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:	34425
Project ID:	JPL	Project No:	04-4428.10	Analysis Date:	08/07/03
		Sample Matrix:	Water	Analysis Time:	13:17
Sample ID:	**03G3595-MB-01**	Batch No:	03G3595	Instrument ID:	GC/MS: A
Lab Sample ID:	03G3595-MB-01	Data File Name:	G3595K01	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	03G3595-LCS-01	03G3595-LCS-01	Lab Control Spike	G3595L01	08/07/03	11:06
2	MW-20-4MS	03-4425-6MS	Matrix Spike	G3595M01	08/07/03	11:32
3	MW-20-4MSD	03-4425-6MSD	Matrix Spike Duplicate	G3595N01	08/07/03	11:58
4	TB-3-7-31-03	03-4425-8	Field Sample	4425-08	08/07/03	14:36
5	EB-3-7-31-03	03-4425-2	Field Sample	4425-02	08/07/03	15:02
6	MW-20-4	03-4425-6	Field Sample	4425-06	08/07/03	16:22
7	DUPE-2-3-Q03	03-4425-1	Field Sample	4425-01	08/07/03	16:49
8	MW-20-1	03-4425-3	Field Sample	4425-03	08/07/03	17:15
9	MW-20-2	03-4425-4	Field Sample	4425-04	08/07/03	17:42
10	MW-20-3	03-4425-5	Field Sample	4425-05	08/07/03	18:08
11	MW-20-5	03-4425-7	Field Sample	4425-07	08/07/03	18:35
12						
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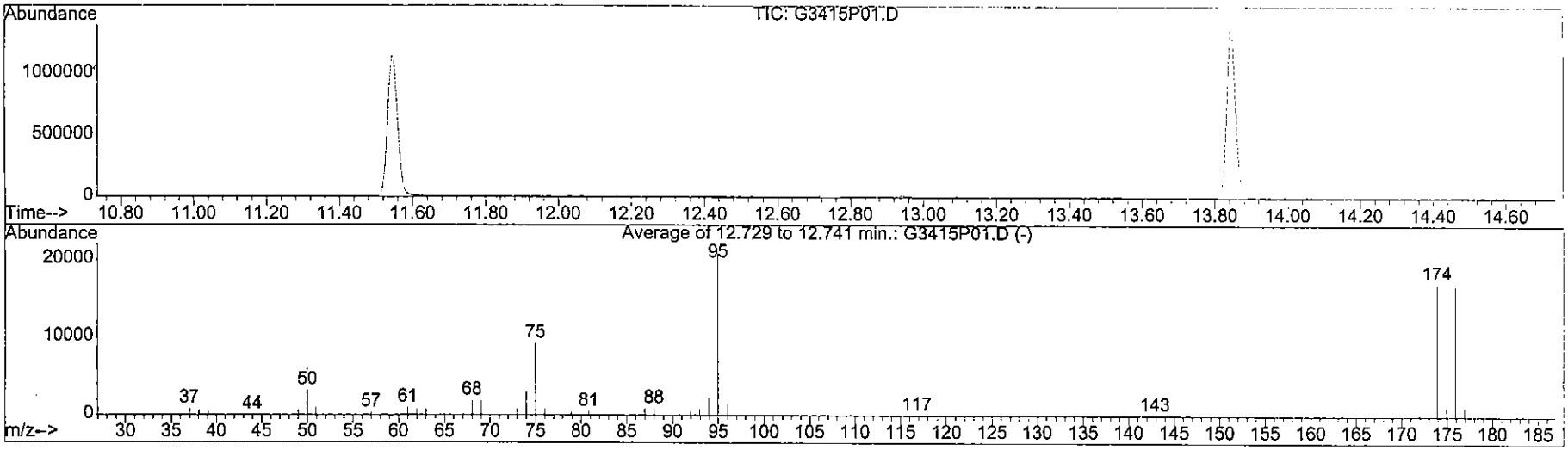
BFB

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

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 034425

Lab File ID: G 3415 P01 BFB Injection Date: 7/22/03

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	7/22/03	1925
02	VSTD002	20-0002	20-0002.D	7/22/03	2111
03	VSTD010	20-0010	20-0010.D	7/22/03	2137
04	VSTD020	20-0020	20-0020.D	7/22/03	2256
05	VSTD040	20-0040	20-0040.D	7/23/03	0043
06	VSTD060	20-0060	20-0060.D	7/23/03	0245
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

Response Factor Report GCMS-A

2055

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, C13	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
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.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
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

2058

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

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

Compound Name	Level 1 Response	Level 2 Response	Level 3 Response	Level 4 Response	Level 5 Response	Level 6 Response	Level 7 Response	Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
51 di-Br-Cl-methane	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

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

2063

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

2064

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
38	38 thiophene	7.53	7.51	0.003	84	58	12.985	0.28	0.3	94	7/24/03
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	48 112-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

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

2065

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

2066

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	

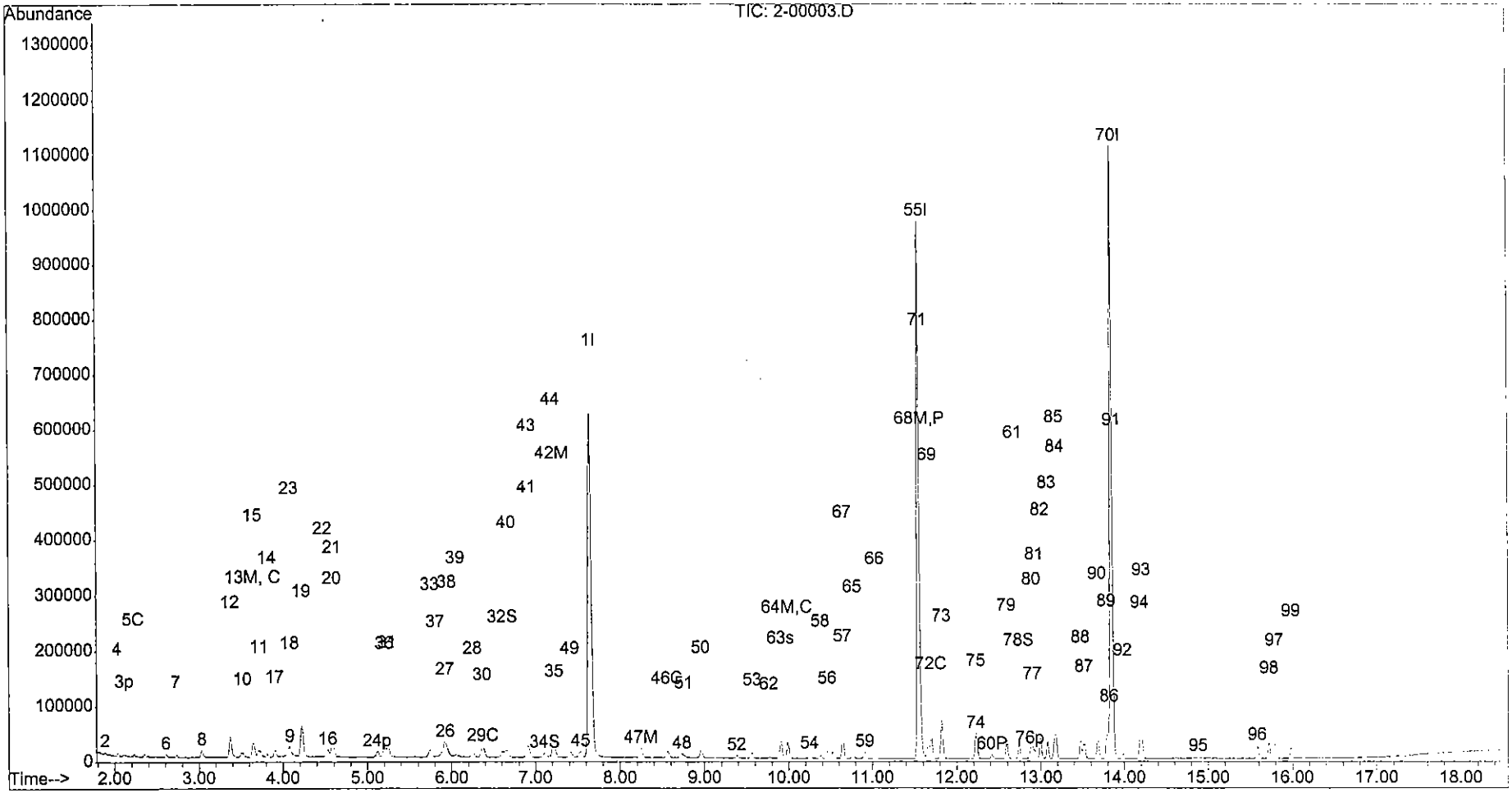
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

2067



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

2068

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 07/24/03
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 07/24/03
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 07/24/03
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

2069

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

2070

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

2071

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	

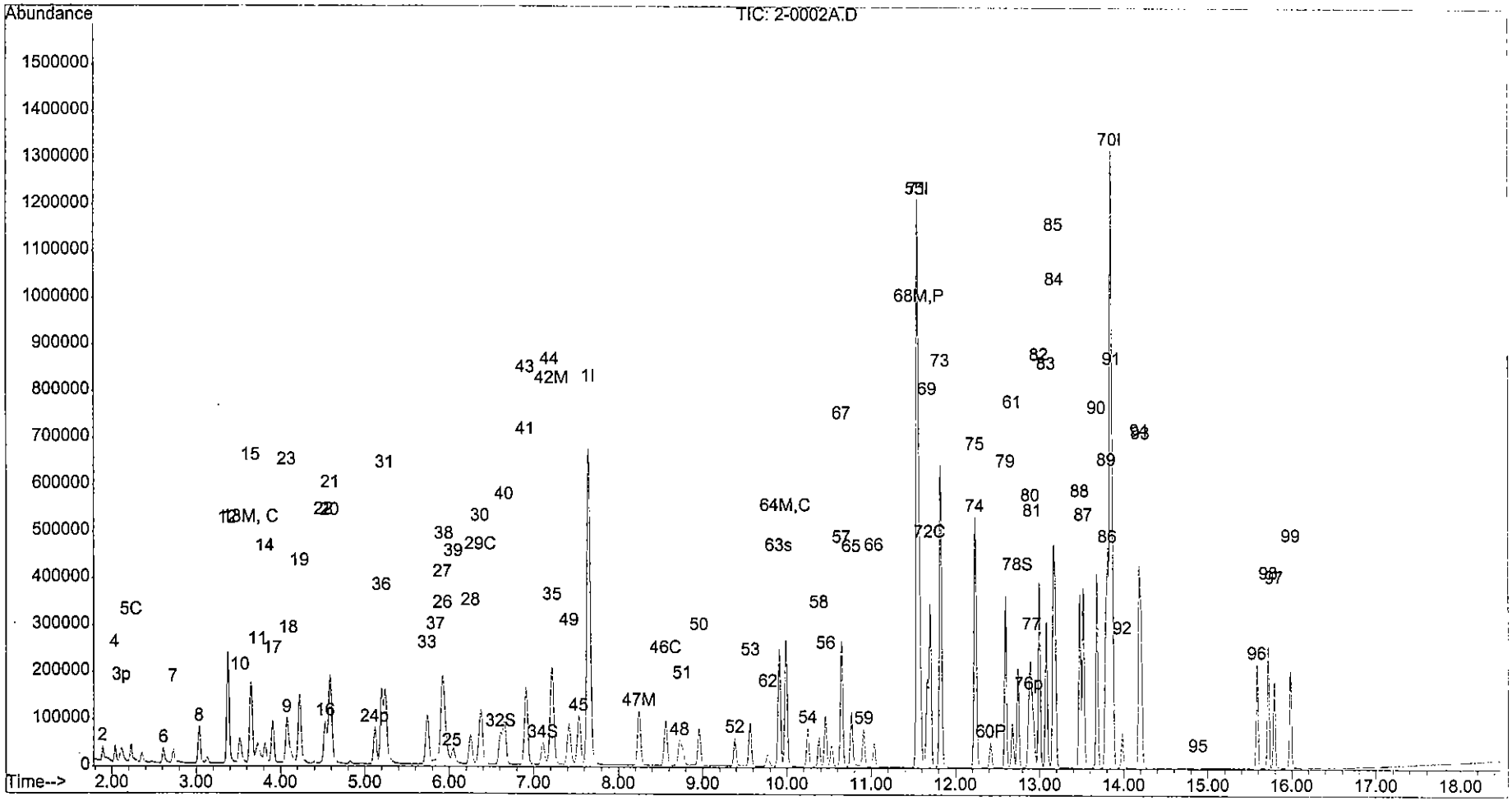
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

2072



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

2073

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

2074

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

2075

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	

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

m 7/24/03

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

2076

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	

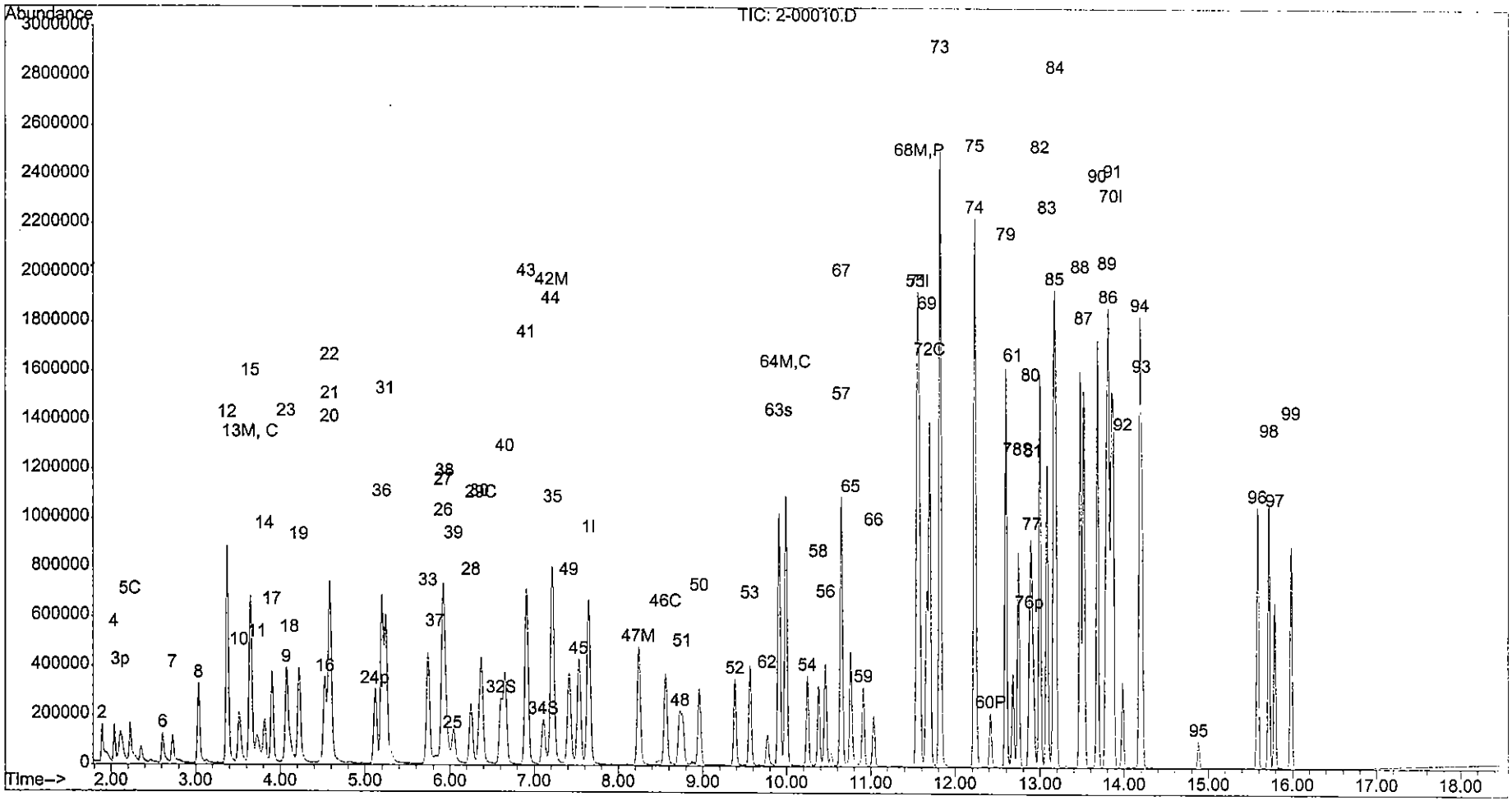
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

2077



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

2078

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

2079

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

2080

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

2081

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	

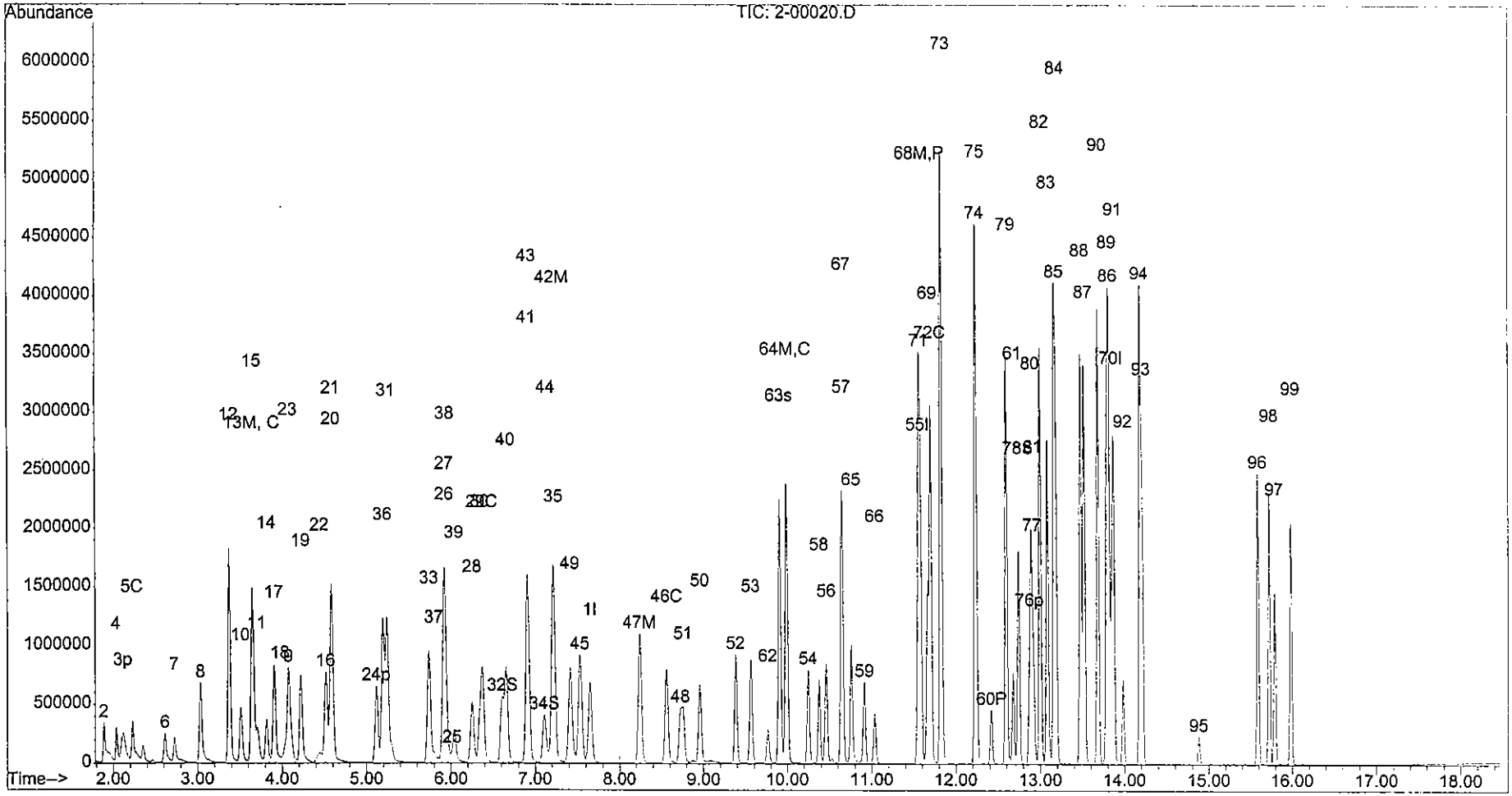
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

2082



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

2083

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

2084

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

2085

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

2086

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	

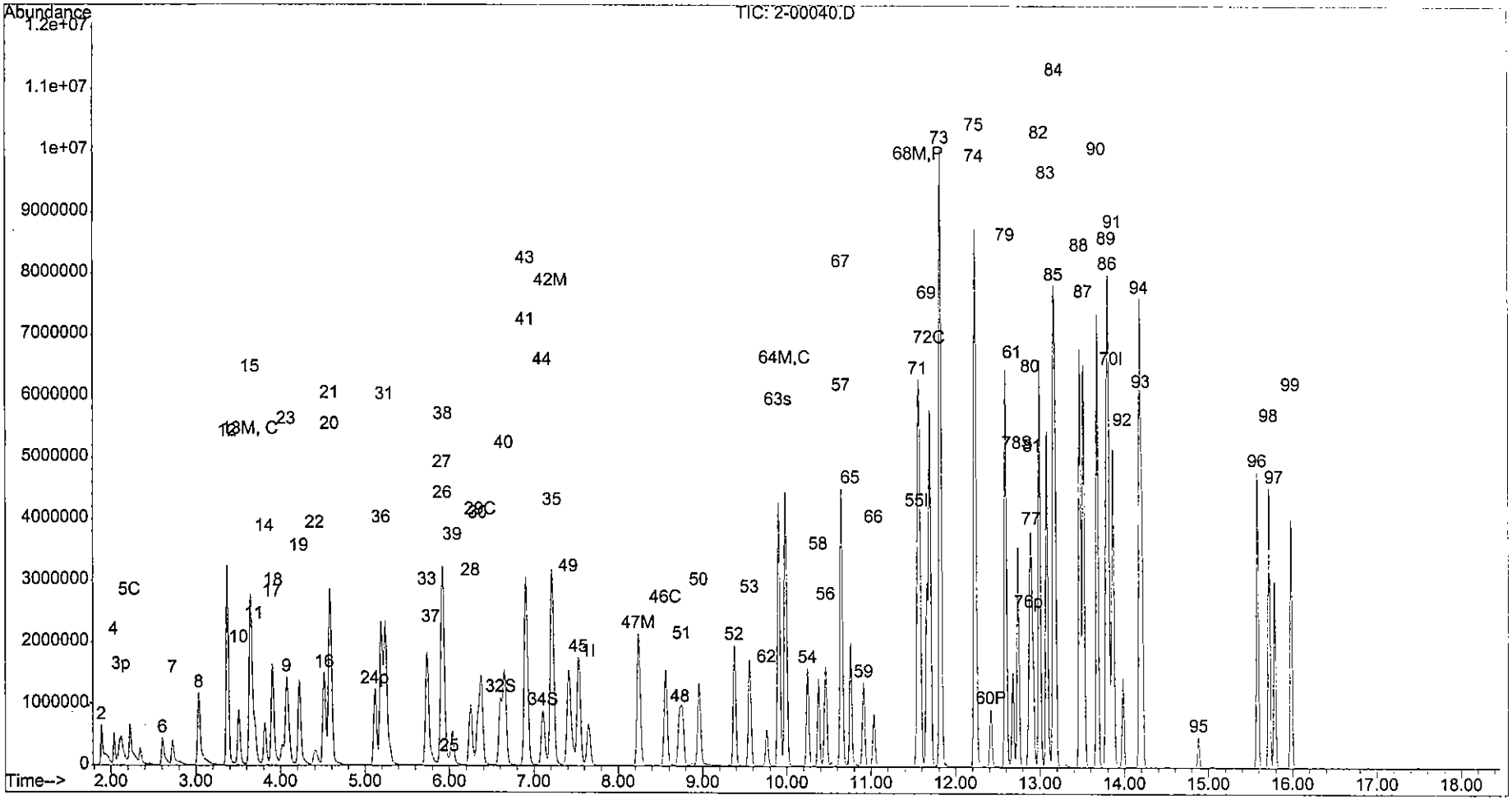
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

2087



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

2088

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

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

2089

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

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

2090

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

2091

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	

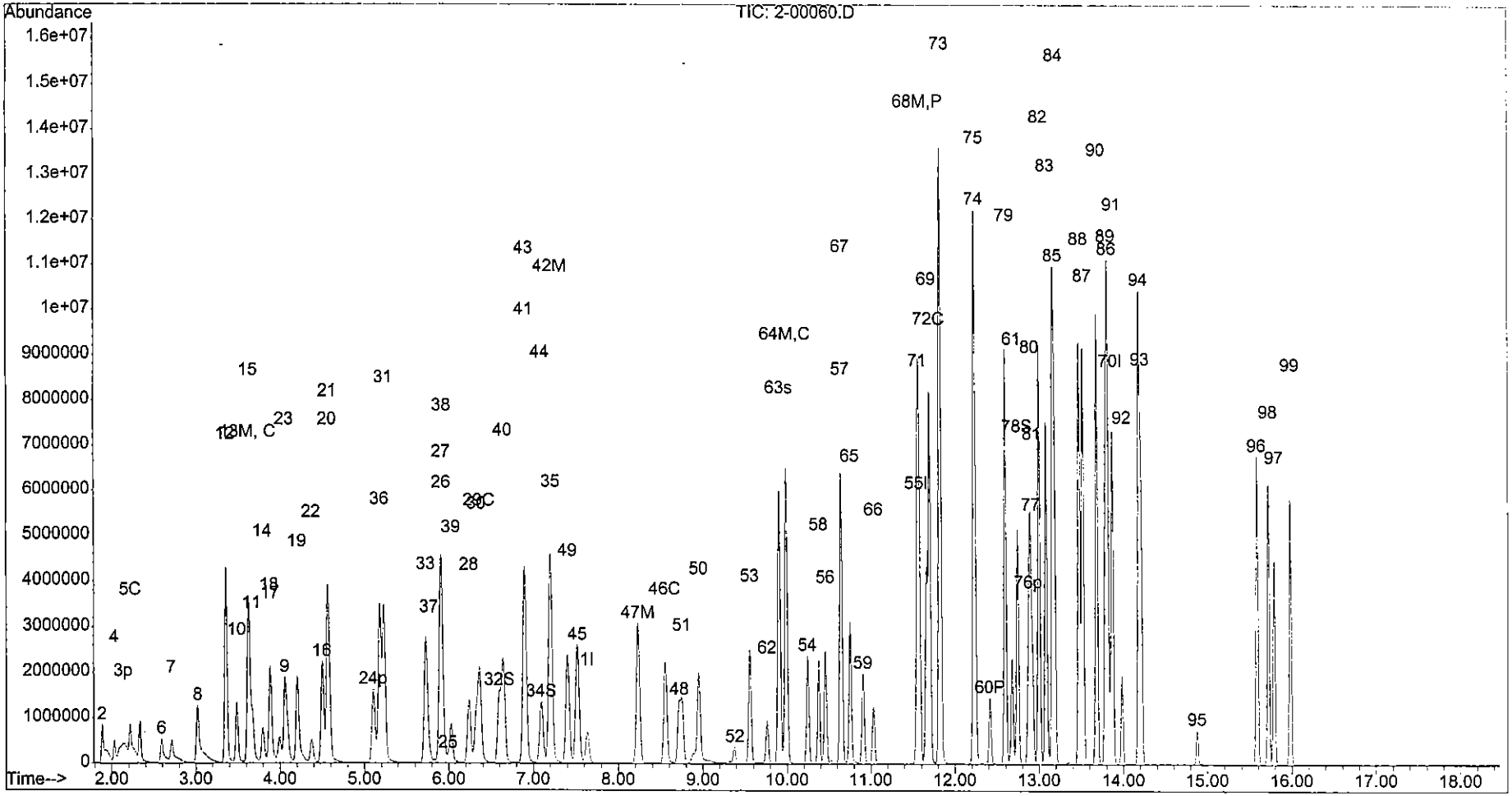
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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 :

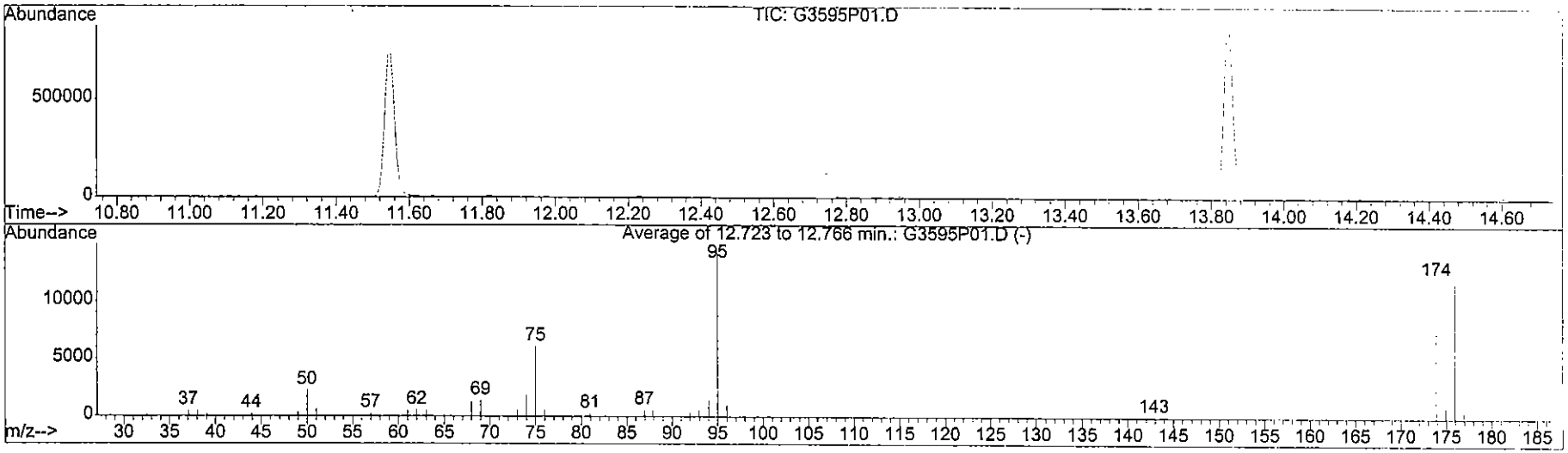
Sample : f=1 60 ppb
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

2092



BFB

Data File : C:\MSDCHEM\1\DATA\03G3595\G3595P01.D Vial: 1
Acq On : 7 Aug 2003 10:15 am Operator: zou
Sample : ##03g3595,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 12.766 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.0	2280	PASS
75	95	30	60	42.8	6115	PASS
95	95	100	100	100.0	14285	PASS
96	95	5	9	7.1	1020	PASS
173	174	0.00	2	0.6	76	PASS
174	95	50	100	85.3	12189	PASS
175	174	5	9	8.7	1066	PASS
176	174	95	101	96.9	11811	PASS
177	176	5	9	7.1	839	PASS

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:	034425
Project ID:	JPL	BFB Inj. Date:	08/07/03	Batch No:	03G3595
		BFB Inj. Time:	10:15	Sequence No:	03G3595
Project No:	04-4428.10	Instrument ID:	A	GC Column:	HP-VOC
Data File Name:	G3595P01	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	03G3595-CCV-01	03G3595-CCV-01	G3595Q01	08/07/03	10:41
2	03G3595-LCS-01	03G3595-LCS-01	G3595L01	08/07/03	11:06
3	MW-20-4MS	03-4425-6MS	G3595M01	08/07/03	11:32
4	MW-20-4MSD	03-4425-6MSD	G3595N01	08/07/03	11:58
5	03G3595-MB-01	03G3595-MB-01	G3595K01	08/07/03	13:17
6	TB-3-7-31-03	03-4425-8	4425-08	08/07/03	14:36
7	EB-3-7-31-03	03-4425-2	4425-02	08/07/03	15:02
8	MW-20-4	03-4425-6	4425-06	08/07/03	16:22
9	DUPE-2-3-Q03	03-4425-1	4425-01	08/07/03	16:49
10	MW-20-1	03-4425-3	4425-03	08/07/03	17:15
11	MW-20-2	03-4425-4	4425-04	08/07/03	17:42
12	MW-20-3	03-4425-5	4425-05	08/07/03	18:08
13	MW-20-5	03-4425-7	4425-07	08/07/03	18:35
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Continuing Calibration Concentration Summary

Data File G3595Q01
Method File E524A002

Compound Name	Amount	Actual	Units	%Dev	Target Response
1 Fluorobenzene	10	10.00	ppb	0.00	766703
3 di-Cl-di-F-methane	20	18.80	ppb	5.98	361919
4 Chloromethane	20	17.47	ppb	12.66	284413
2 F114	20	19.00	ppb	5.02	191179
5 vinyl chloride	20	18.51	ppb	7.44	344051
6 bromomethane	20	20.94	ppb	4.68	186931
7 chloroethane	20	19.40	ppb	2.99	214645
8 tri-Cl-F-methane	20	20.23	ppb	1.13	556813
91 Acetonitrile X10	200	183.60	ppb	8.20	617560
9 acrolein X10	200	221.95	ppb	10.98	402646
11 acetone X10	200	404.53	ppb	102.26	693038
12 ethyl ether X5	100	109.69	ppb	9.69	901636
13 11-dichloroethene	20	19.60	ppb	1.98	430876
14 Iodomethane	20	11.00	ppb	44.99	213763
15 F-113	20	22.34	ppb	11.72	336809
16 acrylonitrile X10	200	181.75	ppb	9.12	622938
17 carbon disulfide	20	19.10	ppb	4.52	1067044
94 Isopropyl Alcoholx10	200	180.25	ppb	9.87	86681
18 methylene chloride	20	18.77	ppb	6.13	365911
19 t-12-di-Cl-ethene	20	19.05	ppb	4.77	394497
20 t-Bu-Me-ether	20	19.34	ppb	3.30	666689
95 Tert butyl alcoholx10	200	188.39	ppb	5.80	169870
94 allyl chloride	20	20.48	ppb	2.38	617560
21 11-dichloroethane	20	18.25	ppb	8.77	606390
97 propionitrile	20	20.72	ppb	3.59	26648
22 c-12-di-Cl-ethene	20	19.23	ppb	3.84	401595
23 22-Dichloropropane	20	26.02	ppb	30.11	543217
24 Br-Cl-methane	20	18.86	ppb	5.72	190934
25 chloroform	20	20.59	ppb	2.97	644722
26 tetrahydrofuranX5	100	91.61	ppb	8.39	230672
98 Diisopropyl ether	20	18.82	ppb	5.91	962962
27 Di-Br-F-Me (surr)	20	19.88	ppb	0.58	379920
99 ETBE	20	20.31	ppb	1.57	794685
29 1,2-Di-Cl-Et-d4 (S1)	20	19.62	ppb	1.88	303684
30 12-dichloroethane	20	21.09	ppb	5.44	113945
32 vinyl acetate X5	100	101.71	ppb	1.71	2432956
92 Nitro Methane(x10)	200	189.09	ppb	5.45	80510
33 2-butanoneMEK X10	200	260.01	ppb	30.00	835421
93 Ethyl Acetate x2	40	40.46	ppb	1.16	338571
34 111-trichloroethane	20	19.84	ppb	0.78	612912
35 11-Di-Cl-propene	20	20.99	ppb	4.93	489795
36 benzene	20	18.89	ppb	5.56	1469920
37 CCl4	20	20.60	ppb	2.98	586558

Compound Name	Amount	Actual	Units	%Dev	Target Response
100 Isobutyl alcoholx10	200	183.27	ppb	8.37	64748
38 thiophene	20	19.96	ppb	0.22	771980
39 12-di-Cl-propane	20	18.69	ppb	6.55	325445
40 trichloroethene	20	19.66	ppb	1.70	476880
41 dibromomethane	20	18.70	ppb	6.48	206592
101 TAME	20	20.73	ppb	3.64	703089
42 Br-di-Cl-methane	20	20.42	ppb	2.08	465535
43 Me-methacrylate	20	18.17	ppb	9.15	161032
44 2-ClEt-Vi-ether10	200	117.61	ppb	41.20	227015
45 c-13-di-Cl-propene	20	20.85	ppb	4.27	527707
46 t-1,3-dichloropropene	20	21.34	ppb	6.68	429352
47 Chlorobezene-d5	10	10.00	ppb	0.00	597320
48 112-tri-Cl-Et	20	18.48	ppb	7.60	266404
49 13-di-Cl-propane	20	18.68	ppb	6.60	424741
50 Et methacrylate	20	19.01	ppb	4.93	343789

Compound Name	Amount	Actual	Units	%Dev	Target Response
51 di-Br-Cl-methane	20	19.96	ppb	0.20	361466
52 bromoform	20	18.66	ppb	6.72	206444
53 1,4-dichlorobutane-2	20	18.19	ppb	9.07	384932
54 MIBK	20	18.40	ppb	7.98	160102
55 toluene-d8	20	19.50	ppb	2.50	1468019
56 toluene	20	19.39	ppb	3.06	1677394
57 2-hexanone X5	100	106.29	ppb	6.29	627565
58 12-dibromoethane	20	18.64	ppb	6.82	265041
59 tetra-Cl-ethene	20	19.66	ppb	1.72	508108
60 chlorobenzene	20	20.66	ppb	3.29	1162225
61 1112-tetra-Cl-Et	20	18.89	ppb	5.56	415886
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	312953
63 1-chlorohexane	20	21.39	ppb	6.95	218294
64 Et-Bz	20	19.83	ppb	0.87	1941342
65 m/p-Xylenes X2	40	40.51	ppb	1.27	2998617
66 styrene	20	20.57	PPB	2.84	1157661
67 o-xylene	20	20.82	ppb	4.08	1545970
68 1122-Tetra-Cl-Et	20	17.60	ppb	12.02	290912
69 123-tri-Cl-Pr	20	18.31	ppb	8.47	90592
70 4-Br-1-F-Bz (S3)	20	19.02	ppb	4.89	492386
71 isopropylbenzene	20	21.60	ppb	8.02	2055482
72 bromobenzene	20	19.55	ppb	2.27	499474
92 t-1,4-dichloro-2-butene	20	19.62	ppb	1.90	55283
73 n-propylbenzene	20	21.18	ppb	5.91	631252
74 2-Cl-Toluene	20	20.48	ppb	2.38	539229
75 4-Cl-Toluene	20	20.09	ppb	0.46	538263
76 135-tri-Me-Benzene	20	21.40	ppb	7.02	1753181
77 4-iso-Pr-toluene	20	21.77	ppb	8.85	1991490
78 124-tri-Me-Benzene	20	20.86	ppb	4.32	1779697
79 tert-butylbenzene	20	21.03	ppb	5.14	1644833
80 13-DCB	20	19.42	ppb	2.89	1043489
81 sec-butylbenzene	20	21.75	ppb	8.76	2394290

82 14-DCB	20	20.20	ppb	0.99	1031759
83 Cl-benzyl	20	28.05	ppb	40.25	145214
84 12-DCB	20	19.18	ppb	4.09	917679
85 n-butylbenzene	20	20.76	ppb	3.82	557165
86 12-diBr-2-Cl-Pra	20	19.08	ppb	4.61	64268
87 124-tri-Cl-Bz	20	21.76	ppb	8.82	674132
88 naphthalene	20	18.30	ppb	8.52	1028466
89 hx-Cl-butadiene	20	20.47	ppb	2.35	383886
90 123-Tri-Cl-Bz	20	20.86	ppb	4.31	579865

Average D % 7.4449627

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D
Acq On : 7 Aug 2003 10:41 am
Sample : f=1
Misc :
MS Integration Params: Lscint.p

Vial: 2
Operator: zou
Inst : GCMS-A
Multiplr: 1.00

2098

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	76	0.02
2		3	di-Cl-di-F-methane	0.251	0.236	6.0	71	0.04
3	p	4	Chloromethane	0.235	0.185	21.3#	63	0.04
4		2	F114	0.131	0.125	4.6	69	0.04
5	C	5	vinyl chloride	0.242	0.224	7.4	71	0.04
6		6	bromomethane	0.116	0.122	-5.2	82	0.04
7		7	chloroethane	0.144	0.140	2.8	81	0.03
8		8	tri-Cl-F-methane	0.359	0.363	-1.1	77	0.04
9		91	Acetonitrile X10	0.044	0.040	9.1	73	0.03
10		9	acrolein X10	0.028	0.026	7.1	78	0.04
11		11	acetone X10	0.043	0.045	-4.7	139	0.04
12		12	ethyl ether X5	0.127	0.118	7.1	76	0.04
13	M, C	13	11-dichloroethene	0.287	0.281	2.1	77	0.04
14		14	Iodomethane	0.253	0.139	45.1#	40#	0.04
15		15	F-113	0.225	0.220	2.2	79	0.04
16		16	acrylonitrile X10	0.045	0.041	8.9	75	0.03
17		17	carbon disulfide	0.729	0.696	4.5	72	0.04
18		94	Isopropyl Alcoholx10	0.008	0.006	25.0#	69	0.09
19		18	methylene chloride	0.467	0.239	48.8#	72	0.04
20		19	t-12-di-Cl-ethene	0.270	0.257	4.8	74	0.04
21		20	t-Bu-Me-ether	0.450	0.435	3.3	77	0.04
22		95	Tert butyl alcoholx10	0.012	0.011	8.3	82	0.10
23		94	allyl chloride	0.393	0.403	-2.5	73	0.03
24	p	21	11-dichloroethane	0.433	0.395	8.8	73	0.03
25		97	propionitrile	0.017	0.017	0.0	80	0.04
26		22	c-12-di-Cl-ethene	0.272	0.262	3.7	75	0.02

(#) = Out of Range

Data File : C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D
Acq On : 7 Aug 2003 10:41 am
Sample : f=1
Misc :
MS Integration Params: Lscint.p

Vial: 2
Operator: zou
Inst : GCMS-A
Multiplr: 1.00

2099

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	0.354	-14.2	92	0.03
28		24 Br-Cl-methane	0.132	0.125	5.3	76	0.02
29	C	25 chloroform	0.478	0.420	12.1	77	0.02
30		26 tetrahydrofuranX5	0.033	0.030	9.1	72	0.03
31		98 Diisopropyl ether	0.667	0.628	5.8	73	0.02
32	S	27 Di-Br-F-Me (surr)	0.249	0.248	0.4	78	0.03
33		99 ETBE	0.510	0.518	-1.6	75	0.02
34	S	29 1,2-Di-Cl-Et-d4 (S1)	0.202	0.198	2.0	78	0.03
35		30 12-dichloroethane	0.078	0.074	5.1	80	0.02
36		32 vinyl acetate X5	0.312	0.317	-1.6	82	0.03
37		92 Nitro Methane(x10)	0.006	0.005	16.7	72	0.03
38		33 2-butanoneMEK X10	0.052	0.054	-3.8	95	0.03
39		93 Ethyl Acetate x2	0.124	0.110	11.3	78	0.02
40		34 111-trichloroethane	0.403	0.400	0.7	78	0.02
41		35 11-Di-Cl-propene	0.304	0.319	-4.9	74	0.02
42	M	36 benzene	1.015	0.959	5.5	74	0.02
43		37 CCl4	0.371	0.383	-3.2	80	0.02
44		100 Isobutyl alcoholx10	0.004	0.004	0.0	74	-0.21
45		38 thiophene	0.505	0.503	0.4	75	0.02
46	C	39 12-di-Cl-propane	0.227	0.212	6.6	73	0.02
47	M	40 trichloroethene	0.316	0.311	1.6	75	0.02
48		41 dibromomethane	0.144	0.135	6.2	76	0.01
49		101 TAME	0.442	0.459	-3.8	75	0.02
50		42 Br-di-Cl-methane	0.327	0.304	7.0	77	0.01
51		43 Me-methacrylate	0.102	0.105	-2.9	71	0.01
52		44 2-ClEt-Vi-ether10	0.020	0.015	25.0#	44#	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

2100

Data File : C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D Vial: 2
Acq On : 7 Aug 2003 10:41 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	0.344	-4.2	78	0.01
54		46	t-1,3-dichloropropene	0.262	0.280	-6.9	78	0.00
55	I	47	Chlorobezene-d5	1.000	1.000	0.0	77	0.00
56		48	112-tri-Cl-Et	0.241	0.223	7.5	78	0.00
57		49	13-di-Cl-propane	0.381	0.356	6.6	77	0.00
58		50	Et methacrylate	0.273	0.288	-5.5	78	0.00
59		51	di-Br-Cl-methane	0.325	0.303	6.8	79	0.00
60	P	52	bromoform	0.185	0.173	6.5	78	0.00
61		53	1,4-dichlorobutane-2	0.354	0.322	9.0	75	0.00
62		54	MIBK	0.146	0.134	8.2	72	0.00
63	s	55	toluene-d8	1.260	1.229	2.5	76	0.01
64	M,C	56	toluene	1.448	1.404	3.0	75	0.00
65		57	2-hexanone X5	0.099	0.105	-6.1	86	0.00
66		58	12-dibromoethane	0.238	0.222	6.7	77	0.00
67		59	tetra-Cl-ethene	0.433	0.425	1.8	77	0.00
68	M,P	60	chlorobenzene	1.032	0.973	5.7	78	0.00
69		61	1112-tetra-Cl-Et	0.369	0.348	5.7	79	0.00
70	I	62	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	79	0.00
71		63	1-chlorohexane	0.326	0.349	-7.1	78	0.00
72	C	64	Et-Bz	3.129	3.102	0.9	77	0.00
73		65	m/p-Xylenes X2	2.365	2.395	-1.3	78	0.00
74		66	styrene	1.798	1.850	-2.9	77	0.00
75		67	o-xylene	2.373	2.470	-4.1	78	0.00
76	p	68	1122-Tetra-Cl-Et	0.528	0.465	11.9	78	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D Vial: 2
Acq On : 7 Aug 2003 10:41 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	0.145	8.2	79	0.00
78	S	70	4-Br-1-F-Bz (S3)	0.827	0.787	4.8	78	0.00
79		71	isopropylbenzene	3.040	3.284	-8.0	78	0.00
80		72	bromobenzene	0.817	0.798	2.3	79	0.00
81		92	t-1,4-dichloro-2-butene	0.077	0.088	-14.3	86	0.00
82		73	n-propylbenzene	0.952	1.009	-6.0	79	0.00
83		74	2-Cl-Toluene	0.841	0.862	-2.5	79	0.00
84		75	4-Cl-Toluene	0.856	0.860	-0.5	79	0.00
85		76	135-tri-Me-Benzene	2.617	2.801	-7.0	79	0.00
86		77	4-iso-Pr-toluene	2.923	3.182	-8.9	80	0.00
87		78	124-tri-Me-Benzene	2.726	2.843	-4.3	79	0.00
88		79	tert-butylbenzene	2.499	2.628	-5.2	79	0.00
89		80	13-DCB	1.717	1.667	2.9	79	0.00
90		81	sec-butylbenzene	3.517	3.825	-8.8	79	0.00
91		82	14-DCB	1.749	1.648	5.8	80	0.00
92		83	Cl-benzyl	0.165	0.232	-40.6#	109	0.00
93		84	12-DCB	1.529	1.466	4.1	80	0.00
94		85	n-butylbenzene	0.779	0.890	-14.2	81	0.00
95		86	12-diBr-2-Cl-Pra	0.108	0.103	4.6	80	0.00
96		87	124-tri-Cl-Bz	0.990	1.077	-8.8	80	0.00
97		88	naphthalene	1.796	1.643	8.5	79	0.00
98		89	hx-Cl-butadiene	0.599	0.613	-2.3	81	0.00
99		90	123-Tri-Cl-Bz	0.888	0.926	-4.3	81	0.00

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

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

2102

Data Filename: C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 7 10:41 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 12:23 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 12:23 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	766.703	10.00		0.02	
47	47	Chlorobezene-d5	11.54	11.54	0.000	117	82	597.320	10.00		0.00	
62	62	1,4-Dichlorobenze	13.84	13.84	0.000	152	150	312.953	10.00		0.00	
System Monitoring Compounds (Surrogate)										%Recovery		
27	27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	379.920	19.88	19.9	99.42%	
29	29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	303.684	19.62	19.6	98.12%	
55	55	toluene-d8	9.91	9.89	0.000	98	100	1468.019	19.50	19.5	97.50%	
70	70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	492.386	19.02	19.0	95.11%	
Target Compounds										Qvalue		
<<< I1 : ISTD ID = 1 >>>												
3	3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	361.919	18.80	18.8	99	m
4	4	Chloromethane	2.11	2.07	0.006	50	52	284.413	17.47	17.5	98	m 08/08/03
2	2	F114	2.04	2.00	0.006	85	135	191.179	19.00	19.0	51	m
5	5	vinyl chloride	2.23	2.19	0.005	62	64	344.051	18.51	18.5	99	
6	6	bromomethane	2.61	2.58	0.005	94	96	186.931	20.94	20.9	100	
7	7	chloroethane	2.73	2.70	0.004	64	66	214.645	19.40	19.4	0	m
8	8	tri-Cl-F-methane	3.04	3.00	0.006	101	103	556.813	20.23	20.2	99	
91	91	Acetonitrile X10	4.07	4.04	0.004	41	40	617.560	183.60	183.6	93	?
9	9	acrolein X10	3.52	3.48	0.006	56	55	402.646	221.95	222.0	0	m 08/08/03
11	11	acetone X10	3.73	3.69	0.005	43	58	693.038	404.53	404.5	0	m
12	12	ethyl ether X5	3.37	3.34	0.005	59	74	901.636	109.69	109.7	90	
13	13	11-dichloroethene	3.64	3.60	0.005	61	96	430.876	19.60	19.6	97	?
14	14	Iodomethane	3.82	3.78	0.005	142	127	213.763	11.00	11.0	98	
15	15	F-113	3.65	3.62	0.005	101	151	336.809	22.34	22.3	89	?
16	16	acrylonitrile X10	4.52	4.49	0.004	53	52	622.938	181.75	181.8	98	
17	17	carbon disulfide	3.91	3.87	0.005	76	78	1067.044	19.10	19.1	99	
94	94	Isopropyl Alcohol	4.10	4.01	0.012	45	43	86.681	180.25	180.3	100	m 08/08/03
18	18	methylene chlorid	4.22	4.19	0.005	84	49	365.911	18.77	18.8	99	
19	19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	394.497	19.05	19.0	94	?

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

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

2103

Data Filename: C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 7 10:41 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 12:23 2003
Print Time : Fri Aug 08 12:23 2003
Miscleneous :

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

ID		Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	20	t-Bu-Me-ether	4.60	4.56	0.005	73	57	666.689	19.34	19.3	96	?
95	95	Tert butyl alcoho	4.57	4.47	0.014	59	57	169.870	188.39	188.4	100	m
94	94	allyl chloride	4.07	4.04	0.004	41	76	617.560	20.48	20.5	86	#?
21	21	11-dichloroethane	5.12	5.09	0.004	63	83	606.390	18.25	18.2	98	
97	97	propionitrile	6.03	5.99	0.005	54	51	26.648	20.72	20.7	100	#?
22	22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	401.595	19.23	19.2	85	?
23	23	22-Dichloropropan	5.92	5.89	0.004	77	97	543.217	26.02	26.0	98	?
24	24	Br-Cl-methane	6.25	6.23	0.003	128	130	190.934	18.86	18.9	100	
25	25	chloroform	6.37	6.35	0.002	83	85	644.722	20.59	20.6	99	?
26	26	tetrahydrofuranX5	6.35	6.32	0.004	42	72	230.672	91.61	91.6	94	?
98	98	Diisopropyl ether	5.24	5.22	0.003	45	87	962.962	18.82	18.8	99	
99	99	ETBE	5.74	5.72	0.003	59	87	794.685	20.31	20.3	97	
30	30	12-dichloroethane	7.22	7.20	0.003	64	62	113.945	21.09	21.1	96	?
32	32	vinyl acetate X5	5.20	5.17	0.004	43	86	2432.956	101.71	101.7	100	
92	92	Nitro Methane(x10	5.83	5.80	0.004	61	46	80.510	189.09	189.1	83	
33	33	2-butanoneMEK X10	5.95	5.92	0.003	43	72	835.421	260.01	260.0	98	?
93	93	Ethyl Acetate x2	6.04	6.02	0.003	43	61	338.571	40.46	40.5	92	#?
34	34	111-trichloroetha	6.65	6.63	0.002	97	99	612.912	19.84	19.8	99	
35	35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	489.795	20.99	21.0	92	?
36	36	benzene	7.21	7.19	0.003	78	52	1469.920	18.89	18.9	99	?
37	37	CCl4	6.91	6.89	0.003	117	119	586.558	20.60	20.6	97	?
100	100	Isobutyl alcohol	7.18	7.39	-0.028	43	42	64.748	183.27	183.3	93	m
38	38	thiophene	7.53	7.51	0.002	84	58	771.980	19.96	20.0	97	
39	39	12-di-Cl-propane	8.56	8.54	0.002	63	76	325.445	18.69	18.7	98	
40	40	trichloroethene	8.25	8.23	0.002	130	132	476.880	19.66	19.7	100	
41	41	dibromomethane	8.73	8.71	0.002	174	172	206.592	18.70	18.7	98	
101	101	TAME	7.41	7.39	0.002	73	43	703.089	20.73	20.7	98	
42	42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	465.535	20.42	20.4	100	
43	43	Me-methacrylate	8.76	8.75	0.002	69	100	161.032	18.17	18.2	96	
44	44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	227.015	117.61	117.6	96	
45	45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	527.707	20.85	20.9	94	
46	46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	429.352	21.34	21.3	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\03G3595\G3595Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 7 10:41 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 12:23 2003
Print Time : Fri Aug 08 12:23 2003
Miscleneous :

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

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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	266.404	18.48	18.5	94	
49	49	13-di-Cl-propane	10.65	10.64	0.000	76	78	424.741	18.68	18.7	100	?
50	50	Et methacrylate	10.37	10.37	0.000	69	99	343.789	19.01	19.0	94	
51	51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	361.466	19.96	20.0	99	
52	52	bromoform	12.42	12.41	0.000	173	174	206.444	18.66	18.7	99	
53	53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	384.932	18.19	18.2	95	
54	54	MIBK	9.77	9.76	0.000	43	58	160.102	18.40	18.4	95	
56	56	toluene	9.99	9.98	0.000	91	92	1677.394	19.39	19.4	99	
57	57	2-hexanone X5	10.76	10.75	0.000	43	58	627.565	106.29	106.3	94	
58	58	12-dibromoethane	11.03	11.03	0.000	107	109	265.041	18.64	18.6	98	
59	59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	508.108	19.66	19.7	100	?
60	60	chlorobenzene	11.58	11.57	0.000	112	77	1162.225	20.66	20.7	89	?
61	61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	415.886	18.89	18.9	99	
<<< I3 : ISTD ID = 62 >>>												
63	63	1-chlorohexane	11.56	11.56	0.000	93	55	218.294	21.39	21.4	99	?
64	64	Et-Bz	11.70	11.69	0.000	91	106	1941.342	19.83	19.8	98	
65	65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2998.617	40.51	40.5	97	
66	66	styrene	12.24	12.23	0.000	104	78	1157.661	20.57	20.6	92	?
67	67	o-xylene	12.22	12.22	0.000	91	106	1545.970	20.82	20.8	97	?
68	68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	290.912	17.60	17.6	99	
69	69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	90.592	18.31	18.3	99	?
71	71	isopropylbenzene	12.60	12.59	0.000	105	120	2055.482	21.60	21.6	98	
72	72	bromobenzene	12.89	12.89	0.000	156	158	499.474	19.55	19.5	99	?
92	92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	55.283	19.62	19.6	84	#?
73	73	n-propylbenzene	13.00	12.99	0.000	120	78	631.252	21.18	21.2	93	
74	74	2-Cl-Toluene	13.08	13.08	0.000	126	128	539.229	20.48	20.5	98	
75	75	4-Cl-Toluene	13.19	13.18	0.000	126	128	538.263	20.09	20.1	99	?
76	76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1753.181	21.40	21.4	97	?
77	77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1991.490	21.77	21.8	98	?
78	78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1779.697	20.86	20.9	97	
79	79	tert-butylbenzene	13.47	13.47	0.000	119	91	1644.833	21.03	21.0	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\03G3595\G3595Q01.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A002.M Inst. : GCMS-A
Acq. Time : Aug 7 10:41 2003 RF via : Multiple Level Calibration
Method Update: Thu Jul 24 12:40 2003 Operator: zou
Quant. Time : Aug 08 12:23 2003 Multiplr: 1.000000
Print Time : Fri Aug 08 12:23 2003
Miscleneous :

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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	1043.489	19.42	19.4	100	?
81	81	sec-butylbenzene	13.68	13.68	0.000	105	134	2394.290	21.75	21.8	97	
82	82	14-DCB	13.87	13.87	0.000	146	148	1031.759	20.20	20.2	98	
83	83	Cl-benzyl	13.98	13.98	0.000	126	91	145.214	28.05	28.1	73	#
84	84	12-DCB	14.21	14.21	0.000	146	148	917.679	19.18	19.2	99	?
85	85	n-butylbenzene	14.18	14.18	0.000	134	91	557.165	20.76	20.8	83	#?
86	86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	64.268	19.08	19.1	98	
87	87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	674.132	21.76	21.8	100	
88	88	naphthalene	15.78	15.78	0.000	128	129	1028.466	18.30	18.3	99	
89	89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	383.886	20.47	20.5	97	
90	90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	579.865	20.86	20.9	99	

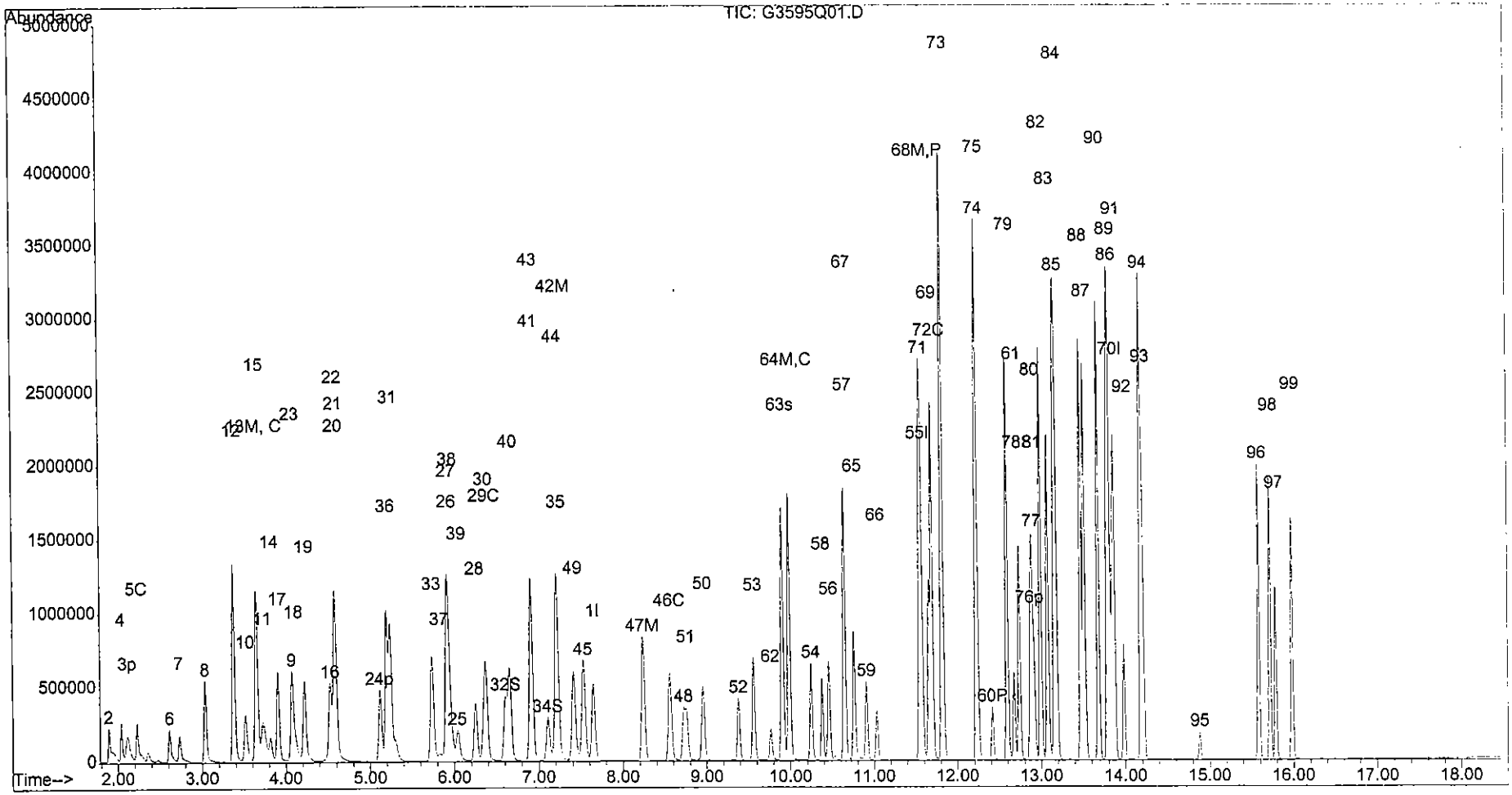
= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

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

Data Filename: C:\MSDCHEM\1\DATA\03G3595\G3595Q01.D
Method : C:\MSDCHEM\1\METHODS\E524A002.M
Acq. Time : Aug 7 10:41 2003
Method Update: Thu Jul 24 12:40 2003
Quant. Time : Aug 08 12:23 2003
Print Time : Fri Aug 08 12:23 2003
Miscleneous :

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

2106



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:	034425
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		CCV Data File:	G3595Q01	Instrument ID:	A

Batch No: 03G3595

#	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			08/07/03 10:41	766703	7.65	597320	11.54	312953	13.84
CCV Upper Limit				1533406	8.15	1194640	12.04	625906	14.34
CCV Lower Limit				383351	7.15	298660	11.04	156476	13.34
1	03G3595-LCS-01	03G3595-LCS-01	08/07/03 11:06	793930	7.65	618724	11.55	326278	13.84
2	MW-20-4MS	03-4425-6MS	08/07/03 11:32	813408	7.65	623673	11.54	310405	13.84
3	MW-20-4MSD	03-4425-6MSD	08/07/03 11:58	820159	7.65	638486	11.54	325382	13.84
4	03G3595-MB-01	03G3595-MB-01	08/07/03 13:17	719160	7.65	584637	11.55	301712	13.84
5	TB-3-7-31-03	03-4425-8	08/07/03 14:36	712719	7.65	584637	11.55	303020	13.85
6	EB-3-7-31-03	03-4425-2	08/07/03 15:02	718272	7.65	584297	11.54	307184	13.85
7	MW-20-4	03-4425-6	08/07/03 16:22	704743	7.65	574822	11.54	298518	13.84
8	DUPE-2-3-Q03	03-4425-1	08/07/03 16:49	694166	7.65	563772	11.55	296621	13.85
9	MW-20-1	03-4425-3	08/07/03 17:15	692034	7.65	563611	11.55	293691	13.84
10	MW-20-2	03-4425-4	08/07/03 17:42	687143	7.65	562925	11.55	296444	13.84
11	MW-20-3	03-4425-5	08/07/03 18:08	687835	7.65	562316	11.54	297075	13.84
12	MW-20-5	03-4425-7	08/07/03 18:35	687756	7.65	557194	11.54	293612	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

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VOC Analysis General Logbook

Sequence # 03f3595 Batch # 03f3595 Matrix: W Date: 08/07/03 Analyst: Zoe

IS/Surrogate: GC-1514/1515 Methanol(mark-*M*): _____ PEG (mark-*PEG*): _____ Defoaming(mark-*DF*): _____

Lab: + 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
1	SP	G3595P01	E524A.002	25/25 = 1	/ =	/ =	1		G3595P01	08/07/03	10:15am
2	CCV	Q01		/ =	/ =	/ =			Q01	GC1552	
3	LCS	L01		/ =	/ =	/ =			L01		
4	MS	M01		/ =	/ =	/ =			M01	$4425-06	<2
5	MSD	N01		/ =	/ =	/ =			N01	↓	↓
6	MB	K01		/ =	/ =	/ =			K01		
7	Sample	4406-14		/ =	/ =	/ =			4406-14	eb	<2
8		02		/ =	/ =	/ =			02	eb	
9		4425-08		/ =	/ =	/ =			4425-08	eb	
10		02		/ =	/ =	/ =			02	eb	
11		4455-10		/ =	/ =	/ =			4455-10	eb	
12		02		/ =	/ =	/ =			02	eb	
13		4425-06		/ =	/ =	/ =			4425-06	MS	
14		01		/ =	/ =	/ =			01		
15		03		/ =	/ =	/ =			03		
16		04		/ =	/ =	/ =			04		
17		05		/ =	/ =	/ =			05		
18		07		/ =	/ =	/ =			07		
19		4455-01		/ =	/ =	/ =			4455-01		
20		03		/ =	/ =	/ =			03		
21		05		/ =	/ =	/ =			05		
22		06		/ =	/ =	/ =			06		
23		07		/ =	/ =	/ =			07		
24		08		/ =	/ =	/ =			08		
25		09		/ =	/ =	/ =			09		
26				/ =	/ =	/ =					
27				/ =	/ =	/ =					
28				/ =	/ =	/ =					
29				/ =	/ =	/ =					
30				/ =	/ =	/ =					
31				/ =	/ =	/ =					
32				/ =	/ =	/ =					
33				/ =	/ =	/ =					
34				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$	Op #	STD Lot #	$C_{std}(ng/\mu L)\times V_{std}(\mu L)/X(g \text{ or } mL)=T$
/LCSD	2635	GC-	x /X= ppb		GC-	x /X= ppb
/MSD	2636/2637	GC-1552	200 x 2.5 /X= 20 ppb		GC-	x /X= ppb

Footnote/Anomaly:

08/11/03

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VOC Analysis General Logbook

Sequence # 033415 Batch # 033415 Matrix: W Date: 7/22/03 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	G345 P01	E524A 002	25/25 = 1	/ =	/ =	1		G345P01	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

2109

A

Applied P & Ch Laboratory
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VOC Analysis General Logbook

Sequence # 03J3452 Batch # 03J3452 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	$V/X=J_1$	$V_f/V_i=J_2$	$V_{spg}/V_{inj}=J_3$	F	A-#	Datafile	Note	pH
2313	SP	G3452P01	E524A 002	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				/ =	/ =	/ =					
2339				/ =	10/25/01 =						
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	200 × 2.5 /X= 20 ppb		GC-	× /X= ppb
MS/MSD		GC-	× /X= ppb		GC-	× /X= ppb

Footnote/Anomaly:

Level C Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & Ch Laboratory

Wet Analysis Results for Method 314.0

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 314.0
Project ID: JPL Service ID: 34425 Collected by:

Component Name: Perchlorate
CAS No:

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-4425-1	DUPE-2-3-Q03	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	<4	U
03-4425-2	EB-3-7-31-03	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	<4	U
03-4425-3	MW-20-1	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	1.5	J
03-4425-4	MW-20-2	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	<4	U
03-4425-5	MW-20-3	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	<4	U
03-4425-6	MW-20-4	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	<4	U
03-4425-7	MW-20-5	Water	07/31/03	07/31/03	08/01/03	03W3930	μg/L	4	<4	U
03W3930-MB-01	03W3930-MB-01	Water	08/01/03	08/01/03	08/01/03	03W3930	μg/L	4	<4	U

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

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

Applied P & Ch Laboratory

Wet Analysis Results for Method 7196

Client Name: GEOFON, Inc. Project No: 04-4428.10 Anal. Method 7196
Project ID: JPL Service ID: 34425 Collected by:

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

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
03-4425-1	DUPE-2-3-Q03	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03-4425-2	EB-3-7-31-03	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03-4425-3	MW-20-1	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03-4425-4	MW-20-2	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03-4425-5	MW-20-3	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03-4425-6	MW-20-4	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03-4425-7	MW-20-5	Water	07/31/03	07/31/03	08/01/03	03W3919	mg/L	0.01	<0.01	U
03W3919-MB-01	03W3919-MB-01	Water	08/01/03	08/01/03	08/01/03	03W3919	mg/L	0.01	<0.01	U

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

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

FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	34425
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3930		
LCS Filename:	-	Date Analyzed:	080103	Time Analyzed:	
LCSD Filename:	-	Date Analyzed:	–	Time Analyzed:	–

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
PERCHLORATE	µg/L	25	0	25.5	102	80-120
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

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

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 314.0

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	34425
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3930		
MS Filename:	-	Date Analyzed:	080103	Time Analyzed:	
MSD Filename:	-	Date Analyzed:	080103	Time Analyzed:	
MS Sample No:	**MW-20-4**	Sample Lab ID:	03-4425-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
PERCHLORATE	µg/L	50.0	0	56.0	112	75-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
PERCHLORATE	µg/L	50.0	55.8	112	0	20	75-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

FORM-3

Applied P & Ch Laboratory

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

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	34425
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3919		
LCS Filename:	-	Date Analyzed:	080103	Time Analyzed:	08:34
LCSD Filename:	-	Date Analyzed:	080103	Time Analyzed:	08:34

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.261	104	80-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.257	103	1	19	80-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

_____

FORM-3

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 7196

Client Name:	GEOFON, Inc.	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	34425
Project ID:	JPL	Project No:	04-4428.10	Sample Matrix:	Water
		Batch No:	03W3919		
MS Filename:	-	Date Analyzed:	080103	Time Analyzed:	08:34
MSD Filename:	-	Date Analyzed:	080103	Time Analyzed:	08:34
MS Sample No:	**MW-20-4**	Sample Lab ID:	03-4425-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0	0.209	84	78-115
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	mg/L	0.25	0.214	86	2	19	78-115
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

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

Comments: _____

6A

INITIAL CALIBRATION DATA

Lab Name: Applied P & Ch Lab Contract: 34425

Analysis: Chromium (VI) Calibration Date: 7/28/03

Concentration (mg/L)	0.000	0.0125	0.050	0.125	0.250	0.50
Absorbance	0.000	0.007	0.017	0.107	0.212	0.420

A=-0.001+ 0.846C

A=Absorbance

C=Concentration (mg/L)

r= 0.9999

FORM-7

Applied P & Ch Laboratory

CCV Recovery for Wet Analysis

Client Name: GEOFON, Inc. Contract No.: Lab Code: APCL

Case No: SAS No.: Service ID: 34425

Project ID: JPL Project No.: 04-4428.10

#	Component Name	Method	Batch No.	Unit	Expe-cted	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Perchlorate	314.0	03W3930	µg/L	50.0	56.3	113	13	√	85-115	08/01/2003
	Perchlorate	314.0	03W3930	µg/L	50.0	56.3	113	13	√	85-115	08/01/2003
	Perchlorate	314.0	03W3930	µg/L	50.0	55.5	111	11	√	85-115	08/01/2003
2	Chromium (VI)	7196	03W3919	mg/L	0.25	0.249	100	0	√	90-110	08/01/2003
	Chromium (VI)	7196	03W3919	mg/L	0.25	0.242	97	-3	√	90-110	08/01/2003

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

Chromium (VI) (7196) Worksheet

Batch # 03W3919 Matrix: W [Holding Time: 24 hours!!] Test Date: 8/1/03 Analyst: hz

Lot #: Reagent Water _____ Diphenylcazide solution _____ Test Time: 8:34 SOP: G-22

Calibration	STD Lot #	$C_{std} \times V_{std} / V_f = C_i$	A_i	$RF_i = A_i / C_i$	Calibration results	Note
STD-1	W-	x / = mg/L			Least Square [RF]=	Cal. Code:
STD-2	W-	x / = mg/L			Average $\bar{RF}$=	
STD-3	W-	x / = mg/L			C.C.=0.999 (≥ 0.995)	
STD-4	W-	x / = mg/L			RSD= % (≤ 15%)	
STD-5	W-	x / = mg/L			Ref. page	
STD-6	W-	x / = mg/L			A=-0.001+0.846C	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0 = f_1$	Treat. Ratio $V/X = f_2$	540 nm A	Concentration $C' = A/RF$	C (Sample) $C = f_1 f_2 C'$	Anomaly Note
CCV	Lot: W- 7757	Expected Conc.: x / = 0.25 mg/L			0.210	0.248 mg/L	REC. %	90-110 %
Method Blank	Bl. Lot: 1117		/X_0 = 1	95.0/ =	0.000	mg/L	0.00 ppm	
LCS1	Bl. Lot: V		/X_0 = 1	95.0/ =	0.220	mg/L	0.26 ppm	
Sample-1	4425-1		/X_0 = 1	95.0/ =	0.002	mg/L	0.004 ppm	
MS on S-1	6		/X_0 = 1	95.0/ =	0.176	mg/L	0.209 ppm	
MSD on S-1	6		/X_0 = 1	95.0/ =	0.180	mg/L	0.214 ppm	
Sample 2	2		/X_0 = 1	95.0/ =	0.000	mg/L	0.001 ppm	
Sample 3	3		/X_0 = 1	95.0/ =	0.004	mg/L	0.006 ppm	
Sample 4	4		/X_0 = 1	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 5	5		/X_0 = 1	95.0/ =	0.001	mg/L	0.002 ppm	
Sample 6	6		/X_0 = 1	95.0/ =	0.005	mg/L	0.007 ppm	
Sample 7	7		/X_0 = 1	95.0/ =	0.002	mg/L	0.004 ppm	
Sample 8 250	4426-1		/X_0 = 1	95.0/ =	0.228	mg/L	0.271 ppm	
Sample 9 251	2		/X_0 = 1 ✓	95.0/ =	0.004	mg/L	0.006 ppm	
Sample 10			/X_0 = 1	95.0/ =		mg/L	ppm	
Blank	Lot:		/X_0 = 1	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot:		/X_0 = 1	95.0/ =	0.216	mg/L	0.257 ppm	
Sample 11			/X_0 =	95.0/ =		mg/L	ppm	
Sample 12			/X_0 =	95.0/ =		mg/L	ppm	
Sample 13			/X_0 =	95.0/ =		mg/L	ppm	
Sample 14			/X_0 =	95.0/ =		mg/L	ppm	
Sample 15			/X_0 =	95.0/ =		mg/L	ppm	
Sample 16			/X_0 =	95.0/ =		mg/L	ppm	
Sample 17			/X_0 =	95.0/ =		mg/L	ppm	
Sample 18			/X_0 =	95.0/ =		mg/L	ppm	
Sample 19			/X_0 =	95.0/ =		mg/L	ppm	
Sample 20			/X_0 =	95.0/ =		mg/L	ppm	
MTX Dup.	Spking 0.25 mg/L		/X_0 =	95.0/ =	0.204	0.248 mg/L	ppm	

Type	STD Lot #	$C_{STD}(\mu g/mL) \times V_{STD}(mL) / X(g \text{ or } mL) = T$	Spike Rec.	Ctl Limit (W/S)
MS	W-7757	x / = 0.25 ppm	%	80-120 %/80-120 %
MSD	W- V	x / = ppm	%	.. ..
LCS	W-7853	x / = ppm	%	80-120 %/80-120 %
LCSD	W-	x / = ppm	%	.. ..

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

Applied P & Ch Laboratory

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Tel: (909) 590-1828 Fax: (909) 590-1498

Chromium (VI) (7196) Worksheet

Batch # PZ Matrix: W&GS [Holding Time: 24 hours!!] Test Date: 7/28/03 Analyst: [illegible]

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

Calibration	STD Lot #	$C_{std} \times V_{std}/V_f = C_i$	A_i	$RF_i = A_i/C_i$	Calibration results	Note
STD-1	W-7757	× / = 0.00 mg/L	0.000		Least Square [RF]=	Cal. Code:
STD-2	W-	× / = 0.025 mg/L	0.007		Average $\bar{RF}$=	
STD-3	W-	× / 0.025 = 0.050 mg/L	0.017		C.C. 0.9999 (≥ 0.995)	
STD-4	W-	× / = 0.125 mg/L	0.107		RSD= % (≤ 15%)	
STD-5	W-	× / = 0.250 mg/L	0.212		Ref. page	
STD-6	W-	× / = 0.50 mg/L	0.420		A = -0.001 + 0.846C	

Analysis Type	Sample ID or Lot #	Samp. Amnt X_0 (g or mL)	Dilu./Ext $X/X_0 = f_1$	Treat. Ratio $V/X = f_2$	540 nm A	Concentration $C' = A/\bar{RF}$	C (Sample) $C = f_1 f_2 C'$	Anom Note
CCV	Lot: W-7853	Expected Conc.:	×	/ = 0.25 mg/L	0.218	0.259 mg/L	REC. %	90-110
Method Blank	Bl. Lot:		$/X_0$ =	95.0/ =	0.000	0.000 mg/L	ppm	
LCS1	Bl. Lot:		$/X_0$ =	95.0/ =	0.210	0.250 mg/L	ppm	
Sample-1	4177-37	1ml → 100ml	$/X_0$ = 1	95.0/ = 2	0.290	0.689 mg/L	ppm	
MS on S-1	37	0.5ml → 100ml	$/X_0$ =	95.0/ = 2	0.287	0.682 mg/L	report	
MSD on S-1	4175-15	10.0g	50.0ml $/X_0$ = 5	95.0/ = 10	0.050	3.04 mg/L	ppm	
Sample 2	15	4	$/X_0$ =	95.0/ = 2	0.247	2.94 mg/L	report	
Sample 3			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 4			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 5			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 6			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 7			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 8			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 9			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 10			$/X_0$ =	95.0/ =		mg/L	ppm	
Blank	Lot:		$/X_0$ =	95.0/ =		mg/L	ppm	
LCS2	Bl. Lot:		$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 11			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 12			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 13			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 14			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 15			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 16			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 17			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 18			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 19			$/X_0$ =	95.0/ =		mg/L	ppm	
Sample 20			$/X_0$ =	95.0/ =		mg/L	ppm	
MTX Dup.	closing on [illegible]		$/X_0$ =	95.0/ =	0.218	0.259 mg/L	ppm	

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

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

2121

APCL form 5-155 May 08, 1996. Ver. 3.1 No pencil. Use blue pen for record. Use red pen for correction.
File:[CUST.DOC.WET]CR6.TEX Root-file: CR6_ROOT.TEX 1-Page-File: CR61.TEX
Control limits are subjected to change. The updated values are given in the latest [illegible]

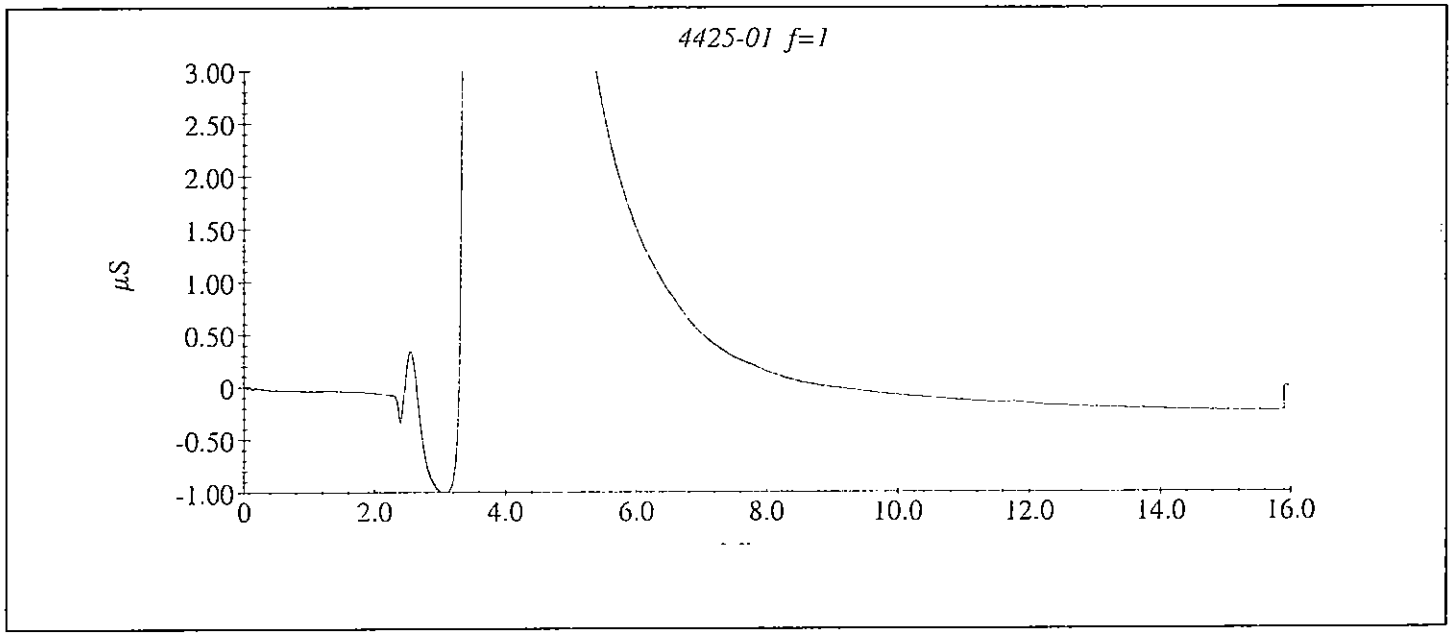
APCL Perchlorate Analysis Report

Sample Name : 4425-01 f=1
Data File Name : C:\DATA\03W3930K\4425-01_011.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 2:46:28 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



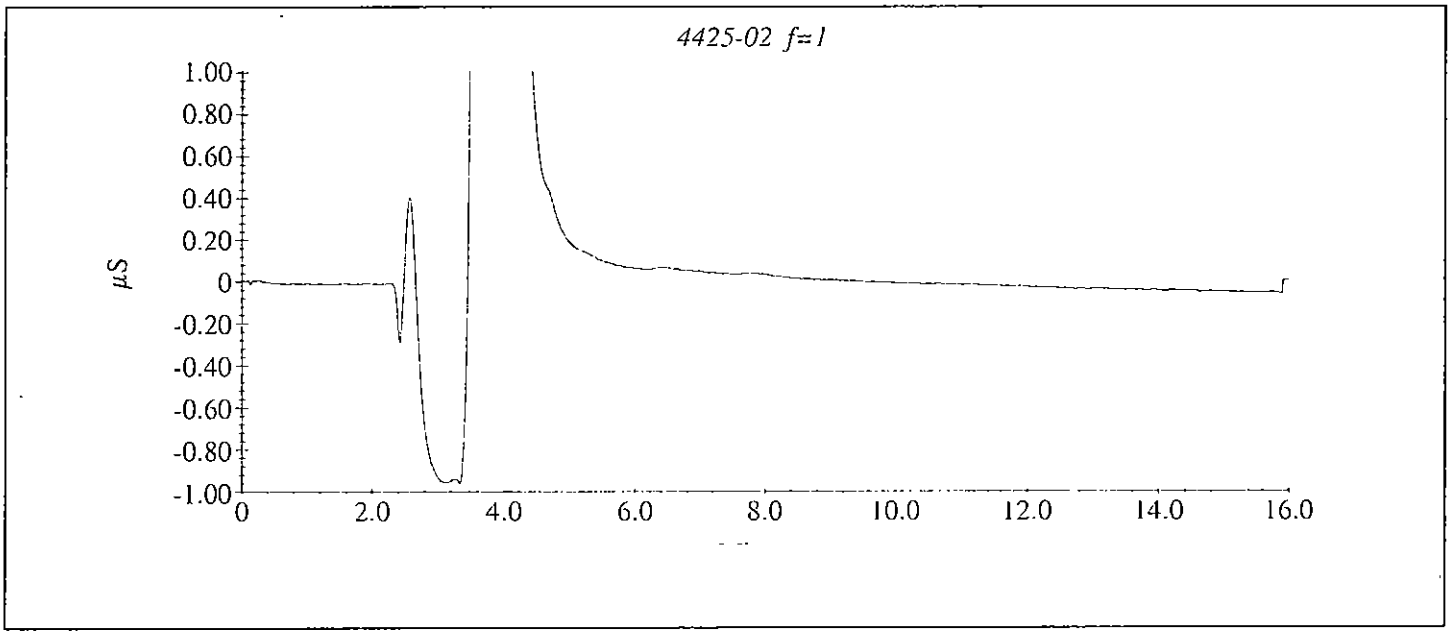
APCL Perchlorate Analysis Report

Sample Name : 4425-02 f=1
Data File Name : C:\DATA\03W3930K\4425-02_012.DXD

Method File Name : c:\peaknet\method\e314-01 1.met
Date Time Collected : 08/01/2003 3:04:53 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



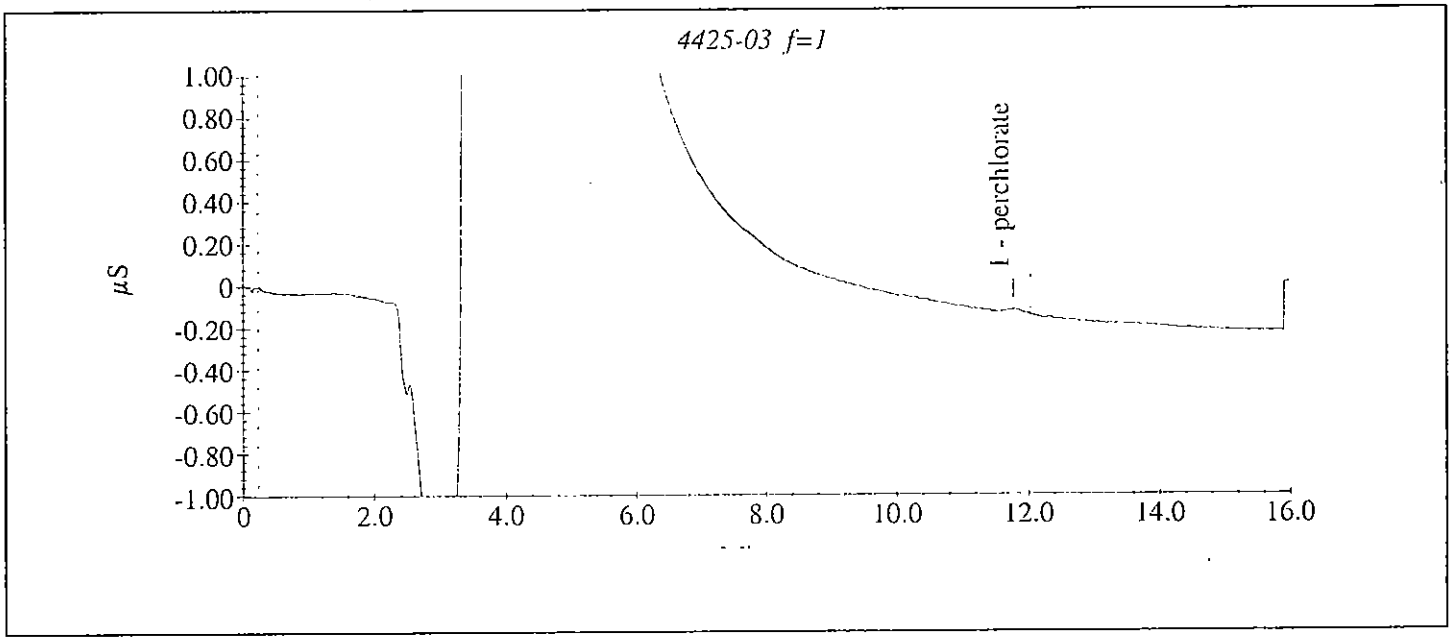
APCL Perchlorate Analysis Report

Sample Name : 4425-03 f=1
Data File Name : C:\DATA\03W3930K\4425-03_018.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 4:55:27 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.77	1.49	2535.10	171.16



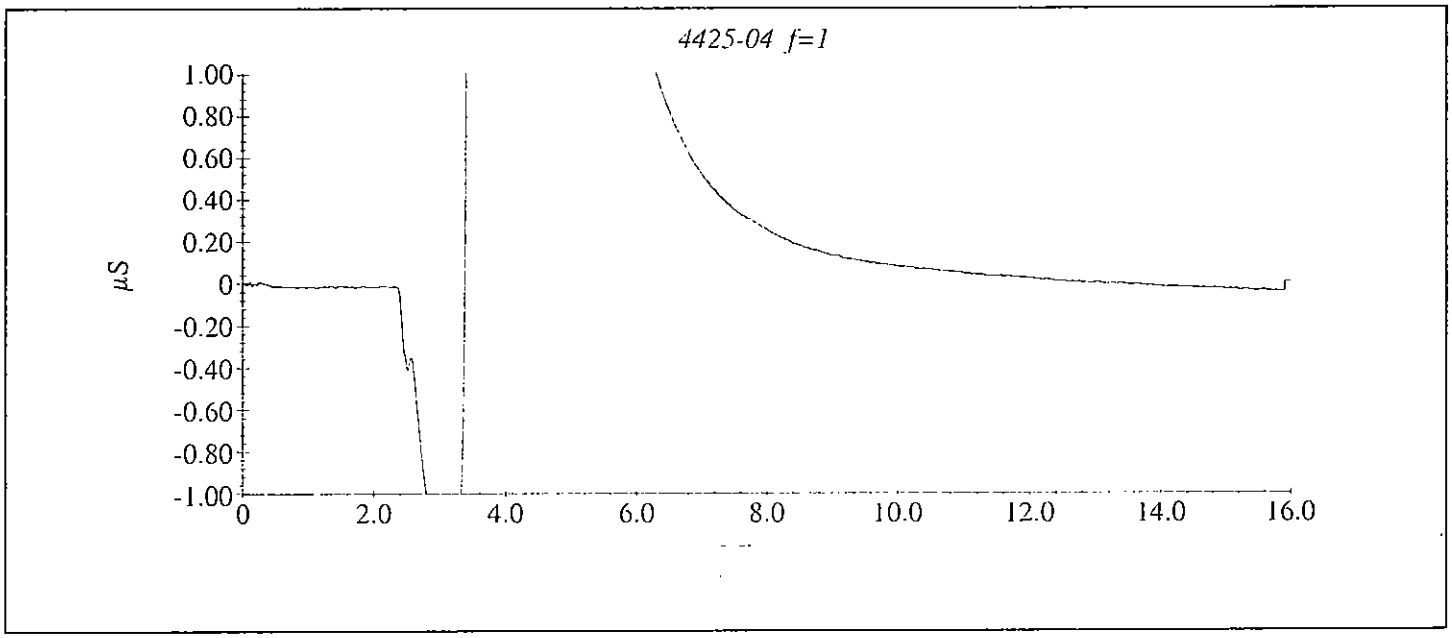
APCL Perchlorate Analysis Report

Sample Name : 4425-04 f=1
Data File Name : C:\DATA\03W3930K\4425-04_019.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 5:13:50 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



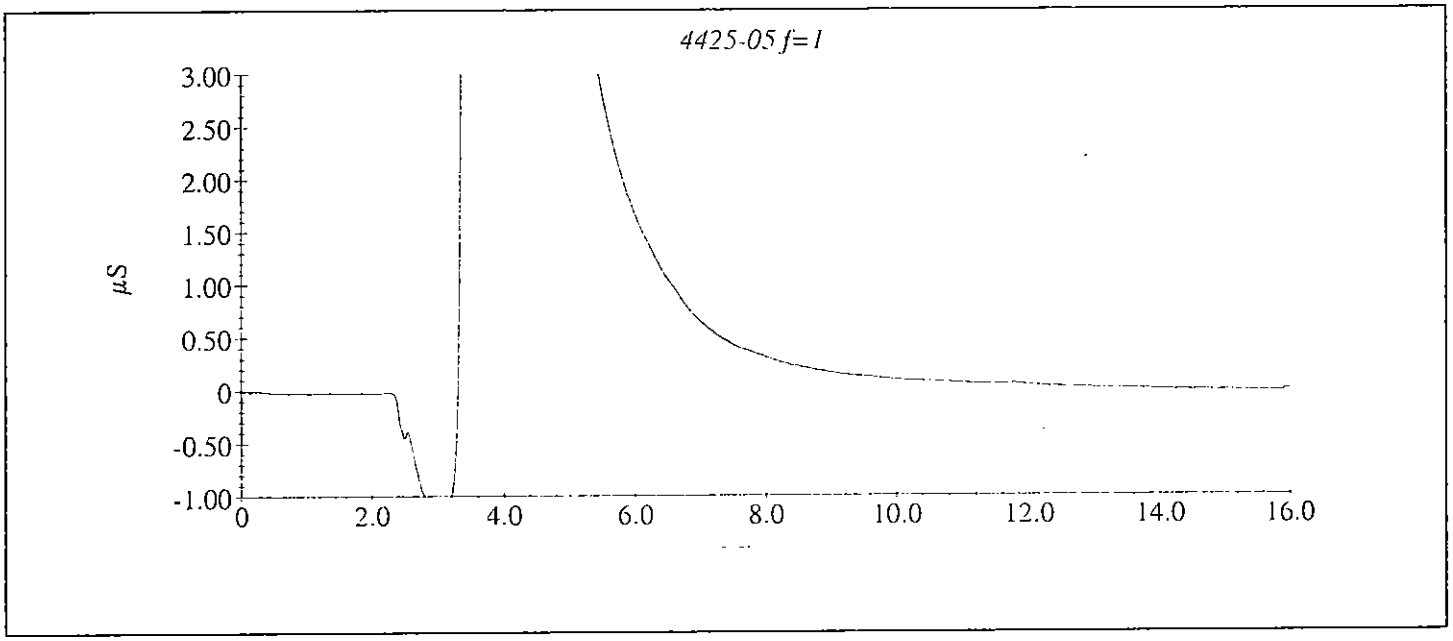
APCL Perchlorate Analysis Report

Sample Name : 4425-05 f=1
Data File Name : C:\DATA\03W3930K\4425-~~04~~05_020.DXD
ww 8/1/03

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 5:32:14 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



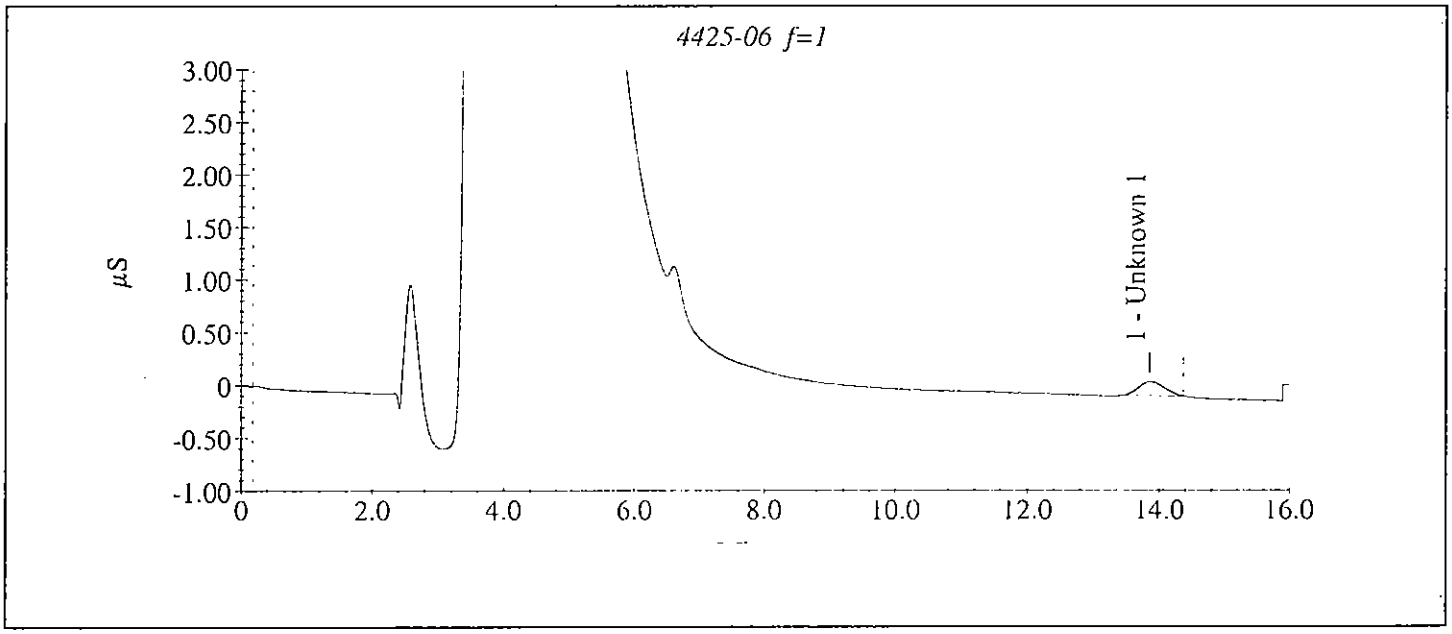
APCL Perchlorate Analysis Report

Sample Name : 4425-06 f=1
Data File Name : C:\DATA\03W3930K\4425-06_009.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 2:09:36 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



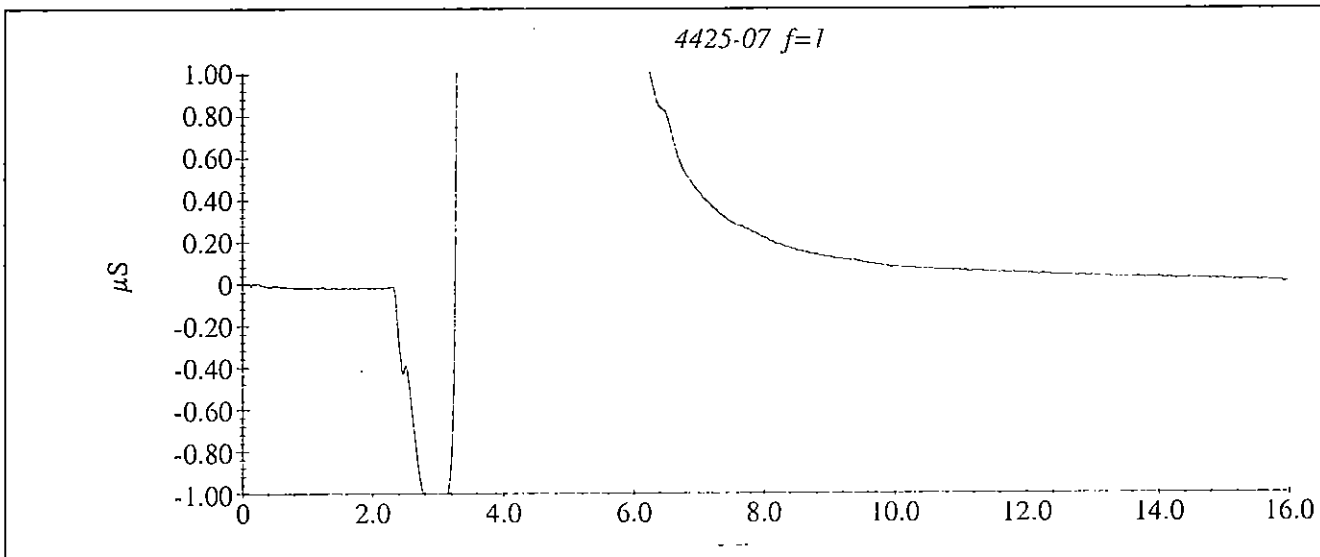
APCL Perchlorate Analysis Report

Sample Name : 4425-07 f=1
Data File Name : C:\DATA\03W3930K\4425-07_021.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 5:50:38 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



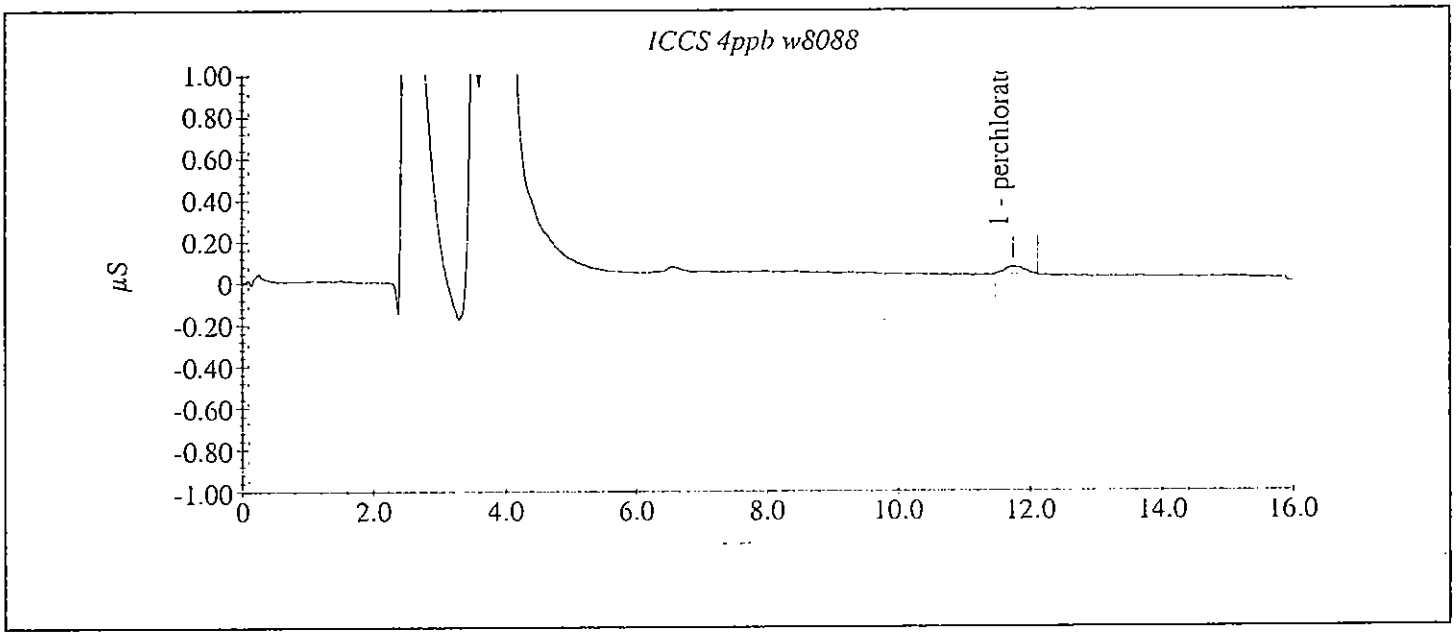
APCL Perchlorate Analysis Report

Sample Name : ICCS 4ppb w8088
Data File Name : C:\DATA\03W3930K\W3930 ICCS 4PPB_005.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 12:55:57 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.75	4.18	7091.90	355.47



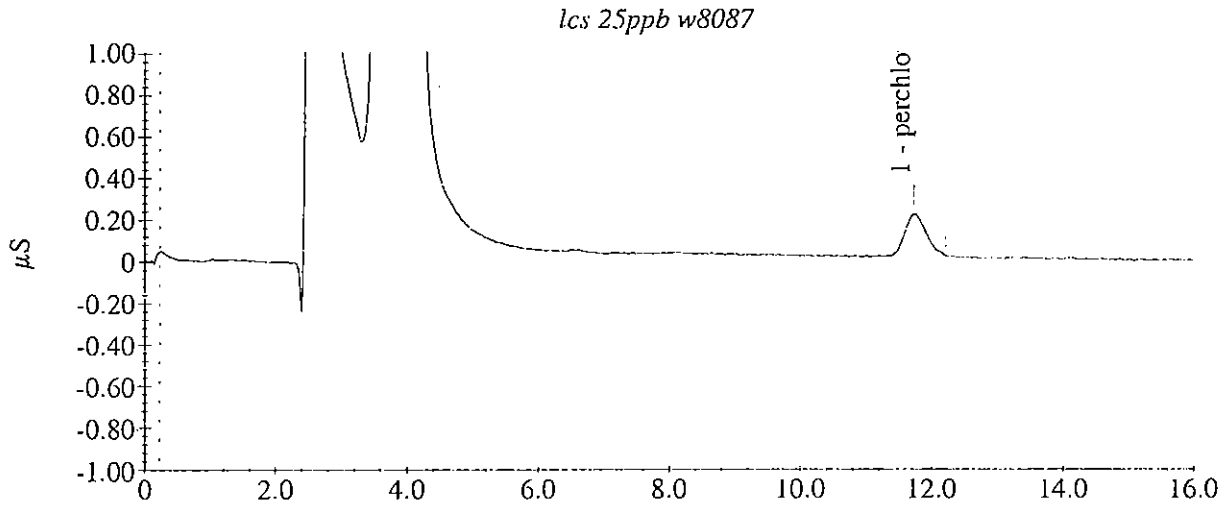
APCL Perchlorate Analysis Report

Sample Name : lcs 25ppb w8087
Data File Name : C:\DATA\03W3930K\W3930 L01_003.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 12:19:01 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.73	25.50	43267.10	1988.77



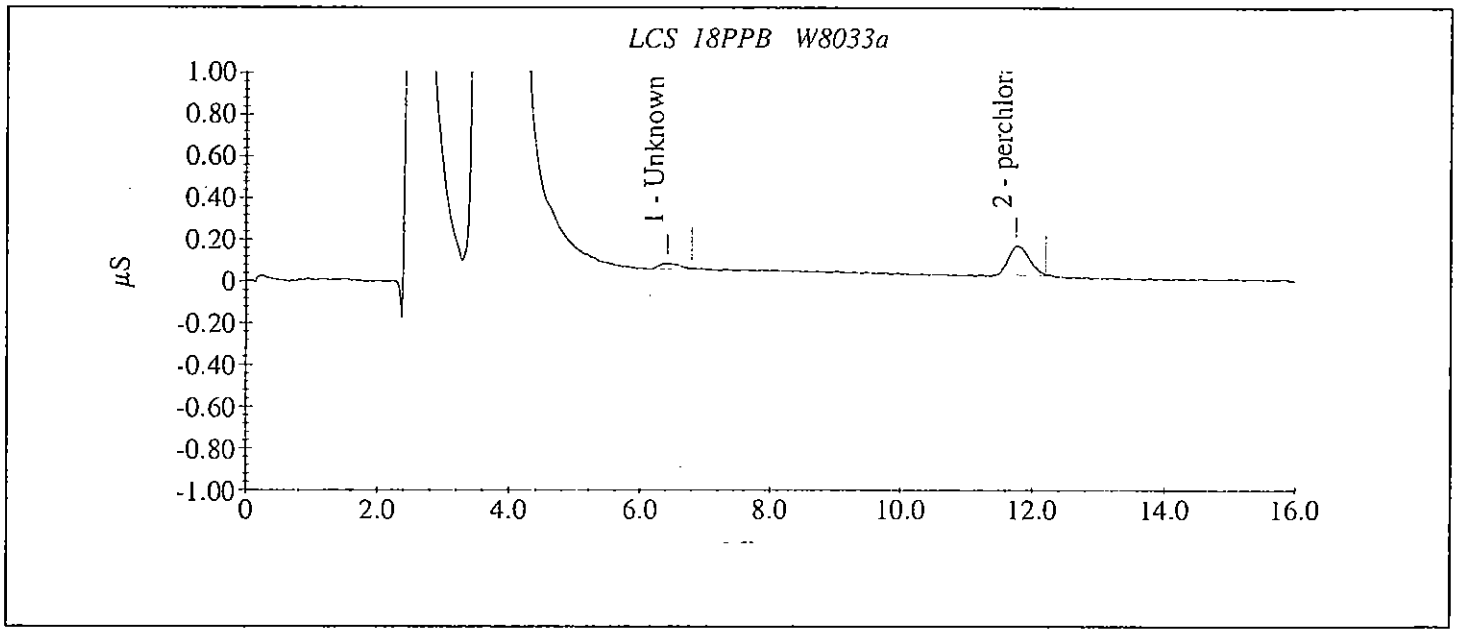
APCL Perchlorate Analysis Report

Sample Name : LCS 18PPB W8033a
Data File Name : C:\DATA\03W3930K\W3930 J01_004.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 12:37:29 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
2	perchlorate	11.75	17.72	30072.30	1391.53



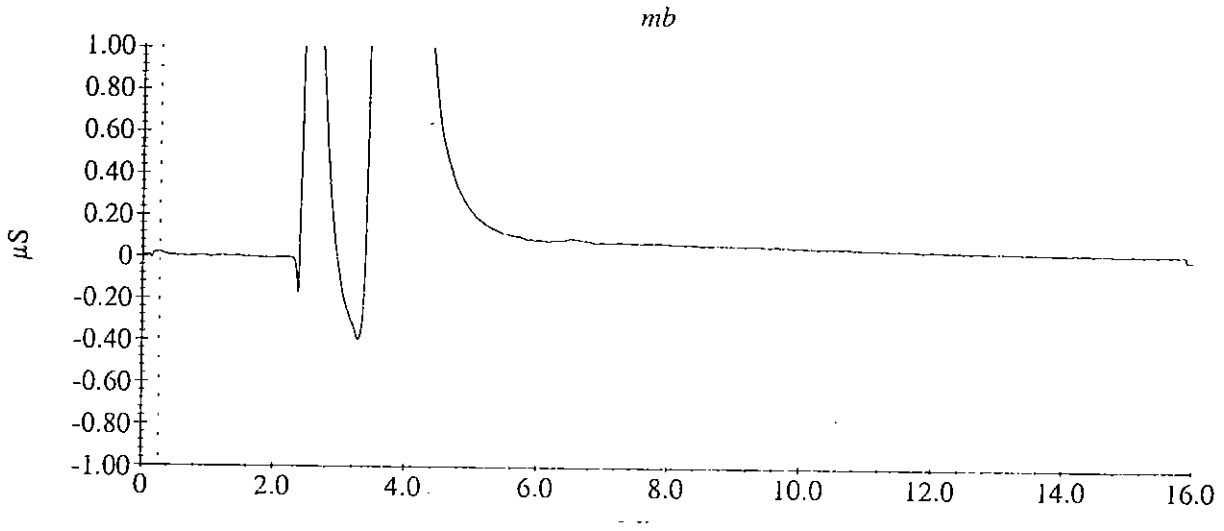
APCL Perchlorate Analysis Report

Sample Name : mb
Data File Name : C:\DATA\03W3930K\W3930 K01_006.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 1:14:23 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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



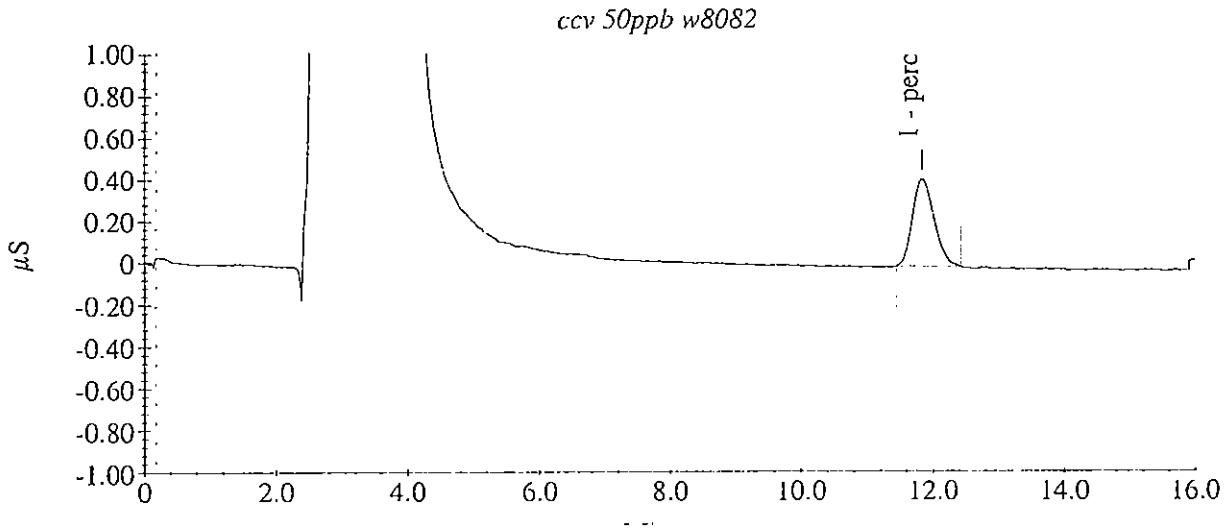
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w8082
Data File Name : C:\DATA\03W3930K\W3930 Q01_002.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 12:00:35 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.83	56.31	95562.00	4205.33



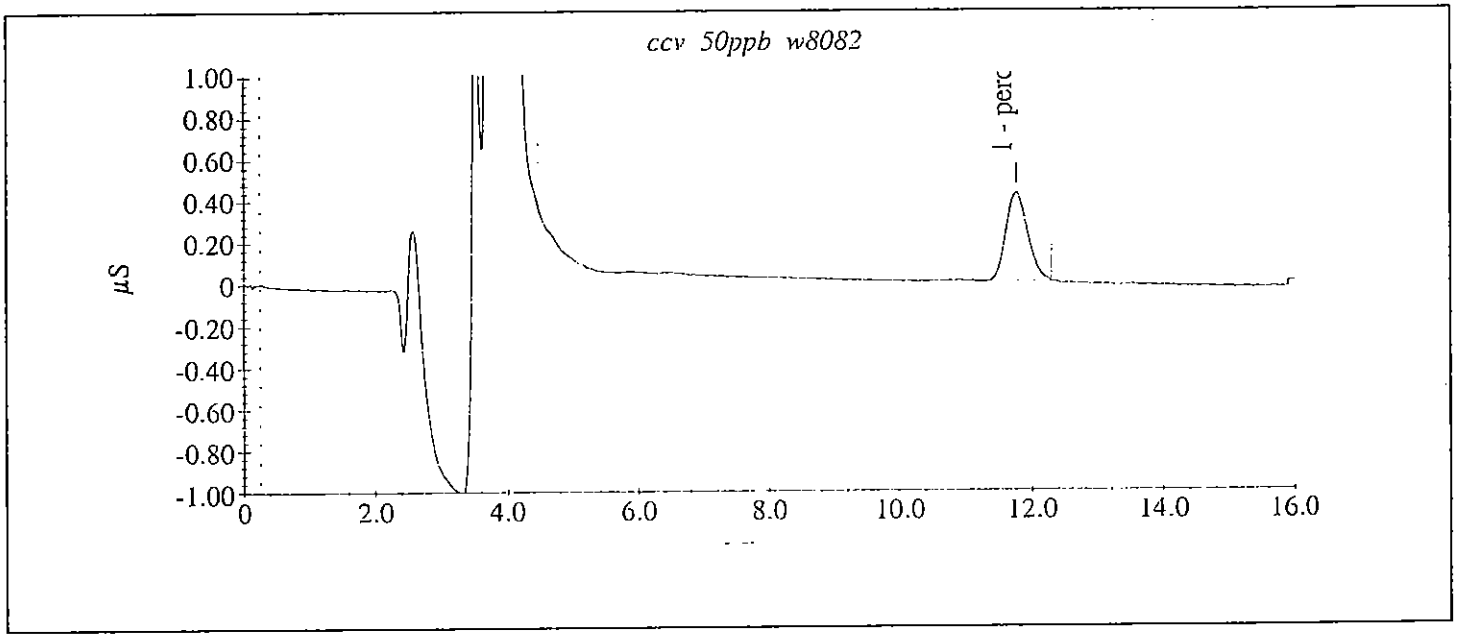
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w8082
Data File Name : C:\DATA\03W3930K\W3930 Q02_013.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 3:23:18 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.77	56.28	95516.10	4230.84



APCL Perchlorate Analysis Report

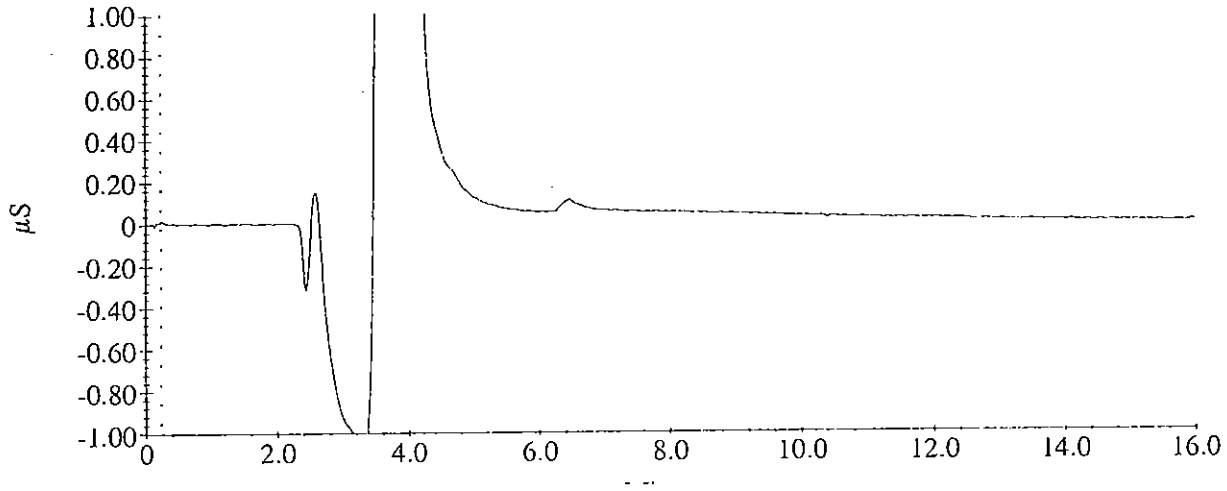
Sample Name : ccb
Data File Name : C:\DATA\03W3930K\W3930 K02_014.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 3:41:45 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

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

ccb



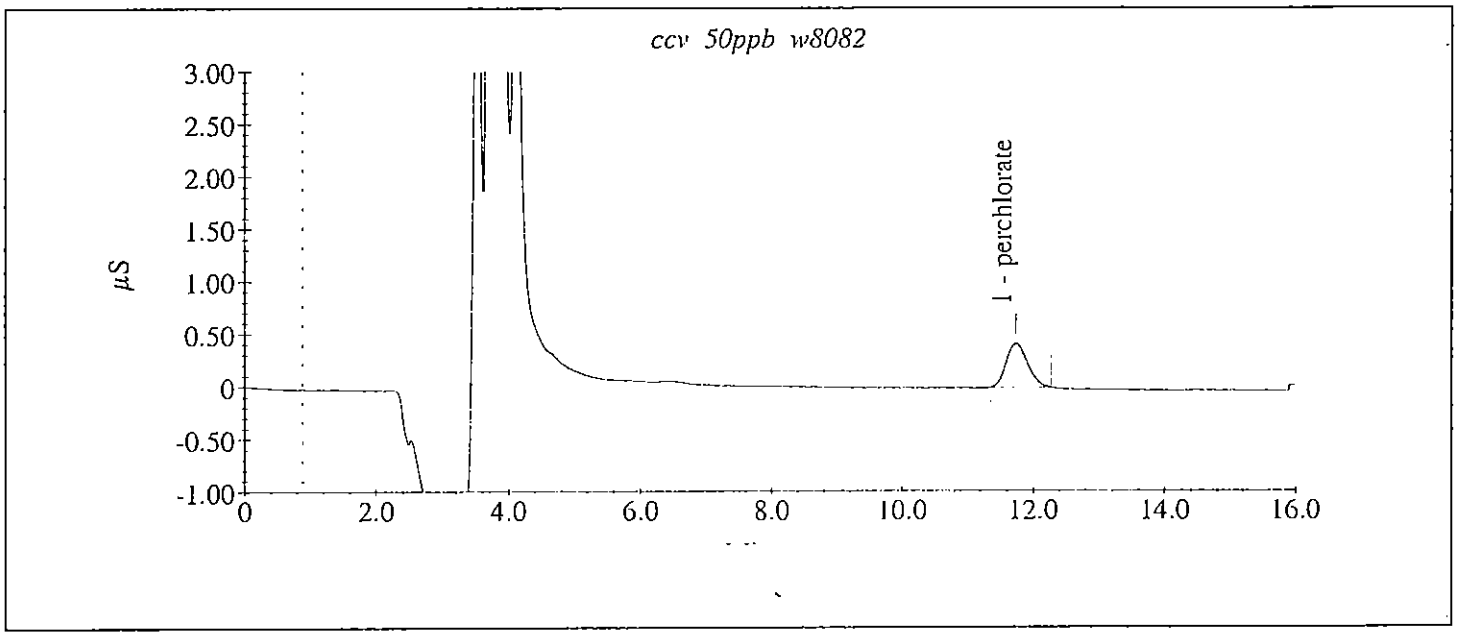
APCL Perchlorate Analysis Report

Sample Name : ccv 50ppb w8082
Data File Name : C:\DATA\03W3930K\W3930 Q03_022.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 6:09:05 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.73	55.49	94172.45	4173.42



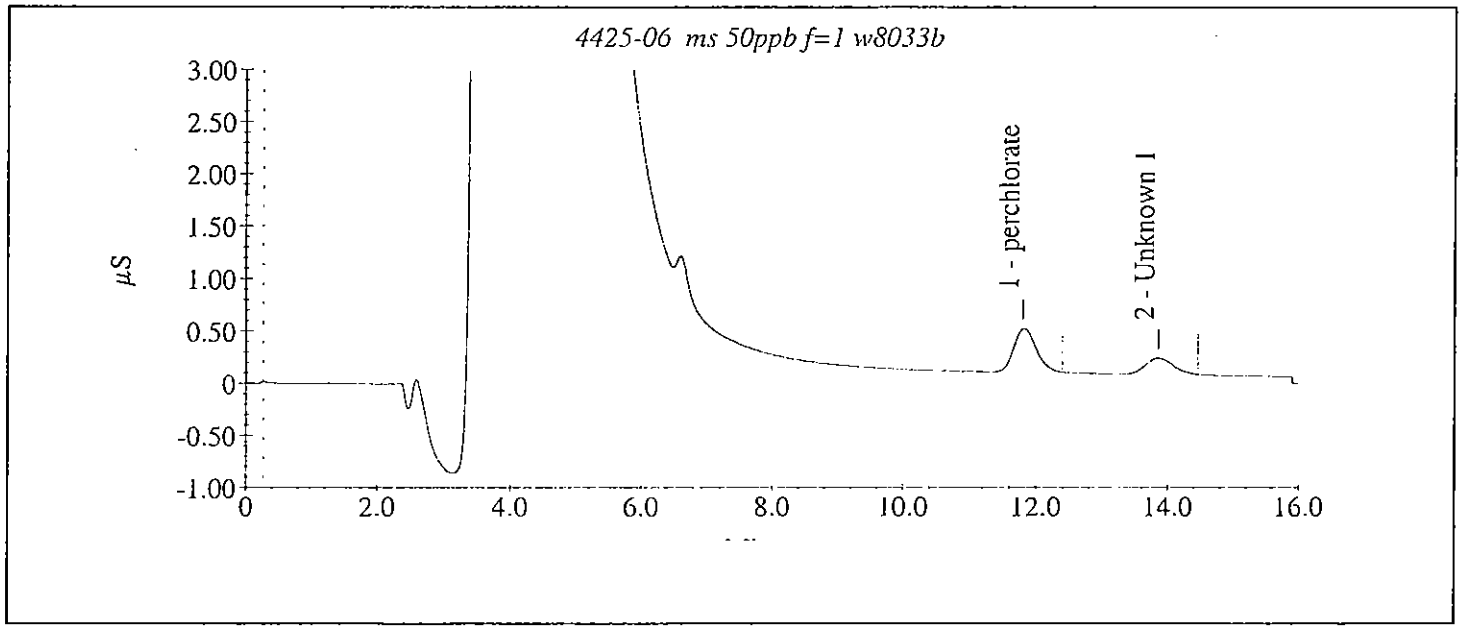
APCL Perchlorate Analysis Report

Sample Name : 4425-06 ms 50ppb f=1 w8033b
Data File Name : C:\DATA\03W3930K\W3930 M01_015.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 4:00:11 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.80	55.97	94980.25	4151.26



Rec 111.94%

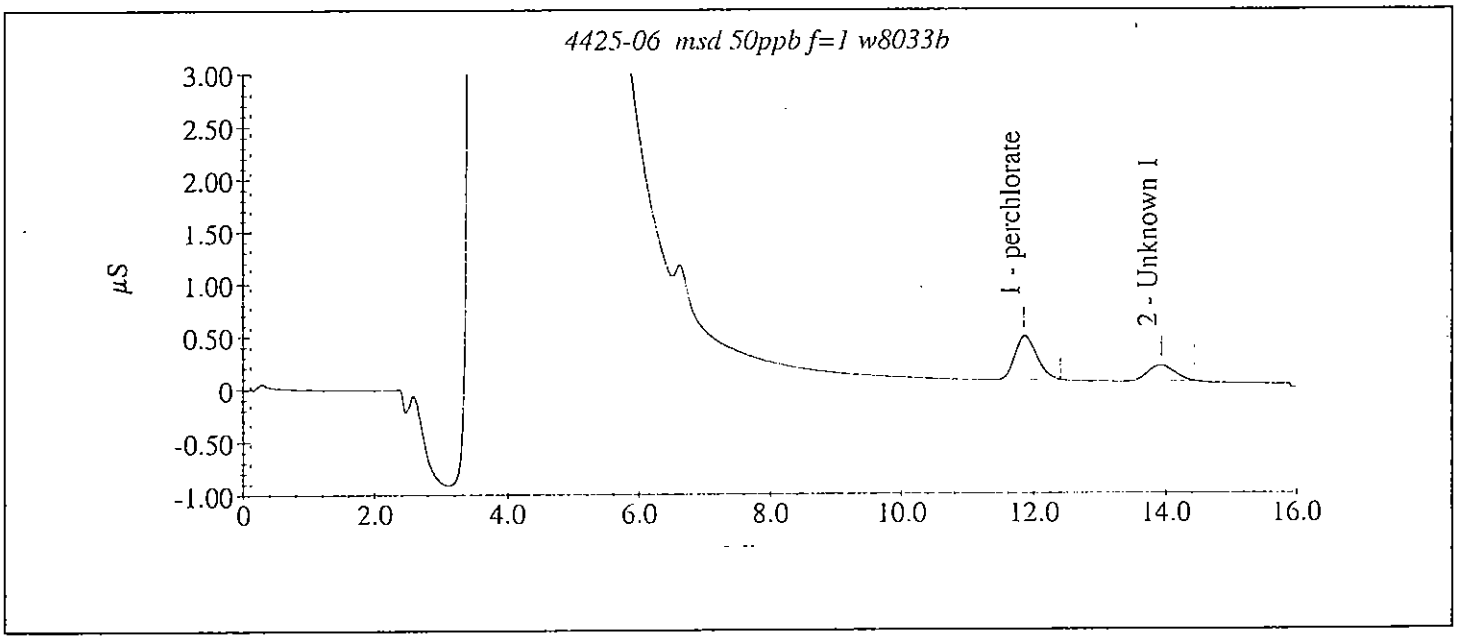
APCL Perchlorate Analysis Report

Sample Name : 4425-06 msd 50ppb f=1 w8033b
Data File Name : C:\DATA\03W3930K\W3930 N01_016.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 4:18:35 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.85	55.81	94705.00	4168.18



Rec 111.6%

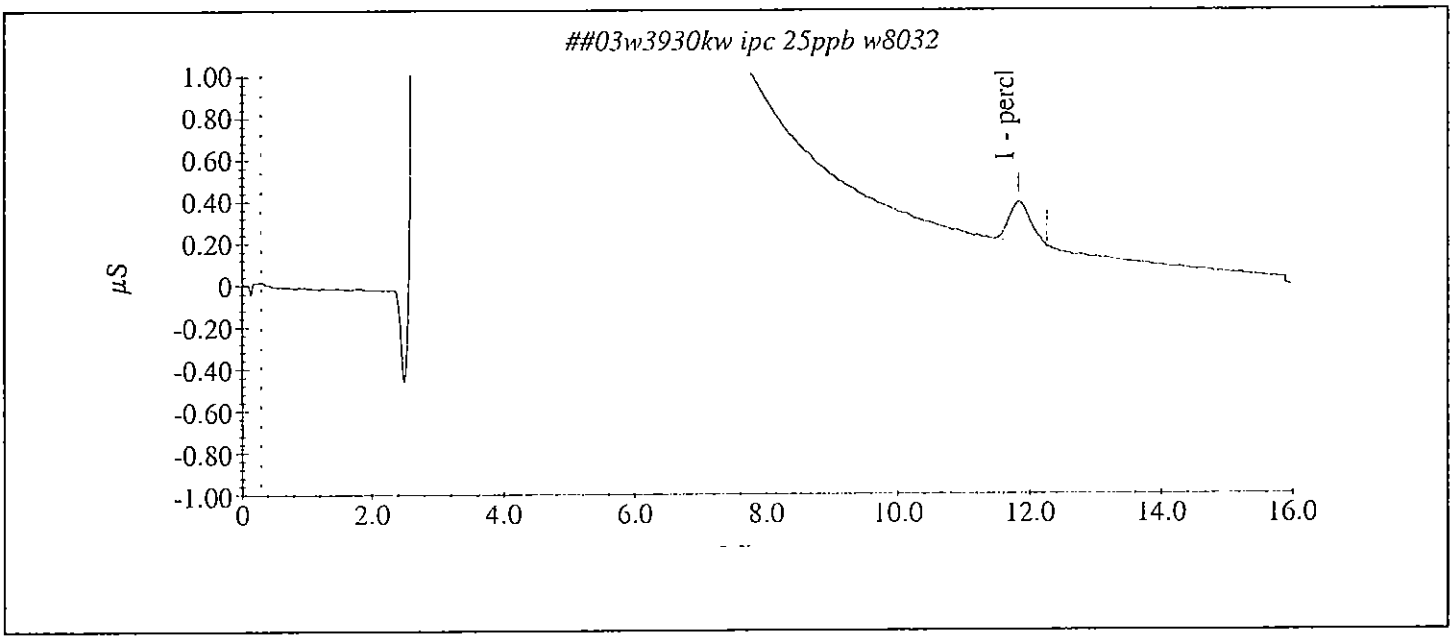
APCL Perchlorate Analysis Report

Sample Name : ##03w3930kw ipc 25ppb w8032
Data File Name : C:\DATA\03W3930K\W3930 IPC 25PPB_001.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 08/01/2003 11:41:51 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	perchlorate	11.83	25.24	42832.05	1928.21



Schedule File: C:\PeakNet\schedule\03w3930k.sch

ine	Sample	Sample Type	Level	Method	Data File	Volume	Dilution
1	##03w3930kw ipc 25ppb w8032	Sample		e314-011.met	c:\data\03w3930k\w3930 ipc 25ppb	1	1
2	ccv 50ppb w8082	Sample		e314-011.met	c:\data\03w3930k\w3930 q01	1	1
3	lcs 25ppb w8087	Sample		e314-011.met	c:\data\03w3930k\w3930 l01	1	1
4	LCS 18PPB W8033a	Sample		e314-011.met	c:\data\03w3930k\w3930 j01	1	1
5	ICCS 4ppb w8088	Sample		e314-011.met	c:\data\03w3930k\w3930 iccs 4ppb	1	1
6	mb	Sample		e314-011.met	c:\data\03w3930k\w3930 k01	1	1
7	4427-01 f=1	Sample		e314-011.met	c:\data\03w3930k\4427-01	1	1
8	4427-02 f=1	Sample		e314-011.met	c:\data\03w3930k\4427-02	1	1
9	4425-06 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-06	1	1
10	4433-01 f=1	Sample		e314-011.met	c:\data\03w3930k\4433-01	1	1
11	4425-01 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-01	1	1
12	4425-02 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-02	1	1
13	ccv 50ppb w8082	Sample		e314-011.met	c:\data\03w3930k\w3930 q02	1	1
14	ccb	Sample		e314-011.met	c:\data\03w3930k\w3930 k02	1	1
15	4425-06 ms 50ppb f=1 w8033b	Sample		e314-011.met	c:\data\03w3930k\w3930 m01	1	1
16	4425-06 msd 50ppb f=1 w8033b	Sample		e314-011.met	c:\data\03w3930k\w3930 n01	1	1
17	4433-01 sprite 5ppb f=1	Sample		e314-011.met	c:\data\03w3930k\4433-01 sprite 5ppb	1	1
18	4425-03 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-03	1	1
19	4425-04 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-04	1	1
20	4425-05 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-05	1	1
21	4425-07 f=1	Sample		e314-011.met	c:\data\03w3930k\4425-07	1	1
22	ccv 50ppb w8082	Sample		e314-011.met	c:\data\03w3930k\w3930 q03	1	1
23		Sample		aastopcl.met		1	1

Analyst WW

Date 8/1/03

Instrument IC-K

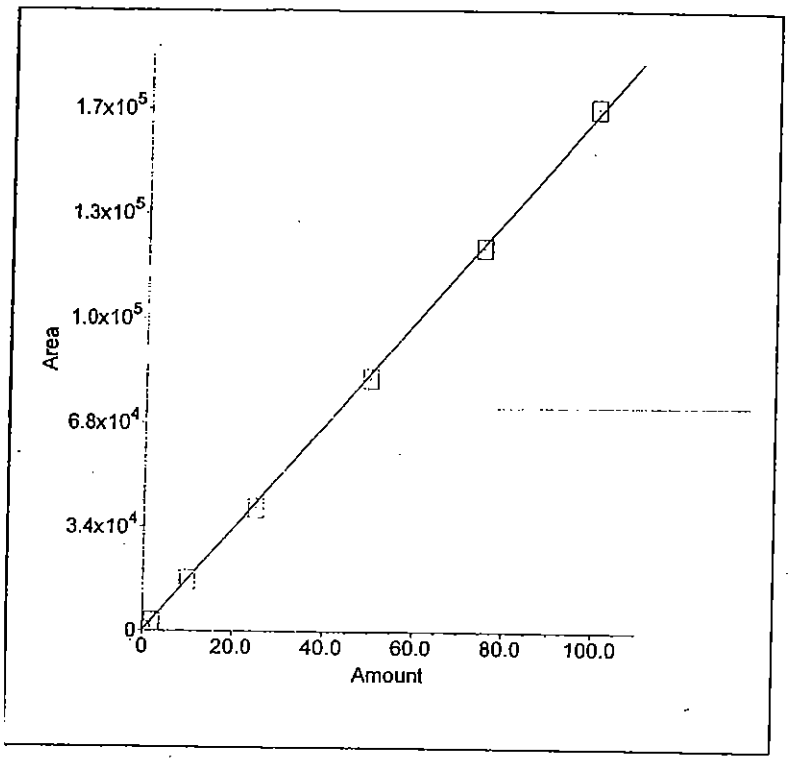
Schedule File: C:\PeakNet\schedule\03W3930K.sch

Line	Weight	Int. Std.	Comment
1	1	1	
2	1	1	
3	1	1	
4	1	1	
5	1	1	
6	1	1	
7	1	1	
8	1	1	
9	1	1	
10	1	1	
11	1	1	
12	1	1	
13	1	1	
14	1	1	
15	1	1	
16	1	1	
17	1	1	
18	1	1	
19	1	1	
20	1	1	
21	1	1	
22	1	1	
23	1	1	

Default Method Path: C:\PEAKNET\METHOD
Default Data Path: C:\DATA\03W3650K
Comment:

Method:C:\PEAKNET\METHOD\E314-011.MET Updated:03/13/2003 10:39:48 AM Total:1

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



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

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

2142

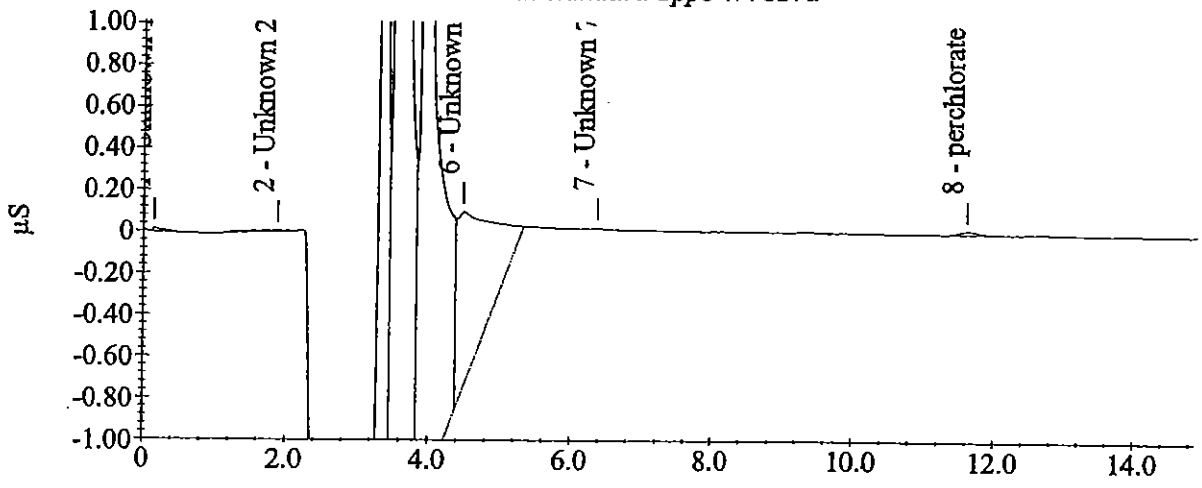
APCL Perchlorate Analysis Report

Sample Name : cal standard 2ppb W7827a
Data File Name : C:\DATA\E314-011\std-2pb_002.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 6:13:12 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.62	1.92	2910	164



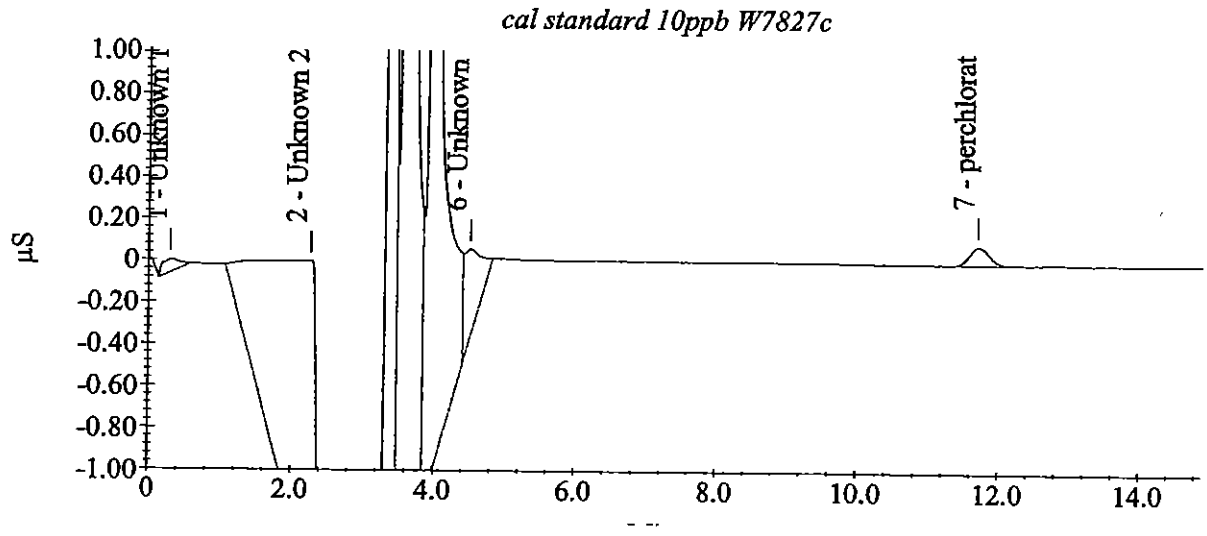
APCL Perchlorate Analysis Report

Sample Name : cal standard 10ppb W7827c
Data File Name : C:\DATA\E314-011\std-10pb_004.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 6:48:21 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
7	perchlorate	11.70	11.16	16917	879



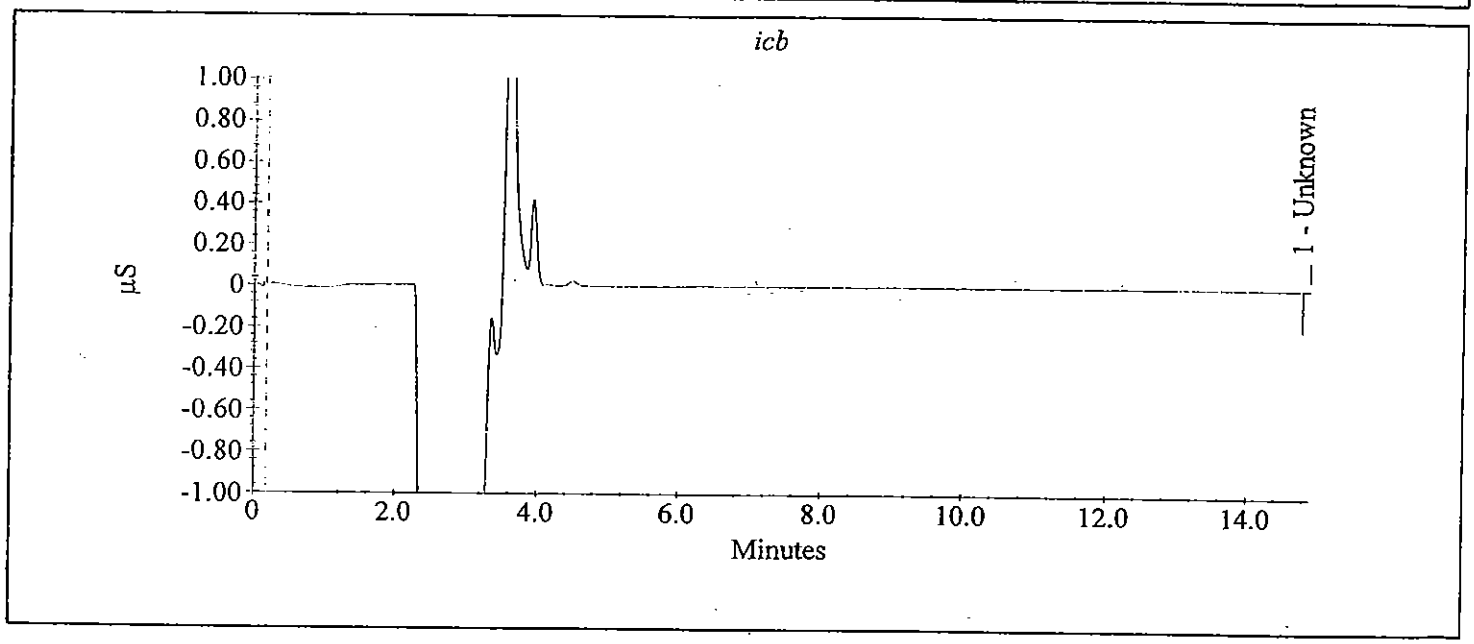
APCL Perchlorate Analysis Report

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

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

Peak Information : All Components

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



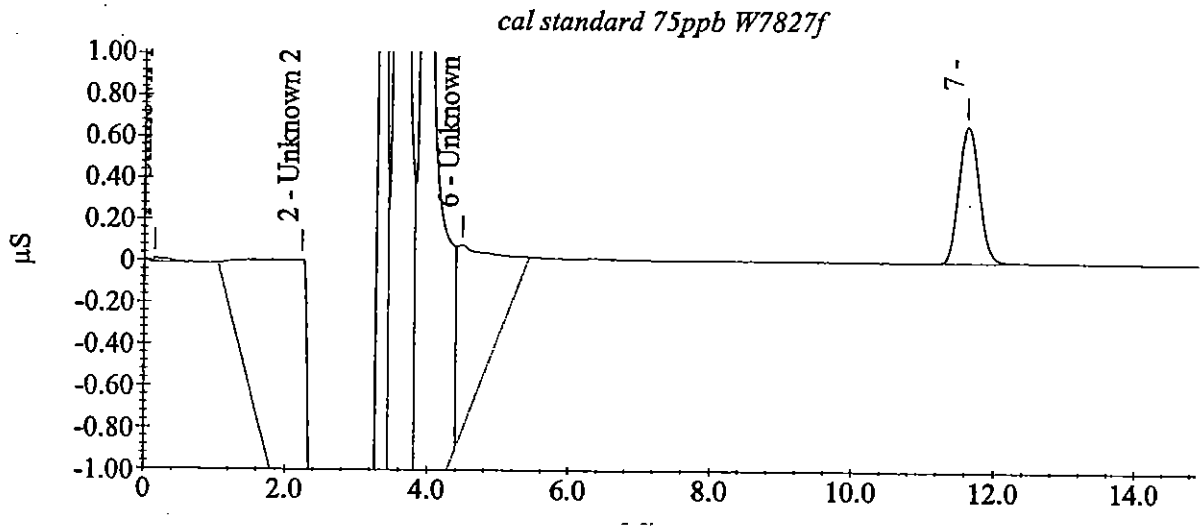
APCL Perchlorate Analysis Report

Sample Name : cal standard 75ppb W7827f
Data File Name : C:\DATA\E314-011\std-75pb_007.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:41:05 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
7	perchlorate	11.62	83.23	126224	6553



APCL Perchlorate Analysis Report

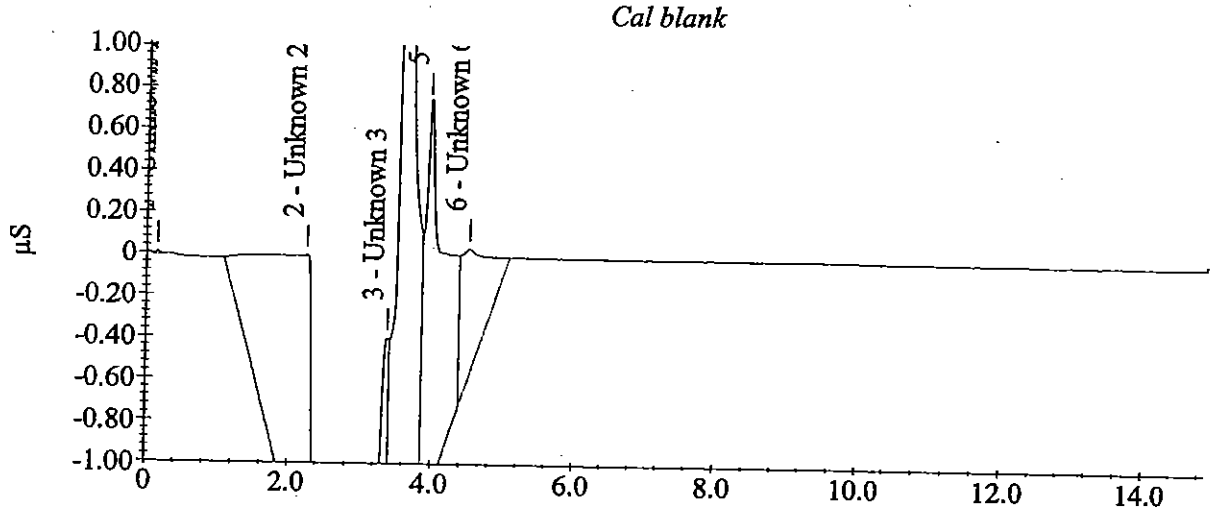
Sample Name : Cal blank
Data File Name : C:\data\E314-011\Mb_001.DXD

Method File Name : c:\peaknet\method\e314-011.met
Date Time Collected : 03/12/2003 5:55:39 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

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

Cal blank



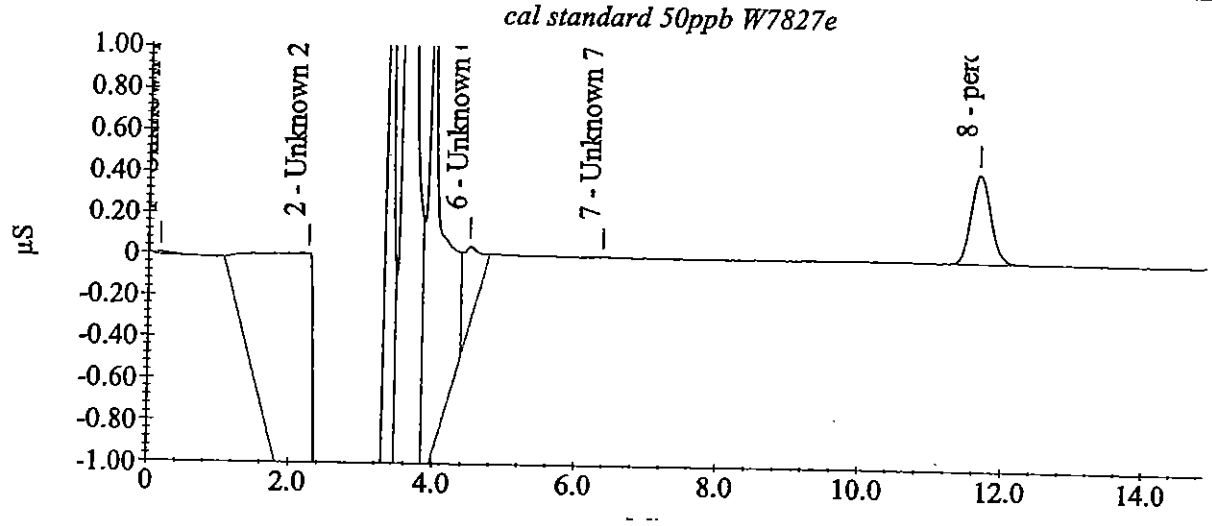
APCL Perchlorate Analysis Report

Sample Name : cal standard 50ppb W7827e
Data File Name : C:\DATA\E314-011\std-50pb_006.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:23:30 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.67	54.89	83240	4320



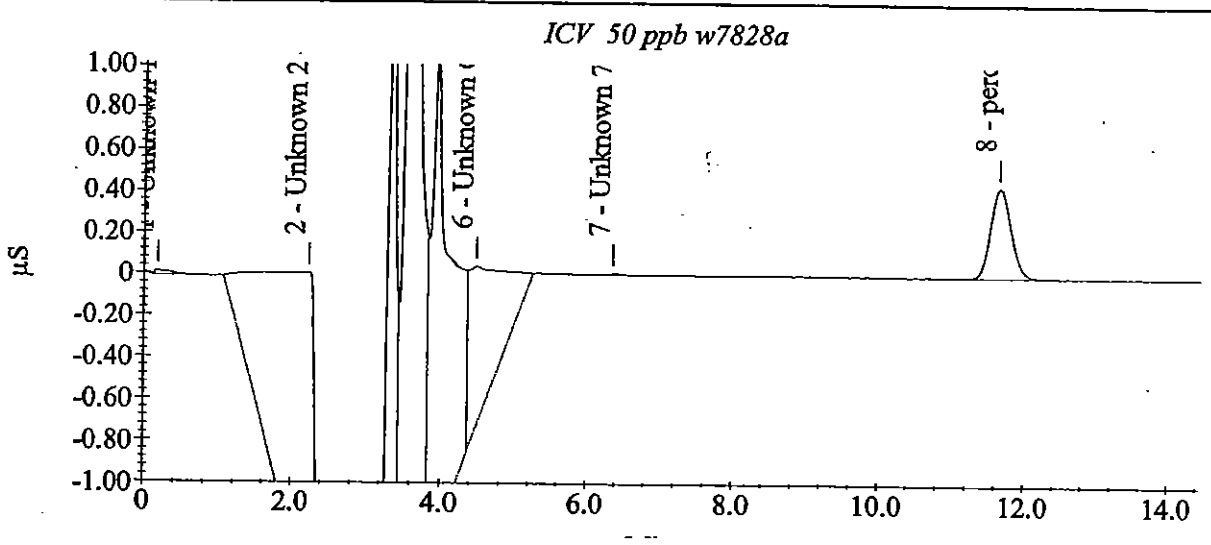
APCL Perchlorate Analysis Report

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

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

Peak Information : All Components

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



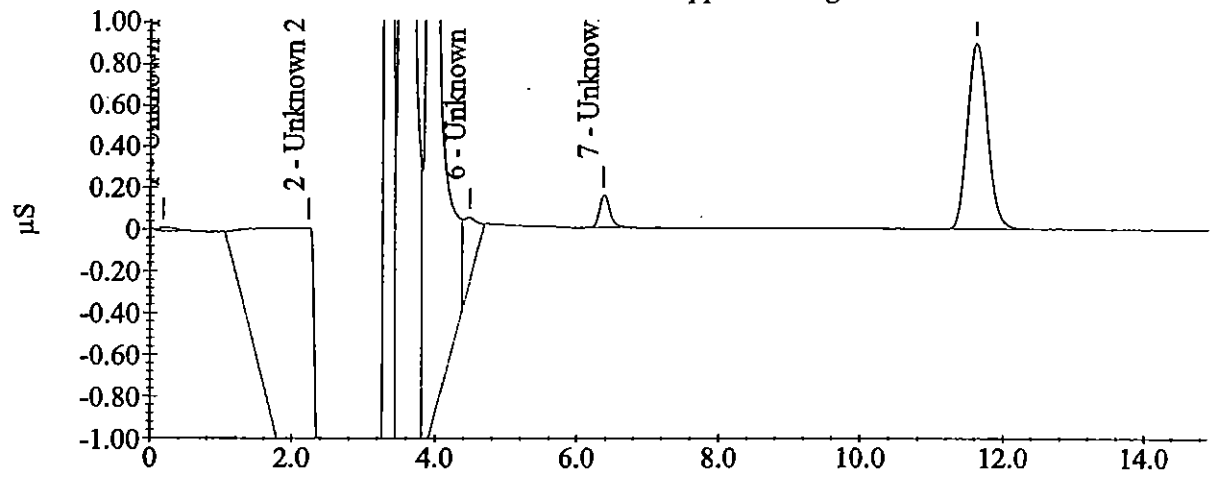
APCL Perchlorate Analysis Report

Sample Name : cal standard 100ppb W7827g
Data File Name : C:\DATA\E314-011\std-100pb_008.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:58:39 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.62	113.21	171686	8927



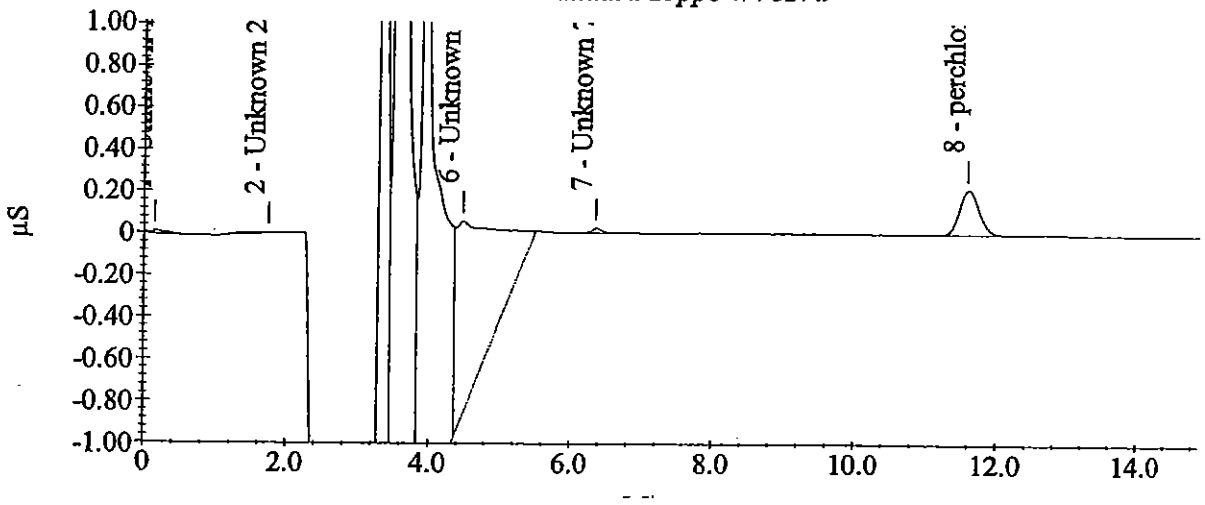
APCL Perchlorate Analysis Report

Sample Name : cal standard 25ppb W7827d
Data File Name : C:\DATA\E314-011\std-25pb_005.DXD

Method File Name : C:\PEAKNET\METHOD\e314-011.met
Date Time Collected : 03/12/2003 7:05:54 PM
System Operator : wei wang
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
8	perchlorate	11.60	26.84	40702	2125



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

Line	Weight	Int. Std.	Comment
1	1	1	
2	1	1	
3	1	1	
4	1	1	
5	1	1	
6	1	1	
7	1	1	
8	1	1	
9	1	1	
10	1	1	
11	1	1	
12	1	1	
13	1	1	
14	1	1	
15	1	1	
16	1	1	
17	1	1	
18	1	1	
19	1	1	
20	1	1	
21	1	1	
22	1	1	
23	1	1	
24	1	1	
25	1	1	
26	1	1	
27	1	1	
28	1	1	
29	1	1	
30	1	1	
31	1	1	
32	1	1	
33	1	1	
34	1	1	
35	1	1	
36	1	1	
37	1	1	
38	1	1	
39	1	1	
40	1	1	
41	1	1	
42	1	1	
43	1	1	
44	1	1	
45	1	1	
46	1	1	
47	1	1	
48	1	1	
49	1	1	
50	1	1	
51	1	1	
52	1	1	
53	1	1	
54	1	1	
55	1	1	
56	1	1	
57	1	1	
58	1	1	

Default Method Path: C:\PEAKNET\METHOD
Default Data Path: C:\DATA\03W1286K
Comment:
Remark:

Condition information:

. Column

Separator column: AS16 4mm

Guard column: AS16 4mm

. Eluent : NaOH 38mM

. Flow rate: 1.2mL/min

. Suppressor: ASRS-ULTRA 4mm

.Detector: CD20

.Analyst: Charles Wu and Wei Wang

.Date: 03 / 12 / 2003

.Instrument: IC-K DX-500 Dionex