Level C Data Package Deliverables

# Volatile Organics

Applied P & Ch Laboratory

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 04/23/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03G2136-MB-01 | Received Date: | 04/23/2003 |
| Sample ID: | **03G2136-MB-01** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Method Blank | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 15:34 |
| Data File Name: | G2136K01 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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-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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8 | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 4-BROMO-FLUOROBENZENE (BFB) | 460-00-4 | 70-129 | 104 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 73 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 89 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 100 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 86 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 90 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 95 |
| # 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

4108

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136K01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 15:34 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 15:55 2003
Print Time : Wed Apr 23 16:58 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 | 9.04 | 9.03 | 0.000 | 96 | 70 | 578.470 | 10.00 | | 0.00 | |
| 47 | 47 Cl-benzene-d5, I2 | 12.68 | 12.66 | 0.001 | 82 | 119 | 153.762 | 10.00 | | 0.02 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.18 | 15.15 | 0.002 | 152 | 150 | 123.416 | 10.00 | | 0.03 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | | %Recovery | |
| 27 | 27 Di-Br-F-Methane ( | 7.46 | 7.44 | 0.002 | 111 | 113 | 365.747 | 17.83 | 17.8 | 89.13% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.04 | 8.02 | 0.001 | 65 | 102 | 138.634 | 14.51 | 14.5 | 72.53% | |
| 55 | 55 toluene-d8(S2) | 11.17 | 11.15 | 0.001 | 100 | 99 | 577.804 | 20.00 | 20.0 | 99.98% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 13.92 | 13.90 | 0.002 | 174 | 95 | 229.052 | 20.77 | 20.8 | 103.86% | |
| Target Compounds | | | | | | | | | | Qvalue | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 111 | 111 isopropyl alcoho | 4.28 | 4.27 | 0.001 | 45 | 43 | 1.713 | 6.56 | 6.6 | 1 | # |
| 119 | 119 methyl acetate | 5.04 | 5.06 | -0.001 | 43 | 74 | 1.783 | 0.52 | 0.5 | 56 | # |
| 18 | 18 methylene chlorid | 4.99 | 4.97 | 0.002 | 84 | 49 | 77.447 | 1.48 | 1.5 | 95 | |
| 48 | 48 112-tri-Cl-Et | 11.17 | 11.03 | 0.016 | 97 | 83 | 19.803 | 2.64 | 2.6 | 4 | #? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 49 | 49 1,3-di-cl-propane | 11.17 | 11.29 | -0.009 | 76 | 78 | 6.112 | 0.61 | 0.6 | 78 | #? |
| <<< I3 : ISTD ID = 62 >>> | | | | | | | | | | | |
| 87 | 87 124-tri-Cl-Bz | 17.27 | 17.24 | 0.001 | 180 | 182 | 0.244 | 0.62 | 0.6 | 12 | # |

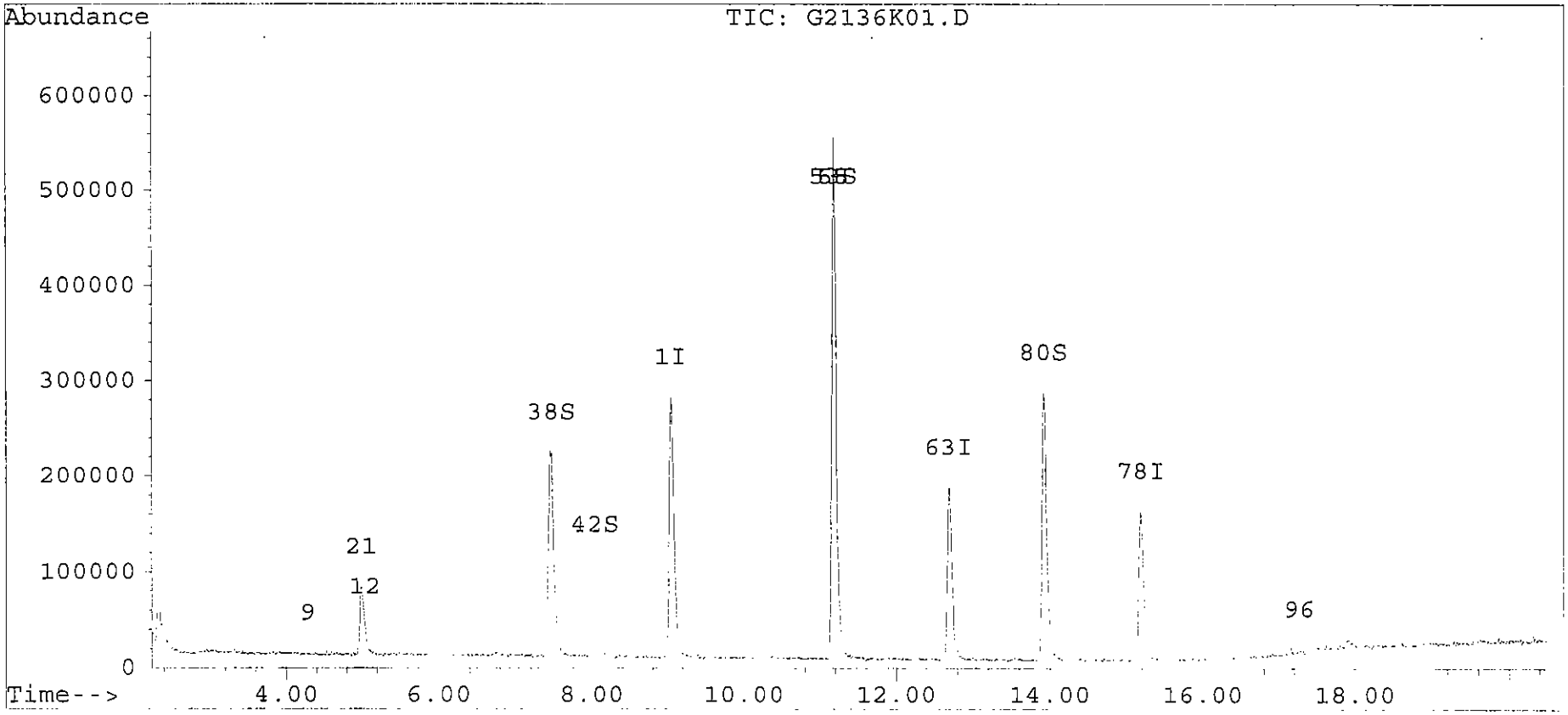
# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

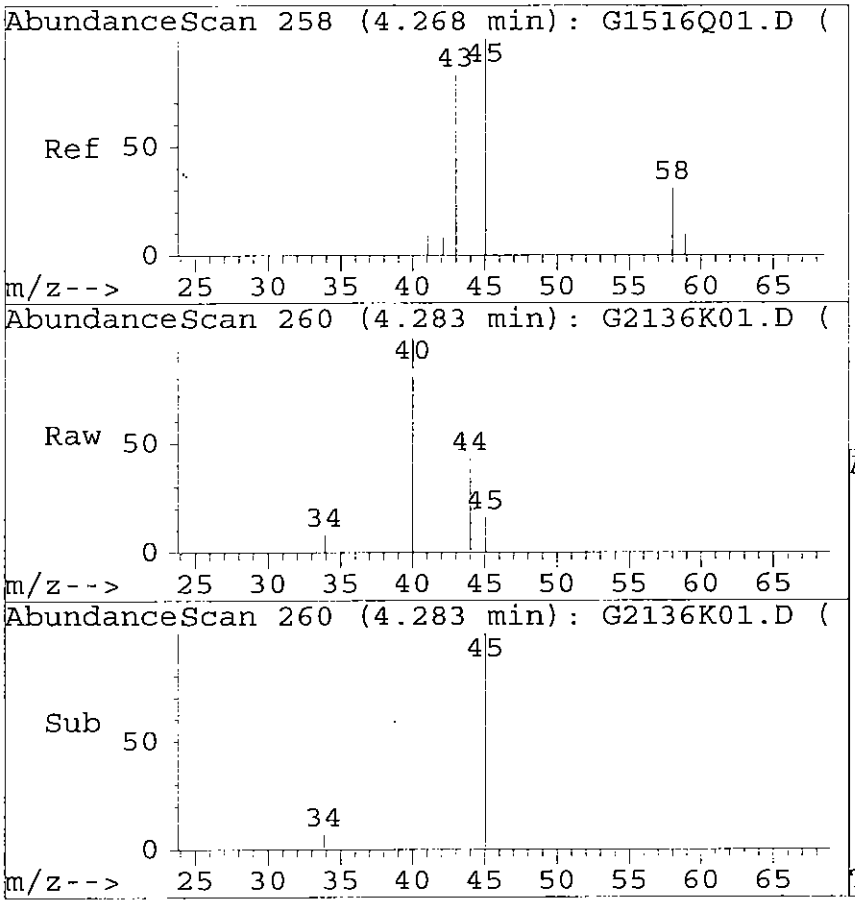
Quantitation Report

4109

Data File : C:\HPCHEM\1\DATA\03G2136\G2136K01.D Vial: 24
Acq On : 23 Apr 03 3:34 pm Operator: Eddie
Sample : f=1 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 23 15:55 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

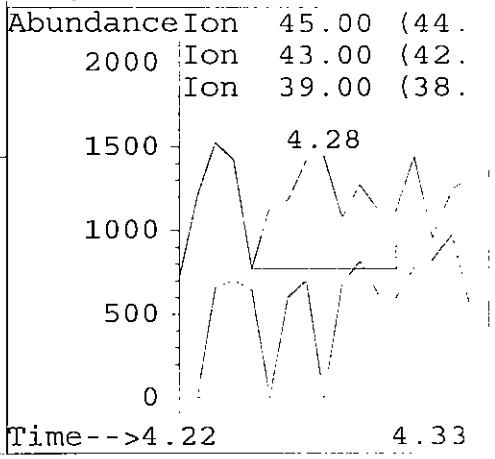


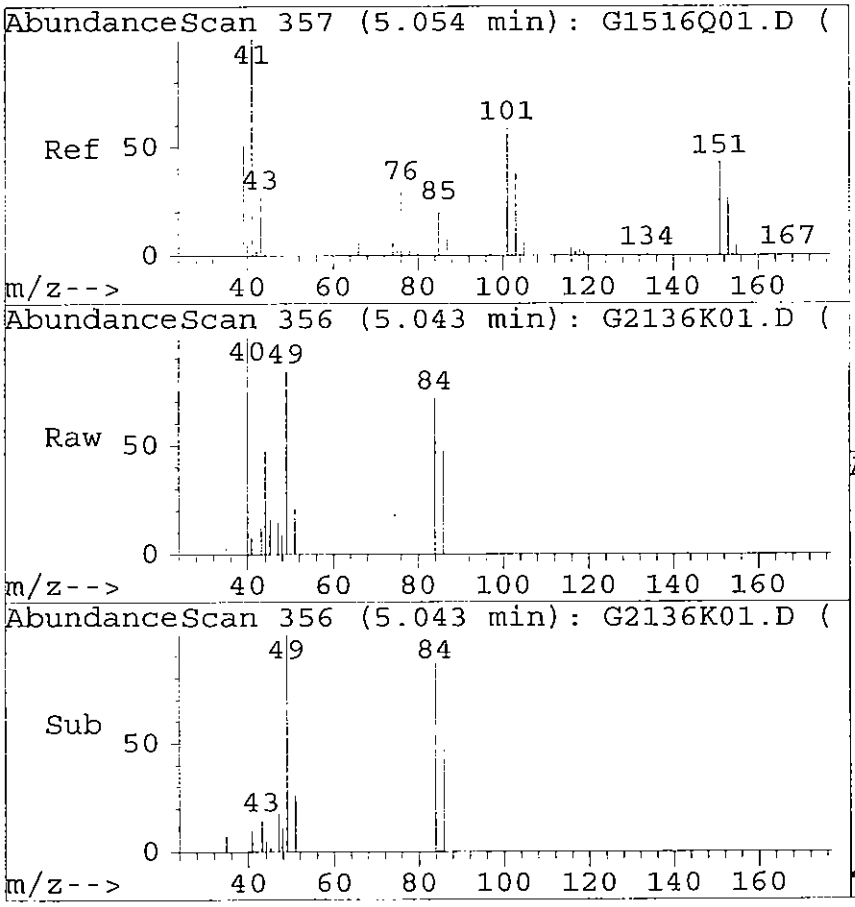



#9
111 isopropyl alcohol x10
Concen: 6.56 ppb
RT: 4.28 min Scan# 260
Delta R.T. 0.01 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

Tgt Ion:45 Resp: 1713

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 36.1 | 395.5 | 593.2# |
| 39 | 0.0 | 28.3 | 42.4# |
| 0 | 0.0 | 0.0 | 0.0 |

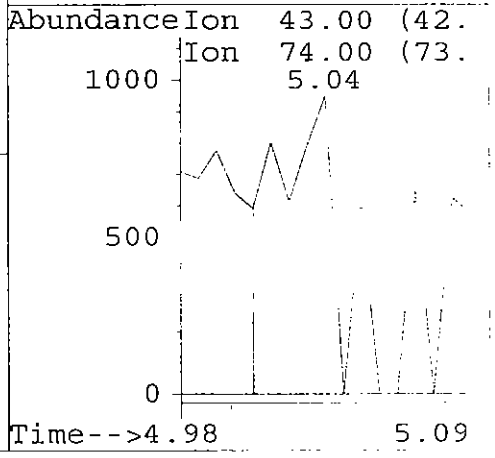


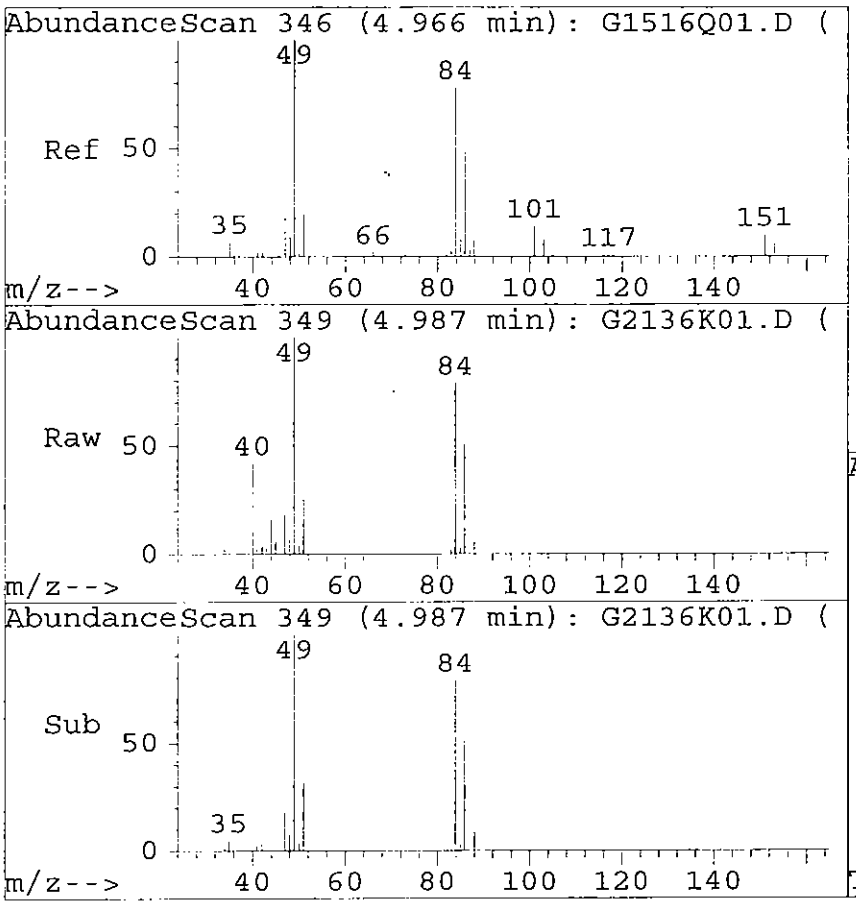




#12
119 methyl acetate
Concen: 0.52 ppb
RT: 5.04 min Scan# 356
Delta R.T. -0.01 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

Tgt Ion:43 Resp: 1783

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 74 | 0.0 | 0.6 | 40.6# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

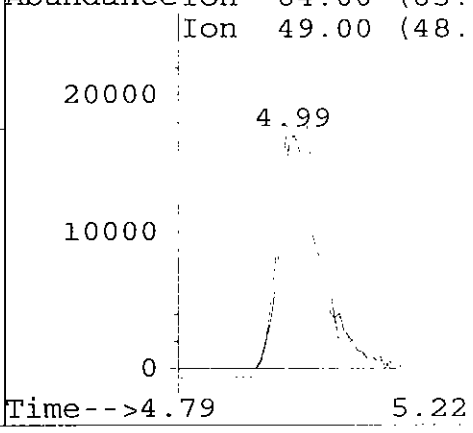


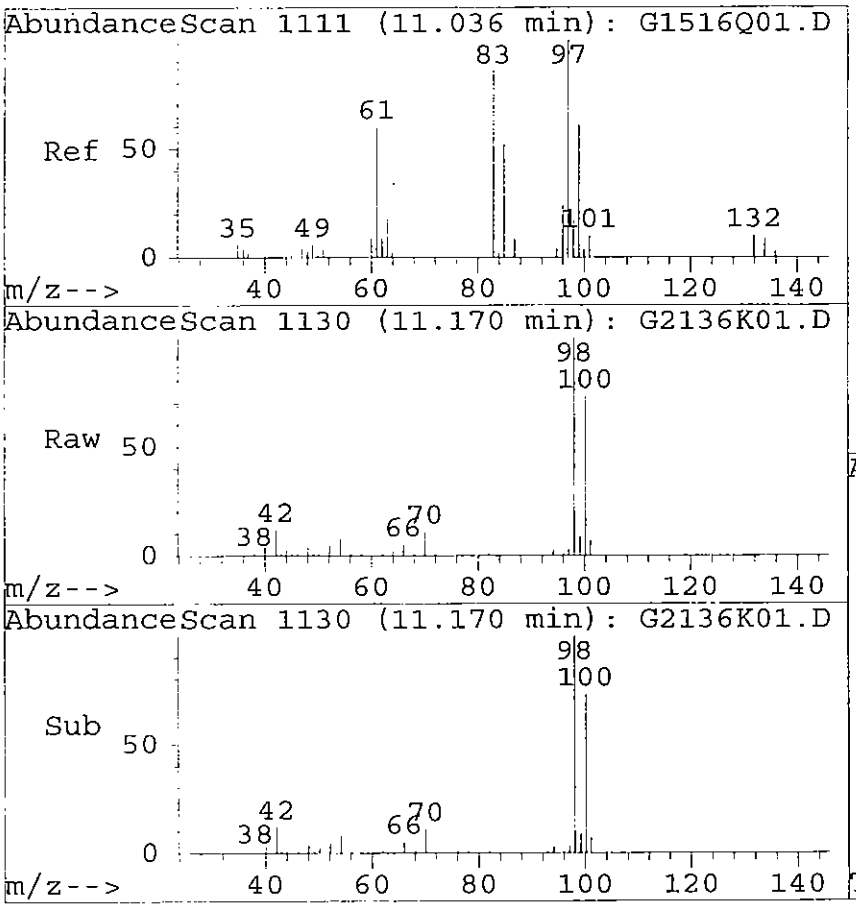



#21
18 methylene chloride 49 84
Concen: 1.48 ppb
RT: 4.99 min Scan# 349
Delta R.T. 0.02 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

Tgt Ion:84 Resp: 77447

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 127.0 | 66.5 | 199.4 |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

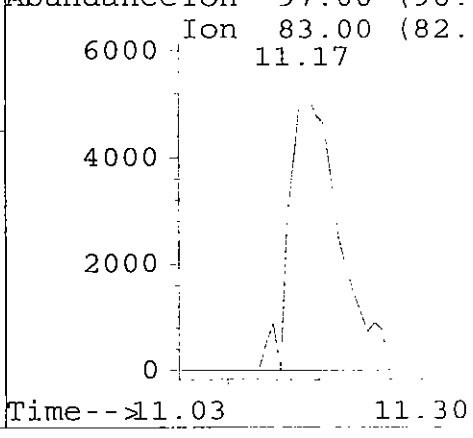


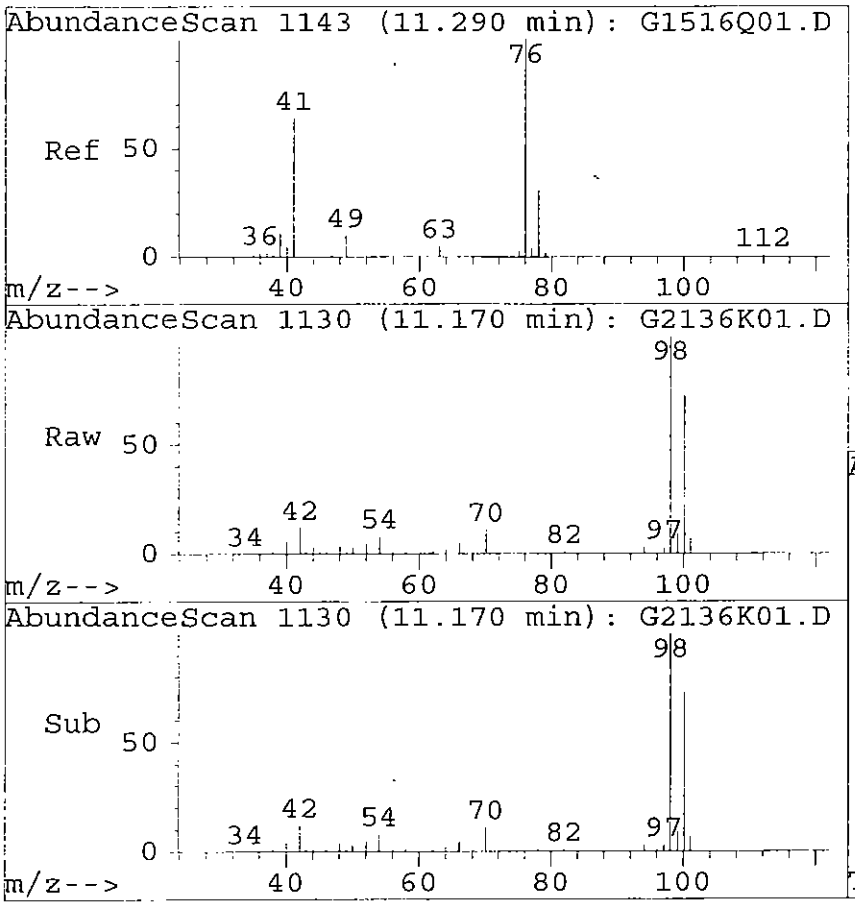




#58
48 112-tri-Cl-Et 97 83
Concen: 2.64 ppb
RT: 11.17 min Scan# 1130
Delta R.T. 0.14 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

Tgt Ion:97 Resp: 19803

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 0.0 | 46.0 | 137.9# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

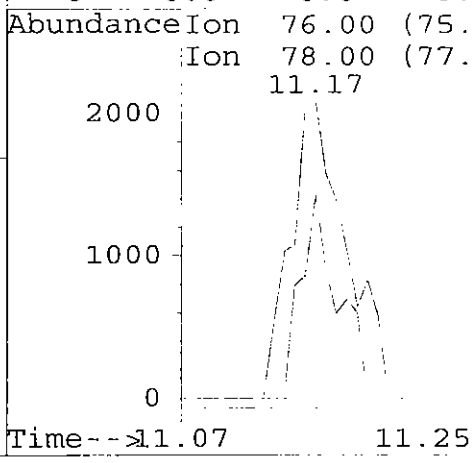


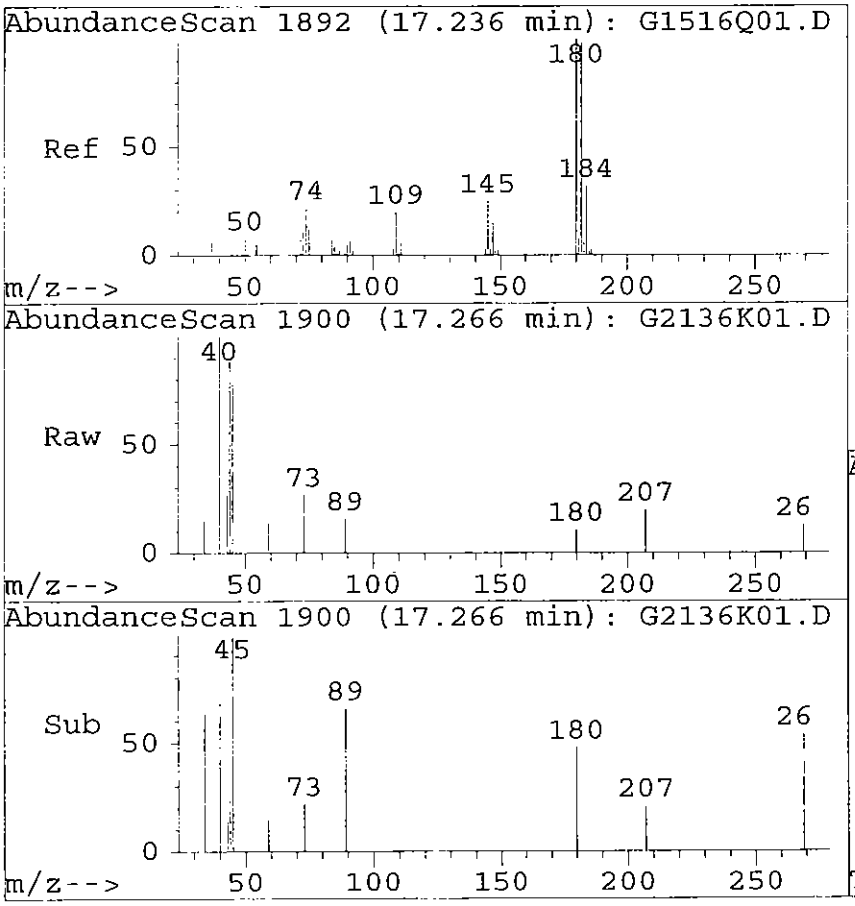



#65
49 1,3-di-cl-propane 76 78
Concen: 0.61 ppb
RT: 11.17 min Scan# 1130
Delta R.T. -0.12 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

Tgt Ion:76 Resp: 6112

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 45.8 | 26.5 | 39.8# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

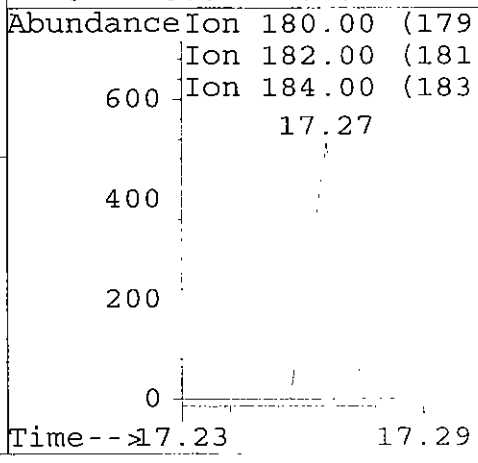



#96
87 124-tri-Cl-Bz 180 182
Concen: 0.62 ppb
RT: 17.27 min Scan# 1900
Delta R.T. 0.02 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

Tgt Ion:180 Resp: 244

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 0.0 | 47.8 | 143.3# |
| 184 | 0.0 | 15.1 | 45.1# |
| 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: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-1 | Received Date: | 04/21/2003 |
| Sample ID: | **DUPE-1-2Q03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 19:25 |
| Data File Name: | 2809-01 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 107 |
| 2 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 87 |
| 3 DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 92 |
| 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 | 84 |
| 2 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 86 |
| 3 FLUOROBENZENE | 462-06-6 | 50-200 | 93 |
| # 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

4115

Data Filename: C:\HPCHEM\1\DATA\03G2136\2809-01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 19:25 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 24 10:41 2003
Print Time : Thu Apr 24 10:41 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 | 9.08 | 9.03 | 0.005 | 96 | 70 | 567.144 | 10.00 | | 0.05 | |
| 47 | 47 Cl-benzene-d5, I2 | 12.73 | 12.66 | 0.005 | 82 | 119 | 150.002 | 10.00 | | 0.07 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.22 | 15.15 | 0.005 | 152 | 150 | 117.831 | 10.00 | | 0.07 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | | %Recovery | |
| 27 | 27 Di-Br-F-Methane ( | 7.50 | 7.44 | 0.004 | 111 | 113 | 368.403 | 18.32 | 18.3 | 91.60% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.07 | 8.02 | 0.003 | 65 | 102 | 162.259 | 17.32 | 17.3 | 86.58% | |
| 55 | 55 toluene-d8(S2) | 11.22 | 11.15 | 0.004 | 100 | 99 | 571.169 | 20.16 | 20.2 | 100.81% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 13.97 | 13.90 | 0.005 | 174 | 95 | 224.896 | 21.36 | 21.4 | 106.81% | |
| Target Compounds | | | | | | | | | | Qvalue | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 111 | 111 isopropyl alcoho | 4.26 | 4.27 | -0.001 | 45 | 43 | 0.964 | 3.77 | | ~~<3.8 1~~ | # |
| 119 | 119 methyl acetate | 5.06 | 5.06 | 0.000 | 43 | 74 | 1.360 | 0.46 | | ~~0.5 56~~ | # |
| 91 | 91 2-butanone MEKx10 | 6.78 | 6.83 | -0.006 | 43 | 72 | 6.522 | 1.23 | | ~~1<2 74~~ | # |
| 117 | 117 Iso-butyl alcoho | 7.32 | 7.31 | 0.001 | 43 | 42 | 0.593 | 0.39 | | ~~0.4 1~~ | # |
| 48 | 48 112-tri-Cl-Et | 11.23 | 11.03 | 0.022 | 97 | 83 | 19.133 | 2.60 | | ~~2<6 4~~ | #? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 49 | 49 1,3-di-cl-propane | 11.22 | 11.29 | -0.006 | 76 | 78 | 6.451 | 0.66 | | ~~0.7 94~~ | ? |

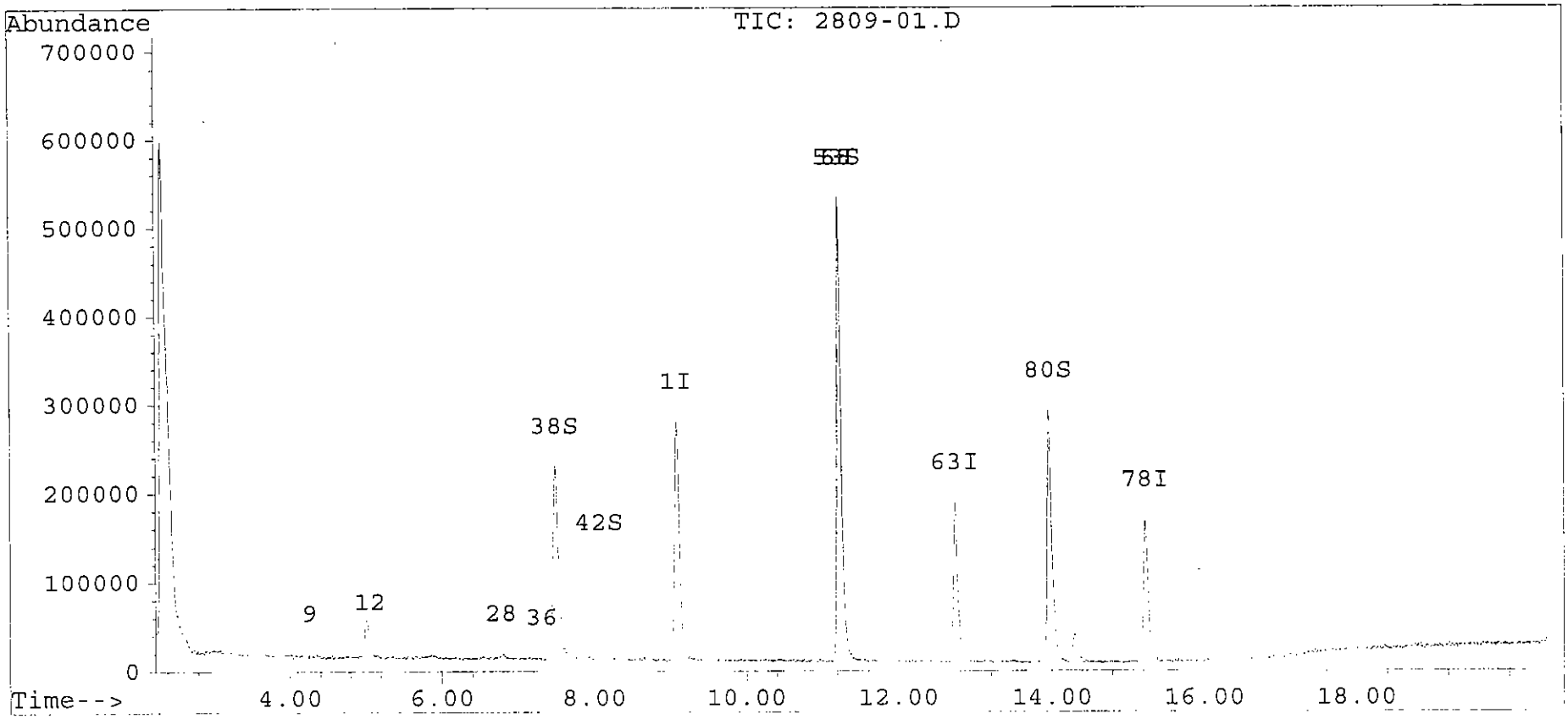
# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

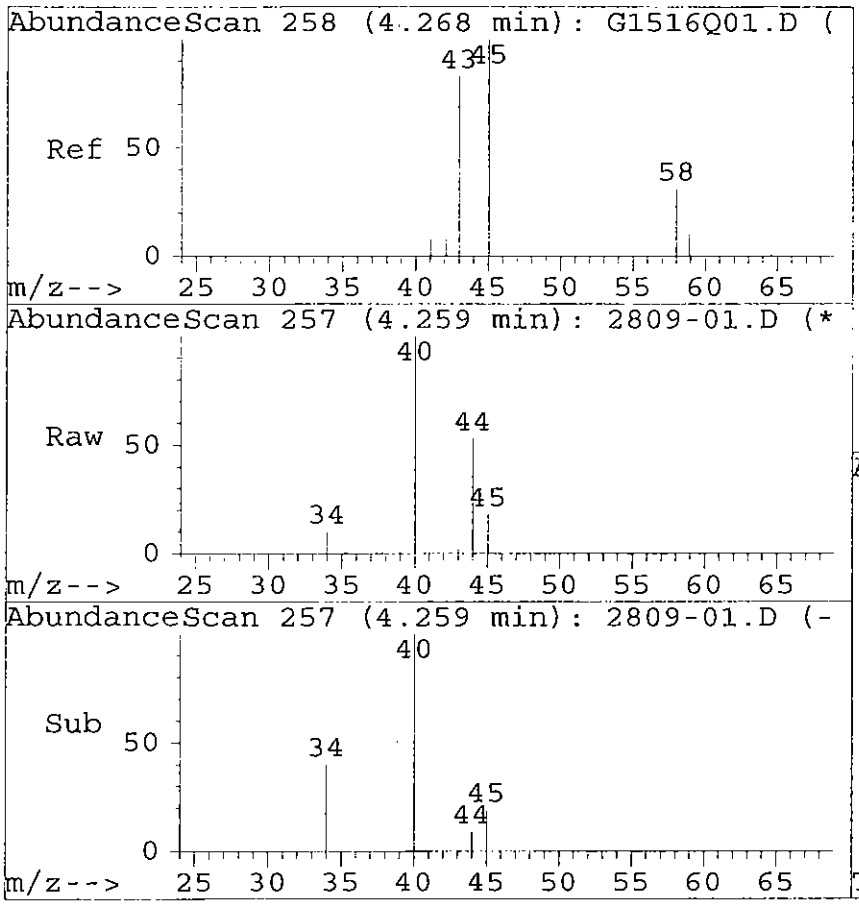
Quantitation Report

4116

Data File : C:\HPCHEM\1\DATA\03G2136\2809-01.D Vial: 22
Acq On : 23 Apr 03 7:25 pm Operator: Eddie
Sample : f=1 8 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 24 10:41 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

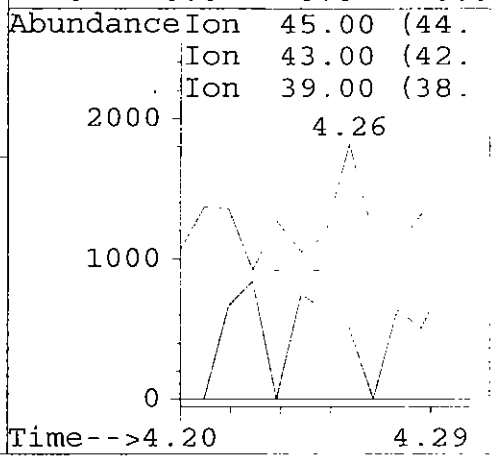


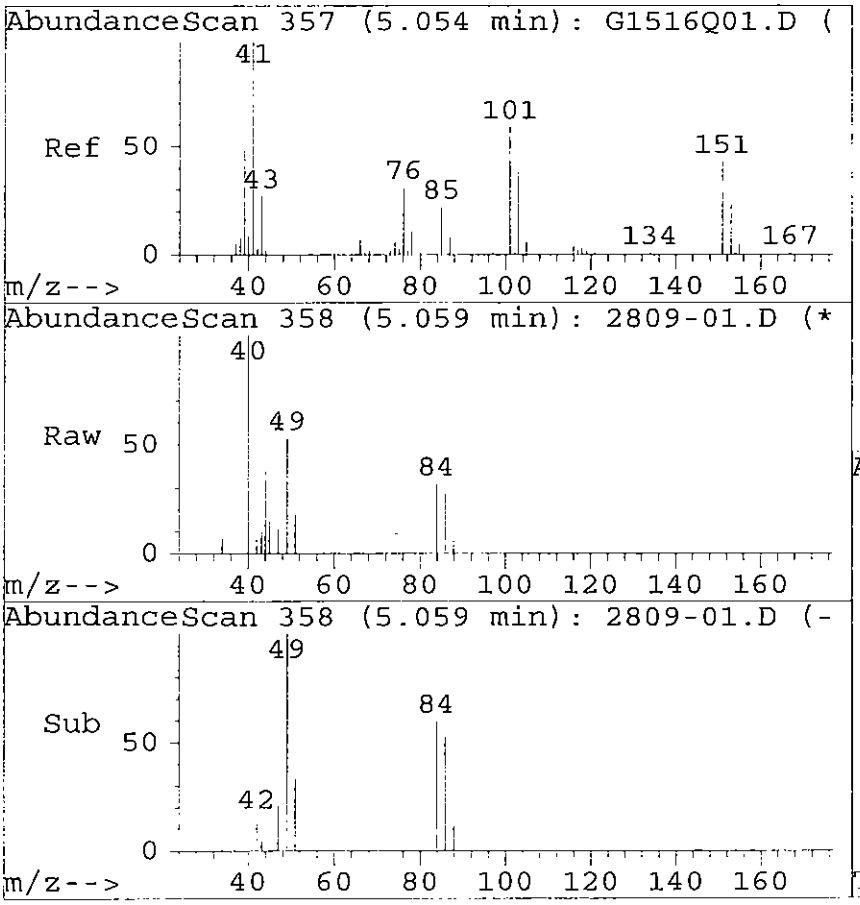



#9
111 isopropyl alcohol x10
Concen: 3.77 ppb
RT: 4.26 min Scan# 257
Delta R.T. -0.01 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

Tgt Ion:45 Resp: 964

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 93.3 | 395.5 | 593.2# |
| 39 | 0.0 | 28.3 | 42.4# |
| 0 | 0.0 | 0.0 | 0.0 |

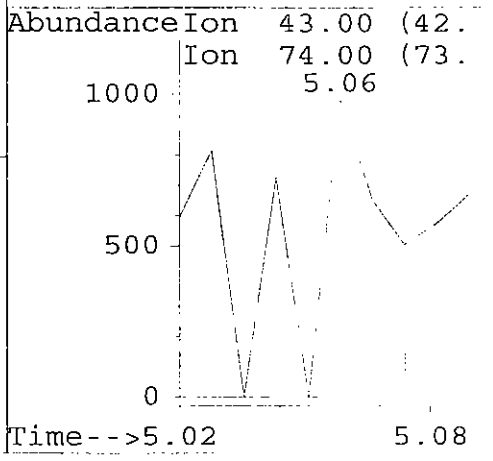


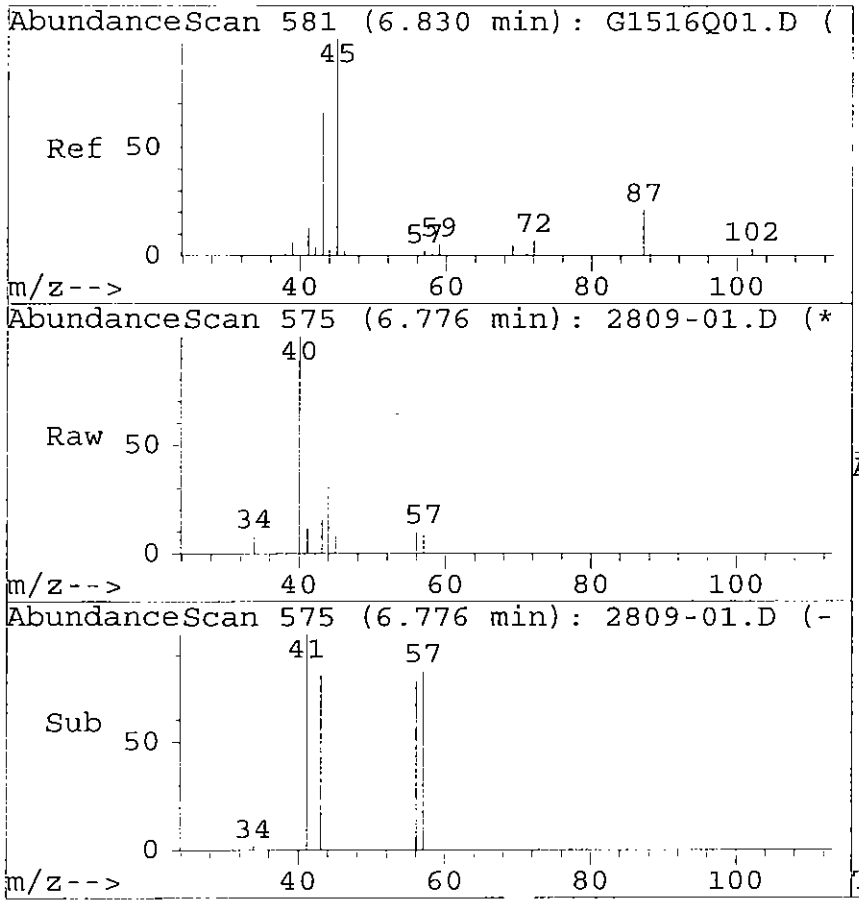




#12
119 methyl acetate
Concen: 0.46 ppb
RT: 5.06 min Scan# 358
Delta R.T. 0.00 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

Tgt Ion:43 Resp: 1360

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 74 | 0.0 | 0.6 | 40.6# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

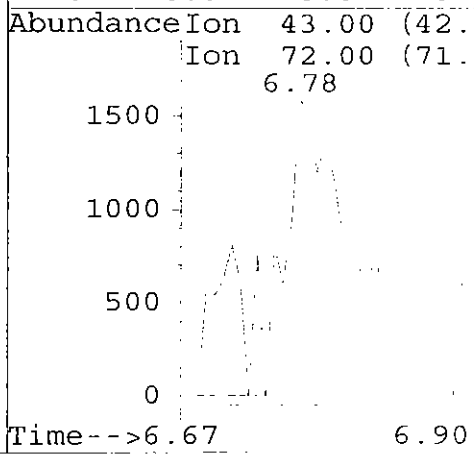


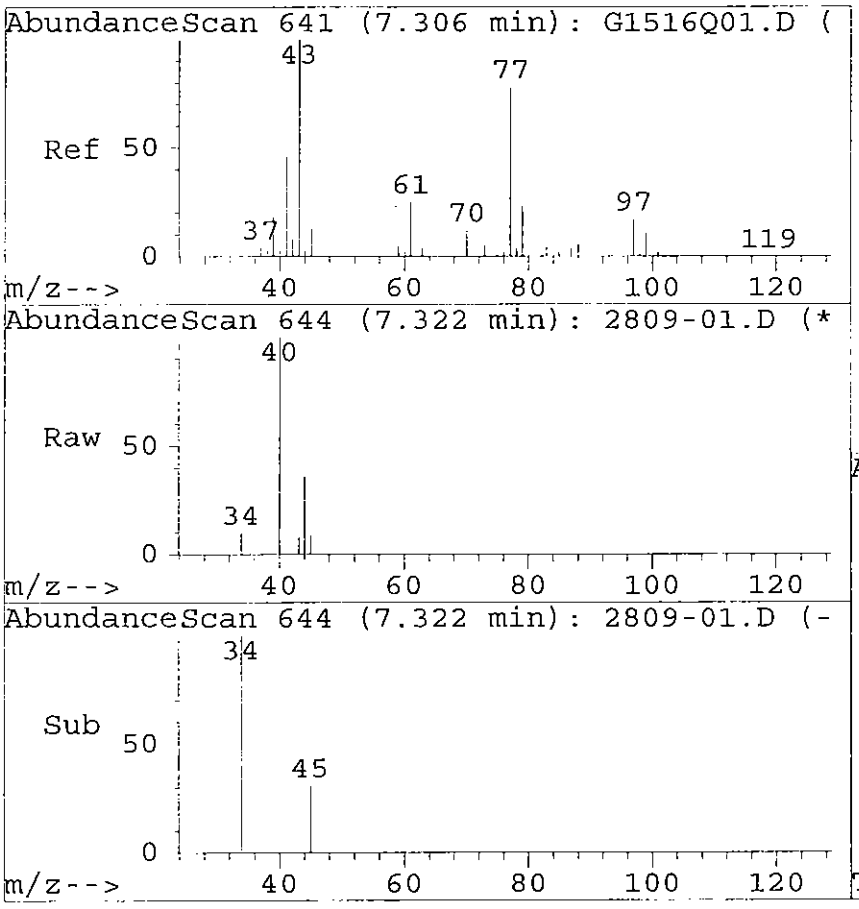



#28
91 2-butanone MEKx10
Concen: 1.23 ppb
RT: 6.78 min Scan# 575
Delta R.T. -0.06 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

Tgt Ion:43 Resp: 6522

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 0.0 | 7.7 | 11.6# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

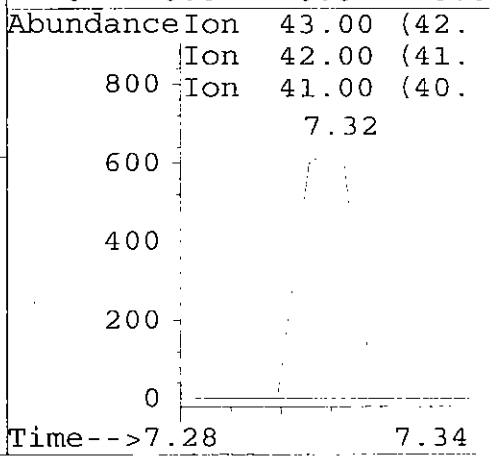


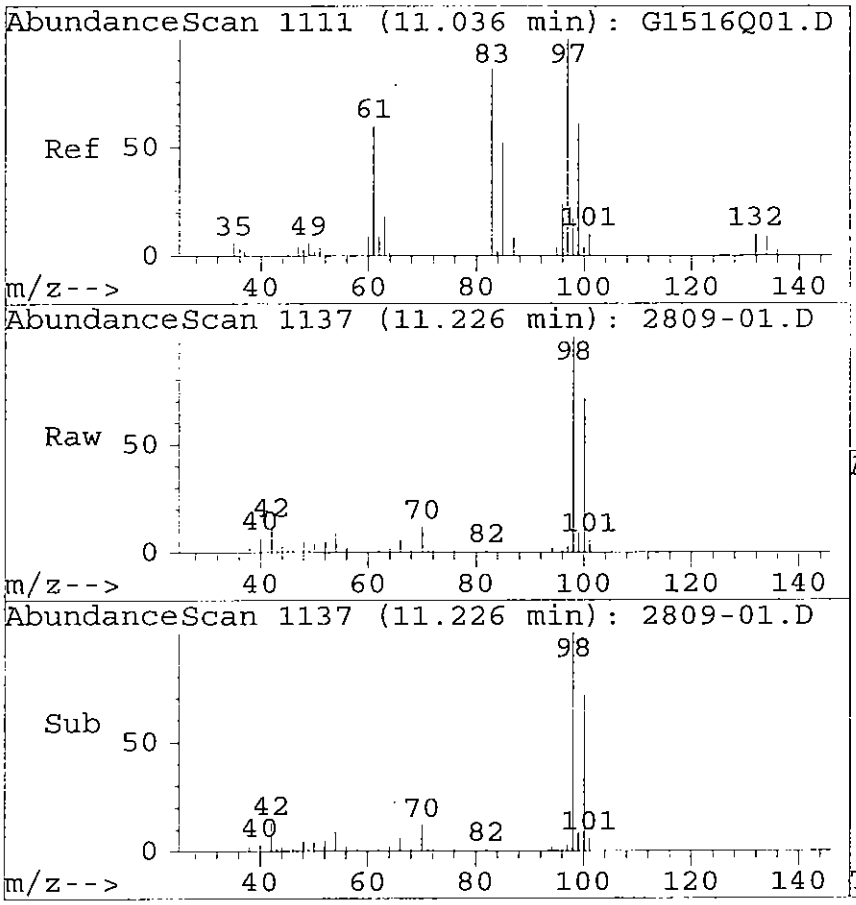




#36
117 Iso-butyl alcohol X10
Concen: 0.39 ppb
RT: 7.32 min Scan# 644
Delta R.T. 0.01 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

Tgt Ion:43 Resp: 593

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 42 | 0.0 | 21.1 | 31.6# |
| 41 | 0.0 | 161.8 | 242.7# |
| 0 | 0.0 | 0.0 | 0.0 |

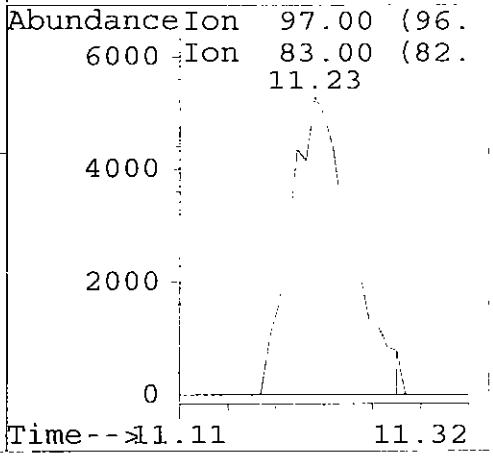


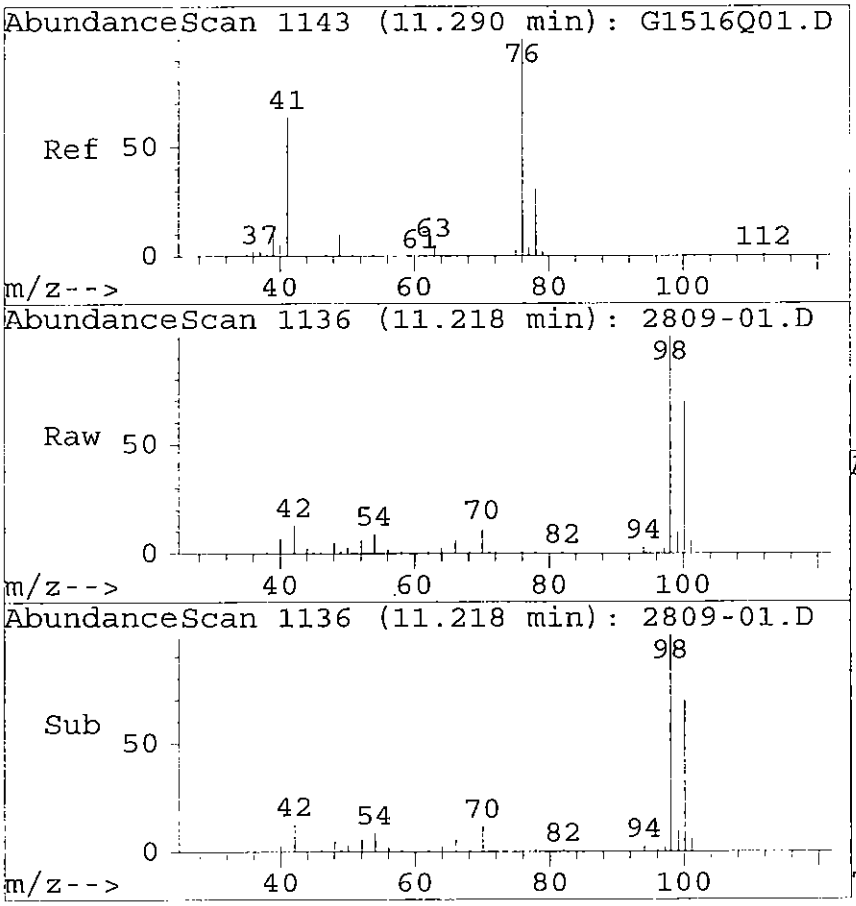



#58
48 112-tri-Cl-Et 97 83
Concen: 2.60 ppb
RT: 11.23 min Scan# 1137
Delta R.T. 0.20 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

Tgt Ion:97 Resp: 19133

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 83 | 0.0 | 46.0 | 137.9# |
| 0 | 0.0 | 0.0 | 0.0 |
| 0 | 0.0 | 0.0 | 0.0 |

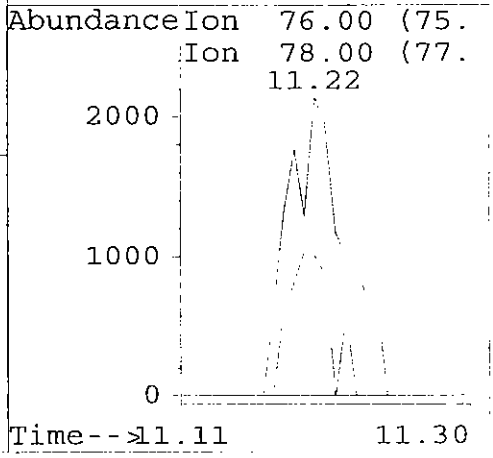



#65
49 1,3-di-cl-propane 76 78
Concen: 0.66 ppb
RT: 11.22 min Scan# 1136
Delta R.T. -0.07 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

Tgt Ion:76 Resp: 6451

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 36.2 | 26.5 | 39.8 |
| 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: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-2 | Received Date: | 04/21/2003 |
| Sample ID: | **EB-2-4/21/03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 19:54 |
| Data File Name: | 2809-02 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 109 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 87 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 89 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 100 |
| # 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 | 83 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 93 |
| # 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

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-3 | Received Date: | 04/21/2003 |
| Sample ID: | **MW-4-1** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 20:22 |
| Data File Name: | 2809-03 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 113 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 84 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 92 |
| 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 | 90 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 85 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 95 |
| # 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

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-4 | Received Date: | 04/21/2003 |
| Sample ID: | **MW-4-2** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 20:50 |
| Data File Name: | 2809-04 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 0.7 | |
| 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 | 0.4 | 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 | 102 |
| 2 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 84 |
| 3 DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 86 |
| 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 | 91 |
| 2 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 91 |
| 3 FLUOROBENZENE | 462-06-6 | 50-200 | 100 |
| # 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: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-5 | Received Date: | 04/21/2003 |
| Sample ID: | **MW-4-3** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 21:19 |
| Data File Name: | 2809-05 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | 1.8 | |
| 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 | 1.9 | |
| 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 0.3 | J |
| 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 | 106 |
| 2 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 85 |
| 3 DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 89 |
| 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 | 89 |
| 2 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 88 |
| 3 FLUOROBENZENE | 462-06-6 | 50-200 | 97 |
| # 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: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-6 | Received Date: | 04/21/2003 |
| Sample ID: | **MW-4-4** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 21:48 |
| Data File Name: | 2809-06 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 110 |
| 2 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 88 |
| 3 DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 93 |
| 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 | 88 |
| 2 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 86 |
| 3 FLUOROBENZENE | 462-06-6 | 50-200 | 94 |
| # 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: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-7 | Received Date: | 04/21/2003 |
| Sample ID: | **MW-4-5** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 22:16 |
| Data File Name: | 2809-07 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 105 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 93 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 92 |
| 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 | 90 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 91 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 93 |
| # 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

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-8 | Received Date: | 04/21/2003 |
| Sample ID: | **SOURCE-2Q03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 22:44 |
| Data File Name: | 2809-08 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 104 |
| 2 | 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 83 |
| 3 | DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 86 |
| 4 | TOLUENE-D8 | 2037-26-5 | 73-129 | 98 |
| # of out-of-control | | | | 0 |

| Internal Standard | | | Control Limit, % | IS Rec.% |
|---|---|---|---|---|
| 1 | CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 82 |
| 2 | 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 79 |
| 3 | FLUOROBENZENE | 462-06-6 | 50-200 | 92 |
| # 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

Applied P & Ch Laboratory

# Organic Analysis Results for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Project No: | 04-4428.10 | Collection Date: | 04/21/2003 |
| Project ID: | JPL | Service ID: | 32809 | Collected by: | |
| | | Lab Sample ID: | 03-2809-9 | Received Date: | 04/21/2003 |
| Sample ID: | **TB-2-4/21/03** | Sample Matrix | Water | Moisture %: | – |
| Sample Type: | Field Sample | Prep. Method: | 5030 | Instrument ID: | GC/MS: G |
| Anal. Method: | 524.2 | Prep. Date: | 04/23/03 | Anal. Date: | 04/23/03 |
| Batch No: | 03G2136 | Prep. No: | – | Anal. Time: | 23:13 |
| Data File Name: | 2809-09 | 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 | N-BUTYLBENZENE | 104-51-8 | µg/L | 0.5 | <0.5 | U |
| 8 | SEC-BUTYLBENZENE | 135-98-8 | µg/L | 0.5 | <0.5 | U |
| 9 | TERT-BUTYLBENZENE | 98-06-6 | µg/L | 0.5 | <0.5 | U |
| 10 | 2-BUTANONE | 78-93-3 | µg/L | 10 | <10 | 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 | METHYLENE CHLORIDE | 75-09-2 | µg/L | 1.8[a] | <1.8 | U |
| 42 | METHYL-T-BUTYL ETHER (MTBE) | 1634-04-4 | µg/L | 1 | <1 | U |
| 43 | 4-METHYL-2-PENTANONE (MIBK) | 108-10-1 | µg/L | 10 | <10 | 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 | 107 |
| 2 1,2-DICHLOROETHANE-D4 | 17060-07-0 | 70-129 | 80 |
| 3 DIBROMOFLUOROMETHANE | 1868-53-7 | 70-122 | 85 |
| 4 TOLUENE-D8 | 2037-26-5 | 73-129 | 98 |
| # of out-of-control | | | 0 |

| Internal Standard | | Control Limit, % | IS Rec.% |
|---|---|---|---|
| 1 CHLOROBENZENE-D5 | 3114-55-4 | 50-200 | 79 |
| 2 1,4-DICHLOROBENZENE-D4 | 3855-82-1 | 50-200 | 76 |
| 3 FLUOROBENZENE | 462-06-6 | 50-200 | 90 |
| # 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

FORM-2C

Applied P & Ch Laboratory

# Surrogate Recovery Summary for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | SDG Number: | 032809 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03G2136 | | |

| # | Client Sample No | Lab Sample ID | S1 % # | S2 % # | S3 % # | S4 % # | TOT OUT |
|---|---|---|---|---|---|---|---|
| 1 | 03G2136-LCS-01 | 03G2136-LCS-01 | 109 | 89 | 98 | 102 | 0 |
| 2 | MW-4-2MS | 03-2809-4MS | 98 | 78 | 86 | 91 | 0 |
| 3 | MW-4-2MSD | 03-2809-4MSD | 99 | 79 | 88 | 93 | 0 |
| 4 | 03G2136-MB-01 | 03G2136-MB-01 | 104 | 73 | 89 | 100 | 0 |
| 5 | DUPE-1-2Q03 | 03-2809-1 | 107 | 87 | 92 | 101 | 0 |
| 6 | EB-2-4/21/03 | 03-2809-2 | 109 | 87 | 89 | 100 | 0 |
| 7 | MW-4-1 | 03-2809-3 | 113 | 84 | 92 | 102 | 0 |
| 8 | MW-4-2 | 03-2809-4 | 102 | 84 | 86 | 96 | 0 |
| 9 | MW-4-3 | 03-2809-5 | 106 | 85 | 89 | 102 | 0 |
| 10 | MW-4-4 | 03-2809-6 | 110 | 88 | 93 | 104 | 0 |
| 11 | MW-4-5 | 03-2809-7 | 105 | 93 | 92 | 102 | 0 |
| 12 | SOURCE-2Q03 | 03-2809-8 | 104 | 83 | 86 | 98 | 0 |
| 13 | TB-2-4/21/03 | 03-2809-9 | 107 | 80 | 85 | 98 | 0 |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | | | |

| | QC Control Limit |
|---|---|
| S1 = 1-BROMO-4-FLUOROBENZENE (4-BROMOFL | 70-129 |
| S2 = 1,2-DICHLOROETHANE-D4 | 70-129 |
| S3 = DIBROMOFLUOROMETHANE | 70-122 |
| S4 = TOLUENE-D8 | 73-129 |

# Column to be used to flag recovery values:

* – Values outside of contract required QC Limits  D – Surrogate diluted out  I – Matrix Interference

FORM-3A

Applied P & Ch Laboratory

# Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 32809 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03G2136 | | |
| LCS Filename: | G2136L01 | Date Analyzed: | 042303 | Time Analyzed: | 11:44 |
| LCSD Filename: | – | Date Analyzed: | – | Time Analyzed: | – |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration LCS | LCS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| BENZENE | µg/L | 20 | 0 | 21.0 | 105 | 65-120 |
| CHLOROBENZENE | µg/L | 20 | 0 | 21.5 | 108 | 65-134 |
| 1,1-DICHLOROETHENE | µg/L | 20 | 0 | 19.7 | 99 | 65-127 |
| TOLUENE | µg/L | 20 | 0 | 19.6 | 98 | 65-134 |
| TRICHLOROETHENE | µg/L | 20 | 0 | 19.9 | 100 | 67-122 |
| # 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: _____

_____

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

4138

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 11:44 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:36 2003
Print Time : Wed Apr 23 16:37 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 | 9.04 | 9.03 | 0.000 | 96 | 70 | 578.592 | 10.00 | | 0.00 | |
| 47 | 47 Cl-benzene-d5, I2 | 12.68 | 12.66 | 0.001 | 82 | 119 | 162.818 | 10.00 | | 0.02 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.17 | 15.15 | 0.001 | 152 | 150 | 125.199 | 10.00 | | 0.02 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | %Recovery | | |
| 27 | 27 Di-Br-F-Methane ( | 7.43 | 7.44 | 0.000 | 111 | 113 | 399.981 | 19.52 | 19.5 | 97.58% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.03 | 8.02 | 0.000 | 65 | 102 | 170.681 | 17.85 | 17.9 | 89.27% | |
| 55 | 55 toluene-d8(S2) | 11.16 | 11.15 | 0.000 | 100 | 99 | 590.649 | 20.44 | 20.4 | 102.18% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 13.91 | 13.90 | 0.000 | 174 | 95 | 243.309 | 21.75 | 21.8 | 108.75% | |
| Target Compounds | | | | | | | | | Qvalue | | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 3 | 3 di-Cl-di-F-methan | 2.58 | 2.60 | -0.002 | 85 | 87 | 344.543 | 20.96 | 21.0 | 97 | |
| 4 | 4 Chloromethane | 2.76 | 2.78 | -0.002 | 50 | 52 | 248.456 | 17.65 | 17.6 | 97 | |
| 9 | 9 F114 85 135 | 2.80 | 2.83 | -0.002 | 85 | 135 | 343.441 | 18.59 | 18.6 | 95 | |
| 5 | 5 vinyl chloride | 2.94 | 2.96 | -0.003 | 62 | 64 | 235.366 | 17.63 | 17.6 | 98 | |
| 6 | 6 bromomethane | 3.36 | 3.37 | -0.002 | 94 | 96 | 198.483 | 16.85 | 16.9 | 93 | |
| 7 | 7 Chloroethane | 3.51 | 3.52 | 0.000 | 64 | 66 | 199.099 | 20.14 | 20.1 | 99 | |
| 8 | 8 tri-Cl-F-methane | 4.14 | 4.14 | 0.000 | 101 | 103 | 486.784 | 21.56 | 21.6 | 99 | ? |
| 111 | 111 isopropyl alcoho | 4.26 | 4.27 | 0.000 | 45 | 43 | 46.561 | 178.35 | 178.3 | 61 | # |
| 100 | 100 ethyl ether x5 | 4.44 | 4.44 | 0.000 | 59 | 74 | 697.082 | 84.53 | 84.5 | 99 | |
| 102 | 102 Acrolein x10 | 4.15 | 4.15 | 0.000 | 56 | 55 | 107.521 | 163.42 | 163.4 | 99 | ? |
| 119 | 119 methyl acetate | 5.05 | 5.06 | 0.000 | 43 | 74 | 180.572 | 25.39 | 25.4 | 97 | |
| 104 | 104 Carbon disulfide | 5.18 | 5.18 | 0.000 | 76 | 78 | 867.513 | 17.99 | 18.0 | 100 | m |
| 103 | 103 Acrylonitrilex10 | 4.89 | 4.89 | 0.000 | 53 | 52 | 248.888 | 180.03 | 180.0 | 95 | |
| 95 | 95 Acetone x10 | 4.32 | 4.31 | 0.000 | 43 | 58 | 179.827 | 181.19 | 181.2 | 96 | |
| 108 | 108 F-113 | 5.03 | 5.02 | 0.000 | 151 | 101 | 386.546 | 22.29 | 22.3 | 98 | ? |
| 13 | 13 11-dichloroethene | 4.76 | 4.76 | 0.000 | 61 | 96 | 447.185 | 19.71 | 19.7 | 98 | |
| 101 | 101 Acetonnitrilex10 | 4.20 | 4.20 | 0.000 | 41 | 40 | 79.124 | 213.87 | 213.9 | 85 | # |
| 109 | 109 Iodomethane | 4.80 | 4.80 | 0.000 | 142 | 127 | 415.786 | 22.67 | 22.7 | 99 | |
| 113 | 113 Tert butyl alcoh | 4.85 | 4.86 | -0.002 | 59 | 57 | 87.152 | 174.11 | 174.1 | 100 | |

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

9/23/03

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 11:44 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:36 2003
Print Time : Wed Apr 23 16:37 2003
Miscleneous :

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

4139

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 18 methylene chlorid | 4.97 | 4.97 | 0.000 | 84 | 49 | 400.642 | 17.35 | 17.3 | 96 | |
| | 112 Allyl chloride | 5.07 | 5.07 | 0.000 | 41 | 76 | 521.263 | 20.78 | 20.8 | 98 | ? |
| 200 | 200 Nitro methane x1 | 5.81 | 5.82 | -0.001 | 61 | 46 | 496.331 | 196.62 | 196.6 | 97 | #? |
| 10 | 10 t-Bu-Me-ether | 5.99 | 6.00 | -0.001 | 73 | 57 | 460.350 | 18.79 | 18.8 | 97 | |
| 19 | 19 t-12-di-Cl-ethene | 5.81 | 5.82 | -0.001 | 96 | 61 | 309.121 | 17.78 | 17.8 | 87 | ? |
| 98 | 98 Vinyl acetate x5 | 6.40 | 6.41 | 0.000 | 43 | 86 | 1144.769 | 73.16 | 73.2 | 100 | |
| 21 | 21 11-dichloroethane | 6.15 | 6.15 | 0.000 | 63 | 83 | 675.281 | 22.24 | 22.2 | 99 | |
| 91 | 91 2-butanone MEKx10 | 6.84 | 6.83 | 0.000 | 43 | 72 | 984.970 | 181.52 | 181.5 | 100 | ? |
| 115 | 115 Di isoprop ether | 6.85 | 6.85 | 0.000 | 45 | 87 | 1518.712 | 19.82 | 19.8 | 98 | ? |
| 22 | 22 c-12-di-Cl-ethene | 6.97 | 6.97 | 0.000 | 96 | 61 | 323.301 | 19.00 | 19.0 | 95 | |
| 23 | 23 22-Dichloropropan | 7.35 | 7.35 | 0.000 | 77 | 97 | 549.579 | 20.97 | 21.0 | 99 | |
| 24 | 24 Br-Cl-methane | 7.19 | 7.18 | 0.000 | 128 | 130 | 101.191 | 16.58 | 16.6 | 97 | |
| 25 | 25 chloroform | 7.27 | 7.27 | 0.000 | 83 | 85 | 586.378 | 19.30 | 19.3 | 99 | |
| 201 | 201 Ethyl acetate x2 | 7.32 | 7.31 | 0.001 | 43 | 61 | 277.600 | 35.89 | 35.9 | 99 | ? |
| 116 | 116 ETBE | 7.40 | 7.40 | 0.000 | 59 | 87 | 854.720 | 18.31 | 18.3 | 98 | |
| 117 | 117 Iso-butyl alcoho | 7.32 | 7.31 | 0.001 | 43 | 42 | 285.444 | 184.40 | 184.4 | 80 | #? |
| 26 | 26 tetrahydrofuranx5 | 7.71 | 7.71 | 0.000 | 72 | 42 | 49.223 | 83.01 | 83.0 | 85 | |
| 34 | 34 111-tri-Cl-ethane | 8.24 | 8.23 | 0.000 | 97 | 99 | 518.953 | 20.51 | 20.5 | 99 | |
| 30 | 30 12-dichloroethane | 8.12 | 8.13 | 0.000 | 62 | 64 | 217.555 | 18.37 | 18.4 | 99 | |
| 35 | 35 11-Di-Cl-propene | 8.48 | 8.48 | 0.000 | 75 | 110 | 451.039 | 20.40 | 20.4 | 98 | |
| 36 | 36 benzene | 8.75 | 8.75 | 0.000 | 78 | 52 | 1054.210 | 20.97 | 21.0 | 100 | |
| 37 | 37 CCl4 | 8.69 | 8.68 | 0.000 | 117 | 119 | 423.170 | 21.85 | 21.8 | 100 | |
| 97 | 97 thiophene | 8.89 | 8.89 | 0.000 | 84 | 58 | 474.038 | 18.96 | 19.0 | 100 | |
| 118 | 118 TAME | 9.01 | 9.00 | 0.000 | 73 | 43 | 580.655 | 18.07 | 18.1 | 96 | |
| 39 | 39 12-di-Cl-propane | 9.50 | 9.49 | 0.000 | 63 | 76 | 302.192 | 20.54 | 20.5 | 96 | |
| 40 | 40 trichloroethene | 9.55 | 9.54 | 0.001 | 130 | 132 | 310.221 | 19.91 | 19.9 | 99 | |
| 96 | 96 Me-methacrylate | 9.86 | 9.85 | 0.000 | 69 | 100 | 96.501 | 18.86 | 18.9 | 98 | |
| 42 | 42 Br-di-Cl-methane | 9.62 | 9.61 | 0.000 | 83 | 85 | 367.870 | 17.93 | 17.9 | 96 | |
| 41 | 41 dibromomethane | 9.45 | 9.45 | 0.000 | 174 | 172 | 129.069 | 18.19 | 18.2 | 99 | |
| 45 | 45 c-13-di-Cl-propen | 10.38 | 10.37 | 0.001 | 75 | 110 | 336.534 | 18.60 | 18.6 | 96 | |
| 92 | 92 2-ClEt-Vi-ether10 | 10.15 | 10.15 | 0.000 | 63 | 43 | 320.653 | 103.33 | 103.3 | 96 | |
| 56 | 56 toluene | 11.24 | 11.23 | 0.002 | 91 | 92 | 927.847 | 19.64 | 19.6 | 99 | |

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

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

4140

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 11:44 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:36 2003
Print Time : Wed Apr 23 16:37 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 | 107 Et methacrylate | 11.37 | 11.36 | 0.000 | 69 | 99 | 158.785 | 16.24 | 16.2 | 100 | |
| 93 | 93 2-Hexanone x5 | 11.50 | 11.48 | 0.002 | 43 | 58 | 294.196 | 89.51 | 89.5 | 98 | |
| 48 | 48 112-tri-Cl-Et | 11.04 | 11.03 | 0.002 | 97 | 83 | 125.359 | 18.11 | 18.1 | 98 | |
| 58 | 58 1,2-di-br-ethane | 11.85 | 11.82 | 0.003 | 107 | 109 | 127.412 | 17.22 | 17.2 | 99 | |
| 51 | 51 di-Br-Cl-methane | 11.58 | 11.57 | 0.002 | 129 | 127 | 172.362 | 18.51 | 18.5 | 99 | |
| 46 | 46 t-13-di-cl-propen | 10.89 | 10.87 | 0.002 | 75 | 110 | 223.354 | 19.15 | 19.2 | 97 | |
| 105 | 105 1-Chlorohexane | 12.65 | 12.64 | 0.002 | 55 | 93 | 333.693 | 23.35 | 23.4 | 94 | ? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 54 | 54 MIBK | 10.53 | 10.52 | 0.000 | 43 | 58 | 102.949 | 20.11 | 20.1 | 95 | |
| 49 | 49 1,3-di-cl-propane | 11.31 | 11.29 | 0.001 | 76 | 78 | 228.279 | 21.45 | 21.4 | 99 | |
| 59 | 59 tetra-Cl-ethene | 12.02 | 12.00 | 0.001 | 166 | 168 | 315.009 | 21.98 | 22.0 | 99 | |
| 60 | 60 chlorobenzene | 12.71 | 12.70 | 0.000 | 112 | 77 | 511.018 | 21.48 | 21.5 | 96 | |
| 61 | 61 1112-tetra-Cl-Et | 12.64 | 12.62 | 0.001 | 131 | 133 | 208.505 | 21.88 | 21.9 | 99 | ? |
| 64 | 64 ethylbenzene | 12.92 | 12.90 | 0.001 | 91 | 106 | 1041.012 | 22.71 | 22.7 | 99 | |
| 65 | 65 m/p-Xylenes x2 | 13.12 | 13.10 | 0.001 | 91 | 106 | 1582.052 | 45.39 | 45.4 | 99 | |
| 99 | 99 1-4-di-Cl-butane | 13.46 | 13.46 | 0.000 | 55 | 41 | 213.055 | 20.29 | 20.3 | 98 | ? |
| 52 | 52 bromoform | 13.23 | 13.22 | 0.001 | 173 | 175 | 94.409 | 19.46 | 19.5 | 98 | |
| 66 | 66 styrene | 13.44 | 13.43 | 0.001 | 104 | 78 | 541.097 | 21.99 | 22.0 | 100 | ? |
| 67 | 67 o-xylene | 13.51 | 13.50 | 0.001 | 91 | 106 | 746.362 | 21.76 | 21.8 | 99 | ? |
| 68 | 68 1122-Tetra-Cl-Et | 13.52 | 13.51 | 0.001 | 83 | 85 | 122.908 | 19.52 | 19.5 | 97 | ? |
| 110 | 110 t-1,4-dichloro-2 | 13.67 | 13.67 | 0.000 | 89 | 53 | 20.788 | 20.56 | 20.6 | 82 | #? |
| 106 | 106 Cl-benzyl | 15.14 | 15.12 | 0.002 | 91 | 126 | 175.988 | 22.43 | 22.4 | 96 | ? |
| <<< I3 : ISTD ID = 62 >>> | | | | | | | | | | | |
| 69 | 69 123-tri-Cl-Pr | 13.66 | 13.64 | 0.001 | 110 | 97 | 29.700 | 19.48 | 19.5 | 88 | ? |
| 71 | 71 isopropylbenzene | 13.87 | 13.86 | 0.000 | 105 | 120 | 1051.966 | 25.57 | 25.6 | 100 | |
| 72 | 72 bromobenzene | 14.12 | 14.10 | 0.000 | 156 | 158 | 203.798 | 22.57 | 22.6 | 97 | |
| 73 | 73 n-propylbenzene | 14.30 | 14.29 | 0.000 | 120 | 78 | 280.316 | 25.28 | 25.3 | 97 | |
| 74 | 74 2-Cl-Tl 126 1 | 14.40 | 14.37 | 0.001 | 126 | 128 | 164.480 | 22.32 | 22.3 | 93 | |
| 75 | 75 4-Cl-Tl 126 1 | 14.46 | 14.45 | 0.000 | 126 | 128 | 231.827 | 23.02 | 23.0 | 99 | m |
| 76 | 76 135-tri-Me-Bz | 14.58 | 14.57 | 0.000 | 105 | 120 | 805.877 | 24.26 | 24.3 | 99 | |
| 79 | 79 tert-butylbenzene | 14.85 | 14.84 | 0.000 | 119 | 91 | 870.343 | 25.52 | 25.5 | 99 | |
| 78 | 78 124-tri-Me-Bz | 14.95 | 14.94 | 0.000 | 105 | 120 | 671.841 | 23.79 | 23.8 | 100 | |

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

4/23/03

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136L01.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 11:44 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:36 2003
Print Time : Wed Apr 23 16:37 2003
Miscleneous :

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

4141

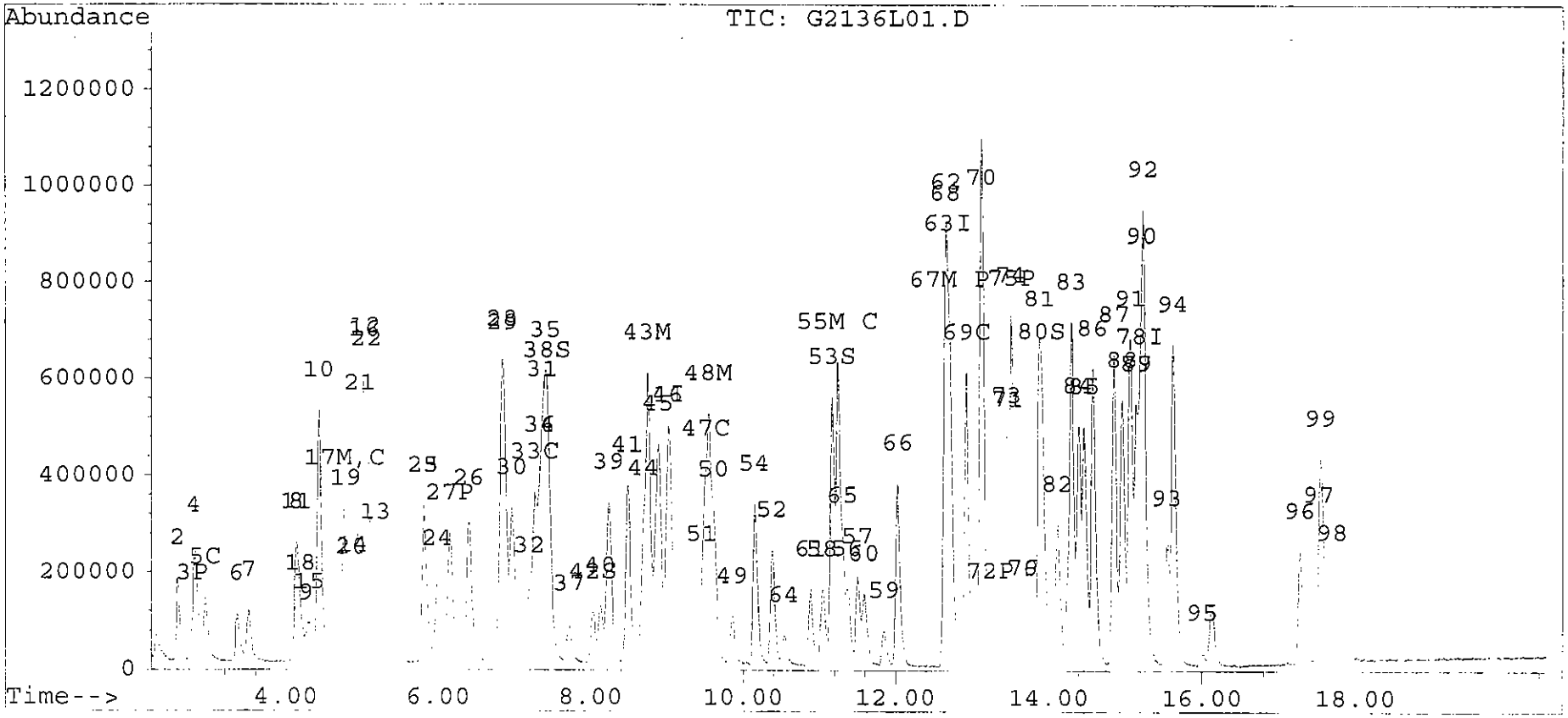
| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 80 13-di-Cl-Bz 146 | 15.13 | 15.11 | 0.001 | 146 | 148 | 296.104 | 20.58 | 20.6 | 91 | ? |
| 82 | 82 14-di-Cl-Bz 146 | 15.20 | 15.19 | 0.000 | 146 | 148 | 451.705 | 21.60 | 21.6 | 93 | |
| 81 | 81 sec-butylbenzene | 15.06 | 15.04 | 0.001 | 105 | 134 | 1287.810 | 25.82 | 25.8 | 98 | |
| 77 | 77 4-iso-Pr-toluene | 15.23 | 15.22 | 0.000 | 119 | 134 | 891.838 | 24.79 | 24.8 | 99 | |
| 84 | 84 12-di-Cl-benzene | 15.55 | 15.52 | 0.002 | 146 | 148 | 293.296 | 21.13 | 21.1 | 100 | |
| 85 | 85 n-butylbenzene | 15.62 | 15.60 | 0.001 | 91 | 134 | 930.277 | 24.67 | 24.7 | 99 | |
| 86 | 86 12-diBr-3-Cl-Pra | 16.00 | 15.97 | 0.002 | 157 | 155 | 20.637 | 20.29 | 20.3 | 95 | |
| 87 | 87 124-tri-Cl-Bz | 17.27 | 17.24 | 0.002 | 180 | 182 | 229.888 | 21.00 | 21.0 | 99 | |
| 88 | 88 naphthalene | 17.51 | 17.49 | 0.001 | 128 | 129 | 184.196 | 22.12 | 22.1 | 98 | |
| 90 | 90 123-tri-Cl-Bz | 17.69 | 17.68 | 0.000 | 180 | 182 | 170.132 | 22.49 | 22.5 | 100 | |
| 89 | 89 hx-Cl-butadiene | 17.55 | 17.52 | 0.002 | 225 | 260 | 226.381 | 27.51 | 27.5 | 95 | |

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

# Quantitation Report

Data File : C:\HPCHEM\1\DATA\03G2136\G2136L01.D  Vial: 11
Acq On : 23 Apr 03 11:44 am  Operator: Eddie
Sample : f=1  Inst : GCMS-G
Misc :  Multiplr: 1.00
Quant Time: Apr 23 16:36 2003  Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab**  EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration



FORM-3A

Applied P & Ch Laboratory

# Matrix Spike/Matrix Spike Duplicate Recovery for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 32809 |
| Project ID: | JPL | Project No: | 04-4428.10 | Sample Matrix: | Water |
| | | Batch No: | 03G2136 | | |
| MS Filename: | G2136M02 | Date Analyzed: | 042303 | Time Analyzed: | 13:39 |
| MSD Filename: | G2136N02 | Date Analyzed: | 042303 | Time Analyzed: | 14:08 |
| MS Sample No: | **MW-4-2** | Sample Lab ID: | 03-2809-4 | | |

| Spiked Components | Unit | Spike Added | Concentration Unspiked | Concentration MS | MS Rec% # | QC Limit, % REC |
|---|---|---|---|---|---|---|
| BENZENE | µg/L | 20 | 0 | 18.1 | 91 | 65-121 |
| CHLOROBENZENE | µg/L | 20 | 0 | 20.0 | 100 | 65-134 |
| 1,1-DICHLOROETHENE | µg/L | 20 | 0 | 16.6 | 83 | 65-127 |
| TOLUENE | µg/L | 20 | 0 | 17.7 | 89 | 65-134 |
| TRICHLOROETHENE | µg/L | 20 | 0.4 | 17.5 | 86 | 65-125 |
| # of Out-of-control | | | | | 0 | |

| Spiked Components | Unit | Spike Added | MSD Concentration | MSD Rec% # | RPD% # | QC Limit, % RPD | QC Limit, % REC |
|---|---|---|---|---|---|---|---|
| BENZENE | µg/L | 20 | 18.7 | 94 | 3 | 28 | 65-121 |
| CHLOROBENZENE | µg/L | 20 | 20.3 | 102 | 2 | 35 | 65-134 |
| 1,1-DICHLOROETHENE | µg/L | 20 | 17.3 | 87 | 5 | 31 | 65-127 |
| TOLUENE | µg/L | 20 | 18.3 | 92 | 3 | 35 | 65-134 |
| TRICHLOROETHENE | µg/L | 20 | 18.3 | 90 | 5 | 30 | 65-125 |
| # 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: _____

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

4144

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136M02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 13:39 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:50 2003
Print Time : Wed Apr 23 16:51 2003
Miscleneous :

Sample : f=1 $2809-04
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 | 9.04 | 9.03 | 0.000 | 96 | 70 | 615.187 | 10.00 | | 0.00 | |
| 47 | 47 Cl-benzene-d5, I2 | 12.69 | 12.66 | 0.002 | 82 | 119 | 173.342 | 10.00 | | 0.02 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.17 | 15.15 | 0.001 | 152 | 150 | 138.143 | 10.00 | | 0.02 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | | %Recovery | |
| 27 | 27 Di-Br-F-Methane ( | 7.43 | 7.44 | 0.000 | 111 | 113 | 373.683 | 17.11 | 17.1 | 85.57% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.02 | 8.02 | 0.000 | 65 | 102 | 158.220 | 15.57 | 15.6 | 77.83% | |
| 55 | 55 toluene-d8(S2) | 11.17 | 11.15 | 0.001 | 100 | 99 | 557.354 | 18.14 | 18.1 | 90.69% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 13.91 | 13.90 | 0.000 | 174 | 95 | 240.919 | 19.52 | 19.5 | 97.59% | |
| Target Compounds | | | | | | | | | | Qvalue | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 3 | 3 di-Cl-di-F-methan | 2.57 | 2.60 | -0.002 | 85 | 87 | 304.517 | 17.31 | 17.3 | 99 | |
| 4 | 4 Chloromethane | 2.76 | 2.78 | -0.002 | 50 | 52 | 198.105 | 13.23 | 13.2 | 96 | |
| 9 | 9 F114 85 135 | 2.81 | 2.83 | -0.002 | 85 | 135 | 323.799 | 16.48 | 16.5 | 97 | |
| 5 | 5 vinyl chloride | 2.94 | 2.96 | -0.003 | 62 | 64 | 209.202 | 14.74 | 14.7 | 97 | |
| 6 | 6 bromomethane | 3.36 | 3.37 | -0.002 | 94 | 96 | 202.403 | 16.14 | 16.1 | 94 | |
| 7 | 7 Chloroethane | 3.51 | 3.52 | 0.000 | 64 | 66 | 175.462 | 16.69 | 16.7 | 99 | |
| 8 | 8 tri-Cl-F-methane | 4.13 | 4.14 | 0.000 | 101 | 103 | 434.560 | 18.11 | 18.1 | 100 | ? |
| 111 | 111 isopropyl alcoho | 4.26 | 4.27 | 0.000 | 45 | 43 | 42.327 | 152.49 | 152.5 | 59 | # |
| 100 | 100 ethyl ether x5 | 4.43 | 4.44 | 0.000 | 59 | 74 | 629.413 | 71.78 | 71.8 | 99 | |
| 102 | 102 Acrolein x10 | 4.14 | 4.15 | 0.000 | 56 | 55 | 121.965 | 174.35 | 174.3 | 91 | ? |
| 119 | 119 methyl acetate | 5.05 | 5.06 | 0.000 | 43 | 74 | 170.795 | 22.62 | 22.6 | 94 | ? |
| 104 | 104 Carbon disulfide | 5.18 | 5.18 | 0.000 | 76 | 78 | 775.685 | 15.13 | 15.1 | 99 | m |
| 103 | 103 Acrylonitrilex10 | 4.89 | 4.89 | 0.000 | 53 | 52 | 230.171 | 156.58 | 156.6 | 99 | |
| 95 | 95 Acetone x10 | 4.31 | 4.31 | 0.000 | 43 | 58 | 159.708 | 149.00 | 149.0 | 99 | |
| 108 | 108 F-113 | 5.03 | 5.02 | 0.000 | 151 | 101 | 355.266 | 19.27 | 19.3 | 97 | ? |
| 13 | 13 11-dichloroethene | 4.76 | 4.76 | 0.000 | 61 | 96 | 399.210 | 16.55 | 16.6 | 100 | |
| 101 | 101 Acetonnitrilex10 | 4.21 | 4.20 | 0.000 | 41 | 40 | 72.020 | 182.79 | 182.8 | 53 | # |
| 109 | 109 Iodomethane | 4.80 | 4.80 | 0.000 | 142 | 127 | 404.394 | 20.60 | 20.6 | 100 | |
| 113 | 113 Tert butyl alcoh | 4.86 | 4.86 | 0.000 | 59 | 57 | 78.521 | 147.26 | 147.3 | 96 | # |

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

4/23/03

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136M02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 13:39 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:50 2003
Print Time : Wed Apr 23 16:51 2003
Miscleneous :

Sample : f=1 $2809-04
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

4145

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 18 methylene chlorid | 4.96 | 4.97 | 0.000 | 84 | 49 | 406.871 | 16.47 | 16.5 | 99 | |
| | 112 Allyl chloride | 5.07 | 5.07 | 0.000 | 41 | 76 | 457.372 | 17.14 | 17.1 | 94 | ? |
| 200 | 200 Nitro methane x1 | 5.81 | 5.82 | -0.001 | 61 | 46 | 455.280 | 169.63 | 169.6 | 97 | #? |
| 10 | 10 t-Bu-Me-ether | 6.00 | 6.00 | 0.000 | 73 | 57 | 429.547 | 16.51 | 16.5 | 100 | |
| 19 | 19 t-12-di-Cl-ethene | 5.81 | 5.82 | -0.001 | 96 | 61 | 298.275 | 16.13 | 16.1 | 94 | ? |
| 98 | 98 Vinyl acetate x5 | 6.40 | 6.41 | 0.000 | 43 | 86 | 963.311 | 57.90 | 57.9 | 99 | |
| 21 | 21 11-dichloroethane | 6.15 | 6.15 | 0.000 | 63 | 83 | 605.042 | 18.74 | 18.7 | 99 | |
| 91 | 91 2-butanone MEKx10 | 6.84 | 6.83 | 0.000 | 43 | 72 | 869.225 | 150.66 | 150.7 | 100 | ? |
| 115 | 115 Di isoprop ether | 6.85 | 6.85 | 0.000 | 45 | 87 | 1362.377 | 16.71 | 16.7 | 100 | ? |
| 22 | 22 c-12-di-Cl-ethene | 6.97 | 6.97 | 0.000 | 96 | 61 | 297.276 | 16.43 | 16.4 | 95 | |
| 23 | 23 22-Dichloropropan | 7.35 | 7.35 | 0.000 | 77 | 97 | 498.241 | 17.88 | 17.9 | 99 | |
| 24 | 24 Br-Cl-methane | 7.20 | 7.18 | 0.001 | 128 | 130 | 98.871 | 15.24 | 15.2 | 99 | |
| 25 | 25 chloroform | 7.27 | 7.27 | 0.000 | 83 | 85 | 534.469 | 16.55 | 16.5 | 100 | |
| 201 | 201 Ethyl acetate x2 | 7.31 | 7.31 | 0.000 | 43 | 61 | 218.393 | 26.55 | 26.6 | 96 | ? |
| 116 | 116 ETBE | 7.40 | 7.40 | 0.000 | 59 | 87 | 774.657 | 15.61 | 15.6 | 99 | |
| 117 | 117 Iso-butyl alcoho | 7.31 | 7.31 | 0.000 | 43 | 42 | 220.918 | 134.22 | 134.2 | 1 | #? |
| 26 | 26 tetrahydrofuranx5 | 7.71 | 7.71 | 0.000 | 72 | 42 | 45.759 | 72.58 | 72.6 | 89 | |
| 34 | 34 111-tri-Cl-ethane | 8.24 | 8.23 | 0.000 | 97 | 99 | 471.263 | 17.51 | 17.5 | 99 | |
| 30 | 30 12-dichloroethane | 8.12 | 8.13 | 0.000 | 62 | 64 | 201.232 | 16.00 | 16.0 | 97 | |
| 35 | 35 11-Di-Cl-propene | 8.49 | 8.48 | 0.001 | 75 | 110 | 413.335 | 17.58 | 17.6 | 99 | |
| 36 | 36 benzene | 8.75 | 8.75 | 0.000 | 78 | 52 | 965.696 | 18.06 | 18.1 | 99 | |
| 37 | 37 CCl4 | 8.70 | 8.68 | 0.002 | 117 | 119 | 381.585 | 18.53 | 18.5 | 99 | |
| 97 | 97 thiophene | 8.89 | 8.89 | 0.000 | 84 | 58 | 446.002 | 16.78 | 16.8 | 97 | |
| 118 | 118 TAME | 9.01 | 9.00 | 0.000 | 73 | 43 | 541.033 | 15.83 | 15.8 | 95 | |
| 39 | 39 12-di-Cl-propane | 9.50 | 9.49 | 0.000 | 63 | 76 | 278.468 | 17.80 | 17.8 | 97 | |
| 40 | 40 trichloroethene | 9.54 | 9.54 | 0.000 | 130 | 132 | 289.194 | 17.46 | 17.5 | 100 | |
| 96 | 96 Me-methacrylate | 9.85 | 9.85 | 0.000 | 69 | 100 | 85.673 | 15.87 | 15.9 | 99 | |
| 42 | 42 Br-di-Cl-methane | 9.62 | 9.61 | 0.000 | 83 | 85 | 343.798 | 15.76 | 15.8 | 98 | |
| 41 | 41 dibromomethane | 9.46 | 9.45 | 0.000 | 174 | 172 | 120.735 | 16.00 | 16.0 | 99 | |
| 45 | 45 c-13-di-Cl-propen | 10.39 | 10.37 | 0.002 | 75 | 110 | 314.795 | 16.36 | 16.4 | 98 | |
| 92 | 92 2-ClEt-Vi-ether10 | 10.16 | 10.15 | 0.001 | 63 | 43 | 290.481 | 88.04 | 88.0 | 97 | |
| 56 | 56 toluene | 11.24 | 11.23 | 0.002 | 91 | 92 | 889.341 | 17.70 | 17.7 | 100 | |

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

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136M02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 13:39 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:50 2003
Print Time : Wed Apr 23 16:51 2003
Miscleneous :

Sample : f=1 $2809-04
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

4146

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 | 107 Et methacrylate | 11.38 | 11.36 | 0.002 | 69 | 99 | 133.737 | 12.86 | 12.9 | 98 | |
| 93 | 93 2-Hexanone x5 | 11.50 | 11.48 | 0.002 | 43 | 58 | 263.978 | 75.54 | 75.5 | 96 | |
| 48 | 48 112-tri-Cl-Et | 11.04 | 11.03 | 0.000 | 97 | 83 | 118.069 | 16.01 | 16.0 | 98 | |
| 58 | 58 1,2-di-br-ethane | 11.85 | 11.82 | 0.003 | 107 | 109 | 123.920 | 15.76 | 15.8 | 99 | |
| 51 | 51 di-Br-Cl-methane | 11.59 | 11.57 | 0.003 | 129 | 127 | 162.903 | 16.45 | 16.4 | 99 | |
| 46 | 46 t-13-di-cl-propen | 10.88 | 10.87 | 0.000 | 75 | 110 | 207.457 | 16.73 | 16.7 | 100 | |
| 105 | 105 1-Chlorohexane | 12.65 | 12.64 | 0.002 | 55 | 93 | 308.904 | 20.20 | 20.2 | 98 | ? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 54 | 54 MIBK | 10.54 | 10.52 | 0.001 | 43 | 58 | 97.315 | 17.78 | 17.8 | 98 | |
| 49 | 49 1,3-di-cl-propane | 11.31 | 11.29 | 0.001 | 76 | 78 | 212.616 | 18.76 | 18.8 | 98 | |
| 59 | 59 tetra-Cl-ethene | 12.02 | 12.00 | 0.001 | 166 | 168 | 312.861 | 20.51 | 20.5 | 99 | |
| 60 | 60 chlorobenzene | 12.72 | 12.70 | 0.001 | 112 | 77 | 506.118 | 19.98 | 20.0 | 100 | |
| 61 | 61 1112-tetra-Cl-Et | 12.65 | 12.62 | 0.002 | 131 | 133 | 198.665 | 19.58 | 19.6 | 98 | ? |
| 64 | 64 ethylbenzene | 12.92 | 12.90 | 0.001 | 91 | 106 | 997.188 | 20.43 | 20.4 | 99 | |
| 65 | 65 m/p-Xylenes x2 | 13.11 | 13.10 | 0.001 | 91 | 106 | 1515.897 | 40.85 | 40.9 | 98 | |
| 99 | 99 1-4-di-Cl-butane | 13.47 | 13.46 | 0.001 | 55 | 41 | 197.459 | 17.66 | 17.7 | 99 | |
| 52 | 52 bromoform | 13.23 | 13.22 | 0.000 | 173 | 175 | 93.710 | 18.07 | 18.1 | 100 | |
| 66 | 66 styrene | 13.44 | 13.43 | 0.001 | 104 | 78 | 528.204 | 20.16 | 20.2 | 99 | |
| 67 | 67 o-xylene | 13.51 | 13.50 | 0.001 | 91 | 106 | 730.611 | 20.01 | 20.0 | 99 | ? |
| 68 | 68 1122-Tetra-Cl-Et | 13.53 | 13.51 | 0.002 | 83 | 85 | 115.386 | 17.21 | 17.2 | 96 | ? |
| 110 | 110 t-1,4-dichloro-2 | 13.69 | 13.67 | 0.002 | 89 | 53 | 20.552 | 18.76 | 18.8 | 81 | #? |
| 106 | 106 Cl-benzyl | 15.14 | 15.12 | 0.002 | 91 | 126 | 171.692 | 20.41 | 20.4 | 96 | ? |
| <<< I3 : ISTD ID = 62 >>> | | | | | | | | | | | |
| 69 | 69 123-tri-Cl-Pr | 13.66 | 13.64 | 0.001 | 110 | 97 | 29.421 | 17.49 | 17.5 | 93 | ? |
| 71 | 71 isopropylbenzene | 13.87 | 13.86 | 0.000 | 105 | 120 | 1025.861 | 22.60 | 22.6 | 100 | |
| 72 | 72 bromobenzene | 14.12 | 14.10 | 0.000 | 156 | 158 | 202.289 | 20.30 | 20.3 | 97 | |
| 73 | 73 n-propylbenzene | 14.30 | 14.29 | 0.000 | 120 | 78 | 272.656 | 22.28 | 22.3 | 99 | |
| 74 | 74 2-Cl-Tl 126 1 | 14.39 | 14.37 | 0.001 | 126 | 128 | 158.009 | 19.43 | 19.4 | 99 | |
| 75 | 75 4-Cl-Tl 126 1 | 14.47 | 14.45 | 0.001 | 126 | 128 | 232.249 | 20.90 | 20.9 | 92 | m |
| 76 | 76 135-tri-Me-Bz | 14.58 | 14.57 | 0.000 | 105 | 120 | 792.586 | 21.62 | 21.6 | 98 | |
| 79 | 79 tert-butylbenzene | 14.85 | 14.84 | 0.000 | 119 | 91 | 841.541 | 22.36 | 22.4 | 98 | |
| 78 | 78 124-tri-Me-Bz | 14.96 | 14.94 | 0.001 | 105 | 120 | 688.560 | 22.10 | 22.1 | 98 | |

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

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136M02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 13:39 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:50 2003
Print Time : Wed Apr 23 16:51 2003
Miscleneous :

Sample : f=1 $2809-04
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

4147

| ID | | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 80 | 13-di-Cl-Bz 146 | 15.13 | 15.11 | 0.001 | 146 | 148 | 296.222 | 18.66 | 18.7 | 89 | ? |
| 82 | 82 | 14-di-Cl-Bz 146 | 15.20 | 15.19 | 0.000 | 146 | 148 | 455.563 | 19.75 | 19.7 | 94 | |
| 81 | 81 | sec-butylbenzene | 15.06 | 15.04 | 0.001 | 105 | 134 | 1243.224 | 22.59 | 22.6 | 98 | |
| 77 | 77 | 4-iso-Pr-toluene | 15.23 | 15.22 | 0.000 | 119 | 134 | 883.507 | 22.25 | 22.3 | 100 | |
| 84 | 84 | 12-di-Cl-benzene | 15.54 | 15.52 | 0.001 | 146 | 148 | 287.363 | 18.76 | 18.8 | 98 | |
| 85 | 85 | n-butylbenzene | 15.62 | 15.60 | 0.001 | 91 | 134 | 905.245 | 21.76 | 21.8 | 98 | |
| 86 | 86 | 12-diBr-3-Cl-Pra | 16.01 | 15.97 | 0.002 | 157 | 155 | 18.382 | 16.38 | 16.4 | 28 | # |
| 87 | 87 | 124-tri-Cl-Bz | 17.27 | 17.24 | 0.002 | 180 | 182 | 231.743 | 19.23 | 19.2 | 98 | |
| 88 | 88 | naphthalene | 17.51 | 17.49 | 0.000 | 128 | 129 | 182.985 | 19.92 | 19.9 | 99 | |
| 90 | 90 | 123-tri-Cl-Bz | 17.70 | 17.68 | 0.000 | 180 | 182 | 171.491 | 20.55 | 20.5 | 99 | |
| 89 | 89 | hx-Cl-butadiene | 17.54 | 17.52 | 0.000 | 225 | 260 | 220.451 | 24.25 | 24.3 | 96 | |

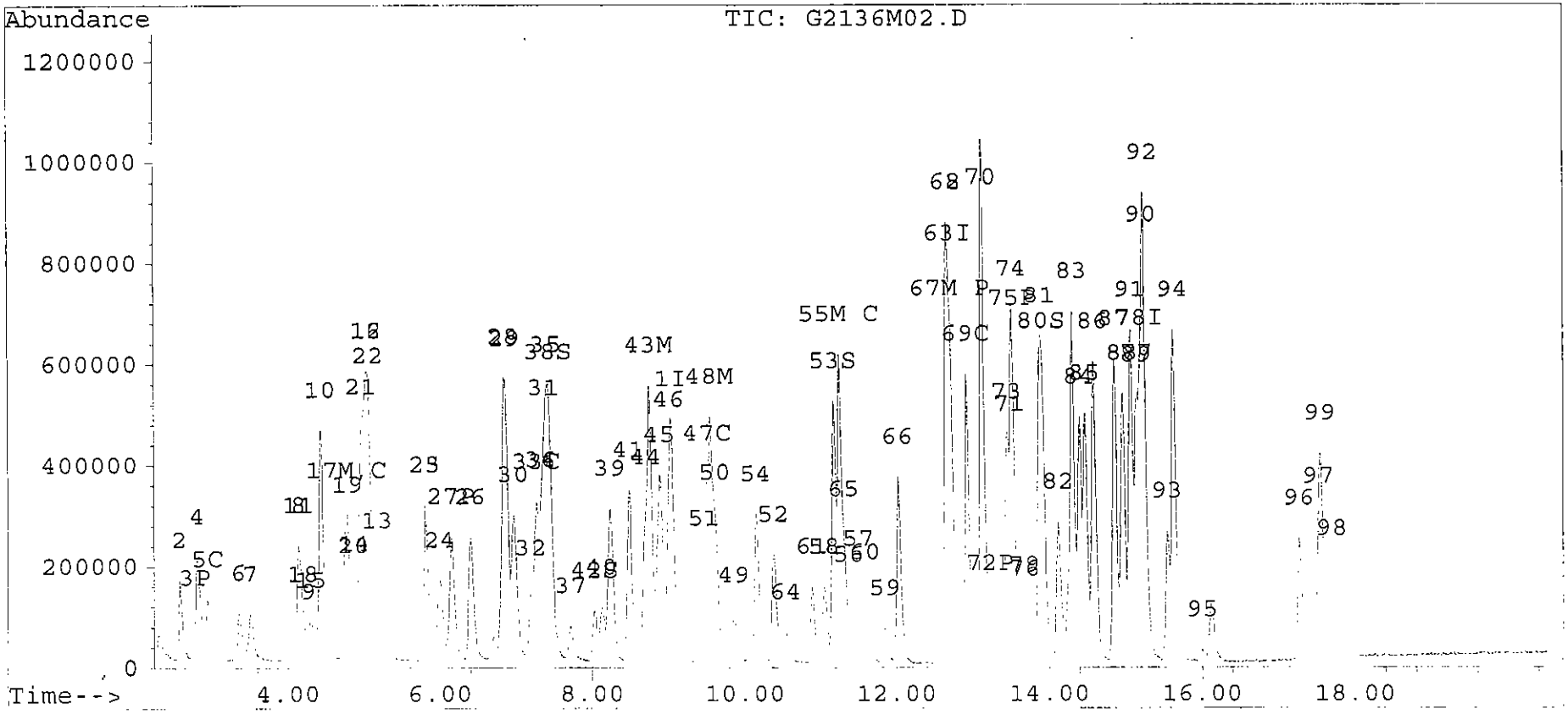
# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report

Data File : C:\HPCHEM\1\DATA\03G2136\G2136M02.D Vial: 15
Acq On : 23 Apr 03 1:39 pm Operator: Eddie
Sample : f=1 $2809-04 Inst : GCMS-G
Misc : Multiplr: 1.00
Quant Time: Apr 23 16:50 2003 Quant Results File: quant.res

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

4148



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

4149

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136N02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 14:08 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:53 2003
Print Time : Wed Apr 23 16:53 2003
Miscleneous :

Sample : f=1 $2809-04
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 | 9.04 | 9.03 | 0.000 | 96 | 70 | 595.121 | 10.00 | | 0.00 | |
| 47 | 47 Cl-benzene-d5, I2 | 12.67 | 12.66 | 0.000 | 82 | 119 | 166.748 | 10.00 | | 0.00 | |
| 62 | 62 1,4-DCB-d4 150 15 | 15.18 | 15.15 | 0.002 | 152 | 150 | 133.552 | 10.00 | | 0.03 | |
| System Monitoring Compounds (Surrogate) | | | | | | | | | | %Recovery | |
| 27 | 27 Di-Br-F-Methane ( | 7.44 | 7.44 | 0.000 | 111 | 113 | 370.645 | 17.55 | 17.6 | 87.77% | |
| 29 | 29 1,2-di-Cl-ethane- | 8.03 | 8.02 | 0.000 | 65 | 102 | 154.996 | 15.76 | 15.8 | 78.82% | |
| 55 | 55 toluene-d8(S2) | 11.16 | 11.15 | 0.000 | 100 | 99 | 552.035 | 18.57 | 18.6 | 92.85% | |
| 70 | 70 4-Br-1-F-Bz (S3) | 13.92 | 13.90 | 0.001 | 174 | 95 | 236.791 | 19.84 | 19.8 | 99.22% | |
| Target Compounds | | | | | | | | | | Qvalue | |
| <<< I1 : ISTD ID = 1 >>> | | | | | | | | | | | |
| 3 | 3 di-Cl-di-F-methan | 2.58 | 2.60 | -0.002 | 85 | 87 | 315.434 | 18.58 | 18.6 | 99 | |
| 4 | 4 Chloromethane | 2.76 | 2.78 | -0.002 | 50 | 52 | 197.632 | 13.65 | 13.6 | 96 | |
| 9 | 9 F114 85 135 | 2.81 | 2.83 | -0.002 | 85 | 135 | 341.437 | 17.97 | 18.0 | 93 | |
| 5 | 5 vinyl chloride | 2.95 | 2.96 | -0.002 | 62 | 64 | 207.973 | 15.15 | 15.1 | 98 | |
| 6 | 6 bromomethane | 3.37 | 3.37 | 0.000 | 94 | 96 | 201.181 | 16.60 | 16.6 | 92 | |
| 7 | 7 Chloroethane | 3.51 | 3.52 | 0.000 | 64 | 66 | 177.315 | 17.44 | 17.4 | 100 | |
| 8 | 8 tri-Cl-F-methane | 4.14 | 4.14 | 0.000 | 101 | 103 | 442.220 | 19.05 | 19.0 | 98 | ? |
| 111 | 111 isopropyl alcoho | 4.26 | 4.27 | 0.000 | 45 | 43 | 42.162 | 157.01 | 157.0 | 1 | # |
| 100 | 100 ethyl ether x5 | 4.44 | 4.44 | 0.000 | 59 | 74 | 622.716 | 73.41 | 73.4 | 99 | |
| 102 | 102 Acrolein x10 | 4.16 | 4.15 | 0.000 | 56 | 55 | 136.585 | 201.83 | 201.8 | 92 | ? |
| 119 | 119 methyl acetate | 5.07 | 5.06 | 0.002 | 43 | 74 | 126.991 | 17.45 | 17.4 | 99 | ? |
| 104 | 104 Carbon disulfide | 5.19 | 5.18 | 0.000 | 76 | 78 | 777.122 | 15.66 | 15.7 | 100 | m |
| 103 | 103 Acrylonitrilex10 | 4.90 | 4.89 | 0.000 | 53 | 52 | 219.783 | 154.56 | 154.6 | 99 | ? |
| 95 | 95 Acetone x10 | 4.32 | 4.31 | 0.002 | 43 | 58 | 144.211 | 138.12 | 138.1 | 99 | |
| 108 | 108 F-113 | 5.03 | 5.02 | 0.000 | 151 | 101 | 361.048 | 20.24 | 20.2 | 98 | |
| 13 | 13 11-dichloroethene | 4.77 | 4.76 | 0.000 | 61 | 96 | 403.204 | 17.28 | 17.3 | 99 | |
| 101 | 101 Acetonnitrilex10 | 4.21 | 4.20 | 0.000 | 41 | 40 | 69.858 | 183.29 | 183.3 | 79 | # |
| 109 | 109 Iodomethane | 4.81 | 4.80 | 0.000 | 142 | 127 | 409.038 | 21.61 | 21.6 | 100 | |
| 113 | 113 Tert butyl alcoh | 4.87 | 4.86 | 0.000 | 59 | 57 | 66.657 | 129.00 | 129.0 | 95 | #? |

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

4/23/03

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136N02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 14:08 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:53 2003
Print Time : Wed Apr 23 16:53 2003
Miscleneous :

Sample : f=1 $2809-04
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

4150

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 18 methylene chlorid | 4.97 | 4.97 | 0.000 | 84 | 49 | 409.880 | 17.24 | 17.2 | 100 | |
| | 112 Allyl chloride | 5.07 | 5.07 | 0.000 | 41 | 76 | 477.125 | 18.49 | 18.5 | 97 | ? |
| 200 | 200 Nitro methane x1 | 5.82 | 5.82 | 0.000 | 61 | 46 | 456.410 | 175.78 | 175.8 | 97 | #? |
| 10 | 10 t-Bu-Me-ether | 6.01 | 6.00 | 0.000 | 73 | 57 | 422.323 | 16.78 | 16.8 | 98 | |
| 19 | 19 t-12-di-Cl-ethene | 5.82 | 5.82 | 0.000 | 96 | 61 | 300.119 | 16.78 | 16.8 | 94 | ? |
| 98 | 98 Vinyl acetate x5 | 6.40 | 6.41 | 0.000 | 43 | 86 | 1233.982 | 76.67 | 76.7 | 98 | |
| 21 | 21 11-dichloroethane | 6.15 | 6.15 | 0.000 | 63 | 83 | 616.015 | 19.73 | 19.7 | 99 | |
| 91 | 91 2-butanone MEKx10 | 6.83 | 6.83 | 0.000 | 43 | 72 | 860.934 | 154.25 | 154.3 | 99 | ? |
| 115 | 115 Di isoprop ether | 6.85 | 6.85 | 0.000 | 45 | 87 | 1329.377 | 16.86 | 16.9 | 100 | ? |
| 22 | 22 c-12-di-Cl-ethene | 6.97 | 6.97 | 0.000 | 96 | 61 | 300.482 | 17.17 | 17.2 | 100 | |
| 23 | 23 22-Dichloropropan | 7.35 | 7.35 | 0.000 | 77 | 97 | 496.460 | 18.42 | 18.4 | 99 | |
| 24 | 24 Br-Cl-methane | 7.20 | 7.18 | 0.002 | 128 | 130 | 97.727 | 15.57 | 15.6 | 98 | |
| 25 | 25 chloroform | 7.27 | 7.27 | 0.000 | 83 | 85 | 536.493 | 17.17 | 17.2 | 99 | |
| 201 | 201 Ethyl acetate x2 | 7.32 | 7.31 | 0.001 | 43 | 61 | 243.466 | 30.60 | 30.6 | 98 | ? |
| 116 | 116 ETBE | 7.41 | 7.40 | 0.001 | 59 | 87 | 750.559 | 15.63 | 15.6 | 100 | |
| 117 | 117 Iso-butyl alcoho | 7.32 | 7.31 | 0.001 | 43 | 42 | 247.614 | 155.52 | 155.5 | 85 | #? |
| 26 | 26 tetrahydrofuranx5 | 7.72 | 7.71 | 0.001 | 72 | 42 | 44.794 | 73.45 | 73.4 | 87 | |
| 34 | 34 111-tri-Cl-ethane | 8.24 | 8.23 | 0.001 | 97 | 99 | 468.767 | 18.01 | 18.0 | 99 | |
| 30 | 30 12-dichloroethane | 8.13 | 8.13 | 0.000 | 62 | 64 | 194.676 | 16.00 | 16.0 | 99 | |
| 35 | 35 11-Di-Cl-propene | 8.48 | 8.48 | 0.000 | 75 | 110 | 411.334 | 18.09 | 18.1 | 98 | |
| 36 | 36 benzene | 8.75 | 8.75 | 0.000 | 78 | 52 | 969.256 | 18.74 | 18.7 | 99 | |
| 37 | 37 CCl4 | 8.70 | 8.68 | 0.001 | 117 | 119 | 390.424 | 19.60 | 19.6 | 98 | |
| 97 | 97 thiophene | 8.90 | 8.89 | 0.001 | 84 | 58 | 439.205 | 17.08 | 17.1 | 99 | |
| 118 | 118 TAME | 9.01 | 9.00 | 0.000 | 73 | 43 | 518.118 | 15.67 | 15.7 | 96 | |
| 39 | 39 12-di-Cl-propane | 9.51 | 9.49 | 0.001 | 63 | 76 | 273.545 | 18.07 | 18.1 | 97 | |
| 40 | 40 trichloroethene | 9.55 | 9.54 | 0.001 | 130 | 132 | 292.816 | 18.27 | 18.3 | 99 | |
| 96 | 96 Me-methacrylate | 9.85 | 9.85 | 0.000 | 69 | 100 | 81.924 | 15.70 | 15.7 | 100 | |
| 42 | 42 Br-di-Cl-methane | 9.62 | 9.61 | 0.000 | 83 | 85 | 339.117 | 16.07 | 16.1 | 96 | |
| 41 | 41 dibromomethane | 9.46 | 9.45 | 0.000 | 174 | 172 | 118.409 | 16.22 | 16.2 | 99 | |
| 45 | 45 c-13-di-Cl-propen | 10.38 | 10.37 | 0.001 | 75 | 110 | 308.703 | 16.59 | 16.6 | 97 | |
| 92 | 92 2-ClEt-Vi-ether10 | 10.15 | 10.15 | 0.000 | 63 | 43 | 269.170 | 84.33 | 84.3 | 99 | |
| 56 | 56 toluene | 11.24 | 11.23 | 0.002 | 91 | 92 | 889.439 | 18.30 | 18.3 | 99 | |

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

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136N02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 14:08 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:53 2003
Print Time : Wed Apr 23 16:53 2003
Miscleneous :

Sample : f=1 $2809-04
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

4151

| ID | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 | 107 Et methacrylate | 11.38 | 11.36 | 0.002 | 69 | 99 | 156.391 | 15.55 | 15.5 | 100 | |
| 93 | 93 2-Hexanone x5 | 11.50 | 11.48 | 0.002 | 43 | 58 | 280.988 | 83.12 | 83.1 | 97 | |
| 48 | 48 112-tri-Cl-Et | 11.04 | 11.03 | 0.002 | 97 | 83 | 117.643 | 16.50 | 16.5 | 96 | |
| 58 | 58 1,2-di-br-ethane | 11.84 | 11.82 | 0.002 | 107 | 109 | 118.065 | 15.53 | 15.5 | 100 | |
| 51 | 51 di-Br-Cl-methane | 11.58 | 11.57 | 0.002 | 129 | 127 | 159.546 | 16.65 | 16.7 | 99 | |
| 46 | 46 t-13-di-cl-propen | 10.88 | 10.87 | 0.000 | 75 | 110 | 200.386 | 16.71 | 16.7 | 99 | |
| 105 | 105 1-Chlorohexane | 12.65 | 12.64 | 0.000 | 55 | 93 | 312.794 | 21.19 | 21.2 | 97 | ? |
| <<< I2 : ISTD ID = 47 >>> | | | | | | | | | | | |
| 54 | 54 MIBK | 10.54 | 10.52 | 0.001 | 43 | 58 | 91.290 | 17.33 | 17.3 | 95 | |
| 49 | 49 1,3-di-cl-propane | 11.31 | 11.29 | 0.001 | 76 | 78 | 211.139 | 19.37 | 19.4 | 98 | |
| 59 | 59 tetra-Cl-ethene | 12.02 | 12.00 | 0.001 | 166 | 168 | 306.604 | 20.89 | 20.9 | 100 | |
| 60 | 60 chlorobenzene | 12.71 | 12.70 | 0.000 | 112 | 77 | 493.388 | 20.25 | 20.2 | 98 | |
| 61 | 61 1112-tetra-Cl-Et | 12.65 | 12.62 | 0.002 | 131 | 133 | 193.417 | 19.82 | 19.8 | 98 | ? |
| 64 | 64 ethylbenzene | 12.92 | 12.90 | 0.001 | 91 | 106 | 985.977 | 21.00 | 21.0 | 99 | |
| 65 | 65 m/p-Xylenes x2 | 13.11 | 13.10 | 0.001 | 91 | 106 | 1509.182 | 42.28 | 42.3 | 98 | |
| 99 | 99 1-4-di-Cl-butane | 13.47 | 13.46 | 0.001 | 55 | 41 | 190.852 | 17.74 | 17.7 | 99 | |
| 52 | 52 bromoform | 13.23 | 13.22 | 0.000 | 173 | 175 | 89.373 | 17.91 | 17.9 | 97 | |
| 66 | 66 styrene | 13.44 | 13.43 | 0.001 | 104 | 78 | 522.152 | 20.72 | 20.7 | 100 | |
| 67 | 67 o-xylene | 13.51 | 13.50 | 0.001 | 91 | 106 | 703.716 | 20.04 | 20.0 | 97 | ? |
| 68 | 68 1122-Tetra-Cl-Et | 13.51 | 13.51 | 0.000 | 83 | 85 | 112.735 | 17.48 | 17.5 | 96 | ? |
| 110 | 110 t-1,4-dichloro-2 | 13.69 | 13.67 | 0.002 | 89 | 53 | 18.904 | 17.74 | 17.7 | 84 | # |
| 106 | 106 Cl-benzyl | 15.14 | 15.12 | 0.002 | 91 | 126 | 164.582 | 20.33 | 20.3 | 94 | ? |
| <<< I3 : ISTD ID = 62 >>> | | | | | | | | | | | |
| 69 | 69 123-tri-Cl-Pr | 13.65 | 13.64 | 0.000 | 110 | 97 | 27.487 | 16.90 | 16.9 | 93 | |
| 71 | 71 isopropylbenzene | 13.87 | 13.86 | 0.000 | 105 | 120 | 1014.278 | 23.11 | 23.1 | 100 | |
| 72 | 72 bromobenzene | 14.11 | 14.10 | 0.000 | 156 | 158 | 198.075 | 20.56 | 20.6 | 97 | |
| 73 | 73 n-propylbenzene | 14.30 | 14.29 | 0.000 | 120 | 78 | 264.326 | 22.34 | 22.3 | 98 | |
| 74 | 74 2-Cl-Tl 126 1 | 14.39 | 14.37 | 0.001 | 126 | 128 | 158.445 | 20.16 | 20.2 | 100 | |
| 75 | 75 4-Cl-Tl 126 1 | 14.47 | 14.45 | 0.001 | 126 | 128 | 227.632 | 21.19 | 21.2 | 93 | m 4/23/03 |
| 76 | 76 135-tri-Me-Bz | 14.58 | 14.57 | 0.000 | 105 | 120 | 774.035 | 21.84 | 21.8 | 99 | |
| 79 | 79 tert-butylbenzene | 14.85 | 14.84 | 0.000 | 119 | 91 | 831.367 | 22.85 | 22.9 | 98 | |
| 78 | 78 124-tri-Me-Bz | 14.96 | 14.94 | 0.001 | 105 | 120 | 632.606 | 21.00 | 21.0 | 99 | |

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

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

Data Filename: C:\HPCHEM\1\DATA\03G2136\G2136N02.D
Method : C:\HPCHEM\1\METHODS\E524G003.M
Acq. Time : Apr 23 14:08 2003
Method Update: Mon Jan 13 10:38 2003
Quant. Time : Apr 23 16:53 2003
Print Time : Wed Apr 23 16:54 2003
Miscleneous :

Sample : f=1 $2809-04
Inst. : GCMS-G
RF via : Multiple Level Calibration
Operator: Eddie
Multiplr: 1.000000

4152

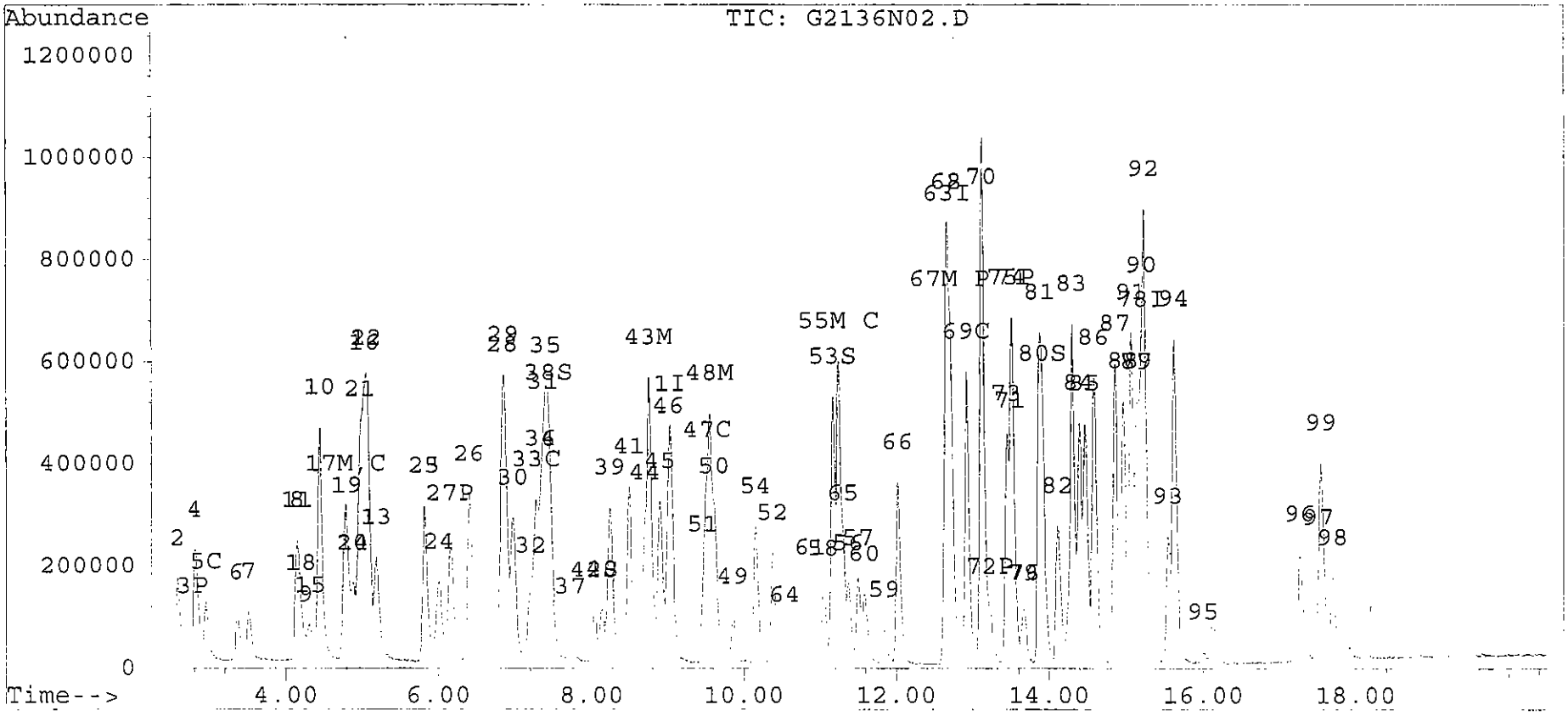
| ID | | Component Name | R.T. | RT0 | DRRT | QIon | Q1 | RF/1000 | C0,ppb | C,ppb | Quality | Note |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 80 | 13-di-Cl-Bz 146 | 15.13 | 15.11 | 0.001 | 146 | 148 | 289.208 | 18.85 | 18.8 | 90 | ? |
| 82 | 82 | 14-di-Cl-Bz 146 | 15.19 | 15.19 | 0.000 | 146 | 148 | 431.864 | 19.36 | 19.4 | 93 | |
| 81 | 81 | sec-butylbenzene | 15.06 | 15.04 | 0.001 | 105 | 134 | 1249.433 | 23.49 | 23.5 | 99 | |
| 77 | 77 | 4-iso-Pr-toluene | 15.23 | 15.22 | 0.000 | 119 | 134 | 857.510 | 22.34 | 22.3 | 100 | |
| 84 | 84 | 12-di-Cl-benzene | 15.54 | 15.52 | 0.001 | 146 | 148 | 274.501 | 18.54 | 18.5 | 97 | |
| 85 | 85 | n-butylbenzene | 15.62 | 15.60 | 0.001 | 91 | 134 | 879.458 | 21.87 | 21.9 | 99 | |
| 86 | 86 | 12-diBr-3-Cl-Pra | 16.00 | 15.97 | 0.002 | 157 | 155 | 18.550 | 17.09 | 17.1 | 96 | |
| 87 | 87 | 124-tri-Cl-Bz | 17.27 | 17.24 | 0.002 | 180 | 182 | 208.365 | 17.93 | 17.9 | 97 | |
| 88 | 88 | naphthalene | 17.50 | 17.49 | 0.000 | 128 | 129 | 153.913 | 17.33 | 17.3 | 100 | |
| 90 | 90 | 123-tri-Cl-Bz | 17.69 | 17.68 | 0.000 | 180 | 182 | 155.963 | 19.33 | 19.3 | 98 | |
| 89 | 89 | hx-Cl-butadiene | 17.54 | 17.52 | 0.000 | 225 | 260 | 204.257 | 23.23 | 23.2 | 96 | |

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

Data File : C:\HPCHEM\1\DATA\03G2136\G2136N02.D  Vial: 16
Acq On : 23 Apr 03 2:08 pm  Operator: Eddie
Sample : f=1 $2809-04  Inst : GCMS-G
Misc :  Multiplr: 1.00
Quant Time: Apr 23 16:53 2003  Quant Results File: quant.res

4153

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration



FORM-4A

Applied P & Ch Laboratory

# Method Blank Summary for Method 524.2

| | | | | | |
|---|---|---|---|---|---|
| Client Name: | GEOFON, Inc. | Contract No: | | Lab Code: | APCL |
| Case No: | | SAS No: | | Service ID: | 32809 |
| Project ID: | JPL | Project No: | 04-4428.10 | Analysis Date: | 04/23/03 |
| | | Sample Matrix: | Water | Analysis Time: | 15:34 |
| Sample ID: | **03G2136-MB-01** | Batch No: | 03G2136 | Instrument ID: | GC/MS: G |
| Lab Sample ID: | 03G2136-MB-01 | Data File Name: | G2136K01 | GC Column: | DB-VEX |
| | | Heated Purge: (Y/N) | N | Column ID: | 0.45 mm |

**This Method Blank applies to the following samples and QC samples:**

| # | Client Sample No | Lab Sample ID | Sample Type | Data Filename | Analysis Date | Analysis Time |
|---|---|---|---|---|---|---|
| 1 | 03G2136-LCS-01 | 03G2136-LCS-01 | Lab Control Spike | G2136L01 | 04/23/03 | 11:44 |
| 2 | MW-4-2MS | 03-2809-4MS | Matrix Spike | G2136M02 | 04/23/03 | 13:39 |
| 3 | MW-4-2MSD | 03-2809-4MSD | Matrix Spike Duplicate | G2136N02 | 04/23/03 | 14:08 |
| 4 | DUPE-1-2Q03 | 03-2809-1 | Field Sample | 2809-01 | 04/23/03 | 19:25 |
| 5 | EB-2-4/21/03 | 03-2809-2 | Field Sample | 2809-02 | 04/23/03 | 19:54 |
| 6 | MW-4-1 | 03-2809-3 | Field Sample | 2809-03 | 04/23/03 | 20:22 |
| 7 | MW-4-2 | 03-2809-4 | Field Sample | 2809-04 | 04/23/03 | 20:50 |
| 8 | MW-4-3 | 03-2809-5 | Field Sample | 2809-05 | 04/23/03 | 21:19 |
| 9 | MW-4-4 | 03-2809-6 | Field Sample | 2809-06 | 04/23/03 | 21:48 |
| 10 | MW-4-5 | 03-2809-7 | Field Sample | 2809-07 | 04/23/03 | 22:16 |
| 11 | SOURCE-2Q03 | 03-2809-8 | Field Sample | 2809-08 | 04/23/03 | 22:44 |
| 12 | TB-2-4/21/03 | 03-2809-9 | Field Sample | 2809-09 | 04/23/03 | 23:13 |
| 13 | | | | | | |
| 14 | | | | | | |
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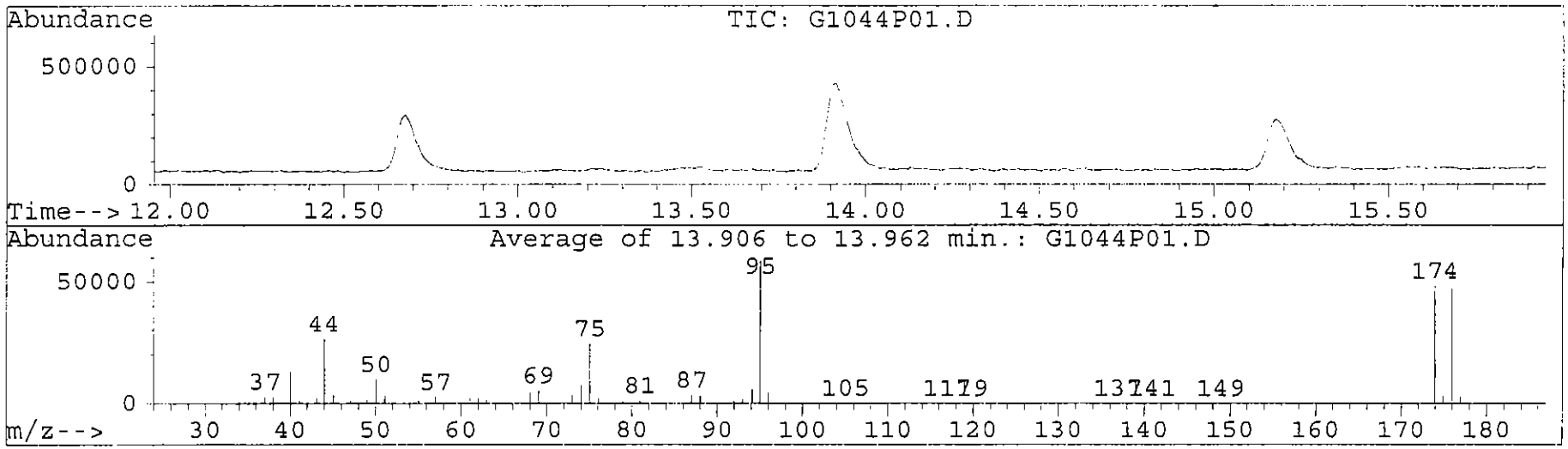
| 24 | | | | | | |
| 25 | | | | | | |

BFB

Data File : C:\HPCHEM\1\DATA\03G1044\G1044P01.D
Acq On : 10 Jan 03 1:51 pm
Sample : ##03g1044, w
Misc :

Vial: 16
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2




Peak Apex is scan: 1479

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.9 | 9968 | PASS |
| 75 | 95 | 30 | 60 | 41.9 | 24658 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 58860 | PASS |
| 96 | 95 | 5 | 9 | 7.2 | 4263 | PASS |
| 173 | 174 | 0 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 100 | 82.4 | 48487 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 3468 | PASS |
| 176 | 174 | 95 | 101 | 96.8 | 46953 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 2949 | PASS |

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 03-2809

Lab File ID: G1044 P01 BFB Injection Date: 1/10/03

Instrument ID: GCMS-G BFB Injection Time: 1351

GC Column: VOCOL ID: 0.32 (mm) Heated Purge: (Y/N) N

| m/e | ION ABUNDANCE CRITERIA | %RELATIVE ABUNDANCE |
|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.9 |
| 75 | 30.0 - 60.0% of mass 95 | 41.9 |
| 95 | Base peak, 100% relative abundance | 100.0 |
| 96 | 5.0 - 9.0% of mass 95 | 7.2 |
| 173 | Less than 2.0% of mass 174 | 0.0 ( 0.0 )1 |
| 174 | 50.0 - 100.0% of mass 95 | 82.4 |
| 175 | 5.0 - 9.0% of mass 174 | 5.9 ( 7.2 )1 |
| 176 | 95.0 - 101.0% of mass 174 | 79.8 ( 96.8 )1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.0 ( 6.3 )2 |

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

| | EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 01 | VSTD0003 | 003-A0003 | 003-A0003.D | 01/10/03 | 1427 |
| 02 | VSTD002 | 003-002 | 003-0002.D | 01/10/03 | 1526 |
| 03 | VSTD010 | 003-0010 | 003-0010.D | 01/10/03 | 1555 |
| 04 | VSTD020 | 003-0020 | 003-0020.D | 01/10/03 | 1624 |
| 05 | VSTD040 | 003-0040 | 003-0040.D | 01/10/03 | 1654 |
| 06 | VSTD080 | 003-0080 | 003-0080.D | 01/10/03 | 1723 |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
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| 22 | | | | | |
| | | | | | |

# INITIAL CALIBRATION SUMMARY

| | |
|---|---|
| Method File | E524G003 |
| Last Calibration Update | Mon Jan 13 09:57:17 2003 |

| | | | |
|---|---|---|---|
| Level 1 File Name | 3-0003.D | Level 1 ID | 0.3 |
| Level 2 File Name | 3-002.D | Level 2 ID | 2 |
| Level 3 File Name | 3-010.D | Level 3 ID | 10 |
| Level 4 File Name | 3-020.D | Level 4 ID | 20 |
| Level 5 File Name | 3-040.D | Level 5 ID | 40 |
| Level 6 File Name | 3-080.D | Level 6 ID | 80 |
| Level 7 File Name | 3-020.D | Level 7 ID | cc |

| Compound Name | Level 1 Response | Level 2 Response | Level 3 Response | Level 4 Response | Level 5 Response | Level 6 Response | Level 7 Response | Coeff X^0 | Coeff X^1 / ave RF | Coeff X^2 | R^2 / RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Fluorobenzene I1 1 | 765834 | 768596 | 755237 | 739905 | 721219 | 703721 | -1 | ------ | ------ | ------ | ------ |
| 3 di-Cl-di-F-methane 85 87 | 9202 | 44272 | 235359 | 427426 | 820884 | 1551879 | -1 | 0.0191 | 0.2750 | 0.0000 | 0.9996 |
| 4 Chloromethane 50 52 | 4751 | 30836 | 163038 | 374044 | 803175 | 1514667 | -1 | 0.0000 | 0.2433 | 0.0000 | 0.1388 |
| 9 F114 85 135 | 8035 | 46094 | 252154 | 462947 | 909235 | 1714061 | -1 | 0.0000 | 0.3193 | 0.0000 | 0.0593 |
| 5 vinyl chloride 62 64 | 4990 | 35625 | 183259 | 344227 | 682967 | 1258237 | -1 | 0.0000 | 0.2307 | 0.0000 | 0.0396 |
| 6 bromomethane 94 96 | 5861 | 43488 | 181174 | 281305 | 570773 | 1116110 | -1 | 0.0126 | 0.1961 | 0.0000 | 0.9990 |
| 7 Chloroethane 64 66 | 3629 | 27223 | 133510 | 250119 | 505034 | 952606 | -1 | 0.0000 | 0.1709 | 0.0000 | 0.0425 |
| 8 tri-Cl-F-methane 101 103 | 7295 | 56379 | 326202 | 612174 | 1192828 | 2238212 | -1 | 0.0000 | 0.3902 | 0.0000 | 0.1070 |
| 111 isopropyl alcohol x10 | 1236 | 8181 | 34708 | 55395 | 131600 | 244204 | -1 | 0.0000 | 0.0045 | 0.0000 | 0.1257 |
| 100 ethyl ether x5 | 20361 | 108089 | 509174 | 980952 | 1975186 | 3742221 | -1 | 0.0000 | 0.1425 | 0.0000 | 0.1211 |
| 102 Acrolein x10 | 3234 | 15074 | 75489 | 215710 | 340415 | 601157 | -1 | 0.0000 | 0.0114 | 0.0000 | 0.1719 |
| 119 methyl acetate | 4062 | 15788 | 82815 | 187169 | -1 | 696519 | -1 | -0.0033 | 0.1242 | 0.0000 | 0.9997 |
| 104 Carbon disulfide | 21121 | 133095 | 626926 | 1173322 | 2357195 | 4372134 | -1 | 0.0000 | 0.8336 | 0.0000 | 0.0625 |
| 103 Acrylonitrilex10 | 4569 | 37044 | 178667 | 348877 | 701313 | 1341637 | -1 | 0.0000 | 0.0239 | 0.0000 | 0.0128 |
| 95 Acetone x10 | 989 | 41993 | 128289 | 268909 | 465240 | 912905 | -1 | 0.0227 | 0.0159 | 0.0000 | 0.9991 |
| 108 F-113 | 5327 | 41068 | 259145 | 480691 | 925581 | 1749444 | -1 | 0.0000 | 0.2998 | 0.0000 | 0.1395 |
| 13 11-dichloroethene 61 96 | 8641 | 61263 | 309126 | 575822 | 1147783 | 2146767 | -1 | 0.0000 | 0.3920 | 0.0000 | 0.0313 |
| 101 Acetonnitrilex10 | 2063 | 1527 | 53569 | 97490 | 189257 | 353648 | -1 | 0.0013 | 0.0063 | 0.0000 | 0.9985 |
| 109 Iodomethane | 3901 | 55824 | 290992 | 473953 | 954242 | 1666625 | -1 | 0.0467 | 0.2964 | 0.0000 | 0.9961 |
| 113 Tert butyl alcohol x10 | 2556 | 18436 | 60720 | 133851 | 240444 | 485913 | -1 | 0.0016 | 0.0086 | 0.0000 | 0.9991 |
| 18 methylene chloride 49 84 | 28023 | 111315 | 375753 | 602942 | 1052979 | -1 | -1 | 0.0818 | 0.3520 | 0.0000 | 0.9932 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 112 Allyl chloride | 11807 | 73643 | 318868 | 616004 | 1168854 | 2056270 | -1 | 0.0000 | 0.4336 | 0.0000 | 0.1239 |
| 200 Nitro methane x10 | 10089 | 68361 | 334791 | 633827 | 1264975 | 2385881 | -1 | 0.0000 | 0.0436 | 0.0000 | 0.0192 |
| 10 t-Bu-Me-ether 73 57 | 19344 | 73627 | 300489 | 618307 | 1211982 | 2415631 | -1 | -0.0086 | 0.4281 | 0.0000 | 0.9997 |
| 19 t-12-di-Cl-ethene 96 61 | 7446 | 45222 | 225516 | 438020 | 867973 | 1629626 | -1 | 0.0000 | 0.3005 | 0.0000 | 0.0405 |
| 98 Vinyl acetate x5 | 35861 | 233914 | 1080092 | 1161950 | 4543111 | 6984572 | -1 | 0.0000 | 0.2704 | 0.0000 | 0.2248 |
| 21 11-dichloroethane 63 83 | 11490 | 83925 | 403704 | 780313 | 1539657 | 2853804 | -1 | 0.0000 | 0.5248 | 0.0000 | 0.0336 |
| 91 2-butanone MEKx10 | 23960 | 146366 | 680153 | 1296553 | 2708302 | 5159574 | -1 | 0.0000 | 0.0938 | 0.0000 | 0.0620 |
| 115 Di isoprop ether | 2475 | 206054 | 993426 | 1953682 | 3898884 | 7414434 | -1 | 0.0032 | 1.3231 | 0.0000 | 0.9998 |
| 22 c-12-di-Cl-ethene 96 61 | 6875 | 46067 | 219592 | 430734 | 857123 | 1613152 | -1 | 0.0000 | 0.2941 | 0.0000 | 0.0183 |
| 23 22-Dichloropropane 77 97 | 13155 | 71811 | 330092 | 619878 | 1207116 | 2269373 | -1 | 0.0000 | 0.4529 | 0.0000 | 0.1383 |
| 24 Br-Cl-methane 128 130 | 956 | 15248 | 78733 | 153832 | 312235 | 593248 | -1 | -0.0008 | 0.1060 | 0.0000 | 0.9998 |
| 25 chloroform 83 85 | 14881 | 81604 | 372529 | 722194 | 1453363 | 2739754 | -1 | 0.0000 | 0.5251 | 0.0000 | 0.1186 |
| 201 Ethyl acetate x2 | -1 | 44403 | 206670 | 296783 | 873148 | 1526995 | -1 | 0.0000 | 0.1337 | 0.0000 | 0.1475 |
| 116 ETBE | 20917 | 124488 | 594002 | 1154600 | 2264664 | 4329036 | -1 | 0.0000 | 0.8068 | 0.0000 | 0.0650 |
| 117 Iso-butyl alcohol X10 | 5582 | 44403 | 221032 | 297076 | 880890 | 1546333 | -1 | 0.0000 | 0.0268 | 0.0000 | 0.1460 |
| 26 tetrahydrofuranx5 | 1945 | 8407 | 36840 | 75144 | 146600 | 287877 | -1 | 0.0000 | 0.0102 | 0.0000 | 0.0418 |
| 27 Di-Br-F-Methane (S1) 111 1 | 13867 | 59189 | 265788 | 517816 | 1038870 | 1963588 | -1 | 0.0096 | 0.3493 | 0.0000 | 0.9997 |
| 34 111-tri-Cl-ethane 97 99 | 12459 | 65859 | 315664 | 604949 | 1193974 | 2324189 | -1 | 0.0000 | 0.4374 | 0.0000 | 0.1185 |
| 30 12-dichloroethane 64 62 | 549 | 31555 | 154021 | 298086 | 600265 | 1155412 | -1 | -0.0025 | 0.2060 | 0.0000 | 0.9999 |
| 35 11-Di-Cl-propene 75 110 | 9488 | 58117 | 286388 | 549558 | 1091787 | 2099663 | -1 | 0.0000 | 0.3822 | 0.0000 | 0.0404 |
| 29 1,2-di-Cl-ethane-d4 [Surr] 10 | -1 | 26643 | 124715 | 242470 | 475685 | 894560 | -1 | 0.0000 | 0.1652 | 0.0000 | 0.0314 |
| 36 benzene 78 52 | 19613 | 138554 | 661631 | 1277049 | 2547937 | 4710056 | -1 | 0.0000 | 0.8690 | 0.0000 | 0.0263 |
| 37 CCl4 117 119 | 7832 | 47773 | 267339 | 493900 | 981263 | 1852391 | -1 | 0.0000 | 0.3348 | 0.0000 | 0.0432 |
| 97 thiophene | 10129 | 70133 | 323713 | 623624 | 1239916 | 2337761 | -1 | 0.0000 | 0.4320 | 0.0000 | 0.0339 |
| 118 TAME | 4367 | 97622 | 406861 | 792558 | 1521011 | 3045504 | -1 | 0.0000 | 0.5555 | 0.0000 | 0.0806 |
| 39 12-di-Cl-propane 63 76 | 5869 | 38931 | 190695 | 376101 | 741594 | 1426638 | -1 | 0.0000 | 0.2543 | 0.0000 | 0.0066 |
| 40 trichloroethene 130 132 | 5805 | 41064 | 207771 | 403682 | 804090 | 1515012 | -1 | 0.0000 | 0.2693 | 0.0000 | 0.0339 |
| 96 Me-methacrylate | 1472 | 19691 | 65318 | 123371 | 250724 | 519513 | -1 | -0.0068 | 0.0920 | 0.0000 | 0.9983 |
| 42 Br-di-Cl-methane 83 85 | 10138 | 55994 | 256691 | 484084 | 955698 | 1823535 | -1 | 0.0000 | 0.3546 | 0.0000 | 0.1265 |
| 41 dibromomethane 174 172 | 2292 | 17911 | 96884 | 194764 | 383350 | 714384 | -1 | 0.0000 | 0.1227 | 0.0000 | 0.1029 |

| Compound Name | Level 1 Response | Level 2 Response | Level 3 Response | Level 4 Response | Level 5 Response | Level 6 Response | Level 7 Response | Coeff X^0 | Coeff X^1 / ave RF | Coeff X^2 | R^2 / RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 c-13-di-Cl-propene 75 110 | 7832 | 48533 | 229072 | 445153 | 890451 | 1727952 | -1 | ------ | ------ | ------ | ------ |
| 55 toluene-d8(S2) 100 99 | -1 | 78299 | 377922 | 725871 | 1455135 | 2774904 | -1 | 0.0000 | 0.4995 | 0.0000 | 0.0157 |
| 92 2-ClEt-Vi-ether10 | 10352 | 80060 | 410701 | 820365 | 1655105 | 3234891 | -1 | 0.0000 | 0.0536 | 0.0000 | 0.0868 |
| 56 toluene 91 92 | 21278 | 126101 | 601438 | 1149709 | 2291459 | 4425814 | -1 | 0.0000 | 0.8167 | 0.0000 | 0.0680 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 107 Et methacrylate | -1 | 35707 | 132945 | 165590 | 512644 | 828103 | -1 | 0.0000 | 0.1690 | 0.0000 | 0.2625 |
| 93 2-Hexanone x5 | 10744 | 47646 | 218029 | 368204 | 831419 | 1601350 | -1 | 0.0000 | 0.0568 | 0.0000 | 0.0778 |
| 48 112-tri-Cl-Et 97 83 | 5203 | 21908 | 90597 | 172036 | 347876 | 664699 | -1 | 0.0031 | 0.1179 | 0.0000 | 0.9998 |
| 58 1,2-di-br-ethane 107 109 | 1144 | 19207 | 94012 | 191133 | 371448 | 723238 | -1 | -0.0016 | 0.1288 | 0.0000 | 1.0000 |
| 51 di-Br-Cl-methane 129 127 | 2693 | 27173 | 125300 | 243477 | 489254 | 967601 | -1 | 0.0000 | 0.1610 | 0.0000 | 0.1359 |
| 46 t-13-di-cl-propene 75 110 | 4584 | 30276 | 155530 | 301394 | 594704 | 1109294 | -1 | 0.0000 | 0.2015 | 0.0000 | 0.0211 |
| 105 1-Chlorohexane | 12961 | 43864 | 205359 | 374248 | 719249 | 1336615 | -1 | 0.0247 | 0.2364 | 0.0000 | 0.9994 |
| 47 Cl-benzene-d5, I2 | 226795 | 229493 | 225971 | 224981 | 233528 | 241678 | -1 | 0.0000 | 1.0000 | 0.0000 | 0.0000 |
| 54 MIBK | 1407 | 13676 | 74160 | 143757 | 303184 | 587112 | -1 | 0.0184 | 0.3053 | 0.0000 | 0.9988 |
| 49 1,3-di-cl-propane 76 78 | 4247 | 30516 | 157929 | 310529 | 604220 | 1155285 | -1 | 0.0000 | 0.6537 | 0.0000 | 0.0595 |
| 59 tetra-Cl-ethene 166 168 | 5221 | 40927 | 216892 | 417298 | 825820 | 1643233 | -1 | 0.0000 | 0.8800 | 0.0000 | 0.0760 |

| Compound Name | Level 1 Response | Level 2 Response | Level 3 Response | Level 4 Response | Level 5 Response | Level 6 Response | Level 7 Response | Coeff X^0 | Coeff X^1 / ave RF | Coeff X^2 | R^2 / RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 chlorobenzene 112 77 | 9971 | 71440 | 352480 | 668143 | 1330525 | 2470738 | -1 | 0.0000 | ------ | ------ | ------ |
| 61 1112-tetra-Cl-Et 131 133 | 3219 | 28400 | 138607 | 283855 | 562377 | 1108773 | -1 | 0.0000 | 0.5853 | 0.0000 | 0.0996 |
| 64 ethylbenzene 91 106 | 21430 | 140640 | 637777 | 1239073 | 2446417 | 4804958 | -1 | 0.0000 | 2.8157 | 0.0000 | 0.0906 |
| 65 m/p-Xylenes x2 | 31419 | 213036 | 1000145 | 1911139 | 3754507 | 7222435 | -1 | 0.0000 | 2.1406 | 0.0000 | 0.0830 |
| 99 1-4-di-Cl-butane | 5503 | 32572 | 146606 | 276558 | 532573 | 1001628 | -1 | 0.0000 | 0.6450 | 0.0000 | 0.1606 |
| 52 bromoform 173 175 | 806 | 13982 | 71698 | 143599 | 281887 | 544898 | -1 | 0.0303 | 0.2823 | 0.0000 | 0.9980 |
| 66 styrene 104 78 | 10850 | 75317 | 352645 | 677932 | 1346269 | 2563056 | -1 | 0.0000 | 1.5116 | 0.0000 | 0.0758 |
| 67 o-xylene 91 106 | 16715 | 110603 | 485194 | 915641 | 1764503 | 3287299 | -1 | 0.0000 | 2.1063 | 0.0000 | 0.1398 |
| 68 1122-Tetra-Cl-Et 83 85 | 2658 | 21540 | 91096 | 173152 | 326262 | 625224 | -1 | 0.0000 | 0.3868 | 0.0000 | 0.1294 |
| 110 t-1,4-dichloro-2-butene | 1095 | 7032 | 17679 | 27009 | 54200 | 103110 | -1 | 0.0235 | 0.0507 | 0.0000 | 0.9991 |
| 106 Cl-benzyl | 6053 | 24517 | 121704 | 238713 | 457227 | 866531 | -1 | 0.0784 | 0.4469 | 0.0000 | 0.9969 |
| 62 1,4-DCB-d4 150 152 I3 | 197143 | 197148 | 188831 | 184633 | 176207 | 164785 | -1 | 0.0000 | 1.0000 | 0.0000 | 0.0000 |
| 69 123-tri-Cl-Pr 110 97 | 253 | 4401 | 21971 | 45443 | 89331 | 172722 | -1 | 0.0000 | 0.1218 | 0.0000 | 0.0642 |
| 70 4-Br-1-F-Bz (S3) 174 95 | -1 | 36886 | 165570 | 327081 | 627145 | 1159540 | -1 | 0.0000 | 0.8935 | 0.0000 | 0.0269 |
| 71 isopropylbenzene 105 120 | 16442 | 135584 | 641793 | 1217921 | 2372165 | 4528346 | -1 | 0.0000 | 3.2861 | 0.0000 | 0.0771 |
| 72 bromobenzene 156 158 | 3119 | 27613 | 143515 | 285095 | 554412 | 1030644 | -1 | 0.0000 | 0.7214 | 0.0000 | 0.1387 |
| 73 n-propylbenzene 120 78 | 4297 | 36443 | 173970 | 335858 | 643879 | 1212584 | -1 | 0.0000 | 0.8858 | 0.0000 | 0.0883 |
| 74 2-Cl-Tl 126 128 | 3821 | 23738 | 106793 | 201349 | 427470 | 745993 | -1 | 0.0000 | 0.5885 | 0.0000 | 0.0623 |
| 75 4-Cl-Tl 126 128 | 4042 | 32882 | 163598 | 289530 | 594245 | 1075809 | -1 | 0.0000 | 0.8045 | 0.0000 | 0.0813 |
| 76 135-tri-Me-Bz 105 120 | 14680 | 107323 | 509842 | 969387 | 1885346 | 3580223 | -1 | 0.0000 | 2.6533 | 0.0000 | 0.0343 |
| 79 tert-butylbenzene 119 91 | 13115 | 113211 | 533176 | 1020985 | 1994231 | 3739615 | -1 | 0.0000 | 2.7239 | 0.0000 | 0.0919 |
| 78 124-tri-Me-Bz 105 120 | 11184 | 96787 | 424953 | 847796 | 1639260 | 3054447 | -1 | 0.0000 | 2.2558 | 0.0000 | 0.0848 |
| 80 13-di-Cl-Bz 146 148 | 5522 | 45648 | 238597 | 400250 | 844281 | 1658291 | -1 | 0.0000 | 1.1491 | 0.0000 | 0.1087 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 82 14-di-Cl-Bz 146 148 | 9029 | 69544 | 305231 | 644124 | 1193857 | 2207723 | -1 | 0.0000 | 1.6699 | 0.0000 | 0.0524 |
| 81 sec-butylbenzene 105 134 | 19695 | 163551 | 797663 | 1465228 | 2859247 | 5499576 | -1 | 0.0000 | 3.9831 | 0.0000 | 0.0835 |
| 77 4-iso-Pr-toluene 119 134 | 14306 | 119820 | 572630 | 1085210 | 2064029 | 3804782 | -1 | 0.0000 | 2.8739 | 0.0000 | 0.0804 |
| 84 12-di-Cl-benzene 146 148 | 5444 | 45355 | 219614 | 410082 | 812246 | 1524040 | -1 | 0.0000 | 1.1088 | 0.0000 | 0.0849 |
| 85 n-butylbenzene 91 134 | 17944 | 117913 | 579573 | 1096665 | 2099124 | 3991637 | -1 | 0.0000 | 3.0116 | 0.0000 | 0.0128 |
| 86 12-diBr-3-Cl-Pra 157 155 | -1 | 2498 | 14611 | 31395 | 62914 | 120318 | -1 | 0.0000 | 0.0813 | 0.0000 | 0.1395 |
| 87 124-tri-Cl-Bz 180 182 | 3158 | 29532 | 158333 | 322231 | 604462 | 1187497 | -1 | -0.0539 | 0.9002 | 0.0000 | 0.9995 |
| 88 naphthalene 128 129 | 4753 | 21798 | 116373 | 245906 | 459400 | 922945 | -1 | 0.0000 | 0.6651 | 0.0000 | 0.1268 |
| 90 123-tri-Cl-Bz 180 182 | 2940 | 22060 | 121207 | 239739 | 448256 | 845940 | -1 | 0.0000 | 0.6042 | 0.0000 | 0.1029 |
| 89 hx-Cl-butadiene 225 260 | 2553 | 24644 | 130257 | 244690 | 466707 | 859594 | -1 | 0.0135 | 0.6525 | 0.0000 | 0.9999 |

# Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

| | | | Compound | 0.3 | 2 | 10 | 20 | 40 | 80 | Avg | %RSD | r2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | 1 | Fluorobenzene I1 | ----------ISTD---------- | | | | | | | | |
| 2) | | 3 | di-Cl-di-F-metha | 0.401 | 0.288 | 0.312 | 0.289 | 0.285 | 0.276 | 0.308 | 15.17 | 1.000 |
| 3) | P | 4 | Chloromethane | | 0.201 | 0.216 | 0.253 | 0.278 | 0.269 | 0.243 | 13.88 | |
| 4) | | 9 | F114 85 135 | 0.350 | 0.300 | 0.334 | 0.313 | 0.315 | 0.304 | 0.319 | 5.93 | |
| 5) | C | 5 | vinyl chloride | 0.217 | 0.232 | 0.243 | 0.233 | 0.237 | 0.223 | 0.231 | 3.96 | |
| 6) | | 6 | bromomethane | 0.255 | 0.283 | 0.240 | 0.190 | 0.198 | 0.198 | 0.227 | 16.60 | 0.999 |
| 7) | | 7 | Chloroethane | 0.158 | 0.177 | 0.177 | 0.169 | 0.175 | 0.169 | 0.171 | 4.25 | |
| 8) | | 8 | tri-Cl-F-methane | 0.318 | 0.367 | 0.432 | 0.414 | 0.413 | 0.398 | 0.390 | 10.70 | |
| 9) | | 111 | isopropyl alcoh | | 0.005 | 0.005 | 0.004 | 0.005 | 0.004 | 0.005# | 12.57 | |
| 10) | | 100 | ethyl ether x5 | 0.177 | 0.141 | 0.135 | 0.133 | 0.137 | 0.133 | 0.143 | 12.11 | |
| 11) | | 102 | Acrolein x10 | | 0.010 | 0.010 | 0.015 | 0.012 | 0.011 | 0.011# | 17.19 | |
| 12) | | 119 | methyl acetate | 0.177 | 0.103 | 0.110 | 0.126 | | 0.124 | 0.128 | 22.73 | 1.000 |
| 13) | | 104 | Carbon disulfid | 0.919 | 0.866 | 0.830 | 0.793 | 0.817 | 0.777 | 0.834 | 6.25 | |
| 14) | | 103 | Acrylonitrilex1 | | 0.024 | 0.024 | 0.024 | 0.024 | 0.024 | 0.024# | 1.28 | |
| 15) | | 95 | Acetone x10 | | 0.027 | 0.017 | 0.018 | 0.016 | 0.016 | 0.019# | 25.00 | 0.999 |
| 16) | | 108 | F-113 | 0.232 | 0.267 | 0.343 | 0.325 | 0.321 | 0.311 | 0.300 | 13.95 | |
| 17) | M,C | 13 | 11-dichloroethen | 0.376 | 0.399 | 0.409 | 0.389 | 0.398 | 0.381 | 0.392 | 3.13 | |
| 18) | | 101 | Acetonnitrilex1 | 0.009 | 0.001 | 0.007 | 0.007 | 0.007 | 0.006 | 0.006# | 44.01 | 0.998 |
| 19) | | 109 | Iodomethane | 0.170 | 0.363 | 0.385 | 0.320 | 0.331 | 0.296 | 0.311 | 24.45 | 0.996 |
| 20) | | 113 | Tert butyl alco | | 0.012 | 0.008 | 0.009 | 0.008 | 0.009 | 0.009# | 17.38 | 0.999 |
| 21) | | 18 | methylene chlori | 1.220 | 0.724 | 0.498 | 0.407 | 0.365 | | 0.643 | 54.62 | 0.993 |
| 22) | | 112 | Allyl chloride | 0.514 | 0.479 | 0.422 | 0.416 | 0.405 | 0.365 | 0.434 | 12.39 | |
| 23) | | 200 | Nitro methane x | 0.044 | 0.044 | 0.044 | 0.043 | 0.044 | 0.042 | 0.044# | 1.92 | |
| 24) | | 10 | t-Bu-Me-ether | 0.842 | 0.479 | 0.398 | 0.418 | 0.420 | 0.429 | 0.498 | 34.33 | 1.000 |
| 25) | | 19 | t-12-di-Cl-ethen | 0.324 | 0.294 | 0.299 | 0.296 | 0.301 | 0.289 | 0.301 | 4.05 | |
| 26) | | 98 | Vinyl acetate x5 | 0.312 | 0.304 | 0.286 | 0.157 | 0.315 | 0.248 | 0.270 | 22.48 | |
| 27) | P | 21 | 11-dichloroethan | 0.500 | 0.546 | 0.535 | 0.527 | 0.534 | 0.507 | 0.525 | 3.36 | |
| 28) | | 91 | 2-butanone MEKx1 | 0.104 | 0.095 | 0.090 | 0.088 | 0.094 | 0.092 | 0.094 | 6.20 | |

(#) = Out of Range

# Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

| | | Compound | 0.3 | 2 | 10 | 20 | 40 | 80 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|
| 29) | | 115 Di isoprop ethe | 0.108 | 1.340 | 1.315 | 1.320 | 1.351 | 1.317 | 1.125 | 44.32 |
| 30) | | 22 c-12-di-Cl-ethen | 0.299 | 0.300 | 0.291 | 0.291 | 0.297 | 0.287 | 0.294 | 1.83 |
| 31) | | 23 22-Dichloropropa | 0.573 | 0.467 | 0.437 | 0.419 | 0.418 | 0.403 | 0.453 | 13.83 |
| 32) | | 24 Br-Cl-methane | 0.042 | 0.099 | 0.104 | 0.104 | 0.108 | 0.105 | 0.094 | 27.43 |
| 33) | C | 25 chloroform | 0.648 | 0.531 | 0.493 | 0.488 | 0.504 | 0.487 | 0.525 | 11.86 |
| 34) | | 201 Ethyl acetate x | | 0.144 | 0.137 | 0.100 | 0.151 | 0.136 | 0.134 | 14.75 |
| 35) | | 116 ETBE | 0.910 | 0.810 | 0.787 | 0.780 | 0.785 | 0.769 | 0.807 | 6.50 |
| 36) | | 117 Iso-butyl alcoh | 0.024 | 0.029 | 0.029 | 0.020 | 0.031 | 0.027 | 0.027# | 14.60 |
| 37) | | 26 tetrahydrofuranx | | 0.011 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010# | 4.18 |
| 38) | S | 27 Di-Br-F-Methane | 0.604 | 0.385 | 0.352 | 0.350 | 0.360 | 0.349 | 0.400 | 25.18 |
| 39) | | 34 111-tri-Cl-ethan | 0.542 | 0.428 | 0.418 | 0.409 | 0.414 | 0.413 | 0.437 | 11.85 |
| 40) | | 30 12-dichloroethan | 0.024 | 0.205 | 0.204 | 0.201 | 0.208 | 0.205 | 0.175 | 42.30 |
| 41) | | 35 11-Di-Cl-propene | 0.413 | 0.378 | 0.379 | 0.371 | 0.378 | 0.373 | 0.382 | 4.04 |
| 42) | S | 29 1,2-di-Cl-ethane | | 0.173 | 0.165 | 0.164 | 0.165 | 0.159 | 0.165 | 3.14 |
| 43) | M | 36 benzene | 0.854 | 0.901 | 0.876 | 0.863 | 0.883 | 0.837 | 0.869 | 2.63 |
| 44) | | 37 CCl4 | 0.341 | 0.311 | 0.354 | 0.334 | 0.340 | 0.329 | 0.335 | 4.32 |
| 45) | | 97 thiophene | 0.441 | 0.456 | 0.429 | 0.421 | 0.430 | 0.415 | 0.432 | 3.39 |
| 46) | | 118 TAME | | 0.635 | 0.539 | 0.536 | 0.527 | 0.541 | 0.556 | 8.06 |
| 47) | C | 39 12-di-Cl-propane | 0.255 | 0.253 | 0.252 | 0.254 | 0.257 | 0.253 | 0.254 | 0.66 |
| 48) | M | 40 trichloroethene | 0.253 | 0.267 | 0.275 | 0.273 | 0.279 | 0.269 | 0.269 | 3.39 |
| 49) | | 96 Me-methacrylate | | 0.128 | 0.086 | 0.083 | 0.087 | 0.092 | 0.095 | 19.43 |
| 50) | | 42 Br-di-Cl-methane | 0.441 | 0.364 | 0.340 | 0.327 | 0.331 | 0.324 | 0.355 | 12.65 |
| 51) | | 41 dibromomethane | 0.100 | 0.117 | 0.128 | 0.132 | 0.133 | 0.127 | 0.123 | 10.29 |
| 52) | | 45 c-13-di-Cl-prope | 0.341 | 0.316 | 0.303 | 0.301 | 0.309 | 0.307 | 0.313 | 4.71 |
| 53) | S | 55 toluene-d8(S2) | | 0.509 | 0.500 | 0.491 | 0.504 | 0.493 | 0.500 | 1.57 |
| 54) | | 92 2-ClEt-Vi-ether1 | 0.045 | 0.052 | 0.054 | 0.055 | 0.057 | 0.057 | 0.054 | 8.68 |
| 55) | M C | 56 toluene | 0.926 | 0.820 | 0.796 | 0.777 | 0.794 | 0.786 | 0.817 | 6.80 |
| 56) | | 107 Et methacrylate | | 0.232 | 0.176 | 0.112 | 0.178 | 0.147 | 0.169 | 26.25 |
| 57) | | 93 2-Hexanone x5 | | 0.062 | 0.058 | 0.050 | 0.058 | 0.057 | 0.057 | 7.78 |

(#) = Out of Range

# Response Factor Report GCMS-G

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

| | | | Compound | 0.3 | 2 | 10 | 20 | 40 | 80 | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 58) | | 48 | 112-tri-Cl-Et | 0.226 | 0.143 | 0.120 | 0.116 | 0.121 | 0.118 | 0.141 | 30.67 | 1.000 |
| 59) | | 58 | 1,2-di-br-ethane | 0.050 | 0.125 | 0.124 | 0.129 | 0.129 | 0.128 | 0.114 | 27.70 | 1.000 |
| 60) | | 51 | di-Br-Cl-methane | 0.117 | 0.177 | 0.166 | 0.165 | 0.170 | 0.172 | 0.161 | 13.59 | |
| 61) | | 46 | t-13-di-cl-prope | 0.200 | 0.197 | 0.206 | 0.204 | 0.206 | 0.197 | 0.202 | 2.11 | |
| 62) | | 105 | 1-Chlorohexane | 0.564 | 0.285 | 0.272 | 0.253 | 0.249 | 0.237 | 0.310 | 40.49 | 0.999 |
| 63) | I | 47 | Cl-benzene-d5, I2 | ISTD | | | | | | | | |
| 64) | | 54 | MIBK | 0.207 | 0.298 | 0.328 | 0.319 | 0.325 | 0.304 | 0.297 | 15.38 | 0.999 |
| 65) | | 49 | 1,3-di-cl-propan | 0.624 | 0.665 | 0.699 | 0.690 | 0.647 | 0.598 | 0.654 | 5.95 | |
| 66) | | 59 | tetra-Cl-ethene | 0.767 | 0.892 | 0.960 | 0.927 | 0.884 | 0.850 | 0.880 | 7.60 | |
| 67) | M P | 60 | chlorobenzene | 1.465 | 1.556 | 1.560 | 1.485 | 1.424 | 1.278 | 1.461 | 7.13 | |
| 68) | | 61 | 1112-tetra-Cl-Et | 0.473 | 0.619 | 0.613 | 0.631 | 0.602 | 0.573 | 0.585 | 9.96 | |
| 69) | C | 64 | ethylbenzene | 3.150 | 3.064 | 2.822 | 2.754 | 2.619 | 2.485 | 2.816 | 9.06 | |
| 70) | | 65 | m/p-Xylenes x2 | 2.309 | 2.321 | 2.213 | 2.124 | 2.010 | 1.868 | 2.141 | 8.30 | |
| 71) | | 99 | 1-4-di-Cl-butane | 0.809 | 0.710 | 0.649 | 0.615 | 0.570 | 0.518 | 0.645 | 16.06 | |
| 72) | P | 52 | bromoform | 0.118 | 0.305 | 0.317 | 0.319 | 0.302 | 0.282 | 0.274 | 28.23 | 0.998 |
| 73) | | 66 | styrene | 1.595 | 1.641 | 1.561 | 1.507 | 1.441 | 1.326 | 1.512 | 7.58 | |
| 74) | | 67 | o-xylene | 2.457 | 2.410 | 2.147 | 2.035 | 1.889 | 1.700 | 2.106 | 13.98 | |
| 75) | P | 68 | 1122-Tetra-Cl-Et | 0.391 | 0.469 | 0.403 | 0.385 | 0.349 | 0.323 | 0.387 | 12.94 | |
| 76) | | 110 | t-1,4-dichloro- | | 0.153 | 0.078 | 0.060 | 0.058 | 0.053 | 0.081 | 51.75 | 0.999 |
| 77) | | 106 | Cl-benzyl | 0.890 | 0.534 | 0.539 | 0.531 | 0.489 | 0.448 | 0.572 | 27.91 | 0.996 |
| 78) | I | 62 | 1,4-DCB-d4 150 152 | ISTD | | | | | | | | |
| 79) | | 69 | 123-tri-Cl-Pr | | 0.112 | 0.116 | 0.123 | 0.127 | 0.131 | 0.122 | 6.42 | |
| 80) | S | 70 | 4-Br-1-F-Bz (S3) | | 0.935 | 0.877 | 0.886 | 0.890 | 0.880 | 0.893 | 2.69 | |
| 81) | | 71 | isopropylbenzene | 2.780 | 3.439 | 3.399 | 3.298 | 3.366 | 3.435 | 3.286 | 7.71 | |
| 82) | | 72 | bromobenzene | 0.527 | 0.700 | 0.760 | 0.772 | 0.787 | 0.782 | 0.721 | 13.87 | |
| 83) | | 73 | n-propylbenzene | 0.727 | 0.924 | 0.921 | 0.910 | 0.914 | 0.920 | 0.886 | 8.83 | |
| 84) | | 74 | 2-Cl-Tl 126 | 0.646 | 0.602 | 0.566 | 0.545 | 0.606 | 0.566 | 0.589 | 6.23 | |

(#) = Out of Range

4164

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 09:57:17 2003
Response via : Initial Calibration

Calibration Files
0.3 =3-0003.D 2 =3-002.D 10 =3-010.D
20 =3-020.D 40 =3-040.D 80 =3-080.D

| | Compound | | 0.3 | 2 | 10 | 20 | 40 | 80 | Avg | %RSD | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 85) | 75 4-Cl-Tl | 126 | 0.683 | 0.834 | 0.866 | 0.784 | 0.843 | 0.816 | 0.804 | 8.13 | |
| 86) | 76 135-tri-Me-Bz | | 2.482 | 2.722 | 2.700 | 2.625 | 2.675 | 2.716 | 2.653 | 3.43 | |
| 87) | 79 tert-butylbenzen | | 2.218 | 2.871 | 2.824 | 2.765 | 2.829 | 2.837 | 2.724 | 9.19 | |
| 88) | 78 124-tri-Me-Bz | | 1.891 | 2.455 | 2.250 | 2.296 | 2.326 | 2.317 | 2.256 | 8.48 | |
| 89) | 80 13-di-Cl-Bz | 146 | 0.934 | 1.158 | 1.264 | 1.084 | 1.198 | 1.258 | 1.149 | 10.87 | |
| 90) | 82 14-di-Cl-Bz | 146 | 1.527 | 1.764 | 1.616 | 1.744 | 1.694 | 1.675 | 1.670 | 5.24 | |
| 91) | 81 sec-butylbenzene | | 3.330 | 4.148 | 4.224 | 3.968 | 4.057 | 4.172 | 3.983 | 8.35 | |
| 92) | 77 4-iso-Pr-toluene | | 2.419 | 3.039 | 3.032 | 2.939 | 2.928 | 2.886 | 2.874 | 8.04 | |
| 93) | 84 12-di-Cl-benzene | | 0.920 | 1.150 | 1.163 | 1.111 | 1.152 | 1.156 | 1.109 | 8.49 | |
| 94) | 85 n-butylbenzene | | 3.034 | 2.990 | 3.069 | 2.970 | 2.978 | 3.028 | 3.012 | 1.28 | |
| 95) | 86 12-diBr-3-Cl-Pra | | | 0.063 | 0.077 | 0.085 | 0.089 | 0.091 | 0.081 | 13.95 | |
| 96) | 87 124-tri-Cl-Bz | | 0.534 | 0.749 | 0.838 | 0.873 | 0.858 | 0.901 | 0.792 | 17.24 | 0.999 |
| 97) | 88 naphthalene | | 0.804 | 0.553 | 0.616 | 0.666 | 0.652 | 0.700 | 0.665 | 12.68 | |
| 98) | 90 123-tri-Cl-Bz | | 0.497 | 0.559 | 0.642 | 0.649 | 0.636 | 0.642 | 0.604 | 10.29 | |
| 99) | 89 hx-Cl-butadiene | | 0.432 | 0.625 | 0.690 | 0.663 | 0.662 | 0.652 | 0.621 | 15.29 | 1.000 |

(#) = Out of Range

# Continuing Calibration Concentration Summary

**Data File** G1044Q01.D
**Method File** E524G003

| Compound Name | Amount | Actual | Units | %Dev | Target Response |
|---|---|---|---|---|---|
| 1 Fluorobenzene I1 1 | 10 | 10.00 | ppb | 0.00 | 796616 |
| 3 di-Cl-di-F-methane 85 87 | 20 | 17.19 | ppb | 14.06 | 391713 |
| 4 Chloromethane 50 52 | 20 | 17.91 | ppb | 10.45 | 347170 |
| 9 F114 85 135 | 20 | 16.95 | ppb | 15.23 | 431287 |
| 5 vinyl chloride 62 64 | 20 | 17.64 | ppb | 11.78 | 324322 |
| 6 bromomethane 94 96 | 20 | 19.27 | ppb | 3.65 | 311034 |
| 7 Chloroethane 64 66 | 20 | 17.40 | ppb | 12.98 | 236890 |
| 8 tri-Cl-F-methane 101 103 | 20 | 17.66 | ppb | 11.71 | 548800 |
| 111 isopropyl alcohol x10 | 200 | 187.37 | ppb | 6.31 | 67350 |
| 100 ethyl ether x5 | 100 | 81.84 | ppb | 18.16 | 929231 |
| 102 Acrolein x10 | 200 | 149.65 | ppb | 25.17 | 135563 |
| 119 methyl acetate | 20 | 16.58 | ppb | 17.09 | 161424 |
| 104 Carbon disulfide | 20 | 16.24 | ppb | 18.81 | 1078389 |
| 103 Acrylonitrilex10 | 200 | 173.63 | ppb | 13.19 | 330493 |
| 95 Acetone x10 | 200 | 167.58 | ppb | 16.21 | 230352 |
| 108 F-113 | 20 | 17.73 | ppb | 11.36 | 423314 |
| 13 11-dichloroethene 61 96 | 20 | 16.97 | ppb | 15.13 | 530128 |
| 101 Acetonnitrilex10 | 200 | 179.80 | ppb | 10.10 | 91752 |
| 109 Iodomethane | 20 | 21.14 | ppb | 5.72 | 536517 |
| 1 Tert butyl alcohol x10 | 200 | 169.00 | ppb | 15.50 | 116507 |
| 1 ethylene chloride 49 84 | 20 | 11.83 | ppb | 40.83 | 397006 |
| 112 Allyl chloride | 20 | 17.03 | ppb | 14.85 | 588305 |
| 200 Nitro methane x10 | 200 | 175.74 | ppb | 12.13 | 610779 |
| 10 t-Bu-Me-ether 73 57 | 20 | 16.56 | ppb | 17.22 | 557717 |
| 19 t-12-di-Cl-ethene 96 61 | 20 | 16.96 | ppb | 15.20 | 406048 |
| 98 Vinyl acetate x5 | 100 | 91.24 | ppb | 8.76 | 1965632 |
| 21 11-dichloroethane 63 83 | 20 | 17.96 | ppb | 10.18 | 750915 |
| 91 2-butanone MEKx10 | 200 | 164.89 | ppb | 17.56 | 1231875 |
| 115 Di isoprop ether | 20 | 17.14 | ppb | 14.32 | 1808509 |
| 22 c-12-di-Cl-ethene 96 61 | 20 | 16.89 | ppb | 15.55 | 395661 |
| 23 22-Dichloropropane 77 97 | 20 | 15.99 | ppb | 20.03 | 576991 |
| 24 Br-Cl-methane 128 130 | 20 | 16.86 | ppb | 15.70 | 141700 |
| 25 chloroform 83 85 | 20 | 16.48 | ppb | 17.61 | 689236 |
| 201 Ethyl acetate x2 | 40 | 35.55 | ppb | 11.12 | 378636 |
| 116 ETBE | 20 | 16.37 | ppb | 18.16 | 1052083 |
| 117 Iso-butyl alcohol X10 | 200 | 184.17 | ppb | 7.92 | 392518 |
| 26 tetrahydrofuranx5 | 100 | 85.20 | ppb | 14.80 | 69559 |
| 27 Di-Br-F-Methane (S1) 111 1 | 20 | 17.40 | ppb | 12.98 | 491970 |
| 34 111-tri-Cl-ethane 97 99 | 20 | 16.22 | ppb | 18.92 | 564989 |
| 30 12-dichloroethane 64 62 | 20 | 17.32 | ppb | 13.41 | 282242 |
| 35 11-Di-Cl-propene 75 110 | 20 | 16.34 | ppb | 18.29 | 497493 |
| 29 1,2-di-Cl-ethane-d4 [Surr] 10 | 20 | 17.16 | ppb | 14.18 | 225901 |
| 36 benzene 78 52 | 20 | 17.33 | ppb | 13.37 | 1199382 |
| 37 CCl4 117 119 | 20 | 17.10 | ppb | 14.51 | 455994 |

| | | | | | |
|---|---|---|---|---|---|
| 97 thiophene | 20 | 16.95 | ppb | 15.26 | 583305 |
| 1[illegible] TAME | 20 | 15.87 | ppb | 20.63 | 702458 |
| [illegible]-di-Cl-propane 63 76 | 20 | 17.34 | ppb | 13.31 | 351243 |
| 40 trichloroethene 130 132 | 20 | 17.62 | ppb | 11.92 | 377871 |
| 96 Me-methacrylate | 20 | 17.85 | ppb | 10.77 | 125425 |
| 42 Br-di-Cl-methane 83 85 | 20 | 15.94 | ppb | 20.31 | 450244 |
| 41 dibromomethane 174 172 | 20 | 18.45 | ppb | 7.74 | 180293 |
| 45 c-13-di-Cl-propene 75 110 | 20 | 16.57 | ppb | 17.14 | 412841 |
| 55 toluene-d8(S2) 100 99 | 20 | 17.54 | ppb | 12.30 | 697975 |
| 92 2-ClEt-Vi-ether10 | 200 | 175.75 | ppb | 12.12 | 750880 |

| Compound Name | Amount | Actual | Units | %Dev | Target Response |
|---|---|---|---|---|---|
| 56 toluene 91 92 | 20 | 16.81 | ppb | 15.95 | 1093591 |
| 107 Et methacrylate | 20 | 17.29 | ppb | 13.55 | 232775 |
| 93 2-Hexanone x5 | 100 | 86.81 | ppb | 13.19 | 392829 |
| 48 112-tri-Cl-Et 97 83 | 20 | 16.95 | ppb | 15.24 | 161722 |
| 58 1,2-di-br-ethane 107 109 | 20 | 16.98 | ppb | 15.09 | 172988 |
| 51 di-Br-Cl-methane 129 127 | 20 | 17.48 | ppb | 12.61 | 224132 |
| 46 t-13-di-cl-propene 75 110 | 20 | 17.60 | ppb | 12.00 | 282573 |
| 105 1-Chlorohexane | 20 | 18.07 | ppb | 9.65 | 359945 |
| 47 Cl-benzene-d5, I2 | 10 | 10.00 | ppb | 0.00 | 235344 |
| 54 MIBK | 20 | 18.90 | ppb | 5.50 | 140136 |
| 49 1,3-di-cl-propane 76 78 | 20 | 18.31 | ppb | 8.47 | 281641 |
| 59 tetra-Cl-ethene 166 168 | 20 | 18.21 | ppb | 8.97 | 377073 |
| 60 chlorobenzene 112 77 | 20 | 18.14 | ppb | 9.32 | 623775 |
| 61 1112-tetra-Cl-Et 131 133 | 20 | 18.92 | ppb | 5.41 | 260584 |
| [illegible]hylbenzene 91 106 | 20 | 17.29 | ppb | 13.57 | 1145522 |

| Compound Name | Amount | Actual | Units | %Dev | Target Response |
|---|---|---|---|---|---|
| 65 m/p-Xylenes x2 | 40 | 35.76 | ppb | 10.60 | 1801521 |
| 99 1-4-di-Cl-butane | 20 | 16.44 | ppb | 17.80 | 249550 |
| 52 bromoform 173 175 | 20 | 18.57 | ppb | 7.15 | 130519 |
| 66 styrene 104 78 | 20 | 17.65 | ppb | 11.75 | 627907 |
| 67 o-xylene 91 106 | 20 | 17.23 | ppb | 13.83 | 854318 |
| 68 1122-Tetra-Cl-Et 83 85 | 20 | 17.29 | ppb | 13.57 | 157341 |
| 110 t-1,4-dichloro-2-butene | 20 | 20.23 | ppb | 1.14 | 29653 |
| 106 Cl-benzyl | 20 | 18.94 | ppb | 5.29 | 217674 |
| 62 1,4-DCB-d4 150 152 I3 | 10 | 10.00 | ppb | 0.00 | 194845 |
| 69 123-tri-Cl-Pr 110 97 | 20 | 16.92 | ppb | 15.39 | 40148 |
| 70 4-Br-1-F-Bz (S3) 174 95 | 20 | 17.58 | ppb | 12.11 | 306029 |
| 71 isopropylbenzene 105 120 | 20 | 17.55 | ppb | 12.23 | 1123964 |
| 72 bromobenzene 156 158 | 20 | 18.24 | ppb | 8.81 | 256336 |
| 73 n-propylbenzene 120 78 | 20 | 17.81 | ppb | 10.96 | 307368 |
| 74 2-Cl-Tl 126 128 | 20 | 17.09 | ppb | 14.53 | 196033 |
| 75 4-Cl-Tl 126 128 | 20 | 17.35 | ppb | 13.26 | 271926 |
| 76 135-tri-Me-Bz 105 120 | 20 | 16.96 | ppb | 15.19 | 876887 |
| 79 tert-butylbenzene 119 91 | 20 | 17.96 | ppb | 10.21 | 953072 |
| 78 124-tri-Me-Bz 105 120 | 20 | 17.48 | ppb | 12.58 | 768449 |
| 80 13-di-Cl-Bz 146 148 | 20 | 17.97 | ppb | 10.13 | 402440 |
| 82 14-di-Cl-Bz 146 148 | 20 | 16.63 | ppb | 16.83 | 541239 |
| 81 [illegible]ec-butylbenzene 105 134 | 20 | 17.92 | ppb | 10.39 | 1390850 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 77 4-iso-Pr-toluene | 119 134 | 20 | 18.03 | ppb | 9.85 | 1009580 |
| 84 12-di-Cl-benzene | 146 148 | 20 | 17.46 | ppb | 12.70 | 377204 |
| butylbenzene | 91 134 | 20 | 17.34 | ppb | 13.30 | 1017452 |
| 86 12-diBr-3-Cl-Pra | 157 155 | 20 | 18.10 | ppb | 9.51 | 28653 |
| 87 124-tri-Cl-Bz | 180 182 | 20 | 16.93 | ppb | 15.36 | 286395 |
| 88 naphthalene | 128 129 | 20 | 18.23 | ppb | 8.85 | 236255 |
| 90 123-tri-Cl-Bz | 180 182 | 20 | 17.95 | ppb | 10.27 | 211274 |
| | | | | Ave.% Dev | 13.04 | |

# Evaluate Continuing Calibration Report

4168

Data File : C:\HPCHEM\1\DATA\03G1044\G1044Q01.D  Vial: 9
Acq On : 10 Jan 03 6:50 pm  Operator: Eddie
Sample : f=1 ccv/icv  Inst : GCMS-G
Misc :  Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | 1 Fluorobenzene I1 1 | 1.000 | 1.000 | 0.0 | 108 | 0.00 |
| 2 | | 3 di-Cl-di-F-methane 85 8 | 0.308 | 0.246 | 20.2# | 92 | 0.00 |
| 3 | P | 4 Chloromethane 50 5 | 0.243 | 0.218 | 10.5 | 93 | 0.00 |
| 4 | | 9 F114 85 135 | 0.319 | 0.271 | 15.2 | 93 | 0.00 |
| 5 | C | 5 vinyl chloride 62 6 | 0.231 | 0.204 | 11.8 | 94 | 0.00 |
| 6 | | 6 bromomethane 94 9 | 0.227 | 0.195 | 14.1 | 111 | 0.00 |
| 7 | | 7 Chloroethane 64 66 | 0.171 | 0.149 | 13.0 | 95 | 0.00 |
| 8 | | 8 tri-Cl-F-methane 101 10 | 0.390 | 0.344 | 11.7 | 90 | 0.00 |
| 9 | | 111 isopropyl alcohol x10 | 0.005 | 0.004# | 6.3 | 122 | 0.00 |
| 10 | | 100 ethyl ether x5 | 0.143 | 0.117 | 18.2 | 95 | 0.00 |
| 11 | | 102 Acrolein x10 | 0.011 | 0.009# | 25.2# | 63 | 0.00 |
| 12 | | 119 methyl acetate | 0.128 | 0.101 | 20.8# | 86 | 0.00 |
| 13 | | 104 Carbon disulfide | 0.834 | 0.677 | 18.8 | 92 | 0.00 |
| 14 | | 103 Acrylonitrilex10 | 0.024 | 0.021# | 13.2 | 95 | 0.00 |
| 15 | | 95 Acetone x10 | 0.019 | 0.014# | 23.8# | 86 | 0.00 |
| 16 | | 108 F-113 | 0.300 | 0.266 | 11.4 | 88 | 0.00 |
| 17 | M,C | 13 11-dichloroethene 61 9 | 0.392 | 0.333 | 15.1 | 92 | 0.00 |
| 18 | | 101 Acetonnitrilex10 | 0.006 | 0.006# | 5.3 | 94 | 0.00 |
| 19 | | 109 Iodomethane | 0.311 | 0.337 | -8.3 | 113 | 0.00 |
| 20 | | 113 Tert butyl alcohol x10 | 0.009 | 0.007# | 20.6# | 87 | 0.00 |
| 21 | | 18 methylene chloride 49 8 | 0.643 | 0.249 | 61.2# | 66 | 0.00 |
| 22 | | 112 Allyl chloride | 0.434 | 0.369 | 14.8 | 96 | 0.00 |
| 23 | | 200 Nitro methane x10 | 0.044 | 0.038# | 12.1 | 96 | 0.00 |
| 24 | | 10 t-Bu-Me-ether 73 57 | 0.498 | 0.350 | 29.7# | 90 | 0.00 |
| 25 | | 19 t-12-di-Cl-ethene 96 6 | 0.301 | 0.255 | 15.2 | 93 | 0.00 |
| 26 | | 98 Vinyl acetate x5 | 0.270 | 0.247 | 8.8 | 169# | 0.00 |
| 27 | P | 21 11-dichloroethane 63 8 | 0.525 | 0.471 | 10.2 | 96 | 0.00 |

(#) = Out of Range

Evaluate Continuing Calibration Report

4169

Data File : C:\HPCHEM\1\DATA\03G1044\G1044Q01.D  Vial: 9
Acq On : 10 Jan 03 6:50 pm  Operator: Eddie
Sample : f=1 ccv/icv  Inst : GCMS-G
Misc :  Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 28 | | 91 2-butanone MEKx10 | 0.094 | 0.077 | 17.6 | 95 | 0.00 |
| 29 | | 115 Di isoprop ether | 1.125 | 1.135 | -0.9 | 93 | 0.00 |
| 30 | | 22 c-12-di-Cl-ethene 96 6 | 0.294 | 0.248 | 15.6 | 92 | 0.00 |
| 31 | | 23 22-Dichloropropane 77 9 | 0.453 | 0.362 | 20.0# | 93 | 0.00 |
| 32 | | 24 Br-Cl-methane 128 13 | 0.094 | 0.089 | 5.2 | 92 | 0.00 |
| 33 | C | 25 chloroform 83 8 | 0.525 | 0.433 | 17.6 | 95 | 0.00 |
| 34 | | 201 Ethyl acetate x2 | 0.134 | 0.119 | 11.1 | 128 | 0.00 |
| 35 | | 116 ETBE | 0.807 | 0.660 | 18.2 | 91 | 0.00 |
| 36 | | 117 Iso-butyl alcohol X10 | 0.027 | 0.025# | 7.9 | 132 | 0.00 |
| 37 | | 26 tetrahydrofuranx5 | 0.010 | 0.009# | 14.8 | 93 | 0.00 |
| 38 | S | 27 Di-Br-F-Methane (S1) 11 | 0.400 | 0.309 | 22.8# | 95 | 0.00 |
| 39 | | 34 111-tri-Cl-ethane 97 9 | 0.437 | 0.355 | 18.9 | 93 | 0.00 |
| 40 | | 30 12-dichloroethane 64 6 | 0.175 | 0.177 | -1.4 | 95 | 0.00 |
| 41 | | 35 11-Di-Cl-propene 75 11 | 0.382 | 0.312 | 18.3 | 91 | 0.00 |
| 42 | S | 29 1,2-di-Cl-ethane-d4 [Sur | 0.165 | 0.142 | 14.2 | 93 | 0.00 |
| 43 | M | 36 benzene 78 5 | 0.869 | 0.753 | 13.4 | 94 | 0.00 |
| 44 | | 37 CCl4 117 11 | 0.335 | 0.286 | 14.5 | 92 | 0.00 |
| 45 | | 97 thiophene | 0.432 | 0.366 | 15.3 | 94 | 0.00 |
| 46 | | 118 TAME | 0.556 | 0.441 | 20.6# | 89 | 0.00 |
| 47 | C | 39 12-di-Cl-propane 63 7 | 0.254 | 0.220 | 13.3 | 93 | 0.00 |
| 48 | M | 40 trichloroethene 130 13 | 0.269 | 0.237 | 11.9 | 94 | 0.00 |
| 49 | | 96 Me-methacrylate | 0.095 | 0.079 | 17.5 | 102 | 0.00 |
| 50 | | 42 Br-di-Cl-methane 83 8 | 0.355 | 0.283 | 20.3# | 93 | 0.00 |
| 51 | | 41 dibromomethane 174 17 | 0.123 | 0.113 | 7.7 | 93 | 0.00 |
| 52 | | 45 c-13-di-Cl-propene 75 11 | 0.313 | 0.259 | 17.1 | 93 | 0.00 |
| 53 | S | 55 toluene-d8(S2) 100 | 0.500 | 0.438 | 12.3 | 96 | 0.00 |
| 54 | | 92 2-ClEt-Vi-ether10 | 0.054 | 0.047# | 12.1 | 92 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

4170

Data File : C:\HPCHEM\1\DATA\03G1044\G1044Q01.D  Vial: 9
Acq On : 10 Jan 03 6:50 pm  Operator: Eddie
Sample : f=1 ccv/icv  Inst : GCMS-G
Misc :  Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | | Compound | | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|---|---|
| 55 | M | C | 56 toluene | 91 9 | 0.817 | 0.686 | 16.0 | 95 | 0.00 |
| 56 | | | 107 Et methacrylate | | 0.169 | 0.146 | 13.6 | 141 | 0.00 |
| 57 | | | 93 2-Hexanone x5 | | 0.057 | 0.049# | 13.2 | 107 | 0.00 |
| 58 | | | 48 112-tri-Cl-Et | 97 8 | 0.141 | 0.102 | 27.8# | 94 | 0.00 |
| 59 | | | 58 1,2-di-br-ethane | 107 109 | 0.114 | 0.109 | 5.0 | 91 | 0.00 |
| 60 | | | 51 di-Br-Cl-methane | 129 12 | 0.161 | 0.141 | 12.6 | 92 | 0.00 |
| 61 | | | 46 t-13-di-cl-propene | 75 11 | 0.202 | 0.177 | 12.0 | 94 | 0.00 |
| 62 | | | 105 1-Chlorohexane | | 0.310 | 0.226 | 27.2# | 96 | 0.00 |
| 63 | I | | 47 Cl-benzene-d5, I2 | | 1.000 | 1.000 | 0.0 | 105 | 0.00 |
| 64 | | | 54 MIBK | | 0.297 | 0.298 | -0.3 | 97 | 0.00 |
| 65 | | | 49 1,3-di-cl-propane | 76 78 | 0.654 | 0.598 | 8.5 | 91 | 0.00 |
| 66 | | | 59 tetra-Cl-ethene | 166 16 | 0.880 | 0.801 | 9.0 | 90 | 0.00 |
| 67 | M | P | 60 chlorobenzene | 112 7 | 1.461 | 1.325 | 9.3 | 93 | 0.00 |
| 68 | | | 61 1112-tetra-Cl-Et | 131 13 | 0.585 | 0.554 | 5.4 | 92 | 0.00 |
| 69 | C | | 64 ethylbenzene | 91 10 | 2.816 | 2.434 | 13.6 | 92 | 0.00 |
| 70 | | | 65 m/p-Xylenes x2 | | 2.141 | 1.914 | 10.6 | 94 | 0.00 |
| 71 | | | 99 1-4-di-Cl-butane | | 0.645 | 0.530 | 17.8 | 90 | 0.00 |
| 72 | P | | 52 bromoform | 173 17 | 0.274 | 0.277 | -1.3 | 91 | 0.00 |
| 73 | | | 66 styrene | 104 7 | 1.512 | 1.334 | 11.7 | 93 | 0.00 |
| 74 | | | 67 o-xylene | 91 10 | 2.106 | 1.815 | 13.8 | 93 | 0.00 |
| 75 | P | | 68 1122-Tetra-Cl-Et | 83 8 | 0.387 | 0.334 | 13.6 | 91 | 0.00 |
| 76 | | | 110 t-1,4-dichloro-2-butene | | 0.081 | 0.063 | 21.8# | 110 | 0.00 |
| 77 | | | 106 Cl-benzyl | | 0.572 | 0.462 | 19.1 | 91 | 0.00 |
| 78 | I | | 62 1,4-DCB-d4 150 152 I3 | | 1.000 | 1.000 | 0.0 | 106 | 0.00 |
| 79 | | | 69 123-tri-Cl-Pr | 110 9 | 0.122 | 0.103 | 15.4 | 88 | 0.00 |

(#) = Out of Range

# Evaluate Continuing Calibration Report

4171

Data File : C:\HPCHEM\1\DATA\03G1044\G1044Q01.D  Vial: 9
Acq On : 10 Jan 03 6:50 pm  Operator: Eddie
Sample : f=1 ccv/icv  Inst : GCMS-G
Misc :  Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\E524G003.M
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Jan 13 10:38:23 2003
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 35% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

| | | Compound | | | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|---|---|
| 80 | S | 70 4-Br-1-F-Bz (S3) | 174 | 9 | 0.893 | 0.785 | 12.1 | 94 | 0.00 |
| 81 | | 71 isopropylbenzene | 105 | 12 | 3.286 | 2.884 | 12.2 | 92 | 0.00 |
| 82 | | 72 bromobenzene | 156 | 15 | 0.721 | 0.658 | 8.8 | 90 | 0.00 |
| 83 | | 73 n-propylbenzene | 120 | 7 | 0.886 | 0.789 | 11.0 | 92 | 0.00 |
| 84 | | 74 2-Cl-Tl | 126 | 128 | 0.589 | 0.503 | 14.5 | 97 | 0.00 |
| 85 | | 75 4-Cl-Tl | 126 | 128 | 0.804 | 0.698 | 13.3 | 94 | 0.00 |
| 86 | | 76 135-tri-Me-Bz | 105 | 12 | 2.653 | 2.250 | 15.2 | 90 | 0.00 |
| 87 | | 79 tert-butylbenzene | 119 | 9 | 2.724 | 2.446 | 10.2 | 93 | 0.00 |
| 88 | | 78 124-tri-Me-Bz | 105 | 12 | 2.256 | 1.972 | 12.6 | 91 | 0.00 |
| 89 | | 80 13-di-Cl-Bz | 146 | 148 | 1.149 | 1.033 | 10.1 | 101 | 0.00 |
| 90 | | 82 14-di-Cl-Bz | 146 | 148 | 1.670 | 1.389 | 16.8 | 84 | 0.00 |
| 91 | | 81 sec-butylbenzene | 105 | 13 | 3.983 | 3.569 | 10.4 | 95 | 0.00 |
| 92 | | 77 4-iso-Pr-toluene | 119 | 13 | 2.874 | 2.591 | 9.9 | 93 | 0.00 |
| 93 | | 84 12-di-Cl-benzene | 146 | 14 | 1.109 | 0.968 | 12.7 | 92 | 0.00 |
| 94 | | 85 n-butylbenzene | 91 | 13 | 3.012 | 2.611 | 13.3 | 93 | 0.00 |
| 95 | | 86 12-diBr-3-Cl-Pra | 157 | 15 | 0.081 | 0.074 | 9.5 | 91 | 0.00 |
| 96 | | 87 124-tri-Cl-Bz | 180 | 18 | 0.792 | 0.735 | 7.2 | 89 | 0.00 |
| 97 | | 88 naphthalene | 128 | 12 | 0.665 | 0.606 | 8.8 | 96 | 0.00 |
| 98 | | 90 123-tri-Cl-Bz | 180 | 18 | 0.604 | 0.542 | 10.3 | 88 | 0.00 |
| 99 | | 89 hx-Cl-butadiene | 225 | 26 | 0.621 | 0.586 | 5.5 | 93 | 0.00 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0