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

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:40 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 13:33 2003
Print Time : Mon Aug 11 13:34 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2245

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	784.993	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	592.210	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	296.302	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	380.334	19.44	19.4	97.21%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	285.038	17.99	18.0	89.95%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1521.291	20.38	20.4	101.92%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	489.131	19.96	20.0	99.79%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	383.247	19.45	19.4	100	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	271.793	16.25	16.2	99	
2	2	F114	2.03	2.00	0.005	85	135	224.279	21.77	21.8	57	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	374.865	19.70	19.7	98	
6	6	bromomethane	2.61	2.58	0.004	94	96	146.633	16.04	16.0	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	237.574	20.98	21.0	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	592.262	21.01	21.0	96	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	615.950	178.85	178.9	97	m?
9	9	acrolein X10	3.51	3.48	0.004	56	55	274.683	143.31	143.3	100	
11	11	acetone X10	3.69	3.69	0.000	43	58	307.635	158.46	158.5	99	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	820.395	96.49	96.5	92	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	455.345	20.23	20.2	94	?
14	14	Iodomethane	3.81	3.78	0.004	142	127	278.693	14.01	14.0	93	m
15	15	F-113	3.65	3.62	0.005	101	151	356.434	23.13	23.1	90	?
16	16	acrylonitrile X10	4.51	4.49	0.002	53	52	516.962	147.32	147.3	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1130.737	19.77	19.8	99	?
94	94	Isopropyl Alcohol	3.91	4.01	-0.013	45	43	81.196	165.28	165.3	100	m
18	18	methylene chlorid	4.22	4.19	0.004	84	49	375.820	18.84	18.8	98	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	416.365	19.63	19.6	92	?

= 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\03G3619\G3619M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:40 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 13:33 2003
Print Time : Mon Aug 11 13:34 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2246

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	589.430	16.70	16.7	95	?
95	95 Tert butyl alcoho	4.41	4.47	-0.008	59	57	136.525	153.08	153.1	100	#
94	94 allyl chloride	4.07	4.04	0.004	41	76	472.591	15.30	15.3	94	?
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	650.452	19.12	19.1	98	
97	97 propionitrile	5.99	5.99	0.000	54	51	19.027	14.45	14.4	100	#
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	417.251	19.52	19.5	95	?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	580.369	27.19	27.2	99	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	183.791	17.73	17.7	98	
25	25 chloroform	6.37	6.35	0.003	83	85	675.582	21.08	21.1	99	
26	26 tetrahydrofuranX5	6.34	6.32	0.002	42	72	184.094	71.41	71.4	95	
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	949.711	18.13	18.1	98	
99	99 ETBE	5.74	5.72	0.003	59	87	749.021	18.70	18.7	98	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	107.943	19.49	19.5	99	?
32	32 vinyl acetate X5	5.19	5.17	0.003	43	86	2157.451	88.09	88.1	100	
92	92 Nitro Methane(x10	5.79	5.80	-0.002	61	46	84.082	192.88	192.9	80	
33	33 2-butanoneMEK X10	5.93	5.92	0.000	43	72	502.629	149.34	149.3	97	?
93	93 Ethyl Acetate x2	6.04	6.02	0.002	43	61	261.176	30.46	30.5	89	#
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	642.101	20.30	20.3	100	
35	35 11-Di-Cl-propene	6.90	6.88	0.002	75	110	530.187	22.19	22.2	92	?
36	36 benzene	7.21	7.19	0.003	78	52	1528.965	19.19	19.2	99	?
37	37 CCl4	6.91	6.89	0.003	117	119	619.021	21.23	21.2	100	?
100	100 Isobutyl alcohol	7.11	7.39	-0.037	43	42	49.003	138.06	138.1	98	m
38	38 thiophene	7.53	7.51	0.002	84	58	769.251	19.42	19.4	98	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	326.532	18.32	18.3	98	
40	40 trichloroethene	8.24	8.23	0.002	130	132	527.906	21.26	21.3	98	
41	41 dibromomethane	8.73	8.71	0.002	174	172	192.429	17.02	17.0	99	
101	101 TAME	7.41	7.39	0.002	73	43	638.555	18.39	18.4	98	
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	456.855	19.57	19.6	97	
43	43 Me-methacrylate	8.76	8.75	0.000	69	100	137.420	15.30	15.3	92	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	19.083	23.80	23.8	93	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	515.711	19.90	19.9	91	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	403.963	19.61	19.6	94	

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

8/11/03

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

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:40 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 13:33 2003
Print Time : Mon Aug 11 13:34 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2247

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	244.693	17.12	17.1	95	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	382.602	16.97	17.0	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	305.014	17.12	17.1	95	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	330.815	18.45	18.5	99	
52	52	bromoform	12.41	12.41	0.000	173	174	181.938	16.58	16.6	100	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	340.354	16.22	16.2	94	
54	54	MIBK	9.77	9.76	0.000	43	58	134.468	15.59	15.6	95	
56	56	toluene	9.99	9.98	0.000	91	92	1743.590	20.33	20.3	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	447.181	76.39	76.4	95	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	238.302	16.90	16.9	98	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	567.213	22.13	22.1	99	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	1176.206	21.10	21.1	90	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	409.066	18.74	18.7	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	229.777	23.78	23.8	94	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2017.869	21.76	21.8	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3098.778	44.21	44.2	96	
66	66	styrene	12.24	12.23	0.000	104	78	1167.221	21.90	21.9	92	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1581.659	22.49	22.5	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	245.930	15.71	15.7	100	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	76.568	16.34	16.3	96	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2152.114	23.89	23.9	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	491.462	20.31	20.3	97	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	46.588	17.60	17.6	86	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	659.290	23.37	23.4	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	548.596	22.00	22.0	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	549.076	21.65	21.6	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1808.808	23.32	23.3	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2058.900	23.77	23.8	97	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1827.771	22.63	22.6	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1700.045	22.96	23.0	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\03G3619\G3619M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:40 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 13:33 2003
Print Time : Mon Aug 11 13:34 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2248

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	1045.100	20.55	20.5	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2491.493	23.91	23.9	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	1017.464	21.04	21.0	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	125.795	25.67	25.7	73	#
84	84	12-DCB	14.21	14.21	0.000	146	148	883.836	19.51	19.5	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	582.254	22.90	22.9	84	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	51.844	16.26	16.3	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	667.982	22.78	22.8	99	
88	88	naphthalene	15.79	15.78	0.000	128	129	977.403	18.37	18.4	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	399.205	22.48	22.5	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	551.127	20.94	20.9	97	

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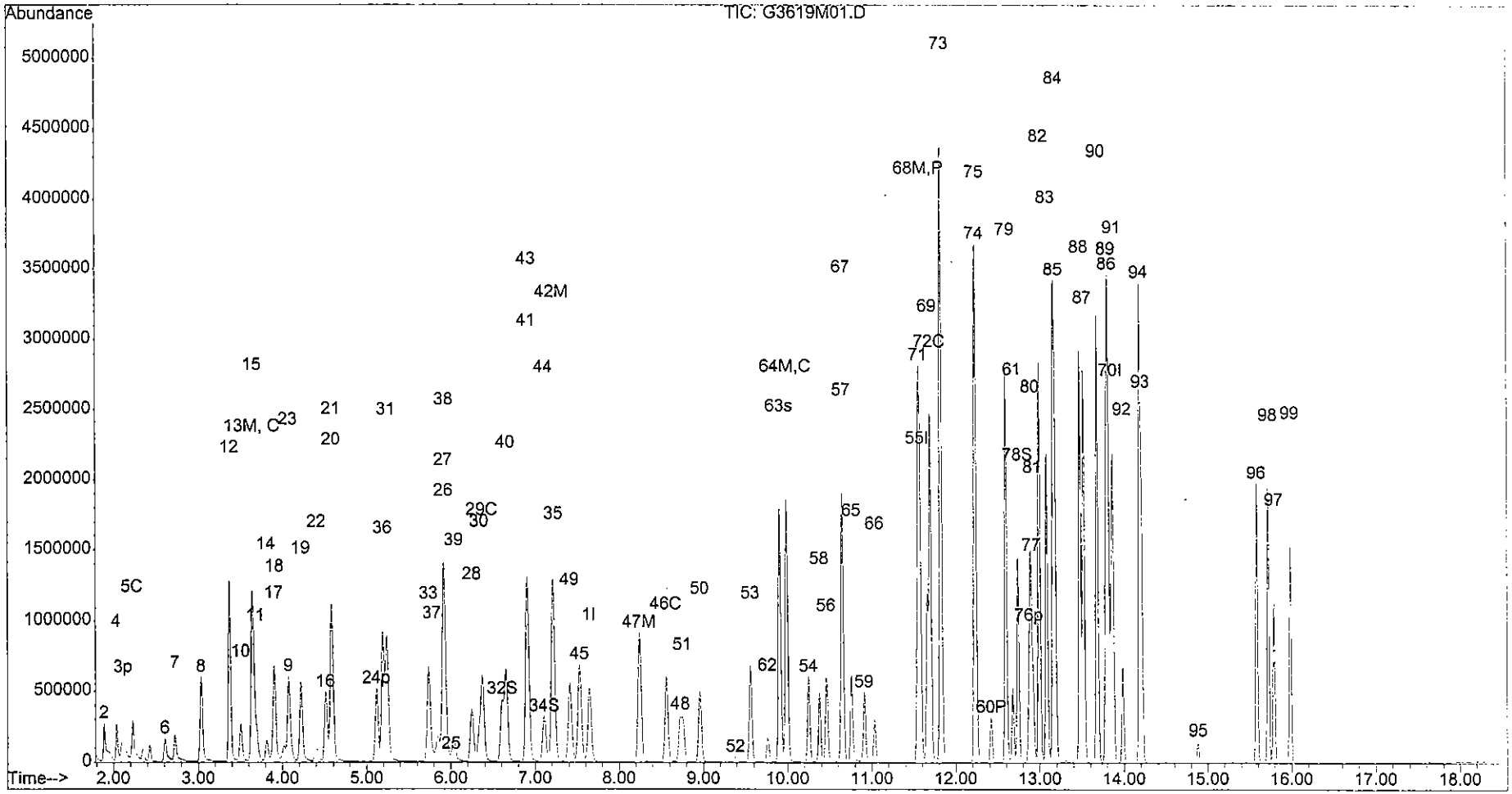
Quantitation Report: **Applied P &Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 11:40 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 13:33 2003
Print Time : Mon Aug 11 13:34 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2249



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

2250

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619N01.D Sample : f=1 $4455-04
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 12:06 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 18:03 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 18:03 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	7.63	0.003	96	70	821.352	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	637.228	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	327.356	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	399.817	19.53	19.5	97.66%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	314.197	18.95	19.0	94.76%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1545.738	19.25	19.2	96.24%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	518.067	19.13	19.1	95.67%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	378.911	18.38	18.4	99	
4	4	Chloromethane	2.11	2.07	0.006	50	52	266.949	15.20	15.2	100	
2	2	F114	2.03	2.00	0.005	85	135	214.294	19.88	19.9	52	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	365.511	18.36	18.4	99	
6	6	bromomethane	2.61	2.58	0.004	94	96	145.132	15.17	15.2	99	8/8/03
7	7	chloroethane	2.73	2.70	0.004	64	66	221.178	18.66	18.7	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	576.600	19.55	19.6	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	661.446	183.56	183.6	89	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	341.578	172.91	172.9	0	m
11	11	acetone X10	3.72	3.69	0.004	43	58	395.297	201.41	201.4	99	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	947.761	107.46	107.5	91	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	455.295	19.34	19.3	97	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	277.273	13.32	13.3	94	
15	15	F-113	3.65	3.62	0.005	101	151	351.052	21.71	21.7	88	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	642.268	174.92	174.9	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1121.530	18.74	18.7	99	8/6/03
94	94	Isopropyl Alcohol	4.05	4.01	0.005	45	43	106.375	205.87	205.9	100	m?
18	18	methylene chlorid	4.22	4.19	0.004	84	49	395.015	18.93	18.9	98	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	417.925	18.84	18.8	95	?

= 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\03G3619\G3619N01.D Sample : f=1 $4455-04
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 12:06 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 18:03 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 18:03 2003
Miscleneous :

2251

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	715.501	19.37	19.4	98	?
95	95	Tert butyl alcoho	4.49	4.47	0.003	59	57	196.745	201.72	201.7	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	661.446	20.47	20.5	86	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	663.399	18.63	18.6	99	
97	97	propionitrile	6.01	5.99	0.002	54	51	27.389	19.88	19.9	100	#?
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	428.744	19.17	19.2	93	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	581.356	25.99	26.0	99	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	199.486	18.39	18.4	100	
25	25	chloroform	6.37	6.35	0.003	83	85	689.673	20.56	20.6	97	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	241.853	89.66	89.7	95	
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	1026.147	18.72	18.7	99	
99	99	ETBE	5.74	5.72	0.003	59	87	857.457	20.46	20.5	98	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	116.964	20.19	20.2	99	?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	2513.592	98.09	98.1	99	
92	92	Nitro Methane(x10	5.82	5.80	0.002	61	46	91.923	201.53	201.5	82	
33	33	2-butanoneMEK X10	5.94	5.92	0.003	43	72	670.771	192.78	192.8	98	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	331.289	36.95	36.9	89	#?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	638.385	19.29	19.3	99	
35	35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	530.932	21.23	21.2	91	?
36	36	benzene	7.21	7.19	0.003	78	52	1566.405	18.79	18.8	99	?
37	37	CCl4	6.91	6.89	0.003	117	119	616.706	20.21	20.2	99	?
100	100	Isobutyl alcohol	7.16	7.39	-0.031	43	42	68.489	181.08	181.1	96	m
38	38	thiophene	7.53	7.51	0.002	84	58	811.169	19.57	19.6	97	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	348.481	18.68	18.7	97	
40	40	trichloroethene	8.24	8.23	0.002	130	132	528.819	20.35	20.4	100	
41	41	dibromomethane	8.73	8.71	0.002	174	172	218.909	18.50	18.5	99	
101	101	TAME	7.41	7.39	0.002	73	43	755.851	20.80	20.8	97	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	484.594	19.84	19.8	98	
43	43	Me-methacrylate	8.76	8.75	0.000	69	100	175.736	18.49	18.5	93	
44	44	2-ClEt-Vi-ether10	9.57	9.37	0.026	63	43	2.531	16.47	16.5	28	#?
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	553.610	20.42	20.4	94	?
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	458.914	21.29	21.3	91	

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

8/8/03

8/8/03

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

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619N01.D Sample : f=1 $4455-04
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 12:06 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 18:03 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 18:03 2003
Miscleneous :

2252

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	277.262	18.03	18.0	98	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	438.986	18.10	18.1	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	378.884	19.61	19.6	95	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	373.227	19.33	19.3	98	
52	52	bromoform	12.42	12.41	0.000	173	174	215.685	18.27	18.3	100	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	400.842	17.75	17.8	95	
54	54	MIBK	9.77	9.76	0.000	43	58	179.539	19.35	19.3	93	
56	56	toluene	9.99	9.98	0.000	91	92	1783.402	19.32	19.3	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	585.841	93.01	93.0	92	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	275.233	18.14	18.1	96	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	565.622	20.51	20.5	98	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	1220.277	20.33	20.3	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	433.866	18.47	18.5	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	229.767	21.52	21.5	96	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2052.091	20.03	20.0	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3132.599	40.46	40.5	96	
66	66	styrene	12.24	12.23	0.000	104	78	1219.773	20.72	20.7	93	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1621.963	20.88	20.9	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	295.358	17.08	17.1	99	
69	69	123-tri-Cl-Pr	12.92	12.91	0.000	110	97	92.270	17.82	17.8	97	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2163.920	21.74	21.7	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	525.861	19.67	19.7	100	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	59.300	20.09	20.1	83	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	664.547	21.32	21.3	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	562.303	20.41	20.4	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	562.391	20.07	20.1	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1834.356	21.41	21.4	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2086.859	21.81	21.8	98	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	1869.629	20.95	21.0	95	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1717.551	20.99	21.0	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\03G3619\G3619N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 12:06 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 18:03 2003
Print Time : Fri Aug 08 18:03 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2253

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	1088.164	19.36	19.4	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2496.026	21.68	21.7	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	1067.560	19.98	20.0	100	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	150.392	27.77	27.8	78	#
84	84	12-DCB	14.21	14.21	0.000	146	148	954.149	19.07	19.1	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	583.999	20.81	20.8	86	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	66.740	18.94	18.9	97	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	727.294	22.45	22.4	100	
88	88	naphthalene	15.78	15.78	0.000	128	129	1178.239	20.04	20.0	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	400.268	20.40	20.4	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	620.687	21.35	21.3	98	

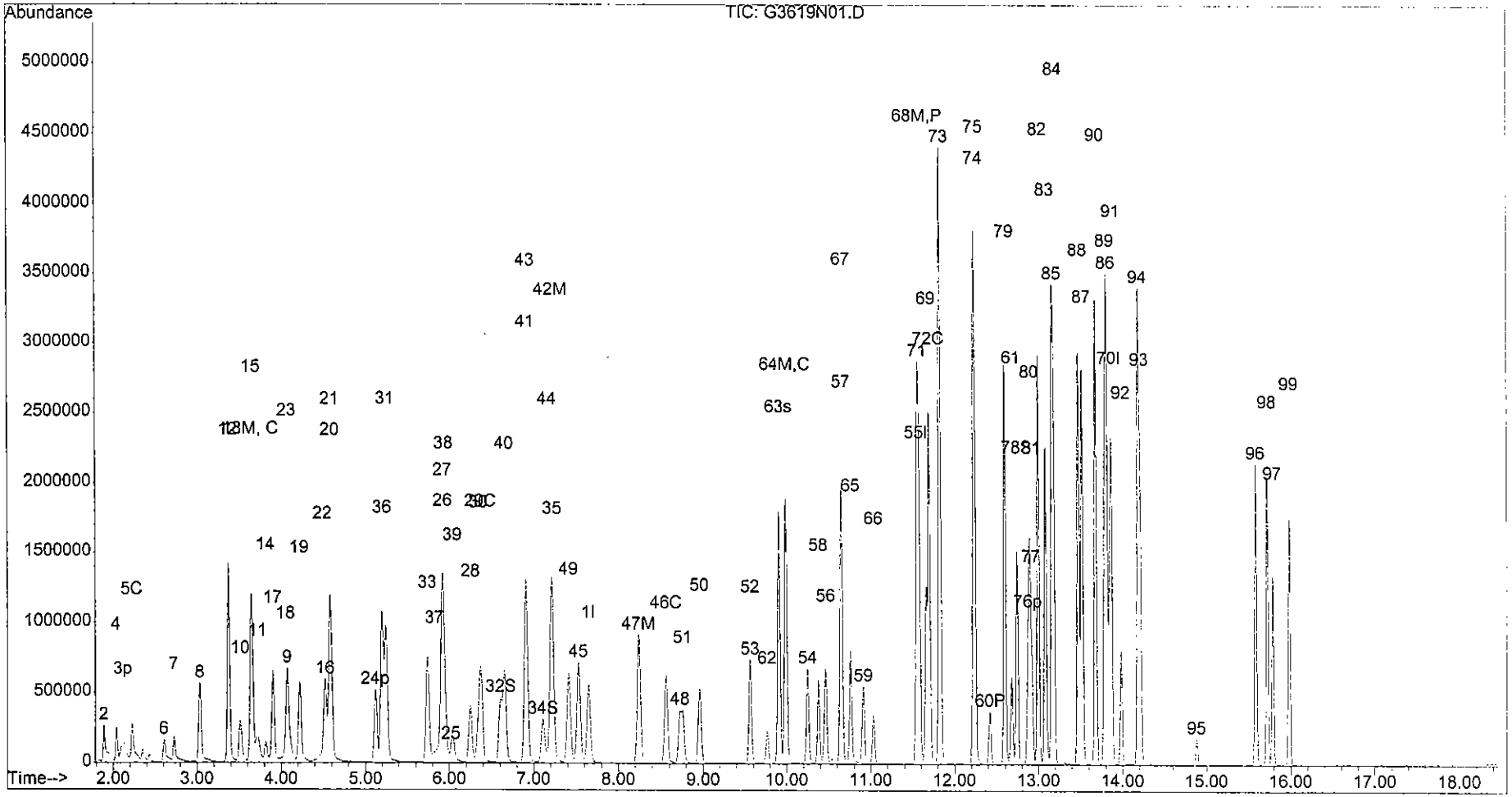
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 12:06 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 18:03 2003
Print Time : Fri Aug 08 18:03 2003
Miscleneous :

Sample : f=1 $4455-04
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2254



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

2255

Data Filename: C:\MSDCHEM\1\DATA\03G3619\4455-04.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 14:18 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 14:55 2003
Print Time : Fri Aug 08 18:04 2003
Miscleneous :

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

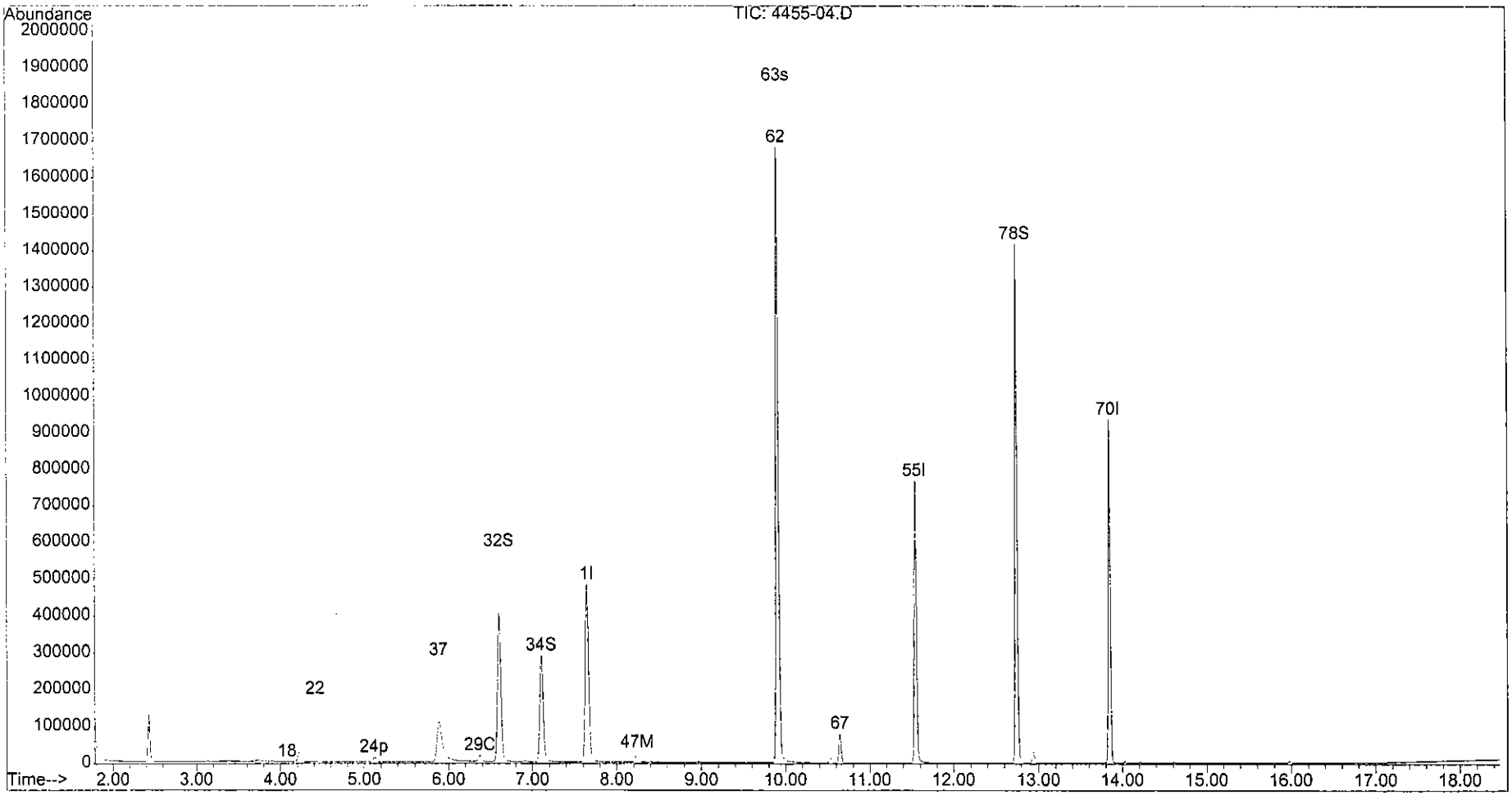
ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											Dev(Min)	
1	1	Fluorobenzene	7.65	7.63	0.003	96	70	694.818	10.00		0.02	
47	47	Chlorobezene-d5	11.55	11.54	0.000	117	82	565.506	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	293.871	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	370.166	21.38	21.4	106.89%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	305.414	21.78	21.8	108.89%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1406.416	19.73	19.7	98.67%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	462.546	19.03	19.0	95.15%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
94	94	Isopropyl Alcohol	4.08	4.01	0.009	45	43	0.233	4.80	4.8	100	#
95	95	Tert butyl alcoho	4.41	4.47	-0.007	59	57	1.102	25.34	25.3	100	#
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	16.470	0.55	0.5	99	
25	25	chloroform	6.37	6.35	0.002	83	85	20.435	0.46	0.5	95	
92	92	Nitro Methane(x10	5.88	5.80	0.010	61	46	3.987	10.33	10.3	23	#
40	40	trichloroethene	8.25	8.23	0.002	130	132	15.790	0.72	0.7	98	
<<< I2 : ISTD ID = 47 >>>												
54	54	MIBK	9.91	9.76	0.013	43	58	4.207	0.51	0.5	1	#
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	31.281	1.28	1.3	98	

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

Data Filename: C:\MSDCHEM\1\DATA\03G3619\4455-04.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 14:18 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 14:55 2003
Print Time : Fri Aug 08 18:04 2003
Miscleneous :

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

2256



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:	34509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G3659		
LCS Filename:	G3659L01	Date Analyzed:	081103	Time Analyzed:	11:06
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	18.6	93	65-120
CHLOROBENZENE	µg/L	20	0	20.3	102	65-134
1,1-DICHLOROETHENE	µg/L	20	0	19.3	97	65-127
TOLUENE	µg/L	20	0	19.1	96	65-134
TRICHLOROETHENE	µg/L	20	0	19.3	97	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: _____

_____

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:	34509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03G3659		
MS Filename:	G3659M01	Date Analyzed:	081103	Time Analyzed:	11:33
MSD Filename:	G3659N01	Date Analyzed:	081103	Time Analyzed:	12:00
MS Sample No:	**MW-14-2**	Sample Lab ID:	03-4509-8		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
BENZENE	µg/L	20	0	18.6	93	65-121
CHLOROBENZENE	µg/L	20	0	20.2	101	65-134
1,1-DICHLOROETHENE	µg/L	20	0	20.4	102	65-127
TOLUENE	µg/L	20	0	18.9	95	65-134
TRICHLOROETHENE	µg/L	20	1.0	21.5	103	65-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
BENZENE	µg/L	20	18.5	93	0	28	65-121
CHLOROBENZENE	µg/L	20	20.2	101	0	35	65-134
1,1-DICHLOROETHENE	µg/L	20	20.3	102	0	31	65-127
TOLUENE	µg/L	20	19.1	96	1	35	65-134
TRICHLOROETHENE	µg/L	20	21.4	102	1	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

2259

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 11:33 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:07 2003
Print Time : Mon Aug 11 16:07 2003
Miscleneous :

Sample : f=1 $4509-08
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	814.477	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	635.039	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	330.339	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	396.282	19.52	19.5	97.62%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	319.305	19.42	19.4	97.12%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1521.417	19.01	19.0	95.05%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	514.724	18.84	18.8	94.19%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	366.032	17.90	17.9	99	m
4	4	Chloromethane	2.12	2.07	0.006	50	52	283.710	16.35	16.4	97	08/11/03
2	2	F114	2.04	2.00	0.006	85	135	218.350	20.42	20.4	51	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	358.437	18.15	18.2	98	
6	6	bromomethane	2.61	2.58	0.005	94	96	167.954	17.71	17.7	99	
7	7	chloroethane	2.73	2.70	0.004	64	66	224.979	19.14	19.1	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	566.354	19.37	19.4	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	657.650	184.05	184.0	89	? 08/11/03
9	9	acrolein X10	3.51	3.48	0.005	56	55	356.170	182.52	182.5	0	m
11	11	acetone X10	3.72	3.69	0.004	43	58	412.178	213.32	213.3	98	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	953.730	109.18	109.2	91	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	447.041	19.15	19.1	96	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	238.941	11.58	11.6	96	
15	15	F-113	3.65	3.62	0.005	101	151	348.021	21.71	21.7	87	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	665.957	182.90	182.9	98	?
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1066.839	17.97	18.0	99	
94	94	Isopropyl Alcohol	4.10	4.01	0.011	45	43	103.775	202.60	202.6	100	m 08/11/03
18	18	methylene chlorid	4.22	4.19	0.004	84	49	381.455	18.40	18.4	99	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	403.961	18.36	18.4	94	?

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

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

2260

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 11:33 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:07 2003
Print Time : Mon Aug 11 16:07 2003
Miscleneous :

Sample : f=1 $4509-08
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	728.266	19.89	19.9	95	?
95	95 Tert butyl alcoho	4.50	4.47	0.004	59	57	193.492	200.26	200.3	100	m 08/11/03
94	94 allyl chloride	4.07	4.04	0.004	41	76	657.650	20.53	20.5	85	#?
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	649.702	18.40	18.4	99	
97	97 propionitrile	6.02	5.99	0.003	54	51	29.468	21.57	21.6	100	#?
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	422.704	19.06	19.1	94	?
23	23 22-Dichloropropan	5.92	5.89	0.003	77	97	562.857	25.36	25.4	97	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	201.331	18.72	18.7	95	
25	25 chloroform	6.37	6.35	0.002	83	85	684.609	20.58	20.6	98	?
26	26 tetrahydrofuranX5	6.35	6.32	0.003	42	72	248.955	93.07	93.1	95	?
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	1026.407	18.88	18.9	99	
99	99 ETBE	5.74	5.72	0.003	59	87	856.608	20.61	20.6	98	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	116.843	20.35	20.3	99	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	2500.531	98.40	98.4	99	
92	92 Nitro Methane(x10	5.82	5.80	0.003	61	46	90.932	201.04	201.0	79	
33	33 2-butanoneMEK X10	5.95	5.92	0.003	43	72	690.832	200.54	200.5	96	
93	93 Ethyl Acetate x2	6.04	6.02	0.002	43	61	351.590	39.55	39.6	91	#?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	633.423	19.30	19.3	98	
35	35 11-Di-Cl-propene	6.91	6.88	0.003	75	110	516.399	20.83	20.8	89	?
36	36 benzene	7.21	7.19	0.003	78	52	1538.235	18.61	18.6	99	?
37	37 CCl4	6.91	6.89	0.003	117	119	605.037	20.00	20.0	98	?
100	100 Isobutyl alcohol	7.17	7.39	-0.029	43	42	71.199	189.36	189.4	96	m 08/11/03
38	38 thiophene	7.53	7.51	0.003	84	58	803.216	19.55	19.5	97	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	346.502	18.73	18.7	95	
40	40 trichloroethene	8.24	8.23	0.002	130	132	529.120	20.53	20.5	98	
41	41 dibromomethane	8.73	8.71	0.002	174	172	221.041	18.84	18.8	100	
101	101 TAME	7.41	7.39	0.002	73	43	763.447	21.19	21.2	97	
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	486.367	20.08	20.1	100	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	177.320	18.80	18.8	91	
44	44 2-ClEt-Vi-ether10	9.55	9.37	0.024	63	43	2.151	16.32	16.3	28	#?
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	544.182	20.24	20.2	95	?
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	457.272	21.39	21.4	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\03G3659\G3659M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 11:33 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:07 2003
Print Time : Mon Aug 11 16:07 2003
Miscleneous :

Sample : f=1 $4509-08
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2261

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	280.713	18.32	18.3	94	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	444.016	18.37	18.4	97	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	381.809	19.82	19.8	94	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	377.321	19.61	19.6	100	
52	52	bromoform	12.42	12.41	0.000	173	174	220.724	18.76	18.8	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	410.005	18.22	18.2	95	
54	54	MIBK	9.77	9.76	0.000	43	58	182.983	19.78	19.8	95	
56	56	toluene	9.99	9.98	0.000	91	92	1740.567	18.92	18.9	98	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	605.153	96.40	96.4	95	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	279.547	18.49	18.5	95	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	536.824	19.53	19.5	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	1209.073	20.21	20.2	90	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	431.976	18.45	18.5	98	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	226.491	21.02	21.0	96	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2018.978	19.53	19.5	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3096.940	39.63	39.6	96	
66	66	styrene	12.24	12.23	0.000	104	78	1206.315	20.30	20.3	92	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1605.475	20.48	20.5	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	306.043	17.54	17.5	97	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	94.783	18.14	18.1	99	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2134.612	21.25	21.3	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	524.586	19.45	19.4	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	59.505	19.98	20.0	86	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	658.708	20.94	20.9	94	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	559.780	20.14	20.1	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	556.761	19.69	19.7	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1811.296	20.95	20.9	96	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2085.509	21.60	21.6	98	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1852.070	20.57	20.6	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1714.560	20.77	20.8	92	

= 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\03G3659\G3659M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 11:33 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:07 2003
Print Time : Mon Aug 11 16:07 2003
Miscleneous :

Sample : f=1 $4509-08
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2262

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	1096.674	19.34	19.3	98	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2484.511	21.38	21.4	96	
82	82	14-DCB	13.87	13.87	0.000	146	148	1077.255	19.98	20.0	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	154.304	28.24	28.2	72	#
84	84	12-DCB	14.21	14.21	0.000	146	148	959.013	18.99	19.0	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	582.147	20.56	20.6	84	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	69.203	19.46	19.5	97	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	727.080	22.24	22.2	99	
88	88	naphthalene	15.79	15.78	0.000	128	129	1191.245	20.08	20.1	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	404.696	20.44	20.4	97	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	625.475	21.32	21.3	99	

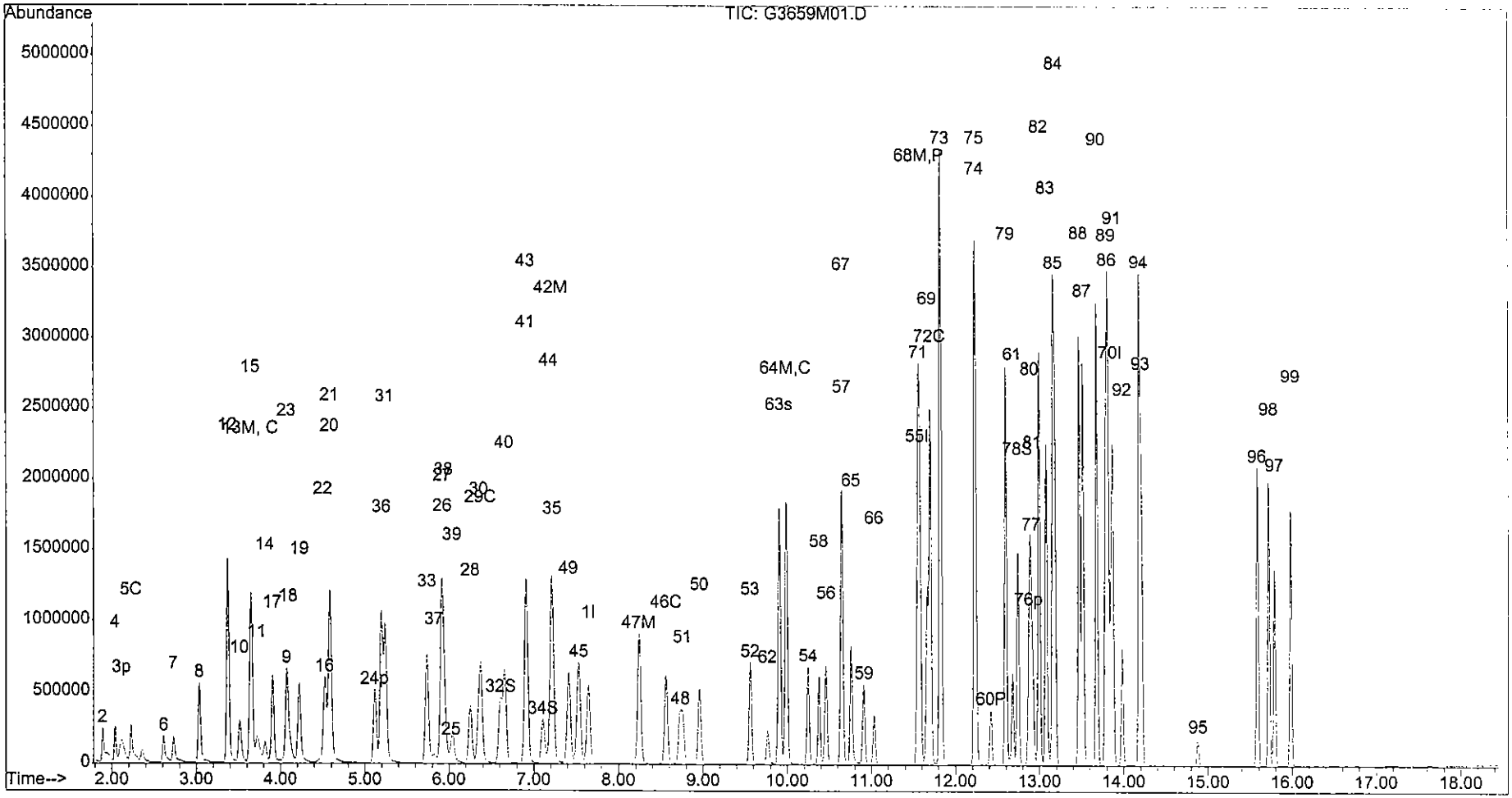
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659M01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 11:33 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:07 2003
Print Time : Mon Aug 11 16:07 2003
Miscleneous :

Sample : f=1 $4509-08
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2263



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

2264

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 12:00 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:09 2003
Print Time : Mon Aug 11 16:09 2003
Miscleneous :

Sample : f=1 $4509-08
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	7.63	0.002	96	70	819.015	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	631.300	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	316.189	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	392.157	19.21	19.2	96.07%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	311.186	18.82	18.8	94.12%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1518.668	19.09	19.1	95.44%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	512.065	19.58	19.6	97.90%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	365.325	17.77	17.8	100	
4	4	Chloromethane	2.11	2.07	0.005	50	52	277.569	15.89	15.9	100	
2	2	F114	2.03	2.00	0.005	85	135	211.063	19.63	19.6	58	m 08/11/03
5	5	vinyl chloride	2.22	2.19	0.004	62	64	355.634	17.91	17.9	97	
6	6	bromomethane	2.61	2.58	0.005	94	96	172.800	18.12	18.1	97	
7	7	chloroethane	2.73	2.70	0.004	64	66	202.275	17.12	17.1	99	
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	574.017	19.52	19.5	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	657.825	183.08	183.1	91	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	335.430	170.07	170.1	99	
11	11	acetone X10	3.71	3.69	0.002	43	58	386.999	197.20	197.2	99	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	928.024	105.36	105.4	92	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	447.650	19.07	19.1	96	?
14	14	Iodomethane	3.81	3.78	0.004	142	127	239.291	11.53	11.5	96	m
15	15	F-113	3.65	3.62	0.005	101	151	345.547	21.42	21.4	86	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	631.381	172.45	172.4	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1063.634	17.82	17.8	100	08/11/03
94	94	Isopropyl Alcohol	4.01	4.01	0.000	45	43	106.957	207.55	207.5	100	m
18	18	methylene chlorid	4.22	4.19	0.004	84	49	375.910	18.00	18.0	97	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	406.360	18.37	18.4	95	?

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

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

2265

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 12:00 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:09 2003
Print Time : Mon Aug 11 16:09 2003
Miscleneous :

Sample : f=1 $4509-08
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	706.854	19.20	19.2	96	?
95	95	Tert butyl alcoho	4.46	4.47	0.000	59	57	162.721	171.44	171.4	100	#
94	94	allyl chloride	4.07	4.04	0.004	41	76	657.825	20.42	20.4	84	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	654.072	18.42	18.4	99	
97	97	propionitrile	6.01	5.99	0.002	54	51	26.706	19.44	19.4	100	#
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	424.921	19.05	19.1	90	?
23	23	22-Dichloropropan	5.92	5.89	0.003	77	97	550.191	24.62	24.6	100	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	197.128	18.22	18.2	100	
25	25	chloroform	6.37	6.35	0.002	83	85	681.068	20.36	20.4	97	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	237.575	88.32	88.3	97	
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	1011.018	18.50	18.5	100	
99	99	ETBE	5.74	5.72	0.003	59	87	846.668	20.26	20.3	98	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	117.130	20.28	20.3	97	?
32	32	vinyl acetate X5	5.19	5.17	0.003	43	86	2398.372	93.86	93.9	100	
92	92	Nitro Methane(x10	5.81	5.80	0.000	61	46	93.460	205.49	205.5	78	
33	33	2-butanoneMEK X10	5.94	5.92	0.002	43	72	649.720	187.02	187.0	98	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	313.939	35.11	35.1	86	#
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	632.799	19.18	19.2	99	
35	35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	518.511	20.80	20.8	92	?
36	36	benzene	7.21	7.19	0.003	78	52	1536.436	18.48	18.5	98	?
37	37	CCl4	6.91	6.89	0.003	117	119	604.080	19.86	19.9	98	?
100	100	Isobutyl alcohol	7.14	7.39	-0.033	43	42	68.046	180.46	180.5	97	m 8/14/03
38	38	thiophene	7.53	7.51	0.002	84	58	799.212	19.34	19.3	97	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	341.999	18.39	18.4	96	
40	40	trichloroethene	8.24	8.23	0.002	130	132	529.582	20.44	20.4	100	
41	41	dibromomethane	8.73	8.71	0.002	174	172	214.009	18.14	18.1	99	
101	101	TAME	7.41	7.39	0.002	73	43	744.727	20.55	20.6	97	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	480.935	19.74	19.7	99	
43	43	Me-methacrylate	8.76	8.75	0.000	69	100	174.269	18.40	18.4	98	
44	44	2-ClEt-Vi-ether10	9.56	9.37	0.025	63	43	2.272	16.37	16.4	28	#?
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	538.804	19.93	19.9	94	?
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	449.075	20.89	20.9	92	

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

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

2266

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 12:00 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:09 2003
Print Time : Mon Aug 11 16:09 2003
Miscleneous :

Sample : f=1 $4509-08
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	270.206	17.73	17.7	95	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	432.335	17.99	18.0	99	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	368.122	19.25	19.2	93	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	368.760	19.28	19.3	99	
52	52	bromoform	12.41	12.41	0.000	173	174	212.977	18.21	18.2	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	391.977	17.52	17.5	94	
54	54	MIBK	9.77	9.76	0.000	43	58	173.304	18.85	18.8	91	
56	56	toluene	9.99	9.98	0.000	91	92	1743.153	19.06	19.1	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	568.594	91.11	91.1	92	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	271.434	18.06	18.1	97	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	536.025	19.62	19.6	98	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	1199.352	20.16	20.2	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	427.542	18.37	18.4	100	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	226.377	21.95	22.0	97	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2009.283	20.31	20.3	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3091.156	41.33	41.3	97	
66	66	styrene	12.24	12.23	0.000	104	78	1197.201	21.05	21.1	93	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1593.047	21.23	21.2	96	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	292.456	17.51	17.5	100	
69	69	123-tri-Cl-Pr	12.92	12.91	0.000	110	97	91.104	18.22	18.2	94	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2136.285	22.22	22.2	97	
72	72	bromobenzene	12.89	12.89	0.000	156	158	514.919	19.94	19.9	100	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	56.843	19.95	19.9	82	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	654.459	21.74	21.7	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	557.639	20.96	21.0	99	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	553.850	20.46	20.5	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1810.456	21.88	21.9	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2053.172	22.22	22.2	98	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	1836.838	21.31	21.3	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1701.849	21.53	21.5	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\03G3659\G3659N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 12:00 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:09 2003
Print Time : Mon Aug 11 16:09 2003
Miscleneous :

Sample : f=1 $4509-08
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2267

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	1086.047	20.01	20.0	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2467.486	22.19	22.2	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	1061.463	20.57	20.6	97	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	141.951	27.14	27.1	71	#
84	84	12-DCB	14.21	14.21	0.000	146	148	938.877	19.42	19.4	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	570.960	21.06	21.1	87	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	64.821	19.05	19.0	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	708.077	22.63	22.6	99	
88	88	naphthalene	15.78	15.78	0.000	128	129	1143.525	20.14	20.1	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	396.555	20.93	20.9	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	610.461	21.74	21.7	98	

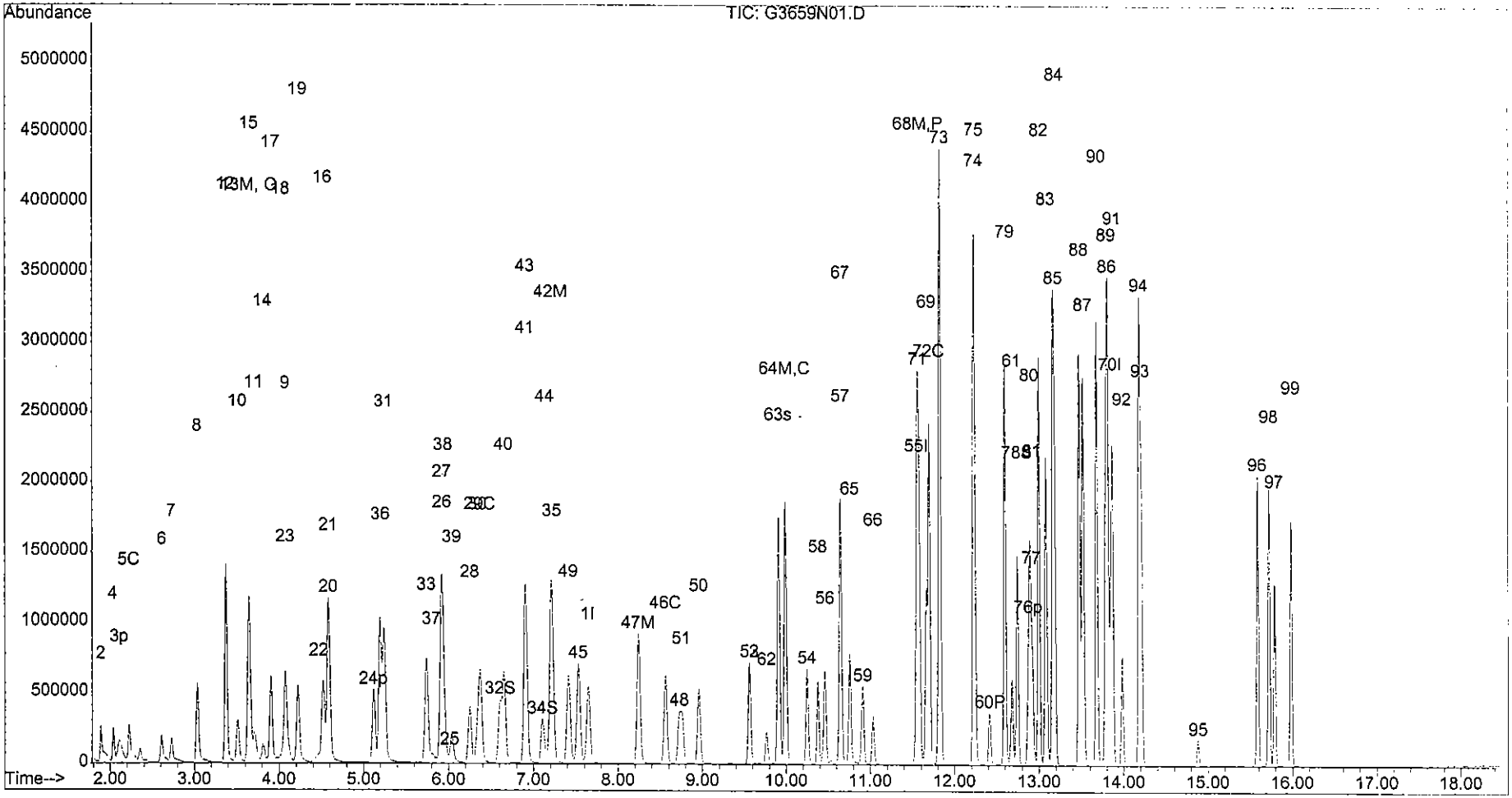
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3659\G3659N01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 12:00 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:09 2003
Print Time : Mon Aug 11 16:09 2003
Miscleneous :

Sample : f=1 $4509-08
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2268



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

Data Filename: C:\MSDCHEM\1\DATA\03G3659\4509-08.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 14:38 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:10 2003
Print Time : Mon Aug 11 16:10 2003
Miscleneous :

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

2269

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	667.922	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	570.554	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	307.468	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	365.141	21.94	21.9	109.68%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	303.018	22.48	22.5	112.38%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1373.674	19.10	19.1	95.52%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	480.069	18.88	18.9	94.39%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
94	94	Isopropyl Alcohol	3.77	4.01	-0.031	45	43	0.194	4.73	4.7	100	#
18	18	methylene chlorid	4.22	4.19	0.004	84	49	27.774	0.39	0.4	96	
95	95	Tert butyl alcoho	4.41	4.47	-0.008	59	57	0.342	24.54	24.5	100	#
21	21	11-dichloroethane	5.12	5.09	0.005	63	83	9.108	0.31	0.3	92	
25	25	chloroform	6.37	6.35	0.003	83	85	17.326	0.37	0.4	95	
92	92	Nitro Methane(x10	5.89	5.80	0.012	61	46	1.326	3.57	3.6	16	#
40	40	trichloroethene	8.24	8.23	0.002	130	132	21.097	1.00	1.0	91	
<<< I2 : ISTD ID = 47 >>>												
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	11.287	0.46	0.5	95	

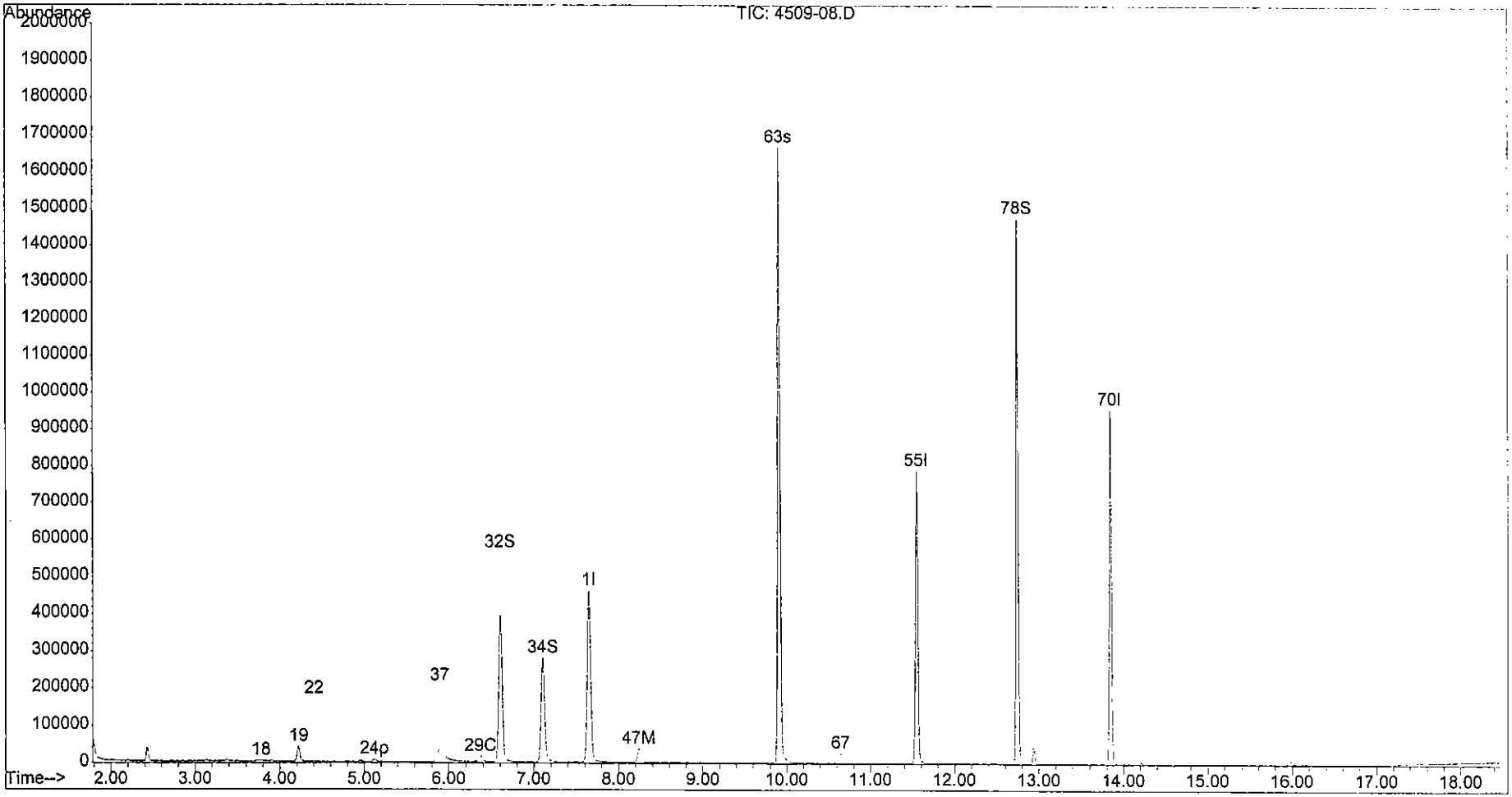
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3659\4509-08.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 11 14:38 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 11 16:10 2003
Print Time : Mon Aug 11 16:10 2003
Miscleneous :

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

2270



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:	34509
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	08/08/03
		Sample Matrix:	Water	Analysis Time:	13:25
Sample ID:	**03G3619-MB-01**	Batch No:	03G3619	Instrument ID:	GC/MS: A
Lab Sample ID:	03G3619-MB-01	Data File Name:	G3619K01	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	03G3619-LCS-01	03G3619-LCS-01	Lab Control Spike	G3619L01	08/08/03	11:12
2	MW-4-2MS	03-4455-4MS	Matrix Spike	G3619M01	08/08/03	11:40
3	MW-4-2MSD	03-4455-4MSD	Matrix Spike Duplicate	G3619N01	08/08/03	12:06
4	TB-5-8-6-03	03-4509-11	Field Sample	4509-11	08/08/03	13:52
5	DUPE-4-3-Q03	03-4509-1	Field Sample	4509-01	08/08/03	14:45
6	ER-5-8-6-03	03-4509-2	Field Sample	4509-02	08/08/03	15:12
7	MW-23-1	03-4509-3	Field Sample	4509-03	08/08/03	15:38
8	MW-23-2	03-4509-4	Field Sample	4509-04	08/08/03	16:05
9	MW-23-3	03-4509-5	Field Sample	4509-05	08/08/03	16:32
10	MW-14-1	03-4509-7	Field Sample	4509-07	08/08/03	16:58
11	MW-14-3	03-4509-9	Field Sample	4509-09	08/08/03	17:25
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						

FORM-4A

Applied P & Ch Laboratory

Method Blank Summary for Method 524.2

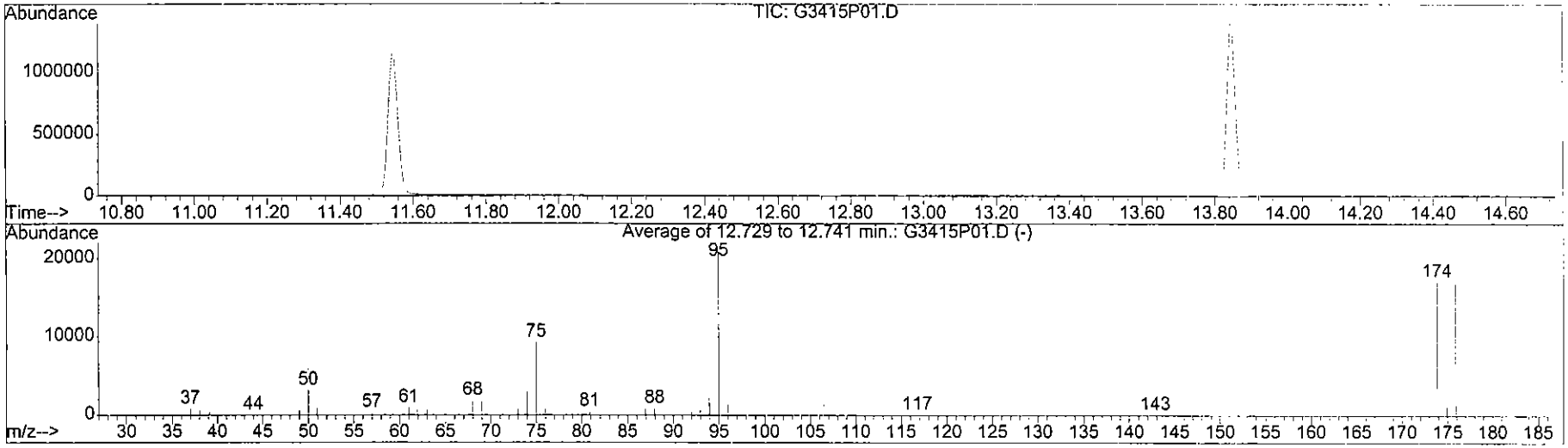
Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	34509
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	08/11/03
		Sample Matrix:	Water	Analysis Time:	13:18
Sample ID:	**03G3659-MB-01**	Batch No:	03G3659	Instrument ID:	GC/MS: A
Lab Sample ID:	03G3659-MB-01	Data File Name:	G3659K01	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	03G3659-LCS-01	03G3659-LCS-01	Lab Control Spike	G3659L01	08/11/03	11:06
2	MW-14-2MS	03-4509-8MS	Matrix Spike	G3659M01	08/11/03	11:33
3	MW-14-2MSD	03-4509-8MSD	Matrix Spike Duplicate	G3659N01	08/11/03	12:00
4	MW-14-2	03-4509-8	Field Sample	4509-08	08/11/03	14:38
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						

BFB

Data File : C:\MSDCHEM\1\DATA\03G3415\G3415P01.D Vial: 2
Acq On : 22 Jul 2003 5:08 pm Operator: zou
Sample : ##03g3415, w 50 ng Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2



Spectrum Information: Average of 12.729 to 12.741 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.3	3208	PASS
75	95	30	60	44.1	9259	PASS
95	95	100	100	100.0	20984	PASS
96	95	5	9	7.0	1467	PASS
173	174	0.00	2	0.7	120	PASS
174	95	50	100	81.3	17069	PASS
175	174	5	9	7.1	1218	PASS
176	174	95	101	98.6	16830	PASS
177	176	5	9	7.6	1277	PASS

G3415P01.D E524A002.M Thu Jul 31 17:21:02 2003

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 034509

Lab File ID: G3415 P01 BFB Injection Date: 07/22/2003

Instrument ID: GCMS-A BFB Injection Time: 1708

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	15.3
75	30.0 - 60.0% of mass 95	44.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.6 (0.7)1
174	50.0 - 100.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.8 (7.1)1
176	95.0 - 101.0% of mass 174	80.2 (98.6)1
177	5.0 - 9.0% of mass 176	6.1 (7.6)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	20-0003	20-00003.D	07/22/2003	1925
02	VSTD002	20-0002	20-0002.D	07/22/2003	2111
03	VSTD010	20-0010	20-0010.D	07/22/2003	2137
04	VSTD020	20-0020	20-0020.D	07/22/2003	2256
05	VSTD040	20-0040	20-0040.D	07/23/2003	0043
06	VSTD060	20-0060	20-0060.D	07/23/2003	0245
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Response Factor Report GCMS-A

2275

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 2003
Response via : Initial Calibration

Calibration Files
.3 =2-00003.D 2 =2-0002A.D 10 =2-00010.D
20 =2-00020.D 40 =2-00040.D 60 =2-00060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	r^2
1)	I	1	Fluorobenzene	ISTD								
2)		3	di-Cl-di-F-m	0.279	0.253	0.228	0.251	0.250	0.246	0.251	6.61	
3)	p	4	Chloromethan	0.300	0.265	0.208	0.221	0.218	0.200	0.235	16.51	0.996
4)		2	F114	0.116	0.138	0.126	0.136	0.137	0.133	0.131	6.45	
5)	C	5	vinyl chlori	0.268	0.267	0.219	0.239	0.240	0.223	0.242	8.61	
6)		6	bromomethane	0.143	0.128	0.105	0.113	0.104	0.106	0.116	13.63	
7)		7	chloroethane	0.162	0.171	0.136	0.131	0.138	0.129	0.144	12.08	
8)		8	tri-Cl-F-met	0.426	0.367	0.310	0.357	0.356	0.338	0.359	10.76	
9)		91	Acetonitrile		0.055	0.041	0.042	0.041	0.040	0.044	14.16	
10)		9	acrolein	0.034	0.034	0.026	0.025	0.024	0.022	0.028	18.73	0.997
11)		11	acetone X	0.106	0.053	0.028	0.024	0.024	0.021	0.043	77.29	0.994
12)		12	ethyl ether	0.162	0.157	0.117	0.117	0.110	0.098	0.127	20.67	0.992
13)	M, C	13	11-dichloroe	0.345	0.312	0.258	0.277	0.275	0.253	0.287	12.31#	
14)		14	Iodomethane	0.266	0.286	0.244	0.262	0.258	0.205	0.253	10.75	
15)		15	F-113	0.313	0.246	0.193	0.211	0.205	0.185	0.225	21.21	0.994
16)		16	acrylonitril	0.053	0.052	0.042	0.041	0.040	0.040	0.045	13.61	
17)		17	carbon disul	0.838	0.780	0.654	0.729	0.722	0.649	0.729	10.00	
18)		94	Isopropyl Al	0.015	0.008	0.005	0.006	0.007	0.006	0.008	46.15	0.995
19)		18	methylene ch	1.323	0.482	0.257	0.251	0.242	0.244	0.467	92.15	1.00
20)		19	t-12-di-Cl-e	0.297	0.305	0.248	0.262	0.256	0.253	0.270	8.99	
21)		20	t-Bu-Me-ethe	0.474	0.509	0.419	0.427	0.427	0.442	0.450	7.81	
22)		95	Tert butyl a		0.014	0.010	0.010	0.012	0.013	0.012	16.51	0.990
23)		94	allyl chlori		0.549	0.412	0.417	0.307	0.282	0.393	26.97	
24)	p	21	11-dichloroe	0.518	0.484	0.380	0.407	0.403	0.409	0.433	12.52	
25)		97	propionitril		0.020	0.014	0.016	0.016	0.017	0.017	14.53	
26)		22	c-12-di-Cl-e	0.296	0.311	0.252	0.263	0.257	0.255	0.272	9.12	
27)		23	22-Dichlorop	0.392	0.360	0.280	0.290	0.277	0.262	0.310	16.98	0.998
28)		24	Br-Cl-methan	0.158	0.150	0.117	0.123	0.122	0.122	0.132	13.12	

(#) = Out of Range

Response Factor Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 2003
Response via : Initial Calibration

Calibration Files
.3 =2-00003.D 2 =2-0002A.D 10 =2-00010.D
20 =2-00020.D 40 =2-00040.D 60 =2-00060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	r²
29)	C	25	chloroform	0.724	0.528	0.396	0.413	0.403	0.406	0.478	27.21#	1.00
30)		26	tetrahydrofu	0.036	0.035	0.031	0.031	0.032	0.032	0.033	6.66	
31)		98	Diisopropyl	0.648	0.792	0.634	0.653	0.636	0.641	0.667	9.23	
32)	S	27	Di-Br-F-Me (		0.294	0.230	0.240	0.239	0.243	0.249	10.27	
33)		99	ETBE	0.437	0.534	0.485	0.524	0.532	0.549	0.510	8.20	
34)	S	29	1,2-Di-Cl-Et		0.248	0.186	0.191	0.191	0.192	0.202	12.96	
35)		30	12-dichloroe	0.094	0.093	0.070	0.070	0.070	0.070	0.078	15.50	1.00
36)		32	vinyl acetat	0.319	0.377	0.321	0.291	0.285	0.280	0.312	11.53	
37)		92	Nitro Methan		0.006	0.005	0.005	0.006	0.006	0.006	9.09	
38)		33	2-butanoneME	0.081	0.061	0.044	0.043	0.042	0.041	0.052	30.99	1.00
39)		93	Ethyl Acetat	0.175	0.135	0.110	0.107	0.107	0.110	0.124	22.07	0.999
40)		34	111-trichlor	0.479	0.436	0.353	0.387	0.385	0.378	0.403	11.36	
41)		35	11-Di-Cl-pro	0.271	0.306	0.284	0.325	0.324	0.316	0.304	7.40	
42)	M	36	benzene	1.117	1.160	0.923	0.983	0.960	0.948	1.015	9.69	
43)		37	CCl4	0.434	0.397	0.329	0.361	0.358	0.350	0.371	10.20	
44)		100	Isobutyl al	0.002	0.005	0.004	0.004	0.005	0.005	0.004	30.78	0.997
45)		38	thiophene	0.471	0.573	0.471	0.505	0.504	0.503	0.505	7.36	
46)	C	39	12-di-Cl-pro	0.247	0.251	0.204	0.220	0.221	0.220	0.227	7.93#	
47)	M	40	trichloroeth	0.354	0.335	0.274	0.312	0.315	0.309	0.316	8.59	
48)		41	dibromometha	0.177	0.159	0.126	0.133	0.134	0.135	0.144	13.68	
49)		101	TAME	0.352	0.451	0.420	0.462	0.472	0.498	0.442	11.61	
50)		42	Br-di-Cl-met	0.433	0.359	0.280	0.298	0.298	0.297	0.327	17.81	1.00
51)		43	Me-methacryl	0.065	0.098	0.100	0.112	0.117	0.121	0.102	20.03	0.999
52)		44	2-ClEt-Vi-et	0.010	0.016	0.019	0.025	0.029		0.020	37.07	0.992
53)		45	c-13-di-Cl-p	0.312	0.358	0.307	0.333	0.335	0.336	0.330	5.59	
54)		46	t-1,3-dichlo	0.227	0.272	0.247	0.270	0.278	0.281	0.262	8.00	
55)	I	47	Chlorobezene-d5	----------ISTD----------								
56)		48	112-tri-Cl-E	0.288	0.275	0.213	0.222	0.224	0.226	0.241	13.17	

(#) = Out of Range

Response Factor Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 2003
Response via : Initial Calibration

Calibration Files
.3 =2-00003.D 2 =2-0002A.D 10 =2-00010.D
20 =2-00020.D 40 =2-00040.D 60 =2-00060.D

			Compound	.3	2	10	20	40	60	Avg	%RSD	
57)		49	13-di-Cl-pro	0.436	0.432	0.347	0.357	0.359	0.353	0.381	10.91	
58)		50	Et methacryl	0.189	0.269	0.272	0.287	0.301	0.321	0.273	16.74	0.997
59)		51	di-Br-Cl-met	0.422	0.341	0.275	0.296	0.304	0.309	0.325	16.16	0.999
60)	P	52	bromoform	0.222	0.192	0.159	0.171	0.181	0.187	0.185	11.70	
61)		53	1,4-dichloro	0.405	0.396	0.312	0.330	0.340	0.344	0.354	10.53	
62)		54	MIBK	0.132	0.144	0.134	0.144	0.155	0.166	0.146	8.89	
63)	s	55	toluene-d8	1.345	1.364	1.130	1.244	1.257	1.223	1.260	6.78	
64)	M,C	56	toluene	1.448	1.627	1.315	1.441	1.448	1.412	1.448	6.98	
65)		57	2-hexanone X	0.100	0.109	0.092	0.094	0.098	0.100	0.099	5.95	
66)		58	12-dibromoet	0.274	0.254	0.210	0.222	0.233	0.235	0.238	9.68	
67)		59	tetra-Cl-eth	0.496	0.464	0.378	0.427	0.424	0.408	0.433	9.68	
68)	M,P	60	chlorobenzen	1.297	1.156	0.893	0.967	0.959	0.919	1.032	15.48	0.999
69)		61	1112-tetra-C	0.447	0.412	0.317	0.340	0.348	0.348	0.369	13.47	
70)	I	62	1,4-Dichlorobenzen	----------	----------	ISTD	----------	----------	----------			
71)		63	1-chlorohexa	0.269	0.309	0.291	0.356	0.374	0.358	0.326	12.94	
72)	C	64	Et-Bz	3.072	3.263	2.780	3.211	3.292	3.156	3.129	6.01#	
73)		65	m/p-Xylenes	2.292	2.598	2.175	2.438	2.422	2.268	2.365	6.37	
74)		66	styrene	1.472	1.978	1.707	1.902	1.915	1.818	1.798	10.32	
75)		67	o-xylene	1.955	2.508	2.249	2.527	2.563	2.438	2.373	9.83	
76)	p	68	1122-Tetra-C	0.659	0.575	0.456	0.475	0.501	0.503	0.528	14.34	
77)		69	123-tri-Cl-P	0.186	0.176	0.138	0.146	0.151	0.152	0.158	11.76	
78)	S	70	4-Br-1-F-Bz	0.953	0.876	0.706	0.798	0.823	0.806	0.827	10.01	
79)		71	isopropylben	2.262	3.010	2.857	3.361	3.462	3.290	3.040	14.58	
80)		72	bromobenzene	0.840	0.881	0.719	0.807	0.842	0.810	0.817	6.73	
81)		92	t-1,4-dichlo	0.038	0.078	0.075	0.082	0.094	0.095	0.077	27.12	0.997
82)		73	n-propylbenz	0.759	0.999	0.867	1.019	1.061	1.009	0.952	12.10	
83)		74	2-Cl-Toluene	0.756	0.887	0.758	0.870	0.905	0.873	0.841	7.90	
84)		75	4-Cl-Toluene	0.853	0.955	0.757	0.860	0.880	0.830	0.856	7.52	

(#) = Out of Range

Response Factor Report GCMS-A

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 2003
Response via : Initial Calibration

Calibration Files
.3 =2-00003.D 2 =2-0002A.D 10 =2-00010.D
20 =2-00020.D 40 =2-00040.D 60 =2-00060.D

	Compound	.3	2	10	20	40	60	Avg	%RSD	r^2
85)	76 135-tri-Me-B	2.031	2.864	2.465	2.815	2.851	2.678	2.617	12.38	
86)	77 4-iso-Pr-tol	2.280	3.155	2.726	3.159	3.220	2.998	2.923	12.39	
87)	78 124-tri-Me-B	2.267	3.012	2.517	2.854	2.932	2.773	2.726	10.34	
88)	79 tert-butylbe	2.041	2.391	2.526	2.636	2.748	2.655	2.499	10.24	
89)	80 13-DCB	1.989	1.888	1.484	1.667	1.680	1.592	1.717	10.95	
90)	81 sec-butylben	2.715	3.632	3.274	3.857	3.936	3.690	3.517	12.95	
91)	82 14-DCB	2.240	1.859	1.457	1.644	1.684	1.613	1.749	15.60	0.999
92)	83 Cl-benzyl	0.164	0.159	0.155	0.169	0.181	0.165	0.165	5.41	
93)	84 12-DCB	1.762	1.734	1.326	1.464	1.479	1.408	1.529	11.67	
94)	85 n-butylbenze	0.528	0.789	0.731	0.875	0.910	0.843	0.779	17.73	0.997
95)	86 12-diBr-2-Cl	0.110	0.104	0.091	0.102	0.118	0.120	0.108	10.09	
96)	87 124-tri-Cl-B	0.843	0.926	0.884	1.065	1.130	1.091	0.990	12.16	
97)	88 naphthalene	2.218	1.820	1.426	1.651	1.832	1.831	1.796	14.50	
98)	89 hx-Cl-butadi	0.644	0.621	0.514	0.599	0.629	0.588	0.599	7.74	
99)	90 123-Tri-Cl-B	0.849	0.875	0.777	0.914	0.969	0.944	0.888	7.86	

(#) = Out of Range

INITIAL CALIBRATION SUMMARY

Method File	E524A002		
Last Calibration Update	Thu Jul 24 12:40:35 2003		
Level 1 File Name	2-00003.D	**Level 1 ID**	.3
Level 2 File Name	2-0002A.D	**Level 2 ID**	2
Level 3 File Name	2-00010.D	**Level 3 ID**	10
Level 4 File Name	2-00020.D	**Level 4 ID**	20
Level 5 File Name	2-00040.D	**Level 5 ID**	40
Level 6 File Name	2-00060.D	**Level 6 ID**	60
Level 7 File Name	2-00020.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	919393	1006828	1003977	1015499	990930	980047	-1	------	------	------	------
3 di-Cl-di-F-methane	7698	51044	228452	508778	990705	1444214	-1	0.0000	0.2510	0.0000	0.0661
4 Chloromethane	8264	53373	208536	448729	864850	1174857	-1	0.0169	0.2027	0.0000	0.9966
2 F114	3209	27835	126949	275940	544934	783345	-1	0.0000	0.1313	0.0000	0.0645
5 vinyl chloride	7381	53695	219399	484855	949966	1312837	-1	0.0000	0.2424	0.0000	0.0861
6 bromomethane	3952	25743	105105	228520	411844	626111	-1	0.0000	0.1165	0.0000	0.1363
7 chloroethane	4460	34347	136103	266250	546077	758703	-1	0.0000	0.1443	0.0000	0.1208
8 tri-Cl-F-methane	11754	73985	311036	724847	1412342	1986417	-1	0.0000	0.3591	0.0000	0.1076
91 Acetonitrile X10	-1	110646	413272	845923	1639456	2365932	-1	0.0000	0.0439	0.0000	0.1416
9 acrolein X10	9511	67561	262941	513017	937791	1313901	-1	0.0306	0.0223	0.0000	0.9978
11 acetone X10	29124	106138	281400	497276	943071	1241915	-1	0.0622	0.0208	0.0000	0.9944
12 ethyl ether X5	22348	158277	587938	1189867	2188257	2883396	-1	0.0885	0.0991	0.0000	0.9929
13 11-dichloroethene	9522	62800	259067	562011	1088836	1490545	-1	0.0000	0.2867	0.0000	0.1231
14 Iodomethane	7324	57536	244664	532902	1022337	1206486	-1	0.0000	0.2534	0.0000	0.1075
15 F-113	8636	49466	193654	427782	814332	1086062	-1	0.0189	0.1881	0.0000	0.9947
16 acrylonitrile X10	14700	104060	420553	831510	1601521	2352958	-1	0.0000	0.0447	0.0000	0.1361
17 carbon disulfide	23125	156993	656825	1480814	2862257	3817157	-1	0.0000	0.7288	0.0000	0.1000
94 Isopropyl Alcoholx10	4021	15273	46223	124874	265806	369178	-1	-0.0027	0.0064	0.0000	0.9954
18 methylene chloride	36501	97000	257935	510536	960233	1435510	-1	0.0322	0.2370	0.0000	0.9996
19 t-12-di-Cl-ethene	8180	61414	249312	531623	1015155	1488348	-1	0.0000	0.2701	0.0000	0.0899
20 t-Bu-Me-ether	13066	102540	420692	866584	1693079	2598506	-1	0.0000	0.4496	0.0000	0.0781
95 Tert butyl alcoholx10	-1	28855	98345	205914	482970	785022	-1	-0.0326	0.0135	0.0000	0.9918

94 allyl chloride	-1	110646	413272	845923	1216384	1660968	-1	0.0000	0.3934	0.0000	0.2697
21 11-dichloroethane	14292	97373	381929	825889	1598207	2404444	-1	0.0000	0.4335	0.0000	0.1252
97 propionitrile	-1	4103	13637	33328	64498	101359	-1	0.0000	0.0168	0.0000	0.1453
22 c-12-di-Cl-ethene	8154	62676	253306	533706	1019103	1499328	-1	0.0000	0.2723	0.0000	0.0912
23 22-Dichloropropane	10809	72464	281116	589735	1098975	1539718	-1	0.0244	0.2629	0.0000	0.9982
24 Br-Cl-methane	4359	30212	117713	250220	483734	716534	-1	0.0000	0.1321	0.0000	0.1312
25 chloroform	19972	106303	398005	838697	1597118	2387736	-1	0.0108	0.4031	0.0000	0.9998
26 tetrahydrofuranX5	4965	35404	154519	318868	624422	946730	-1	0.0000	0.0328	0.0000	0.0666
98 Diisopropyl ether	17882	159533	636576	1326012	2521921	3767835	-1	0.0000	0.6674	0.0000	0.0923
27 Di-Br-F-Me (surr)	-1	59230	230740	486919	949109	1428311	-1	0.0000	0.2492	0.0000	0.1027
99 ETBE	12061	107588	486462	1064815	2106754	3231163	-1	0.0000	0.5102	0.0000	0.0820
29 1,2-Di-Cl-Et-d4 (S1)	-1	50036	187219	388784	757790	1126883	-1	0.0000	0.2018	0.0000	0.1296
30 12-dichloroethane	2582	18795	70404	142937	277276	411282	-1	0.0020	0.0695	0.0000	0.9999
32 vinyl acetate X5	43949	379164	1608933	2957025	5653569	8226056	-1	0.0000	0.3120	0.0000	0.1153
92 Nitro Methane(x10)	-1	12060	47784	111334	237578	325914	-1	0.0000	0.0056	0.0000	0.0909
33 2-butanoneMEK X10	22369	123309	444332	875377	1648493	2411259	-1	0.0340	0.0406	0.0000	0.9998
93 Ethyl Acetate x2	9671	54370	220002	434881	845931	1295021	-1	0.0014	0.1088	0.0000	0.9995
34 111-trichloroethane	13204	87716	354801	785718	1524561	2222673	-1	0.0000	0.4029	0.0000	0.1136
35 11-Di-Cl-propene	7463	61583	285223	660985	1285689	1859527	-1	0.0000	0.3044	0.0000	0.0740
36 benzene	30808	233485	926403	1995763	3805709	5575015	-1	0.0000	1.0150	0.0000	0.0969
37 CCl4	11983	79844	329846	732441	1420059	2060040	-1	0.0000	0.3715	0.0000	0.1020

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	457	10371	40745	87337	182637	287972	-1	------	------	------	------
38 thiophene	12985	115327	473132	1025220	1999457	2960047	-1	0.0000	0.5046	0.0000	0.0736
39 12-di-Cl-propane	6808	50516	204989	446632	875952	1293157	-1	0.0000	0.2271	0.0000	0.0793
40 trichloroethene	9774	67466	274815	633192	1246934	1815606	-1	0.0000	0.3164	0.0000	0.0859
41 dibromomethane	4889	32002	126997	270225	530196	793122	-1	0.0000	0.1441	0.0000	0.1368
101 TAME	9699	90788	421379	938326	1872529	2927534	-1	0.0000	0.4424	0.0000	0.1161
42 Br-di-Cl-methane	11934	72312	281223	604352	1181950	1745648	-1	0.0014	0.2967	0.0000	0.9998
43 Me-methacrylate	1794	19729	100519	228095	464768	714088	-1	-0.0114	0.1219	0.0000	0.9990
44 2-ClEt-Vi-ether10	2834	31796	189485	514977	1130652	-1	-1	-0.0446	0.0290	0.0000	0.9927
45 c-13-di-Cl-propene	8596	71992	308098	676158	1328342	1977341	-1	0.0000	0.3301	0.0000	0.0559
46 t-1,3-dichloropropene	6273	54825	247619	547714	1100371	1653172	-1	0.0000	0.2625	0.0000	0.0800
47 Chlorobezene-d5	683445	775455	774184	772935	739886	736062	-1	0.0000	1.0000	0.0000	0.0000

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
48 112-tri-Cl-Et	5902	42713	164770	343401	662895	997315	-1	0.0000	0.2413	0.0000	0.1317
49 13-di-Cl-propane	8941	66977	268452	552557	1062190	1558760	-1	0.0000	0.3807	0.0000	0.1091
50 Et methacrylate	3865	41714	210769	443099	890456	1418605	-1	-0.0322	0.3197	0.0000	0.9978
51 di-Br-Cl-methane	8661	52843	213283	456818	899440	1365305	-1	-0.0111	0.3087	0.0000	0.9994
52 bromoform	4560	29809	123106	263988	534402	823804	-1	0.0000	0.1852	0.0000	0.1170
53 1,4-dichlorobutane-2	8296	61397	241554	510059	1005306	1519089	-1	0.0000	0.3544	0.0000	0.1053
54 MIBK	2701	22334	103475	222364	457366	733371	-1	0.0000	0.1456	0.0000	0.0889
55 toluene-d8	27570	211476	874470	1923324	3719816	5400714	-1	0.0000	1.2603	0.0000	0.0678
56 toluene	29681	252340	1018191	2227432	4284454	6235319	-1	0.0000	1.4484	0.0000	0.0698
57 2-hexanone X5	10224	84522	356146	728526	1453530	2205707	-1	0.0000	0.0989	0.0000	0.0595
58 12-dibromoethane	5621	39459	162435	343609	688415	1038913	-1	0.0000	0.2381	0.0000	0.0968
59 tetra-Cl-ethene	10167	72027	292262	659769	1256084	1800306	-1	0.0000	0.4328	0.0000	0.0968
60 chlorobenzene	26600	179300	691236	1494861	2837497	4059222	-1	0.0338	0.9255	0.0000	0.9991
61 1112-tetra-Cl-Et	9159	63898	245258	525072	1031299	1537036	-1	0.0000	0.3686	0.0000	0.1347
62 1,4-Dichlorobenzene-d4	358277	419640	407774	393961	367099	365124	-1	0.0000	1.0000	0.0000	0.0000
63 1-chlorohexane	2893	25946	118729	280119	548810	784184	-1	0.0000	0.3261	0.0000	0.1294
64 Et-Bz	33015	273886	1133719	2529977	4833949	6913463	-1	0.0000	3.1290	0.0000	0.0601
65 m/p-Xylenes X2	49281	436018	1773476	3842318	7112016	9936549	-1	0.0000	2.3654	0.0000	0.0637
66 styrene	15818	166023	695954	1498467	2811895	3981902	-1	0.0000	1.7985	0.0000	0.1032
67 o-xylene	21010	210456	917264	1990843	3763083	5341093	-1	0.0000	2.3732	0.0000	0.0983
68 1122-Tetra-Cl-Et	7086	48249	186045	374484	736112	1101133	-1	0.0000	0.5283	0.0000	0.1434
69 123-tri-Cl-Pr	1994	14801	56224	114784	222436	332760	-1	0.0000	0.1581	0.0000	0.1176
70 4-Br-1-F-Bz (S3)	10243	73535	287803	629095	1208574	1766234	-1	0.0000	0.8271	0.0000	0.1001
71 isopropylbenzene	24316	252585	1164869	2648278	5083237	7208570	-1	0.0000	3.0403	0.0000	0.1458
72 bromobenzene	9030	73980	293172	635461	1236729	1774887	-1	0.0000	0.8166	0.0000	0.0673
92 t-1,4-dichloro-2-butene	406	6524	30509	64587	137632	207953	-1	-0.0118	0.0961	0.0000	0.9978
73 n-propylbenzene	8157	83853	353478	802663	1558540	2210026	-1	0.0000	0.9523	0.0000	0.1210
74 2-Cl-Toluene	8123	74427	309252	685694	1328259	1912837	-1	0.0000	0.8415	0.0000	0.0790
75 4-Cl-Toluene	9172	80121	308786	677984	1291985	1819259	-1	0.0000	0.8560	0.0000	0.0752
76 135-tri-Me-Benzene	21830	240336	1005234	2217776	4186569	5867539	-1	0.0000	2.6173	0.0000	0.1238
77 4-iso-Pr-toluene	24508	264794	1111631	2489320	4727712	6567533	-1	0.0000	2.9230	0.0000	0.1239
78 124-tri-Me-Benzene	24365	252796	1026195	2248874	4305294	6074118	-1	0.0000	2.7257	0.0000	0.1034
79 tert-butylbenzene	21932	200692	1030129	2077031	4034706	5816456	-1	0.0000	2.4995	0.0000	0.1024

80 13-DCB	21374	158442	605258	1313556	2467081	3488098	-1	0.0000	1.7167	0.0000	0.1095
81 sec-butylbenzene	29181	304851	1334960	3039109	5779243	8084394	-1	0.0000	3.5174	0.0000	0.1295
82 14-DCB	24079	155998	594167	1295125	2472135	3533637	-1	-0.0003	1.6325	0.0000	0.9988
83 Cl-benzyl	1764	13306	63403	132793	265795	361085	-1	0.0000	0.1654	0.0000	0.0541
84 12-DCB	18942	145496	540526	1153351	2171646	3083911	-1	0.0000	1.5286	0.0000	0.1167
85 n-butylbenzene	5679	66251	298215	689097	1335543	1846727	-1	-0.0178	0.8660	0.0000	0.9968
86 12-diBr-2-Cl-Pra	1180	8757	37194	80335	173925	263112	-1	0.0000	0.1076	0.0000	0.1009
87 124-tri-Cl-Bz	9061	77700	360446	838928	1658990	2390948	-1	0.0000	0.9898	0.0000	0.1216
88 naphthalene	23839	152715	581293	1300980	2689379	4011635	-1	0.0000	1.7961	0.0000	0.1450
89 hx-Cl-butadiene	6922	52135	209577	472099	923440	1288580	-1	0.0000	0.5992	0.0000	0.0774
90 123-Tri-Cl-Bz	9124	73440	317007	719921	1423460	2068944	-1	0.0000	0.8881	0.0000	0.0786

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

2283

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00003.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 19:25 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:52 2003
Print Time : Thu Jul 24 11:52 2003
Miscleneous :

Sample : f=1 0.3 ppb
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	919.393	10.00		0.02	
47	47	Chlorobezene-d5	11.55	11.54	0.000	117	82	683.445	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	358.277	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.61	6.58	0.002	111	113	10.081	0.48	0.5	2.38%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	8.754	0.45	0.4	2.23%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	27.570	0.32	0.3	1.58%	
70	70	4-Br-1-F-Bz (S3)	12.75	12.74	0.000	174	95	10.243	0.38	0.4	1.88%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	7.698	0.34	0.3	97	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	8.264	0.34	0.3	97	
2	2	F114	2.04	2.00	0.006	85	135	3.209	0.27	0.3	96	
5	5	vinyl chloride	2.22	2.19	0.004	62	64	7.381	0.32	0.3	89	m
6	6	bromomethane	2.61	2.58	0.005	94	96	3.952	0.30	0.3	95	
7	7	chloroethane	2.73	2.70	0.004	64	66	4.460	0.30	0.3	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	11.754	0.34	0.3	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	24.302	8.33	8.3	73	#?
9	9	acrolein X10	3.51	3.48	0.005	56	55	9.511	4.28	4.3	0	m
11	11	acetone X10	3.72	3.69	0.004	43	58	29.124	12.37	12.4	94	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	22.348	1.91	1.9	92	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	9.522	0.34	0.3	0	m
14	14	Iodomethane	3.82	3.78	0.006	142	127	7.324	0.47	0.5	84	
15	15	F-113	3.65	3.62	0.005	101	151	8.636	0.42	0.4	0	m
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	14.700	4.72	4.7	89	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	23.125	0.28	0.3	98	
94	94	Isopropyl Alcohol	4.08	4.01	0.010	45	43	4.021	14.57	14.6	100	m
18	18	methylene chlorid	4.22	4.19	0.004	84	49	36.501	1.52	1.5	94	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	8.180	0.35	0.3	83	?

= 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\03G3415\2-00003.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 19:25 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:52 2003
Print Time : Thu Jul 24 11:52 2003
Miscleneous :

Sample : f=1 0.3 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2284

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	13.066	0.31	0.3	93	?
95	95 Tert butyl alcoho	4.47	4.47	0.000	59	57	6.515	8.83	8.8	100	m
94	94 allyl chloride	4.07	4.04	0.004	41	76	24.302	0.71	0.7	62	#? 7/24/03
21	21 11-dichloroethane	5.12	5.09	0.005	63	83	14.292	0.37	0.4	95	
22	22 c-12-di-Cl-ethene	5.92	5.89	0.004	96	61	8.154	0.35	0.3	96	m
23	23 22-Dichloropropan	5.92	5.89	0.003	77	97	10.809	0.38	0.4	95	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	4.359	0.47	0.5	87	
25	25 chloroform	6.37	6.35	0.002	83	85	19.972	0.51	0.5	100	?
26	26 tetrahydrofuranX5	6.36	6.32	0.005	42	72	4.965	1.89	1.9	89	?
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	17.882	0.28	0.3	69	#
99	99 ETBE	5.75	5.72	0.004	59	87	12.061	0.25	0.2	97	
30	30 12-dichloroethane	7.23	7.20	0.004	64	62	2.582	0.36	0.4	83	m
32	32 vinyl acetate X5	5.20	5.17	0.005	43	86	43.949	1.55	1.5	99	m 7/24/03
92	92 Nitro Methane(x10	5.81	5.80	0.002	61	46	1.737	0.82	0.8	47	#
33	33 2-butanoneMEK X10	5.95	5.92	0.004	43	72	22.369	7.70	7.7	96	
93	93 Ethyl Acetate x2	6.04	6.02	0.003	43	61	9.671	0.81	0.8	78	#
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	13.204	0.38	0.4	99	
35	35 11-Di-Cl-propene	6.91	6.88	0.003	75	110	7.463	0.25	0.2	91	?
36	36 benzene	7.21	7.19	0.003	78	52	30.808	0.33	0.3	96	?
37	37 CCl4	6.91	6.89	0.002	117	119	11.983	0.40	0.4	92	?
100	100 Isobutyl alcohol	7.19	7.39	-0.027	43	42	0.457	2.50	2.5	89	m 7/24/03
38	38 thiophene	7.53	7.51	0.003	84	58	12.985	0.28	0.3	94	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	6.808	0.34	0.3	94	
40	40 trichloroethene	8.24	8.23	0.002	130	132	9.774	0.39	0.4	96	
41	41 dibromomethane	8.73	8.71	0.002	174	172	4.889	0.51	0.5	87	
101	101 TAME	7.42	7.39	0.003	73	43	9.699	0.22	0.2	83	#
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	11.934	0.44	0.4	100	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	1.794	0.19	0.2	99	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	2.834	1.36	1.4	84	
45	45 c-13-di-Cl-propen	9.57	9.55	0.002	75	110	8.596	0.29	0.3	97	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	6.273	0.28	0.3	90	
<<< I2 : ISTD ID = 47 >>>											
48	48 1,1,2-tri-Cl-Et	10.46	10.45	0.000	97	83	5.902	0.41	0.4	96	

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

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

2285

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00003.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 19:25 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:52 2003
Print Time : Thu Jul 24 11:52 2003
Miscleneous :

Sample : f=1 0.3 ppb
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
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	8.941	0.36	0.4	90	?
50	50	Et methacrylate	10.38	10.37	0.001	69	99	3.865	0.19	0.2	92	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	8.661	0.50	0.5	99	
52	52	bromoform	12.42	12.41	0.000	173	174	4.560	0.49	0.5	95	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	8.296	0.37	0.4	91	
54	54	MIBK	9.77	9.76	0.000	43	58	2.701	0.28	0.3	85	
56	56	toluene	9.99	9.98	0.000	91	92	29.681	0.29	0.3	96	
57	57	2-hexanone X5	10.76	10.75	0.001	43	58	10.224	1.59	1.6	94	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	5.621	0.42	0.4	90	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	10.167	0.39	0.4	95	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	26.600	0.40	0.4	90	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	9.159	0.43	0.4	95	
<<<	I3	: ISTD ID = 62	>>>									
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	2.893	0.20	0.2	54	#?
64	64	Et-Bz	11.70	11.69	0.000	91	106	33.015	0.26	0.3	99	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	49.281	0.51	0.5	99	
66	66	styrene	12.24	12.23	0.000	104	78	15.818	0.21	0.2	80	?
67	67	o-xylene	12.22	12.22	0.000	91	106	21.010	0.21	0.2	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	7.086	0.41	0.4	98	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	1.994	0.39	0.4	100	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	24.316	0.20	0.2	97	
72	72	bromobenzene	12.89	12.89	0.000	156	158	9.030	0.33	0.3	97	?
92	92	t-1,4-dichloro-2-	12.93	12.92	0.000	89	53	0.406	0.16	0.2	19	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	8.157	0.23	0.2	82	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	8.123	0.27	0.3	94	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	9.172	0.29	0.3	88	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	21.830	0.21	0.2	96	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	24.508	0.21	0.2	97	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	24.365	0.23	0.2	98	
79	79	tert-butylbenzene	13.48	13.47	0.000	119	91	21.932	0.23	0.2	94	m
80	80	13-DCB	13.79	13.78	0.000	146	148	21.374	0.37	0.4	97	? 7/24/03
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	29.181	0.21	0.2	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\03G3415\2-00003.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 19:25 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:52 2003
Print Time : Thu Jul 24 11:52 2003
Miscleneous :

Sample : f=1 0.3 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2286

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	24.079	0.41	0.4	92	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	1.764	0.41	0.4	82	#
84	84	12-DCB	14.21	14.21	0.000	146	148	18.942	0.38	0.4	95	
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	5.679	0.19	0.2	87	#
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	1.180	0.41	0.4	81	#
87	87	124-tri-Cl-Bz	15.59	15.58	0.000	180	182	9.061	0.25	0.2	96	
88	88	naphthalene	15.79	15.78	0.000	128	129	23.839	0.45	0.4	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	6.922	0.32	0.3	88	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	9.124	0.30	0.3	91	

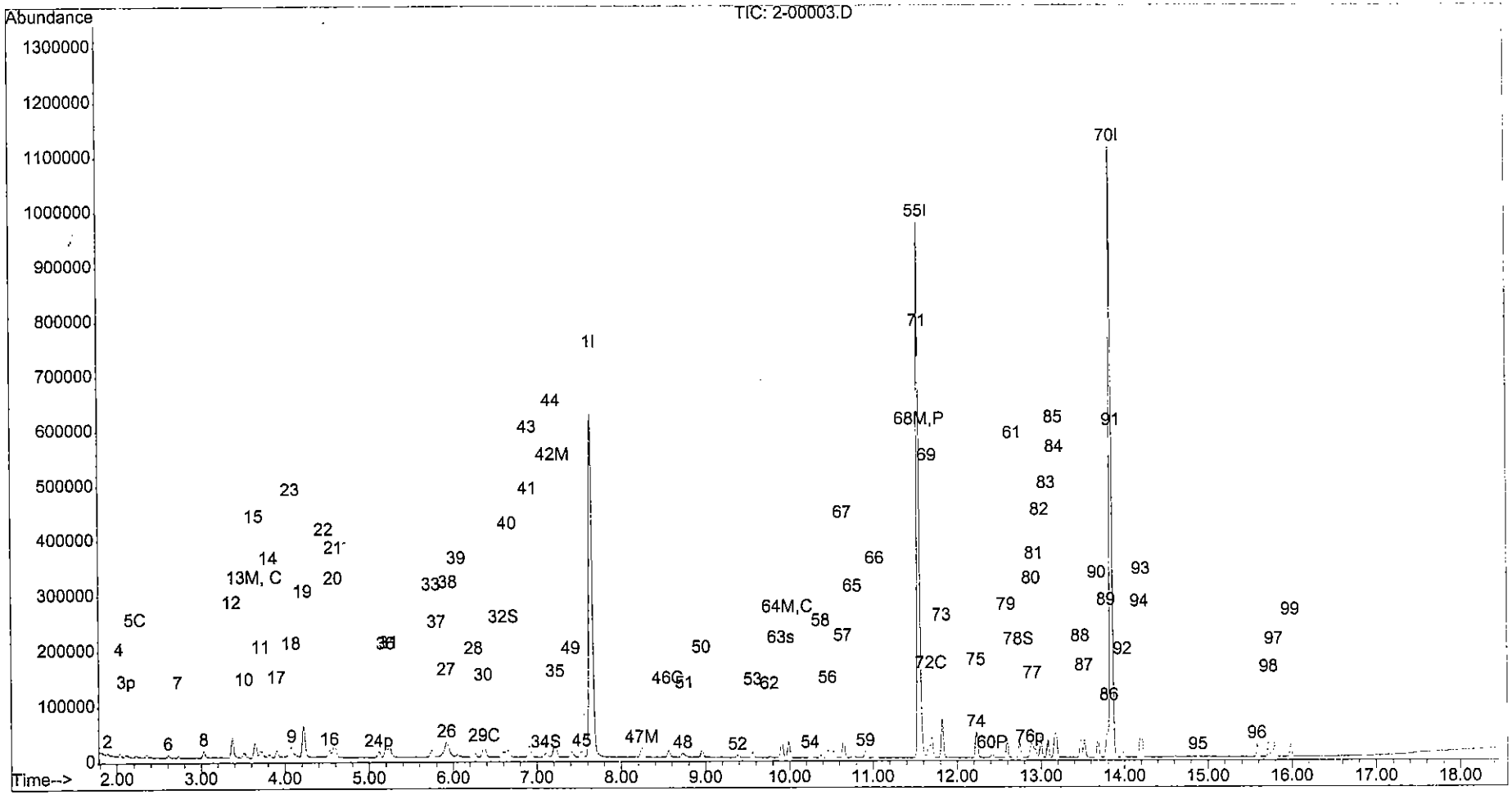
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00003.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 19:25 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:52 2003
Print Time : Thu Jul 24 11:52 2003
Miscleneous :

Sample : f=1 0.3 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2287



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

2288

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-0002A.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:11 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:56 2003
Print Time : Thu Jul 24 11:56 2003
Miscleneous :

Sample : f=1 2 ppb
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	1006.828	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	775.455	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	419.640	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	59.230	2.56	2.6	12.78%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	50.036	2.33	2.3	11.64%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	211.476	2.14	2.1	10.71%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	73.535	2.30	2.3	11.51%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	51.044	2.04	2.0	96	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	53.373	2.02	2.0	98	
2	2	F114	2.03	2.00	0.005	85	135	27.835	2.13	2.1	54	m 7/24/03
5	5	vinyl chloride	2.23	2.19	0.005	62	64	53.695	2.14	2.1	98	m
6	6	bromomethane	2.61	2.58	0.005	94	96	25.743	1.77	1.8	100	
7	7	chloroethane	2.73	2.70	0.004	64	66	34.347	2.11	2.1	96	
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	73.985	1.97	2.0	100	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	110.646	34.62	34.6	84	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	67.561	27.75	27.8	99	
11	11	acetone X10	3.73	3.69	0.005	43	58	106.138	41.18	41.2	0	m 7/24/03
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	158.277	12.35	12.4	89	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	62.800	2.04	2.0	94	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	57.536	3.40	3.4	93	
15	15	F-113	3.65	3.62	0.005	101	151	49.466	2.20	2.2	90	?
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	104.060	30.48	30.5	95	?
17	17	carbon disulfide	3.90	3.87	0.004	76	78	156.993	1.77	1.8	99	
94	94	Isopropyl Alcohol	4.10	4.01	0.011	45	43	15.273	50.54	50.5	100	m 7/24/03
18	18	methylene chlorid	4.22	4.19	0.005	84	49	97.000	3.70	3.7	94	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	61.414	2.39	2.4	90	?

= 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\03G3415\2-0002A.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:11 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:56 2003
Print Time : Thu Jul 24 11:56 2003
Miscleneous :

Sample : f=1 2 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2289

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	102.540	2.19	2.2	97	?
95	95	Tert butyl alcoho	4.50	4.47	0.005	59	57	28.855	35.70	35.7	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	110.646	2.96	3.0	77	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	97.373	2.28	2.3	95	
97	97	propionitrile	6.03	5.99	0.004	54	51	4.103	2.96	3.0	100	m
22	22	c-12-di-Cl-ethene	5.92	5.89	0.004	96	61	62.676	2.45	2.5	90	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	72.464	2.34	2.3	99	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	30.212	2.99	3.0	97	
25	25	chloroform	6.38	6.35	0.003	83	85	106.303	2.47	2.5	99	?
26	26	tetrahydrofuranX5	6.36	6.32	0.005	42	72	35.404	12.31	12.3	89	?
98	98	Diisopropyl ether	5.25	5.22	0.004	45	87	159.533	2.30	2.3	97	
99	99	ETBE	5.75	5.72	0.004	59	87	107.588	2.02	2.0	95	
30	30	12-dichloroethane	7.22	7.20	0.002	64	62	18.795	2.38	2.4	89	#?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	379.164	12.18	12.2	98	
92	92	Nitro Methane(x10	5.84	5.80	0.005	61	46	12.060	5.18	5.2	2	m
33	33	2-butanoneMEK X10	5.95	5.92	0.003	43	72	123.309	38.78	38.8	95	?
93	93	Ethyl Acetate x2	6.05	6.02	0.004	43	61	54.370	4.14	4.1	88	#?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	87.716	2.28	2.3	98	
35	35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	61.583	1.86	1.9	88	?
36	36	benzene	7.22	7.19	0.004	78	52	233.485	2.31	2.3	100	?
37	37	CCl4	6.91	6.89	0.003	117	119	79.844	2.46	2.5	100	?
100	100	Isobutyl alcohol	7.19	7.39	-0.027	43	42	10.371	51.83	51.8	91	m
38	38	thiophene	7.53	7.51	0.002	84	58	115.327	2.25	2.3	95	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	50.516	2.33	2.3	97	
40	40	trichloroethene	8.24	8.23	0.002	130	132	67.466	2.44	2.4	95	
41	41	dibromomethane	8.73	8.71	0.002	174	172	32.002	3.05	3.0	100	
101	101	TAME	7.42	7.39	0.003	73	43	90.788	1.90	1.9	95	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	72.312	2.42	2.4	97	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	19.729	1.93	1.9	90	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	31.796	13.91	13.9	97	
45	45	c-13-di-Cl-propen	9.57	9.55	0.002	75	110	71.992	2.24	2.2	95	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	54.825	2.21	2.2	90	

= 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\03G3415\2-0002A.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:11 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:56 2003
Print Time : Thu Jul 24 11:56 2003
Miscleneous :

Sample : f=1 2 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2290

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	10.46	10.45	0.000	97	83	42.713	2.65	2.6	97	
49	13-di-Cl-propane	10.65	10.64	0.001	76	78	66.977	2.35	2.3	96	?
50	Et methacrylate	10.38	10.37	0.001	69	99	41.714	1.85	1.8	95	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	52.843	2.67	2.7	100	
52	bromoform	12.42	12.41	0.000	173	174	29.809	2.82	2.8	100	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	61.397	2.38	2.4	96	
54	MIBK	9.77	9.76	0.001	43	58	22.334	2.04	2.0	94	
56	toluene	9.99	9.98	0.001	91	92	252.340	2.17	2.2	99	
57	2-hexanone X5	10.76	10.75	0.001	43	58	84.522	11.62	11.6	94	
58	12-dibromoethane	11.03	11.03	0.000	107	109	39.459	2.61	2.6	94	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	72.027	2.41	2.4	99	?
60	chlorobenzene	11.58	11.57	0.000	112	77	179.300	2.40	2.4	93	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	63.898	2.67	2.7	98	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	25.946	1.54	1.5	91	?
64	Et-Bz	11.70	11.69	0.000	91	106	273.886	1.85	1.9	96	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	436.018	3.85	3.8	96	
66	styrene	12.24	12.23	0.000	104	78	166.023	1.92	1.9	92	?
67	o-xylene	12.22	12.22	0.000	91	106	210.456	1.81	1.8	99	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	48.249	2.37	2.4	93	
69	123-tri-Cl-Pr	12.92	12.91	0.000	110	97	14.801	2.50	2.5	96	?
71	isopropylbenzene	12.60	12.59	0.000	105	120	252.585	1.76	1.8	99	
72	bromobenzene	12.89	12.89	0.000	156	158	73.980	2.31	2.3	99	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	6.524	2.14	2.1	92	?
73	n-propylbenzene	13.00	12.99	0.000	120	78	83.853	1.98	2.0	94	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	74.427	2.08	2.1	100	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	80.121	2.19	2.2	97	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	240.336	1.95	1.9	98	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	264.794	1.97	2.0	99	?
78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	252.796	1.99	2.0	96	
79	tert-butylbenzene	13.48	13.47	0.000	119	91	200.692	1.81	1.8	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\03G3415\2-0002A.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:11 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:56 2003
Print Time : Thu Jul 24 11:56 2003
Miscleneous :

Sample : f=1 2 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2291

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	158.442	2.31	2.3	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	304.851	1.87	1.9	100	
82	82	14-DCB	13.87	13.87	0.000	146	148	155.998	2.27	2.3	97	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	13.306	2.65	2.6	81	#
84	84	12-DCB	14.21	14.21	0.000	146	148	145.496	2.46	2.5	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	66.251	1.89	1.9	94	?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	8.757	2.61	2.6	89	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	77.700	1.82	1.8	97	
88	88	naphthalene	15.79	15.78	0.000	128	129	152.715	2.44	2.4	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	52.135	2.05	2.0	100	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	73.440	2.07	2.1	99	

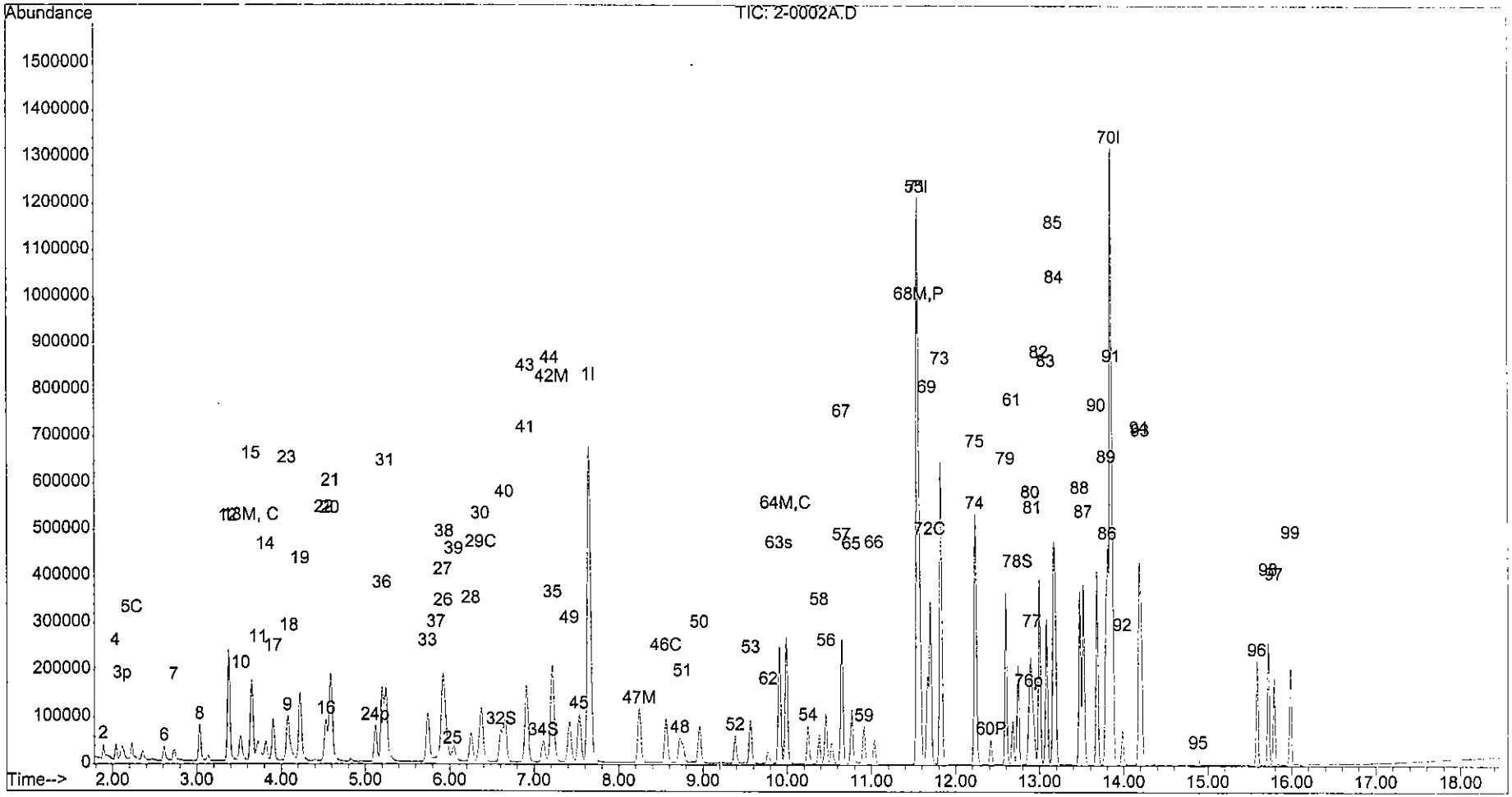
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-0002A.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:11 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:56 2003
Print Time : Thu Jul 24 11:56 2003
Miscleneous :

Sample : f=1 2 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2292



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

2293

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00010.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:37 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:58 2003
Print Time : Thu Jul 24 11:58 2003
Miscleneous :

Sample : f=1 10 ppb
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	1003.977	10.00		0.02	
47	47	Chlorobezene-d5	11.55	11.54	0.000	117	82	774.184	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	407.774	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	230.740	9.99	10.0	49.93%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	187.219	8.73	8.7	43.66%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	874.470	8.87	8.9	44.35%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	287.803	9.27	9.3	46.37%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	228.452	9.14	9.1	98	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	208.536	7.92	7.9	98	
2	2	F114	2.03	2.00	0.005	85	135	126.949	9.74	9.7	59	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	219.399	8.78	8.8	100	
6	6	bromomethane	2.61	2.58	0.005	94	96	105.105	7.25	7.2	97	
7	7	chloroethane	2.73	2.70	0.004	64	66	136.103	8.39	8.4	100	
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	311.036	8.29	8.3	100	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	413.272	129.67	129.7	89	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	262.941	108.33	108.3	0	m
11	11	acetone X10	3.73	3.69	0.005	43	58	281.400	109.48	109.5	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	587.938	46.01	46.0	88	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	259.067	8.43	8.4	98	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	244.664	14.51	14.5	93	
15	15	F-113	3.65	3.62	0.005	101	151	193.654	8.65	8.6	87	?
16	16	acrylonitrile X10	4.53	4.49	0.005	53	52	420.553	123.54	123.5	97	
17	17	carbon disulfide	3.91	3.87	0.005	76	78	656.825	7.41	7.4	100	
94	94	Isopropyl Alcohol	4.11	4.01	0.014	45	43	46.223	153.39	153.4	100	m
18	18	methylene chlorid	4.22	4.19	0.005	84	49	257.935	9.86	9.9	100	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	249.312	9.75	9.7	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\03G3415\2-00010.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:37 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:58 2003
Print Time : Thu Jul 24 11:58 2003
Miscleneous :

Sample : f=1 10 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2294

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	420.692	9.03	9.0	97	?
95	95	Tert butyl alcoho	4.58	4.47	0.014	59	57	98.345	122.02	122.0	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	413.272	11.07	11.1	81	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	381.929	8.98	9.0	99	
97	97	propionitrile	6.03	5.99	0.004	54	51	13.637	9.86	9.9	100	#?
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	253.306	9.94	9.9	88	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	281.116	9.09	9.1	95	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	117.713	11.68	11.7	96	
25	25	chloroform	6.37	6.35	0.002	83	85	398.005	9.29	9.3	98	?
26	26	tetrahydrofuranX5	6.35	6.32	0.003	42	72	154.519	53.88	53.9	88	?
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	636.576	9.21	9.2	96	
99	99	ETBE	5.74	5.72	0.003	59	87	486.462	9.16	9.2	95	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	70.404	8.93	8.9	96	?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	1608.933	51.83	51.8	99	
92	92	Nitro Methane(x10	5.83	5.80	0.004	61	46	47.784	20.59	20.6	88	
33	33	2-butanoneMEK X10	5.95	5.92	0.003	43	72	444.332	140.12	140.1	95	?
93	93	Ethyl Acetate x2	6.04	6.02	0.003	43	61	220.002	16.80	16.8	92	#?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	354.801	9.25	9.2	100	
35	35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	285.223	8.66	8.7	88	?
36	36	benzene	7.21	7.19	0.003	78	52	926.403	9.17	9.2	99	?
37	37	CCl4	6.91	6.89	0.003	117	119	329.846	10.19	10.2	99	?
100	100	Isobutyl alcohol	7.19	7.39	-0.027	43	42	40.745	204.19	204.2	95	m
38	38	thiophene	7.53	7.51	0.003	84	58	473.132	9.26	9.3	98	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	204.989	9.47	9.5	98	
40	40	trichloroethene	8.24	8.23	0.002	130	132	274.815	9.97	10.0	99	
41	41	dibromomethane	8.73	8.71	0.002	174	172	126.997	12.13	12.1	99	
101	101	TAME	7.41	7.39	0.002	73	43	421.379	8.86	8.9	98	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	281.223	9.42	9.4	99	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	100.519	9.84	9.8	97	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	189.485	83.14	83.1	98	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	308.098	9.63	9.6	94	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	247.619	10.02	10.0	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\03G3415\2-00010.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:37 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:58 2003
Print Time : Thu Jul 24 11:58 2003
Miscleneous :

Sample : f=1 10 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2295

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	164.770	10.23	10.2	98	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	268.452	9.42	9.4	100	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	210.769	9.34	9.3	94	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	213.283	10.78	10.8	100	
52	52	bromoform	12.42	12.41	0.000	173	174	123.106	11.66	11.7	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	241.554	9.38	9.4	95	
54	54	MIBK	9.77	9.76	0.000	43	58	103.475	9.46	9.5	99	
56	56	toluene	9.99	9.98	0.000	91	92	1018.191	8.79	8.8	100	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	356.146	49.05	49.0	95	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	162.435	10.76	10.8	97	
59	59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	292.262	9.80	9.8	97	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	691.236	9.26	9.3	91	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	245.258	10.28	10.3	100	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	118.729	7.23	7.2	96	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	1133.719	7.90	7.9	95	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	1773.476	16.10	16.1	96	
66	66	styrene	12.24	12.23	0.000	104	78	695.954	8.27	8.3	91	?
67	67	o-xylene	12.22	12.22	0.000	91	106	917.264	8.12	8.1	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	186.045	9.39	9.4	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	56.224	9.77	9.8	98	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	1164.869	8.34	8.3	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	293.172	9.42	9.4	97	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	30.509	10.30	10.3	90	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	353.478	8.59	8.6	94	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	309.252	8.90	8.9	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	308.786	8.67	8.7	96	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1005.234	8.38	8.4	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1111.631	8.52	8.5	99	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1026.195	8.33	8.3	98	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1030.129	9.57	9.6	94	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\03G3415\2-00010.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:37 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:58 2003
Print Time : Thu Jul 24 11:58 2003
Miscleneous :

Sample : f=1 10 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2296

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	605.258	9.08	9.1	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	1334.960	8.44	8.4	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	594.167	8.88	8.9	98	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	63.403	12.97	13.0	76	#
84	84	12-DCB	14.21	14.21	0.000	146	148	540.526	9.41	9.4	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	298.215	8.75	8.8	90	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	37.194	11.39	11.4	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	360.446	8.69	8.7	98	
88	88	naphthalene	15.79	15.78	0.000	128	129	581.293	9.57	9.6	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	209.577	8.47	8.5	96	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	317.007	9.19	9.2	99	

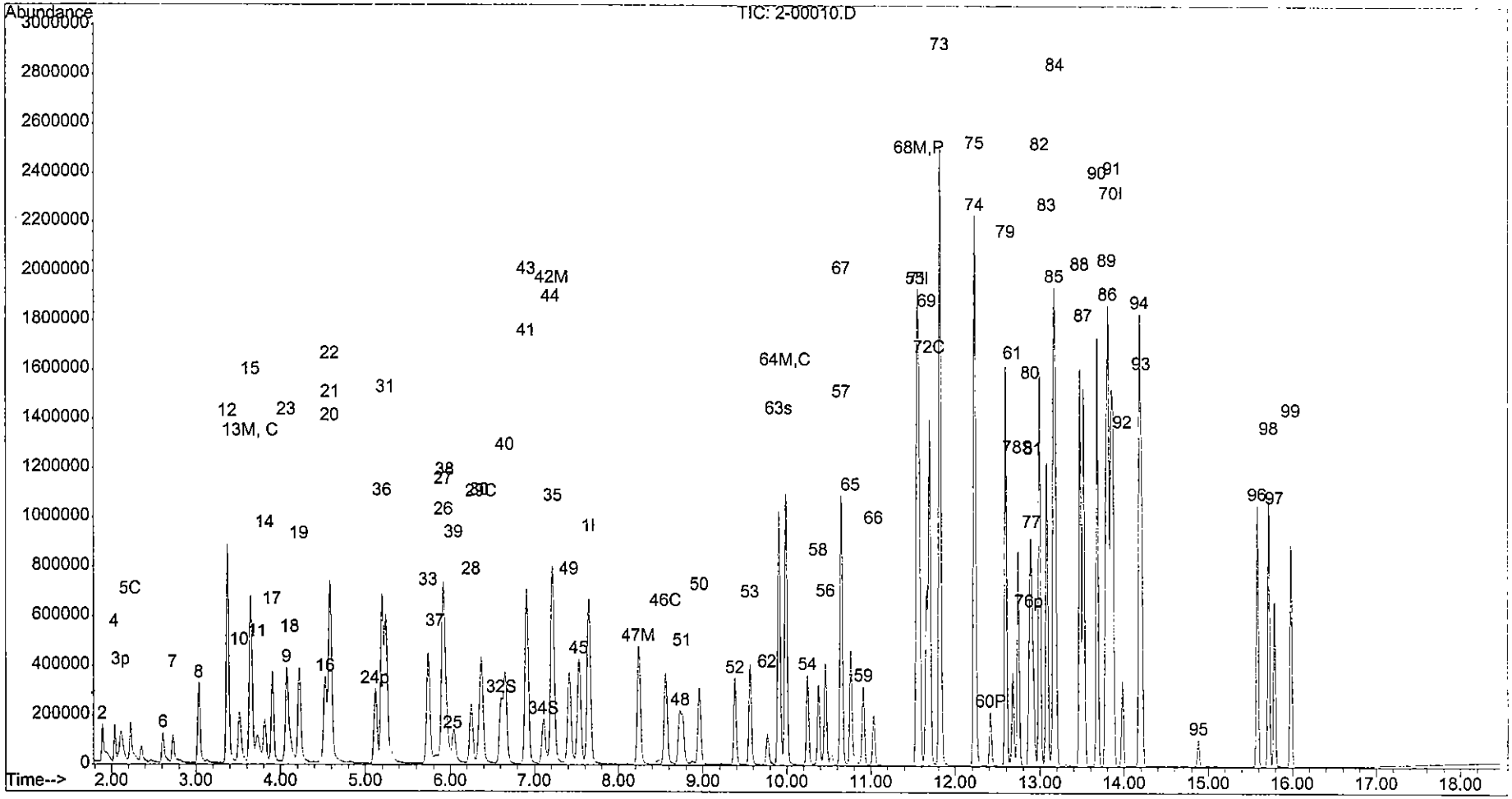
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00010.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 21:37 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 11:58 2003
Print Time : Thu Jul 24 11:58 2003
Miscleneous :

Sample : f=1 10 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2297



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

2298

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00020.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 22:56 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:01 2003
Print Time : Thu Jul 24 12:01 2003
Miscleneous :

Sample : f=1 20 ppb
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	7.63	0.002	96	70	1015.499	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	772.935	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	393.961	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	486.919	20.83	20.8	104.16%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	388.784	17.93	17.9	89.64%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1923.324	19.54	19.5	97.70%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	629.095	20.98	21.0	104.91%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	508.778	20.12	20.1	100	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	448.729	16.85	16.9	99	
2	2	F114	2.03	2.00	0.005	85	135	275.940	20.92	20.9	51	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	484.855	19.18	19.2	98	
6	6	bromomethane	2.61	2.58	0.005	94	96	228.520	15.58	15.6	97	
7	7	chloroethane	2.73	2.70	0.004	64	66	266.250	16.22	16.2	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	724.847	19.09	19.1	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	845.923	262.40	262.4	90	?
9	9	acrolein X10	3.51	3.48	0.004	56	55	513.017	208.95	209.0	0	m
11	11	acetone X10	3.70	3.69	0.002	43	58	497.276	191.27	191.3	99	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	1189.867	92.06	92.1	90	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	562.011	18.08	18.1	0	m
14	14	Iodomethane	3.82	3.78	0.005	142	127	532.902	31.25	31.3	95	
15	15	F-113	3.65	3.62	0.005	101	151	427.782	18.88	18.9	90	?
16	16	acrylonitrile X10	4.52	4.49	0.003	53	52	831.510	241.48	241.5	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1480.814	16.51	16.5	99	
94	94	Isopropyl Alcohol	3.98	4.01	-0.004	45	43	124.874	409.68	409.7	100	m
18	18	methylene chlorid	4.22	4.19	0.005	84	49	510.536	19.30	19.3	99	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	531.623	20.55	20.5	95	?

= 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\03G3415\2-00020.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 22:56 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:01 2003
Print Time : Thu Jul 24 12:01 2003
Miscleneous :

Sample : f=1 20 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2299

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	866.584	18.38	18.4	94	?
95	95	Tert butyl alcoho	4.45	4.47	-0.002	59	57	205.914	252.58	252.6	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	845.923	22.41	22.4	83	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	825.889	19.20	19.2	99	
97	97	propionitrile	6.01	5.99	0.002	54	51	33.328	23.83	23.8	100	#
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	533.706	20.71	20.7	91	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	589.735	18.85	18.9	95	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	250.220	24.55	24.5	100	
25	25	chloroform	6.38	6.35	0.003	83	85	838.697	19.34	19.3	99	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	318.868	109.93	109.9	94	
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	1326.012	18.97	19.0	97	
99	99	ETBE	5.74	5.72	0.003	59	87	1064.815	19.83	19.8	96	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	142.937	17.93	17.9	99	?
32	32	vinyl acetate X5	5.19	5.17	0.003	43	86	2957.025	94.18	94.2	99	
92	92	Nitro Methane(x10	5.81	5.80	0.000	61	46	111.334	47.43	47.4	78	
33	33	2-butanoneMEK X10	5.93	5.92	0.002	43	72	875.377	272.92	272.9	94	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	434.881	32.82	32.8	91	#
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	785.718	20.25	20.2	100	
35	35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	660.985	19.83	19.8	92	?
36	36	benzene	7.21	7.19	0.003	78	52	1995.763	19.54	19.5	100	?
37	37	CCl4	6.91	6.89	0.002	117	119	732.441	22.36	22.4	99	?
100	100	Isobutyl alcohol	7.14	7.39	-0.034	43	42	87.337	432.72	432.7	93	m
38	38	thiophene	7.53	7.51	0.002	84	58	1025.220	19.84	19.8	99	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	446.632	20.39	20.4	93	
40	40	trichloroethene	8.24	8.23	0.002	130	132	633.192	22.70	22.7	100	
41	41	dibromomethane	8.73	8.71	0.002	174	172	270.225	25.52	25.5	96	
101	101	TAME	7.41	7.39	0.002	73	43	938.326	19.51	19.5	99	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	604.352	20.02	20.0	100	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	228.095	22.09	22.1	93	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	514.977	223.40	223.4	98	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	676.158	20.89	20.9	94	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	547.714	21.91	21.9	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\03G3415\2-00020.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 22:56 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:01 2003
Print Time : Thu Jul 24 12:01 2003
Miscleneous :

Sample : f=1 20 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2300

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	343.401	21.35	21.4	94	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	552.557	19.42	19.4	100	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	443.099	19.68	19.7	94	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	456.818	23.12	23.1	100	
52	52	bromoform	12.42	12.41	0.000	173	174	263.988	25.03	25.0	100	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	510.059	19.84	19.8	94	
54	54	MIBK	9.77	9.76	0.000	43	58	222.364	20.36	20.4	92	
56	56	toluene	9.99	9.98	0.000	91	92	2227.432	19.25	19.3	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	728.526	100.50	100.5	94	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	343.609	22.79	22.8	96	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	659.769	22.17	22.2	99	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	1494.861	20.06	20.1	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	525.072	22.05	22.0	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	280.119	17.67	17.7	97	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	2529.977	18.24	18.2	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3842.318	36.10	36.1	97	
66	66	styrene	12.24	12.23	0.000	104	78	1498.467	18.43	18.4	92	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1990.843	18.25	18.2	96	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	374.484	19.56	19.6	98	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	114.784	20.64	20.6	100	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2648.278	19.63	19.6	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	635.461	21.14	21.1	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	64.587	22.57	22.6	85	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	802.663	20.20	20.2	93	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	685.694	20.42	20.4	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	677.984	19.70	19.7	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	2217.776	19.13	19.1	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2489.320	19.74	19.7	97	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	2248.874	18.90	18.9	96	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	2077.031	19.97	20.0	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\03G3415\2-00020.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 22:56 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:01 2003
Print Time : Thu Jul 24 12:01 2003
Miscleneous :

Sample : f=1 20 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2301

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	1313.556	20.40	20.4	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	3039.109	19.88	19.9	98	
82	82	14-DCB	13.87	13.87	0.000	146	148	1295.125	20.04	20.0	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	132.793	28.12	28.1	76	#
84	84	12-DCB	14.21	14.21	0.000	146	148	1153.351	20.77	20.8	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	689.097	20.94	20.9	84	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	80.335	25.47	25.5	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	838.928	20.94	20.9	99	
88	88	naphthalene	15.79	15.78	0.000	128	129	1300.980	22.16	22.2	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	472.099	19.75	19.8	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	719.921	21.61	21.6	98	

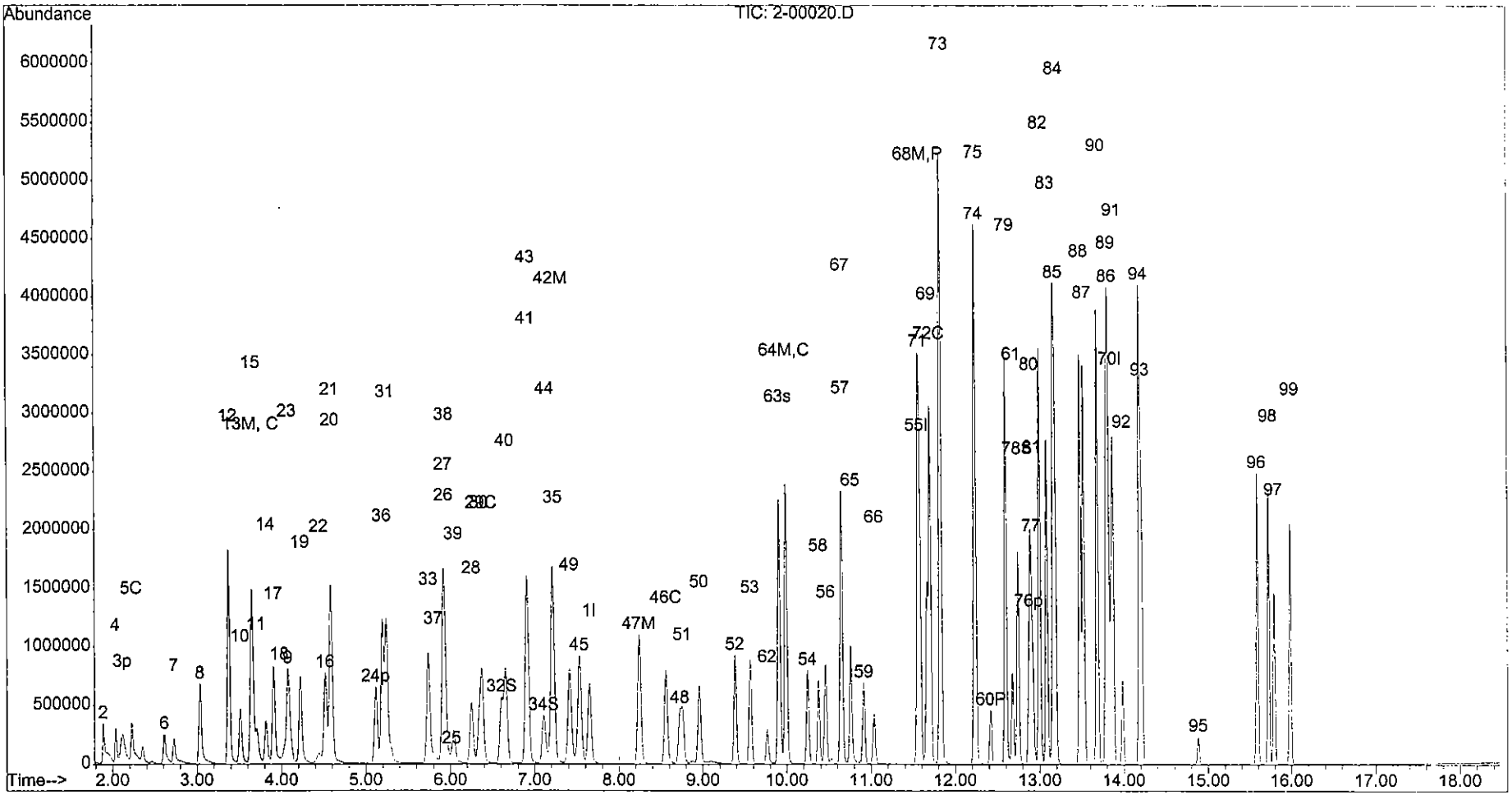
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00020.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 22 22:56 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:01 2003
Print Time : Thu Jul 24 12:02 2003
Miscleneous :

Sample : f=1 20 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2302



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

2303

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00040.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 00:43 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:04 2003
Print Time : Thu Jul 24 12:05 2003
Miscleneous :

Sample : f=1 40 ppb
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	990.930	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	739.886	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	367.099	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	949.109	41.61	41.6	208.07%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	757.790	35.81	35.8	179.05%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	3719.816	39.48	39.5	197.40%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	1208.574	43.26	43.3	216.30%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	990.705	40.14	40.1	99	
4	4	Chloromethane	2.11	2.07	0.006	50	52	864.850	33.28	33.3	98	
2	2	F114	2.03	2.00	0.005	85	135	544.934	42.35	42.3	45	m
5	5	vinyl chloride	2.22	2.19	0.004	62	64	949.966	38.50	38.5	100	
6	6	bromomethane	2.61	2.58	0.004	94	96	411.844	28.77	28.8	98	
7	7	chloroethane	2.73	2.70	0.004	64	66	546.077	34.09	34.1	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	1412.342	38.12	38.1	98	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	1639.456	521.17	521.2	95	m?
9	9	acrolein X10	3.51	3.48	0.004	56	55	937.791	391.44	391.4	0	m
11	11	acetone X10	3.70	3.69	0.000	43	58	943.071	371.74	371.7	100	
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	2188.257	173.50	173.5	91	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	1088.836	35.91	35.9	0	m?
14	14	Iodomethane	3.82	3.78	0.005	142	127	1022.337	61.44	61.4	94	
15	15	F-113	3.65	3.62	0.005	101	151	814.332	36.83	36.8	0	m?
16	16	acrylonitrile X10	4.52	4.49	0.003	53	52	1601.521	476.63	476.6	98	
17	17	carbon disulfide	3.90	3.87	0.004	76	78	2862.257	32.71	32.7	100	?
94	94	Isopropyl Alcohol	3.92	4.01	-0.012	45	43	265.806	893.67	893.7	100	m
18	18	methylene chlorid	4.22	4.19	0.004	84	49	960.233	37.20	37.2	94	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	1015.155	40.21	40.2	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\03G3415\2-00040.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 00:43 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:04 2003
Print Time : Thu Jul 24 12:05 2003
Miscleneous :

Sample : f=1 40 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2304

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	1693.079	36.81	36.8	97	?
95	95	Tert butyl alcoho	4.41	4.47	-0.008	59	57	482.970	607.12	607.1	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	1216.384	33.02	33.0	99	?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	1598.207	38.08	38.1	100	
97	97	propionitrile	6.00	5.99	0.000	54	51	64.498	47.25	47.3	100	#
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	1019.103	40.53	40.5	93	?
23	23	22-Dichloropropan	5.92	5.89	0.003	77	97	1098.975	36.00	36.0	96	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	483.734	48.64	48.6	98	
25	25	chloroform	6.37	6.35	0.002	83	85	1597.118	37.75	37.8	97	
26	26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	624.422	220.61	220.6	95	
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	2521.921	36.97	37.0	97	
99	99	ETBE	5.74	5.72	0.003	59	87	2106.754	40.20	40.2	97	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	277.276	35.64	35.6	96	?
32	32	vinyl acetate X5	5.19	5.17	0.003	43	86	5653.569	184.52	184.5	99	
92	92	Nitro Methane(x10	5.79	5.80	0.000	61	46	237.578	103.73	103.7	79	
33	33	2-butanoneMEK X10	5.93	5.92	0.002	43	72	1648.493	526.70	526.7	98	?
93	93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	845.931	65.43	65.4	88	#
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	1524.561	40.26	40.3	100	
35	35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	1285.689	39.53	39.5	91	?
36	36	benzene	7.21	7.19	0.003	78	52	3805.709	38.18	38.2	98	?
37	37	CCl4	6.91	6.89	0.003	117	119	1420.059	44.44	44.4	100	?
100	100	Isobutyl alcohol	7.11	7.39	-0.037	43	42	182.637	927.34	927.3	95	m
38	38	thiophene	7.53	7.51	0.003	84	58	1999.457	39.65	39.7	98	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	875.952	40.98	41.0	93	
40	40	trichloroethene	8.24	8.23	0.002	130	132	1246.934	45.81	45.8	99	
41	41	dibromomethane	8.73	8.71	0.002	174	172	530.196	51.31	51.3	100	
101	101	TAME	7.41	7.39	0.002	73	43	1872.529	39.90	39.9	99	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	1181.950	40.13	40.1	100	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	464.768	46.12	46.1	92	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	1130.652	502.64	502.6	98	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1328.342	42.05	42.1	93	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	1100.371	45.10	45.1	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\03G3415\2-00040.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 00:43 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:04 2003
Print Time : Thu Jul 24 12:05 2003
Miscleneous :

Sample : f=1 40 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2305

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	662.895	43.06	43.1	96	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	1062.190	39.00	39.0	100	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	890.456	41.31	41.3	94	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	899.440	47.55	47.6	100	
52	52	bromoform	12.42	12.41	0.000	173	174	534.402	52.94	52.9	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	1005.306	40.86	40.9	94	
54	54	MIBK	9.76	9.76	0.000	43	58	457.366	43.74	43.7	94	
56	56	toluene	9.99	9.98	0.001	91	92	4284.454	38.69	38.7	98	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	1453.530	209.46	209.5	94	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	688.415	47.70	47.7	97	
59	59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	1256.084	44.09	44.1	98	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	2837.497	39.78	39.8	92	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	1031.299	45.23	45.2	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	548.810	37.15	37.1	97	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	4833.949	37.41	37.4	94	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	7112.016	71.71	71.7	95	
66	66	styrene	12.24	12.23	0.000	104	78	2811.895	37.11	37.1	94	?
67	67	o-xylene	12.22	12.22	0.000	91	106	3763.083	37.01	37.0	96	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	736.112	41.27	41.3	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	222.436	42.93	42.9	99	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	5083.237	40.43	40.4	97	
72	72	bromobenzene	12.89	12.89	0.000	156	158	1236.729	44.14	44.1	98	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	137.632	51.61	51.6	83	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	1558.540	42.09	42.1	93	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1328.259	42.46	42.5	99	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1291.985	40.28	40.3	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	4186.569	38.76	38.8	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	4727.712	40.24	40.2	98	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	4305.294	38.84	38.8	95	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	4034.706	41.63	41.6	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\03G3415\2-00040.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 00:43 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:04 2003
Print Time : Thu Jul 24 12:05 2003
Miscleneous :

Sample : f=1 40 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2306

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	2467.081	41.12	41.1	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	5779.243	40.56	40.6	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	2472.135	41.06	41.1	100	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	265.795	60.40	60.4	76	#
84	84	12-DCB	14.21	14.21	0.000	146	148	2171.646	41.97	42.0	100	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1335.543	43.55	43.6	81	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	173.925	59.18	59.2	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	1658.990	44.44	44.4	99	
88	88	naphthalene	15.79	15.78	0.000	128	129	2689.379	49.16	49.2	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	923.440	41.46	41.5	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1423.460	45.86	45.9	99	

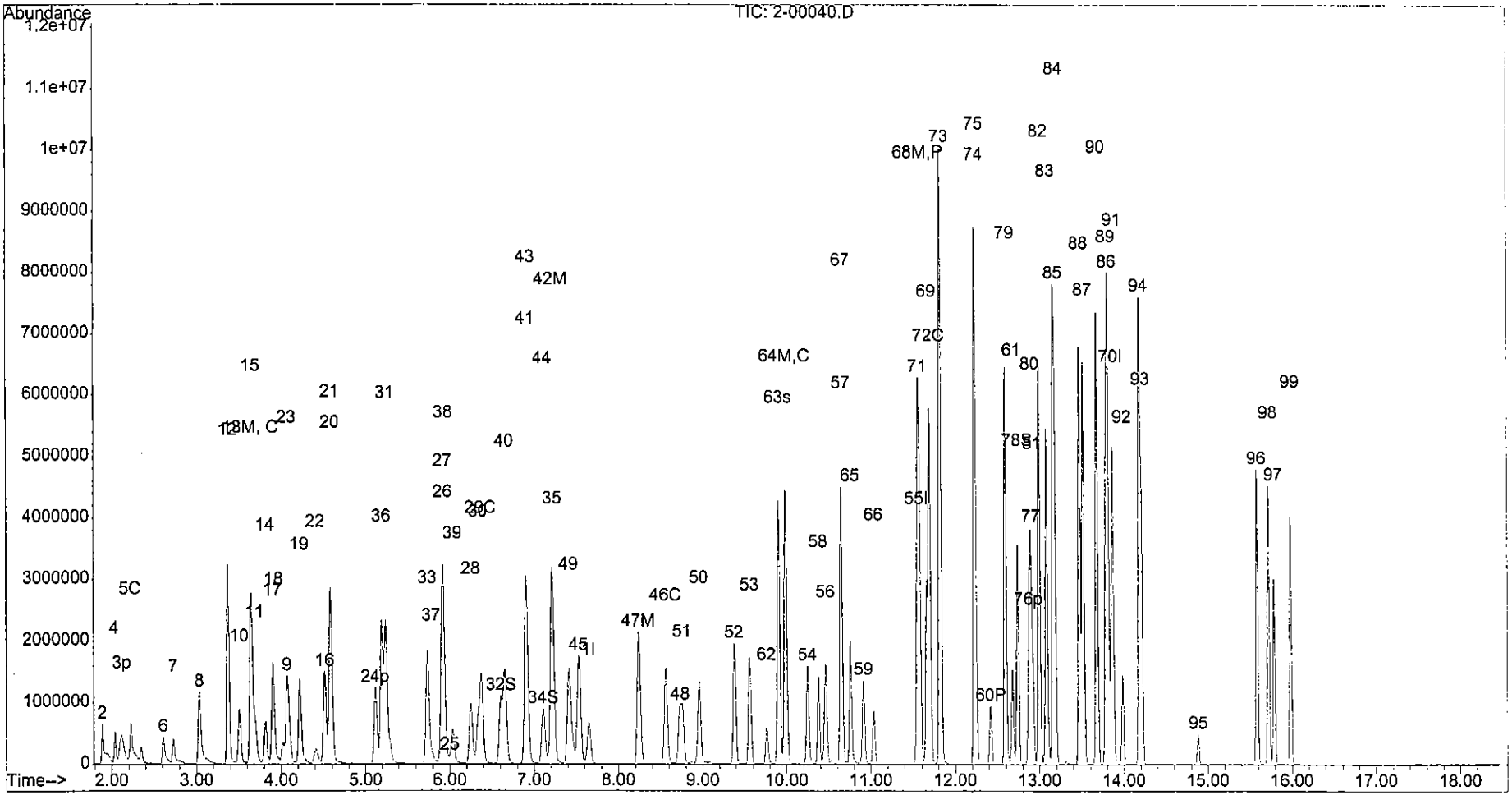
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00040.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 00:43 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:04 2003
Print Time : Thu Jul 24 12:05 2003
Miscleneous :

Sample : f=1 40 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2307



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

2308

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00060.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 02:45 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:07 2003
Print Time : Thu Jul 24 12:07 2003
Miscleneous :

Sample : f=1 60 ppb
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	7.63	0.002	96	70	980.047	10.00		0.01	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	736.062	10.00		0.00	
62	62	1,4-Dichlorobenze	13.85	13.84	0.000	152	150	365.124	10.00		0.00	
System Monitoring Compounds (Surrogate)											%Recovery	
27	27	Di-Br-F-Me (surr)	6.59	6.58	0.000	111	113	1428.311	63.32	63.3	316.60%	
29	29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.000	65	102	1126.883	53.84	53.8	269.21%	
55	55	toluene-d8	9.90	9.89	0.000	98	100	5400.714	57.62	57.6	288.09%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	1766.234	63.56	63.6	317.81%	
Target Compounds											Qvalue	
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.88	1.85	0.004	85	87	1444.214	59.17	59.2	99	m
4	4	Chloromethane	2.14	2.07	0.010	50	52	1174.857	45.71	45.7	99	
2	2	F114	2.03	2.00	0.004	85	135	783.345	61.55	61.5	12	m
5	5	vinyl chloride	2.22	2.19	0.003	62	64	1312.837	53.80	53.8	99	
6	6	bromomethane	2.59	2.58	0.002	94	96	626.111	44.22	44.2	97	
7	7	chloroethane	2.71	2.70	0.002	64	66	758.703	47.89	47.9	0	m
8	8	tri-Cl-F-methane	3.01	3.00	0.002	101	103	1986.417	54.21	54.2	98	
91	91	Acetonitrile X10	4.05	4.04	0.002	41	40	2365.932	760.46	760.5	95	m?
9	9	acrolein X10	3.49	3.48	0.002	56	55	1313.901	554.52	554.5	0	m
11	11	acetone X10	3.67	3.69	-0.002	43	58	1241.915	494.97	495.0	99	
12	12	ethyl ether X5	3.35	3.34	0.002	59	74	2883.396	231.16	231.2	92	
13	13	11-dichloroethene	3.62	3.60	0.002	61	96	1490.545	49.70	49.7	0	m
14	14	Iodomethane	3.80	3.78	0.002	142	127	1206.486	73.32	73.3	95	
15	15	F-113	3.63	3.62	0.002	101	151	1086.062	49.67	49.7	87	?
16	16	acrylonitrile X10	4.50	4.49	0.000	53	52	2352.958	708.05	708.0	99	
17	17	carbon disulfide	3.88	3.87	0.002	76	78	3817.157	44.11	44.1	99	?
94	94	Isopropyl Alcohol	3.87	4.01	-0.019	45	43	369.178	1255.00	1255.0	100	m
18	18	methylene chlorid	4.20	4.19	0.002	84	49	1435.510	56.24	56.2	95	
19	19	t-12-di-Cl-ethene	4.57	4.55	0.002	96	61	1488.348	59.61	59.6	92	?

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

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

2309

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00060.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 02:45 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:07 2003
Print Time : Thu Jul 24 12:07 2003
Miscleneous :

Sample : f=1 60 ppb
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	4.58	4.56	0.002	73	57	2598.506	57.12	57.1	96	?
95	95 Tert butyl alcoho	4.37	4.47	-0.013	59	57	785.022	997.78	997.8	100	m
94	94 allyl chloride	4.05	4.04	0.002	41	76	1660.968	45.58	45.6	93	?
21	21 11-dichloroethane	5.11	5.09	0.002	63	83	2404.444	57.92	57.9	99	
97	97 propionitrile	5.98	5.99	-0.002	54	51	101.359	75.08	75.1	100	#
22	22 c-12-di-Cl-ethene	5.90	5.89	0.002	96	61	1499.328	60.28	60.3	93	?
23	23 22-Dichloropropan	5.90	5.89	0.002	77	97	1539.718	51.00	51.0	96	?
24	24 Br-Cl-methane	6.24	6.23	0.002	128	130	716.534	72.84	72.8	99	
25	25 chloroform	6.36	6.35	0.000	83	85	2387.736	57.07	57.1	97	
26	26 tetrahydrofuranX5	6.32	6.32	0.000	42	72	946.730	338.19	338.2	95	
98	98 Diisopropyl ether	5.23	5.22	0.002	45	87	3767.835	55.85	55.8	97	
99	99 ETBE	5.73	5.72	0.002	59	87	3231.163	62.34	62.3	97	
30	30 12-dichloroethane	7.21	7.20	0.002	64	62	411.282	53.45	53.5	98	?
32	32 vinyl acetate X5	5.18	5.17	0.002	43	86	8226.056	271.47	271.5	100	m
92	92 Nitro Methane(x10	5.78	5.80	-0.003	61	46	325.914	143.88	143.9	78	
33	33 2-butanoneMEK X10	5.92	5.92	0.000	43	72	2411.259	778.97	779.0	98	?
93	93 Ethyl Acetate x2	6.03	6.02	0.000	43	61	1295.021	101.28	101.3	87	#
34	34 111-trichloroetha	6.64	6.63	0.000	97	99	2222.673	59.34	59.3	98	
35	35 11-Di-Cl-propene	6.89	6.88	0.000	75	110	1859.527	57.81	57.8	90	?
36	36 benzene	7.20	7.19	0.002	78	52	5575.015	56.55	56.6	98	?
37	37 CCl4	6.90	6.89	0.002	117	119	2060.040	65.18	65.2	99	?
100	100 Isobutyl alcohol	7.08	7.39	-0.041	43	42	287.972	1478.42	1478.4	93	m
38	38 thiophene	7.52	7.51	0.002	84	58	2960.047	59.36	59.4	99	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	1293.157	61.17	61.2	94	
40	40 trichloroethene	8.23	8.23	0.000	130	132	1815.606	67.45	67.4	98	
41	41 dibromomethane	8.72	8.71	0.000	174	172	793.122	77.61	77.6	99	
101	101 TAME	7.41	7.39	0.002	73	43	2927.534	63.08	63.1	98	
42	42 Br-di-Cl-methane	8.95	8.95	0.000	83	85	1745.648	59.93	59.9	99	
43	43 Me-methacrylate	8.76	8.75	0.000	69	100	714.088	71.64	71.6	92	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	198.558	89.25	89.3	97	
45	45 c-13-di-Cl-propen	9.55	9.55	0.000	75	110	1977.341	63.30	63.3	94	
46	46 t-1,3-dichloropro	10.24	10.24	0.000	75	110	1653.172	68.51	68.5	92	

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00060.D Sample : f=1 60 ppb
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Jul 23 02:45 2003 RF via : Multiple Level Calibration
Method Update: Mon Jul 21 15:01 2003 Operator: zou
Quant. Time : Jul 24 12:07 2003 Multiplr: 1.000000
Print Time : Thu Jul 24 12:07 2003
Miscleneous :

2310

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	997.315	65.11	65.1	96	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	1558.760	57.54	57.5	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	1418.605	66.15	66.2	94	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	1365.305	72.56	72.6	100	
52	52	bromoform	12.41	12.41	0.000	173	174	823.804	82.04	82.0	100	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	1519.089	62.06	62.1	94	
54	54	MIBK	9.76	9.76	0.000	43	58	733.371	70.50	70.5	92	
56	56	toluene	9.99	9.98	0.000	91	92	6235.319	56.59	56.6	98	
57	57	2-hexanone X5	10.75	10.75	0.000	43	58	2205.707	319.50	319.5	93	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	1038.913	72.36	72.4	97	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	1800.306	63.52	63.5	98	?
60	60	chlorobenzene	11.57	11.57	0.000	112	77	4059.222	57.21	57.2	95	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	1537.036	67.77	67.8	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	784.184	53.36	53.4	99	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	6913.463	53.79	53.8	94	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	9936.549	100.73	100.7	95	
66	66	styrene	12.24	12.23	0.000	104	78	3981.902	52.84	52.8	95	?
67	67	o-xylene	12.22	12.22	0.000	91	106	5341.093	52.81	52.8	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	1101.133	62.07	62.1	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	332.760	64.57	64.6	97	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	7208.570	57.65	57.6	96	
72	72	bromobenzene	12.89	12.89	0.000	156	158	1774.887	63.70	63.7	100	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	207.953	78.40	78.4	83	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	2210.026	60.01	60.0	93	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1912.837	61.48	61.5	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1819.259	57.03	57.0	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	5867.539	54.61	54.6	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	6567.533	56.20	56.2	97	?
78	78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	6074.118	55.09	55.1	94	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	5816.456	60.34	60.3	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\03G3415\2-00060.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 02:45 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:07 2003
Print Time : Thu Jul 24 12:07 2003
Miscleneous :

Sample : f=1 60 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2311

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	3488.098	58.45	58.5	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	8084.394	57.05	57.0	96	
82	82	14-DCB	13.87	13.87	0.000	146	148	3533.637	59.01	59.0	99	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	361.085	82.50	82.5	75	#
84	84	12-DCB	14.21	14.21	0.000	146	148	3083.911	59.93	59.9	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	1846.727	60.55	60.5	79	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	263.112	90.01	90.0	99	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	2390.948	64.40	64.4	100	
88	88	naphthalene	15.79	15.78	0.000	128	129	4011.635	73.73	73.7	100	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	1288.580	58.17	58.2	99	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	2068.944	67.02	67.0	99	

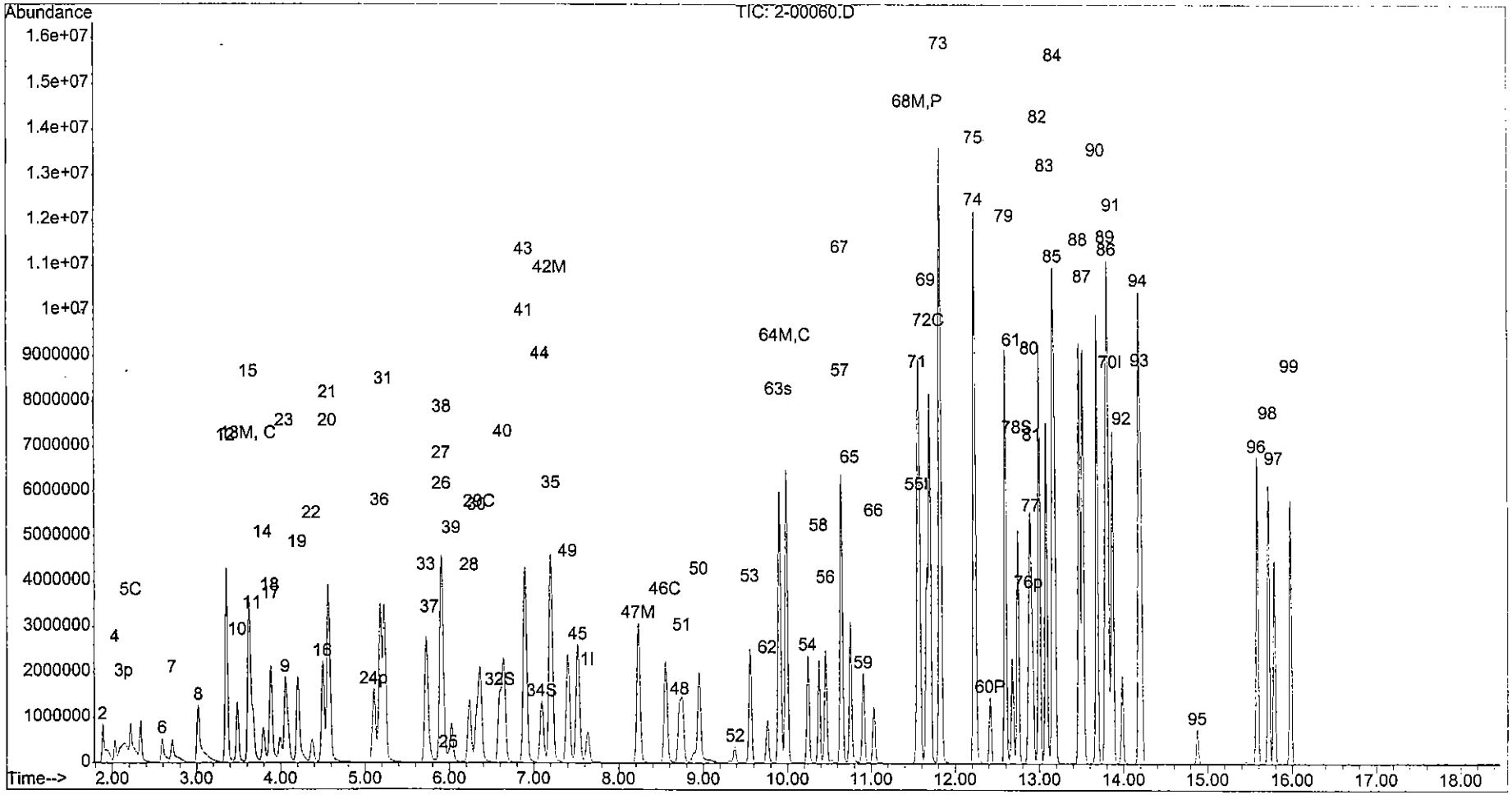
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3415\2-00060.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Jul 23 02:45 2003
Method Update: Mon Jul 21 15:01 2003
Quant. Time : Jul 24 12:07 2003
Print Time : Thu Jul 24 12:07 2003
Miscleneous :

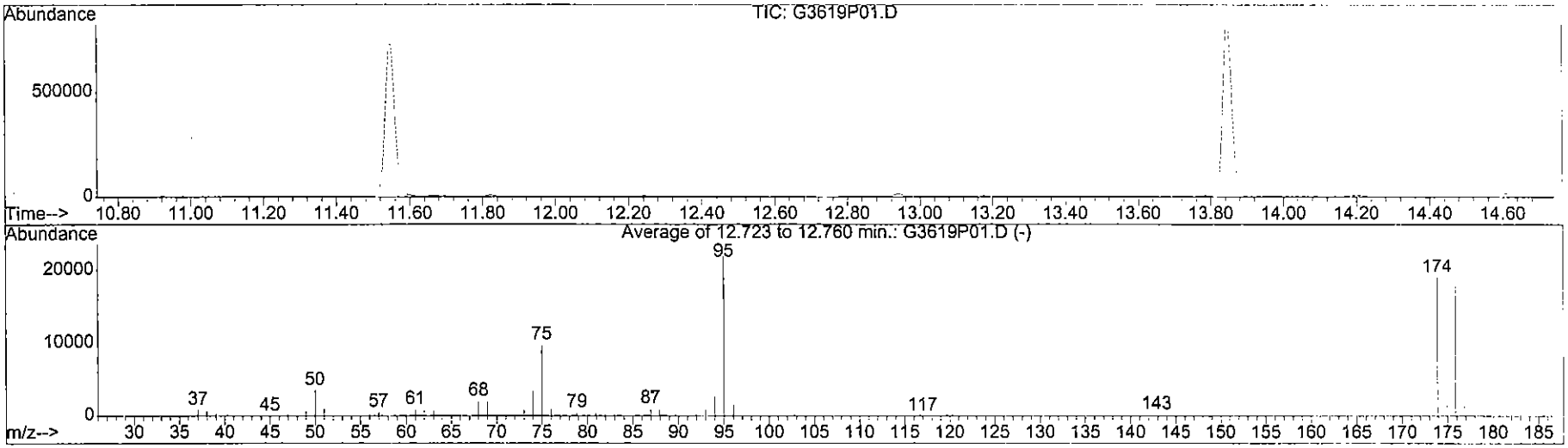
Sample : f=1 60 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2312



BFB

Data File : C:\MSDCHEM\1\DATA\03G3619\G3619P01.D Vial: 1
Acq On : 8 Aug 2003 10:20 am Operator: zou
Sample : ##03g3619,w 50ng Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2



Spectrum Information: Average of 12.723 to 12.760 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.7	3543	PASS
75	95	30	60	43.2	9759	PASS
95	95	100	100	100.0	22616	PASS
96	95	5	9	7.4	1670	PASS
173	174	0.00	2	0.5	88	PASS
174	95	50	100	84.3	19060	PASS
175	174	5	9	8.9	1695	PASS
176	174	95	101	99.9	19044	PASS
177	176	5	9	7.6	1443	PASS

G3619P01.D E524A002.M Fri Aug 08 17:50:53 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:	034509
Project ID:	JPL	BFB Inj. Date:	08/08/03	Batch No:	03G3619
		BFB Inj. Time:	10:20	Sequence No:	03G3619
Project No:	04-4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G3619P01	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	03G3619-CCV-01	03G3619-CCV-01	G3619Q01	08/08/03	10:46
2	03G3619-LCS-01	03G3619-LCS-01	G3619L01	08/08/03	11:12
3	MW-4-2MS	03-4455-4MS	G3619M01	08/08/03	11:40
4	MW-4-2MSD	03-4455-4MSD	G3619N01	08/08/03	12:06
5	03G3619-MB-01	03G3619-MB-01	G3619K01	08/08/03	13:25
6	TB-5-8-6-03	03-4509-11	4509-11	08/08/03	13:52
7	DUPE-4-3-Q03	03-4509-1	4509-01	08/08/03	14:45
8	ER-5-8-6-03	03-4509-2	4509-02	08/08/03	15:12
9	MW-23-1	03-4509-3	4509-03	08/08/03	15:38
10	MW-23-2	03-4509-4	4509-04	08/08/03	16:05
11	MW-23-3	03-4509-5	4509-05	08/08/03	16:32
12	MW-14-1	03-4509-7	4509-07	08/08/03	16:58
13	MW-14-3	03-4509-9	4509-09	08/08/03	17:25
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Evaluate Continuing Calibration Report

2315

Data File : C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Vial: 2
Acq On : 8 Aug 2003 10:46 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	75	0.02
2		3	di-Cl-di-F-methane	0.251	0.231	8.0	69	0.04
3	p	4	Chloromethane	0.235	0.164	30.2#	56	0.04
4		2	F114	0.131	0.132	-0.8	73	0.04
5	C	5	vinyl chloride	0.242	0.214	11.6	67	0.04
6		6	bromomethane	0.116	0.072	37.9#	48#	0.04
7		7	chloroethane	0.144	0.138	4.2	79	0.03
8		8	tri-Cl-F-methane	0.359	0.353	1.7	74	0.04
9		91	Acetonitrile X10	0.044	0.039	11.4	70	0.03
10		9	acrolein X10	0.028	0.024	14.3	72	0.04
11		11	acetone X10	0.043	0.034	20.9#	104	0.03
12		12	ethyl ether X5	0.127	0.112	11.8	72	0.04
13	M, C	13	11-dichloroethene	0.287	0.270	5.9	73	0.04
14		14	Iodomethane	0.253	0.095	62.5#	27#	0.04
15		15	F-113	0.225	0.211	6.2	75	0.04
16		16	acrylonitrile X10	0.045	0.038	15.6	70	0.03
17		17	carbon disulfide	0.729	0.675	7.4	69	0.03
18		94	Isopropyl Alcoholx10	0.008	0.006	25.0#	70	0.06
19		18	methylene chloride	0.467	0.236	49.5#	70	0.04
20		19	t-12-di-Cl-ethene	0.270	0.248	8.1	71	0.03
21		20	t-Bu-Me-ether	0.450	0.410	8.9	72	0.03
22		95	Tert butyl alcoholx10	0.012	0.011	8.3	78	0.03
23		94	allyl chloride	0.393	0.389	1.0	70	0.03
24	p	21	11-dichloroethane	0.433	0.383	11.5	71	0.03
25		97	propionitrile	0.017	0.014	17.6	66	0.02
26		22	c-12-di-Cl-ethene	0.272	0.252	7.4	72	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Vial: 2
Acq On : 8 Aug 2003 10:46 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	0.310	0.340	-9.7	88	0.03
28		24 Br-Cl-methane	0.132	0.119	9.8	73	0.02
29	C	25 chloroform	0.478	0.407	14.9	74	0.02
30		26 tetrahydrofuranX5	0.033	0.028	15.2	67	0.02
31		98 Diisopropyl ether	0.667	0.601	9.9	69	0.02
32	S	27 Di-Br-F-Me (surr)	0.249	0.236	5.2	74	0.03
33		99 ETBE	0.510	0.489	4.1	70	0.02
34	S	29 1,2-Di-Cl-Et-d4 (S1)	0.202	0.191	5.4	75	0.03
35		30 12-dichloroethane	0.078	0.072	7.7	77	0.02
36		32 vinyl acetate X5	0.312	0.303	2.9	78	0.03
37		92 Nitro Methane(x10)	0.006	0.005	16.7	73	0.03
38		33 2-butanoneMEK X10	0.052	0.046	11.5	80	0.03
39		93 Ethyl Acetate x2	0.124	0.097	21.8#	68	0.02
40		34 111-trichloroethane	0.403	0.384	4.7	74	0.02
41		35 11-Di-Cl-propene	0.304	0.308	-1.3	71	0.02
42	M	36 benzene	1.015	0.925	8.9	71	0.02
43		37 CCl4	0.371	0.369	0.5	77	0.02
44		100 Isobutyl alcoholx10	0.004	0.004	0.0	67	-0.23
45		38 thiophene	0.505	0.480	5.0	71	0.02
46	C	39 12-di-Cl-propane	0.227	0.203	10.6	69	0.02
47	M	40 trichloroethene	0.316	0.298	5.7	72	0.01
48		41 dibromomethane	0.144	0.130	9.7	73	0.01
49		101 TAME	0.442	0.429	2.9	70	0.02
50		42 Br-di-Cl-methane	0.327	0.290	11.3	73	0.01
51		43 Me-methacrylate	0.102	0.101	1.0	67	0.01
52		44 2-ClEt-Vi-ether10	0.020	0.014	30.0#	41#	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Vial: 2
Acq On : 8 Aug 2003 10:46 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	0.330	0.327	0.9	74	0.01
54		46	t-1,3-dichloropropene	0.262	0.270	-3.1	75	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	77	0.00
56		48	112-tri-Cl-Et	0.241	0.213	11.6	74	0.00
57		49	13-di-Cl-propane	0.381	0.337	11.5	72	0.00
58		50	Et methacrylate	0.273	0.269	1.5	72	0.00
59		51	di-Br-Cl-methane	0.325	0.289	11.1	75	0.00
60	P	52	bromoform	0.185	0.166	10.3	75	0.00
61		53	1,4-dichlorobutane-2	0.354	0.307	13.3	72	0.00
62		54	MIBK	0.146	0.124	15.1	66	0.00
63	s	55	toluene-d8	1.260	1.176	6.7	73	0.01
64	M,C	56	toluene	1.448	1.364	5.8	73	0.00
65		57	2-hexanone X5	0.099	0.091	8.1	74	0.00
66		58	12-dibromoethane	0.238	0.212	10.9	73	0.00
67		59	tetra-Cl-ethene	0.433	0.412	4.8	74	0.00
68	M,P	60	chlorobenzene	1.032	0.935	9.4	74	0.00
69		61	1112-tetra-Cl-Et	0.369	0.332	10.0	75	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	80	0.00
71		63	1-chlorohexane	0.326	0.327	-0.3	73	0.00
72	C	64	Et-Bz	3.129	2.968	5.1	74	0.00
73		65	m/p-Xylenes X2	2.365	2.297	2.9	75	0.00
74		66	styrene	1.798	1.765	1.8	74	0.00
75		67	o-xylene	2.373	2.354	0.8	74	0.00
76	p	68	1122-Tetra-Cl-Et	0.528	0.433	18.0	73	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Vial: 2
Acq On : 8 Aug 2003 10:46 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	0.158	0.136	13.9	75	0.00
78	S	70	4-Br-1-F-Bz (S3)	0.827	0.752	9.1	75	0.00
79		71	isopropylbenzene	3.040	3.126	-2.8	74	0.00
80		72	bromobenzene	0.817	0.758	7.2	75	0.00
81		92	t-1,4-dichloro-2-butene	0.077	0.082	-6.5	80	0.00
82		73	n-propylbenzene	0.952	0.967	-1.6	76	0.00
83		74	2-Cl-Toluene	0.841	0.819	2.6	75	0.00
84		75	4-Cl-Toluene	0.856	0.820	4.2	76	0.00
85		76	135-tri-Me-Benzene	2.617	2.683	-2.5	76	0.00
86		77	4-iso-Pr-toluene	2.923	3.044	-4.1	77	0.00
87		78	124-tri-Me-Benzene	2.726	2.712	0.5	76	0.00
88		79	tert-butylbenzene	2.499	2.505	-0.2	76	0.00
89		80	13-DCB	1.717	1.598	6.9	77	0.00
90		81	sec-butylbenzene	3.517	3.644	-3.6	75	0.00
91		82	14-DCB	1.749	1.569	10.3	76	0.00
92		83	Cl-benzyl	0.165	0.217	-31.5#	103	0.00
93		84	12-DCB	1.529	1.392	9.0	76	0.00
94		85	n-butylbenzene	0.779	0.851	-9.2	78	0.00
95		86	12-diBr-2-Cl-Pra	0.108	0.094	13.0	73	0.00
96		87	124-tri-Cl-Bz	0.990	1.035	-4.5	78	0.00
97		88	naphthalene	1.796	1.573	12.4	76	0.00
98		89	hx-Cl-butadiene	0.599	0.596	0.5	79	0.00
99		90	123-Tri-Cl-Bz	0.888	0.881	0.8	77	0.00

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

Continuing Calibration Concentration Summary

Data File G3619Q01
Method File E524A002

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	760914
3 di-Cl-di-F-methane	20	18.37	ppb	8.15	350895
4 Chloromethane	20	15.38	ppb	23.11	250056
2 F114	20	20.17	ppb	0.86	201480
5 vinyl chloride	20	17.66	ppb	11.69	325784
6 bromomethane	20	12.42	ppb	37.88	110085
7 chloroethane	20	19.17	ppb	4.17	210434
8 tri-Cl-F-methane	20	19.68	ppb	1.62	537597
91 Acetonitrile X10	200	177.11	ppb	11.44	591239
9 acrolein X10	200	204.26	ppb	2.13	369611
11 acetone X10	200	295.99	ppb	48.00	515963
12 ethyl ether X5	100	104.47	ppb	4.47	855474
13 11-dichloroethene	20	18.87	ppb	5.66	411575
14 Iodomethane	20	7.51	ppb	62.44	144854
15 F-113	20	21.47	ppb	7.33	321704
16 acrylonitrile X10	200	170.13	ppb	14.93	578709
17 carbon disulfide	20	18.51	ppb	7.44	1026499
94 Isopropyl Alcoholx10	200	183.40	ppb	8.30	87566
18 methylene chloride	20	18.53	ppb	7.34	358772
19 t-12-di-Cl-ethene	20	18.39	ppb	8.07	377936
20 t-Bu-Me-ether	20	18.25	ppb	8.73	624525
95 Tert butyl alcoholx10	200	180.58	ppb	9.71	160566
94 allyl chloride	20	19.75	ppb	1.24	591239
21 11-dichloroethane	20	17.68	ppb	11.59	583244
97 propionitrile	20	17.17	ppb	14.14	21919
22 c-12-di-Cl-ethene	20	18.48	ppb	7.61	382910
23 22-Dichloropropane	20	24.97	ppb	24.84	518023
24 Br-Cl-methane	20	18.07	ppb	9.64	181609
25 chloroform	20	19.93	ppb	0.34	619565
26 tetrahydrofuranX5	100	85.75	ppb	14.25	214291
98 Diisopropyl ether	20	18.01	ppb	9.97	914466
27 Di-Br-F-Me (surr)	20	18.93	ppb	5.36	358922
99 ETBE	20	19.15	ppb	4.25	743459
29 1,2-Di-Cl-Et-d4 (S1)	20	18.96	ppb	5.21	291164
30 12-dichloroethane	20	20.46	ppb	2.29	109753
32 vinyl acetate X5	100	96.99	ppb	3.01	2302550
92 Nitro Methane(x10)	200	192.79	ppb	3.60	81466
33 2-butanoneMEK X10	200	218.65	ppb	9.32	701333
93 Ethyl Acetate x2	40	35.61	ppb	10.97	295853
34 111-trichloroethane	20	19.06	ppb	4.70	584259
35 11-Di-Cl-propene	20	20.22	ppb	1.11	468409
36 benzene	20	18.22	ppb	8.89	1407278
37 CCl4	20	19.86	ppb	0.72	561205

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	166.67	ppb	16.67	58106
38 thiophene	20	19.04	ppb	4.82	730842
39 12-di-Cl-propane	20	17.88	ppb	10.62	308922
40 trichloroethene	20	18.87	ppb	5.65	454247
41 dibromomethane	20	18.06	ppb	9.72	197924
101 TAME	20	19.39	ppb	3.07	652583
42 Br-di-Cl-methane	20	19.52	ppb	2.38	441872
43 Me-methacrylate	20	17.47	ppb	12.63	153364
44 2-ClEt-Vi-ether10	200	111.81	ppb	44.09	212526
45 c-13-di-Cl-propene	20	19.84	ppb	0.82	498164
46 t-1,3-dichloropropene	20	20.54	ppb	2.69	410148
47 Chlorobezene-d5	10	10.00	ppb	0.00	594577
48 112-tri-Cl-Et	20	17.65	ppb	11.73	253337
49 13-di-Cl-propane	20	17.68	ppb	11.59	400223
50 Et methacrylate	20	17.81	ppb	10.94	319361

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	19.10	ppb	4.50	344016
52 bromoform	20	17.87	ppb	10.66	196812
53 1,4-dichlorobutane-2	20	17.32	ppb	13.39	364953
54 MIBK	20	17.04	ppb	14.79	147582
55 toluene-d8	20	18.66	ppb	6.71	1398140
56 toluene	20	18.84	ppb	5.81	1622333
57 2-hexanone X5	100	91.67	ppb	8.33	538779
58 12-dibromoethane	20	17.77	ppb	11.15	251555
59 tetra-Cl-ethene	20	19.02	ppb	4.89	489478
60 chlorobenzene	20	19.83	ppb	0.83	1111537
61 1112-tetra-Cl-Et	20	17.99	ppb	10.05	394273
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	314620
63 1-chlorohexane	20	20.05	ppb	0.27	205765
64 Et-Bz	20	18.97	ppb	5.13	1867831
65 m/p-Xylenes X2	40	38.84	ppb	2.90	2890463
66 styrene	20	19.63	PPB	1.85	1110739
67 o-xylene	20	19.84	ppb	0.80	1481328
68 1122-Tetra-Cl-Et	20	16.38	ppb	18.10	272231
69 123-tri-Cl-Pr	20	17.22	ppb	13.91	85659
70 4-Br-1-F-Bz (S3)	20	18.19	ppb	9.04	473414
71 isopropylbenzene	20	20.57	ppb	2.83	1967297
72 bromobenzene	20	18.56	ppb	7.22	476714
92 t-1,4-dichloro-2-butene	20	18.38	ppb	8.10	51829
73 n-propylbenzene	20	20.32	ppb	1.58	608713
74 2-Cl-Toluene	20	19.46	ppb	2.72	515117
75 4-Cl-Toluene	20	19.17	ppb	4.16	516213
76 135-tri-Me-Benzene	20	20.50	ppb	2.52	1688486
77 4-iso-Pr-toluene	20	20.83	ppb	4.15	1915619
78 124-tri-Me-Benzene	20	19.90	ppb	0.49	1706718
79 tert-butylbenzene	20	20.04	ppb	0.20	1575985
80 13-DCB	20	18.62	ppb	6.91	1005533
81 sec-butylbenzene	20	20.72	ppb	3.60	2292846

82 14-DCB	20	19.22	ppb	3.88	987220
83 Cl-benzyl	20	26.24	ppb	31.21	136574
84 12-DCB	20	18.21	ppb	8.93	875953
85 n-butylbenzene	20	19.87	ppb	0.67	535675
86 12-diBr-2-Cl-Pra	20	17.39	ppb	13.07	58878
87 124-tri-Cl-Bz	20	20.91	ppb	4.53	650992
88 naphthalene	20	17.52	ppb	12.42	989871
89 hx-Cl-butadiene	20	19.90	ppb	0.48	375234
90 123-Tri-Cl-Bz	20	19.85	ppb	0.76	554611

Average D % 8.4932066

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

2322

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 10:46 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 17:54 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 17:54 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	7.63	0.003	96	70	760.914	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	594.577	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	314.620	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	358.922	18.93	18.9	94.64%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	291.164	18.96	19.0	94.79%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1398.140	18.66	18.7	93.29%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	473.414	18.19	18.2	90.96%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	350.895	18.37	18.4	97	
4	4	Chloromethane	2.11	2.07	0.006	50	52	250.056	15.38	15.4	100	
2	2	F114	2.04	2.00	0.006	85	135	201.480	20.17	20.2	53	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	325.784	17.66	17.7	99	
6	6	bromomethane	2.61	2.58	0.005	94	96	110.085	12.42	12.4	93	
7	7	chloroethane	2.73	2.70	0.004	64	66	210.434	19.17	19.2	0	m
8	8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	537.597	19.68	19.7	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	591.239	177.11	177.1	90	?
9	9	acrolein X10	3.51	3.48	0.005	56	55	369.611	204.26	204.3	0	m
11	11	acetone X10	3.72	3.69	0.004	43	58	515.963	295.99	296.0	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	855.474	104.47	104.5	91	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	411.575	18.87	18.9	0	m
14	14	Iodomethane	3.82	3.78	0.005	142	127	144.854	7.51	7.5	96	
15	15	F-113	3.65	3.62	0.005	101	151	321.704	21.47	21.5	86	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	578.709	170.13	170.1	97	?
17	17	carbon disulfide	3.90	3.87	0.004	76	78	1026.499	18.51	18.5	99	
94	94	Isopropyl Alcohol	4.07	4.01	0.007	45	43	87.566	183.40	183.4	100	m
18	18	methylene chlorid	4.22	4.19	0.005	84	49	358.772	18.53	18.5	99	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	377.936	18.39	18.4	94	?

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

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

2323

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 10:46 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 17:54 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 17:54 2003
Miscleneous :

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	624.525	18.25	18.3	96	?
95	95 Tert butyl alcoho	4.50	4.47	0.004	59	57	160.566	180.58	180.6	100	m?
94	94 allyl chloride	4.07	4.04	0.004	41	76	591.239	19.75	19.8	85	#?
21	21 11-dichloroethane	5.12	5.09	0.004	63	83	583.244	17.68	17.7	100	
97	97 propionitrile	6.02	5.99	0.003	54	51	21.919	17.17	17.2	100	#?
22	22 c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	382.910	18.48	18.5	91	?
23	23 22-Dichloropropan	5.92	5.89	0.004	77	97	518.023	24.97	25.0	97	?
24	24 Br-Cl-methane	6.25	6.23	0.003	128	130	181.609	18.07	18.1	100	
25	25 chloroform	6.37	6.35	0.003	83	85	619.565	19.93	19.9	99	?
26	26 tetrahydrofuranX5	6.35	6.32	0.003	42	72	214.291	85.75	85.7	96	?
98	98 Diisopropyl ether	5.24	5.22	0.003	45	87	914.466	18.01	18.0	99	
99	99 ETBE	5.74	5.72	0.003	59	87	743.459	19.15	19.1	97	
30	30 12-dichloroethane	7.22	7.20	0.003	64	62	109.753	20.46	20.5	99	?
32	32 vinyl acetate X5	5.20	5.17	0.004	43	86	2302.550	96.99	97.0	99	
92	92 Nitro Methane(x10	5.83	5.80	0.004	61	46	81.466	192.79	192.8	83	
33	33 2-butanoneMEK X10	5.95	5.92	0.003	43	72	701.333	218.65	218.6	95	?
93	93 Ethyl Acetate x2	6.04	6.02	0.002	43	61	295.853	35.61	35.6	89	#?
34	34 111-trichloroetha	6.65	6.63	0.002	97	99	584.259	19.06	19.1	100	
35	35 11-Di-Cl-propene	6.90	6.88	0.002	75	110	468.409	20.22	20.2	90	?
36	36 benzene	7.21	7.19	0.003	78	52	1407.278	18.22	18.2	99	?
37	37 CCl4	6.91	6.89	0.003	117	119	561.205	19.86	19.9	98	?
100	100 Isobutyl alcohol	7.16	7.39	-0.030	43	42	58.106	166.67	166.7	94	m
38	38 thiophene	7.53	7.51	0.002	84	58	730.842	19.04	19.0	98	
39	39 12-di-Cl-propane	8.56	8.54	0.002	63	76	308.922	17.88	17.9	96	
40	40 trichloroethene	8.24	8.23	0.002	130	132	454.247	18.87	18.9	98	
41	41 dibromomethane	8.73	8.71	0.002	174	172	197.924	18.06	18.1	100	
101	101 TAME	7.41	7.39	0.002	73	43	652.583	19.39	19.4	98	
42	42 Br-di-Cl-methane	8.96	8.95	0.002	83	85	441.872	19.52	19.5	100	
43	43 Me-methacrylate	8.76	8.75	0.002	69	100	153.364	17.47	17.5	95	
44	44 2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	212.526	111.81	111.8	98	
45	45 c-13-di-Cl-propen	9.56	9.55	0.002	75	110	498.164	19.84	19.8	93	
46	46 t-1,3-dichloropro	10.25	10.24	0.000	75	110	410.148	20.54	20.5	95	

= 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\03G3619\G3619Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 10:46 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 17:54 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 17:54 2003
Miscleneous :

2324

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	253.337	17.65	17.7	95	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	400.223	17.68	17.7	99	?
50	50	Et methacrylate	10.38	10.37	0.000	69	99	319.361	17.81	17.8	95	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	344.016	19.10	19.1	100	
52	52	bromoform	12.42	12.41	0.000	173	174	196.812	17.87	17.9	99	
53	53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	364.953	17.32	17.3	95	
54	54	MIBK	9.77	9.76	0.000	43	58	147.582	17.04	17.0	95	
56	56	toluene	9.99	9.98	0.000	91	92	1622.333	18.84	18.8	100	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	538.779	91.67	91.7	95	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	251.555	17.77	17.8	99	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	489.478	19.02	19.0	99	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	1111.537	19.83	19.8	90	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	394.273	17.99	18.0	100	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	205.765	20.05	20.1	95	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	1867.831	18.97	19.0	96	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2890.463	38.84	38.8	98	
66	66	styrene	12.24	12.23	0.000	104	78	1110.739	19.63	19.6	93	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1481.328	19.84	19.8	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	272.231	16.38	16.4	100	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	85.659	17.22	17.2	100	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	1967.297	20.57	20.6	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	476.714	18.56	18.6	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	51.829	18.38	18.4	85	?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	608.713	20.32	20.3	92	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	515.117	19.46	19.5	100	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	516.213	19.17	19.2	100	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1688.486	20.50	20.5	98	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1915.619	20.83	20.8	98	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1706.718	19.90	19.9	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1575.985	20.04	20.0	94	

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

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

2325

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 8 10:46 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 17:54 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 17:54 2003
Miscleneous :

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	1005.533	18.62	18.6	99	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2292.846	20.72	20.7	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	987.220	19.22	19.2	98	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	136.574	26.24	26.2	78	#
84	84	12-DCB	14.21	14.21	0.000	146	148	875.953	18.21	18.2	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	535.675	19.87	19.9	85	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	58.878	17.39	17.4	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	650.992	20.91	20.9	99	
88	88	naphthalene	15.79	15.78	0.000	128	129	989.871	17.52	17.5	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	375.234	19.90	19.9	98	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	554.611	19.85	19.8	99	

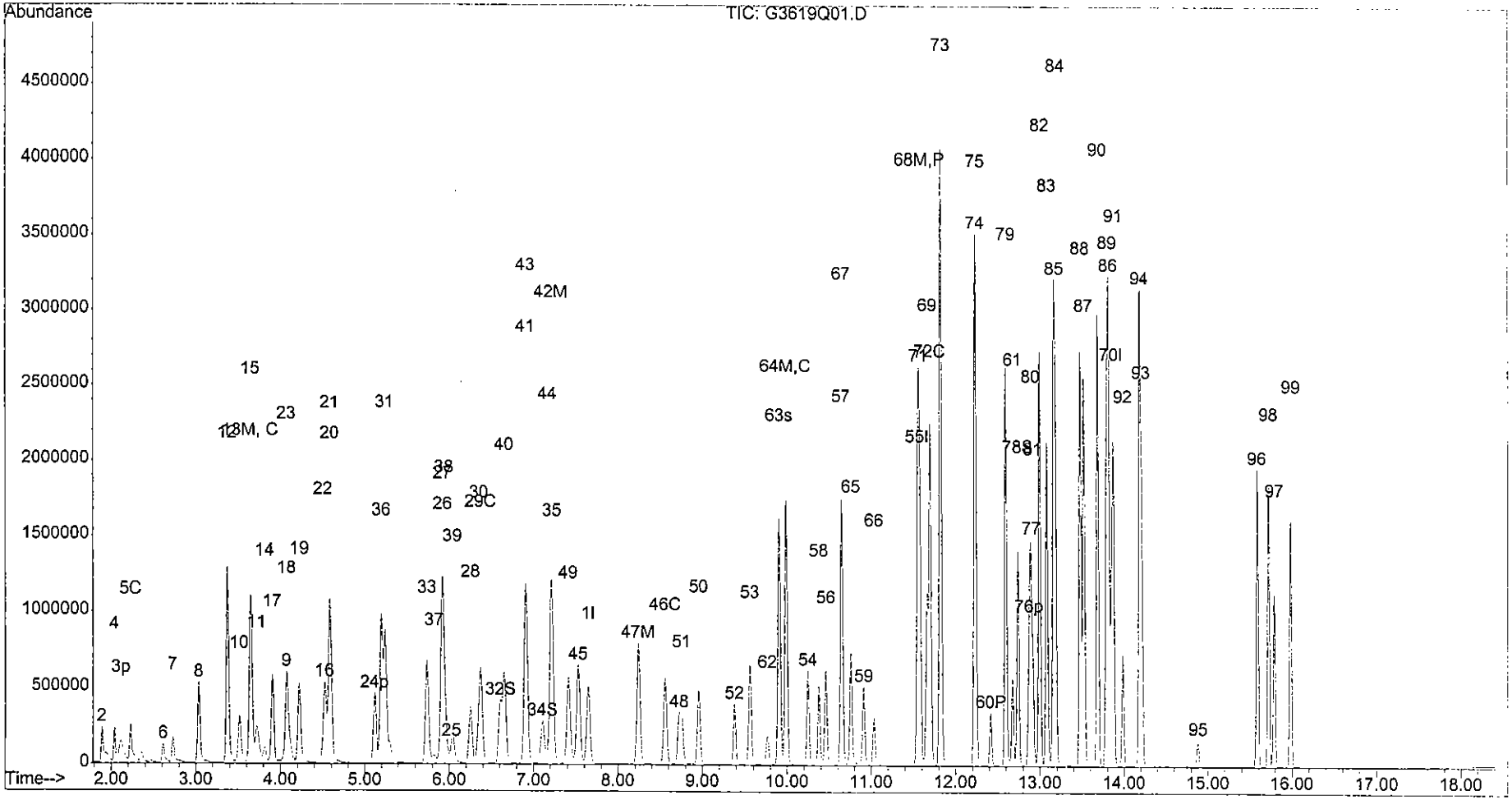
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3619\G3619Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 8 10:46 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 17:54 2003
Print Time : Fri Aug 08 17:54 2003
Miscleneous :

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

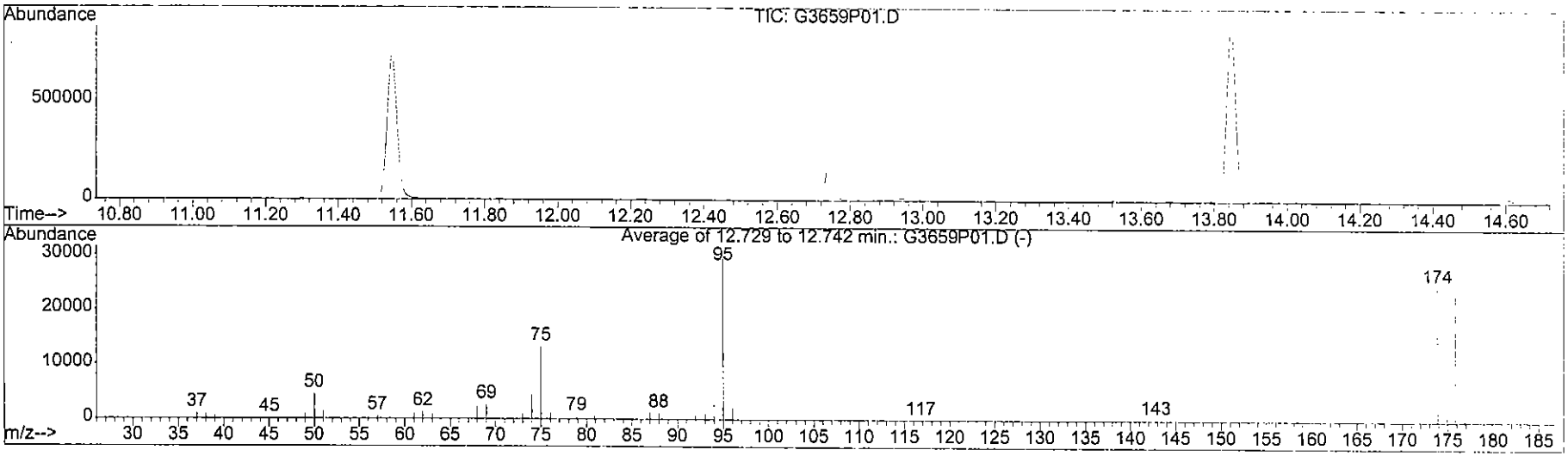
2326



BFB

Data File : C:\MSDCHEM\1\DATA\03G3659\G3659P01.D
Acq On : 11 Aug 2003 10:14 am
Sample : ##03g3659,w 50ng
Misc :
MS Integration Params: Lscint.p
Method : C:\MSDCHEM\1\METHODS\E524A002.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 12.729 to 12.742 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.5	4665	PASS
75	95	30	60	44.1	13288	PASS
95	95	100	100	100.0	30159	PASS
96	95	5	9	7.5	2271	PASS
173	174	0.00	2	0.5	114	PASS
174	95	50	100	82.3	24811	PASS
175	174	5	9	8.0	1991	PASS
176	174	95	101	97.9	24285	PASS
177	176	5	9	6.3	1535	PASS

G3659P01.D E524A002.M Mon Aug 11 15:57:30 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:	034509
Project ID:	JPL	BFB Inj. Date:	08/11/03	Batch No:	03G3659
		BFB Inj. Time:	10:14	Sequence No:	03G3659
Project No:	04-4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G3659P01	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	03G3659-CCV-01	03G3659-CCV-01	G3659Q01	08/11/03	10:40
2	03G3659-LCS-01	03G3659-LCS-01	G3659L01	08/11/03	11:06
3	MW-14-2MS	03-4509-8MS	G3659M01	08/11/03	11:33
4	MW-14-2MSD	03-4509-8MSD	G3659N01	08/11/03	12:00
5	03G3659-MB-01	03G3659-MB-01	G3659K01	08/11/03	13:18
6	MW-14-2	03-4509-8	4509-08	08/11/03	14:38
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continuing Calibration Concentration Summary

Data File G3659Q01
Method File E524A002

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	764133
3 di-Cl-di-F-methane	20	17.70	ppb	11.52	339443
4 Chloromethane	20	15.64	ppb	21.82	255103
2 F114	20	19.72	ppb	1.42	197749
5 vinyl chloride	20	17.40	ppb	12.98	322358
6 bromomethane	20	12.76	ppb	36.22	113517
7 chloroethane	20	18.70	ppb	6.52	206129
8 tri-Cl-F-methane	20	19.13	ppb	4.34	524924
91 Acetonitrile X10	200	174.31	ppb	12.84	584362
9 acrolein X10	200	197.96	ppb	1.02	360446
11 acetone X10	200	292.02	ppb	46.01	511834
12 ethyl ether X5	100	102.57	ppb	2.57	844649
13 11-dichloroethene	20	18.56	ppb	7.20	406590
14 Iodomethane	20	8.59	ppb	57.07	166238
15 F-113	20	21.13	ppb	5.64	318205
16 acrylonitrile X10	200	166.07	ppb	16.97	567276
17 carbon disulfide	20	17.54	ppb	12.31	976666
94 Isopropyl Alcoholx10	200	166.25	ppb	16.87	79517
18 methylene chloride	20	18.96	ppb	5.18	368132
19 t-12-di-Cl-ethene	20	17.88	ppb	10.62	368993
20 t-Bu-Me-ether	20	17.60	ppb	12.00	604643
95 Tert butyl alcoholx10	200	169.66	ppb	15.17	149992
94 allyl chloride	20	19.44	ppb	2.80	584362
21 11-dichloroethane	20	17.33	ppb	13.35	574058
97 propionitrile	20	18.62	ppb	6.90	23869
22 c-12-di-Cl-ethene	20	18.24	ppb	8.82	379501
23 22-Dichloropropane	20	24.79	ppb	23.94	516622
24 Br-Cl-methane	20	17.45	ppb	12.74	176116
25 chloroform	20	19.68	ppb	1.62	614292
26 tetrahydrofuranX5	100	82.15	ppb	17.85	206156
98 Diisopropyl ether	20	17.85	ppb	10.77	910176
27 Di-Br-F-Me (surr)	20	18.81	ppb	5.97	358122
99 ETBE	20	18.67	ppb	6.66	727874
29 1,2-Di-Cl-Et-d4 (S1)	20	18.49	ppb	7.56	285144
30 12-dichloroethane	20	19.93	ppb	0.37	107389
32 vinyl acetate X5	100	93.14	ppb	6.86	2220559
92 Nitro Methane(x10)	200	186.18	ppb	6.91	79006
33 2-butanoneMEK X10	200	210.61	ppb	5.30	679357
93 Ethyl Acetate x2	40	32.96	ppb	17.60	275070
34 111-trichloroethane	20	18.79	ppb	6.07	578308
35 11-Di-Cl-propene	20	19.70	ppb	1.52	458172
36 benzene	20	17.89	ppb	10.56	1387345
37 CCl4	20	19.69	ppb	1.57	558782

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	158.40	ppb	20.80	55273
38 thiophene	20	18.62	ppb	6.90	717865
39 12-di-Cl-propane	20	17.61	ppb	11.94	305636
40 trichloroethene	20	18.51	ppb	7.44	447547
41 dibromomethane	20	17.43	ppb	12.86	191858
101 TAME	20	18.74	ppb	6.29	633612
42 Br-di-Cl-methane	20	19.18	ppb	4.10	435941
43 Me-methacrylate	20	16.44	ppb	17.82	144340
44 2-ClEt-Vi-ether10	200	98.28	ppb	50.86	183472
45 c-13-di-Cl-propene	20	19.55	ppb	2.27	492981
46 t-1,3-dichloropropene	20	20.01	ppb	0.07	401404
47 Chlorobezene-d5	10	10.00	ppb	0.00	595141
48 112-tri-Cl-Et	20	17.14	ppb	14.32	246121
49 13-di-Cl-propane	20	17.42	ppb	12.88	394744
50 Et methacrylate	20	17.26	ppb	13.72	309091

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	18.64	ppb	6.78	335964
52 bromoform	20	17.42	ppb	12.89	192070
53 1,4-dichlorobutane-2	20	17.02	ppb	14.88	359028
54 MIBK	20	16.01	ppb	19.95	138771
55 toluene-d8	20	18.41	ppb	7.94	1380968
56 toluene	20	18.32	ppb	8.39	1579323
57 2-hexanone X5	100	86.48	ppb	13.52	508775
58 12-dibromoethane	20	17.13	ppb	14.35	242728
59 tetra-Cl-ethene	20	18.62	ppb	6.88	479686
60 chlorobenzene	20	19.60	ppb	2.02	1099490
61 1112-tetra-Cl-Et	20	17.79	ppb	11.03	390340
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	318055
63 1-chlorohexane	20	19.99	ppb	0.07	207296
64 Et-Bz	20	18.55	ppb	7.27	1845608
65 m/p-Xylenes X2	40	37.95	ppb	5.12	2855210
66 styrene	20	19.20	PPB	4.02	1097995
67 o-xylene	20	19.42	ppb	2.88	1466176
68 1122-Tetra-Cl-Et	20	15.78	ppb	21.12	265064
69 123-tri-Cl-Pr	20	16.52	ppb	17.38	83112
70 4-Br-1-F-Bz (S3)	20	17.74	ppb	11.29	466731
71 isopropylbenzene	20	20.19	ppb	0.96	1952530
72 bromobenzene	20	18.09	ppb	9.54	469862
92 t-1,4-dichloro-2-butene	20	17.90	ppb	10.49	50934
73 n-propylbenzene	20	19.96	ppb	0.22	604443
74 2-Cl-Toluene	20	19.12	ppb	4.40	511745
75 4-Cl-Toluene	20	18.85	ppb	5.76	513142
76 135-tri-Me-Benzene	20	20.09	ppb	0.46	1672635
77 4-iso-Pr-toluene	20	20.52	ppb	2.59	1907530
78 124-tri-Me-Benzene	20	19.69	ppb	1.53	1707247
79 tert-butylbenzene	20	19.74	ppb	1.28	1569659
80 13-DCB	20	18.08	ppb	9.59	987293
81 sec-butylbenzene	20	20.38	ppb	1.88	2279521

82 14-DCB	20	18.83	ppb	5.84	977724
83 Cl-benzyl	20	24.78	ppb	23.91	130389
84 12-DCB	20	17.69	ppb	11.57	859875
85 n-butylbenzene	20	19.56	ppb	2.19	533156
86 12-diBr-2-Cl-Pra	20	16.72	ppb	16.42	57226
87 124-tri-Cl-Bz	20	20.19	ppb	0.96	635630
88 naphthalene	20	16.78	ppb	16.09	958708
89 hx-Cl-butadiene	20	19.46	ppb	2.70	370879
90 123-Tri-Cl-Bz	20	19.27	ppb	3.64	544416

Average D % 9.9459377

Evaluate Continuing Calibration Report

2332

Data File : C:\MSDCHEM\1\DATA\03G3659\G3659Q01.D Vial: 2
Acq On : 11 Aug 2003 10:40 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	75	0.02
2		3	di-Cl-di-F-methane	0.251	0.222	11.6	67	0.04
3	p	4	Chloromethane	0.235	0.167	28.9#	57	0.04
4		2	F114	0.131	0.129	1.5	72	0.04
5	C	5	vinyl chloride	0.242	0.211	12.8	66	0.04
6		6	bromomethane	0.116	0.074	36.2#	50#	0.04
7		7	chloroethane	0.144	0.135	6.2	77	0.03
8		8	tri-Cl-F-methane	0.359	0.343	4.5	72	0.04
9		91	Acetonitrile X10	0.044	0.038	13.6	69	0.03
10		9	acrolein X10	0.028	0.024	14.3	70	0.04
11		11	acetone X10	0.043	0.033	23.3#	103	0.04
12		12	ethyl ether X5	0.127	0.111	12.6	71	0.04
13	M, C	13	11-dichloroethene	0.287	0.266	7.3	72	0.04
14		14	Iodomethane	0.253	0.109	56.9#	31#	0.04
15		15	F-113	0.225	0.208	7.6	74	0.04
16		16	acrylonitrile X10	0.045	0.037	17.8	68	0.03
17		17	carbon disulfide	0.729	0.639	12.3	66	0.04
18		94	Isopropyl Alcoholx10	0.008	0.005	37.5#	64	0.10
19		18	methylene chloride	0.467	0.241	48.4#	72	0.04
20		19	t-12-di-Cl-ethene	0.270	0.241	10.7	69	0.04
21		20	t-Bu-Me-ether	0.450	0.396	12.0	70	0.04
22		95	Tert butyl alcoholx10	0.012	0.010	16.7	73	0.06
23		94	allyl chloride	0.393	0.382	2.8	69	0.03
24	p	21	11-dichloroethane	0.433	0.376	13.2	70	0.03
25		97	propionitrile	0.017	0.016	5.9	72	0.03
26		22	c-12-di-Cl-ethene	0.272	0.248	8.8	71	0.02

(#) = Out of Range

Evaluate Continuing Calibration Report

2333

Data File : C:\MSDCHEM\1\DATA\03G3659\G3659Q01.D Vial: 2
Acq On : 11 Aug 2003 10:40 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	0.310	0.338	-9.0	88	0.03
28		24 Br-Cl-methane	0.132	0.115	12.9	70	0.02
29	C	25 chloroform	0.478	0.402	15.9	73	0.03
30		26 tetrahydrofuranX5	0.033	0.027	18.2	65	0.02
31		98 Diisopropyl ether	0.667	0.596	10.6	69	0.02
32	S	27 Di-Br-F-Me (surr)	0.249	0.234	6.0	74	0.03
33		99 ETBE	0.510	0.476	6.7	68	0.02
34	S	29 1,2-Di-Cl-Et-d4 (S1)	0.202	0.187	7.4	73	0.03
35		30 12-dichloroethane	0.078	0.070	10.3	75	0.02
36		32 vinyl acetate X5	0.312	0.291	6.7	75	0.03
37		92 Nitro Methane(x10)	0.006	0.005	16.7	71	0.03
38		33 2-butanoneMEK X10	0.052	0.044	15.4	78	0.03
39		93 Ethyl Acetate x2	0.124	0.090	27.4#	63	0.02
40		34 111-trichloroethane	0.403	0.378	6.2	74	0.02
41		35 11-Di-Cl-propene	0.304	0.300	1.3	69	0.02
42	M	36 benzene	1.015	0.908	10.5	70	0.02
43		37 CCl4	0.371	0.366	1.3	76	0.02
44		100 Isobutyl alcoholx10	0.004	0.004	0.0	63	-0.22
45		38 thiophene	0.505	0.470	6.9	70	0.02
46	C	39 12-di-Cl-propane	0.227	0.200	11.9	68	0.02
47	M	40 trichloroethene	0.316	0.293	7.3	71	0.01
48		41 dibromomethane	0.144	0.126	12.5	71	0.01
49		101 TAME	0.442	0.415	6.1	68	0.02
50		42 Br-di-Cl-methane	0.327	0.285	12.8	72	0.01
51		43 Me-methacrylate	0.102	0.094	7.8	63	0.01
52		44 2-ClEt-Vi-ether10	0.020	0.012	40.0#	36#	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3659\G3659Q01.D Vial: 2
Acq On : 11 Aug 2003 10:40 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	0.330	0.323	2.1	73	0.01
54		46	t-1,3-dichloropropene	0.262	0.263	-0.4	73	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	77	0.00
56		48	112-tri-Cl-Et	0.241	0.207	14.1	72	0.00
57		49	13-di-Cl-propane	0.381	0.332	12.9	71	0.00
58		50	Et methacrylate	0.273	0.260	4.8	70	0.00
59		51	di-Br-Cl-methane	0.325	0.282	13.2	74	0.00
60	P	52	bromoform	0.185	0.161	13.0	73	0.00
61		53	1,4-dichlorobutane-2	0.354	0.302	14.7	70	0.00
62		54	MIBK	0.146	0.117	19.9	62	0.00
63	s	55	toluene-d8	1.260	1.160	7.9	72	0.01
64	M,C	56	toluene	1.448	1.327	8.4	71	0.00
65		57	2-hexanone X5	0.099	0.085	14.1	70	0.00
66		58	12-dibromoethane	0.238	0.204	14.3	71	0.00
67		59	tetra-Cl-ethene	0.433	0.403	6.9	73	0.00
68	M,P	60	chlorobenzene	1.032	0.924	10.5	74	0.00
69		61	1112-tetra-Cl-Et	0.369	0.328	11.1	74	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	81	0.00
71		63	1-chlorohexane	0.326	0.326	0.0	74	0.00
72	C	64	Et-Bz	3.129	2.901	7.3	73	0.00
73		65	m/p-Xylenes X2	2.365	2.244	5.1	74	0.00
74		66	styrene	1.798	1.726	4.0	73	0.00
75		67	o-xylene	2.373	2.305	2.9	74	0.00
76	p	68	1122-Tetra-Cl-Et	0.528	0.417	21.0#	71	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3659\G3659Q01.D Vial: 2
Acq On : 11 Aug 2003 10:40 am Operator: zou
Sample : f=1 Inst : GCMS-A
Misc : Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A002.M (RTE Integrator)
Title : **Applied P &Ch Lab** EPA 524.2
Last Update : Thu Jul 24 12:40:35 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	0.158	0.131	17.1	72	0.00
78	S	70 4-Br-1-F-Bz (S3)	0.827	0.734	11.2	74	0.00
79		71 isopropylbenzene	3.040	3.069	-1.0	74	0.00
80		72 bromobenzene	0.817	0.739	9.5	74	0.00
81		92 t-1,4-dichloro-2-butene	0.077	0.080	-3.9	79	0.00
82		73 n-propylbenzene	0.952	0.950	0.2	75	0.00
83		74 2-Cl-Toluene	0.841	0.804	4.4	75	0.00
84		75 4-Cl-Toluene	0.856	0.807	5.7	76	0.00
85		76 135-tri-Me-Benzene	2.617	2.629	-0.5	75	0.00
86		77 4-iso-Pr-toluene	2.923	2.999	-2.6	77	0.00
87		78 124-tri-Me-Benzene	2.726	2.684	1.5	76	0.00
88		79 tert-butylbenzene	2.499	2.468	1.2	76	0.00
89		80 13-DCB	1.717	1.552	9.6	75	0.00
90		81 sec-butylbenzene	3.517	3.584	-1.9	75	0.00
91		82 14-DCB	1.749	1.537	12.1	75	0.00
92		83 Cl-benzyl	0.165	0.205	-24.2#	98	0.00
93		84 12-DCB	1.529	1.352	11.6	75	0.00
94		85 n-butylbenzene	0.779	0.838	-7.6	77	0.00
95		86 12-diBr-2-Cl-Pra	0.108	0.090	16.7	71	0.00
96		87 124-tri-Cl-Bz	0.990	0.999	-0.9	76	0.00
97		88 naphthalene	1.796	1.507	16.1	74	0.00
98		89 hx-Cl-butadiene	0.599	0.583	2.7	79	0.00
99		90 123-Tri-Cl-Bz	0.888	0.856	3.6	76	0.00

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

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:	034509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G3619Q01	Instrument ID:	A

Batch No: 03G3619

#	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			08/08/03 10:46	760914	7.65	594577	11.54	314620	13.84
CCV Upper Limit				1521828	8.15	1189154	12.04	629240	14.34
CCV Lower Limit				380457	7.15	297288	11.04	157310	13.34
1	03G3619-LCS-01	03G3619-LCS-01	08/08/03 11:12	789769	7.65	614802	11.54	323815	13.84
2	MW-4-2MS	03-4455-4MS	08/08/03 11:40	784993	7.64	592210	11.54	296302	13.84
3	MW-4-2MSD	03-4455-4MSD	08/08/03 12:06	821352	7.65	637228	11.54	327356	13.84
4	03G3619-MB-01	03G3619-MB-01	08/08/03 13:25	705734	7.65	577919	11.54	302850	13.84
5	TB-5-8-6-03	03-4509-11	08/08/03 13:52	700230	7.65	570087	11.54	303369	13.84
6	DUPE-4-3-Q03	03-4509-1	08/08/03 14:45	695150	7.65	564515	11.55	297211	13.84
7	ER-5-8-6-03	03-4509-2	08/08/03 15:12	698045	7.65	566082	11.55	299678	13.84
8	MW-23-1	03-4509-3	08/08/03 15:38	681301	7.65	560867	11.55	296883	13.84
9	MW-23-2	03-4509-4	08/08/03 16:05	683066	7.65	564110	11.54	296553	13.84
10	MW-23-3	03-4509-5	08/08/03 16:32	678005	7.65	564170	11.55	294050	13.85
11	MW-14-1	03-4509-7	08/08/03 16:58	673994	7.65	557331	11.54	292221	13.84
12	MW-14-3	03-4509-9	08/08/03 17:25	684077	7.65	562276	11.54	295414	13.85
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

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:	034509
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G3659Q01	Instrument ID:	A

Batch No: 03G3659

#	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			08/11/03 10:40	764133	7.65	595141	11.55	318055	13.84
CCV Upper Limit				1528266	8.15	1190282	12.05	636110	14.34
CCV Lower Limit				382066	7.15	297570	11.05	159027	13.34
1	03G3659-LCS-01	03G3659-LCS-01	08/11/03 11:06	777095	7.65	607472	11.55	315375	13.84
2	MW-14-2MS	03-4509-8MS	08/11/03 11:33	814477	7.65	635039	11.54	330339	13.84
3	MW-14-2MSD	03-4509-8MSD	08/11/03 12:00	819015	7.64	631300	11.54	316189	13.84
4	03G3659-MB-01	03G3659-MB-01	08/11/03 13:18	681858	7.65	580347	11.54	305392	13.84
5	MW-14-2	03-4509-8	08/11/03 14:38	667922	7.65	570554	11.54	307468	13.85
6									
7									
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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

...ntrol & Ch Laboratories
...Magnolia Ave. Chino CA 91710
(...) 590-1828 Fax: (909) 590-1498

VOC Analysis General Logbook

Lot # 03G3619 Batch # 03G3619 Matrix: W Date: 08/08/03 Analyst: Zoe

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

Tmi Batch ☒ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

	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
2668	LSP	G3619P01	E524A.002	25/25 = 1	/ =	/ =	1		G3619P01	08/08/03	10:20AM
2669	CCV	Q01		/ =	/ =	/ =			Q01	GC1552	
2670	LCS	L01		/ =	/ =	/ =			L01		
2671	MS	M01		/ =	/ =	/ =			M01	$4455-04	<2
2672	MSD	N01		/ =	/ =	/ =			N01	↓	↓
2673	MB	K01		/ =	/ =	/ =			K01		
2674	Sample	4509-11		/ =	/ =	/ =			4509-11	tb	<2
2675		4455-04		/ =	/ =	/ =			4455-04	MS	
2676		4509-01		/ =	/ =	/ =			4509-01		
2677		02		/ =	/ =	/ =			02		
2678		03		/ =	/ =	/ =			03		
2679		04		/ =	/ =	/ =			04		
2680		05		/ =	/ =	/ =			05		
2681		07		/ =	/ =	/ =			07		
2682		09		/ =	/ =	/ =			09		
2683		4525-01		/ =	/ =	/ =			4525-01		
2684		02		/ =	/ =	/ =			02		
2685		03		/ =	/ =	/ =			03		
2686		04		/ =	/ =	/ =			04		
2687		4534-02		/ =	/ =	/ =			4534-02		
2688		4534-03		/ =	/ =	/ =			4534-03		
2689		04		/ =	/ =	/ =			04		
2690		05		/ =	/ =	/ =			05		
2691		06		/ =	/ =	/ =			06		
2692		07		/ =	/ =	/ =			07		
693				/ =	/ =	/ =					
694				/ =	/ =	/ =					
695				/ =	/ =	/ =					
696				/ =	/ =	/ =					

08/11/03

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$
CS/LCSD	2667	GC-15522	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
IS/MSD	2668/2669	GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

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VOC-054

Applied P & Ch Laboratory
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VOC Analysis General Logbook

Sequence # 03G3659 Batch # 03G3659 Matrix: W Date: 08/11/03 Analyst: Zou

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: _____

	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
2697	SP	G3659P01	E524A.02	25/25 = 1	/ =	/ =	1		G3659P01	08/11/03 10:44am	
2698	CCV	Q01		/ =	/ =	/ =			Q01	GC15535	
2699	LCS	L01		/ =	/ =	/ =			L01		
2700	MS	M01		/ =	/ =	/ =			M01	4509-08	<2
2701	MSD	N01		/ =	/ =	/ =			N01	↓	↓
2702	MB	K01		/ =	/ =	/ =			K01		
2703	Sample	4534-12		/ =	/ =	/ =			4534-12		<2
2704		01		/ =	/ =	/ =			01		
2705		4509-08		/ =	/ =	/ =			4509-08		
2706		4534-08		/ =	/ =	/ =			4534-08		
2707		09		/ =	/ =	/ =			09		
2708		10		/ =	/ =	/ =			10		
2709		4572-01		/ =	/ =	/ =			4572-01		
2710		02		/ =	/ =	/ =			02		
2711		03		/ =	/ =	/ =			03		
2712		04		/ =	/ =	/ =			04		
2713		05		/ =	/ =	/ =			05		
2714		06		/ =	/ =	/ =			06		
2715		07		/ =	/ =	/ =			07		
2716		08		/ =	/ =	/ =			08		
2717		09		/ =	/ =	/ =			09		
2718		10		/ =	/ =	/ =			10		
2719		11		/ =	/ =	/ =			11		
2720		G3659M02		/ =	/ =	/ =			G3659M02	4572-06	
2721	↓	↓ N02	↓	/ =	/ =	/ =	↓		↓ N02	↓	↓
2722				/ =	/ =	/ =					
2723				/ =	/ =	/ =					
2724				/ =	/ =	/ =					
2725				/ =	/ =	/ =					
2726				/ =	/ 08/12/03	/ =					
2727				/ =	/ =	/ =					
2728				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)= T$
CS/LCSD	2699	GC-15536	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
MS/MSD	2700/2701	GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

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VOC Analysis General Logbook

Sequence # 0393415 Batch # 0393415 Matrix: W Date: 07/22/03 Analyst: Bou

Lot #: IS/Surrogate: GC-1514/1515 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
2217	SP	G3415P01	E524A 002	25/25 = 1	/ =	/ =	1		G3415P01	07/22/03	17:08
2218	Calib.	02-00003		/ =	/ =	/ =			02-00003	0.3ppb	
2219		0002A		/ =	/ =	/ =			0002A	2ppb	
2220		00010		/ =	/ =	/ =			00010	10ppb	
2221		00020		/ =	/ =	/ =			00020	20ppb	
2222		00040		/ =	/ =	/ =			00040	40ppb	
2223		00060		/ =	/ =	/ =			00060	60ppb	
2224				/ =	/ =	/ =					
2225				/ =	/ =	/ =					
2226				/ =	/ =	/ =					
2227				/ =	/ =	/ =					
2228				/ =	/ =	/ =					
2229				/ =	/ =	/ =					
2230				/ =	/ =	/ =					
2231				/ =	/ =	/ =					
2232				/ =	/ =	/ =					
2233				/ =	/ =	/ =					
2234				/ =	/ =	/ =					
2235				/ =	/ =	/ =					
2236				/ =	/ =	/ =					
2237				/ =	/ =	/ =					
2238				/ =	/ =	/ =					
2239				/ =	/ =	/ =					
2240				/ =	/ =	/ =					
2241				/ =	/ =	/ =					
2242				/ =	/ =	/ =					
2243				/ =	/ =	/ =					
2244				/ =	/ =	/ =					
2245				/ =	/ =	/ =					
2246				/ =	/ =	/ =					
2247				/ =	/ =	/ =					
2248				/ =	/ =	/ =					

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:

07/23/03

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VOC Analysis General Logbook

Sequence # 033452 Batch # 033452 Matrix: W Date: 07/24/03 Analyst: ZOU

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	$V/X=f_1$	$V_f/V_i=f_2$	$V_{spg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
2313	SP	G3452P01	E524A.m2	25/25 = 1	/ =	/ =	1		G3452P01	07/24/03	10:07am
2314	CCV	Q01		/ =	/ =	/ =			Q01	9C15447	
2315	LCS	L01		/ =	/ =	/ =			L01		
2316	LCSD	J01		/ =	/ =	/ =			J01		
2317	MB	K01		/ =	/ =	/ =			K01		
2318	Sample	4476-08		/ =	/ =	/ =			4476-08	Internal PE	
2319		4482-05		/ =	/ =	/ =			4482-05	PE	
2320		18		/ =	/ =	/ =	5		18		
2321		03		1/5 = 5	/ =	/ =	1		03		
2322		03A		1/25 = 1	/ =	/ =	5		03A		
2323		04		1/5 = 5	/ =	/ =	5		04		
2324		04A		1/5 = 5	/ =	/ =	1		04A		
2325		04B		1/25 = 1	/ =	/ =	5		04B		
2326		4475-03B		1/5 = 5	/ =	/ =	1		4475-03B		
2327		03C		1/25 = 1	/ =	/ =			03C		
2328				/ =	/ =	/ =					
2329				/ =	/ =	/ =					
2330				/ =	/ =	/ =					
2331				/ =	/ =	/ =					
2332				/ =	/ =	/ =					
2333				/ =	/ =	/ =					
2334				/ =	/ =	/ =					
2335				/ =	/ =	/ =					
2336				/ =	/ =	/ =					
2337				/ =	/ =	/ =					
2338				/ =	10/7/05/01 =	/ =					
2339				/ =	/ =	/ =					
2340				/ =	/ =	/ =					
2341				/ =	/ =	/ =					
2342				/ =	/ =	/ =					
2343				/ =	/ =	/ =					
2344				/ =	/ =	/ =					

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	2315/2316	GC-15448	20 × 2.5 /X= 20 ppb		GC-	× /X= ppb
MS/MSD		GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly: