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~~	#

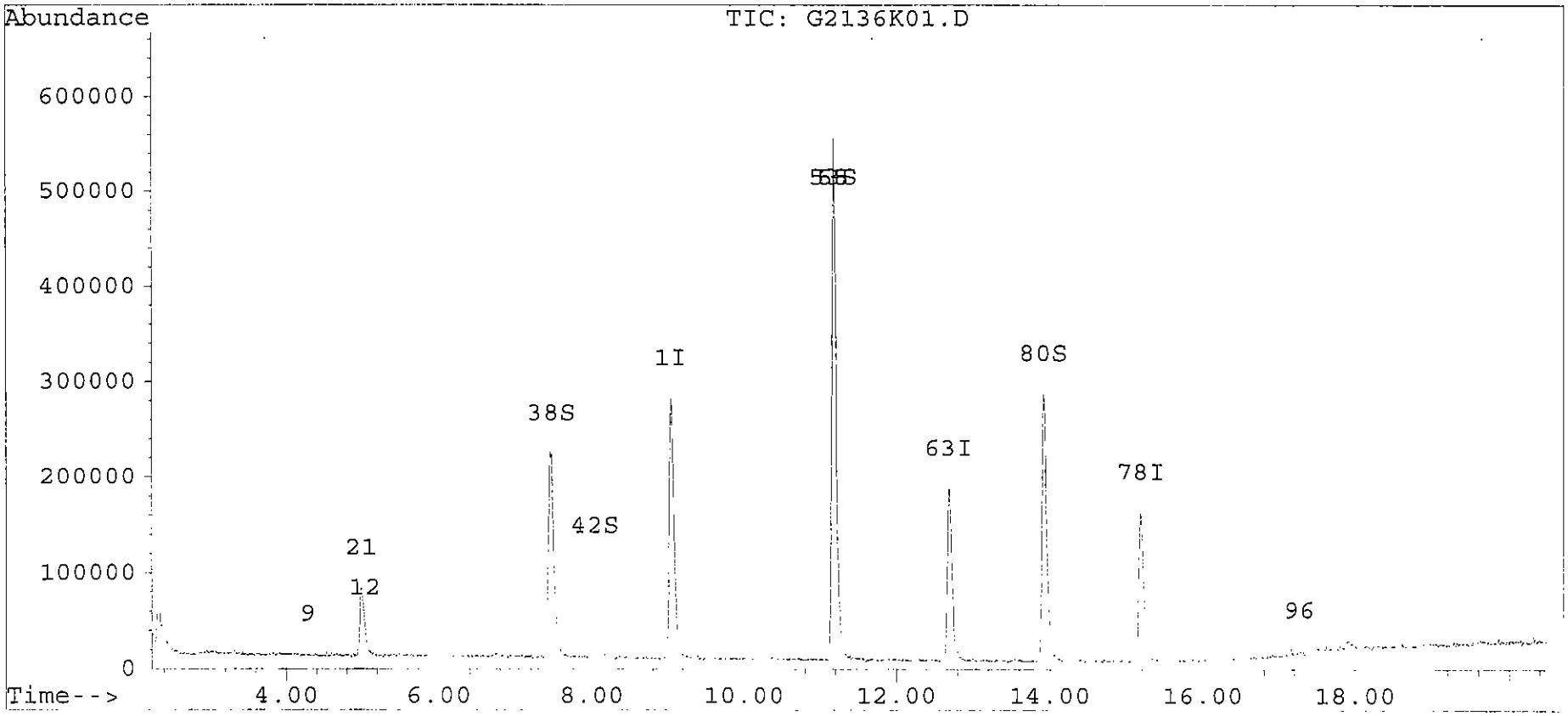
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

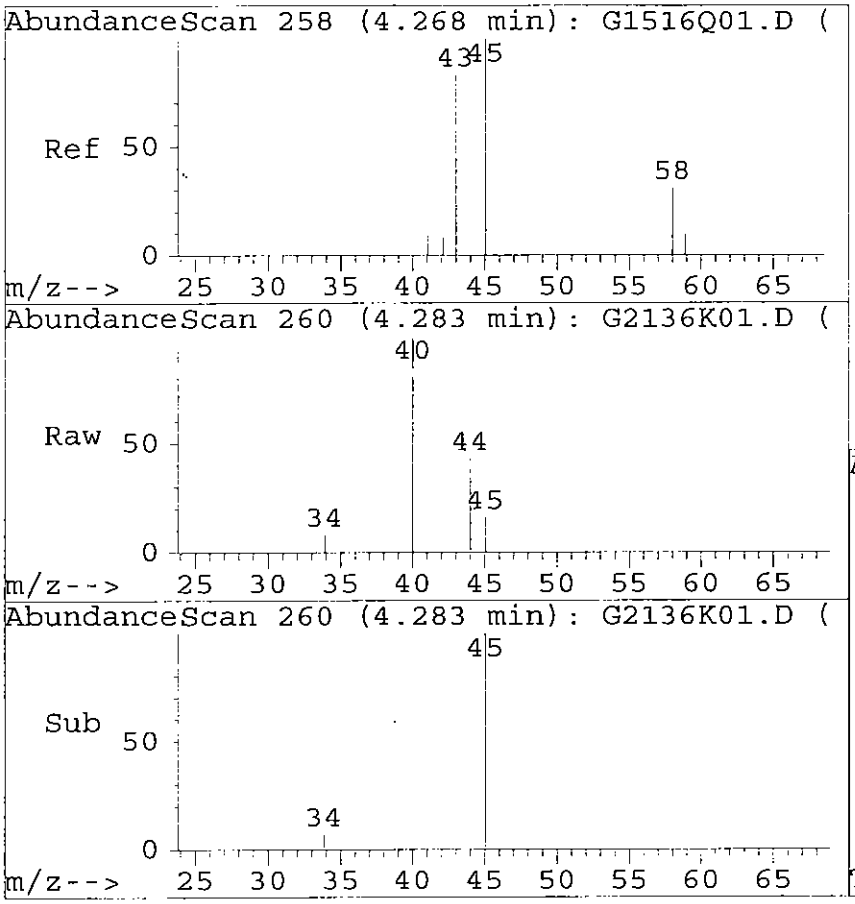
Quantitation Report

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

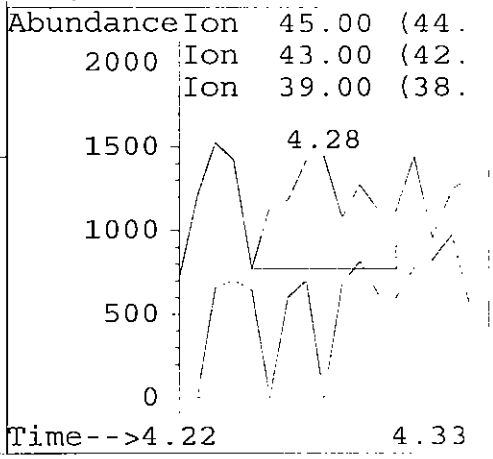


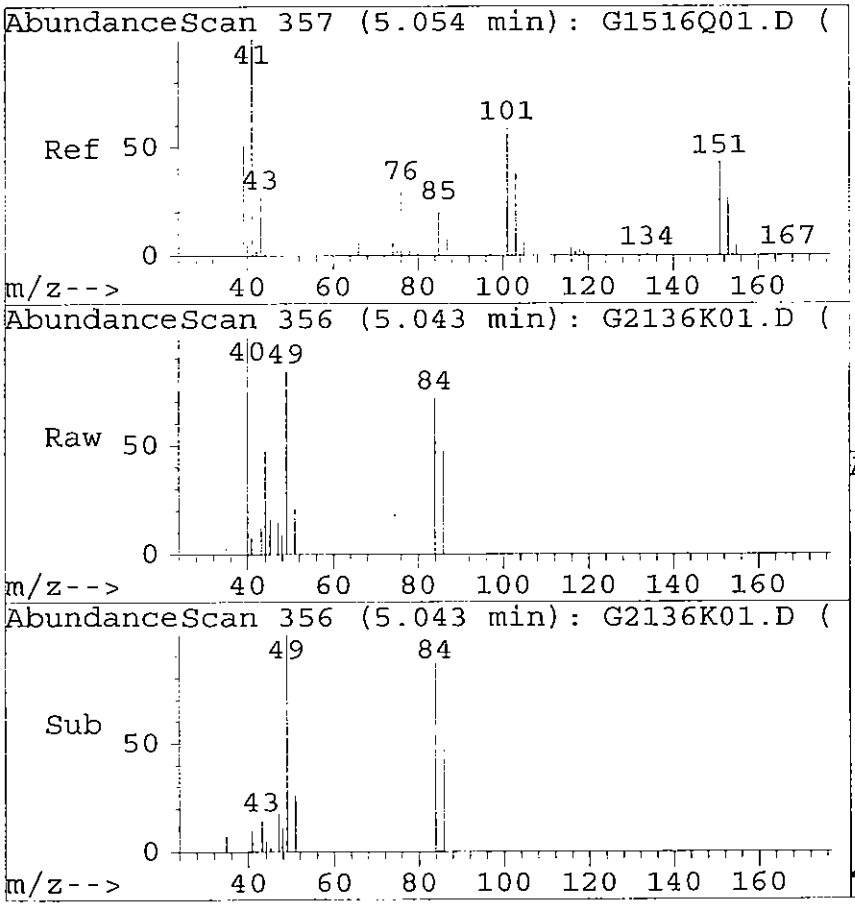


#9
111 isopropyl alcohol x10
Concen: 6.56 ppb
RT: 4.28 min Scan# 260
Delta R.T. 0.01 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

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

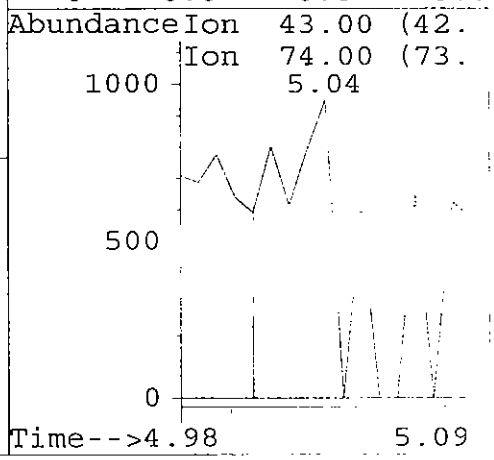


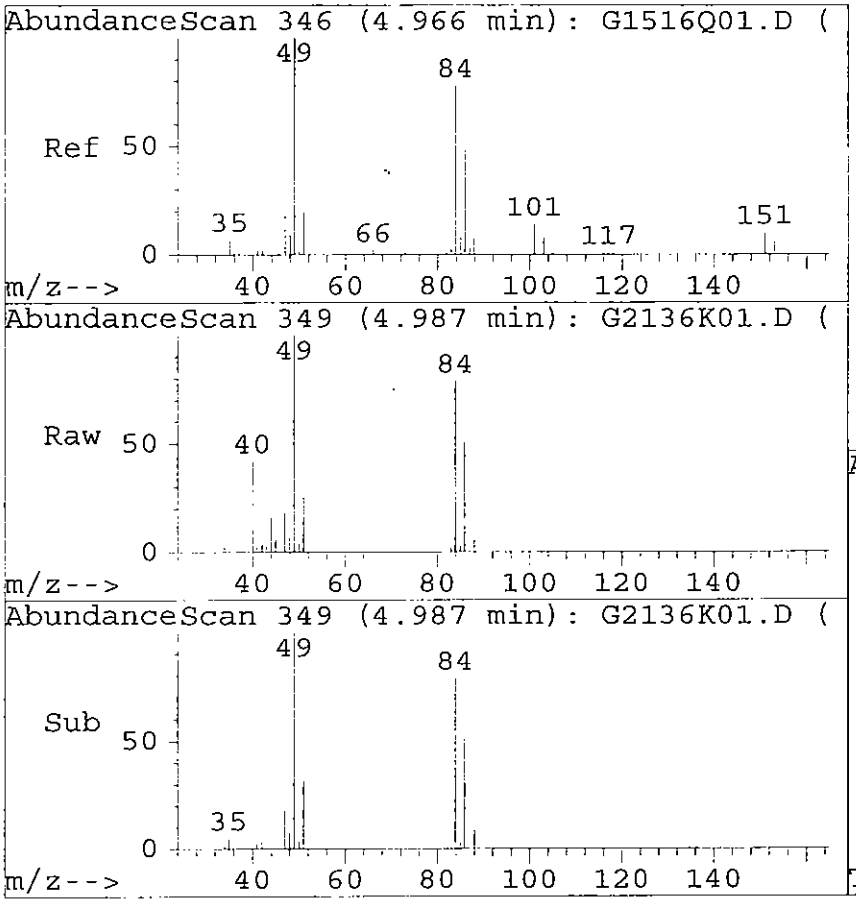


#12
119 methyl acetate
Concen: 0.52 ppb
RT: 5.04 min Scan# 356
Delta R.T. -0.01 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

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

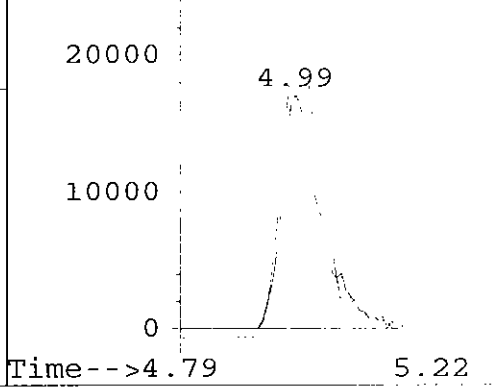


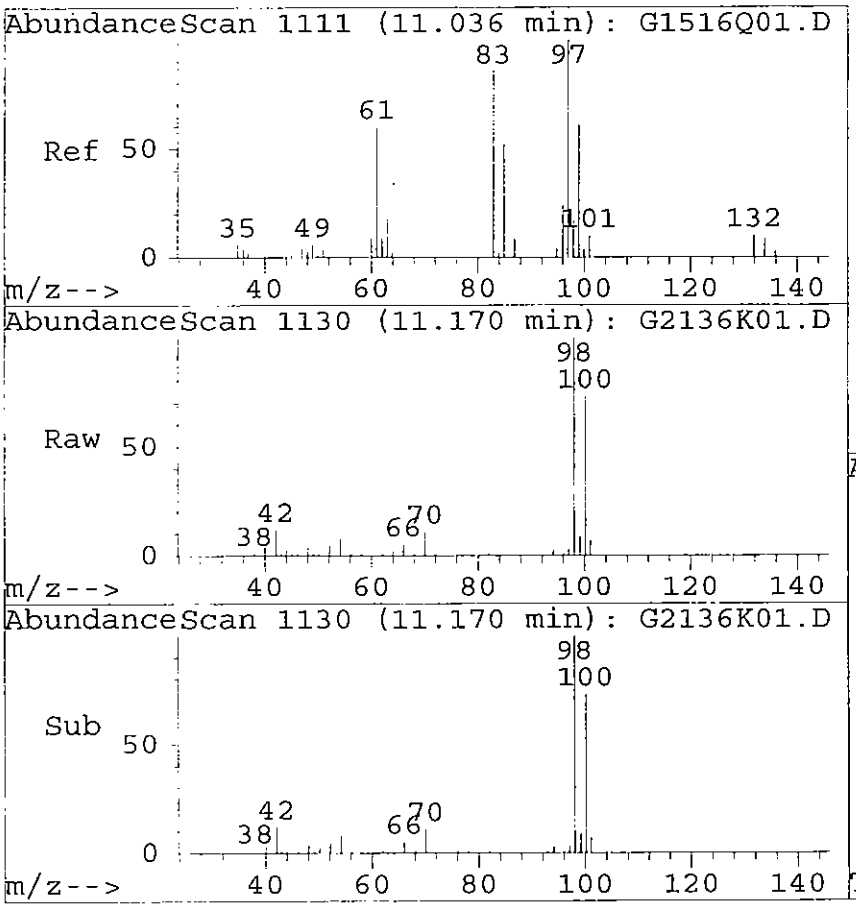


#21
18 methylene chloride 49 84
Concen: 1.48 ppb
RT: 4.99 min Scan# 349
Delta R.T. 0.02 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

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

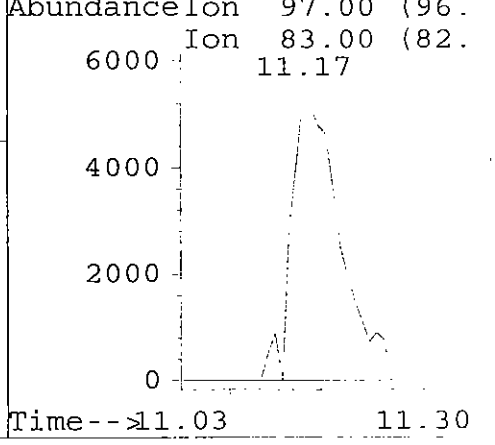


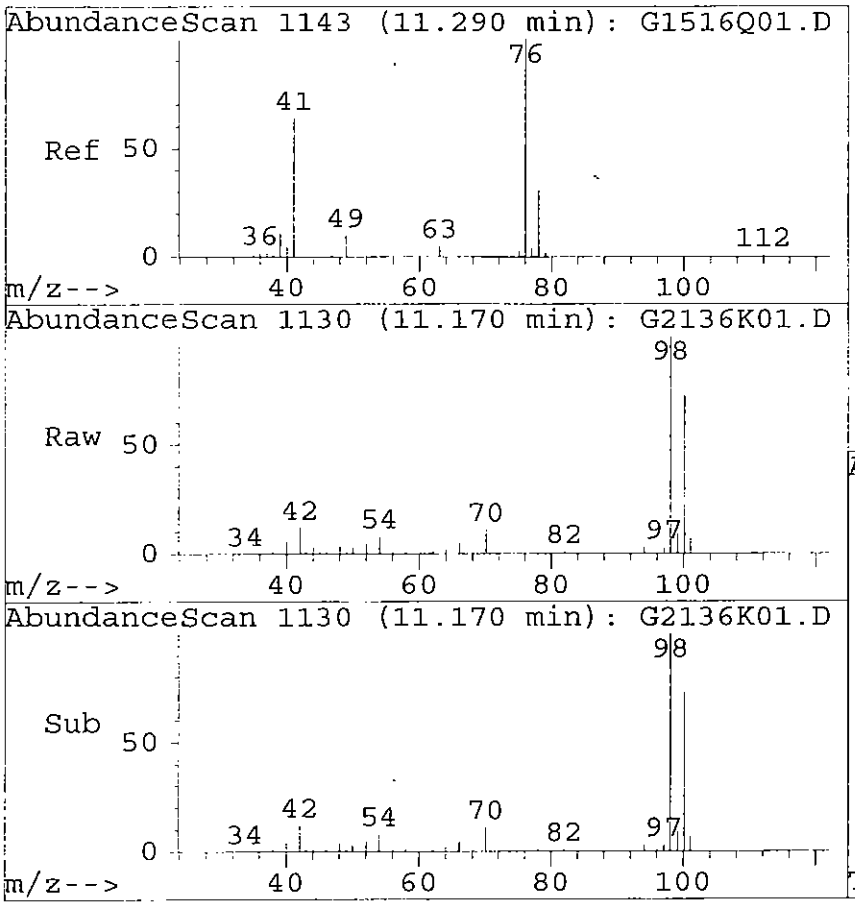


#58
48 112-tri-Cl-Et 97 83
Concen: 2.64 ppb
RT: 11.17 min Scan# 1130
Delta R.T. 0.14 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

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

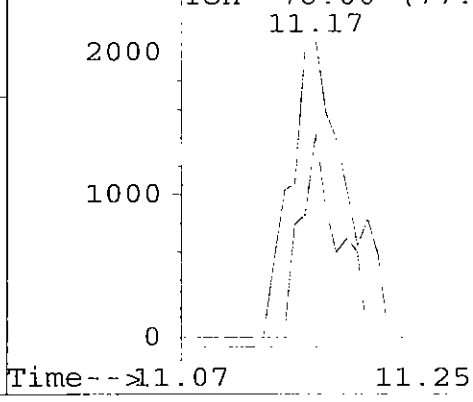


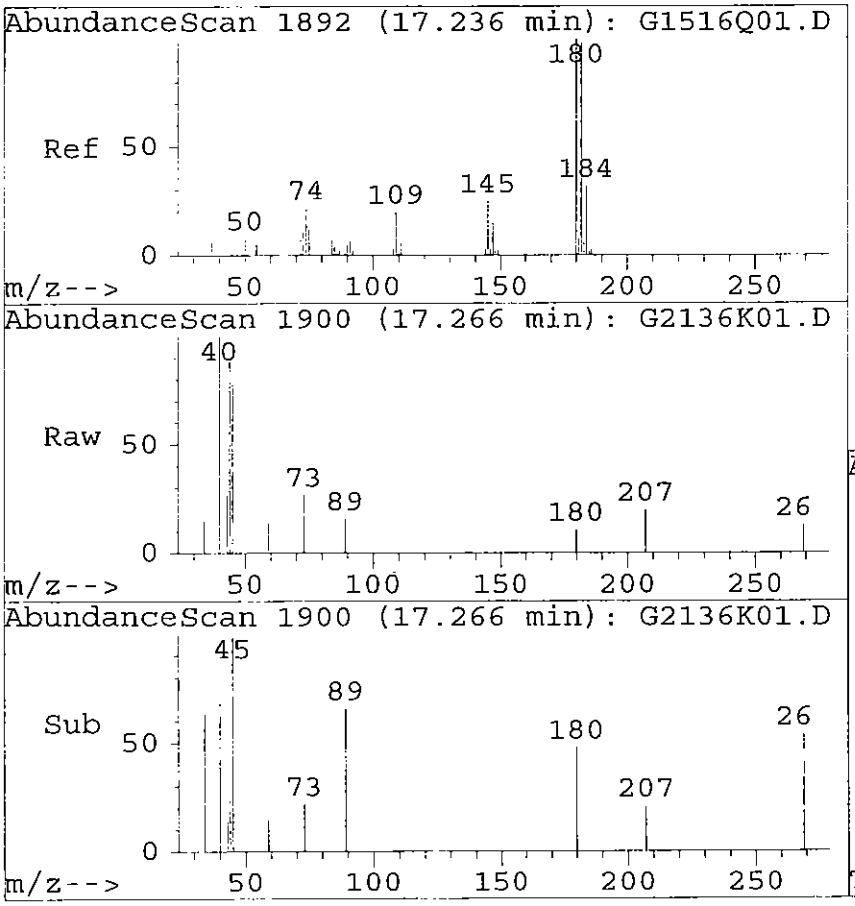


#65
49 1,3-di-cl-propane 76 78
Concen: 0.61 ppb
RT: 11.17 min Scan# 1130
Delta R.T. -0.12 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

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

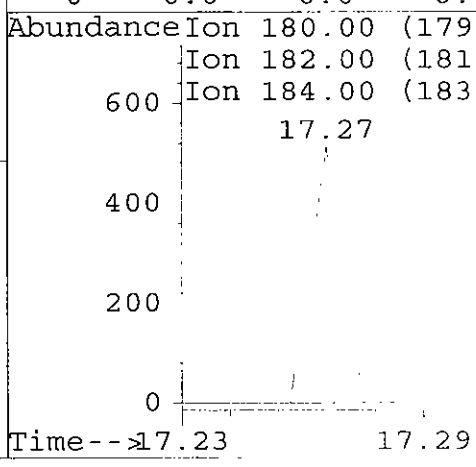




#96
87 124-tri-Cl-Bz 180 182
Concen: 0.62 ppb
RT: 17.27 min Scan# 1900
Delta R.T. 0.02 min
Lab File: G2136K01.D
Acq: 23 Apr 03 3:34 pm

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	21.4	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~~	?

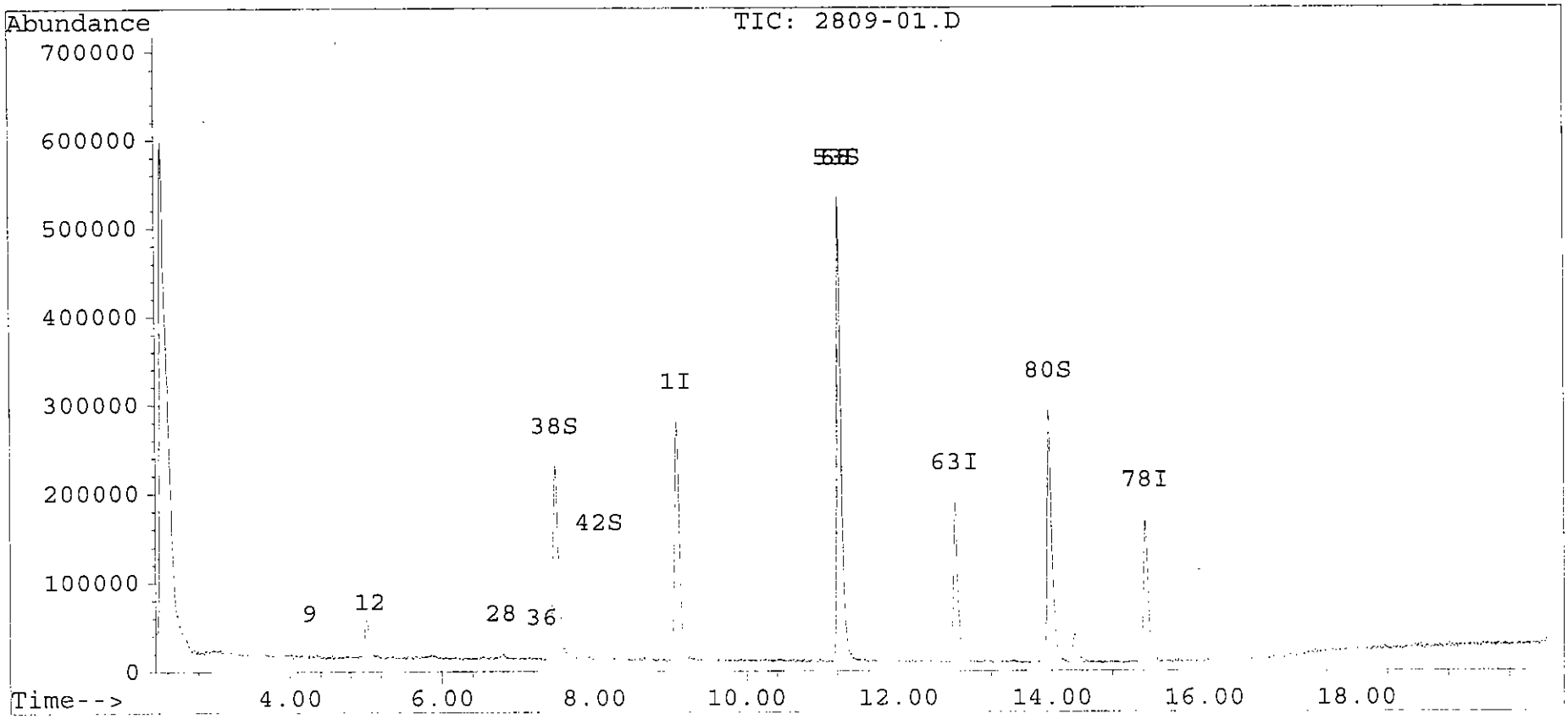
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

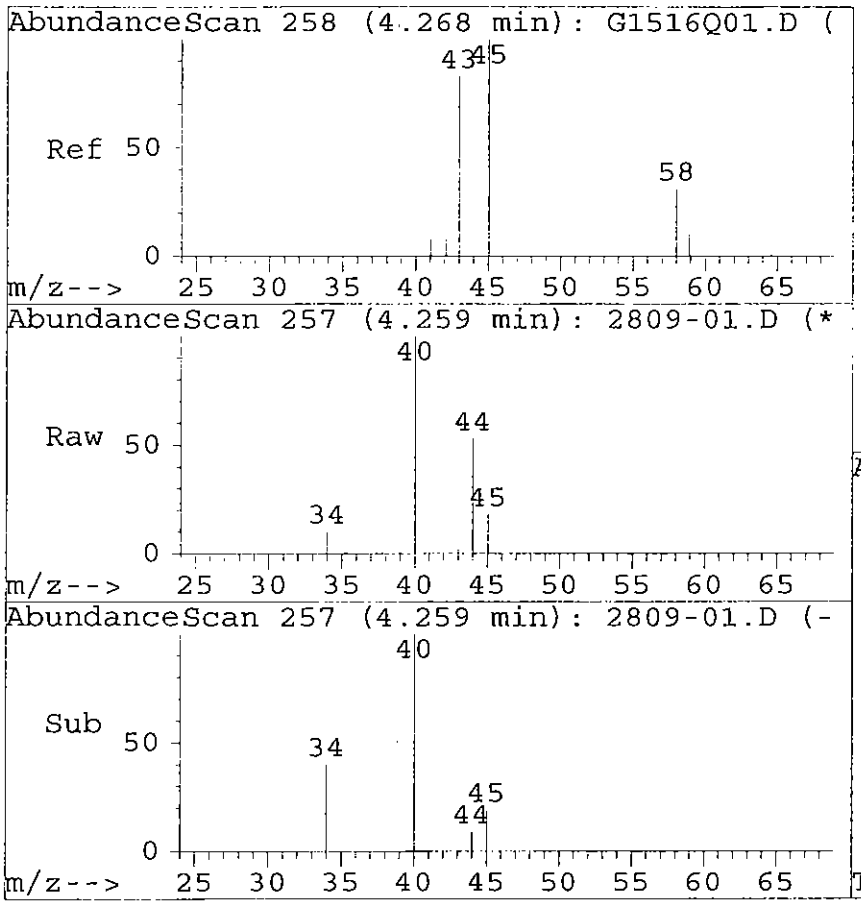
Quantitation Report

Data File : C:\HPCHEM\1\DATA\03G2136\2809-01.D
Acq On : 23 Apr 03 7:25 pm
Sample : f=1 8
Misc :
Quant Time: Apr 24 10:41 2003

Vial: 22
Operator: Eddie
Inst : GCMS-G
Multiplr: 1.00
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

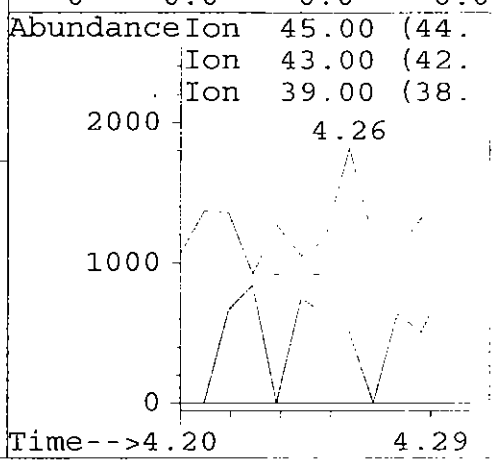


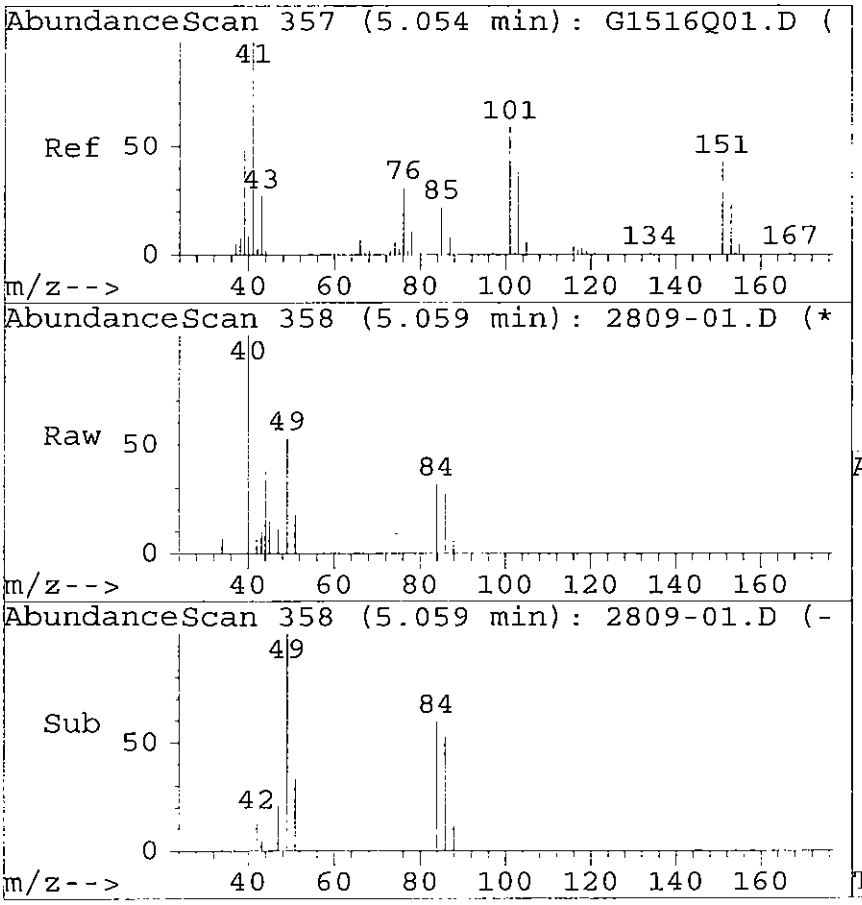


#9
111 isopropyl alcohol x10
Concen: 3.77 ppb
RT: 4.26 min Scan# 257
Delta R.T. -0.01 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

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

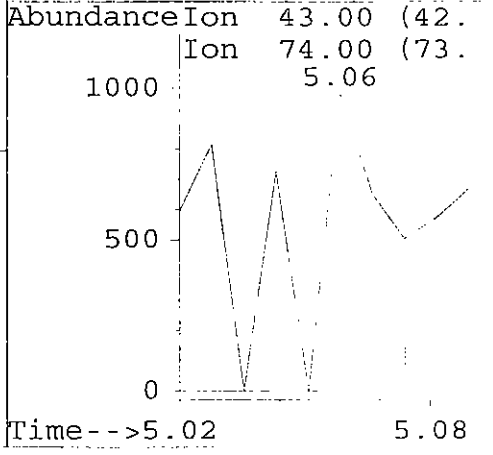


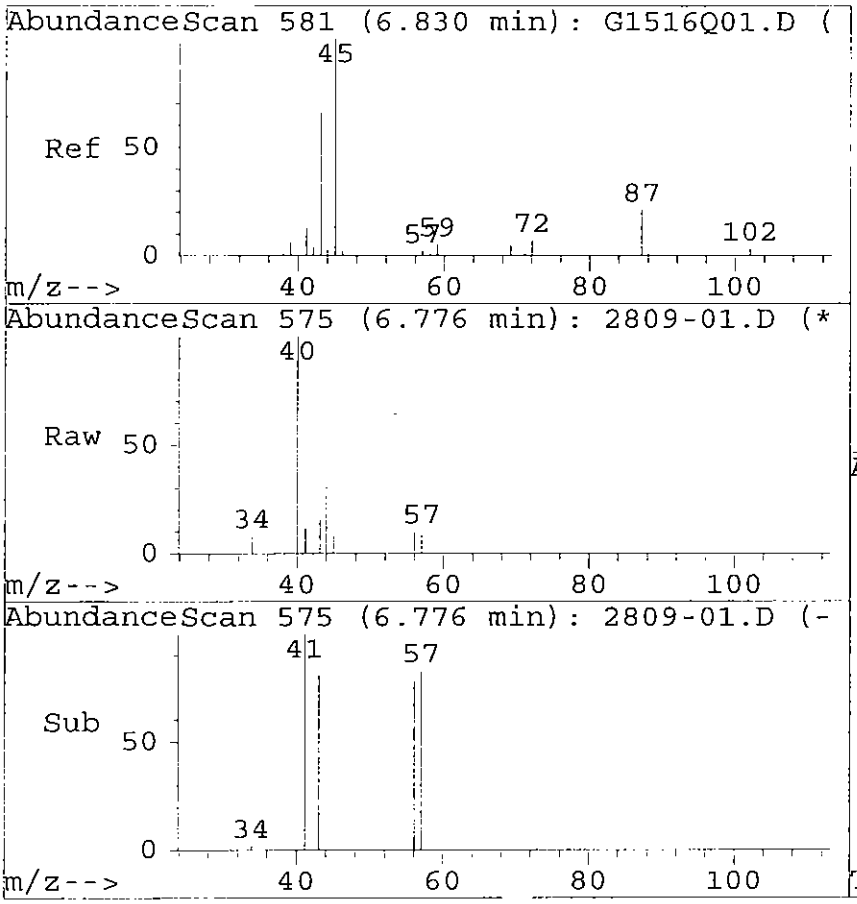


#12
119 methyl acetate
Concen: 0.46 ppb
RT: 5.06 min Scan# 358
Delta R.T. 0.00 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

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

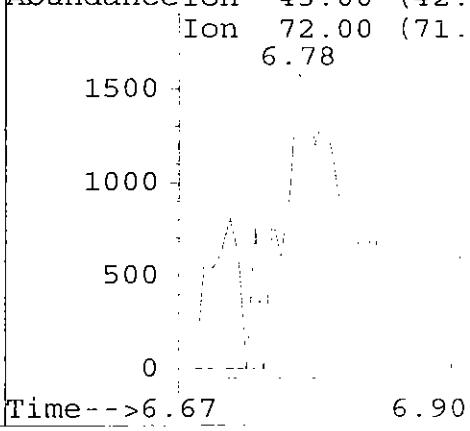


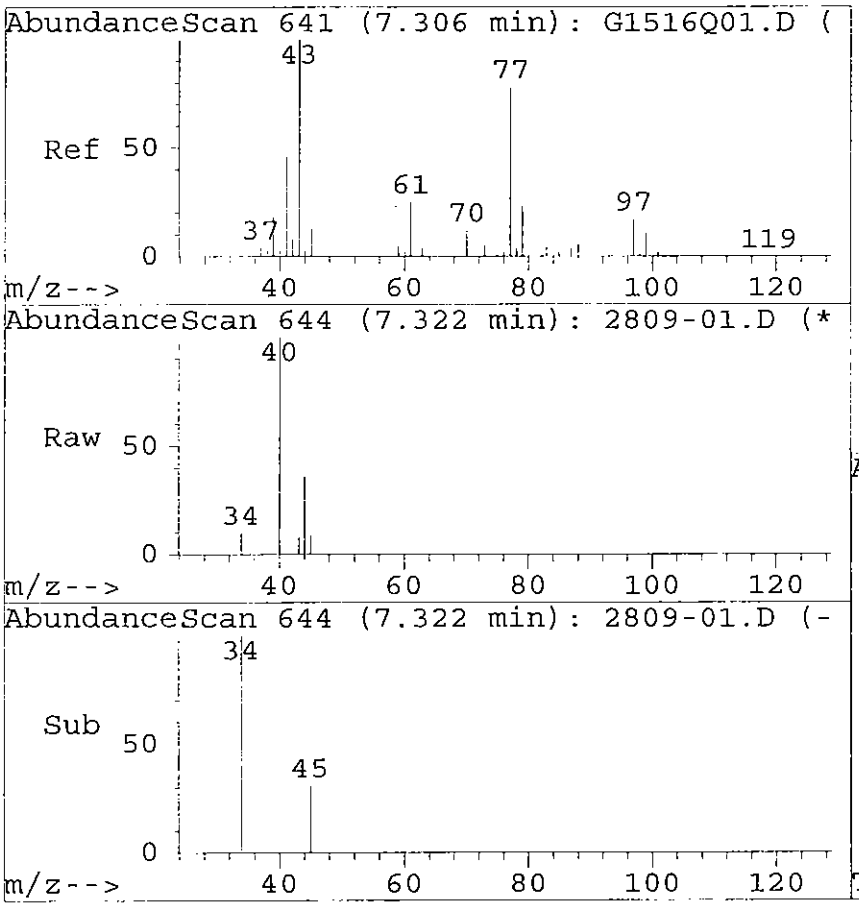


#28
91 2-butanone MEKx10
Concen: 1.23 ppb
RT: 6.78 min Scan# 575
Delta R.T. -0.06 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

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

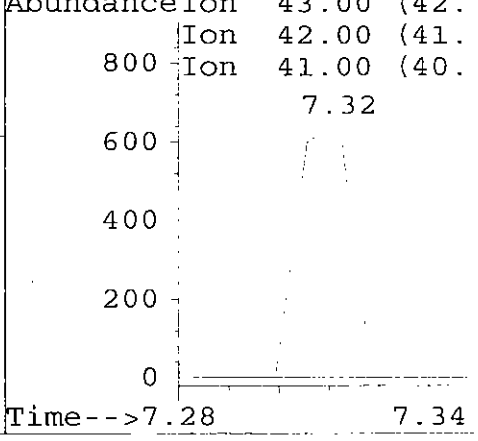


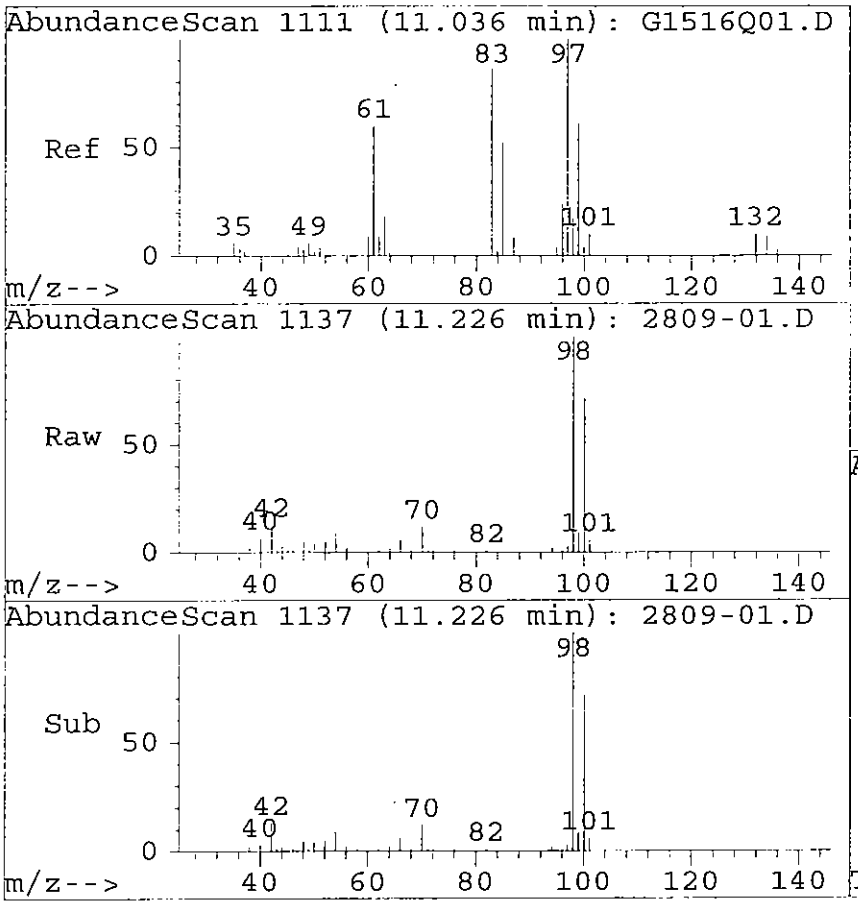


#36
117 Iso-butyl alcohol X10
Concen: 0.39 ppb
RT: 7.32 min Scan# 644
Delta R.T. 0.01 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

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

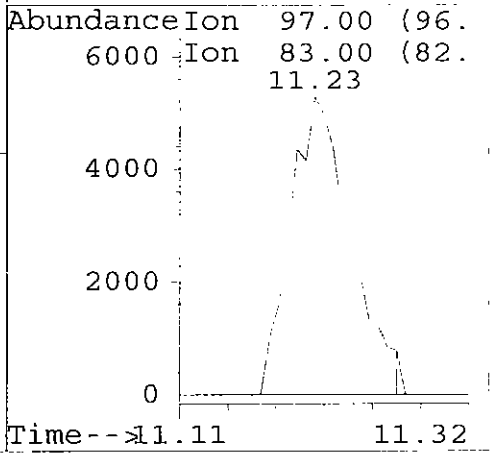


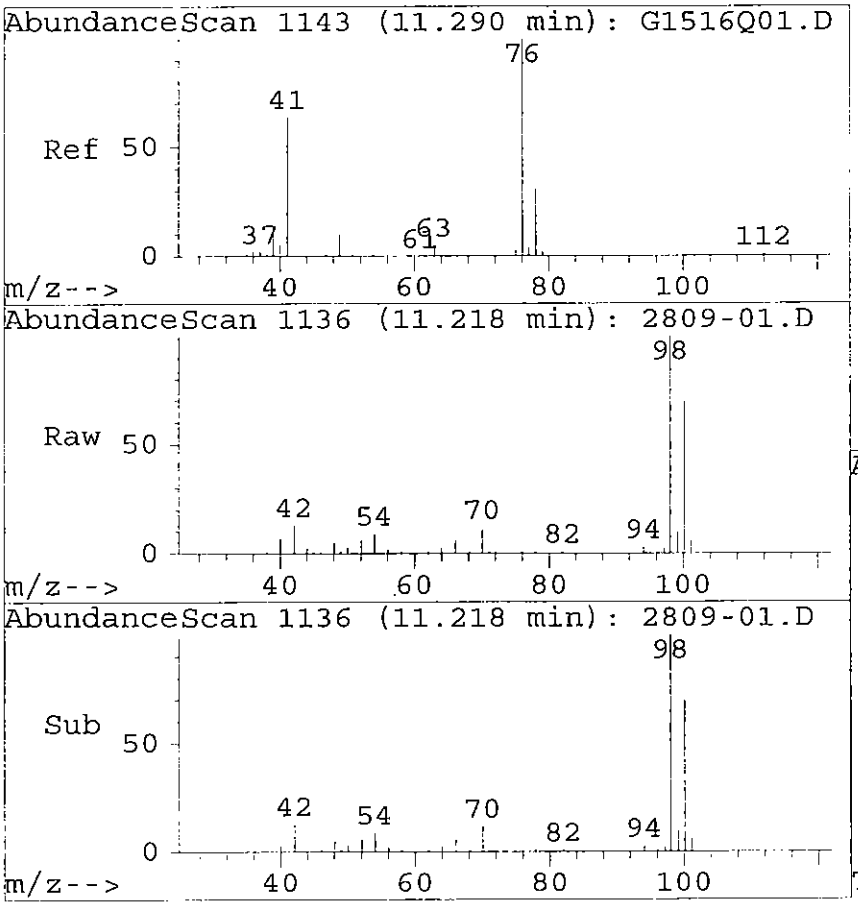


#58
48 112-tri-Cl-Et 97 83
Concen: 2.60 ppb
RT: 11.23 min Scan# 1137
Delta R.T. 0.20 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

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

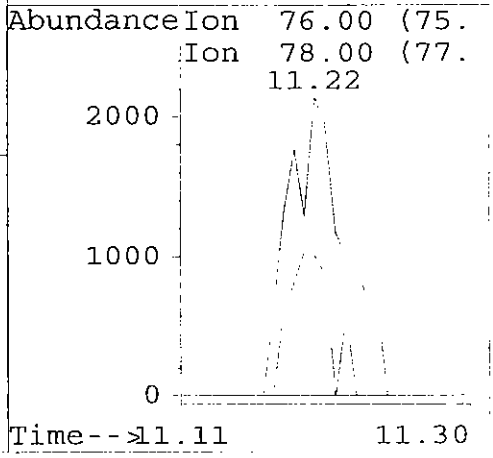




#65
49 1,3-di-cl-propane 76 78
Concen: 0.66 ppb
RT: 11.22 min Scan# 1136
Delta R.T. -0.07 min
Lab File: 2809-01.D
Acq: 23 Apr 03 7:25 pm

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

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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:	03-2809-4	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

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:	03-2809-6	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

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:	03-2809-7	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	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

4139

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
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

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

4141

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
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	

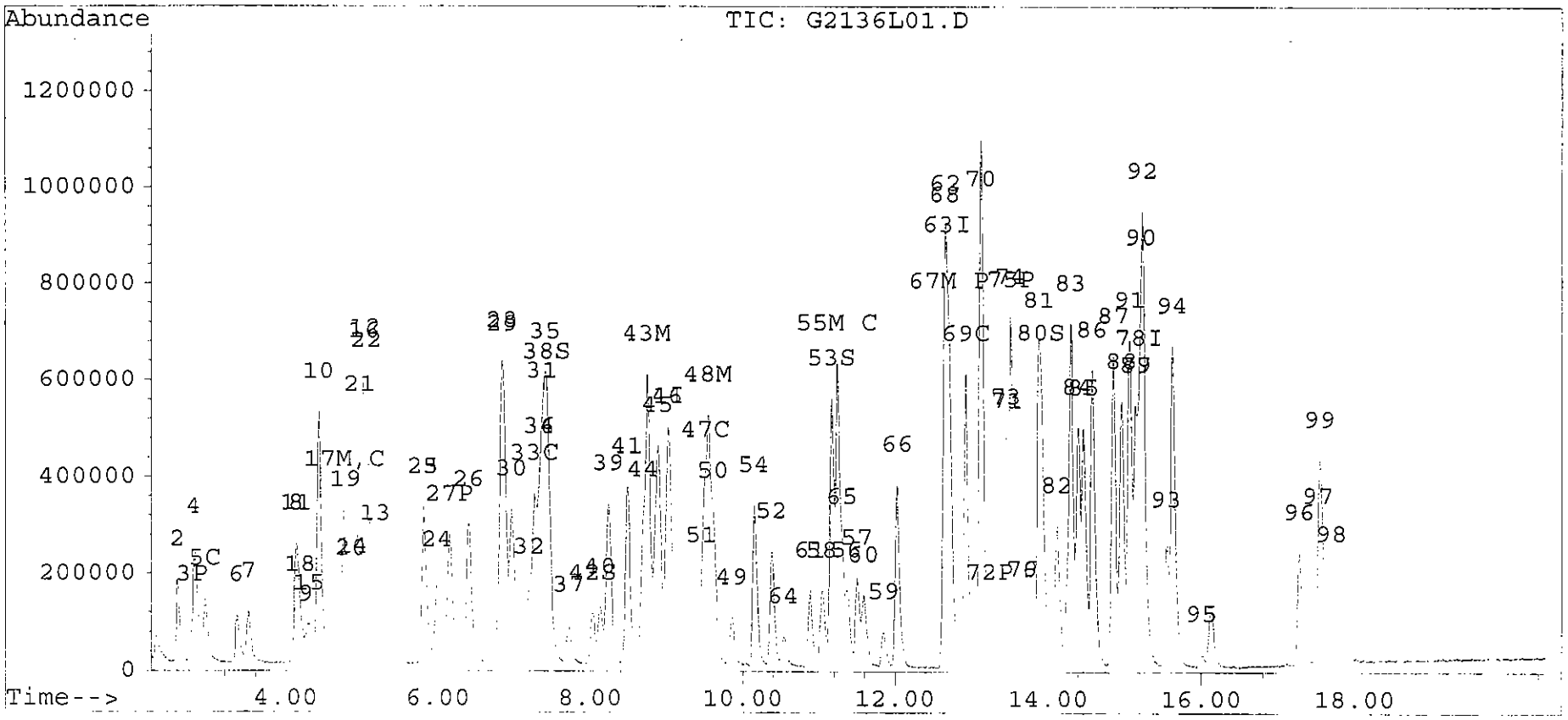
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report

4142

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

4145

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
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

4146

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
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

4147

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

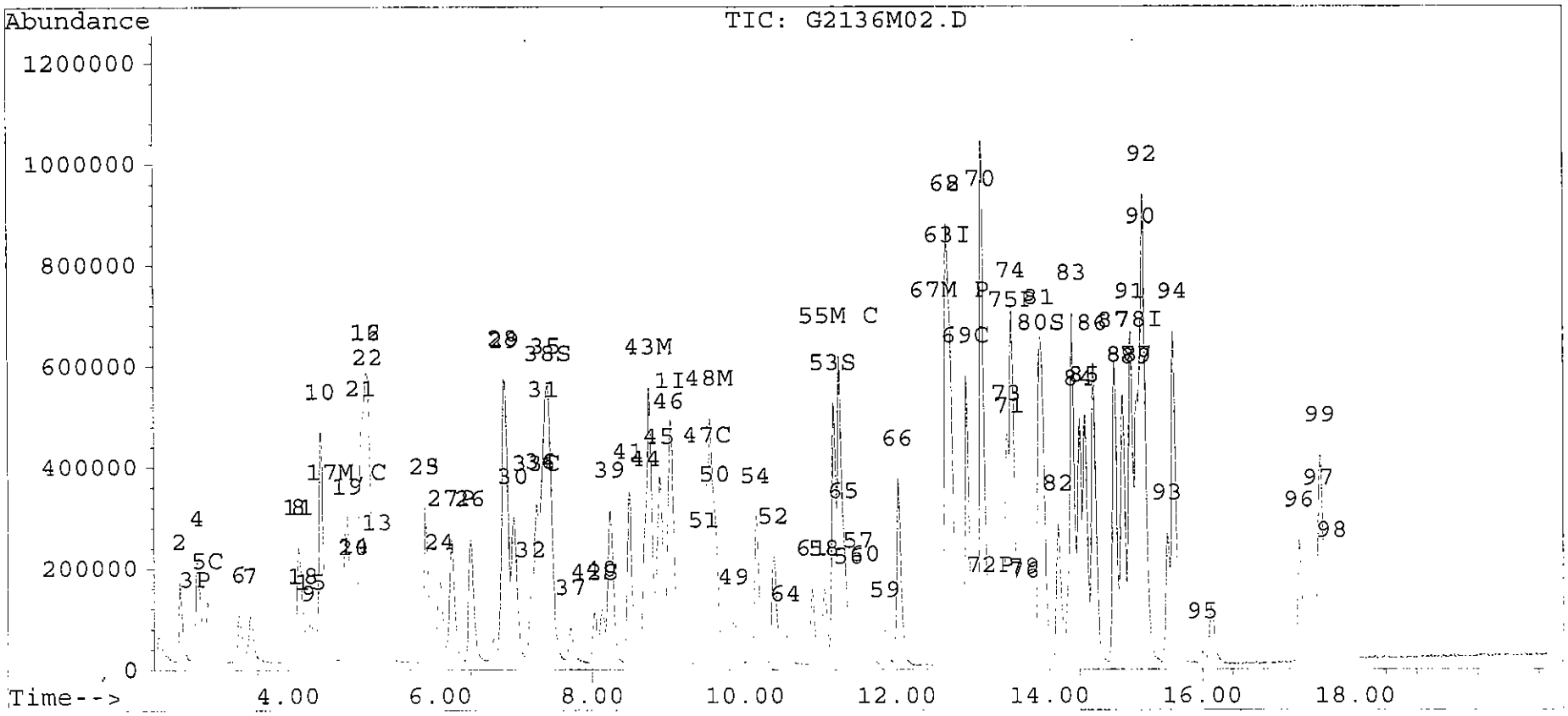
ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80 13-di-Cl-Bz 146	15.13	15.11	0.001	146	148	296.222	18.66	18.7	89	?
82	82 14-di-Cl-Bz 146	15.20	15.19	0.000	146	148	455.563	19.75	19.7	94	
81	81 sec-butylbenzene	15.06	15.04	0.001	105	134	1243.224	22.59	22.6	98	
77	77 4-iso-Pr-toluene	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



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

4150

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
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

4151

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
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
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	

4/23/03

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

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

4152

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

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	

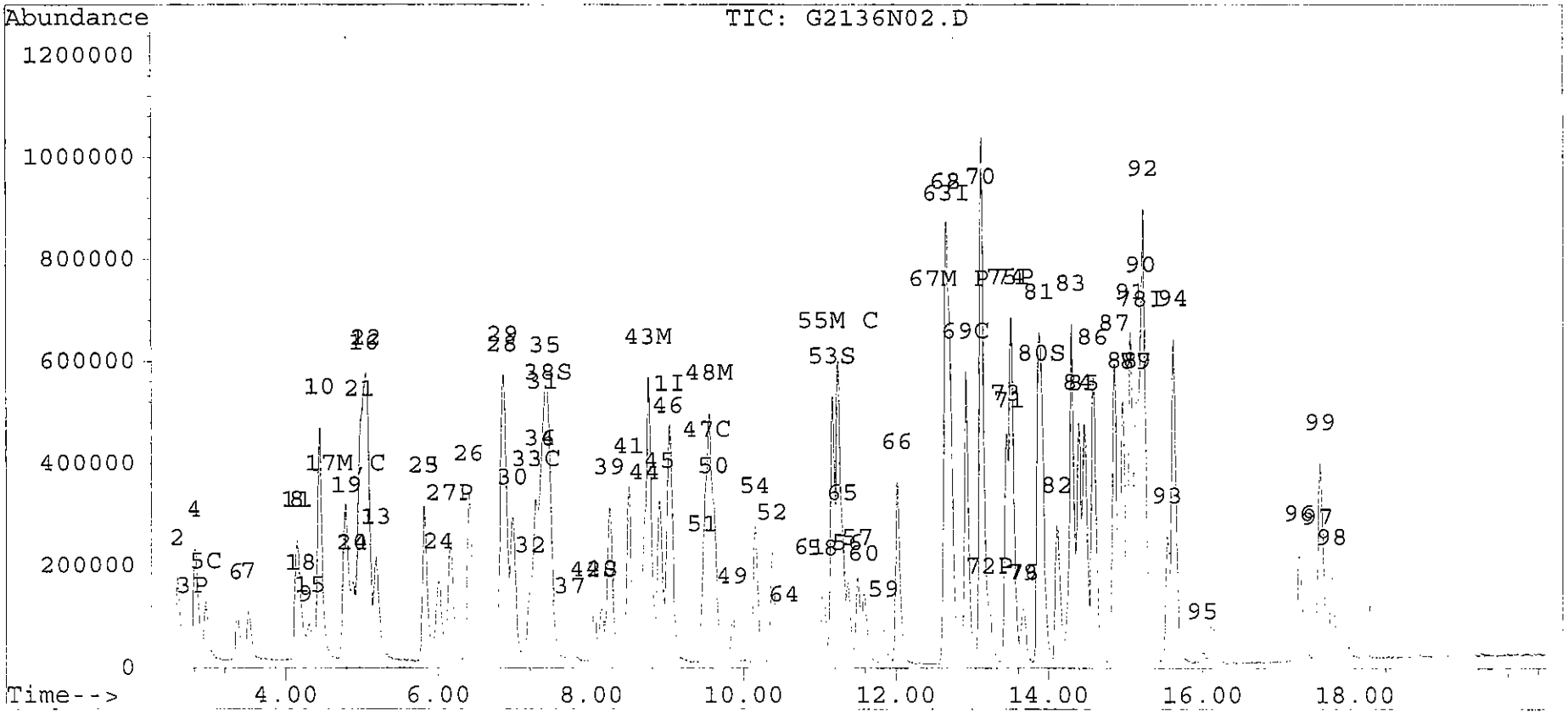
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report

4153

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

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:

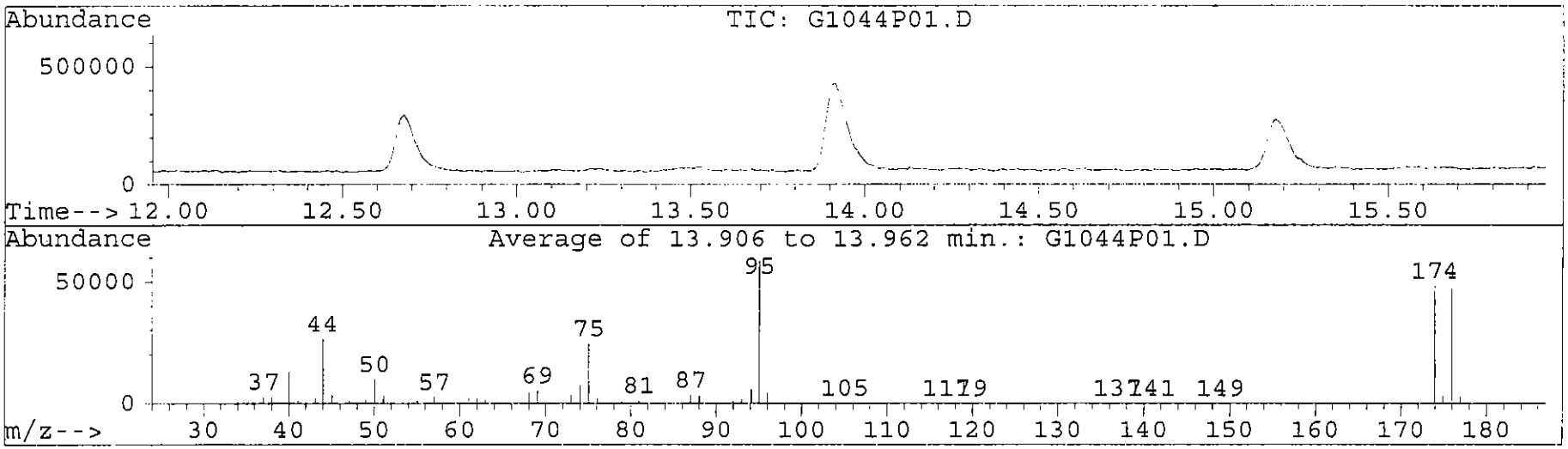
#	Client Sample No	Lab Sample ID	Sample Type	Data Filename	Analysis Date	Analysis Time
1	03G2136-LCS-01	03G2136-LCS-01	Lab Control Spike	G2136L01	04/23/03	11:44
2	MW-4-2MS	03-2809-4MS	Matrix Spike	G2136M02	04/23/03	13:39
3	MW-4-2MSD	03-2809-4MSD	Matrix Spike Duplicate	G2136N02	04/23/03	14:08
4	DUPE-1-2Q03	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						
15						
16						
17						
18						
19						
20						
21						
22						
23						
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					
13					
14					
15					
16					
17					
18					
19					
20					
21					
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	r^2
29)		115 Di isoprop ethe	0.108	1.340	1.315	1.320	1.351	1.317	1.125	44.32	1.000
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	1.000
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	1.000
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	1.000
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	0.99 P
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

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
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 sec-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

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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