Level C Data Package Deliverables

# Metals

Applied P & Ch Laboratory

6354

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/13/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03M1458-MB-01 | Received Date: | 05/13/2003 |
| Sample ID: | **03M1458-MB-01** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Method Blank | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | < 5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | < 200 | U | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 6.5 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 22.5 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 39.1 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 400 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/06/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03-3082-1 | Received Date: | 05/06/2003 |
| Sample ID: | **EB-10-5/6/03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | < 5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | < 200 | U | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 31.4 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 56.5 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 59.3 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 1200 | B | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/06/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03-3082-2 | Received Date: | 05/06/2003 |
| Sample ID: | **MW-11-1** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | < 5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | 56200 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 92.6 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 18700 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 3130 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 24700 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/06/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03-3082-3 | Received Date: | 05/06/2003 |
| Sample ID: | **MW-11-2** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | <5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | 39200 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 216 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 15900 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 2770 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 21200 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/06/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03-3082-4 | Received Date: | 05/06/2003 |
| Sample ID: | **MW-11-3** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | < 5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | 38600 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 2310 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 11900 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 2050 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 24700 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/06/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03-3082-5 | Received Date: | 05/06/2003 |
| Sample ID: | **MW-11-4** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | <5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | 9050 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 61.5 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 7550 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 1820 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 25100 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

Applied P & Ch Laboratory

# Metal Analysis Results

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/06/2003 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |
| | | Lab Sample ID: | 03-3082-6 | Received Date: | 05/06/2003 |
| Sample ID: | **MW-11-5** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | | | | |

| Element Name | CAS No | Unit | RL | Result | C | M | Q | Batch | D-Date | A-Date | DF | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ARSENIC | 7440-38-2 | μg/L | 5 | < 5 | U | F | | 03M1458E | 05/13/03 | 05/13/03 | 1 | 200.9 |
| CALCIUM | 7440-70-2 | μg/L | 200 | 13300 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| IRON | 7439-89-6 | μg/L | 50 | 250 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| MAGNESIUM | 7439-95-4 | μg/L | 100 | 1610 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| POTASSIUM | 7440-09-7 | μg/L | 400 | 1170 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |
| SODIUM | 7440-23-5 | μg/L | 2000 | 46800 | | P | | 03M1442L | 05/08/03 | 05/08/03 | 1 | 200.7 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: RL: PQL (EQL) or CRDL D-Date: Digestion Date; A-Date: Analysis Date; DF: Dilution Factor

C Qualifier: U - Not Detected or less than IDL B - Less than RL (PQL, EQL or CRDL), but greater than IDL.

Q Qualifier: N - Spike recovery out of control * - Duplicate analysis out of control

W - Post digestion spike for GFAA out of control E - Serial dilution difference out of control

M Qualifier: P - ICP A - FLAA F - GFAA CV - Cold Vapor

FORM-2A Metal

Applied P & Ch Laboratory

# Initial and Continuing Calibration Verification

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | | | | |

Analysis Date: **05/08/03** Concentration Units: **UG/L**

| # | Analyte | ICV True | 12:47 Result | %R | CCV True | 13:06 Result | %R | CCV True | 13:33 Result | %R | CCV True | 14:01 Result | %R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Calcium | 100000.0 | 99157.68 | 99.2 | 50000.0 | 50933.48 | 101.9 | 50000.0 | 49353.50 | 98.7 | 50000.0 | 50677.68 | 101.4 |
| 2 | Iron | 10000.0 | 9950.21 | 99.5 | 5000.0 | 4980.48 | 99.6 | 5000.0 | 4891.39 | 97.8 | 5000.0 | 5003.66 | 100.1 |
| 3 | Magnesium | 50000.0 | 51051.63 | 102.1 | 25000.0 | 25016.86 | 100.1 | 25000.0 | 24834.93 | 99.3 | 25000.0 | 25378.85 | 101.5 |
| 4 | Potassium | 30000.0 | 29959.65 | 99.9 | 15000.0 | 15169.41 | 101.1 | 15000.0 | 15006.94 | 100.0 | 15000.0 | 15035.59 | 100.2 |
| 5 | Sodium | 200000.0 | 197263.13 | 98.6 | 100000.0 | 104546.71 | 104.5 | 100000.0 | 102475.75 | 102.5 | 100000.0 | 105263.09 | 105.3 |

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

# Initial and Continuing Calibration Verification

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | | | | |

Analysis Date: **05/08/03** Concentration Units: **UG/L**

| # | Analyte | CCV True | 14:24 Result | %R | CCV True | 14:52 Result | %R | CCV True | 15:18 Result | %R | CCV True | 15:36 Result | %R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Calcium | 50000.0 | 50736.71 | 101.5 | 50000.0 | 50446.97 | 100.9 | 50000.0 | 50846.14 | 101.7 | 50000.0 | 50191.61 | 100.4 |
| 2 | Iron | 5000.0 | 5071.85 | 101.4 | 5000.0 | 4977.75 | 99.6 | 5000.0 | 4958.01 | 99.2 | 5000.0 | 5057.88 | 101.2 |
| 3 | Magnesium | 25000.0 | 25642.50 | 102.6 | 25000.0 | 25159.45 | 100.6 | 25000.0 | 25248.49 | 101.0 | 25000.0 | 25320.68 | 101.3 |
| 4 | Potassium | 15000.0 | 15551.38 | 103.7 | 15000.0 | 15194.11 | 101.3 | 15000.0 | 15141.38 | 100.9 | 15000.0 | 15156.78 | 101.0 |
| 5 | Sodium | 100000.0 | 107049.55 | 107.0 | 100000.0 | 105128.01 | 105.1 | 100000.0 | 104240.20 | 104.2 | 100000.0 | 103058.88 | 103.1 |

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

# Initial and Continuing Calibration Verification

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Instrument: | GFAA-E | Method: | 200.9 |
| Batch No.(s): | 03M1458 | | | | |

Analysis Date: **05/13/03** Concentration Units: **UG/L**

| # | Analyte | ICV 11:10 True | Result | %R | CCV 12:27 True | Result | %R | CCV 13:42 True | Result | %R | CCV 14:59 True | Result | %R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 50.0 | 51.40 | 102.8 | 50.0 | 56.60 | 113.2 | 50.0 | 55.60 | 111.2 | 50.0 | 64.60 | 129.2 |

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2A Metal

Applied P & Ch Laboratory

# Initial and Continuing Calibration Verification

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Instrument: | GFAA-E | Method: | 200.9 |
| Batch No.(s): | 03M1458 | | | | |

Analysis Date: **05/13/03** Concentration Units: **UG/L**

| # | Analyte | CCV True | 15:15 Result | %R | CCV True | 16:06 Result | %R | True | Result | %R | True | Result | %R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 50.0 | 51.00 | 102.0 | 50.0 | 49.70 | 99.4 | | | | | | |

(a) ICV Control Limit 95-105%; For Hg, 90-110%.

(b) CCV Control Limit 90-110%; For Hg, 80-120%.

FORM-2B Metal

Applied P & Ch Laboratory

# CRDL Standard For AA and ICP

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | | | | |

Analysis Date: **05/08/03**

Concentration Units: **UG/L**

| # | Analyte | True | 12:58 Found | R% | Time Found | R% |
|---|---|---|---|---|---|---|
| 1 | Calcium | 1000.0 | 1044.07 | 104.4 | | |
| 2 | Iron | 50.0 | 46.86 | 93.7 | | |
| 3 | Magnesium | | 14.04 | | | |
| 4 | Potassium | | 45.67 | | | |
| 5 | Sodium | | 375.85 | | | |

FORM-3 Metal

Applied P & Ch Laboratory

# Metal ICB/CCB Summary

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | | | | |

Analysis Date: **05/08/03** Concentration Units: **UG/L**

| # | Analyte | ICB Result | 12:51 C | CCB Result | 13:08 C | CCB Result | 13:36 C | CCB Result | 14:04 C | CCB Result | 14:27 C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Calcium | -550.40 | | 59.00 | U | -283.01 | | -501.76 | | -295.18 | |
| 2 | Iron | 1.50 | U | 11.92 | B | 1.50 | U | 2.03 | B | 2.67 | B |
| 3 | Magnesium | 11.37 | B | 40.30 | B | 9.70 | U | 16.76 | B | 17.63 | B |
| 4 | Potassium | 37.50 | B | 42.52 | B | 41.79 | B | 43.33 | B | 41.42 | B |
| 5 | Sodium | 309.43 | B | 463.29 | B | 303.00 | B | 537.71 | B | 239.23 | B |

FORM-3 Metal

Applied P & Ch Laboratory

# Metal ICB/CCB Summary

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | | | | |

Analysis Date: **05/08/03**

Concentration Units: **UG/L**

| # | Analyte | CCB Result | 14:55 C | CCB Result | 15:20 C | CCB Result | 15:38 C | CCB Result | Time C | CCB Result | Time C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Calcium | -404.48 | | -190.57 | B | -127.93 | B | | | | |
| 2 | Iron | 3.10 | B | 3.23 | B | 70.00 | | | | | |
| 3 | Magnesium | 20.34 | B | 50.91 | B | 163.85 | | | | | |
| 4 | Potassium | 49.06 | B | 46.57 | B | 46.48 | B | | | | |
| 5 | Sodium | 234.15 | B | 568.97 | B | 233.38 | B | | | | |

FORM-3 Metal

Applied P & Ch Laboratory

# Metal ICB/CCB Summary

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Instrument: | GFAA-E | Method: | 200.9 |
| Batch No.(s): | 03M1458 | | | | |

Analysis Date: **05/13/03**

Concentration Units: **UG/L**

| # | Analyte | ICB Result | 11:17 C | CCB Result | 12:34 C | CCB Result | 13:49 C | CCB Result | 15:06 C | CCB Result | 15:21 C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 2.10 | U | 2.10 | U | 2.10 | U | 2.10 | U | 2.10 | U |

FORM-3 Metal

Applied P & Ch Laboratory

# Metal ICB/CCB Summary

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Instrument: | GFAA-E | Method: | 200.9 |
| Batch No.(s): | 03M1458 | | | | |

Analysis Date: **05/13/03** Concentration Units: **UG/L**

| # | Analyte | CCB Result | 16:12 C | CCB Result | Time C | CCB Result | Time C | CCB Result | Time C | CCB Result | Time C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 2.10 | U | | | | | | | | |

FORM-4 Metal

Applied P & Ch Laboratory

# ICP Interference Check Sample

Client Name: GEOFON, Inc.
Project Name: JPL
Batch No.(s): 03M1442

Project No: 04-4428.10
Service ID: 033082
ICP ID Number: ICP -L

Lab Code: APCL
Sequence No.: 03M1442L

Analysis Date: **05/08/03**

Concentration Units: **UG/L**

| # | Analyte | Expected Sol. A | Expected Sol. AB | Initial 13:00 Sol. A | Found 13:03 Sol. AB | %R | Final 15:31 Sol. A | Found 15:33 Sol. AB | %R |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Calcium | 500000 | 500000 | 468054 | 470353.8 | 94.1 | 459157 | 462841.1 | 92.6 |
| 2 | Iron | 200000 | 200000 | 179857 | 184181.8 | 92.1 | 178418 | 186233.3 | 93.1 |
| 3 | Magnesium | 500000 | 500000 | 472613 | 481539.6 | 96.3 | 473200 | 491814.1 | 98.4 |
| 4 | Potassium | 0 | 0 | 42 | 33.1 | | 50 | 38.3 | |
| 5 | Sodium | 0 | 0 | 35 | 375.7 | | 121 | 494.6 | |

FORM-5A Metal

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.9

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03M1458E | | |
| MS Filename: | - | Date Analyzed: | 051303 | Time Analyzed: | 12:01 |
| MSD Filename: | - | Date Analyzed: | 051303 | Time Analyzed: | 12:08 |
| MS Sample No: | **MW-11-3** | Sample Lab ID: | 03-3082-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| ARSENIC | $\mu$g/L | 50 | 0 | 54.9 | 110 | 75-125 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| ARSENIC | $\mu$g/L | 50 | 55.0 | 110 | 0 | 20 | 75-125 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits  D – Spiked components diluted out

Comments: _____

FORM-5A Metal

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 200.7

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03M1442L | | |
| MS Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:26 |
| MSD Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:28 |
| MS Sample No: | **MW-11-3** | Sample Lab ID: | 03-3082-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| CALCIUM | μg/L | 20000 | 38600 | 59200 | 103 | 75-125 |
| IRON | μg/L | 1000 | 2310 | 3420 | 111 | 75-125 |
| MAGNESIUM | μg/L | 10000 | 11900 | 22700 | 108 | 75-125 |
| POTASSIUM | μg/L | 5000 | 2050 | 7690 | 113 | 75-125 |
| SODIUM | μg/L | 40000 | 24700 | 69200 | 111 | 75-125 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| CALCIUM | μg/L | 20000 | 57800 | 96 | 7 | 20 | 75-125 |
| IRON | μg/L | 1000 | 3270 | 96 | 14 | 20 | 75-125 |
| MAGNESIUM | μg/L | 10000 | 21600 | 97 | 11 | 20 | 75-125 |
| POTASSIUM | μg/L | 5000 | 7850 | 116 | 3 | 20 | 75-125 |
| SODIUM | μg/L | 40000 | 66000 | 103 | 7 | 20 | 75-125 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-5B Metal

Applied P & Ch Laboratory

# Post Digest Spike Sample Recovery

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Batch No.: | 03M1442 | Method: | 200.7 |
| Spike Sample No. : | 03-3082-04 | Matrix: | WATER | Instrument: | ICP -L |
| Client Sample No.: | MW-11-3 | Analysis Date: | 05/08/03 | | |

Concentration Units: **UG/L**

| # | Analyte | Spiked Sample Result(SSR) | 13:31 C | Sample Result(SR) | 13:18 C | Spike Added(SA) | % Rec. | Control Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Calcium | 58408.4219 | | 38602.4375 | | 20000.00 | 99.0 | 75-125 | |
| 2 | Iron | 3324.6311 | | 2311.5544 | | 1000.00 | 101.3 | 75-125 | |
| 3 | Magnesium | 22020.9512 | | 11939.2461 | | 10000.00 | 100.8 | 75-125 | |
| 4 | Potassium | 7691.8008 | | 2051.4998 | | 5000.00 | 112.8 | 75-125 | |
| 5 | Sodium | 67122.6719 | | 24669.8223 | | 40000.00 | 106.1 | 75-125 | |

FORM-5B Metal

Applied P & Ch Laboratory

# Post Digest Spike Sample Recovery

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Batch No.: | 03M1458 | Method: | 200.9 |
| Spike Sample No. : | 03-3082-04 | Matrix: | WATER | Instrument: | GFAA-E |
| Client Sample No.: | MW-11-3 | Analysis Date: | 05/13/03 | | |

Concentration Units: **UG/L**

| # | Analyte | Spiked Sample Result(SSR) | 12:14 C | Sample Result(SR) | 11:42 C | Spike Added(SA) | % Rec. | Control Limit | Q |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 56.4000 | | 0.9000 | U | 50.00 | 112.8 | 75-125 | |

FORM-6 Metal

Applied P & Ch Laboratory

# Duplicates Verification

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Batch No.: | 03M1442 | Method: | 200.7 |
| Spike Sample No. | 03-3082-04 | Matrix: | WATER | Instrument: | ICP -L |
| Client Sample No. | MW-11-3 | % Solid: | 0.00 | Analysis Date: | 05/08/03 |

Concentration Unit: UG/L

| # | Analyte | 13:18 Sample(s) | C | 13:21 Duplicate | C | RPD(%) | Q |
|---|---|---|---|---|---|---|---|
| 1 | Calcium | 38602.4375 | | 39149.0078 | | 1.4 | |
| 2 | Iron | 2311.5544 | | 2342.1619 | | 1.3 | |
| 3 | Magnesium | 11939.2461 | | 12161.7412 | | 1.8 | |
| 4 | Potassium | 2051.4998 | | 2012.4011 | | 1.9 | |
| 5 | Sodium | 24669.8223 | | 25210.3086 | | 2.2 | |

FORM-6 Metal

Applied P & Ch Laboratory

# Duplicates Verification

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Batch No.: | 03M1458 | Method: | 200.9 |
| Spike Sample No. | 03-3082-04 | Matrix: | WATER | Instrument: | GFAA-E |
| Client Sample No. | MW-11-3 | % Solid: | 0.00 | Analysis Date: | 05/13/03 |

Concentration Unit: **UG/L**

| # | Analyte | 11:42 Sample(s) | C | 11:48 Duplicate | C | RPD(%) | Q |
|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 0.9000 | U | 0.5000 | U | | |

FORM-7 Metal

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.9

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03M1458E | | |
| LCS Filename: | - | Date Analyzed: | 051303 | Time Analyzed: | 11:29 |
| LCSD Filename: | - | Date Analyzed: | 051303 | Time Analyzed: | 11:36 |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| ARSENIC | μg/L | 50 | 0 | 56.8 | 114 | 80-120 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | LCSD Concentration | LCSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| ARSENIC | μg/L | 50 | 57.1 | 114 | 0 | 20 | 80-120 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-7 Metal

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 200.7

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03M1442L | | |
| LCS Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:13 |
| LCSD Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:16 |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| CALCIUM | µg/L | 20000 | 0 | 20400 | 102 | 80-120 |
| IRON | µg/L | 1000 | 0 | 1030 | 103 | 80-120 |
| MAGNESIUM | µg/L | 10000 | 0 | 9390 | 94 | 80-120 |
| POTASSIUM | µg/L | 5000 | 0 | 4890 | 98 | 80-120 |
| SODIUM | µg/L | 40000 | 0 | 41800 | 105 | 80-120 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | LCSD Concentration | LCSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| CALCIUM | µg/L | 20000 | 20500 | 103 | 1 | 20 | 80-120 |
| IRON | µg/L | 1000 | 1040 | 104 | 1 | 20 | 80-120 |
| MAGNESIUM | µg/L | 10000 | 9430 | 94 | 0 | 20 | 80-120 |
| POTASSIUM | µg/L | 5000 | 4900 | 98 | 0 | 20 | 80-120 |
| SODIUM | µg/L | 40000 | 41300 | 103 | 2 | 20 | 80-120 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits  D – Spiked components diluted out

Comments: _____

FORM-9 Metal

Applied P & Ch Laboratory

# Serial Dilution

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Batch No.: | 03M1442 | Method: | 200.7 |
| Dilution Sample No.: | 03-3082-04 | Matrix: | WATER | Instrument: | ICP -L |
| Client Sample No.: | MW-11-3 | Analysis Date: | 05/08/03 | | |

Concentration Units: **UG/L**

| # | Analyte | Initial Sample Results(I) | 13:18 C | Serial Dilut Results(S) | 13:23 C | % Diff. | Q |
|---|---|---|---|---|---|---|---|
| 1 | Calcium | 38602.44 | | 38426.93 | | 0.5 | |
| 2 | Iron | 2311.55 | | 2332.19 | | 0.9 | |
| 3 | Magnesium | 11939.25 | | 11456.36 | | 4.0 | |
| 4 | Potassium | 2051.50 | | 1838.65 | B | 10.4 | |
| 5 | Sodium | 24669.82 | | 23330.49 | | 5.4 | |

FORM-9 Metal

Applied P & Ch Laboratory

# Serial Dilution

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Batch No.: | 03M1458 | Method: | 200.9 |
| Dilution Sample No.: | 03-3082-04 | Matrix: | WATER | Instrument: | GFAA-E |
| Client Sample No.: | MW-11-3 | Analysis Date: | 05/13/03 | | |

Concentration Units: **UG/L**

| # | Analyte | Initial Sample Results(I) | 11:42 C | Serial Dilut Results(S) | 11:55 C | % Diff. | Q |
|---|---|---|---|---|---|---|---|
| 1 | Arsenic | 0.90 | U | -0.50 | U | | |

FORM-13 Metal

Applied P & Ch Laboratory

# Preparation Log

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Batch No.: | 03M1442 | Method: | 200.7 |
| Preparation Matrix: | WATER | Instrument: | ICP -L | | |

| # | Client Sample No. | APCL Sample No. | Preparation Date | Weight (gram) | Volume (ml) |
|---|---|---|---|---|---|
| 1 | MW-11-3 | 03-3082-04DM | 05/08/03 | | 50.0 |
| 2 | EB-10-5/6/03 | 03-3082-01 | 05/08/03 | | 50.0 |
| 3 | MW-11-1 | 03-3082-02 | 05/08/03 | | 50.0 |
| 4 | MW-11-2 | 03-3082-03 | 05/08/03 | | 50.0 |
| 5 | MW-11-4 | 03-3082-05 | 05/08/03 | | 50.0 |
| 6 | MW-11-5 | 03-3082-06 | 05/08/03 | | 50.0 |
| 7 | DUPE-6-2Q03 | 03-3102-01 | 05/08/03 | | 50.0 |
| 8 | EB-11-5/7/03 | 03-3102-02 | 05/08/03 | | 50.0 |
| 9 | MW-12-1 | 03-3102-03 | 05/08/03 | | 50.0 |
| 10 | MW-12-2 | 03-3102-04 | 05/08/03 | | 50.0 |
| 11 | MW-12-3 | 03-3102-05 | 05/08/03 | | 50.0 |
| 12 | MW-12-4 | 03-3102-06 | 05/08/03 | | 50.0 |
| 13 | MW-12-5 | 03-3102-07 | 05/08/03 | | 50.0 |
| 14 | A | 03-3105-01 | 05/08/03 | | 50.0 |
| 15 | B | 03-3105-02 | 05/08/03 | | 50.0 |
| 16 | C | 03-3105-03 | 05/08/03 | | 50.0 |
| 17 | D | 03-3105-04 | 05/08/03 | | 50.0 |
| 18 | | 03M1442MB | 05/08/03 | | 50.0 |
| 19 | | 03M1442LCS | 05/08/03 | | 50.0 |
| 20 | | 03M1442LCSD | 05/08/03 | | 50.0 |
| 21 | MW-11-3 Dup. | 03M1442MD | 05/08/03 | | 50.0 |
| 22 | MW-11-3 MS | 03M1442MS | 05/08/03 | | 50.0 |
| 23 | MW-11-3 MSD | 03M1442MSD | 05/08/03 | | 50.0 |

FORM-13 Metal

Applied P & Ch Laboratory

# Preparation Log

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Batch No.: | 03M1458 | Method: | 200.9 |
| Preparation Matrix: | WATER | Instrument: | GFAA-E | | |

| # | Client Sample No. | APCL Sample No. | Preparation Date | Weight (gram) | Volume (ml) |
|---|---|---|---|---|---|
| 1 | MW-11-3 | 03-3082-04DM | 05/13/03 | | 50.0 |
| 2 | EB-10-5/6/03 | 03-3082-01 | 05/13/03 | | 50.0 |
| 3 | MW-11-1 | 03-3082-02 | 05/13/03 | | 50.0 |
| 4 | MW-11-2 | 03-3082-03 | 05/13/03 | | 50.0 |
| 5 | MW-11-4 | 03-3082-05 | 05/13/03 | | 50.0 |
| 6 | MW-11-5 | 03-3082-06 | 05/13/03 | | 50.0 |
| 7 | DUPE-6-2Q03 | 03-3102-01 | 05/13/03 | | 50.0 |
| 8 | EB-11-5/7/03 | 03-3102-02 | 05/13/03 | | 50.0 |
| 9 | MW-12-1 | 03-3102-03 | 05/13/03 | | 50.0 |
| 10 | MW-12-2 | 03-3102-04 | 05/13/03 | | 50.0 |
| 11 | MW-12-3 | 03-3102-05 | 05/13/03 | | 50.0 |
| 12 | MW-12-4 | 03-3102-06 | 05/13/03 | | 50.0 |
| 13 | MW-12-5 | 03-3102-07 | 05/13/03 | | 50.0 |
| 14 | EB-12-5/8/03 | 03-3130-01 | 05/13/03 | | 50.0 |
| 15 | MW-22-1 | 03-3130-02 | 05/13/03 | | 50.0 |
| 16 | MW-22-2 | 03-3130-03 | 05/13/03 | | 50.0 |
| 17 | MW-22-3 | 03-3130-04 | 05/13/03 | | 50.0 |
| 18 | MW-22-4 | 03-3130-05 | 05/13/03 | | 50.0 |
| 19 | MW-22-5 | 03-3130-06 | 05/13/03 | | 50.0 |
| 20 | | 03M1458MB | 05/13/03 | | 50.0 |
| 21 | | 03M1458LCS | 05/13/03 | | 50.0 |
| 22 | | 03M1458LCSD | 05/13/03 | | 50.0 |
| 23 | MW-11-3 Dup. | 03M1458MD | 05/13/03 | | 50.0 |
| 24 | MW-11-3 MS | 03M1458MS | 05/13/03 | | 50.0 |
| 25 | MW-11-3 MSD | 03M1458MSD | 05/13/03 | | 50.0 |

FORM-14 Metal

Applied P & Ch Laboratory

# Analysis Run Log

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | Start Date: | 05/08/03 | End Date: | 05/08/03 |

| # | APCL Sample No. | D/F | Time | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Hg | Ni | K | Se | Ag | Na | Tl | V | Zn | Mo | Sr | Ti | Sn | Li | B | Si |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Calib Blank | 1.00 | 12:37 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 2 | STD1 1423A | 1.00 | 12:40 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 3 | STD2 1423B | 1.00 | 12:42 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 4 | STD3 1423C | 1.00 | 12:45 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 5 | ICV 1447A | 1.00 | 12:47 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 6 | ICB | 1.00 | 12:51 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 7 | CRI A1432 | 1.00 | 12:58 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 8 | ICSA 1441 | 1.00 | 13:00 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 9 | ICSAB 1443 | 1.00 | 13:03 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 10 | CCV 1447B | 1.00 | 13:06 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 11 | CCB | 1.00 | 13:08 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 12 | M-BL 03M1442 W | 1.00 | 13:11 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 13 | LCS-03M1442 | 1.00 | 13:13 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 14 | LCSD-03M1442 | 1.00 | 13:16 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 15 | 3082-4 S F=1 | 1.00 | 13:18 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 16 | 3082-4 D F=1 | 1.00 | 13:21 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 17 | 3082-4 1/5 F=5 | 5.00 | 13:23 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 18 | 3082-4 MS F=1 | 1.00 | 13:26 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 19 | 3082-4 MSD F=1 | 1.00 | 13:28 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 20 | 3082-4 PS F=1 | 1.00 | 13:31 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 21 | CCV 1447B | 1.00 | 13:33 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 22 | CCB | 1.00 | 13:36 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 23 | 3082-1 F=1 | 1.00 | 13:38 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 24 | 3082-2 F=1 | 1.00 | 13:41 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 25 | 3082-3 F=1 | 1.00 | 13:44 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 26 | 3082-5 F=1 | 1.00 | 13:46 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 27 | 3082-6 F=1 | 1.00 | 13:49 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 28 | 3102-1 F=1 | 1.00 | 13:51 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 29 | 3102-2 F=1 | 1.00 | 13:54 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 30 | 3102-3 F=1 | 1.00 | 13:56 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 31 | 3102-4 F=1 | 1.00 | 13:59 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 32 | CCV 1447B | 1.00 | 14:01 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 33 | CCB | 1.00 | 14:04 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 34 | 3102-5 F=1 | 1.00 | 14:06 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 35 | 3102-6 F=1 | 1.00 | 14:09 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 36 | 3102-7 F=1 | 1.00 | 14:12 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 37 | 3105-1 F=1 | 1.00 | 14:14 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 38 | 3105-2 F=1 | 1.00 | 14:17 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 39 | 3105-3 F=1 | 1.00 | 14:19 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 40 | 3105-4 F=1 | 1.00 | 14:22 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |

FORM-14 Metal

Applied P & Ch Laboratory

# Analysis Run Log

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1442L |
| | | Instrument: | ICP -L | Method: | 200.7 |
| Batch No.(s): | 03M1442 | Start Date: | 05/08/03 | End Date: | 05/08/03 |

| # | APCL Sample No. | D/F | Time | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Hg | Ni | K | Se | Ag | Na | Tl | V | Zn | Mo | Sr | Ti | Sn | Li | B | Si |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 41 | CCV 1447B | 1.00 | 14:24 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 42 | CCB | 1.00 | 14:27 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 43 | M-BL 03M1443 W | 1.00 | 14:29 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 44 | LCS-03M1443 | 1.00 | 14:32 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 45 | LCSD-03M1443 | 1.00 | 14:34 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 46 | 3100-1 S F=1 | 1.00 | 14:37 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 47 | 3100-1 D F=1 | 1.00 | 14:39 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 48 | 3100-1 1/5 F=5 | 5.00 | 14:42 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 49 | 3100-1 MS F=1 | 1.00 | 14:44 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 50 | 3100-1 MSD F=1 | 1.00 | 14:47 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 51 | 3100-1 PS F=1 | 1.00 | 14:50 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 52 | CCV 1447B | 1.00 | 14:52 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 53 | CCB | 1.00 | 14:55 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 54 | 3100-3 F=1 | 1.00 | 14:57 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 55 | 3100-4 F=1 | 1.00 | 15:00 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 56 | 3100-5 F=1 | 1.00 | 15:02 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 57 | 3100-6 F=1 | 1.00 | 15:05 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 58 | 3100-7 F=1 | 1.00 | 15:08 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 59 | 3100-8 F=1 | 1.00 | 15:10 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 60 | 3100-9 F=1 | 1.00 | 15:13 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 61 | 3100-10 F=1 | 1.00 | 15:15 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 62 | CCV 1447B | 1.00 | 15:18 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 63 | CCB | 1.00 | 15:20 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 64 | 3100-11 F=1 | 1.00 | 15:23 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 65 | 3100-12 F=1 | 1.00 | 15:26 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 66 | 3100-13 F=1 | 1.00 | 15:28 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 67 | ICSA 1441 | 1.00 | 15:31 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 68 | ICSAB 1443 | 1.00 | 15:33 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 69 | CCV 1447B | 1.00 | 15:36 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |
| 70 | CCB | 1.00 | 15:38 | | | | | | | √ | | | | √ | | √ | | | | √ | | | √ | | | | | | | | | | |

FORM-14 Metal

Applied P & Ch Laboratory

# Analysis Run Log

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Instrument: | GFAA-E | Method: | 200.9 |
| Batch No.(s): | 03M1458 | Start Date: | 05/13/03 | End Date: | 05/13/03 |

| # | APCL Sample No. | D/F | Time | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Hg | Ni | K | Se | Ag | Na | Tl | V | Zn | Mo | Sr | Ti | Sn | Li | B | Si |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | AS Position 002 | 1.00 | 10:17 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | AS Position 001 | 1.00 | 10:25 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Calib. Blank | 1.00 | 10:34 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 1/2 STD1 1472A | 1.00 | 10:40 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | STD1 1472A | 1.00 | 10:46 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | STD2 1472B | 1.00 | 10:53 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | STD3 1472C | 1.00 | 10:59 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | ICV A1474 | 1.00 | 11:10 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | ICB | 1.00 | 11:17 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | M-BL 03M1458 | 1.00 | 11:23 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | LCS-03M1458 | 1.00 | 11:29 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | LCSD-03M1458 | 1.00 | 11:36 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | 3082-4 S F=1 | 1.00 | 11:42 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | 3082-4 D F=1 | 1.00 | 11:48 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 3082-4 1/5 F=5 | 5.00 | 11:55 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 3082-4 MS F=1 | 1.00 | 12:01 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 3082-4 MSD F=1 | 1.00 | 12:08 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 3082-4 PS F=1 | 1.00 | 12:14 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | 3082-1 F=1 | 1.00 | 12:21 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | CCV A1474 | 1.00 | 12:27 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | CCB | 1.00 | 12:34 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 3082-2 F=1 | 1.00 | 12:40 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23 | 3082-3 F=1 | 1.00 | 12:46 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24 | 3082-5 F=1 | 1.00 | 12:52 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | 3082-6 F=1 | 1.00 | 12:59 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | 3130-1 F=1 | 1.00 | 13:05 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | 3130-2 F=1 | 1.00 | 13:17 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | CCV A1474 | 1.00 | 13:42 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 29 | CCB | 1.00 | 13:49 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 3130-3 F=1 | 1.00 | 14:08 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | 3130-4 F=1 | 1.00 | 14:14 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | 3130-5 F=1 | 1.00 | 14:21 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | 3130-6 F=1 | 1.00 | 14:27 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | 3102-1 F=1 | 1.00 | 14:34 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | 3102-2 F=1 | 1.00 | 14:40 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 3102-3 F=1 | 1.00 | 14:47 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 37 | 3102-4 F=1 | 1.00 | 14:53 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 38 | CCV A1474 | 1.00 | 14:59 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | CCB | 1.00 | 15:06 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 | CCV A1474 | 1.00 | 15:15 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |

FORM-14 Metal

Applied P & Ch Laboratory

# Analysis Run Log

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Lab Code: | APCL |
| Project Name: | JPL | Service ID: | 033082 | Sequence No.: | 03M1458E |
| | | Instrument: | GFAA-E | Method: | 200.9 |
| Batch No.(s): | 03M1458 | Start Date: | 05/13/03 | End Date: | 05/13/03 |

| # | APCL Sample No. | D/F | Time | Al | Sb | As | Ba | Be | Cd | Ca | Cr | Co | Cu | Fe | Pb | Mg | Mn | Hg | Ni | K | Se | Ag | Na | Tl | V | Zn | Mo | Sr | Ti | Sn | Li | B | Si |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 41 | CCB | 1.00 | 15:21 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 42 | 3102-5 F=1 | 1.00 | 15:27 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 43 | 3102-6 F=1 | 1.00 | 15:33 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 44 | 3102-7 F=1 | 1.00 | 15:40 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 | CCV A1474 | 1.00 | 16:06 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | CCB | 1.00 | 16:12 | | | √ | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

# Metal Digestion (3010/3050) Worksheet

Digest-

Batch # 03M1442 Matrix: W Method used: 3010 A Date: 5/8/03 Digested by: XL Diluted by: ____

Lot #: ASTM Type I water RW1410 $HNO_3$ 1102/20 $H_2SO_4$ ____ HCl 4102050 $H_2O_2$ ____

| OP # | Type | Samp ID /Lot # | X (g or mL) | $V_{digest}/X = f_1$ | $V_f/V_i = f_2$ | $V_f'/V_i' = f_3$ | $F=f_1f_2f_3$ | Note |
|---|---|---|---|---|---|---|---|---|
| 1495 | Method Blank | Bl. Lot RW1410 | 50 | 50 /X= 1 | / = | / = | | |
| 1496 | LCS1 | Bl. Lot: " | | /X= | / = | / = | | 5ME |
| 1497 | Sample-1 | 3082-4 | | /X= | / = | / = | | |
| 1498 | MS1 on S-1 | -4 | | /X= | / = | / = | | T=95°C |
| 1499 | MS2 on S-1 | -4 | | /X= | / = | / = | | |
| 1500 | Sample 2 | -1 | | /X= | / = | / = | | |
| 1501 | Sample 3 | -2 | | /X= | / = | / = | | |
| 1502 | Sample 4 | -3 | | /X= | / = | / = | | |
| 1503 | Sample 5 | -5 | | /X= | / = | / = | | |
| 1504 | Sample 6 | -6 | | /X= | / = | / = | | |
| 1505 | Sample 7 | 3102-1 | | /X= | / = | / = | | |
| 1506 | Sample 8 | -2 | | /X= | / = | / = | | |
| 1507 | Sample 9 | -3 | | /X= | / = | / = | | |
| 1508 | Sample 10 | -4 | | /X= | / = | / = | | |
| 1509 | LCS2 | Bl. Lot RW1410 | | /X= | / = | / = | | |
| 1510 | Sample 11 | -5 | | /X= | / = | / = | | |
| 1511 | Sample 12 | -6 | | /X= | / = | / = | | |
| 1512 | Sample 13 | -7 | | /X= | / = | / = | | |
| 1513 | Sample 14 | 3105-1 | | /X= | / = | / = | | |
| 1514 | Sample 15 | -2 | | /X= | / = | / = | | |
| 1515 | Sample 16 | -3 | | /X= | / = | / = | | |
| 1516 | Sample 17 | -4 | | /X= | / = | / = | | |
| 1517 | Sample 18 | | | /X= | / = | / = | | |
| 1518 | Sample 19 | | | /X= | / = | / = | | |
| 1519 | Sample 20 | | | /X= | / = | / = | | |
| 1520 | Duplicate | 3082-4 | 50 | 50 /X= 1 | / = | / = | | |

XL 5/8/03

## Specification of matrix spike and lab control spike

| QC Type | Spiked Element * | Spike Stock Solution Lot # | Spike Stock (Rep.) Conc. $C_s$, μg/mL | Spike Stock Volum Used $V_s$ mL | Spike Level $T'=C_sV_s/V$ ppm or mg/L | Sample Spike $T$, ppm |
|---|---|---|---|---|---|---|
| MS1 | /AsSe/Sb/$M_{20}$ | AA- /AA- /AA- /AA 1493 | / / / 25 | / / / 2 | / / / 1 | |
| MS2 | /AsSe/Sb/$M_{20}$ | AA- /AA- /AA- /AA- " | / / / | / / / | / / / | |
| LCS1 | /AsSe/Sb/$M_{20}$ | AA- /AA- /AA- /AA 1492 | / / / | / / / | / / / | |
| LCS2 | /AsSe/Sb/$M_{20}$ | AA- /AA- /AA- /AA- " | / / / | / / / | / / / | |

* Notation: $T$ – rep. sample spike level. $T'$ – digest solution spike level. $T=f\,T'=C_sV_s/X$. M20 (or $M_j$) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

APCL form 6-116 April. 03, 1996. Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.
Root-File:[CUST.DOC.AA]DIGEST_ROOT.TEX File:[CUST.DOC.AA]DIGEST .TEX

6388

Supervisor Initial U.W

Applied P & Ch Laboratory
760 Magnolia Ave. Chino CA 91710
Tel (909) 590-1828 Fax: (909) 590-1498

Digest-030

# Metal Digestion (3010/3050) Worksheet

Batch # 03M1458 Matrix: W Method used: 3020A Date: 5/13/03 Digested by: [illegible] Diluted by: _____

Lot #: ASTM Type I water RW1411 $HNO_3$ 1102620 $H_2SO_4$ _____ HCl _____ $H_2O_2$ _____

| OP # | Type | Samp ID /Lot # | X (g or mL) | $V_{digest}/X = f_1$ | $V_j/V_i = f_2$ | $V'_j/V'_i = f_3$ | $F=f_1f_2f_3$ | Note |
|---|---|---|---|---|---|---|---|---|
| 1755 | Method Blank | Bl. Lot: RW1411 | 50 | 50 /X= 1 | / = | / = | | GFAA/As |
| 1756 | LCS1 | Bl. Lot: " | | /X= | / = | / = | | T=95°C |
| 1757 | Sample-1 | 3082-4 | | /X= | / = | / = | | |
| 1758 | MS1 on S-1 | -4 | | /X= | / = | / = | | |
| 1759 | MS2 on S-1 | -4 | | /X= | / = | / = | | |
| 1760 | Sample 2 | -1 | | /X= | / = | / = | | |
| 1761 | Sample 3 | -2 | | /X= | / = | / = | | |
| 1762 | Sample 4 | -3 | | /X= | / = | / = | | |
| 1763 | Sample 5 | -5 | | /X= | / = | / = | | |
| 1764 | Sample 6 | -6 | | /X= | / = | / = | | |
| 1765 | Sample 7 | 3130-1 | | /X= | / = | / = | | |
| 1766 | Sample 8 | -2 | | /X= | / = | / = | | DUP/MS |
| 1767 | Sample 9 | -3 | | /X= | / = | / = | | |
| 1768 | Sample 10 | -4 | | /X= | / = | / = | | |
| 1769 | LCS2 | Bl. Lot: RW1411 | | /X= | / = | / = | | |
| 1770 | Sample 11 | -5 | | /X= | / = | / = | | |
| 1771 | Sample 12 | -6 | | /X= | / = | / = | | |
| 1772 | Sample 13 | 3102-1 | | /X= | / = | / = | | |
| 1773 | Sample 14 | -2 | | /X= | / = | / = | | |
| 1774 | Sample 15 | -3 | | /X= | / = | / = | | |
| 1775 | Sample 16 | -4 | | /X= | / = | / = | | |
| 1776 | Sample 17 | -5 | | /X= | / = | / = | | |
| 1777 | Sample 18 | -6 | | /X= | / = | / = | | |
| 1778 | Sample 19 | -7 | | /X= | / = | / = | | |
| 1779 | Sample 20 | | 5/13/03 | /X= | / = | / = | | |
| 1780 | Duplicate | 3082-4 | 50 | 50 /X= 1 | / = | / = | | |

## Specification of matrix spike and lab control spike

| QC Type | Spiked Element * | Spike Stock Solution Lot # | Spike Stock (Rep.) Conc. $C_s$, µg/mL | Spike Stock Volum Used $V_s$ mL | Spike Level $T'=C_sV_s/V$ ppm or mg/L | Sample Spike $T$, ppm |
|---|---|---|---|---|---|---|
| MS1 | /As/Se/Sb/$M_{20}$ | AA- /AA-1013 /AA- /AA- | /5/ / | /0.5/ / | /0.08/ / | |
| MS2 | /As/Se/Sb/$M_{20}$ | AA- /AA-11 /AA- /AA- | / / / | / / / | / / / | |
| LCS1 | /As/Se/Sb/$M_{20}$ | AA- /AA-1011 /AA- /AA- | / / / | / / / | / / / | |
| LCS2 | /As/Se/Sb/$M_{20}$ | AA- /AA-11 /AA- /AA- | / / / | / / / | / / / | |

* Notation: $T$ – rep. sample spike level. $T'$ – digest solution spike level. $T=f\,T'=C_sV_s/X$. M20 (or $M_j$) represents 20 (or j) metals, (see STD logbook).
If digest needs dilution for different metals, use dilution worksheet.

APCL form 6-116 April. 03, 1996. Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.
Root-File:[CUST.DOC.AA]DIGEST_ROOT.TEX File:[CUST.DOC.AA]DIGEST .TEX

Supervisor Initial [illegible]

Level C Data Package Deliverables

# Wet Chemistry

Applied P & Ch Laboratory

6390

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# Wet Analysis Results for Method SM2320B

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | SM2320B |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Bicarbonate**
**CAS No:**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg/L | 2 | <2 | U |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg/L | 2 | 208 | |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg/L | 2 | 171 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg/L | 2 | 176 | |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg/L | 2 | 80.5 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg/L | 2 | 114 | |
| 03W2817-MB-01 | 03W2817-MB-01 | Water | 05/10/03 | 05/10/03 | 05/10/03 | 03W2817 | mg/L | 2 | <2 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method SM2320B

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | SM2320B |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Carbonate**
**CAS No:**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | <2 | U |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | <2 | U |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | 2.6 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | <2 | U |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | 20.4 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | 5.2 | |
| 03W2817-MB-01 | 03W2817-MB-01 | Water | 05/10/03 | 05/10/03 | 05/10/03 | 03W2817 | mg-$CaCO_3$/L | 2 | <2 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method 9040B

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 9040B |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: pH**
**CAS No: 10-29-7**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 6.95 | |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 7.85 | |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 8.08 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 7.95 | |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 8.77 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 8.43 | |
| 03W2740-MB-01 | 03W2740-MB-01 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2740 | pH unit | 0.01 | 6.84 | |

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method 160.1

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 160.1 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Solids, Total Dissolved (TDS)**
**CAS No: 10-33-3**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/08/03 | 03W2783 | mg/L | 10 | <10 | U |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/08/03 | 03W2783 | mg/L | 10 | 323 | |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/08/03 | 03W2783 | mg/L | 10 | 215 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/08/03 | 03W2783 | mg/L | 10 | 222 | |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/08/03 | 03W2783 | mg/L | 10 | 120 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/08/03 | 03W2783 | mg/L | 10 | 156 | |
| 03W2783-MB-01 | 03W2783-MB-01 | Water | 05/08/03 | 05/08/03 | 05/08/03 | 03W2783 | mg/L | 10 | <10 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method 7196

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 7196 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Chromium (VI)**
**CAS No: 1333-82-0**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |
| 03W2737-MB-01 | 03W2737-MB-01 | Water | 05/06/03 | 05/06/03 | 05/06/03 | 03W2737 | mg/L | 0.01 | <0.01 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method 314.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 314.0 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Perchlorate**
**CAS No:**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |
| 03W2804-MB-01 | 03W2804-MB-01 | Water | 05/09/03 | 05/09/03 | 05/09/03 | 03W2804 | μg/L | 4 | <4 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method 300.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 300.0 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Chloride $Cl^-$**
**CAS No: 16887-00-6**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.25 | 0.33 | |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.5 | 20.0 | |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.5 | 15.4 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.5 | 11.8 | |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.4 | 11.6 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.4 | 12.2 | |
| 03W2750-MB-01 | 03W2750-MB-01 | Water | 05/07/03 | 05/07/03 | 05/07/03 | 03W2750 | mg/L | 0.2 | <0.2 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

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# Wet Analysis Results for Method 300.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 300.0 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Nitrate as N**
**CAS No: 14797-55-8**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.05 | 0.16 | |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.1 | 0.97 | |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.1 | 0.15 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.1 | 0.15 | |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.08 | 0.11 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.08 | 0.11 | |
| 03W2750-MB-01 | 03W2750-MB-01 | Water | 05/07/03 | 05/07/03 | 05/07/03 | 03W2750 | mg/L | 0.04 | <0.04 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

Applied P & Ch Laboratory

# Wet Analysis Results for Method 300.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Anal. Method | 300.0 |
| Project ID: | JPL | Service ID: | 33082 | Collected by: | |

**Component Name: Sulfate $SO_4^{--}$**
**CAS No: 14808-79-8**

| Lab ID | Sample ID | Matrix | Coll. Date | Rcv Date | Anal. Date | Batch | Unit | RL | Result | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| 03-3082-1 | EB-10-5/6/03 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 0.63 | 0.82 | |
| 03-3082-2 | MW-11-1 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 1.3 | 43.9 | |
| 03-3082-3 | MW-11-2 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 1.3 | 33.6 | |
| 03-3082-4 | MW-11-3 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 1.3 | 22.5 | |
| 03-3082-5 | MW-11-4 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 1 | 2.2 | |
| 03-3082-6 | MW-11-5 | Water | 05/06/03 | 05/06/03 | 05/07/03 | 03W2750 | mg/L | 1 | 9.7 | |
| 03W2750-MB-01 | 03W2750-MB-01 | Water | 05/07/03 | 05/07/03 | 05/07/03 | 03W2750 | mg/L | 0.5 | <0.5 | U |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

FORM-3

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 300.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2750 | | |
| LCS Filename: | - | Date Analyzed: | 050703 | Time Analyzed: | 10:16 |
| LCSD Filename: | - | Date Analyzed: | 050703 | Time Analyzed: | 10:29 |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| CHLORIDE $CL^-$ | mg/L | 4.0 | 0 | 4.17 | 104 | 80-120 |
| NITRATE AS N | mg/L | 1.5 | 0 | 1.58 | 105 | 80-120 |
| SULFATE $SO_4^{--}$ | mg/L | 15 | 0 | 15.4 | 103 | 80-120 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | LCSD Concentration | LCSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| CHLORIDE $CL^-$ | mg/L | 4.0 | 4.20 | 105 | 1 | 20 | 80-120 |
| NITRATE AS N | mg/L | 1.5 | 1.59 | 106 | 1 | 20 | 80-120 |
| SULFATE $SO_4^{--}$ | mg/L | 15 | 15.5 | 103 | 0 | 25 | 80-120 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 300.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2750 | | |
| MS Filename: | - | Date Analyzed: | 050703 | Time Analyzed: | 13:39 |
| MSD Filename: | - | Date Analyzed: | 050703 | Time Analyzed: | 14:03 |
| MS Sample No: | **MW-11-3** | Sample Lab ID: | 03-3082-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| CHLORIDE $CL^-$ | mg/L | 20.0 | 11.8 | 32.5 | 104 | 75-125 |
| NITRATE AS N | mg/L | 7.50 | 0.15 | 7.70 | 101 | 75-125 |
| SULFATE $SO_4^{--}$ | mg/L | 75.0 | 22.5 | 102 | 106 | 75-125 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| CHLORIDE $CL^-$ | mg/L | 20.0 | 32.7 | 105 | 1 | 20 | 75-125 |
| NITRATE AS N | mg/L | 7.50 | 7.81 | 102 | 1 | 20 | 75-125 |
| SULFATE $SO_4^{--}$ | mg/L | 75.0 | 102 | 106 | 0 | 25 | 75-125 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 314.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2804 | | |
| LCS Filename: | - | Date Analyzed: | 050903 | Time Analyzed: | 12:52 |
| LCSD Filename: | - | Date Analyzed: | – | Time Analyzed: | – |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| PERCHLORATE | $\mu$g/L | 25 | 0 | 24.7 | 99 | 80-120 |
| # of Out-of-control | | | | | 0 | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 314.0

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2804 | | |
| MS Filename: | - | Date Analyzed: | 050903 | Time Analyzed: | 17:15 |
| MSD Filename: | - | Date Analyzed: | 050903 | Time Analyzed: | 17:34 |
| MS Sample No: | **MW-11-3** | Sample Lab ID: | 03-3082-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| PERCHLORATE | $\mu g/L$ | 50 | 0 | 51.3 | 103 | 75-125 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| PERCHLORATE | $\mu g/L$ | 50 | 51.6 | 103 | 0 | 20 | 75-125 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 160.1

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2783 | | |
| LCS Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:54 |
| LCSD Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:54 |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| SOLIDS, TOTAL DISSOLVED (TDS) | mg/L | 400 | 0 | 412 | 103 | 88-108 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | LCSD Concentration | LCSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| SOLIDS, TOTAL DISSOLVED (TDS) | mg/L | 400 | 390 | 98 | 5 | 20 | 88-108 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 160.1

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2783 | | |
| MS Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:54 |
| MSD Filename: | - | Date Analyzed: | 050803 | Time Analyzed: | 13:54 |
| MS Sample No: | **MW-11-3** | Sample Lab ID: | 03-3082-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| SOLIDS, TOTAL DISSOLVED (TDS) | mg/L | 400 | 222 | 631 | 102 | 80-119 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| SOLIDS, TOTAL DISSOLVED (TDS) | mg/L | 400 | 619 | 99 | 3 | 20 | 80-119 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 7196

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2737 | | |
| LCS Filename: | - | Date Analyzed: | 050603 | Time Analyzed: | 13:25 |
| LCSD Filename: | - | Date Analyzed: | 050603 | Time Analyzed: | 13:25 |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| CHROMIUM (VI) | mg/L | 0.25 | 0 | 0.252 | 101 | 80-115 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | LCSD Concentration | LCSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| CHROMIUM (VI) | mg/L | 0.25 | 0.246 | 98 | 3 | 19 | 80-115 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

FORM-3

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 7196

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 33082 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03W2737 | | |
| MS Filename: | - | Date Analyzed: | 050603 | Time Analyzed: | 13:25 |
| MSD Filename: | - | Date Analyzed: | 050603 | Time Analyzed: | 13:25 |
| MS Sample No: | **MW-11-3** | Sample Lab ID: | 03-3082-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| CHROMIUM (VI) | mg/L | 0.25 | 0 | 0.231 | 92 | 78-115 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| CHROMIUM (VI) | mg/L | 0.25 | 0.227 | 91 | 1 | 19 | 78-115 |
| # of Out-of-control | | | | 0 | 0 | | |

# Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

**Wet Chemistry QC Report B**
**Duplicate Results**

**Matrix: Water**

**APCL Service ID: 03-3082**

| Analysis | Batch ID | Analysis Date | Sample Name | Unit | Result | Duplicate Result | RPD % | RPD Control limit |
|---|---|---|---|---|---|---|---|---|
| Bicarbonate | 03W2817 | 05/10/2003 | MW-11-1 | mg/L | 208 | 210 | 1 | 20 |
| Carbonate | 03W2817 | 05/10/2003 | MW-11-1 | mg-$CaCO_3$/L | ND | ND | NC | 20 |
| pH | 03W2740 | 05/06/2003 | 03-3090-1 | pH unit | 7.11 | 7.15 | 1 | 20 |

Note: N/A = Not applicable; NR: Not requested; NC= Not Calculated; ND: Not detected.

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: _____

Analysis: Chromium (VI) Calibration Date: 01/29/2003

| Concentration (mg/L) | 0.000 | 0.0125 | 0.050 | 0.125 | 0.250 | 0.50 |
|---|---|---|---|---|---|---|
| Absorbance | 0.000 | 0.006 | 0.041 | 0.109 | 0.214 | 0.415 |

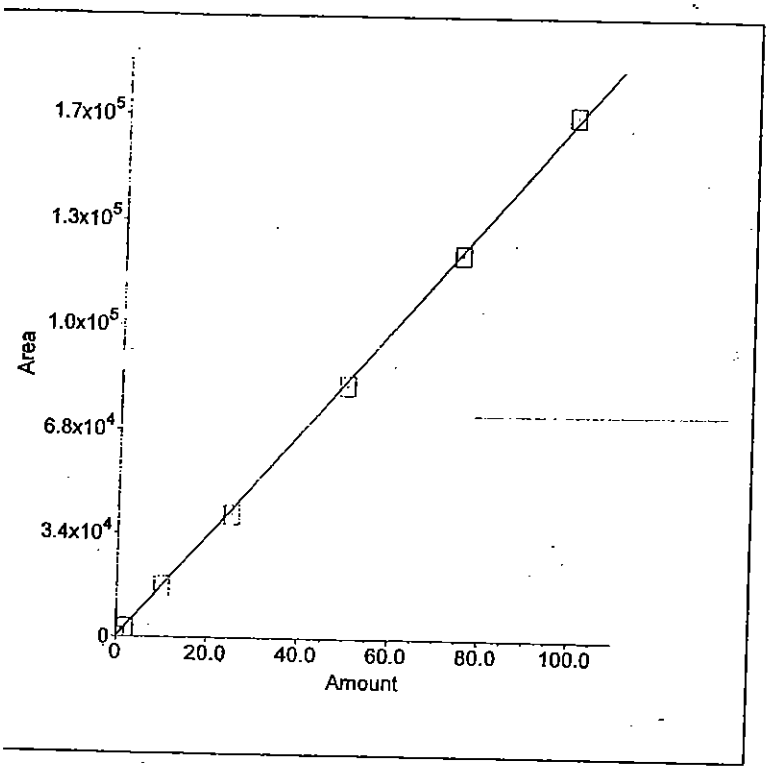
**A= 0.000 + 0.836C**

**A=Absorbance**

**C=Concentration (mg/L)**

**r= 0.9997**

1. Component:perchlorate
Standard:External Fit Type:Linear
Origin:Force Calibration:Area
$r^2$=0.999492
Amt=0.0005893*Resp+0




Calibration : 7 points , 0, 2, 10, 25, 50, 75, 100 ppb

Analyst C. W
Date 03/12/03
Instrument IC-1c

# APCL Perchlorate Analysis Report

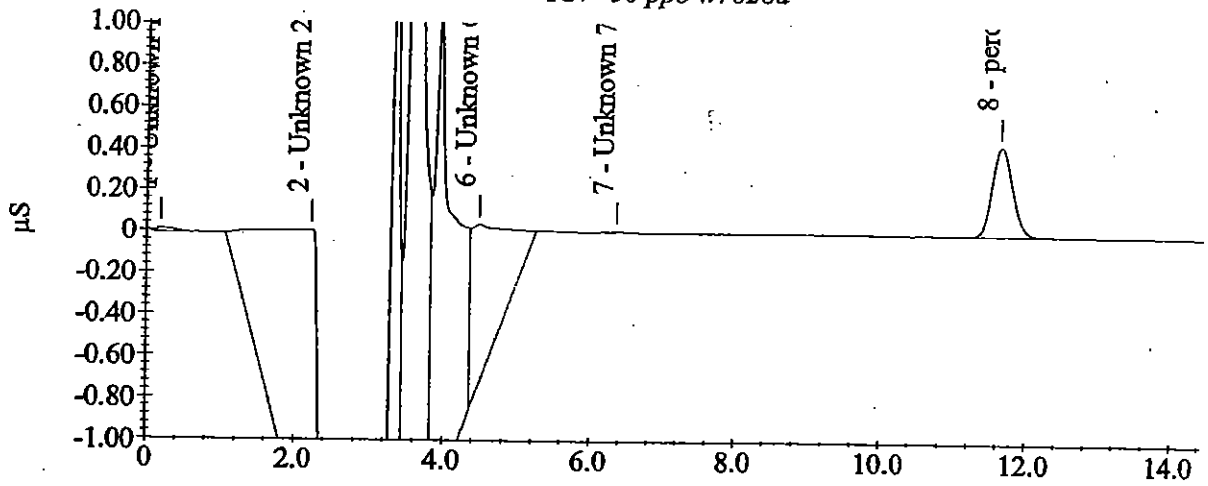
**Sample Name : ICV 50 ppb w7828a**
**Data File Name : C:\DATA\E314-011\icv-50pb_009.DXD**

Method File Name : C:\PEAKNET\METHOD\E314-011.met
Date Time Collected : 03/12/2003 8:16:15 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

| Peak # | Component Name | Retention Time | Amount (ppb) | Peak Area | Peak Height |
|---|---|---|---|---|---|
| 8 | perchlorate | 11.65 | 49.49 | 83990 | 4321 |

*ICV 50 ppb w7828a*



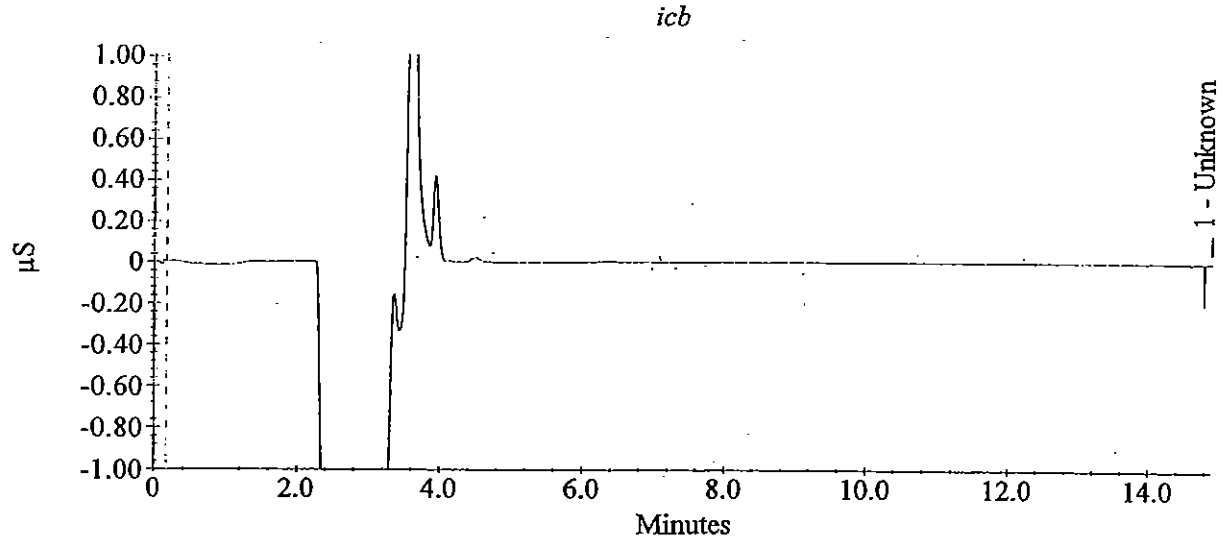
# APCL Perchlorate Analysis Report

**Sample Name : icb**
**Data File Name : C:\DATA\E314-011\ICB_010.DXD**

Method File Name : c:\PeakNet\method\E314-011.met
Date Time Collected : 03/12/2003 8:33:51 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

| Peak # | Component Name | Retention Time | Amount (ppb) | Peak Area | Peak Height |
|---|---|---|---|---|---|



# DIONEX METHOD PARAMETERS - E300-063.MET

Method Comment: APCL EPA 300 ANALYSIS DX-100
Column ID: Dionex AS4A-SC
Analyst ID: David

System Parameters

System Name: DX-100

| | |
|---|---|
| Number of Detectors | 1 |
| Run Time (minutes) | 10.00 |
| Sampling Rate (seconds) | 0.20 |
| Detector 1 Type | COND |
| Detector 1 real time plot scale maximum (uS ) | 30.000 |
| minimum | -3.000 |
| Detector 1 Output Equivalent to 1 Volt (in uS ) | 30.00 |
| Detector 1 ACI Analog Input Connection | DET1 |
| Save Data File | Yes |

Data File Name: C:\DX\DATA\03W1991\W1991Q01.D10

-- DETECTOR 1 PARAMETERS --

Report Options

| | |
|---|---|
| Create ASCII Report File | No |
| Print Report | Yes |
| Print All Components | Yes |
| Print Components Found | No |
| Print Missing Components | No |
| Print All Peaks | No |
| Print Unknown Peaks | No |
| Print Chromatogram | Yes |
| Autoscale Chromatogram Maximum | No |
| Autoscale Chromatogram Minimum | No |
| Fill Peaks with Color | No |
| Draw Grid Lines on Chromatogram | No |
| Show Component Fraction Numbers | No |
| Label with Peak Number | No |
| Label with Retention Times on Chromatogram | Yes |
| Label with Component Name | Yes |

Format File Name: C:\DX\METHOD\DEFAULT.PRF

Integration Parameters

| | |
|---|---|
| Starting Peak Width (seconds) | 10.0 |
| Peak Threshold | 2.000 |
| Peak Area Reject | 1000 |
| Area Reject for Reference Peaks | 1000 |

Data Events

| Time | Description |
|---|---|
| 0.13 | Start peak detection |
| 10.00 | Stop peak detection |

Calibration Parameters

| | |
|---|---|
| Number Of Levels for Calibration | 6 |
| Force Calibration Curve Through Origin | No |
| Calibration Fit Type | Linear |
| Replace Or Average Calibrations | Replace |
| External or Internal Calibration | External |
| Calculate Unknowns by Area or Height | Area |
| Default Sample Volume | 1.0 |
| Default Dilution Factor | 1.0 |
| Default Response Factor for Unknown Peaks | 0.0 |
| Calibration Standard Volume | 1.0 |
| Internal Standard Amount in Samples | 1.0 |
| Amount Units | ppm |

Component # 4 Bromide Retention Time 3.45
Reference Comp. Nitrate-N Window Size 0.20 min.
Amount = K0 + K1*Area
K0 = 4.58974E-002
K1 = 4.83279E-006

| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 7.50000E-002 | 13830 | 1488 |
| 2 | 1.50000E+000 | 298206 | 30100 |
| 3 | 3.00000E+000 | 591234 | 61776 |
| 4 | 6.00000E+000 | 1219933 | 128845 |
| 5 | 7.50000E+000 | 1559887 | 166594 |
| 6 | 0.00000E+000 | 0 | 0 |

Component # 5 Nitrate-N Retention Time 3.87
Reference Comp. Nitrate-N Window Size 0.25 min.
Amount = K0 + K1*Area
K0 = 4.24689E-002
K1 = 8.05553E-007

| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 3.75000E-002 | 40157 | 3802 |
| 2 | 7.50000E-001 | 849179 | 77129 |
| 3 | 1.50000E+000 | 1713421 | 152776 |
| 4 | 3.00000E+000 | 3610927 | 313707 |
| 5 | 3.75000E+000 | 4688990 | 396441 |
| 6 | 0.00000E+000 | 0 | 0 |

Component # 6 Phosphate-P Retention Time 6.38
Reference Comp. Phosphate-P Window Size 0.60 min.
Amount = K0 + K1*Area
K0 = 8.68926E-002
K1 = 2.12227E-006

| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 7.50000E-002 | 24783 | 1450 |
| 2 | 1.50000E+000 | 642376 | 38579 |
| 3 | 3.00000E+000 | 1301126 | 79971 |
| 4 | 6.00000E+000 | 2756481 | 168994 |
| 5 | 7.50000E+000 | 3546397 | 217521 |
| 6 | 0.00000E+000 | 0 | 0 |

Component Table -- Last Modified: 17:42 on Fri, 21 Mar 2003

Component # 1 Fluoride Retention Time 1.32
Reference Comp. Fluoride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = -9.62851E-004
K1 = 1.37614E-006

| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 2.50000E-002 | 28534 | 2732 |
| 2 | 5.00000E-001 | 373164 | 44629 |
| 3 | 1.00000E+000 | 707646 | 82595 |
| 4 | 2.00000E+000 | 1435865 | 173007 |
| 5 | 2.50000E+000 | 1837162 | 220914 |
| 6 | 0.00000E+000 | 0 | 0 |

Component # 2 Chloride Retention Time 1.97
Reference Comp. Chloride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = 1.28188E-001
K1 = 1.95287E-006

| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 1.00000E-001 | 51206 | 7044 |
| 2 | 2.00000E+000 | 909455 | 126181 |
| 3 | 4.00000E+000 | 1856586 | 261681 |
| 4 | 8.00000E+000 | 3987563 | 585791 |
| 5 | 1.00000E+001 | 5142155 | 754321 |
| 6 | 0.00000E+000 | 0 | 0 |

Component # 3 Nitrite-N Retention Time 2.33
Reference Comp. Chloride Window Size 0.15 min.
Amount = K0 + K1*Area
K0 = 2.38085E-002
K1 = 9.76240E-007

| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 3.75000E-002 | 30884 | 3582 |
| 2 | 7.50000E-001 | 734006 | 79701 |
| 3 | 1.50000E+000 | 1468106 | 162005 |
| 4 | 3.00000E+000 | 3021523 | 336616 |
| 5 | 3.75000E+000 | 3856614 | 429219 |
| 6 | 0.00000E+000 | 0 | 0 |

Component # 7 Sulfate Retention Time 7.92
Reference Comp. Sulfate Window Size 0.90 min.
Amount = K0 + K1*Area
K0 = 5.32283E-001
K1 = 2.53252E-006

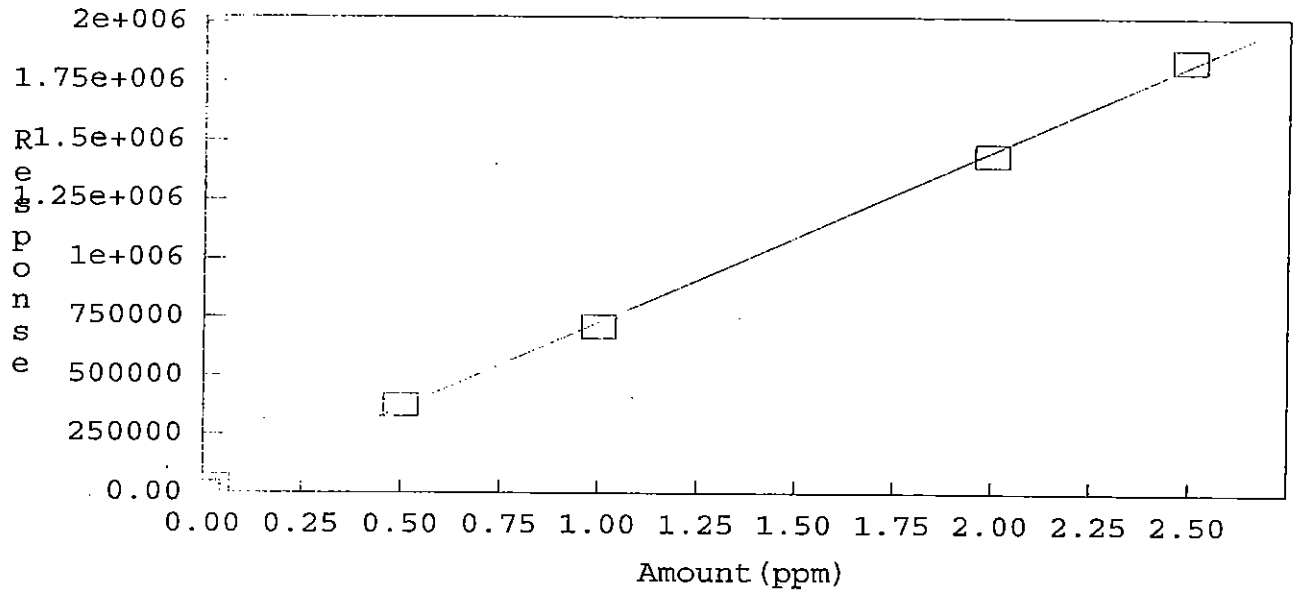
| Level | Amount | Area | Height |
|---|---|---|---|
| 1 | 3.76000E-001 | 129999 | 6524 |
| 2 | 7.50000E+000 | 2598757 | 138579 |
| 3 | 1.50000E+001 | 5330209 | 287851 |
| 4 | 3.00000E+001 | 11507107 | 615917 |
| 5 | 3.75000E+001 | 14859049 | 776426 |
| 6 | 0.00000E+000 | 0 | 0 |

Timed Events File: C:\DX\METHOD\W761CAL.TE

| Step | Time | Description |
|---|---|---|
| Init | | ACI Autosmp OFF |
| Init | | ACI pump st ON |
| Init | | ACI inject OFF |
| Init | | ACI auto zer OFF |
| Init | | ACI TTL 1 OFF |
| Init | | ACI TTL 2 OFF |
| Init | | ACI TTL 3 OFF |
| Init | | ACI TTL 4 OFF |
| Init | | ACI OFF |
| Init | | ACI OFF |
| 1 | 0.0 | ACI Autosmp ON |
| 1 | 0.0 | ACI auto zer ON |
| 2 | 2.5 | ACI Autosmp OFF |
| 2 | 2.5 | ACI inject ON |
| 2 | 2.5 | ACI TTL 1 ON |
| 2 | 2.5 | Start Sampling |

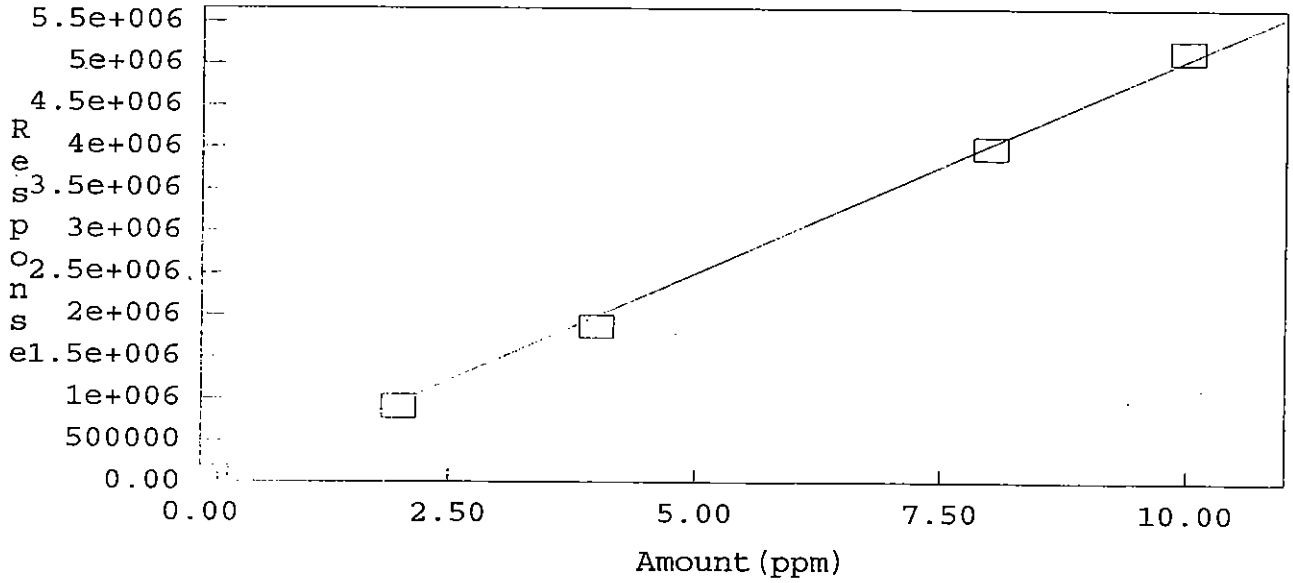
Method: E300-063.MET - Last Updated: 17:42 on Fri, 21 Mar 2003

Component: Fluoride
Fit Type: Linear
$r^2$ = 0.999552
Amt = Resp * 1.376e-006 + -0.000962
Resp = Amt * 7.267e+005 + 699.7
Standardization: External
Calibration: Area



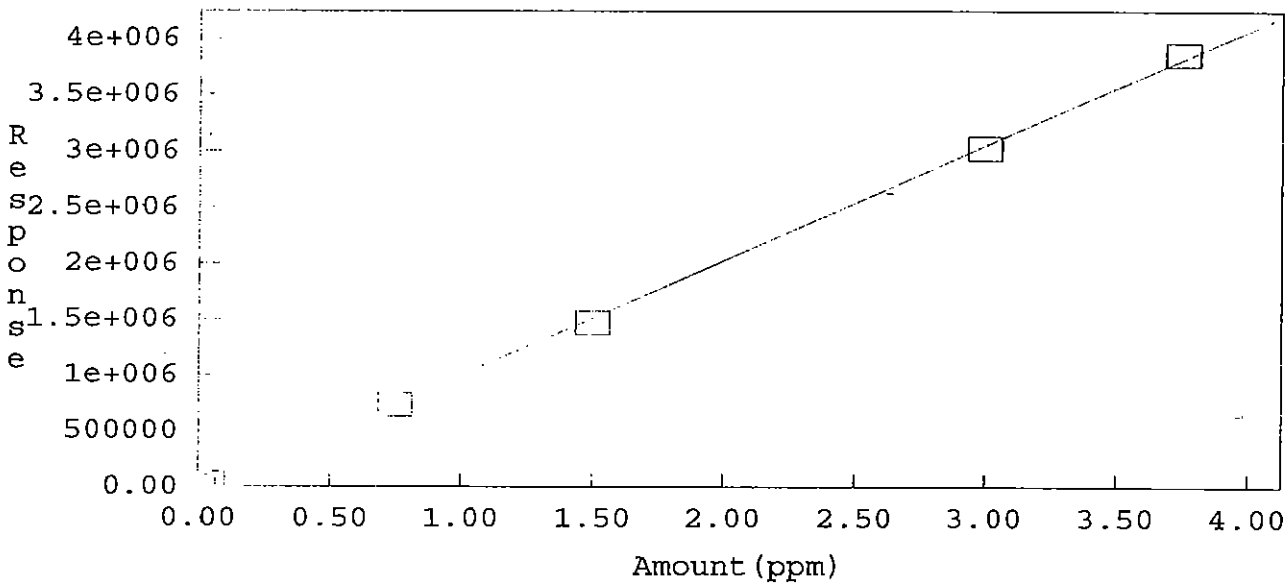

Method: C:\DX\METHOD\E300-063.MET

Component: Chloride
Fit Type: Linear
$r^2$ = 0.998409
Amt = Resp * 1.953e-006 + 0.1282
Resp = Amt * 5.121e+005 + -6.564e+00
Standardization: External
Calibration: Area



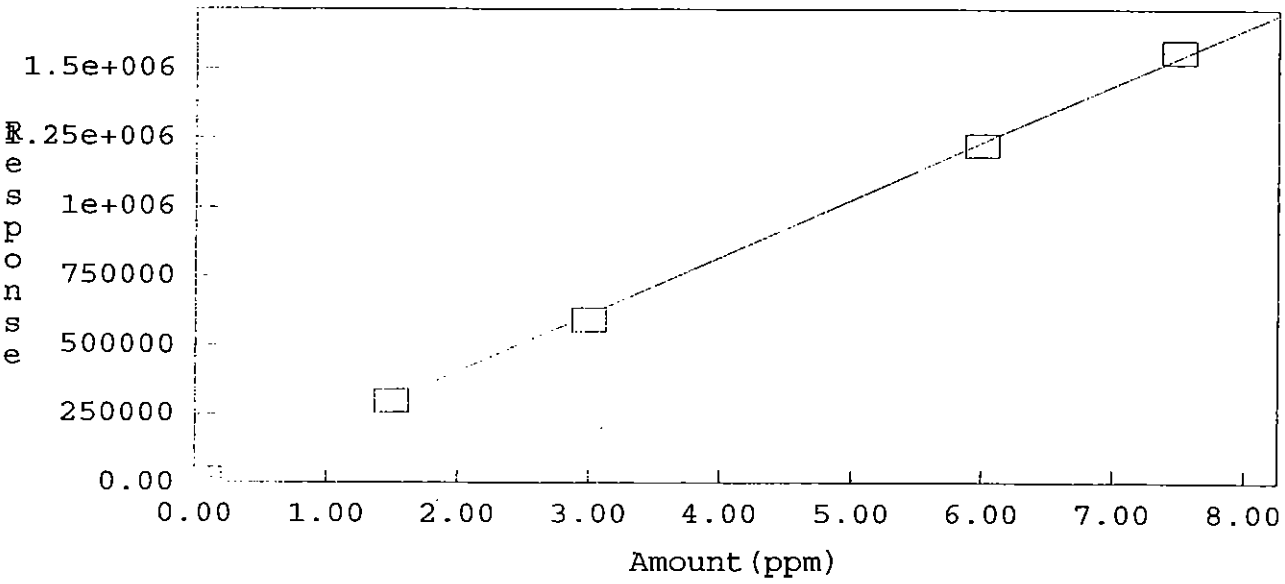
Method: C:\DX\METHOD\E300-063.MET

Component: Nitrite-N
Fit Type: Linear
$r^2$ = 0.999594
Amt = Resp * 9.762e-007 + 0.02381
Resp = Amt * 1.024e+006 + -2.439e+00
Standardization: External
Calibration: Area



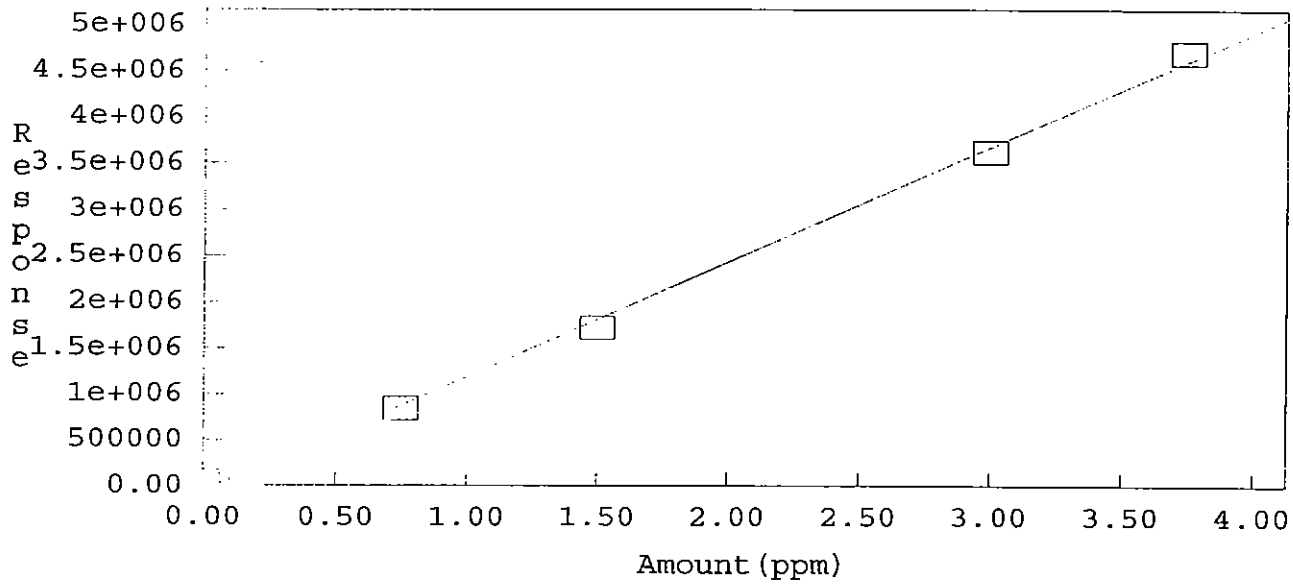

Method: C:\DX\METHOD\E300-063.MET

Component: Bromide
Fit Type: Linear
$r^2$ = 0.999518
Amt = Resp * 4.833e-006 + 0.0459
Resp = Amt * 2.069e+005 + -9497
Standardization: External
Calibration: Area



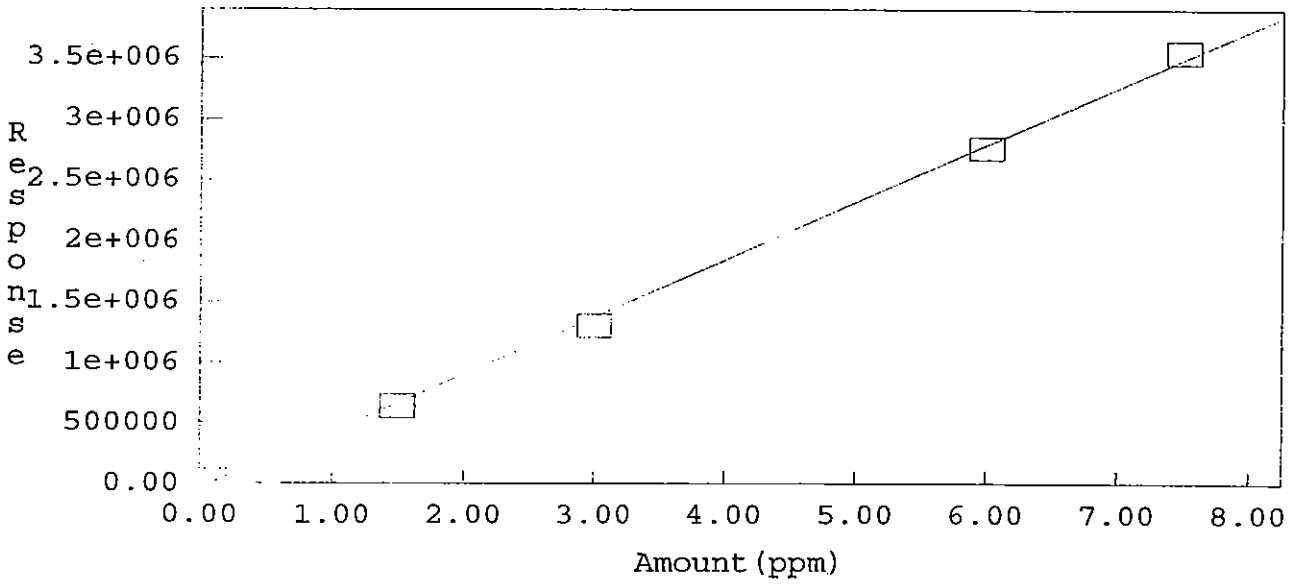
Method: C:\DX\METHOD\E300-063.MET

Component: Nitrate-N
Fit Type: Linear
$r^2$ = 0.998618
Amt = Resp * 8.056e-007 + 0.04247
Resp = Amt * 1.241e+006 + -5.272e+00
Standardization: External
Calibration: Area



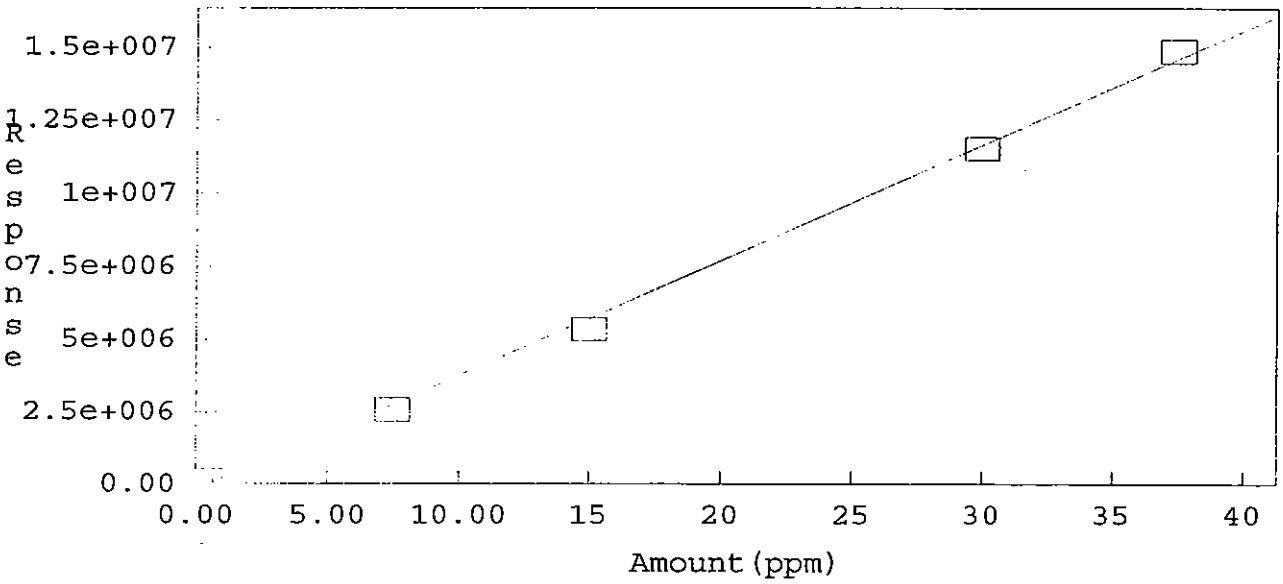

Method: C:\DX\METHOD\E300-063.MET

Component: Phosphate-P
Fit Type: Linear
$r^2$ = 0.998898
Amt = Resp * 2.122e-006 + 0.08689
Resp = Amt * 4.712e+005 + -4.094e+00
Standardization: External
Calibration: Area



Method: C:\DX\METHOD\E300-063.MET

Component: Sulfate
Fit Type: Linear
$r^2$ = 0.998245
Amt = Resp * 2.533e-006 + 0.5323
Resp = Amt * 3.949e+005 + -2.102e+00
Standardization: External
Calibration: Area

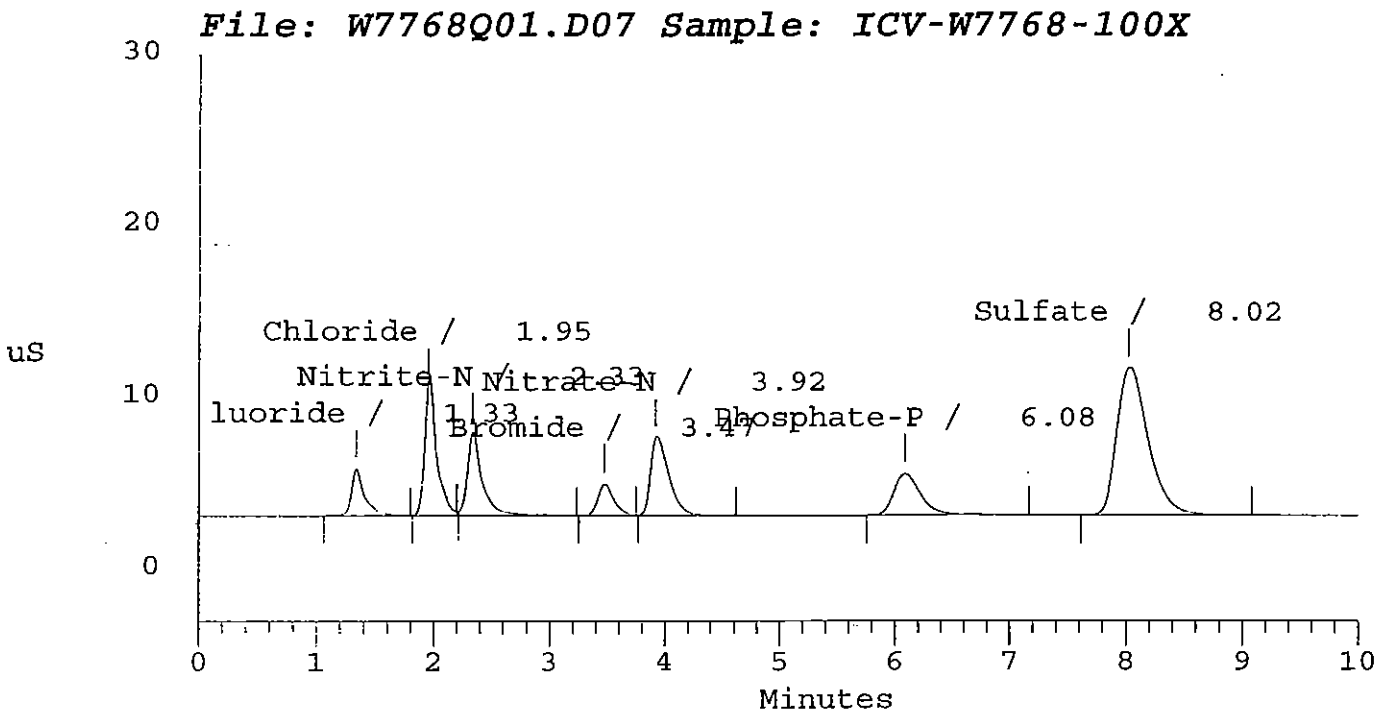


```
==========================================================================
| Sample Name: ICV-W7768-100X                  Date: 03/21/2003 17:56:33  |
| Data File  : C:\DX\DATA\e300-063\W7768Q01.D07                          |
| Method     : C:\DX\METHOD\E300-063.MET                                 |
| ACI Address: 1  System: 1  Inject#: 7                Detector:COND     |
| Analyst    : David          Column: Dionex AS4A-SC                     |
==========================================================================
```

| Calibration | Volume | Dilution | Points | Rate | Start | Stop | Area | Reject |
|---|---|---|---|---|---|---|---|---|
| External | 1 | 1 | 3000 | 5Hz | 0.00 | 10.00 | 1000 | |

********** Component Report: All Components **********

| Pk. Num | Ret Time | Component Name | Concentration ppm | Height | Area | Bl. Code | %Delta |
|---|---|---|---|---|---|---|---|
| 1 | 1.33 | Fluoride | 0.999 | 89896 | 726672 | 2 | 0.00 |
| 2 | 1.95 | Chloride | 3.767 | 248158 | 1863483 | 2 | 0.00 |
| 3 | 2.33 | Nitrite-N | 1.445 | 160603 | 1455681 | 2 | 1.17 |
| 4 | 3.47 | Bromide | 2.881 | 61007 | 586729 | 2 | -0.71 |
| 5 | 3.92 | Nitrate-N | 1.410 | 149958 | 1697030 | 2 | 0.00 |
| 6 | 6.08 | Phosphate-P | 2.852 | 79916 | 1302965 | 1 | 0.00 |
| 7 | 8.02 | Sulfate | 13.993 | 285121 | 5314983 | 1 | 0.00 |
| | | Totals | 27.347 | 1074659 | 12947545 | | |

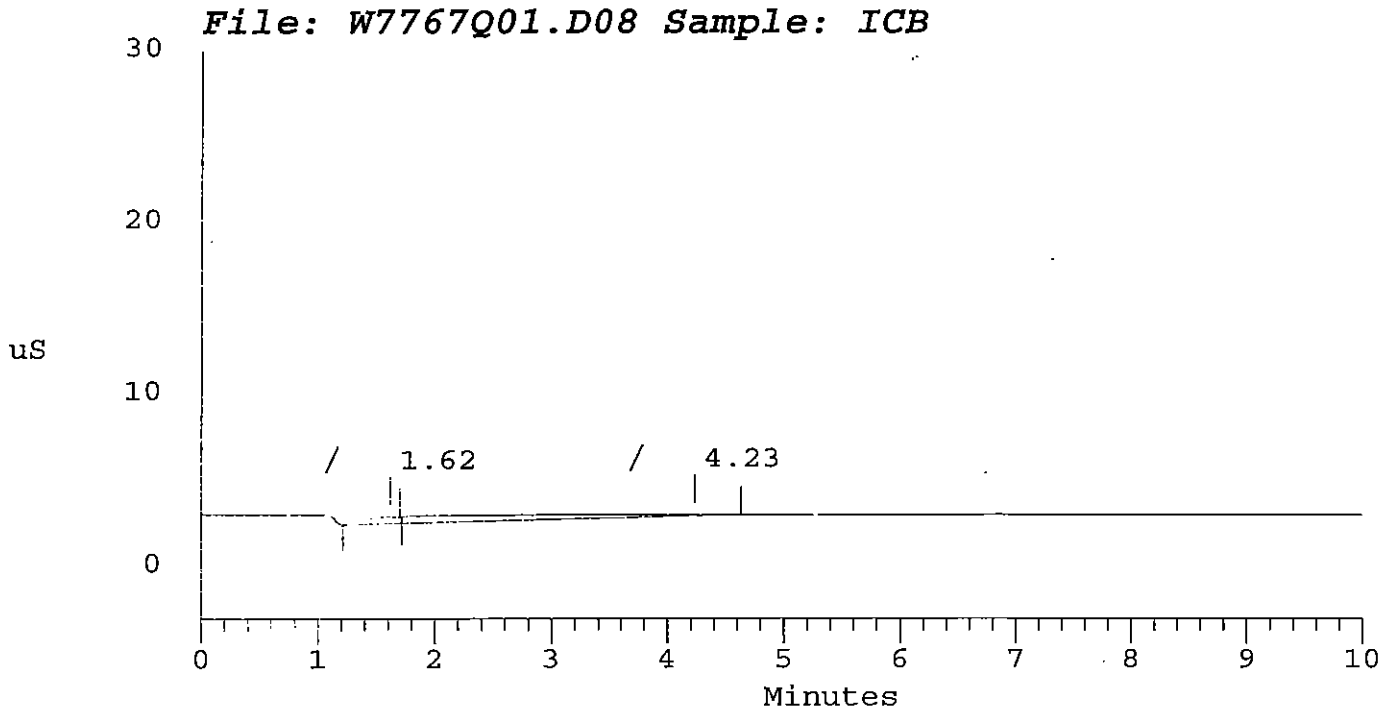


```
==============================================================================
| Sample Name: ICB                                Date: 03/21/2003 18:21:00   |
| Data File  : C:\DX\DATA\E300-063\W7767Q01.D08                               |
| Method     : C:\DX\METHOD\E300-063.MET                                      |
| ACI Address: 1  System: 1  Inject#: 8                    Detector:COND      |
| Analyst    : David          Column: Dionex AS4A-SC                          |
==============================================================================
```

| Calibration | Volume | Dilution | Points | Rate | Start | Stop | Area | Reject |
|---|---|---|---|---|---|---|---|---|
| External | 1 | 1 | 3000 | 5Hz | 0.00 | 10.00 | 1000 | |

********** Component Report: All Components **********

| Pk. Num | Ret Time | Component Name | Concentration ppm | Height | Area | Bl. Code | %Delta |
|---|---|---|---|---|---|---|---|
| 0 | 0.00 | Fluoride | 0.000 | 0 | 0 | 0 | 0.00 |
| 0 | 0.00 | Chloride | 0.000 | 0 | 0 | 0 | 0.00 |
| 0 | 0.00 | Nitrite-N | 0.000 | 0 | 0 | 0 | 0.00 |
| 0 | 0.00 | Bromide | 0.000 | 0 | 0 | 0 | 0.00 |
| 0 | 0.00 | Nitrate-N | 0.000 | 0 | 0 | 0 | 0.00 |
| 0 | 0.00 | Phosphate-P | 0.000 | 0 | 0 | 0 | 0.00 |
| 0 | 0.00 | Sulfate | 0.000 | 0 | 0 | 0 | 0.00 |
| | | Totals | 0.000 | 0 | 0 | | |



FORM-7

Applied P & Ch Laboratory

# CCV Recovery for Wet Analysis

Client Name: GEOFON, Inc. Contract No.: Lab Code: APCL
Case No: SAS No.: Service ID: 33082
Project ID: JPL Project No.: 04-4428.10

| # | Component Name | Method | Batch No. | Unit | Expe-cted | Test Result | Rec. % | Dev. % | Flag | Control Limit, % | Test Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Chloride $Cl^-$ | 300.0 | 03W2750 | mg/L | 4.0 | 4.29 | 107 | 7 | √ | 90-110 | 05/07/2003 |
| | NITRATE as N-$NO_3^-$, BY | 300.0 | 03W2750 | mg/L | 1.5 | 1.56 | 104 | 4 | √ | 90-110 | 05/07/2003 |
| | SULFATE $SO_4^{--}$, BY I | 300.0 | 03W2750 | mg/L | 15 | 15.3 | 102 | 2 | √ | 90-110 | 05/07/2003 |
| | Chloride $Cl^-$ | 300.0 | 03W2750 | mg/L | 4.0 | 4.20 | 105 | 5 | √ | 90-110 | 05/07/2003 |
| | NITRATE as N-$NO_3^-$, BY | 300.0 | 03W2750 | mg/L | 1.5 | 1.57 | 104 | 4 | √ | 90-110 | 05/07/2003 |
| | SULFATE $SO_4^{--}$, BY I | 300.0 | 03W2750 | mg/L | 15 | 15.6 | 104 | 4 | √ | 90-110 | 05/07/2003 |
| | Chloride $Cl^-$ | 300.0 | 03W2750 | mg/L | 4.0 | 4.06 | 102 | 2 | √ | 90-110 | 05/07/2003 |
| | NITRATE as N-$NO_3^-$, BY | 300.0 | 03W2750 | mg/L | 1.5 | 1.58 | 105 | 5 | √ | 90-110 | 05/07/2003 |
| | SULFATE $SO_4^{--}$, BY I | 300.0 | 03W2750 | mg/L | 15 | 15.5 | 104 | 4 | √ | 90-110 | 05/07/2003 |
| 2 | Perchlorate | 314.0 | 03W2804 | μg/L | 50 | 49.9 | 100 | 0 | √ | 90-110 | 05/09/2003 |
| | Perchlorate | 314.0 | 03W2804 | μg/L | 50 | 51.1 | 102 | 2 | √ | 90-110 | 05/09/2003 |
| | Perchlorate | 314.0 | 03W2804 | μg/L | 50 | 51.1 | 102 | 2 | √ | 90-110 | 05/09/2003 |
| | Perchlorate | 314.0 | 03W2804 | μg/L | 50 | 52.3 | 105 | 5 | √ | 90-110 | 05/09/2003 |
| 3 | Chromium (VI) | 7196 | 03W2737 | mg/L | 0.25 | 0.244 | 98 | -2 | √ | 90-110 | 05/06/2003 |
| | Chromium (VI) | 7196 | 03W2737 | mg/L | 0.25 | 0.255 | 102 | 2 | √ | 90-110 | 05/06/2003 |

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# pH ( 150.1/9045B ) Worksheet

**Temperature compensation must be performed by the instrument automatically.** Analyst M SOP: G-44

| Batch # 03W2734 | Analysis Date: 5/6/03 | Batch # 03W2740 | Analysis Date: 5/6/03 |
|---|---|---|---|
| Starting Time: 11:37 | Ending Time: ___:___ | Starting Time: 16:19 | Ending Time: ___:___ |
| Matrix ☐ Aaueous ☒ Soil | | Matrix ☐ Aaueous ☒ Soil | |

| Standard | 4.00 | 7.00 | 10.00 | Standard | 4.00 | 7.00 | 10.00 |
|---|---|---|---|---|---|---|---|
| Lot # | | 2120 | 030689-24 | Lot # | | 2120 | 030689-24 |
| Temperature °C | | 24.2 | 24.2 | Temperature °C | | 24.0 | 24.0 |
| pH Reading | | 7.01 | 10.00 | pH Reading | | 7.02 | 10.02 |
| T-corrected pH | | 7.00 | 10.01 | T-corrected pH | | 7.00 | 10.01 |
| Control Limit | ±0.05 pH unit | | | Control Limit | ±0.05 pH unit | | |

| # | Sample ID | Pre-treat | pH | Note | # | Sample ID | Pre-treat | pH | Note |
|---|---|---|---|---|---|---|---|---|---|
| MB | 0577MB | | 6.86 | 1:1 | MB | T1115 | | 6.84 | |
| 1 | 3016-1 | | 7.66 | | 1 | 3082-1 | | 6.95 | |
| 2 | -2 | | 7.55 | | 2 | -2 | | 7.85 | |
| 3 | -3 | | 7.95 | | 3 | -3 | | 8.08 | |
| 4 | -4 | | 7.88 | | 4 | -4 | | 7.95 | |
| 5 | 2979-1 | | | | 5 | -5 | | 8.77 | |
| 6 | -2 | 5/6/03 | | | 6 | -6 | | 8.43 | |
| 7 | -3 | M | | | 7 | 3090-1 | | 7.11 | |
| 8 | -4 | | | | 8 | -2 | | 7.22 | |
| 9 | -5 | | | | 9 | -3 | | 7.62 | |
| 10 | -6 | | | | 10 | -4 | | 8.11 | |
| 11 | 3000-1 | | | | 11 | | | | |
| 12 | | | | | 12 | | | | |
| 13 | | | | | 13 | | | | |
| 14 | | | | | 14 | | | | |
| 15 | | | | | 15 | | | | |
| 16 | | | | | 16 | | | | |
| 17 | | | | | 17 | | | | |
| 18 | | | | | 18 | | | | |
| 19 | | | | | 19 | | | | |
| 20 | | | | | 20 | | | | |
| | 3016-1 | | 7.72 | 1:1 | Dup. | 3090-1 | | 7.15 | |

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# Alkalinity/OH/$CO_3$/$HCO_3$ ( 310.1/SM2320B ) Worksheet



Batch # 03W2817 Matrix: W Titrant $H_2SO_4$ Lot # W7900 Concentration (C) 0.02455 N; Test Date: 1/16/03 Analyst: [illegible] SOP: G-51

| # | Sample ID | Dilution $V_f/V_i=f_1$ | Smpl Amnt V, mL | $H_2SO_4$ (mL) by Phnln $S_A$ | $E_A$ | A | $H_2SO_4$ (mL) by MR-BCG $S_B$ | $E_B$ | B | Phnln-Alk., P | Tot. Alk., T (in unit of mg$CaCO_3$/L) | $OH^-$ | $CO_3^{2-}$ | $HCO_3^-$ | Note & Anomaly |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MB: T116 | 1 = | 100 | | | 0 | | | 0 | | 0 | 0 | 0 | 0 | |
| 2 | LCS | 1 = | 100 | | | | | | 7.90 | | 100.9 | | | | |
| 3 | LCSD | 1 = | 100 | | | | | | 7.90 | | 100.9 | | | | |
| 4 | 3082-1 | 1 = | 50.0 | | | 0 | | | 0 | | 0 | 0 | 0 | 0 | |
| 5 | -2 | 1 = | 50.0 | | | 0 | | | 8.15 | | 208.2 | 0 | 0 | 208.2 | |
| 6 | -3 | 1 = | 50.0 | | | 0.05 | | | 6.75 | 1.3 | 173.7 | 0 | 2.6 | 171.1 | |
| 7 | -4 | 1 = | 50.0 | | | 0 | | | 6.90 | | 176.3 | 0 | 0 | 176.3 | |
| 8 | -5 | 1 = | 50.0 | | | 0.40 | | 3.55 1/16/03 | ~~3.50~~ | 10.2 | 100.9 | 0 | 20.4 | 80.5 | |
| 9 | -6 | 1 = | 50.0 | | | 0.10 | | | 4.55 | 2.6 | 118.8 | 0 | 5.2 | 113.6 | |
| 10 | 3130-1 | 1 = | 50.0 | | | 0 | | | 0 | | 0 | 0 | 0 | 0 | |
| 11 | -2 | 1 = | 50.0 | | | 0 | | | 10.60 | | 270.8 | 0 | 0 | 270.8 | |
| 12 | -3 | 1 = | 50.0 | | | 0.05 | | | 5.85 | 1.3 | 150.7 | 0 | 2.6 | 148.1 | |
| 13 | -4 | 1 = | 50.0 | | | 0.10 | | | 5.20 | 2.6 | 135.4 | 0 | 5.2 | 130.2 | |
| 14 | -5 | 1 = | 50.0 | | | 0.05 | | | 5.70 | 1.3 | 146.9 | 0 | 2.6 | 114.3 | |
| 15 | -6 | 1 = | 50.0 | | | 1.50 | | | 3.45 | 38.3 | 126.5 | 0 | 76.6 | 49.9 | |
| 16 | | 1 = | | | | | | | | | | | | | |
| 17 | | 1 = | | | | | | | | | | | | | |
| 18 | | 1 = | | | | | | | | | | | | | |
| 19 | | 1 = | | | | | | | | | | | | | |
| 20 | | 1 = | | | | | | | | | | | | | |
| Dup. | 3082-2 | 1 = | 50.0 | | | 0 | | | 8.20 | | 209.5 | 0 | 0 | 209.5 | |

| Titration Results | $OH^-$ ($CaCO_3$ mg/L) | $CO_3^{2-}$ ($CaCO_3$ mg/L) | $HCO_3^-$ ($CaCO_3$ mg/L) |
|---|---|---|---|
| P=0 | 0 | 0 | T |
| P<T/2 | 0 | 2P | T-2P |
| P=T/2 | 0 | 2P | 0 |
| P>T/2 | 2P-T | 2(T-P) | 0 |
| P = T | T | 0 | 0 |

**Calculation:**

$A=S_A-E_A$

$B=S_B-E_B$

$P=50{,}000\ f_1\ A\ C\ /V$

$T=50{,}000\ f_1\ (A+B)\ C\ /V$

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# Chromium (VI) ( 7196 ) Worksheet

Batch # 03W2737 Matrix: W [ Holding Time: 24 hours!! ] Test Date: 5/6/03 Analyst: [illegible]

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: 13:25 SOP: G-22

| Calibration | STD Lot # | $C_{std} \times V_{std}/V_f = C_i$ | $A_i$ | $RF_i = A_i/C_i$ | Calibration results | Note |
|---|---|---|---|---|---|---|
| STD-1 | W- | × / = mg/L | | | Least Square [RF]= | Cal. Code: |
| STD-2 | W- | × / = mg/L | | | Average $\bar{RF}$= | |
| STD-3 | W- | × / = mg/L | | | C.C.=0.997 (≥ 0.995) | |
| STD-4 | W- | × / = mg/L | | | RSD= % (≤ 15%) | |
| STD-5 | W- | × / = mg/L | | | Ref. page | |
| STD-6 | W- | × / = mg/L | | | A=0.000+0.8266 | |

| Analysis Type | Sample ID or Lot # | Samp. Amnt $X_0$ (g or mL) | Dilu./Ext $X/X_0=f_1$ | Treat. Ratio $V/X=f_2$ | 540 nm A | Concentration $C'=A/\bar{RF}$ | C (Sample) $C=f_1 f_2 C'$ | Anomaly Note |
|---|---|---|---|---|---|---|---|---|
| CCV | Lot: W-7853 | Expected Conc.: | × | / =0.25 mg/L | 0.204 | 0.244 mg/L | REC. % | 90-110 % |
| Method Blank | Bl. Lot: T116 | | /$X_0$ = 1 | 95.0/ = | 0.000 | mg/L | 0.000 ppm | |
| LCS1 | Bl. Lot: " | | /$X_0$ = 1 | 95.0/ = | 0.211 | mg/L | 0.252 ppm | |
| Sample-1 | 3082-1 | | /$X_0$ = | 95.0/ = | 0.000 | mg/L | 0.000 ppm | |
| MS on S-1 | 4 | | /$X_0$ = | 95.0/ = | 0.193 | mg/L | 0.231 ppm | |
| MSD on S-1 | 4 | | /$X_0$ = | 95.0/ = | 0.190 | mg/L | 0.227 ppm | |
| Sample 2 | 2 | | /$X_0$ = | 95.0/ = | 0.003 | mg/L | 0.004 ppm | |
| Sample 3 | 3 | | /$X_0$ = | 95.0/ = | 0.003 | mg/L | 0.004 ppm | |
| Sample 4 | 4 | | /$X_0$ = | 95.0/ = | 0.003 | mg/L | 0.004 ppm | |
| Sample 5 | 5 | | /$X_0$ = | 95.0/ = | 0.001 | mg/L | 0.001 ppm | |
| Sample 6 | 6 | | /$X_0$ = | 95.0/ = | 0.001 | mg/L | 0.001 ppm | |
| Sample 7 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 8 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 9 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 10 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Blank | Lot: | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| LCS2 | Bl. Lot: T116 | | /$X_0$ = 1 | 95.0/ = | 0.206 | mg/L | 0.246 ppm | |
| Sample 11 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 12 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 13 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 14 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 15 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 16 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 17 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 18 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 19 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 20 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| MTX Dup. | closing 0.25 mg/L | | /$X_0$ = | 95.0/ = | 0.213 | 0.255 mg/L | ppm | |

| Type | STD Lot # | $C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$ | Spike Rec. | Ctl Limit (W/S) |
|---|---|---|---|---|
| MS | W-7853 | × / = 0.25 ppm | % | 80-120 %/80-120 % |
| MSD | W- | × / = ppm | % | .. .. |
| LCS | W-7759 | × / = ppm | % | 80-120 %/80-120 % |
| LCSD | W- | × / = ppm | % | .. .. |

| PQL/MDL (in ppm) | |
|---|---|
| PQL(w) | 0.01 |
| PQL(s) | 0.05 |
| MDL(w) | 0.005 |
| MDL(s) | 0.025 |

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# Chromium (VI) ( 7196 ) Worksheet

Batch # 03W1295 Matrix: W [ Holding Time: 24 hours!! ] Test Date: 1/29/03 Analyst: BN

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: _____ SOP: G-22

| Calibration | STD Lot # | $C_{std} \times V_{std} / V_f = C_i$ | $A_i$ | $RF_i = A_i / C_i$ | Calibration results | Note |
|---|---|---|---|---|---|---|
| STD-1 | W-7191 | × / =0.000mg/L | 0.000 | | Least Square [RF]= | Cal. Code: |
| STD-2 | W- | × / =0.012mg/L | 0.006 | | Average $\bar{RF}$= | A=0.000+0.836C |
| STD-3 | W- | × / =0.050mg/L | 0.041 | | C.C.=0.9977 (≥ 0.995) | |
| STD-4 | W- | × / =0.125mg/L | 0.109 | | RSD= % (≤ 15%) | |
| STD-5 | W- | × / =0.250mg/L | 0.214 | | Ref. page | |
| STD-6 | W- | × / =0.500mg/L | 0.415 | | A=0.003+0.81Cmg/L | |

| Analysis Type | Sample ID or Lot # | Samp. Amnt $X_0$ (g or mL) | Dilu./Ext $X/X_0=f_1$ | Treat. Ratio $V/X=f_2$ | 540 nm A | Concentration $C'=A/\bar{RF}$ | C (Sample) $C=f_1 f_2 C'$ | Anomaly Note |
|---|---|---|---|---|---|---|---|---|
| CCV | Lot: W-7076. | Expected Conc.: | × | / =0.25 mg/L | 0.216 | 0.258 mg/L | REC. % | 90-110 % |
| Method Blank | Bl. Lot: T1115 | | /$X_0$ = 1 | 95.0/ = | 0.000 | mg/L | 0.00 ppm | |
| LCS1 | Bl. Lot: " | | /$X_0$ = | 95.0/ = | 0.209 | mg/L | 0.244 ppm | |
| Sample-1 | 1369-1 | | /$X_0$ = | 95.0/ = | 0.000 | mg/L | 0.00 ppm | |
| MS on S-1 | 6 | | /$X_0$ = | 95.0/ = | 0.223 | mg/L | 0.266 ppm | |
| MSD on S-1 | 6 | | /$X_0$ = | 95.0/ = | 0.230 | mg/L | 0.275 ppm | |
| Sample 2 | 2 | | /$X_0$ = | 95.0/ = | 0.004 | mg/L | 0.005 ppm | |
| Sample 3 | 3 | | /$X_0$ = | 95.0/ = | 0.002 | mg/L | 0.002 ppm | |
| Sample 4 | 4 | | /$X_0$ = | 95.0/ = | 0.001 | mg/L | 0.001 ppm | |
| Sample 5 | 5 | | /$X_0$ = | 95.0/ = | 0.002 | mg/L | 0.002 ppm | |
| Sample 6 | 6 | | /$X_0$ = | 95.0/ = | 0.004 | mg/L | 0.005 ppm | |
| Sample 7 | - | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 8 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 9 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 10 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Blank | Lot: | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| LCS2 | Bl. Lot: T1115 | | /$X_0$ = 1 | 95.0/ = | 0.210 | mg/L | 0.251 ppm | |
| Sample 11 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 12 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 13 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 14 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 15 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 16 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 17 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 18 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 19 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| Sample 20 | | | /$X_0$ = | 95.0/ = | | mg/L | ppm | |
| MTX Dup. | closing 0.25mg/L | | /$X_0$ = | 95.0/ = | 0.204 | mg/L | 0.248 ppm | |

| Type | STD Lot # | $C_{STD}(\mu g/mL) \times V_{STD}(mL) / X(g \text{ or } mL) = T$ | Spike Rec. | Ctl Limit (W/S) |
|---|---|---|---|---|
| MS | W-7076 | × / =0.25 ppm | % | 80-120 %/80-120 % |
| MSD | W- | × / = ppm | % | .. .. |
| LCS | W-7191 | × / = ppm | % | 80-120 %/80-120 % |
| LCSD | W- | × / = ppm | % | .. .. |

| PQL/MDL (in ppm) | |
|---|---|
| PQL(w) | 0.01 |
| PQL(s) | 0.05 |
| MDL(w) | 0.005 |
| MDL(s) | 0.025 |

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# Solid Analysis ( 160.1, 160.2, 160.3 ) Worksheet

Batch # 13W2783 Matrix W Method: 160.1 Balance No. _____ Date: 5/8/03 Analyst: DC

**EPA 160.1** TDS – Total Dissolved (filterable) Solids — Dry for 1hr. or more at 180 °C

**EPA 160.2** TSS – Total Suspended (nonfilterable) Soilds — Dry for 1hr. or more at 103-105 °C

**EPA 160.3** TS – Total Solids — Dry for 1hr. or more at 103-105 °C

**Other method** (specify):

Result= $10^6 \times \Delta W \times f_1 / V$ SOP: G-81

| # | Analysis Type | Sample ID (STD Lot #) | Treatment Ratio $V_f/X=f_1$ | Volume $V$, mL | $W_1$ g | $W_2$ 1st, g | $W_2$ 2nd, g | $\Delta W = W_2 - W_1$, g | Results (ppm) | Note |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Blank | T116 | 1 = | 100 | 115.3129 | 115.3129 | 115.3130 | 0.0001 | 1 | 38 |
| 2 | LCS | T116 | 1 = | 100 | 114.1692 | 114.2106 | 114.2104 | 0.0412 | 412 | 41 |
| 3 | Sample-1 | 3112-2 | 1 = | 100 | 108.5429 | 108.5762 | 108.5764 | 0.0335 | 335 | 1P |
| 4 | MS on S-1 | 3082-4 | 1 = | 100 | 115.1120 | 115.1752 | 115.1751 | 0.0631 | 631 | G |
| 5 | MSD on S-1 | ↓ -4 | 1 = | 100 | 114.7521 | 114.8142 | 114.8140 | 0.0619 | 619 | XX |
| 6 | Sample-2 | 3113-7 | 1 = | 100 | 112.2714 | 112.3019 | 112.3018 | 0.0304 | 304 | 24 |
| 7 | Sample-3 | 3105-1 | 1 = | 100 | 114.7844 | 114.8381 | 114.8380 | 0.0536 | 536 | 12 |
| 8 | Sample-4 | -2 | 1 = | 100 | 111.7980 | 111.8336 | 111.8334 | 0.0354 | 354 | R |
| 9 | Sample-5 | -3 | 1 = | 100 | 112.9022 | 112.9440 | 112.9439 | 0.0417 | 417 | 本 |
| 10 | Sample-6 | ↓ -4 | 1 = | 100 | 117.8990 | 117.9218 | 117.9217 | 0.0227 | 227 | 7 |
| 11 | Sample-7 | 3102-1 | 1 = | 100 | 116.0654 | 116.0921 | 116.0920 | 0.0266 | 266 | 31 |
| 12 | Sample-8 | -2 | 1 = | 100 | 117.6086 | 117.6089 | 117.6088 | 0.0002 | 2 | XS |
| 13 | Sample-9 | -3 | 1 = | 100 | 116.9500 | 116.9869 | 116.9868 | 0.0368 | 368 | W |
| 14 | Sample-10 | -4 | 1 = | 100 | 99.0897 | 99.1213 | 99.1213 | 0.0316 | 316 | Y2 |
| 15 | LCSD | T116 | 1 = | 100 | 103.9474 | 103.9864 | 103.9864 | 0.0390 | 390 | 14 |
| 16 | Sample-11 | 3102-5 | 1 = | 100 | 103.5398 | 103.5647 | 103.5646 | 0.0248 | 248 | 76 |
| 17 | Sample-12 | -6 | 1 = | 100 | 114.3109 | 114.3387 | 114.3386 | 0.0277 | 277 | 14 |
| 18 | Sample-13 | -7 | 1 = | 100 | 115.3243 | 115.3493 | 115.3495 | 0.0252 | 252 | 12 |
| 19 | ~~Sample-14~~ | ~~3082-1~~ | ~~3082-1~~ | 100 | 116.6615 | 116.6617 | 116.6616 | 0.0001 | 1 | ZS |
| 20 | Sample-15 | 3082-2 | 1 = | 100 | 115.1376 | 115.1698 | 115.1699 | 0.0323 | 323 | 10 |
| 21 | Sample-16 | -3 | 1 = | 100 | 115.2417 | 115.2635 | 115.2632 | 0.0215 | 215 | J |
| 22 | Sample-17 | ↓ -4 | 1 = | 100 | 107.7129 | 107.7354 | 107.7351 | 0.0222 | 222 | O |
| 23 | ~~Sample-18~~ | ~~3086-1~~ | 5/8/03 DC | 100 | 105.9092 | 105.9848 | 105.9848 | 0.0756 | 756 | 19 |
| 24 | Sample-19 | 3082-5 | 1 = | 100 | 121.3345 | 121.3486 | 121.3465 | 0.0120 | 120 | I |
| 25 | Sample-20 | ↓ -6 | 1 = | 100 | 115.8921 | 115.9079 | 115.9077 | 0.0156 | 156 | CK |
| 26 | Mtx Dup. | | 1 = | | | | | | | |

| Type | STD Lot # | $C_{STD}(\mu g/mL) \times V_{STD}(mL)/X(g \text{ or } mL) = T$ | Spike Rec. | Ctl Limit (W/S) |
|---|---|---|---|---|
| LCS | W- 7618 | × 1 = 400 ppm | % | 85-115 %/80-120 % |
| LCSD | W- ↓ | × 1 = ↓ ppm | % | .. .. |
| MS | W- 7619 | × 1 = ppm | % | 90-110 %/85-115 % |
| MSD | W- ↓ | × 1 = ppm | % | .. .. |

| PQL/MDL (in ppm) | |
|---|---|
| PQL(w) | 10 |
| PQL(s) | 50 |
| MDL(w) | 4 |
| MDL(s) | 20 |

Form S-127, March 7, 1995. Ver. 3.0 No pencil. Use blue pen for record. Use red pen for correction.

GUST.DOC.WET|TDS .TEX ROOT-FILE: TDS_ROOT.TEX CONTROL-FILE: TDS.000 1-Page file: TDS1.TEX

Limits are subjected to change. The updated values are given in the latest version of APCL Technical Handbook Vol. 2

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

# Balance Daily Calibration Worksheet

6430

Weight Set S/N: 12006

| Calib. Date | Lab Balance Balance # | Lab 1 g ±0.05g | Lab 10 g ±0.1g | Lab 200 g ±0.5g | Lab Note (C) | Digital Balance Balance # | Digital 1 g ±0.02g | Digital 10 g ±0.05g | Digital 200 g ±0.10g | Digital Note (D) (C) (AR) | Analytical Balance Balance # | Analytical 1 g ±0.0002g | Analytical 10 g ±0.0005g | Analytical 200 g ±0.0010g | Analytical Note (D) (C) (AR) | Calib. by |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/7/03 | A-01 | not | in | use | ✓ | B-01 | 1.00 | 10.01 | 200.00 | ✓✓✓ | C-01 | 1.0000 | 10.0001 | 200.0000 | ✓✓✓ | 1/✓ |
| | ~~A-02~~ | | | | | B-05 | 1.00 | 10.00 | 200.01 | ✓✓✓ | C-02 | 1.0001 | 10.0000 | 200.0001 | ✓✓✓ | |
| | A-03 | 1.00 | 9.99 | 200.00 | ✓ | B-06 | 1.00 | 9.99 | 200.00 | ✓✓✓ | C- | | | | | |
| | A-04 | | | | | B-07 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C- | | | | | |
| | A- | | 5/7/03 | | | B- | | | 5/7/03 | | C- | | 5/7/03 | | | |
| | A- | | | | | B- | | 5/7/03 | | | C- | | | | | |
| 5/8/03 | A-01 | not | in | use | ✓ | B-01 | 1.00 | 10.01 | 200.00 | ✓✓✓ | C-01 | 1.0000 | 10.0001 | 200.0000 | ✓✓✓ | 1/2 |
| | ~~A-02~~ | | | | | B-05 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C-02 | 1.0001 | 10.0000 | 200.0000 | ✓✓✓ | |
| | A-03 | 1.00 | 9.99 | 200.00 | ✓ | B-06 | 1.00 | 9.99 | 199.99 | ✓✓✓ | C- | | | | | |
| | A-04 | | | | | B-07 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C- | | | | | |
| | A- | | 5/8/03 | | | B- | | | 5/8/03 | | C- | | 5/8/03 | | | |
| | A- | | | | | B- | | 5/8/03 | | | C- | | | | | |
| 5/9/03 | A-01 | not | in | use | ✓ | B-01 | 1.00 | 10.01 | 200.00 | ✓✓✓ | C-01 | 1.0000 | 10.0000 | 200.0001 | ✓✓✓ | 1/2 |
| | ~~A-02~~ | | | | | B-05 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C-02 | 1.0001 | 10.0001 | 199.9999 | ✓✓✓ | |
| | A-03 | 1.00 | 9.99 | 200.00 | ✓ | B-06 | 1.00 | 9.99 | 199.99 | ✓✓✓ | C- | | | | | |
| | A-04 | | | | | B-07 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C- | | | | | |
| | A- | | 5/9/03 | | | B- | | | 5/9/03 | | C- | | 5/9/03 | | | |
| | A- | | | | | B- | | 5/9/03 | | | C- | | | | | |
| 5/12/03 | A-01 | not | in | use | ✓ | B-01 | 1.00 | 10.01 | 200.00 | ✓✓✓ | C-01 | 1.0000 | 10.0000 | 200.0001 | ✓✓✓ | 1/2 |
| | ~~A-02~~ | | | | | B-05 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C-02 | 1.0001 | 10.0001 | 199.9999 | ✓✓✓ | |
| | A-03 | 1.00 | 9.99 | 200.00 | ✓ | B-06 | 1.00 | 9.99 | 199.99 | ✓✓✓ | C- | | | | | |
| | A-04 | | | | | B-07 | 1.00 | 10.00 | 200.00 | ✓✓✓ | C- | | | | | |
| | A- | | 5/12/03 | | | B- | | | 5/12/03 | | C- | | 5/12/03 | | | |
| | A- | | | | | B- | | 5/12/03 | | | C- | | | | | |

Notation: (C) – Cleanliness; (D) – Display; (AR) – Auto Rezeroing.

APCL form 4-213, March 30, 1995. Ver. 4.0 No pencil. Use blue pen for record. Use red pen for correction.

File: [CUST.DOC.LAB]BAL_CAL.TEX Root-File: BAL_CAL.ROOT.TEX 1-Page-File: BAL_CAL1.TEX

| Line | Sample | Sample Type | Level | Method | Data File | Volume | Dilution |
|---|---|---|---|---|---|---|---|
| 1 | Cal blank | Sample | | e314-011.met | c:\data\e314-011\mb_001.dxd | 1 | 1 |
| 2 | cal standard 2ppb W7827a | Sample | | e314-011.met | c:\data\e314-011\std-2pb_002.dxd | 1 | 1 |
| 3 | cal standard 4ppb W7827b | Sample | | e314-011.met | c:\data\e314-011\std-4pb_003.dxd | 1 | 1 |
| 4 | cal standard 10ppb W7827c | Sample | | e314-011.met | c:\data\e314-011\std-10pb_004.dxd | 1 | 1 |
| 5 | cal standard 25ppb W7827d | Sample | | e314-011.met | c:\data\e314-011\std-25pb_005.dxd | 1 | 1 |
| 6 | cal standard 50ppb W7827e | Sample | | e314-011.met | c:\data\e314-011\std-50pb_006.dxd | 1 | 1 |
| 7 | cal standard 75ppb W7827f | Sample | | e314-011.met | c:\data\e314-011\std-75pb_007.dxd | 1 | 1 |
| 8 | cal standard 100ppb W7827g | Sample | | e314-011.met | c:\data\e314-011\std-100pb_008.dxd | 1 | 1 |
| 9 | ICV 50 ppb w7828a | Sample | | e314-011.met | c:\data\e314-011\icv-50pb_009.dxd | 1 | 1 |
| 10 | icb | Sample | | e314-011.met | c:\data\e314-011\icb_010.dxd | 1 | 1 |
| 11 | anion 100pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-100_011.dxd | 1 | 1 |
| 12 | anion 200pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-200_012.dxd | 1 | 1 |
| 13 | anion 300pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-300_013.dxd | 1 | 1 |
| 14 | anion 400pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-400_014.dxd | 1 | 1 |
| 15 | anion 500pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-500_015.dxd | 1 | 1 |
| 16 | anion 600pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-600_016.dxd | 1 | 1 |
| 17 | anion 800pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-800_017.dxd | 1 | 1 |
| 18 | anion 1000pm each ,25pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\mct-1000_018.dxd | 1 | 1 |
| 19 | anion 400pm each 2pb | Sample | | e314-011.met | c:\data\e314-011\ipc-2pb_019.dxd | 1 | 1 |
| 20 | anion 400pm each 4pb | Sample | | e314-011.met | c:\data\e314-011\ipc-4pb_020.dxd | 1 | 1 |
| 21 | anion 400pm each 25pb | Sample | | e314-011.met | c:\data\e314-011\ipc-25pb_021.dxd | 1 | 1 |
| 22 | ICV 50 ppb | Sample | | e314-011.met | c:\data\e314-011\ccv-50pb | 1 | 1 |
| 23 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-02_023.dxd | 1 | 1 |
| 24 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-03_024.dxd | 1 | 1 |
| 25 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-04 | 1 | 1 |
| 26 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-05 | 1 | 1 |
| 27 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-06 | 1 | 1 |
| 28 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-07 | 1 | 1 |
| 29 | MDL 4pb | Sample | | e314-011.met | c:\data\e314-011\mdl-08 | 1 | 1 |
| 30 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 31 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 32 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 33 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 34 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 35 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 36 | IDP and IDA 25pb | Sample | | e314-011.met | c:\data\e314-011\idap-25pb | 1 | 1 |
| 37 | MCT anion 800pm each, 25pbCLO4 | Sample | | e314-011.met | c:\data\e314-011\ipc-25pb | 1 | 1 |
| 38 | MCT anion 800pm each, 25pbCLO4 | Sample | | e314-011.met | c:\data\e314-011\ipc-25pb | 1 | 1 |
| 39 | MCT anion 800pm each, 4pbCLO4 | Sample | | e314-011.met | c:\data\e314-011\ipc-4pb | 1 | 1 |
| 40 | MCT anion 800pm each, 4pbCLO4 | Sample | | e314-011.met | c:\data\e314-011\ipc-4pb | 1 | 1 |
| 41 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s01 | 1 | 5 |
| 42 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s02 | 1 | 5 |
| 43 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s03 | 1 | 5 |
| 44 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s04 | 1 | 5 |
| 45 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s05 | 1 | 5 |
| 46 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s06 | 1 | 5 |
| 47 | MDL 20pb soil | Sample | | e314-011.met | c:\data\e314-011\mdl-s07 | 1 | 5 |
| 48 | standard 25ppb W7827d | Sample | | e314-011.met | c:\data\e314-011\std-25pb | 1 | 1 |
| 49 | anion 100pm each,4pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\am-100-4pb | 1 | 1 |
| 50 | anion 200pm each ,4pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\am-200-4pb | 1 | 1 |
| 51 | anion 300pm each ,4pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\am-300-4pb | 1 | 1 |
| 52 | anion 100pm each,2pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\am-100-2pb | 1 | 1 |
| 53 | anion 200pm each,2pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\am-200-2pb | 1 | 1 |
| 54 | anion 300pm each,2pb CLO4 | Sample | | e314-011.met | c:\data\e314-011\am-300-2pb | 1 | 1 |
| 55 | 1982-01 B S.C 4450us/cm | Sample | | e314-011.met | c:\data\e314-011\1982-01 | 1 | 1 |
| 56 | 1982-01 B S.C 4450us/cm | Sample | | e314-011.met | c:\data\e314-011\1982-01 | 1 | 2 |
| 57 | 1982-02 f=10 | Sample | | e314-011.met | c:\data\e314-011\1982-02_057.dxd | 1 | 10 |
| | | Sample | | aastopcl.met | | 1 | 1 |

hedule File: C:\PeakNet\schedule\03w2804k.SCH

| ıe | Sample | Sample Type | Level | Method | Data File | Volume |
|---|---|---|---|---|---|---|
| | ##03w2804kw ipc 25ppb w7759 | Sample | | e314-011.met | c:\data\03w2804k\w2804k ipc 25ppb_001.dxd | 1 |
| | ccv 50ppb w7827e | Sample | | e314-011.met | c:\data\03w2804k\w2804k q01 | 1 |
| | ccb | Sample | | e314-011.met | c:\data\03w2804k\w2804k ccb01_003.dxd | 1 |
| | lcs 25ppb w7827d | Sample | | e314-011.met | c:\data\03w2804k\w2804k l01_004.dxd | 1 |
| | LCS 18PPB W7685D | Sample | | e314-011.met | c:\data\03w2804k\w2804k j01_005.dxd | 1 |
| | ICCS 4ppb w7827b | Sample | | e314-011.met | c:\data\03w2804k\w2804k iccs 4ppb_006.dxd | 1 |
| | mb | Sample | | e314-011.met | c:\data\03w2804k\w2804k k01_007.dxd | 1 |
| | 3152-01 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3152-01_008.dxd | 1 |
| | 3152-02 f=1 | Sample | | e314-011.met | c:\data\03w2804k\3152-02_009.dxd | 1 |
| | 3152-03 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3152-03_010.dxd | 1 |
| | 3152-04 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3152-04_011.dxd | 1 |
| | 3152-05 f=1 | Sample | | e314-011.met | c:\data\03w2804k\3152-05_012.dxd | 1 |
| | ccv 50ppb w7827e | Sample | | e314-011.met | c:\data\03w2804k\w2804k q02_013.dxd | 1 |
| | ccb | Sample | | e314-011.met | c:\data\03w2804k\w2804k k02_014.dxd | 1 |
| | 3152-06 f=1 | Sample | | e314-011.met | c:\data\03w2804k\3152-06_015.dxd | 1 |
| | 3082-04 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3082-04_016.dxd | 1 |
| | 3082-01 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3082-01_017.dxd | 1 |
| | 3082-04 MS 50PPB F=1 | Sample | | e314-011.met | c:\data\03w2804k\w2804k m01_018.dxd | 1 |
| | 3082-04 MSD 50PPB F=1 | Sample | | e314-011.met | c:\data\03w2804k\w2804k n01_019.dxd | 1 |
| | 3082-02 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3082-02_020.dxd | 1 |
| | 3082-03 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3082-03_021.dxd | 1 |
| | 3082-05 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3082-05_022.dxd | 1 |
| | 3082-06 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3082-06_023.dxd | 1 |
| | ccv 50ppb w7827e | Sample | | e314-011.met | c:\data\03w2804k\w2804k q03_024.dxd | 1 |
| | CCB | Sample | | e314-011.met | c:\data\03w2804k\w2804k k03_025.dxd | 1 |
| | 3102-01 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-01_026.dxd | 1 |
| | 3102-02 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-02_027.dxd | 1 |
| | 3102-03 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-03_028.dxd | 1 |
| | 3102-04 f=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-04_029.dxd | 1 |
| | 3102-05 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-05_030.dxd | 1 |
| | 3102-06 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-06_031.dxd | 1 |
| | 3102-07 F=1 | Sample | | e314-011.met | c:\data\03w2804k\3102-07_032.dxd | 1 |
| | CCV 50PPB W7827E | Sample | | e314-011.met | c:\data\03w2804k\w2804k q04_033.dxd | 1 |
| | | Sample | | aastopcl.met | | 1 |

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ıstrument ZC-K

6432

DIONEX SCHEDULE - C:\DX\SCHEDULE\E300-063.SCH

| Inj# | Sample Name | Method | Data File | Vol. | Dil. | Int.Std. |
|---|---|---|---|---|---|---|
| 1 | autocal1r | ..\E300-063 | ..\W7767Q01.D01 | 1 | 1 | 1 |
| 2 | autocal2r | ..\E300-063 | ..\W7767Q01.D02 | 1 | 1 | 1 |
| 3 | autocal3r | ..\E300-063 | ..\W7767Q01.D03 | 1 | 1 | 1 |
| 4 | autocal4r | ..\E300-063 | ..\W7767Q01.D04 | 1 | 1 | 1 |
| 5 | autocal5r | ..\E300-063 | ..\W7767Q01.D05 | 1 | 1 | 1 |
| 6 | autocal6r | ..\E300-063 | ..\W7767Q01.D06 | 1 | 1 | 1 |
| 7 | icv-w7768-100X | ..\E300-063 | ..\W7768Q01.D07 | 1 | 1 | 1 |
| 8 | icb | ..\E300-063 | ..\W7767Q01.D08 | 1 | 1 | 1 |

Comment:

Analyst DR

Date 3/21/03

Instrument J

DIONEX SCHEDULE - C:\DX\SCHEDULE\03W2750.SCH

| Inj# | Sample Name | Method | Data File | Vol. | Dil. | Int.Std. |
|---|---|---|---|---|---|---|
| 1 | ##03W2750, W CCVW77 | ..\E300-063 | ..\W2750Q01.D01 | 1 | 1 | 1 |
| 2 | MB RW1410 | ..\E300-063 | ..\W2750K01.D02 | 1 | 1 | 1 |
| 3 | LCS W7768-100X | ..\E300-063 | ..\W2750L01.D03 | 1 | 1 | 1 |
| 4 | LCSD W7768-100X | ..\E300-063 | ..\W2750J01.D04 | 1 | 1 | 1 |
| 5 | 3082-2 F=2.5 | ..\E300-063 | ..\3082-201.D05 | 1 | 2.5 | 1 |
| 6 | 3082-3 F=2.5 | ..\E300-063 | ..\3082-301.D06 | 1 | 2.5 | 1 |
| 7 | 3082-4 F=2.5 | ..\E300-063 | ..\3082-401.D07 | 1 | 2.5 | 1 |
| 8 | 3082-5 F=2 | ..\E300-063 | ..\3082-501.D08 | 1 | 2 | 1 |
| 9 | 3082-6 F=2 | ..\E300-063 | ..\3082-601.D09 | 1 | 2 | 1 |
| 10 | 3090-1 F=4 | ..\E300-063 | ..\3090-101.D10 | 1 | 4 | 1 |
| 11 | 3082-1 F=1.25 | ..\E300-063 | ..\3082-101.D11 | 1 | 1.25 | 1 |
| 12 | CCV2W7767-100X | ..\E300-063 | ..\W2750Q01.D12 | 1 | 1 | 1 |
| 13 | MB RW1410 | ..\E300-063 | ..\W2750K01.D13 | 1 | 1 | 1 |
| 14 | $3082-4 MS F=5 | ..\E300-063 | ..\W2750M01.D14 | 1 | 5 | 1 |
| 15 | $3082-4 MSD F=5 | ..\E300-063 | ..\W2750N01.D15 | 1 | 5 | 1 |
| 16 | 3090-2 F=4 | ..\E300-063 | ..\3090-201.D16 | 1 | 4 | 1 |
| 17 | 3090-3 F=5 | ..\E300-063 | ..\3090-301.D17 | 1 | 5 | 1 |
| 18 | 3090-4 F=8 | ..\E300-063 | ..\3090-401.D18 | 1 | 8 | 1 |
| 19 | 3090-4 MD F=8 | ..\E300-063 | ..\W2750D01.D19 | 1 | 8 | 1 |
| 20 | CCV3W7767-100X | ..\E300-063 | ..\W2750Q11.D20 | 1 | 1 | 1 |
| 21 | | ..\STOP.MET | | 1 | 1 | 1 |

Comment:
LCS/LCSD LOT # W7768
MS/MSD LOT # W7767
ELUENT LOT # W7868
ANALYTICAL METHOD 9056/E300 MATRIX W

Analyst DZ
Date 5/2/03
Instrument J

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

June 6, 2003

GEOFON, Inc.
Attention: Leo Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765

Dear Leo Williamson,

This package contains samples in our Service ID 03-3102 and your project : 04-4428.10 JPL GW Mon 2Q03.
Enclosed please find:

(1) Original analytical report.
(2) Original Chain of Custody.
(3) One diskette containing EDD deliverable.
(4) One original Level C Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

# APCL Analytical Report

Submitted to:
GEOFON, Inc.
Attention: Leo W. Williamson
22632 Golden Spring Dr Ste 270
Diamond Bar CA 91765
Tel: (909)396-7662 Fax: (909)396-1455

Service ID #: 801-033102
Collected by: Leo Williamson
Collected on: 05/07/03

Received: 05/07/03
Extracted: N/A
Tested: 05/07-16/03
Reported: 05/21/03

Sample Description: Water from NW-12 (E. of Bl 302)
Project Description: 04-4428.10 JPL. GW Mon 2Q03.

## Analysis of Water Samples

| Component Analyzed | Method | Unit | PQL | Analysis Result DUPE-6-2Q03 03-03102-1 | EB-11-5/7/03 03-03102-2 | MW-12-1 03-03102-3 | MW-12-2 03-03102-4 |
|---|---|---|---|---|---|---|---|
| BICARBONATE | SM2320B | mg/L | 2 | 185 | <2 | 199 | 198 |
| CARBONATE | SM2320B | mg-$CaCO_3$/L | 2 | <2 | <2 | <2 | <2 |
| PH | 9040B | pH unit | 0.01 | 7.89 | 7.73 | 7.56 | 7.56 |
| SOLIDS, TOTAL DISSOLVED (TDS) | 160.1 | mg/L | 10 | 266 | <10 | 368 | 316 |
| CHROMIUM (VI) | 7196 | mg/L | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Dilution Factor | | | | 1 | 1 | 1 | 1 |
| PERCHLORATE | 314.0 | µg/L | 4 | 3.4J | <4 | <4 | 2.0J |
| Dilution Factor | | | | 25 | 1.25 | 4 | 2.5 |
| CHLORIDE $CL^-$ | 300.0 | mg/L | 0.2 | 16.8 | 0.21J | 30.9 | 17.3 |
| NITRATE AS N | 300.0 | mg/L | 0.04 | <1 | 0.098 | 1.5 | 1.5 |
| SULFATE $SO_4^{--}$ | 300.0 | mg/L | 0.5 | 32.6 | 0.71 | 62.4 | 39.0 |
| Dilution Factor | | | | 1 | 1 | 1 | 1 |
| ARSENIC | 200.9 | µg/L | 5 | <5 | <5 | <5 | <5 |
| CALCIUM | 200.7 | µg/L | 200 | 44,800 | <200 | 60,100 | 56,400 |
| IRON | 200.7 | µg/L | 50 | 62.8 | 16.4J | 572 | 204 |
| MAGNESIUM | 200.7 | µg/L | 100 | 14,400 | 25.9J | 21,600 | 17,000 |
| POTASSIUM | 200.7 | µg/L | 400 | 2,790 | 70.9J | 3,430 | 2,910 |
| SODIUM | 200.7 | µg/L | 2000 | 23,400 | 931J | 24,500 | 23,700 |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| Dilution Factor | | | | 1 | 1 | 1 | 1 |
| BENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOCHLOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMODICHLOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOFORM | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-BUTANONE | 524.2 | µg/L | 10 | <10 | <10 | <10 | <10 |
| N-BUTYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SEC-BUTYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TERT-BUTYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARBON TETRACHLORIDE | 524.2 | µg/L | 0.5 | 2.6 | <0.5 | <0.5 | <0.5 |
| CHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CHLORODIBROMOMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CHLOROFORM | 524.2 | µg/L | 0.5 | 1.2 | <0.5 | <0.5 | <0.5 |
| CHLOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-CHLOROTOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-CHLOROTOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

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# APCL Analytical Report

| Component Analyzed | Method | Unit | PQL | Analysis Result DUPE-6-2Q03 03-03102-1 | EB-11-5/7/03 03-03102-2 | MW-12-1 03-03102-3 | MW-12-2 03-03102-4 |
|---|---|---|---|---|---|---|---|
| 1,2-DIBROMO-3-CHLOROPROPANE | 524.2 | µg/L | 1.1 [a] | <1.1 | <1.1 | <1.1 | <1.1 |
| 1,2-DIBROMOETHANE (EDB) | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| DIBROMOMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-DICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-DICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| DICHLORODIFLUOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-DICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-DICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CIS-1,2-DICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRANS-1,2-DICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROETHENE (TOTAL) | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-DICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-DICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-DICHLOROPROPENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CIS-1,3-DICHLOROPROPENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRANS-1,3-DICHLOROPROPENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ETHYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| HEXACHLOROBUTADIENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ISOPROPYLBENZENE (CUMENE) | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| P-ISOPROPYLTOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-METHYL-2-PENTANONE (MIBK) | 524.2 | µg/L | 10 | 4J | 7J | 8J | 5J |
| METHYLENE CHLORIDE | 524.2 | µg/L | 1.8 [a] | <1.8 | <1.8 | 7.2 [b] | 10 [b] |
| METHYL-T-BUTYL ETHER (MTBE) | 524.2 | µg/L | 1 | <1 | <1 | <1 | <1 |
| NAPHTHALENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| N-PROPYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| STYRENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-TETRACHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-TETRACHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TETRACHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-TRICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-TRICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-TRICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-TRICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRICHLOROFLUOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-TRICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 112TRICHLORO-122TRIFLUOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-TRIMETHYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-TRIMETHYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| VINYL CHLORIDE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| O-XYLENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| M/P-XYLENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

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# APCL Analytical Report

| Component Analyzed | Method | Unit | PQL | Analysis Result MW-12-3 03-03102-5 | MW-12-4 03-03102-6 | MW-12-5 03-03102-7 | TB-11-5/7/03 03-03102-8 |
|---|---|---|---|---|---|---|---|
| BICARBONATE | SM2320B | mg/L | 2 | 180 | 204 | 181 | - |
| CARBONATE | SM2320B | mg-$CaCO_3$/L | 2 | <2 | <2 | <2 | - |
| PH | 9040B | pH unit | 0.01 | 8.03 | 7.88 | 8.00 | - |
| SOLIDS, TOTAL DISSOLVED (TDS) | 160.1 | mg/L | 10 | 248 | 277 | 252 | - |
| CHROMIUM (VI) | 7196 | mg/L | 0.01 | <0.01 | <0.01 | <0.01 | - |
| Dilution Factor | | | | 1 | 1 | 1 | 1 |
| PERCHLORATE | 314.0 | µg/L | 4 | 2.8J | 3.6J | 2.2J | - |
| Dilution Factor | | | | 2.5 | 2.5 | 2.5 | 1 |
| CHLORIDE $CL^-$ | 300.0 | mg/L | 0.2 | 15.7 | 14.9 | 15.6 | - |
| NITRATE AS N | 300.0 | mg/L | 0.04 | 0.53 | 1.1 | 1.1 | - |
| SULFATE $SO_4^{--}$ | 300.0 | mg/L | 0.5 | 29.8 | 30.3 | 22.0 | - |
| Dilution Factor | | | | 1 | 1 | 1 | 1 |
| ARSENIC | 200.9 | µg/L | 5 | <5 | <5 | <5 | - |
| CALCIUM | 200.7 | µg/L | 200 | 45,300 | 56,900 | 39,500 | - |
| IRON | 200.7 | µg/L | 50 | 64.2 | 74.4 | 286 | - |
| MAGNESIUM | 200.7 | µg/L | 100 | 14,600 | 13,500 | 11,100 | - |
| POTASSIUM | 200.7 | µg/L | 400 | 2,760 | 2,120 | 2,080 | - |
| SODIUM | 200.7 | µg/L | 2000 | 23,600 | 23,200 | 35,100 | - |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | |
| Dilution Factor | | | | 1 | 1 | 1 | 1 |
| BENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOCHLOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMODICHLOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOFORM | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| BROMOMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-BUTANONE | 524.2 | µg/L | 10 | <10 | <10 | <10 | <10 |
| N-BUTYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| SEC-BUTYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TERT-BUTYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CARBON TETRACHLORIDE | 524.2 | µg/L | 0.5 | 2.5 | 1.5 | 0.6 | <0.5 |
| CHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CHLORODIBROMOMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CHLOROFORM | 524.2 | µg/L | 0.5 | 1.1 | 0.7 | 0.4J | <0.5 |
| CHLOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-CHLOROTOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-CHLOROTOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DIBROMO-3-CHLOROPROPANE | 524.2 | µg/L | 1.1 [a] | <1.1 | <1.1 | <1.1 | <1.1 |
| 1,2-DIBROMOETHANE (EDB) | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| DIBROMOMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-DICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-DICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| DICHLORODIFLUOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

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# APCL Analytical Report

| Component Analyzed | Method | Unit | PQL | Analysis Result MW-12-3 03-03102-5 | MW-12-4 03-03102-6 | MW-12-5 03-03102-7 | TB-11-5/7/03 03-03102-8 |
|---|---|---|---|---|---|---|---|
| 1,1-DICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-DICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CIS-1,2-DICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRANS-1,2-DICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-DICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-DICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-DICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-DICHLOROPROPENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| CIS-1,3-DICHLOROPROPENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRANS-1,3-DICHLOROPROPENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ETHYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| HEXACHLOROBUTADIENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| ISOPROPYLBENZENE (CUMENE) | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| P-ISOPROPYLTOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-METHYL-2-PENTANONE (MIBK) | 524.2 | µg/L | 10 | <10 | <10 | 7J | <10 |
| METHYLENE CHLORIDE | 524.2 | µg/L | 1.8 [a] | 8.3 [b] | 11 [b] | 13 [b] | 6.8 [b] |
| METHYL-T-BUTYL ETHER (MTBE) | 524.2 | µg/L | 1 | <1 | <1 | <1 | <1 |
| NAPHTHALENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| N-PROPYLBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| STYRENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-TETRACHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-TETRACHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TETRACHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TOLUENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-TRICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-TRICHLOROBENZENE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-TRICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-TRICHLOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| TRICHLOROETHENE | 524.2 | µg/L | 0.5 | <0.5 | 0.3J | <0.5 | <0.5 |
| TRICHLOROFLUOROMETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-TRICHLOROPROPANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 112TRICHLORO-122TRIFLUOROETHANE | 524.2 | µg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

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# APCL Analytical Report

| Component Analyzed | Method | Unit | PQL | Analysis Result MW-12-3 03-03102-5 | MW-12-4 03-03102-6 | MW-12-5 03-03102-7 | TB-11-5/7/03 03-03102-8 |
|---|---|---|---|---|---|---|---|
| 1,2,4-TRIMETHYLBENZENE | 524.2 | μg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-TRIMETHYLBENZENE | 524.2 | μg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| VINYL CHLORIDE | 524.2 | μg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| O-XYLENE | 524.2 | μg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| M/P-XYLENE | 524.2 | μg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) MDL reported.
(b) Laboratory contamination suspected.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

# General Information

Project: 04-4428.10 JPL GW Mon-2Q03

APCL Service ID: 03-3102

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# Case Narrative

## Project: JPL GW Mon 2Q03/NW-12 E. of Bl 302/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-3102

### 1. Sample Identification

The sample identifications are listed in the following table:

| GEOFON, Inc. Sample ID | APCL Sample ID |
|---|---|
| MW-12-5 | 03-03102-7 |
| MW-12-4 | 03-03102-6 |
| MW-12-3 | 03-03102-5 |
| MW-12-2 | 03-03102-4 |
| MW-12-1 | 03-03102-3 |
| TB-11-5/7/03 | 03-03102-8 |
| EB-11-5/7/03 | 03-03102-2 |
| DUPE-6-2Q03 | 03-03102-1 |

### 2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds ),
7196 (Chromium (VI) ),
314.0 (Perchlorate, low level ),
300.0 (Anions by IC ),
SM2320B (Carbonate ),
SM2320B (Bicarbonate ),
9040B (pH ),
160.1 (Solids, Total Dissolved (TDS) ),
200.7 (Metals by ICP ),
200.9 (Arsenic, As, by GFAA ),

### 3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

### 4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

### 5. Tele-log

None

### 6. Anomaly

(1) EPA 524.2:

Methylene Chloride in the amount of 6.7 ug/L was detected in the Method Blank of batch 03G2404. Methylene Chloride was also detected in the associated field samples, due to lab contamination.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory

# GEOFON INCORPORATED

22632 GOLDEN SPRINGS DR., SUITE 270
DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

# CHAIN-OF-CUSTODY RECORD

LABORATORY COPY

MW-12 0030

| GEOFON's LAB COORDINATOR | LAB COORDINATOR'S PHONE | LAB COORDINATOR'S FAX | LABORATORY SERVICE ID | LABORATORY CONTACT | MAIL REPORT (COMPANY NAME) |
|---|---|---|---|---|---|
| Brad Shojaee | (909) 396-7662 | (909) 396-1455 | — | Kenny Chan | GEOFON, INC. |
| PROJECT NAME: JDL GW Mon-2Q03 | PROJECT LOCATION MW-12 (E. of B1 302) | PROJECT NUMBER 04-4428.10 | LABORATORY PHONE (909)590-1828 | LABORATORY FAX (909) 590-1498 | RECIPIENT NAME Leo W. Williamson |
| PROJECT CONTACT Leo W. Williamson | PROJECT PHONE NUMBER (714) 920-8729 | PROJECT FAX (909) 396-1455 | LABORATORY ADDRESS 13760 Magnolia Ave | | ADDRESS 22632 Golden Springs Dr. #270 |
| PROJECT ADDRESS 4800 Oak Grove Dr. | CITY, STATE AND ZIPCODE Pasadena CA. | CLIENT US NAVY SWDIV | CITY, STATE AND ZIPCODE Chino, CA 91710 | | CITY, STATE AND ZIPCODE Diamond Bar, CA. 91765 |
| PROJECT MANAGER Asrar Faheem | PROJECT MANAGER'S PHONE (909) 396-7662 | PROJECT MANAGER'S FAX (909) 396-1455 | | | |

| Item | Sample Identifier | Matrix | Date | Time | Preserved | # of Cont | QC Level | T.A.T | Analyses: 624.2 (VOC) | 200.7 & 200.9 (Minerals) | 7196 (Hex Chrome) | SIM 2320B (Carb. Bicarb) | 300.0 (Cl, SO4, NO3) | 314.0 (Perchlorate) | 160.1 (TDS) | 200.8 (Cr + Pb) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-12-5 | $H_2O$ | 5/7/03 | 750 | HCl + NONE $HNO_3$ | 3+1+ 1+1 | III | NORMAL | X | X | X | X | X | X | X | X | MINERALS: Na/K/Ca/As/Mg/Fe |
| 2 | MW-12-4 | ↓ | ↓ | 830 | ↓ | ↓ | ↓ | ↓ | X | X | X | X | X | X | X | X | |
| 3 | MW-12-3 | ↓ | ↓ | 940 | ↓ | ↓ | ↓ | ↓ | X | X | X | X | X | X | X | X | |
| 4 | MW-12-2 | ↓ | ↓ | 1020 | ↓ | ↓ | ↓ | ↓ | X | X | X | X | X | X | X | X | |
| 5 | MW-12-1 | ↓ | ↓ | 1100 | ↓ | ↓ | ↓ | ↓ | X | X | X | X | X | X | X | X | |
| 6 | | | | | | | | | | | | | | | | | |
| 7 | TB-11-5/7/03 | $H_2O$ | — | — | HCl | 1 | III | NORMAL | X | | | | | | | | |
| 8 | EB-11-5/7/03 | ↓ | 5/7/03 | 850 | HCl NONE $HNO_3$ | 3+1+ 1+1 | ↓ | ↓ | X | X | X | X | X | X | X | X | |
| 9 | DUPE-6-2Q03 | ↓ | ↓ | — | ↓ | ↓ | IV | ↓ | X | X | X | X | X | X | X | X | |
| 10 | | | | | | | | | | | | | | | | | |

3102

SAMPLES COLLECTED BY: Leo W. Williamson

COURIER AND AIR BILL NUMBER:

COOLER TEMPERATURE UPON RECEIPT:

SAMPLE'S CONDITION UPON RECEIPT:

| RELINQUISHED BY | RECEIVED BY | DATE | TIME |
|---|---|---|---|
| Leo W. Williamson | [signature] | 5/7/03 | 11:35 |
| [signature] | [signature] | 5/7/03 | 1225 |

Distribution: White - Laboratory (To be returned with Analytical Report); Goldenrod - Project File; Yellow - Project Data Manager

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

# Sample Receiving Checklist

**APCL ServiceID:** 3102 **Client Name/Project:** Geofon JPL

**1. Sample Arrival**

Date/Time Received 5/7/03 1225 Date/Time Opened 5/7/03 1225 By (name): Kenny Chan

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☑ APCL Empl: Adam Abed

**2. Chain-of-Custody (CoC)**

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☐ Signed, dated? By:
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold # Received 8
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: ☑ #Samples OK?
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs):

**3. Shipping Container/Cooler**

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

**Temp °C** 4.1

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

**4. Sample Preservation**

☐ **pH <2** ☐ pH >12

**If Not, pH =** Preserved by: ☐ Client ☐ APCL ☐ Third Party

**5. Holding-time Requirements**

☐ pH 24hr ☐ BACT 6/24hr ☑ $Cr^{VI}$ 24hr ☐ $NO_3^-$ 48hr ☐ BOD 48hr
☐ $Cl_2$ ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

**6. Sample Container Condition**

☑ Intact? ☐ Broken? ☐ Documented? Number:
Type: ☑ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☑ Unique ID? ☑ Date/Time ☐ Preserved?

**7. Turn Around Time**

☐ RUSH TAT: ☑ Std (7-10 days) ☐ Not Marked

**8. Sample Matrix**

☐ Drinking $H_2O$ ☑ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other:
☐ Ground $H_2O$ ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

**9. Pre-Login Check List Completed & OK?**

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: )Date/Time:

Received/Checked by: Kenny Chan Date: 7 May 2003 Time: 7:40 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.texfiles]amprcl.tex.

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

# Sample Login: Check List

## 03-03102 (0470_ 139) (2202777_ 139)

05/07/03

## Part 1: General Information

| | | |
|---|---|---|
| ☐ Company Information | Name: | *GEOFON, Inc.* |
| | Address: | *22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765* |
| ☐ Project Information | Project Description: | *JPL* |
| | Project #: | *04-4428.10* |
| ☐ Billing Information | P.O. #: | |
| | Bill Address: | *22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765* |
| | Lab Project ID: | |
| | Client Database #: | *3* |
| ☐ Receiving Information | Who Received Sample? | *Kenny Chan* |
| | Receiving Date/Time: | *05/07/03 1225* |
| | COC No. | |
| ☐ Shipping Information | Shipping Company | *APCL pick up* |
| | Packing Information: | *Cooler/Ice Chester* |
| | Cooler Temperature: | *4.1 °C* |
| ☐ Container Information | Container Provider: | *Client* |
| ☐ Sampling Information | Sampling Person: | |
| | Sampling Company: | *Client* |
| ☐ Turn-Around-Time Option: | | *Rush 5 working day(s)* |
| ☐ QC Option: | | *NEESA C* |
| ☐ Disposal Option: | | *Not specify* |

## Part 2: Sample Information

| Seq. # | Sample ID (on COC) | Sample Sub-ID | APCL Sample ID | Matrix | Cont-tainer | Preser-vative | Vol, ml Am. g | # of Replica | Condition G, L, B | Collected mmddyy | Hold ? | Composite Group | TAT Days | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-12-5 | VOC | 03-03102-7-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-5 | Metal | 03-03102-7-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-5 | Anion | 03-03102-7-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| 2 | MW-12-4 | VOC | 03-03102-6-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-4 | Metal | 03-03102-6-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-4 | Anion | 03-03102-6-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| 3 | MW-12-3 | VOC | 03-03102-5-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-3 | Metal | 03-03102-5-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-3 | Anion | 03-03102-5-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| 4 | MW-12-2 | VOC | 03-03102-4-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-2 | Metal | 03-03102-4-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-2 | Anion | 03-03102-4-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| 5 | MW-12-1 | VOC | 03-03102-3-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-1 | Metal | 03-03102-3-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | MW-12-1 | Anion | 03-03102-3-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| 6 | TB-11-5/7/03 | VOC | 03-03102-8 | W | V | C | 40 | 2 | G | 050703 | N | 0 | 7 | ☐ |
| 7 | EB-11-5/7/03 | VOC | 03-03102-2-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | EB-11-5/7/03 | Metal | 03-03102-2-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | EB-11-5/7/03 | Anion | 03-03102-2-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| 8 | DUPE-6-2Q03 | VOC | 03-03102-1-$\alpha$ | W | V | C | 40 | 3 | G | 050703 | N | 0 | 7 | ☐ |
| | DUPE-6-2Q03 | Metal | 03-03102-1-$\beta$ | W | P | N | 500 | 1 | G | 050703 | N | 0 | 7 | ☐ |
| | DUPE-6-2Q03 | Anion | 03-03102-1-$\gamma$ | W | P | | 1000 | 1 | G | 050703 | N | 0 | 7 | ☐ |

## Part 3: Analysis Information

Test Items:

- ☐ *524.2* Volatile Organic Compounds
- ☐ *7196A* Chromium (VI)
- ☐ *314.0/300.0* Perchlorate, low level
- ☐ *300.0* Chloride $Cl^-$ by IC
- ☐ *300.0* Sulfate ($SO_4^{--}$), by IC
- ☐ *300.0/SM4500NO3* Nitrate ($NO_3^-$) as N by IC
- ☐ *SM2320B* Carbonate
- ☐ *SM2320B* Bicarbonate
- ☐ *9040B/150.1* pH
- ☐ *160.1* Solids, Total Dissolved (TDS)
- ☐ *200.7/6010B* Sodium, Na, by ICP
- ☐ *200.7/6010B* Calcium, Ca, by ICP

Level C Data Package Deliverables

# Volatile Organics

Applied P & Ch Laboratory

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# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/16/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03G2404-MB-01 | Received Date: | 05/16/2003 |
| Sample ID: | **03G2404-MB-01** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Method Blank | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 14:07 |
| Data File Name: | G2404K01 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | µg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | µg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | µg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | µg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | µg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | µg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | µg/L | 0.5 | <0.5 | U |
| 12 | CHLOROBENZENE | 108-90-7 | µg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | µg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | µg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | µg/L | 0.5 | <0.5 | U |
| 16 | CHLOROMETHANE | 74-87-3 | µg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | µg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | µg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | µg/L | 1.1 | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | µg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | µg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | µg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | µg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | µg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | µg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | µg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | µg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | µg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | µg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | µg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROETHENE (TOTAL) | 540-59-0 | µg/L | 0.5 | <0.5 | U |
| 32 | 1,2-DICHLOROPROPANE | 78-87-5 | µg/L | 0.5 | <0.5 | U |
| 33 | 1,3-DICHLOROPROPANE | 142-28-9 | µg/L | 0.5 | <0.5 | U |
| 34 | 2,2-DICHLOROPROPANE | 594-20-7 | µg/L | 0.5 | <0.5 | U |
| 35 | 1,1-DICHLOROPROPENE | 563-58-6 | µg/L | 0.5 | <0.5 | U |
| 36 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | µg/L | 0.5 | <0.5 | U |
| 37 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | µg/L | 0.5 | <0.5 | U |
| 38 | ETHYLBENZENE | 100-41-4 | µg/L | 0.5 | <0.5 | U |
| 39 | HEXACHLOROBUTADIENE | 87-68-3 | µg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | µg/L | 0.5 | <0.5 | U |
| 41 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 42 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | U |
| 43 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 | 6.7 | |
| 44 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 45 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 46 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 47 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 49 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 50 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 51 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 55 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | <0.5 | U |
| 57 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 59 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 61 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 62 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 63 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 64 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 4-BROMO-FLUOROBENZENE (BFB) | 460-00-4 | 70-129 | 104 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 103 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 105 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 108 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 87 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 99 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 99 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

# Quantitation Report: **Applied P &Ch Lab** EPA 524.2

5708

Data Filename: C:\HPCHEM\1\DATA\03G2404\G2404K01.D
Method : C:\HPCHEM\1\METHODS\E524G004.M
Acq. Time : May 16 14:07 2003
Method Update: Fri May 16 12:11 2003
Quant. Time : May 16 14:28 2003
Print Time : Fri May 16 14:38 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | | | | Dev(Min) | |
| 1 | 1 Fluorobenzene I1 | 9.51 | 9.44 | 0.007 | 96 | 70 | 646.001 | 10.00 | | 0.07 | |
| 47 | 47 Cl-benzene-d5, I2 | 13.11 | 13.05 | 0.004 | 82 | 119 | 178.183 | 10.00 | | 0.06 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.62 | 15.56 | 0.004 | 152 | 150 | 174.849 | 10.00 | | 0.06 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | | %Recovery | |
| 27 | 27 Di-Br-F-Methane ( | 7.96 | 7.90 | 0.004 | 111 | 113 | 502.090 | 20.93 | 20.9 | 104.66% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.53 | 8.47 | 0.004 | 65 | 102 | 222.912 | 20.45 | 20.4 | 102.23% | |
| 55 | 55 toluene-d8(S2) | 11.60 | 11.54 | 0.004 | 100 | 99 | 699.779 | 21.50 | 21.5 | 107.51% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 14.34 | 14.28 | 0.004 | 174 | 95 | 298.013 | 20.68 | 20.7 | 103.41% | |
| Target Compounds | | | | | | | | | | Qvalue | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 111 | 111 isopropyl alcoho | 4.73 | 4.73 | 0.000 | 45 | 43 | 1.133 | 4.38 | ~~4.4~~ | ~~1~~ | # |
| 101 | 101 Acetonnitrilex10 | 4.64 | 4.65 | -0.002 | 41 | 40 | 0.250 | 10.12 | ~~10.1~~ | ~~1~~ | # |
| 113 | 113 Tert butyl alcoh | 5.33 | 5.32 | 0.001 | 59 | 57 | 1.202 | 2.02 | ~~2.0~~ | ~~79~~ | # |
| 18 | 18 methylene chlorid | 5.50 | 5.45 | 0.006 | 84 | 49 | 106.423 | 6.72 | 6.7 | 95 | |
| 98 | 98 Vinyl acetate x5 | 6.89 | 6.90 | -0.002 | 43 | 86 | 0.748 | 12.55 | ~~12.5~~ | ~~69~~ | # |
| 91 | 91 2-butanone MEKx10 | 7.30 | 7.31 | -0.002 | 43 | 72 | 7.793 | 1.29 | ~~1.3~~ | ~~71~~ | # |
| 201 | 201 Ethyl acetate x2 | 7.79 | 7.78 | 0.002 | 43 | 61 | 3.879 | 4.77 | ~~4.8~~ | ~~52~~ | #? |
| 117 | 117 Iso-butyl alcoho | 7.79 | 7.78 | 0.002 | 43 | 42 | 3.879 | 15.97 | ~~16.0~~ | ~~51~~ | #? |
| 30 | 30 12-dichloroethane | 8.62 | 8.57 | 0.006 | 62 | 64 | 0.272 | 0.90 | 0.9 | 1 | # |
| 107 | 107 Et methacrylate | 11.64 | 11.73 | -0.010 | 69 | 99 | 0.513 | 1.65 | ~~1.6~~ | ~~58~~ | #? |
| 93 | 93 2-Hexanone x5 | 11.84 | 11.86 | -0.002 | 43 | 58 | 0.659 | 5.79 | ~~5.8~~ | ~~87~~ | |
| 48 | 48 112-tri-Cl-Et | 11.62 | 11.42 | 0.021 | 97 | 83 | 22.264 | 2.93 | ~~2.9~~ | ~~8~~ | #? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 49 | 49 1,3-di-cl-propane | 11.60 | 11.68 | -0.006 | 76 | 78 | 8.608 | 0.68 | ~~0.7~~ | ~~99~~ | ? |
| 110 | 110 t-1,4-dichloro-2 | 14.00 | 14.04 | -0.003 | 89 | 53 | 0.673 | 0.48 | ~~0.5~~ | ~~9~~ | # |
| <<< I3 : ISTD ID = 62 >>> | | | | | | | | | | | |
| 88 | 88 naphthalene | 17.97 | 17.92 | 0.004 | 128 | 129 | 0.282 | 1.37 | ~~1.4~~ | ~~69~~ | # |

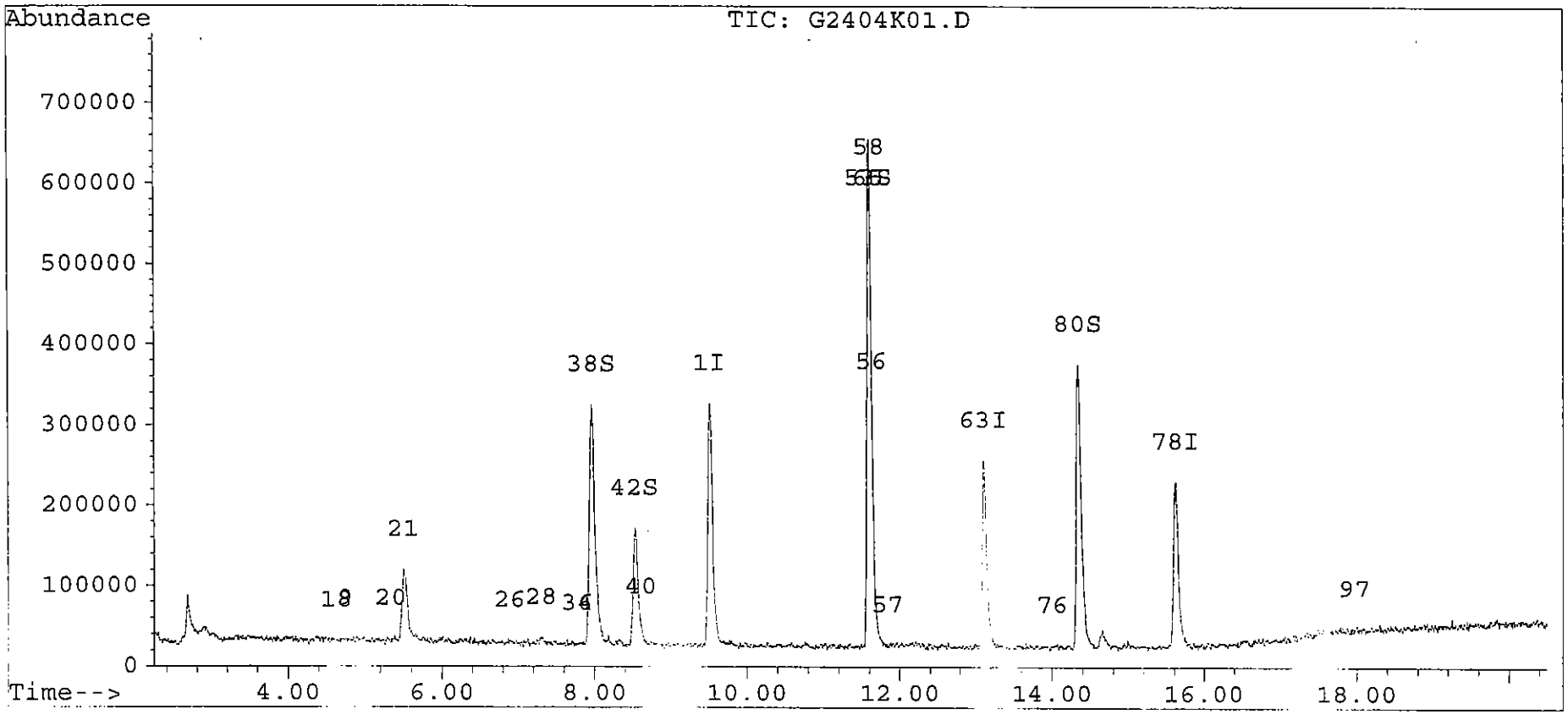
# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

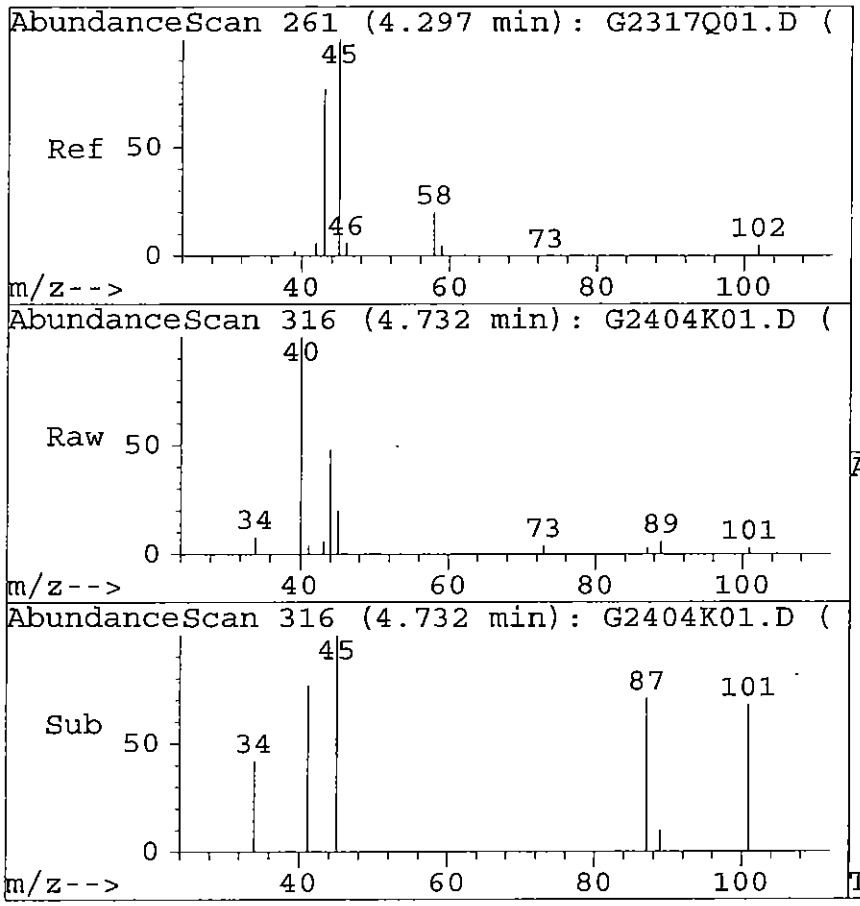
# Quantitation Report

5709

Data File : C:\HPCHEM\1\DATA\03G2404\G2404K01.D  Vial: 10
Acq On : 16 May 03 2:07 pm  Operator: Eddie
Sample : f=1  Inst : GCMS-G
Misc :  Multiplr: 1.00
Quant Time: May 16 14:28 2003  Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G004.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Fri May 16 12:11:07 2003
Response via : Multiple Level Calibration

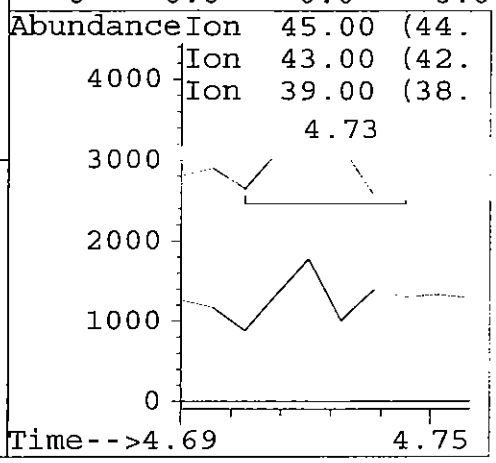


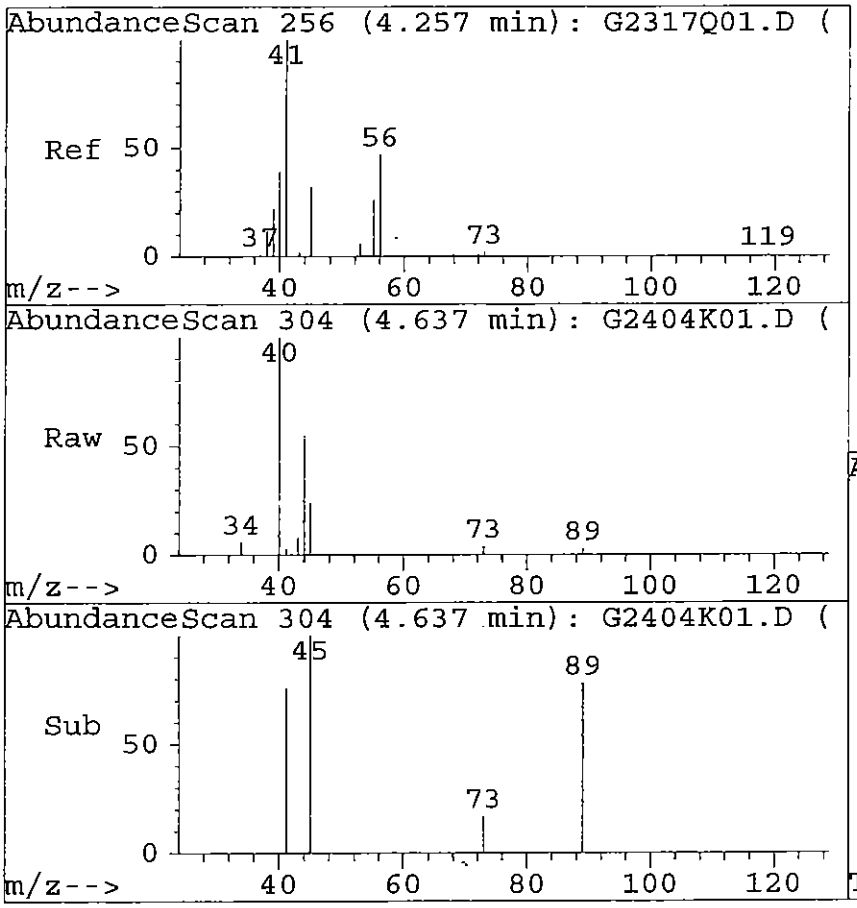



#9
111 isopropyl alcohol x10
Concen: 4.38 ppb
RT: 4.73 min Scan# 316
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:45 Resp: 1133

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 326.0 | 77.0 | 115.5# |
| 39 | 0.0 | 13.3 | 19.9# |
| 0 | 0.0 | 0.0 | 0.0 |

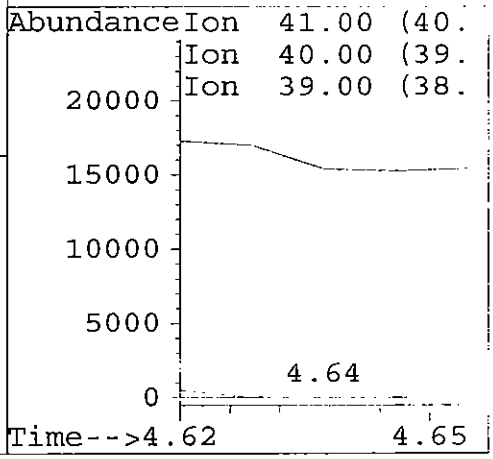


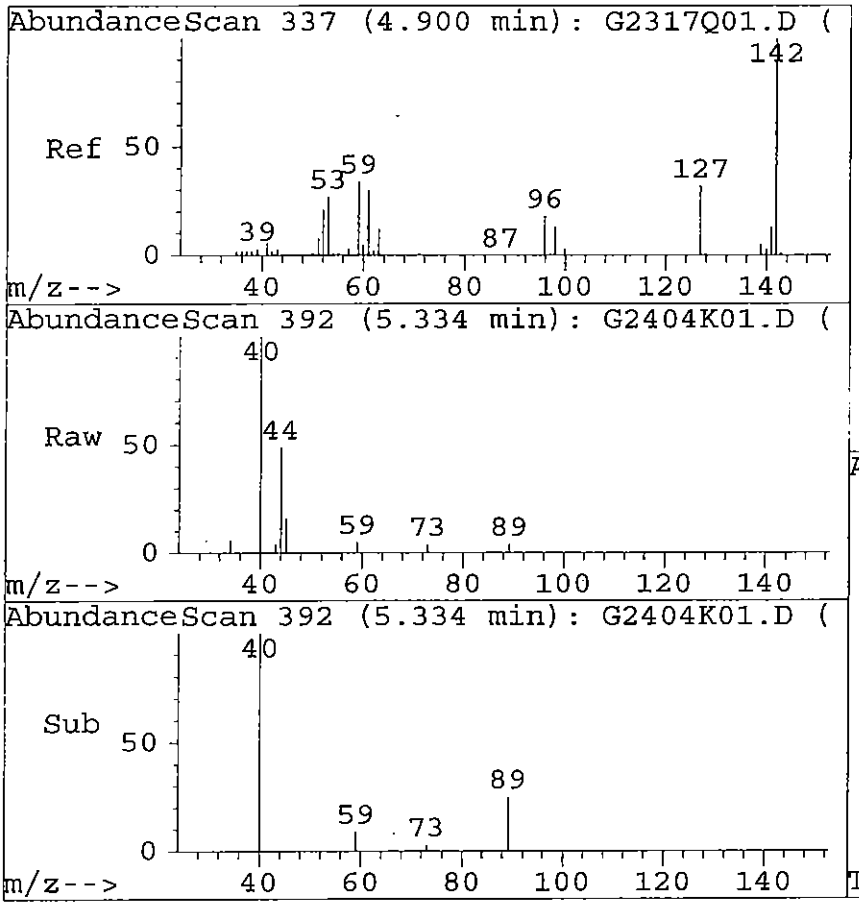




#18
101 Acetonnitrilex10
Concen: 10.12 ppb
RT: 4.64 min Scan# 304
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:41 Resp: 250

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 0.0 | 151.7 | 227.5# |
| 39 | 0.0 | 17.3 | 25.9# |
| 0 | 0.0 | 0.0 | 0.0 |

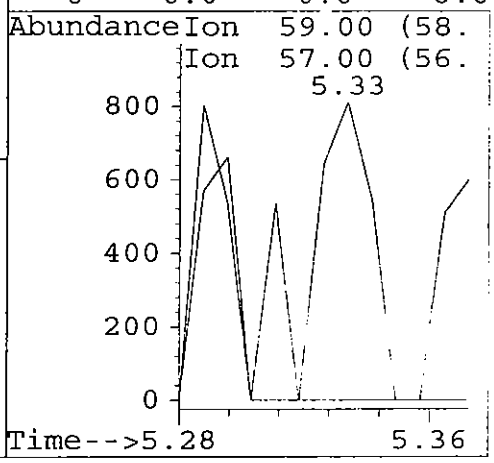


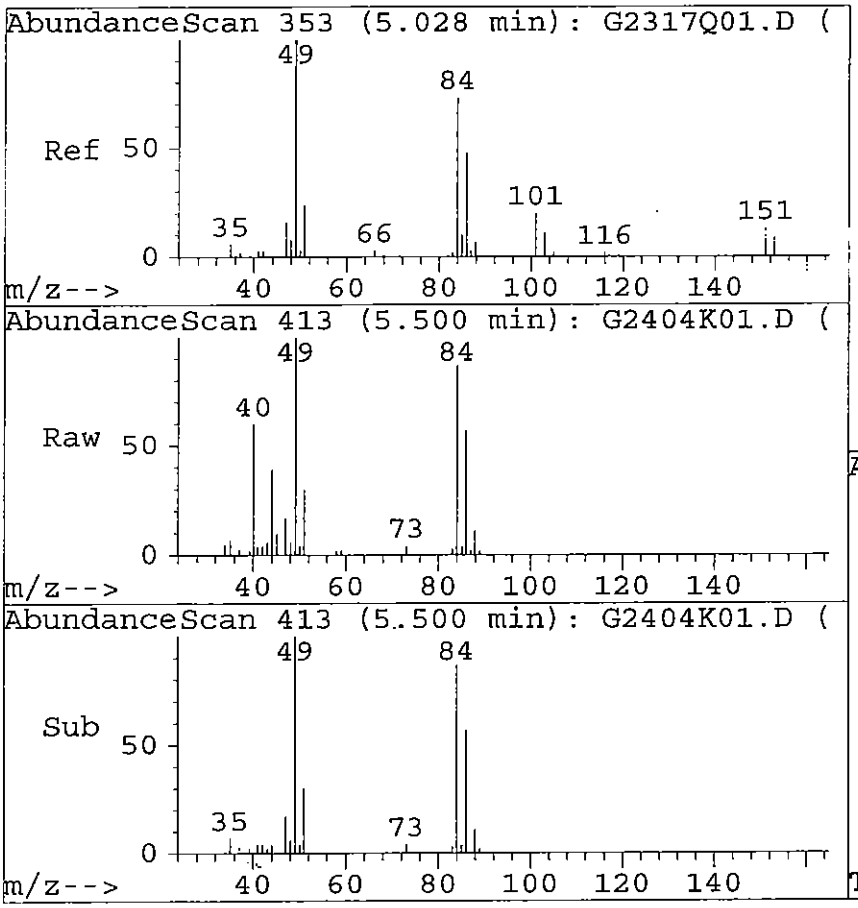



#20
113 Tert butyl alcohol x10
Concen: 2.02 ppb
RT: 5.33 min Scan# 392
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:59 Resp: 1202

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 57 | 0.0 | 5.8 | 8.7# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

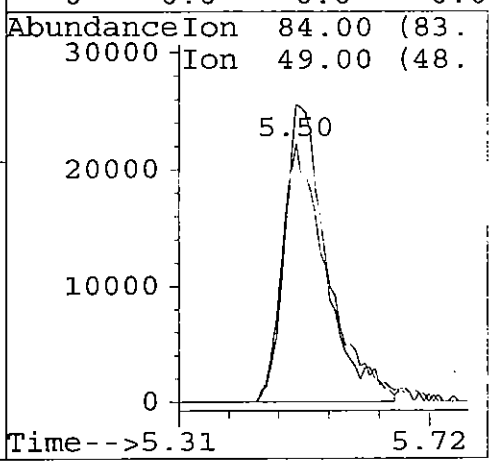


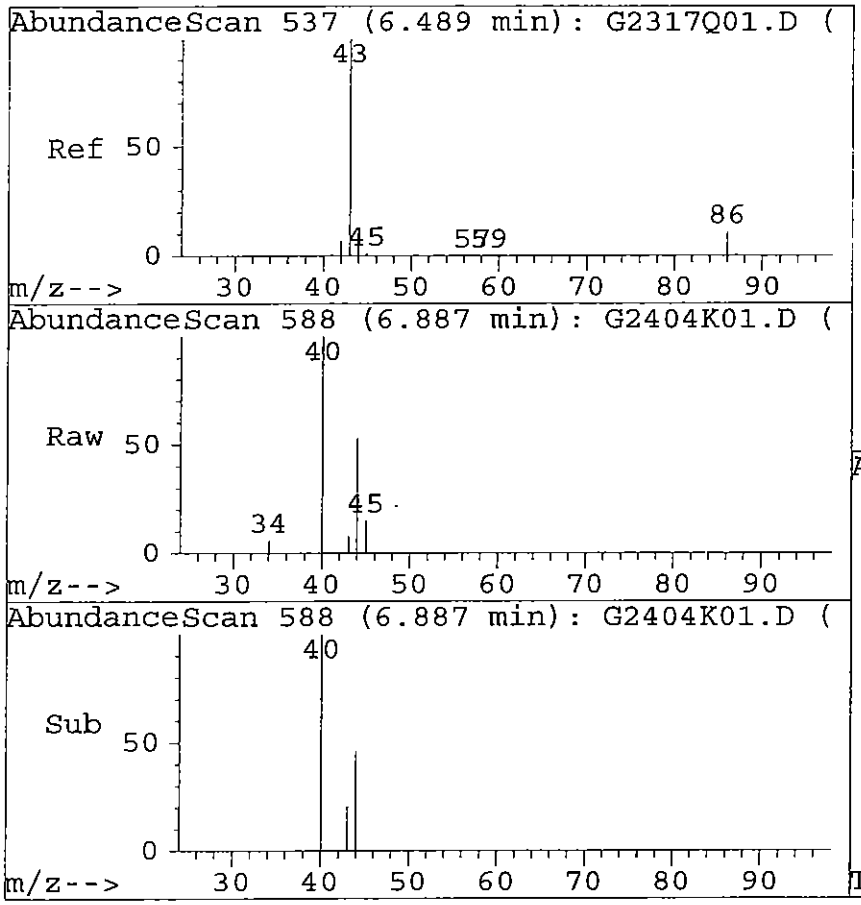




#21
18 methylene chloride 49 84
Concen: 6.72 ppb
RT: 5.50 min Scan# 413
Delta R.T. 0.05 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:84 Resp: 106423

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 120.4 | 62.9 | 188.5 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

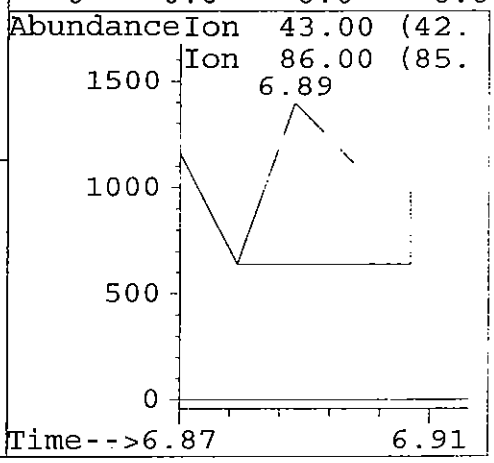


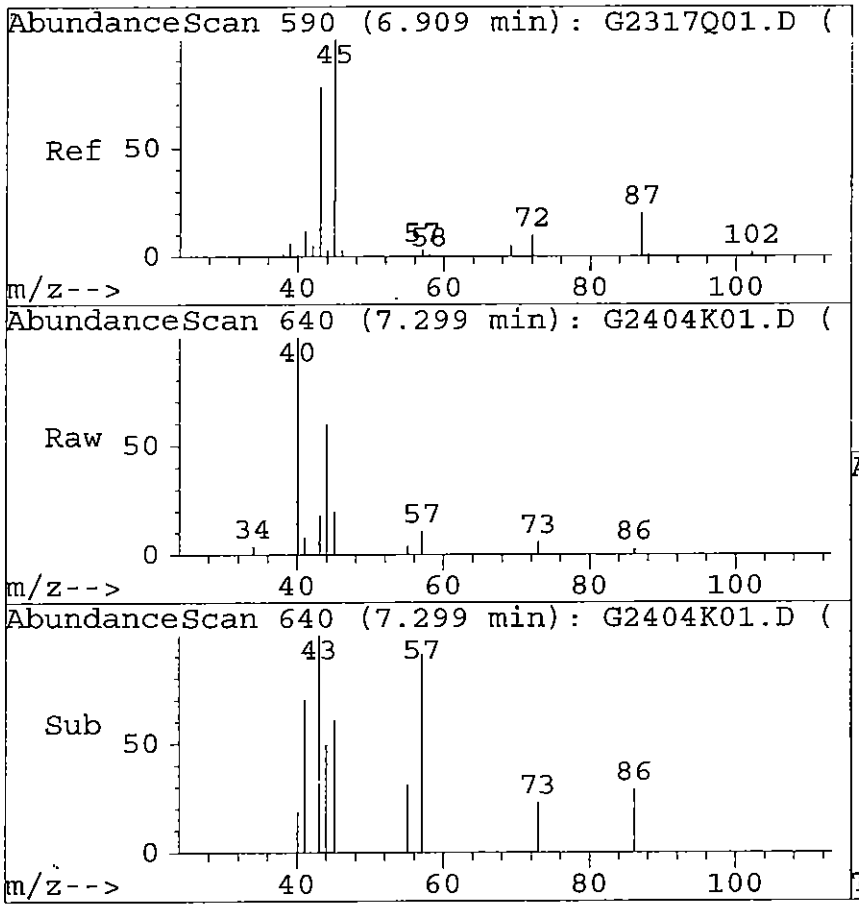



#26
98 Vinyl acetate x5
Concen: 12.55 ppb
RT: 6.89 min Scan# 588
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 748

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 0.0 | 9.5 | 14.2# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

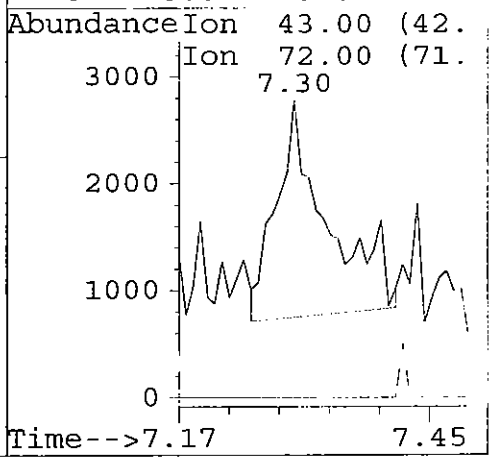


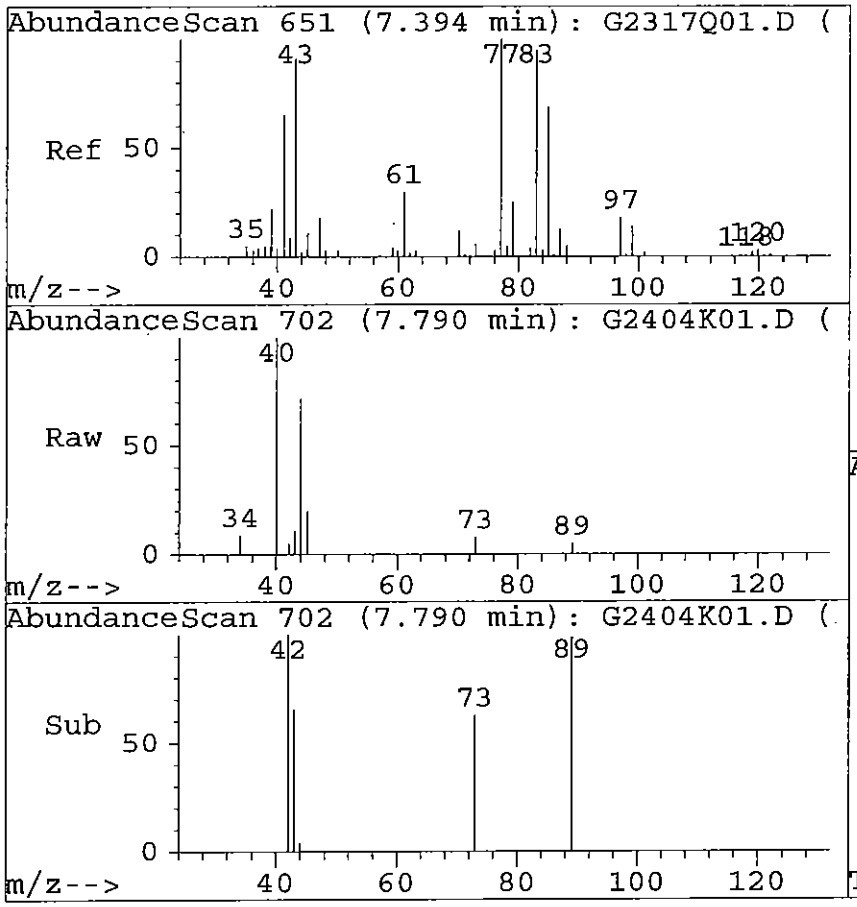




#28
91 2-butanone MEKx10
Concen: 1.29 ppb
RT: 7.30 min Scan# 640
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 7793

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 0.0 | 9.0 | 13.5# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

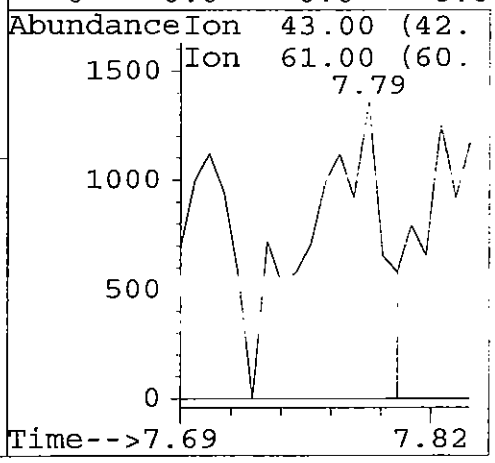


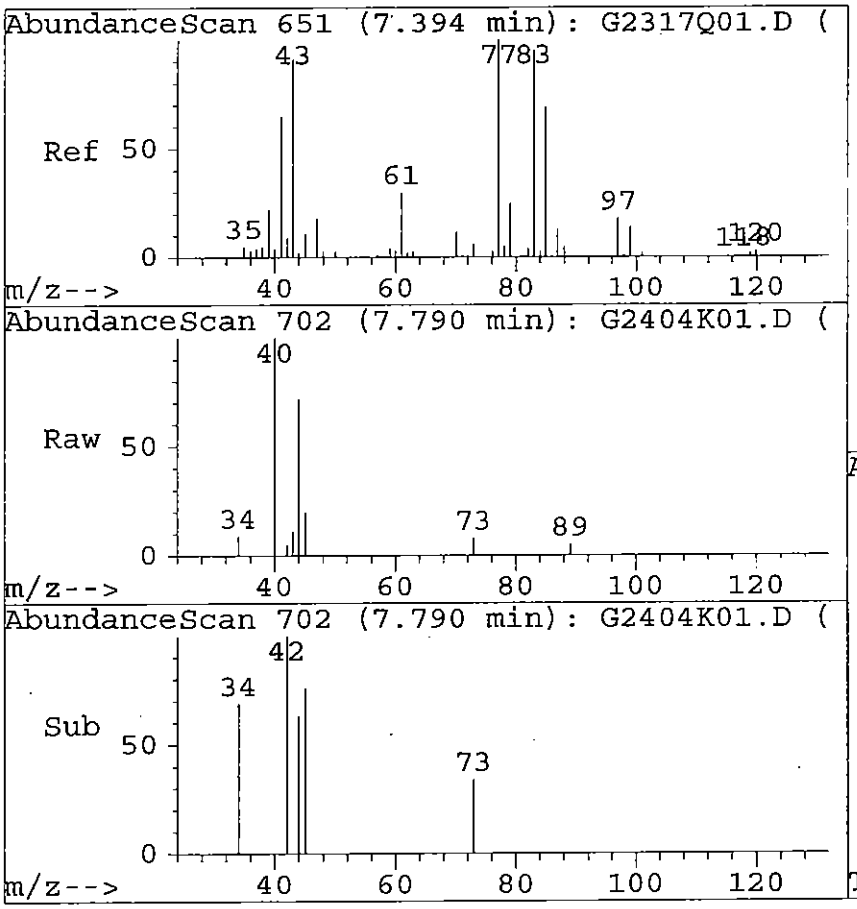



#34
201 Ethyl acetate x2
Concen: 4.77 ppb
RT: 7.79 min Scan# 702
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 3879

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 61 | 0.0 | 19.1 | 28.6# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

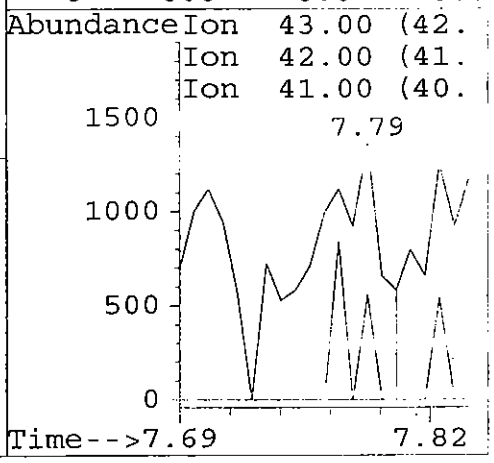


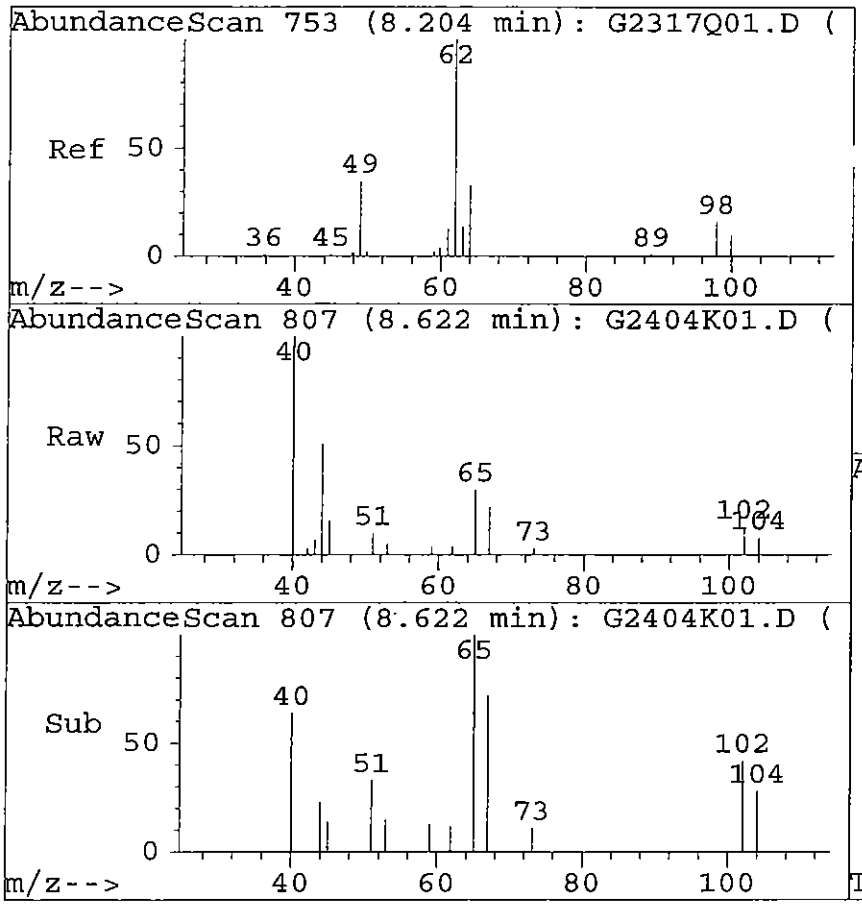




#36
117 Iso-butyl alcohol X10
Concen: 15.97 ppb
RT: 7.79 min Scan# 702
Delta R.T. 0.01 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 3879

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 6.8 | 7.3 | 10.9# |
| 41 | 10.3 | 39.7 | 59.5# |
| 0 | 0.0 | 0.0 | 0.0 |

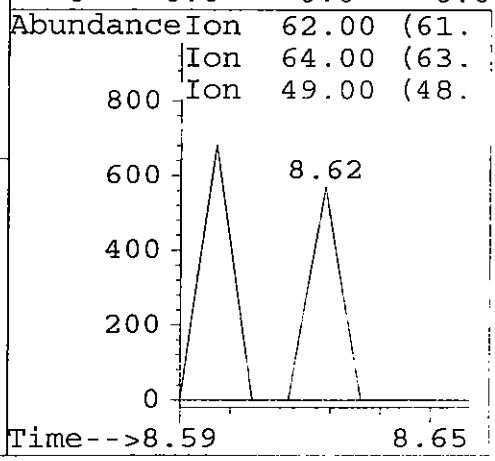


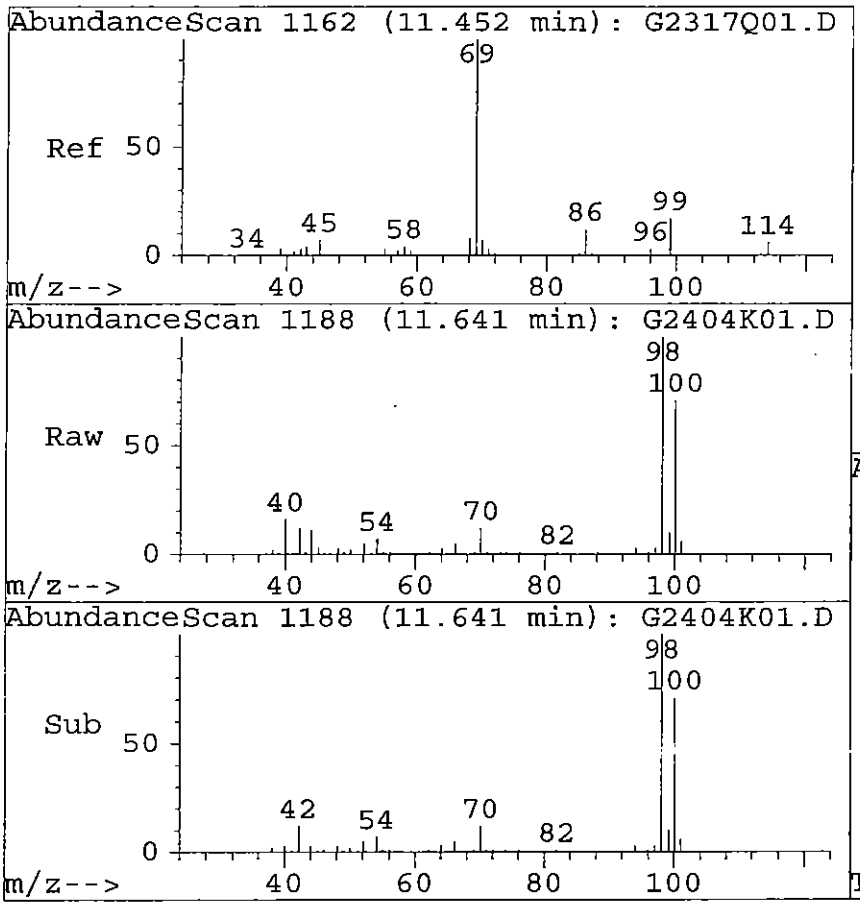



#40
30 12-dichloroethane 64 62
Concen: 0.90 ppb
RT: 8.62 min Scan# 807
Delta R.T. 0.05 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:62 Resp: 272

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 0.0 | 13.1 | 53.1# |
| 49 | 2080.1 | 16.2 | 56.2# |
| 0 | 0.0 | 0.0 | 0.0 |

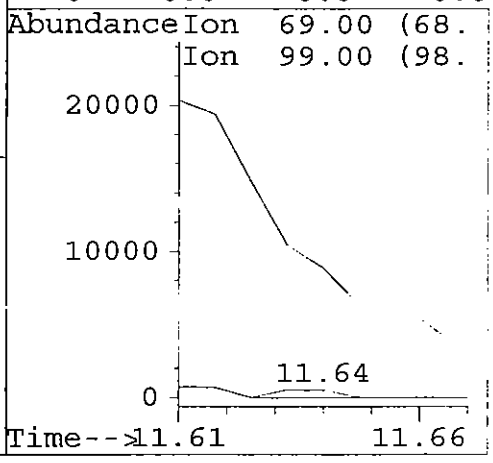


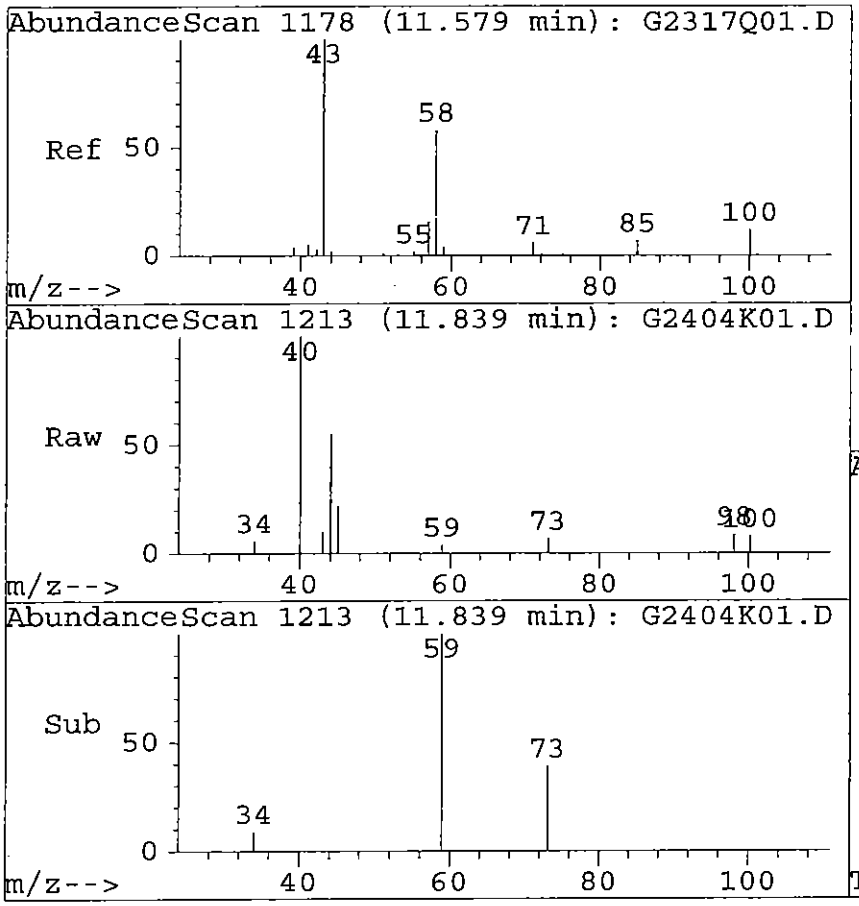




#56
107 Et methacrylate
Concen: 1.65 ppb
RT: 11.64 min Scan# 1188
Delta R.T. -0.09 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:69 Resp: 513

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 69 | 100 | | |
| 99 | 0.0 | 9.4 | 28.0# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

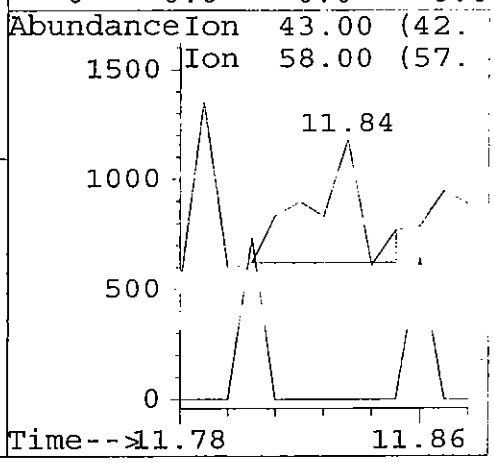


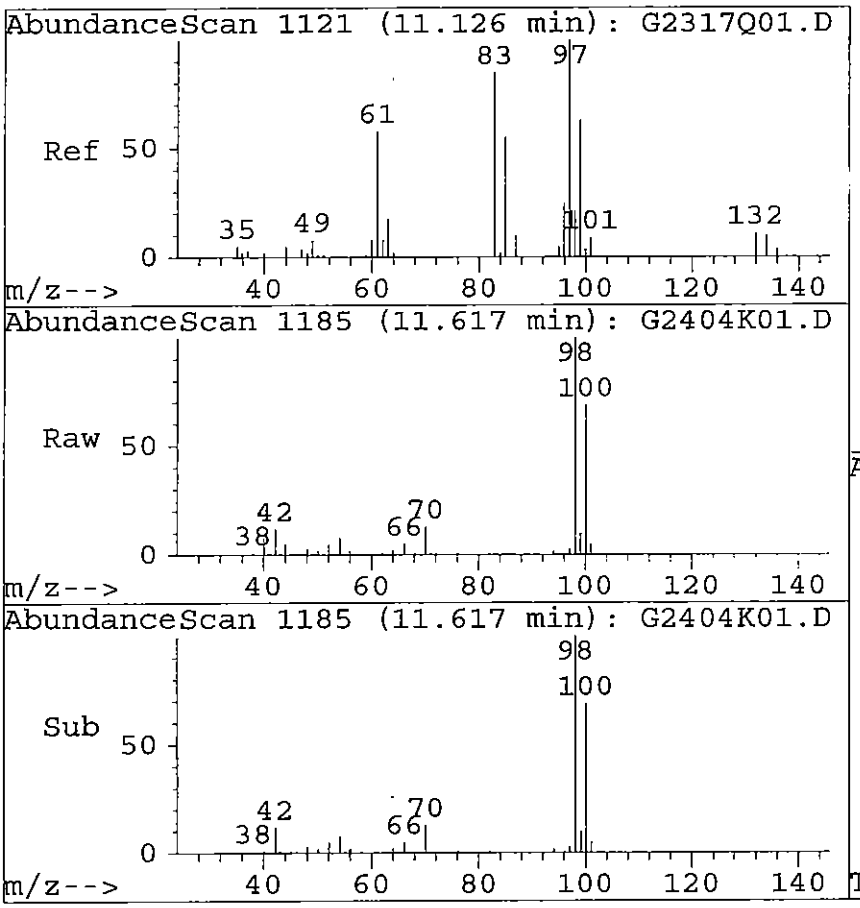



#57
93 2-Hexanone x5
Concen: 5.79 ppb
RT: 11.84 min Scan# 1213
Delta R.T. -0.02 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:43 Resp: 659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 46.3 | 44.5 | 66.8 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

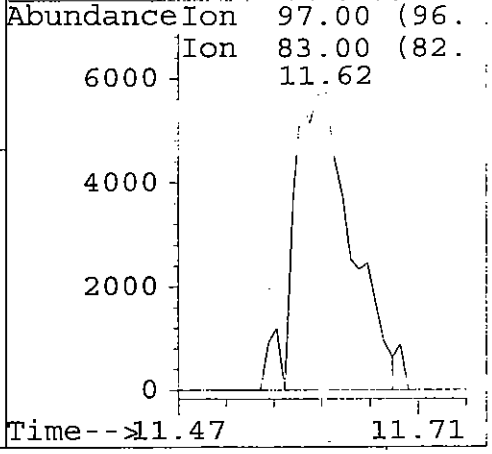


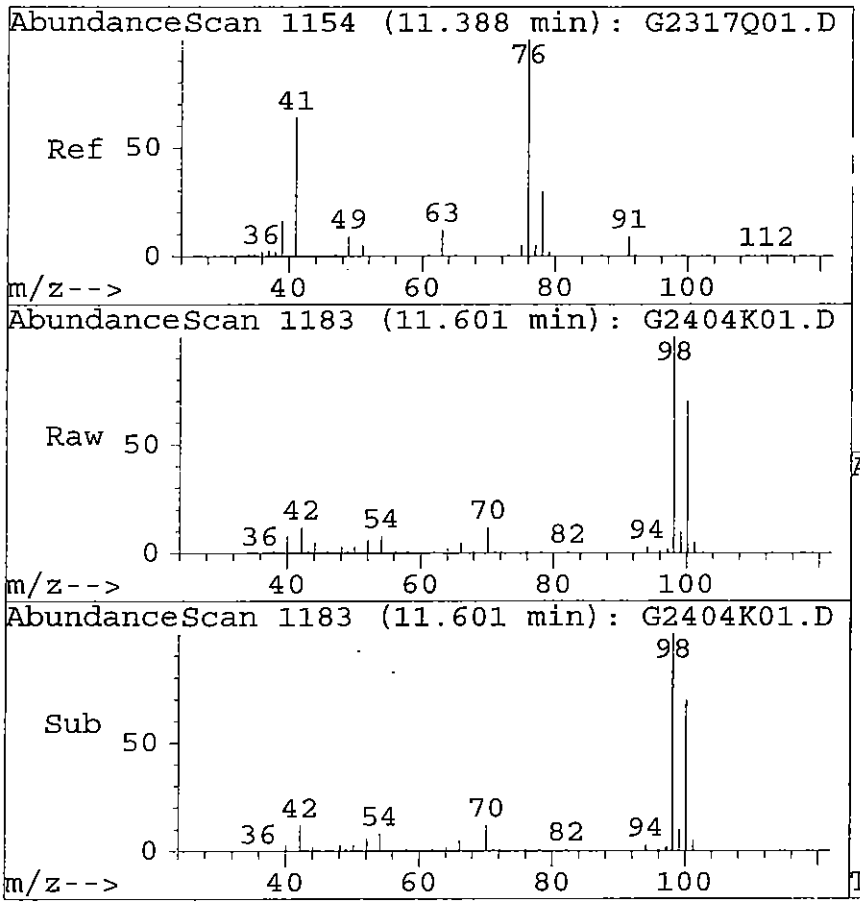




#58
48 112-tri-Cl-Et 97 83
Concen: 2.93 ppb
RT: 11.62 min Scan# 1185
Delta R.T. 0.20 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:97 Resp: 22264

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 0.0 | 41.5 | 124.4# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

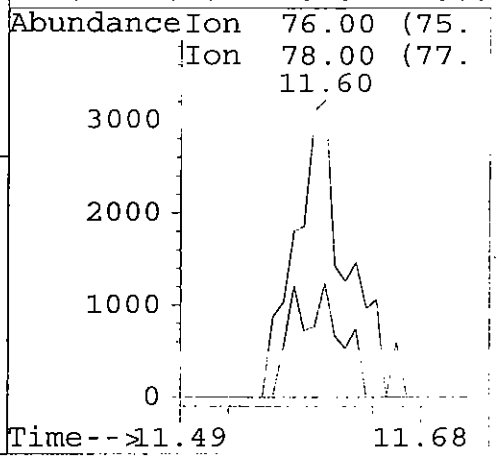


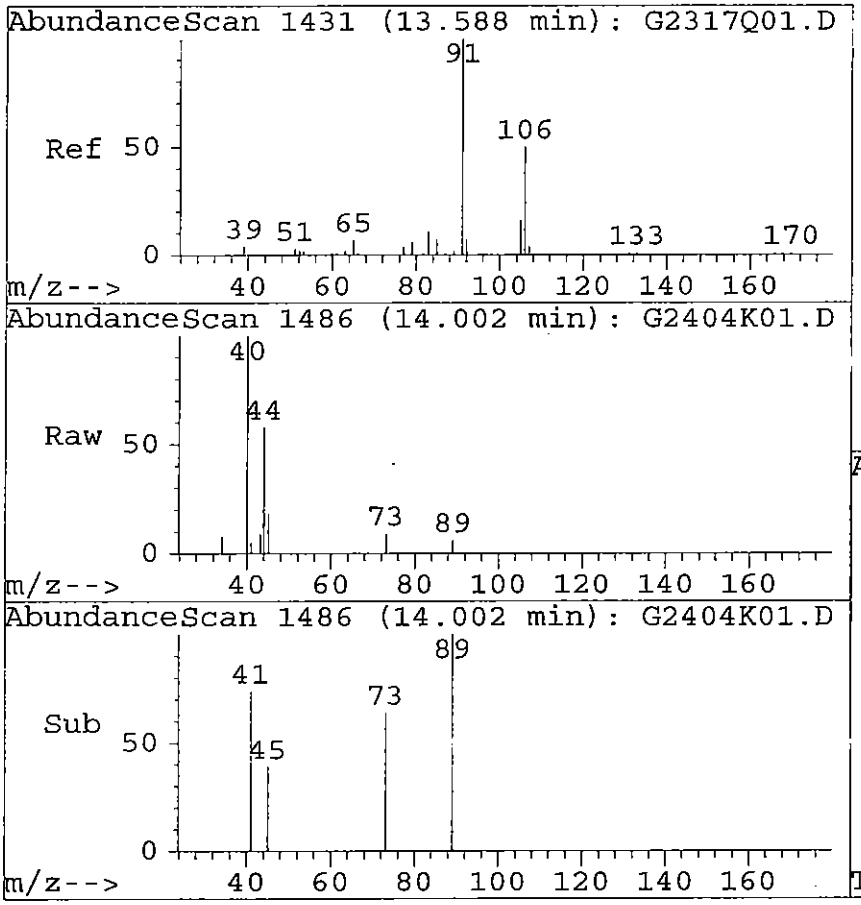



#65
49 1,3-di-cl-propane 76 78
Concen: 0.68 ppb
RT: 11.60 min Scan# 1183
Delta R.T. -0.07 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:76 Resp: 8608

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 35.5 | 27.9 | 41.8 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

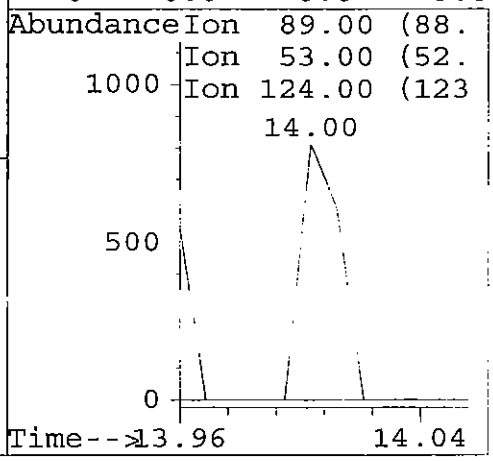


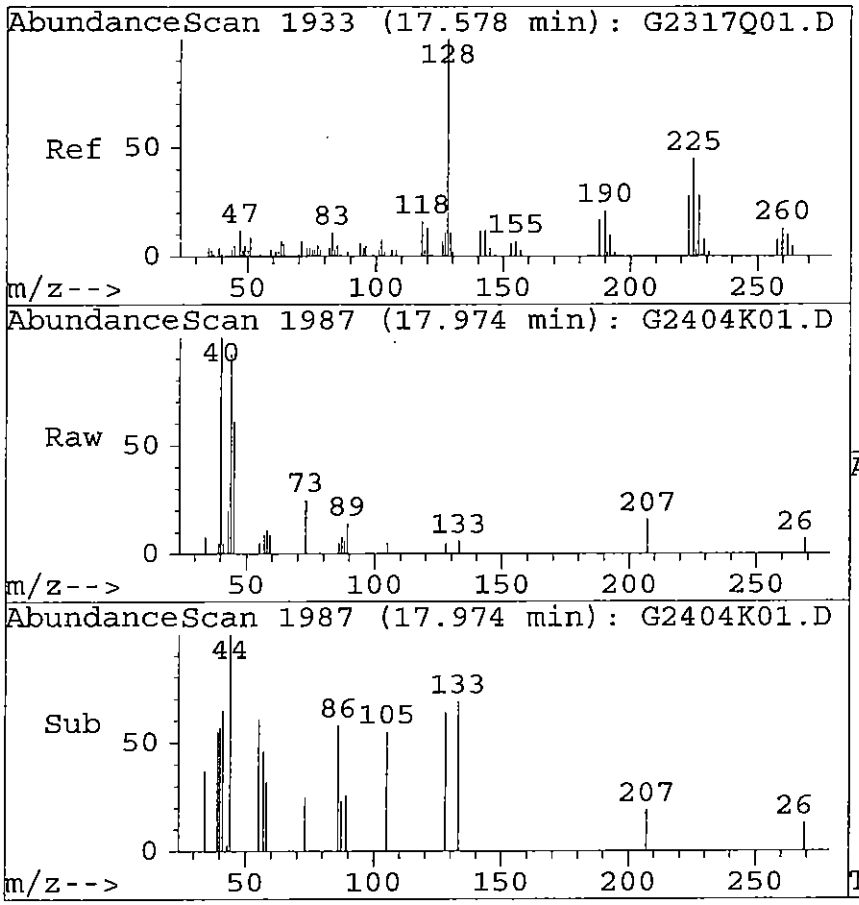




#76
110 t-1,4-dichloro-2-butene
Concen: 0.48 ppb
RT: 14.00 min Scan# 1486
Delta R.T. -0.04 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:89 Resp: 673

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 89 | 100 | | |
| 53 | 0.0 | 83.4 | 125.1# |
| 124 | 0.0 | 29.4 | 44.1# |
| 0 | 0.0 | 0.0 | 0.0 |

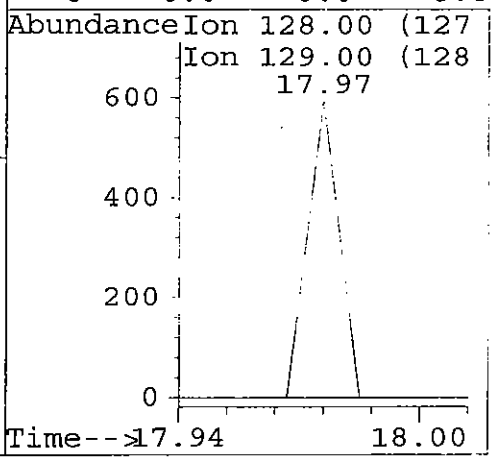





#97
88 naphthalene 128 129
Concen: 1.37 ppb
RT: 17.97 min Scan# 1987
Delta R.T. 0.06 min
Lab File: G2404K01.D
Acq: 16 May 03 2:07 pm

Tgt Ion:128 Resp: 282

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 129 | 0.0 | 6.2 | 18.4# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |



Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-1 | Received Date: | 05/07/2003 |
| Sample ID: | **DUPE-6-2Q03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 17:59 |
| Data File Name: | 3102-01 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | 2.6 | |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | 1.2 | |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROETHENE (TOTAL) | 540-59-0 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 33 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 34 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 35 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 36 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 37 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 38 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 39 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | µg/L | 0.5 | <0.5 | U |
| 41 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 42 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | 4 | J |
| 43 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 [a] | <1.8 | U |
| 44 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 45 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 46 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 47 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 49 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 50 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 51 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 55 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | <0.5 | U |
| 57 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 59 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 61 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 62 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 63 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 64 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 94 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 88 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 94 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 96 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 107 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 118 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 123 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Quantitation Report: **Applied P&Ch Lab** EPA 524.2

5720

Data Filename: C:\HPCHEM\1\DATA\03G2404\3102-01.D
Method : C:\HPCHEM\1\METHODS\E524G004.M
Acq. Time : May 16 17:59 2003
Method Update: Fri May 16 12:11 2003
Quant. Time : May 19 10:20 2003
Print Time : Mon May 19 10:20 2003
Miscleneous :

Sample : f=1 8
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Internal Standards | | | | | | | | | | Dev(Min) | |
| 1 | 1 Fluorobenzene I1 | 9.47 | 9.52 | -0.005 | 96 | 70 | 797.559 | 10.00 | | -0.05 | |
| 47 | 47 Cl-benzene-d5, I2 | 13.08 | 13.12 | -0.003 | 82 | 119 | 217.915 | 10.00 | | -0.04 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.60 | 15.63 | -0.002 | 152 | 150 | 209.628 | 10.00 | | -0.03 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | | %Recovery | |
| 27 | 27 Di-Br-F-Methane ( | 7.94 | 7.97 | -0.002 | 111 | 113 | 557.153 | 18.81 | 18.8 | 94.07% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.50 | 8.54 | -0.003 | 65 | 102 | 235.511 | 17.50 | 17.5 | 87.49% | |
| 55 | 55 toluene-d8(S2) | 11.57 | 11.61 | -0.003 | 100 | 99 | 774.823 | 19.28 | 19.3 | 96.42% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 14.32 | 14.36 | -0.002 | 174 | 95 | 324.004 | 18.76 | 18.8 | 93.78% | |
| Target Compounds | | | | | | | | | | Qvalue | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 111 | 111 isopropyl alcoho | 4.76 | 4.76 | 0.000 | 45 | 43 | 0.839 | 2.63 | ~~3.6~~ | ~~10~~ | # |
| 102 | 102 Acrolein x10 | 4.80 | 4.67 | 0.013 | 56 | 55 | 0.238 | 4.44 | ~~4.4~~ | ~~14~~ | # |
| 101 | 101 Acetonnitrilex10 | 4.72 | 4.71 | 0.000 | 41 | 40 | 1.364 | 12.11 | ~~12.1~~ | ~~1~~ | # |
| 113 | 113 Tert butyl alcoh | 5.38 | 5.38 | 0.000 | 59 | 57 | 0.307 | 0.42 | ~~0.4~~ | ~~79~~ | # |
| 18 | 18 methylene chlorid | 5.48 | 5.50 | -0.003 | 84 | 49 | 25.220 | 1.29 | 1.3 | 94 | |
| 98 | 98 Vinyl acetate x5 | 6.99 | 6.97 | 0.002 | 43 | 86 | 0.936 | 12.55 | ~~12.5~~ | ~~69~~ | # |
| 91 | 91 2-butanone MEKx10 | 7.37 | 7.37 | 0.000 | 43 | 72 | 6.272 | 0.84 | ~~0.8~~ | ~~71~~ | # |
| 25 | 25 chloroform | 7.77 | 7.81 | -0.005 | 83 | 85 | 48.408 | 1.18 | 1.2 | 98 | |
| 201 | 201 Ethyl acetate x2 | 7.82 | 7.83 | 0.000 | 43 | 61 | 1.343 | 4.44 | ~~4.4~~ | ~~52~~ | #? |
| 117 | 117 Iso-butyl alcoho | 7.82 | 7.83 | 0.000 | 43 | 42 | 1.343 | 14.30 | ~~14.3~~ | ~~35~~ | #? |
| 30 | 30 12-dichloroethane | 8.61 | 8.63 | -0.003 | 62 | 64 | 0.601 | 0.92 | ~~0.9~~ | ~~1~~ | # |
| 37 | 37 CCl4 | 9.16 | 9.19 | -0.003 | 117 | 119 | 73.832 | 2.58 | 2.6 | 96 | |
| 118 | 118 TAME | 9.47 | 9.47 | 0.000 | 73 | 43 | 13.982 | 0.40 | ~~0.4~~ | ~~70~~ | # |
| 107 | 107 Et methacrylate | 11.60 | 11.80 | -0.020 | 69 | 99 | 0.799 | 1.66 | ~~1.7~~ | ~~58~~ | #? |
| 93 | 93 2-Hexanone x5 | 11.96 | 11.93 | 0.003 | 43 | 58 | 0.435 | 5.71 | ~~5.7~~ | ~~95~~ | |
| 48 | 48 112-tri-Cl-Et | 11.59 | 11.49 | 0.010 | 97 | 83 | 25.317 | 2.72 | ~~2.7~~ | ~~9~~ | #? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 54 | 54 MIBK | 10.94 | 10.99 | -0.004 | 43 | 58 | 27.296 | 3.88 | 3.9 | 76 | |
| 49 | 49 1,3-di-cl-propane | 11.56 | 11.75 | -0.015 | 76 | 78 | 9.220 | 0.60 | ~~0.6~~ | ~~88~~ | ? |

# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P&Ch Lab** EPA 524.2

5721

Data Filename: C:\HPCHEM\1\DATA\03G2404\3102-01.D
Method : C:\HPCHEM\1\METHODS\E524G004.M
Acq. Time : May 16 17:59 2003
Method Update: Fri May 16 12:11 2003
Quant. Time : May 19 10:20 2003
Print Time : Mon May 19 10:20 2003
Miscleneous :

Sample : f=1 8
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|

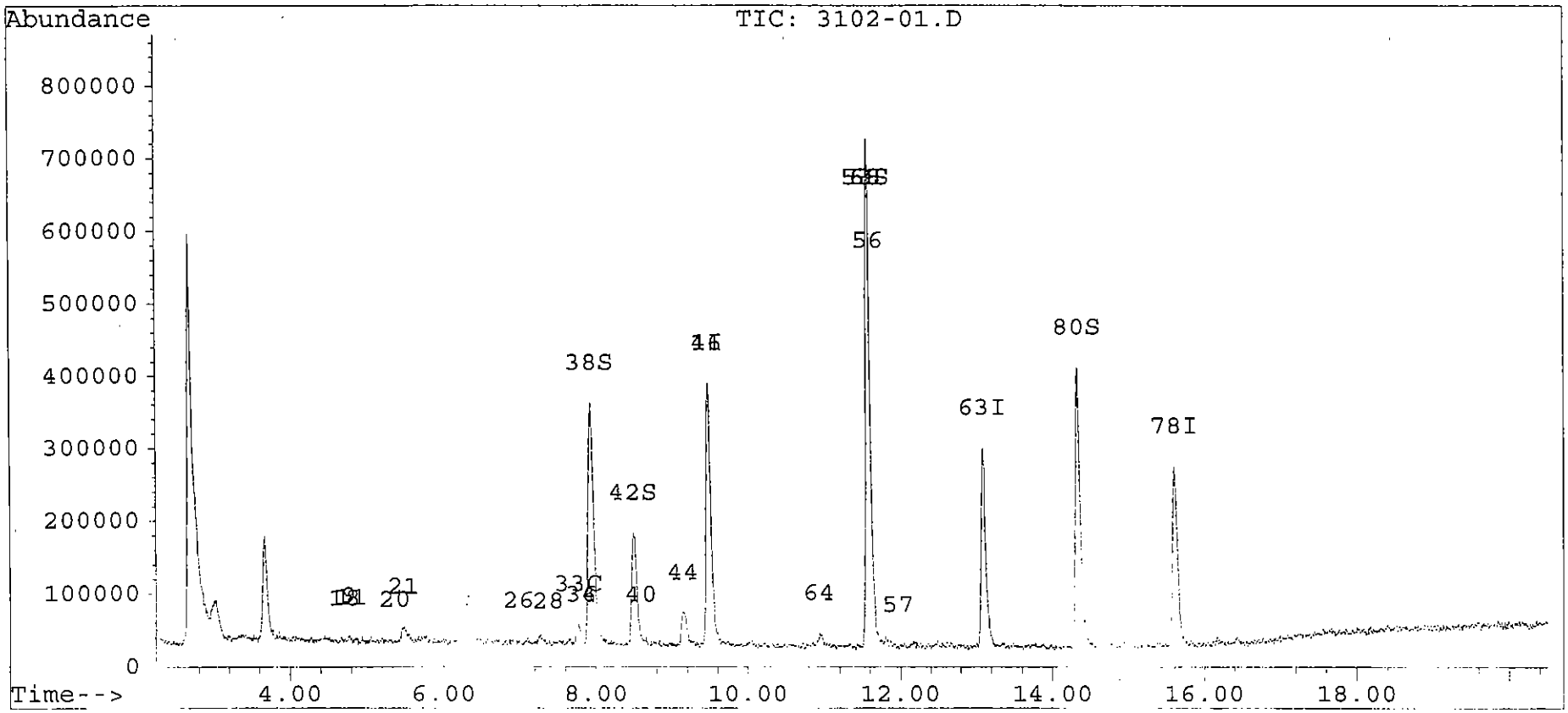
# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

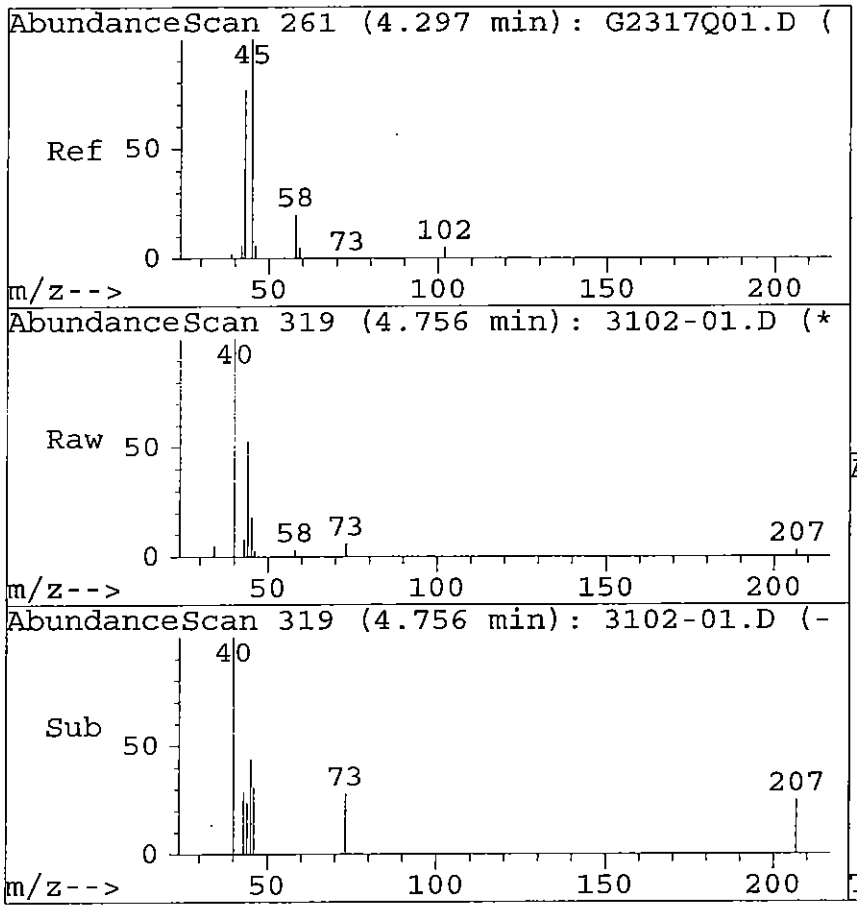
# Quantitation Report

5722

Data File : C:\HPCHEM\1\DATA\03G2404\3102-01.D  Vial: 21
Acq On : 16 May 03 5:59 pm  Operator: Eddie
Sample : f=1 8  Inst : GCMS-G
Misc :  Multiplr: 1.00
Quant Time: May 19 10:20 2003  Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G004.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Fri May 16 12:11:07 2003
Response via : Multiple Level Calibration

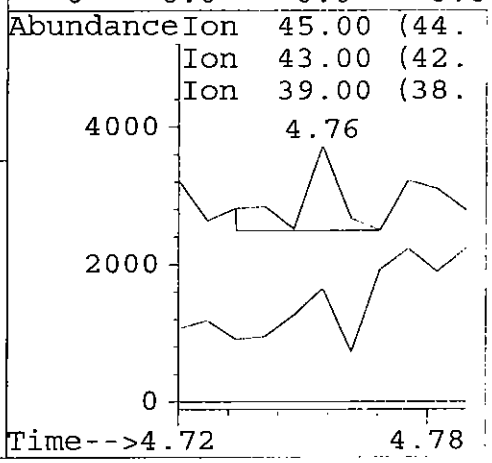


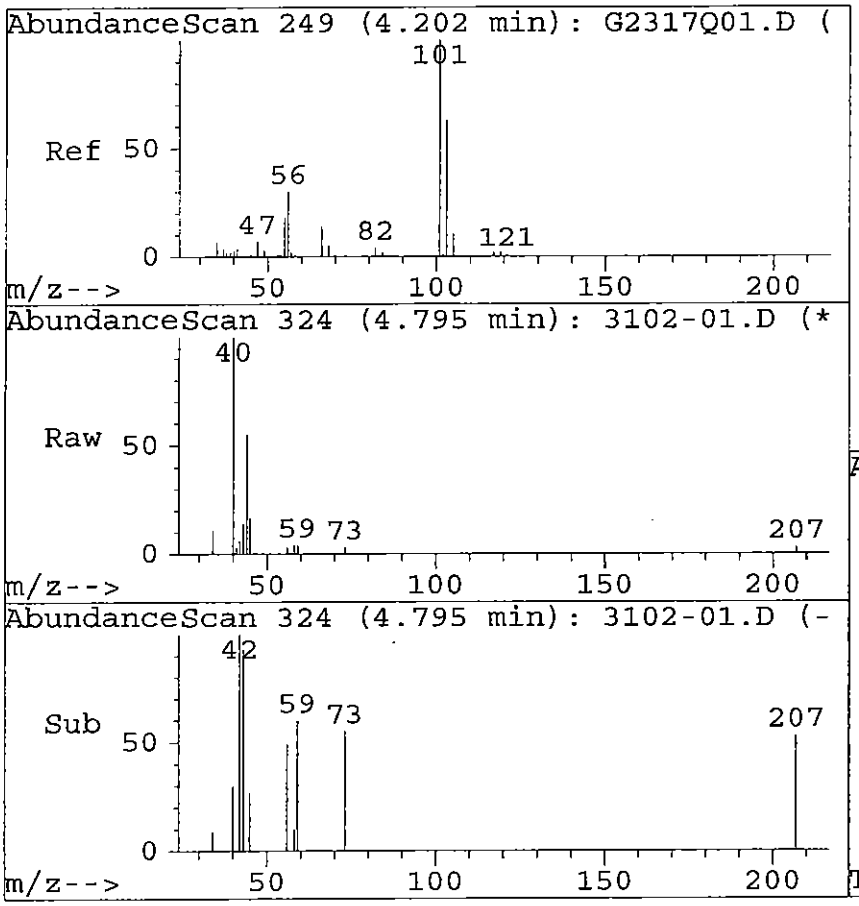



#9
111 isopropyl alcohol x10
Concen: 2.63 ppb
RT: 4.76 min Scan# 319
Delta R.T. 0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:45 Resp: 839

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 0.0 | 77.0 | 115.5# |
| 39 | 0.0 | 13.3 | 19.9# |
| 0 | 0.0 | 0.0 | 0.0 |

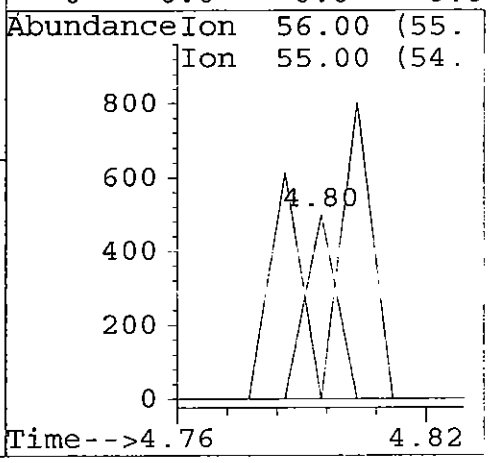


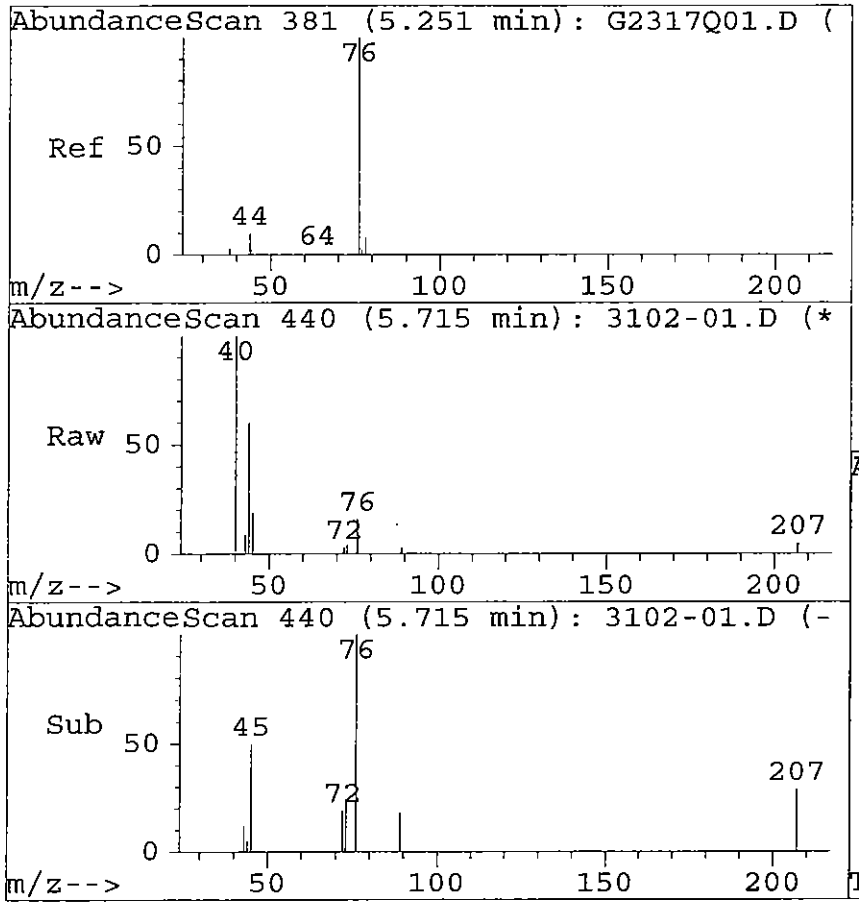




#11
102 Acrolein x10
Concen: 4.44 ppb
RT: 4.80 min Scan# 324
Delta R.T. 0.13 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:56 Resp: 238

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 122.7 | 29.2 | 87.5# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

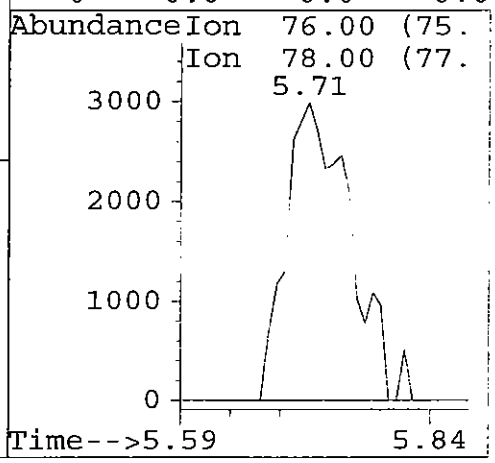


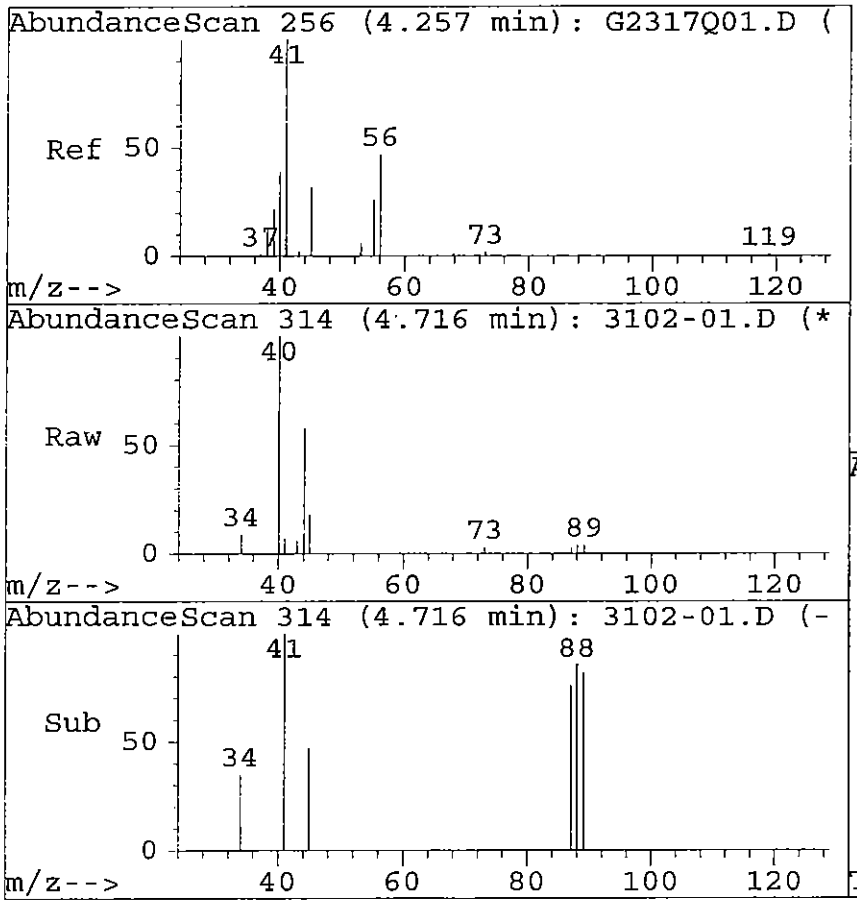



#13
104 Carbon disulfide
Concen: 0.26 ppb
RT: 5.71 min Scan# 440
Delta R.T. -0.02 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:76 Resp: 12991

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 0.0 | 4.5 | 13.4# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

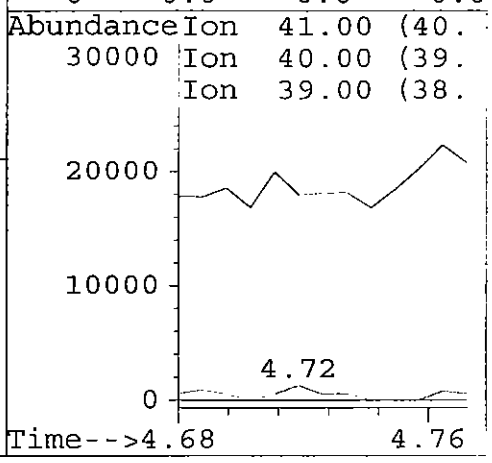


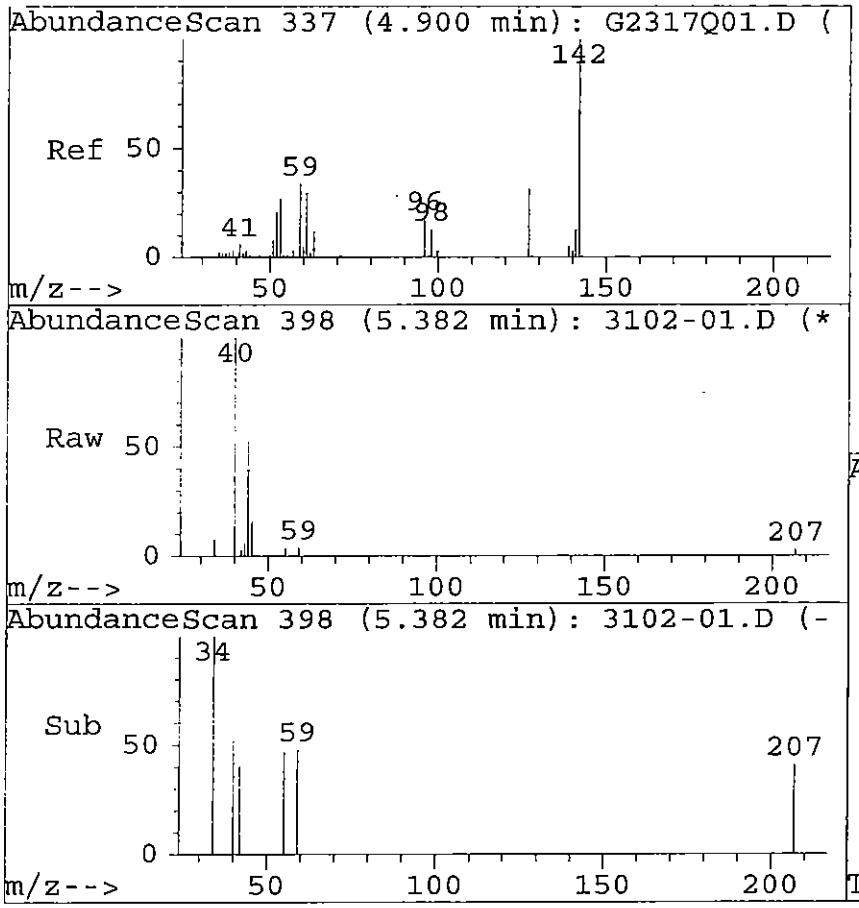




#18
101 Acetonnitrilex10
Concen: 12.11 ppb
RT: 4.72 min Scan# 314
Delta R.T. 0.01 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:41 Resp: 1364

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 349.3 | 151.7 | 227.5# |
| 39 | 0.0 | 17.3 | 25.9# |
| 0 | 0.0 | 0.0 | 0.0 |

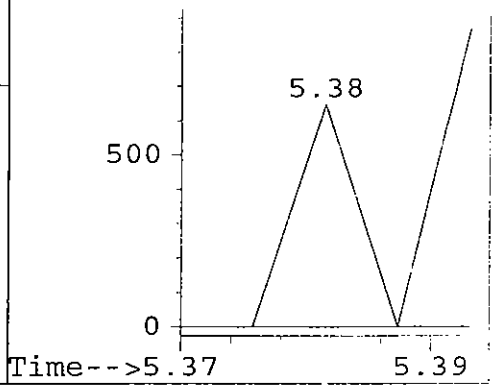


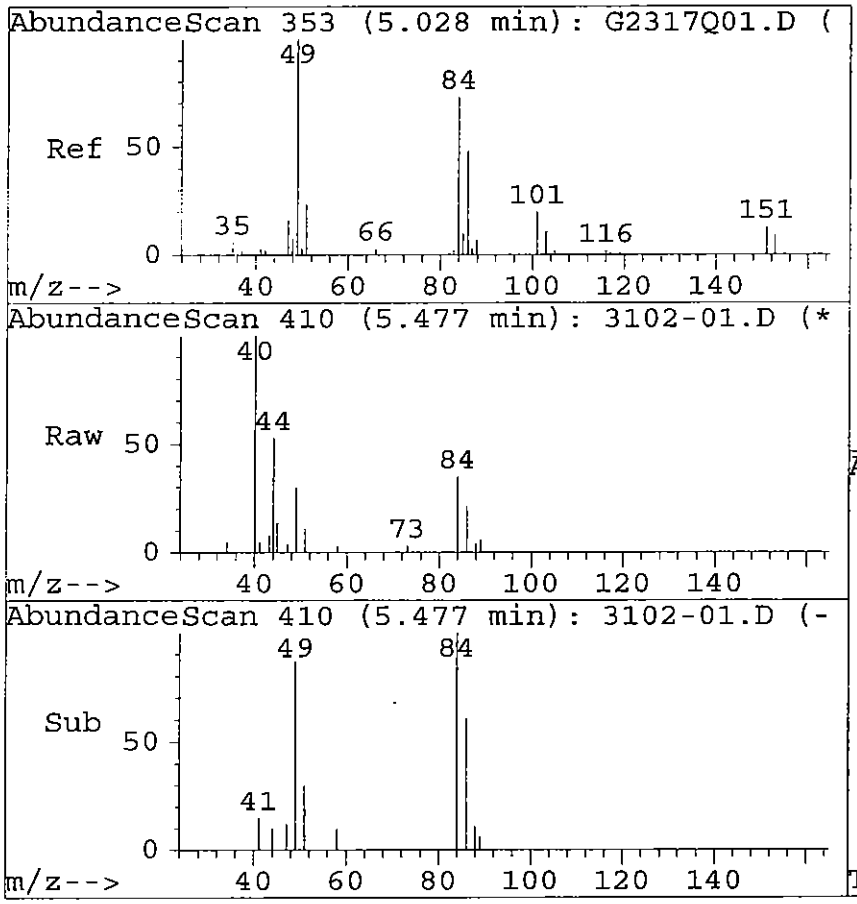



#20
113 Tert butyl alcohol x10
Concen: 0.42 ppb
RT: 5.38 min Scan# 398
Delta R.T. -0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:59 Resp: 307

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 57 | 0.0 | 5.8 | 8.7# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

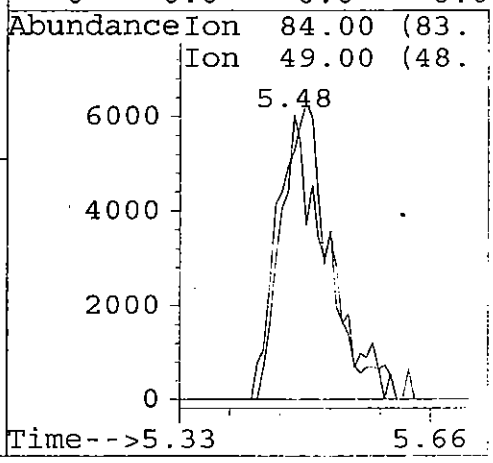


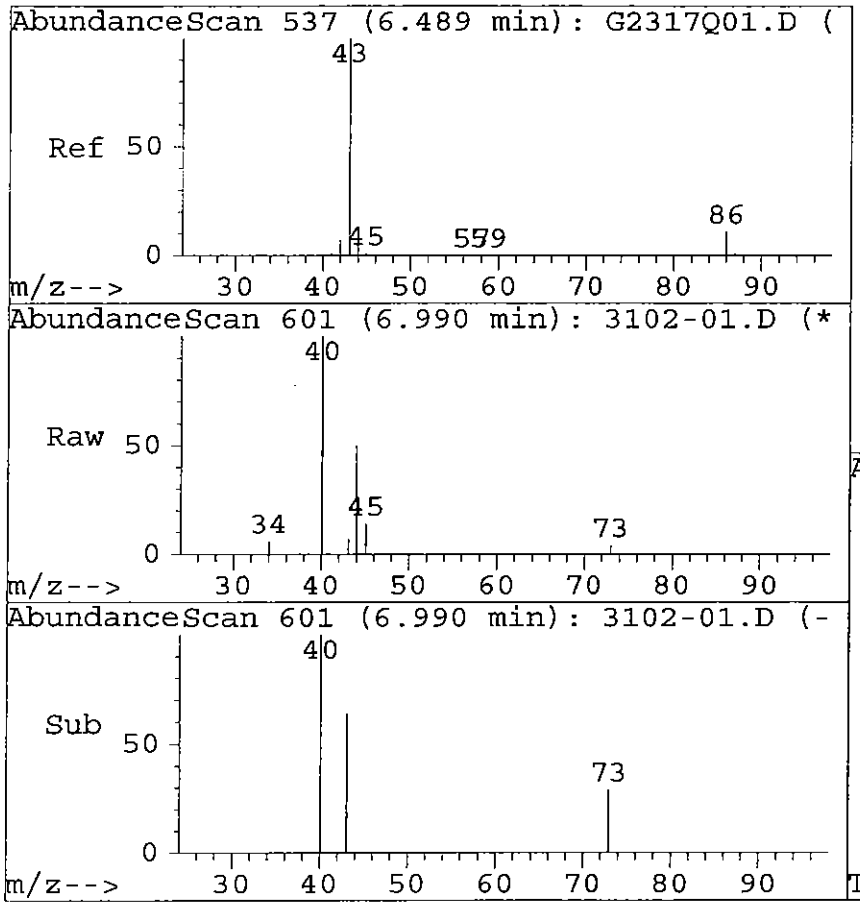




#21
18 methylene chloride 49 84
Concen: 1.29 ppb
RT: 5.48 min Scan# 410
Delta R.T. -0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:84 Resp: 25220

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 118.9 | 62.9 | 188.5 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

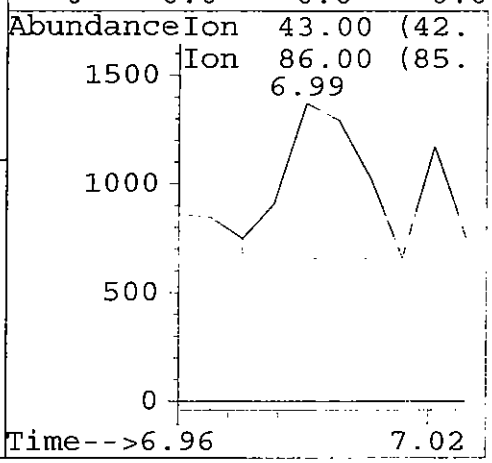


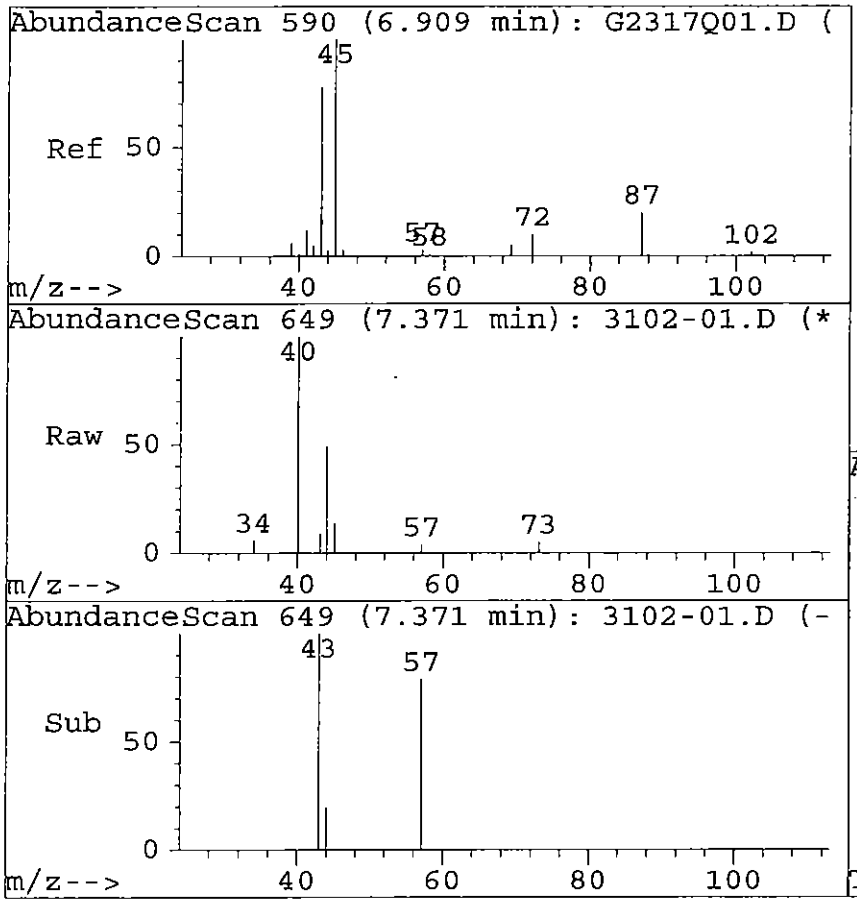



#26
98 Vinyl acetate x5
Concen: 12.55 ppb
RT: 6.99 min Scan# 601
Delta R.T. 0.02 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 936

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 86 | 0.0 | 9.5 | 14.2# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

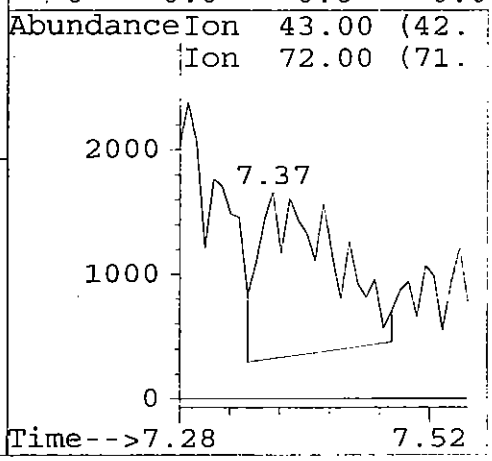


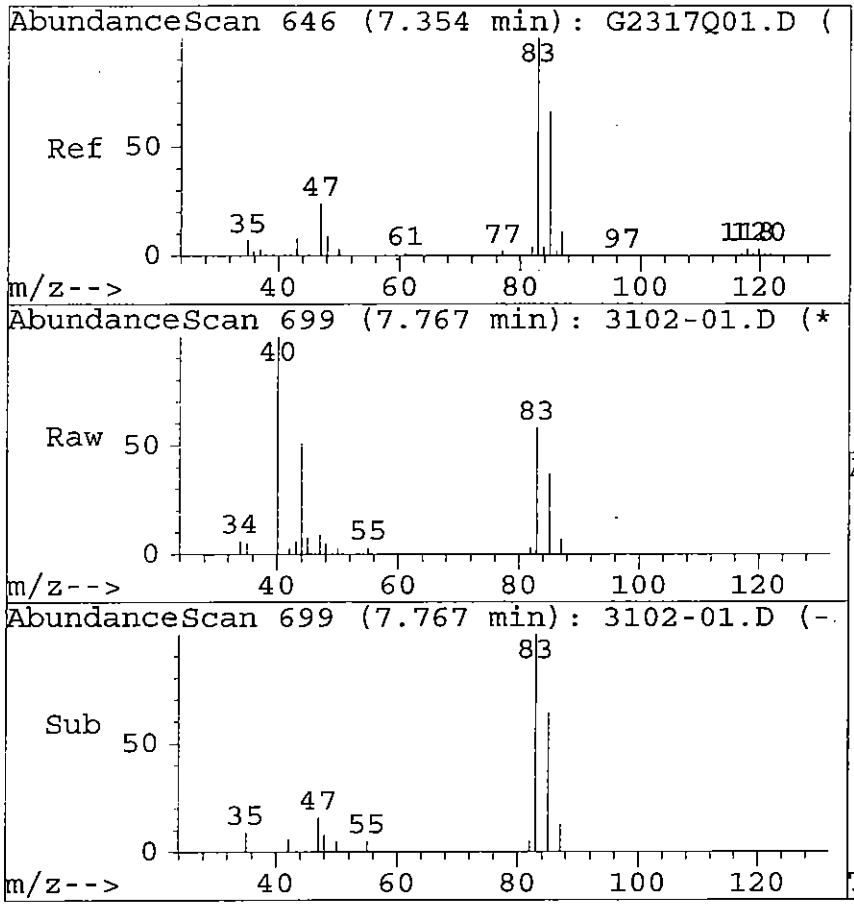




#28
91 2-butanone MEKx10
Concen: 0.84 ppb
RT: 7.37 min Scan# 649
Delta R.T. -0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 6272

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 0.0 | 9.0 | 13.5# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

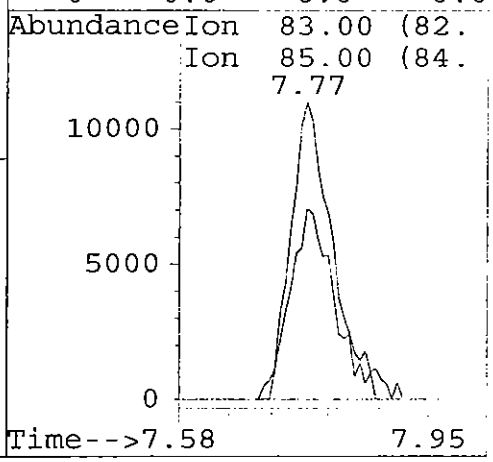


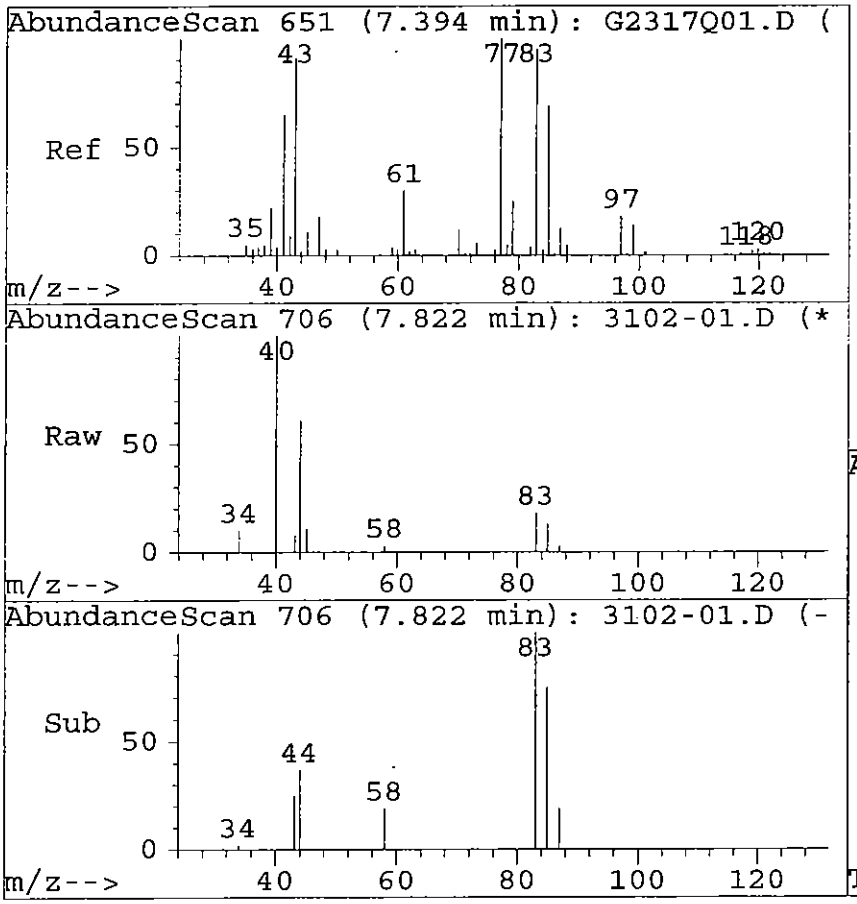



#33
25 chloroform 83 85
Concen: 1.18 ppb
RT: 7.77 min Scan# 699
Delta R.T. -0.05 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:83 Resp: 48408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.6 | 33.5 | 100.3 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

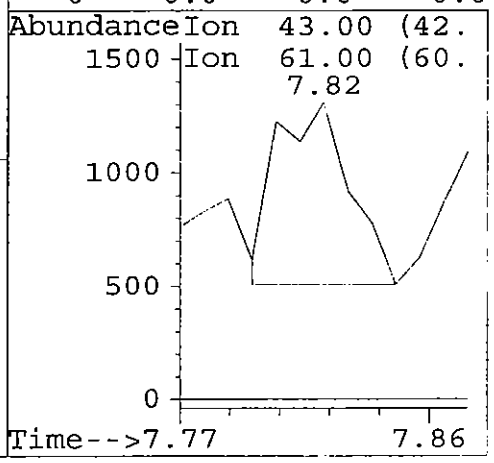


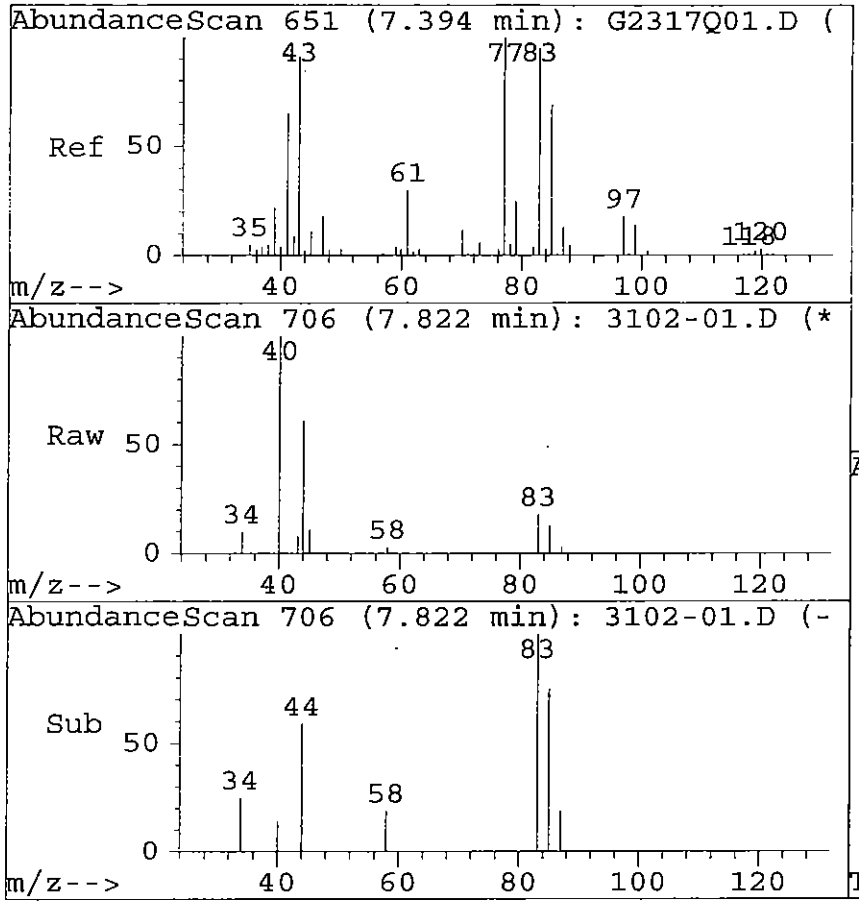




#34
201 Ethyl acetate x2
Concen: 4.44 ppb
RT: 7.82 min Scan# 706
Delta R.T. -0.01 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 1343

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 61 | 0.0 | 19.1 | 28.6# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

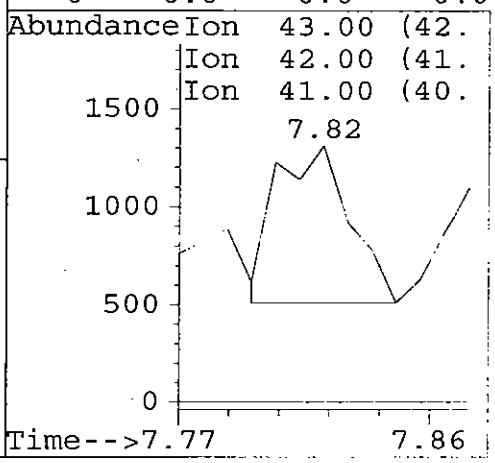


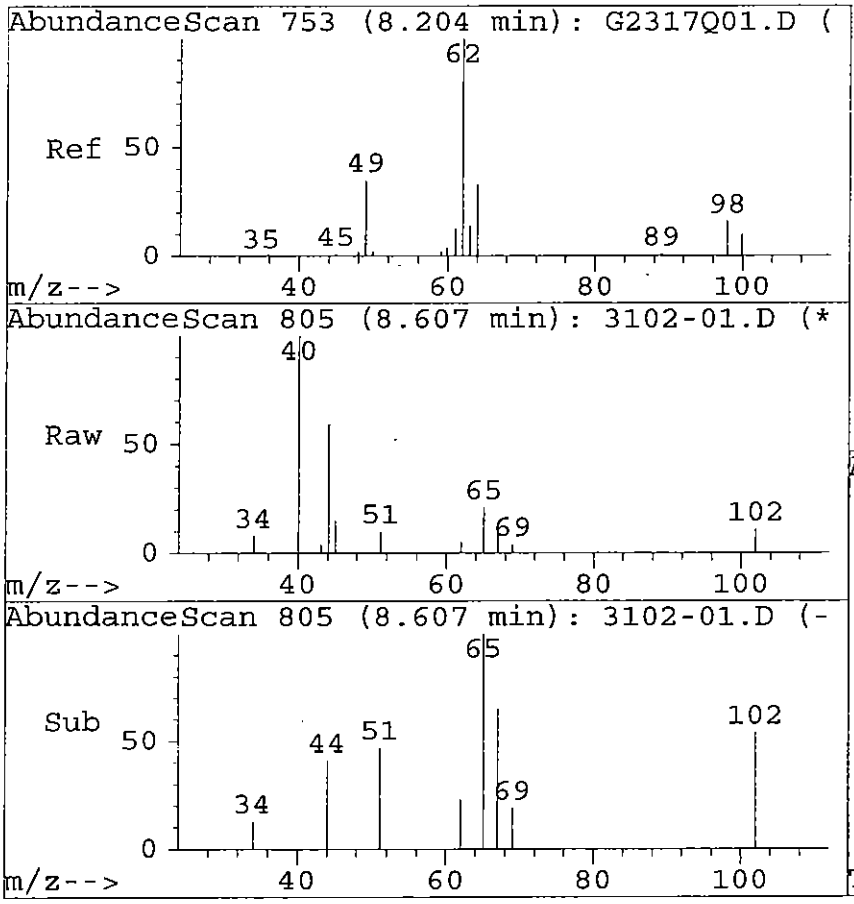



#36
117 Iso-butyl alcohol X10
Concen: 14.30 ppb
RT: 7.82 min Scan# 706
Delta R.T. -0.01 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 1343

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 7.3 | 10.9# |
| 41 | 0.0 | 39.7 | 59.5# |
| 0 | 0.0 | 0.0 | 0.0 |

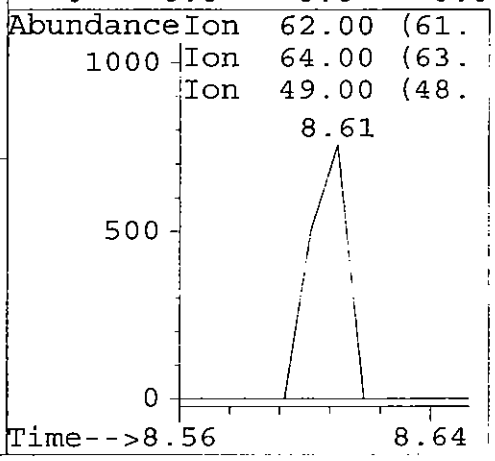


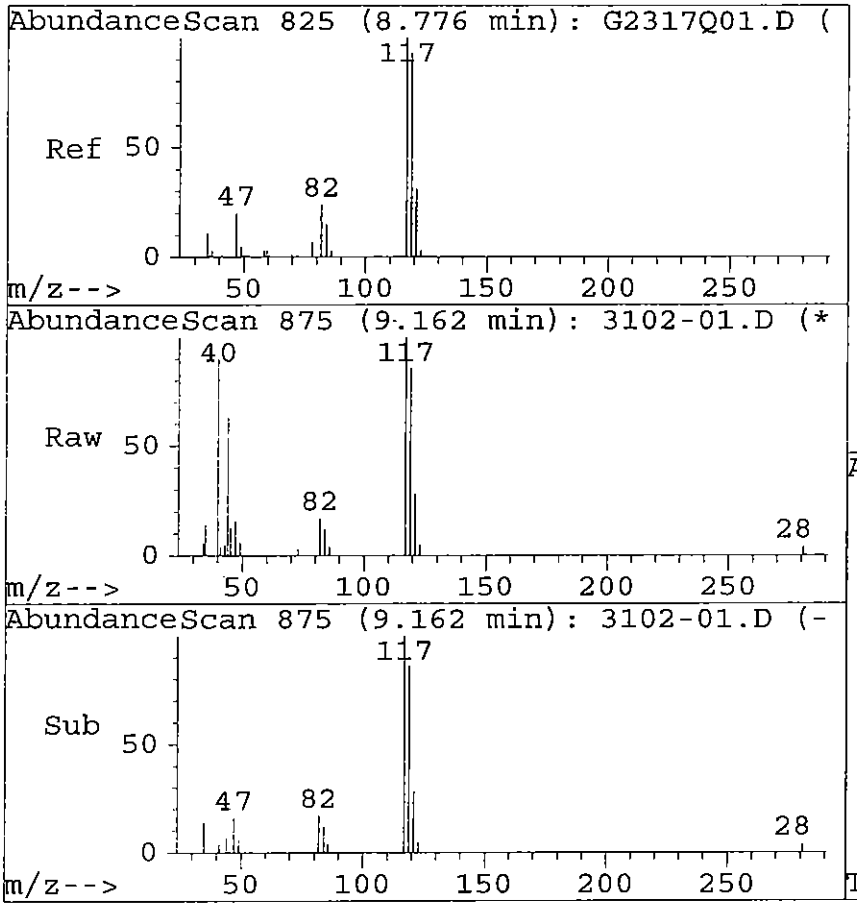




#40
30 12-dichloroethane 64 62
Concen: 0.92 ppb
RT: 8.61 min Scan# 805
Delta R.T. -0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:62 Resp: 601

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 49.8 | 13.1 | 53.1 |
| 49 | 1052.7 | 16.2 | 56.2# |
| 0 | 0.0 | 0.0 | 0.0 |

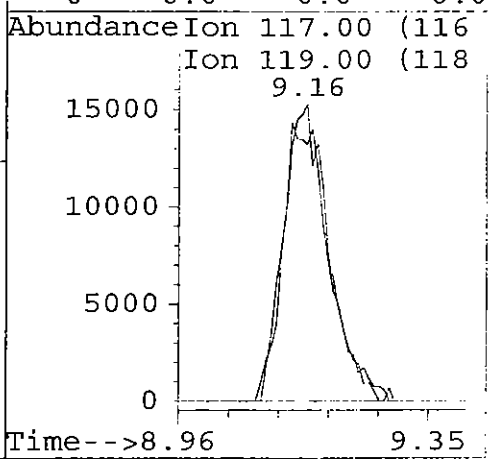


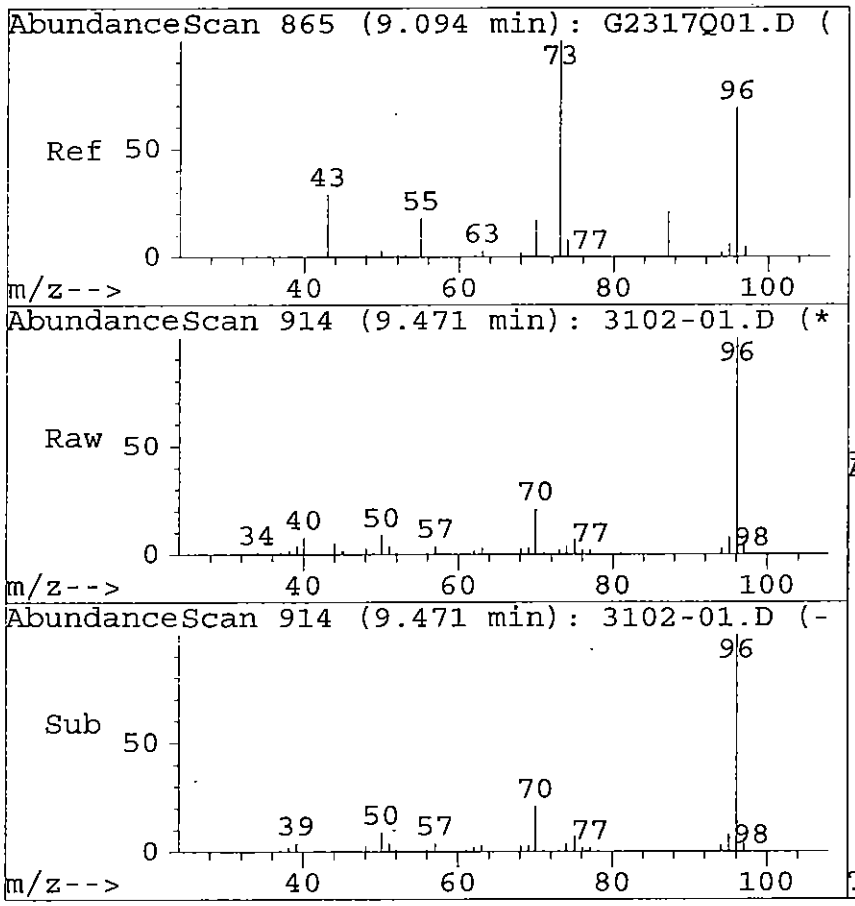



#44
37 CCl4 117 119
Concen: 2.58 ppb
RT: 9.16 min Scan# 875
Delta R.T. -0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:117 Resp: 73832

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.2 | 80.3 | 120.3 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

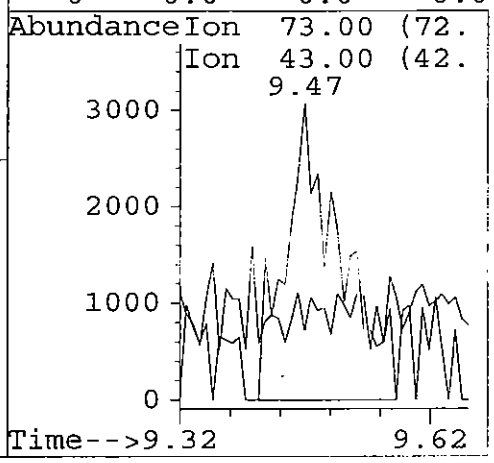


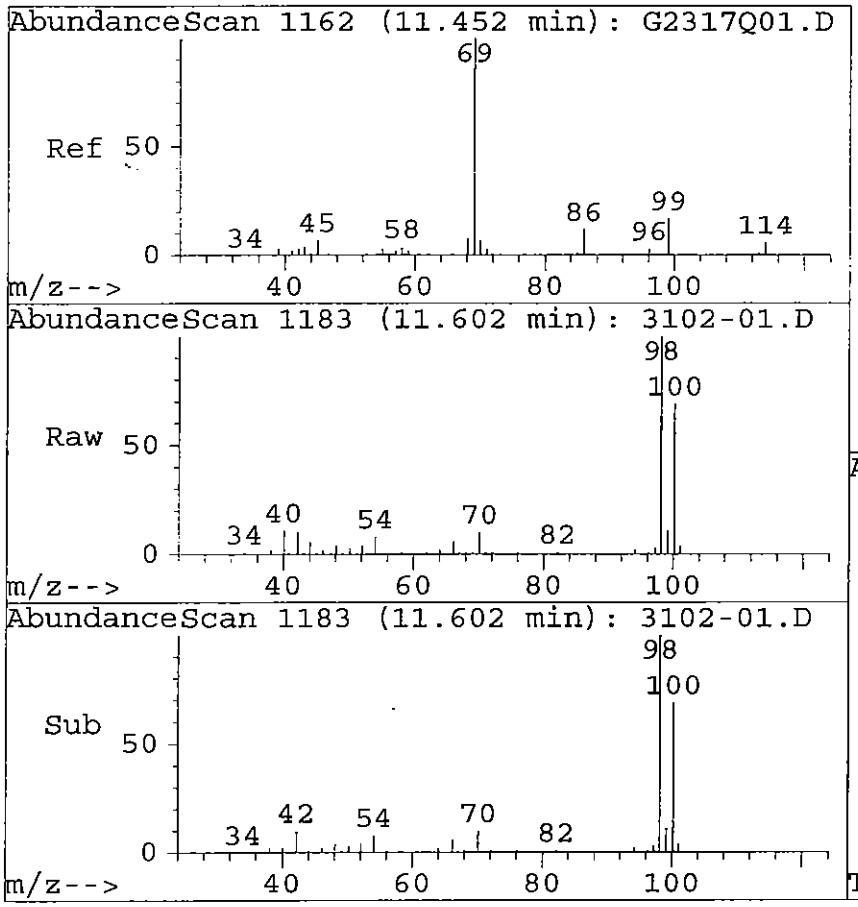




#46
118 TAME
Concen: 0.40 ppb
RT: 9.47 min Scan# 914
Delta R.T. -0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:73 Resp: 13982

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 43 | 14.6 | 25.0 | 37.5# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

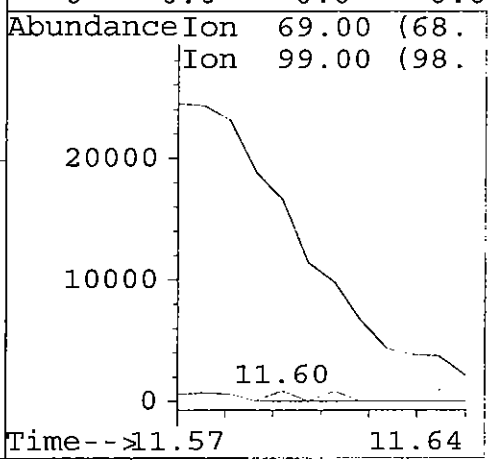


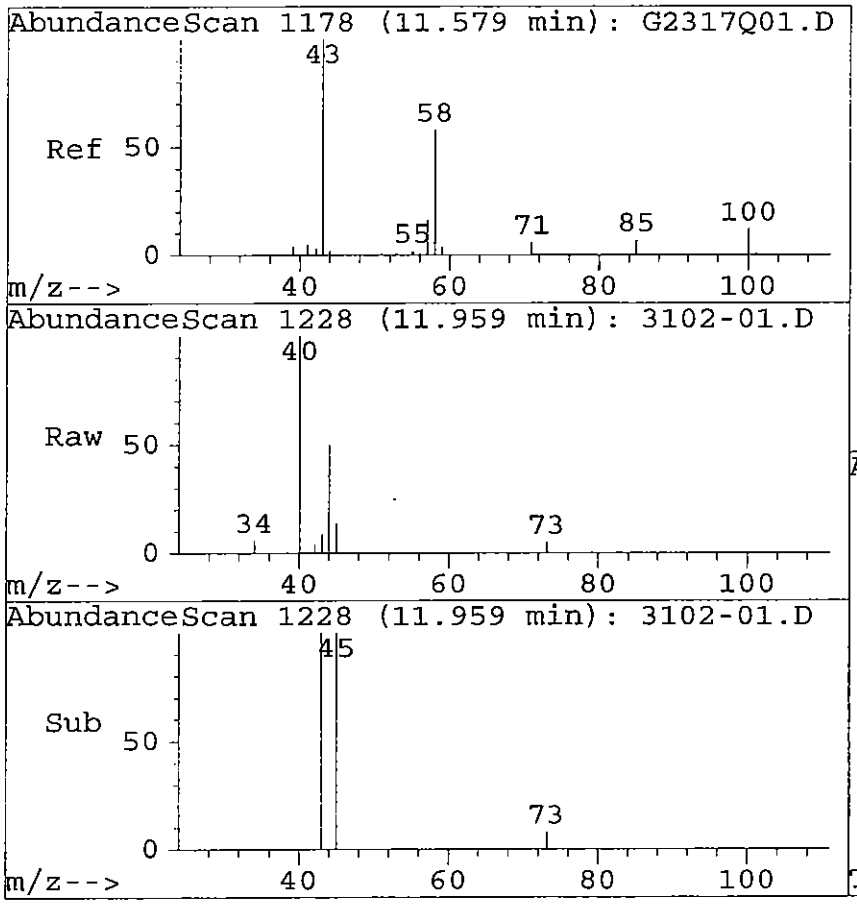



#56
107 Et methacrylate
Concen: 1.66 ppb
RT: 11.60 min Scan# 1183
Delta R.T. -0.20 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:69 Resp: 799

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 69 | 100 | | |
| 99 | 0.0 | 9.4 | 28.0# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

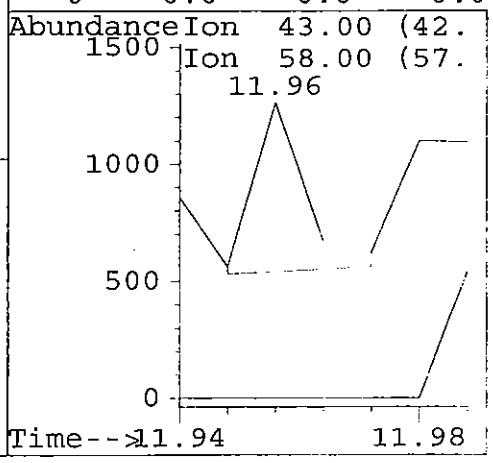


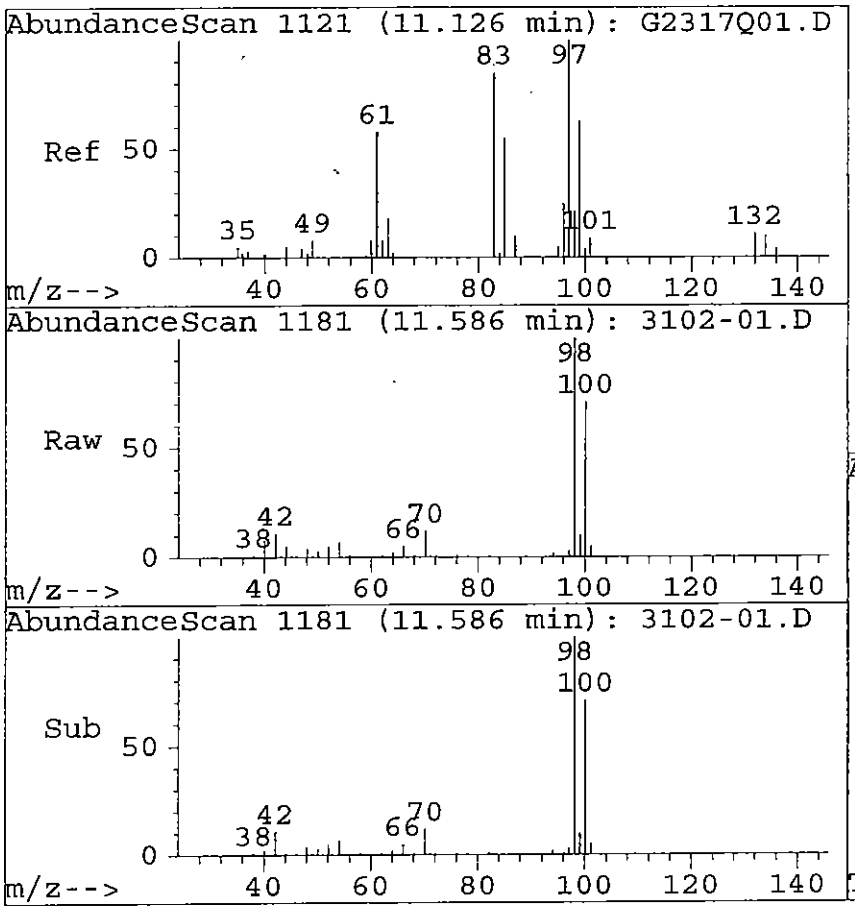




#57
93 2-Hexanone x5
Concen: 5.71 ppb
RT: 11.96 min Scan# 1228
Delta R.T. 0.03 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 435

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 59.1 | 44.5 | 66.8 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

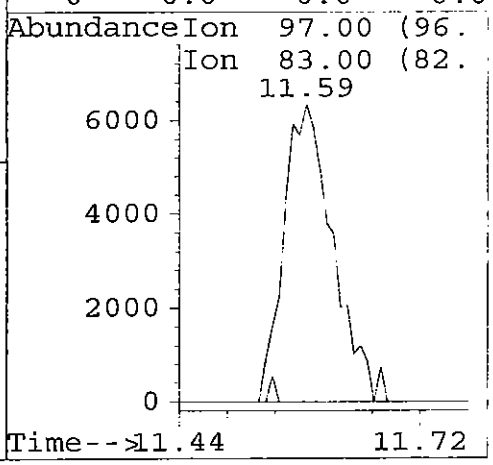


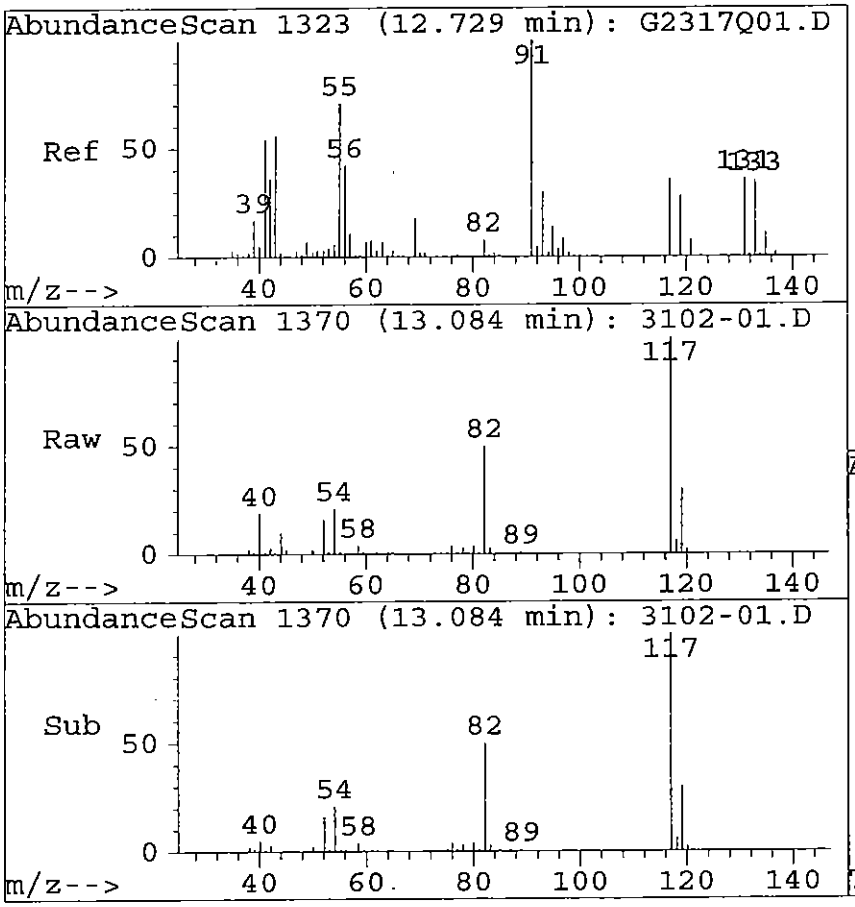



#58
48 112-tri-Cl-Et 97 83
Concen: 2.72 ppb
RT: 11.59 min Scan# 1181
Delta R.T. 0.10 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:97 Resp: 25317

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 1.0 | 41.5 | 124.4# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

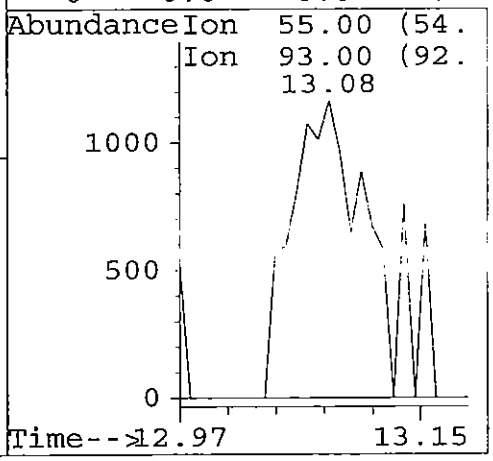


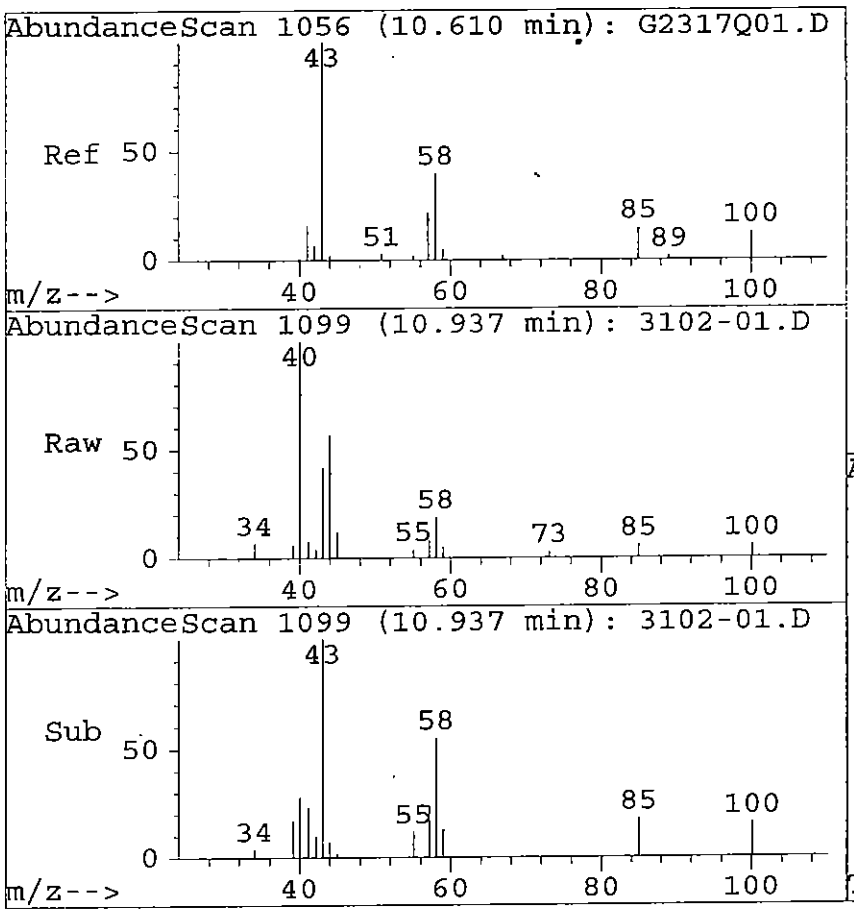




#62
105 1-Chlorohexane
Concen: 0.21 ppb
RT: 13.08 min Scan# 1370
Delta R.T. 0.00 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:55 Resp: 4274

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 55 | 100 | | |
| 93 | 0.0 | 0.0 | 94.3 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

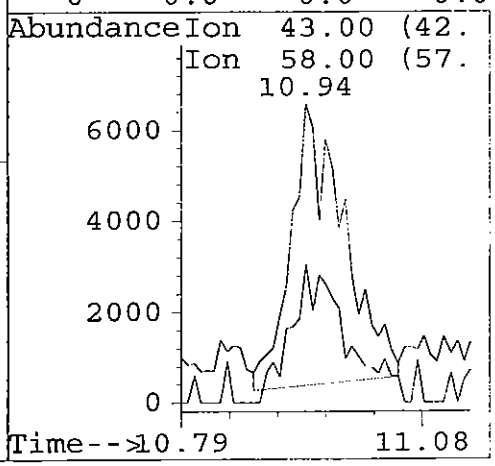


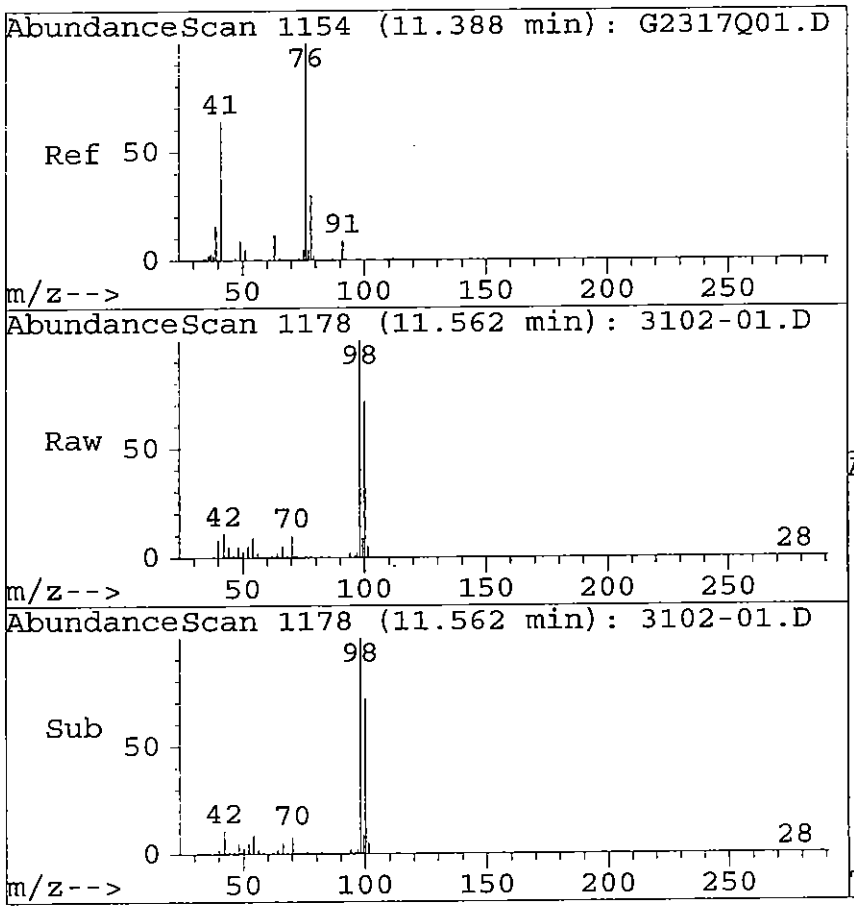



#64
54 MIBK
Concen: 3.88 ppb
RT: 10.94 min Scan# 1099
Delta R.T. -0.06 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:43 Resp: 27296

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 52.0 | 17.5 | 57.5 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

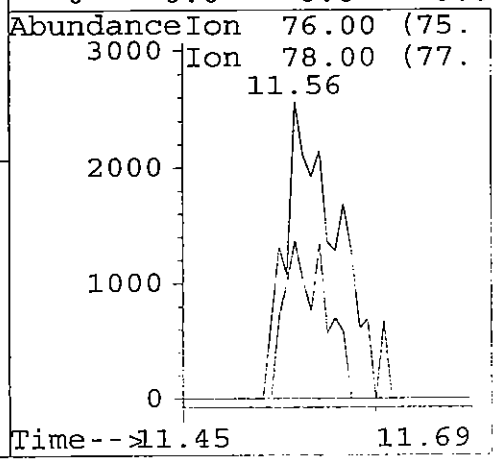



#65
49 1,3-di-cl-propane 76 78
Concen: 0.60 ppb
RT: 11.56 min Scan# 1178
Delta R.T. -0.19 min
Lab File: 3102-01.D
Acq: 16 May 03 5:59 pm

Tgt Ion:76 Resp: 9220

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 41.6 | 27.9 | 41.8 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |



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# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-2 | Received Date: | 05/07/2003 |
| Sample ID: | **EB-11-5/7/03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 18:28 |
| Data File Name: | 3102-02 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | <0.5 | U |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | <0.5 | U |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROETHENE (TOTAL) | 540-59-0 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 33 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 34 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 35 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 36 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 37 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 38 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 39 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | µg/L | 0.5 | <0.5 | U |
| 41 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 42 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | 7 | J |
| 43 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 [a] | <1.8 | U |
| 44 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 45 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 46 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 47 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 49 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 50 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 51 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 55 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | <0.5 | U |
| 57 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 59 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 61 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 62 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 63 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 64 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 96 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 94 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 101 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 103 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 103 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 118 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 116 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-3 | Received Date: | 05/07/2003 |
| Sample ID: | **MW-12-1** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 18:57 |
| Data File Name: | 3102-03 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: | (Y/N) N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | <0.5 | U |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | <0.5 | U |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROETHENE (TOTAL) | 540-59-0 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 33 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 34 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 35 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 36 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 37 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 38 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 39 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | μg/L | 0.5 | <0.5 | U |
| 41 | P-ISOPROPYLTOLUENE | 99-87-6 | μg/L | 0.5 | <0.5 | U |
| 42 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | μg/L | 10 | 8 | J |
| 43 | METHYLENE CHLORIDE | 75-09-2 | μg/L | 1.8 [a] | 7.2 [b] | B |
| 44 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | μg/L | 1 | <1 | U |
| 45 | NAPHTHALENE | 91-20-3 | μg/L | 0.5 | <0.5 | U |
| 46 | N-PROPYLBENZENE | 103-65-1 | μg/L | 0.5 | <0.5 | U |
| 47 | STYRENE | 100-42-5 | μg/L | 0.5 | <0.5 | U |
| 48 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | μg/L | 0.5 | <0.5 | U |
| 49 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | μg/L | 0.5 | <0.5 | U |
| 50 | TETRACHLOROETHENE | 127-18-4 | μg/L | 0.5 | <0.5 | U |
| 51 | TOLUENE | 108-88-3 | μg/L | 0.5 | <0.5 | U |
| 52 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | μg/L | 0.5 | <0.5 | U |
| 53 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | μg/L | 0.5 | <0.5 | U |
| 54 | 1,1,1-TRICHLOROETHANE | 71-55-6 | μg/L | 0.5 | <0.5 | U |
| 55 | 1,1,2-TRICHLOROETHANE | 79-00-5 | μg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROETHENE | 79-01-6 | μg/L | 0.5 | <0.5 | U |
| 57 | TRICHLOROFLUOROMETHANE | 75-69-4 | μg/L | 0.5 | <0.5 | U |
| 58 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | μg/L | 0.5 | <0.5 | U |
| 59 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | μg/L | 0.5 | <0.5 | U |
| 60 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | μg/L | 0.5 | <0.5 | U |
| 61 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | μg/L | 0.5 | <0.5 | U |
| 62 | VINYL CHLORIDE | 75-01-4 | μg/L | 0.5 | <0.5 | U |
| 63 | O-XYLENE | 95-47-6 | μg/L | 0.5 | <0.5 | U |
| 64 | M/P-XYLENE | 108-38-3 | μg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 94 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 90 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 97 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 101 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 105 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 117 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 115 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-4 | Received Date: | 05/07/2003 |
| Sample ID: | **MW-12-2** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 19:26 |
| Data File Name: | 3102-04 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | <0.5 | U |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | <0.5 | U |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROETHENE (TOTAL) | 540-59-0 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 33 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 34 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 35 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 36 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 37 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 38 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 39 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | µg/L | 0.5 | <0.5 | U |
| 41 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 42 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | 5 | J |
| 43 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 [a] | 10 [b] | B |
| 44 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 45 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 46 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 47 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 49 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 50 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 51 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 55 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | <0.5 | U |
| 57 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 59 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 61 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 62 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 63 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 64 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 91 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 92 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 99 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 104 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 104 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 122 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 115 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-5 | Received Date: | 05/07/2003 |
| Sample ID: | **MW-12-3** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 19:55 |
| Data File Name: | 3102-05 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | 2.5 | |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | 1.1 | |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 33 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 34 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 35 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 36 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 37 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 38 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |
| 39 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 41 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | U |
| 42 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 [a] | 8.3 [b] | B |
| 43 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 44 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 45 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 46 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 47 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 49 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 50 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 51 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 55 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 57 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 59 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 61 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 62 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 63 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 97 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 93 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 98 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 102 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 111 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 123 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 120 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-6 | Received Date: | 05/07/2003 |
| Sample ID: | **MW-12-4** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 20:24 |
| Data File Name: | 3102-06 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | 1.5 | |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | 0.7 | |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 33 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 34 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 35 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 36 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 37 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 38 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |
| 39 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 41 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | U |
| 42 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 [a] | 11 [b] | B |
| 43 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 44 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 45 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 46 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 47 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 49 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 50 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 51 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 55 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | 0.3 | J |
| 56 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 57 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 59 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 61 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 62 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 63 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 99 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 96 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 100 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 103 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 105 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 118 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 117 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-7 | Received Date: | 05/07/2003 |
| Sample ID: | **MW-12-5** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 20:53 |
| Data File Name: | 3102-07 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | 0.6 | |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | 0.4 | J |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 33 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 34 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 35 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 36 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 37 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 38 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |
| 39 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | P-ISOPROPYLTOLUENE | 99-87-6 | µg/L | 0.5 | <0.5 | U |
| 41 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | 7 | J |
| 42 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 [a] | 13 [b] | B |
| 43 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 44 | NAPHTHALENE | 91-20-3 | µg/L | 0.5 | <0.5 | U |
| 45 | N-PROPYLBENZENE | 103-65-1 | µg/L | 0.5 | <0.5 | U |
| 46 | STYRENE | 100-42-5 | µg/L | 0.5 | <0.5 | U |
| 47 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | µg/L | 0.5 | <0.5 | U |
| 48 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | µg/L | 0.5 | <0.5 | U |
| 49 | TETRACHLOROETHENE | 127-18-4 | µg/L | 0.5 | <0.5 | U |
| 50 | TOLUENE | 108-88-3 | µg/L | 0.5 | <0.5 | U |
| 51 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | µg/L | 0.5 | <0.5 | U |
| 52 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | µg/L | 0.5 | <0.5 | U |
| 53 | 1,1,1-TRICHLOROETHANE | 71-55-6 | µg/L | 0.5 | <0.5 | U |
| 54 | 1,1,2-TRICHLOROETHANE | 79-00-5 | µg/L | 0.5 | <0.5 | U |
| 55 | TRICHLOROETHENE | 79-01-6 | µg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROFLUOROMETHANE | 75-69-4 | µg/L | 0.5 | <0.5 | U |
| 57 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | µg/L | 0.5 | <0.5 | U |
| 58 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | µg/L | 0.5 | <0.5 | U |
| 59 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | µg/L | 0.5 | <0.5 | U |
| 60 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | µg/L | 0.5 | <0.5 | U |
| 61 | VINYL CHLORIDE | 75-01-4 | µg/L | 0.5 | <0.5 | U |
| 62 | O-XYLENE | 95-47-6 | µg/L | 0.5 | <0.5 | U |
| 63 | M/P-XYLENE | 108-38-3 | µg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 100 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 95 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 101 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 105 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 99 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 112 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 112 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 05/07/2003 |
| Project ID: | JPL | Service ID: | 33102 | Collected by: | |
| | | Lab Sample ID: | 03-3102-8 | Received Date: | 05/07/2003 |
| Sample ID: | **TB-11-5/7/03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 05/16/03 | Anal. Date: | 05/16/03 |
| Batch No: | 03G2404 | Prep. No: | – | Anal. Time: | 21:22 |
| Data File Name: | 3102-08 | Sample Amount: | 25 mL | Dilution Factor: | 1 |
| Methanol Vol. | – | | | | |
| Test Level: | Low | Sparge Size: | 25 mL | Heated Purge: (Y/N) | N |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 1 | BENZENE | 71-43-2 | μg/L | 0.5 | <0.5 | U |
| 2 | BROMOBENZENE | 108-86-1 | μg/L | 0.5 | <0.5 | U |
| 3 | BROMOCHLOROMETHANE | 74-97-5 | μg/L | 0.5 | <0.5 | U |
| 4 | BROMODICHLOROMETHANE | 75-27-4 | μg/L | 0.5 | <0.5 | U |
| 5 | BROMOFORM | 75-25-2 | μg/L | 0.5 | <0.5 | U |
| 6 | BROMOMETHANE | 74-83-9 | μg/L | 0.5 | <0.5 | U |
| 7 | 2-BUTANONE | 78-93-3 | μg/L | 10 | <10 | U |
| 8 | N-BUTYLBENZENE | 104-51-8 | μg/L | 0.5 | <0.5 | U |
| 9 | SEC-BUTYLBENZENE | 135-98-8 | μg/L | 0.5 | <0.5 | U |
| 10 | TERT-BUTYLBENZENE | 98-06-6 | μg/L | 0.5 | <0.5 | U |
| 11 | CARBON TETRACHLORIDE | 56-23-5 | μg/L | 0.5 | <0.5 | U |
| 12 | CHLOROBENZENE | 108-90-7 | μg/L | 0.5 | <0.5 | U |
| 13 | CHLORODIBROMOMETHANE | 124-48-1 | μg/L | 0.5 | <0.5 | U |
| 14 | CHLOROETHANE | 75-00-3 | μg/L | 0.5 | <0.5 | U |
| 15 | CHLOROFORM | 67-66-3 | μg/L | 0.5 | <0.5 | U |
| 16 | CHLOROMETHANE | 74-87-3 | μg/L | 0.5 | <0.5 | U |
| 17 | 2-CHLOROTOLUENE | 95-49-8 | μg/L | 0.5 | <0.5 | U |
| 18 | 4-CHLOROTOLUENE | 106-43-4 | μg/L | 0.5 | <0.5 | U |
| 19 | 1,2-DIBROMO-3-CHLOROPROPANE | 96-12-8 | μg/L | 1.1 [a] | <1.1 | U |
| 20 | 1,2-DIBROMOETHANE (EDB) | 106-93-4 | μg/L | 0.5 | <0.5 | U |
| 21 | DIBROMOMETHANE | 74-95-3 | μg/L | 0.5 | <0.5 | U |
| 22 | 1,2-DICHLOROBENZENE | 95-50-1 | μg/L | 0.5 | <0.5 | U |
| 23 | 1,3-DICHLOROBENZENE | 541-73-1 | μg/L | 0.5 | <0.5 | U |
| 24 | 1,4-DICHLOROBENZENE | 106-46-7 | μg/L | 0.5 | <0.5 | U |
| 25 | DICHLORODIFLUOROMETHANE | 75-71-8 | μg/L | 0.5 | <0.5 | U |
| 26 | 1,1-DICHLOROETHANE | 75-34-3 | μg/L | 0.5 | <0.5 | U |
| 27 | 1,2-DICHLOROETHANE | 107-06-2 | μg/L | 0.5 | <0.5 | U |
| 28 | 1,1-DICHLOROETHENE | 75-35-4 | μg/L | 0.5 | <0.5 | U |
| 29 | CIS-1,2-DICHLOROETHENE | 156-59-2 | μg/L | 0.5 | <0.5 | U |
| 30 | TRANS-1,2-DICHLOROETHENE | 156-60-5 | μg/L | 0.5 | <0.5 | U |
| 31 | 1,2-DICHLOROPROPANE | 78-87-5 | μg/L | 0.5 | <0.5 | U |
| 32 | 1,3-DICHLOROPROPANE | 142-28-9 | μg/L | 0.5 | <0.5 | U |
| 33 | 2,2-DICHLOROPROPANE | 594-20-7 | μg/L | 0.5 | <0.5 | U |
| 34 | 1,1-DICHLOROPROPENE | 563-58-6 | μg/L | 0.5 | <0.5 | U |
| 35 | CIS-1,3-DICHLOROPROPENE | 10061-01-5 | μg/L | 0.5 | <0.5 | U |
| 36 | TRANS-1,3-DICHLOROPROPENE | 10061-02-6 | μg/L | 0.5 | <0.5 | U |
| 37 | ETHYLBENZENE | 100-41-4 | μg/L | 0.5 | <0.5 | U |
| 38 | HEXACHLOROBUTADIENE | 87-68-3 | μg/L | 0.5 | <0.5 | U |
| 39 | ISOPROPYLBENZENE (CUMENE) | 98-82-8 | μg/L | 0.5 | <0.5 | U |

| # | Component Name | CAS No | Unit | RL | Result | Qualifier |
|---|---|---|---|---|---|---|
| 40 | P-ISOPROPYLTOLUENE | 99-87-6 | μg/L | 0.5 | <0.5 | U |
| 41 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | μg/L | 10 | <10 | U |
| 42 | METHYLENE CHLORIDE | 75-09-2 | μg/L | 1.8 [a] | 6.8 [b] | B |
| 43 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | μg/L | 1 | <1 | U |
| 44 | NAPHTHALENE | 91-20-3 | μg/L | 0.5 | <0.5 | U |
| 45 | N-PROPYLBENZENE | 103-65-1 | μg/L | 0.5 | <0.5 | U |
| 46 | STYRENE | 100-42-5 | μg/L | 0.5 | <0.5 | U |
| 47 | 1,1,1,2-TETRACHLOROETHANE | 630-20-6 | μg/L | 0.5 | <0.5 | U |
| 48 | 1,1,2,2-TETRACHLOROETHANE | 79-34-5 | μg/L | 0.5 | <0.5 | U |
| 49 | TETRACHLOROETHENE | 127-18-4 | μg/L | 0.5 | <0.5 | U |
| 50 | TOLUENE | 108-88-3 | μg/L | 0.5 | <0.5 | U |
| 51 | 1,2,3-TRICHLOROBENZENE | 87-61-6 | μg/L | 0.5 | <0.5 | U |
| 52 | 1,2,4-TRICHLOROBENZENE | 120-82-1 | μg/L | 0.5 | <0.5 | U |
| 53 | 1,1,1-TRICHLOROETHANE | 71-55-6 | μg/L | 0.5 | <0.5 | U |
| 54 | 1,1,2-TRICHLOROETHANE | 79-00-5 | μg/L | 0.5 | <0.5 | U |
| 55 | TRICHLOROETHENE | 79-01-6 | μg/L | 0.5 | <0.5 | U |
| 56 | TRICHLOROFLUOROMETHANE | 75-69-4 | μg/L | 0.5 | <0.5 | U |
| 57 | 1,2,3-TRICHLOROPROPANE | 96-18-4 | μg/L | 0.5 | <0.5 | U |
| 58 | 112TRICHLORO-122TRIFLUOROETHANE | 76-13-1 | μg/L | 0.5 | <0.5 | U |
| 59 | 1,2,4-TRIMETHYLBENZENE | 95-63-6 | μg/L | 0.5 | <0.5 | U |
| 60 | 1,3,5-TRIMETHYLBENZENE | 108-67-8 | μg/L | 0.5 | <0.5 | U |
| 61 | VINYL CHLORIDE | 75-01-4 | μg/L | 0.5 | <0.5 | U |
| 62 | O-XYLENE | 95-47-6 | μg/L | 0.5 | <0.5 | U |
| 63 | M/P-XYLENE | 108-38-3 | μg/L | 0.5 | <0.5 | U |

| Surrogates | | | Control Limit, % | Surro. Rec.% |
|---|---|---|---|---|
| 1 | 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 460-00-4 | 70-129 | 97 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 91 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 99 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 103 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 108 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 121 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 119 |
| # of out-of-control | | | | 0 |

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a] MDL reported.

[b] Laboratory contamination suspected.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted