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:	11/12/2003
Project ID:	JPL	Service ID:	36034	Collected by:	
		Lab Sample ID:	03G4771-MB-01	Received Date:	11/12/2003
Sample ID:	**03G4771-MB-01**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Method Blank	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/12/03	Anal. Date:	11/12/03
Batch No:	03G4771	Prep. No:	–	Anal. Time:	01:17
Data File Name:	G4771K01	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	0.4	J
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	108
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	115
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	112
4	TOLUENE-D8	2037-26-5	73-129	104
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	104
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	102
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.

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

1808

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771K01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 12 01:17 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:52 2003
Print Time : Wed Nov 12 09:52 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.64	0.000	96	70	650.041	10.00		0.00	
47	47 Chlorobezene-d5	11.54	11.54	0.000	117	82	514.703	10.00		0.00	
62	62 1,4-Dichlorobenze	13.84	13.85	0.000	152	150	313.855	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	340.959	22.34	22.3	111.69%	
29	29 1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	311.077	22.88	22.9	114.41%	
55	55 toluene-d8	9.91	9.91	0.000	98	100	1182.862	20.82	20.8	104.10%	
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	458.535	21.56	21.6	107.80%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
94	94 Isopropyl Alcohol	3.90	4.10	-0.025	45	43	0.169	1.27	1.3	100	#
18	18 methylene chlorid	4.21	4.22	0.000	84	49	18.425	0.40	0.4	78	#
101	101 TAME	7.64	7.41	0.029	73	43	8.959	1.12	1.1	46	#
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	9.89	9.77	0.011	43	58	5.021	2.01	2.0	1	#
57	57 2-hexanone X5	10.76	10.76	0.000	43	58	0.338	5.06	5.1	22	#
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	15.80	15.78	0.000	128	129	2.479	1.18	1.2	71	

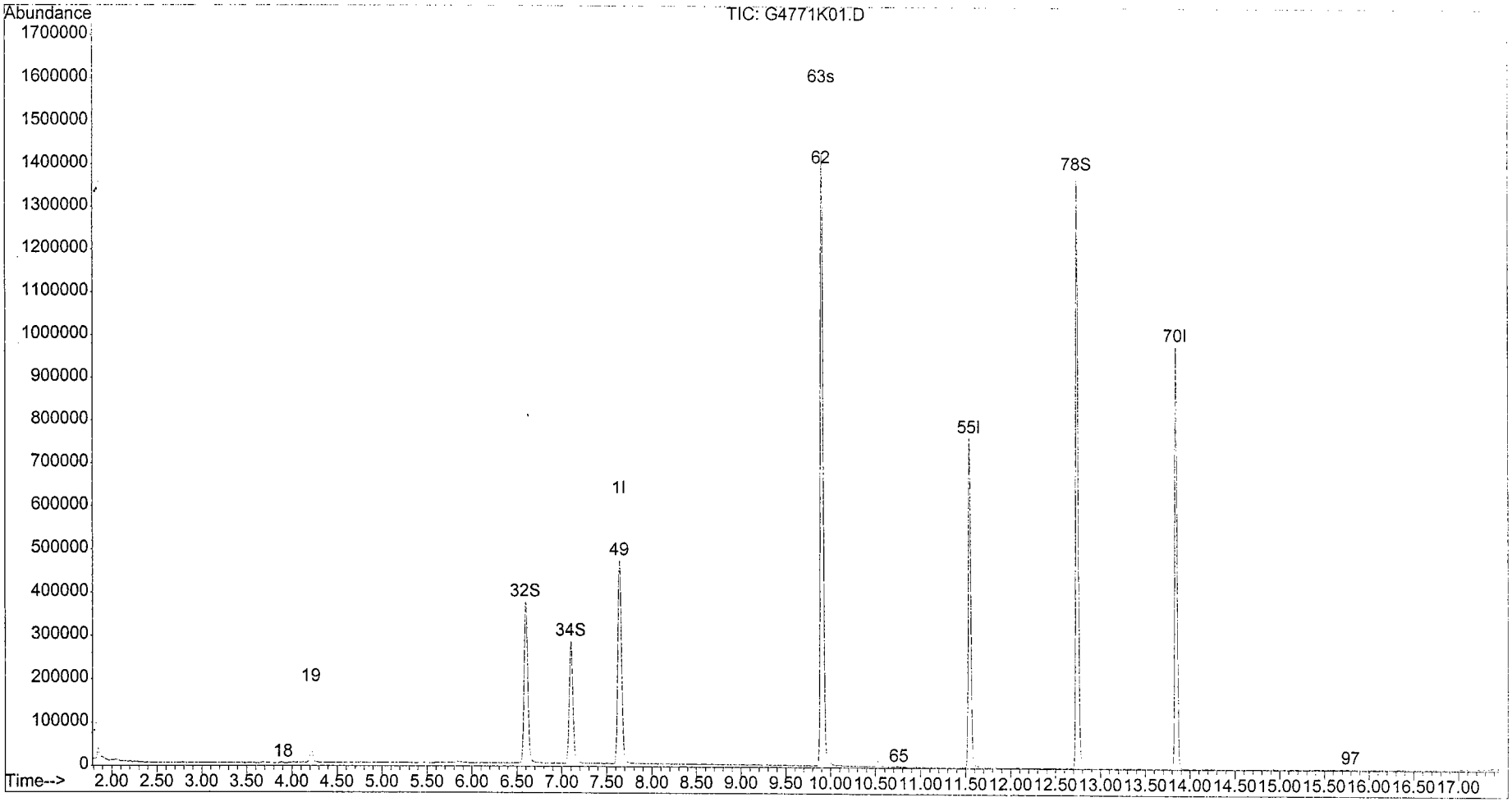
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

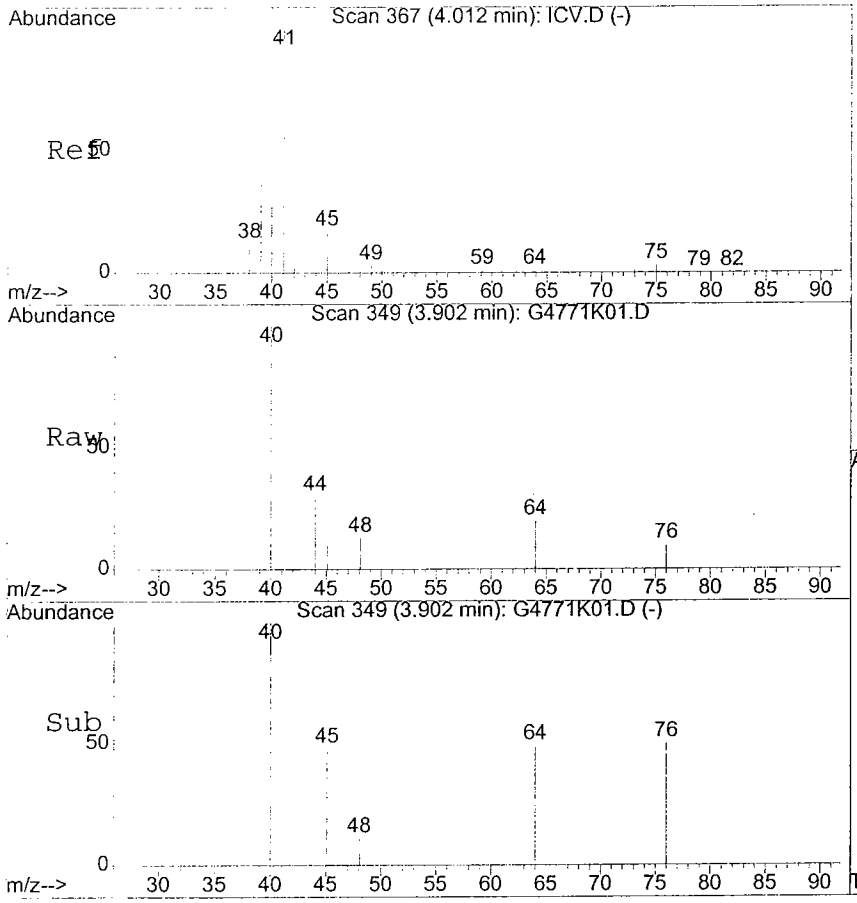
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

1809

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771K01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 12 01:17 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:52 2003
Print Time : Wed Nov 12 09:52 2003
Miscleneous :

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

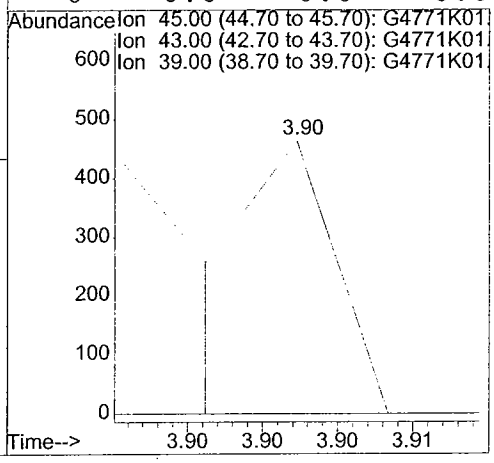


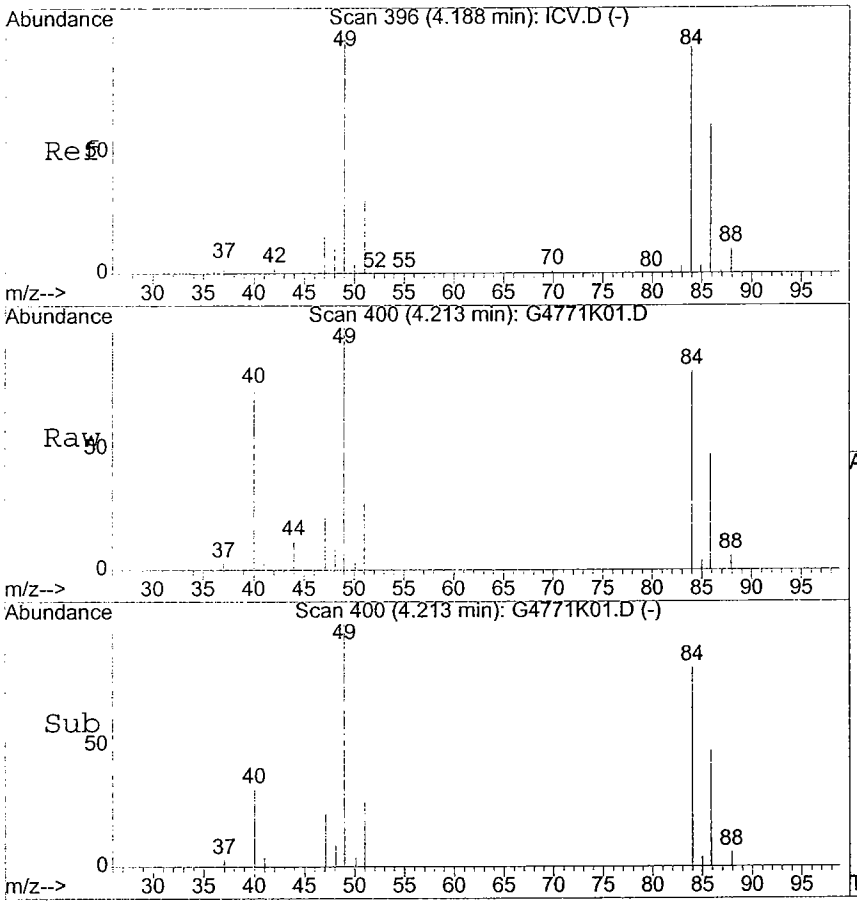


#18
94 Isopropyl Alcoholx10
Concen: 1.27 ppb
RT: 3.90 min Scan# 349
Delta R.T. -0.19 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion:45 Resp: 169

Ion	Ratio	Lower	Upper
45	100		
43	127.2	0.0	0.0#
39	0.0	0.0	0.0
0	0.0	0.0	0.0

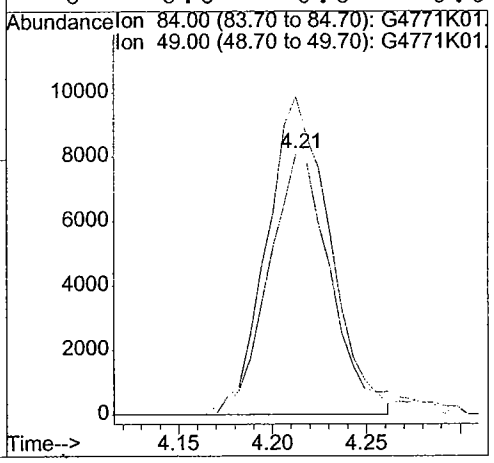


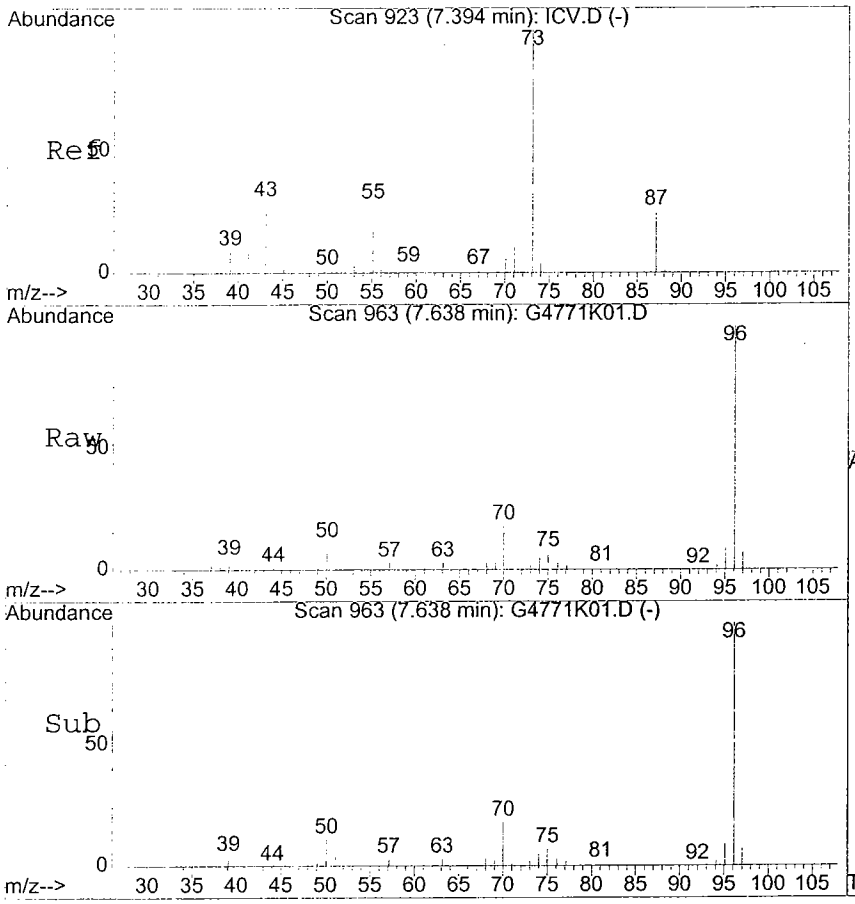


#19
18 methylene chloride
Concen: 0.40 ppb
RT: 4.21 min Scan# 400
Delta R.T. -0.01 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion:84 Resp: 18425

Ion	Ratio	Lower	Upper
84	100		
49	122.5	80.4	120.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

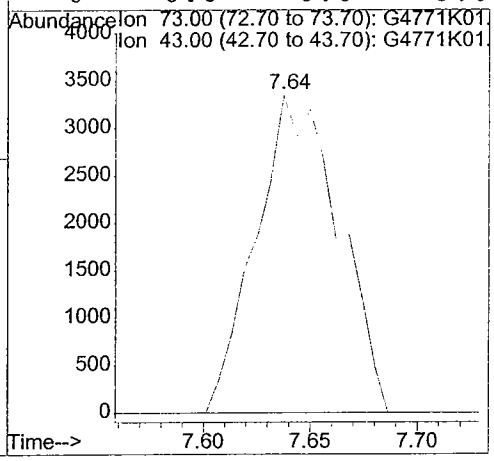


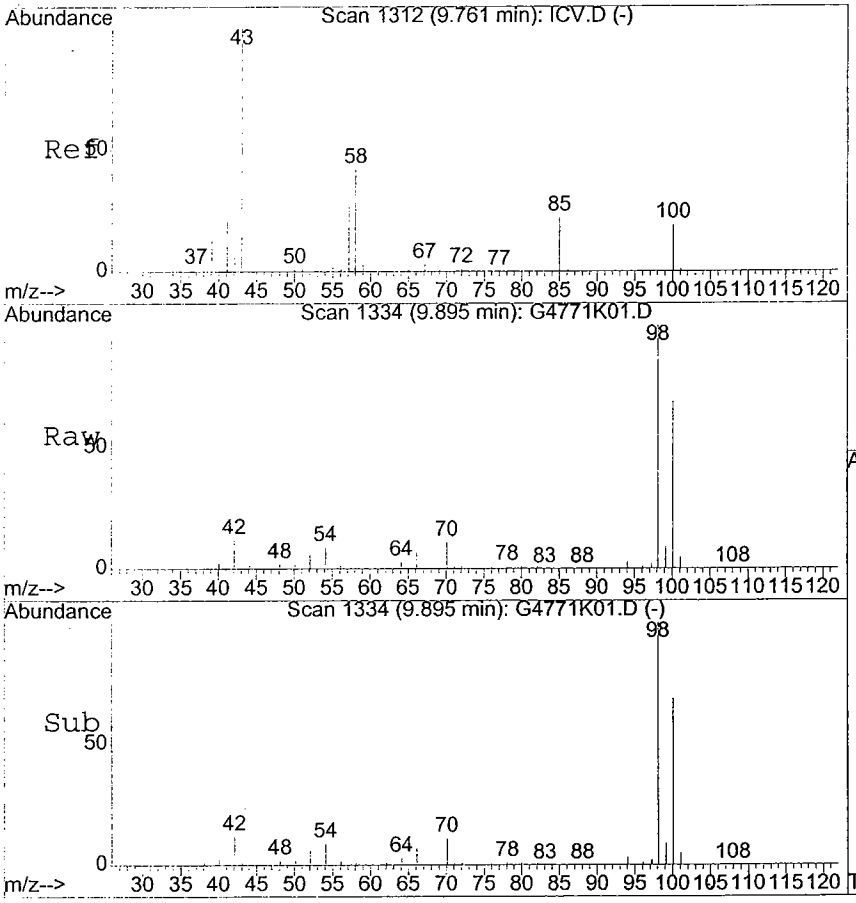


#49
101 TAME
Concen: 1.12 ppb
RT: 7.64 min Scan# 963
Delta R.T. 0.23 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion:73 Resp: 8959

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.7	34.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

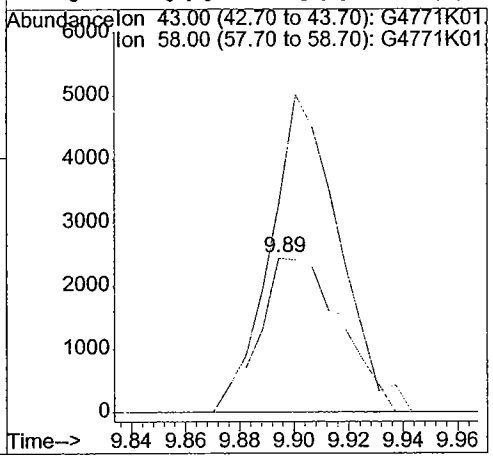


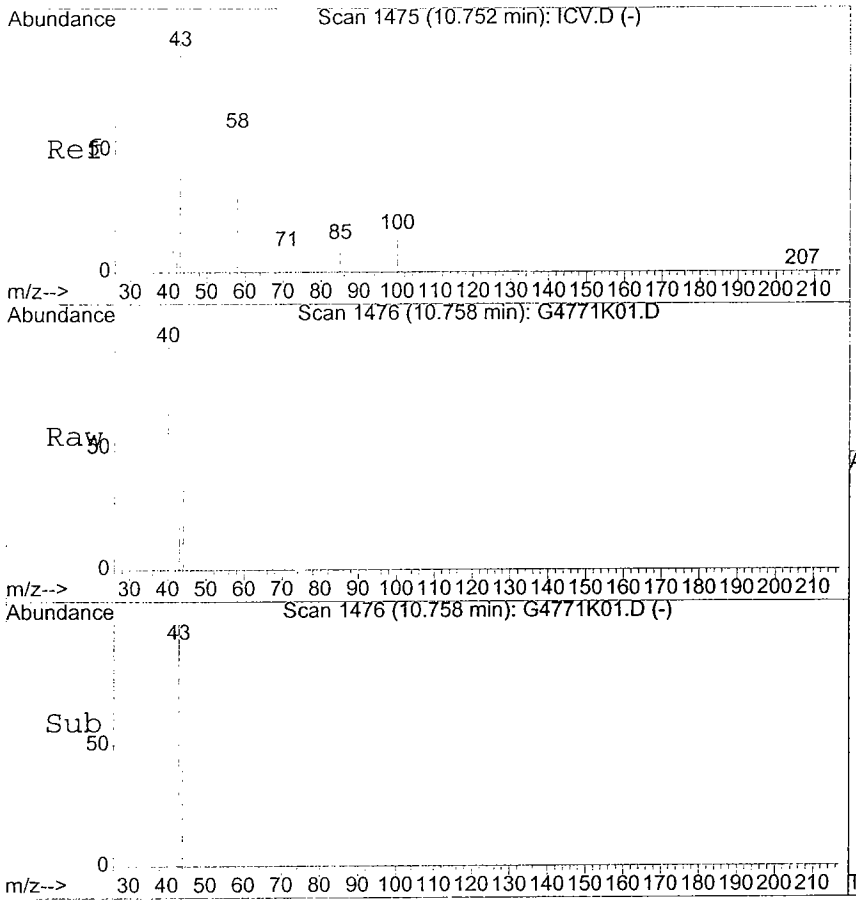


#62
54 MIBK
Concen: 2.01 ppb
RT: 9.89 min Scan# 1334
Delta R.T. 0.13 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion:43 Resp: 5021

Ion	Ratio	Lower	Upper
43	100		
58	134.9	20.1	60.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

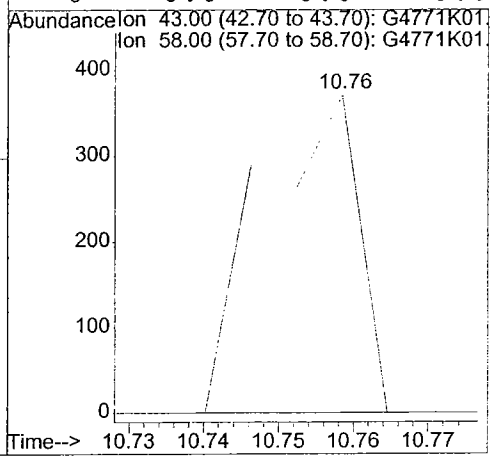


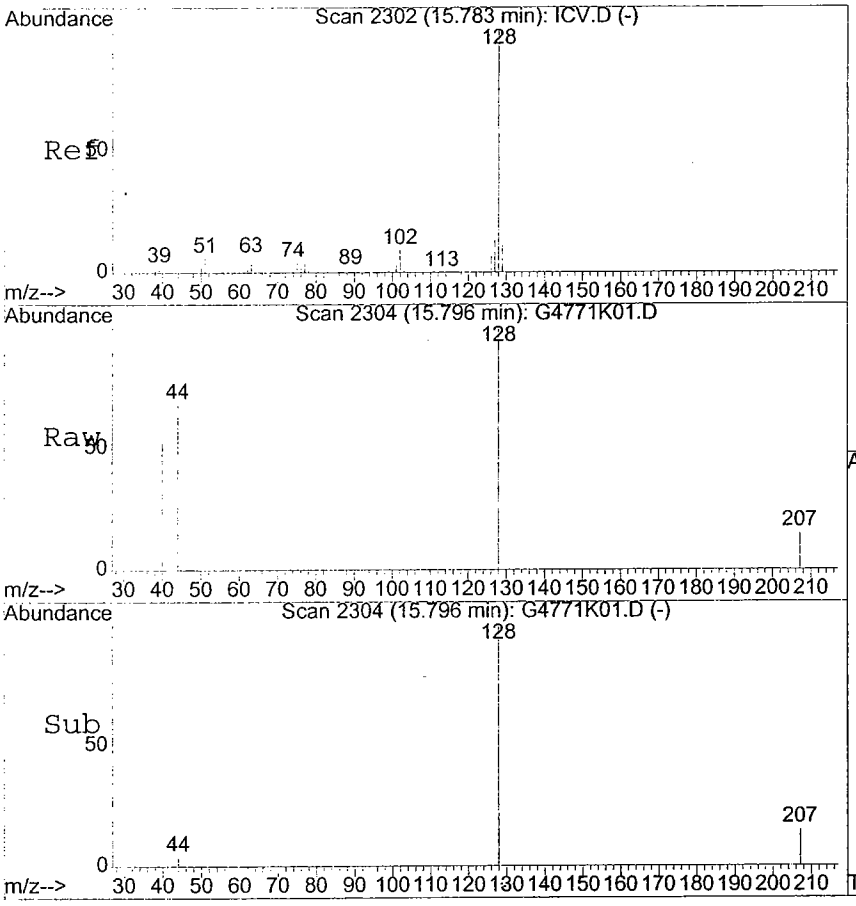


#65
57 2-hexanone X5
Concen: 5.06 ppb
RT: 10.76 min Scan# 1476
Delta R.T. 0.00 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion:43 Resp: 338

Ion	Ratio	Lower	Upper
43	100		
58	0.0	38.4	78.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

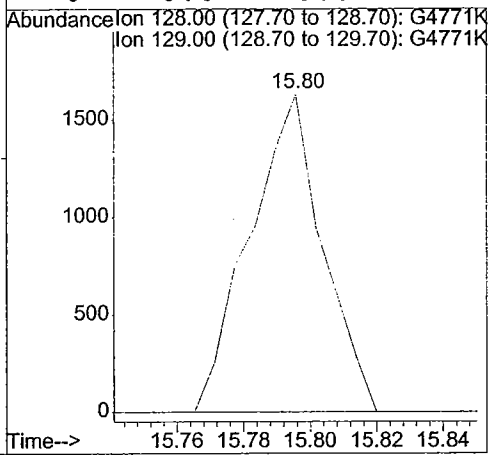




#97
88 naphthalene
Concen: 1.18 ppb
RT: 15.80 min Scan# 2304
Delta R.T. 0.01 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion:128 Resp: 2479

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	31.1
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:	11/07/2003
Project ID:	JPL	Service ID:	36034	Collected by:	JR
		Lab Sample ID:	03-6034-1	Received Date:	11/07/2003
Sample ID:	**DUPE-2-4-Q03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/12/03	Anal. Date:	11/12/03
Batch No:	03G4771	Prep. No:	–	Anal. Time:	05:18
Data File Name:	6034-01	Sample Amount:	25.0 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
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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
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18	4-CHLOROTOLUENE	106-43-4	μg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	μg/L	0.5	<0.5	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	0.5	<0.5	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	115
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	113
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	102
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	102
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.

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

1815

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6034-01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 12 05:18 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:18 2003
Print Time : Wed Nov 12 09:18 2003
Miscleneous :

Sample : f=1 dup
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.64	0.000	96	70	628.729	10.00		0.00	
47	47 Chlorobezene-d5	11.54	11.54	0.000	117	82	504.664	10.00		0.00	
62	62 1,4-Dichlorobenze	13.84	13.85	0.000	152	150	311.471	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery	
27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	333.182	22.57	22.6	112.85%	
29	29 1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	301.499	22.93	22.9	114.64%	
55	55 toluene-d8	9.91	9.91	0.000	98	100	1144.887	20.55	20.6	102.76%	
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	450.814	21.36	21.4	106.80%	
Target Compounds										Qvalue	
<<< I1 : ISTD ID = 1 >>>											
5	5 vinyl chloride	2.43	2.22	0.027	62	64	6.106	0.57		0.6 68	
95	95 Tert butyl alcoho	4.40	4.51	-0.014	59	57	0.475	1.15		1.2 100	#
92	92 Nitro Methane(x10	5.87	5.84	0.005	61	46	1.275	1.74		1.7 89	
101	101 TAME	7.66	7.41	0.032	73	43	8.350	1.11		1.1 46	#
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	9.91	9.77	0.012	43	58	4.927	2.02		2.0 1	#
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	15.79	15.78	0.000	128	129	0.598	1.14		1.1 71	

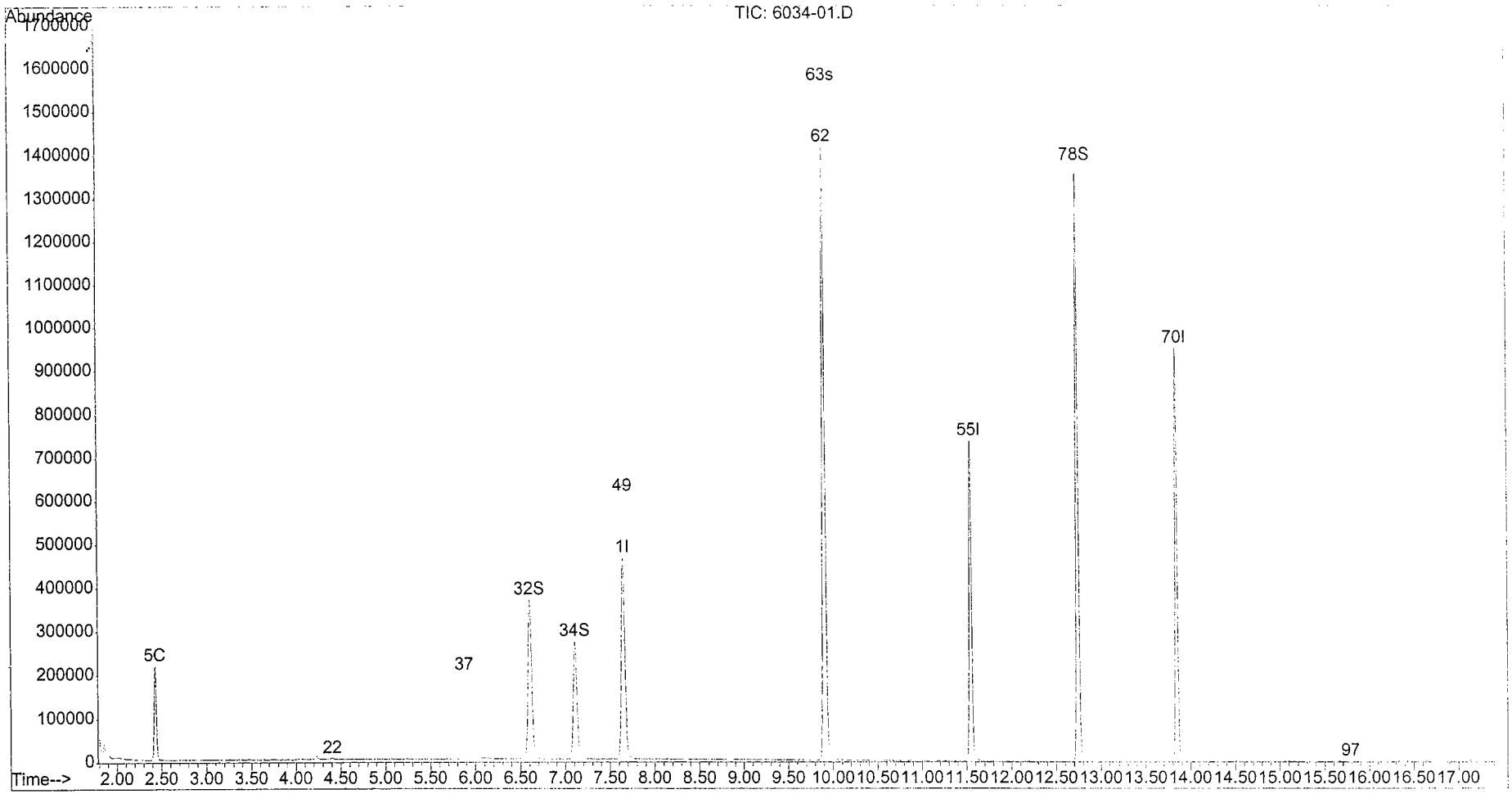
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

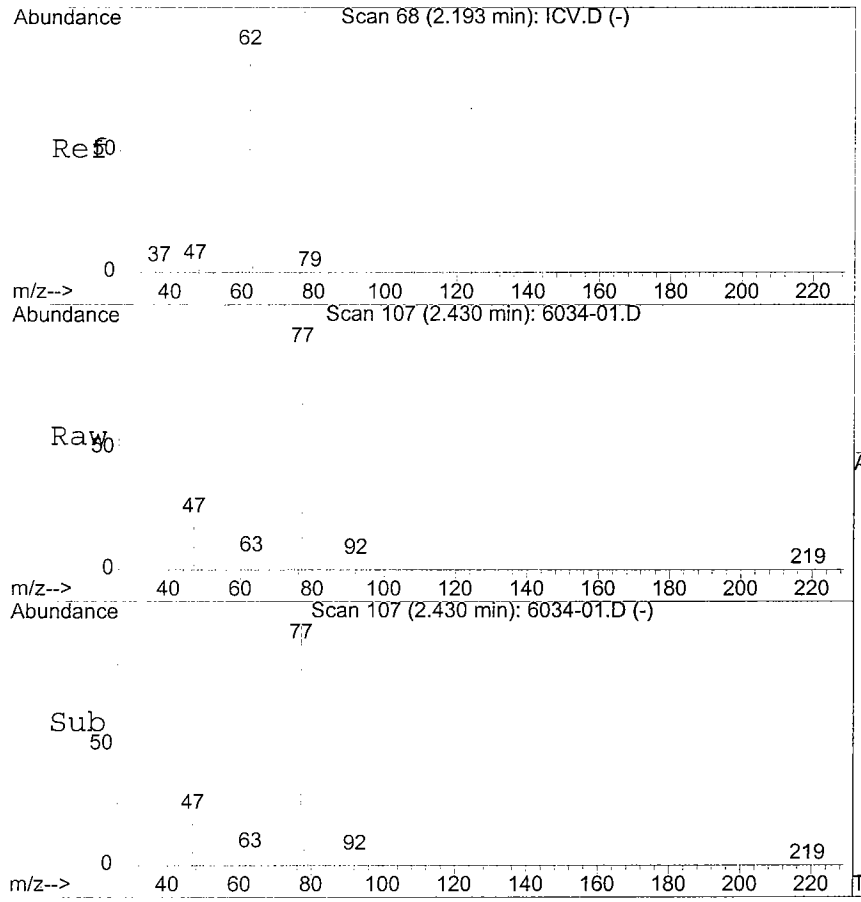
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6034-01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 12 05:18 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:18 2003
Print Time : Wed Nov 12 09:18 2003
Miscleneous :

Sample : f=1 dup
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

1816

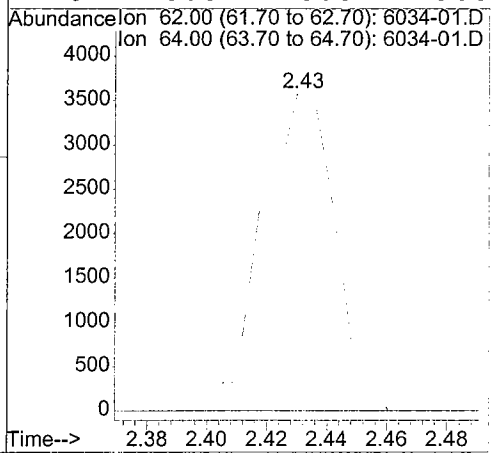


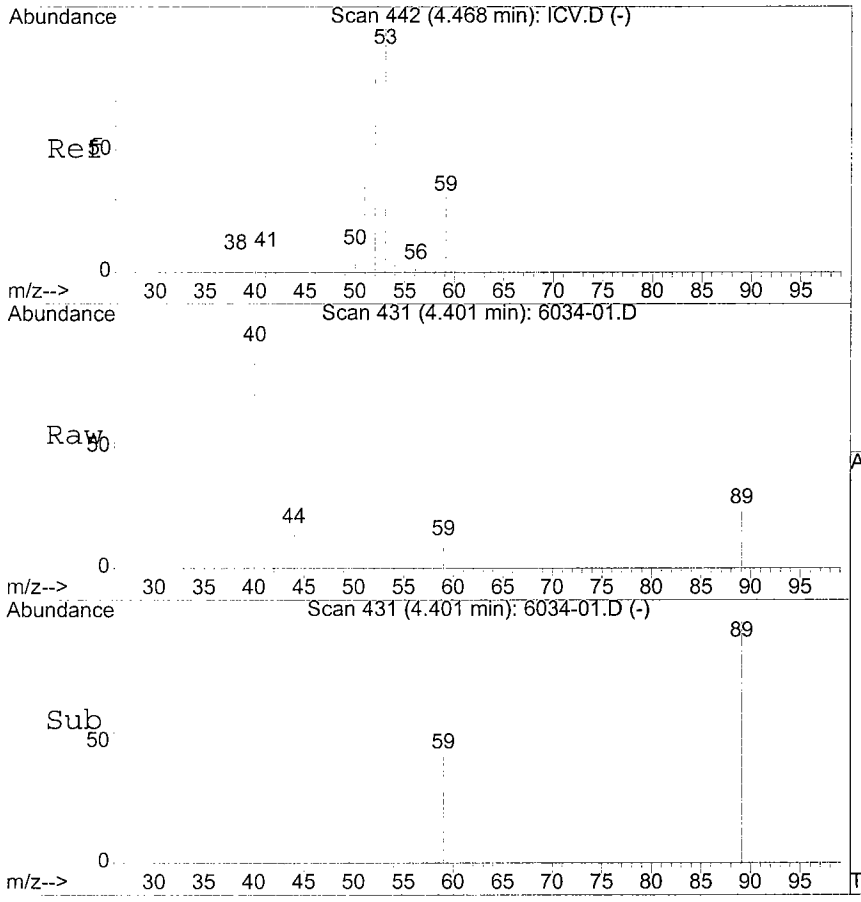


#5
5 vinyl chloride
Concen: 0.57 ppb
RT: 2.43 min Scan# 107
Delta R.T. 0.21 min
Lab File: 6034-01.D
Acq: 12 Nov 2003 5:18 am

Tgt Ion:62 Resp: 6106

Ion	Ratio	Lower	Upper
62	100		
64	14.6	12.8	52.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

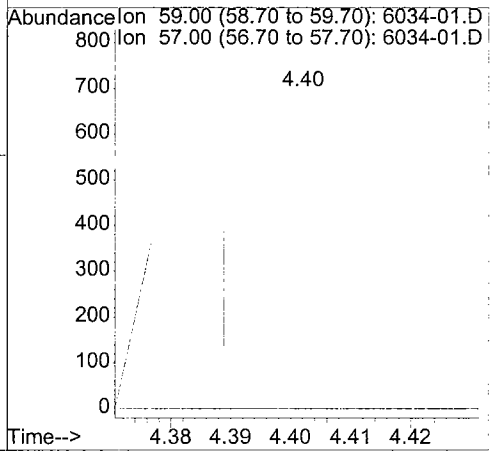


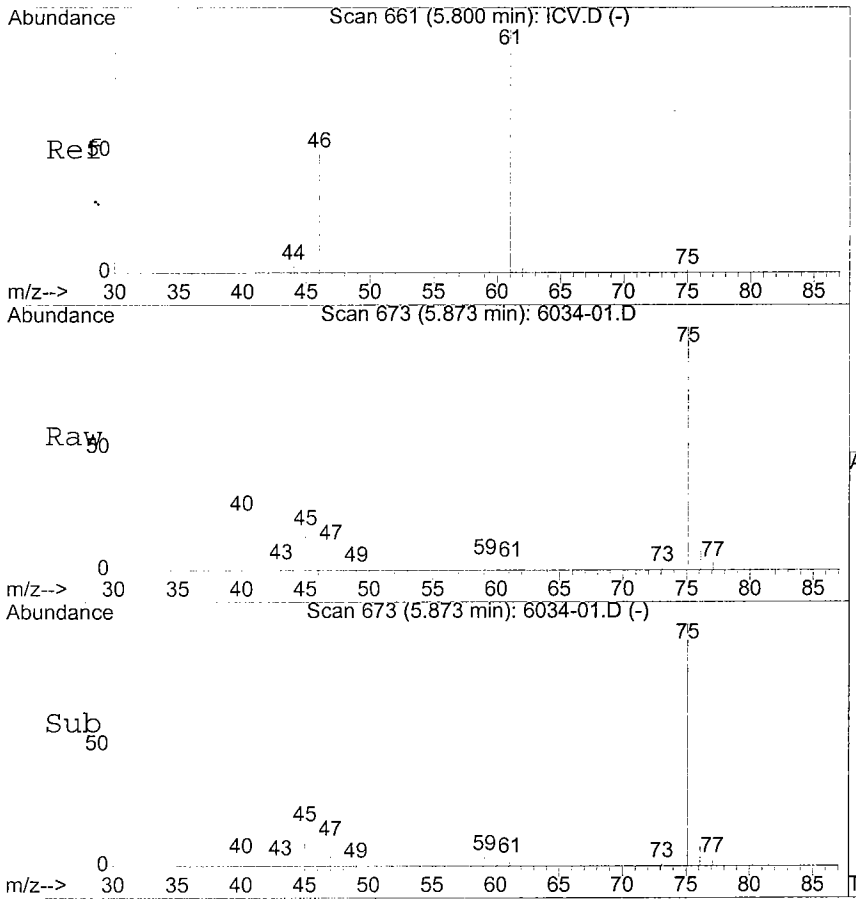


#22
95 Tert butyl alcoholx10
Concen: 1.15 ppb
RT: 4.40 min Scan# 431
Delta R.T. -0.11 min
Lab File: 6034-01.D
Acq: 12 Nov 2003 5:18 am

Tgt Ion:59 Resp: 475

Ion	Ratio	Lower	Upper
59	100		
57	0.0	0.0	0.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

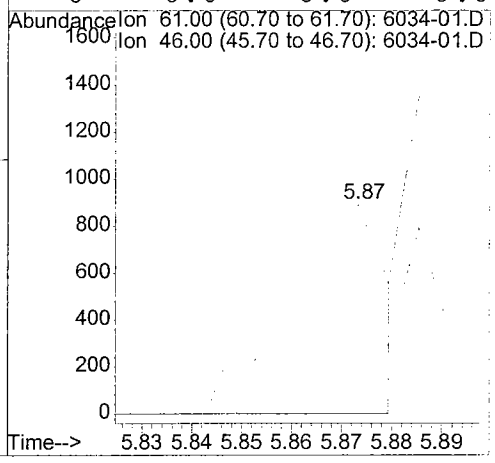


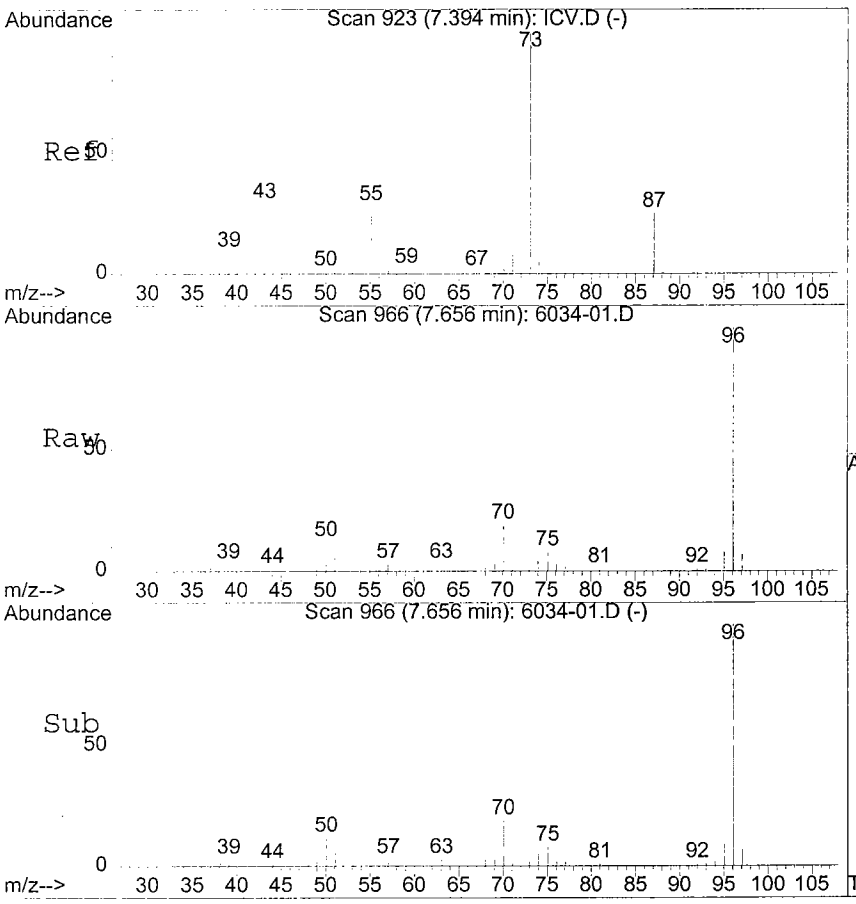


#37
92 Nitro Methane(x10)
Concen: 1.74 ppb
RT: 5.87 min Scan# 673
Delta R.T. 0.04 min
Lab File: 6034-01.D
Acq: 12 Nov 2003 5:18 am

Tgt Ion:61 Resp: 1275

Ion	Ratio	Lower	Upper
61	100		
46	58.7	48.0	88.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

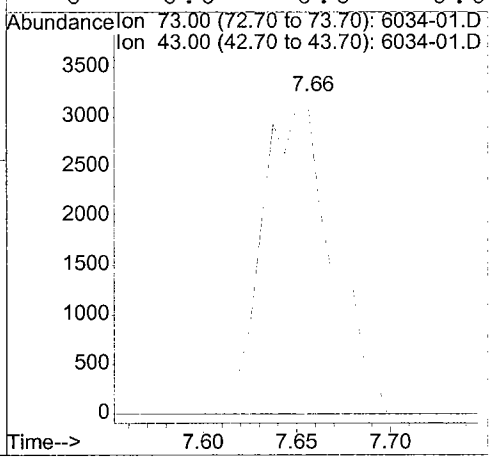


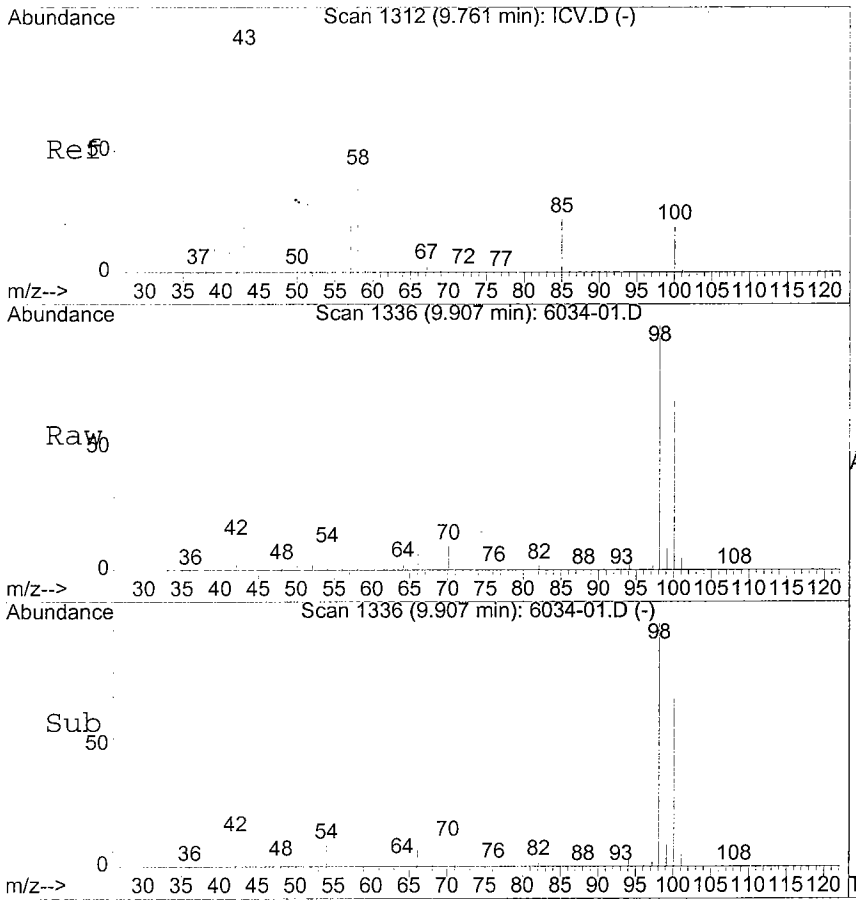


#49
101 TAME
Concen: 1.11 ppb
RT: 7.66 min Scan# 966
Delta R.T. 0.24 min
Lab File: 6034-01.D
Acq: 12 Nov 2003 5:18 am

Tgt Ion:73 Resp: 8350

Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.7	34.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

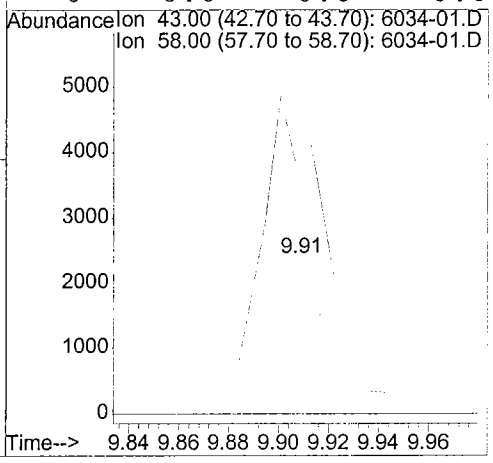


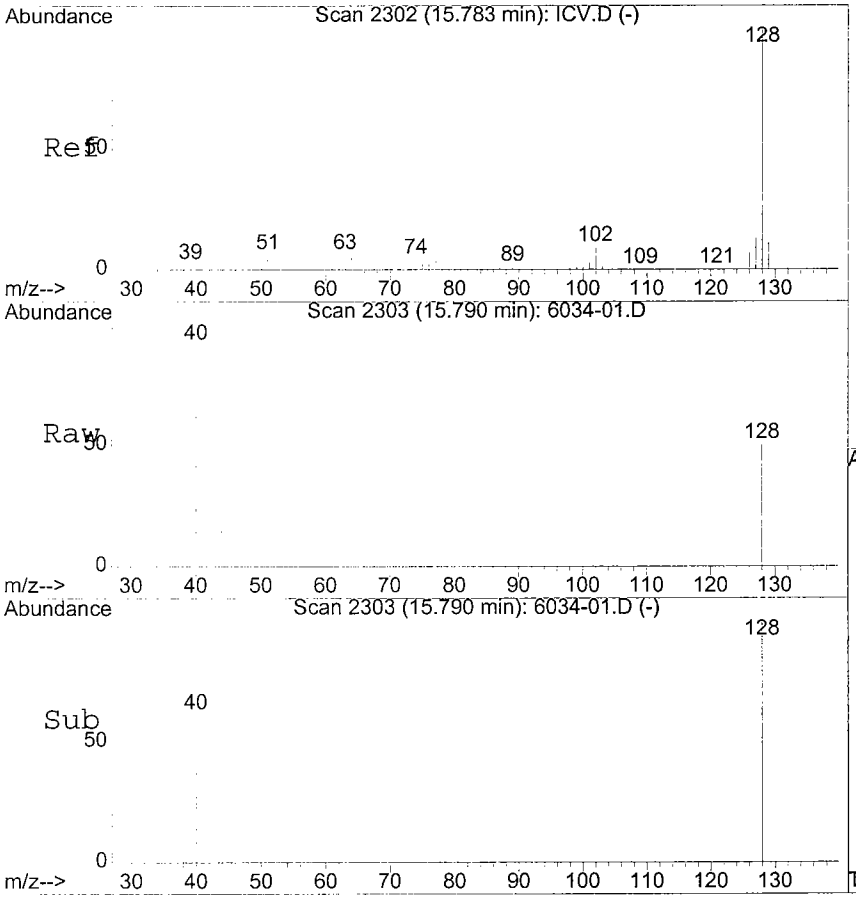


#62
54 MIBK
Concen: 2.02 ppb
RT: 9.91 min Scan# 1336
Delta R.T. 0.14 min
Lab File: 6034-01.D
Acq: 12 Nov 2003 5:18 am

Tgt Ion:43 Resp: 4927

Ion	Ratio	Lower	Upper
43	100		
58	161.7	20.1	60.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

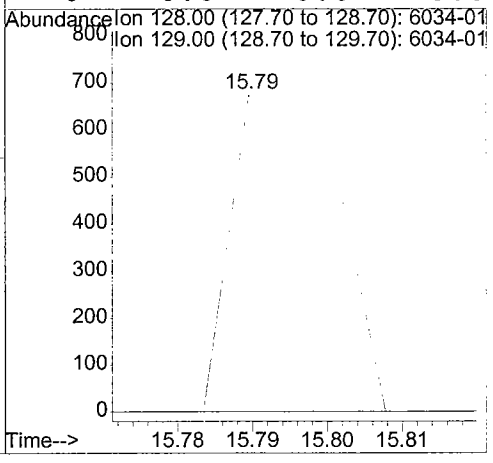




#97
88 naphthalene
Concen: 1.14 ppb
RT: 15.79 min Scan# 2303
Delta R.T. 0.01 min
Lab File: 6034-01.D
Acq: 12 Nov 2003 5:18 am

Tgt Ion:128 Resp: 598

Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	31.1
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:	11/07/2003
Project ID:	JPL	Service ID:	36034	Collected by:	JR
		Lab Sample ID:	03-6034-2	Received Date:	11/07/2003
Sample ID:	**MW-6**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/12/03	Anal. Date:	11/12/03
Batch No:	03G4771	Prep. No:	–	Anal. Time:	05:44
Data File Name:	6034-02	Sample Amount:	25.0 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	0.3	J
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	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	0.9	
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	0.8	
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	0.5	<0.5	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	3.0	
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	117
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	113
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	102
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	103
3	FLUOROBENZENE	462-06-6	50-200	98
# 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	11/07/2003
Project ID:	JPL	Service ID:	36034	Collected by:	JR
		Lab Sample ID:	03-6034-3	Received Date:	11/07/2003
Sample ID:	**MW-13**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/12/03	Anal. Date:	11/12/03
Batch No:	03G4771	Prep. No:	-	Anal. Time:	03:07
Data File Name:	6034-03	Sample Amount:	25.0 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	1.5	
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	1.7	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	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	0.4	J
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	0.5	<0.5	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	0.9	
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	9.0	
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	113
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	111
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	105
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	105
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.

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:	11/07/2003
Project ID:	JPL	Service ID:	36034	Collected by:	JR
		Lab Sample ID:	03-6034-4	Received Date:	11/07/2003
Sample ID:	**MW-15**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/12/03	Anal. Date:	11/12/03
Batch No:	03G4771	Prep. No:	–	Anal. Time:	06:10
Data File Name:	6034-04	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	<0.5	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	106
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	114
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	113
4	TOLUENE-D8	2037-26-5	73-129	103
# of out-of-control				0

Internal Standard			Control Limit, %	IS Rec.%
1	CHLOROBENZENE-D5	3114-55-4	50-200	102
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	102
3	FLUOROBENZENE	462-06-6	50-200	98
# 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

Applied P & Ch Laboratory

Organic Analysis Results for Method 524.2

Client Name:	GEOFON, Inc.	Project No:	04-4428.10	Collection Date:	11/07/2003
Project ID:	JPL	Service ID:	36034	Collected by:	JR
		Lab Sample ID:	03-6034-5	Received Date:	11/07/2003
Sample ID:	**TB-12-11-7-03**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	524.2	Prep. Date:	11/12/03	Anal. Date:	11/12/03
Batch No:	03G4771	Prep. No:	–	Anal. Time:	02:41
Data File Name:	6034-05	Sample Amount:	25.0 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	0.5	<0.5	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	0.5	<0.5	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	106
2	1,2-DICHLOROETHANE-D4	17060-07-0	70-129	114
3	DIBROMOFLUOROMETHANE	1868-53-7	70-122	112
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	103
2	1,4-DICHLOROBENZENE-D4	3855-82-1	50-200	104
3	FLUOROBENZENE	462-06-6	50-200	99
# of out-of-control				0

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

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

FORM-2A

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:	036034
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4771		

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G4771-LCS-01	03G4771-LCS-01	95	99	96	93	0
2	MW-13MS	03-6034-3MS	93	96	93	91	0
3	MW-13MSD	03-6034-3MSD	98	101	100	94	0
4	03G4771-MB-01	03G4771-MB-01	108	115	112	104	0
5	TB-12-11-7-03	03-6034-5	106	114	112	102	0
6	MW-13	03-6034-3	109	113	111	103	0
7	DUPE-2-4-Q03	03-6034-1	107	115	113	103	0
8	MW-6	03-6034-2	107	117	113	104	0
9	MW-15	03-6034-4	106	114	113	103	0
10							
11							
12							
13							
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:	36034
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4771		
LCS Filename:	G4771L01	Date Analyzed:	111103	Time Analyzed:	20:46
LCSD Filename:	–	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	17.0	85	65-120
CHLOROBENZENE	µg/L	20	0	18.5	93	65-134
1,1-DICHLOROETHENE	µg/L	20	0	20.4	102	65-127
TOLUENE	µg/L	20	0	17.2	86	65-134
TRICHLOROETHENE	µg/L	20	0	18.5	93	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

1830

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:46 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:42 2003
Print Time : Wed Nov 12 09:42 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.64	0.000	96	70	677.978	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	508.521	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	312.840	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	306.992	19.28	19.3	96.42%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	281.689	19.87	19.9	99.33%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1038.885	18.51	18.5	92.54%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	404.401	19.08	19.1	95.38%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	234.472	17.20	17.2	98	
4	4	Chloromethane	2.11	2.11	0.000	50	52	162.291	11.99	12.0	97	
2	2	F114	2.03	2.03	0.000	85	135	116.288	18.11	18.1	28	
5	5	vinyl chloride	2.22	2.22	0.000	62	64	184.229	15.93	15.9	100	
6	6	bromomethane	2.61	2.61	0.000	94	96	89.540	13.63	13.6	99	
7	7	chloroethane	2.73	2.73	0.000	64	66	110.360	17.73	17.7	100	
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	435.826	22.80	22.8	100	
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	479.813	164.26	164.3	90	?
9	9	acrolein X10	3.51	3.51	0.000	56	55	261.995	182.62	182.6	99	
11	11	acetone X10	3.71	3.73	-0.002	43	58	467.414	215.80	215.8	78	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	591.559	91.84	91.8	77	#
13	13	11-dichloroethene	3.64	3.64	0.000	61	96	327.682	20.35	20.3	80	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	115.750	8.73	8.7	89	
15	15	F-113	3.65	3.65	0.000	101	151	221.713	22.69	22.7	91	?
16	16	acrylonitrile X10	4.52	4.52	0.000	53	52	488.944	168.11	168.1	95	
17	17	carbon disulfide	3.90	3.90	0.000	76	78	483.904	15.78	15.8	99	
94	94	Isopropyl Alcohol	4.04	4.10	-0.007	45	43	77.917	561.32	561.3	100	m
18	18	methylene chlorid	4.22	4.22	0.000	84	49	246.721	17.08	17.1	79	#
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	262.305	17.33	17.3	89	?

11/12/03

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

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

1831

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:46 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:42 2003
Print Time : Wed Nov 12 09:42 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.59	0.000	73	57	531.044	19.94	19.9	97	?
95	95 Tert butyl alcoho	4.47	4.51	-0.005	59	57	146.641	329.62	329.6	100	m
94	94 allyl chloride	4.07	4.07	0.000	41	76	479.813	16.05	16.1	75	#?
21	21 11-dichloroethane	5.12	5.12	0.000	63	83	442.595	17.65	17.7	99	
97	97 propionitrile	6.01	6.02	0.000	54	51	21.089	17.65	17.6	100	m
22	22 c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	278.663	17.65	17.6	86	?
23	23 22-Dichloropropan	5.92	5.92	0.000	77	97	372.521	23.28	23.3	98	?
24	24 Br-Cl-methane	6.25	6.25	0.000	128	130	139.290	17.45	17.4	95	
25	25 chloroform	6.37	6.37	0.000	83	85	519.882	18.45	18.4	98	?
26	26 tetrahydrofuranX5	6.35	6.35	0.000	42	72	194.029	82.61	82.6	88	?
98	98 Diisopropyl ether	5.24	5.24	0.000	45	87	852.015	17.70	17.7	90	
99	99 ETBE	5.74	5.74	0.000	59	87	636.237	20.96	21.0	92	
30	30 12-dichloroethane	7.22	7.22	0.000	64	62	107.247	19.52	19.5	98	?
32	32 vinyl acetate X5	5.19	5.20	0.000	43	86	2234.927	95.14	95.1	92	
92	92 Nitro Methane(x10	5.82	5.84	-0.002	61	46	73.443	92.75	92.8	16	m
33	33 2-butanoneMEK X10	5.94	5.95	0.000	43	72	646.571	182.79	182.8	84	?
93	93 Ethyl Acetate x2	6.04	6.04	0.000	43	61	306.015	34.94	34.9	99	?
34	34 111-trichloroetha	6.65	6.65	0.000	97	99	519.899	21.94	21.9	97	
35	35 11-Di-Cl-propene	6.91	6.90	0.000	75	110	351.068	19.62	19.6	90	?
36	36 benzene	7.21	7.21	0.000	78	52	974.814	17.00	17.0	91	?
37	37 CCl4	6.91	6.91	0.000	117	119	513.767	23.57	23.6	96	?
100	100 Isobutyl alcohol	7.41	7.41	0.000	43	42	176.729	202.99	203.0	94	?
38	38 thiophene	7.53	7.53	0.000	84	58	538.159	18.03	18.0	94	
39	39 12-di-Cl-propane	8.56	8.56	0.000	63	76	223.944	17.07	17.1	85	
40	40 trichloroethene	8.24	8.24	0.000	130	132	340.237	18.52	18.5	88	
41	41 dibromomethane	8.73	8.73	0.000	174	172	169.114	18.53	18.5	99	
101	101 TAME	7.41	7.41	0.000	73	43	511.947	18.35	18.3	88	#?
42	42 Br-di-Cl-methane	8.96	8.96	0.000	83	85	389.998	18.88	18.9	96	
43	43 Me-methacrylate	8.76	8.76	0.000	69	100	119.342	16.31	16.3	90	
44	44 2-ClEt-Vi-ether10	9.38	9.38	0.000	63	43	276.998	124.56	124.6	81	
45	45 c-13-di-Cl-propen	9.56	9.56	0.000	75	110	395.072	18.99	19.0	94	
46	46 t-1,3-dichloropro	10.25	10.25	0.000	75	110	347.283	18.70	18.7	92	

11/12/03

14/12/03

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

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

1832

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:46 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:42 2003
Print Time : Wed Nov 12 09:42 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	202.432	17.98	18.0	90	
49	49	13-di-Cl-propane	10.65	10.65	0.000	76	78	312.506	18.09	18.1	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	257.001	16.39	16.4	85	
51	51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	313.020	19.59	19.6	96	
52	52	bromoform	12.41	12.42	0.000	173	174	185.477	19.74	19.7	99	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	340.330	17.89	17.9	96	
54	54	MIBK	9.77	9.77	0.000	43	58	151.171	15.43	15.4	95	
56	56	toluene	9.99	9.99	0.000	91	92	1184.174	17.20	17.2	99	
57	57	2-hexanone X5	10.76	10.76	0.000	43	58	529.082	83.95	83.9	91	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	210.315	18.23	18.2	100	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	387.992	20.47	20.5	100	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	867.143	18.45	18.5	91	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	354.515	20.27	20.3	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	140.480	19.66	19.7	59	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	1485.440	18.68	18.7	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2337.730	38.00	38.0	99	
66	66	styrene	12.24	12.24	0.000	104	78	960.915	18.55	18.6	100	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1177.059	18.95	19.0	98	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	216.692	17.49	17.5	98	
69	69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	80.303	19.52	19.5	86	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	1652.331	19.90	19.9	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	402.421	19.15	19.1	97	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	42.355	17.36	17.4	85	#?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	492.190	20.47	20.5	94	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	401.012	19.67	19.7	99	
75	75	4-Cl-Toluene	13.18	13.19	0.000	126	128	401.187	19.15	19.1	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1474.838	20.14	20.1	94	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1618.336	20.52	20.5	99	?
78	78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1512.568	19.72	19.7	95	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1344.496	20.91	20.9	99	

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

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

1833

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:46 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:42 2003
Print Time : Wed Nov 12 09:42 2003
Miscleneous :

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

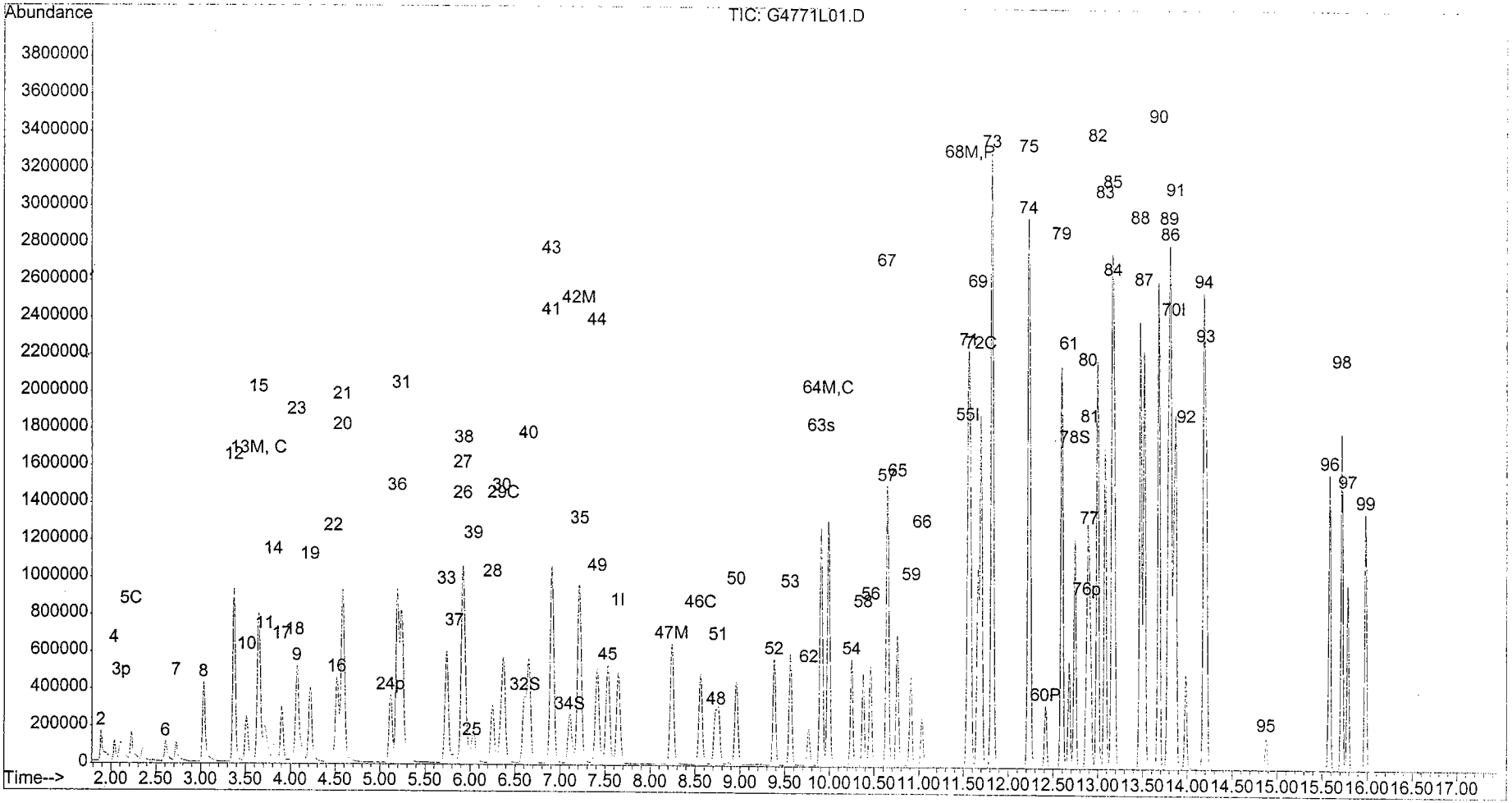
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	840.811	19.25	19.3	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1953.235	20.35	20.3	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	846.372	18.52	18.5	98	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	80.883	17.32	17.3	82	#
84	84	12-DCB	14.21	14.21	0.000	146	148	755.831	18.90	18.9	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	439.099	21.08	21.1	78	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	57.967	19.47	19.5	100	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	519.681	20.86	20.9	100	
88	88	naphthalene	15.78	15.78	0.000	128	129	826.963	18.05	18.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	325.383	22.83	22.8	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	450.955	20.97	21.0	97	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:46 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:42 2003
Print Time : Wed Nov 12 09:42 2003
Miscleneous :

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



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:	36034
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G4771		
MS Filename:	G4771M02	Date Analyzed:	111103	Time Analyzed:	22:29
MSD Filename:	G4771N02	Date Analyzed:	111103	Time Analyzed:	22:55
MS Sample No:	**MW-13**	Sample Lab ID:	03-6034-3		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	17.0	85	65-121
CHLOROBENZENE	µg/L	20	0	18.2	91	65-134
1,1-DICHLOROETHENE	µg/L	20	0	20.5	103	65-127
TOLUENE	µg/L	20	0	16.9	85	65-134
TRICHLOROETHENE	µg/L	20	9.0	27.1	91	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	17.8	89	5	28	65-121
CHLOROBENZENE	µg/L	20	18.7	94	3	35	65-134
1,1-DICHLOROETHENE	µg/L	20	20.9	105	2	31	65-127
TOLUENE	µg/L	20	17.6	88	3	35	65-134
TRICHLOROETHENE	µg/L	20	28.0	95	4	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

1836

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M02.D Sample : f=1 $6034-03
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Nov 11 22:29 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 14:05 2003 Operator: zou
Quant. Time : Nov 12 09:49 2003 Multiplr: 1.000000
Print Time : Wed Nov 12 09:49 2003
Miscleneous :

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.65	7.64	0.000	96	70	710.443	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	537.799	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	330.228	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	311.074	18.65	18.6	93.24%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	285.875	19.24	19.2	96.20%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1078.653	18.17	18.2	90.85%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	417.118	18.64	18.6	93.20%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	235.540	16.48	16.5	99	m
4	4	Chloromethane	2.11	2.11	0.000	50	52	176.182	12.42	12.4	97	
2	2	F114	2.03	2.03	0.000	85	135	120.747	17.94	17.9	1	m 11/12/03
5	5	vinyl chloride	2.22	2.22	0.000	62	64	196.635	16.23	16.2	100	
6	6	bromomethane	2.61	2.61	0.000	94	96	98.164	14.27	14.3	95	m
7	7	chloroethane	2.73	2.73	0.000	64	66	106.276	16.29	16.3	93	
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	456.086	22.77	22.8	97	
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	498.417	162.83	162.8	89	?
9	9	acrolein X10	3.51	3.51	0.000	56	55	223.335	148.56	148.6	96	
11	11	acetone X10	3.70	3.73	-0.003	43	58	393.449	173.35	173.3	80	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	635.519	94.15	94.2	80	
13	13	11-dichloroethene	3.64	3.64	0.000	61	96	346.263	20.52	20.5	78	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	142.102	10.26	10.3	89	
15	15	F-113	3.65	3.65	0.000	101	151	234.436	22.90	22.9	92	?
16	16	acrylonitrile X10	4.52	4.52	0.000	53	52	503.954	165.36	165.4	95	
17	17	carbon disulfide	3.90	3.90	0.000	76	78	513.933	15.99	16.0	99	
94	94	Isopropyl Alcohol	4.03	4.10	-0.009	45	43	40.519	278.56	278.6	100	m
18	18	methylene chlorid	4.22	4.22	0.000	84	49	257.197	16.99	17.0	74	# 11/12/03
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	273.894	17.27	17.3	89	?

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

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

1837

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:29 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:49 2003
Print Time : Wed Nov 12 09:49 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.59	0.000	73	57	559.665	20.05	20.0	96	?
95	95 Tert butyl alcoho	4.45	4.51	-0.008	59	57	166.145	356.40	356.4	100	m
94	94 allyl chloride	4.07	4.07	0.000	41	76	498.417	15.91	15.9	77	#?
21	21 11-dichloroethane	5.12	5.12	0.000	63	83	477.095	18.16	18.2	98	
97	97 propionitrile	6.01	6.02	-0.002	54	51	21.010	16.78	16.8	100	#
22	22 c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	291.505	17.62	17.6	89	?
23	23 22-Dichloropropan	5.92	5.92	0.000	77	97	371.541	22.16	22.2	100	?
24	24 Br-Cl-methane	6.24	6.25	0.000	128	130	146.022	17.46	17.5	98	
25	25 chloroform	6.37	6.37	0.000	83	85	580.193	19.65	19.6	100	
26	26 tetrahydrofuranX5	6.34	6.35	0.000	42	72	205.849	83.63	83.6	84	
98	98 Diisopropyl ether	5.24	5.24	0.000	45	87	895.384	17.75	17.7	90	
99	99 ETBE	5.74	5.74	0.000	59	87	680.777	21.40	21.4	92	
30	30 12-dichloroethane	7.22	7.22	0.000	64	62	111.331	19.33	19.3	99	?
32	32 vinyl acetate X5	5.19	5.20	0.000	43	86	2125.799	86.36	86.4	92	
92	92 Nitro Methane(x10	5.81	5.84	-0.004	61	46	67.613	81.49	81.5	96	
33	33 2-butanoneMEK X10	5.93	5.95	-0.002	43	72	629.421	169.81	169.8	88	?
93	93 Ethyl Acetate x2	6.04	6.04	0.000	43	61	279.856	30.49	30.5	98	
34	34 111-trichloroetha	6.65	6.65	0.000	97	99	538.220	21.67	21.7	100	
35	35 11-Di-Cl-propene	6.90	6.90	0.000	75	110	367.291	19.59	19.6	91	?
36	36 benzene	7.21	7.21	0.000	78	52	1019.430	16.97	17.0	90	?
37	37 CCl4	6.91	6.91	0.000	117	119	559.647	24.51	24.5	97	?
100	100 Isobutyl alcohol	7.41	7.41	0.000	43	42	186.311	204.22	204.2	99	?
38	38 thiophene	7.53	7.53	0.000	84	58	550.200	17.59	17.6	94	
39	39 12-di-Cl-propane	8.56	8.56	0.000	63	76	233.809	17.01	17.0	84	
40	40 trichloroethene	8.24	8.24	0.000	130	132	521.489	27.09	27.1	89	
41	41 dibromomethane	8.73	8.73	0.000	174	172	171.028	17.88	17.9	98	
101	101 TAME	7.41	7.41	0.000	73	43	540.326	18.47	18.5	89	#?
42	42 Br-di-Cl-methane	8.96	8.96	0.000	83	85	401.348	18.55	18.5	99	
43	43 Me-methacrylate	8.76	8.76	0.000	69	100	125.887	16.41	16.4	96	
44	44 2-ClEt-Vi-ether10	9.55	9.38	0.023	63	43	1.343	10.78	10.8	28	#?
45	45 c-13-di-Cl-propen	9.56	9.56	0.000	75	110	399.977	18.35	18.3	93	?
46	46 t-1,3-dichloropro	10.25	10.25	0.000	75	110	358.933	18.45	18.4	95	

14/12/03

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

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

1838

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:29 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:49 2003
Print Time : Wed Nov 12 09:49 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	210.869	17.71	17.7	92	
49	49	13-di-Cl-propane	10.65	10.65	0.000	76	78	320.585	17.55	17.5	98	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	272.057	16.41	16.4	91	
51	51	di-Br-Cl-methane	10.90	10.91	0.000	129	127	326.467	19.32	19.3	96	
52	52	bromoform	12.41	12.42	0.000	173	174	189.484	19.07	19.1	99	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	351.184	17.45	17.5	96	
54	54	MIBK	9.76	9.77	0.000	43	58	162.577	15.66	15.7	95	
56	56	toluene	9.99	9.99	0.000	91	92	1231.617	16.91	16.9	98	
57	57	2-hexanone X5	10.75	10.76	0.000	43	58	542.560	81.55	81.5	88	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	216.529	17.75	17.7	92	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	419.485	20.92	20.9	96	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	906.072	18.23	18.2	93	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	364.179	19.69	19.7	91	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	147.134	19.51	19.5	56	#?
64	64	Et-Bz	11.69	11.70	0.000	91	106	1551.321	18.48	18.5	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2411.110	37.13	37.1	99	
66	66	styrene	12.24	12.24	0.000	104	78	994.343	18.19	18.2	99	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1231.531	18.78	18.8	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	225.556	17.25	17.2	100	
69	69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	80.265	18.49	18.5	93	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	1715.816	19.57	19.6	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	421.472	19.00	19.0	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	42.908	16.73	16.7	81	#?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	504.152	19.86	19.9	96	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	418.013	19.42	19.4	98	
75	75	4-Cl-Toluene	13.18	13.19	0.000	126	128	410.930	18.58	18.6	98	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1518.747	19.65	19.6	94	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1687.953	20.27	20.3	100	?
78	78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1570.417	19.40	19.4	95	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1389.511	20.48	20.5	100	

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

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

1839

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:29 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:49 2003
Print Time : Wed Nov 12 09:49 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	869.976	18.87	18.9	98	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2022.007	19.95	20.0	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	880.539	18.25	18.3	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	78.027	16.03	16.0	87	#
84	84	12-DCB	14.21	14.21	0.000	146	148	784.714	18.59	18.6	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	452.267	20.57	20.6	85	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	60.057	19.11	19.1	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	547.253	20.81	20.8	97	
88	88	naphthalene	15.78	15.78	0.000	128	129	896.507	18.50	18.5	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	339.398	22.56	22.6	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	479.745	21.13	21.1	97	

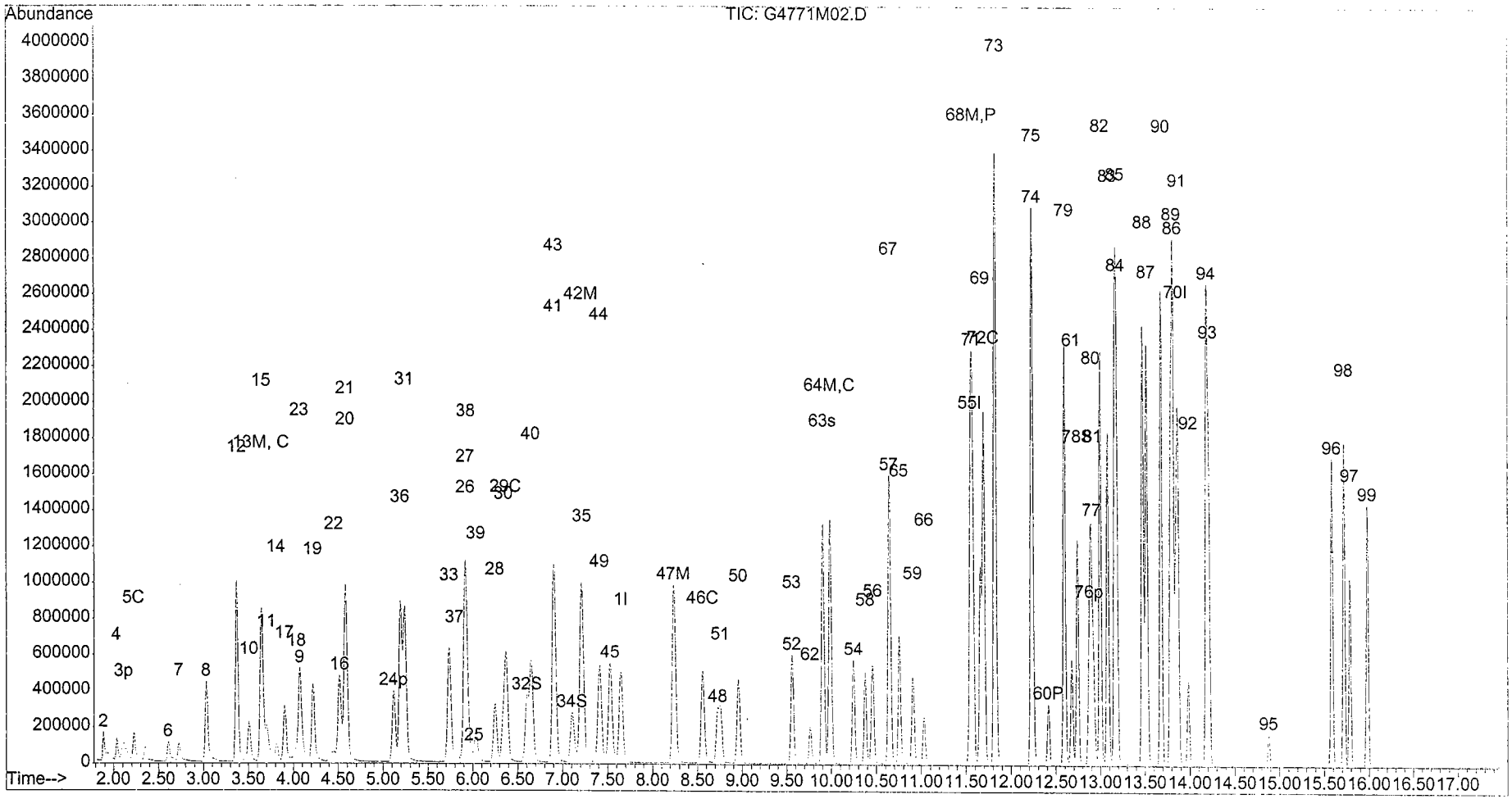
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:29 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:49 2003
Print Time : Wed Nov 12 09:49 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

1840



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

1841

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:55 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:51 2003
Print Time : Wed Nov 12 09:51 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.64	0.000	96	70	702.138	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	536.504	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	324.603	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	328.849	19.95	19.9	99.73%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	297.298	20.25	20.2	101.23%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1109.233	18.73	18.7	93.66%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	430.218	19.56	19.6	97.79%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	241.870	17.13	17.1	100	m
4	4	Chloromethane	2.10	2.11	0.000	50	52	171.353	12.22	12.2	98	
2	2	F114	2.03	2.03	0.000	85	135	118.555	17.82	17.8	26	m 11/12/03
5	5	vinyl chloride	2.22	2.22	0.000	62	64	197.229	16.47	16.5	99	
6	6	bromomethane	2.61	2.61	0.000	94	96	96.545	14.20	14.2	99	
7	7	chloroethane	2.73	2.73	0.000	64	66	127.691	19.80	19.8	96	m 11/12/03
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	449.923	22.73	22.7	96	
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	527.218	174.28	174.3	93	?
9	9	acrolein X10	3.51	3.51	0.000	56	55	228.570	153.84	153.8	99	
11	11	acetone X10	3.71	3.73	-0.002	43	58	395.744	176.42	176.4	79	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	629.532	94.37	94.4	77	#
13	13	11-dichloroethene	3.63	3.64	0.000	61	96	348.747	20.91	20.9	76	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	147.231	10.76	10.8	91	
15	15	F-113	3.65	3.65	0.000	101	151	234.448	23.17	23.2	85	?
16	16	acrylonitrile X10	4.52	4.52	0.000	53	52	528.954	175.61	175.6	95	
17	17	carbon disulfide	3.90	3.90	0.000	76	78	516.556	16.26	16.3	99	
94	94	Isopropyl Alcohol	4.05	4.10	-0.006	45	43	55.127	383.48	383.5	100	m?
18	18	methylene chlorid	4.22	4.22	0.000	84	49	266.067	17.83	17.8	75	# 11/12/03
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	279.543	17.83	17.8	91	?

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

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

1842

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:55 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:51 2003
Print Time : Wed Nov 12 09:51 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.59	4.59	0.000	73	57	591.726	21.45	21.4	95	?
95	95	Tert butyl alcoho	4.47	4.51	-0.006	59	57	173.192	375.91	375.9	100	m
94	94	allyl chloride	4.07	4.07	0.000	41	76	527.218	17.03	17.0	75	#?
21	21	11-dichloroethane	5.12	5.12	0.000	63	83	485.179	18.69	18.7	100	
97	97	propionitrile	6.02	6.02	0.000	54	51	23.701	19.15	19.1	100	#?
22	22	c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	305.649	18.69	18.7	94	?
23	23	22-Dichloropropan	5.92	5.92	0.000	77	97	371.969	22.45	22.4	100	?
24	24	Br-Cl-methane	6.25	6.25	0.000	128	130	152.191	18.41	18.4	98	
25	25	chloroform	6.37	6.37	0.000	83	85	603.528	20.68	20.7	96	
26	26	tetrahydrofuranX5	6.34	6.35	0.000	42	72	217.278	89.32	89.3	88	
98	98	Diisopropyl ether	5.24	5.24	0.000	45	87	926.982	18.59	18.6	89	
99	99	ETBE	5.74	5.74	0.000	59	87	707.786	22.52	22.5	92	
30	30	12-dichloroethane	7.22	7.22	0.000	64	62	118.020	20.74	20.7	95	?
32	32	vinyl acetate X5	5.19	5.20	0.000	43	86	2241.288	92.13	92.1	93	
92	92	Nitro Methane(x10	5.82	5.84	-0.002	61	46	66.148	80.67	80.7	93	
33	33	2-butanoneMEK X10	5.94	5.95	0.000	43	72	664.266	181.33	181.3	87	?
93	93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	305.925	33.73	33.7	100	?
34	34	111-trichloroetha	6.65	6.65	0.000	97	99	552.472	22.51	22.5	98	
35	35	11-Di-Cl-propene	6.90	6.90	0.000	75	110	382.013	20.62	20.6	95	?
36	36	benzene	7.21	7.21	0.000	78	52	1059.293	17.84	17.8	89	?
37	37	CCl4	6.91	6.91	0.000	117	119	577.389	25.58	25.6	99	?
100	100	Isobutyl alcohol	7.41	7.41	0.000	43	42	193.651	214.77	214.8	96	?
38	38	thiophene	7.53	7.53	0.000	84	58	580.479	18.78	18.8	92	
39	39	12-di-Cl-propane	8.56	8.56	0.000	63	76	244.060	17.96	18.0	90	
40	40	trichloroethene	8.24	8.24	0.000	130	132	533.550	28.04	28.0	89	
41	41	dibromomethane	8.73	8.73	0.000	174	172	181.766	19.23	19.2	99	
101	101	TAME	7.41	7.41	0.000	73	43	569.470	19.65	19.6	89	?
42	42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	418.235	19.55	19.6	100	
43	43	Me-methacrylate	8.76	8.76	0.000	69	100	134.156	17.63	17.6	94	
44	44	2-ClEt-Vi-ether10	9.56	9.38	0.024	63	43	1.991	11.05	11.0	28	#?
45	45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	418.672	19.43	19.4	95	?
46	46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	369.776	19.21	19.2	94	

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

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

1843

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:55 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:51 2003
Print Time : Wed Nov 12 09:51 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	218.060	18.36	18.4	91	
49	49	13-di-Cl-propane	10.65	10.65	0.000	76	78	339.305	18.62	18.6	100	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	291.949	17.55	17.6	92	
51	51	di-Br-Cl-methane	10.90	10.91	0.000	129	127	334.651	19.86	19.9	99	
52	52	bromoform	12.41	12.42	0.000	173	174	198.250	20.00	20.0	99	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	370.510	18.46	18.5	96	
54	54	MIBK	9.77	9.77	0.000	43	58	170.225	16.36	16.4	97	
56	56	toluene	9.99	9.99	0.000	91	92	1278.105	17.59	17.6	99	
57	57	2-hexanone X5	10.76	10.76	0.000	43	58	570.734	85.72	85.7	90	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	226.858	18.64	18.6	98	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	423.180	21.16	21.2	95	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	927.190	18.70	18.7	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	378.522	20.51	20.5	96	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	150.750	20.34	20.3	63	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	1590.773	19.28	19.3	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2480.932	38.87	38.9	100	
66	66	styrene	12.24	12.24	0.000	104	78	1022.926	19.03	19.0	100	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1261.418	19.57	19.6	100	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	234.556	18.25	18.2	97	
69	69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	83.391	19.54	19.5	89	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	1760.764	20.44	20.4	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	435.965	19.99	20.0	100	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	44.693	17.63	17.6	87	?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	509.223	20.41	20.4	96	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	427.039	20.18	20.2	99	
75	75	4-Cl-Toluene	13.18	13.19	0.000	126	128	419.397	19.29	19.3	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1548.499	20.38	20.4	95	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1719.521	21.01	21.0	100	?
78	78	124-tri-Me-Benzen	13.51	13.52	0.000	105	120	1582.863	19.89	19.9	96	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1419.547	21.28	21.3	100	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:55 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:51 2003
Print Time : Wed Nov 12 09:51 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

1844

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	896.315	19.78	19.8	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2063.612	20.72	20.7	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	896.721	18.91	18.9	97	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	78.347	16.32	16.3	77	#
84	84	12-DCB	14.21	14.21	0.000	146	148	812.891	19.59	19.6	98	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	461.323	21.34	21.3	82	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	61.794	20.01	20.0	96	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	556.856	21.54	21.5	100	
88	88	naphthalene	15.78	15.78	0.000	128	129	916.677	19.20	19.2	98	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	348.994	23.60	23.6	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	489.595	21.94	21.9	99	

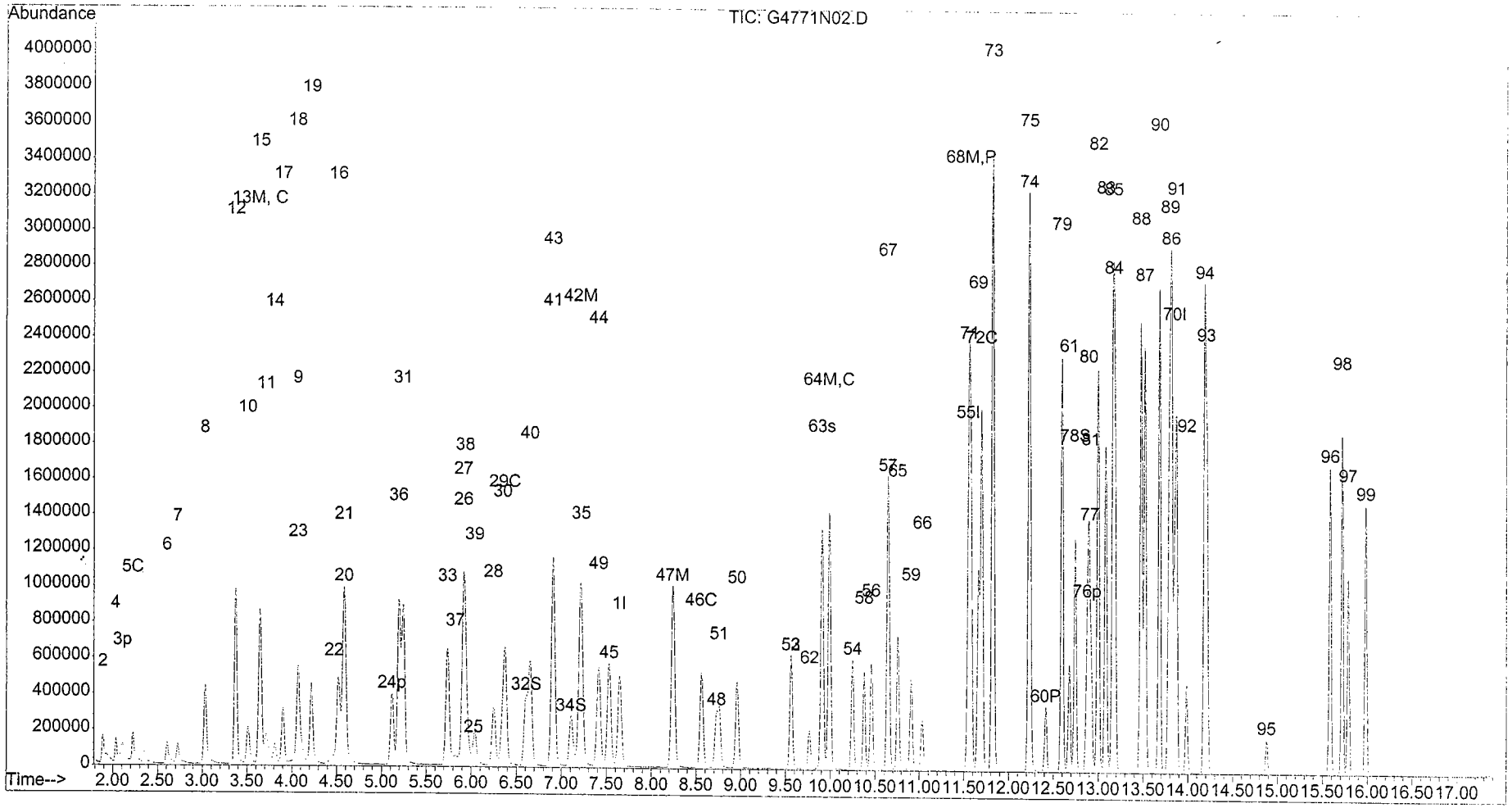
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N02.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 22:55 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:51 2003
Print Time : Wed Nov 12 09:51 2003
Miscleneous :

Sample : f=1 $6034-03
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

1845



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

1846

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6034-03.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 12 03:07 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:18 2003
Print Time : Wed Nov 12 09:52 2003
Miscleneous :

Sample : f=1 ms
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.64	0.000	96	70	650.440	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	522.269	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.85	0.000	152	150	320.745	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	337.919	22.13	22.1	110.63%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	305.729	22.47	22.5	112.37%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1188.550	20.62	20.6	103.09%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	471.460	21.69	21.7	108.46%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
95	95	Tert butyl alcoho	4.40	4.51	-0.014	59	57	0.653	1.53	1.5	100	#
21	21	11-dichloroethane	5.12	5.12	0.000	63	83	8.606	0.36	0.4	92	
25	25	chloroform	6.38	6.37	0.000	83	85	46.221	1.71	1.7	96	
92	92	Nitro Methane(x10	5.85	5.84	0.002	61	46	0.261	0.34	0.3	16	#
37	37	CCl4	6.91	6.91	0.000	117	119	31.502	1.51	1.5	86	
40	40	trichloroethene	8.24	8.24	0.000	130	132	158.033	8.97	9.0	89	
101	101	TAME	7.65	7.41	0.031	73	43	9.463	1.14	1.1	46	#
<<< I2 : ISTD ID = 47 >>>												
54	54	MIBK	9.91	9.77	0.012	43	58	5.114	2.02	2.0	1	#
59	59	tetra-Cl-ethene	10.65	10.64	0.000	166	168	18.062	0.93	0.9	95	
<<< I3 : ISTD ID = 62 >>>												
88	88	naphthalene	15.79	15.78	0.000	128	129	0.695	1.14	1.1	71	

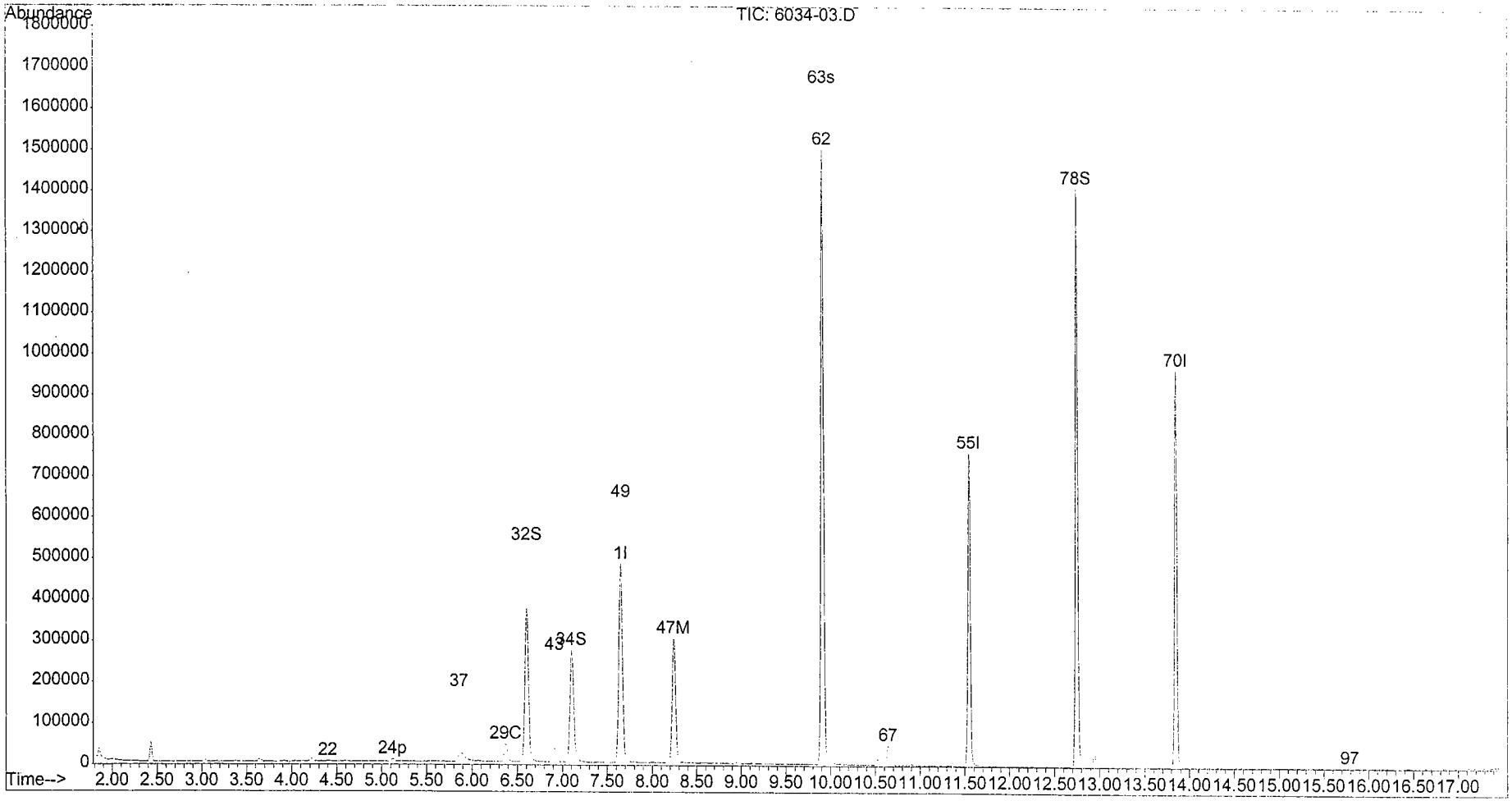
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6034-03.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 12 03:07 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:18 2003
Print Time : Wed Nov 12 09:52 2003
Miscleneous :

Sample : f=1 ms
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

1847



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:	36034
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	11/12/03
		Sample Matrix:	Water	Analysis Time:	01:17
Sample ID:	**03G4771-MB-01**	Batch No:	03G4771	Instrument ID:	GC/MS: A
Lab Sample ID:	03G4771-MB-01	Data File Name:	G4771K01	GC Column:	HP-VOC
		Heated Purge: (Y/N)	N	Column ID:	0.20 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	03G4771-LCS-01	03G4771-LCS-01	Lab Control Spike	G4771L01	11/11/03	20:46
2	MW-13MS	03-6034-3MS	Matrix Spike	G4771M02	11/11/03	22:29
3	MW-13MSD	03-6034-3MSD	Matrix Spike Duplicate	G4771N02	11/11/03	22:55
4	TB-12-11-7-03	03-6034-5	Field Sample	6034-05	11/12/03	02:41
5	MW-13	03-6034-3	Field Sample	6034-03	11/12/03	03:07
6	DUPE-2-4-Q03	03-6034-1	Field Sample	6034-01	11/12/03	05:18
7	MW-6	03-6034-2	Field Sample	6034-02	11/12/03	05:44
8	MW-15	03-6034-4	Field Sample	6034-04	11/12/03	06:10
9						
10						
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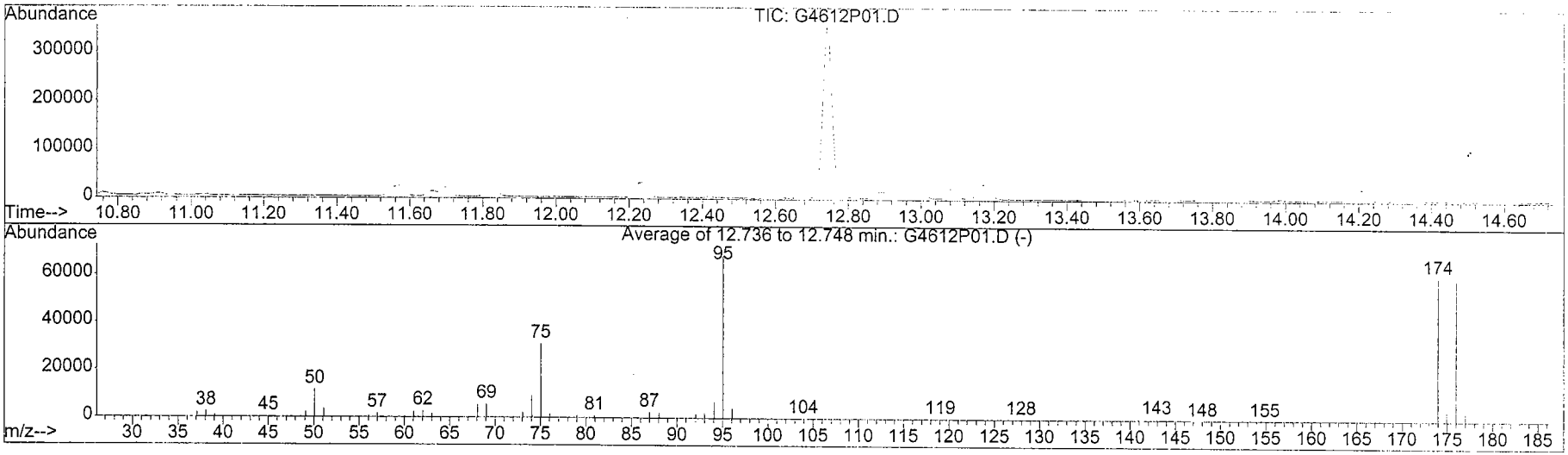
17						
18						
19						
20						
21						
22						
23						
24						
25						

Data File : C:\MSDCHEM\1\DATA\03G4612\G4612P01.D Vial: 1
Acq On : 21 Oct 2003 9:14 am Operator: zou
Sample : ##03g4565,w 50ng Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2



Spectrum Information: Average of 12.736 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.0	11745	PASS
75	95	30	60	45.0	31162	PASS
95	95	100	100	100.0	69181	PASS
96	95	5	9	6.6	4558	PASS
173	174	0.00	2	0.5	275	PASS
174	95	50	100	87.4	60456	PASS
175	174	5	9	7.7	4634	PASS
176	174	95	101	98.1	59312	PASS
177	176	5	9	7.0	4135	PASS

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 036034

Lab File ID: G4612 P01 BFB Injection Date: 10/21/2003

Instrument ID: GCMS-A BFB Injection Time: 0914

GC Column: HP-VOC ID: 0.20 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	45.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 100.0% of mass 95	87.4
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	85.7 (98.1)1
177	5.0 - 9.0% of mass 176	6.0 (7.0)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	3-A0003	3-A0003.D	10/21/2003	1005
02	VSTD002	3-0002	3-0002.D	10/21/2003	1031
03	VSTD010	3-0010	3-0010.D	10/21/2003	1056
04	VSTD020	3-0020	3-0020.D	10/21/2003	1122
05	VSTD040	3-0040	3-0040.D	10/21/2003	1147
06	VSTD060	3-0060	3-0060.D	10/21/2003	1214
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

INITIAL CALIBRATION SUMMARY

Method File	e524a003		
Last Calibration Update	Mon Oct 27 13:56:31 2003		
Level 1 File Name	3-A0003.D	**Level 1 ID**	.3
Level 2 File Name	3-002.D	**Level 2 ID**	2
Level 3 File Name	3-0010.D	**Level 3 ID**	10
Level 4 File Name	3-0020.D	**Level 4 ID**	20
Level 5 File Name	3-0040.D	**Level 5 ID**	40
Level 6 File Name	3-0060.D	**Level 6 ID**	60
Level 7 File Name	3-0020.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	920067	916201	919392	955116	907151	1006211	-1	------	------	------	------
3 di-Cl-di-F-methane	6437	39097	199979	303885	731076	1099511	-1	0.0000	0.2011	0.0000	0.1330
4 Chloromethane	6136	37417	181676	348991	739859	1132557	-1	0.0000	0.1997	0.0000	0.0704
2 F114	1527	19306	101058	155932	367886	551592	-1	0.0028	0.0932	0.0000	0.9919
5 vinyl chloride	4876	33446	161213	285451	640709	982033	-1	0.0000	0.1705	0.0000	0.0717
6 bromomethane	2539	18408	87613	168214	383891	601141	-1	0.0000	0.0969	0.0000	0.0659
7 chloroethane	2197	17752	90280	159905	376464	536590	-1	0.0000	0.0918	0.0000	0.1013
8 tri-Cl-F-methane	8394	56082	277768	461283	1030751	1532166	-1	0.0000	0.2819	0.0000	0.0992
91 Acetonitrile X10	10689	82041	382813	794170	1713507	2428244	-1	0.0000	0.0431	0.0000	0.0662
9 acrolein X10	5645	40130	201945	381523	807796	1232252	-1	0.0000	0.0212	0.0000	0.0467
11 acetone X10	-1	64324	288996	538495	1267205	1816586	-1	0.0000	0.0319	0.0000	0.0947
12 ethyl ether X5	13693	93915	436367	874255	1704647	2654028	-1	0.0000	0.0950	0.0000	0.0552
13 11-dichloroethene	6637	46215	229524	410040	877445	1367991	-1	0.0000	0.2376	0.0000	0.0605
14 Iodomethane	3461	29384	183879	356970	751141	1123042	-1	0.0038	0.1913	0.0000	0.9951
15 F-113	4492	28088	146108	224035	516639	784890	-1	0.0000	0.1441	0.0000	0.1231
16 acrylonitrile X10	10574	78358	419836	794346	1709905	2532493	-1	0.0000	0.0429	0.0000	0.0731
17 carbon disulfide	13839	85463	420250	772812	1671671	2561651	-1	0.0000	0.4524	0.0000	0.0750
94 Isopropyl Alcoholx10	331	1284	1238	28714	240070	128634	-1	0.0000	0.0020	0.0000	1.1427
18 methylene chloride	10278	48191	203033	407143	804880	1192483	-1	0.0203	0.2012	0.0000	0.9947
19 t-12-di-Cl-ethene	6615	45733	217854	407874	774111	1126298	-1	0.0000	0.2233	0.0000	0.1039
20 t-Bu-Me-ether	9529	70095	362056	751228	1592599	2437498	-1	0.0000	0.3929	0.0000	0.0773
95 Tert butyl alcoholx10	1332	4624	88338	76985	452680	251872	-1	0.0000	0.0066	0.0000	0.6496

94 allyl chloride	10689	82041	426268	794170	1724483	2428244	-1	0.0000	0.4409	0.0000	0.0706
21 11-dichloroethane	10035	71189	342138	689918	1398310	2101878	-1	0.0000	0.3698	0.0000	0.0415
97 propionitrile	103	3119	18745	29270	62391	109975	-1	0.0000	0.0176	0.0000	0.1055
22 c-12-di-Cl-ethene	6459	46844	225560	436935	845644	1210430	-1	0.0000	0.2329	0.0000	0.0801
23 22-Dichloropropane	5693	38859	218612	456844	979998	1513030	-1	0.0000	0.2360	0.0000	0.1011
24 Br-Cl-methane	3294	23046	109590	215148	438926	655419	-1	0.0000	0.1177	0.0000	0.0523
25 chloroform	13164	80631	375460	741683	1492648	2229387	-1	0.0000	0.4157	0.0000	0.0920
26 tetrahydrofuranX5	4044	28808	169729	317711	726346	1114014	-1	0.0000	0.0346	0.0000	0.1155
98 Diisopropyl ether	16931	136442	688556	1387177	2723439	4088155	-1	0.0000	0.7101	0.0000	0.0772
27 Di-Br-F-Me (surr)	6137	45047	218874	439096	880145	1314263	-1	0.0000	0.2348	0.0000	0.0481
99 ETBE	9591	74005	411030	879689	1934215	2984281	-1	0.0000	0.4477	0.0000	0.1468
29 1,2-Di-Cl-Et-d4 (S1)	5167	39287	192209	385356	801084	1206050	-1	0.0000	0.2091	0.0000	0.0418
30 12-dichloroethane	2318	14864	77221	146461	303955	463659	-1	0.0000	0.0811	0.0000	0.0434
32 vinyl acetate X5	36279	291623	1683396	3463521	7301957	11062661	-1	0.0000	0.3465	0.0000	0.1412
92 Nitro Methane(x10)	1574	10571	358371	95786	134103	298076	-1	0.0000	0.0117	0.0000	1.3083
33 2-butanoneMEK X10	14739	98541	459782	956754	2014463	3034414	-1	0.0000	0.0522	0.0000	0.0453
93 Ethyl Acetate x2	6463	37342	237607	465630	1199719	1687653	-1	0.0000	0.1292	0.0000	0.1682
34 111-trichloroethane	9393	63933	333945	629233	1352461	2070811	-1	0.0000	0.3496	0.0000	0.0454
35 11-Di-Cl-propene	6749	49362	260487	484228	1020849	1516179	-1	0.0000	0.2639	0.0000	0.0625
36 benzene	23536	167998	811668	1581767	3067808	4519766	-1	0.0000	0.8457	0.0000	0.0673
37 CCl4	9052	59763	312695	555550	1228562	1842053	-1	0.0000	0.3215	0.0000	0.0608

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
100 Isobutyl alcoholx10	2932	21047	112031	247109	552842	880424	-1	------	------	------	------
38 thiophene	10222	83170	428533	868274	1718044	2554816	-1	0.0000	0.4403	0.0000	0.0870
39 12-di-Cl-propane	4815	37555	178169	370946	752605	1124998	-1	0.0000	0.1935	0.0000	0.0628
40 trichloroethene	7696	50098	255616	501517	1020048	1520360	-1	0.0000	0.2710	0.0000	0.0423
41 dibromomethane	3770	26033	124373	247759	508912	747601	-1	0.0000	0.1346	0.0000	0.0506
101 TAME	7879	59032	335735	716981	1622049	2525816	-1	-0.0345	0.4304	0.0000	0.9963
42 Br-di-Cl-methane	9392	56733	274489	546104	1129675	1703118	-1	0.0000	0.3046	0.0000	0.0694
43 Me-methacrylate	1457	14747	87065	188318	435160	662734	-1	-0.0095	0.1138	0.0000	0.9946
44 2-ClEt-Vi-ether10	4887	45249	275793	591932	1294105	1950851	-1	-0.0367	0.0357	0.0000	0.9955
45 c-13-di-Cl-propene	6769	54923	293425	608486	1252896	1891415	-1	0.0000	0.3069	0.0000	0.1096
46 t-1,3-dichloropropene	5153	40425	231011	505285	1067475	1638452	-1	-0.0097	0.2792	0.0000	0.9968
47 Chlorobezene-d5	745928	732691	724575	731811	659336	705610	-1	0.0000	1.0000	0.0000	0.0000

48 112-tri-Cl-Et	4896	31570	158039	308164	644393	936372	-1	0.0000	0.2214	0.0000	0.0533
49 13-di-Cl-propane	7569	48826	251096	479955	958048	1392110	-1	0.0000	0.3397	0.0000	0.0396
50 Et methacrylate	2785	29334	189197	404574	897662	1374874	-1	-0.0430	0.3345	0.0000	0.9960

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
51 di-Br-Cl-methane	7359	44728	219307	430191	895491	1332246	-1	0.0000	0.3141	0.0000	0.0548
52 bromoform	4029	26611	127022	257402	537161	813031	-1	0.0000	0.1848	0.0000	0.0599
53 1,4-dichlorobutane-2	7248	52525	270048	530472	1118631	1708578	-1	0.0000	0.3742	0.0000	0.0947
54 MIBK	2727	20267	114402	244409	567049	883730	-1	-0.0334	0.2144	0.0000	0.9947
55 toluene-d8	22176	162055	811859	1597728	3175057	4699033	-1	0.0000	1.1038	0.0000	0.0617
56 toluene	32453	204349	957684	1867212	3679239	5453434	-1	0.0000	1.3542	0.0000	0.0513
57 2-hexanone X5	8296	70148	400071	806303	1789801	2714840	-1	-0.0660	0.1318	0.0000	0.9958
58 12-dibromoethane	4393	32436	159989	322735	683020	1029927	-1	0.0000	0.2269	0.0000	0.0954
59 tetra-Cl-ethene	8603	59173	281865	498130	1001817	1436032	-1	0.0000	0.3728	0.0000	0.0719
60 chlorobenzene	21200	144953	676974	1307160	2492370	3536493	-1	0.0000	0.9241	0.0000	0.0576
61 1112-tetra-Cl-Et	7365	51367	249086	487380	969491	1437439	-1	0.0000	0.3439	0.0000	0.0403
62 1,4-Dichlorobenzene-d4	436784	441685	431820	433290	398842	428493	-1	0.0000	1.0000	0.0000	0.0000
63 1-chlorohexane	3125	20185	105292	181129	379300	546400	-1	0.0000	0.2284	0.0000	0.0636
64 Et-Bz	31613	225200	1128701	2162672	4307205	6378701	-1	0.0000	2.5420	0.0000	0.0404
65 m/p-Xylenes X2	51588	364290	1753788	3322945	6407191	9314343	-1	0.0000	1.9663	0.0000	0.0463
66 styrene	19899	158986	755749	1448349	2712603	3842415	-1	0.0000	1.6558	0.0000	0.0748
67 o-xylene	25030	181225	888564	1715323	3289680	4761198	-1	0.0000	1.9855	0.0000	0.0445
68 1122-Tetra-Cl-Et	4786	35408	176142	333638	679431	1005365	-1	0.0000	0.3960	0.0000	0.0524
69 123-tri-Cl-Pr	1463	11857	58506	111098	231129	345542	-1	0.0000	0.1315	0.0000	0.0844
70 4-Br-1-F-Bz (S3)	9236	60769	292727	571173	1114624	1638683	-1	0.0000	0.6776	0.0000	0.0376
71 isopropylbenzene	31809	228075	1204677	2257352	4576796	6821750	-1	0.0000	2.6544	0.0000	0.0592
72 bromobenzene	8279	62596	299551	577972	1123002	1610222	-1	0.0000	0.6719	0.0000	0.0539
92 t-1,4-dichloro-2-butene	370	3850	26890	58909	138278	214154	-1	-0.0139	0.0860	0.0000	0.9950
73 n-propylbenzene	9091	70513	355352	656540	1290074	1877926	-1	0.0000	0.7686	0.0000	0.0653
74 2-Cl-Toluene	7570	61543	297725	558317	1084812	1601091	-1	0.0000	0.6518	0.0000	0.0707
75 4-Cl-Toluene	9182	64367	296683	566381	1062470	1497703	-1	0.0000	0.6698	0.0000	0.0750
76 135-tri-Me-Benzene	28727	213694	1063069	2008540	3906361	5670674	-1	0.0000	2.3409	0.0000	0.0517
77 4-iso-Pr-toluene	31720	226621	1149787	2111126	4215398	6174914	-1	0.0000	2.5215	0.0000	0.0463
78 124-tri-Me-Benzene	29971	222021	1078747	2103275	4147713	6124395	-1	0.0000	2.4513	0.0000	0.0448
79 tert-butylbenzene	24279	177466	929162	1736357	3598467	5289165	-1	0.0000	2.0550	0.0000	0.0671

80 13-DCB	19447	131664	611576	1176380	2227519	3166301	-1	0.0000	1.3960	0.0000	0.0684
81 sec-butylbenzene	38627	268975	1387531	2530666	5231475	7732088	-1	0.0000	3.0688	0.0000	0.0475
82 14-DCB	21754	133604	619366	1184125	2334471	3417867	-1	0.0000	1.4610	0.0000	0.0806
83 Cl-benzyl	871	5857	44122	106539	268318	431461	-1	-0.0412	0.1731	0.0000	0.9920
84 12-DCB	17721	121367	559240	1055514	2046326	2953834	-1	0.0000	1.2785	0.0000	0.0657
85 n-butylbenzene	8164	59910	307483	567085	1127859	1596385	-1	0.0000	0.6659	0.0000	0.0599
86 12-diBr-2-Cl-Pra	1032	7477	40003	83208	177685	276212	-1	0.0000	0.0951	0.0000	0.1330
87 124-tri-Cl-Bz	9169	66792	354819	702123	1402301	2085639	-1	0.0000	0.7963	0.0000	0.0771
88 naphthalene	11079	87277	545491	1159824	2506296	3927146	-1	-0.1762	1.5623	0.0000	0.9976
89 hx-Cl-butadiene	6445	40287	205532	360400	746186	1096494	-1	0.0000	0.4557	0.0000	0.0644
90 123-Tri-Cl-Bz	7754	57941	307963	600915	1229181	1798500	-1	0.0000	0.6874	0.0000	0.0870

Response F or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	r2
1)	I	1	Fluorobenzene	ISTD								
2)		3	di-Cl-di-F-m	0.233	0.213	0.218	0.159	0.201	0.182	0.201	13.30	
3)	p	4	Chloromethan	0.222	0.204	0.198	0.183	0.204	0.188	0.200	7.04	
4)		2	F114	0.055	0.105	0.110	0.082	0.101	0.091	0.091	22.20	0.990
5)	C	5	vinyl chlori	0.177	0.183	0.175	0.149	0.177	0.163	0.171	7.17	
6)		6	bromomethane	0.092	0.100	0.095	0.088	0.106	0.100	0.097	6.59	
7)		7	chloroethane	0.080	0.097	0.098	0.084	0.104	0.089	0.092	10.13	
8)		8	tri-Cl-F-met	0.304	0.306	0.302	0.241	0.284	0.254	0.282	9.92	
9)		91	Acetonitrile		0.045	0.042	0.042	0.047	0.040	0.043	6.62	
10)		9	acrolein	0.020	0.022	0.022	0.020	0.022	0.020	0.021	4.67	
11)		11	acetone X		0.035	0.031	0.028	0.035	0.030	0.032	9.47	
12)		12	ethyl ether	0.099	0.103	0.095	0.092	0.094	0.088	0.095	5.52	
13)	M, C13	11	-dichloroe	0.240	0.252	0.250	0.215	0.242	0.227	0.238	6.05#	
14)		14	Iodomethane	0.125	0.160	0.200	0.187	0.207	0.186	0.178	16.98	0.995
15)		15	F-113	0.163	0.153	0.159	0.117	0.142	0.130	0.144	12.31	
16)		16	acrylonitril	0.038	0.043	0.046	0.042	0.047	0.042	0.043	7.31	
17)		17	carbon disul	0.501	0.466	0.457	0.405	0.461	0.424	0.452	7.50	
18)		94	Isopropyl Al	0.001	0.001	0.000	0.002	0.007	0.002	0.002	114.27	
19)		18	methylene ch	0.372	0.263	0.221	0.213	0.222	0.198	0.248	26.04	0.995
20)		19	t-12-di-Cl-e	0.240	0.250	0.237	0.214	0.213	0.187	0.223	10.39	
21)		20	t-Bu-Me-ethe	0.345	0.383	0.394	0.393	0.439	0.404	0.393	7.73	
22)		95	Tert butyl a		0.003	0.010	0.004	0.012	0.004	0.007	64.96	
23)		94	allyl chlori		0.448	0.464	0.416	0.475	0.402	0.441	7.06	
24)	p	21	11-dichloroe	0.364	0.389	0.372	0.361	0.385	0.348	0.370	4.15	
25)		97	propionitril		0.017	0.020	0.015	0.017	0.018	0.018	10.55	
26)		22	c-12-di-Cl-e	0.234	0.256	0.245	0.229	0.233	0.200	0.233	8.01	
27)		23	22-Dichlorop	0.206	0.212	0.238	0.239	0.270	0.251	0.236	10.11	
28)		24	Br-Cl-methan	0.119	0.126	0.119	0.113	0.121	0.109	0.118	5.23	

(#) = Out of Range

Response F or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

		Compound	.3	2	10	20	40	60	Avg	%RSD	
29)	C	25 chloroform	0.477	0.440	0.408	0.388	0.411	0.369	0.416	9.20	
30)		26 tetrahydrofu	0.029	0.031	0.037	0.033	0.040	0.037	0.035	11.55	
31)		98 Diisopropyl	0.613	0.745	0.749	0.726	0.751	0.677	0.710	7.72	
32)	S	27 Di-Br-F-Me (		0.246	0.238	0.230	0.243	0.218	0.235	4.81	
33)		99 ETBE	0.347	0.404	0.447	0.461	0.533	0.494	0.448	14.68	
34)	S	29 1,2-Di-Cl-Et		0.214	0.209	0.202	0.221	0.200	0.209	4.18	
35)		30 12-dichloroe	0.084	0.081	0.084	0.077	0.084	0.077	0.081	4.34	
36)		32 vinyl acetat	0.263	0.318	0.366	0.363	0.402	0.366	0.346	14.12	
37)		92 Nitro Methan		0.006	0.039	0.005	0.004	0.005	0.012	130.83	
38)		33 2-butanoneME	0.053	0.054	0.050	0.050	0.056	0.050	0.052	4.53	
39)		93 Ethyl Acetat	0.117	0.102	0.129	0.122	0.165	0.140	0.129	16.82	
40)		34 111-trichlor	0.340	0.349	0.363	0.329	0.373	0.343	0.350	4.54	
41)		35 11-Di-Cl-pro	0.245	0.269	0.283	0.253	0.281	0.251	0.264	6.25	
42)	M	36 benzene	0.853	0.917	0.883	0.828	0.845	0.749	0.846	6.73	
43)		37 CCl4	0.328	0.326	0.340	0.291	0.339	0.305	0.321	6.08	
44)		100 Isobutyl al	0.011	0.011	0.012	0.013	0.015	0.015	0.013	13.92	
45)		38 thiophene	0.370	0.454	0.466	0.455	0.473	0.423	0.440	8.70	
46)	C	39 12-di-Cl-pro	0.174	0.205	0.194	0.194	0.207	0.186	0.194	6.28#	
47)	M	40 trichloroeth	0.279	0.273	0.278	0.263	0.281	0.252	0.271	4.23	
48)		41 dibromometha	0.137	0.142	0.135	0.130	0.140	0.124	0.135	5.06	
49)		101 TAME	0.285	0.322	0.365	0.375	0.447	0.418	0.369	16.15	0.995
50)		42 Br-di-Cl-met	0.340	0.310	0.299	0.286	0.311	0.282	0.305	6.94	
51)		43 Me-methacryl	0.053	0.080	0.095	0.099	0.120	0.110	0.093	25.59	0.994
52)		44 2-ClEt-Vi-et	0.018	0.025	0.030	0.031	0.036		0.028	24.68	0.993
53)		45 c-13-di-Cl-p	0.245	0.300	0.319	0.319	0.345	0.313	0.307	10.96	
54)		46 t-1,3-dichlo	0.187	0.221	0.251	0.265	0.294	0.271	0.248	15.58	0.997
55)	I	47 Chlorobezene-d5	----------	ISTD	----------						
56)		48 112-tri-Cl-E	0.219	0.215	0.218	0.211	0.244	0.221	0.221	5.33	

(#) = Out of Range

Response F or Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	
57)		49	13-di-Cl-pro	0.338	0.333	0.347	0.328	0.363	0.329	0.340	3.96	
58)		50	Et methacryl	0.124	0.200	0.261	0.276	0.340	0.325	0.255	31.77	0.995
59)		51	di-Br-Cl-met	0.329	0.305	0.303	0.294	0.340	0.315	0.314	5.48	
60)	P	52	bromoform	0.180	0.182	0.175	0.176	0.204	0.192	0.185	5.99	
61)		53	1,4-dichloro	0.324	0.358	0.373	0.362	0.424	0.404	0.374	9.47	
62)		54	MIBK	0.122	0.138	0.158	0.167	0.215	0.209	0.168	22.23	0.992
63)	s	55	toluene-d8	0.991	1.106	1.120	1.092	1.204	1.110	1.104	6.17	
64)	M,C	56	toluene	1.450	1.395	1.322	1.276	1.395	1.288	1.354	5.13	
65)		57	2-hexanone X	0.074	0.096	0.110	0.110	0.136	0.128	0.109	20.41	0.994
66)		58	12-dibromoet	0.196	0.221	0.221	0.221	0.259	0.243	0.227	9.54	
67)		59	tetra-Cl-eth	0.384	0.404	0.389	0.340	0.380	0.339	0.373	7.19	
68)	M,P	60	chlorobenzen	0.947	0.989	0.934	0.893	0.945	0.835	0.924	5.76	
69)		61	1112-tetra-C	0.329	0.351	0.344	0.333	0.368	0.340	0.344	4.03	
70)	I	62	1,4-Dichlorobenzen	----------	----------	----------	ISTD	----------	----------	----------	----------	
71)		63	1-chlorohexa	0.238	0.228	0.244	0.209	0.238	0.213	0.228	6.36	
72)	C	64	Et-Bz	2.413	2.549	2.614	2.496	2.700	2.481	2.542	4.04#	
73)		65	m/p-Xylenes	1.968	2.062	2.031	1.917	2.008	1.811	1.966	4.63	
74)		66	styrene	1.519	1.800	1.750	1.671	1.700	1.495	1.656	7.48	
75)		67	o-xylene	1.910	2.052	2.058	1.979	2.062	1.852	1.985	4.45	
76)	p	68	1122-Tetra-C	0.365	0.401	0.408	0.385	0.426	0.391	0.396	5.24	
77)		69	123-tri-Cl-P	0.112	0.134	0.135	0.128	0.145	0.134	0.131	8.44	
78)	S	70	4-Br-1-F-Bz	0.705	0.688	0.678	0.659	0.699	0.637	0.678	3.76	
79)		71	isopropylben	2.428	2.582	2.790	2.605	2.869	2.653	2.654	5.92	
80)		72	bromobenzene	0.632	0.709	0.694	0.667	0.704	0.626	0.672	5.39	
81)		92	t-1,4-dichlo	0.028	0.044	0.062	0.068	0.087	0.083	0.062	36.62	0.993
82)		73	n-propylbenz	0.694	0.798	0.823	0.758	0.809	0.730	0.769	6.53	
83)		74	2-Cl-Toluene	0.578	0.697	0.689	0.644	0.680	0.623	0.652	7.07	
84)		75	4-Cl-Toluene	0.701	0.729	0.687	0.654	0.666	0.583	0.670	7.50	

(#) = Out of Range

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 13:56:31 2003
Response via : Initial Calibration

Calibration Files
.3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

	Compound	.3	2	10	20	40	60	Avg	%RSD	
85)	76 135-tri-Me-B	2.192	2.419	2.462	2.318	2.449	2.206	2.341	5.17	
86)	77 4-iso-Pr-tol	2.421	2.565	2.663	2.436	2.642	2.402	2.522	4.63	
87)	78 124-tri-Me-B	2.287	2.513	2.498	2.427	2.600	2.382	2.451	4.48	
88)	79 tert-butylbe	1.853	2.009	2.152	2.004	2.256	2.057	2.055	6.71	
89)	80 13-DCB	1.484	1.490	1.416	1.357	1.396	1.232	1.396	6.84	
90)	81 sec-butylben	2.948	3.045	3.213	2.920	3.279	3.007	3.069	4.75	
91)	82 14-DCB	1.660	1.512	1.434	1.366	1.463	1.329	1.461	8.06	
92)	83 Cl-benzyl	0.066	0.066	0.102	0.123	0.168	0.168	0.116	39.76	0.989
93)	84 12-DCB	1.352	1.374	1.295	1.218	1.283	1.149	1.278	6.57	
94)	85 n-butylbenze	0.623	0.678	0.712	0.654	0.707	0.621	0.666	5.99	
95)	86 12-diBr-2-Cl	0.079	0.085	0.093	0.096	0.111	0.107	0.095	13.30	
96)	87 124-tri-Cl-B	0.700	0.756	0.822	0.810	0.879	0.811	0.796	7.71	
97)	88 naphthalene	0.845	0.988	1.263	1.338	1.571	1.528	1.256	23.09	0.997
98)	89 hx-Cl-butadi	0.492	0.456	0.476	0.416	0.468	0.426	0.456	6.44	
99)	90 123-Tri-Cl-B	0.592	0.656	0.713	0.693	0.770	0.700	0.687	8.70	

(#) = Out of Range

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1859

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.64	7.63	0.002	96	70	920.067	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	745.928	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	436.784	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	6.137	0.27	0.3	1.34%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	5.167	0.28	0.3	1.39%	
55	55	toluene-d8	9.90	9.89	0.000	98	100	22.176	0.24	0.2	1.18%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	9.236	0.26	0.3	1.28%	
Target Compounds											Qvalue	
<<< I		: ISTD ID = 1 >>>										
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	6.437	0.28	0.3	96	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	6.136	0.28	0.3	85	m
2	2	F114	2.04	2.00	0.006	85	135	1.527	0.13	0.1	99	
5	5	vinyl chloride	2.23	2.19	0.005	62	64	4.876	0.22	0.2	74	m
6	6	bromomethane	2.60	2.58	0.003	94	96	2.539	0.24	0.2	69	#
7	7	chloroethane	2.72	2.70	0.003	64	66	2.197	0.17	0.2	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.004	101	103	8.394	0.25	0.3	100	
91	91	Acetonitrile X10	4.07	4.04	0.003	41	40	10.689	2.65	2.6	80	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	5.645	2.22	2.2	0	m
11	11	acetone X10	3.71	3.69	0.002	43	58	18.756	4.78	4.8	80	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	13.693	1.17	1.2	79	
13	13	11-dichloroethene	3.63	3.60	0.004	61	96	6.637	0.25	0.3	0	m?
14	14	Iodomethane	3.81	3.78	0.004	142	127	3.461	0.15	0.1	95	
15	15	F-113	3.65	3.62	0.004	101	151	4.492	0.22	0.2	0	m?
16	16	acrylonitrile X10	4.52	4.49	0.003	53	52	10.574	2.57	2.6	85	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	13.839	0.21	0.2	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.003	45	43	0.331	0.47	0.5	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	10.278	0.24	0.2	72	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	6.615	0.27	0.3	88	?

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

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

1860

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.56	0.004	73	57	9.529	0.23	0.2	67	?
95	95 Tert butyl alcoho	4.45	4.47	-0.002	59	57	1.332	1.21	1.2	100	#
94	94 allyl chloride	4.07	4.04	0.003	41	76	10.689	0.30	0.3	56	#?
21	21 11-dichloroethane	5.12	5.09	0.005	63	83	10.035	0.25	0.3	97	
22	22 c-12-di-Cl-ethene	5.93	5.89	0.005	96	61	6.459	0.26	0.3	86	m?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	5.693	0.20	0.2	90	m?
24	24 Br-Cl-methane	6.26	6.23	0.004	128	130	3.294	0.27	0.3	87	
25	25 chloroform	6.37	6.35	0.003	83	85	13.164	0.30	0.3	82	?
26	26 tetrahydrofuranX5	6.35	6.32	0.004	42	72	4.044	1.34	1.3	73	#?
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	16.931	0.28	0.3	93	
99	99 ETBE	5.73	5.72	0.002	59	87	9.591	0.20	0.2	95	m
30	30 12-dichloroethane	7.23	7.20	0.004	64	62	2.318	0.32	0.3	46	m?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	36.279	1.26	1.3	95	m
92	92 Nitro Methane(x10	5.81	5.80	0.000	61	46	1.574	3.08	3.1	16	m
33	33 2-butanoneMEK X10	5.94	5.92	0.003	43	72	14.739	3.08	3.1	87	?
93	93 Ethyl Acetate x2	6.04	6.02	0.003	43	61	6.463	0.57	0.6	79	#
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	9.393	0.25	0.3	85	
35	35 11-Di-Cl-propene	6.91	6.88	0.004	75	110	6.749	0.24	0.2	89	?
36	36 benzene	7.21	7.19	0.002	78	52	23.536	0.25	0.3	87	?
37	37 CCl4	6.91	6.89	0.002	117	119	9.052	0.26	0.3	90	?
100	100 Isobutyl alcohol	7.42	7.39	0.003	43	42	2.932	7.75	7.8	61	#?
38	38 thiophene	7.54	7.51	0.004	84	58	10.222	0.22	0.2	75	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	4.815	0.23	0.2	95	
40	40 trichloroethene	8.25	8.23	0.002	130	132	7.696	0.26	0.3	95	m
41	41 dibromomethane	8.72	8.71	0.000	174	172	3.770	0.28	0.3	83	
101	101 TAME	7.41	7.39	0.002	73	43	7.879	0.19	0.2	52	m?
42	42 Br-di-Cl-methane	8.95	8.95	0.000	83	85	9.392	0.31	0.3	94	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	1.457	0.15	0.2	34	m
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	4.887	2.69	2.7	93	
45	45 c-13-di-Cl-propen	9.57	9.55	0.002	75	110	6.769	0.22	0.2	89	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	5.153	0.21	0.2	89	
<<< I2 : ISTD ID = 47 >>>											
48	48 112-tri-Cl-Et	10.47	10.45	0.001	97	83	4.896	0.27	0.3	48	m

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1981

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
49	49	13-di-Cl-propane	10.65	10.64	0.001	76	78	7.569	0.27	0.3	85	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	2.785	0.14	0.1	83	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	7.359	0.30	0.3	83	
52	52	bromoform	12.41	12.41	0.000	173	174	4.029	0.29	0.3	95	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	7.248	0.27	0.3	90	
54	54	MIBK	9.77	9.76	0.001	43	58	2.727	0.25	0.3	63	m
56	56	toluene	9.99	9.98	0.001	91	92	32.453	0.30	0.3	96	10/27/03
57	57	2-hexanone X5	10.76	10.75	0.001	43	58	8.296	1.13	1.1	89	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	4.393	0.25	0.2	83	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	8.603	0.27	0.3	96	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	21.200	0.28	0.3	95	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	7.365	0.27	0.3	93	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	3.125	0.22	0.2	17	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	31.613	0.23	0.2	94	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	51.588	0.50	0.5	98	
66	66	styrene	12.24	12.23	0.000	104	78	19.899	0.25	0.3	94	?
67	67	o-xylene	12.22	12.22	0.000	91	106	25.030	0.24	0.2	96	?
68	68	1122-Tetra-Cl-Et	12.88	12.87	0.000	83	85	4.786	0.21	0.2	86	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	1.463	0.21	0.2	75	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	31.809	0.24	0.2	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	8.279	0.23	0.2	74	#?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	0.370	0.11	0.1	84	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	9.091	0.22	0.2	91	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	7.570	0.21	0.2	93	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	9.182	0.25	0.2	95	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	28.727	0.25	0.3	90	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	31.720	0.25	0.2	99	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	29.971	0.25	0.3	99	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	24.279	0.22	0.2	91	
80	80	13-DCB	13.79	13.78	0.000	146	148	19.447	0.26	0.3	91	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	38.627	0.25	0.3	96	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1862

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
82	82	14-DCB	13.87	13.87	0.000	146	148	21.754	0.28	0.3	84	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	0.871	0.12	0.1	35	#
84	84	12-DCB	14.21	14.21	0.000	146	148	17.721	0.27	0.3	90	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	8.164	0.24	0.2	80	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	1.032	0.22	0.2	75	#
87	87	124-tri-Cl-Bz	15.59	15.58	0.000	180	182	9.169	0.21	0.2	96	
88	88	naphthalene	15.79	15.78	0.000	128	129	11.079	0.14	0.1	91	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	6.445	0.25	0.2	81	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	7.754	0.20	0.2	97	

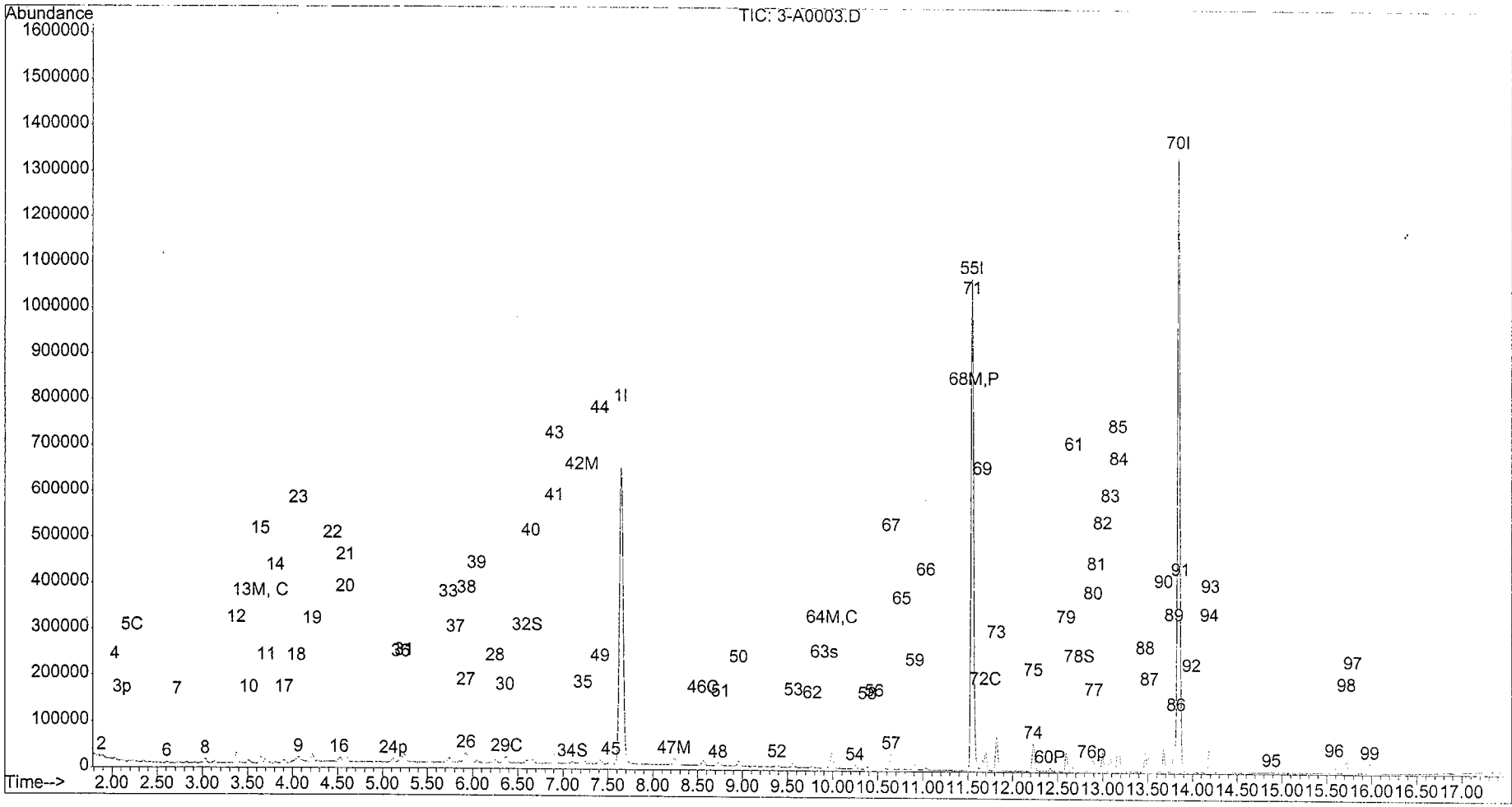
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1863



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

1864

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.63	0.003	96	70	916.201	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	732.691	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	441.685	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	45.047	1.97	2.0	9.86%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	39.287	2.12	2.1	10.62%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	162.055	1.75	1.8	8.77%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	60.769	1.66	1.7	8.32%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	39.097	1.70	1.7	95	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	37.417	1.74	1.7	92	m
2	2	F114	2.03	2.00	0.005	85	135	19.306	1.61	1.6	55	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	33.446	1.51	1.5	95	m
6	6	bromomethane	2.61	2.58	0.005	94	96	18.408	1.73	1.7	96	m
7	7	chloroethane	2.73	2.70	0.004	64	66	17.752	1.34	1.3	88	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	56.082	1.70	1.7	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	82.041	20.41	20.4	96	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	40.130	15.88	15.9	98	
11	11	acetone X10	3.71	3.69	0.002	43	58	64.324	16.47	16.5	79	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	93.915	8.07	8.1	81	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	46.215	1.76	1.8	85	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	29.384	1.27	1.3	99	
15	15	F-113	3.65	3.62	0.004	101	151	28.088	1.36	1.4	90	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	78.358	19.13	19.1	95	
17	17	carbon disulfide	3.91	3.87	0.005	76	78	85.463	1.28	1.3	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.004	45	43	1.284	1.83	1.8	100	#
18	18	methylene chlorid	4.22	4.19	0.005	84	49	48.191	1.13	1.1	94	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	45.733	1.85	1.8	96	?

10/27/03

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1865

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	70.095	1.70	1.7	90	?
95	95	Tert butyl alcoho	4.46	4.47	0.000	59	57	4.624	4.22	4.2	100	#
94	94	allyl chloride	4.07	4.04	0.004	41	76	82.041	2.28	2.3	71	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	71.189	1.79	1.8	96	
97	97	propionitrile	6.03	5.99	0.004	54	51	3.119	2.03	2.0	100	m? 10/27/03
22	22	c-12-di-Cl-ethene	5.91	5.89	0.002	96	61	46.844	1.88	1.9	91	?
23	23	22-Dichloropropan	5.92	5.89	0.003	77	97	38.859	1.37	1.4	94	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	23.046	1.90	1.9	96	
25	25	chloroform	6.38	6.35	0.003	83	85	80.631	1.84	1.8	95	
26	26	tetrahydrofuranX5	6.35	6.32	0.003	42	72	28.808	9.57	9.6	83	
98	98	Diisopropyl ether	5.25	5.22	0.004	45	87	136.442	2.23	2.2	88	
99	99	ETBE	5.74	5.72	0.003	59	87	74.005	1.58	1.6	93	
30	30	12-dichloroethane	7.22	7.20	0.002	64	62	14.864	2.08	2.1	93	?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	291.623	10.20	10.2	95	
92	92	Nitro Methane(x10	5.82	5.80	0.002	61	46	10.571	20.78	20.8	63	#
33	33	2-butanoneMEK X10	5.94	5.92	0.003	43	72	98.541	20.66	20.7	83	?
93	93	Ethyl Acetate x2	6.05	6.02	0.004	43	61	37.342	3.29	3.3	91	#?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	63.933	1.73	1.7	97	
35	35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	49.362	1.77	1.8	85	?
36	36	benzene	7.21	7.19	0.003	78	52	167.998	1.81	1.8	94	?
37	37	CCl4	6.91	6.89	0.002	117	119	59.763	1.76	1.8	98	?
100	100	Isobutyl alcohol	7.42	7.39	0.003	43	42	21.047	55.87	55.9	81	#?
38	38	thiophene	7.53	7.51	0.003	84	58	83.170	1.80	1.8	95	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	37.555	1.80	1.8	93	
40	40	trichloroethene	8.24	8.23	0.002	130	132	50.098	1.73	1.7	82	
41	41	dibromomethane	8.73	8.71	0.002	174	172	26.033	1.97	2.0	87	
101	101	TAME	7.42	7.39	0.004	73	43	59.032	1.46	1.5	92	m?
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	56.733	1.89	1.9	97	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	14.747	1.57	1.6	91	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	45.249	24.99	25.0	84	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	54.923	1.82	1.8	94	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	40.425	1.68	1.7	98	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

19661

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	31.570	1.79	1.8	94	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	48.826	1.75	1.8	84	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	29.334	1.47	1.5	96	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	44.728	1.88	1.9	100	
52	52	bromoform	12.42	12.41	0.000	173	174	26.611	1.96	2.0	98	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	52.525	2.02	2.0	98	
54	54	MIBK	9.77	9.76	0.000	43	58	20.267	1.90	1.9	91	
56	56	toluene	9.99	9.98	0.000	91	92	204.349	1.93	1.9	97	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	70.148	9.69	9.7	85	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	32.436	1.86	1.9	94	
59	59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	59.173	1.87	1.9	98	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	144.953	1.92	1.9	94	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	51.367	1.90	1.9	98	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	20.185	1.40	1.4	69	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	225.200	1.63	1.6	92	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	364.290	3.49	3.5	99	
66	66	styrene	12.24	12.23	0.000	104	78	158.986	2.00	2.0	95	?
67	67	o-xylene	12.22	12.22	0.000	91	106	181.225	1.73	1.7	92	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	35.408	1.52	1.5	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	11.857	1.70	1.7	94	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	228.075	1.70	1.7	97	
72	72	bromobenzene	12.89	12.89	0.000	156	158	62.596	1.74	1.7	97	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	3.850	1.13	1.1	71	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	70.513	1.68	1.7	96	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	61.543	1.66	1.7	96	
75	75	4-Cl-Toluene	13.18	13.18	0.000	126	128	64.367	1.70	1.7	100	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	213.694	1.85	1.8	96	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	226.621	1.76	1.8	97	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	222.021	1.84	1.8	99	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	177.466	1.61	1.6	90	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

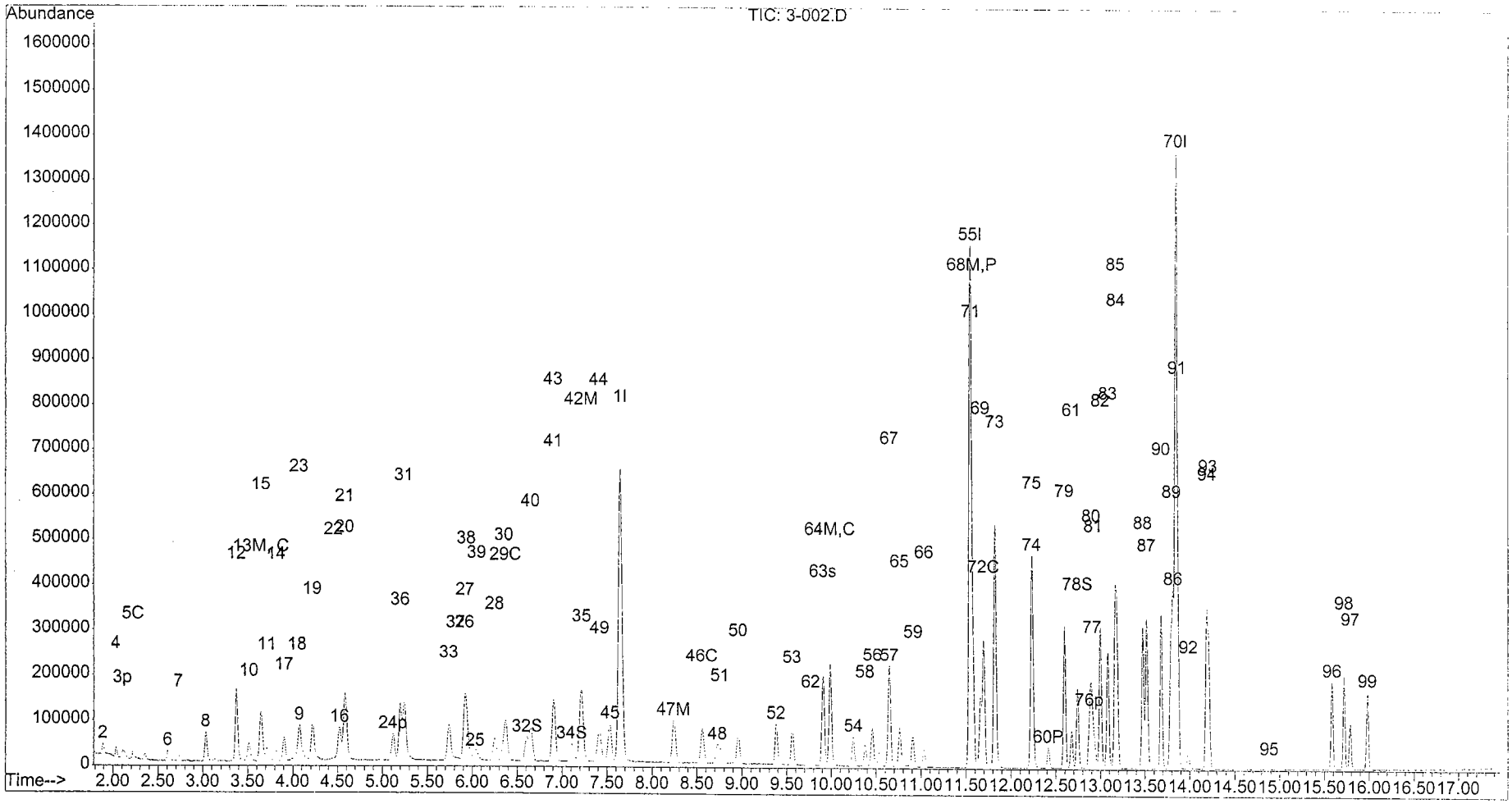
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	131.664	1.74	1.7	94	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	268.975	1.73	1.7	95	
82	82	14-DCB	13.87	13.87	0.000	146	148	133.604	1.73	1.7	94	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	5.857	0.80	0.8	61	#
84	84	12-DCB	14.21	14.21	0.000	146	148	121.367	1.80	1.8	96	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	59.910	1.74	1.7	82	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	7.477	1.57	1.6	89	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	66.792	1.53	1.5	94	
88	88	naphthalene	15.79	15.78	0.000	128	129	87.277	1.10	1.1	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	40.287	1.52	1.5	96	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	57.941	1.48	1.5	93	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:31 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:36 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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



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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1869

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards										Dev(Min)		
1	1	Fluorobenzene	7.65	7.63	0.003	96	70	919.392	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	724.575	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	431.820	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	218.874	9.55	9.6	47.76%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	192.209	10.36	10.4	51.79%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	811.859	8.89	8.9	44.45%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	292.727	8.20	8.2	40.98%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	199.979	8.66	8.7	93	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	181.676	8.40	8.4	99	m
2	2	F114	2.03	2.00	0.005	85	135	101.058	8.37	8.4	67	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	161.213	7.23	7.2	98	m
6	6	bromomethane	2.61	2.58	0.005	94	96	87.613	8.18	8.2	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	90.280	6.81	6.8	100	
8	8	tri-Cl-F-methane	3.04	3.00	0.006	101	103	277.768	8.41	8.4	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	382.813	94.91	94.9	92	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	201.945	79.64	79.6	100	
11	11	acetone X10	3.75	3.69	0.008	43	58	288.996	73.75	73.8	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	436.367	37.37	37.4	80	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	229.524	8.71	8.7	83	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	183.879	7.89	7.9	97	
15	15	F-113	3.65	3.62	0.005	101	151	146.108	7.05	7.1	89	?
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	419.836	102.15	102.1	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	420.250	6.27	6.3	99	
94	94	Isopropyl Alcohol	4.04	4.01	0.004	45	43	1.238	1.76	1.8	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	203.033	4.73	4.7	78	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	217.854	8.77	8.8	93	?

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

10/27/03

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1870

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.60	4.56	0.005	73	57	362.056	8.76	8.8	94	
95	95	Tert butyl alcoho	4.58	4.47	0.015	59	57	88.338	80.34	80.3	100	m?
94	94	allyl chloride	4.07	4.04	0.004	41	76	426.268	11.79	11.8	75	m?
21	21	11-dichloroethane	5.12	5.09	0.005	63	83	342.138	8.58	8.6	99	
97	97	propionitrile	6.04	5.99	0.006	54	51	18.745	12.15	12.2	100	m?
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	225.560	9.01	9.0	93	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	218.612	7.67	7.7	98	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	109.590	9.03	9.0	100	
25	25	chloroform	6.38	6.35	0.003	83	85	375.460	8.54	8.5	96	?
26	26	tetrahydrofuranX5	6.36	6.32	0.005	42	72	169.729	56.21	56.2	82	m?
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	688.556	11.22	11.2	90	
99	99	ETBE	5.74	5.72	0.003	59	87	411.030	8.76	8.8	90	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	77.221	10.78	10.8	91	?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	1683.396	58.68	58.7	93	
92	92	Nitro Methane(x10	5.92	5.80	0.015	61	46	358.371	701.91	701.9	16	#?
33	33	2-butanoneMEK X10	5.96	5.92	0.005	43	72	459.782	96.08	96.1	86	
93	93	Ethyl Acetate x2	6.05	6.02	0.004	43	61	237.607	20.85	20.8	100	?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	333.945	9.02	9.0	98	
35	35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	260.487	9.31	9.3	88	?
36	36	benzene	7.21	7.19	0.003	78	52	811.668	8.70	8.7	93	?
37	37	CCl4	6.91	6.89	0.002	117	119	312.695	9.16	9.2	95	?
100	100	Isobutyl alcohol	7.42	7.39	0.003	43	42	112.031	296.35	296.4	81	#?
38	38	thiophene	7.53	7.51	0.003	84	58	428.533	9.24	9.2	98	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	178.169	8.53	8.5	97	
40	40	trichloroethene	8.24	8.23	0.002	130	132	255.616	8.79	8.8	93	
41	41	dibromomethane	8.72	8.71	0.000	174	172	124.373	9.39	9.4	96	
101	101	TAME	7.41	7.39	0.002	73	43	335.735	8.25	8.3	91	?
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	274.489	9.12	9.1	98	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	87.065	9.25	9.3	97	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	275.793	151.78	151.8	84	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	293.425	9.67	9.7	91	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	231.011	9.57	9.6	91	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1871

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	158.039	9.04	9.0	98	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	251.096	9.10	9.1	100	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	189.197	9.56	9.6	95	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	219.307	9.33	9.3	95	
52	52	bromoform	12.42	12.41	0.000	173	174	127.022	9.46	9.5	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	270.048	10.52	10.5	94	
54	54	MIBK	9.77	9.76	0.000	43	58	114.402	10.84	10.8	95	
56	56	toluene	9.99	9.98	0.000	91	92	957.684	9.13	9.1	98	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	400.071	55.86	55.9	90	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	159.989	9.27	9.3	95	
59	59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	281.865	8.99	9.0	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	676.974	9.05	9.1	90	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	249.086	9.33	9.3	98	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	105.292	7.48	7.5	60	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	1128.701	8.35	8.4	94	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	1753.788	17.17	17.2	97	
66	66	styrene	12.24	12.23	0.000	104	78	755.749	9.73	9.7	95	?
67	67	o-xylene	12.22	12.22	0.000	91	106	888.564	8.67	8.7	95	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	176.142	7.72	7.7	100	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	58.506	8.57	8.6	97	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	1204.677	9.18	9.2	99	
72	72	bromobenzene	12.89	12.89	0.000	156	158	299.551	8.50	8.5	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	26.890	8.11	8.1	75	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	355.352	8.64	8.6	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	297.725	8.19	8.2	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	296.683	8.03	8.0	98	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1063.069	9.41	9.4	98	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1149.787	9.11	9.1	97	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1078.747	9.17	9.2	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	929.162	8.61	8.6	97	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1872

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	611.576	8.25	8.3	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1387.531	9.14	9.1	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	619.366	8.20	8.2	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	44.122	6.18	6.2	94	
84	84	12-DCB	14.21	14.21	0.000	146	148	559.240	8.47	8.5	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	307.483	9.14	9.1	90	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	40.003	8.61	8.6	96	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	354.819	8.30	8.3	98	
88	88	naphthalene	15.78	15.78	0.000	128	129	545.491	7.03	7.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	205.532	7.94	7.9	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	307.963	8.03	8.0	97	

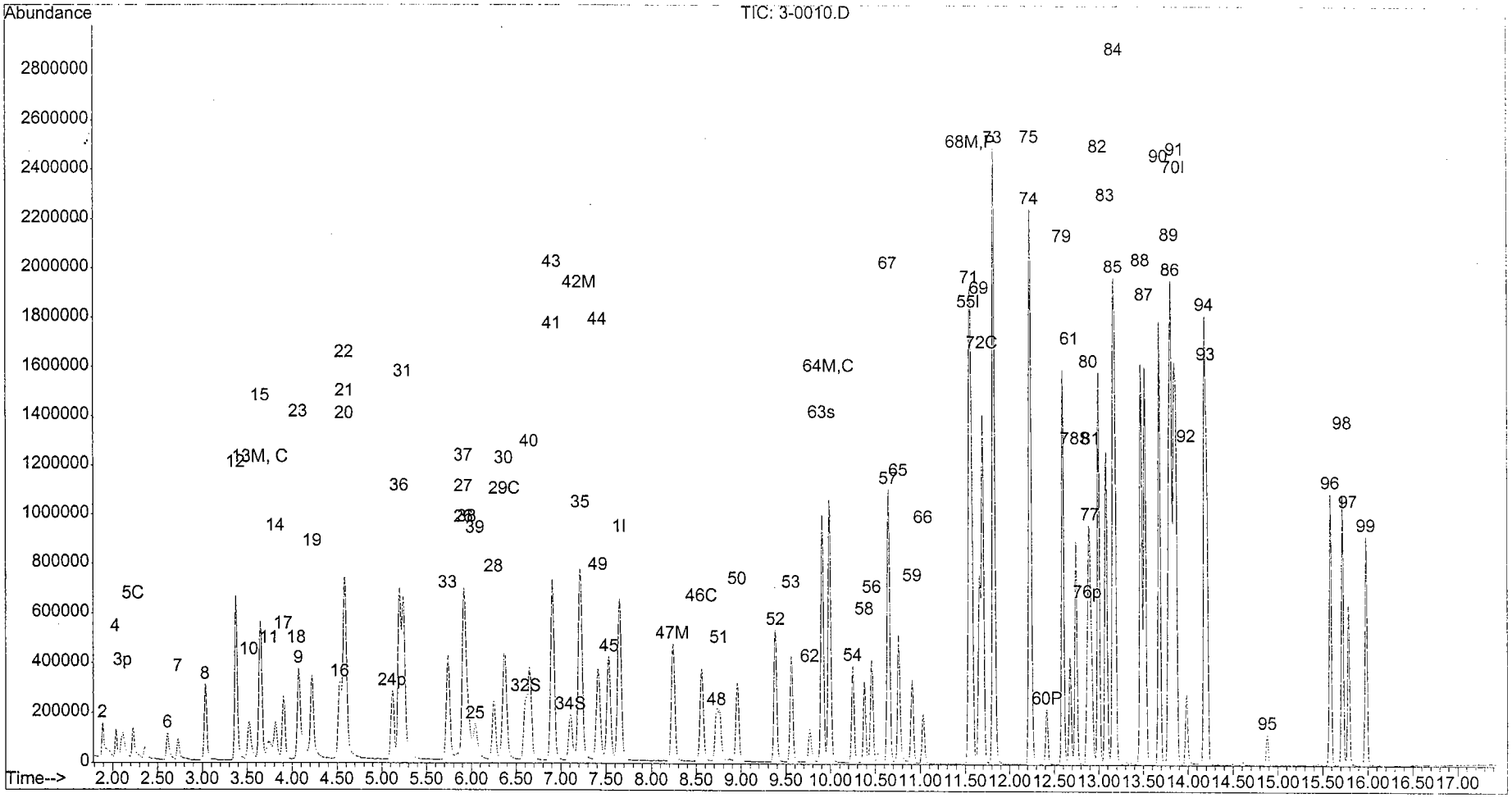
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:56 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:38 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1873



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

1874

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.63	0.003	96	70	955.116	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	731.811	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	433.290	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	439.096	18.45	18.4	92.24%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	385.356	19.99	20.0	99.95%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1597.728	17.32	17.3	86.62%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	571.173	15.94	15.9	79.69%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	303.885	12.67	12.7	98	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	348.991	15.53	15.5	98	m
2	2	F114	2.03	2.00	0.005	85	135	155.932	12.44	12.4	59	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	285.451	12.33	12.3	100	m
6	6	bromomethane	2.61	2.58	0.005	94	96	168.214	15.12	15.1	95	
7	7	chloroethane	2.73	2.70	0.004	64	66	159.905	11.60	11.6	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	461.283	13.45	13.5	99	m
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	794.170	189.53	189.5	97	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	381.523	144.83	144.8	99	
11	11	acetone X10	3.71	3.69	0.003	43	58	538.495	132.28	132.3	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	874.255	72.07	72.1	79	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	410.040	14.98	15.0	80	?
14	14	Iodomethane	3.81	3.78	0.004	142	127	356.970	14.75	14.7	94	
15	15	F-113	3.65	3.62	0.005	101	151	224.035	10.41	10.4	95	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	794.346	186.04	186.0	97	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	772.812	11.10	11.1	100	
94	94	Isopropyl Alcohol	4.01	4.01	0.000	45	43	28.714	39.30	39.3	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	407.143	9.14	9.1	76	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	407.874	15.81	15.8	89	?

10/27/03

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1875

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.59	4.56	0.004	73	57	751.228	17.49	17.5	93	?
95	95 Tert butyl alcoho	4.47	4.47	0.000	59	57	76.985	67.40	67.4	100	#
94	94 allyl chloride	4.07	4.04	0.004	41	76	794.170	21.14	21.1	75	#?
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	689.918	16.66	16.7	98	
97	97 propionitrile	6.01	5.99	0.002	54	51	29.270	18.27	18.3	100	#
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	436.935	16.80	16.8	90	?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	456.844	15.42	15.4	97	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	215.148	17.06	17.1	93	
25	25 chloroform	6.37	6.35	0.003	83	85	741.683	16.23	16.2	99	
26	26 tetrahydrofuranX5	6.34	6.32	0.002	42	72	317.711	101.28	101.3	84	
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	1387.177	21.76	21.8	89	
99	99 ETBE	5.74	5.72	0.003	59	87	879.689	18.05	18.1	91	
30	30 12-dichloroethane	7.22	7.20	0.002	64	62	146.461	19.69	19.7	97	?
32	32 vinyl acetate X5	5.19	5.17	0.003	43	86	3463.521	116.23	116.2	93	
92	92 Nitro Methane(x10	5.81	5.80	0.002	61	46	95.786	180.59	180.6	50	#
33	33 2-butanoneMEK X10	5.94	5.92	0.003	43	72	956.754	192.46	192.5	86	?
93	93 Ethyl Acetate x2	6.04	6.02	0.002	43	61	465.630	39.33	39.3	97	
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	629.233	16.35	16.4	100	
35	35 11-Di-Cl-propene	6.90	6.88	0.002	75	110	484.228	16.65	16.7	89	?
36	36 benzene	7.21	7.19	0.003	78	52	1581.767	16.32	16.3	90	?
37	37 CCl4	6.91	6.89	0.002	117	119	555.550	15.66	15.7	98	?
100	100 Isobutyl alcohol	7.41	7.39	0.002	43	42	247.109	629.22	629.2	82	#?
38	38 thiophene	7.53	7.51	0.002	84	58	868.274	18.02	18.0	92	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	370.946	17.10	17.1	99	
40	40 trichloroethene	8.24	8.23	0.002	130	132	501.517	16.60	16.6	90	
41	41 dibromomethane	8.73	8.71	0.002	174	172	247.759	18.01	18.0	99	
101	101 TAME	7.41	7.39	0.002	73	43	716.981	16.97	17.0	89	#?
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	546.104	17.46	17.5	99	
43	43 Me-methacrylate	8.76	8.75	0.000	69	100	188.318	19.26	19.3	88	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	591.932	313.58	313.6	85	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	608.486	19.30	19.3	91	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	505.285	20.16	20.2	93	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1876

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	308.164	17.45	17.4	96	
49	13-di-Cl-propane	10.65	10.64	0.000	76	78	479.955	17.23	17.2	99	?
50	Et methacrylate	10.38	10.37	0.000	69	99	404.574	20.25	20.2	91	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	430.191	18.11	18.1	99	
52	bromoform	12.41	12.41	0.000	173	174	257.402	18.99	19.0	100	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	530.472	20.46	20.5	97	
54	MIBK	9.77	9.76	0.000	43	58	244.409	22.93	22.9	97	
56	toluene	9.99	9.98	0.000	91	92	1867.212	17.62	17.6	99	
57	2-hexanone X5	10.76	10.75	0.000	43	58	806.303	111.46	111.5	96	
58	12-dibromoethane	11.03	11.03	0.000	107	109	322.735	18.52	18.5	93	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	498.130	15.73	15.7	97	?
60	chlorobenzene	11.58	11.57	0.000	112	77	1307.160	17.31	17.3	92	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	487.380	18.07	18.1	99	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	181.129	12.82	12.8	74	#?
64	Et-Bz	11.70	11.69	0.000	91	106	2162.672	15.95	16.0	95	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3322.945	32.42	32.4	97	
66	styrene	12.24	12.23	0.000	104	78	1448.349	18.59	18.6	95	?
67	o-xylene	12.22	12.22	0.000	91	106	1715.323	16.68	16.7	97	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	333.638	14.58	14.6	99	
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	111.098	16.21	16.2	97	?
71	isopropylbenzene	12.60	12.59	0.000	105	120	2257.352	17.14	17.1	99	
72	bromobenzene	12.89	12.89	0.000	156	158	577.972	16.34	16.3	99	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	58.909	17.70	17.7	85	?
73	n-propylbenzene	13.00	12.99	0.000	120	78	656.540	15.91	15.9	94	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	558.317	15.31	15.3	100	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	566.381	15.27	15.3	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	2008.540	17.71	17.7	96	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2111.126	16.67	16.7	98	?
78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	2103.275	17.81	17.8	97	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1736.357	16.03	16.0	97	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1877

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	1176.380	15.82	15.8	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2530.666	16.61	16.6	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	1184.125	15.62	15.6	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	106.539	14.86	14.9	84	#
84	84	12-DCB	14.21	14.21	0.000	146	148	1055.514	15.94	15.9	97	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	567.085	16.79	16.8	82	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	83.208	17.84	17.8	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	702.123	16.37	16.4	99	
88	88	naphthalene	15.78	15.78	0.000	128	129	1159.824	14.90	14.9	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	360.400	13.88	13.9	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	600.915	15.62	15.6	97	

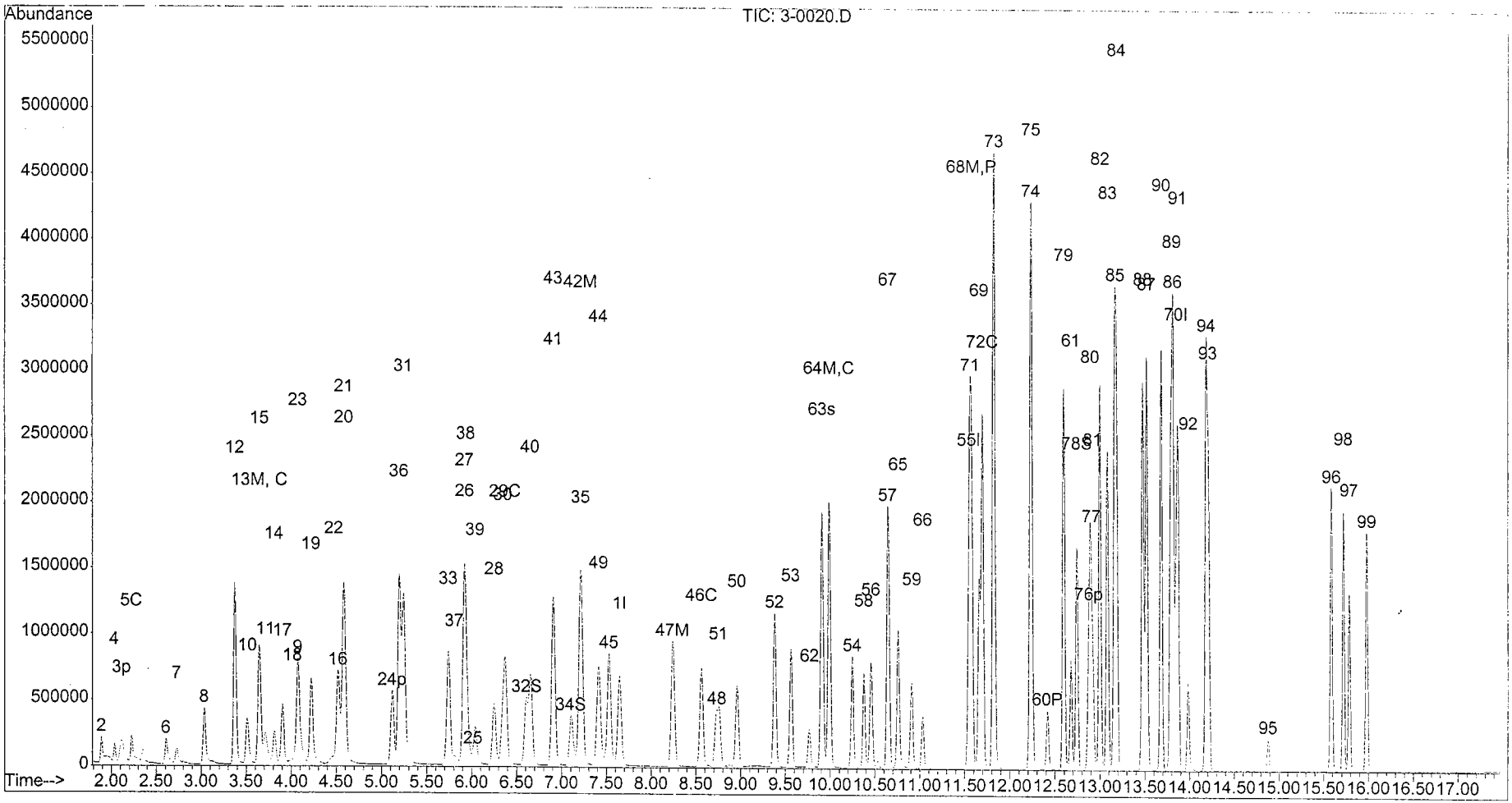
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:22 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:40 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1878



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

1879

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-004U.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.65	7.63	0.003	96	70	907.151	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	659.336	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	398.842	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	880.145	38.93	38.9	194.66%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	801.084	43.75	43.8	218.76%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	3175.057	38.21	38.2	191.05%	
70	70	4-Br-1-F-Bz (S3)	12.75	12.74	0.000	174	95	1114.624	33.79	33.8	168.94%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	731.076	32.10	32.1	99	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	739.859	34.67	34.7	99	m
2	2	F114	2.03	2.00	0.005	85	135	367.886	30.90	30.9	51	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	640.709	29.14	29.1	99	
6	6	bromomethane	2.61	2.58	0.005	94	96	383.891	36.34	36.3	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	376.464	28.76	28.8	0	m
8	8	tri-Cl-F-methane	3.04	3.00	0.006	101	103	1030.751	31.64	31.6	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	1713.507	430.55	430.5	92	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	807.796	322.86	322.9	0	m
11	11	acetone X10	3.74	3.69	0.006	43	58	1267.205	327.75	327.8	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	1704.647	147.96	148.0	74	#
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	877.445	33.74	33.7	80	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	751.141	32.68	32.7	94	
15	15	F-113	3.65	3.62	0.005	101	151	516.639	25.27	25.3	91	?
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	1709.905	421.65	421.6	93	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1671.671	25.29	25.3	98	
94	94	Isopropyl Alcohol	4.16	4.01	0.020	45	43	240.070	345.94	345.9	100	m
18	18	methylene chlorid	4.22	4.19	0.005	84	49	804.880	19.01	19.0	77	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	774.111	31.59	31.6	88	?

10/27/03

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

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

1880

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-004U.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20 t-Bu-Me-ether	4.60	4.56	0.005	73	57	1592.599	39.05	39.0	94	?
95	95 Tert butyl alcoho	4.58	4.47	0.014	59	57	452.680	417.24	417.2	100	m?
94	94 allyl chloride	4.07	4.04	0.004	41	76	1724.483	48.32	48.3	72	#? 10/27/03
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	1398.310	35.56	35.6	99	
97	97 propionitrile	6.03	5.99	0.004	54	51	62.391	41.00	41.0	100	#?
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	845.644	34.23	34.2	94	?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	979.998	34.83	34.8	100	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	438.926	36.64	36.6	96	
25	25 chloroform	6.38	6.35	0.003	83	85	1492.648	34.39	34.4	99	
26	26 tetrahydrofuranX5	6.35	6.32	0.003	42	72	726.346	243.80	243.8	81	
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	2723.439	44.98	45.0	88	
99	99 ETBE	5.74	5.72	0.003	59	87	1934.215	41.79	41.8	90	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	303.955	43.02	43.0	92	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	7301.957	257.99	258.0	91	
92	92 Nitro Methane(x10	5.84	5.80	0.006	61	46	134.103	266.20	266.2	67	#
33	33 2-butanoneMEK X10	5.95	5.92	0.004	43	72	2014.463	426.65	426.7	85	
93	93 Ethyl Acetate x2	6.04	6.02	0.003	43	61	1199.719	106.69	106.7	99	?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	1352.461	37.01	37.0	99	
35	35 11-Di-Cl-propene	6.90	6.88	0.002	75	110	1020.849	36.97	37.0	92	?
36	36 benzene	7.21	7.19	0.003	78	52	3067.808	33.32	33.3	92	?
37	37 CCl4	6.91	6.89	0.003	117	119	1228.562	36.46	36.5	99	?
100	100 Isobutyl alcohol	7.41	7.39	0.002	43	42	552.842	1482.14	1482.1	86	#?
38	38 thiophene	7.53	7.51	0.003	84	58	1718.044	37.54	37.5	92	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	752.605	36.53	36.5	96	
40	40 trichloroethene	8.24	8.23	0.002	130	132	1020.048	35.54	35.5	90	
41	41 dibromomethane	8.73	8.71	0.002	174	172	508.912	38.94	38.9	100	
101	101 TAME	7.41	7.39	0.002	73	43	1622.049	40.42	40.4	89	#?
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	1129.675	38.03	38.0	100	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	435.160	46.87	46.9	88	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	1294.105	721.80	721.8	82	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1252.896	41.84	41.8	91	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	1067.475	44.83	44.8	93	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1881

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	644.393	40.50	40.5	94	
49	49	13-di-Cl-propane	10.65	10.64	0.001	76	78	958.048	38.17	38.2	100	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	897.662	49.86	49.9	91	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	895.491	41.85	41.8	99	
52	52	bromoform	12.42	12.41	0.000	173	174	537.161	43.98	44.0	100	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	1118.631	47.88	47.9	96	
54	54	MIBK	9.77	9.76	0.000	43	58	567.049	59.05	59.1	97	
56	56	toluene	9.99	9.98	0.001	91	92	3679.239	38.53	38.5	100	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	1789.801	274.61	274.6	92	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	683.020	43.51	43.5	98	
59	59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	1001.817	35.11	35.1	98	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	2492.370	36.63	36.6	93	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	969.491	39.89	39.9	97	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	379.300	29.16	29.2	63	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	4307.205	34.51	34.5	97	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	6407.191	67.91	67.9	98	
66	66	styrene	12.24	12.23	0.000	104	78	2712.603	37.82	37.8	99	?
67	67	o-xylene	12.22	12.22	0.000	91	106	3289.680	34.76	34.8	100	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	679.431	32.25	32.2	98	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	231.129	36.65	36.6	92	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	4576.796	37.74	37.7	96	
72	72	bromobenzene	12.89	12.89	0.000	156	158	1123.002	34.48	34.5	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	138.278	45.13	45.1	84	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	1290.074	33.97	34.0	96	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1084.812	32.32	32.3	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1062.470	31.12	31.1	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	3906.361	37.42	37.4	94	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	4215.398	36.16	36.2	99	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	4147.713	38.15	38.2	94	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	3598.467	36.10	36.1	96	

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1882

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	2227.519	32.53	32.5	98	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	5231.475	37.29	37.3	100	
82	82	14-DCB	13.87	13.87	0.000	146	148	2334.471	33.46	33.5	96	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	268.318	40.67	40.7	84	#
84	84	12-DCB	14.21	14.21	0.000	146	148	2046.326	33.56	33.6	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1127.859	36.28	36.3	87	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	177.685	41.39	41.4	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	1402.301	35.52	35.5	100	
88	88	naphthalene	15.78	15.78	0.000	128	129	2506.296	34.99	35.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	746.186	31.22	31.2	97	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1229.181	34.70	34.7	97	

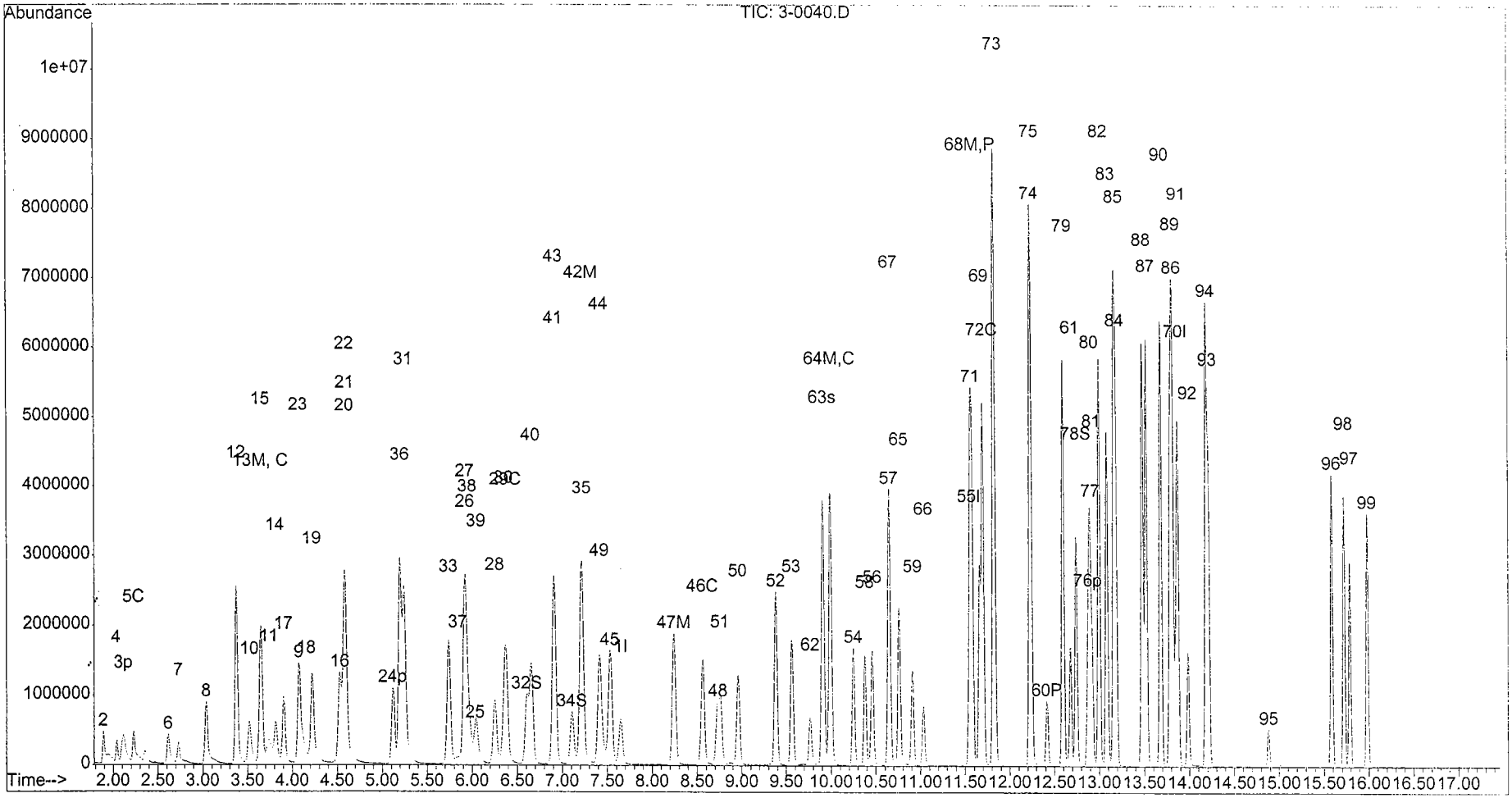
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1883



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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1884

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.65	7.63	0.003	96	70	1006.211	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	705.610	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	428.493	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	1314.263	52.41	52.4	262.06%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	1206.050	59.38	59.4	296.92%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	4699.033	52.84	52.8	264.21%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	1638.683	46.24	46.2	231.18%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	1099.511	43.53	43.5	100	m
4	4	Chloromethane	2.11	2.07	0.005	50	52	1132.557	54.69	54.7	98	m
2	2	F114	2.03	2.00	0.005	85	135	551.592	41.76	41.8	32	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	982.033	40.26	40.3	99	
6	6	bromomethane	2.61	2.58	0.005	94	96	601.141	51.30	51.3	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	536.590	36.96	37.0	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	1532.166	42.41	42.4	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	2428.244	550.07	550.1	95	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	1232.252	535.84	535.8	100	
11	11	acetone X10	3.72	3.69	0.004	43	58	1816.586	837.75	837.8	0	m
12	12	ethyl ether X5	3.37	3.34	0.004	59	74	2654.028	257.12	257.1	77	#
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	1367.991	47.43	47.4	0	m?
14	14	Iodomethane	3.81	3.78	0.004	142	127	1123.042	44.04	44.0	95	
15	15	F-113	3.65	3.62	0.005	101	151	784.890	40.46	40.5	86	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	2532.493	563.01	563.0	97	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	2561.651	34.93	34.9	100	
94	94	Isopropyl Alcohol	4.05	4.01	0.006	45	43	128.634	203.26	203.3	100	#?
18	18	methylene chlorid	4.22	4.19	0.004	84	49	1192.483	48.64	48.6	74	#
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	1126.298	41.44	41.4	84	?

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1885

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20 20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	2437.498	53.88	53.9	92	?
95 95	Tert butyl alcoho	4.48	4.47	0.002	59	57	251.872	209.71	209.7	100	#
94 94	allyl chloride	4.07	4.04	0.004	41	76	2428.244	61.34	61.3	72	#?
21 21	11-dichloroethane	5.12	5.09	0.004	63	83	2101.878	48.19	48.2	100	
97 97	propionitrile	6.01	5.99	0.002	54	51	109.975	65.15	65.2	100	#?
22 22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	1210.430	44.17	44.2	93	?
23 23	22-Dichloropropan	5.92	5.89	0.003	77	97	1513.030	56.27	56.3	98	?
24 24	Br-Cl-methane	6.25	6.23	0.003	128	130	655.419	49.32	49.3	97	
25 25	chloroform	6.37	6.35	0.002	83	85	2229.387	54.70	54.7	99	
26 26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	1114.014	337.11	337.1	81	
98 98	Diisopropyl ether	5.24	5.22	0.003	45	87	4088.155	60.87	60.9	87	#
99 99	ETBE	5.74	5.72	0.003	59	87	2984.281	58.13	58.1	90	
30 30	12-dichloroethane	7.22	7.20	0.003	64	62	463.659	65.98	66.0	99	?
32 32	vinyl acetate X5	5.20	5.17	0.004	43	86	11062.661	352.38	352.4	90	
92 92	Nitro Methane(x10	5.82	5.80	0.002	61	46	298.076	533.44	533.4	95	
33 33	2-butanoneMEK X10	5.95	5.92	0.003	43	72	3034.414	734.41	734.4	85	
93 93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	1687.653	154.04	154.0	98	?
34 34	111-trichloroetha	6.65	6.63	0.002	97	99	2070.811	51.08	51.1	98	
35 35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	1516.179	49.50	49.5	88	?
36 36	benzene	7.21	7.19	0.003	78	52	4519.766	44.25	44.3	90	?
37 37	CCl4	6.91	6.89	0.003	117	119	1842.053	49.28	49.3	99	?
100 100	Isobutyl alcohol	7.41	7.39	0.002	43	42	880.424	1806.00	1806.0	99	?
38 38	thiophene	7.53	7.51	0.003	84	58	2554.816	50.32	50.3	93	
39 39	12-di-Cl-propane	8.56	8.54	0.002	63	76	1124.998	49.23	49.2	97	
40 40	trichloroethene	8.24	8.23	0.002	130	132	1520.360	47.76	47.8	92	
41 41	dibromomethane	8.73	8.71	0.002	174	172	747.601	51.57	51.6	99	
101 101	TAME	7.41	7.39	0.002	73	43	2525.816	56.74	56.7	88	#?
42 42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	1703.118	57.00	57.0	99	
43 43	Me-methacrylate	8.76	8.75	0.002	69	100	662.734	54.98	55.0	88	
44 44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	1950.851	684.59	684.6	82	
45 45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1891.415	56.95	57.0	94	
46 46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	1638.452	62.04	62.0	94	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	936.372	54.99	55.0	95	
49	49	13-di-Cl-propane	10.65	10.64	0.001	76	78	1392.110	51.83	51.8	100	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	1374.874	61.96	62.0	92	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	1332.246	61.52	61.5	99	
52	52	bromoform	12.41	12.41	0.000	173	174	813.031	62.20	62.2	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	1708.578	68.33	68.3	98	
54	54	MIBK	9.77	9.76	0.000	43	58	883.730	86.00	86.0	98	
56	56	toluene	9.99	9.98	0.001	91	92	5453.434	53.36	53.4	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	2714.840	389.23	389.2	91	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	1029.927	61.31	61.3	98	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	1436.032	47.03	47.0	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	3536.493	53.79	53.8	95	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	1437.439	55.27	55.3	95	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	546.400	39.10	39.1	57	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	6378.701	47.58	47.6	98	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	9314.343	91.90	91.9	94	
66	66	styrene	12.24	12.23	0.000	104	78	3842.415	49.86	49.9	98	?
67	67	o-xylene	12.22	12.22	0.000	91	106	4761.198	46.82	46.8	98	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	1005.365	44.41	44.4	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	345.542	51.00	51.0	95	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	6821.750	52.36	52.4	95	
72	72	bromobenzene	12.89	12.89	0.000	156	158	1610.222	46.02	46.0	100	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	214.154	53.26	53.3	84	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	1877.926	46.02	46.0	95	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1601.091	44.40	44.4	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1497.703	40.83	40.8	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	5670.674	50.56	50.6	91	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	6174.914	49.30	49.3	97	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	6124.395	52.44	52.4	93	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	5289.165	49.39	49.4	98	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

1887

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.78	0.000	146	148	3166.301	43.04	43.0	97	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	7732.088	51.30	51.3	99	
82	82	14-DCB	13.87	13.87	0.000	146	148	3417.867	48.86	48.9	95	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	431.461	60.87	60.9	98	
84	84	12-DCB	14.21	14.21	0.000	146	148	2953.834	45.10	45.1	97	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1596.385	43.23	43.2	93	?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	276.212	59.89	59.9	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	2085.639	49.18	49.2	96	
88	88	naphthalene	15.78	15.78	0.000	128	129	3927.146	51.03	51.0	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	1096.494	42.70	42.7	100	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1798.500	47.26	47.3	99	

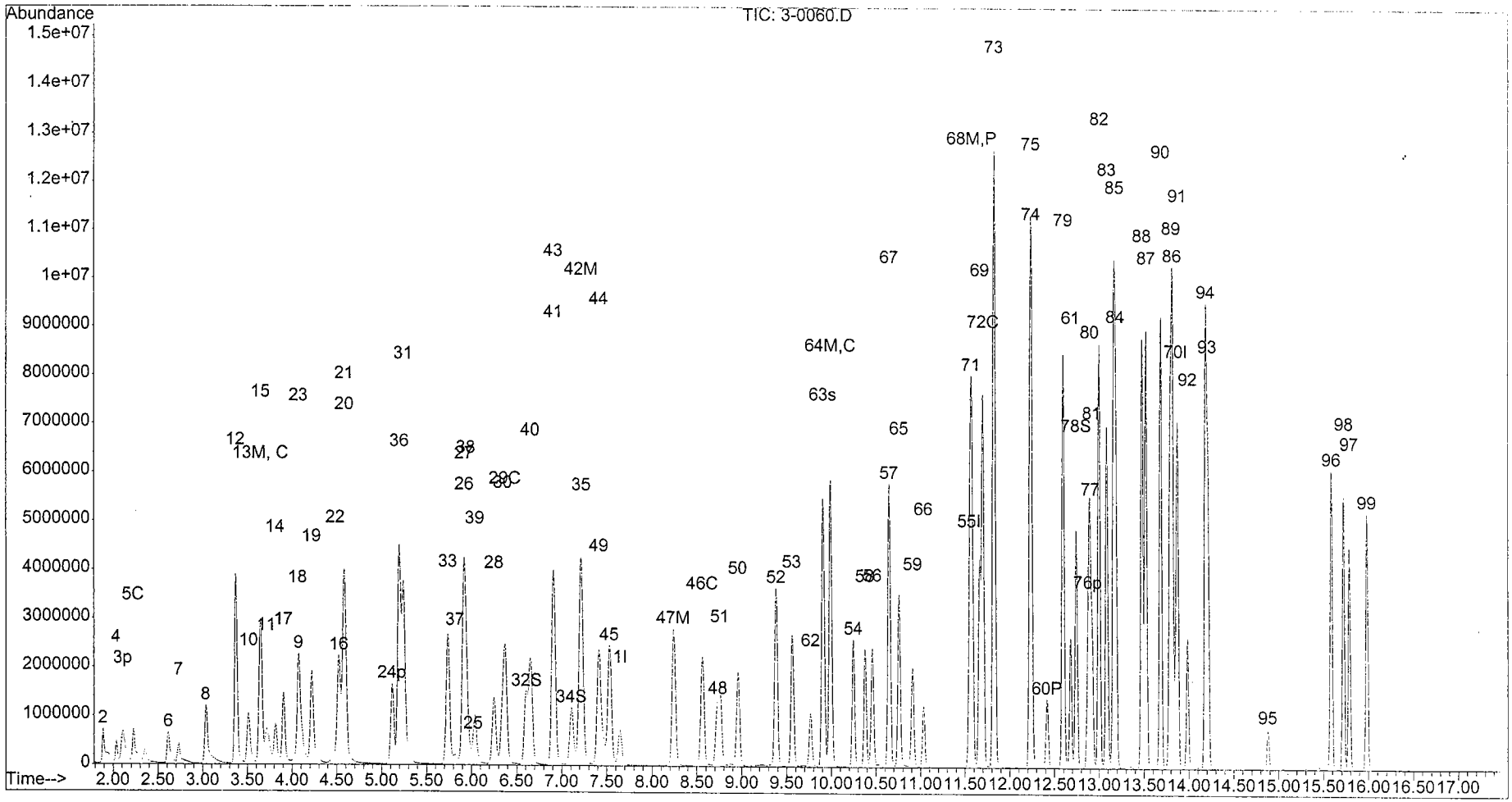
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 12:14 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:45 2003
Print Time : Mon Oct 27 13:50 2003
Miscleneous :

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

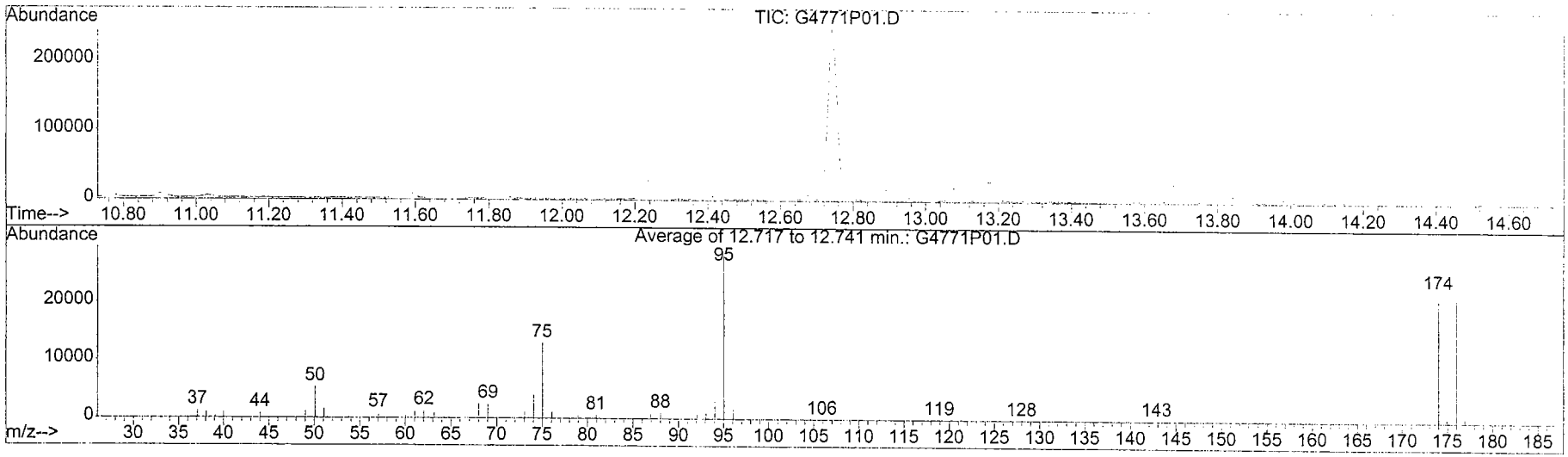
1888



BFB

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771P01.D
Acq On : 11 Nov 2003 7:55 pm
Sample : ##03g4771, w 50 ng
Misc :
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2

Vial: 1
Operator: zou
Inst : GCMS-A
Multiplr: 1.00



Spectrum Information: Average of 12.717 to 12.741 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.9	5344	PASS
75	95	30	60	46.0	13021	PASS
95	95	100	100	100.0	28294	PASS
96	95	5	9	6.3	1780	PASS
173	174	0.00	2	0.4	86	PASS
174	95	50	100	79.6	22535	PASS
175	174	5	9	9.0	2018	PASS
176	174	95	101	96.5	21748	PASS
177	176	5	9	6.5	1404	PASS

G4771P01.D E524A003.M Wed Nov 12 09:36:20 2003

FORM-5A

Applied P & Ch Laboratory

Volatile Organic Instrument Performance Check for Method 524.2

Bromofluorobenzene (BFB), Part II

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	036034
Project ID:	JPL	BFB Inj. Date:	11/11/03	Batch No:	03G4771
		BFB Inj. Time:	19:55	Sequence No:	03G4771
Project No:	04-4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G4771P01	Heated Purge: (Y/N)	N	Column ID:	0.20 mm

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

#	Client Sample No	Lab Sample ID	Data File Name	Date Analyzed	Time Analyzed
1	03G4771-CCV-01	03G4771-CCV-01	G4771Q01	11/11/03	20:21
2	03G4771-LCS-01	03G4771-LCS-01	G4771L01	11/11/03	20:46
3	MW-13MS	03-6034-3MS	G4771M02	11/11/03	22:29
4	MW-13MSD	03-6034-3MSD	G4771N02	11/11/03	22:55
5	03G4771-MB-01	03G4771-MB-01	G4771K01	11/12/03	01:17
6	TB-12-11-7-03	03-6034-5	6034-05	11/12/03	02:41
7	MW-13	03-6034-3	6034-03	11/12/03	03:07
8	DUPE-2-4-Q03	03-6034-1	6034-01	11/12/03	05:18
9	MW-6	03-6034-2	6034-02	11/12/03	05:44
10	MW-15	03-6034-4	6034-04	11/12/03	06:10
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continuing Calibration Concentration Summary

Data File G4771Q01
Method File E524A003

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	648705
3 di-Cl-di-F-methane	20	18.09	ppb	9.55	236014
4 Chloromethane	20	12.06	ppb	39.69	156277
2 F114	20	19.43	ppb	2.86	119259
5 vinyl chloride	20	16.30	ppb	18.51	180287
6 bromomethane	20	12.56	ppb	37.19	78937
7 chloroethane	20	17.87	ppb	10.66	106450
8 tri-Cl-F-methane	20	22.87	ppb	14.34	418258
91 Acetonitrile X10	200	171.16	ppb	14.42	478387
9 acrolein X10	200	182.44	ppb	8.78	250437
11 acetone X10	200	175.87	ppb	12.06	364495
12 ethyl ether X5	100	92.37	ppb	7.63	569304
13 11-dichloroethene	20	20.68	ppb	3.40	318706
14 Iodomethane	20	7.98	ppb	60.10	101487
15 F-113	20	23.06	ppb	15.28	215535
16 acrylonitrile X10	200	172.76	ppb	13.62	480760
17 carbon disulfide	20	15.85	ppb	20.77	465029
94 Isopropyl Alcoholx10	200	523.05	ppb	161.52	69469
18 methylene chloride	20	17.58	ppb	12.09	242614
19 t-12-di-Cl-ethene	20	17.76	ppb	11.19	257248
20 t-Bu-Me-ether	20	20.53	ppb	2.63	523188
95 Tert butyl alcoholx10	200	329.22	ppb	64.61	140138
94 allyl chloride	20	16.73	ppb	16.37	478387
21 11-dichloroethane	20	18.46	ppb	7.69	442921
97 propionitrile	20	17.58	ppb	12.08	20109
22 c-12-di-Cl-ethene	20	18.48	ppb	7.60	279184
23 22-Dichloropropane	20	24.66	ppb	23.28	377449
24 Br-Cl-methane	20	18.45	ppb	7.76	140909
25 chloroform	20	19.56	ppb	2.19	527523
26 tetrahydrofuranX5	100	83.11	ppb	16.89	186784
98 Diisopropyl ether	20	18.23	ppb	8.87	839624
27 Di-Br-F-Me (surr)	20	20.13	ppb	0.63	306557
99 ETBE	20	21.57	ppb	7.87	626611
29 1,2-Di-Cl-Et-d4 (S1)	20	20.91	ppb	4.57	283742
30 12-dichloroethane	20	21.32	ppb	6.59	112093
32 vinyl acetate X5	100	98.35	ppb	1.65	2210560
92 Nitro Methane(x10)	200	82.27	ppb	58.87	62329
33 2-butanoneMEK X10	200	175.13	ppb	12.43	592745
93 Ethyl Acetate x2	40	35.79	ppb	10.51	299980
34 111-trichloroethane	20	23.08	ppb	15.42	523515
35 11-Di-Cl-propene	20	20.45	ppb	2.26	350064
36 benzene	20	17.72	ppb	11.40	972148
37 CCl4	20	24.90	ppb	24.52	519310

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	212.46	ppb	6.23	176984
38 thiophene	20	18.91	ppb	5.45	540056
39 12-di-Cl-propane	20	17.67	ppb	11.66	221801
40 trichloroethene	20	19.51	ppb	2.45	342927
41 dibromomethane	20	19.52	ppb	2.41	170442
101 TAME	20	19.08	ppb	4.59	510416
42 Br-di-Cl-methane	20	20.01	ppb	0.05	395417
43 Me-methacrylate	20	16.67	ppb	16.63	116871
44 2-ClEt-Vi-ether10	200	134.62	ppb	32.69	288370
45 c-13-di-Cl-propene	20	19.84	ppb	0.82	394857
46 t-1,3-dichloropropene	20	19.64	ppb	1.82	349316
47 Chlorobezene-d5	10	10.00	ppb	0.00	495670
48 112-tri-Cl-Et	20	18.53	ppb	7.33	203392
49 13-di-Cl-propane	20	19.07	ppb	4.64	321083
50 Et methacrylate	20	16.71	ppb	16.43	255825

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	20.18	ppb	0.90	314220
52 bromoform	20	20.71	ppb	3.56	189669
53 1,4-dichlorobutane-2	20	18.67	ppb	6.63	346373
54 MIBK	20	15.55	ppb	22.23	148712
55 toluene-d8	20	19.10	ppb	4.52	1044814
56 toluene	20	17.85	ppb	10.74	1198320
57 2-hexanone X5	100	82.13	ppb	17.87	503832
58 12-dibromoethane	20	18.70	ppb	6.48	210321
59 tetra-Cl-ethene	20	21.31	ppb	6.55	393755
60 chlorobenzene	20	19.29	ppb	3.57	883342
61 1112-tetra-Cl-Et	20	21.35	ppb	6.77	364035
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	306638
63 1-chlorohexane	20	20.18	ppb	0.88	141280
64 Et-Bz	20	19.32	ppb	3.40	1505927
65 m/p-Xylenes X2	40	39.08	ppb	2.30	2356272
66 styrene	20	19.51	PPB	2.47	990373
67 o-xylene	20	19.76	ppb	1.18	1203304
68 1122-Tetra-Cl-Et	20	17.90	ppb	10.48	217397
69 123-tri-Cl-Pr	20	20.01	ppb	0.04	80664
70 4-Br-1-F-Bz (S3)	20	20.08	ppb	0.42	417338
71 isopropylbenzene	20	20.75	ppb	3.75	1688975
72 bromobenzene	20	20.16	ppb	0.79	415302
92 t-1,4-dichloro-2-butene	20	18.21	ppb	8.93	43762
73 n-propylbenzene	20	21.17	ppb	5.83	498861
74 2-Cl-Toluene	20	20.38	ppb	1.91	407381
75 4-Cl-Toluene	20	19.97	ppb	0.15	410131
76 135-tri-Me-Benzene	20	20.98	ppb	4.91	1506141
77 4-iso-Pr-toluene	20	21.59	ppb	7.96	1669502
78 124-tri-Me-Benzene	20	20.69	ppb	3.47	1555566
79 tert-butylbenzene	20	21.68	ppb	8.38	1365888
80 13-DCB	20	20.03	ppb	0.13	857264
81 sec-butylbenzene	20	21.36	ppb	6.80	2010030

82 14-DCB	20	19.10	ppb	4.52	855464
83 Cl-benzyl	20	18.26	ppb	8.69	84303
84 12-DCB	20	19.73	ppb	1.35	773523
85 n-butylbenzene	20	21.96	ppb	9.80	448411
86 12-diBr-2-Cl-Pra	20	19.32	ppb	3.39	56374
87 124-tri-Cl-Bz	20	21.50	ppb	7.48	524901
88 naphthalene	20	19.34	ppb	3.29	872593
89 hx-Cl-butadiene	20	23.94	ppb	19.71	334524
90 123-Tri-Cl-Bz	20	21.70	ppb	8.49	457343

Average D % 11.558642

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Vial: 2
Acq On : 11 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1	Fluorobenzene	1.000	1.000	0.0	68	0.00
2		3	di-Cl-di-F-methane	0.201	0.182	9.5	78	0.00
3	p	4	Chloromethane	0.200	0.120	40.0#	45#	0.00
4		2	F114	0.091	0.092	-1.1	76	0.00
5	C	5	vinyl chloride	0.171	0.139	18.7	63	0.00
6		6	bromomethane	0.097	0.061	37.1#	47#	0.00
7		7	chloroethane	0.092	0.082	10.9	67	0.00
8		8	tri-Cl-F-methane	0.282	0.322	-14.2	91	0.00
9		91	Acetonitrile X10	0.043	0.037	14.0	60	0.00
10		9	acrolein X10	0.021	0.019	9.5	66	0.00
11		11	acetone X10	0.032	0.028	12.5	68	0.00
12		12	ethyl ether X5	0.095	0.088	7.4	65	0.00
13	M, C	13	11-dichloroethene	0.238	0.246	-3.4	78	0.00
14		14	Iodomethane	0.178	0.078	56.2#	28#	0.00
15		15	F-113	0.144	0.166	-15.3	96	0.00
16		16	acrylonitrile X10	0.043	0.037	14.0	61	0.00
17		17	carbon disulfide	0.452	0.358	20.8#	60	0.00
18		94	Isopropyl Alcoholx10	0.002	0.005	-150.0#	242#	0.00
19		18	methylene chloride	0.248	0.187	24.6#	60	0.00
20		19	t-12-di-Cl-ethene	0.223	0.198	11.2	63	0.00
21		20	t-Bu-Me-ether	0.393	0.403	-2.5	70	0.00
22		95	Tert butyl alcoholx10	0.007	0.011	-57.1#	182	-0.01
23		94	allyl chloride	0.441	0.369	16.3	60	0.00
24	p	21	11-dichloroethane	0.370	0.341	7.8	64	0.00
25		97	propionitrile	0.018	0.015	16.7	69	0.00
26		22	c-12-di-Cl-ethene	0.233	0.215	7.7	64	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Vial: 2
Acq On : 11 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
27		23	22-Dichloropropane	0.236	0.291	-23.3#	83	0.00
28		24	Br-Cl-methane	0.118	0.109	7.6	65	0.00
29	C	25	chloroform	0.416	0.407	2.2	71	0.00
30		26	tetrahydrofuranX5	0.035	0.029	17.1	59	0.00
31		98	Diisopropyl ether	0.710	0.647	8.9	61	0.00
32	S	27	Di-Br-F-Me (surr)	0.235	0.236	-0.4	70	0.00
33		99	ETBE	0.448	0.483	-7.8	71	0.00
34	S	29	1,2-Di-Cl-Et-d4 (S1)	0.209	0.219	-4.8	74	0.00
35		30	12-dichloroethane	0.081	0.086	-6.2	77	0.00
36		32	vinyl acetate X5	0.346	0.341	1.4	64	0.00
37		92	Nitro Methane(x10)	0.012	0.005	58.3#	65	-0.02
38		33	2-butanoneMEK X10	0.052	0.046	11.5	62	0.00
39		93	Ethyl Acetate x2	0.129	0.116	10.1	64	0.00
40		34	111-trichloroethane	0.350	0.404	-15.4	83	0.00
41		35	11-Di-Cl-propene	0.264	0.270	-2.3	72	0.00
42	M	36	benzene	0.846	0.749	11.5	61	0.00
43		37	CCl4	0.321	0.400	-24.6#	93	0.00
44		100	Isobutyl alcoholx10	0.013	0.014	-7.7	72	0.00
45		38	thiophene	0.440	0.416	5.5	62	0.00
46	C	39	12-di-Cl-propane	0.194	0.171	11.9	60	0.00
47	M	40	trichloroethene	0.271	0.264	2.6	68	0.00
48		41	dibromomethane	0.135	0.131	3.0	69	0.00
49		101	TAME	0.369	0.393	-6.5	71	0.00
50		42	Br-di-Cl-methane	0.305	0.305	0.0	72	0.00
51		43	Me-methacrylate	0.093	0.090	3.2	62	0.00
52		44	2-ClEt-Vi-ether10	0.028	0.022	21.4#	49#	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Vial: 2
Acq On : 11 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

			Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53		45	c-13-di-Cl-propene	0.307	0.304	1.0	65	0.00
54		46	t-1,3-dichloropropene	0.248	0.269	-8.5	69	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	68	0.00
56		48	112-tri-Cl-Et	0.221	0.205	7.2	66	0.00
57		49	13-di-Cl-propane	0.340	0.324	4.7	67	0.00
58		50	Et methacrylate	0.255	0.258	-1.2	63	0.00
59		51	di-Br-Cl-methane	0.314	0.317	-1.0	73	0.00
60	P	52	bromoform	0.185	0.191	-3.2	74	0.00
61		53	1,4-dichlorobutane-2	0.374	0.349	6.7	65	0.00
62		54	MIBK	0.168	0.150	10.7	61	0.00
63	s	55	toluene-d8	1.104	1.054	4.5	65	0.00
64	M,C	56	toluene	1.354	1.209	10.7	64	0.00
65		57	2-hexanone X5	0.109	0.102	6.4	62	0.00
66		58	12-dibromoethane	0.227	0.212	6.6	65	0.00
67		59	tetra-Cl-ethene	0.373	0.397	-6.4	79	0.00
68	M,P	60	chlorobenzene	0.924	0.891	3.6	68	0.00
69		61	1112-tetra-Cl-Et	0.344	0.367	-6.7	75	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	71	0.00
71		63	1-chlorohexane	0.228	0.230	-0.9	78	0.00
72	C	64	Et-Bz	2.542	2.456	3.4	70	0.00
73		65	m/p-Xylenes X2	1.966	1.921	2.3	71	0.00
74		66	styrene	1.656	1.615	2.5	68	0.00
75		67	o-xylene	1.985	1.962	1.2	70	0.00
76	p	68	1122-Tetra-Cl-Et	0.396	0.354	10.6	65	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Vial: 2
Acq On : 11 Nov 2003 8:21 pm Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Mon Oct 27 14:05:06 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77		69 123-tri-Cl-Pr	0.131	0.132	-0.8	73	0.00
78	S	70 4-Br-1-F-Bz (S3)	0.678	0.681	-0.4	73	0.00
79		71 isopropylbenzene	2.654	2.754	-3.8	75	0.00
80		72 bromobenzene	0.672	0.677	-0.7	72	0.00
81		92 t-1,4-dichloro-2-butene	0.062	0.071	-14.5	74	0.00
82		73 n-propylbenzene	0.769	0.813	-5.7	76	0.00
83		74 2-Cl-Toluene	0.652	0.664	-1.8	73	0.00
84		75 4-Cl-Toluene	0.670	0.669	0.1	72	0.00
85		76 135-tri-Me-Benzene	2.341	2.456	-4.9	75	0.00
86		77 4-iso-Pr-toluene	2.522	2.722	-7.9	79	0.00
87		78 124-tri-Me-Benzene	2.451	2.536	-3.5	74	0.00
88		79 tert-butylbenzene	2.055	2.227	-8.4	79	0.00
89		80 13-DCB	1.396	1.398	-0.1	73	0.00
90		81 sec-butylbenzene	3.069	3.278	-6.8	79	0.00
91		82 14-DCB	1.461	1.395	4.5	72	0.00
92		83 Cl-benzyl	0.116	0.137	-18.1	79	0.00
93		84 12-DCB	1.278	1.261	1.3	73	0.00
94		85 n-butylbenzene	0.666	0.731	-9.8	79	0.00
95		86 12-diBr-2-Cl-Pra	0.095	0.092	3.2	68	0.00
96		87 124-tri-Cl-Bz	0.796	0.856	-7.5	75	0.00
97		88 naphthalene	1.256	1.423	-13.3	75	0.00
98		89 hx-Cl-butadiene	0.456	0.545	-19.5	93	0.00
99		90 123-Tri-Cl-Bz	0.687	0.746	-8.6	76	0.00

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

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

1898

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:21 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:38 2003
Print Time : Wed Nov 12 09:38 2003
Miscleneous :

Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
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	7.64	7.64	0.000	96	70	648.705	10.00		0.00	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	495.670	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.85	0.000	152	150	306.638	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	306.557	20.13	20.1	100.63%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	283.742	20.91	20.9	104.57%	
55	55	toluene-d8	9.91	9.91	0.000	98	100	1044.814	19.10	19.1	95.48%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	417.338	20.08	20.1	100.42%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	236.014	18.09	18.1	99	m
4	4	Chloromethane	2.11	2.11	0.000	50	52	156.277	12.06	12.1	100	
2	2	F114	2.03	2.03	0.000	85	135	119.259	19.43	19.4	31	m 11/12/03
5	5	vinyl chloride	2.22	2.22	0.000	62	64	180.287	16.30	16.3	97	m
6	6	bromomethane	2.61	2.61	0.000	94	96	78.937	12.56	12.6	91	
7	7	chloroethane	2.73	2.73	0.000	64	66	106.450	17.87	17.9	94	
8	8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	418.258	22.87	22.9	99	
91	91	Acetonitrile X10	4.07	4.07	0.000	41	40	478.387	171.16	171.2	91	?
9	9	acrolein X10	3.51	3.51	0.000	56	55	250.437	182.44	182.4	100	
11	11	acetone X10	3.72	3.73	0.000	43	58	364.495	175.87	175.9	78	
12	12	ethyl ether X5	3.37	3.37	0.000	59	74	569.304	92.37	92.4	78	#
13	13	11-dichloroethene	3.63	3.64	0.000	61	96	318.706	20.68	20.7	79	?
14	14	Iodomethane	3.81	3.81	0.000	142	127	101.487	7.98	8.0	86	
15	15	F-113	3.65	3.65	0.000	101	151	215.535	23.06	23.1	85	?
16	16	acrylonitrile X10	4.52	4.52	0.000	53	52	480.760	172.76	172.8	92	?
17	17	carbon disulfide	3.90	3.90	0.000	76	78	465.029	15.85	15.8	98	
94	94	Isopropyl Alcohol	4.10	4.10	0.000	45	43	69.469	523.05	523.0	100	m
18	18	methylene chlorid	4.22	4.22	0.000	84	49	242.614	17.58	17.6	73	# 11/12/03
19	19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	257.248	17.76	17.8	89	?

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

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

1899

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:21 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:38 2003
Print Time : Wed Nov 12 09:39 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.59	4.59	0.000	73	57	523.188	20.53	20.5	93	?
95	95	Tert butyl alcoho	4.50	4.51	-0.002	59	57	140.138	329.22	329.2	100	m?
94	94	allyl chloride	4.07	4.07	0.000	41	76	478.387	16.73	16.7	75	#?
21	21	11-dichloroethane	5.12	5.12	0.000	63	83	442.921	18.46	18.5	97	
97	97	propionitrile	6.02	6.02	0.000	54	51	20.109	17.58	17.6	100	m?
22	22	c-12-di-Cl-ethene	5.91	5.92	0.000	96	61	279.184	18.48	18.5	90	?
23	23	22-Dichloropropan	5.92	5.92	0.000	77	97	377.449	24.66	24.7	96	?
24	24	Br-Cl-methane	6.25	6.25	0.000	128	130	140.909	18.45	18.4	98	
25	25	chloroform	6.37	6.37	0.000	83	85	527.523	19.56	19.6	96	
26	26	tetrahydrofuranX5	6.34	6.35	0.000	42	72	186.784	83.11	83.1	84	
98	98	Diisopropyl ether	5.24	5.24	0.000	45	87	839.624	18.23	18.2	90	
99	99	ETBE	5.74	5.74	0.000	59	87	626.611	21.57	21.6	93	
30	30	12-dichloroethane	7.22	7.22	0.000	64	62	112.093	21.32	21.3	98	?
32	32	vinyl acetate X5	5.19	5.20	0.000	43	86	2210.560	98.35	98.3	93	
92	92	Nitro Methane(x10	5.82	5.84	-0.002	61	46	62.329	82.27	82.3	56	#
33	33	2-butanoneMEK X10	5.95	5.95	0.000	43	72	592.745	175.13	175.1	85	
93	93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	299.980	35.79	35.8	98	?
34	34	111-trichloroetha	6.65	6.65	0.000	97	99	523.515	23.08	23.1	98	
35	35	11-Di-Cl-propene	6.90	6.90	0.000	75	110	350.064	20.45	20.5	90	?
36	36	benzene	7.21	7.21	0.000	78	52	972.148	17.72	17.7	89	?
37	37	CCl4	6.91	6.91	0.000	117	119	519.310	24.90	24.9	99	?
100	100	Isobutyl alcohol	7.41	7.41	0.000	43	42	176.984	212.46	212.5	94	?
38	38	thiophene	7.53	7.53	0.000	84	58	540.056	18.91	18.9	99	
39	39	12-di-Cl-propane	8.56	8.56	0.000	63	76	221.801	17.67	17.7	86	
40	40	trichloroethene	8.24	8.24	0.000	130	132	342.927	19.51	19.5	93	
41	41	dibromomethane	8.73	8.73	0.000	174	172	170.442	19.52	19.5	99	
101	101	TAME	7.42	7.41	0.000	73	43	510.416	19.08	19.1	88	#?
42	42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	395.417	20.01	20.0	98	
43	43	Me-methacrylate	8.76	8.76	0.000	69	100	116.871	16.67	16.7	92	
44	44	2-ClEt-Vi-ether10	9.38	9.38	0.000	63	43	288.370	134.62	134.6	82	
45	45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	394.857	19.84	19.8	92	
46	46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	349.316	19.64	19.6	93	

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

11/12/03

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

1900

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:21 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:38 2003
Print Time : Wed Nov 12 09:39 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>												
48	48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	203.392	18.53	18.5	92	
49	49	13-di-Cl-propane	10.65	10.65	0.000	76	78	321.083	19.07	19.1	97	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	255.825	16.71	16.7	87	
51	51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	314.220	20.18	20.2	98	
52	52	bromoform	12.41	12.42	0.000	173	174	189.669	20.71	20.7	98	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	346.373	18.67	18.7	96	
54	54	MIBK	9.76	9.77	0.000	43	58	148.712	15.55	15.6	95	
56	56	toluene	9.99	9.99	0.000	91	92	1198.320	17.85	17.9	100	
57	57	2-hexanone X5	10.75	10.76	0.000	43	58	503.832	82.13	82.1	91	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	210.321	18.70	18.7	94	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	393.755	21.31	21.3	99	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	883.342	19.29	19.3	95	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	364.035	21.35	21.4	97	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	141.280	20.18	20.2	62	#?
64	64	Et-Bz	11.70	11.70	0.000	91	106	1505.927	19.32	19.3	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2356.272	39.08	39.1	98	
66	66	styrene	12.24	12.24	0.000	104	78	990.373	19.51	19.5	100	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1203.304	19.76	19.8	100	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	217.397	17.90	17.9	97	
69	69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	80.664	20.01	20.0	93	?
71	71	isopropylbenzene	12.60	12.60	0.000	105	120	1688.975	20.75	20.8	97	
72	72	bromobenzene	12.89	12.89	0.000	156	158	415.302	20.16	20.2	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	43.762	18.21	18.2	84	#?
73	73	n-propylbenzene	13.00	13.00	0.000	120	78	498.861	21.17	21.2	95	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	407.381	20.38	20.4	100	
75	75	4-Cl-Toluene	13.19	13.19	0.000	126	128	410.131	19.97	20.0	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1506.141	20.98	21.0	95	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1669.502	21.59	21.6	99	?
78	78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1555.566	20.69	20.7	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1365.888	21.68	21.7	100	

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

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:21 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:38 2003
Print Time : Wed Nov 12 09:39 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	80	13-DCB	13.79	13.79	0.000	146	148	857.264	20.03	20.0	98	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2010.030	21.36	21.4	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	855.464	19.10	19.1	98	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	84.303	18.26	18.3	88	#
84	84	12-DCB	14.21	14.21	0.000	146	148	773.523	19.73	19.7	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	448.411	21.96	22.0	82	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	56.374	19.32	19.3	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	524.901	21.50	21.5	97	
88	88	naphthalene	15.78	15.78	0.000	128	129	872.593	19.34	19.3	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	334.524	23.94	23.9	100	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	457.343	21.70	21.7	97	

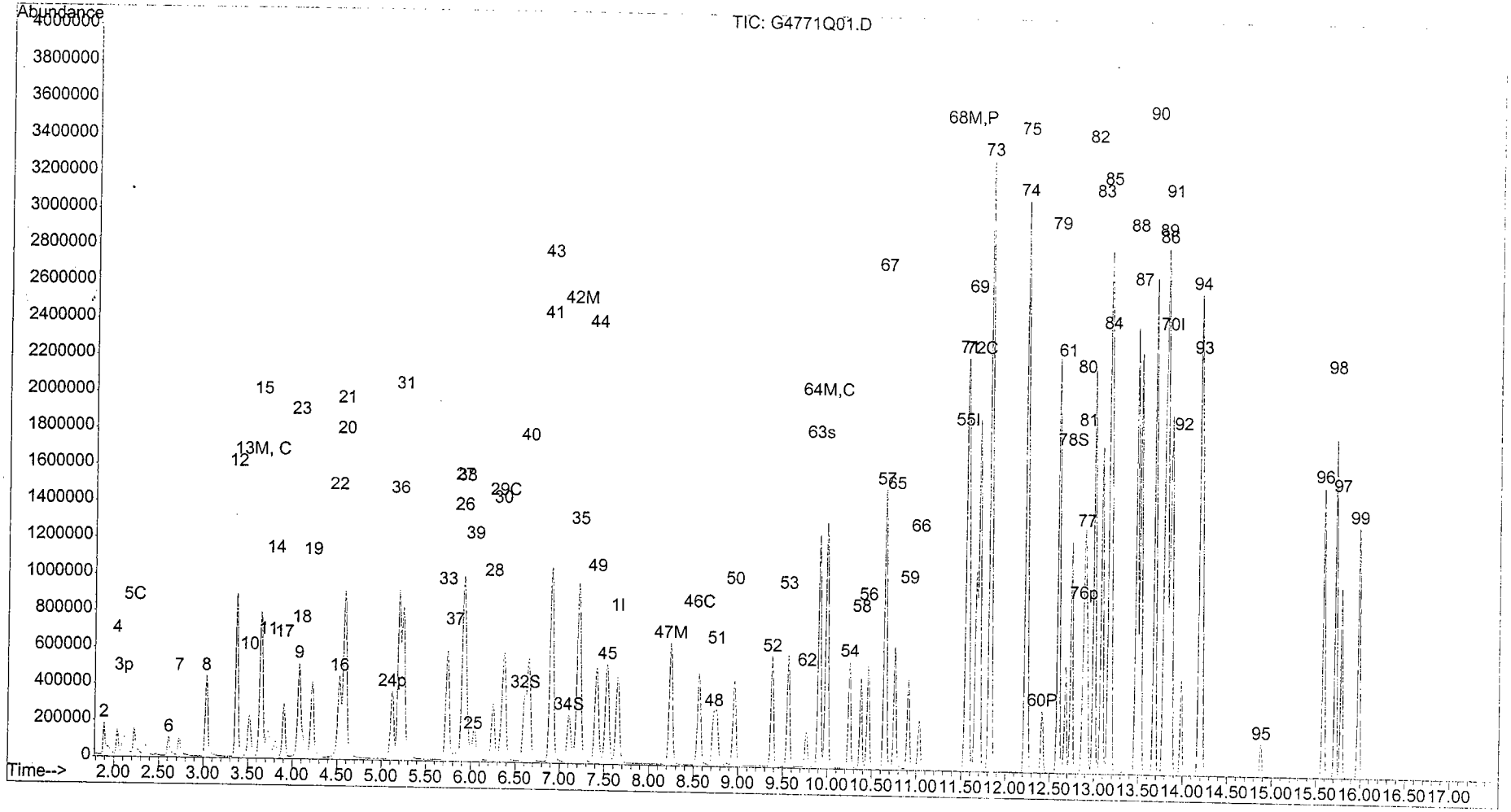
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 20:21 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:38 2003
Print Time : Wed Nov 12 09:39 2003
Miscleneous :

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

1902



FORM-8A

Applied P & Ch Laboratory

Internal Standard Area and RT Summary for Method 524.2

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	036034
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G4771Q01	Instrument ID:	A

Batch No: 03G4771

#	Client Sample No	Lab Sample ID	Analysis Date & Time	IS-1 Area #	IS-1 RT #	IS-2 Area #	IS-2 RT #	IS-3 Area #	IS-3 RT #
12 Hour CCV STD			11/11/03 20:21	648705	7.64	495670	11.54	306638	13.84
CCV Upper Limit				1297410	8.14	991340	12.04	613276	14.34
CCV Lower Limit				324352	7.14	247835	11.04	153319	13.34
1	03G4771-LCS-01	03G4771-LCS-01	11/11/03 20:46	677978	7.64	508521	11.54	312840	13.84
2	MW-13MS	03-6034-3MS	11/11/03 22:29	710443	7.65	537799	11.54	330228	13.84
3	MW-13MSD	03-6034-3MSD	11/11/03 22:55	702138	7.64	536504	11.54	324603	13.84
4	03G4771-MB-01	03G4771-MB-01	11/12/03 01:17	650041	7.64	514703	11.54	313855	13.84
5	TB-12-11-7-03	03-6034-5	11/12/03 02:41	639184	7.65	512112	11.55	319641	13.85
6	MW-13	03-6034-3	11/12/03 03:07	650440	7.65	522268	11.54	320745	13.85
7	DUPE-2-4-Q03	03-6034-1	11/12/03 05:18	628729	7.65	504664	11.54	311471	13.84
8	MW-6	03-6034-2	11/12/03 05:44	636144	7.64	507457	11.54	317308	13.84
9	MW-15	03-6034-4	11/12/03 06:10	636301	7.65	505385	11.54	312417	13.85
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

IS-1 = FLUOROBENZENE
IS-2 = CHLOROBENZENE-D5
IS-3 = 1,4-DICHLOROBENZENE-D4

Area Upper Limit = +100% of CCV internal standard area
Area Lower Limit = - 50% of CCV internal standard area
RT Upper Limit = +0.50 minutes of CCV internal standard RT
RT Lower Limit = - 0.50 minutes of CCV internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits

A

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

VOC Analysis General Logbook

Sequence # 03J4771 Batch # 03J4771 Matrix: W Date: 11/11/03 Analyst: Zou

Lot #: IS/Surrogate: GC-15761/15762 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

☐ Calib. + Ini. Batch ☒ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

Op. #	Type	Sample ID	Method	$V/X=f_1$	$V_f/V_i=f_2$	$V_{spg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
4905	SP	G4771P01	E524A 003	25/25 = 1	/ =	/ =	1		G4771P01	11/11/03	19:55
4906	CCV	Q01		/ =	/ =	/ =			Q01	gc15811	
4907	LCS	L01		/ =	/ =	/ =			L01		
4908	MS	M01		/ =	/ =	/ =			M01	$6002-02	<2
4909	MSD	N01		/ =	/ =	/ =			N01	↓	
4910	MS	M02		/ =	/ =	/ =			M02	$6034-03	
4911	MSD	N02		/ =	/ =	/ =			N02	↓	
4912	MB	K01		/ =	/ =	/ =			K01		
4913	Sample	6047-04		/ =	/ =	/ =			6047-04	tb	<2
4914		6002-05		/ =	/ =	/ =			6002-05	tb	
4915		6034-05		/ =	/ =	/ =			6034-05	tb	
4916		↓ 03		/ =	/ =	/ =			↓ 03	ms	
4917		6002-02		/ =	/ =	/ =			6002-02	ms	
4918		01		/ =	/ =	/ =			01		
4919		03		/ =	/ =	/ =			03		
4920		↓ 04		/ =	/ =	/ =			↓ 04		
4921		6034-01		/ =	/ =	/ =			6034-01		
4922		↓ 02		/ =	/ =	/ =			↓ 02		
4923		↓ 04		/ =	/ =	/ =			↓ 04		
4924		6047-01		/ =	/ =	/ =			6047-01		
4925		↓ 02		/ =	/ =	/ =			↓ 02		
4926	↓	↓ 03	↓	/ =	/ =	/ =	↓		↓ 03		↓
4927				/ =	/ =	/ =					
4928				/ =	/ =	/ =					
4929				/ =	/ =	/ =					
4930				/ =	/ =	/ =					
4931				/ =	/ =	/ =					
4932				/ =	/ =	/ =					
4933				/ =	11/12/03	/ =					
4934				/ =	/ =	/ =					
4935				/ =	/ =	/ =					
4936				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$
LCS/LCSD	4907	GC-15812	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
MS/MSD	4908/4909	GC-15812	200 × 2.5 /X= 20 ppb	4910/4911	GC-15812	200 × 2.5 /X= 20 ppb

Footnote/Anomaly:

A

VOC-103

Applied P & Ch Laboratory
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VOC Analysis General Logbook

Sequence # 0364612 Batch # 0364612 Matrix: W Date: 10/21/03 Analyst: Eddie

Lot #: IS/Surrogate: GC-15114/15115 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

☑ Calib. + Ini. Batch - ☐ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

Op. #	Type	Sample ID	Method	$V/X=f_1$	$V_f/V_i=f_2$	$V_{epg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
4201	SP	G4612P01	E524A	25/25 = 1	/ =	/ =	1		G4612P01	10/21/03 @ 14am	
4202	Calib	3-A0003	003	/ =	/ =	/ =			3-A0003	gc15731	
4203		3-002		/ =	/ =	/ =			3-002		
4204		3-0010		/ =	/ =	/ =			3-0010		
4205		3-0020		/ =	/ =	/ =			3-0020		
4206		3-0040		/ =	/ =	/ =			3-0040		
4207		3-0060		/ =	/ =	/ =			3-0060		
4208	ICV	ICV		/ =	/ =	/ =			ICV	gc15732	
4209				/ =	/ =	/ =					
4210				/ =	/ =	/ =					
4211				/ =	/ =	/ =					
4212				/ =	/ =	/ =					
4213				/ =	/ =	/ =					
4214				/ =	/ =	/ =					
4215				/ =	/ =	/ =					
4216				/ =	/ =	/ =					
4217				/ =	/ =	/ =					
4218				/ =	/ =	/ =					
4219				/ =	/ =	/ =					
4220				/ =	/ =	/ =					
4221				/ =	/ =	/ =					
4222				/ =	/ =	/ =					
4223				/ =	/ =	/ =					
4224				/ =	(10+2)/10 = 1.2	/ =					
4225				/ =	/ =	/ =					
4226				/ =	/ =	/ =					
4227				/ =	/ =	/ =					
4228				/ =	/ =	/ =					
4229				/ =	/ =	/ =					
4230				/ =	/ =	/ =					
4231				/ =	/ =	/ =					
4232				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$
LCS/LCSD		GC-	× /X= ppb		GC-	× /X= ppb
MS/MSD		GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

FILE: [CUST.DOC.GC]VOC_LOG .TEX Root-File: VOC_LOG_ROOT.TEX 1-Page-File:[CUST.DOC.GC]VOC_LOG1.TEX; pH for field water sample only.
APCL form 7-201, April 03, 1996; Ver 4.1 No pencil. Use blue pen for record. Use red pen for correction. Supervisor Initial _____