

Appendix A.6
Focussed Remedial Investigation Report
Volume 2 of 6

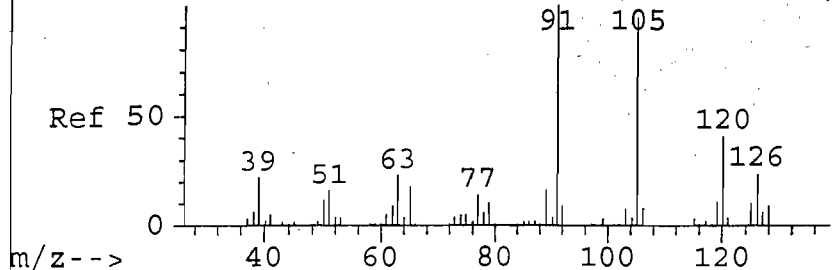
299 Main Street Site
Westbury, New York
(Site Code 1-30-043S)

December 1999

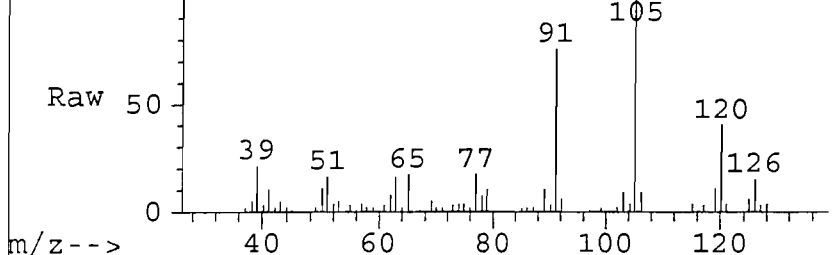
❖ Impact Environmental Consulting, Inc. • 1 Village Plaza Park • New York • 11754
516.269.8800 • fax 516.269.1599



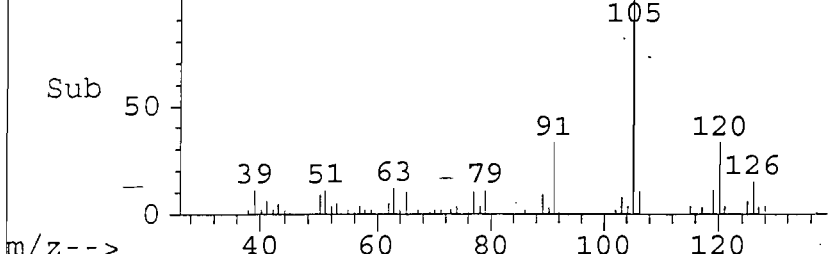
AbundanceScan 2124 (20.648 min): P19049.D (



AbundanceScan 2122 (20.641 min): P19054.D (



AbundanceScan 2122 (20.641 min): P19054.D (



#63

n-propylbenzene

Concen: 8.56 ug/L m

RT: 20.64 min Scan# 2122

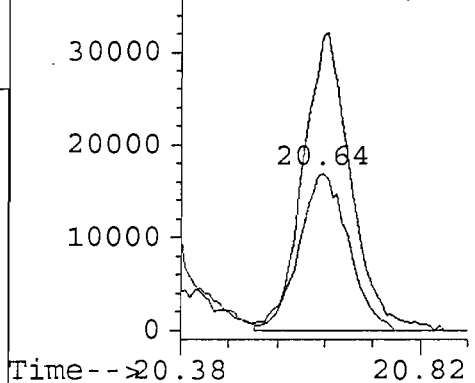
Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

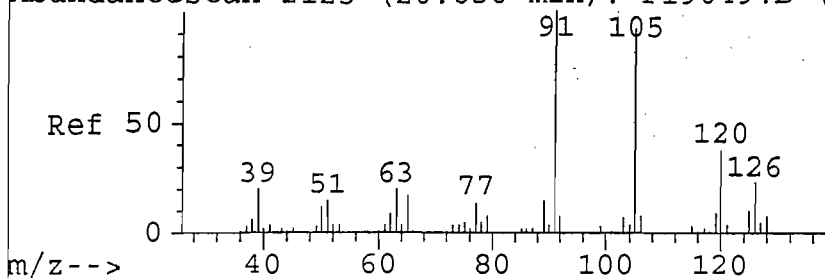
Tgt Ion:120	Resp:	109016
Ion	Ratio	Lower Upper
120	100	
91	241.0	170.7 316.9
0	0.0	0.0 0.0
0	0.0	0.0 0.0

AbundanceIon 120.00 (119
Ion 91.00 (90.

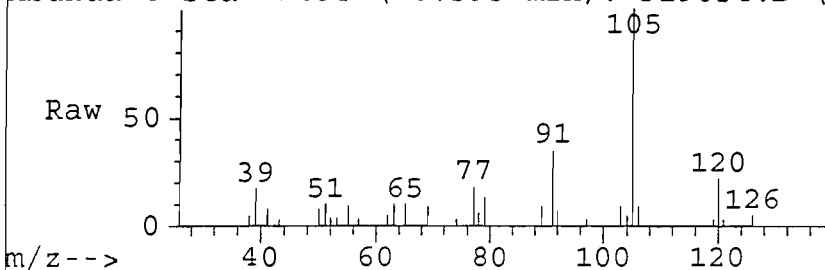


000436

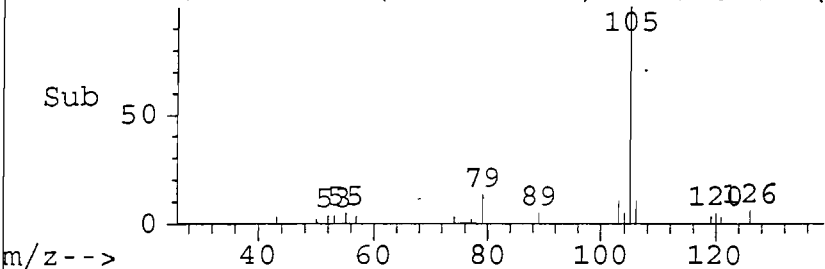
AbundanceScan 2125 (20.658 min): P19049.D (



AbundanceScan 2095 (20.395 min): P19054.D (



AbundanceScan 2095 (20.395 min): P19054.D (



#66

1,3,5-trimethylbenzene

Concen: 4.31 ug/L m

RT: 20.40 min Scan# 2095

Delta R.T. -0.26 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:105 Resp: 134758

Ion Ratio Lower Upper

105 100

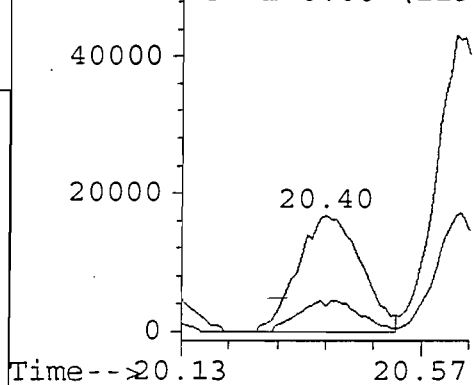
120 40.9 28.6 53.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

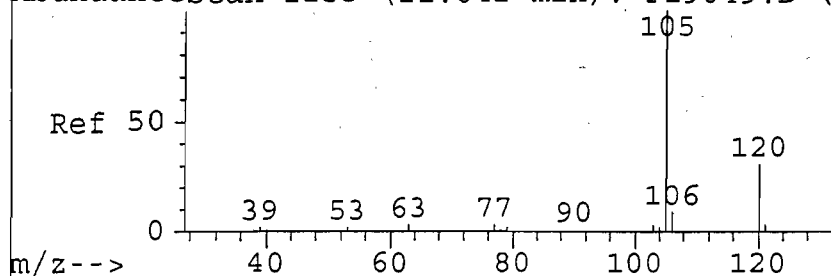
AbundanceIon 105.00 (104

Ion 120.00 (119



000437

AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzene

Concen: 8.21 ug/L m

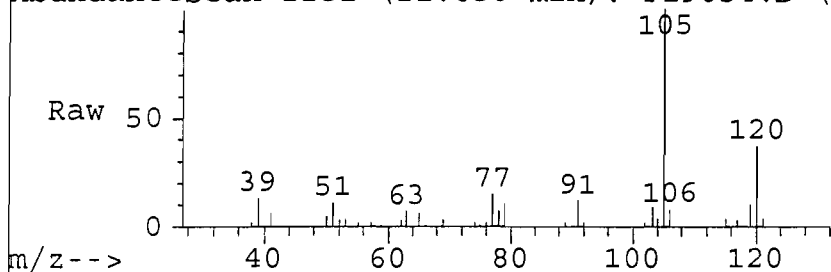
RT: 21.63 min Scan# 2231

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 2231 (21.630 min): P19054.D (



Tgt Ion:105 Resp: 249093

Ion Ratio Lower Upper

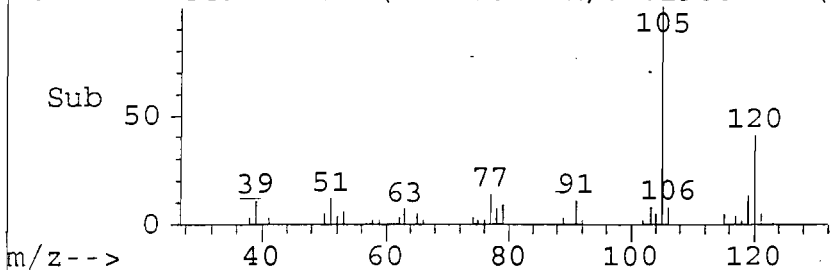
105 100

120 30.8 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2231 (21.630 min): P19054.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

21.63

40000

30000

20000

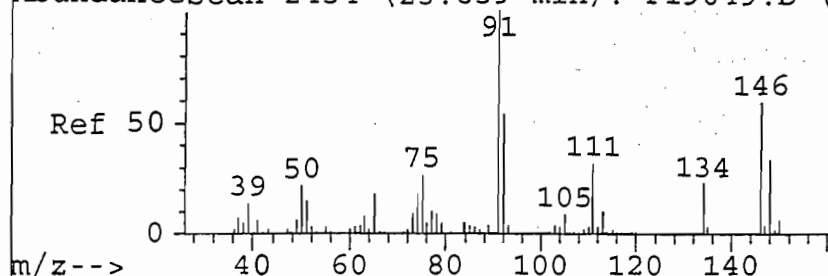
10000

0

Time-->21.37 21.85

000438

AbundanceScan 2454 (23.659 min): P19049.D (



#74

n-butylbenzene

Concen: 6.50 ug/L m

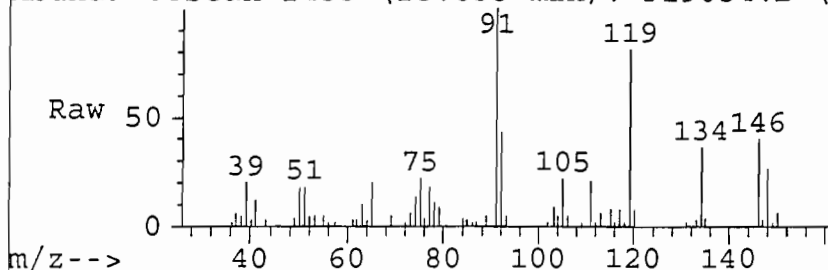
RT: 23.65 min Scan# 2455

Delta R.T. -0.00 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 2455 (23.655 min): P19054.D (



Tgt Ion:91 Resp: 221376

Ion Ratio Lower Upper

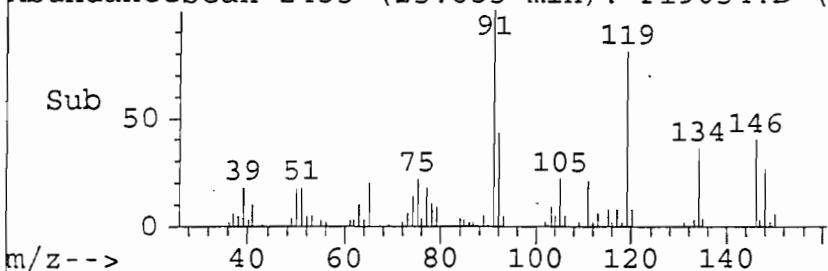
91 100

92 43.4 37.5 69.7

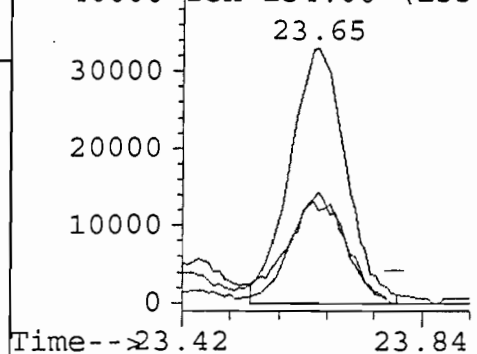
134 36.5 16.2 30.0#

0 0.0 0.0 0.0

AbundanceScan 2455 (23.655 min): P19054.D (

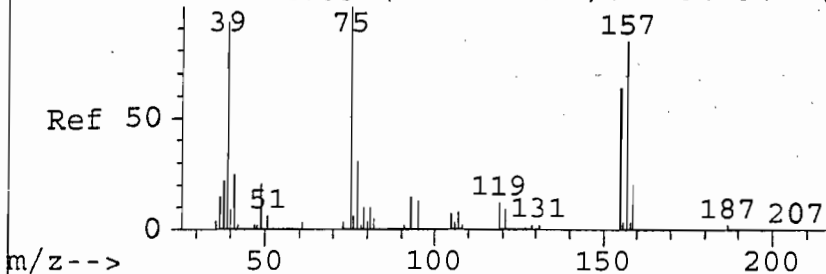


AbundanceIon 91.00 (90.
Ion 92.00 (91.
Ion 134.00 (133

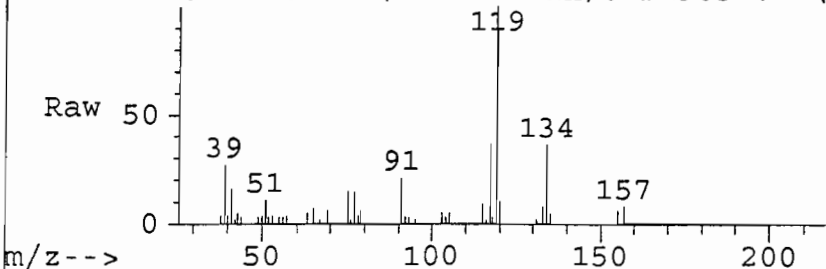


000439

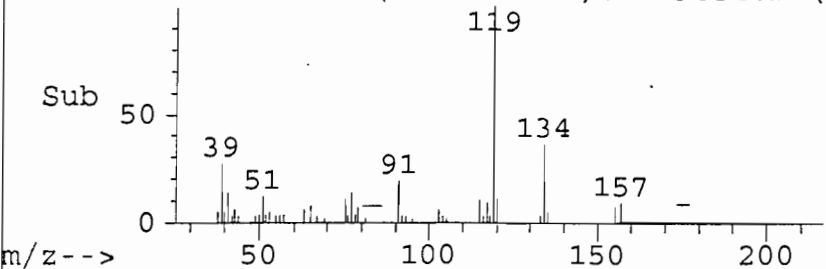
AbundanceScan 2703 (25.927 min): P19049.D (



AbundanceScan 2706 (25.937 min): P19054.D (



AbundanceScan 2706 (25.937 min): P19054.D (



#75

1,2-dibromo-3-chloropropane

Concen: 4.59 ug/L m

RT: 25.94 min Scan# 2706

Delta R.T. 0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:75 Resp: 21024

Ion Ratio Lower Upper

75 100

155 39.9 44.3 82.3#

157 55.2 59.0 109.6#

0 0.0 0.0 0.0

AbundanceIon 75.00 (74.

Ion 155.00 (154

Ion 157.00 (156

4000 25.94

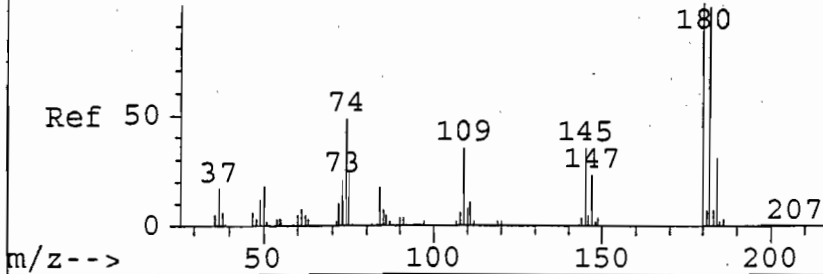
2000

0

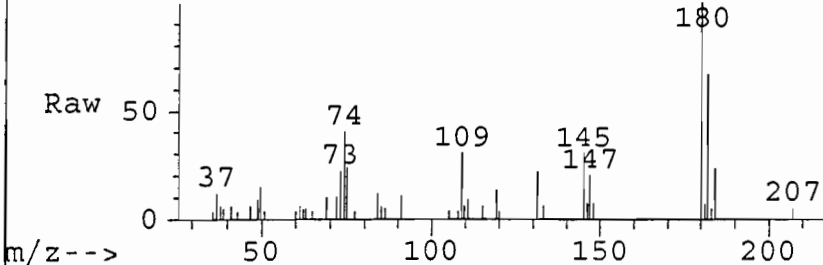
Time-->25.62 26.15

000440

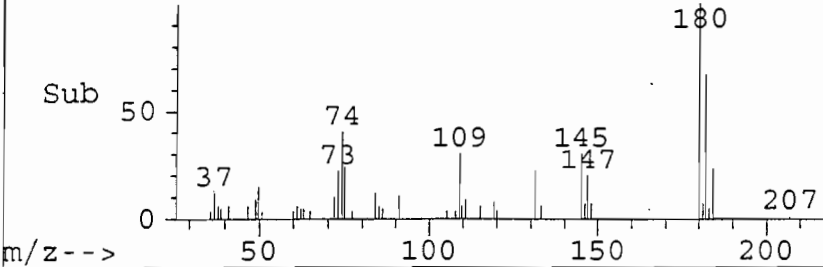
AbundanceScan 2947 (28.149 min): P19049.D (



AbundanceScan 2948 (28.141 min): P19054.D (



AbundanceScan 2948 (28.141 min): P19054.D (



#76

1,2,4-trichlorobenzene

Concen: 5.07 ug/L m

RT: 28.14 min Scan# 2948

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:179.7 Resp: 81498

Ion Ratio Lower Upper

180 100

182 67.4 68.5 127.3#

145 29.6 24.3 45.1

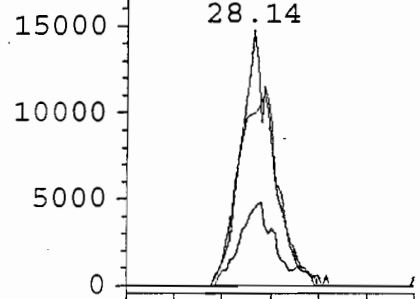
0 0.0 0.0 0.0

AbundanceIon 179.70 (179

20000 Ion 181.80 (181

Ion 144.70 (144

28.14

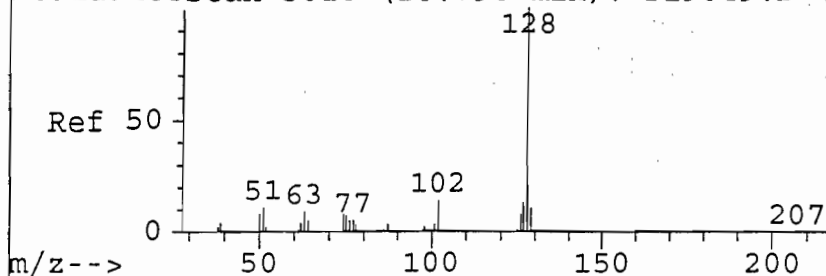


Time-->27.83

28.42

000441

AbundanceScan 3018 (28.798 min): P19049.D (



#78

naphthalene

Concen: 6.20 ug/L m

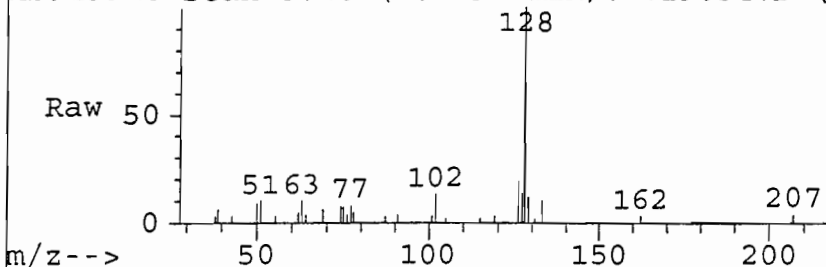
RT: 28.79 min Scan# 3020

Delta R.T. -0.01 min

Lab File: P19054.D

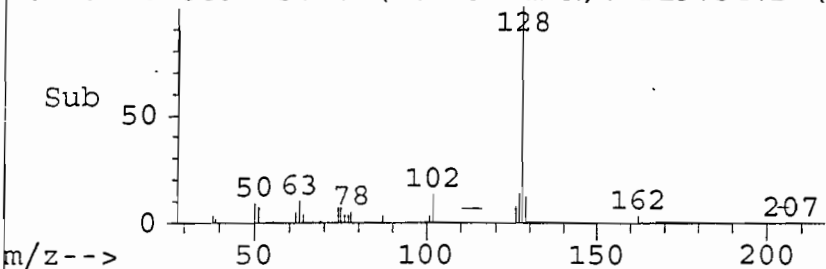
Acq: 6 Oct 99 9:35 pm

AbundanceScan 3020 (28.792 min): P19054.D (

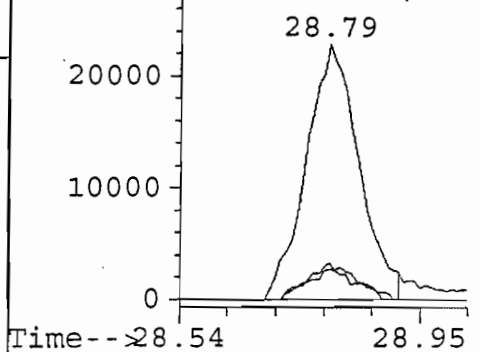


Tgt Ion:	128	Resp:	141195
Ion	Ratio	Lower	Upper
128	100		
127	14.2	9.4	17.4
129	12.0	8.1	15.1
0	0.0	0.0	0.0

AbundanceScan 3020 (28.792 min): P19054.D (



Abundance	Ion	128.00	(127
30000	Ion	127.00	(126
	Ion	129.00	(128



000442

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No. 13701ASP Site: _____ Location: _____ Group: GP-005-SS1

Instrument ID: VOA 2 Calibration Date: 10/8/99 Time: 1149

Lab File ID: P19101.D Init. Calib. Date(s): 10/6/99 10/6/99

Heated Purge: (Y/N) Y Init. Calib. Times: 1753 2135

GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.430	0.432		-0.5	
Chloromethane	0.230	0.237	0.300	-3.0	
Vinyl Chloride	0.219	0.225		-2.7	25.0
Bromomethane	0.247	0.210		15.0	
Chloroethane	0.113	0.104		8.0	
Trichlorofluoromethane	1.065	1.040		2.3	
Methylene Chloride	0.235	0.236		-0.4	
1,1-Dichloroethane	0.730	0.722	0.300	1.1	
2,2-Dichloropropane	0.753	0.777		-3.2	
Bromochloromethane	0.386	0.395		-2.3	
Chloroform	0.997	0.967		3.0	25.0
1,1,1-Trichloroethane	1.046	1.061		-1.4	
Carbon Tetrachloride	0.580	0.598		-3.1	
1,1-Dichloropropene	0.576	0.581		-0.9	
Benzene	0.792	0.780		1.5	
1,2-Dichloroethane	0.717	0.684		4.6	
Trichloroethene	0.469	0.459		2.1	
1,2-Dichloropropane	0.360	0.364		-1.1	25.0
Dibromomethane	0.384	0.372		3.1	
Bromodichloromethane	0.943	0.932		1.2	
Toluene	0.984	0.993		-0.9	25.0
1,1,2-Trichloroethane	0.293	0.300		-2.4	
Tetrachloroethene	0.504	0.521		-3.4	
1,3-Dichloropropane	0.484	0.459		5.2	
Dibromochloromethane	0.687	0.634		7.7	
1,2-Dibromoethane	0.523	0.499		4.6	
Chlorobenzene	0.810	0.779	0.300	3.8	
1,1,1,2-Tetrachloroethane	0.459	0.478		-4.1	
Ethylbenzene	1.365	1.375		-0.7	25.0
Styrene	0.778	0.754		3.1	
Bromoform	0.542	0.549	0.250	-1.3	
isopropylbenzene	2.156	2.098		2.7	
Bromobenzene	1.481	1.482		-0.1	
1,1,2,2-Tetrachloroethane	0.856	0.863	0.300	-0.8	
1,2,3-Trichloropropane	0.640	0.624		2.5	
n-Propylbenzene	0.930	0.784		15.7	

All other compounds must meet a minimum RRF of 0.010.

000443

Contract: IMPACT ENVIRONMENTAL

Group: GP-005-SS1

Time: 1149

Init. Calib. Date(s): 10/6/99 10/6/99

Init. Calib. Times: 1753 2135

ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
2-Chlorotoluene	0.533	0.528		0.9	
4-Chlorotoluene	0.546	0.535		2.0	
1,3,5-Trimethylbenzene	1.976	1.972		0.2	
tert-Butylbenzene	1.907	1.874		1.7	
1,2,4-Trimethylbenzene	2.281	1.985		13.0	
sec-Butylbenzene	2.558	2.459		3.9	
1,3-Dichlorobenzene	1.297	1.243		4.2	
4-Isopropyltoluene	2.355	2.285		3.0	
1,4-Dichlorobenzene	1.315	1.283		2.4	
1,2-Dichlorobenzene	1.244	1.241		0.2	
n-Butylbenzene	2.380	2.214		7.0	
1,2-Dibromo-3-chloropropane	0.312	0.295		5.4	
1,2,4-Trichlorobenzene	1.082	1.014		6.3	
Hexachlorobutadiene	0.877	0.876		0.1	
Naphthalene	1.610	1.467		8.9	
1,2,3-Trichlorobenzene	0.965	0.947		1.9	
Dibromofluoromethane	0.833	0.829		0.5	
Toluene-d8	0.975	0.962		1.3	
4-Bromofluorobenzene	1.001	1.003		-0.2	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 8 16:28 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1071382	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	1121445	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	833409	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	888524	49.78	ug/L	99.55%
30) 1,2-Dichloroethane-d4	8.66	65	693965	49.48	ug/L	98.95%
38) Toluene-d8	12.77	98	1030488	49.31	ug/L	98.63%
42) 4-Bromofluorobenzene	19.49	95	1074062	50.07	ug/L	100.14%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.73	85	462622	50.25	ug/L	99
3) chloromethane	1.95	50	254100	51.55	ug/L	95
4) vinyl chloride	2.07	62	240924	51.34	ug/L	99
5) bromomethane	2.47	94	225365	42.52	ug/L	84
6) chloroethane	2.60	64	111754	46.36	ug/L	90
7) Acrolein	3.63	56	137021	512.03	ug/L	99
8) trichlorofluoromethane	2.89	101	1114247	48.82	ug/L	97
9) 1,1-dichloroethene	3.66	61	575846	50.80	ug/L	99
10) Acetone	3.90	43	80836	42.10	ug/L	99
11) Carbon Disulfide	3.95	76	633720	54.07	ug/L	99
12) Iodo Methane	3.90	142	846360	51.93	ug/L	99
13) methylene chloride	4.58	84	252660	50.23	ug/L	92
14) trans-1,2-dichloroethene	4.97	61	533705	55.43	ug/L	97
15) TBA	4.96	59	307475	433.80	ug/L	96
16) MTBE	4.99	73	971108	52.13	ug/L	99
17) Acrylonitrile	5.17	53	367410	506.01	ug/L	98
18) 1,1-dichloroethane	5.83	63	773177	49.43	ug/L	99
19) 2,2-dichloropropane	6.89	77	832335	51.57	ug/L	95
20) cis-1,2-dichloroethene	6.97	61	668017	50.24	ug/L	96
21) bromochloromethane	7.44	49	422806	51.08	ug/L	97
22) chloroform	7.65	83	1036491	48.51	ug/L	100
23) 1,1,1-trichloroethane	7.85	97	1137074	50.74	ug/L	96
25) Vinyl Acetate	5.96	43	762264	48.76	ug/L	100
26) 2-Butanone	7.11	43	114291	42.28	ug/L	99
27) carbon tetrachloride	8.10	117	641164	51.55	ug/L	98
28) 1,1-dichloropropene	8.20	75	622408	50.41	ug/L	92
29) benzene	8.59	78	836044	49.29	ug/L	99
31) 1,2-dichloroethane	8.83	62	733285	47.74	ug/L	98
32) trichloroethene	10.02	130	492134	48.98	ug/L	95
33) 1,2-dichloropropane	10.60	63	390165	50.55	ug/L	99
34) dibromomethane	10.86	174	398529	48.39	ug/L	97
35) bromodichloromethane	11.26	83	998399	49.40	ug/L	96
36) 2-Chloroethyl Vinyl Ether	12.92	63	139066	51.28	ug/L	84

(#) = qualifier out of range (m) = manual integration

000445

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 8 16:28 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.30	75	572953	48.26	ug/L	99
39) toluene	12.92	91	1063953	50.48	ug/L	100
40) trans-1,3-dichloropropene	13.73	75	554957	48.29	ug/L	97
41) 1,1,2-trichloroethane	14.11	97	321382	51.26	ug/L	97
44) 4-Methyl-2-Pentanone	12.74	43	249740	41.26	ug/L	99
45) tetrachloroethene	14.14	166	584585	51.75	ug/L m	96
46) 1,3-dichloropropane	14.51	76	514361	47.39	ug/L	95
47) dibromochloromethane	14.96	129	710903	46.11	ug/L	94
48) 1,2-dibromoethane	15.19	107	559392	47.71	ug/L	96
49) 2-Hexanone	14.79	43	172530	40.37	ug/L	97
50) chlorobenzene	16.41	112	873956	48.09	ug/L	99
51) 1-Chlorohexane	16.46	91	494116	48.43	ug/L	97
52) 1,1,1,2-tetrachloroethane	16.69	133	536148	52.12	ug/L	87
53) ethylbenzene	16.69	91	1541445	50.34	ug/L	96
54) m&p-xylenes	17.02	106	1065191	101.53	ug/L	96
55) o-xylene	18.02	91	1475056	48.66	ug/L	98
56) styrene	18.11	104	846033	48.46	ug/L	96
57) bromoform	18.58	173	615660	50.68	ug/L	98
59) isopropylbenzene	19.01	105	1748079	48.63	ug/L	99
60) bromobenzene	19.77	77	1234916	50.04	ug/L	96
61) 1,1,2,2-tetrachloroethane	20.10	83	719070	50.38	ug/L	97
62) 1,2,3-trichloropropane	20.14	75	519748	48.71	ug/L	98
63) n-propylbenzene	20.65	120	653658	49.03	ug/L	74
64) 2-chlorotoluene	20.32	126	440078	49.56	ug/L	96
65) 4-chlorotoluene	20.66	126	446212	49.01	ug/L	99
66) 1,3,5-trimethylbenzene	20.66	105	1643625	49.91	ug/L	98
67) tert-butylbenzene	21.47	119	1562030	49.14	ug/L	98
68) 1,2,4-trimethylbenzene	21.65	105	1654522	48.27	ug/L	100
69) sec-butylbenzene	22.09	105	2048939	48.05	ug/L	99
70) 1,3-dichlorobenzene	22.38	146	1036251	47.95	ug/L	97
71) 4-isopropyltoluene	22.53	119	1904259	48.52	ug/L	98
72) 1,4-dichlorobenzene	22.66	146	1069378	48.78	ug/L	98
73) 1,2-dichlorobenzene	23.65	146	1033863	49.84	ug/L	94
74) n-butylbenzene	23.67	91	1845040	46.51	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.93	75	245743	47.27	ug/L	95
76) 1,2,4-trichlorobenzene	28.16	180	844721	46.86	ug/L	98
77) hexachlorobutadiene	28.61	225	730244	49.94	ug/L	100
78) naphthalene	28.80	128	1222390	45.55	ug/L	100
79) 1,2,3-trichlorobenzene	29.54	180	789089	49.05	ug/L m	90

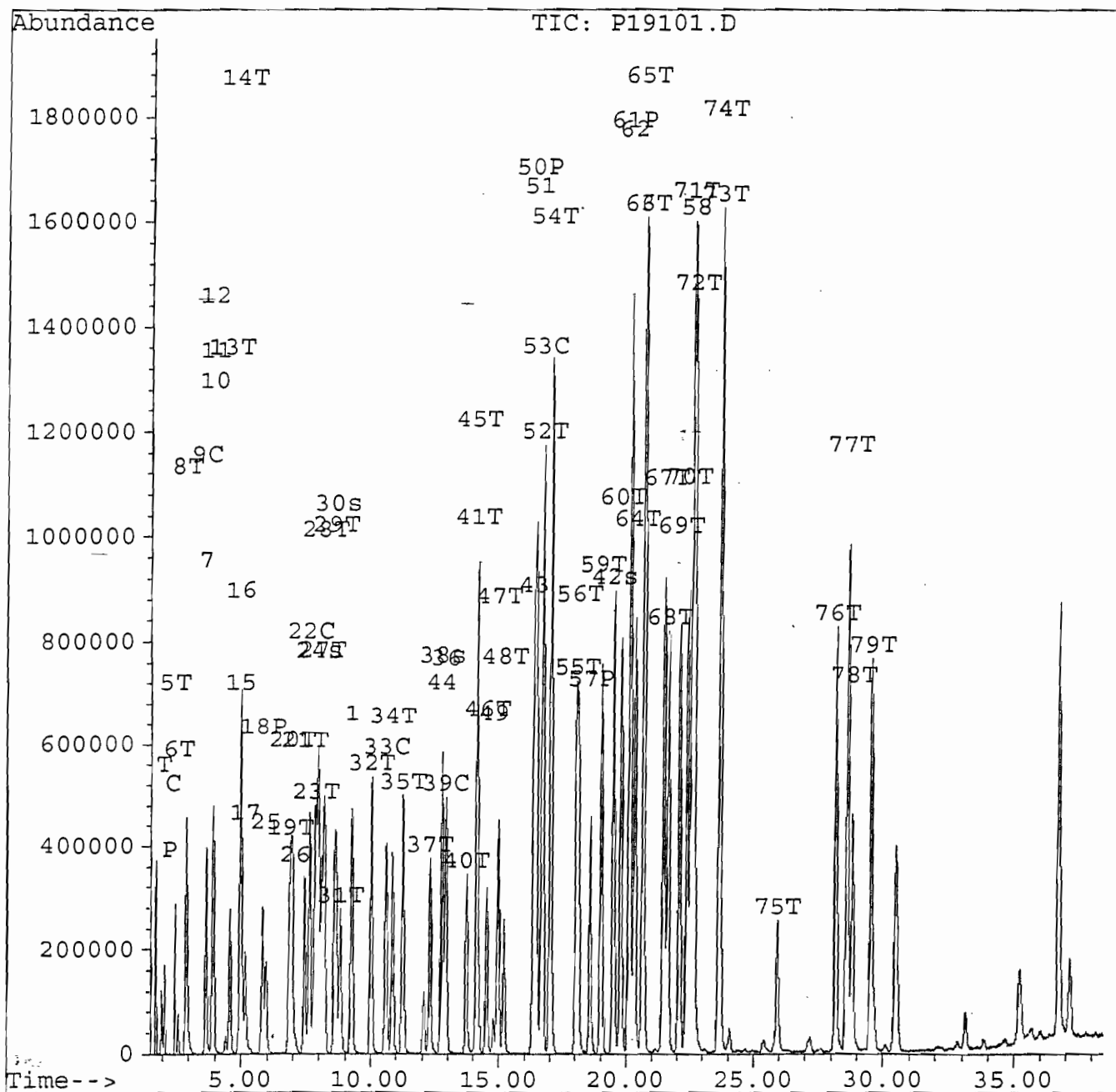
000446

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 8 16:28 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000447

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	93	0.00
2 T	dichlorodifluoromethane	0.430	0.432	-0.5	103	0.00
3 P	chloromethane	0.230	0.237	-3.1	112	0.00
4 C	vinyl chloride	0.219	0.225	-2.7#	107	0.00
5 T	bromomethane	0.247	0.210	15.0	94	0.00
6 T	chloroethane	0.113	0.104	7.3	101	0.00
7	Acrolein	0.012	0.013	-2.4	97	0.00
8 T	trichlorofluoromethane	1.065	1.040	2.4	99	0.00
9 C	1,1-dichloroethene	0.529	0.537	-1.6#	100	0.00
10	Acetone	0.090	0.075	15.8	59	-0.00
11	Carbon Disulfide	0.547	0.591	-8.1	100	0.00
12	Iodo Methane	0.761	0.790	-3.9	98	0.00
13 T	methylene chloride	0.235	0.236	-0.5	100	0.00
14 T	trans-1,2-dichloroethene	0.449	0.498	-10.9	103	0.00
15	TBA	0.033	0.029	13.2	89	0.00
16	MTBE	0.869	0.906	-4.3	94	-0.02
17	Acrylonitrile	0.034	0.034	-1.2	95	0.00
18 P	1,1-dichloroethane	0.730	0.722	1.1	98	0.00
19 T	2,2-dichloropropane	0.753	0.777	-3.1	98	0.00
20 T	cis-1,2-dichloroethene	0.621	0.624	-0.5	97	0.00
21 T	bromochloromethane	0.386	0.395	-2.2	99	0.00
22 C	chloroform	0.997	0.967	3.0#	95	0.00
23 T	1,1,1-trichloroethane	1.046	1.061	-1.5	97	-0.01
24 S	Dibromofluoromethane	0.833	0.829	0.4	97	0.00
25	Vinyl Acetate	0.730	0.711	2.5	92	0.00
26	2-Butanone	0.126	0.107	15.4	67	0.00
27 T	carbon tetrachloride	0.580	0.598	-3.1	100	0.00
28 T	1,1-dichloropropene	0.576	0.581	-0.8	97	0.02
29 T	benzene	0.792	0.780	1.4	92	-0.01
30 S	1,2-Dichlorethane-d4	0.655	0.648	1.0	97	0.00
31 T	1,2-dichloroethane	0.717	0.684	4.5	97	0.00
32 T	trichloroethene	0.469	0.459	2.0	92	0.00
33 C	1,2-dichloropropane	0.360	0.364	-1.1#	99	0.00
34 T	dibromomethane	0.384	0.372	3.2	92	0.00
35 T	bromodichloromethane	0.943	0.932	1.2	97	0.01
36	2-Chloroethyl Vinyl Ether	0.127	0.130	-2.6	99	0.00
37 T	cis-1,3-dichloropropene	0.554	0.535	3.5	94	0.00
38 S	Toluene-d8	0.975	0.962	1.4	94	0.00
39 C	toluene	0.984	0.993	-1.0#	97	0.00
40 T	trans-1,3-dichloropropene	0.536	0.518	3.4	95	0.00
41 T	1,1,2-trichloroethane	0.293	0.300	-2.5	94	-0.01
42 S	4-Bromofluorobenzene	1.001	1.003	-0.1	102	0.01

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00
44	4-Methyl-2-Pentanone	0.270	0.223	17.5	85	0.01
45 T	tetrachloroethene	0.504	0.521	-3.5	94	-0.01
46 T	1,3-dichloropropane	0.484	0.459	5.2	94	0.00
47 T	dibromochloromethane	0.687	0.634	7.8	93	0.00
48 T	1,2-dibromoethane	0.523	0.499	4.6	95	0.00
49	2-Hexanone	0.191	0.154	19.3	68	0.00
50 P	chlorobenzene	0.810	0.779	3.8	96	0.00
51	1-Chlorohexane	0.455	0.441	3.1	93	0.00
52 T	1,1,1,2-tetrachloroethane	0.459	0.478	-4.2	94	0.00
53 C	ethylbenzene	1.365	1.375	-0.7#	99	0.01
54 T	m&p-xylenes	0.468	0.475	-1.5	104	0.00
55 T	o-xylene	1.352	1.315	2.7	102	0.00
56 T	styrene	0.778	0.754	3.1	100	0.00
57 P	bromoform	0.542	0.549	-1.4	94	0.01
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	104	0.00
59 T	isopropylbenzene	2.156	2.098	2.7	101	0.01
60 T	bromobenzene	1.481	1.482	-0.1	103	0.00
61 P	1,1,2,2-tetrachloroethane	0.856	0.863	-0.8	102	0.02
62	1,2,3-trichloropropane	0.640	0.624	2.6	103	0.00
63 T	n-propylbenzene	0.930	0.784	15.7	98	0.00
64 T	2-chlorotoluene	0.533	0.528	0.9	102	0.01
65 T	4-chlorotoluene	0.546	0.535	2.0	102	0.00
66 T	1,3,5-trimethylbenzene	1.976	1.972	0.2	100	0.00
67 T	tert-butylbenzene	1.907	1.874	1.7	103	0.00
68 T	1,2,4-trimethylbenzene	2.281	1.985	13.0	104	0.00
69 T	sec-butylbenzene	2.558	2.459	3.9	102	0.00
70 T	1,3-dichlorobenzene	1.297	1.243	4.1	101	0.00
71 T	4-isopropyltoluene	2.355	2.285	3.0	103	0.00
72 T	1,4-dichlorobenzene	1.315	1.283	2.4	105	0.00
73 T	1,2-dichlorobenzene	1.244	1.241	0.3	104	0.00
74 T	n-butylbenzene	2.380	2.214	7.0	103	0.01
75 T	1,2-dibromo-3-chloropropane	0.312	0.295	5.5	102	0.00
76 T	1,2,4-trichlorobenzene	1.082	1.014	6.3	100	0.01
77 T	hexachlorobutadiene	0.877	0.876	0.1	105	0.00
78 T	naphthalene	1.610	1.467	8.9	102	0.00
79 T	1,2,3-trichlorobenzene	0.965	0.947	1.9	104	0.01

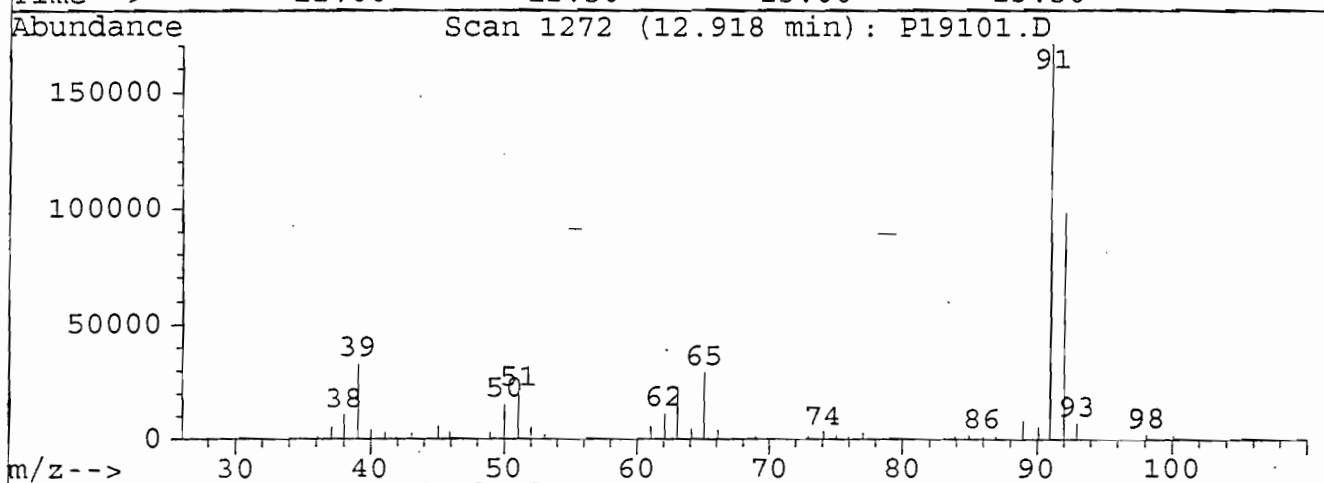
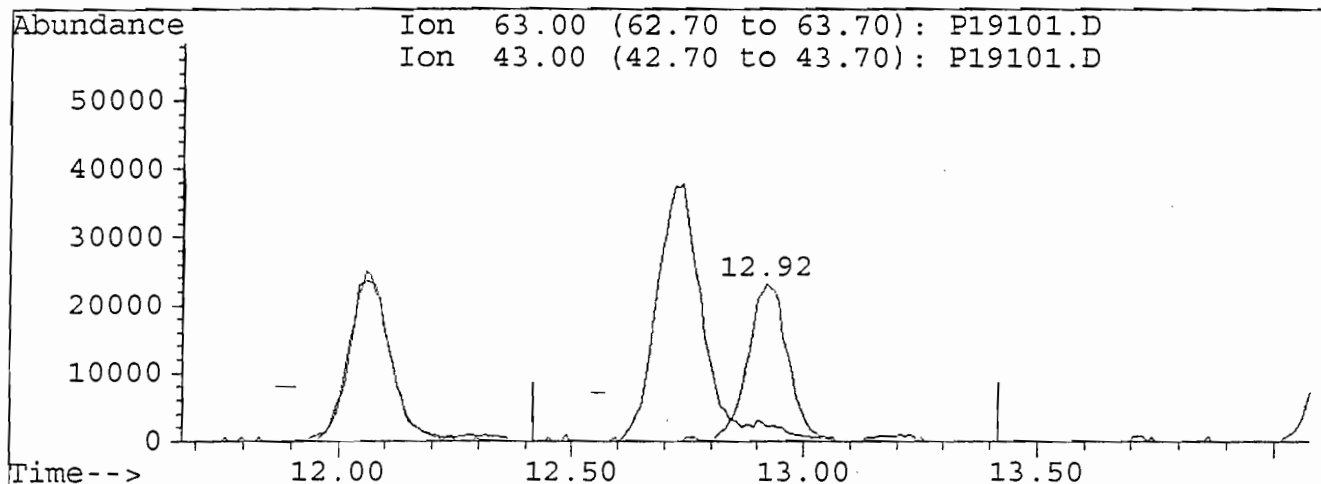
000449

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 8 16:28 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19101.D

(36) 2-Chloroethyl Vinyl Ether

12.92min 51.28ug/L m

response 139066

Ion	Exp%	Act%
63.00	100	100
43.00	5.00	9.85
0.00	0.00	0.00
0.00	0.00	0.00

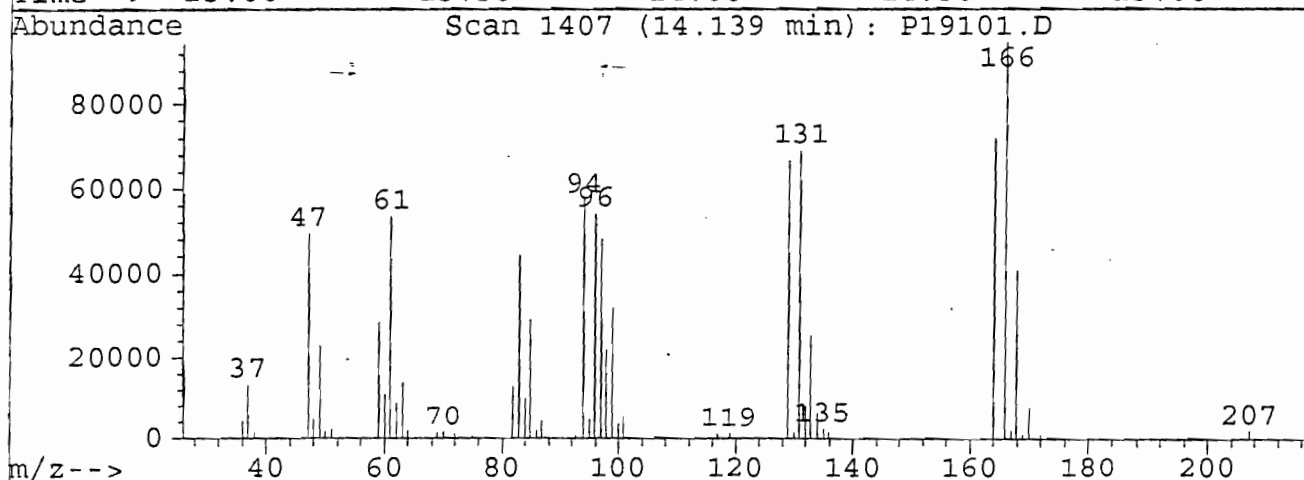
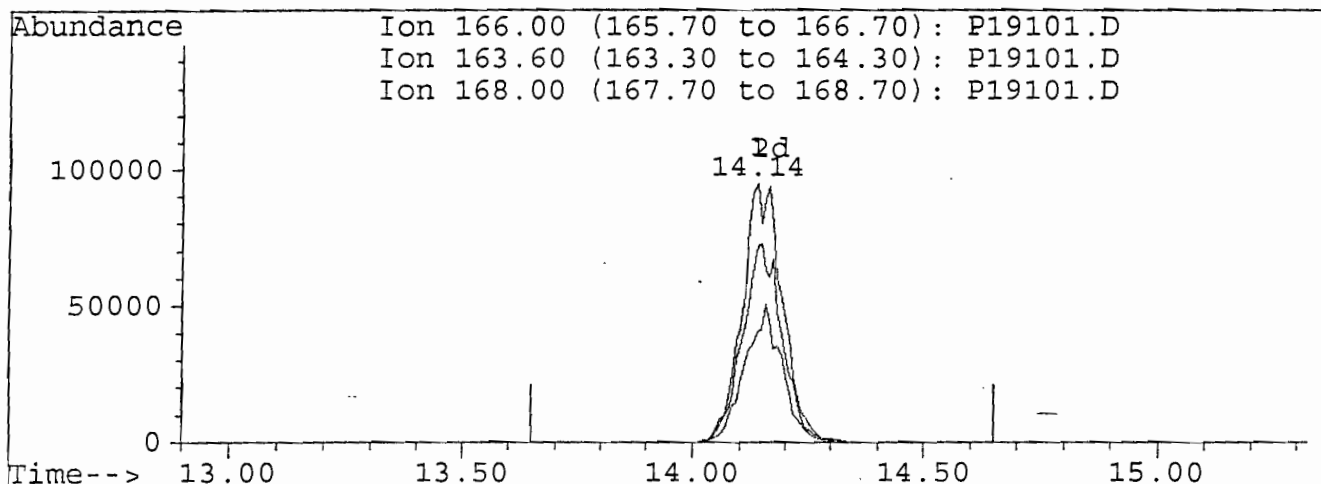
000450

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 8 16:19 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19101.D

(45) tetrachloroethene (T)

14.14min 51.75ug/L m

response 584585

Ion	Exp%	Act%
166.00	100	100
163.60	76.90	75.43
168.00	47.20	42.54
0.00	0.00	0.00

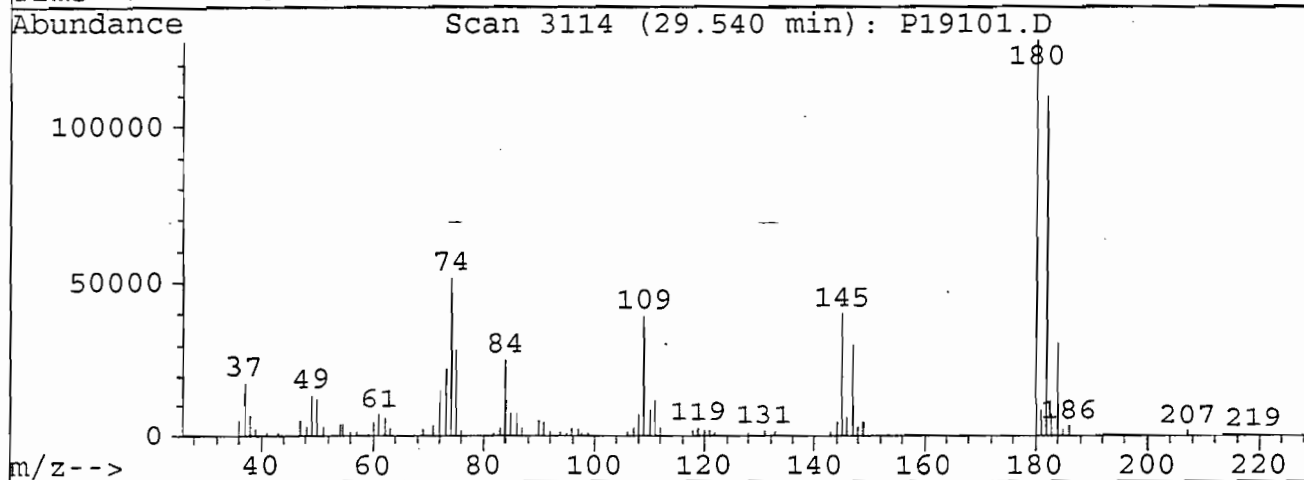
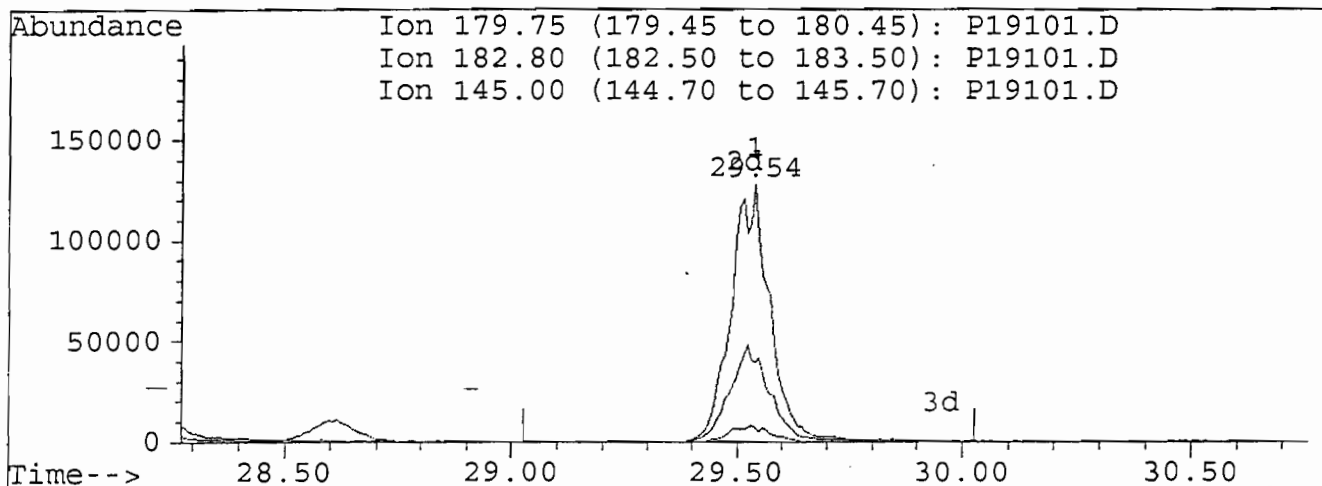
000451

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19101.D
 Acq Time : 8 Oct 99 11:49 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 8 16:19 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19101.D

(79) 1,2,3-trichlorobenzene (T)

29.54min 49.05ug/L m

response 789089

Ion	Exp%	Act%
179.75	100	100
182.80	6.70	5.58
145.00	38.00	30.98
0.00	0.00	0.00

000452

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13701ASP Site: _____ Location: _____ Group: GP-005-SS1
 Instrument ID: VOA 2 Calibration Date: 10/9/99 Time: 0013
 Lab File ID: P19118.D Init. Calib. Date(s): 10/6/99 10/6/99
 Heated Purge: (Y/N) Y Init. Calib. Times: 1753 2135
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.430	0.396		7.9	
Chloromethane	0.230	0.218	0.300	5.2	
Vinyl Chloride	0.219	0.211		3.7	25.0
Bromomethane	0.247	0.199		19.4	
Chloroethane	0.113	0.098		13.3	
Trichlorofluoromethane	1.065	1.017		4.5	
Methylene Chloride	0.235	0.228		3.0	
1,1-Dichloroethane	0.730	0.729	0.300	0.1	
2,2-Dichloropropane	0.753	0.716		4.9	
Bromochloromethane	0.386	0.392		-1.6	
Chloroform	0.997	0.953		4.4	25.0
1,1,1-Trichloroethane	1.046	0.998		4.6	
Carbon Tetrachloride	0.580	0.588		-1.4	
1,1-Dichloropropene	0.576	0.553		4.0	
Benzene	0.792	0.786		0.8	
1,2-Dichloroethane	0.717	0.691		3.6	
Trichloroethene	0.469	0.443		5.5	
1,2-Dichloropropane	0.360	0.351		2.5	25.0
Dibromomethane	0.384	0.359		6.5	
Bromodichloromethane	0.943	0.890		5.6	
Toluene	0.984	0.977		0.7	25.0
1,1,2-Trichloroethane	0.293	0.300		-2.4	
Tetrachloroethene	0.504	0.487		3.4	
1,3-Dichloropropane	0.484	0.475		1.9	
Dibromochloromethane	0.687	0.650		5.4	
1,2-Dibromoethane	0.523	0.503		3.8	
Chlorobenzene	0.810	0.765	0.300	5.6	
1,1,1,2-Tetrachloroethane	0.459	0.480		-4.6	
Ethylbenzene	1.365	1.276		6.5	25.0
Styrene	0.778	0.728		6.4	
Bromoform	0.542	0.522	0.250	3.7	
isopropylbenzene	2.156	2.102		2.5	
Bromobenzene	1.481	1.440		2.8	
1,1,2,2-Tetrachloroethane	0.856	0.850	0.300	0.7	
1,2,3-Trichloropropane	0.640	0.625		2.3	
n-Propylbenzene	0.930	0.766		17.6	

All other compounds must meet a minimum RRF of 0.010.

000453

ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
2-Chlorotoluene	0.533	0.504		5.4	
4-Chlorotoluene	0.546	0.509		6.8	
1,3,5-Trimethylbenzene	1.976	1.936		2.0	
tert-Butylbenzene	1.907	1.812		5.0	
1,2,4-Trimethylbenzene	2.281	1.959		14.1	
sec-Butylbenzene	2.558	2.401		6.1	
1,3-Dichlorobenzene	1.297	1.161		10.5	
4-Isopropyltoluene	2.355	2.089		11.3	
1,4-Dichlorobenzene	1.315	1.141		13.2	
1,2-Dichlorobenzene	1.244	1.154		7.2	
n-Butylbenzene	2.380	1.987		16.5	
1,2-Dibromo-3-chloropropane	0.312	0.284		9.0	
1,2,4-Trichlorobenzene	1.082	0.842		22.2	
Hexachlorobutadiene	0.877	0.784		10.6	
Naphthalene	1.610	1.355		15.8	
1,2,3-Trichlorobenzene	0.965	0.823		14.7	
Dibromofluoromethane	0.833	0.845		-1.4	
Toluene-d8	0.975	0.996		-2.2	
4-Bromofluorobenzene	1.001	0.996		0.5	

All other compounds must meet a minimum RRF of 0.010.

000454

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19118.D
 Acq Time : 9 Oct 99 12:13 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 10 12:45 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	903894	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	963475	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.60	152	675476	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	763370	50.69	ug/L	101.38%
30) 1,2-Dichlorethane-d4	8.66	65	571709	48.31	ug/L	96.63%
38) Toluene-d8	12.78	98	900294	51.07	ug/L	102.13%
42) 4-Bromofluorobenzene	19.49	95	900092	49.73	ug/L	99.47%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	358155	46.12	ug/L	100
3) chloromethane	1.95	50	197461	47.48	ug/L	100
4) vinyl chloride	2.07	62	191153	48.28	ug/L	99
5) bromomethane	2.48	94	179931	40.24	ug/L	86
6) chloroethane	2.61	64	88237	43.39	ug/L m	83
7) Acrolein	3.63	56	111935	495.79	ug/L	98
8) trichlorofluoromethane	2.90	101	919668	47.77	ug/L	97
9) 1,1-dichloroethene	3.66	61	471220	49.27	ug/L	97
10) Acetone	3.90	43	54641	33.73	ug/L	95
11) Carbon Disulfide	3.95	76	487907	49.34	ug/L	95
12) Iodo Methane	3.91	142	668869	48.64	ug/L	94
13) methylene chloride	4.58	84	206343	48.62	ug/L	99
14) trans-1,2-dichloroethene	4.98	61	424543	52.27	ug/L	99
15) TBA	4.96	59	255565	427.38	ug/L	94
16) MTBE	5.00	73	799138	50.84	ug/L	98
17) Acrylonitrile	5.16	53	313037	511.01	ug/L	99
18) 1,1-dichloroethane	5.83	63	659204	49.95	ug/L	97
19) 2,2-dichloropropane	6.90	77	647378	47.55	ug/L	98
20) cis-1,2-dichloroethene	6.97	61	553036	49.30	ug/L	93
21) bromochloromethane	7.45	49	353892	50.68	ug/L	97
22) chloroform	7.64	83	861052	47.76	ug/L	99
23) 1,1,1-trichloroethane	7.85	97	902040	47.71	ug/L	96
25) Vinyl Acetate	5.97	43	670621	50.85	ug/L	99
26) 2-Butanone	7.11	43	91287	40.03	ug/L	96
27) carbon tetrachloride	8.10	117	531856	50.69	ug/L	98
28) 1,1-dichloropropene	8.21	75	500251	48.02	ug/L	97
29) benzene	8.60	78	710741	49.67	ug/L	99
31) 1,2-dichloroethane	8.84	62	624342	48.18	ug/L	97
32) trichloroethene	10.02	130	400512	47.25	ug/L	97
33) 1,2-dichloropropane	10.60	63	317491	48.75	ug/L	96
34) dibromomethane	10.86	174	324457	46.69	ug/L	97
35) bromodichloromethane	11.25	83	804500	47.19	ug/L	99
36) 2-Chloroethyl Vinyl Ether	12.91	63	117932	51.55	ug/L	96

(#) = qualifier out of range (m) = manual integration
 P19118.D V21006CS.M Sun Oct 10 12:46:22 1999

000455
 VOA3 Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19118.D
 Acq Time : 9 Oct 99 12:13 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 10 12:45 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.32	75	475261	47.45	ug/L	96
39) toluene	12.93	91	882671	49.64	ug/L	98
40) trans-1,3-dichloropropene	13.72	75	463191	47.77	ug/L	98
41) 1,1,2-trichloroethane	14.14	97	270806	51.19	ug/L	98
44) 4-Methyl-2-Pentanone	12.71	43	227999	43.84	ug/L	99
45) tetrachloroethene	14.16	166	468739	48.30	ug/L	97
46) 1,3-dichloropropane	14.52	76	457854	49.10	ug/L	97
47) dibromochloromethane	14.95	129	625884	47.25	ug/L	88
48) 1,2-dibromoethane	15.19	107	484859	48.13	ug/L	92
49) 2-Hexanone	14.78	43	160572	43.73	ug/L	99
50) chlorobenzene	16.41	112	736618	47.18	ug/L	98
51) 1-Chlorohexane	16.46	91	408764	46.63	ug/L	97
52) 1,1,1,2-tetrachloroethane	16.70	133	462263	52.31	ug/L	99
53) ethylbenzene	16.68	91	1229859	46.75	ug/L	99
54) m&p-xylenes	17.01	106	833949	92.52	ug/L	99
55) o-xylene	18.02	91	1202737	46.18	ug/L	96
56) styrene	18.11	104	701809	46.79	ug/L	99
57) bromoform	18.59	173	503352	48.23	ug/L	91
59) isopropylbenzene	19.01	105	1419608	48.73	ug/L	99
60) bromobenzene	19.77	77	972640	48.63	ug/L	94
61) 1,1,2,2-tetrachloroethane	20.10	83	573966	49.62	ug/L	100
62) 1,2,3-trichloropropane	20.14	75	422139	48.82	ug/L	97
63) n-propylbenzene	20.66	120	517088	47.86	ug/L	70
64) 2-chlorotoluene	20.32	126	340239	47.28	ug/L	89
65) 4-chlorotoluene	20.66	126	343957	46.61	ug/L	97
66) 1,3,5-trimethylbenzene	20.66	105	1307838	49.00	ug/L	98
67) tert-butylbenzene	21.48	119	1223881	47.51	ug/L	92
68) 1,2,4-trimethylbenzene	21.64	105	1322962	47.62	ug/L	95
69) sec-butylbenzene	22.09	105	1621903	46.93	ug/L	99
70) 1,3-dichlorobenzene	22.37	146	784446	44.78	ug/L	97
71) 4-isopropyltoluene	22.54	119	1411005	44.36	ug/L	98
72) 1,4-dichlorobenzene	22.67	146	770993	43.39	ug/L	97
73) 1,2-dichlorobenzene	23.65	146	779441	46.36	ug/L	94
74) n-butylbenzene	23.67	91	1341879	41.73	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.94	75	191701	45.50	ug/L	89
76) 1,2,4-trichlorobenzene	28.16	180	568491	38.91	ug/L	96
77) hexachlorobutadiene	28.60	225	529645	44.69	ug/L	98
78) naphthalene	28.81	128	915593	42.10	ug/L	98
79) 1,2,3-trichlorobenzene	29.53	180	555610	42.61	ug/L	98

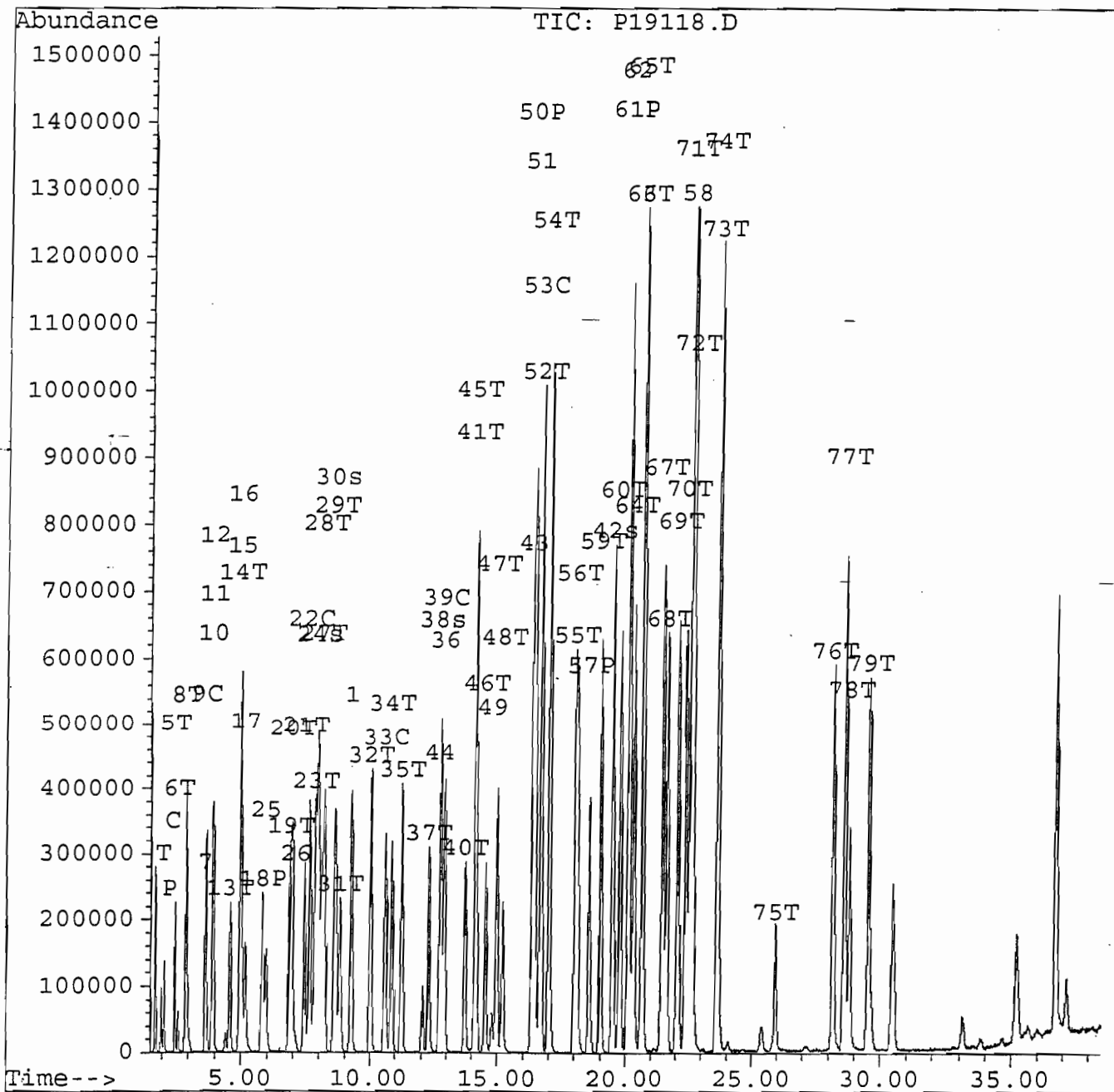
000456

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19118.D
 Acq Time : 9 Oct 99 12:13 am
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 10 12:45 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000457

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19118.D
 Acq Time : 9 Oct 99 12:13 am
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev (Min)
1	Fluorobenzene	1.000	1.000	0.0	79	0.00
2 T	dichlorodifluoromethane	0.430	0.396	7.8	80	0.00
3 P	chloromethane	0.230	0.218	5.0	87	0.00
4 C	vinyl chloride	0.219	0.211	3.4#	85	0.00
5 T	bromomethane	0.247	0.199	19.5	75	0.00
6 T	chloroethane	0.113	0.098	13.2	80	0.00
7	Acrolein	0.012	0.012	0.8	80	0.00
8 T	trichlorofluoromethane	1.065	1.017	4.5	81	0.00
9 C	1,1-dichloroethene	0.529	0.521	1.5#	82	0.00
10	Acetone	0.090	0.060	32.5#	40#	0.00
11	Carbon Disulfide	0.547	0.540	1.3	77	0.00
12	Iodo Methane	0.761	0.740	2.7	77	0.00
13 T	methylene chloride	0.235	0.228	2.8	82	0.00
14 T	trans-1,2-dichloroethene	0.449	0.470	-4.5	82	0.00
15	TBA	0.033	0.028	14.5	74	0.00
16	MTBE	0.869	0.884	-1.7	78	-0.01
17	Acrylonitrile	0.034	0.035	-2.2	81	0.00
18 P	1,1-dichloroethane	0.730	0.729	0.1	84	0.00
19 T	2,2-dichloropropane	0.753	0.716	4.9	76	0.00
20 T	cis-1,2-dichloroethene	0.621	0.612	1.4	81	0.00
21 T	bromochloromethane	0.386	0.392	-1.4	83	0.00
22 C	chloroform	0.997	0.953	4.5#	79	0.00
23 T	1,1,1-trichloroethane	1.046	0.998	4.6	77	0.00
24 S	Dibromofluoromethane	0.833	0.845	-1.4	84	0.00
25	Vinyl Acetate	0.730	0.742	-1.7	81	0.00
26	2-Butanone	0.126	0.101	19.9	54	0.00
27 T	carbon tetrachloride	0.580	0.588	-1.4	83	0.00
28 T	1,1-dichloropropene	0.576	0.553	4.0	78	0.02
29 T	benzene	0.792	0.786	0.7	79	0.00
30 S	1,2-Dichlorethane-d4	0.655	0.632	3.4	80	0.00
31 T	1,2-dichloroethane	0.717	0.691	3.6	82	0.01
32 T	trichloroethene	0.469	0.443	5.5	75	0.00
33 C	1,2-dichloropropane	0.360	0.351	2.5#	81	0.00
34 T	dibromomethane	0.384	0.359	6.6	75	0.00
35 T	bromodichloromethane	0.943	0.890	5.6	78	0.00
36	2-Chloroethyl Vinyl Ether	0.127	0.130	-3.1	84	0.00
37 T	cis-1,3-dichloropropene	0.554	0.526	5.1	78	0.02
38 S	Toluene-d8	0.975	0.996	-2.1	82	0.01
39 C	toluene	0.984	0.977	0.7#	80	0.00
40 T	trans-1,3-dichloropropene	0.536	0.512	4.5	79	0.00
41 T	1,1,2-trichloroethane	0.293	0.300	-2.4	79	0.01
42 S	4-Bromofluorobenzene	1.001	0.996	0.5	86	0.00

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19118.D
 Acq Time : 9 Oct 99 12:13 am
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
44	4-Methyl-2-Pentanone	0.270	0.237	12.3	78	-0.01
45 T	tetrachloroethene	0.504	0.487	3.4	75	0.00
46 T	1,3-dichloropropane	0.484	0.475	1.8	84	0.00
47 T	dibromochloromethane	0.687	0.650	5.5	82	0.00
48 T	1,2-dibromoethane	0.523	0.503	3.7	82	0.00
49	2-Hexanone	0.191	0.167	12.5	63	0.00
50 P	chlorobenzene	0.810	0.765	5.6	81	0.00
51	1-Chlorohexane	0.455	0.424	6.7	77	0.00
52 T	1,1,1,2-tetrachloroethane	0.459	0.480	-4.6	81	0.00
53 C	ethylbenzene	1.365	1.276	6.5#	79	0.00
54 T	m&p-xylenes	0.468	0.433	7.5	82	0.00
55 T	o-xylene	1.352	1.248	7.6	84	0.00
56 T	styrene	0.778	0.728	6.4	83	0.00
57 P	bromoform	0.542	0.522	3.5	77	0.02
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	85	0.00
59 T	isopropylbenzene	2.156	2.102	2.5	82	0.01
60 T	bromobenzene	1.481	1.440	2.7	81	0.00
61 P	1,1,2,2-tetrachloroethane	0.856	0.850	0.8	81	0.02
62	1,2,3-trichloropropane	0.640	0.625	2.4	84	0.00
63 T	n-propylbenzene	0.930	0.766	17.7	77	0.00
64 T	2-chlorotoluene	0.533	0.504	5.4	79	0.01
65 T	4-chlorotoluene	0.546	0.509	6.8	79	0.00
66 T	1,3,5-trimethylbenzene	1.976	1.936	2.0	80	0.00
67 T	tert-butylbenzene	1.907	1.812	5.0	81	0.02
68 T	1,2,4-trimethylbenzene	2.281	1.959	14.1	83	0.00
69 T	sec-butylbenzene	2.558	2.401	6.1	81	0.00
70 T	1,3-dichlorobenzene	1.297	1.161	10.4	76	0.00
71 T	4-isopropyltoluene	2.355	2.089	11.3	76	0.01
72 T	1,4-dichlorobenzene	1.315	1.141	13.2	76	0.01
73 T	1,2-dichlorobenzene	1.244	1.154	7.3	79	-0.01
74 T	n-butylbenzene	2.380	1.987	16.5	75	0.01
75 T	1,2-dibromo-3-chloropropane	0.312	0.284	9.0	80	0.01
76 T	1,2,4-trichlorobenzene	1.082	0.842	22.2#	68	0.01
77 T	hexachlorobutadiene	0.877	0.784	10.6	76	0.00
78 T	naphthalene	1.610	1.355	15.8	77	0.00
79 T	1,2,3-trichlorobenzene	0.965	0.823	14.8	74	0.00

000459

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No. 13701ASP

Site: _____

Location: _____

Group: GP-005-SS1Instrument ID: VOA 2Calibration Date: 10/11/99Time: 1710Lab File ID: P19152.DInit. Calib. Date(s): 10/6/99 10/6/99Heated Purge: (Y/N) YInit. Calib. Times: 1753 2135GC Column: RTX624ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.430	0.384		10.7	
Chloromethane	0.230	0.183	0.300	20.4	
Vinyl Chloride	0.219	0.188		14.2	25.0
Bromomethane	0.247	0.191		22.7	
Chloroethane	0.113	0.092		18.6	
Trichlorofluoromethane	1.065	0.961		9.8	
Methylene Chloride	0.235	0.234		0.4	
1,1-Dichloroethane	0.730	0.692	0.300	5.2	
2,2-Dichloropropane	0.753	0.756		-0.4	
Bromochloromethane	0.386	0.375		2.8	
Chloroform	0.997	0.939		5.8	25.0
1,1,1-Trichloroethane	1.046	0.965		7.7	
Carbon Tetrachloride	0.580	0.550		5.2	
1,1-Dichloropropene	0.576	0.550		4.5	
Benzene	0.792	0.818		-3.3	
1,2-Dichloroethane	0.717	0.611		14.8	
Trichloroethene	0.469	0.473		-0.9	
1,2-Dichloropropane	0.360	0.347		3.6	25.0
Dibromomethane	0.384	0.379		1.3	
Bromodichloromethane	0.943	0.819		13.1	
Toluene	0.984	1.009		-2.5	25.0
1,1,2-Trichloroethane	0.293	0.306		-4.4	
Tetrachloroethene	0.504	0.544		-7.9	
1,3-Dichloropropane	0.484	0.473		2.3	
Dibromochloromethane	0.687	0.641		6.7	
1,2-Dibromoethane	0.523	0.493		5.7	
Chlorobenzene	0.810	0.794	0.300	2.0	
1,1,1,2-Tetrachloroethane	0.459	0.481		-4.8	
Ethylbenzene	1.365	1.290		5.5	25.0
Styrene	0.778	0.713		8.4	
Bromoform	0.542	0.520	0.250	4.1	
isopropylbenzene	2.156	2.202		-2.1	
Bromobenzene	1.481	1.454		1.8	
1,1,2,2-Tetrachloroethane	0.856	0.846	0.300	1.2	
1,2,3-Trichloropropane	0.640	0.604		5.6	
n-Propylbenzene	0.930	0.793		14.7	

All other compounds must meet a minimum RRF of 0.010.

000460

ID: 0.53 (mm)

All other compounds must meet a minimum RRF of 0.010.

3/90

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19152.D
 Acq Time : 11 Oct 99 5:10 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 19 9:00 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.27	96	1379612	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	1443870	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	22.63	152	961810	50.00	ug/L	0.04

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.98	113	1099141	47.82	ug/L	95.64%
30) 1,2-Dichlorethane-d4	8.68	65	800968	44.35	ug/L	88.69%
38) Toluene-d8	12.78	98	1401527	52.09	ug/L	104.17%
42) 4-Bromofluorobenzene	19.50	95	1380003	49.96	ug/L	99.92%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.73	85	529385	44.66	ug/L	100
3) chloromethane	1.96	50	252118	39.72	ug/L	94
4) vinyl chloride	2.08	62	259866	43.00	ug/L	99
5) bromomethane	2.48	94	264025	38.69	ug/L	89
6) chloroethane	2.61	64	127214	40.98	ug/L	96
7) Acrolein	3.64	56	167735	486.76	ug/L	100
8) trichlorofluoromethane	2.90	101	1325361	45.10	ug/L	98
9) 1,1-dichloroethene	3.67	61	687351	47.09	ug/L	95
10) Acetone	3.92	43	169435	68.53	ug/L	98
11) Carbon Disulfide	3.96	76	854810	56.64	ug/L	96
12) Iodo Methane	3.92	142	1092131	52.04	ug/L	96
13) methylene chloride	4.58	84	322861	49.85	ug/L	91
14) trans-1,2-dichloroethene	4.98	61	659013	53.16	ug/L	97
15) TBA	4.98	59	376307	412.30	ug/L	97
16) MTBE	5.00	73	1191746	49.68	ug/L	97
17) Acrylonitrile	5.18	53	453417	484.94	ug/L	100
18) 1,1-dichloroethane	5.84	63	954495	47.38	ug/L	99
19) 2,2-dichloropropane	6.89	77	1042796	50.18	ug/L	96
20) cis-1,2-dichloroethene	6.99	61	835032	48.77	ug/L	96
21) bromochloromethane	7.46	49	517434	48.55	ug/L	90
22) chloroform	7.65	83	1294810	47.06	ug/L	100
23) 1,1,1-trichloroethane	7.86	97	1331617	46.14	ug/L	99
25) Vinyl Acetate	5.98	43	926933	46.05	ug/L	98
26) 2-Butanone	7.12	43	195128	56.06	ug/L	98
27) carbon tetrachloride	8.11	117	758645	47.37	ug/L	94
28) 1,1-dichloropropene	8.21	75	758308	47.69	ug/L	93
29) benzene	8.61	78	1128331	51.66	ug/L	99
31) 1,2-dichloroethane	8.84	62	842532	42.60	ug/L	97
32) trichloroethene	10.03	130	652040	50.40	ug/L	98
33) 1,2-dichloropropane	10.62	63	478418	48.13	ug/L	99
34) dibromomethane	10.88	174	523176	49.33	ug/L	87
35) bromodichloromethane	11.27	83	1129409	43.40	ug/L	96
36) 2-Chloroethyl Vinyl Ether	12.94	63	166156	47.58	ug/L m	90

(#) = qualifier out of range (m) = manual integration
 P19152.D V21006CS.M Tue Oct 19 09:00:50 1999

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19152.D
 Acq Time : 11 Oct 99 5:10 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 19 9:00 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

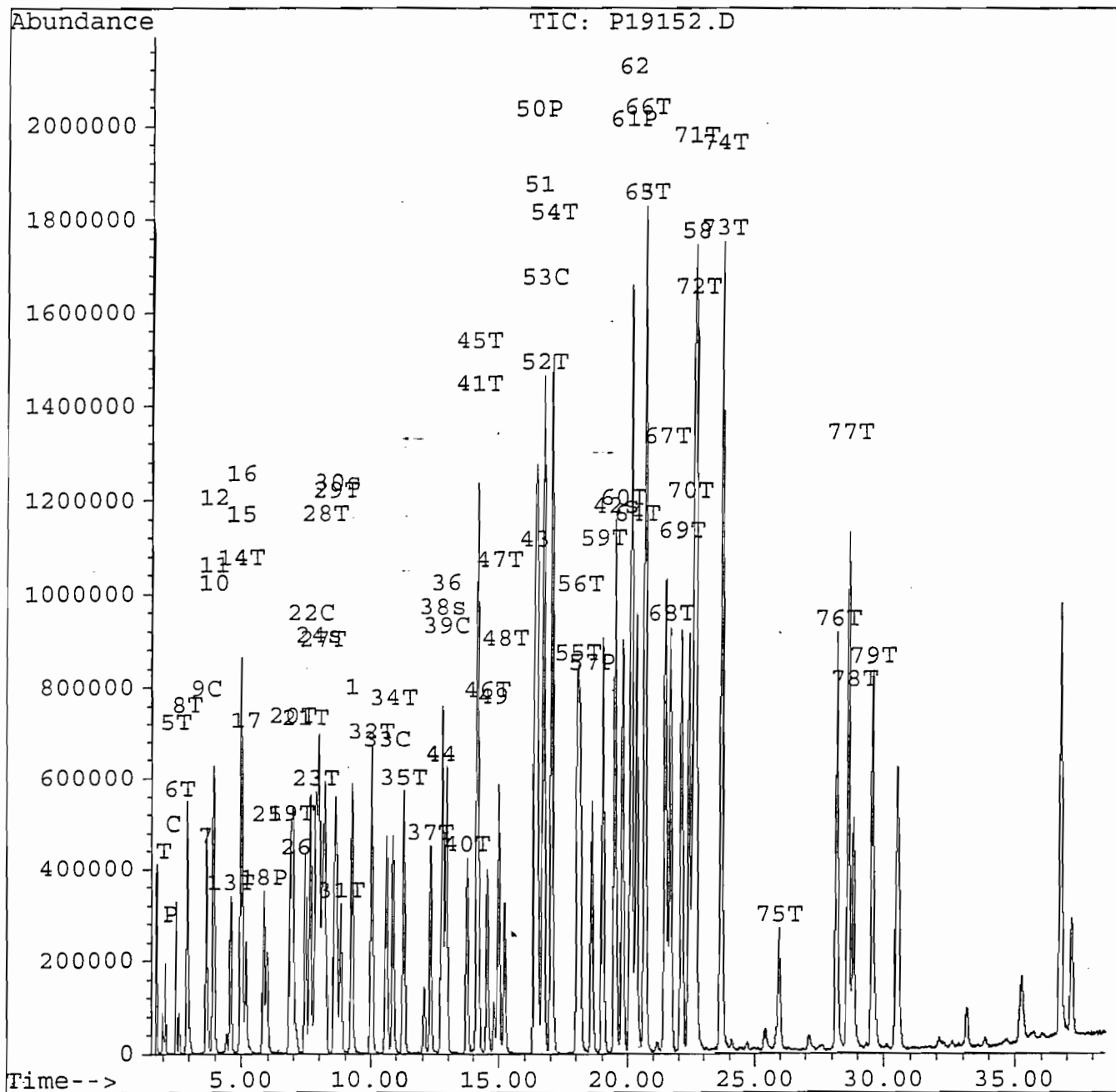
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.32	75	722537	47.27	ug/L	99
39) toluene	12.93	91	1392154	51.29	ug/L	100
40) trans-1,3-dichloropropene	13.74	75	711839	48.10	ug/L	99
41) 1,1,2-trichloroethane	14.14	97	422817	52.37	ug/L	96
44) 4-Methyl-2-Pentanone	12.73	43	319187	40.95	ug/L	98
45) tetrachloroethene	14.16	166	785248	53.99	ug/L	98
46) 1,3-dichloropropane	14.52	76	683390	48.90	ug/L	99
47) dibromochloromethane	14.98	129	925026	46.60	ug/L	98
48) 1,2-dibromoethane	15.22	107	711827	47.15	ug/L	99
49) 2-Hexanone	14.79	43	278309	50.57	ug/L	94
50) chlorobenzene	16.43	112	1146283	48.99	ug/L	99
51) 1-Chlorohexane -	16.48	91	668095	50.86	ug/L	95
52) 1,1,1,2-tetrachloroethane	16.71	133	694478	52.44	ug/L	91
53) ethylbenzene	16.69	91	1862779	47.25	ug/L	99
54) m&p-xylenes	17.02	106	1255430	92.94	ug/L	95
55) o-xylene	18.03	91	1708121	43.76	ug/L	99
56) styrene	18.13	104	1029451	45.80	ug/L	93
57) bromoform	18.59	173	750842	48.00	ug/L	95
59) isopropylbenzene	19.02	105	2117776	51.05	ug/L	99
60) bromobenzene	19.79	77	1398120	49.09	ug/L	94
61) 1,1,2,2-tetrachloroethane	20.12	83	814085	49.42	ug/L	99
62) 1,2,3-trichloropropane	20.15	75	581359	47.21	ug/L	95
63) n-propylbenzene	20.68	120	762272	49.55	ug/L	69
64) 2-chlorotoluene	20.34	126	518819	50.63	ug/L	96
65) 4-chlorotoluene	20.69	126	520628	49.55	ug/L	87
66) 1,3,5-trimethylbenzene	20.68	105	1864797	49.07	ug/L	99
67) tert-butylbenzene	21.49	119	1751001	47.73	ug/L	98
68) 1,2,4-trimethylbenzene	21.67	105	1891994	47.83	ug/L	100
69) sec-butylbenzene	22.09	105	2309072	46.93	ug/L	100
70) 1,3-dichlorobenzene	22.39	146	1167676	46.82	ug/L	97
71) 4-isopropyltoluene	22.56	119	2147776	47.42	ug/L	97
72) 1,4-dichlorobenzene	22.68	146	1188306	46.97	ug/L	89
73) 1,2-dichlorobenzene	23.67	146	1113058	46.50	ug/L	94
74) n-butylbenzene	23.68	91	1978862	43.22	ug/L	97
75) 1,2-dibromo-3-chloropropan	25.94	75	253957	42.33	ug/L	96
76) 1,2,4-trichlorobenzene	28.18	180	948798	45.60	ug/L	99
77) hexachlorobutadiene	28.63	225	792541	46.96	ug/L	93
78) naphthalene	28.82	128	1369016	44.21	ug/L	99
79) 1,2,3-trichlorobenzene	29.55	180	855172	46.06	ug/L	99

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19152.D
 Acq Time : 11 Oct 99 5:10 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 19 9:00 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000464

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19152.D
 Acq Time : 11 Oct 99 5:10 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev (Min)
1	Fluorobenzene	1.000	1.000	0.0	120	0.00
2 T	dichlorodifluoromethane	0.430	0.384	10.7	118	0.00
3 P	chloromethane	0.230	0.183	20.6#	111	0.00
4 C	vinyl chloride	0.219	0.188	14.0#	116	0.00
5 T	bromomethane	0.247	0.191	22.6#	110	0.00
6 T	chloroethane	0.113	0.092	18.0	115	0.00
7	Acrolein	0.012	0.012	2.6	119	0.00
8 T	trichlorofluoromethane	1.065	0.961	9.8	117	0.00
9 C	1,1-dichloroethene	0.529	0.498	5.8#	119	0.00
10	Acetone	0.090	0.123-	-37.1#	123	0.02
11	Carbon Disulfide	0.547	0.620	-13.3	135	0.01
12	Iodo Methane	0.761	0.792	-4.1	126	0.01
13 T	methylene chloride	0.235	0.234	0.3	128	0.00
14 T	trans-1,2-dichloroethene	0.449	0.478	-6.3	127	0.01
15	TBA	0.033	0.027	17.5	109	0.01
16	MTBE	0.869	0.864	0.6	116	0.00
17	Acrylonitrile	0.034	0.033	3.0	117	0.01
18 P	1,1-dichloroethane	0.730	0.692	5.2	122	0.00
19 T	2,2-dichloropropane	0.753	0.756	-0.4	123	0.00
20 T	cis-1,2-dichloroethene	0.621	0.605	2.5	122	0.00
21 T	bromochloromethane	0.386	0.375	2.9	121	0.01
22 C	chloroform	0.997	0.939	5.9#	119	0.01
23 T	1,1,1-trichloroethane	1.046	0.965	7.7	113	0.00
24 S	Dibromofluoromethane	0.833	0.797	4.4	121	0.01
25	Vinyl Acetate	0.730	0.672	7.9	112	0.00
26	2-Butanone	0.126	0.141	-12.1	115	0.02
27 T	carbon tetrachloride	0.580	0.550	5.3	118	0.01
28 T	1,1-dichloropropene	0.576	0.550	4.6	118	0.03
29 T	benzene	0.792	0.818	-3.3	125	0.00
30 S	1,2-Dichloroethane-d4	0.655	0.581	11.3	112	0.01
31 T	1,2-dichloroethane	0.717	0.611	14.8	111	0.02
32 T	trichloroethene	0.469	0.473	-0.8	122	0.00
33 C	1,2-dichloropropane	0.360	0.347	3.7#	122	0.02
34 T	dibromomethane	0.384	0.379	1.3	121	0.02
35 T	bromodichloromethane	0.943	0.819	13.2	110	0.02
36	2-Chloroethyl Vinyl Ether	0.127	0.120	4.8	118	0.03
37 T	cis-1,3-dichloropropene	0.554	0.524	5.5	119	0.02
38 S	Toluene-d8	0.975	1.016	-4.2	128	0.02
39 C	toluene	0.984	1.009	-2.6#	126	0.00
40 T	trans-1,3-dichloropropene	0.536	0.516	3.8	122	0.02
41 T	1,1,2-trichloroethane	0.293	0.306	-4.7	124	0.02
42 S	4-Bromofluorobenzene	1.001	1.000	0.1	131	0.02

(#) = Out of Range
 P19152.D V21006CS.M

Tue Oct 19 09:01:11 1999

VOA3

000465

Page 1

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19152.D
 Acq Time : 11 Oct 99 5:10 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	124	0.02
44	4-Methyl-2-Pentanone	0.270	0.221	18.1	109	0.00
45 T	tetrachloroethene	0.504	0.544	-8.0	126	0.01
46 T	1,3-dichloropropane	0.484	0.473	2.2	125	0.01
47 T	dibromochloromethane	0.687	0.641	6.8	121	0.02
48 T	1,2-dibromoethane	0.523	0.493	5.7	121	0.02
49	2-Hexanone	0.191	0.193	-1.1	110	0.00
50 P	chlorobenzene	0.810	0.794	2.0	125	0.02
51	1-Chlorohexane	0.455	0.463	-1.7	126	0.02
52 T	1,1,1,2-tetrachloroethane	0.459	0.481	-4.9	122	0.02
53 C	ethylbenzene	1.365	1.290	5.5#	120	0.02
54 T	m&p-xylenes	0.468	0.435	7.1	123	0.01
55 T	o-xylene	1.352	1.183	12.5	119	0.02
56 T	styrene	0.778	0.713	8.4	121	0.02
57 P	bromoform	0.542	0.520	4.0	115	0.02
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	120	0.04
59 T	isopropylbenzene	2.156	2.202	-2.1	122	0.02
60 T	bromobenzene	1.481	1.454	1.8	117	0.02
61 P	1,1,2,2-tetrachloroethane	0.856	0.846	1.2	115	0.03
62	1,2,3-trichloropropane	0.640	0.604	5.6	115	0.01
63 T	n-propylbenzene	0.930	0.793	14.8	114	0.03
64 T	2-chlorotoluene	0.533	0.539	-1.3	120	0.03
65 T	4-chlorotoluene	0.546	0.541	0.9	119	0.03
66 T	1,3,5-trimethylbenzene	1.976	1.939	1.9	114	0.02
67 T	tert-butylbenzene	1.907	1.821	4.5	116	0.02
68 T	1,2,4-trimethylbenzene	2.281	1.967	13.8	119	0.03
69 T	sec-butylbenzene	2.558	2.401	6.1	115	0.01
70 T	1,3-dichlorobenzene	1.297	1.214	6.4	113	0.02
71 T	4-isopropyltoluene	2.355	2.233	5.2	116	0.03
72 T	1,4-dichlorobenzene	1.315	1.235	6.1	117	0.02
73 T	1,2-dichlorobenzene	1.244	1.157	7.0	112	0.00
74 T	n-butylbenzene	2.380	2.057	13.6	111	0.03
75 T	1,2-dibromo-3-chloropropane	0.312	0.264	15.3	106	0.01
76 T	1,2,4-trichlorobenzene	1.082	0.986	8.8	113	0.03
77 T	hexachlorobutadiene	0.877	0.824	6.1	114	0.03
78 T	naphthalene	1.610	1.423	11.6	115	0.03
79 T	1,2,3-trichlorobenzene	0.965	0.889	7.9	113	0.02

000466-

CHIVITECH CONSULTING GROUP

VOLATILES

RAW QC DATA

000467

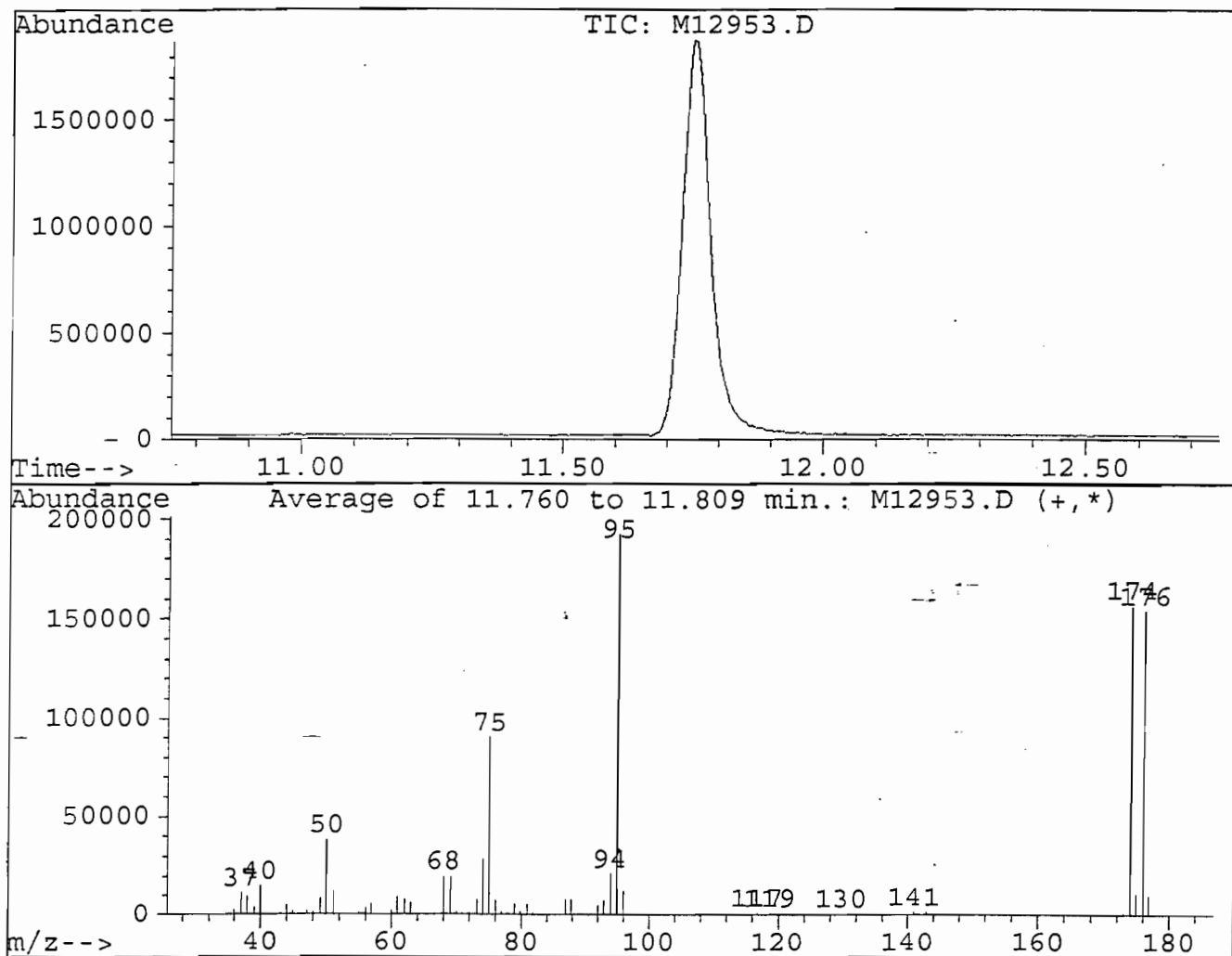
BFB

JJ 10-9-99

Data File : D:\HPCHEM\3\DATA\V3100999\M12953.D
 Acq Time : 9 Oct 99 8:04 am
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA



Peak Apex is scan: 974

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	37712	PASS
75	95	30	60	46.7	89873	PASS
95	95	100	100	100.0	192474	PASS
96	95	5	9	6.2	12005	PASS
173	174	0	2	0.1	215	PASS
174	95	50	100	81.3	156516	PASS
175	174	5	9	6.9	10770	PASS
176	174	95	101	98.2	153652	PASS
177	176	5	9	6.1	9368	PASS

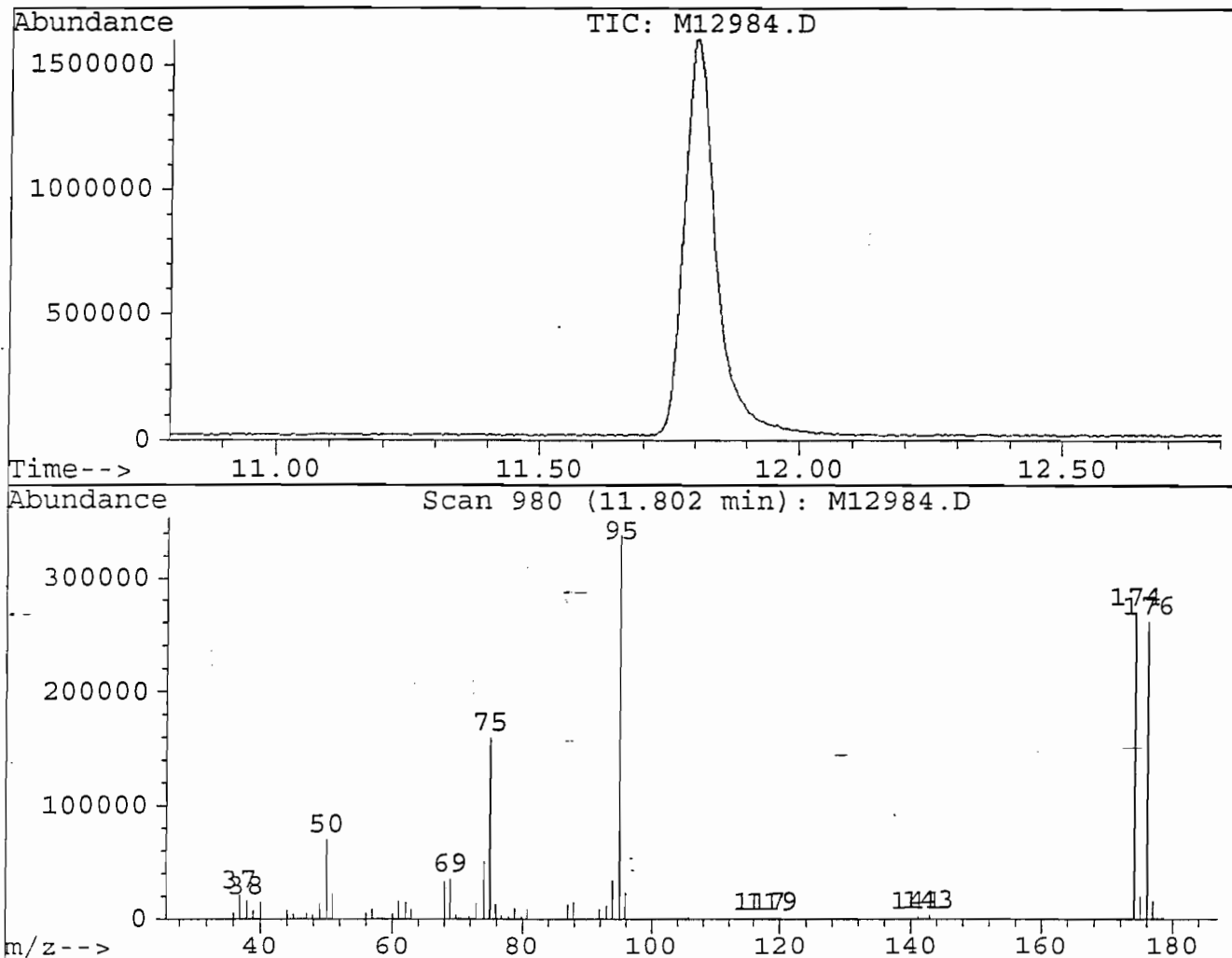
BFB

10-10-99

Data File : D:\HPCHEM\3\DATA\V3101099\M12984.D
 Acq Time : 10 Oct 99 1:35 pm
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: BS
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA



Peak Apex is scan: 980

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.5	69336	PASS
75	95	30	60	47.2	159424	PASS
95	95	100	100	100.0	337728	PASS
96	95	5	9	6.7	22720	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	79.9	269696	PASS
175	174	5	9	7.3	19760	PASS
176	174	95	101	97.1	261824	PASS
177	176	5	9	5.9	15578	PASS

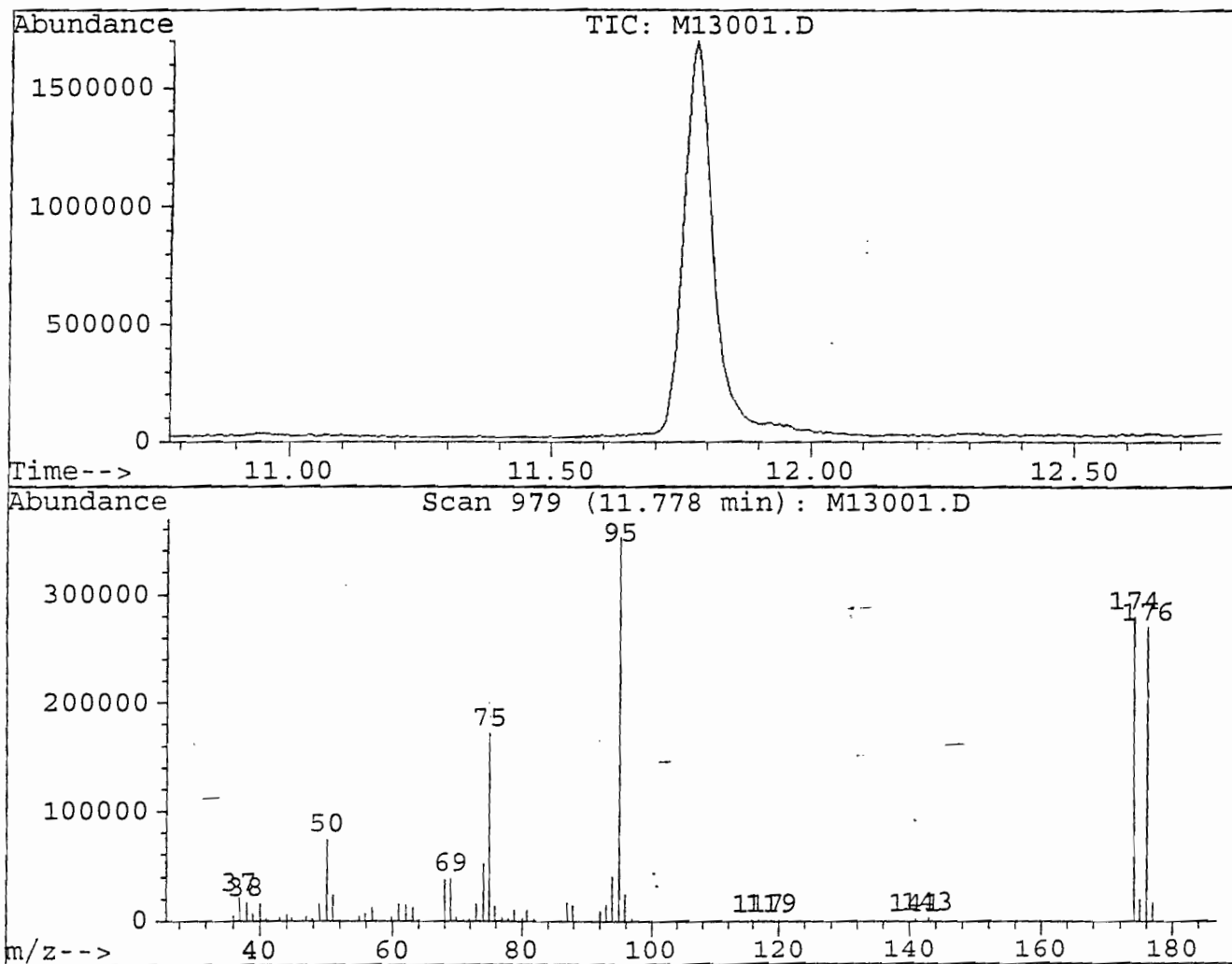
BFB

At Vge

Data File : D:\HPCHEM\3\DATA\V3101199\M13001.D
Acq Time : 11 Oct 99 7:47 am
Sample : BFB TUNE CHECK
Misc : 5MLS

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA



Peak Apex is scan: 979

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.0	74000	PASS
75	95	30	60	48.8	171968	PASS
95	95	100	100	100.0	352704	PASS
96	95	5	9	6.9	24320	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	79.4	280128	PASS
175	174	5	9	7.2	20144	PASS
176	174	95	101	96.3	269696	PASS
177	176	5	9	6.3	16952	PASS

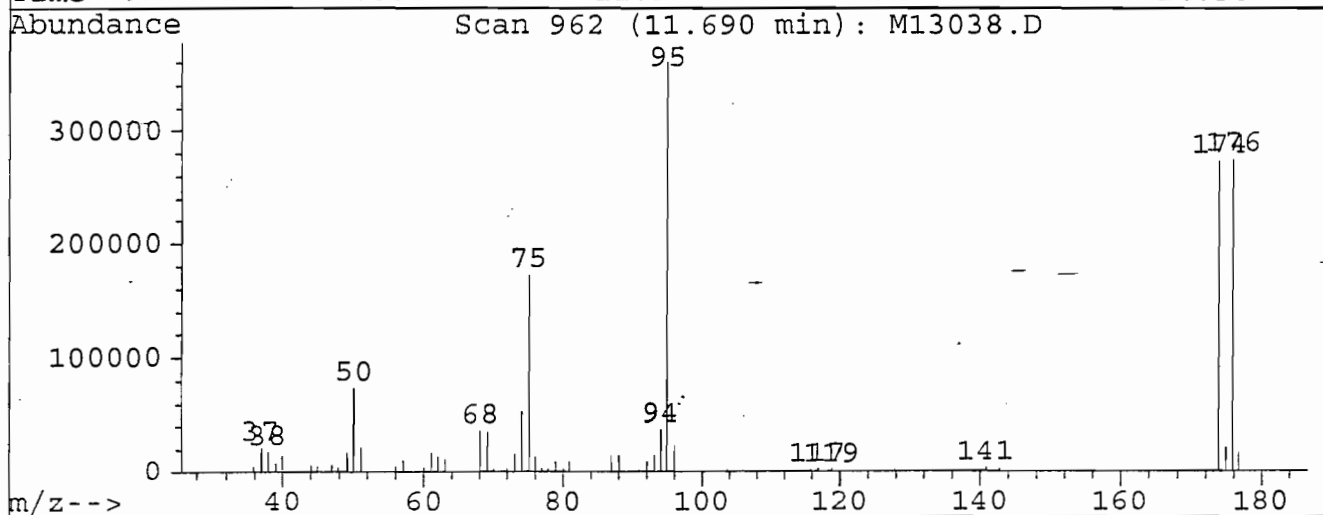
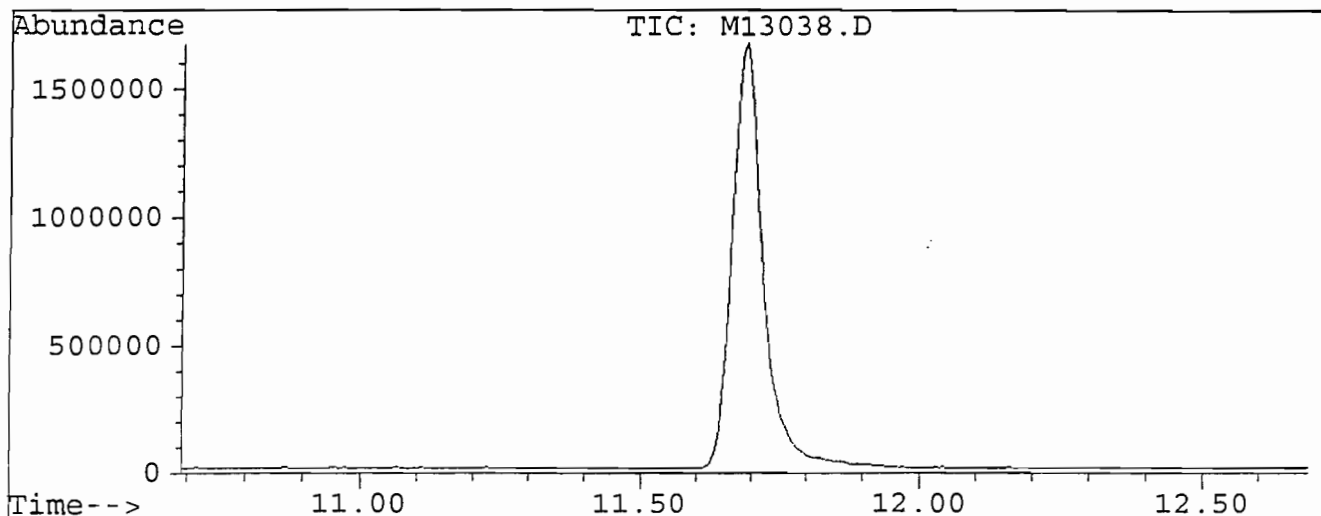
BFB

A. V. dye

Data File : D:\HPCHEM\3\DATA\V3101299\M13038.D
 Acq Time : 12 Oct 99 7:03 pm
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA



Peak Apex is scan: 962

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.3	73000	PASS
75	95	30	60	47.7	171968	PASS
95	95	100	100	100.0	360448	PASS
96	95	5	9	6.5	23472	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	75.9	273408	PASS
175	174	5	9	7.7	20928	PASS
176	174	95	101	100.5	274880	PASS
177	176	5	9	6.2	17144	PASS

000471

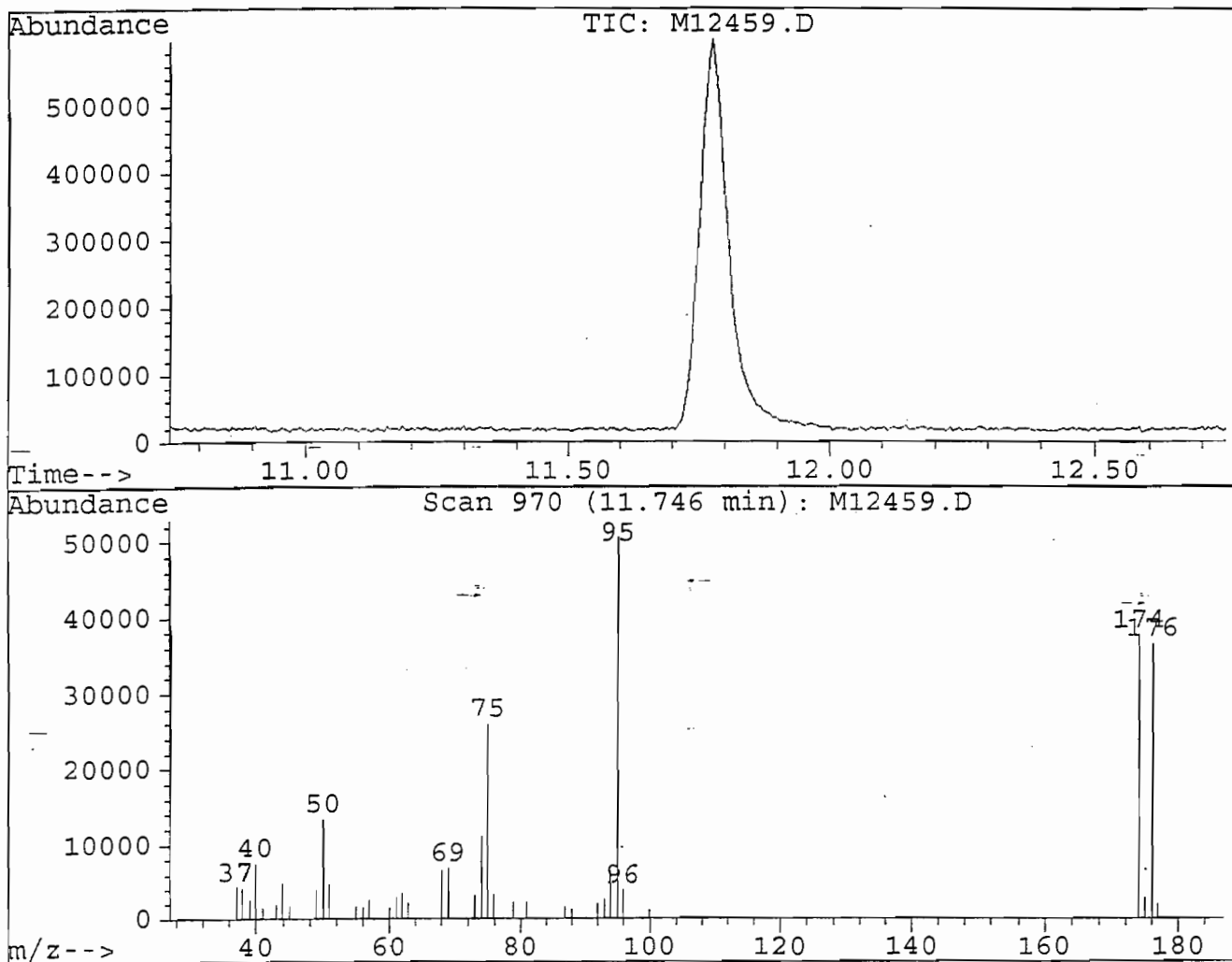
BFB

A. T. V. J.

Data File : D:\HPCHEM\3\DATA\V3091699\M12459.D
Acq Time : 16 Sep 99 7:44 am
Sample : BFB TUNE CHECK
Misc : 5ML

Operator: AVJJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30916CW.M
Title : VOA



Peak Apex is scan: 970

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.3	13323	PASS
75	95	30	60	51.3	25968	PASS
95	95	100	100	100.0	50592	PASS
96	95	5	9	7.7	3872	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	74.4	37616	PASS
175	174	5	9	7.6	2859	PASS
176	174	95	101	97.0	36504	PASS
177	176	5	9	5.2	1892	PASS

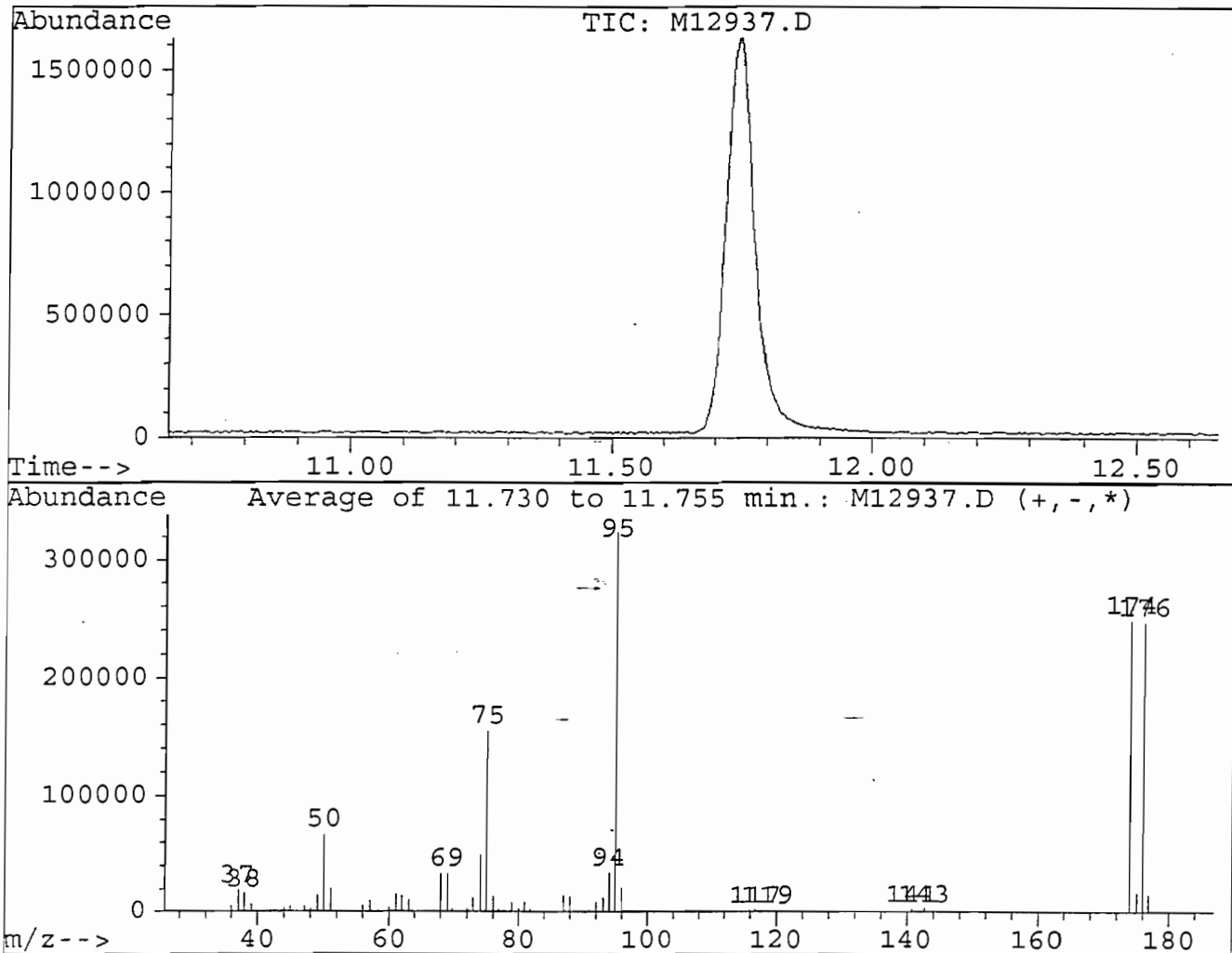
BFB

98 10-8-99

Data File : D:\HPCHEM\3\DATA\V3100899\M12937.D
 Acq Time : 8 Oct 99 7:18 am
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30916CW.M
 Title : VOA



Peak Apex is scan: 1012

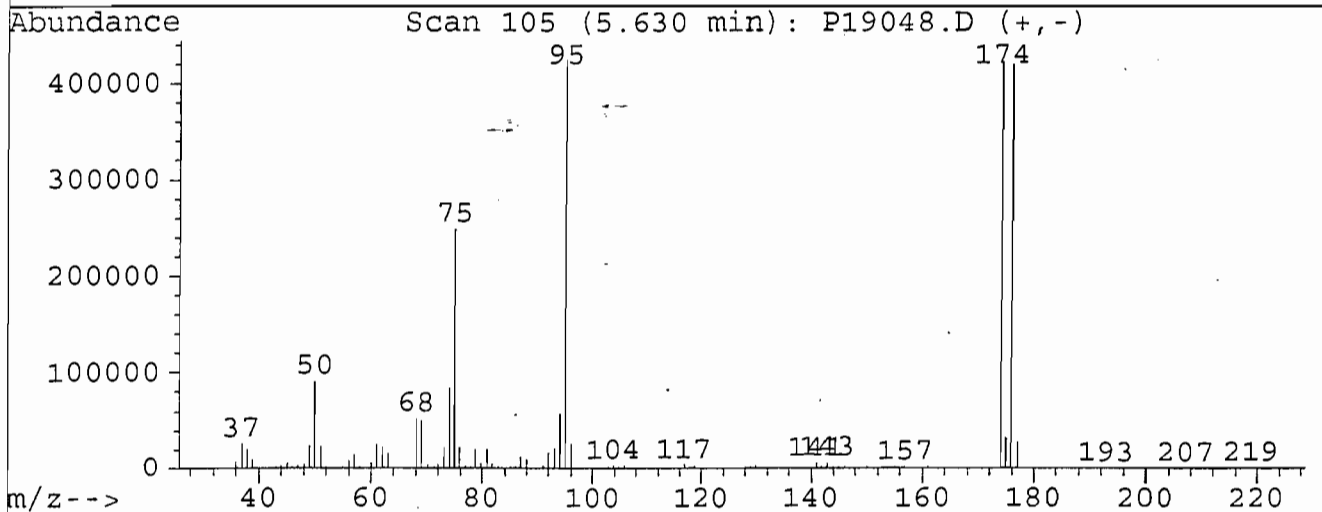
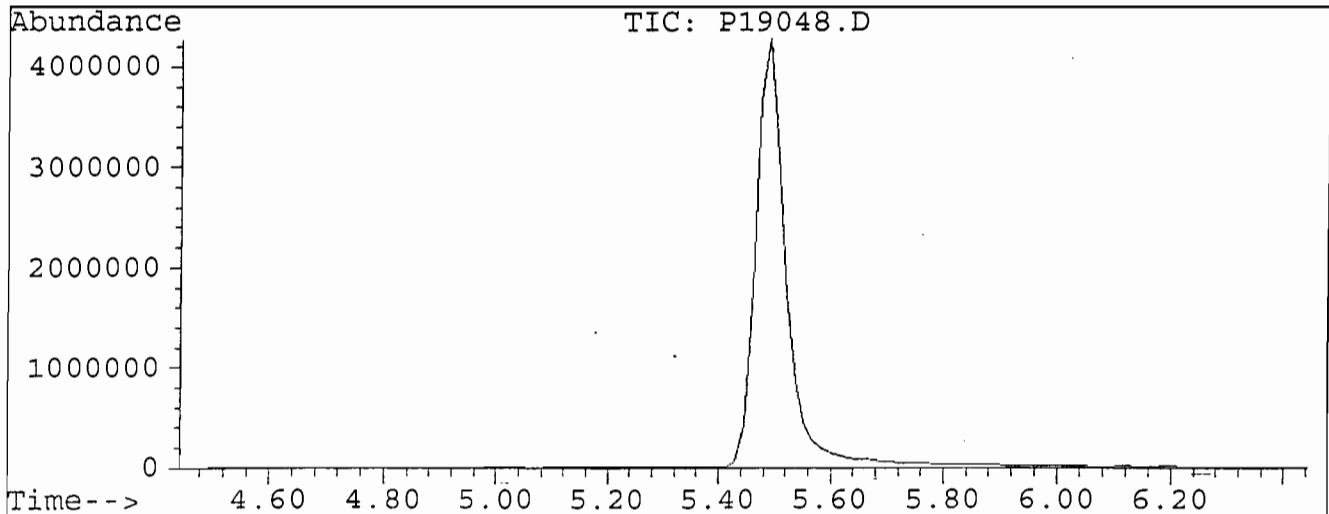
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.7	66731	PASS
75	95	30	60	47.8	154581	PASS
95	95	100	100	100.0	323115	PASS
96	95	5	9	6.4	20759	PASS
173	174	0	2	0.3	704	PASS
174	95	50	100	76.9	248469	PASS
175	174	5	9	6.9	17255	PASS
176	174	95	101	99.2	246411	PASS
177	176	5	9	6.2	15369	PASS

BFB

Data File : I:\HPCHEM\1\DATA\V2100699\P19048.D
 Acq Time : 6 Oct 99 5:15 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA

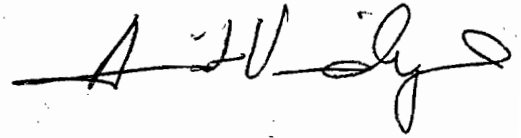


Peak Apex is scan: 93

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	89648	PASS
75	95	30	60	58.3	247453	PASS
95	95	100	100	100.0	424464	PASS
96	95	5	9	6.3	26812	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	99.4	421933	PASS
175	174	5	9	7.4	31270	PASS
176	174	95	101	99.1	418178	PASS
177	176	5	9	6.5	27174	PASS

000474

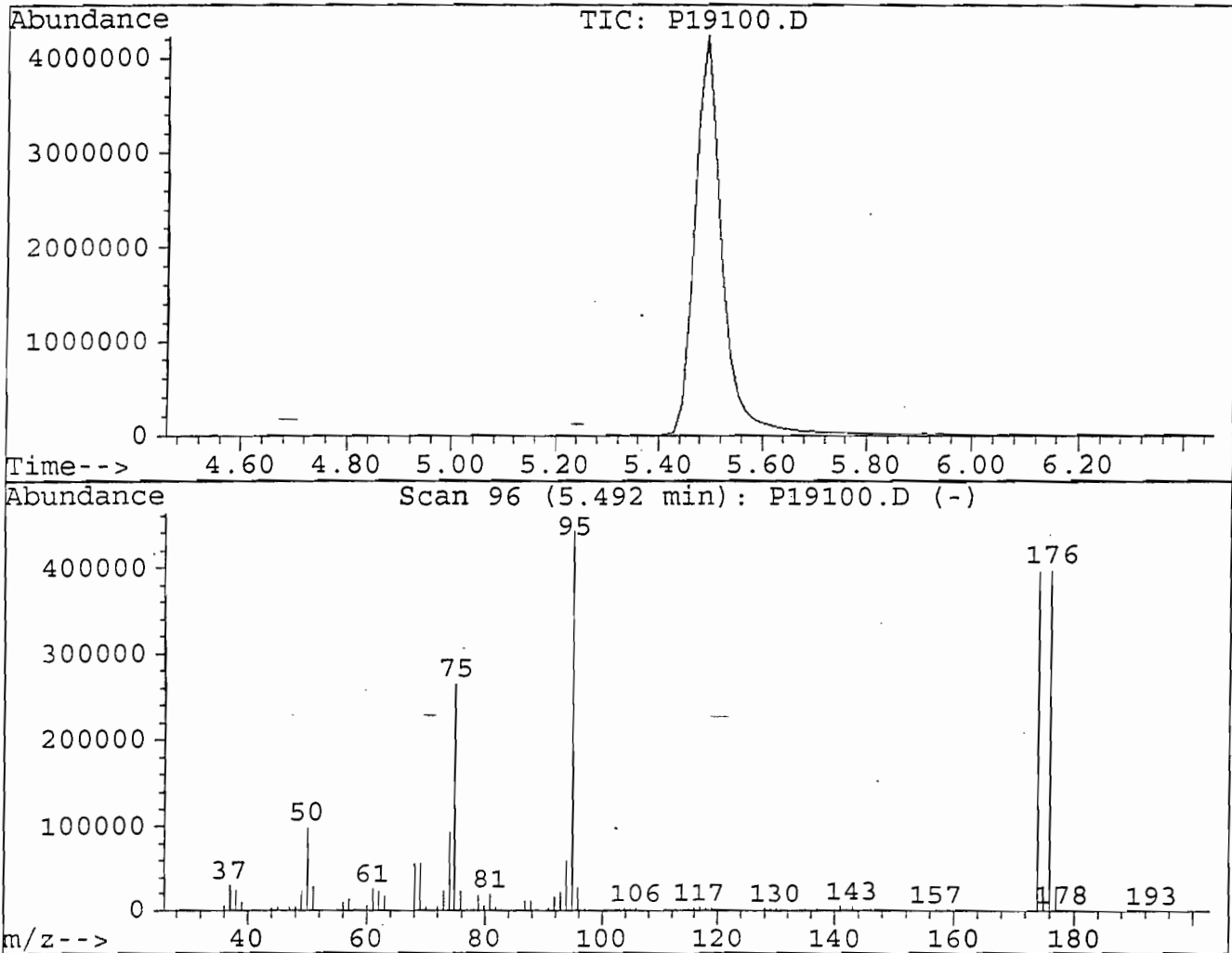
BFB



Data File : I:\HPCHEM\1\DATA\V2100899\P19100.D
 Acq Time : 8 Oct 99 11:11 am
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 94

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	97864	PASS
75	95	30	60	59.7	264208	PASS
95	95	100	100	100.0	442288	PASS
96	95	5	9	6.2	27230	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	89.2	394368	PASS
175	174	5	9	7.1	27915	PASS
176	174	95	101	100.6	396864	PASS
177	176	5	9	6.3	25138	PASS

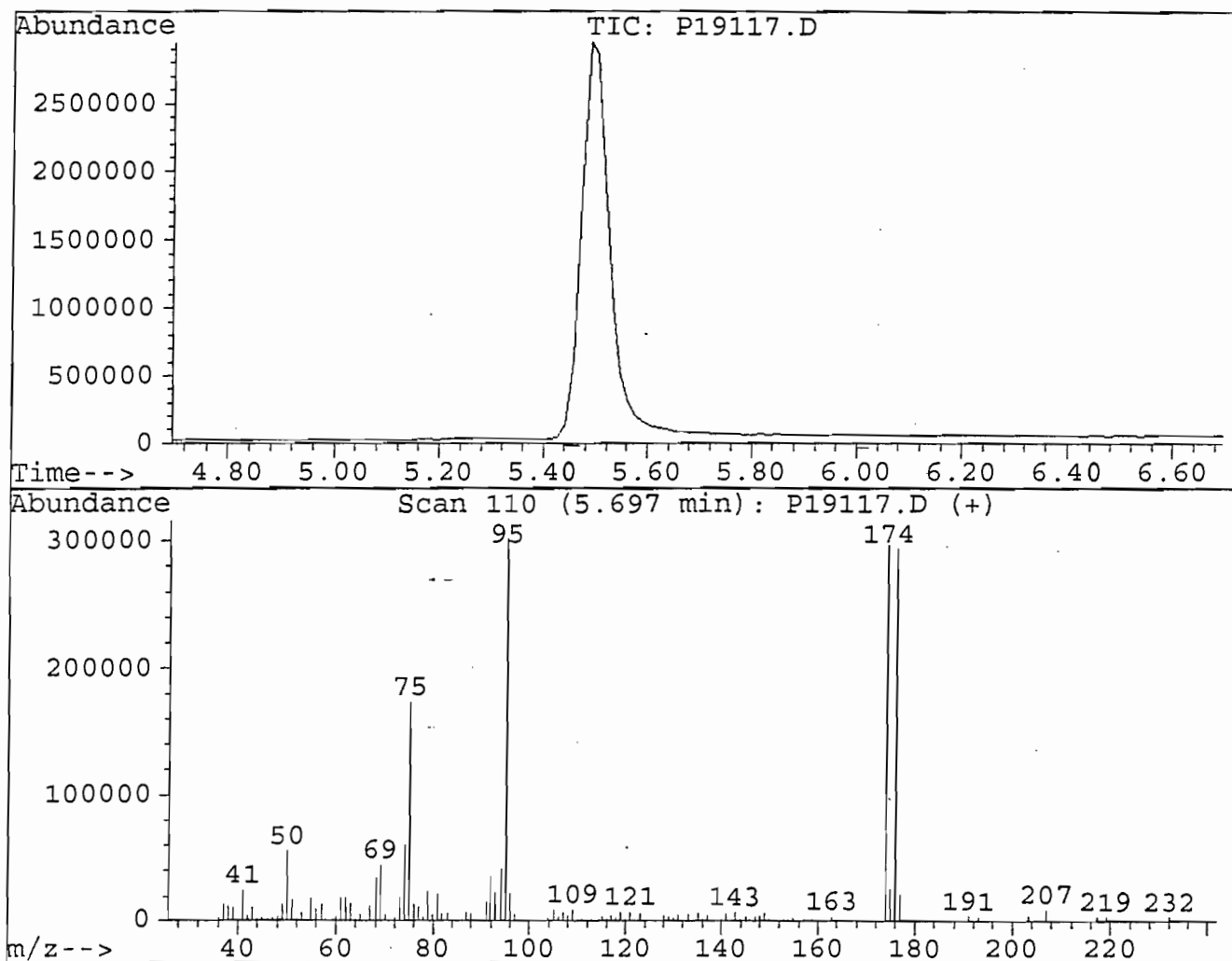
000475

BFB

Data File : I:\HPCHEM\1\DATA\V2100899\P19117.D
 Acq Time : 8 Oct 99 11:35 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 110

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.2	54989	PASS
75	95	30	60	57.4	173067	PASS
95	95	100	100	100.0	301333	PASS
96	95	5	9	7.3	22001	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	98.3	296123	PASS
175	174	5	9	8.4	24961	PASS
176	174	95	101	99.1	293420	PASS
177	176	5	9	6.9	20199	PASS

000476

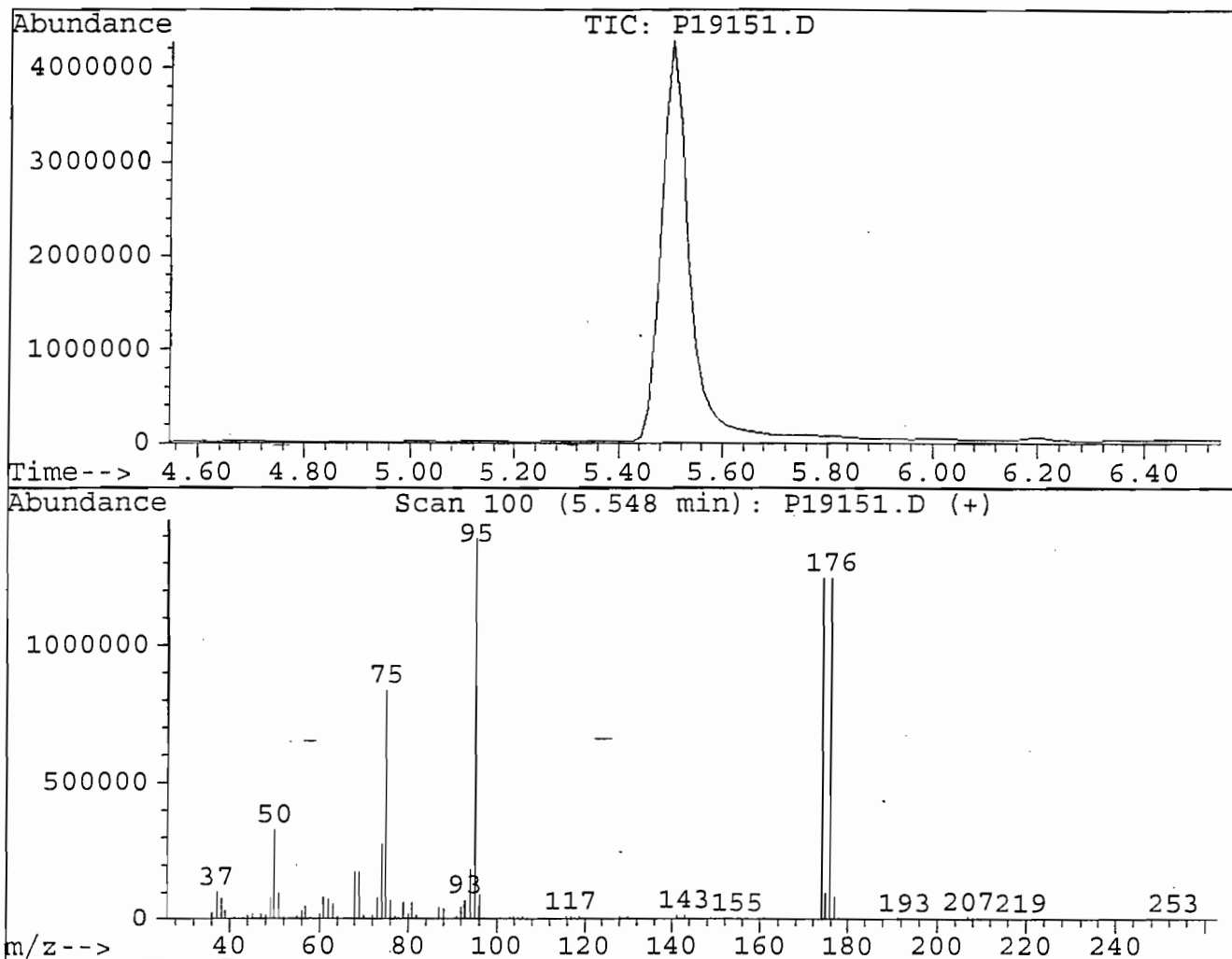
BFB

A. T. V. Jy

Data File : I:\HPCHEM\1\DATA\V2101199\P19151.D
 Acq Time : 11 Oct 99 4:31 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 100

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.3	324497	PASS
75	95	30	60	59.9	833224	PASS
95	95	100	100	100.0	1391976	PASS
96	95	5	9	6.5	89967	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	89.2	1241592	PASS
175	174	5	9	7.6	94165	PASS
176	174	95	101	100.2	1244520	PASS
177	176	5	9	6.6	81986	PASS

000477

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBLK01

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M12986.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/10/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

CAS No.	Compound	Concentration Units:		Q
		(ug/L or ug/Kg)	<u>ug/Kg</u>	
75-71-8	Dichlorodifluoromethane	630		U
74-87-3	Chloromethane	630		U
75-01-4	Vinyl Chloride	630		U
74-83-9	Bromomethane	630		U
75-00-3	Chloroethane	630		U
75-69-4	Trichlorofluoromethane	630		U
75-09-2	Methylene Chloride	630		U
75-34-4	1,1-Dichloroethane	630		U
590-20-7	2,2-Dichloropropane	630		U
74-97-5	Bromochloromethane	630		U
67-66-3	Chloroform	630		U
71-55-6	1,1,1-Trichloroethane	630		U
56-23-5	Carbon Tetrachloride	630		U
563-58-6	1,1-Dichloropropene	630		U
71-43-2	Benzene	630		U
107-06-2	1,2-Dichloroethane	630		U
79-01-6	Trichloroethene	630		U
78-87-5	1,2-Dichloropropane	630		U
74-95-3	Dibromomethane	630		U
75-27-4	Bromodichloromethane	630		U
108-88-3	Toluene	630		U
79-00-5	1,1,2-Trichloroethane	630		U
127-18-4	Tetrachloroethene	630		U
142-28-9	1,3-Dichloropropane	630		U
124-48-1	Dibromochloromethane	630		U
106-93-4	1,2-Dibromoethane	630		U
108-90-7	Chlorobenzene	630		U
630-20-6	1,1,1,2-Tetrachloroethane	630		U
100-41-4	Ethylbenzene	630		U
100-42-5	Styrene	630		U
75-25-2	Bromoform	630		U
98-82-8	isopropylbenzene	630		U
108-86-1	Bromobenzene	630		U

SAMPLE NO.

VBLK01

Contract: IMPACT ENVIRONMENTAL

Group: GP-005-SS

Lab Sample ID: VBLK01

Lab File ID: M12986.D

Date Received:

Date Analyzed: 10/10/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

(ug/L or ug/Kg)

 $\mu\text{g/Kg}$

Q

Page 2 of 2

IE
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No. 1370

Site: _____

Location: _____

Group: GP-005-S

Matrix: (soil/water) SOIL

Lab Sample ID: VBLK01

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M12986.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/10/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

Number TICs found: 0

(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
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000480

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3101099\M12986.D
 Acq Time : 10 Oct 99 2:48 pm
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 11 14:10 1999

Operator: BS/AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	14.13	96	2020386	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.48	117	1736420	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	25.21	152	792828	50.00	ug/L	0.03

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.42	113	678191	53.97	ug/L	107.93%
30) 1,2-Dichlorethane-d4	13.47	65	741213	52.33	ug/L	104.66%
38) Toluene-d8	17.38	98	2082831	52.92	ug/L	105.83%
42) 4-Bromofluorobenzene	22.96	95	866616	52.08	ug/L	104.15%

Target Compounds

Qvalue

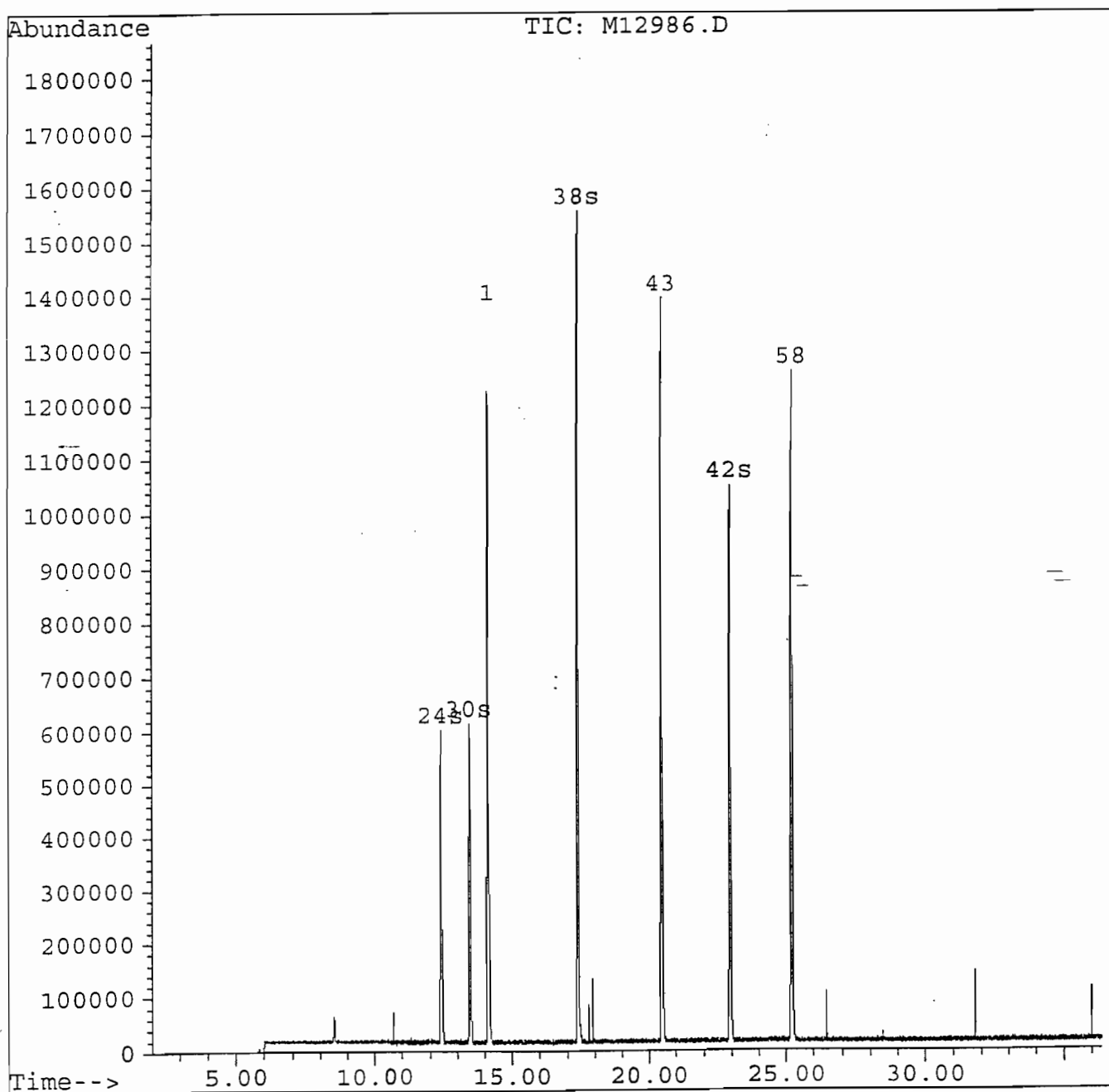
000481

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3101099\M12986.D
Acq Time : 10 Oct 99 2:48 pm
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 11 14:10 1999

Operator: BS/AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000482

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3101099\M12986.D
Acq Time : 10 Oct 99 2:48 pm
Sample : PRO BLK
Misc : 5MLS

Operator: BS/AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

000483

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VLK02

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VLK02

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13003.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/11/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	630		U
74-87-3	Chloromethane	630		U
75-01-4	Vinyl Chloride	630		U
74-83-9	Bromomethane	630		U
75-00-3	Chloroethane	630		U
75-69-4	Trichlorofluoromethane	630		U
75-09-2	Methylene Chloride	630		U
75-34-4	1,1-Dichloroethane	630		U
590-20-7	2,2-Dichloropropane	630		U
74-97-5	Bromochloromethane	630		U
67-66-3	Chloroform	630		U
71-55-6	1,1,1-Trichloroethane	630		U
56-23-5	Carbon Tetrachloride	630		U
563-58-6	1,1-Dichloropropene	630		U
71-43-2	Benzene	630		U
107-06-2	1,2-Dichloroethane	630		U
79-01-6	Trichloroethene	630		U
78-87-5	1,2-Dichloropropane	630		U
74-95-3	Dibromomethane	630		U
75-27-4	Bromodichloromethane	630		U
108-88-3	Toluene	630		U
79-00-5	1,1,2-Trichloroethane	630		U
127-18-4	Tetrachloroethene	630		U
142-28-9	1,3-Dichloropropane	630		U
124-48-1	Dibromochloromethane	630		U
106-93-4	1,2-Dibromoethane	630		U
108-90-7	Chlorobenzene	630		U
630-20-6	1,1,1,2-Tetrachloroethane	630		U
100-41-4	Ethylbenzene	630		U
100-42-5	Styrene	630		U
75-25-2	Bromoform	630		U
98-82-8	isopropylbenzene	630		U
108-86-1	Bromobenzene	630		U

SAMPLE NO.

VBLK02

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-005-SS

Lab Sample ID: VBLK02

Lab File ID: M13003.D

Date Received:

Date Analyzed: 10/11/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

(ug/L or ug/Kg)

ug/Kg

Q

000485

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBK02

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1370 Site: _____ Location: _____ Group: GP-005-S
 Matrix: (soil/water) SOIL Lab Sample ID: VBK02
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13003.D
 Level: (low/med) MED Date Received: _____
 % Moisture: not dec. 0 Date Analyzed: 10/11/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 0 Concentration Units:
 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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000486

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3101199\M13003.D
 Acq Time : 11 Oct 99 9:29 am
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 11 10:10 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.13	96	2095252	50.00	ug/L	0.02
43) Chlorobenzene-d5	20.47	117	1749204	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	25.21	152	812059	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.41	113	682536	52.37	ug/L	104.74%
30) 1,2-Dichlorethane-d4	13.46	65	739018	50.31	ug/L	100.62%
38) Toluene-d8	17.38	98	2101456	51.48	ug/L	102.96%
42) 4-Bromofluorobenzene	22.95	95	874309	50.66	ug/L	101.32%

Target Compounds

Qvalue

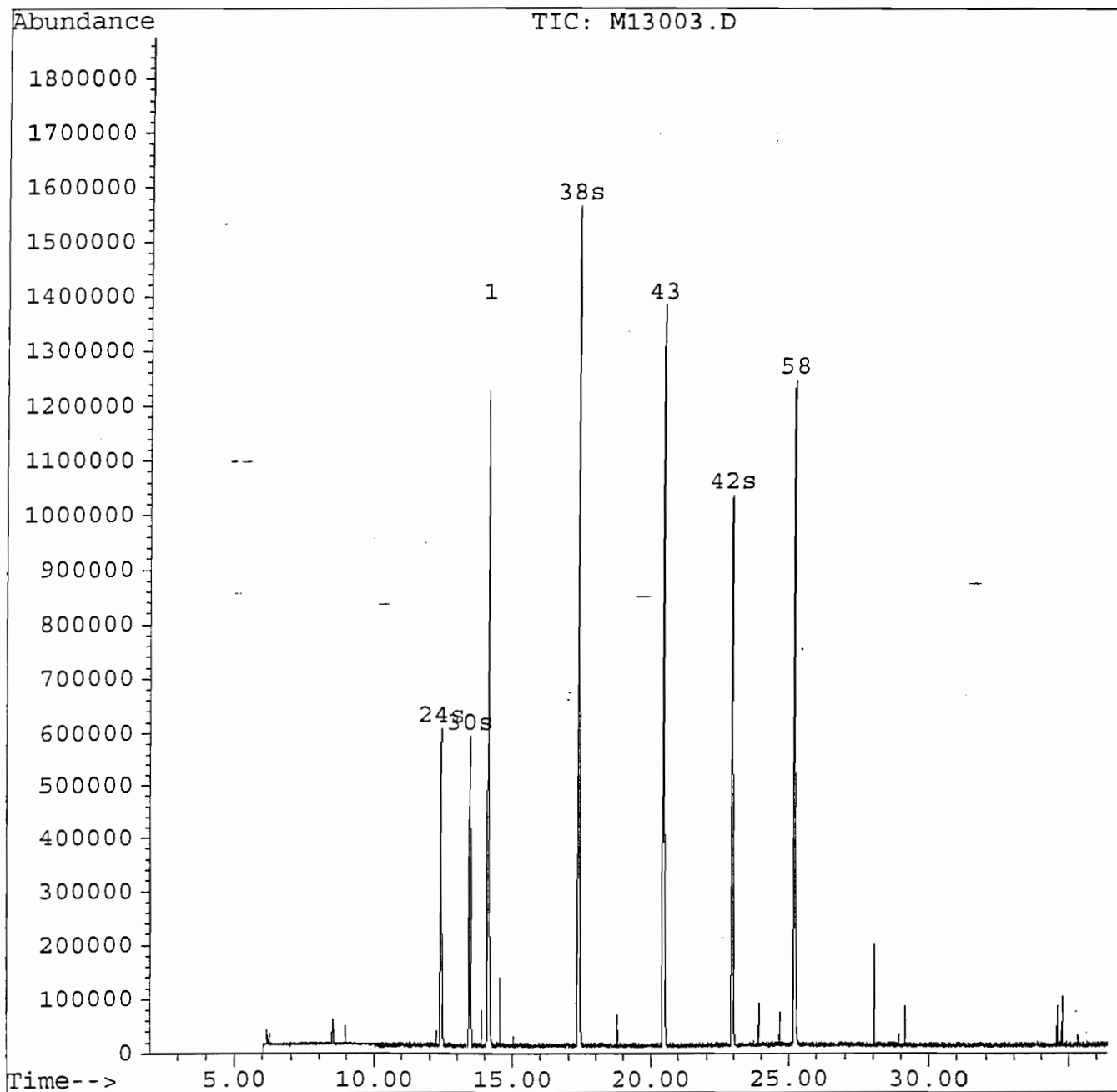
000487

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3101199\M13003.D
Acq Time : 11 Oct 99 9:29 am
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 11 10:10 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000488

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3101199\M13003.D
Acq Time : 11 Oct 99 9:29 am
Sample : PRO BLK
Misc : 5MLS

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

000489

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK03

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK03

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13045.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/13/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	630		U
74-87-3	Chloromethane	630		U
75-01-4	Vinyl Chloride	630		U
74-83-9	Bromomethane	630		U
75-00-3	Chloroethane	630		U
75-69-4	Trichlorofluoromethane	630		U
75-09-2	Methylene Chloride	630		U
75-34-4	1,1-Dichloroethane	630		U
590-20-7	2,2-Dichloropropane	630		U
74-97-5	Bromochloromethane	630		U
67-66-3	Chloroform	630		U
71-55-6	1,1,1-Trichloroethane	630		U
56-23-5	Carbon Tetrachloride	630		U
563-58-6	1,1-Dichloropropene	630		U
71-43-2	Benzene	630		U
107-06-2	1,2-Dichloroethane	630		U
79-01-6	Trichloroethene	630		U
78-87-5	1,2-Dichloropropane	630		U
74-95-3	Dibromomethane	630		U
75-27-4	Bromodichloromethane	630		U
108-88-3	Toluene	630		U
79-00-5	1,1,2-Trichloroethane	630		U
127-18-4	Tetrachloroethene	630		U
142-28-9	1,3-Dichloropropane	630		U
124-48-1	Dibromochloromethane	630		U
106-93-4	1,2-Dibromoethane	630		U
108-90-7	Chlorobenzene	630		U
630-20-6	1,1,1,2-Tetrachloroethane	630		U
100-41-4	Ethylbenzene	630		U
100-42-5	Styrene	630		U
75-25-2	Bromoform	630		U
98-82-8	isopropylbenzene	630		U
108-86-1	Bromobenzene	630		U

SAMPLE NO.

VBLK03

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-005-SS

Lab Sample ID: VBLK03

Lab File ID: M13045.D

Date Received:

Date Analyzed: 10/13/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

(ug/L or ug/Kg)

 $\mu\text{g/Kg}$

Q

000491

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK03

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1370 Site: _____ Location: _____ Group: GP-005-S
 Matrix: (soil/water) SOIL Lab Sample ID: VBLK03
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13045.D
 Level: (low/med) MED Date Received: _____
 % Moisture: not dec. 0 Date Analyzed: 10/13/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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30.				

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3101299\M13045.D
 Acq Time : 13 Oct 99 12:06 am
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 13 9:42 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	14.08	96	1929318	50.00	ug/L	-0.02
43) Chlorobenzene-d5	20.39	117	1723942	50.00	ug/L	-0.06
58) 1,4-dichlorobenzene-d4	25.11	152	755751	50.00	ug/L	-0.07

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.39	113	626140	52.18	ug/L	104.35%
30) 1,2-Dichlorethane-d4	13.42	65	701045	51.83	ug/L	103.66%
38) Toluene-d8	17.31	98	1935306	51.49	ug/L	102.98%
42) 4-Bromofluorobenzene	22.86	95	828607	52.14	ug/L	104.29%

Target Compounds Qvalue

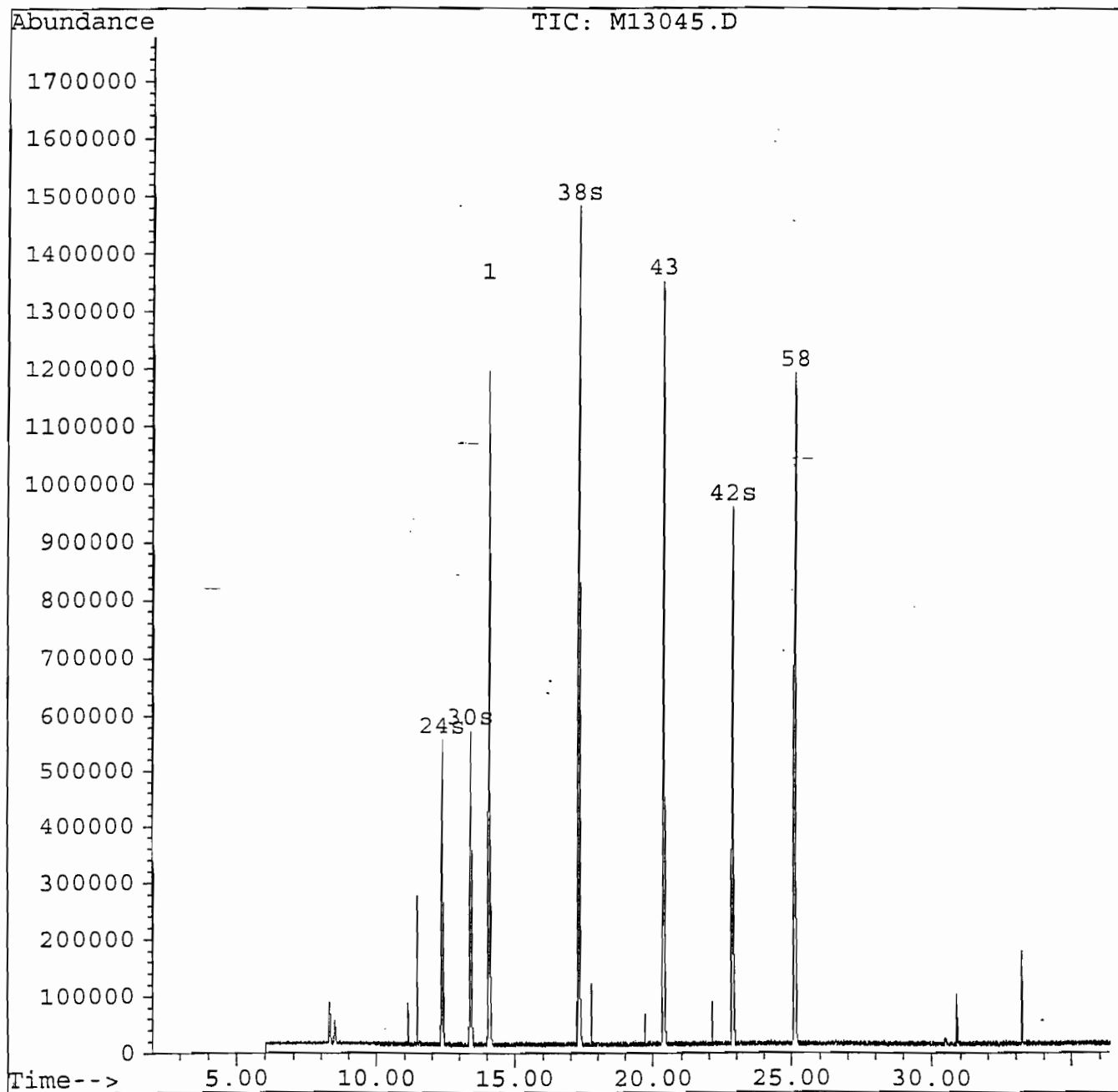
000493

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3101299\M13045.D
Acq Time : 13 Oct 99 12:06 am
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 13 9:42 1999

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000494

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3101299\M13045.D
Acq Time : 13 Oct 99 12:06 am
Sample : PRO BLK
Misc : 5MLS

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VLBK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) WATER

Lab Sample ID: VLBK01

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: M12939.D

Level: (low/med) _____

Date Received: _____

% Moisture: not dec. 100

Date Analyzed: 10/8/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/L	Q
75-71-8	Dichlorodifluoromethane	5		U
74-87-3	Chloromethane	5		U
75-01-4	Vinyl Chloride	5		U
74-83-9	Bromomethane	5		U
75-00-3	Chloroethane	5		U
75-69-4	Trichlorofluoromethane	5		U
75-09-2	Methylene Chloride	5		U
75-34-4	1,1-Dichloroethane	5		U
590-20-7	2,2-Dichloropropane	5		U
74-97-5	Bromochloromethane	5		U
67-66-3	Chloroform	5		U
71-55-6	1,1,1-Trichloroethane	5		U
56-23-5	Carbon Tetrachloride	5		U
563-58-6	1,1-Dichloropropene	5		U
71-43-2	Benzene	5		U
107-06-2	1,2-Dichloroethane	5		U
79-01-6	Trichloroethene	5		U
78-87-5	1,2-Dichloropropane	5		U
74-95-3	Dibromomethane	5		U
75-27-4	Bromodichloromethane	5		U
108-88-3	Toluene	5		U
79-00-5	1,1,2-Trichloroethane	5		U
127-18-4	Tetrachloroethene	5		U
142-28-9	1,3-Dichloropropane	5		U
124-48-1	Dibromochloromethane	5		U
106-93-4	1,2-Dibromoethane	5		U
108-90-7	Chlorobenzene	5		U
630-20-6	1,1,1,2-Tetrachloroethane	5		U
100-41-4	Ethylbenzene	5		U
100-42-5	Styrene	5		U
75-25-2	Bromoform	5		U
98-82-8	isopropylbenzene	5		U
108-86-1	Bromobenzene	5		U

SAMPLE NO.

VBLK01

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-005-SS

Lab Sample ID: VBLK01

Lab File ID: M12939.D

Date Received:

Date Analyzed: 10/8/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Concentration Units:

Compound

(ug/L or ug/Kg)

ug/L

Q

Page 2 of 2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No. 1370

Site: _____

Location: _____

Group: GP-005-S

Matrix: (soil/water) WATER

Lab Sample ID: VBLK01

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: M12939.D

Level: (low/med) _____

Date Received: _____

% Moisture: not dec. 100

Date Analyzed: 10/8/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 0

(ug/L or ug/Kg) ug/L

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
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27.				
28.				
29.				
30.				

000498

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100899\M12939.D
 Acq Time : 8 Oct 99 8:54 am
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 8 9:34 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30916CW.M
 Title : VOA
 Last Update : Thu Sep 16 14:22:43 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.09	96	1856252	50.00	ug/L	-0.01
42) Chlorobenzene-d5	20.43	117	1544937	50.00	ug/L	-0.04
56) 1,4-dichlorobenzene-d4	25.17	152	686703	50.00	ug/L	-0.05
System Monitoring Compounds						%Recovery
23) Dibromofluoromethane	12.37	113	629328	48.31	ug/L	96.63%
29) 1,2-Dichlorethane-d4	13.42	65	749070	42.06	ug/L	84.12%
37) Toluene-d8	17.34	98	1952569	51.59	ug/L	103.19%
41) 4-Bromofluorobenzene	22.91	95	825112	46.50	ug/L	93.00%
Target Compounds						Qvalue

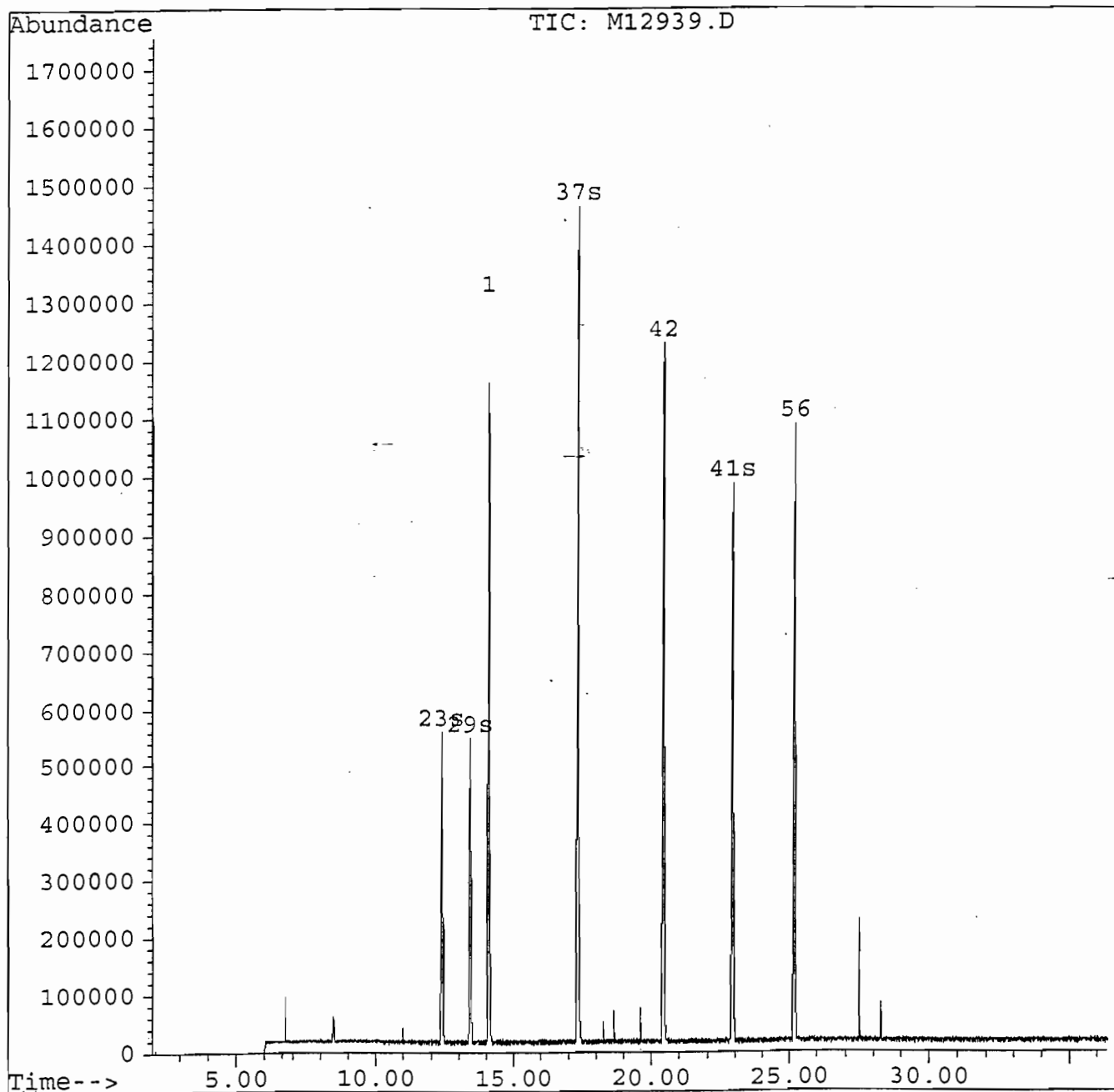
00C499

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100899\M12939.D
Acq Time : 8 Oct 99 8:54 am
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 8 9:34 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30916CW.M
Title : VOA
Last Update : Thu Sep 16 14:22:43 1999
Response via : Multiple Level Calibration



000500

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3100899\M12939.D
Acq Time : 8 Oct 99 8:54 am
Sample : PRO BLK
Misc : 5MLS

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V30916CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

000501

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VLBK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VLBK01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19102.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/8/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	5		U
74-87-3	Chloromethane	5		U
75-01-4	Vinyl Chloride	5		U
74-83-9	Bromomethane	5		U
75-00-3	Chloroethane	5		U
75-69-4	Trichlorofluoromethane	5		U
75-09-2	Methylene Chloride	5		U
75-34-4	1,1-Dichloroethane	5		U
590-20-7	2,2-Dichloropropane	5		U
74-97-5	Bromochloromethane	5		U
67-66-3	Chloroform	5		U
71-55-6	1,1,1-Trichloroethane	5		U
56-23-5	Carbon Tetrachloride	5		U
563-58-6	1,1-Dichloropropene	5		U
71-43-2	Benzene	5		U
107-06-2	1,2-Dichloroethane	5		U
79-01-6	Trichloroethene	5		U
78-87-5	1,2-Dichloropropane	5		U
74-95-3	Dibromomethane	5		U
75-27-4	Bromodichloromethane	5		U
108-88-3	Toluene	5		U
79-00-5	1,1,2-Trichloroethane	5		U
127-18-4	Tetrachloroethene	5		U
142-28-9	1,3-Dichloropropane	5		U
124-48-1	Dibromochloromethane	5		U
106-93-4	1,2-Dibromoethane	5		U
108-90-7	Chlorobenzene	5		U
630-20-6	1,1,1,2-Tetrachloroethane	5		U
100-41-4	Ethylbenzene	5		U
100-42-5	Styrene	5		U
75-25-2	Bromoform	5		U
98-82-8	isopropylbenzene	5		U
108-86-1	Bromobenzene	5		U

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site:

Location:

Group: GP-005-SS

Matrix: (soil/water)

SOIL

Lab Sample ID: VBLK01

Sample wt/vol:

5.0

(g/mL)

G

Lab File ID: P19102.D

Level: (low/med)

LOW

Date Received:

% Moisture: not dec.

0

Date Analyzed: 10/8/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

Concentration Units:

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1370 Site: _____ Location: _____ Group: GP-005-S
 Matrix: (soil/water) SOIL Lab Sample ID: VBLK01
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19102.D
 Level: (low/med) LOW Date Received: _____
 % Moisture: not dec. 0 Date Analyzed: 10/8/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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30.				

000504

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19102.D
 Acq Time : 8 Oct 99 12:33 pm
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 8 16:22 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	1145972	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.33	117	1186195	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	869347	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.95	113	895074	46.88	ug/L	93.76%
30) 1,2-Dichlorethane-d4	8.65	65	687700	45.84	ug/L	91.68%
38) Toluene-d8	12.76	98	1130746	50.59	ug/L	101.18%
42) 4-Bromofluorobenzene	19.47	95	1097870	47.85	ug/L	95.70%

Target Compounds Qvalue

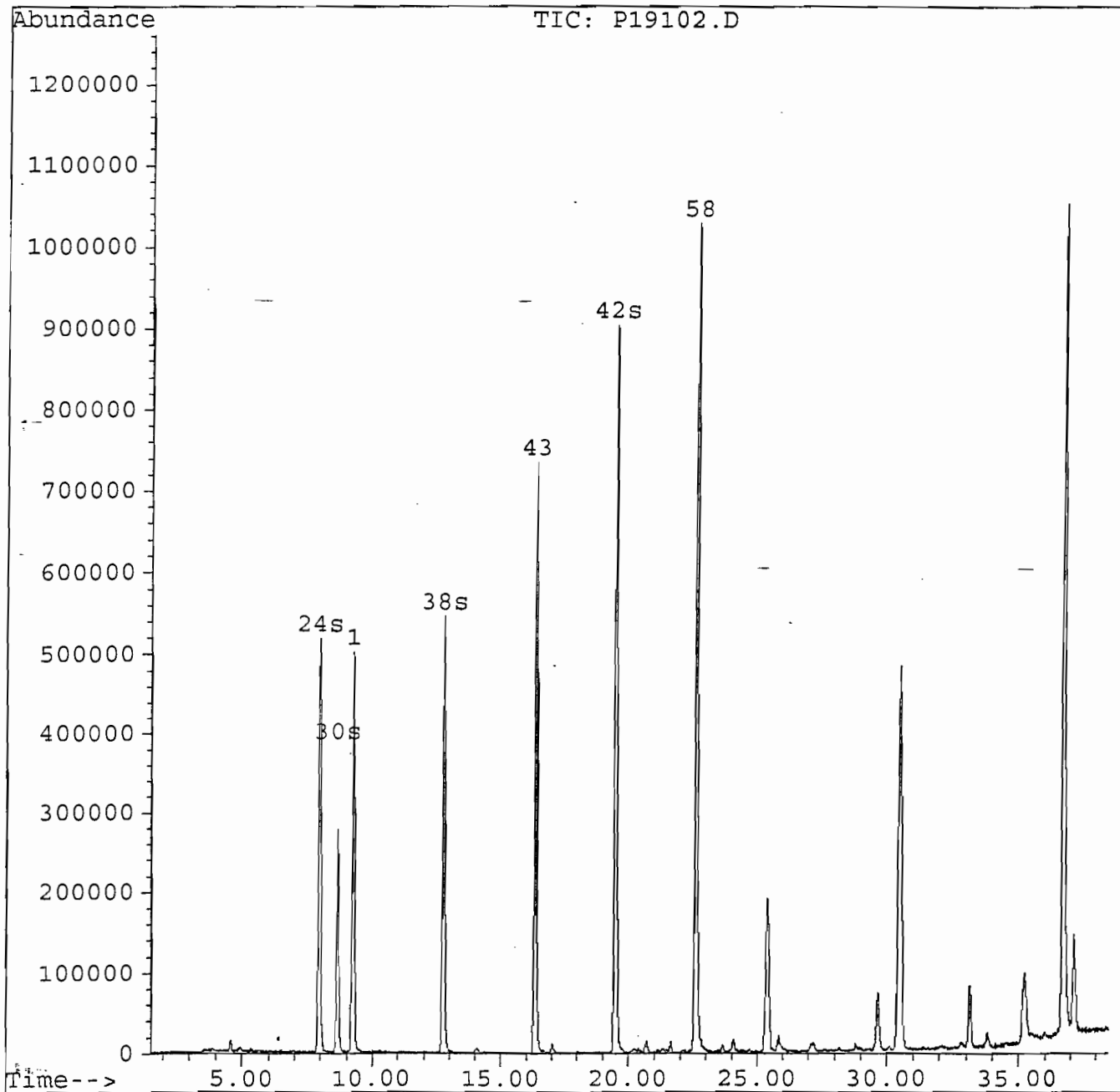
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19102.D
Acq Time : 8 Oct 99 12:33 pm
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 8 16:22 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000506

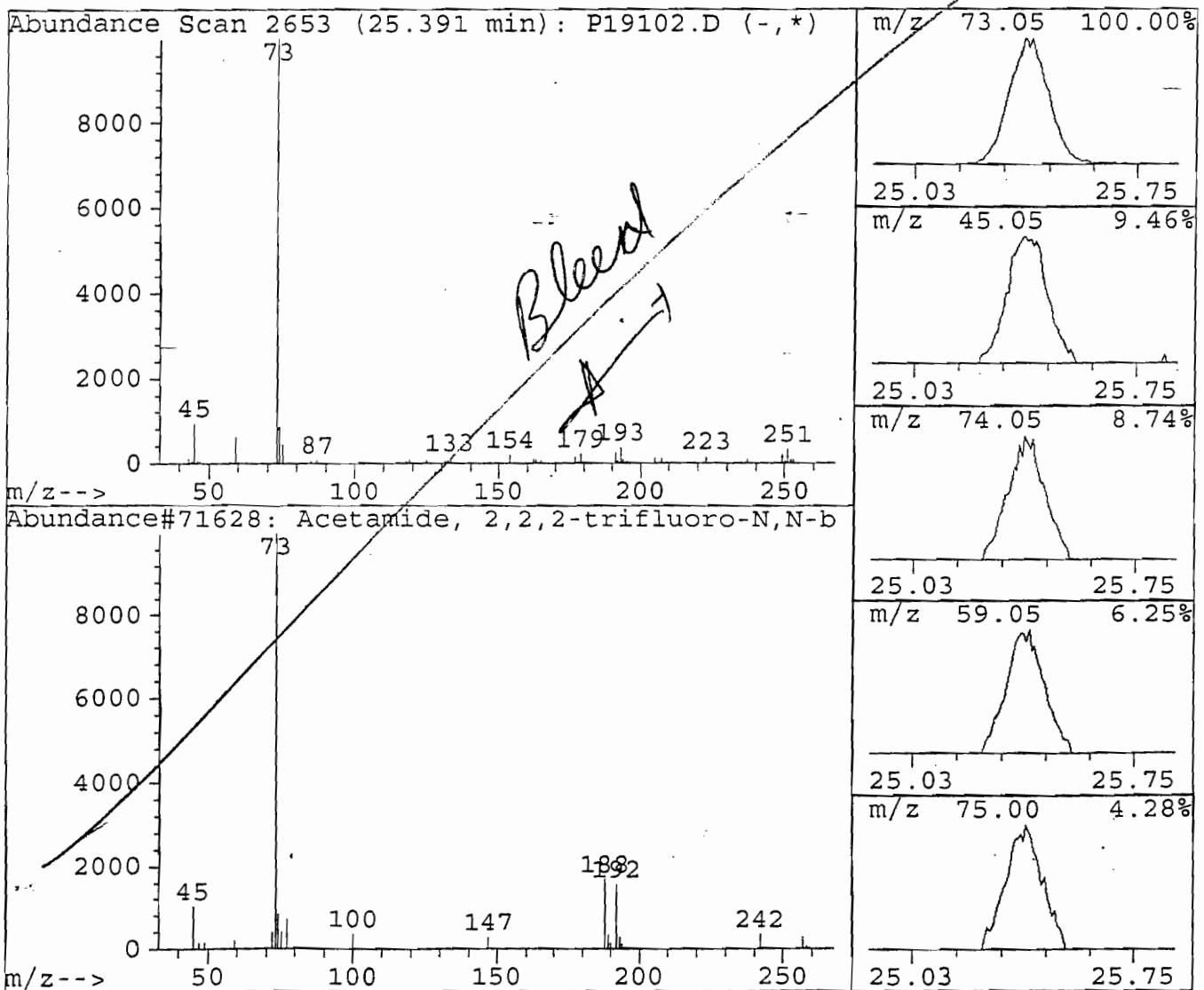
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19102.D
Acq Time : 8 Oct 99 12:33 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.		
25.39	12.49 ug/L	1656885	1,4-dichlorobenzene-d4	22.59		
Hit#	of	1	Tentative ID	Ref#	CAS#	Qual
1	Acetamide,	2,2,2-trifluoro-N,N-bis(	71628	021149-38-2	33	



000507

Library Search Compound Report

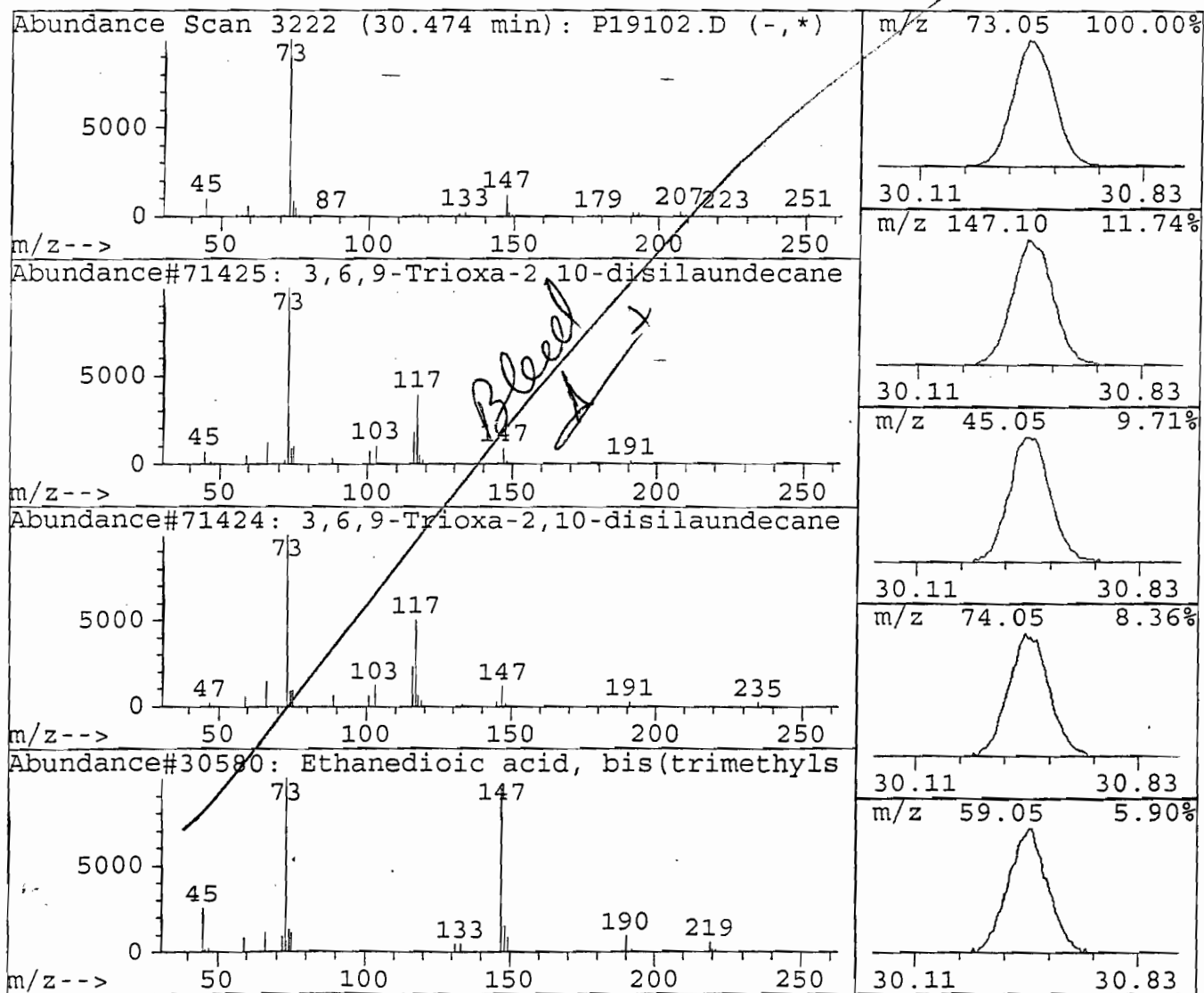
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Acq Time : 8 Oct 99 12:33 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.47	33.38 ug/L	4426939	1,4-dichlorobenzene-d4	22.59

Hit# of	3	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane,	2	71425	016654-74-3	38
2	3,6,9-Trioxa-2,10-disilaundecane,	2	71424	016654-74-3	25
3	Ethanedioic acid, bis(trimethylsilyl)		30580	018294-04-7	12



000508

Library Search Compound Report

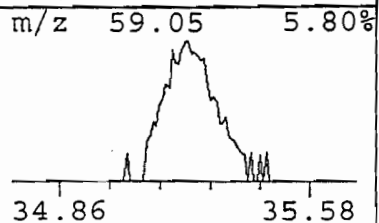
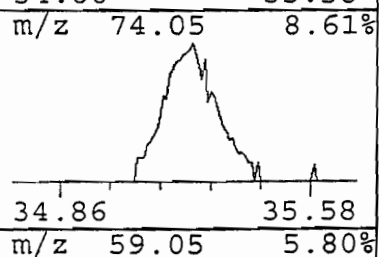
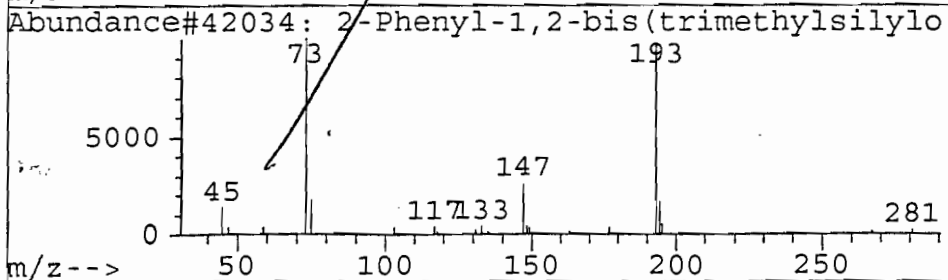
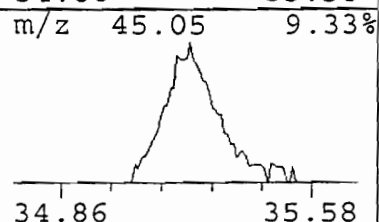
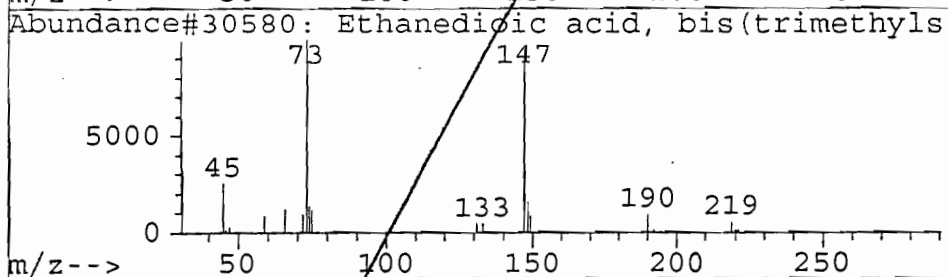
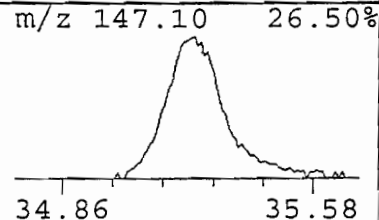
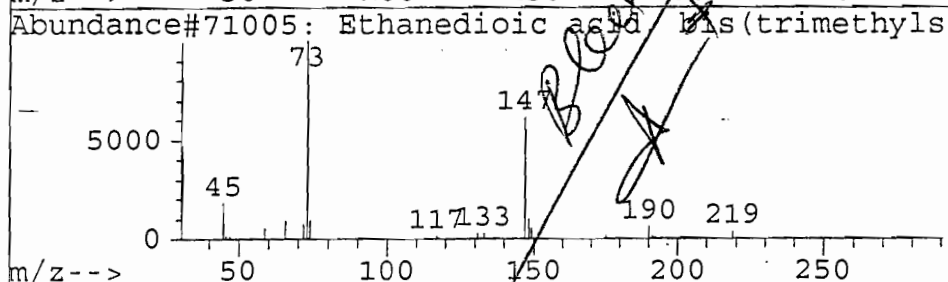
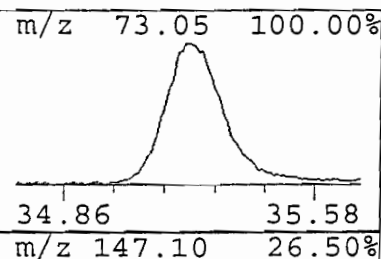
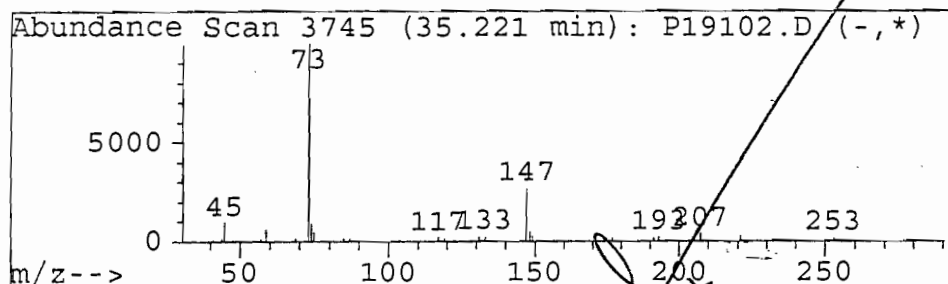
Data File : I:\HPCHEM\1\DATA\V2100899\P19102.D
Acq Time : 8 Oct 99 12:33 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.22	7.55 ug/L	1001545	1,4-dichlorobenzene-d4	22.59

Hit# of	6	Tentative ID	Ref#	CAS#	Qual
1	Ethanedioic acid, bis(trimethylsilyl)	71005	018294-04-7	50	
2	Ethanedioic acid, bis(trimethylsilyl)	30580	018294-04-7	45	
3	2-Phenyl-1,2-bis(trimethylsilyloxy)	42034	000000-00-0	38	
4	Ethanedioic acid, bis(trimethylsilyl)	71006	018294-04-7	38	
5	Butanoic acid, 3-methyl-2-[(trimeth	71782	055124-92-0	33	



000509

Library Search Compound Report

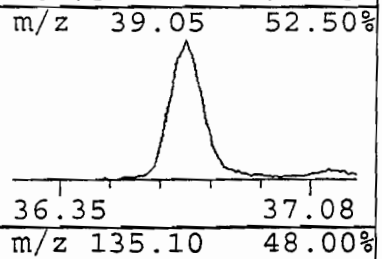
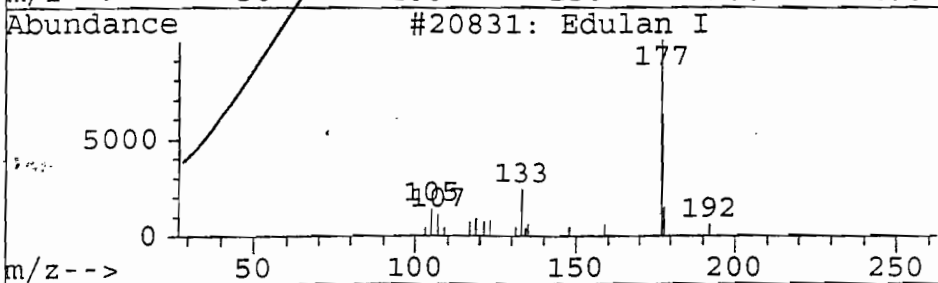
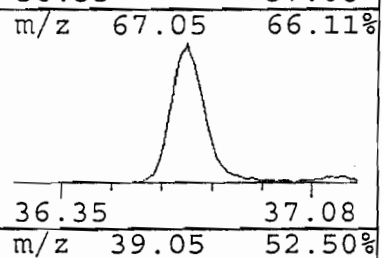
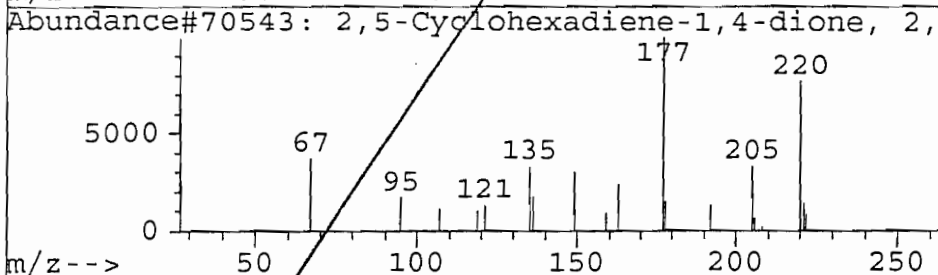
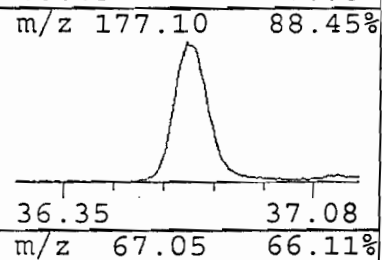
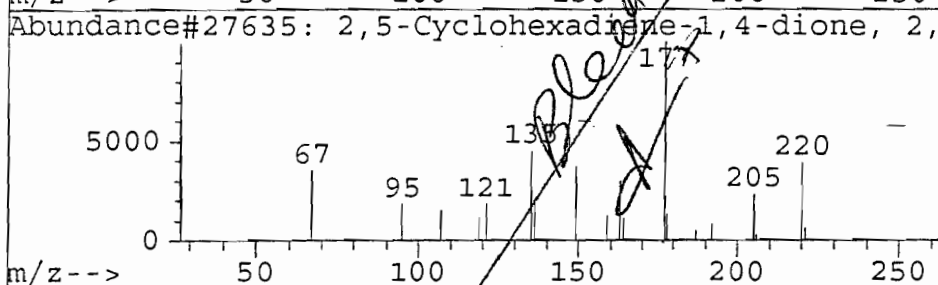
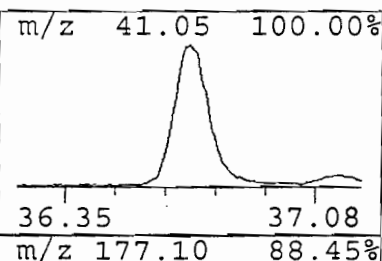
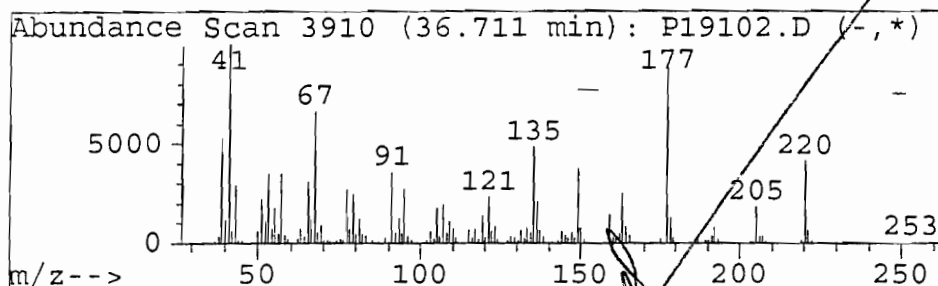
Data File : I:\HPCHEM\1\DATA\V2100899\P19102.D
Acq Time : 8 Oct 99 12:33 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
36.71	55.01 ug/L	7296450	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,5-Cyclohexadiene-1,4-dione, 2,6-b	27635	000719-22-2	99
2	2,5-Cyclohexadiene-1,4-dione, 2,6-b	70543	000719-22-2	96
3	Edulan I	20831	041678-29-9	35
4	3-Buten-2-one, 4-(2,6,6-trimethyl-1	20817	014901-07-6	30
5	1,4-Benzenediamine, N,N'-bis(1-meth	20786	004251-01-8	27



Library Search Compound Report

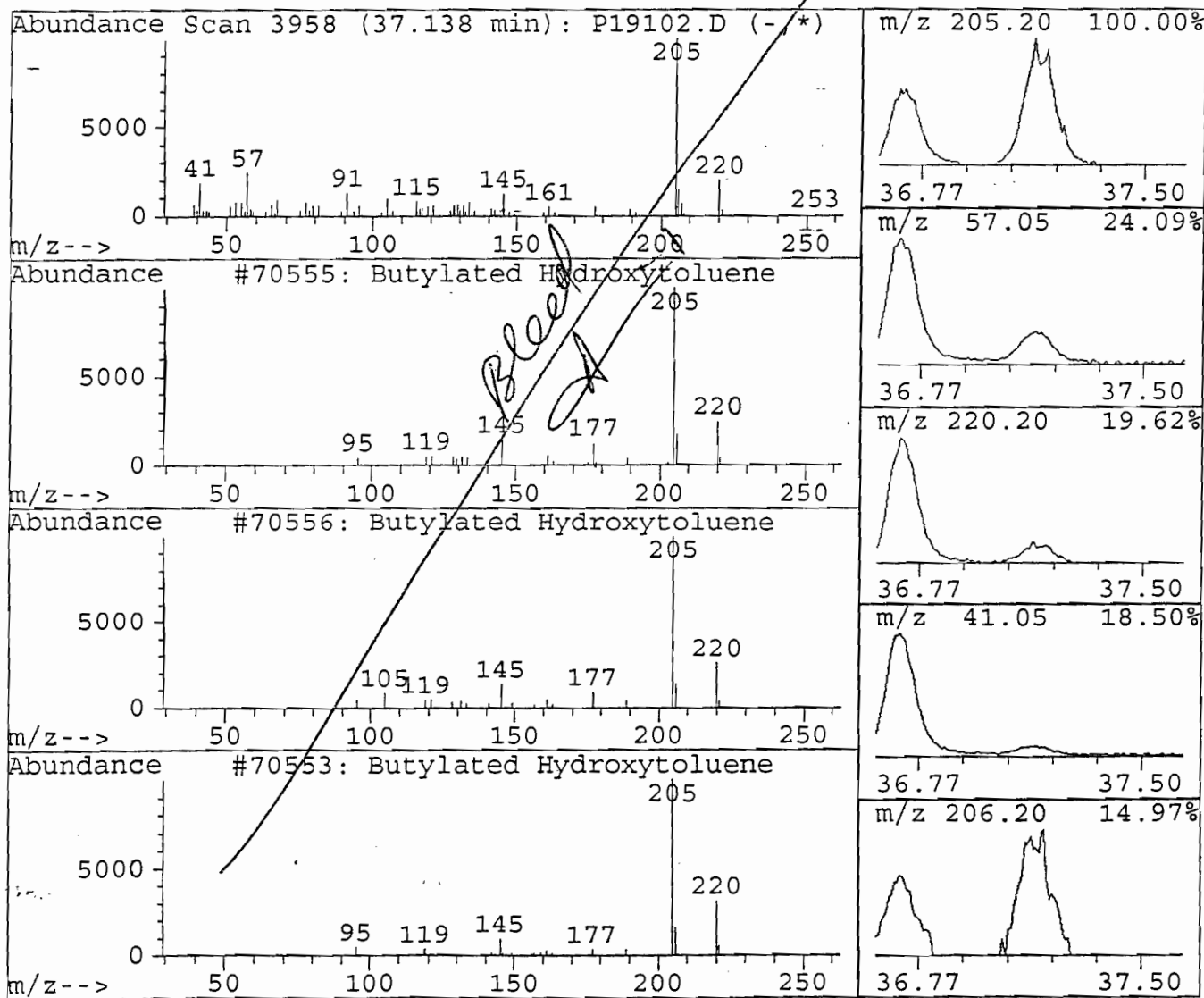
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Acq Time : 8 Oct 99 12:33 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
37.14	6.61 ug/L	876888	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Butylated Hydroxytoluene	70555	000128-37-0	93
2	Butylated Hydroxytoluene	70556	000128-37-0	93
3	Butylated Hydroxytoluene	70553	000128-37-0	93
4	Butylated Hydroxytoluene	70552	000128-37-0	93
5	Butylated Hydroxytoluene	27705	000128-37-0	93



000511

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK02

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19119.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/9/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	5		U
74-87-3	Chloromethane	5		U
75-01-4	Vinyl Chloride	5		U
74-83-9	Bromomethane	5		U
75-00-3	Chloroethane	5		U
75-69-4	Trichlorofluoromethane	5		U
75-09-2	Methylene Chloride	5		U
75-34-4	1,1-Dichloroethane	5		U
590-20-7	2,2-Dichloropropane	5		U
74-97-5	Bromochloromethane	5		U
67-66-3	Chloroform	5		U
71-55-6	1,1,1-Trichloroethane	5		U
56-23-5	Carbon Tetrachloride	5		U
563-58-6	1,1-Dichloropropene	5		U
71-43-2	Benzene	5		U
107-06-2	1,2-Dichloroethane	5		U
79-01-6	Trichloroethene	5		U
78-87-5	1,2-Dichloropropane	5		U
74-95-3	Dibromomethane	5		U
75-27-4	Bromodichloromethane	5		U
108-88-3	Toluene	5		U
79-00-5	1,1,2-Trichloroethane	5		U
127-18-4	Tetrachloroethene	5		U
142-28-9	1,3-Dichloropropane	5		U
124-48-1	Dibromochloromethane	5		U
106-93-4	1,2-Dibromoethane	5		U
108-90-7	Chlorobenzene	5		U
630-20-6	1,1,1,2-Tetrachloroethane	5		U
100-41-4	Ethylbenzene	5		U
100-42-5	Styrene	5		U
75-25-2	Bromoform	5		U
98-82-8	isopropylbenzene	5		U
108-86-1	Bromobenzene	5		U

SAMPLE NO.

VBLK02

Contract: IMPACT ENVIRONMENTAL

Group: GP-005-SS

Lab Sample ID: VBLK02

Lab File ID: P19119.D

Date Received:

Date Analyzed: 10/9/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

Page 2 of 2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBK02

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1370 Site: _____ Location: _____ Group: GP-005-S
 Matrix: (soil/water) SOIL Lab Sample ID: VBK02
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19119.D
 Level: (low/med) LOW Date Received: _____
 % Moisture: not dec. 0 Date Analyzed: 10/9/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units:
 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19119.D
 Acq Time : 9 Oct 99 12:57 am
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 10 12:47 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	823714	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.33	117	919279	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.60	152	684259	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.95	113	699538	50.97	ug/L	101.94%
30) 1,2-Dichlorethane-d4	8.66	65	577876	53.59	ug/L	107.17%
38) Toluene-d8	12.76	98	877233	54.60	ug/L	109.20%
42) 4-Bromofluorobenzene	19.47	95	872702	52.91	ug/L	105.83%

Target Compounds

Qvalue

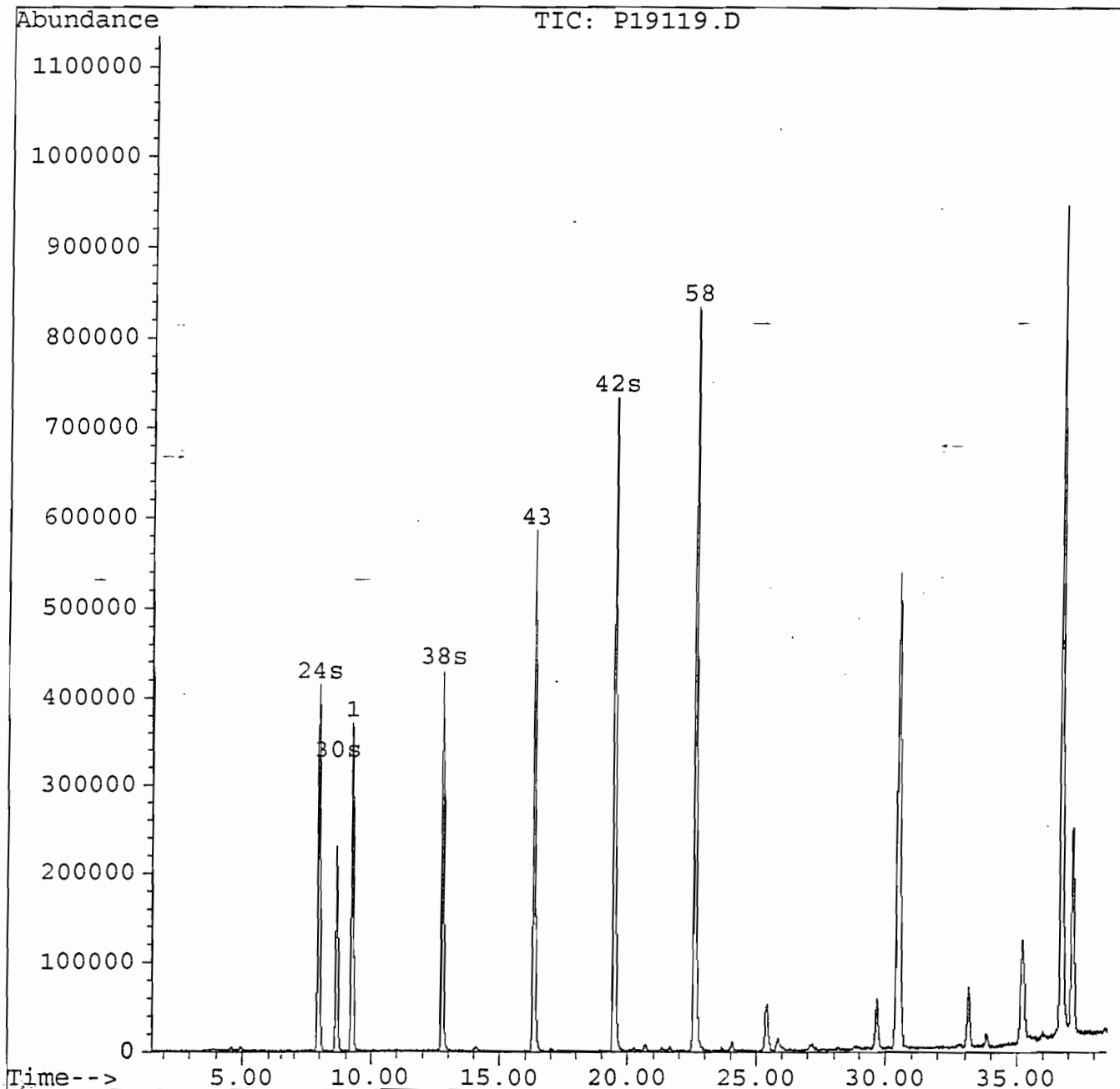
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19119.D
Acq Time : 9 Oct 99 12:57 am
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 10 12:47 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000516

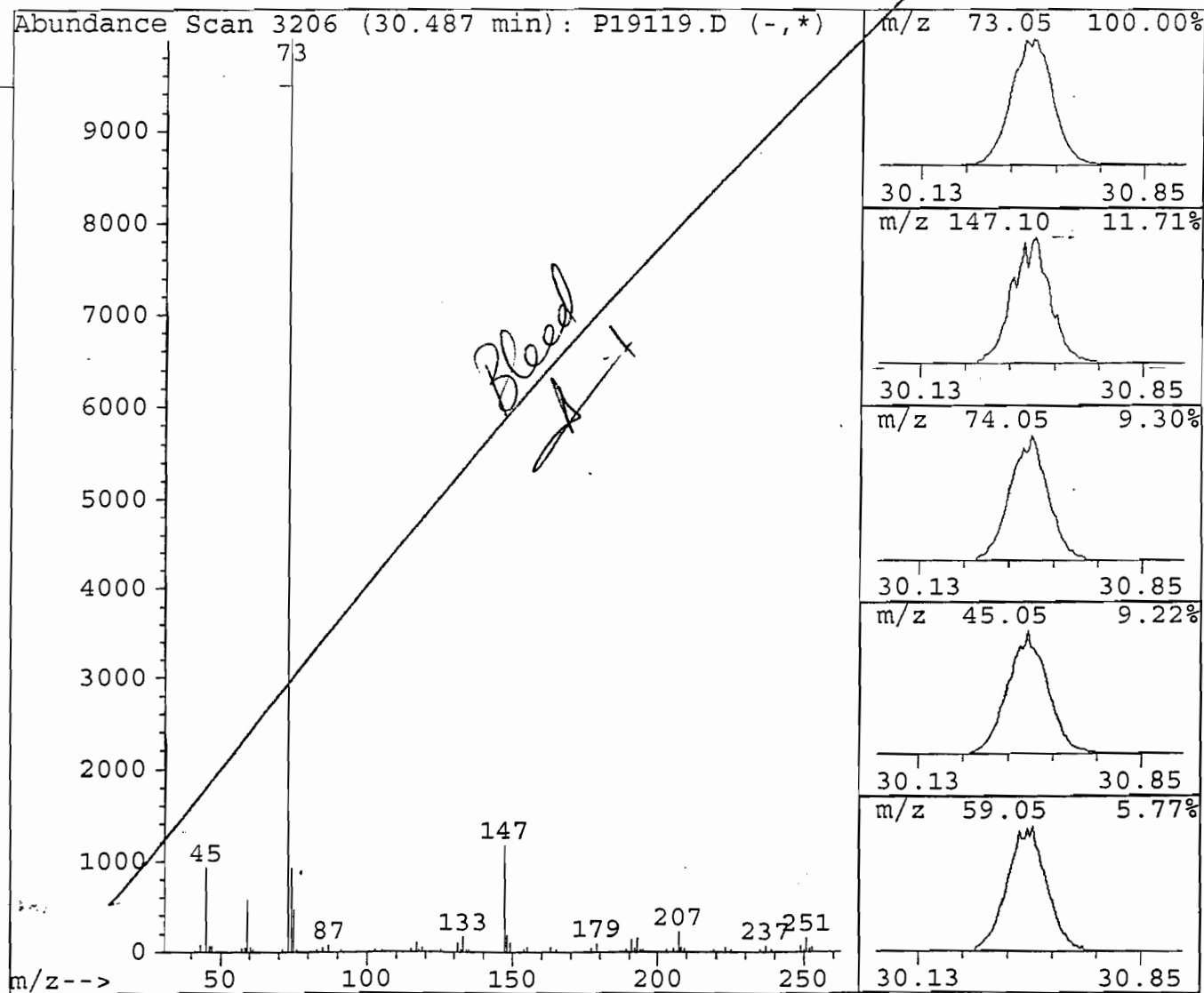
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19119.D
Acq Time : 9 Oct 99 12:57 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.49	45.76 ug/L	4965368	1,4-dichlorobenzene-d4	22.60	
Hit# of	0	Tentative ID	Ref#	CAS#	Qual
1	Unknown		0	000000-00-0	0



000517

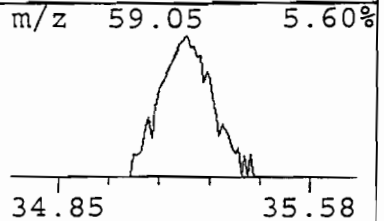
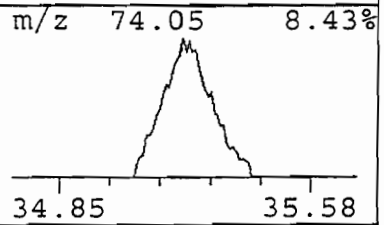
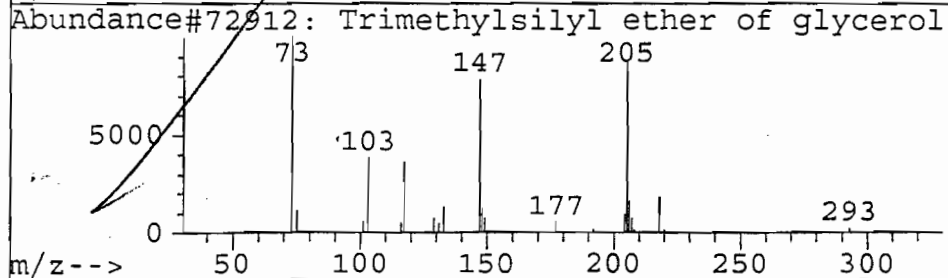
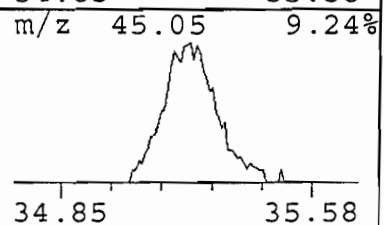
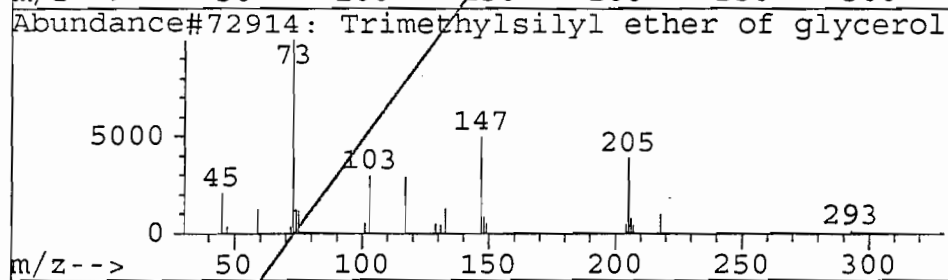
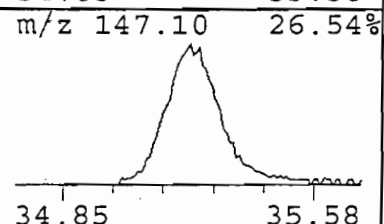
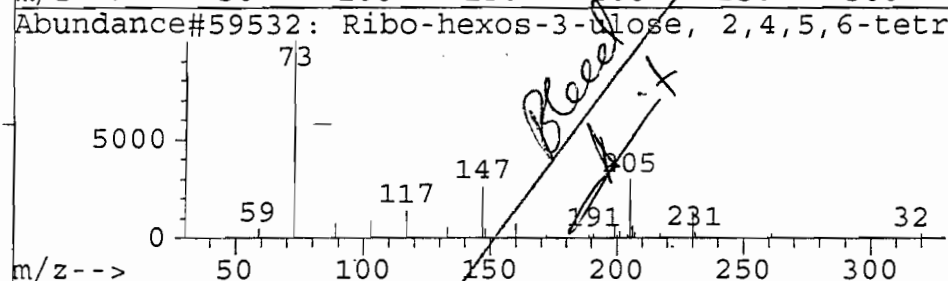
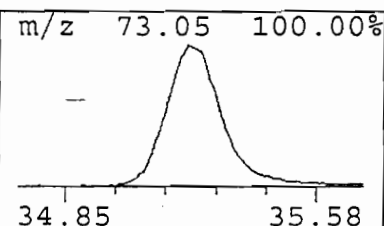
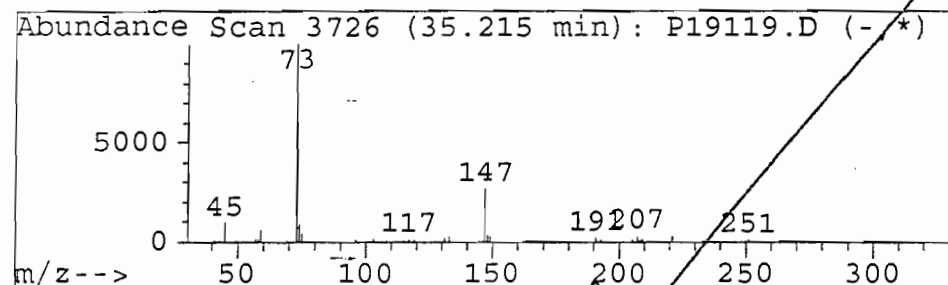
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19119.D
Acq Time : 9 Oct 99 12:57 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
35.21	11.87 ug/L	1287952	1,4-dichlorobenzene-d4	22.60	
Hit# of	5	Tentative ID	Ref#	CAS#	Qual
1		Ribo-hexos-3-ulose, 2,4,5,6-tetraki	59532	062108-14-9	36
2		Trimethylsilyl ether of glycerol	72914	006787-10-6	33
3		Trimethylsilyl ether of glycerol	72912	006787-10-6	33
4		Trimethylsilyl ether of glycerol	72911	006787-10-6	33
5		Silane, [(1-methoxy-1,3-propanediyl	33792	062185-57-3	23



Library Search Compound Report

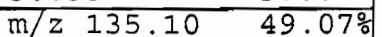
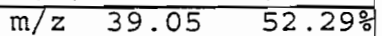
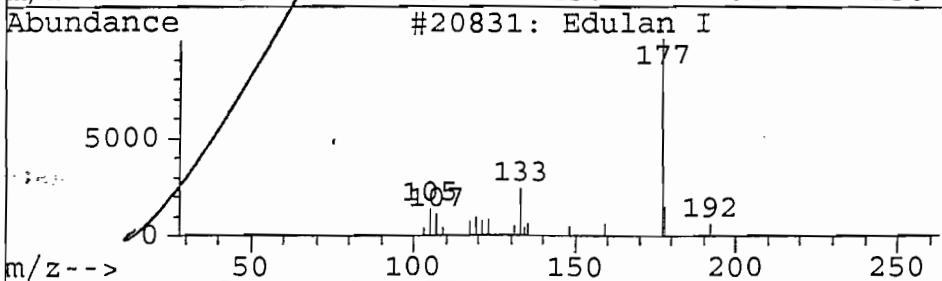
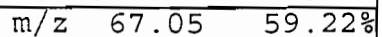
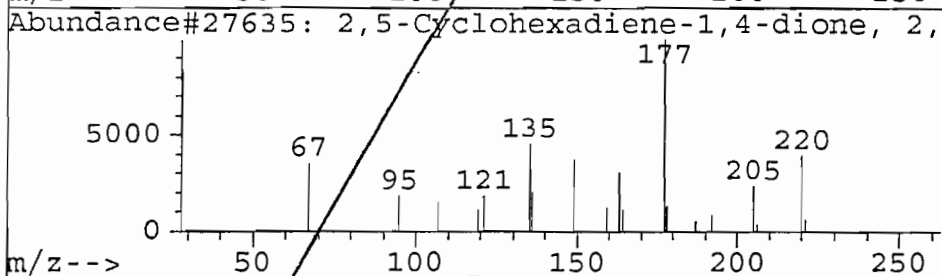
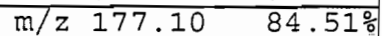
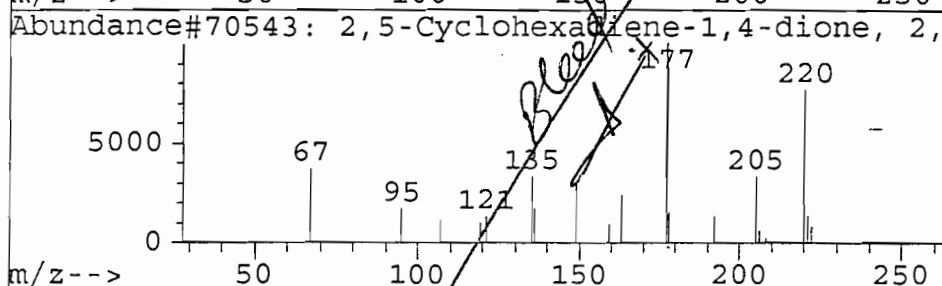
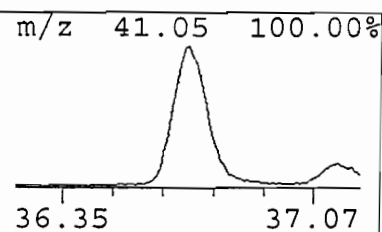
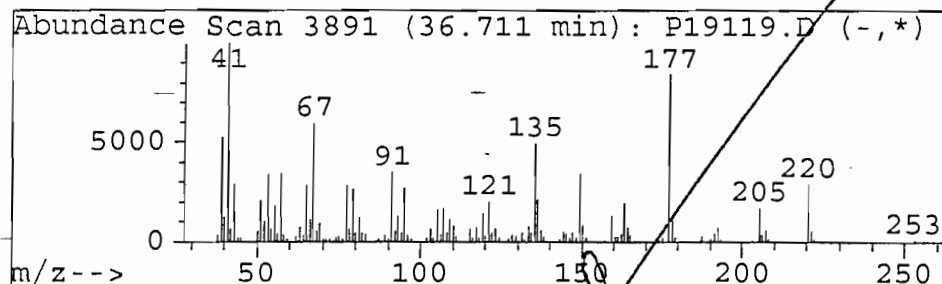
Data File : I:\HPCHEM\1\DATA\V2100899\P19119.D
Acq Time : 9 Oct 99 12:57 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
36.71	60.05 ug/L	6516472	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,5-Cyclohexadiene-1,4-dione, 2,6-b	70543	000719-22-2	96
2	2,5-Cyclohexadiene-1,4-dione, 2,6-b	27635	000719-22-2	93
3	Edulan I	20831	041678-29-9	35
4	3-Buten-2-one, 4-(2,6,6-trimethyl-1	20817	014901-07-6	30
5	3-Buten-1-one, 4-[2,6,6-trimethyl-1	69323	085949-43-5	27



000519

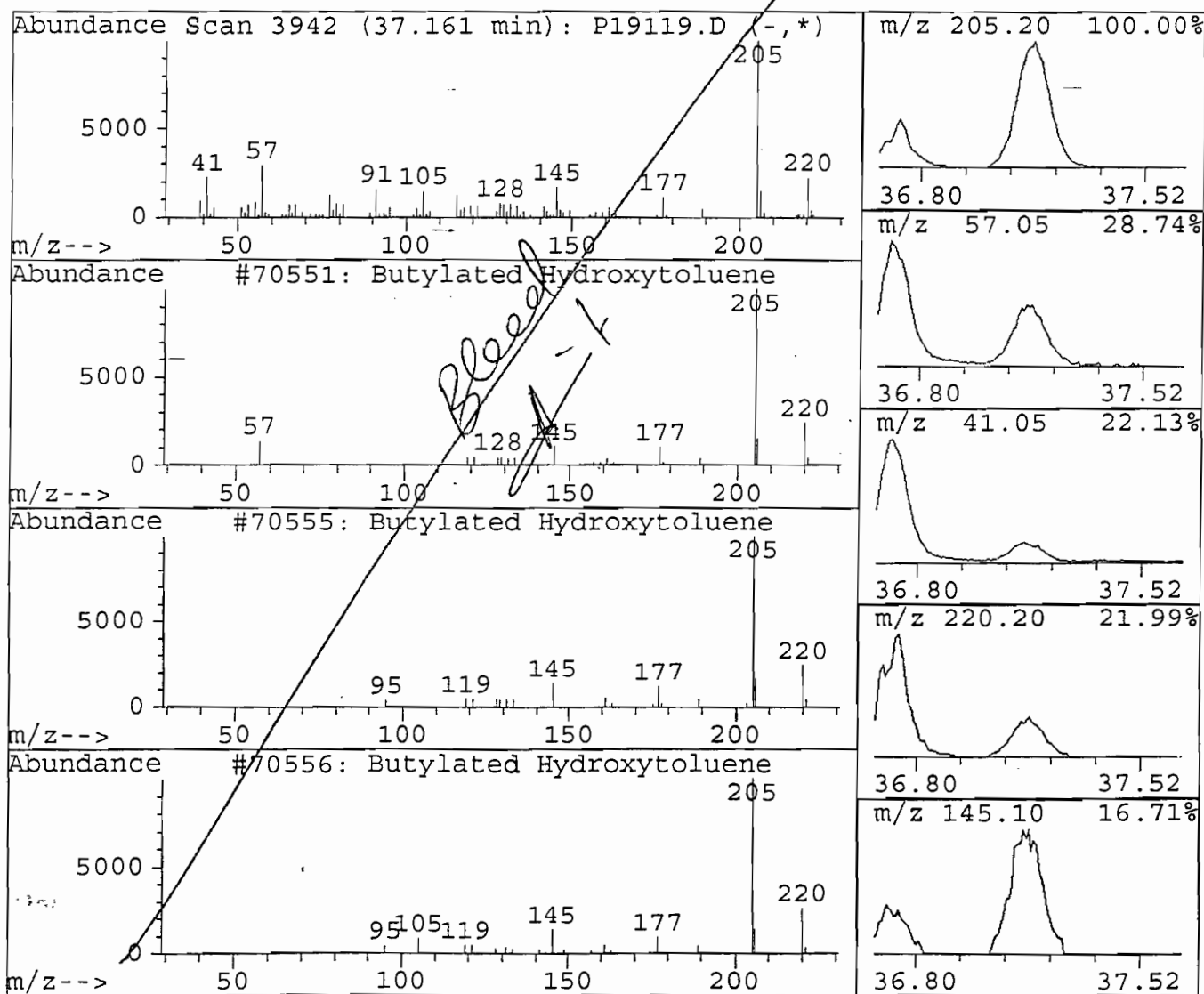
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2100899\P19119.D
Acq Time : 9 Oct 99 12:57 am
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
37.16	15.99 ug/L	1735348	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Butylated Hydroxytoluene		70551	000128-37-0	98
2	Butylated Hydroxytoluene		70555	000128-37-0	97
3	Butylated Hydroxytoluene		70556	000128-37-0	96
4	Butylated Hydroxytoluene		70553	000128-37-0	95
5	Butylated Hydroxytoluene		27705	000128-37-0	95



000520

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLK03

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBLK03

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19154.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/11/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	5		U
74-87-3	Chloromethane	5		U
75-01-4	Vinyl Chloride	5		U
74-83-9	Bromomethane	5		U
75-00-3	Chloroethane	5		U
75-69-4	Trichlorofluoromethane	5		U
75-09-2	Methylene Chloride	5		U
75-34-4	1,1-Dichloroethane	5		U
590-20-7	2,2-Dichloropropane	5		U
74-97-5	Bromochloromethane	5		U
67-66-3	Chloroform	5		U
71-55-6	1,1,1-Trichloroethane	5		U
56-23-5	Carbon Tetrachloride	5		U
563-58-6	1,1-Dichloropropene	5		U
71-43-2	Benzene	5		U
107-06-2	1,2-Dichloroethane	5		U
79-01-6	Trichloroethene	5		U
78-87-5	1,2-Dichloropropane	5		U
74-95-3	Dibromomethane	5		U
75-27-4	Bromodichloromethane	5		U
108-88-3	Toluene	5		U
79-00-5	1,1,2-Trichloroethane	5		U
127-18-4	Tetrachloroethene	5		U
142-28-9	1,3-Dichloropropane	5		U
124-48-1	Dibromochloromethane	5		U
106-93-4	1,2-Dibromoethane	5		U
108-90-7	Chlorobenzene	5		U
630-20-6	1,1,1,2-Tetrachloroethane	5		U
100-41-4	Ethylbenzene	5		U
100-42-5	Styrene	5		U
75-25-2	Bromoform	5		U
98-82-8	isopropylbenzene	5		U
108-86-1	Bromobenzene	5		U

1A

VBLK03

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-005-SS

Lab Sample ID: VBLK03

Lab File ID: P19154.D

Date Received:

Date Analyzed: 10/11/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

O

Page 2 of 2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK03

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No. 1370

Site: _____

Location: _____

Group: GP-005-S

Matrix: (soil/water) SOIL

Lab Sample ID: VBLK03

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19154.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/11/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 0

(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
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21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000523

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19154.D
 Acq Time : 11 Oct 99 6:38 pm
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 18 10:54 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1152921	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	1264915	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.60	152	848397	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.98	113	919417	47.86	ug/L	95.73%
30) 1,2-Dichlorethane-d4	8.68	65	753839	49.94	ug/L	99.89%
38) Toluene-d8	12.77	98	1064463	47.34	ug/L	94.67%
42) 4-Bromofluorobenzene	19.49	95	1014211	43.94	ug/L	87.87%

Target Compounds Qvalue

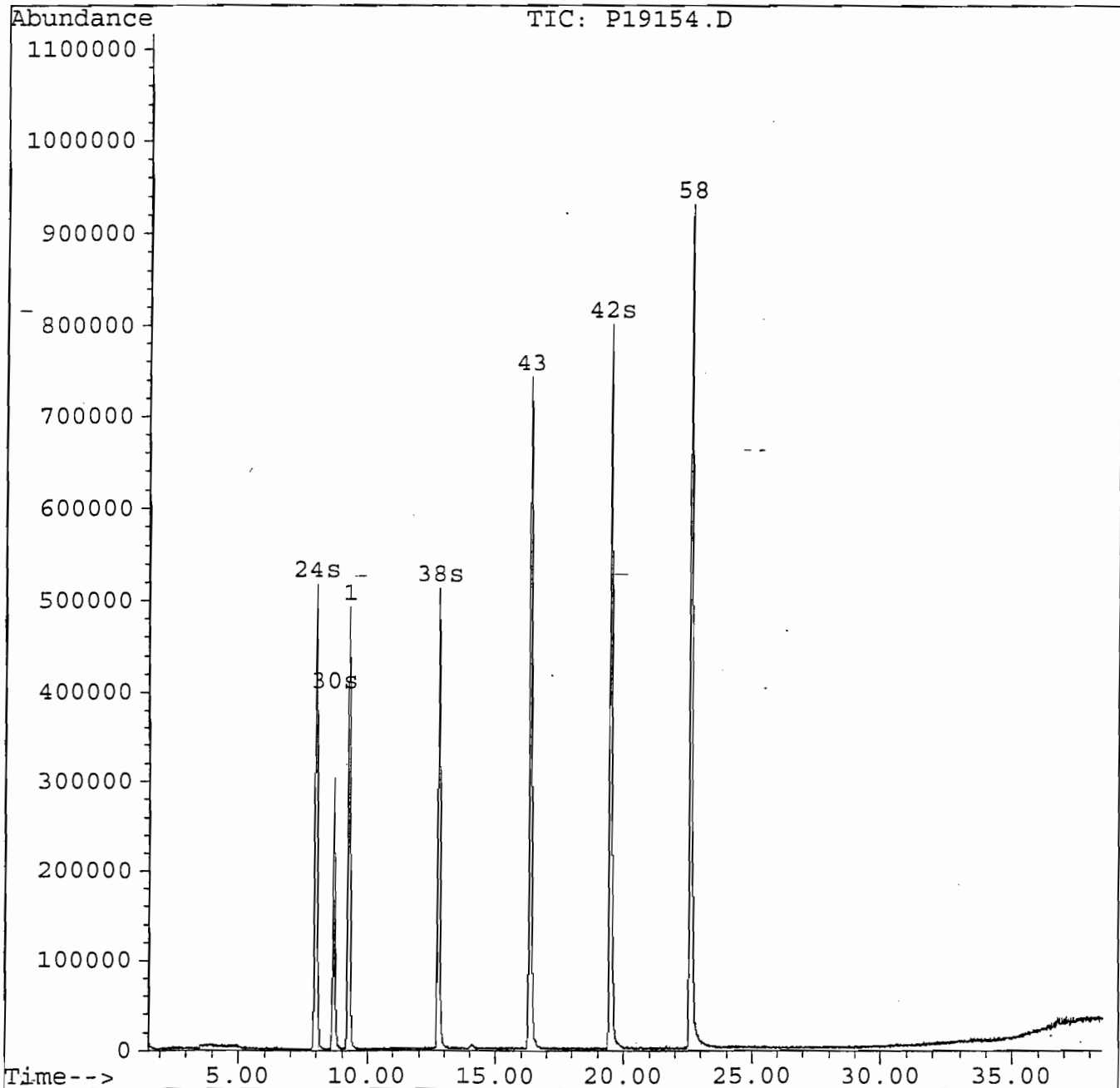
000524

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19154.D
Acq Time : 11 Oct 99 6:38 pm
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 18 10:54 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000525

Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2101199\P19154.D
Acq Time : 11 Oct 99 6:38 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : NBS75K.L

No. Library Search Compounds Detected _

000526

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

BLKSPK

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13701ASP

Site: _____

Location: _____

Group: GP-005-SS

Matrix: (soil/water) SOIL

Lab Sample ID: BLKSPK

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19103.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/8/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	5		U
74-87-3	Chloromethane	5		U
75-01-4	Vinyl Chloride	5		U
74-83-9	Bromomethane	5		U
75-00-3	Chloroethane	5		U
75-69-4	Trichlorofluoromethane	5		U
75-09-2	Methylene Chloride	5		U
75-34-4	1,1-Dichloroethane	5		U
590-20-7	2,2-Dichloropropane	5		U
74-97-5	Bromochloromethane	5		U
67-66-3	Chloroform	5		U
71-55-6	1,1,1-Trichloroethane	5		U
56-23-5	Carbon Tetrachloride	5		U
563-58-6	1,1-Dichloropropene	5		U
71-43-2	Benzene	56		
107-06-2	1,2-Dichloroethane	5		U
79-01-6	Trichloroethene	48		
78-87-5	1,2-Dichloropropane	5		U
74-95-3	Dibromomethane	5		U
75-27-4	Bromodichloromethane	5		U
108-88-3	Toluene	56		
79-00-5	1,1,2-Trichloroethane	5		U
127-18-4	Tetrachloroethene	5		U
142-28-9	1,3-Dichloropropane	5		U
124-48-1	Dibromochloromethane	5		U
106-93-4	1,2-Dibromoethane	5		U
108-90-7	Chlorobenzene	54		
630-20-6	1,1,1,2-Tetrachloroethane	5		U
100-41-4	Ethylbenzene	5		U
100-42-5	Styrene	5		U
75-25-2	Bromoform	5		U
98-82-8	isopropylbenzene	5		U
108-86-1	Bromobenzene	5		U

SAMPLE NO.

BLKSPK

Contract: IMPACT ENVIRONMENTAL

Group: GP-005-SS

Lab Sample ID: BLKSPK

Lab File ID: P19103.D

Date Received:

Date Analyzed: 10/8/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

Page 2 of 2

Quantitation Report

Data File : H:\HPCHEM\1\DATA\V2100899\P19103.D
 Acq Time : 8 Oct 99 1:18 pm
 Sample : BLK SPK
 Misc : 5G/5ML
 Quant Time: Oct 8 16:26 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : H:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1096593	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1099566	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	780714	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.95	113	850724	46.56	ug/L	93.13%
30) 1,2-Dichlorethane-d4	8.65	65	652501	45.45	ug/L	90.90%
38) Toluene-d8	12.75	98	1069813	50.02	ug/L	100.04%
42) 4-Bromofluorobenzene	19.48	95	1015145	46.23	ug/L	92.47%
Target Compounds						Qvalue
9) 1,1-dichloroethene	3.66	61	672199	57.93	ug/L	100
29) benzene	8.58	78	977506	56.31	ug/L	99
32) trichloroethene	10.02	130	492226	47.87	ug/L	97
39) toluene	12.91	91	1198532	55.56	ug/L	99
50) chlorobenzene	16.39	112	954927	53.59	ug/L	100

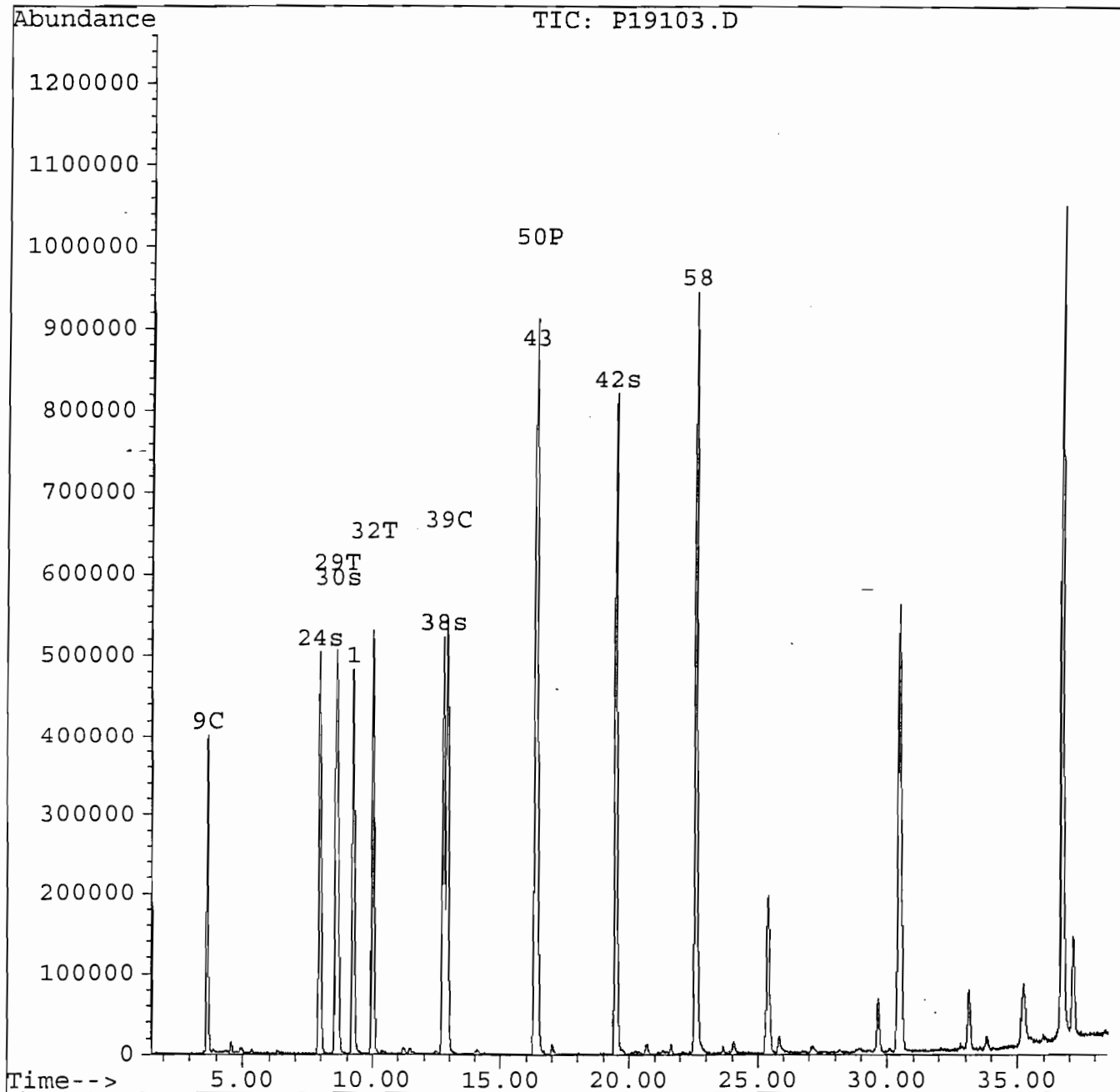
-----000529-----

Quantitation Report

Data File : H:\HPCHEM\1\DATA\V2100899\P19103.D
Acq Time : 8 Oct 99 1:18 pm
Sample : BLK SPK
Misc : 5G/5ML
Quant Time: Oct 8 16:26 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : H:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000530

CHEMTECH CONSULTING GROUP

MISCELLANEOUS DATA

000531

CHEMTECHDaily Analysis Runlog For GC #: GCMSVOA3Start Date: 10/9/99 End Date: / / Analyst Review By:

<u>STD. NAME</u>	<u>STD REF. #:</u>	<u>STD NAME</u>	<u>STD REF. #:</u>
CCC	—	Spike Std.	V1091
Surrogate Stds.	V1088	ISD	V1087
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	V1089, V1090	METH	V31009 CW.M

<u>SR #:</u>	<u>Sample ID</u>	<u>Data File Name</u>	<u>Method #:</u>	<u>Run Information</u>	<u>Comment</u>
1	BFB	M12953			OK 8:04
2	200 PPB ICC	M12954			OK
3	100 PPB ICC	M12955		METH	OK
4	50 PPB ICC	M12956		V31009 CW.M	OK
5	20 PPB ICC	M12957			OK
6	5 PPB ICC	M12958			OK
7	5 PPB ICC	M12959			OK
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					000532

000010

CHEMTECHDaily Analysis Runlog For GC #: GCMSVOA3Start Date: 10/10/99 End Date: 10/11/99 Analyst A.T. Review By: JP

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089 V1090	Spike Std.	V1091
Surrogate Stds.	V1088	Isd	V1087
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	Methu	V31009CW.M

2115126
1788981
722206

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M12984			OK 1:35pm
2	50PPB CCC	M12985	8.26% _W	5ml	OK
3	PRO BLANK	M12986			OK
4	BLANK SPIKE	M12987			OK
5	13736LP- 87072	M12988		1:100 dil	OK
6	13703ASP- 86848	M12989		5ml	OK RR 10X: 100X
7	86848	M12990		1:100 dil	OK RR 100X
8	13701ASP- 86843	M12991		4g/10ml 100ul/5ml	OK RR 10X: 100X
9	13665NT- 86567	M12992		4g/10ml MeOH 100ul/5ml	OK
10	86568	M12993			OK RR 5X
11	86570	M12994			OK RR 5X
12	86573	M12995			OK
13	86574	M12996			OK
14	86575	M12997			OK
15	13718NT- 86997	M12998			OK
16	86999	M12999			OK
17	87000	M13000 M12999			OK
18					
19					000533
20					

E

Start Date: 10/11/99

End Date: 10/11/99

Analyst

Review By:

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1088	ISD	V1087
QC Check Std.	—————	BFB	V1072
Initial Calibration Stds.	—————	METH	V310009CW.m

2163422
1831867
832856

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M13001			OK 7:47
2	SOPB CCC	M13002	8060r		OK
3	PRO BIF	M13003			OK
4	STDR BIK	M13004			OK
5	BIC SPIK	M13005			OK
6	13665M3 -86568	M13006		47r/10mls	OK
7	↓ -86570	M13007			OK
8	13701ASP -86842	M13008		↓	OK RR 1:10
9	13703ASP -86851	M13009		5mls	OK
10	-86848	M13010	✓	1008	OK
11	13701ASP- -86842	M13011		4g/10ml MeOH 1:1002	OK
12					
13					
14					
15					
16					
17					
18					
19					
20					000534

Start Date: 10/12/99 End Date: 10/13/99 Analyst: A. L. Review By: JJ

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1088	Isd	V1087
QC Check Std.	—	BFB	V1073
Initial Calibration Stds.	—	Meth	V31009CWM

2128207
1767032
838782

SR #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M13038			ok
2	50PPB CCC	M13039	8260/w		ok
3	200PPB ICC	M13040	cap/s		ok
4	100PPB ICC	M13041		V31013BW	ok
5	50PPB ICC	M13042			ok
6	20PPB ICC	M13043			ok
7	10PPB ICC	M13044			ok
8	PRO BLANK	M13045	8260/w	Smel	ok
9	PRO BLANK	M13046			not needed
10	BLANK SPIKE	M13047			ok
11	13752ASP- 87169	M13048			50X Surz high RR 10X
12	13735NJ- 87067	M13049			ok
13	13740NJ- 87087	M13050			OK RR 100X
14	13701ASP- 86843	M13051		4g/110ml MeOH 1:100J	ok
15	13758C- 87206	M13052		5g	ok
16	↓ 87207	M13053	↓	↓	RR STR 4 10X
17					
18					
19					
20					000535

CHEMTECHDaily Analysis Runlog For GC #: GCMSVOA3Start Date: 9/16/99 End Date: 9/16/99 Analyst: A-1 Review By: A-1

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1060, V1061	Spike Std.	V1021
Surrogate Stds.	V1059	180	V1058
QC Check Std.	—	BFB	V1035
Initial Calibration Stds.	V1060, V1061	Meth	V30916 W.M.

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M12459			ok
2	50 PPB ICC	M12460	8260 W	Sw	ok
3	200 PPB ICC	M12462			ok
4	100 PPB ICC	M12463			ok
5	20 PPB ICC	M12464			ok
6	5 PPB ICC	M12465			ok
7	5 PPB ICC	M12465			ok
8	Pro BLANK	M12467			ok
9	13345415- 84185	M12468		100% SW	ok
10	84186	M12469			ok
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

000536

Start Date: 10/8/99 End Date: 10/8/99 Analyst: JA Review By: BS

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1060, V1061	Spike Std.	V1073
Surrogate Stds.	V1084	ISD	V1083
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	METH	V30916CW.M

2181875
1748135
773639

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M12937			OK 7:18
2	50PPB CCC	M12938	8260		OK
3	PKA BIK	M12939	↓	—	OK
4	BIC SPK	M12940	↓		OK
5	13651 ASP -86389	M12941	↓	5mls	OK
6	↓ -86391	M12942	↓	5x Dil	OK
7	↓ -86388	M12943	↓	20x Dil	OK
8	↓ -86393	M12944	↓	5mls	OK
9	↓ -86393	M12945	8260	10x Dil	OK
10	13684 DEC -86689	M12946	↓	5mls	OK
11	13701 ASP -86844	M12947	↓	↓	OK
12	13718 M3 -87003	M12948	↓	↓	OK
13	↓ -87004	M12949	↓	↓	OK
14	13714 L -86977	M12950	↓	↓	OK
15	↓ -86978	M12951	↓	↓	OK Sum low P2
16					
17					
18					
19		000000			000537
20					

Start Date: 10/6/99 End Date: 10/6/99 Analyst: A. J. Review By: A. J.

<u>STD. NAME</u>	<u>STD REF. #:</u>	<u>STD NAME</u>	<u>STD REF. #:</u>
CCC	—	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1085
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	V1089, V1090	Meth	V21006CS.M

<u>SR. #:</u>	<u>Sample ID</u>	<u>Data File Name</u>	<u>Method #:</u>	<u>Run Information</u>	<u>Comment</u>
1	BFB	P19048			ok
2	50PPB ICC	P19049	8260/s		ok
3	50PPB ICC	P19050			not needed
4	200PPB ICC	P19051		- V21006CS.M	ok
5	100PPB ICC	P19052			ok
6	20PPB ICC	P19053			ok
7	5PPB ICC	P19054			ok
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					000538

Start Date: 10/8/99 End Date: 10/8/99 Analyst A. f Review By: A. f

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1085
QC Check Std.	—	BFB	V0172
Initial Calibration Stds.	—	Meth	V21006CS.M

1071382
1121445
833409

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19100			ok 11:11am
2	SOPPB CCC	P19101	826075	Sg	ok
3	Pro BLANK	P19102			ok
4	BLANK SPIKE	P19103			ok
5	13652ASP- 86395	P19104			Isd low w/ P19078
6	86396	P19105			ok
7	13684DEC- 86681	P19106			ok
8	86684	P19107		1:100J	ok w/ P19068
9	86688	P19108		Sg	ok
10	13665NJ- 86572	P19109			ok
11	13701ASP- 86830	P19110			ok
12	86831	P19111			ok
13	86832	P19112			ok
14	86833	P19113			ok
15	86834	P19114			ok
16	86835	P19115			ok
17	86836	P19116			ok
18					
19					
20					006539

Start Date: 10/8/99 End Date: 10/9/99 Analyst A. J. 1 Review By: A. J. 1

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1085
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	MePh	V200625.M 903894 963475 675476

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19117			ok 11:35pm
2	SOPPB CCC	P19118	8267/s	Sg	ok
3	PRO BLANK	P19119			ok
4	BLANK SPIKE	P19120			NG
5	13701ASP-86837	P19121			Isd low RR
6	86838	P19122			Isd low RR
7	86839	P19123			ok
8	86840	P19124			ok
9	86841	P19125			ok
10	86842	P19126			Bad matrix ^{RR} MeOH
11	86843	P19127			Isd low RR
12	86843MS	P19128			NG
13	↓ 86843MSD	P19129			↓
14	13709ASP-86920	P19130			ok
15	86921	P19131			Isd low re.
16	86922	P19132			Isd low RR
17	↓ 86923	P19133	↓	↓	ok
18					
19					
20					000540

Start Date: 10/11/99 End Date: 10/12/99 Analyst: A. S. Review By: A. S.

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1085
QC Check Std.	_____	BFB	V1072
Initial Calibration Stds.	_____	Meth	V21006CS.M

1374612
1443870
961810

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19151			ok 4:31pm
2	50 PPB CCC	P19152	826%	5g	ok
3	50 PPB CCC	P19153		10	Not needed
4	P20 BLANK	P19154			ok
5	BLANK SPIKE	P19155			ok
6	13701ASP- 86837	P19156			ok
7	86838	P19157			ok
8	10/11/99 86843 86839	P19158			NG ER 'Meth
9	13701ASP-86921 86840	P19159			ok
10	86922	P19160			Isd low
11	86924	P19161			Isd low
12	86934MS	P19162			Not Run
13	86935MSD	P19163			
14	13718NT- 87002	P19164		1:100:1	
15	13735NT- 87066	P19165		5g	
16					
17					
18					
19					
20					006541

SHIPPING AND RECEIVING DOCUMENTATION

000543

☐ 110 Route 4
Englewood,
(201) 567-68
Fax (201) 56

CHAIN OF CUSTODY RECORD

☐ 205 Campus Plaza 1
Edison, NJ 08837
(732) 225-4111
Fax (732) 225-4110

☐ 515 Route 9 South
Barnegat, NJ 08005
(609) 698-0199
Fax (609) 698-0910

CHEMTECH JOB NO.:

CHEMTECH QUOTE NO.:

CLIENT INFORMATION			PROJECT INFORMATION			BILLING INFORMATION		
REPORT TO BE SENT TO:			PROJECT NAME:			BILL TO:		
COMPANY: Impact Environmental			PROJECT NO.: #1-30-0435			PO #:		
ADDRESS: 1 Village Plaza			PROJECT NO.: 98-335, Westbury			ADDRESS:		
CITY: Kings Park			PROJECT MANAGER: Richard Parish			CITY:		
STATE: NY			LOCATION: 299 Main St., Westbury, NY			STATE:		
ZIP: 11754			PHONE:			ZIP:		
ATTENTION: Kevin Kleaka			FAX:			ATTENTION:		
PHONE: 516.269.8800			FAX: 516.269.1599			PHONE:		
DATA TURNAROUND INFORMATION			DATA DELIVERABLE INFORMATION			ANALYSIS		
FAX: _____			RESULTS ONLY			PRESERVATIVES		
HARD COPY: _____			☐ USEPA CLP			← Specify Preservatives		
EDD: _____			☒ RESULTS + QC			A - HCl B - HNO ₃		
* TO BE APPROVED BY CHEMTECH			☐ NJ REDUCED			C - H ₂ SO ₄ D - NaOH		
** NORMAL TURNAROUND TIME - 14 DAYS			☐ NJ CLP			E - ICE F - Other		
			☐ EDD FORMAT:					
CHEMTECH SAMPLE ID			SAMPLE IDENTIFICATION			COMMENTS		
1. 335-GP-007-SS10			S			40C		
2. 335-GP-007-SS15			S			1 2 3 4 5 6 7 8 9		
3. 335-GP-007-SS30			S					
4. 335-GP-007-SS45			S					
5. 335-GP-008-SS10			S					
6. 335-GP-008-SS15			S					
7. Trip Blank			S					
8.								
RELINQUISHED BY: 1. [Signature]			DATE/TIME: 10/6/99 145			RECEIVED BY: 1. [Signature]		
RELINQUISHED BY: 2.			DATE/TIME:			RECEIVED BY: 2.		
RELINQUISHED BY: 3.			DATE/TIME: 10/6/99			RECEIVED BY: 3. [Signature]		
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY			CONDITIONS OF BOTTLES OR COOLERS AT RECEIPT:			Comments:		
			☐ Compliant ☐ Non-Compliant			# RPS target volatile first attached / sec		
			Temp. of Cooler 40C					
Page _____ of _____			Shipment Complete: Yes _____ No _____					

CHAIN OF CUSTODY RECORD

☐ 110 Route 4
Englewood, NJ 07631
(201) 567-6868
Fax (201) 567-1333

☐ 205 Campus Plaza 1
Edison, NJ 08837
(732) 225-4111
Fax (732) 225-4110

☐ 515 Route 9 South
Barnegat, NJ 08005
(609) 698-0199
Fax (609) 698-0910

CHEMTECH JOB NO.:

CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Impact Environmental

ADDRESS: 1 Village Plaza

CITY: Kings Park STATE: NY ZIP: 11354

ATTENTION: Kevin Kleaka

PHONE: 516.269.3800 FAX: 516.269.1599

DATA TURNAROUND INFORMATION

FAX: _____ DAYS •
HARD COPY: _____ DAYS •
EOD: _____ DAYS •

* TO BE APPROVED BY CHEMTECH

** NORMAL TURNAROUND TIME - 14 DAYS

PROJECT INFORMATION

PROJECT NAME: # 1-30-0435

PROJECT NO.: 98-335, Westbury

PROJECT MANAGER: Richard Parrish

LOCATION: 299 Main St, Westbury, NY

PHONE: _____ FAX: _____

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☒ NY'S ASP "B"
☐ NJ REDUCED ☐ NY'S ASP "A"
☐ NJ CLP ☐ EDD
☐ EDD FORMAT: _____

BILLING INFORMATION

BILL TO: Client PO #:

ADDRESS:

CITY: _____ STATE: _____ ZIP: _____

ATTENTION: _____ PHONE: _____

ANALYSIS

1	2	3	4	5	6	7	8	9

PRESERVATIVES									COMMENTS
									← Specify Preservatives
									A - HCl B - HNO ₃
									C - H ₂ SO ₄ D - NaOH
									E - ICE F - Other

CHEMTECH SAMPLE ID	SAMPLE MATRIX	SAMPLE TYPE	SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES	COMMENTS
			DATE	TIME			

1.		S	X	10/1/99	1:28	1	
2.		S	X	10/1/99	2:14	1	
3.		S	X	10/1/99	2:24	1	
4.	0005	S	X	10/1/99	2:51	1	
5.	0005	S	X	10/1/99	3:10	1	
6.	0005	S	X	10/1/99	3:22	1	
7.		S	X	10/1/99	2:54	1	
8.		S	X	10/1/99	3:10	1	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	DATE/TIME:	CONDITIONS OF BOTTLES OR COOLERS AT RECEIPT:	COMMENTS:
1. <u>Miller</u>	<u>10/6/99 145</u>	<u>[Signature]</u>	<u>10/6/99 145</u>	☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler <u>44</u>	
2.					
3.					

Page _____ of _____ Shipment Complete: Yes _____ No _____

YELLOW - CHEMTECH COPY FOR RETURN TO CLIENT PINK - SAMPLER COPY



ANALAB/ICM DIVISION

205 Campus Plaza 1 • Raritan Center • Edison, NJ • 08837
Tel: 732.225.4111 Fax: 732.225.4110

DATA PACKAGE FOR VOLATILE ORGANICS PART I

**PROJECT NAME: # 1-30-0435
PROJECT # 98-335, WESTBURY**

**IMPACT ENVIRONMENTAL
1 VILLAGE PLAZA
KING PARK NY 11754
916-269-8800**

**CHEMTECH PROJECT
ATTENTION**

**13826ASP
KEVIN KLEAKA**

**PART I VOLATILE ORGANICS
PART II SEMIVOLATILE ORGANICS
PART III TPH BY GC
PART IV TOTAL METALS**



ANALAB/ICM DIVISION

CASE NARRATIVE-VOLATILE ORGANICS

Impact Environmental

Project Name: # 1-30-0435

Project # 98-335, Westbury

Chemtech Project # 13826ASP

A. Number of Samples and Date of Receipt

16 Soil samples were delivered to the laboratory intact on 10/18/99.

B. Parameters

Test requested was Volatile Organics, Semivolatile Organics, TPH BY GC & Total Metals. This data package contains results for Volatile Organics.

C. Analytical Techniques:

Samples were analyzed for Volatile Organics according Method 8260B. The analyses were performed on instruments VOA5, using GC column RTX624 which is 75 meters, 0.53mm ID, 3.0mm df (crossbond 6% cyanopropylphenyl-94%) dimethylpolysiloxane. The Purge Trap was supplied by Supelco, VO CARB 3000, Tekmar 3000.

D. QA/ QC Samples:

The Surrogate Recoveries for each sample are found in Form II-A. Initial Calibration of Single Component Analytes results are found on Form 6 D & E. The Matrix Spike and Matrix Spike Duplicate were analyzed and are reported on Form 3F.

System Monitoring Compound recoveries were acceptable. MS/MSD recoveries and RPDs met requirements. Internal Standard Areas and Retention Times met criteria. Calibrations met requirements. Blank analyses did not indicate the presence of contamination.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature

Name: Divyajit Mehta

Date:

11/11/99

Title: Lab Manager

000001



ANALAB/ICM DIVISION

205 Campus Plaza 1 • Raritan Center • Edison, NJ • 08837
Tel: 732.225.4111 Fax: 732.225.4110

COVER PAGE

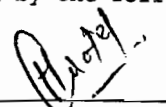
Lab Name: Chemtech Consulting Group

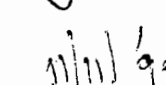
Client: IMPACT ENVIRONMENTAL

Lab Code: CHEM Project No.: 13826ASP

Client Sample No.	Lab Sample ID
GP-008-SS30	87991
GP-008-SS45	87992
GP-009-SS10	87993
GP-010-SS15	87994
GP-011-SS15	87995
GP-012-SS15	87996
GP-009-SS30	87997
GP-009-SS45	87998
GP-010-SS30	87999
GP-010-SS45	88000
GP-011-SS30	88001
GP-011-SS45	88002
GP-012-SS30	88003
GP-012-SS45	88004
GP-013-SS8	88005
GP-013-SS12	88006

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designed, as verified by the following signature.

Signature:  Name: DIVYAJIT MEHTA

Date :  Title: LAB DIRECTOR

000002

DATA REPORTING QUALIFIERS - ORGANIC

For reporting results, the following "Results Qualifiers" are used:

VALUE - If the result is a value greater than or equal to the detection limit, report the value.

- U -** Indicates the compound was analyzed for, but was not detected. Report the minimum detection limit for the sample with the U, ie "10 U". This is not necessarily the instrument detection limit. The figure represents the minimum detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
- J -** Indicates an estimated value. This flag is used:
 - (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed).
 - (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit but greater than zero. If the detection limit was 10 ug/L and a concentration of 3 ug/L was calculated, report as "3 J".
- B -** Indicates the analyte was found in the blank as well as the sample; report as "12 B".
- E -** Indicates the analyte's concentration exceeds the calibrated range of the GC/MS instrument for that specific analysis.
- D -** This flag identifies all compounds identified in an analysis at a secondary dilution factor.
- P -** This flag is used for a Pesticide/Aroclor target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- N -** This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

000003

CHEMTECH CONSULTING GROUP

II

VOLATILES

DATA

000004

CHEMTECH CONSULTING GROUP

VOLATILES

QC DATA

000005

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS30Level: (low/med) LOW

	SAMPLE NO.	SMC1 (DBFM) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	104	100	98	112	
02	BLKSPK	104	100	95	104	
03	GP-008-SS30	89	85	93	85	
04	GP-011-SS15	85	84	95	106	
05	GP-012-SS15	85	82	94	91	
06	GP-009-SS30	86	87	93	102	
07	GP-009-SS45	88	87	94	99	
08	GP-010-SS30	84	81	92	93	
09	GP-010-SS45	84	81	90	85	
10	VBLK02	98	94	98	108	
11	GP-009-SS30DL	93 D	87 D	96 D	96 D	
12	GP-011-SS30	94	91	98	100	
13	GP-011-SS30MS	92	91	94	96	
14	GP-011-SS30MSD	101	102	97	109	
15	GP-011-SS45	102	106	99	109	
16	GP-012-SS30	100	102	101	103	
17	GP-012-SS45	97	102	97	100	
18	GP-013-SS8	105	108	98	106	
19						
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30						

SMC1 (DBFM) = Dibromofluoromethane

SMC2 (DCE) = 1,2-Dichlorethane-d4

SMC3 (TOL) = Toluene-d8

SMC4 (BFB) = 4-Bromofluorobenzene

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

QC LIMITS

(80-120)

(80-120)

(81-117)

(74-121)

000006

SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS30Level: (low/med) MED

	SAMPLE NO.	SMC1 (DBFM) #	SMC2 (DCE) #	SMC3 (TOL) #	SMC4 (BFB) #	TOT OUT
01	VBLK01	103	96	104	110	
02	BLKSPK	107	102	109	108	
03	GP-009-SS10	100	101	98	103	
04	GP-010-SS15	107	101	104	97	
05	VBLK02	98	94	101	101	
06	GP-009-SS10DL	105 D	101 D	102 D	108 D	
07	GP-008-SS45	109	109	111	112	
08	GP-013-SS12	107	108	108	115	
09						
10						
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30						

QC LIMITS

SMC1 (DBFM) = Dibromofluoromethane

(80-120)

SMC2 (DCE) = 1,2-Dichloroethane-d4

(80-120)

SMC3 (TOL) = Toluene-d8

(81-117)

SMC4 (BFB) = 4-Bromofluorobenzene

(74-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

000007

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS30Matrix Spike - Sample No.: GP-011-SS30Level: (low/med) LOW

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	52	0	42	81	(59-172)
Benzene	52	0	50	96	(66-142)
Trichloroethene	52	0	44	85	(62-137)
Toluene	52	0	53	102	(59-139)
Chlorobenzene	52	0	51	98	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MS % REC #	% RPD #	QC LIMITS RPD REC.
1,1-Dichloroethene	52	37	71	13	22 (59-172)
Benzene	52	45	87	11	21 (66-142)
Trichloroethene	52	39	75	12	24 (62-137)
Toluene	52	47	90	12	21 (59-139)
Chlorobenzene	52	44	85	15	21 (60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

000008

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: CHEMTECHContract: EARTH ENGINEERING INCProject No.: 12779NJ

Site: _____

Location: _____

Group: S-1Matrix Spike - Sample No.: S-12Level: (low/med) MED

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	4100	0	4500	110	(59-172)
Benzene	4100	0	4600	112	(66-142)
Trichloroethene	4100	0	4000	98	(62-137)
Toluene	4100	0	4500	110	(59-139)
Chlorobenzene	4100	0	4200	102	(60-133)

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MS % REC #	% RPD #	QC RPD	LIMITS REC.
1,1-Dichloroethene	4100	4800	117	6	22	(59-172)
Benzene	4100	5100	124	10	21	(66-142)
Trichloroethene	4100	4500	110	12	24	(62-137)
Toluene	4100	5000	122	11	21	(59-139)
Chlorobenzene	4100	4700	115	11	21	(60-133)

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Comments: _____

000009

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH

Contract: IMPACT

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Lab File ID: P19252.D

Lab Sample ID: VBLK01

Date Analyzed: '10/20/99

Time Analyzed: 1636

GC Column: RTX624

ID: 0.53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOA 2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	BLKSPK	BLKSPK	P19253.D	1721
02	GP-008-SS30	O87991	P19256.D	1935
03	GP-011-SS15	O87995	P19260.D	2234
04	GP-012-SS15	O87996	P19261.D	2319
05	GP-009-SS30	O87997	P19262.D	0004
06	GP-009-SS45	O87998	P19263.D	0049
07	GP-010-SS30	O87999	P19264.D	0134
08	GP-010-SS45	O88000	P19265.D	0219
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBK02

Lab Name: CHEMTECH

Contract: IMPACT

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Lab File ID: P19269.D

Lab Sample ID: VBK02

Date Analyzed: '10/21/99

Time Analyzed: 2308

GC Column: RTX624

ID: 0.53 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOA 2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	GP-009-SS30DL	O87997DL	P19272.D	0123
02	GP-011-SS30	O88001	P19273.D	0207
03	GP-011-SS30MS	O88001MS	P19274.D	0252
04	GP-011-SS30MSD	O88001SD	P19275.D	0337
05	GP-011-SS45	O88002	P19276.D	0422
06	GP-012-SS30	O88003	P19277.D	0507
07	GP-012-SS45	O88004	P19278.D	0552
08	GP-013-SS8	O88005	P19279.D	0636
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COMMENTS:

4A
VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

VBK01

Lab Name: CHEMTECH Contract: IMPACT

Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS

Lab File ID: M13276.D Lab Sample ID: VBK01

Date Analyzed: '10/21/99 Time Analyzed: 2133

GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: VOA 3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	BLKSPK	BLKSPK	M13277.D	2218
02	GP-009-SS10	O87993	M13289.D	0714
03	GP-010-SS15	O87994	M13290.D	0759
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COMMENTS:

VOLATILE METHOD BLANK SUMMARY

VBLK02

Lab Name: CHEMTECHContract: IMPACTProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SSLab File ID: M13293.DLab Sample ID: VBLK02Date Analyzed: '10/22/99Time Analyzed: 1052GC Column: RTX624ID: 0.53 (mm)Heated Purge: (Y/N) NInstrument ID: VOA 3

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	GP-009-SS10DL	O87993DL	M13297.D	1357
02	GP-008-SS45	O87992	M13298.D	1443
03	GP-013-SS12	O88006	M13299.D	1529
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COMMENTS:

**VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)**

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Lab File ID: P19048.DBFB Injection Date: '10/6/99Instrument ID: VOA 2BFB Injection Time: 1715GC Column: RTX624 ID: 0.53 (mm)Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.1
75	30.0 - 60.0% of mass 95	58.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	99.4
175	5.0 - 9.0% of mass 174	7.4 (7.4)1
176	Greater than 95% but less than 101% of mass 174	98.5 (99.1)1
177	5.0 - 9.0% of mass 176	6.4 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD050	P19049.D	10/6/99	1753
02	VSTD200	VSTD200	P19051.D	10/6/99	1923
03	VSTD100	VSTD100	P19052.D	10/6/99	2007
04	VSTD020	VSTD020	P19053.D	10/6/99	2051
05	VSTD005	VSTD005	P19054.D	10/6/99	2135
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**VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)**

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Lab File ID: P19250.DBFB Injection Date: '10/20/99Instrument ID: VOA 2BFB Injection Time: 1512GC Column: RTX624 ID: 0.53 (mm)Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.2
75	30.0 - 60.0% of mass 95	58.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	88.7
175	5.0 - 9.0% of mass 174	6.5 (7.3)1
176	Greater than 95% but less than 101% of mass 174	85.3 (96.2)1
177	5.0 - 9.0% of mass 176	5.5 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5002	P19251.D	10/20/99	1550
02	VBLK01	VBLK01	P19252.D	10/20/99	1636
03	BLKSPK	BLKSPK	P19253.D	10/20/99	1721
04	GP-008-SS30	O87991	P19256.D	10/20/99	1935
05	GP-011-SS15	O87995	P19260.D	10/20/99	2234
06	GP-012-SS15	O87996	P19261.D	10/20/99	2319
07	GP-009-SS30	O87997	P19262.D	10/21/99	0004
08	GP-009-SS45	O87998	P19263.D	10/21/99	0049
09	GP-010-SS30	O87999	P19264.D	10/21/99	0134
10	GP-010-SS45	O88000	P19265.D	10/21/99	0219
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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Lab File ID: P19267.DBFB Injection Date: '10/21/99Instrument ID: VOA 2BFB Injection Time: 2145GC Column: RTX624 ID: 0.53 (mm)Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.2
75	30.0 - 60.0% of mass 95	59.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	85.6
175	5.0 - 9.0% of mass 174	5.9 (6.9)1
176	Greater than 95% but less than 101% of mass 174	85.1 (99.4)1
177	5.0 - 9.0% of mass 176	5.8 (6.8)2

1-Value is % mass 174

2-Value is % mass 176

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5003	P19268.D	10/21/99	2223
02	VBLK02	VBLK02	P19269.D	10/21/99	2308
03	GP-009-SS30D	O87997DL	P19272.D	10/22/99	0123
04	GP-011-SS30	O88001	P19273.D	10/22/99	0207
05	GP-011-SS30M	O88001MS	P19274.D	10/22/99	0252
06	GP-011-SS30M	O88001SD	P19275.D	10/22/99	0337
07	GP-011-SS45	O88002	P19276.D	10/22/99	0422
08	GP-012-SS30	O88003	P19277.D	10/22/99	0507
09	GP-012-SS45	O88004	P19278.D	10/22/99	0552
10	GP-013-SS8	O88005	P19279.D	10/22/99	0636
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**VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)**

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Lab File ID: M12953.DBFB Injection Date: '10/9/99Instrument ID: VOA 3BFB Injection Time: 0804GC Column: RTX624ID: 0.53 (mm)Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.6
75	30.0 - 60.0% of mass 95	46.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.1 (0.1)1
174	Greater than 50.0% of mass 95	81.3
175	5.0 - 9.0% of mass 174	5.6 (6.9)1
176	Greater than 95% but less than 101% of mass 174	79.8 (98.2)1
177	5.0 - 9.0% of mass 176	4.9 (6.1)2

1-Value is % mass 174

2-Value is % mass 176

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	VSTD200	M12954.D	10/9/99	0832
02	VSTD100	VSTD100	M12955.D	10/9/99	0917
03	VSTD050	VSTD050	M12956.D	10/9/99	1002
04	VSTD020	VSTD020	M12957.D	10/9/99	1049
05	VSTD005	VSTD005	M12959.D	10/9/99	1235
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000017

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Lab File ID: M13274.D BFB Injection Date: '10/21/99
 Instrument ID: VOA 3 BFB Injection Time: 2013
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.3
75	30.0 - 60.0% of mass 95	47.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	Greater than 50.0% of mass 95	78.4
175	5.0 - 9.0% of mass 174	5.3 (6.8)1
176	Greater than 95% but less than 101% of mass 174	76.6 (97.7)1
177	5.0 - 9.0% of mass 176	4.9 (6.4)2

1-Value is % mass 174

2-Value is % mass 176

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5002	M13275.D	10/21/99	2040
02	VBLK01	VBLK01	M13276.D	10/21/99	2133
03	BLKSPK	BLKSPK	M13277.D	10/21/99	2218
04	GP-009-SS10	O87993	M13289.D	10/22/99	0714
05	GP-010-SS15	O87994	M13290.D	10/22/99	0759
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000018

**VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)**

Lab Name : CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP Site: _____

Location: _____

Group: GP-008-SS3Lab File ID: M13291.DBFB Injection Date: '10/22/99Instrument ID: VOA 3BFB Injection Time: 0909GC Column: RTX624 ID: 0.53 (mm)Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.1
75	30.0 - 60.0% of mass 95	46.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	5.9
173	Less than 2.0% of mass 174	0.6 (0.8)1
174	Greater than 50.0% of mass 95	83.0
175	5.0 - 9.0% of mass 174	5.5 (6.6)1
176	Greater than 95% but less than 101% of mass 174	80.1 (96.5)1
177	5.0 - 9.0% of mass 176	5.5 (6.9)2

1-Value is % mass 174

2-Value is % mass 176

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD050	VSTD5003	M13292.D	10/22/99	0937
02	VBLK02	VBLK02	M13293.D	10/22/99	1052
03	GP-009-SS10D	O87993DL	M13297.D	10/22/99	1357
04	GP-008-SS45	O87992	M13298.D	10/22/99	1443
05	GP-013-SS12	O88006	M13299.D	10/22/99	1529
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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Lab File ID (Standard): P19251.D Date Analyzed: 10/20/99
 Instrument ID: VOA 2 Time Analyzed: 1550
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge (Y/N) Y

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1012306	9.27	964865	16.35	651058	22.60
UPPER LIMIT	2024612	9.77	1929730	16.85	1302116	23.10
LOWER LIMIT	506153	8.77	482433	15.85	325529	22.10
SAMPLE NO.						
01 VBLK01	775458	9.27	900342	16.35	726741	22.61
02 BLKSPK	751981	9.27	862614	16.33	675212	22.61
03 GP-008-SS30	1026581	9.26	1049093	16.34	723040	22.60
04 GP-011-SS15	527962	9.27	620334	16.34	494336	22.61
05 GP-012-SS15	1194394	9.27	1295889	16.35	826396	22.61
06 GP-009-SS30	1102766	9.26	1181761	16.35	577061	22.62
07 GP-009-SS45	585195	9.27	676805	16.35	475053	22.61
08 GP-010-SS30	1154368	9.27	1257828	16.34	865727	22.61
09 GP-010-SS45	1164733	9.26	1169912	16.34	815451	22.60
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IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

000020

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Lab File ID (Standard): P19268.DDate Analyzed: 10/21/99Instrument ID: VOA 2Time Analyzed: 2223GC Column: RTX624ID: 0.53 (mm)Heated Purge (Y/N) Y

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1104200	9.26	1019715	16.33	762688	22.59
UPPER LIMIT	2208400	9.76	2039430	16.83	1525376	23.09
LOWER LIMIT	552100	8.76	509858	15.83	381344	22.09
SAMPLE NO.						
01 VBLK02	890527	9.25	1087899	16.33	796990	22.58
02 GP-009-SS30DL	983952	9.26	1032062	16.33	670216	22.58
03 GP-011-SS30	956371	9.26	1069996	16.33	797999	22.59
04 GP-011-SS30MS	955241	9.26	978520	16.32	733080	22.58
05 GP-011-SS30MSD	781715	9.26	861259	16.33	677298	22.59
06 GP-011-SS45	707856	9.26	829139	16.31	599966	22.57
07 GP-012-SS30	732106	9.26	814209	16.33	594536	22.58
08 GP-012-SS45	707230	9.26	743064	16.32	567701	22.59
09 GP-013-SS8	571726	9.27	573327	16.33	434158	22.60
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IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

000021

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Lab File ID (Standard): M13275.D Date Analyzed: 10/21/99
 Instrument ID: VOA 3 Time Analyzed: 2040
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge (Y/N) N

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	2197275	14.14	1885468	20.48	877326	25.21
UPPER LIMIT	4394550	14.64	3770936	20.98	1754652	25.71
LOWER LIMIT	1098638	13.64	942734	19.98	438663	24.71
SAMPLE NO.						
01 VBLK01	2496814	14.14	2039879	20.48	974986	25.21
02 BLKSPK	2167745	14.16	1853391	20.49	868169	25.22
03 GP-009-SS10	2162485	14.16	1721750	20.51	681069	25.26
04 GP-010-SS15	2180567	14.16	1957004	20.51	732172	25.25
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22						

IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Lab File ID (Standard): M13292.D Date Analyzed: 10/22/99
 Instrument ID: VOA 3 Time Analyzed: 0937
 GC Column: RTX624 ID: 0.53 (mm) Heated Purge (Y/N) N

	IS1 (FB) AREA #	RT #	IS2 (CBZ) AREA #	RT #	IS3 (DCB) AREA #	RT #
12 HOUR STD	2115828	14.16	1819804	20.50	830163	25.24
UPPER LIMIT	4231656	14.66	3639608	21.00	1660326	25.74
LOWER LIMIT	1057914	13.66	909902	20.00	415082	24.74
SAMPLE NO.						
01 VBLK02	2157213	14.16	1836170	20.51	845379	25.25
02 GP-009-SS10DL	2062466	14.16	1699680	20.52	748781	25.26
03 GP-008-SS45	1441321	14.16	1316382	20.53	573401	25.28
04 GP-013-SS12	1904206	14.17	1697440	20.54	761528	25.28
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15						
16						
17						
18						
19						
20						
21						
22						

IS1 (FB) = Fluorobenzene

IS2 (CBZ) = Chlorobenzene-d5

IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

000023

CHEMTECH CONSULTING GROUP

VOLATILES

SAMPLE DATA

000024

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-008-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87991

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19256.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 7

Date Analyzed: 10/20/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	5.4		U
74-87-3	Chloromethane	5.4		U
75-01-4	Vinyl Chloride	5.4		U
74-83-9	Bromomethane	5.4		U
75-00-3	Chloroethane	5.4		U
75-69-4	Trichlorofluoromethane	5.4		U
75-09-2	Methylene Chloride	5.4		U
75-34-4	1,1-Dichloroethane	5.4		U
590-20-7	2,2-Dichloropropane	5.4		U
74-97-5	Bromochloromethane	5.4		U
67-66-3	Chloroform	5.4		U
71-55-6	1,1,1-Trichloroethane	5.4		U
56-23-5	Carbon Tetrachloride	5.4		U
563-58-6	1,1-Dichloropropene	5.4		U
71-43-2	Benzene	5.4		U
107-06-2	1,2-Dichloroethane	5.4		U
79-01-6	Trichloroethene	5.4		U
78-87-5	1,2-Dichloropropane	5.4		U
74-95-3	Dibromomethane	5.4		U
75-27-4	Bromodichloromethane	5.4		U
108-88-3	Toluene	5.4		U
79-00-5	1,1,2-Trichloroethane	5.4		U
127-18-4	Tetrachloroethene	5.4		U
142-28-9	1,3-Dichloropropane	5.4		U
124-48-1	Dibromochloromethane	5.4		U
106-93-4	1,2-Dibromoethane	5.4		U
108-90-7	Chlorobenzene	5.4		U
630-20-6	1,1,1,2-Tetrachloroethane	5.4		U
100-41-4	Ethylbenzene	5.4		U
100-42-5	Styrene	5.4		U
75-25-2	Bromoform	5.4		U
98-82-8	isopropylbenzene	5.4		U
108-86-1	Bromobenzene	5.4		U

SAMPLE NO.

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O87991

Lab File ID: P19256.D

Date Received: 10/18/99

Date Analyzed: 10/20/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

000026_{3/90}

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-008-SS30

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: O87991
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19256.D
Level: (low/med) LOW Date Received: 10/18/99
% Moisture: not dec. 7 Date Analyzed: 10/20/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1 Concentration Units:
(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	36.75	6.1	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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16.				
17.				
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22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19256.D
 Acq Time : 20 Oct 99 7:35 pm
 Sample : 13826ASP-87991
 Misc : 5G/5ML
 Quant Time: Oct 21 12:33 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1026581	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	1049093	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	22.60	152	723040	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.98	113	758494	44.35	ug/L	88.69%
30) 1,2-Dichlorethane-d4	8.67	65	572645	42.61	ug/L	85.22%
38) Toluene-d8	12.77	98	935543	46.72	ug/L	93.45%
42) 4-Bromofluorobenzene	19.49	95	868576	42.26	ug/L	84.51%
Target Compounds						Qvalue
10) Acetone	3.89	43	30649	16.66	ug/L	92
66) 1,3,5-trimethylbenzene	20.67	105	75112	2.63	ug/L	95
68) 1,2,4-trimethylbenzene	21.67	105	222804	7.49	ug/L	97

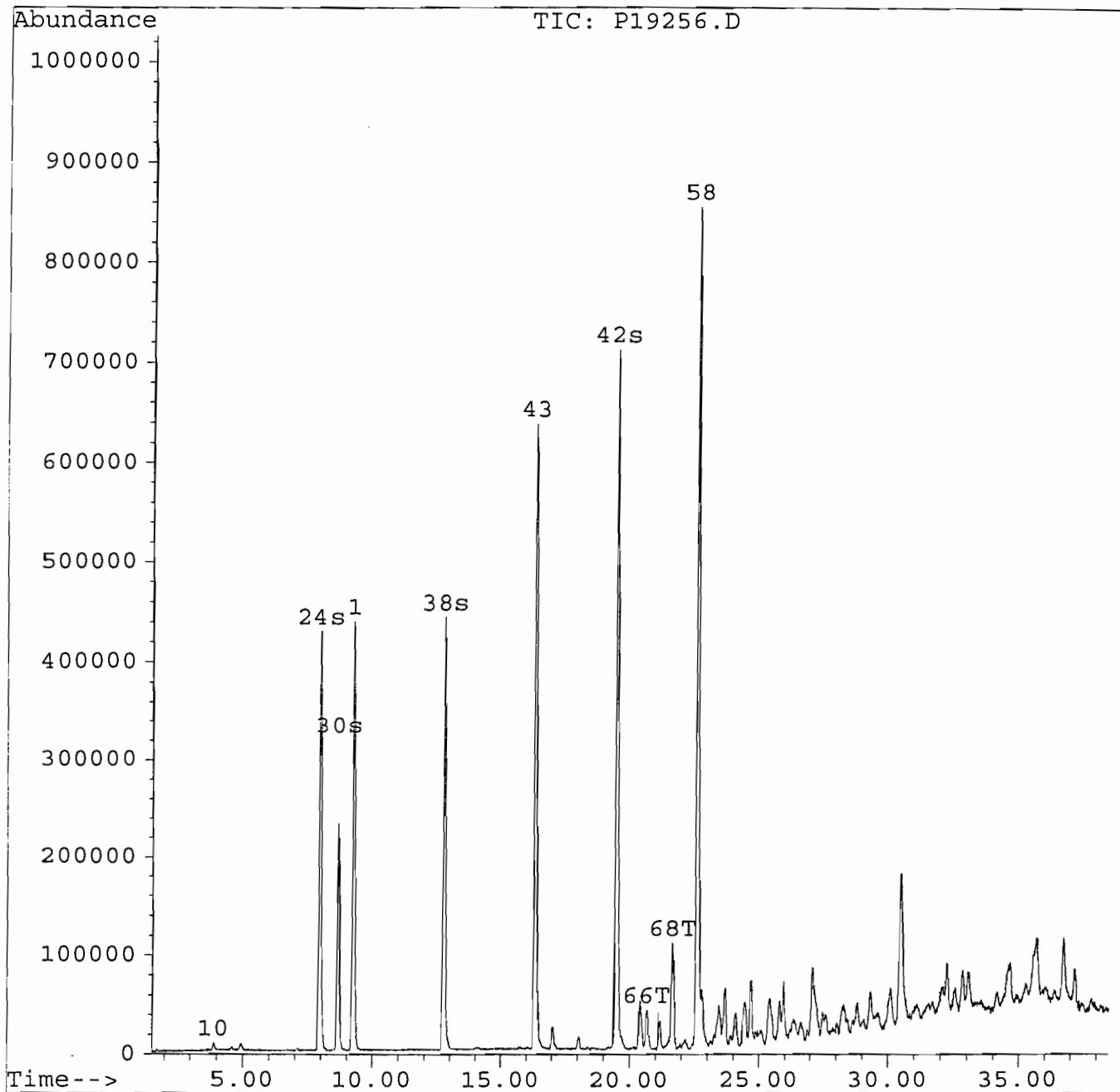
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Quantitation Report

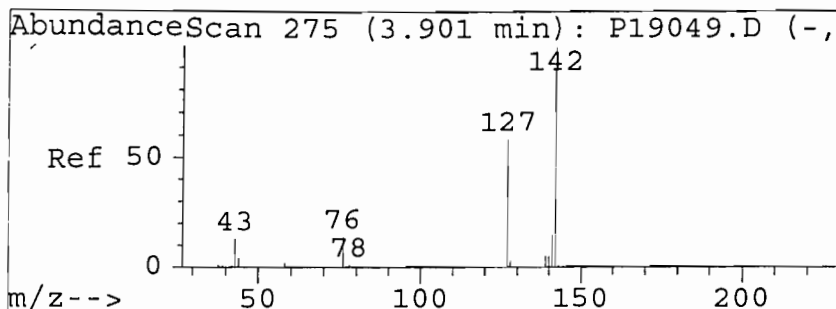
Data File : E:\HPCHEM\1\DATA\V2102099\P19256.D
Acq Time : 20 Oct 99 7:35 pm
Sample : 13826ASP-87991
Misc : 5G/5ML
Quant Time: Oct 21 12:33 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

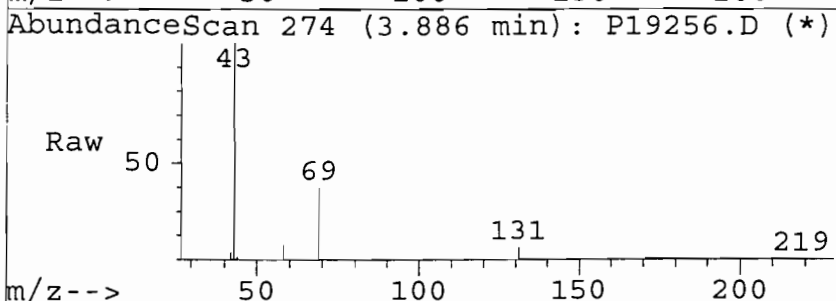
Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



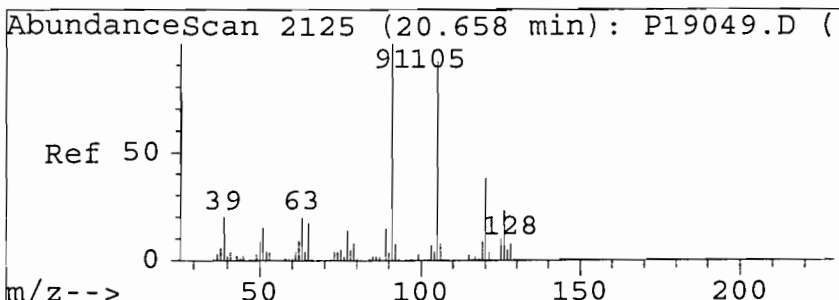
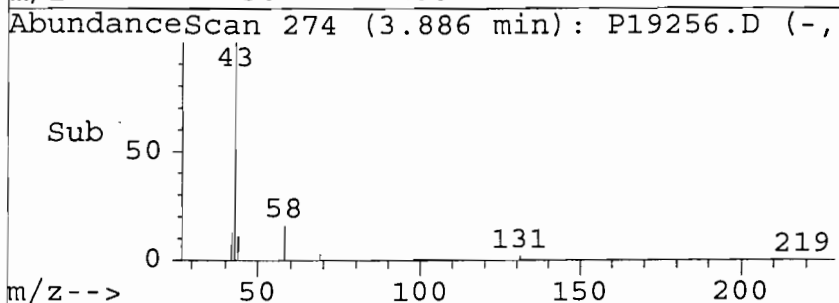
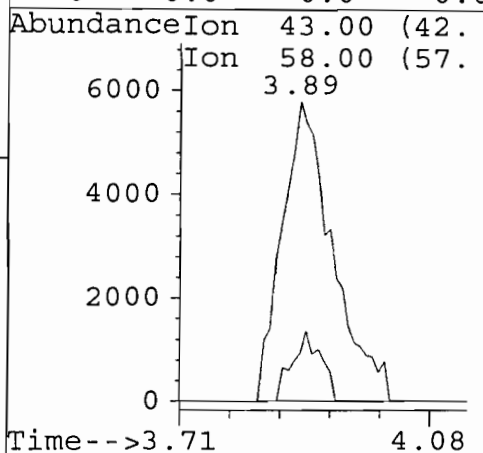
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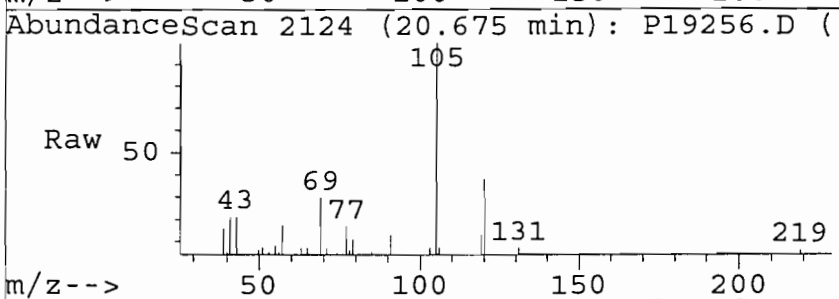
#10
Acetone
Concen: 16.66 ug/L
RT: 3.89 min Scan# 274
Delta R.T. -0.01 min
Lab File: P19256.D
Acq: 20 Oct 99 7:35 pm



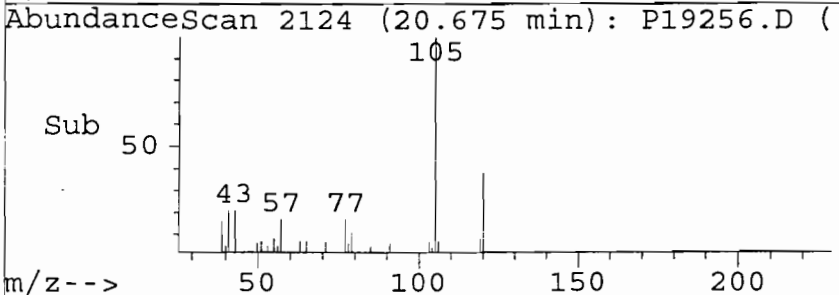
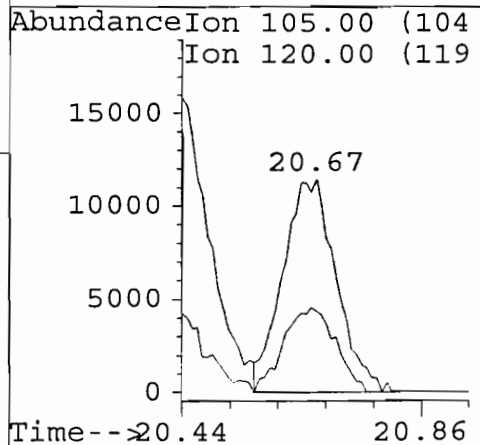
Tgt Ion:	43	Resp:	30649
Ion	Ratio	Lower	Upper
43	100		
58	13.4	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#66
1,3,5-trimethylbenzene
Concen: 2.63 ug/L
RT: 20.67 min Scan# 2124
Delta R.T. 0.02 min
Lab File: P19256.D
Acq: 20 Oct 99 7:35 pm

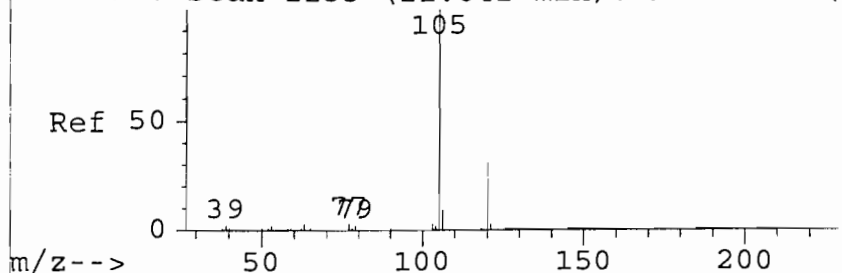


Tgt Ion:	105	Resp:	75112
Ion	Ratio	Lower	Upper
105	100		
120	37.9	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

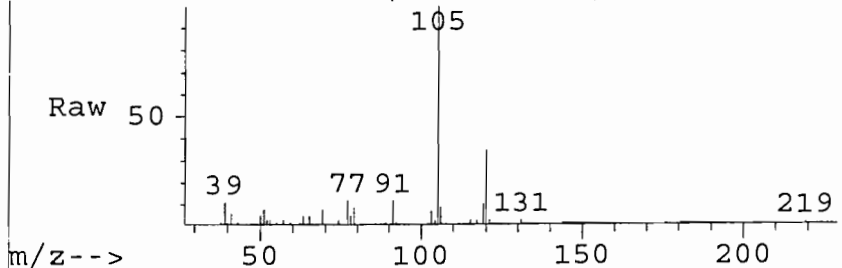


000030

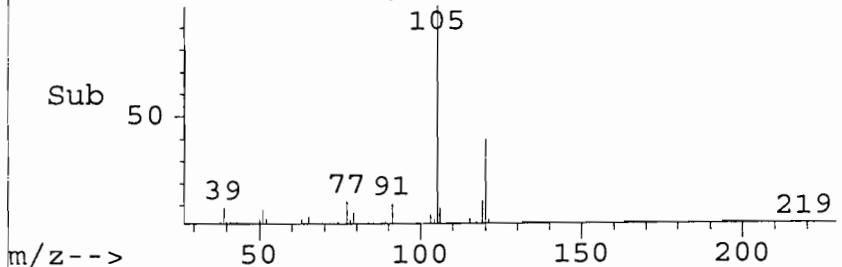
AbundanceScan 2233 (21.642 min): P19049.D (



AbundanceScan 2233 (21.667 min): P19256.D (



AbundanceScan 2233 (21.667 min): P19256.D (



#68

1,2,4-trimethylbenzene

Concen: 7.49 ug/L

RT: 21.67 min Scan# 2233

Delta R.T. 0.02 min

Lab File: P19256.D

Acq: 20 Oct 99 7:35 pm

Tgt Ion:105 Resp: 222804

Ion Ratio Lower Upper

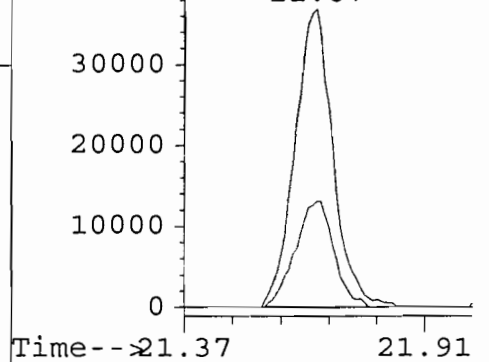
105 100

120 35.4 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 105.00 (104
Ion 120.00 (119
21.67



000031

Library Search Compound Report

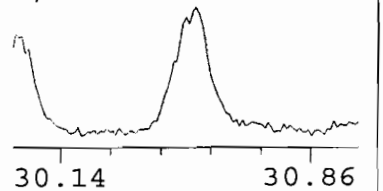
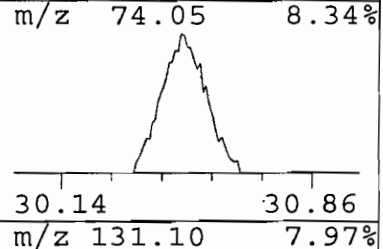
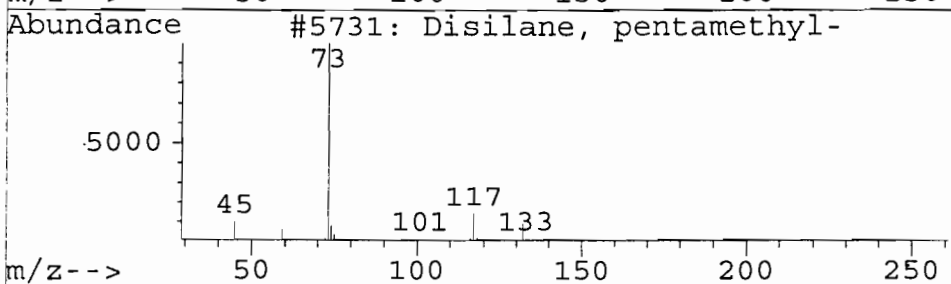
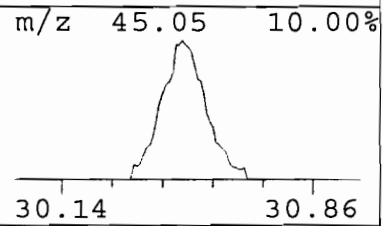
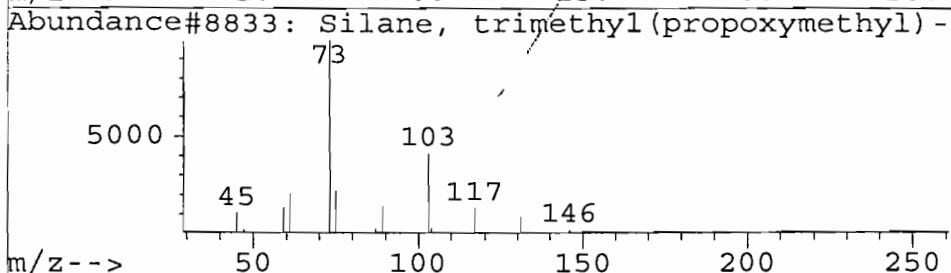
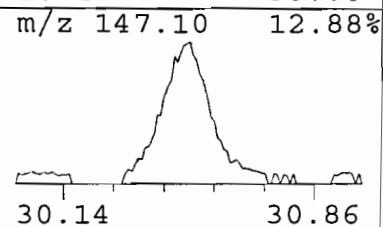
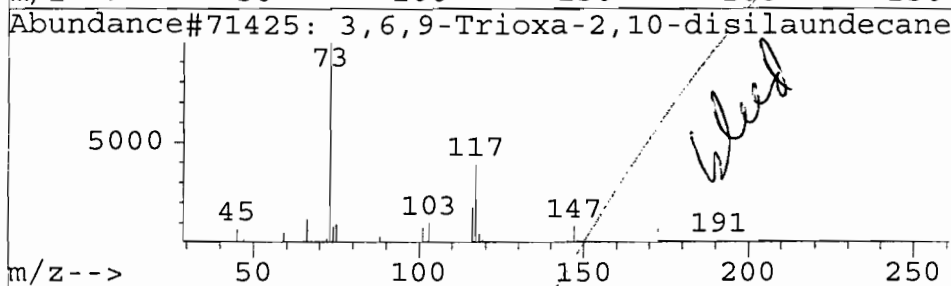
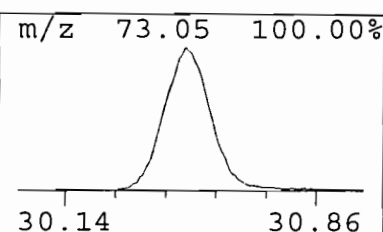
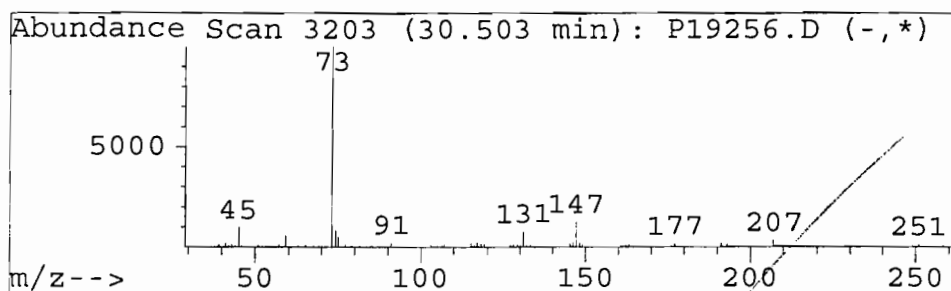
Data File : E:\HPCHEM\1\DATA\V2102099\P19256.D
Acq Time : 20 Oct 99 7:35 pm
Sample : 13826ASP-87991
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.50	14.56 ug/L	1579221	1,4-dichlorobenzene-d4	22.60

Hit# of 18	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	42
2	Silane, trimethyl(propoxymethyl)-	8833	017348-62-8	38
3	Disilane, pentamethyl-	5731	000812-15-7	37
4	3,6,9,12-Tetraoxa-2,13-disilatetrad	72595	062185-58-4	36
5	3,7-Dioxa-2,8-disilanonan-5-one, 2,	30599	017877-42-8	36



000032

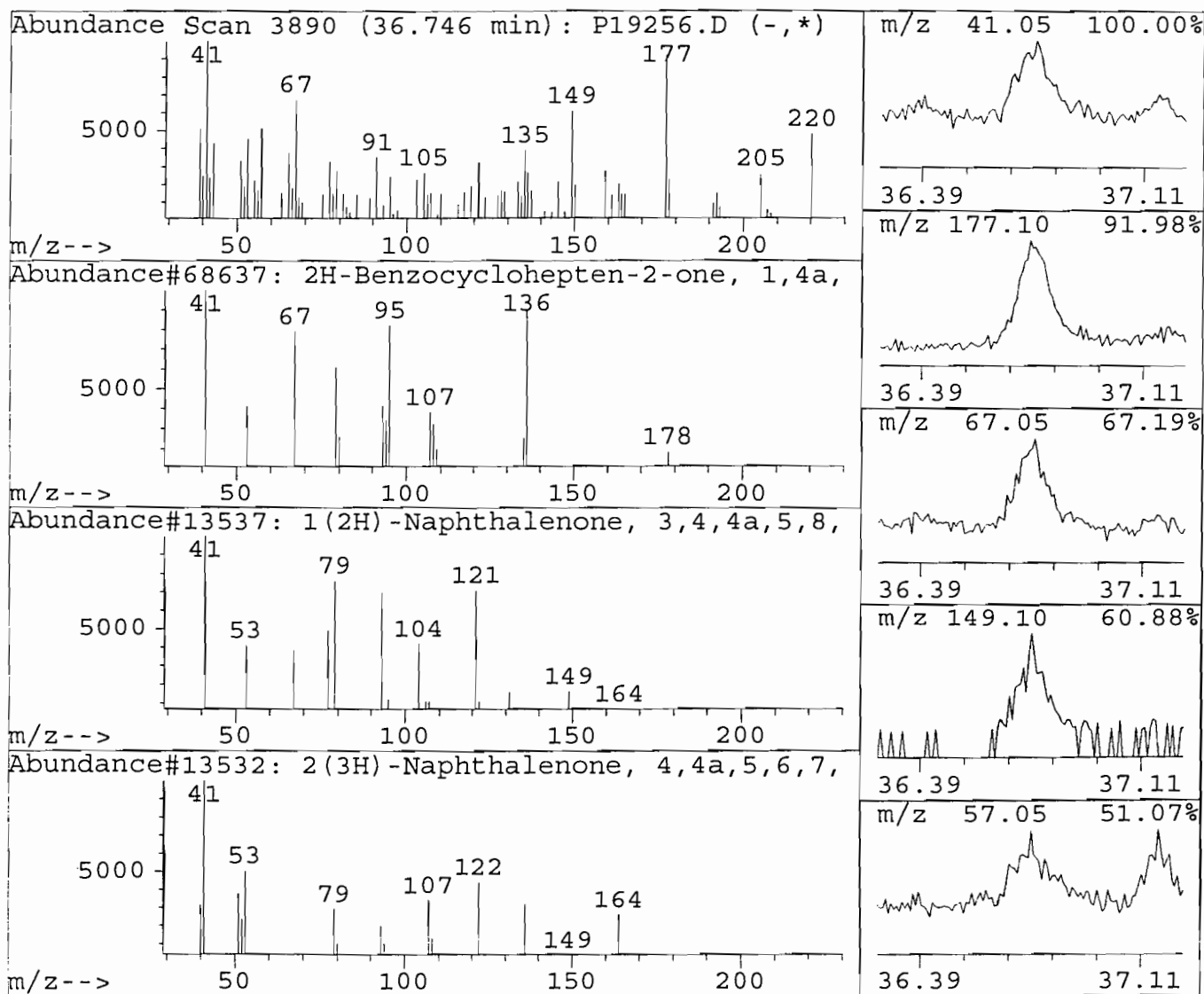
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19256.D
Acq Time : 20 Oct 99 7:35 pm
Sample : 13826ASP-87991
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
36.75	5.66 ug/L	613770	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	2H-Benzocyclohepten-2-one, 1,4a,5,6		68637	017429-26-4	25
2	1(2H)-Naphthalenone, 3,4,4a,5,8,8a-		13537	021841-29-2	22
3	2(3H)-Naphthalenone, 4,4a,5,6,7,8-h		13532	004087-39-2	22
4	1-Pentyne		62419	000627-19-0	22
5	1-Pentyne		190	000627-19-0	22



000033

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-008-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87992

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13298.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 5

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	660		U
74-87-3	Chloromethane	660		U
75-01-4	Vinyl Chloride	660		U
74-83-9	Bromomethane	660		U
75-00-3	Chloroethane	660		U
75-69-4	Trichlorofluoromethane	660		U
75-09-2	Methylene Chloride	450		J
75-34-4	1,1-Dichloroethane	660		U
590-20-7	2,2-Dichloropropane	660		U
74-97-5	Bromochloromethane	660		U
67-66-3	Chloroform	660		U
71-55-6	1,1,1-Trichloroethane	660		U
56-23-5	Carbon Tetrachloride	660		U
563-58-6	1,1-Dichloropropene	660		U
71-43-2	Benzene	660		U
107-06-2	1,2-Dichloroethane	660		U
79-01-6	Trichloroethene	660		U
78-87-5	1,2-Dichloropropane	660		U
74-95-3	Dibromomethane	660		U
75-27-4	Bromodichloromethane	660		U
108-88-3	Toluene	660		U
79-00-5	1,1,2-Trichloroethane	660		U
127-18-4	Tetrachloroethene	660		U
142-28-9	1,3-Dichloropropane	660		U
124-48-1	Dibromochloromethane	660		U
106-93-4	1,2-Dibromoethane	660		U
108-90-7	Chlorobenzene	660		U
630-20-6	1,1,1,2-Tetrachloroethane	660		U
100-41-4	Ethylbenzene	310		J
100-42-5	Styrene	660		U
75-25-2	Bromoform	660		U
98-82-8	isopropylbenzene	660		U
108-86-1	Bromobenzene	660		U

SAMPLE NO.

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87992

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13298.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 5

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

(ug/L or ug/Kg)

 $\mu\text{g}/\text{Kg}$

Q

Page 2 of 2

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-008-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87992
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13298.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 5 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.94	1800	J
2. 611-14-3	Benzene, 1-ethyl-2-methyl-	23.50	5100	J
3.	Unknown	24.11	1100	J
4. 1074-43-7	Benzene, 1-methyl-3-propyl-	25.52	2800	J
5. 874-41-9	Benzene, 1-ethyl-2,4-dimethy	26.23	1300	J
6.	Unknown	26.31	1200	J
7. 535-77-3	Benzene, 1-methyl-3-(1-methy	26.48	2600	J
8. 527-53-7	Benzene, 1,2,3,5-tetramethyl	27.29	1800	J
9.	Unknown	27.47	2600	J
10.	Unknown	28.37	1200	J
11.				
12.				
13.				
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
 Acq Time : 22 Oct 99 2:43 pm
 Sample : 13826ASP-87992
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 22 15:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	14.16	96	1441321	50.00	ug/L	0.05
43) Chlorobenzene-d5	20.53	117	1316382	50.00	ug/L	0.08
58) 1,4-dichlorobenzene-d4	25.28	152	573401	50.00	ug/L	0.10
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.45	113	489993	54.66	ug/L	109.31%
30) 1,2-Dichlorethane-d4	13.49	65	549886	54.42	ug/L	108.84%
38) Toluene-d8	17.42	98	1553011	55.31	ug/L	110.62%
42) 4-Bromofluorobenzene	23.04	95	664322	55.96	ug/L	111.92%
Target Compounds						Qvalue
13) methylene chloride	8.57	84	29876	3.43	ug/L	85
53) ethylbenzene	20.70	91	99795	2.37	ug/L	97
54) m&p-xylenes	20.85	106	191156	13.38	ug/L	97
55) o-xylene	21.77	91	219930	6.65	ug/L	93
63) n-propylbenzene	23.32	120	62898	6.69	ug/L	84
66) 1,3,5-trimethylbenzene	23.61	105	710410	22.71	ug/L	97
68) 1,2,4-trimethylbenzene	24.35	105	2593353	86.42	ug/L	98
69) sec-butylbenzene	24.67	105	94972	2.46	ug/L	94
71) 4-isopropyltoluene	24.81	119	130627	3.81	ug/L	97
78) naphthalene	30.69	128	412027	17.18	ug/L	97

000037

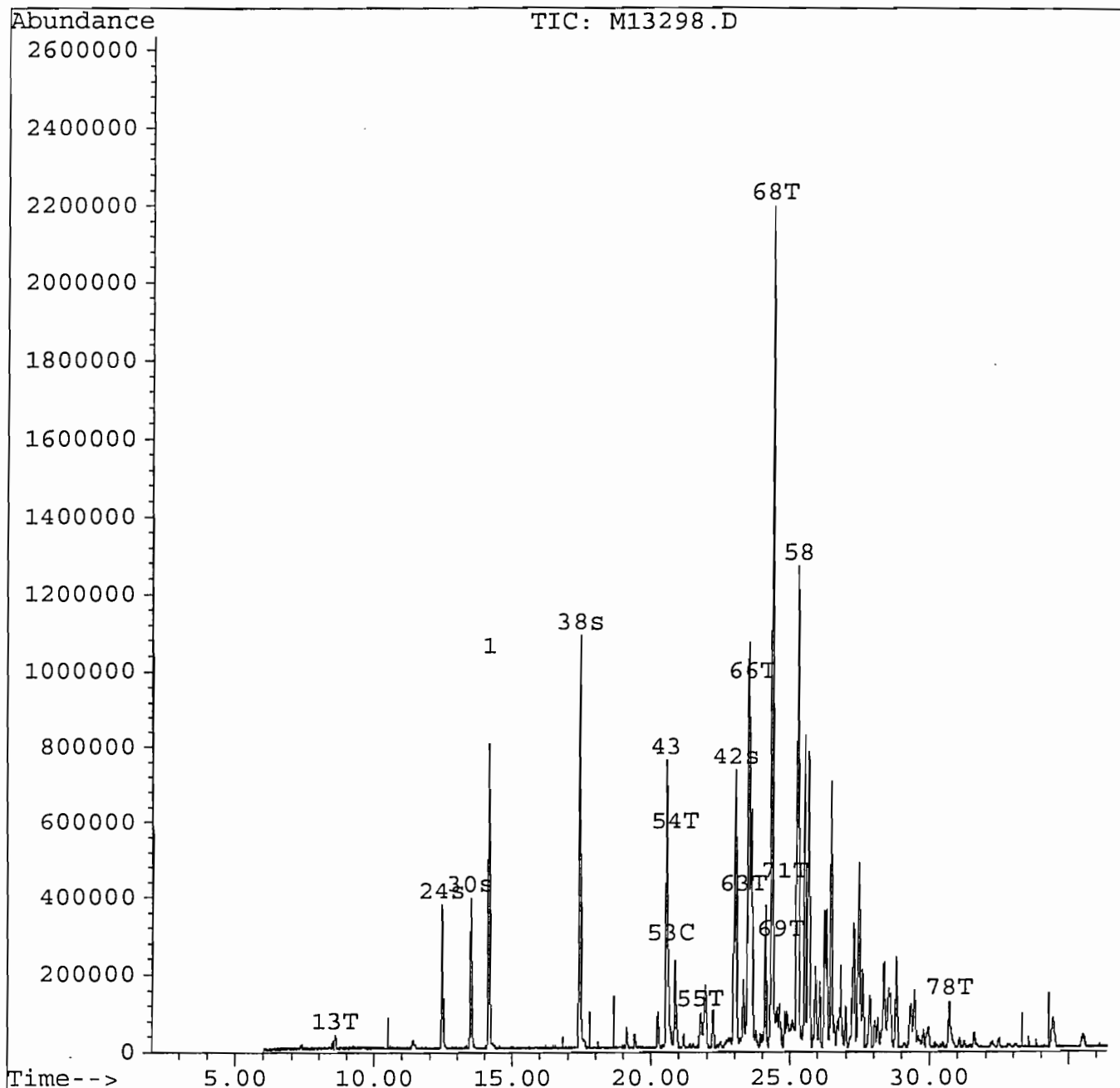
(#) = qualifier out of range (m) = manual integration

Quantitation Report

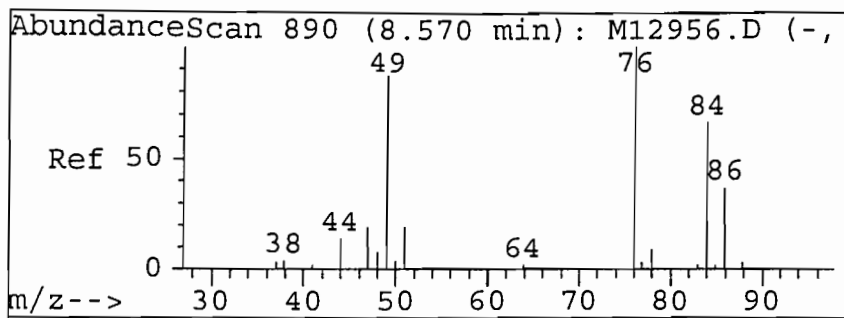
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 22 15:21 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration

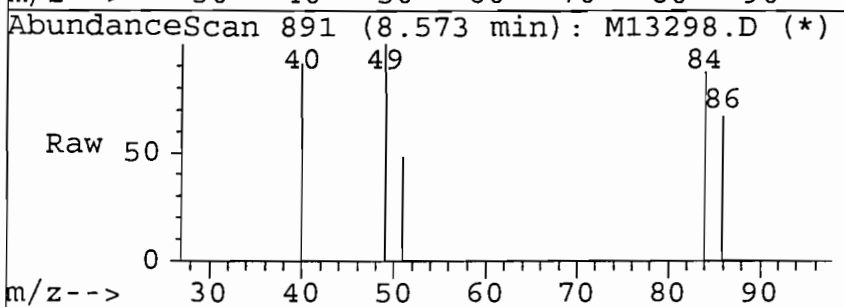


000038

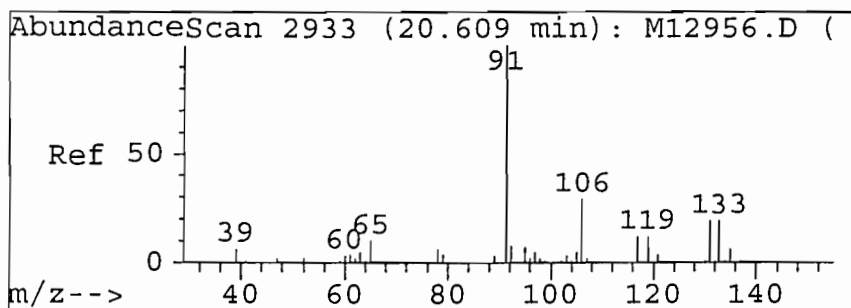
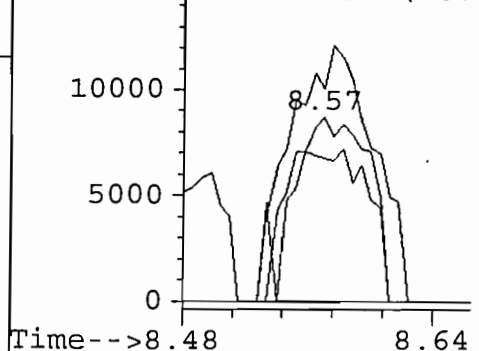
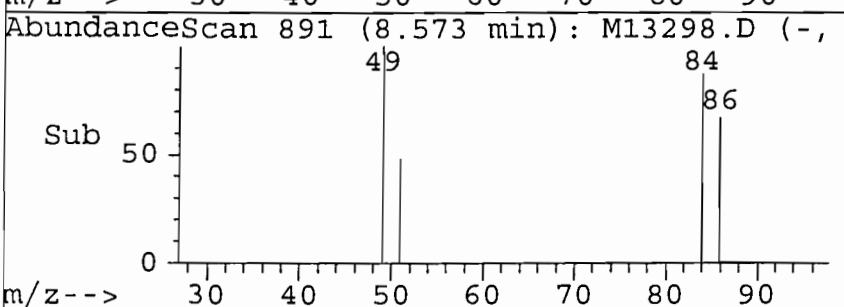


#13
methylene chloride
Concen: 3.43 ug/L
RT: 8.57 min Scan# 891
Delta R.T. 0.00 min
Lab File: M13298.D
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	84	Resp:	29876
Ion	Ratio	Lower	Upper
84	100		
86	77.9	45.0	83.6
49	115.4	92.0	170.9
0	0.0	0.0	0.0

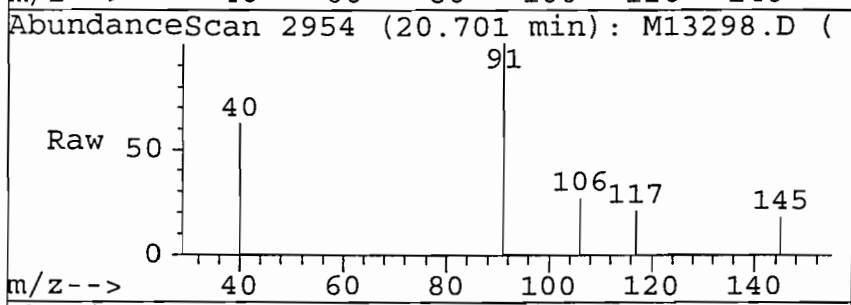


Abundance	Ion	84.00	(83.
	Ion	86.00	(85.
	Ion	49.00	(48.

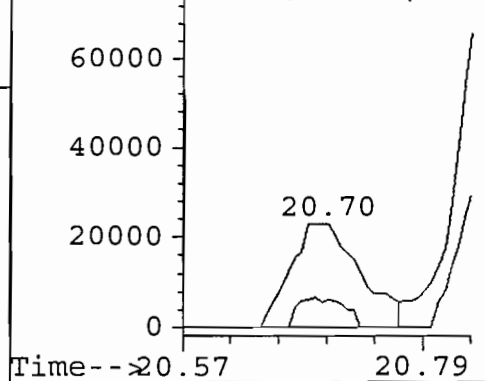
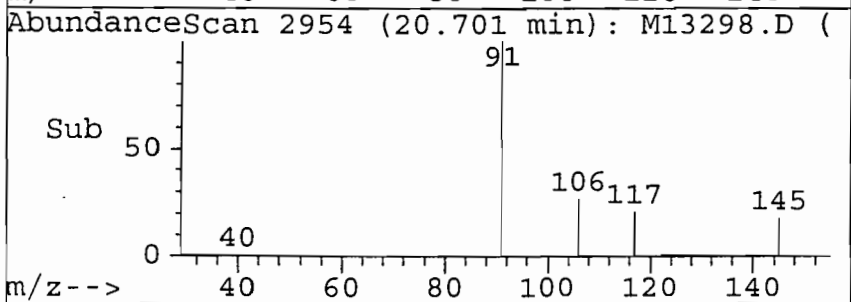


#53
ethylbenzene
Concen: 2.37 ug/L
RT: 20.70 min Scan# 2954
Delta R.T. 0.09 min
Lab File: M13298.D
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	91	Resp:	99795
Ion	Ratio	Lower	Upper
91	100		
106	27.2	20.0	37.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

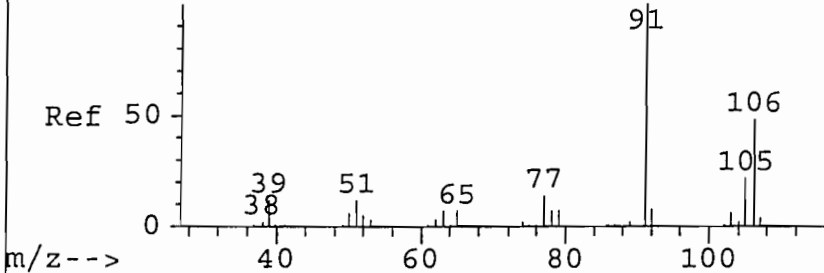


Abundance	Ion	91.00	(90.
	Ion	106.00	(105



000039

AbundanceScan 2960 (20.765 min): M12956.D (



#54

m&p-xylenes

Concen: 13.38 ug/L

RT: 20.85 min Scan# 2979

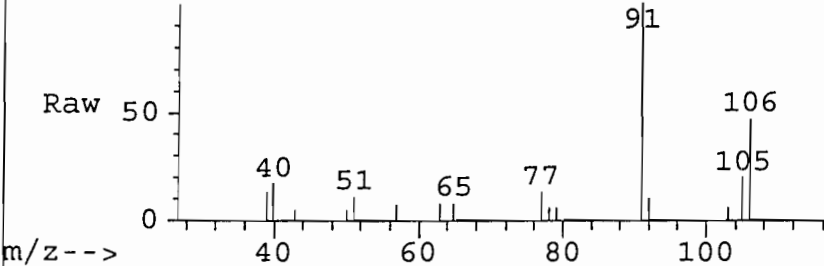
Delta R.T. 0.08 min

Lab File: M13298.D

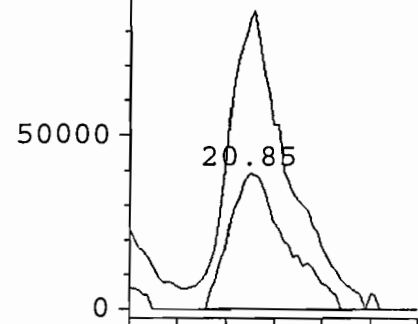
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	106	Resp:	191156
Ion Ratio	Lower	Upper	
106	100		
91	214.6	146.7	272.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

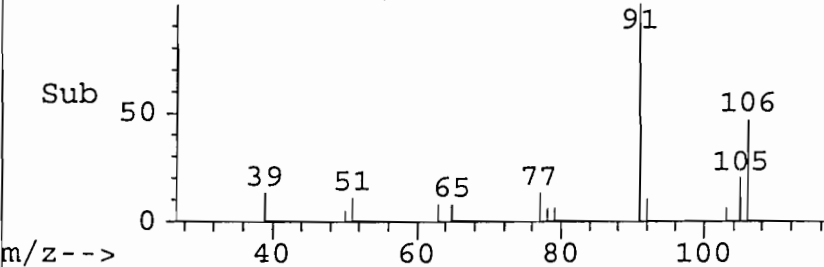
AbundanceScan 2979 (20.848 min): M13298.D (



AbundanceIon 106.00 (105
100000 Ion 91.00 (90.

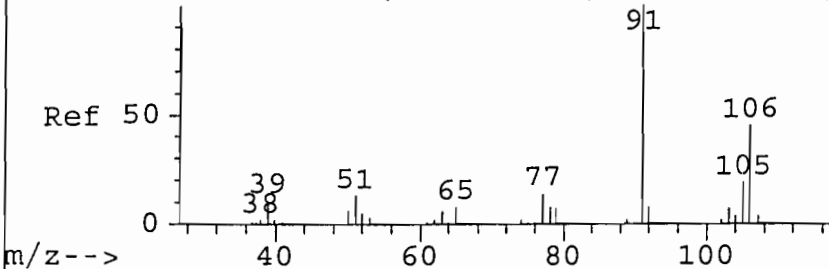


AbundanceScan 2979 (20.848 min): M13298.D (



Time-->20.70 21.00

AbundanceScan 3113 (21.672 min): M12956.D (



#55

o-xylene

Concen: 6.65 ug/L

RT: 21.77 min Scan# 3134

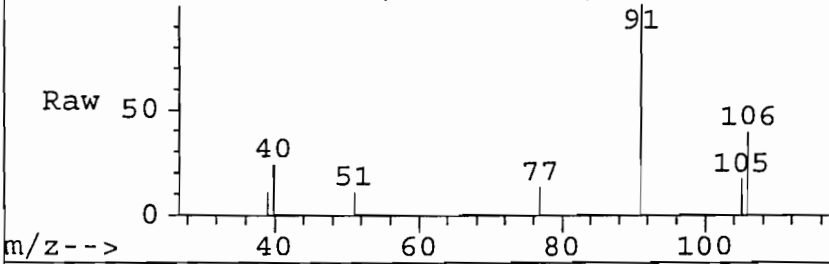
Delta R.T. 0.10 min

Lab File: M13298.D

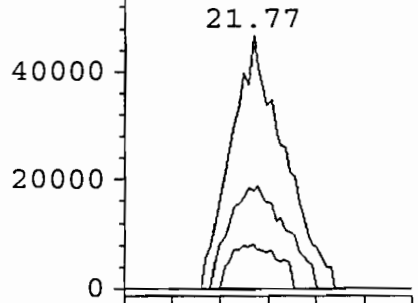
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	91	Resp:	219930
Ion Ratio	Lower	Upper	
91	100		
106	38.6	31.3	58.1
105	17.4	12.9	24.0
0	0.0	0.0	0.0

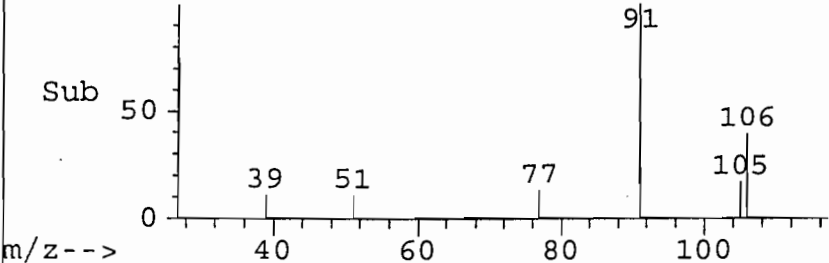
AbundanceScan 3134 (21.769 min): M13298.D (



AbundanceIon 91.00 (90.
60000 Ion 106.00 (105
Ion 105.00 (104



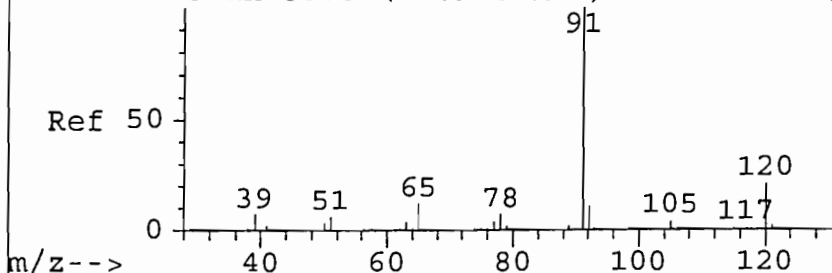
AbundanceScan 3134 (21.769 min): M13298.D (



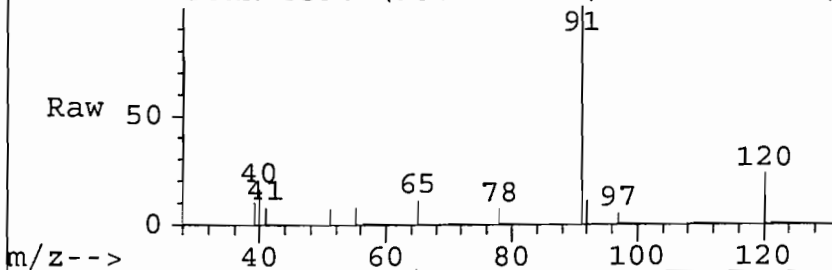
Time-->21.60 21.91

000040

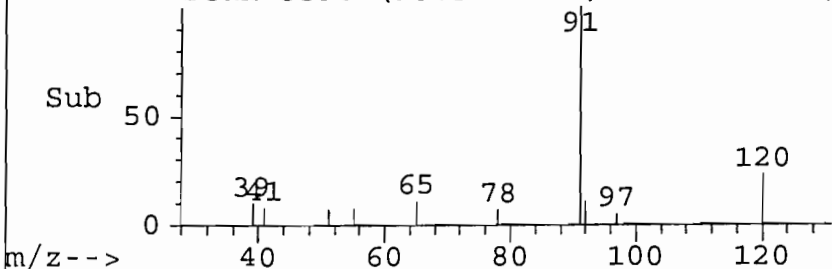
AbundanceScan 3373 (23.210 min): M12956.D (



AbundanceScan 3396 (23.321 min): M13298.D (



AbundanceScan 3396 (23.321 min): M13298.D (



#63

n-propylbenzene

Concen: 6.69 ug/L

RT: 23.32 min Scan# 3396

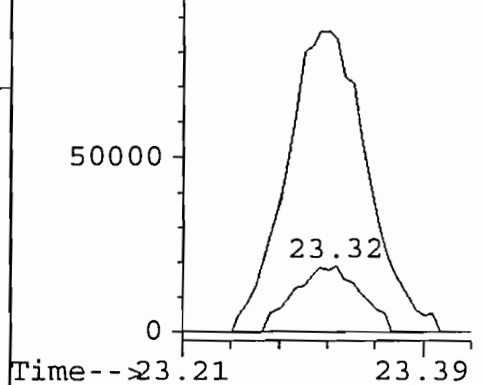
Delta R.T. 0.11 min

Lab File: M13298.D

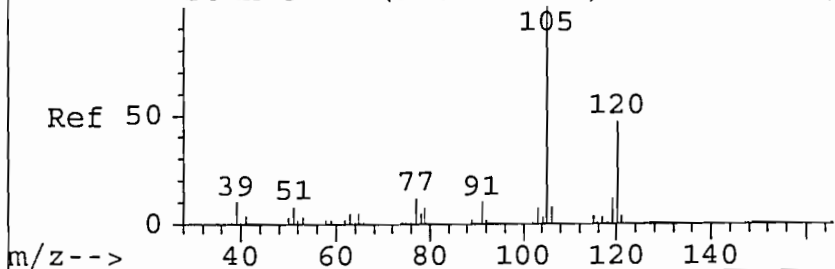
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	120	Resp:	62898
Ion	Ratio	Lower	Upper
120	100		
91	443.1	340.6	632.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

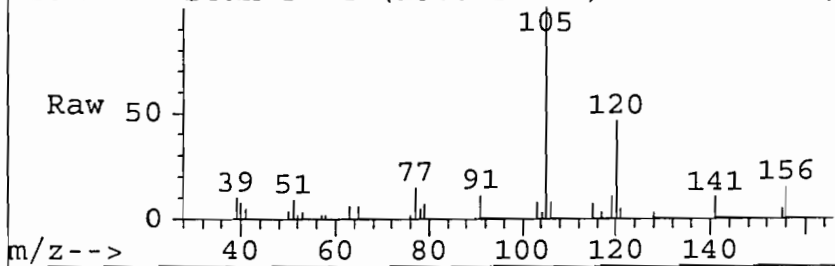
AbundanceIon 120.00 (119)
100000 Ion 91.00 (90)



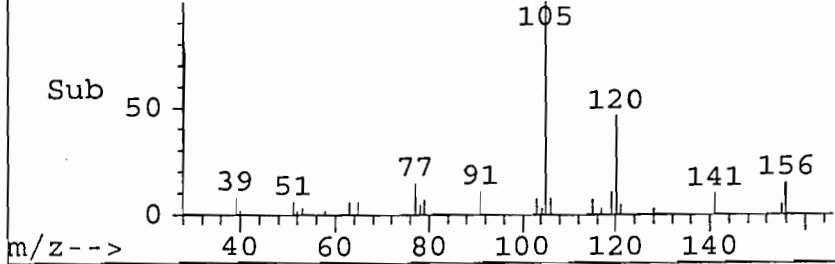
AbundanceScan 3424 (23.513 min): M12956.D (



AbundanceScan 3444 (23.605 min): M13298.D (



AbundanceScan 3444 (23.605 min): M13298.D (



#66

1,3,5-trimethylbenzene

Concen: 22.71 ug/L

RT: 23.61 min Scan# 3444

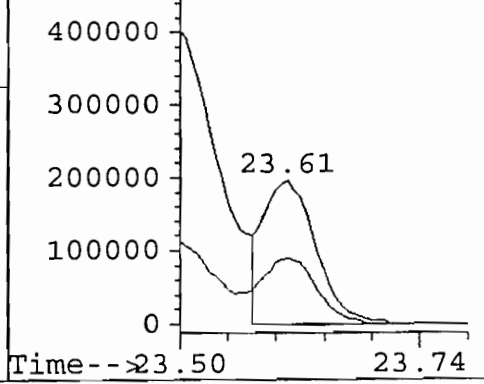
Delta R.T. 0.09 min

Lab File: M13298.D

Acq: 22 Oct 99 2:43 pm

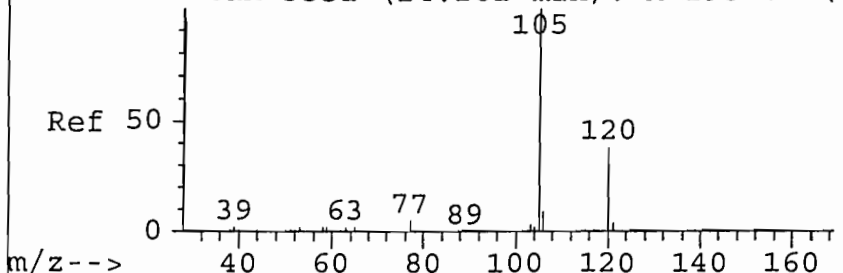
Tgt Ion:	105	Resp:	710410
Ion	Ratio	Lower	Upper
105	100		
120	45.6	33.2	61.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceIon 105.00 (104)
Ion 120.00 (119)



000041

AbundanceScan 3551 (24.261 min): M12956.D (

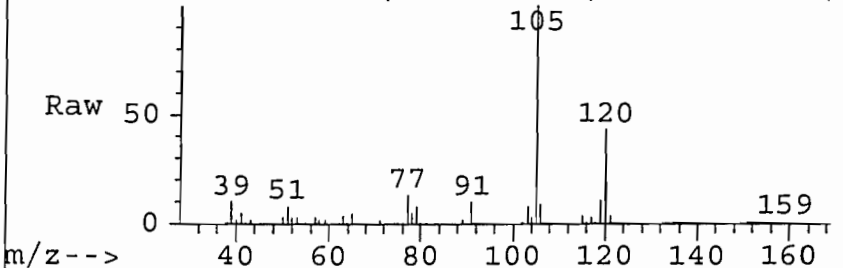


#68

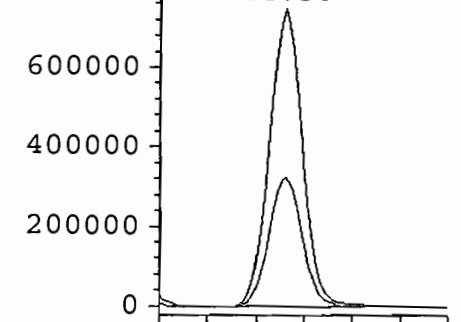
1,2,4-trimethylbenzene
Concen: 86.42 ug/L
RT: 24.35 min Scan# 3570
Delta R.T. 0.09 min
Lab File: M13298.D
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	105	Resp:	2593353
Ion	Ratio	Lower	Upper
105	100		
120	43.4	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

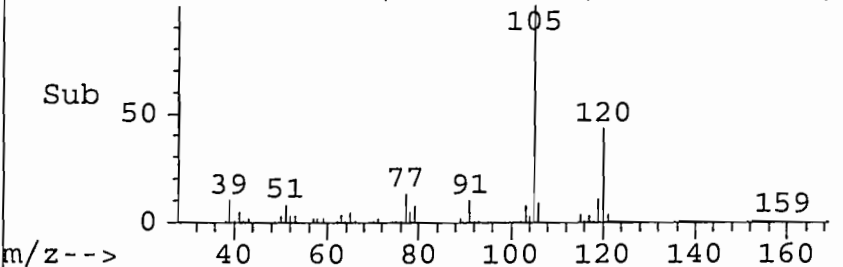
AbundanceScan 3570 (24.349 min): M13298.D (



AbundanceIon 105.00 (104
Ion 120.00 (119
24.35

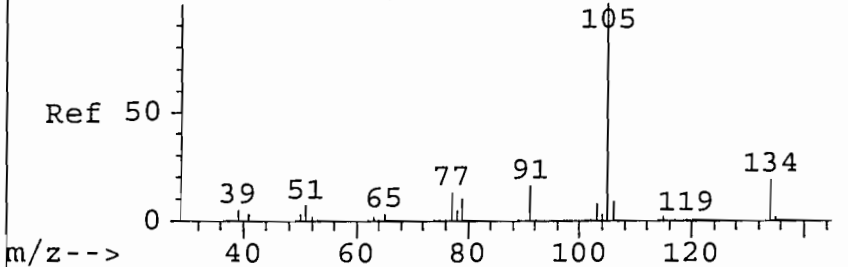


AbundanceScan 3570 (24.349 min): M13298.D (



Time-->24.15 24.53

AbundanceScan 3604 (24.572 min): M12956.D (

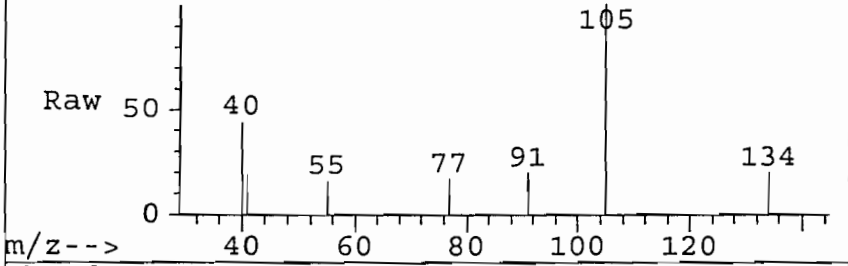


#69

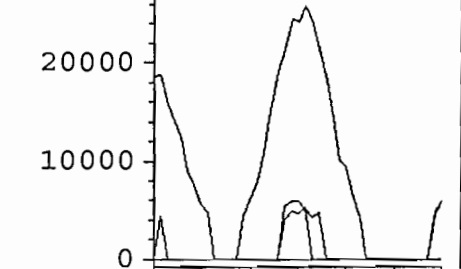
sec-butylbenzene
Concen: 2.46 ug/L
RT: 24.67 min Scan# 3624
Delta R.T. 0.10 min
Lab File: M13298.D
Acq: 22 Oct 99 2:43 pm

Tgt Ion:	105	Resp:	94972
Ion	Ratio	Lower	Upper
105	100		
134	20.5	13.4	25.0
91	19.7	11.1	20.5
0	0.0	0.0	0.0

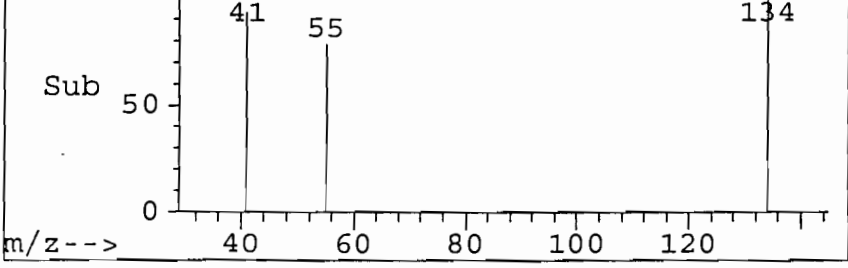
AbundanceScan 3624 (24.669 min): M13298.D (



AbundanceIon 105.00 (104
Ion 134.00 (133
Ion 91.00 (90.
24.67



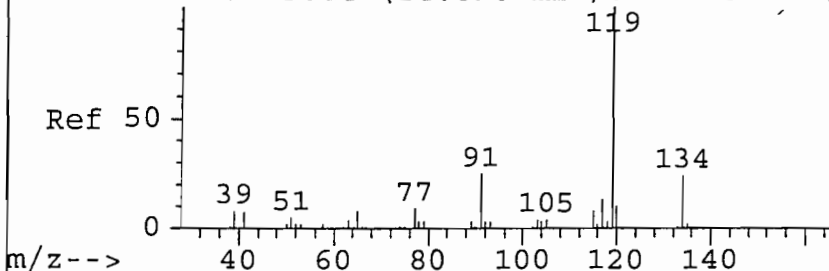
AbundanceScan 3624 (24.669 min): M13298.D (



Time-->24.54 24.75

000042

AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 3.81 ug/L

RT: 24.81 min Scan# 3647

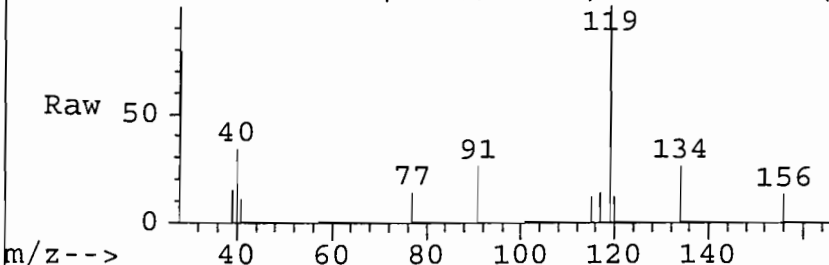
Delta R.T. -0.00 min

Lab File: M13298.D

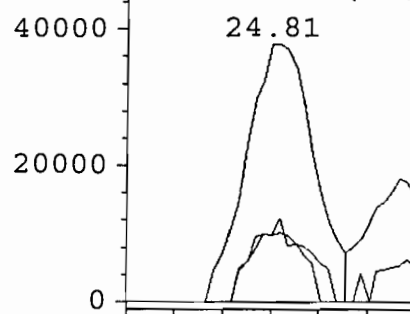
Acq: 22 Oct 99 2:43 pm

Tgt Ion:119	Resp:	130627
Ion Ratio	Lower	Upper
119 100		
134 25.7	16.7	31.1
91 25.8	17.2	32.0
0 0.0	0.0	0.0

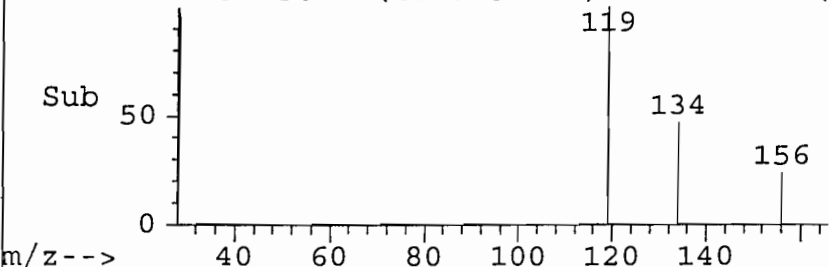
AbundanceScan 3647 (24.805 min): M13298.D (



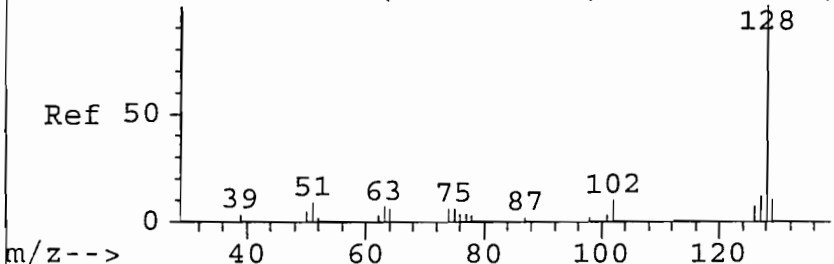
AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3647 (24.805 min): M13298.D (



AbundanceScan 4637 (30.569 min): M12956.D (



#78

naphthalene

Concen: 17.18 ug/L

RT: 30.69 min Scan# 4706

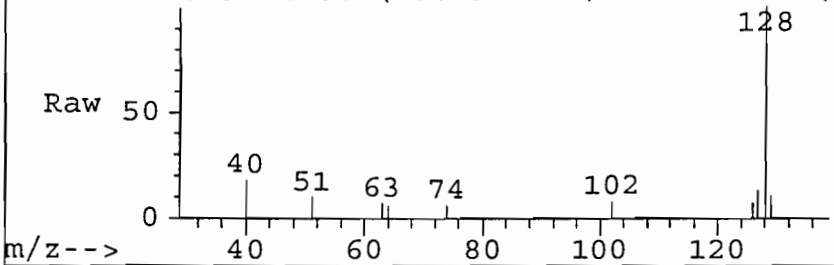
Delta R.T. 0.12 min

Lab File: M13298.D

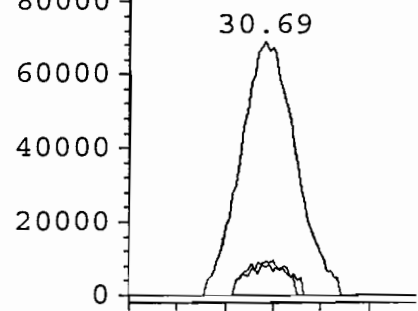
Acq: 22 Oct 99 2:43 pm

Tgt Ion:128	Resp:	412027
Ion Ratio	Lower	Upper
128 100		
127 13.3	8.6	16.0
129 11.3	7.0	13.0
0 0.0	0.0	0.0

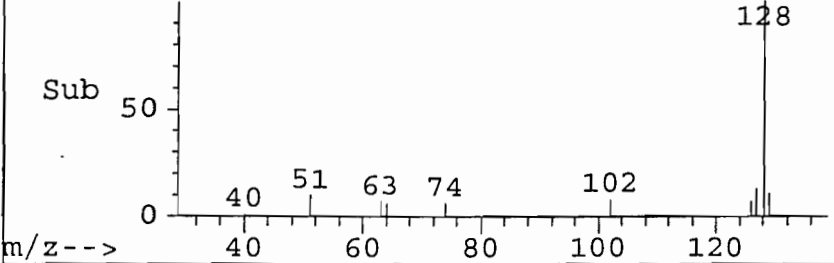
AbundanceScan 4706 (30.693 min): M13298.D (



AbundanceIon 128.00 (127
Ion 127.00 (126
Ion 129.00 (128



AbundanceScan 4706 (30.693 min): M13298.D (



000043

Library Search Compound Report

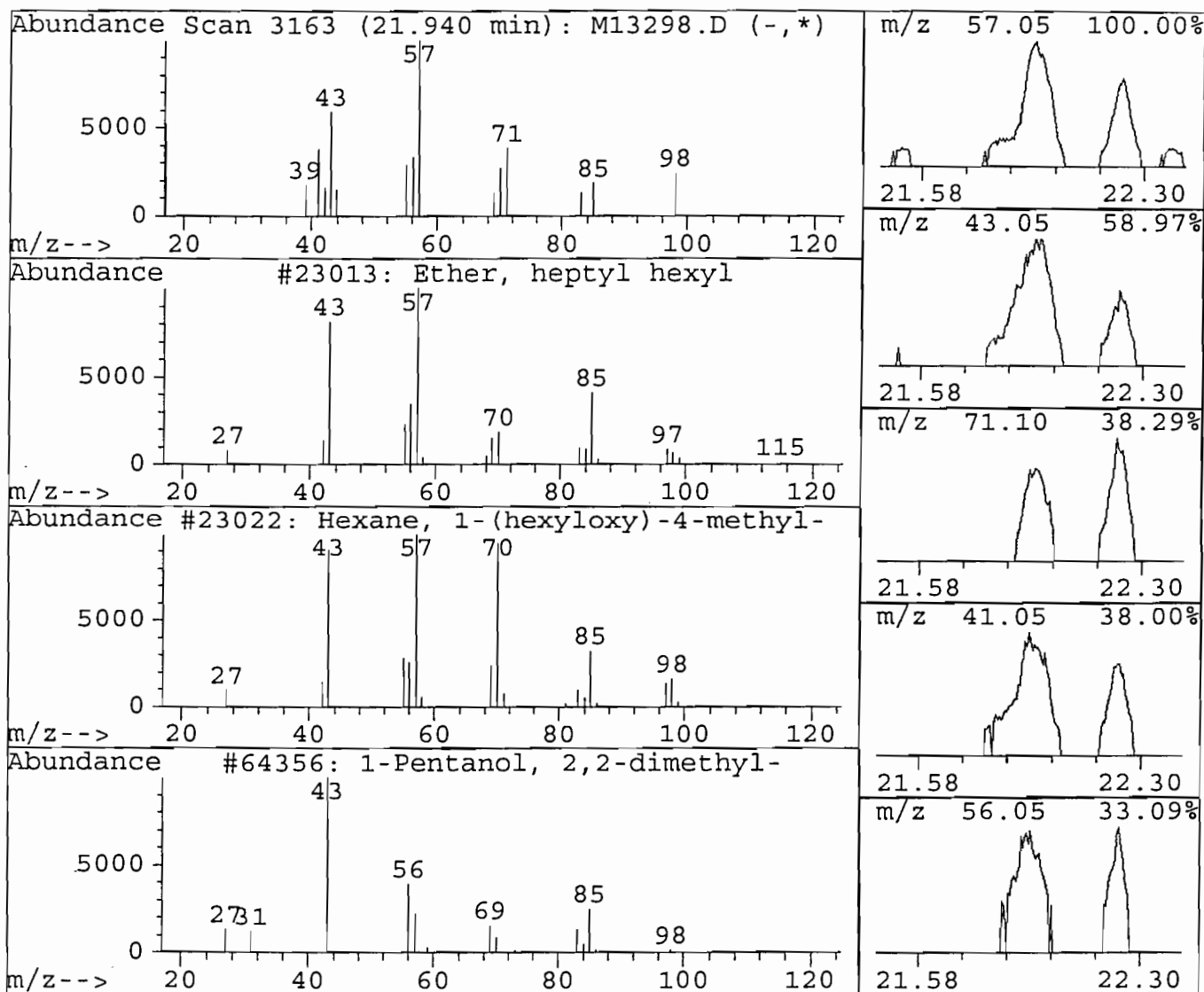
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.94	13.56 ug/L	1019583	Chlorobenzene-d5	20.53

Hit# of	7	Tentative ID	Ref#	CAS#	Qual
1		Ether, heptyl hexyl	23013	007289-40-9	17
2		Hexane, 1-(hexyloxy)-4-methyl-	23022	074421-20-8	17
3		1-Pentanol, 2,2-dimethyl-	64356	002370-12-9	12
4		Butane, 1-bromo-3-methyl-	66677	000107-82-4	12
5		2,4-Dimethyl-1-heptene	64950	019549-87-2	12



000044

Library Search Compound Report

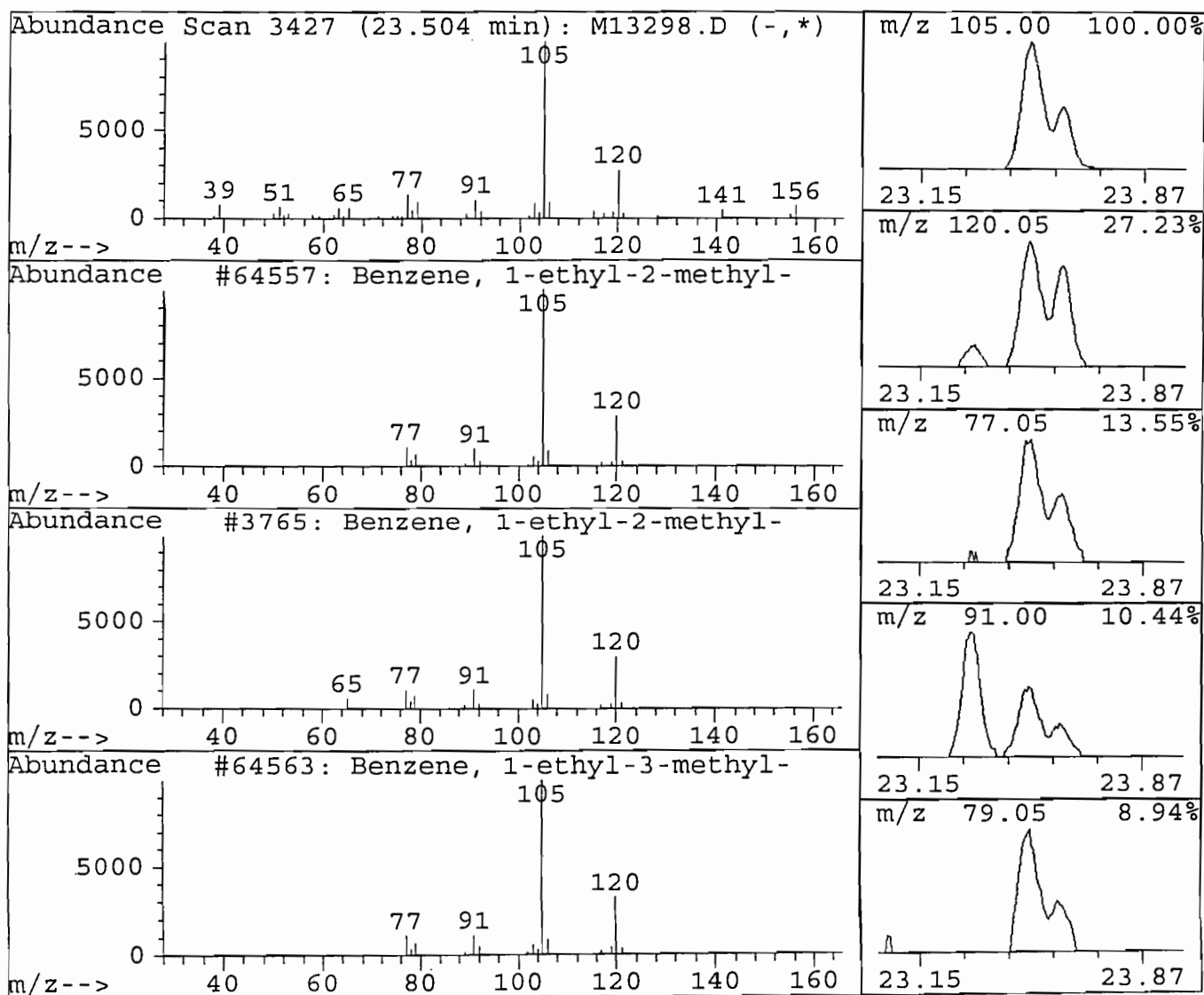
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.50	38.88 ug/L	5176852	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	64557	000611-14-3	94
2	Benzene, 1-ethyl-2-methyl-	3765	000611-14-3	94
3	Benzene, 1-ethyl-3-methyl-	64563	000620-14-4	94
4	Benzene, 1-ethyl-4-methyl-	3770	000622-96-8	94
5	Benzene, 1-ethyl-2-methyl-	64559	000611-14-3	94



000045

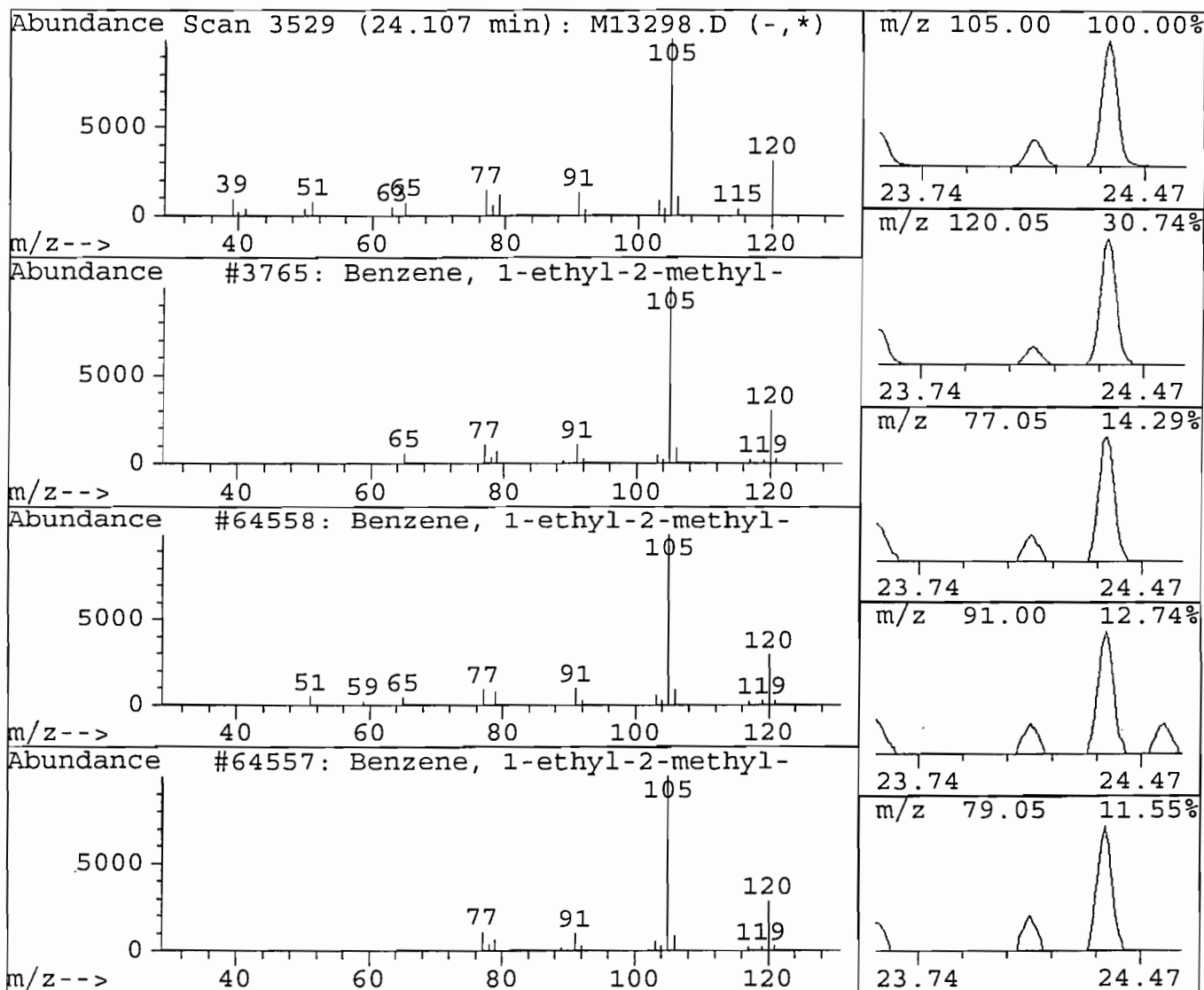
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.11	8.22 ug/L	1095051	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-		3765	000611-14-3	91
2	Benzene, 1-ethyl-2-methyl-		64558	000611-14-3	91
3	Benzene, 1-ethyl-2-methyl-		64557	000611-14-3	91
4	Benzene, 1-ethyl-2-methyl-		64559	000611-14-3	91
5	Benzene, 1-ethyl-4-methyl-		3770	000622-96-8	91



000046

Library Search Compound Report

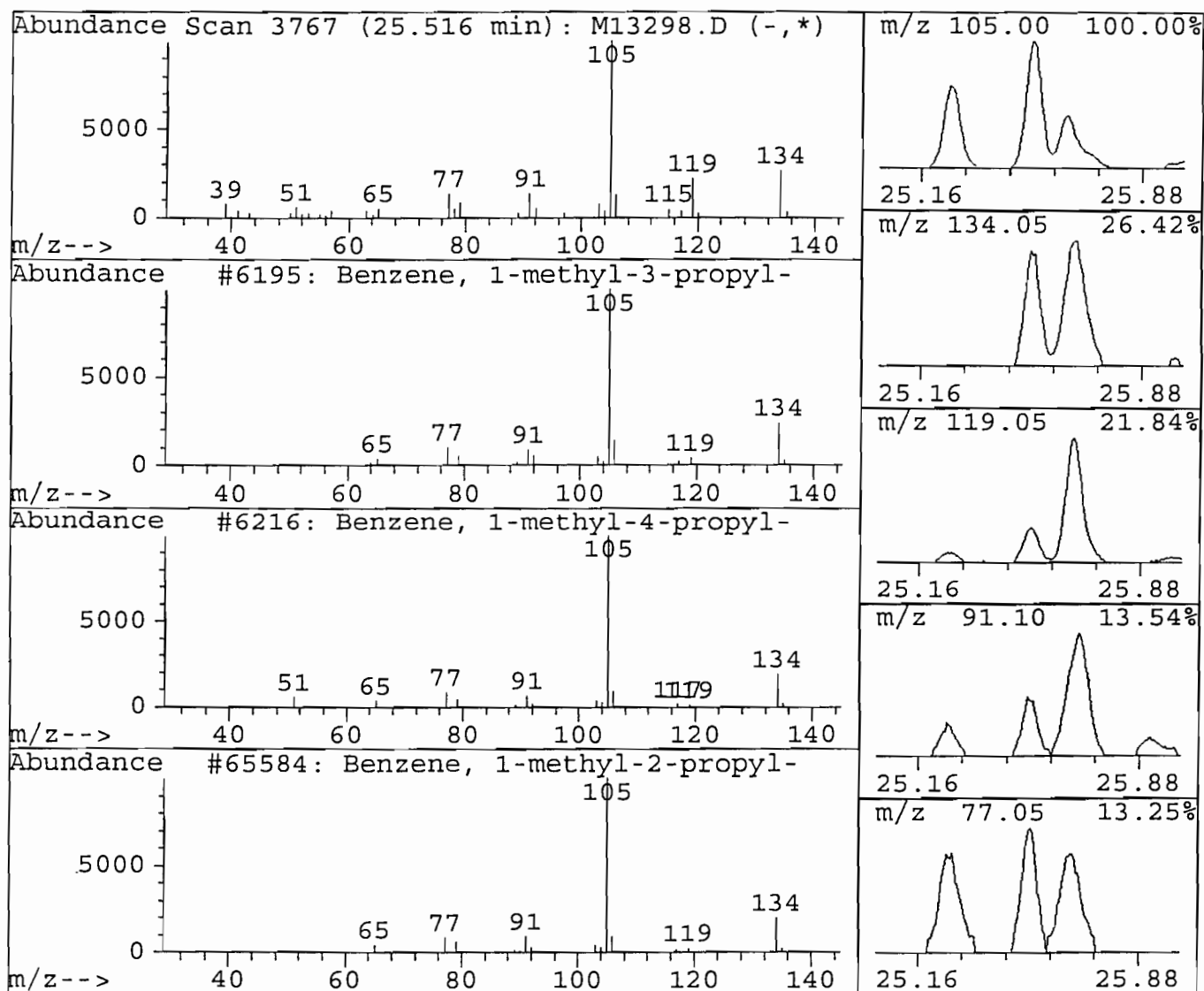
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.52	21.06 ug/L	2804668	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	87
2	Benzene, 1-methyl-4-propyl-	6216	001074-55-1	81
3	Benzene, 1-methyl-2-propyl-	65584	001074-17-5	81
4	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	81
5	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	81



000047

Library Search Compound Report

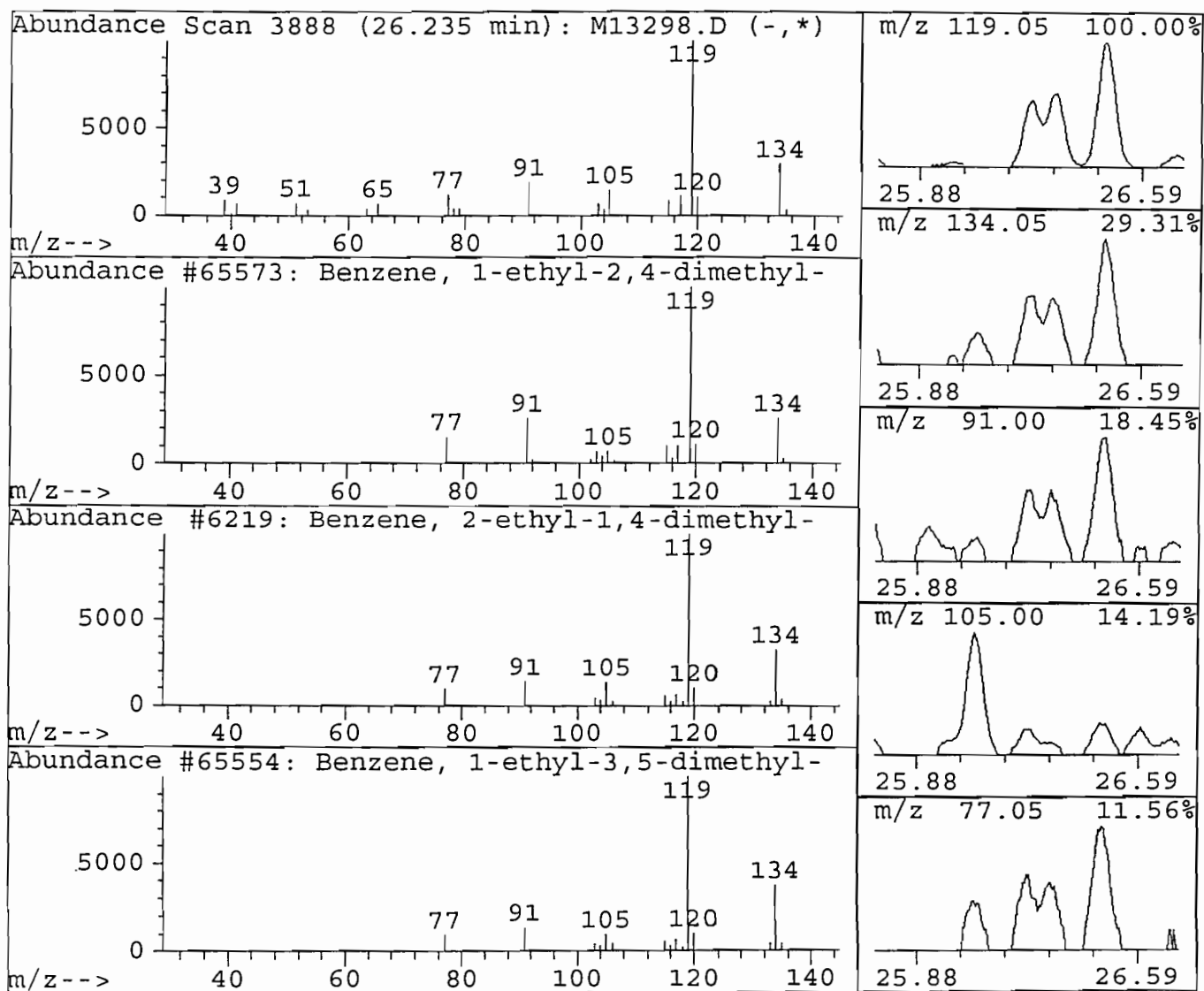
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.23	10.04 ug/L	1336811	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	91
2	Benzene, 2-ethyl-1,4-dimethyl-	6219	001758-88-9	91
3	Benzene, 1-ethyl-3,5-dimethyl-	65554	000934-74-7	91
4	Benzene, 1-ethyl-2,3-dimethyl-	65555	000933-98-2	91
5	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	91



000048

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D

Acq Time : 22 Oct 99 2:43 pm

Sample : 13826ASP-87992

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

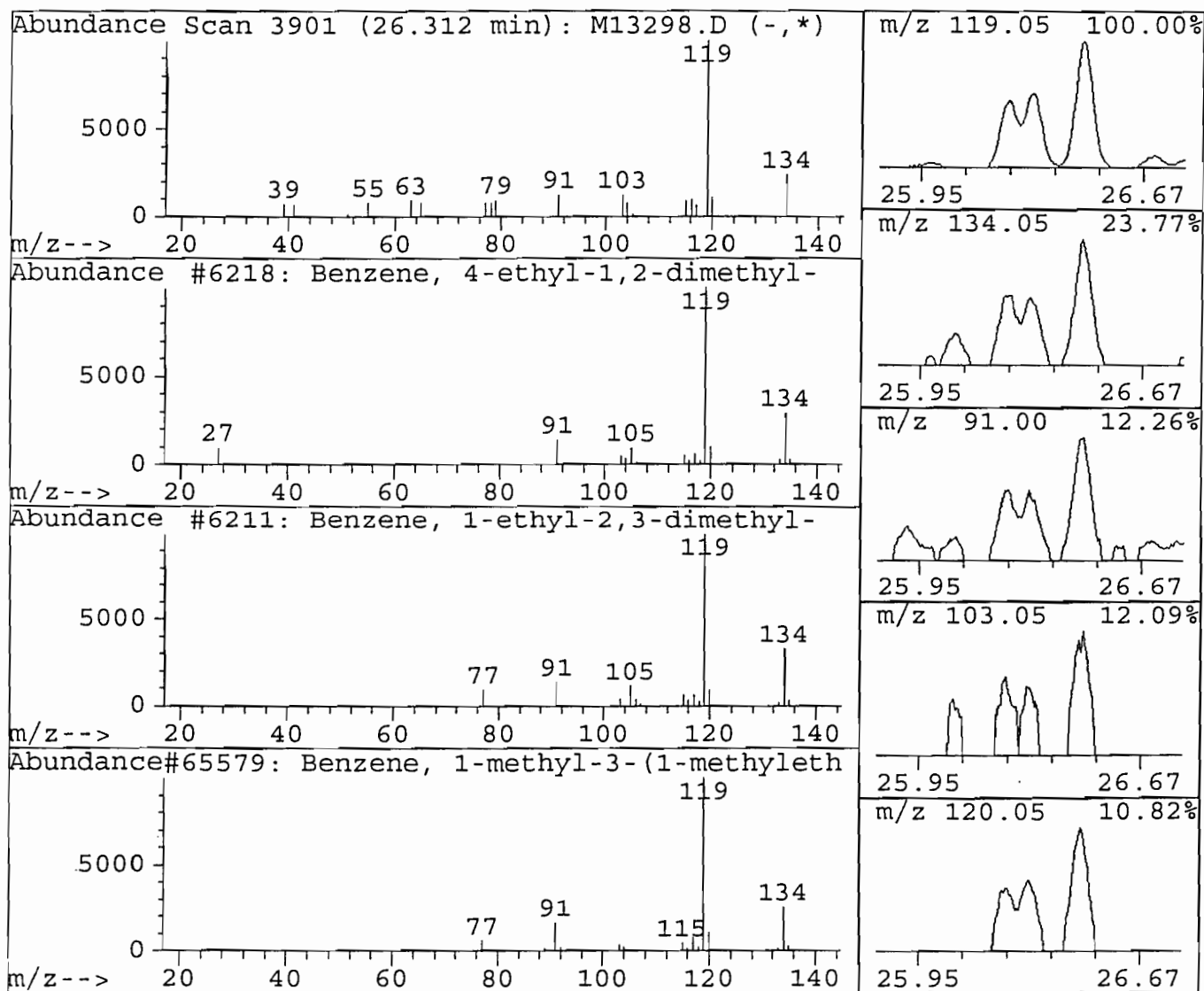
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.31	9.13 ug/L	1215995	1,4-dichlorobenzene-d4	25.28

Hit#	of 20	Tentative ID	Ref#	CAS#	Qual
1		Benzene, 4-ethyl-1,2-dimethyl-	6218	000934-80-5	72
2		Benzene, 1-ethyl-2,3-dimethyl-	6211	000933-98-2	72
3		Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	72
4		Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	72
5		Benzene, 2-ethyl-1,3-dimethyl-	65533	002870-04-4	72



000049

Library Search Compound Report

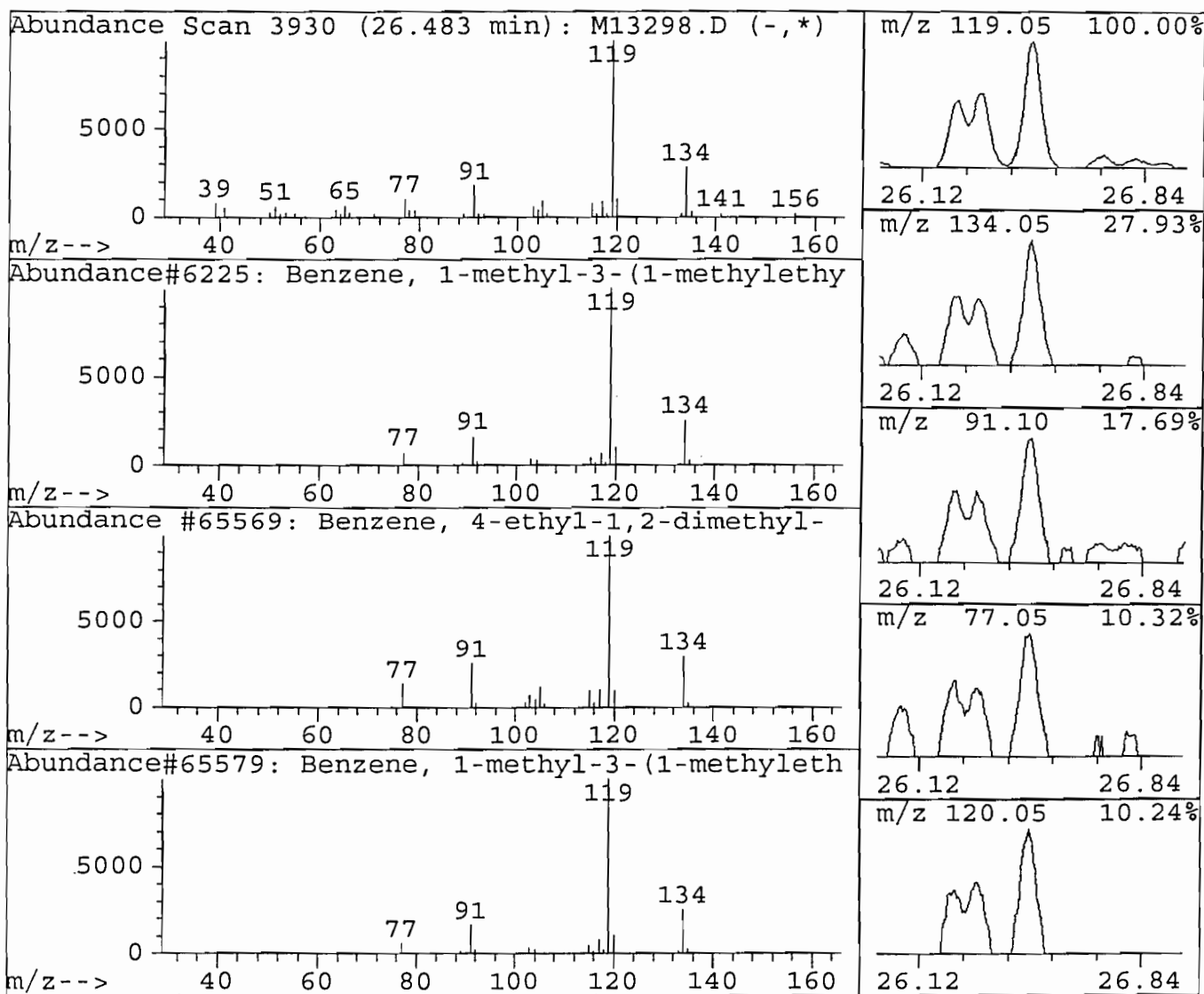
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.48	19.79 ug/L	2634762	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-(1-methylethyl)	6225	000535-77-3	97
2	Benzene, 4-ethyl-1,2-dimethyl-	65569	000934-80-5	97
3	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	97
4	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	95
5	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	95



000050

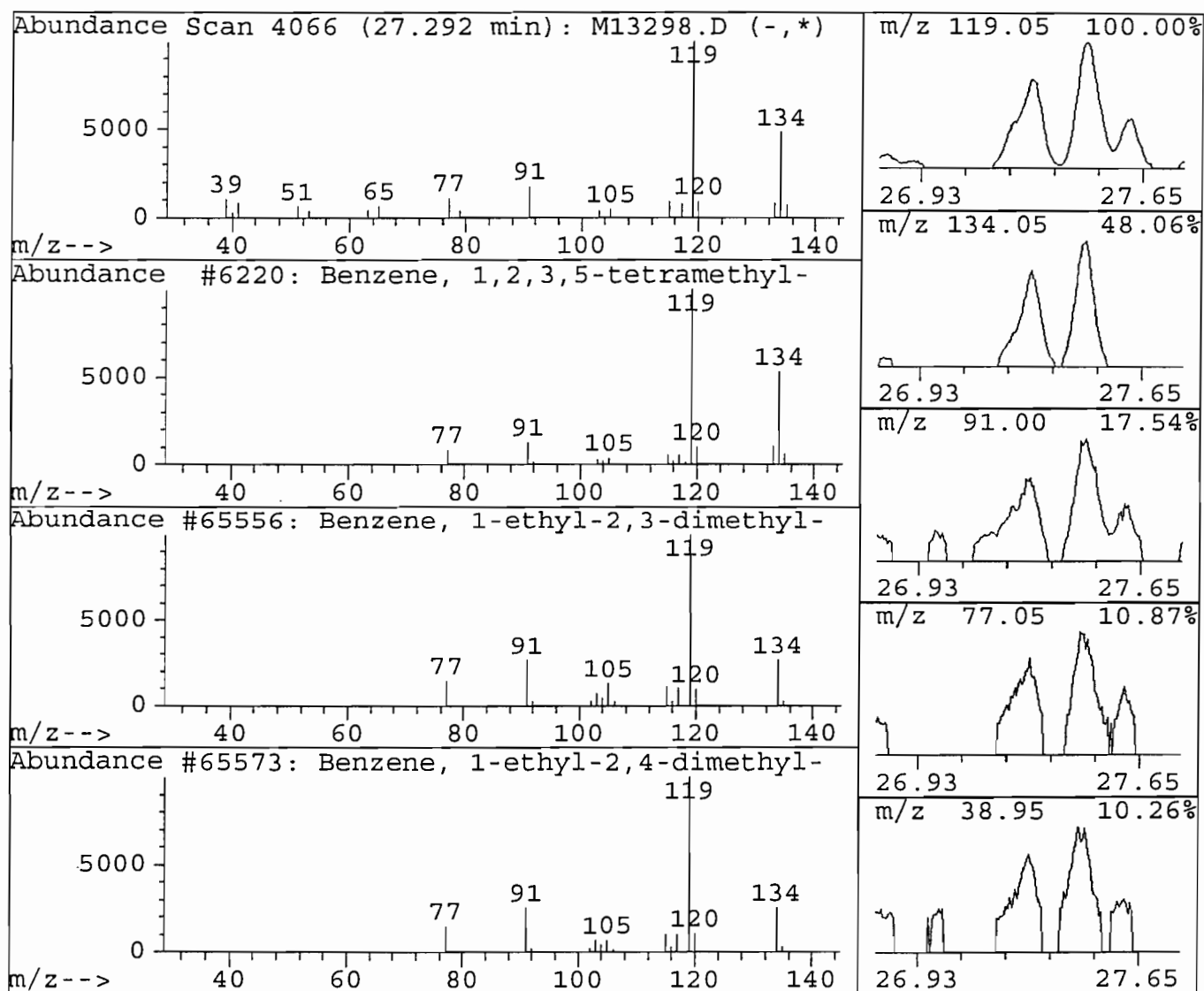
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.29	13.78 ug/L	1834631	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-		6220	000527-53-7	91
2	Benzene, 1-ethyl-2,3-dimethyl-		65556	000933-98-2	91
3	Benzene, 1-ethyl-2,4-dimethyl-		65573	000874-41-9	91
4	Benzene, 1,2,4,5-tetramethyl-		65576	000095-93-2	91
5	Benzene, 1-ethyl-3,5-dimethyl-		65554	000934-74-7	91



000051

Library Search Compound Report

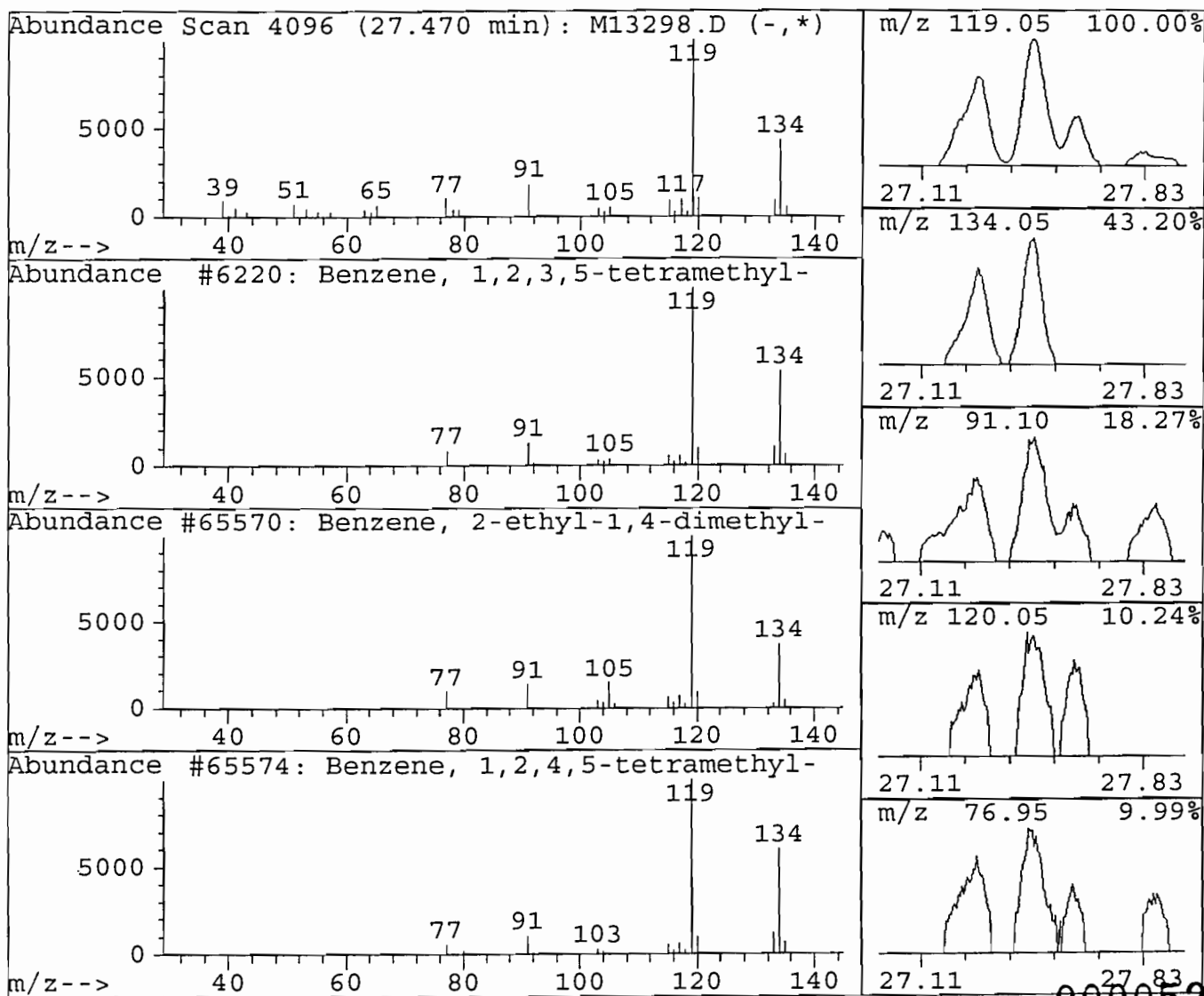
Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.47	19.54 ug/L	2601330	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	6220	000527-53-7	95
2	Benzene, 2-ethyl-1,4-dimethyl-	65570	001758-88-9	91
3	Benzene, 1,2,4,5-tetramethyl-	65574	000095-93-2	91
4	Benzene, 1,2,3,4-tetramethyl-	6202	000488-23-3	91
5	Benzene, 2-ethyl-1,4-dimethyl-	6219	001758-88-9	91



000052

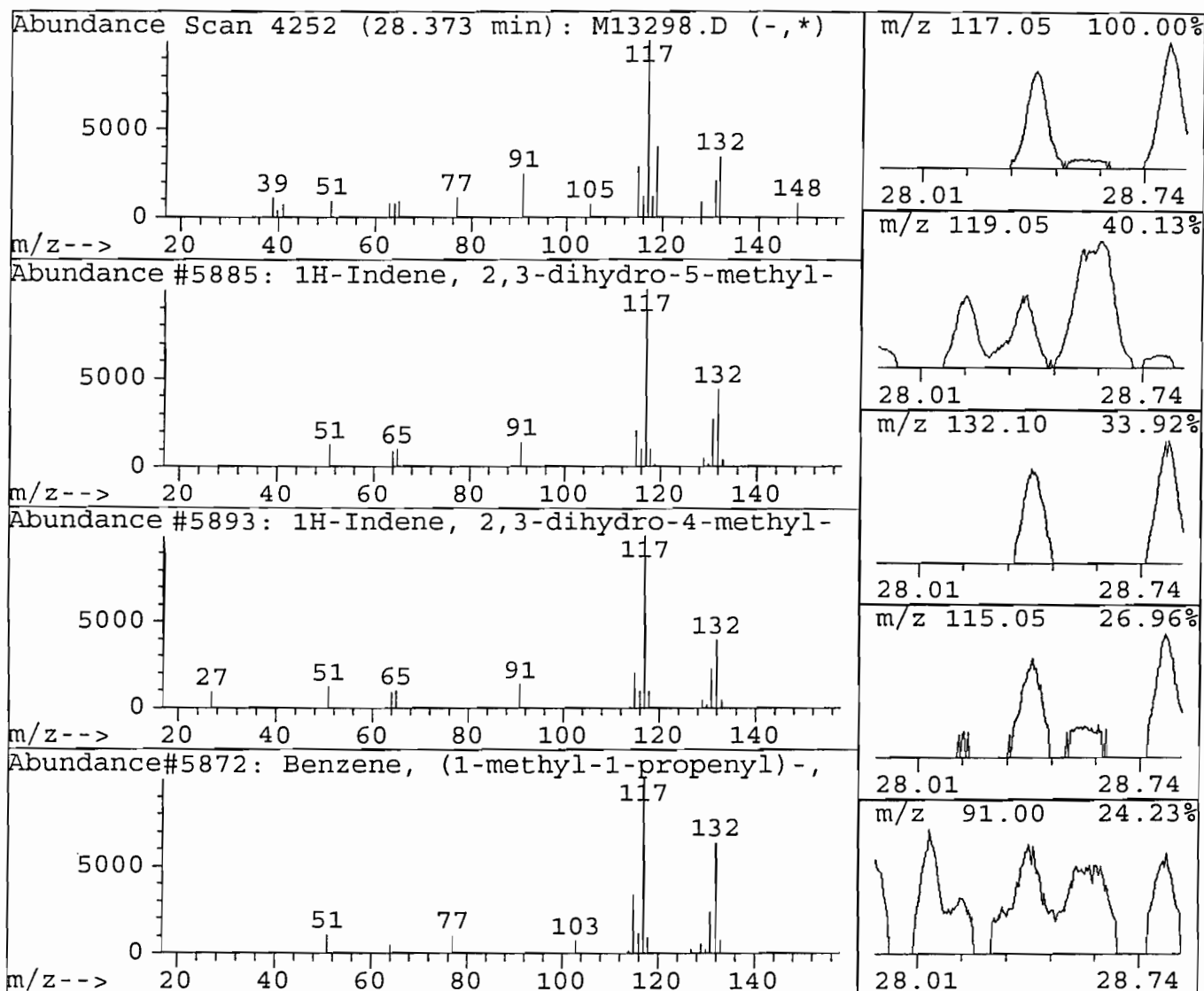
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13298.D
Acq Time : 22 Oct 99 2:43 pm
Sample : 13826ASP-87992
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
28.37	9.25 ug/L	1231131	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	1H-Indene, 2,3-dihydro-5-methyl-		5885	000874-35-1	62
2	1H-Indene, 2,3-dihydro-4-methyl-		5893	000824-22-6	58
3	Benzene, (1-methyl-1-propenyl)-, (E		5872	000768-00-3	58
4	2,3-Dihydro-1-methylindene		5901	027133-93-3	58
5	Benzene, 1-methyl-2-(2-propenyl)-		65419	001587-04-8	53



000053

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS10

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87993

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13289.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 14

Date Analyzed: 10/22/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	240		U
74-87-3	Chloromethane	480		U
75-01-4	Vinyl Chloride	270		U
74-83-9	Bromomethane	550		U
75-00-3	Chloroethane	730		U
107-02-8	Acrolein	730		U
75-69-4	Trichlorofluoromethane	170		U
75-35-4	1,1-Dichloroethene	280		U
67-64-1	Acetone	730		U
75-15-0	Carbon Disulfide	730		U
75-09-2	Methylene Chloride	150		U
156-60-5	trans-1,2-Dichloroethene	620		U
107-13-1	Acrylonitrile	730		U
75-34-3	1,1-Dichloroethane	190		U
594-20-7	2,2-Dichloropropane	150		U
156-59-2	cis-1,2-dichloroethene	43800		E
74-97-5	Bromochloromethane	250		U
67-66-3	Chloroform	170		U
71-55-6	1,1,1-Trichloroethane	130		U
108-05-4	Vinyl Acetate	730		U
78-93-3	2-Butanone	730		U
56-23-5	Carbon Tetrachloride	580		U
563-58-6	1,1-Dichloropropene	170		U
71-43-2	Benzene	3800		
107-06-2	1,2-Dichloroethane	150		U
79-01-6	Trichloroethene	370		U
78-87-5	1,2-Dichloropropane	490		U
74-95-3	Dibromomethane	210		U
75-27-4	Bromodichloromethane	150		U
110-07-3	2-Chloroethyl Vinyl Ether	730		U
10061-01-5	cis-1,3-Dichloropropene	150		U
108-88-3	Toluene	89100		E
10061-02-6	trans-1,3-Dichloropropene	150		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS10

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87993

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13289.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 14

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	200		U
108-10-1	4-Methyl-2-Pentanone	730		U
127-18-4	Tetrachloroethene	1200		
142-28-9	1,3-Dichloropropane	170		U
124-48-1	Dibromochloromethane	100		U
106-93-4	1,2-Dibromoethane	230		U
591-78-6	2-Hexanone	730		U
108-90-7	Chlorobenzene	160		U
630-20-6	1,1,1,2-Tetrachloroethane	170		U
100-41-4	Ethylbenzene	39800		E
136777-61-2	m&p-xylenes	154800		E
95-47-6	o-xylene	68900		E
100-42-5	Styrene	29		U
75-25-2	Bromoform	72		U
98-82-8	isopropylbenzene	16000		
108-86-1	Bromobenzene	150		U
79-34-5	1,1,2,2-Tetrachloroethane	230		U
96-18-4	1,2,3-Trichloropropane	360		U
103-65-1	n-Propylbenzene	190		U
95-49-8	2-Chlorotoluene	9500		
106-43-4	4-Chlorotoluene	9100		
108-67-8	1,3,5-Trimethylbenzene	160700		E
98-06-6	tert-Butylbenzene	170		U
95-63-6	1,2,4-Trimethylbenzene	62900		E
135-98-8	sec-Butylbenzene	10900		
541-73-1	1,3-Dichlorobenzene	170		U
99-87-6	4-Isopropyltoluene	14200		
106-46-7	1,4-Dichlorobenzene	170		U
95-50-1	1,2-Dichlorobenzene	150		U
104-51-8	n-Butylbenzene	250		U
96-12-8	1,2-Dibromo-3-chloropropane	730		U
120-82-1	1,2,4-Trichlorobenzene	170		U
87-68-3	Hexachlorobutadiene	150		U

SAMPLE NO.

GP-009-SS10

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87993

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13289.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture:	not dec.	14

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.

Compound

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-009-SS10

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87993
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13289.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 14 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 591-76-4	Hexane, 2-methyl-	12.15	14900	J
2. 565-59-3	Pentane, 2,3-dimethyl-	12.40	14000	J
3. 589-34-4	Hexane, 3-methyl-	12.57	17100	J
4.	Unknown	12.96	14000	J
5. 108-87-2	Cyclohexane, methyl-	15.11	14100	J
6.	Unknown	15.86	25900	J
7. 589-81-1	Heptane, 3-methyl-	16.20	15000	J
8. 111-65-9	Octane	17.10	20400	J
9. 111-84-2	Nonane	20.21	23400	J
10.	Unknown	21.91	28400	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000057

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
 Acq Time : 22 Oct 99 7:14 am
 Sample : 13826ASP-87993
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 22 10:44 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.16	96	2162485	50.00	ug/L	0.06
43) Chlorobenzene-d5	20.51	117	1721750	50.00	ug/L	0.05
58) 1,4-dichlorobenzene-d4	25.26	152	681069	50.00	ug/L	0.07

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.46	113	672973	50.03	ug/L	100.07%
30) 1,2-Dichlorethane-d4	13.50	65	763474	50.36	ug/L	100.72%
38) Toluene-d8	17.42	98	2059791	48.89	ug/L	97.78%
42) 4-Bromofluorobenzene	23.00	95	917992	51.54	ug/L	103.08%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
20) cis-1,2-dichloroethene	11.64	61	5978814	301.38	ug/L	100
29) benzene	13.73	78	1237134	26.01	ug/L	98
39) toluene	17.58	91	31910627	612.88	ug/L m	96
45) tetrachloroethene	18.91	166	111264	8.39	ug/L	98
50) chlorobenzene	20.59	112	134766	4.28	ug/L	91
53) ethylbenzene	20.67	91	15077014	273.99	ug/L	94
54) m&p-xylenes	20.84	106	19911775	1065.24	ug/L	63
55) o-xylene	21.74	91	20506426	474.25	ug/L	94
59) isopropylbenzene	22.45	105	5069006	109.86	ug/L m	98
64) 2-chlorotoluene	23.68	126	672020	65.08	ug/L m	95
65) 4-chlorotoluene	23.68	126	672020	62.71	ug/L m	95
66) 1,3,5-trimethylbenzene	23.48	105	41082062	1105.70	ug/L m	98
68) 1,2,4-trimethylbenzene	24.07	105	15418560	432.60	ug/L m	85
69) sec-butylbenzene	24.63	105	3440027	74.98	ug/L m	99
71) 4-isopropyltoluene	24.78	119	3980384	97.79	ug/L m	98
78) naphthalene	30.66	128	9220617	323.71	ug/L m	96

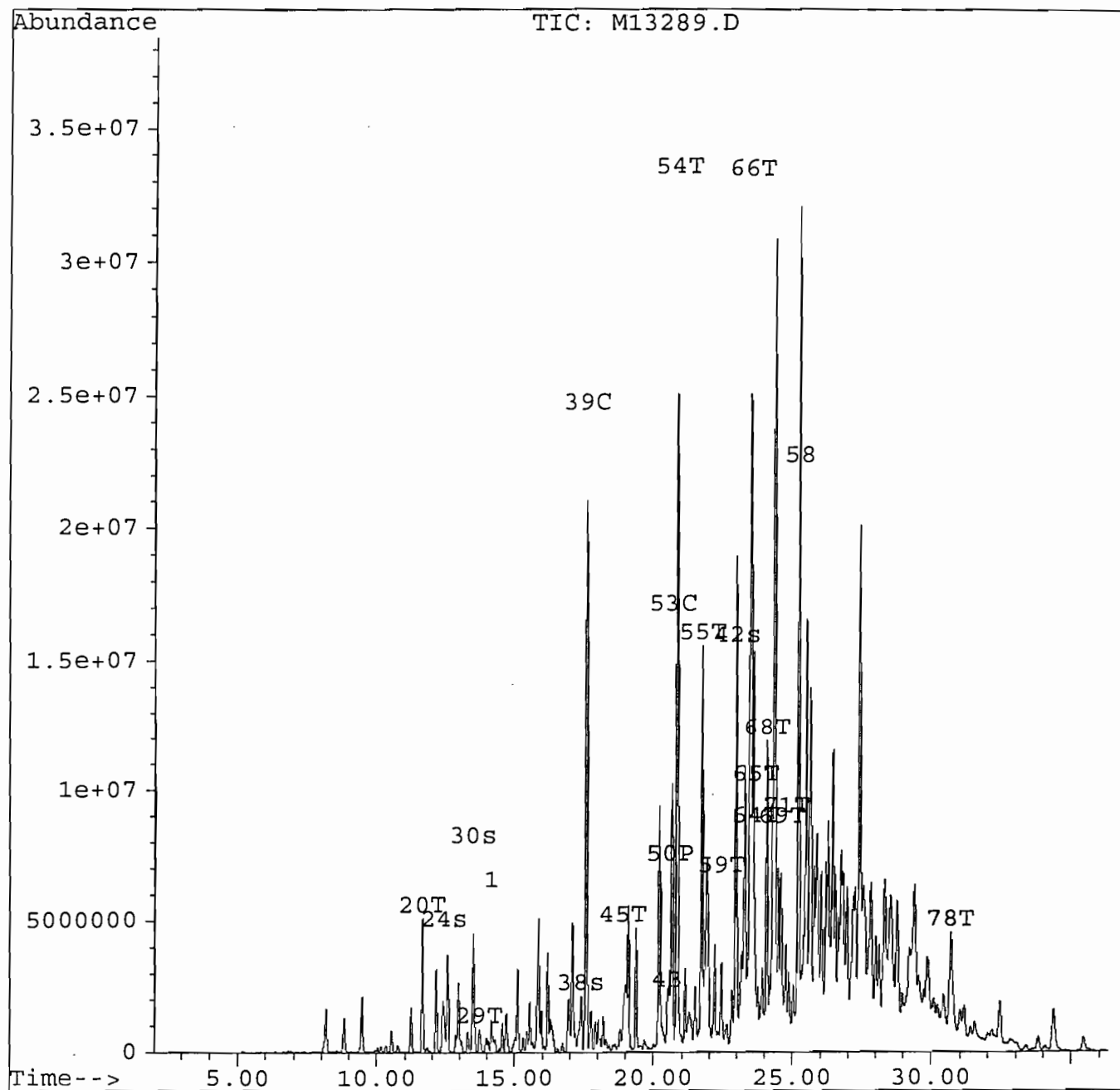
000058

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 22 10:44 1999

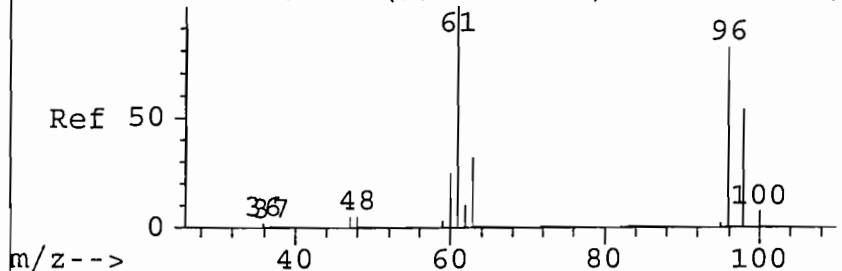
Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000059

AbundanceScan 1403 (11.589 min): M12956.D (

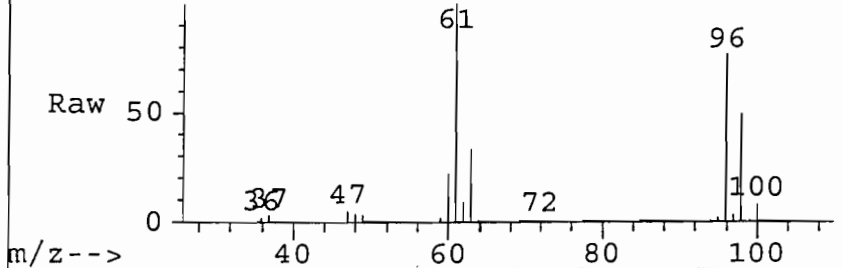


#20

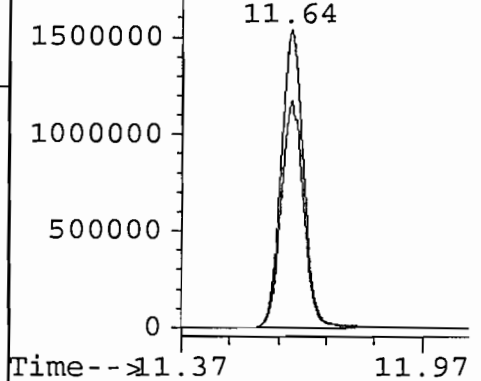
cis-1,2-dichloroethene
Concen: 301.38 ug/L
RT: 11.64 min Scan# 1415
Delta R.T. 0.05 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:	61	Resp:	5978814
Ion	Ratio	Lower	Upper
61	100		
96	75.9	53.3	98.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

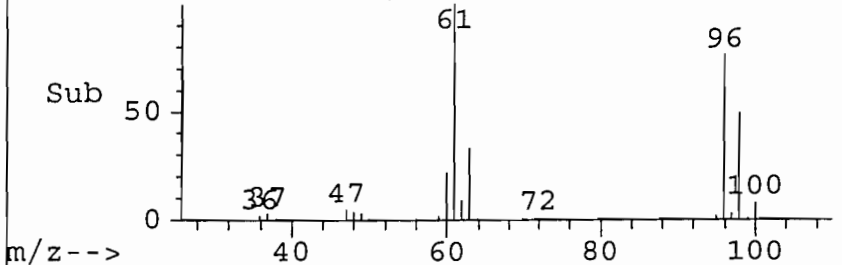
AbundanceScan 1415 (11.640 min): M13289.D (



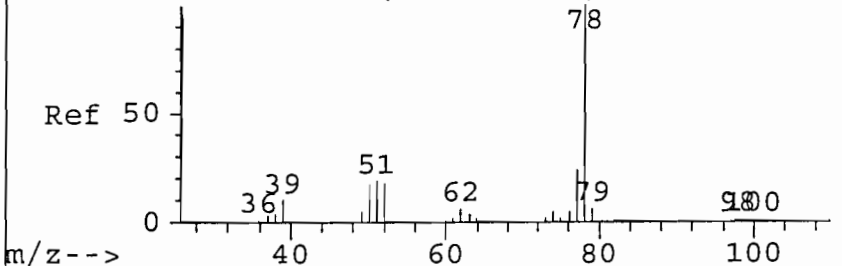
AbundanceIon 61.00 (60.
Ion 96.00 (95.



AbundanceScan 1415 (11.640 min): M13289.D (



AbundanceScan 1757 (13.674 min): M12956.D (

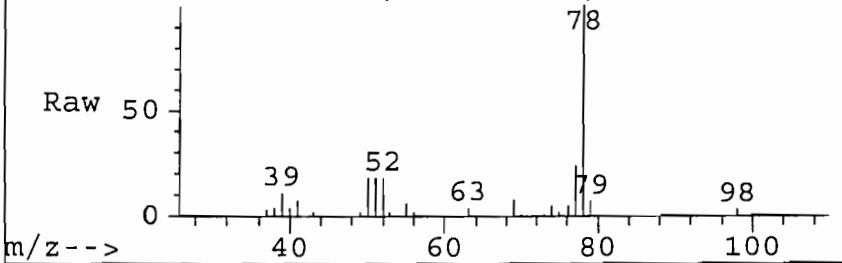


#29

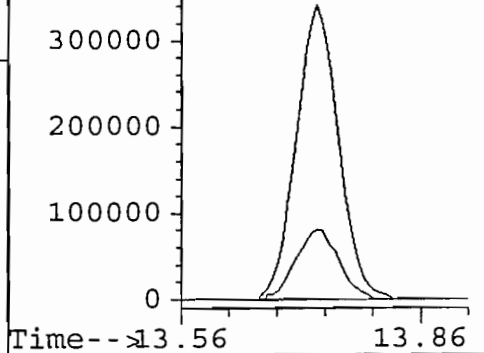
benzene
Concen: 26.01 ug/L
RT: 13.73 min Scan# 1769
Delta R.T. 0.05 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:	78	Resp:	1237134
Ion	Ratio	Lower	Upper
78	100		
77	23.6	17.1	31.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

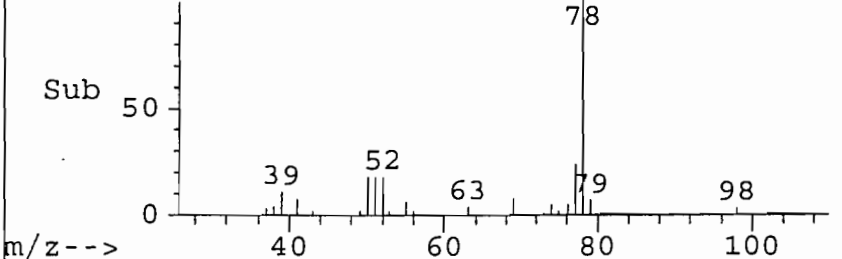
AbundanceScan 1769 (13.726 min): M13289.D (



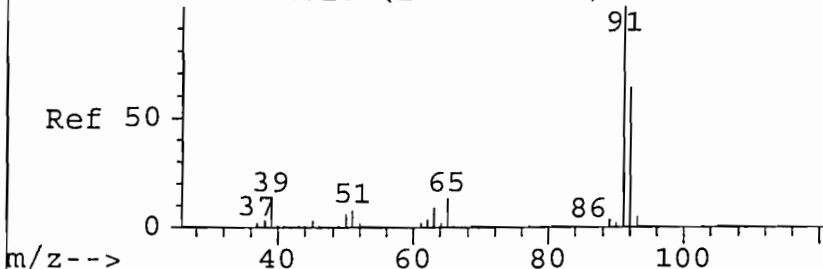
AbundanceIon 78.00 (77.
Ion 77.00 (76.



AbundanceScan 1769 (13.726 min): M13289.D (



AbundanceScan 2410 (17.515 min): M12956.D (



#39

toluene

Concen: 612.88 ug/L m

RT: 17.58 min Scan# 2425

Delta R.T. 0.07 min

Lab File: M13289.D

Acq: 22 Oct 99 7:14 am

Tgt Ion:91 Resp:31910627

Ion Ratio Lower Upper

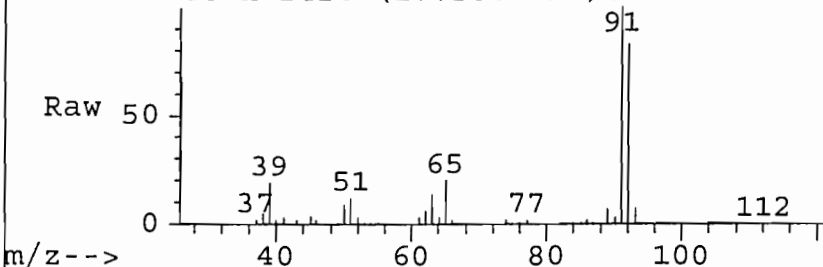
91 100

92 83.2 44.3 82.3#

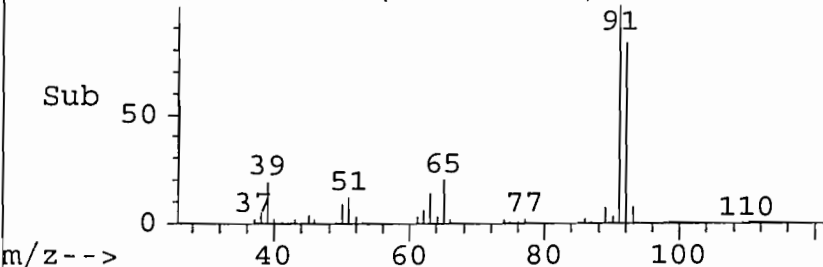
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2425 (17.583 min): M13289.D -



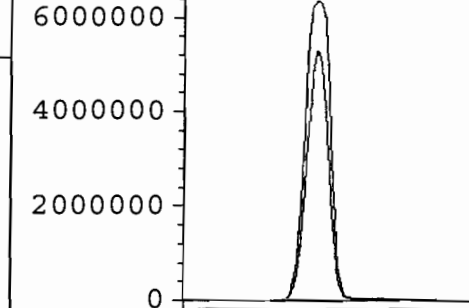
AbundanceScan 2425 (17.583 min): M13289.D -



AbundanceIon 91.00 (90.

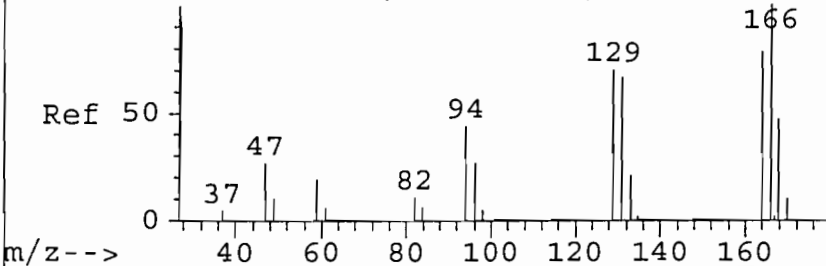
Ion 92.00 (91.

17.58



Time-->17.22 17.87

AbundanceScan 2636 (18.855 min): M12956.D (



#45

tetrachloroethene

Concen: 8.39 ug/L

RT: 18.91 min Scan# 2651

Delta R.T. 0.06 min

Lab File: M13289.D

Acq: 22 Oct 99 7:14 am

Tgt Ion:166 Resp: 111264

Ion Ratio Lower Upper

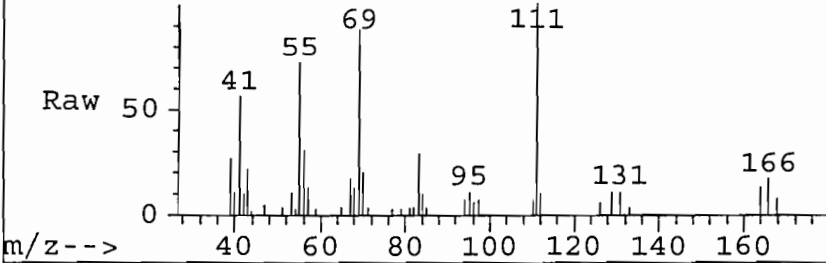
166 100

164 75.7 54.8 101.8

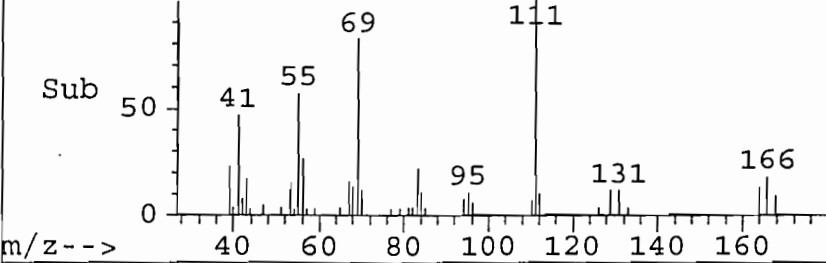
168 48.1 33.2 61.6

0 0.0 0.0 0.0

AbundanceScan 2651 (18.911 min): M13289.D (



AbundanceScan 2651 (18.911 min): M13289.D (

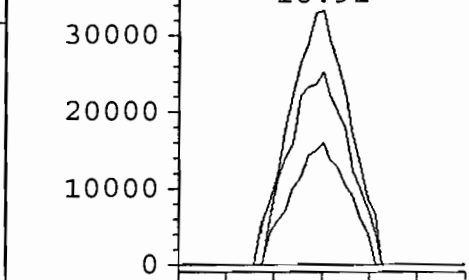


AbundanceIon 166.00 (165

Ion 163.60 (163

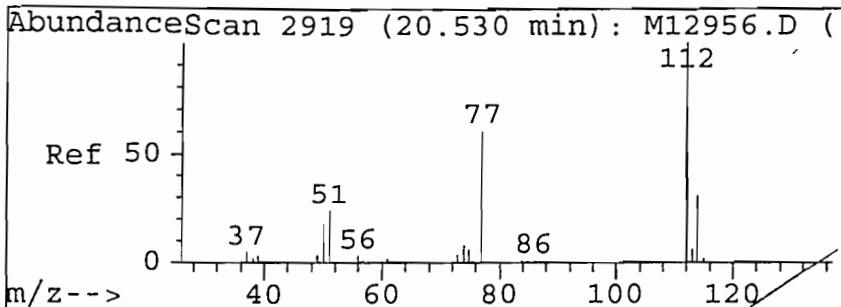
Ion 168.00 (167

18.91



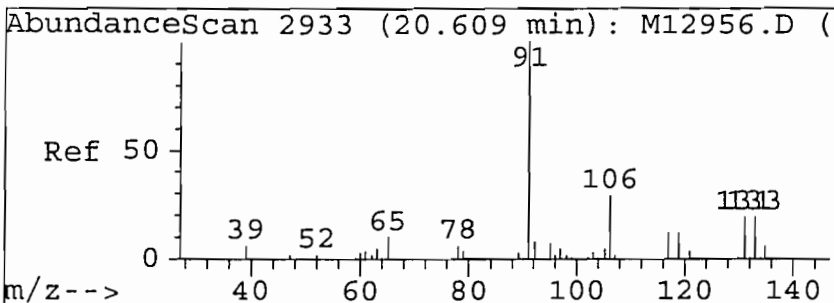
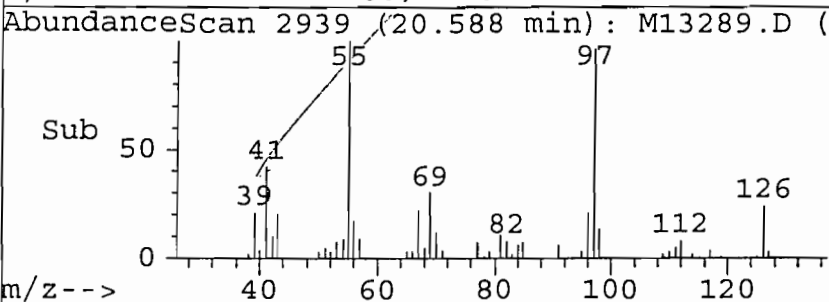
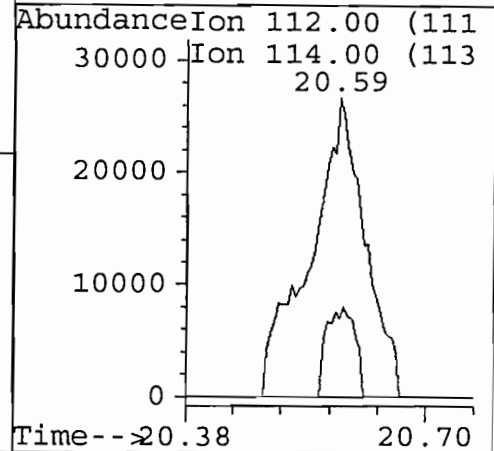
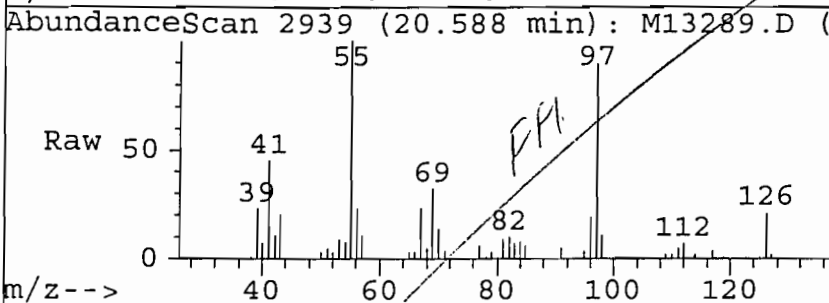
Time-->18.80 18.99

000061



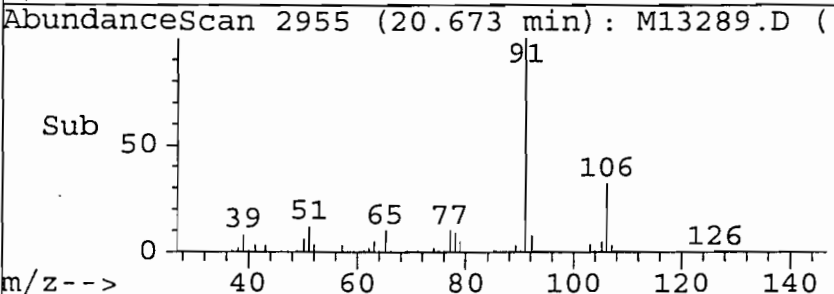
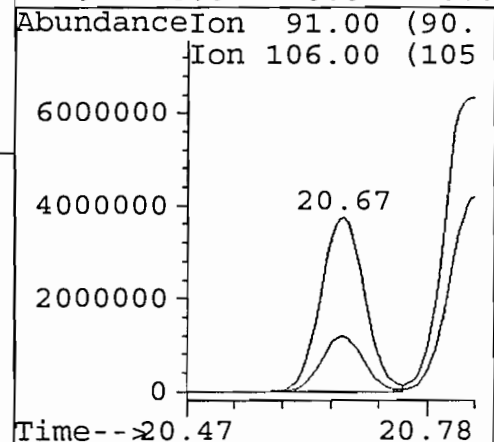
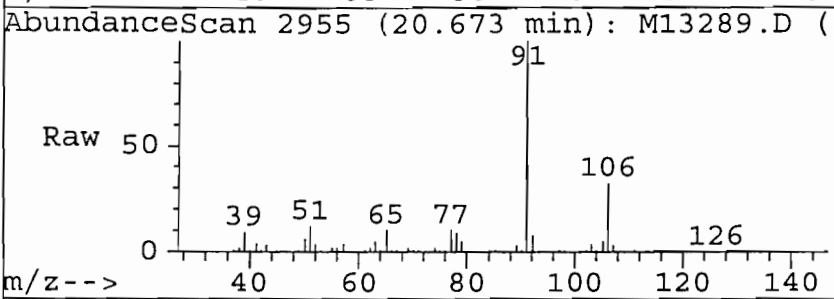
#50
chlorobenzene
Concen: 4.28 ug/L
RT: 20.59 min Scan# 2939
Delta R.T. 0.06 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:112	Resp: 134766
Ion Ratio	Lower Upper
112 100	
114 26.3	21.9 40.7
0 0.0	0.0 0.0
0 0.0	0.0 0.0



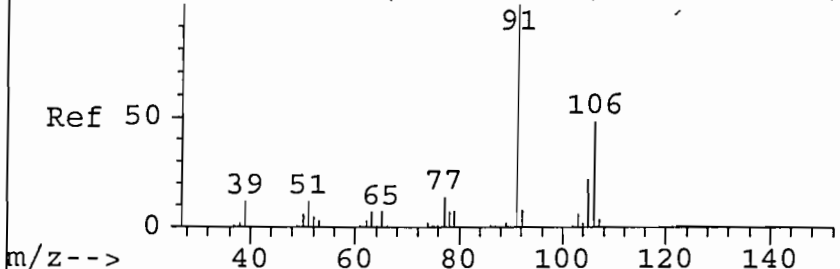
#53
ethylbenzene
Concen: 273.99 ug/L
RT: 20.67 min Scan# 2955
Delta R.T. 0.06 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:91	Resp:15077014
Ion Ratio	Lower Upper
91 100	
106 31.8	20.0 37.2
0 0.0	0.0 0.0
0 0.0	0.0 0.0



000062

AbundanceScan 2960 (20.765 min): M12956.D (



#54

m&p-xylenes

Concen: 1065.24 ug/L

RT: 20.84 min Scan# 2986

Delta R.T. 0.08 min

Lab File: M13289.D

Acq: 22 Oct 99 7:14 am

Tgt Ion:106 Resp:19911775

Ion Ratio Lower Upper

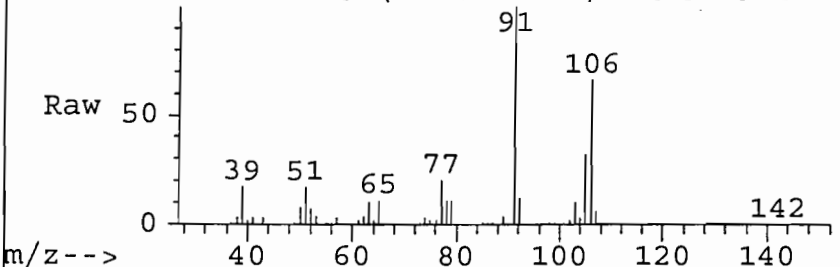
106 100

91 151.3 146.7 272.4

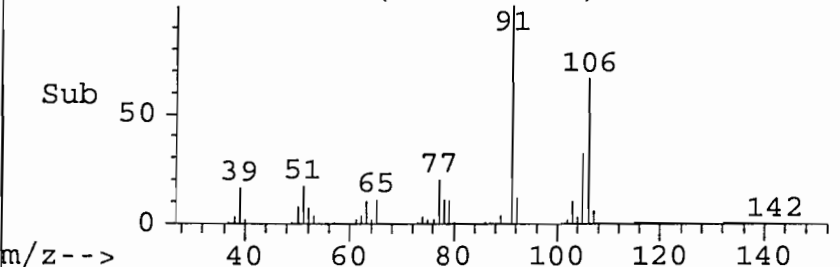
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2986 (20.844 min): M13289.D -

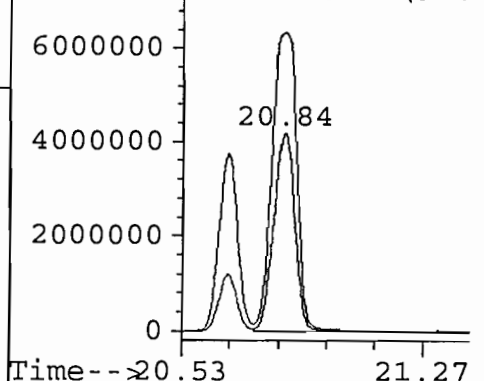


AbundanceScan 2986 (20.844 min): M13289.D -

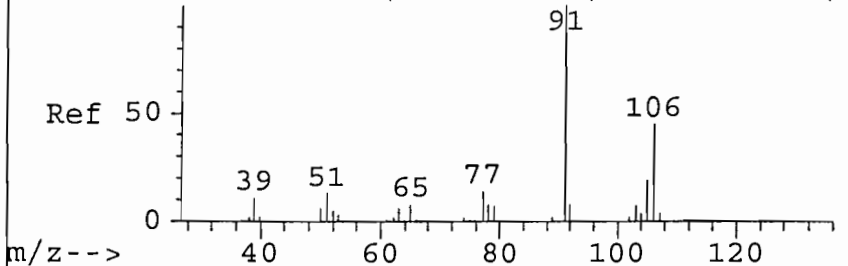


AbundanceIon 106.00 (105

Ion 91.00 (90.



AbundanceScan 3113 (21.672 min): M12956.D (



#55

o-xylene

Concen: 474.25 ug/L

RT: 21.74 min Scan# 3140

Delta R.T. 0.07 min

Lab File: M13289.D

Acq: 22 Oct 99 7:14 am

Tgt Ion:91 Resp:20506426

Ion Ratio Lower Upper

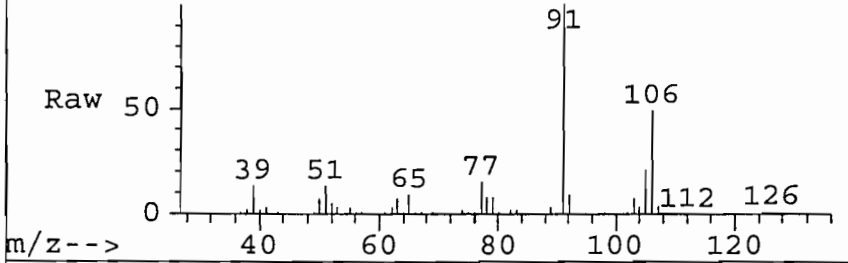
91 100

106 49.1 31.3 58.1

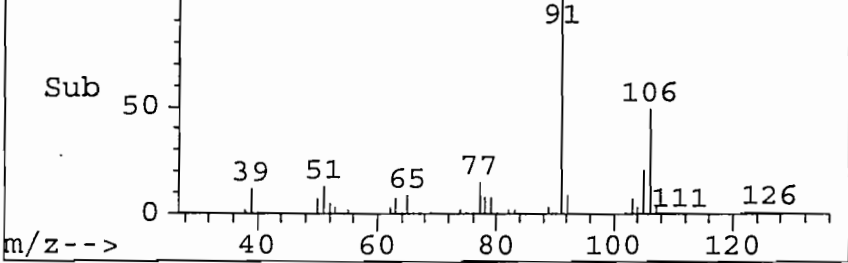
105 20.8 12.9 24.0

0 0.0 0.0 0.0

AbundanceScan 3140 (21.738 min): M13289.D (



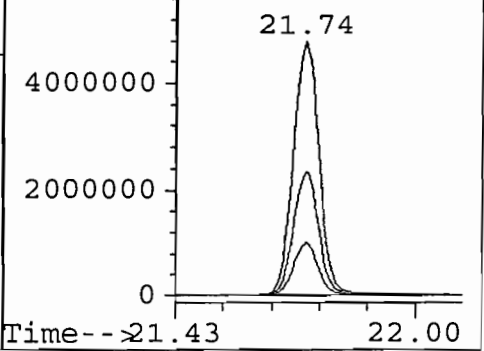
AbundanceScan 3140 (21.738 min): M13289.D (



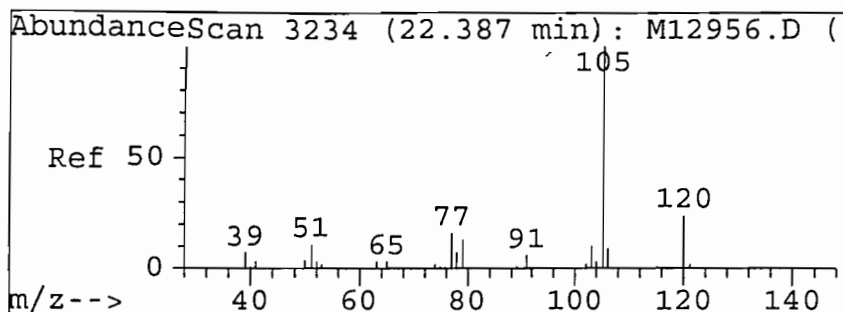
AbundanceIon 91.00 (90.

Ion 106.00 (105

Ion 105.00 (104

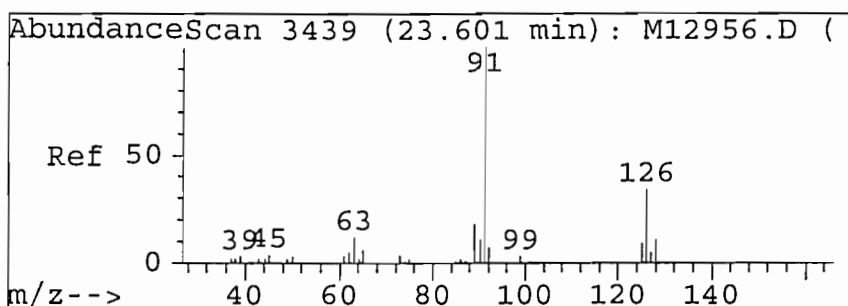
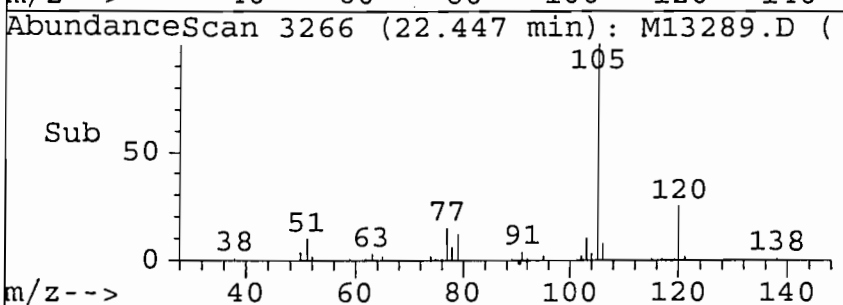
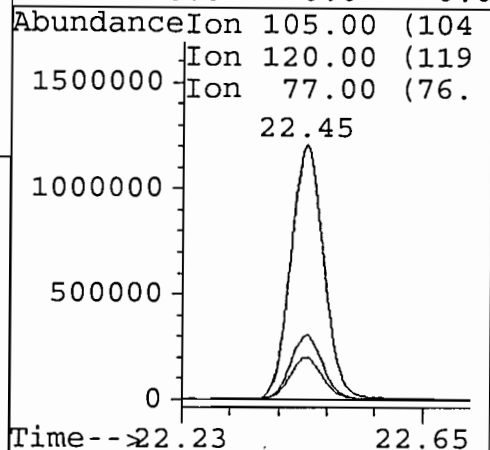
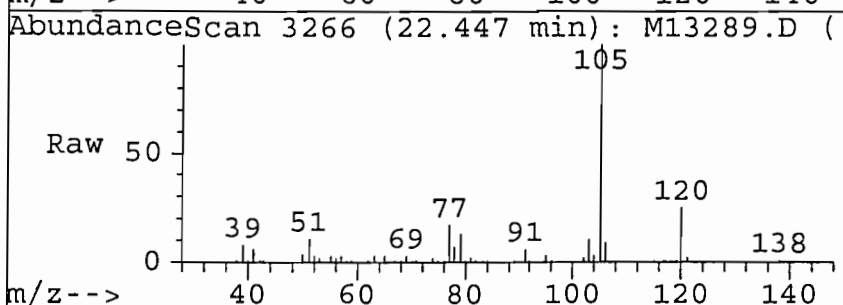


000063



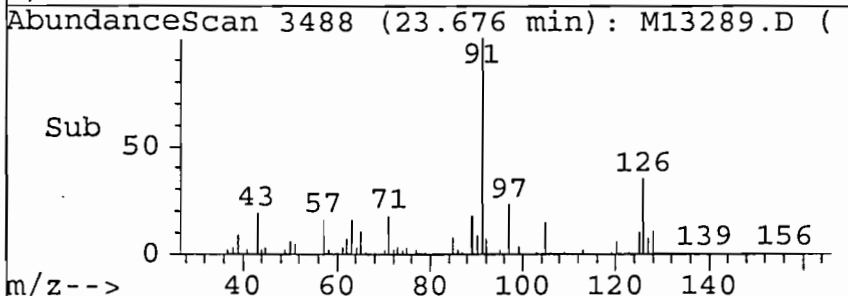
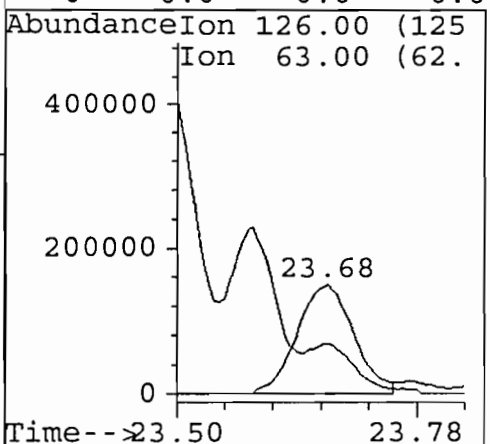
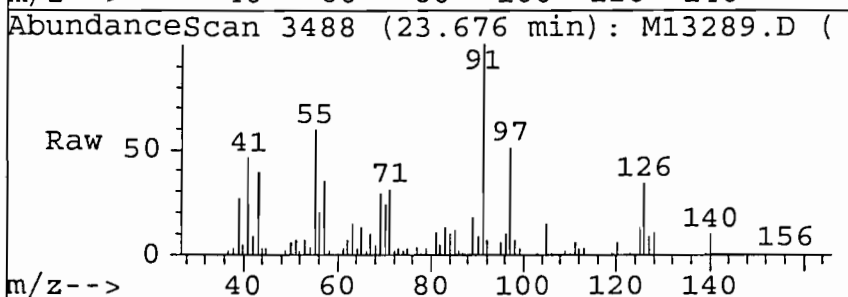
#59
isopropylbenzene
Concen: 109.86 ug/L m
RT: 22.45 min Scan# 3266
Delta R.T. 0.06 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion	Ratio	Lower	Upper
105	100		
120	25.2	16.6	30.8
77	16.5	11.3	20.9
0	0.0	0.0	0.0



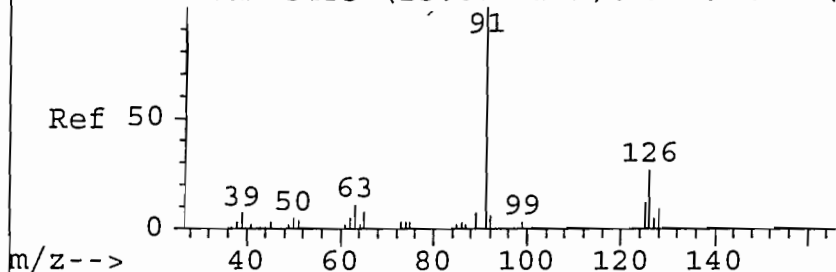
#64
2-chlorotoluene
Concen: 65.08 ug/L m
RT: 23.68 min Scan# 3488
Delta R.T. 0.07 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion	Ratio	Lower	Upper
126	100		
63	44.9	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000064

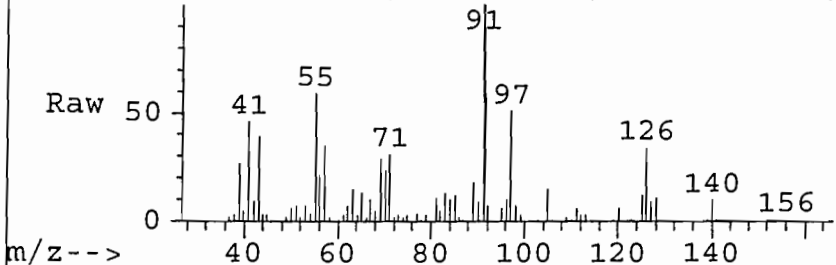
AbundanceScan 3453 (23.682 min): M12956.D (



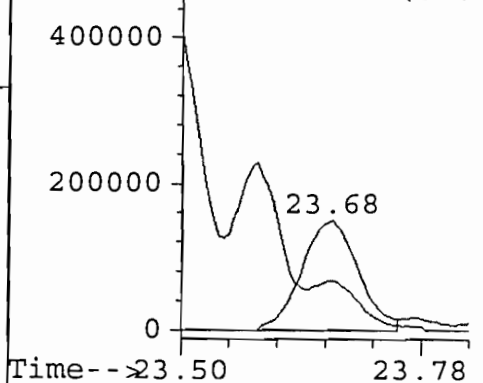
#65
4-chlorotoluene
Concen: 62.71 ug/L m
RT: 23.68 min Scan# 3488
Delta R.T. -0.01 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:	126	Resp:	672020
Ion Ratio	Lower	Upper	
126	100		
63	44.9	29.3	54.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

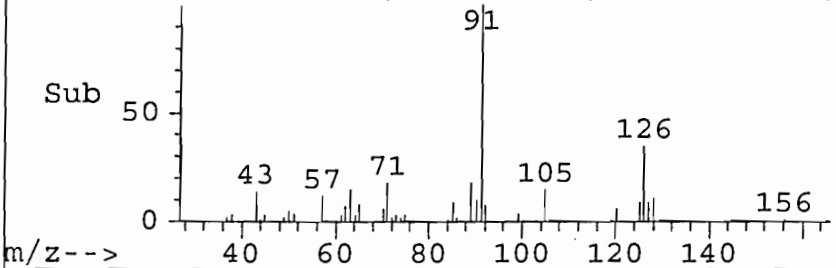
AbundanceScan 3488 (23.676 min): M13289.D (



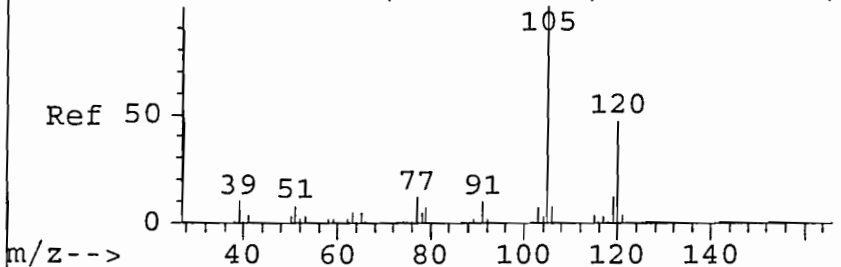
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3488 (23.676 min): M13289.D (



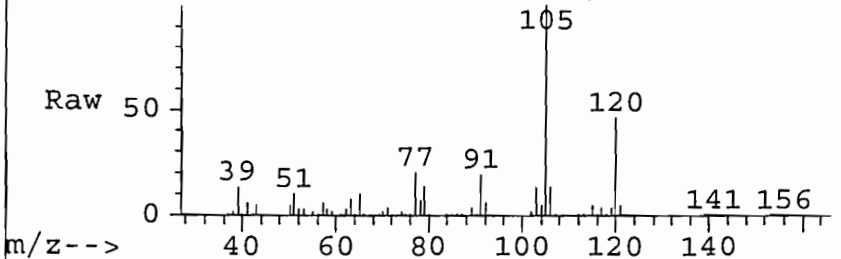
AbundanceScan 3424 (23.513 min): M12956.D (



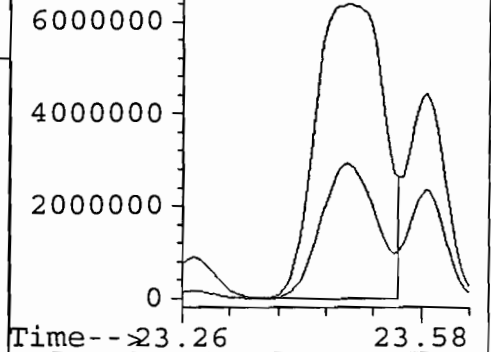
#66
1,3,5-trimethylbenzene
Concen: 1105.70 ug/L m
RT: 23.48 min Scan# 3452
Delta R.T. -0.03 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:	105	Resp:	41082062
Ion Ratio	Lower	Upper	
105	100		
120	45.8	33.2	61.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

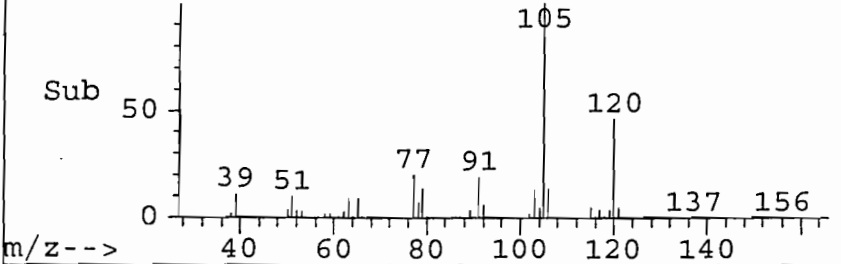
AbundanceScan 3452 (23.484 min): M13289.D -



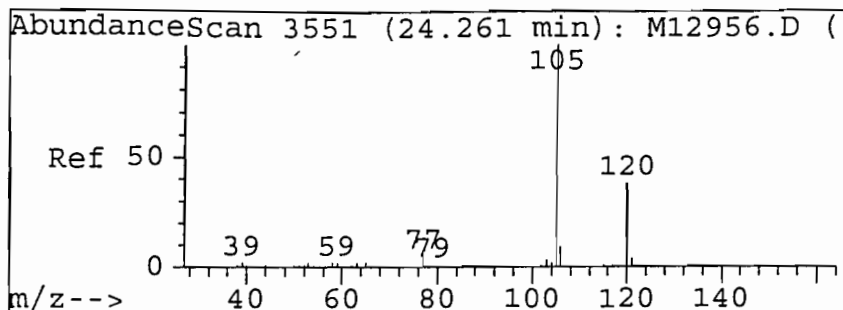
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 3452 (23.484 min): M13289.D -

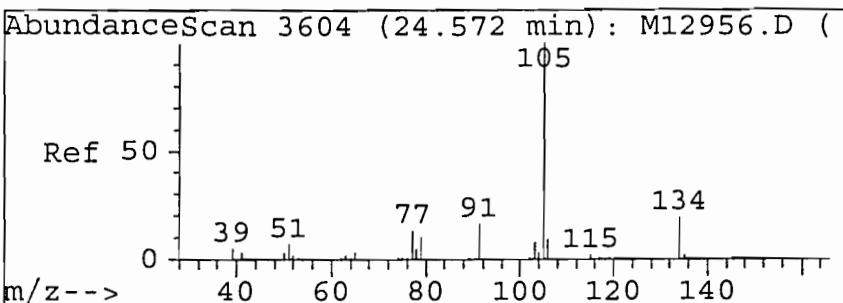
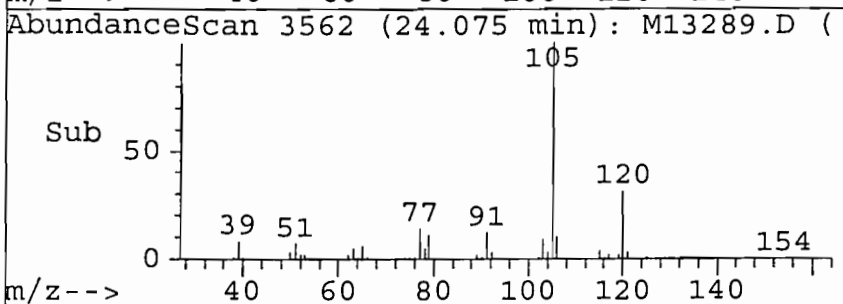
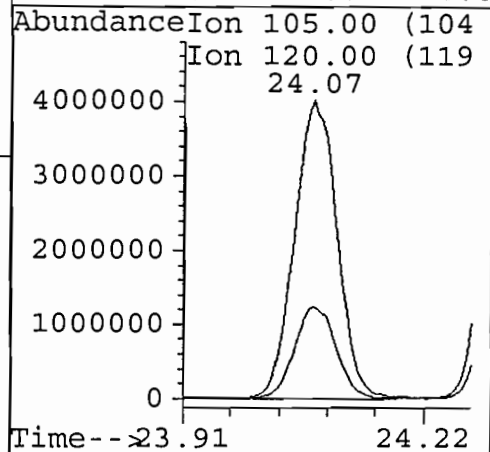
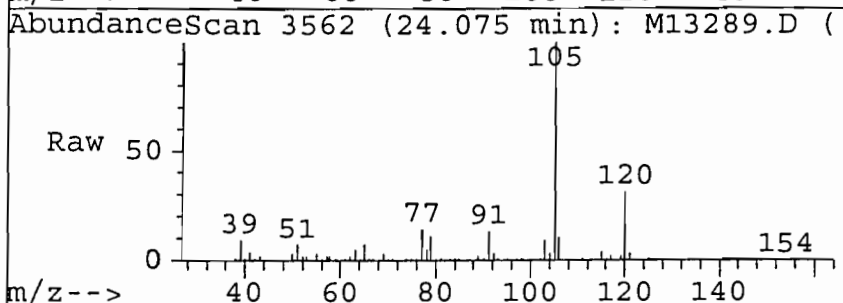


000065



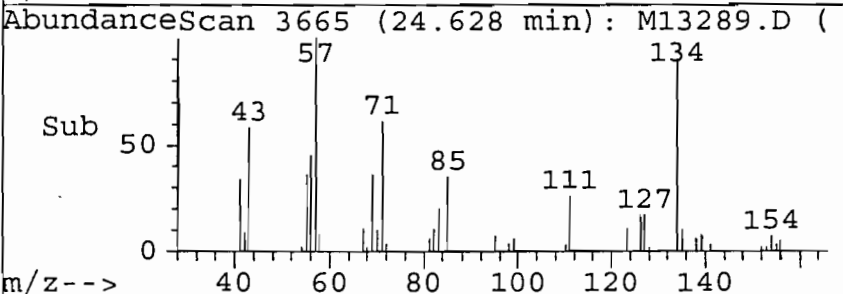
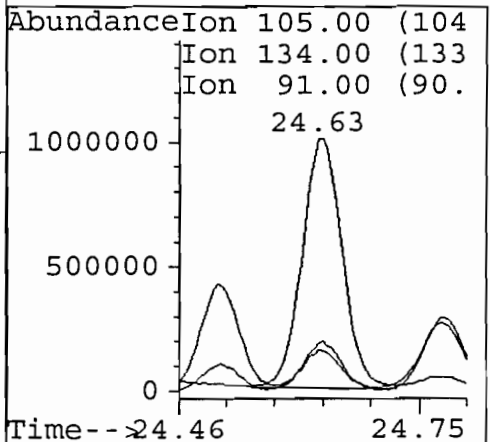
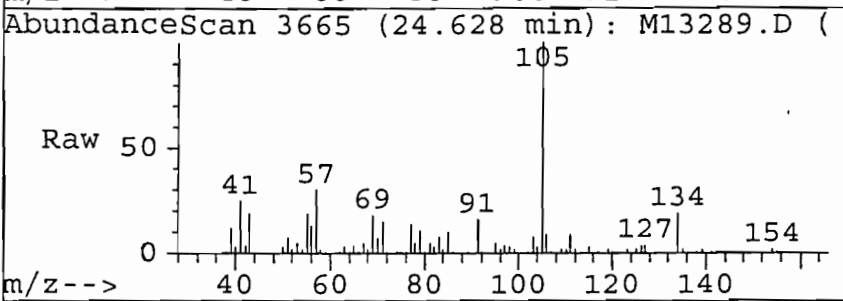
#68
1,2,4-trimethylbenzene
Concen: 432.60 ug/L m
RT: 24.07 min Scan# 3562
Delta R.T. -0.19 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

Tgt Ion:105 Resp:15418560
Ion Ratio Lower Upper
105 100
120 38.5 31.2 58.0
0 0.0 0.0 0.0
0 0.0 0.0 0.0

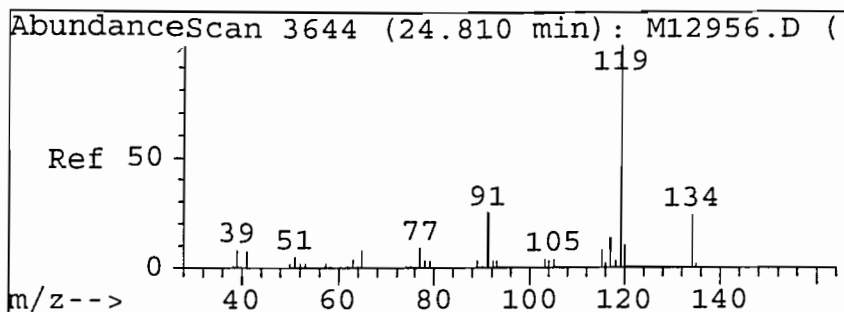


#69
sec-butylbenzene
Concen: 74.98 ug/L m
RT: 24.63 min Scan# 3665
Delta R.T. 0.06 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am

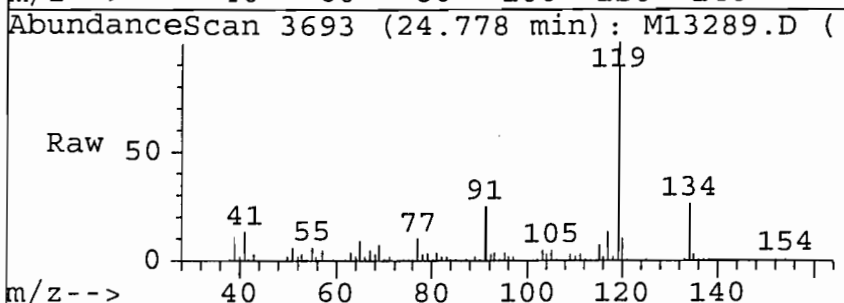
Tgt Ion:105 Resp: 3440027
Ion Ratio Lower Upper
105 100
134 18.7 13.4 25.0
91 16.3 11.1 20.5
0 0.0 0.0 0.0



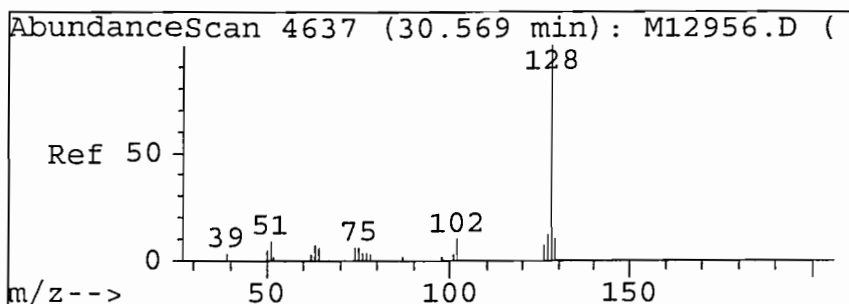
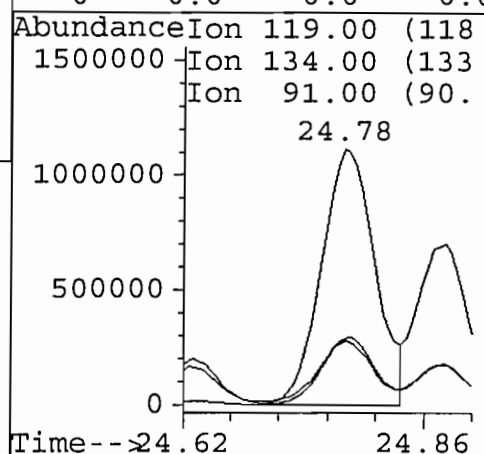
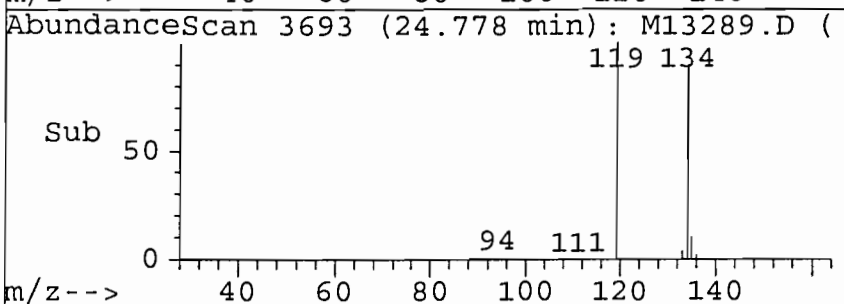
000066



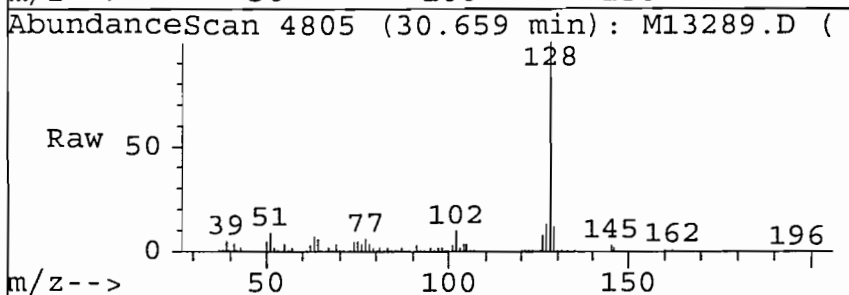
#71
4-isopropyltoluene
Concen: 97.79 ug/L m
RT: 24.78 min Scan# 3693
Delta R.T. -0.03 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am



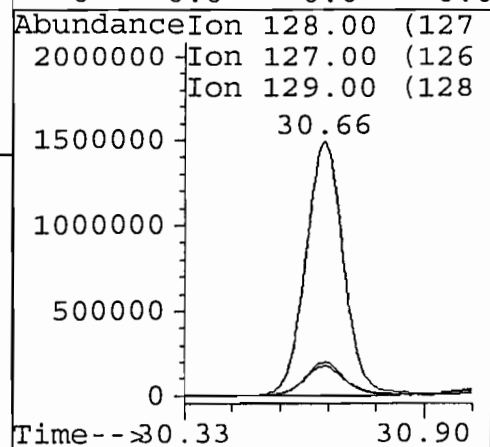
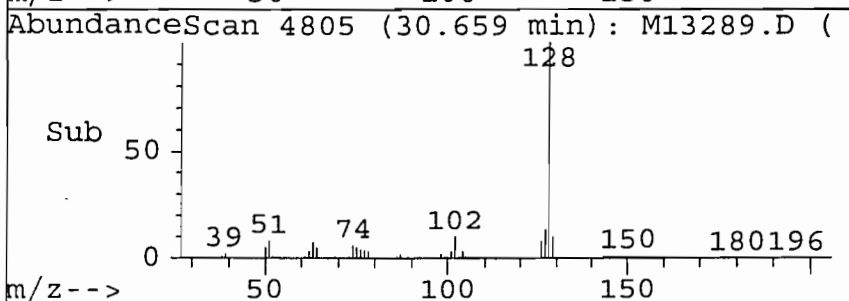
Tgt Ion:119 Resp: 3980384
Ion Ratio Lower Upper
119 100
134 26.1 16.7 31.1
91 24.7 17.2 32.0
0 0.0 0.0 0.0



#78
naphthalene
Concen: 323.71 ug/L m
RT: 30.66 min Scan# 4805
Delta R.T. 0.09 min
Lab File: M13289.D
Acq: 22 Oct 99 7:14 am



Tgt Ion:128 Resp: 9220617
Ion Ratio Lower Upper
128 100
127 13.2 8.6 16.0
129 12.0 7.0 13.0
0 0.0 0.0 0.0



000067

Library Search Compound Report

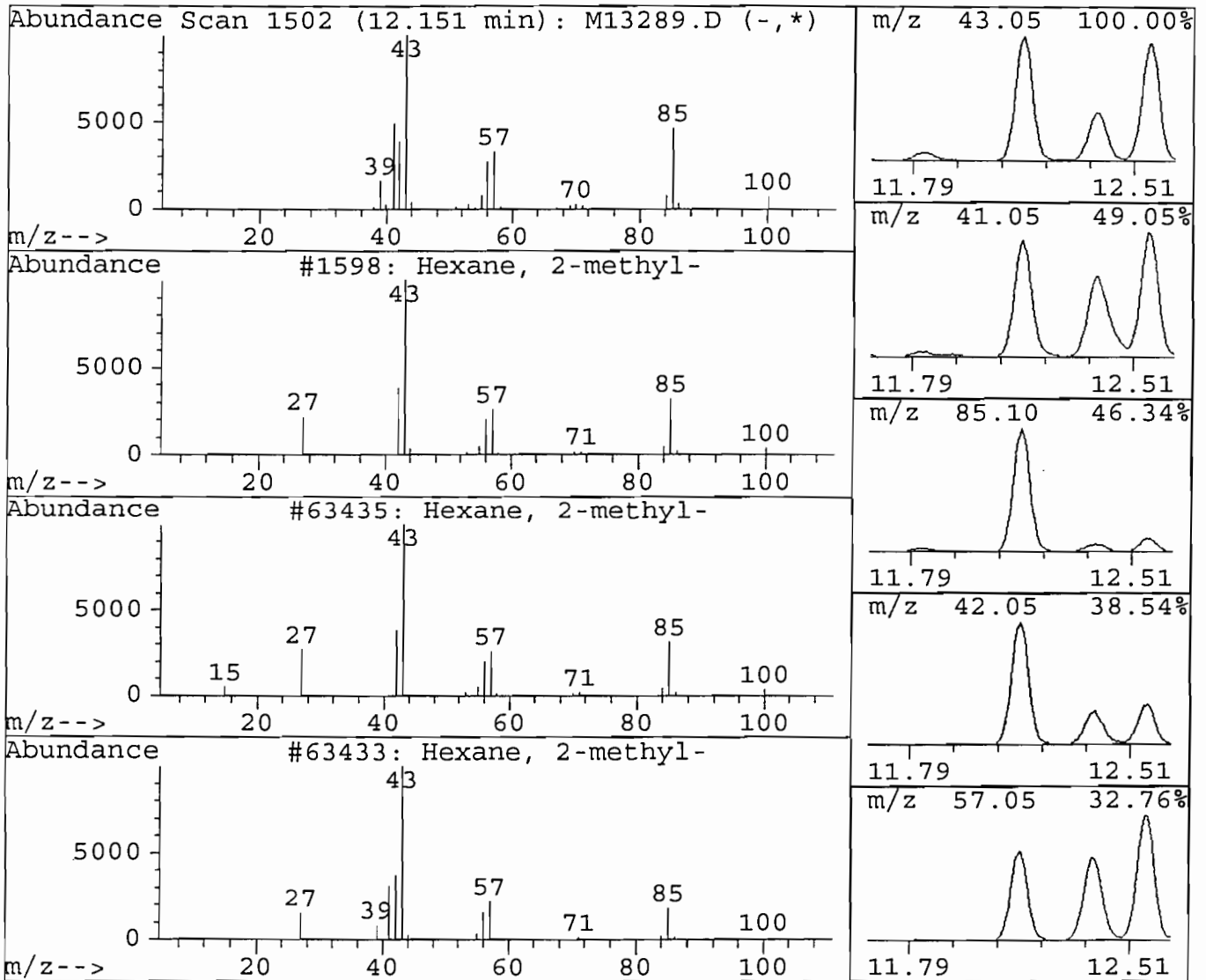
Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
 Acq Time : 22 Oct 99 7:14 am
 Sample : 13826ASP-87993
 Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
12.15	102.62 ug/L	12971165	Fluorobenzene	14.16

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Hexane, 2-methyl-	1598	000591-76-4	94
2	Hexane, 2-methyl-	63435	000591-76-4	91
3	Hexane, 2-methyl-	63433	000591-76-4	83
4	Pentane, 2,4-dimethyl-	63425	000108-08-7	50
5	Hexane, 2,4-dimethyl-	3089	000589-43-5	42



000068

Library Search Compound Report

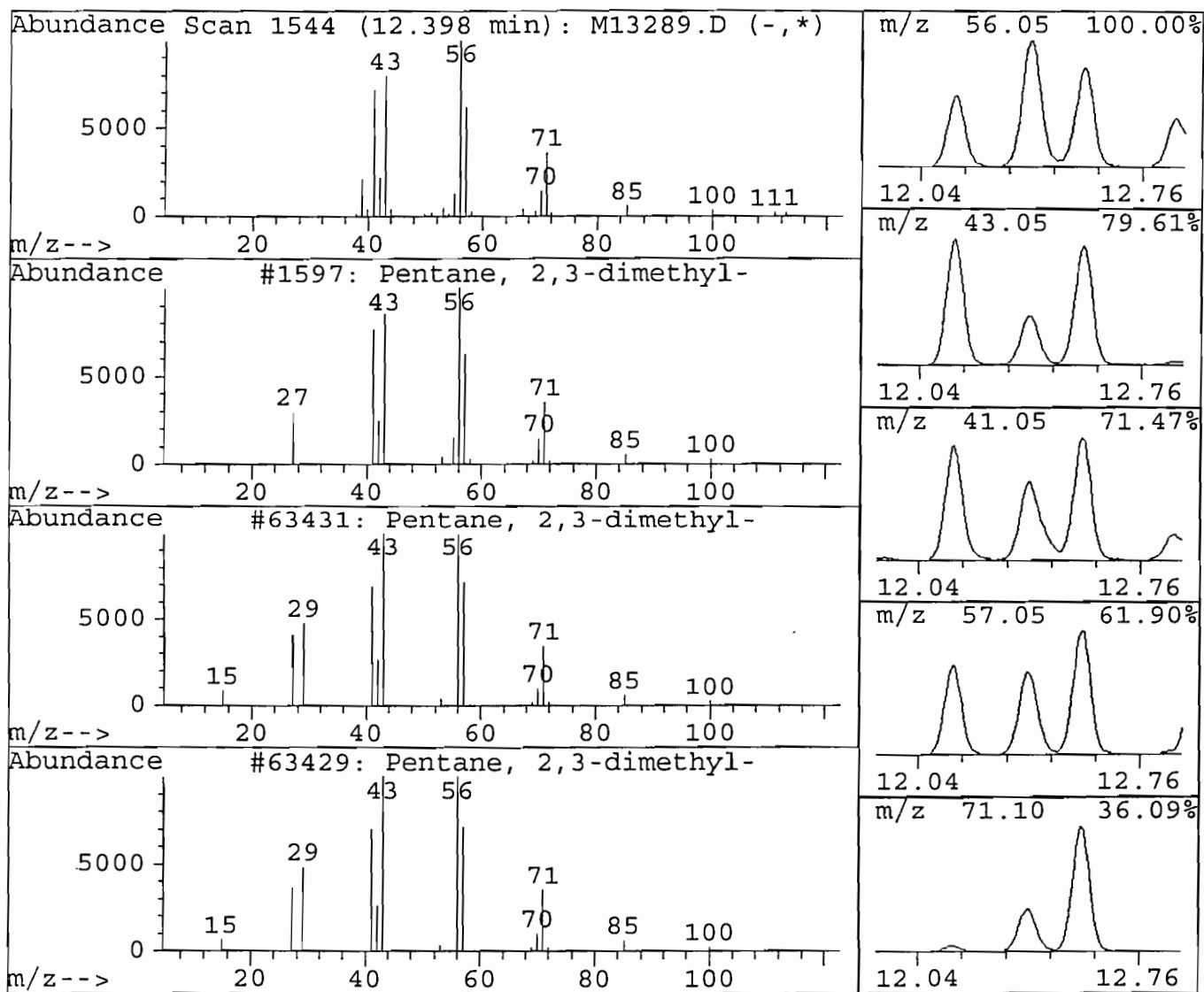
Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
12.40	96.45 ug/L	12191287	Fluorobenzene	14.16

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Pentane, 2,3-dimethyl-	1597	000565-59-3	95
2	Pentane, 2,3-dimethyl-	63431	000565-59-3	91
3	Pentane, 2,3-dimethyl-	63429	000565-59-3	91
4	Pentane, 2,3-dimethyl-	63432	000565-59-3	72
5	Pentane, 2,3-dimethyl-	63430	000565-59-3	59



000069

Library Search Compound Report

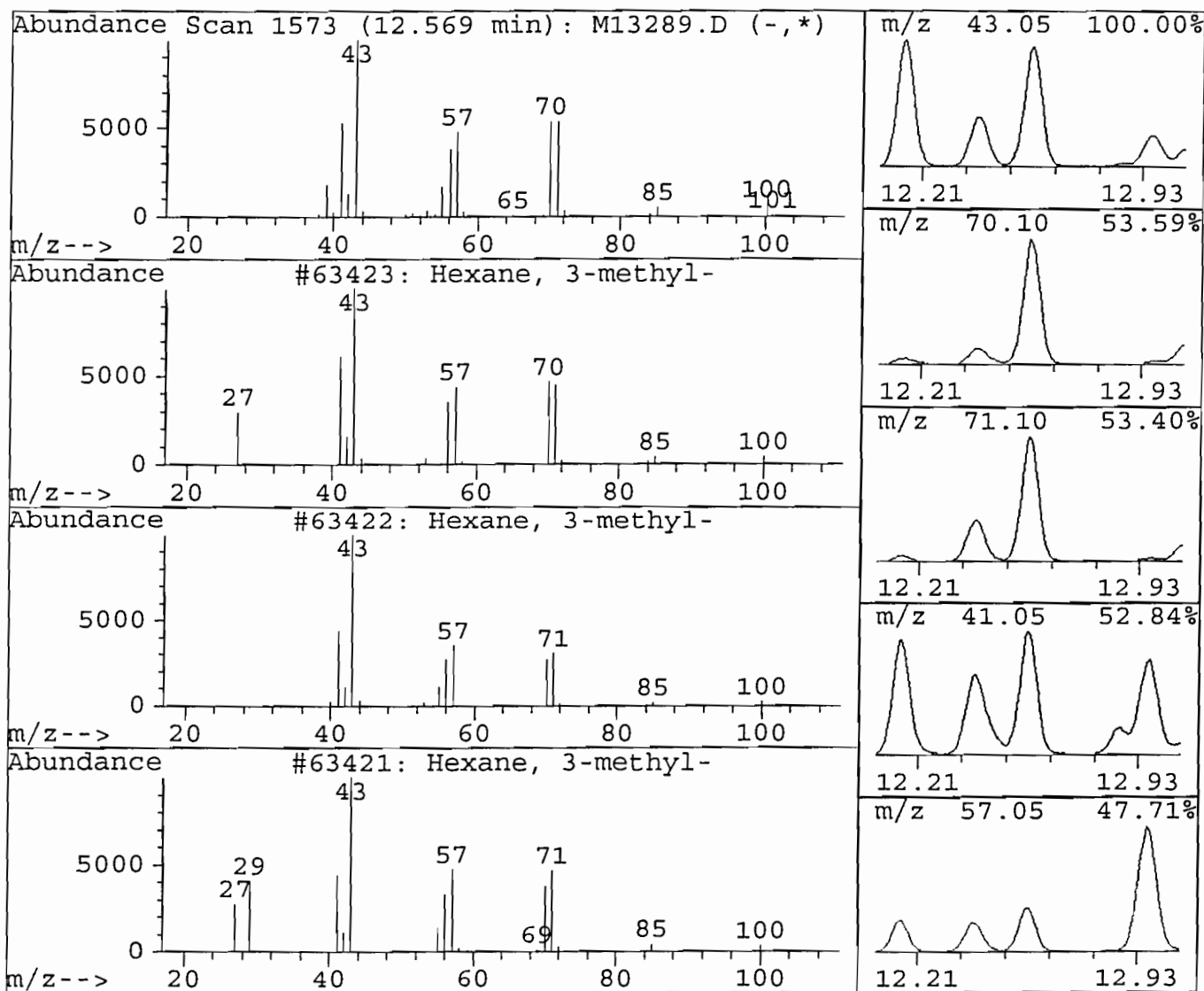
Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
12.57	117.95 ug/L	14907783	Fluorobenzene	14.16

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Hexane, 3-methyl-	63423	000589-34-4	95
2	Hexane, 3-methyl-	63422	000589-34-4	94
3	Hexane, 3-methyl-	63421	000589-34-4	91
4	Hexane, 3-methyl-	1593	000589-34-4	74
5	Heptane, 4-methyl-	3096	000589-53-7	64



000070

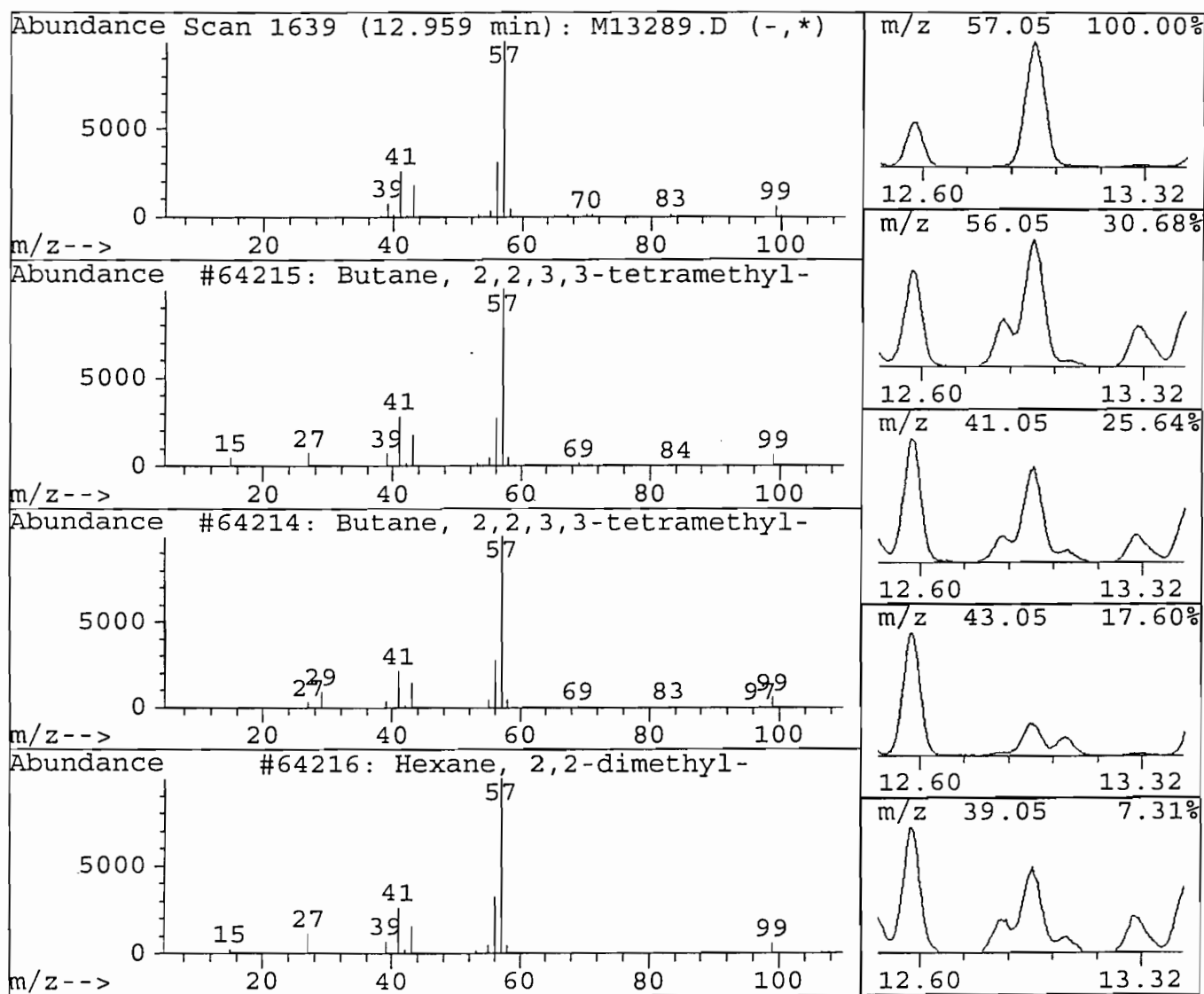
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
12.96	96.07 ug/L	12142396	Fluorobenzene	14.16	
Hit# of 10	Tentative ID		Ref#	CAS#	Qual
1	Butane, 2,2,3,3-tetramethyl-		64215	000594-82-1	78
2	Butane, 2,2,3,3-tetramethyl-		64214	000594-82-1	78
3	Hexane, 2,2-dimethyl-		64216	000590-73-8	78
4	Pentane, 2,2,4-trimethyl-		64220	000540-84-1	78
5	Pentane, 2,2,4-trimethyl-		3093	000540-84-1	72



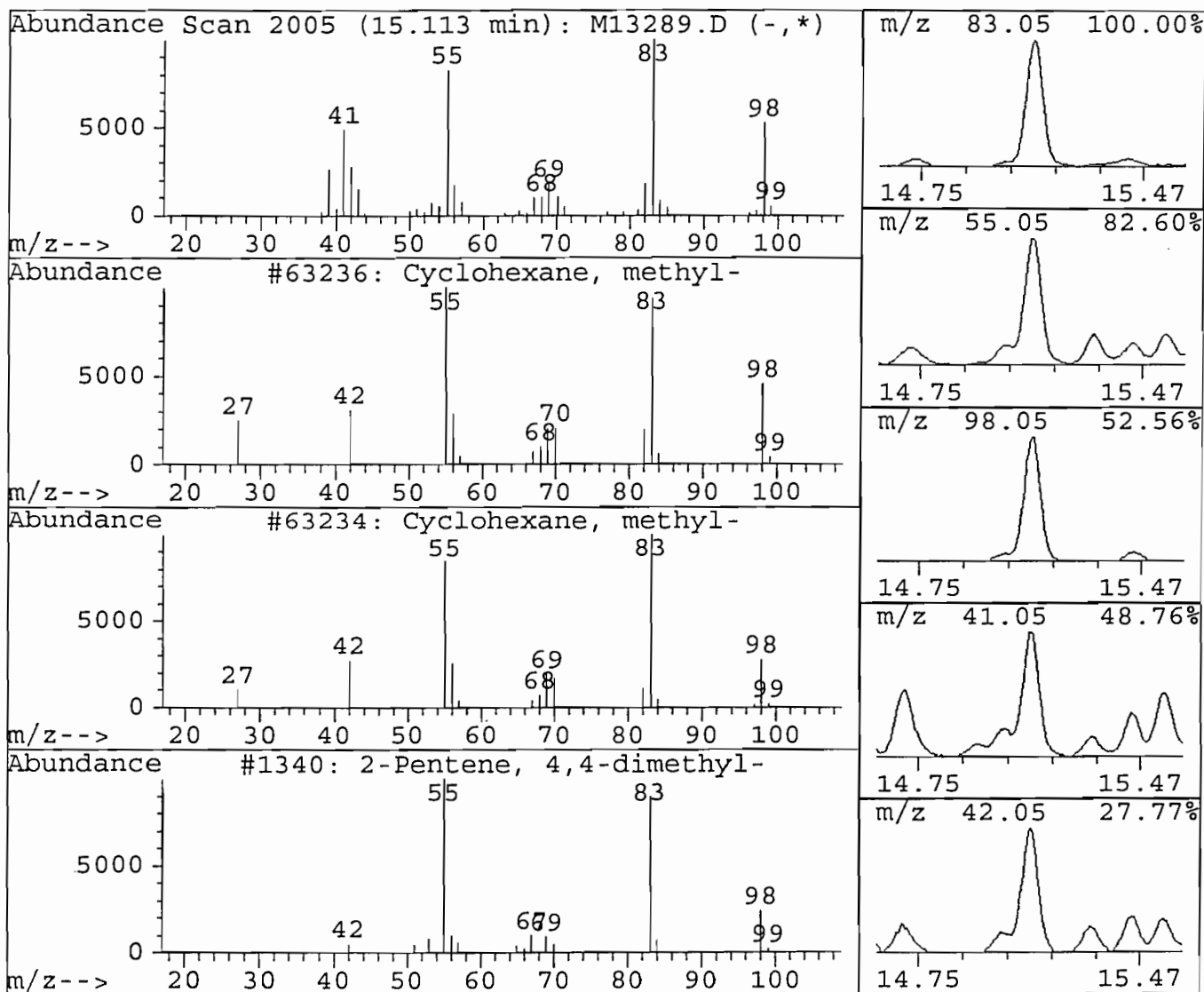
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
15.11	97.20 ug/L	12286031	Fluorobenzene	14.16	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Cyclohexane, methyl-		63236	000108-87-2	93
2	Cyclohexane, methyl-		63234	000108-87-2	78
3	2-Pentene, 4,4-dimethyl-		1340	026232-98-4	72
4	2-Pentene, 3,4-dimethyl-, (Z) -		1358	004914-91-4	72
5	2-Pentene, 2,4-dimethyl-		63271	000625-65-0	68



000072

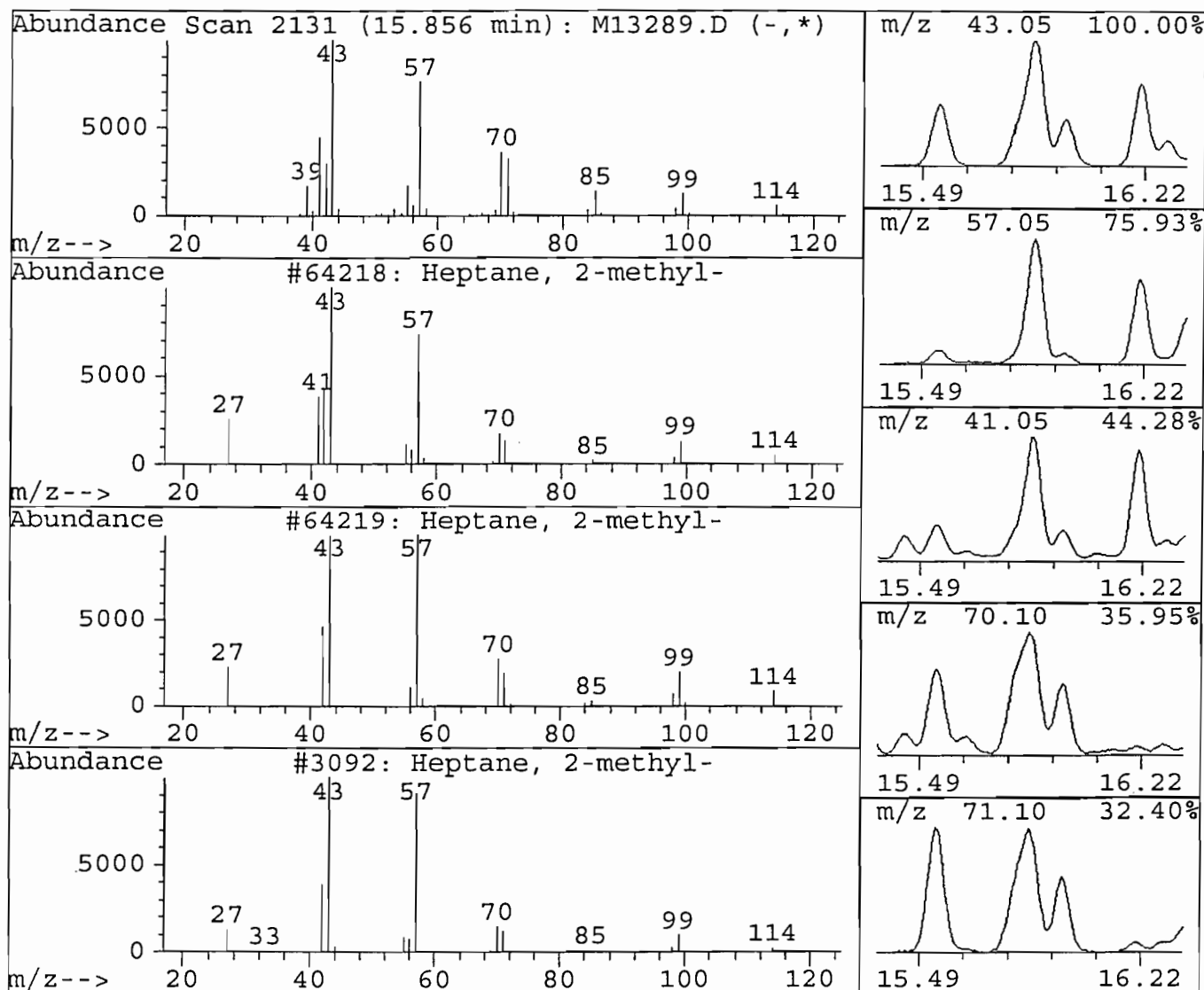
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
15.86	178.12 ug/L	22513129	Fluorobenzene	14.16	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Heptane, 2-methyl-		64218	000592-27-8	64
2	Heptane, 2-methyl-		64219	000592-27-8	58
3	Heptane, 2-methyl-		3092	000592-27-8	53
4	Hexane, 2,5-dimethyl-		64204	000592-13-2	52
5	Heptane, 3,4-dimethyl-		5155	000922-28-1	50



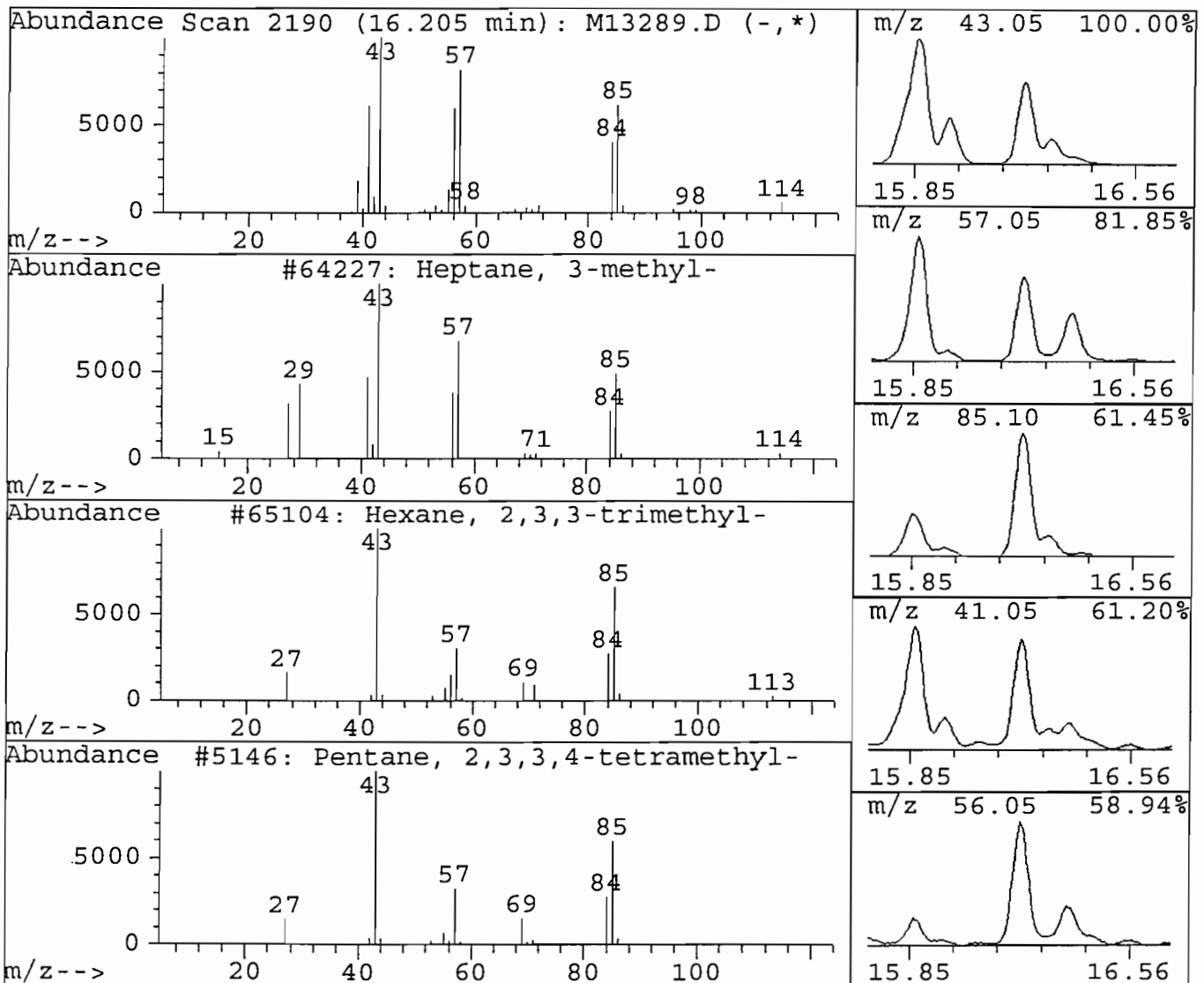
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
16.20	103.31 ug/L	13057646	Fluorobenzene	14.16	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Heptane, 3-methyl-		64227	000589-81-1	83
2	Hexane, 2,3,3-trimethyl-		65104	016747-28-7	59
3	Pentane, 2,3,3,4-tetramethyl-		5146	016747-38-9	53
4	Hexane, 1-(hexyloxy)-2-methyl-		23019	074421-17-3	53
5	Butane, 2,2,3-trimethyl-		1599	000464-06-2	50



000074

Library Search Compound Report

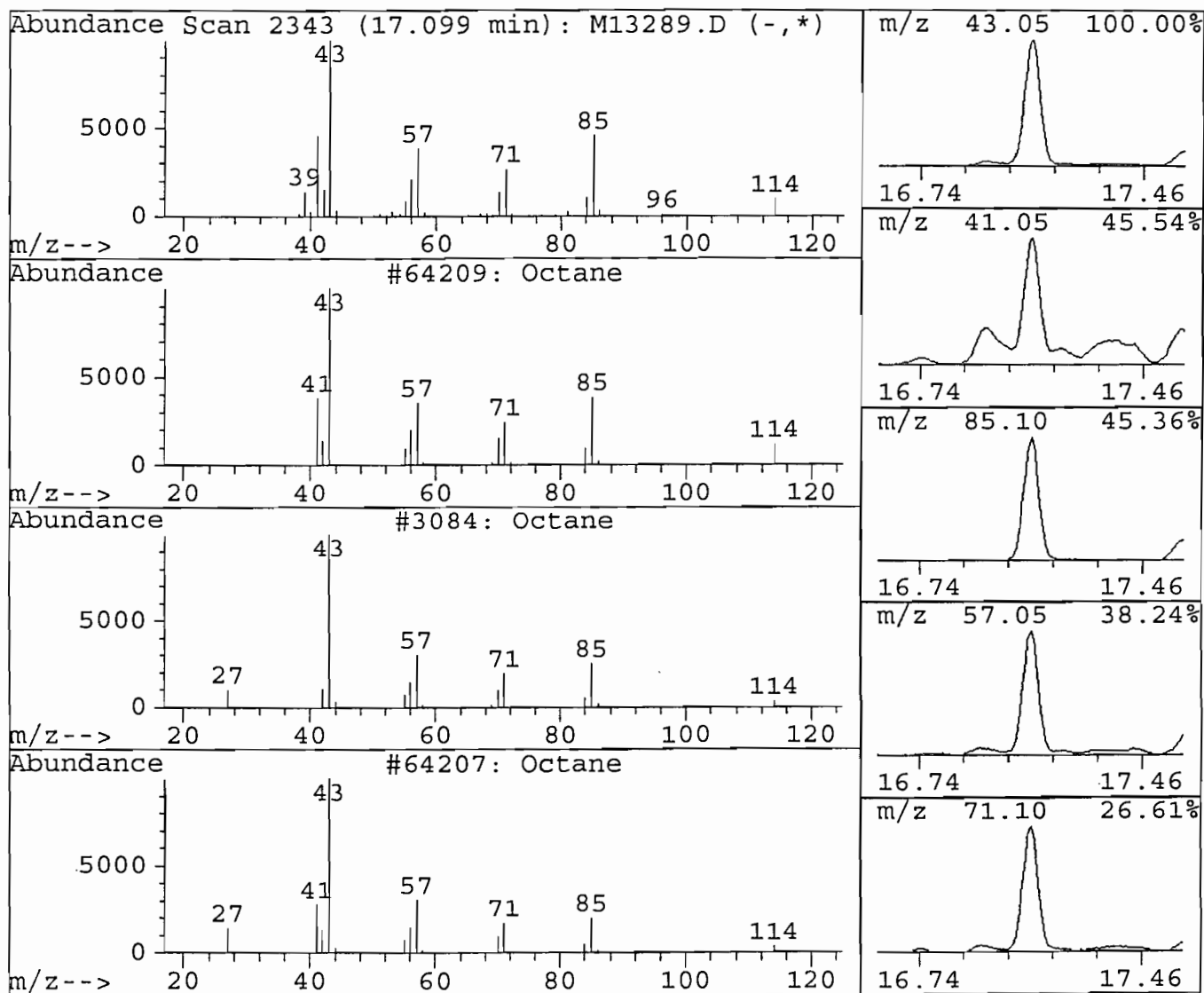
Data File : D:\HPCHEM\3\DATA\V3102199\M13289.D
Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
17.10	140.06 ug/L	17703389	Fluorobenzene	14.16

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane	64209	000111-65-9	94
2	Octane	3084	000111-65-9	91
3	Octane	64207	000111-65-9	91
4	Octane	64208	000111-65-9	87
5	Heptane, 2,4-dimethyl-	5145	002213-23-2	64



000075

Library Search Compound Report

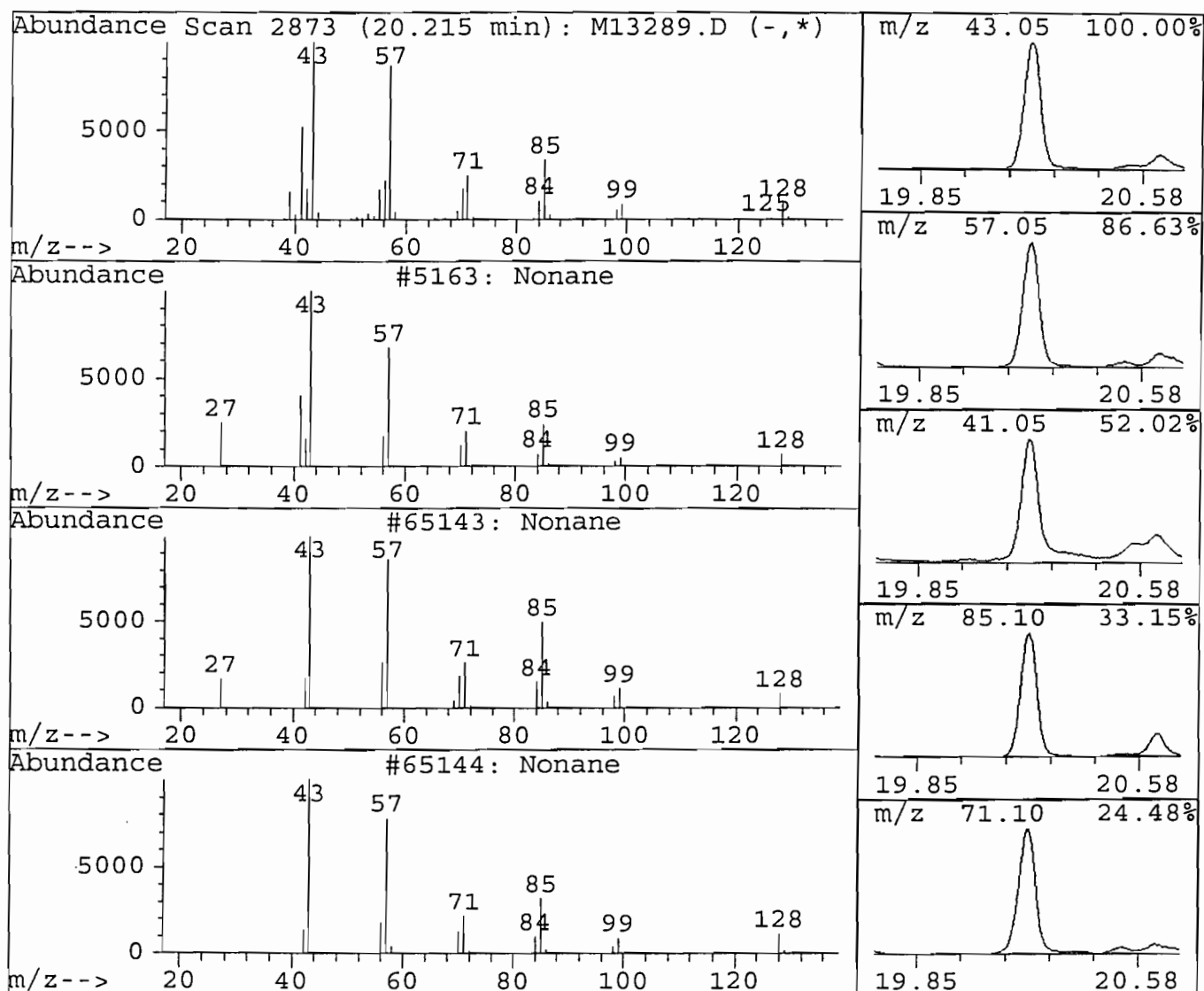
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Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
20.21	161.07 ug/L	42339137	Chlorobenzene-d5	20.51

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane	5163	000111-84-2	97
2	Nonane	65143	000111-84-2	93
3	Nonane	65144	000111-84-2	91
4	Nonane	65142	000111-84-2	91
5	Nonane	65145	000111-84-2	91



000076

Library Search Compound Report

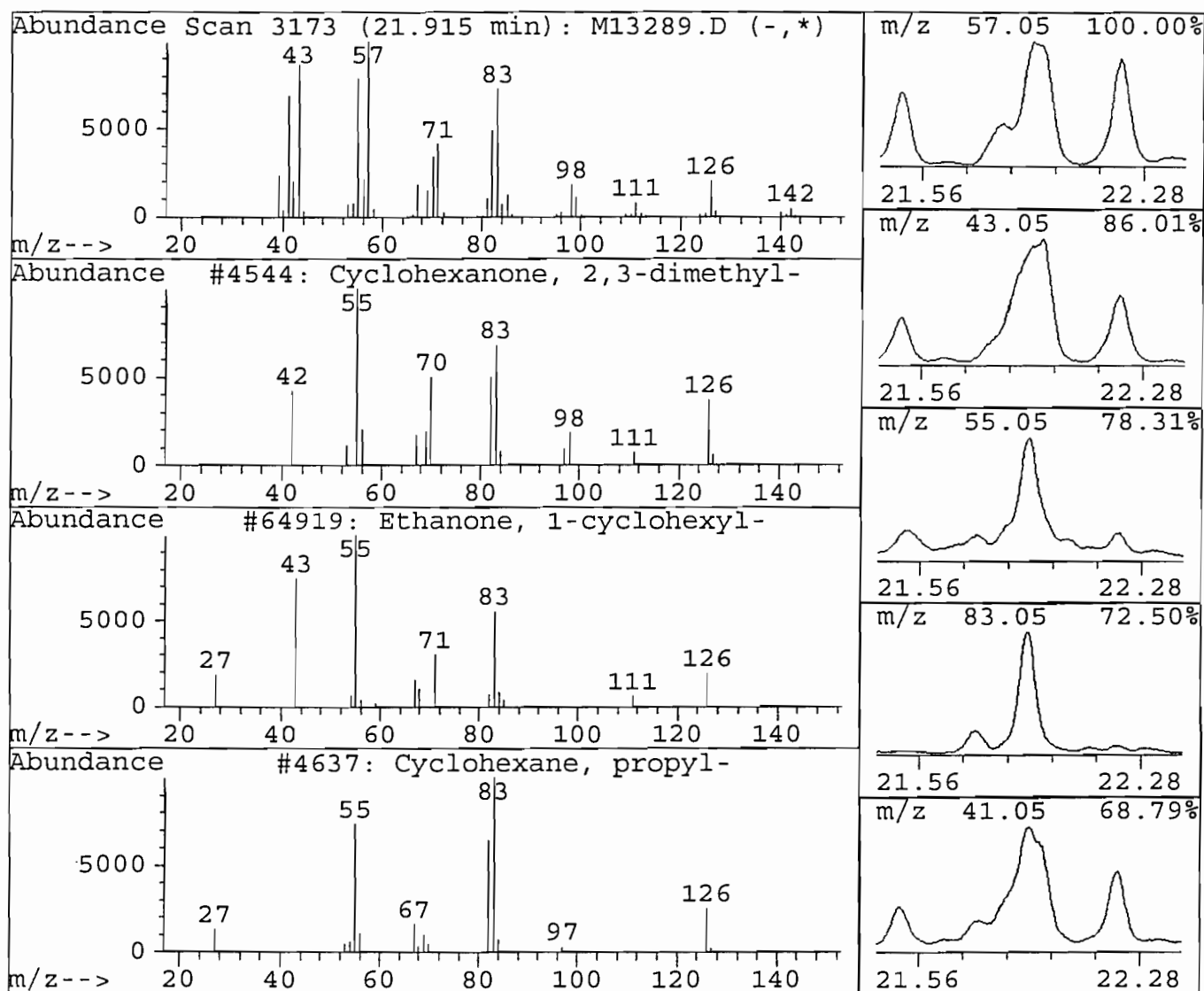
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Acq Time : 22 Oct 99 7:14 am
Sample : 13826ASP-87993
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.91	195.08 ug/L	51278983	Chlorobenzene-d5	20.51

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexanone, 2,3-dimethyl-	4544	013395-76-1	78
2	Ethanone, 1-cyclohexyl-	64919	000823-76-7	43
3	Cyclohexane, propyl-	4637	001678-92-8	41
4	Nonane, 4-methyl-	66223	017301-94-9	38
5	Ethanone, 1-cyclohexyl-	64918	000823-76-7	38



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS10DL

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87993DL

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13297.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 14

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	2400		UD
74-87-3	Chloromethane	4800		UD
75-01-4	Vinyl Chloride	2700		UD
74-83-9	Bromomethane	5500		UD
75-00-3	Chloroethane	7300		UD
107-02-8	Acrolein	7300		UD
75-69-4	Trichlorofluoromethane	1700		UD
75-35-4	1,1-Dichloroethene	2800		UD
67-64-1	Acetone	7300		UD
75-15-0	Carbon Disulfide	7300		UD
75-09-2	Methylene Chloride	6800		D
156-60-5	trans-1,2-Dichloroethene	6200		UD
107-13-1	Acrylonitrile	7300		UD
75-34-3	1,1-Dichloroethane	1900		UD
594-20-7	2,2-Dichloropropane	1500		UD
156-59-2	cis-1,2-dichloroethene	52200		D
74-97-5	Bromochloromethane	2500		UD
67-66-3	Chloroform	1700		UD
71-55-6	1,1,1-Trichloroethane	1300		UD
108-05-4	Vinyl Acetate	7300		UD
78-93-3	2-Butanone	7300		UD
56-23-5	Carbon Tetrachloride	5800		UD
563-58-6	1,1-Dichloropropene	1700		UD
71-43-2	Benzene	4400		D
107-06-2	1,2-Dichloroethane	1500		UD
79-01-6	Trichloroethene	3700		UD
78-87-5	1,2-Dichloropropane	4900		UD
74-95-3	Dibromomethane	2100		UD
75-27-4	Bromodichloromethane	1500		UD
110-07-3	2-Chloroethyl Vinyl Ether	7300		UD
10061-01-5	cis-1,3-Dichloropropene	1500		UD
108-88-3	Toluene	155300		D
10061-02-6	trans-1,3-Dichloropropene	1500		UD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS10DL

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87993DL

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13297.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 14

Date Analyzed: 10/22/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	2000		UD
108-10-1	4-Methyl-2-Pentanone	7300		UD
127-18-4	Tetrachloroethene	1600		UD
142-28-9	1,3-Dichloropropane	1700		UD
124-48-1	Dibromochloromethane	1000		UD
106-93-4	1,2-Dibromoethane	2300		UD
591-78-6	2-Hexanone	7300		UD
108-90-7	Chlorobenzene	1600		UD
630-20-6	1,1,1,2-Tetrachloroethane	1700		UD
100-41-4	Ethylbenzene	55900		D
136777-61-2	m&p-xylenes	220300		D
95-47-6	o-xylene	99900		D
100-42-5	Styrene	290		UD
75-25-2	Bromoform	720		UD
98-82-8	isopropylbenzene	16900		D
108-86-1	Bromobenzene	1500		UD
79-34-5	1,1,2,2-Tetrachloroethane	2300		UD
96-18-4	1,2,3-Trichloropropane	3600		UD
103-65-1	n-Propylbenzene	56700		D
95-49-8	2-Chlorotoluene	9200		D
106-43-4	4-Chlorotoluene	8900		D
108-67-8	1,3,5-Trimethylbenzene	86600		D
98-06-6	tert-Butylbenzene	1700		UD
95-63-6	1,2,4-Trimethylbenzene	275600		D
135-98-8	sec-Butylbenzene	14600		D
541-73-1	1,3-Dichlorobenzene	1700		UD
99-87-6	4-Isopropyltoluene	17400		D
106-46-7	1,4-Dichlorobenzene	1700		UD
95-50-1	1,2-Dichlorobenzene	1500		UD
104-51-8	n-Butylbenzene	2500		UD
96-12-8	1,2-Dibromo-3-chloropropane	7300		UD
120-82-1	1,2,4-Trichlorobenzene	1700		UD
87-68-3	Hexachlorobutadiene	1500		UD

SAMPLE NO.

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Soil Aliquot Volume: 100 (uL)

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-009-SS10DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87993DL
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13297.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 14 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 589-34-4	Hexane, 3-methyl-	12.58	32800	J
2.	Unknown	15.87	62200	J
3. 589-81-1	Heptane, 3-methyl-	16.22	35700	J
4. 111-65-9	Octane	17.11	49000	J
5.	Unknown	19.13	33400	J
6. 111-84-2	Nonane	20.21	62000	J
7.	Unknown	21.92	64800	J
8. 611-14-3	Benzene, 1-ethyl-2-methyl-	23.47	113300	J
9. 1074-43-7	Benzene, 1-methyl-3-propyl-	25.50	46400	J
10. 99-87-6	Benzene, 1-methyl-4-(1-methy	27.45	39400	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000081

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
 Acq Time : 22 Oct 99 1:57 pm
 Sample : 13826ASP-87993 1:10 DIL
 Misc : 5MLS 4G/10 mL MeOH
 Quant Time: Oct 22 15:18 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.16	96	2062466	50.00	ug/L	0.06
43) Chlorobenzene-d5	20.52	117	1699680	50.00	ug/L	0.07
58) 1,4-dichlorobenzene-d4	25.26	152	748781	50.00	ug/L	0.08
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.45	113	670075	52.23	ug/L	104.47%
30) 1,2-Dichlorethane-d4	13.50	65	726705	50.26	ug/L	100.52%
38) Toluene-d8	17.43	98	2046798	50.94	ug/L	101.88%
42) 4-Bromofluorobenzene	23.00	95	917651	54.02	ug/L	108.04%
Target Compounds						Qvalue
13) methylene chloride	8.64	84	57884	4.65	ug/L	93
20) cis-1,2-dichloroethene	11.65	61	678877	35.88	ug/L	96
29) benzene	13.73	78	136122	3.00	ug/L	97
39) toluene	17.59	91	5307501	106.88	ug/L	90
53) ethylbenzene	20.68	91	2090902	38.49	ug/L	99
54) m&p-xylenes	20.83	106	2796477	151.55	ug/L	100
55) o-xylene	21.74	91	2934035	68.74	ug/L	97
59) isopropylbenzene	22.46	105	589240	11.62	ug/L	98
63) n-propylbenzene	23.28	120	478966	38.99	ug/L	95
64) 2-chlorotoluene	23.66	126	71992	6.34	ug/L	97
65) 4-chlorotoluene	23.66	126	71992	6.11	ug/L	92
66) 1,3,5-trimethylbenzene	23.58	105	2432579	59.55	ug/L	99
68) 1,2,4-trimethylbenzene	24.33	105	7429125	189.59	ug/L	98
69) sec-butylbenzene	24.64	105	506633	10.04	ug/L	99
71) 4-isopropyltoluene	24.79	119	536298	11.98	ug/L	98
78) naphthalene	30.68	128	1268489	40.51	ug/L	97

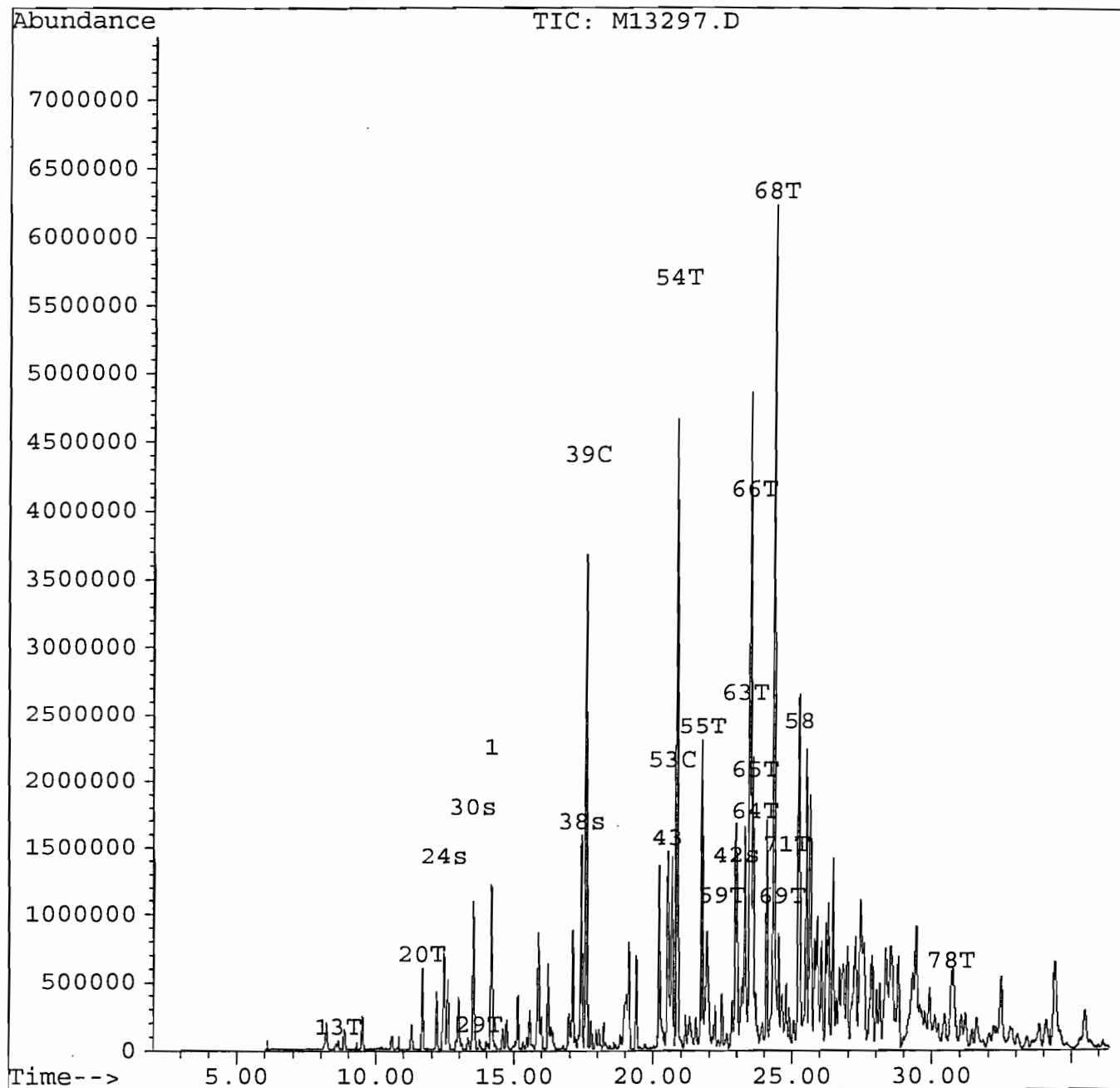
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Quantitation Report

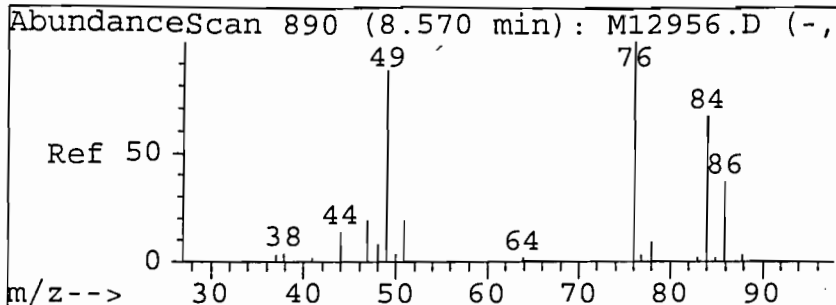
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Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH
Quant Time: Oct 22 15:18 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration

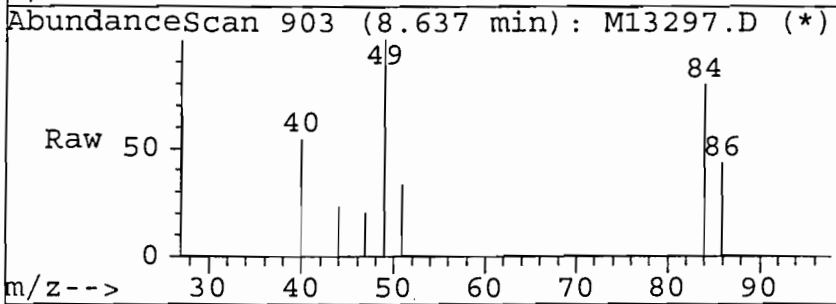


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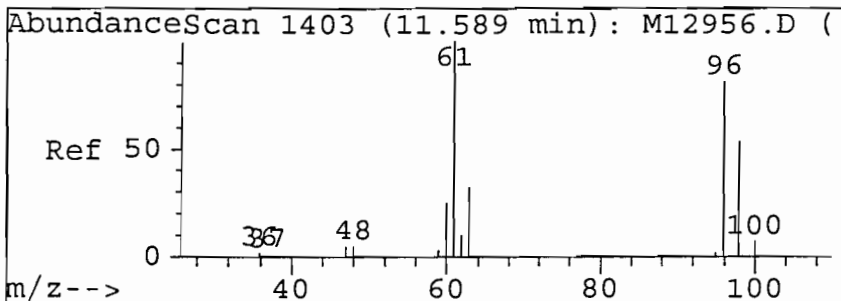
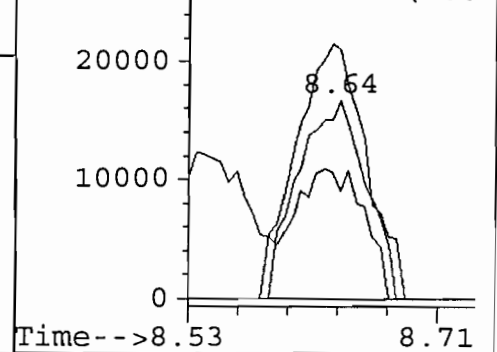
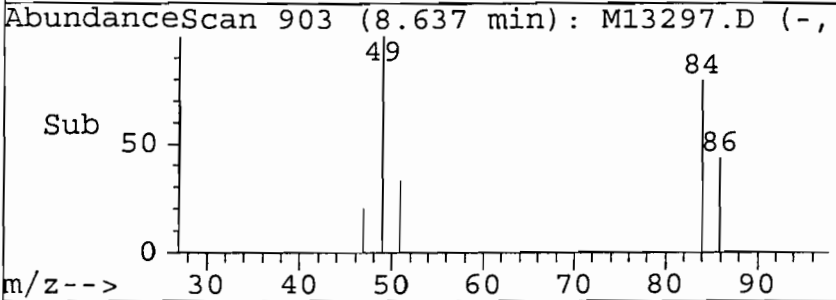


#13
methylene chloride
Concen: 4.65 ug/L
RT: 8.64 min Scan# 903
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

Tgt Ion:	84	Resp:	57884
Ion	Ratio	Lower	Upper
84	100		
86	54.3	45.0	83.6
49	125.9	92.0	170.9
0	0.0	0.0	0.0

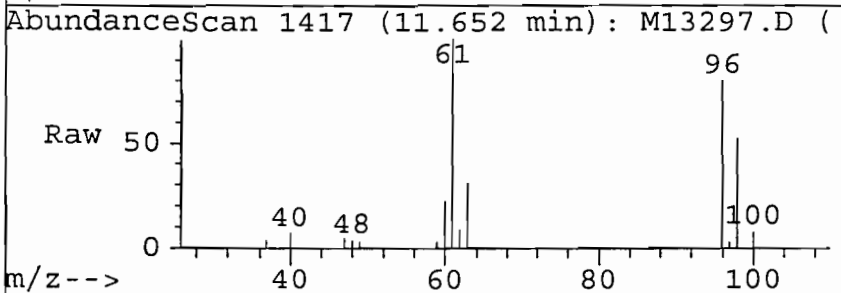


Abundance	Ion	84.00	(83.
30000	Ion	86.00	(85.
	Ion	49.00	(48.

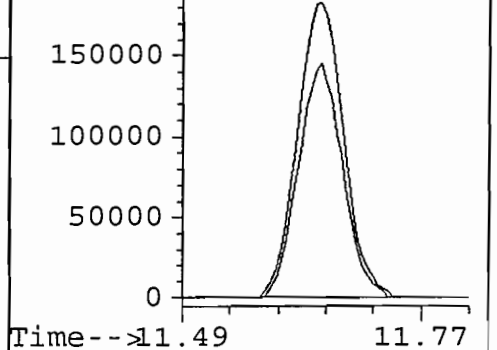
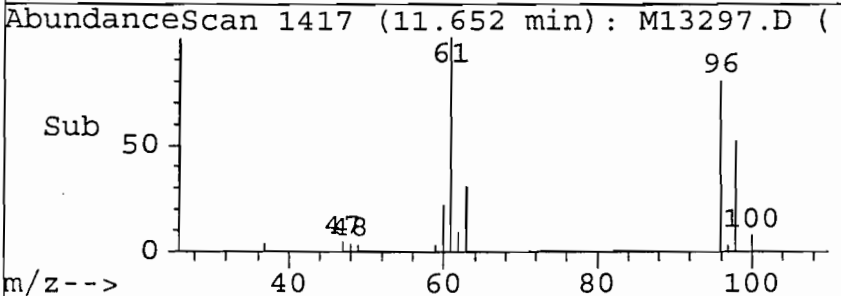


#20
cis-1,2-dichloroethene
Concen: 35.88 ug/L
RT: 11.65 min Scan# 1417
Delta R.T. 0.06 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

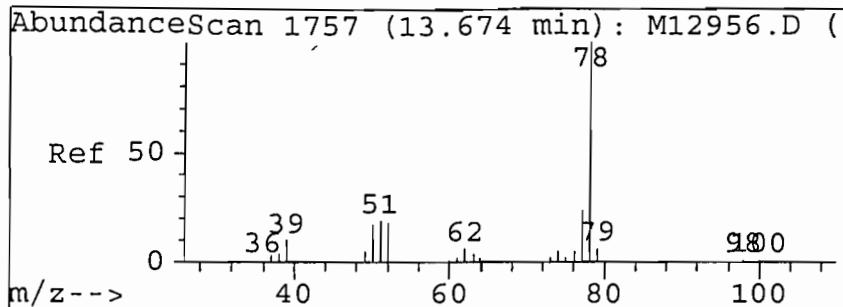
Tgt Ion:	61	Resp:	678877
Ion	Ratio	Lower	Upper
61	100		
96	79.7	53.3	98.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Abundance	Ion	61.00	(60.
200000	Ion	96.00	(95.
		11.65	

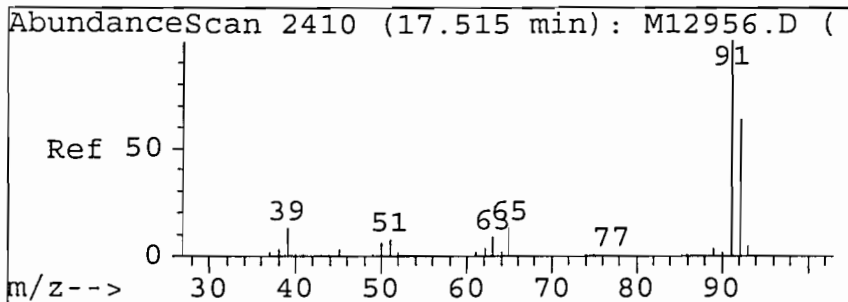
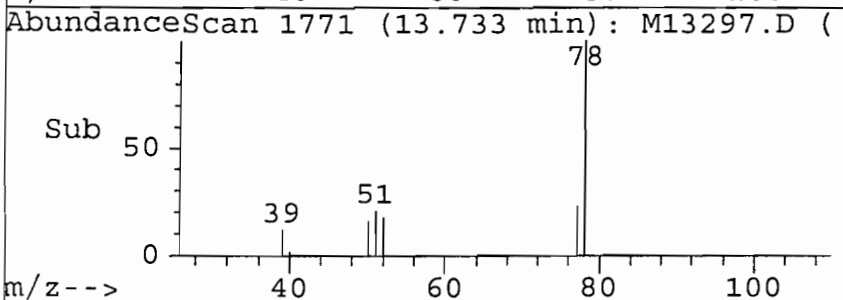
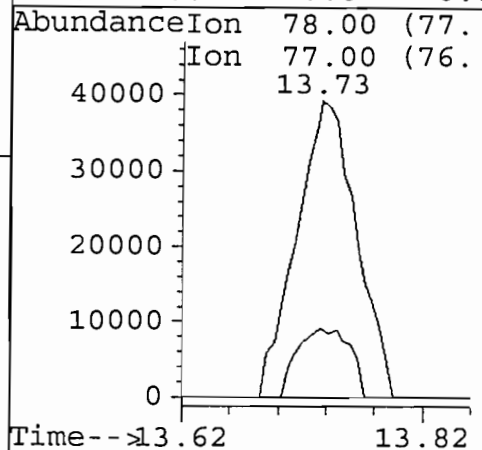
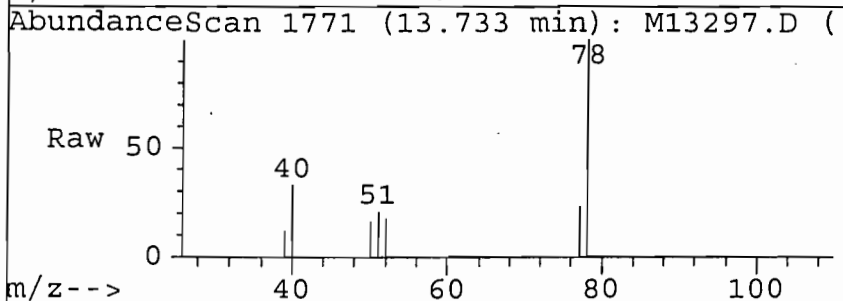


000084



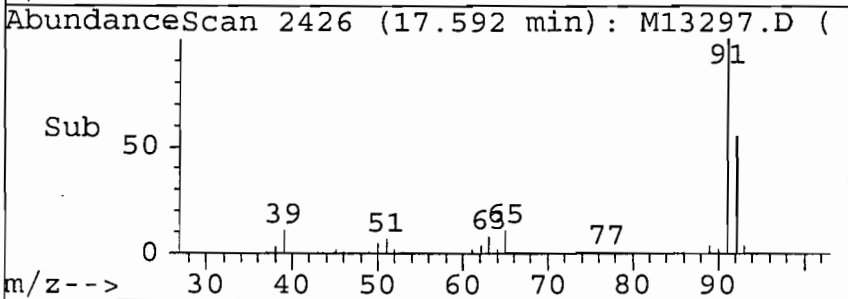
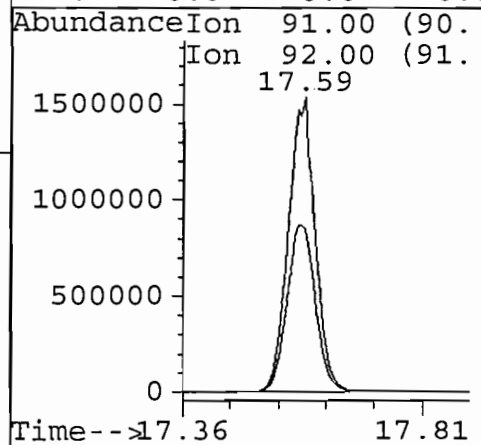
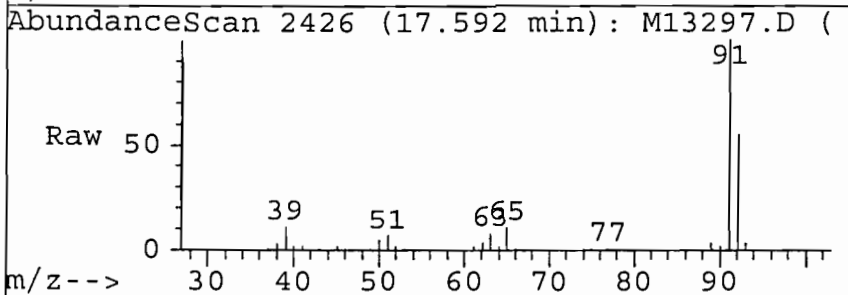
#29
benzene
Concen: 3.00 ug/L
RT: 13.73 min Scan# 1771
Delta R.T. 0.06 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

Tgt Ion:	78	Resp:	136122
Ion Ratio		Lower	Upper
78	100		
77	23.1	17.1	31.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

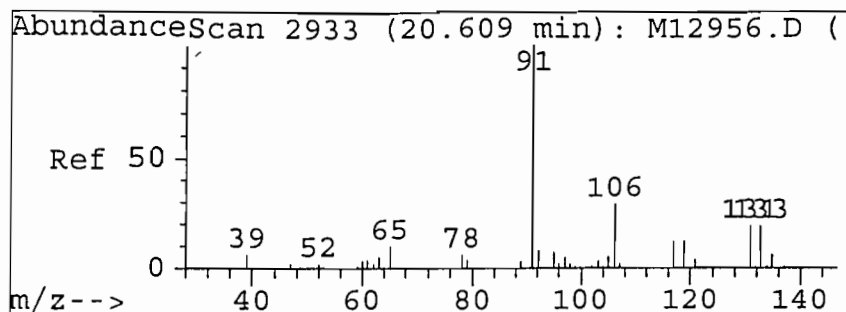


#39
toluene
Concen: 106.88 ug/L
RT: 17.59 min Scan# 2426
Delta R.T. 0.08 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

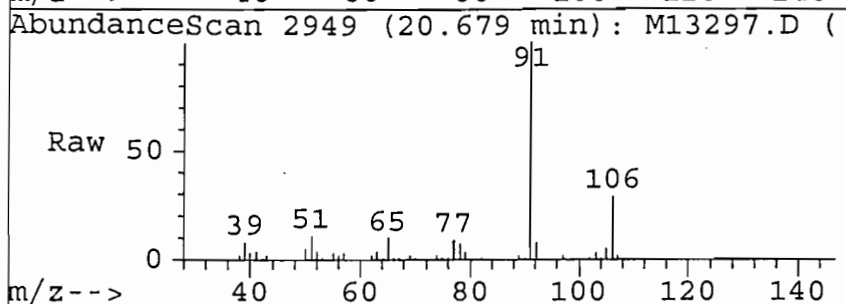
Tgt Ion:	91	Resp:	5307501
Ion Ratio		Lower	Upper
91	100		
92	55.4	44.3	82.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0



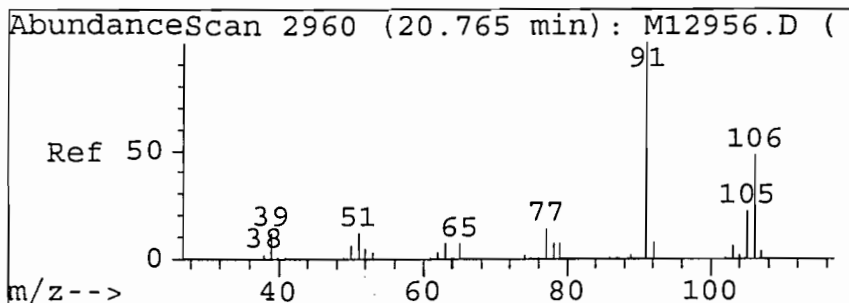
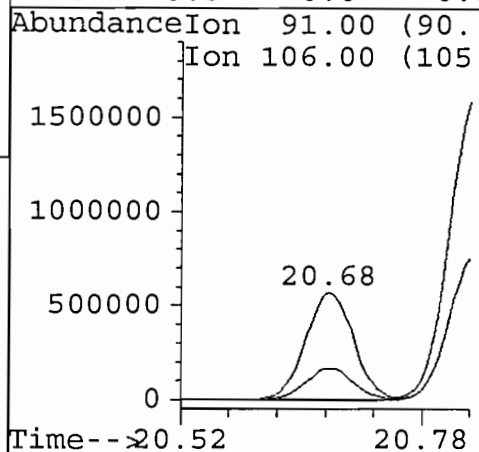
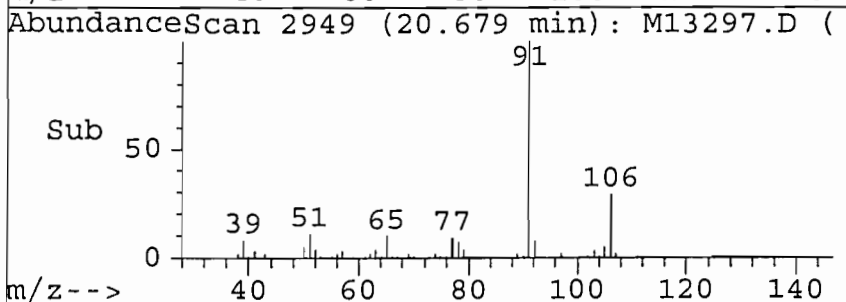
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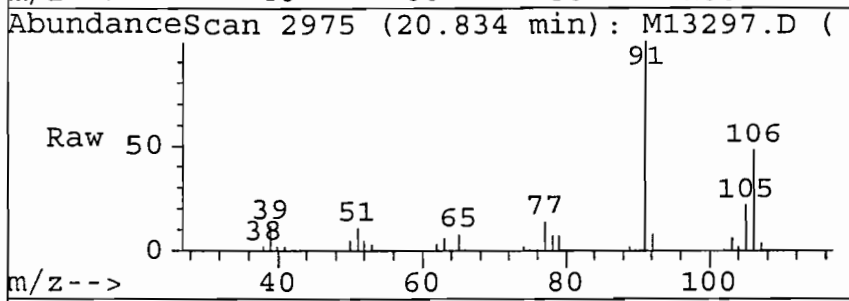
#53
ethylbenzene
Concen: 38.49 ug/L
RT: 20.68 min Scan# 2949
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm



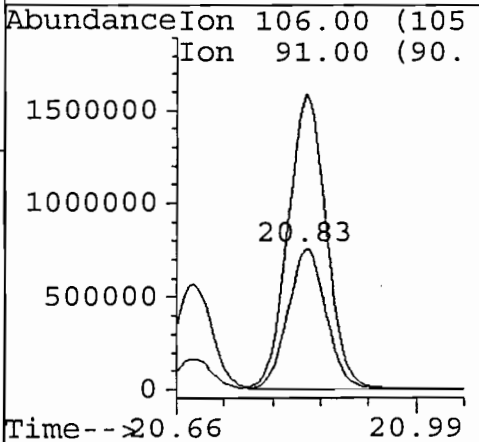
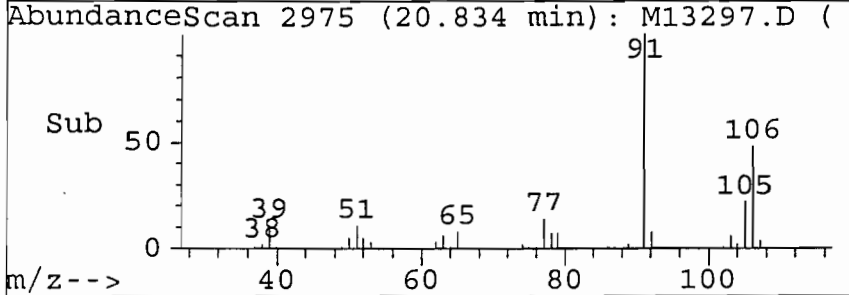
Tgt Ion:91 Resp: 2090902
Ion Ratio Lower Upper
91 100
106 29.1 20.0 37.2
0 0.0 0.0 0.0
0 0.0 0.0 0.0



#54
m&p-xylenes
Concen: 151.55 ug/L
RT: 20.83 min Scan# 2975
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

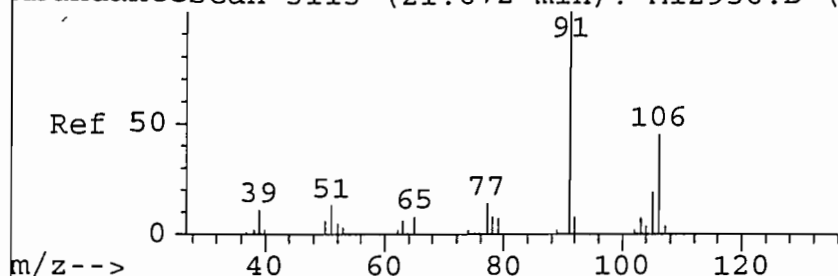


Tgt Ion:106 Resp: 2796477
Ion Ratio Lower Upper
106 100
91 209.4 146.7 272.4
0 0.0 0.0 0.0
0 0.0 0.0 0.0



000086

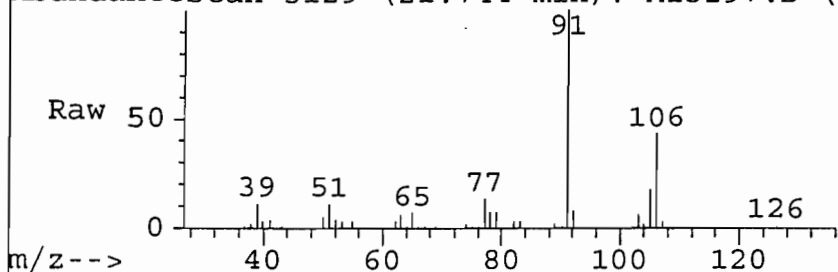
AbundanceScan 3113 (21.672 min): M12956.D (



#55
o-xylene
Concen: 68.74 ug/L
RT: 21.74 min Scan# 3129
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

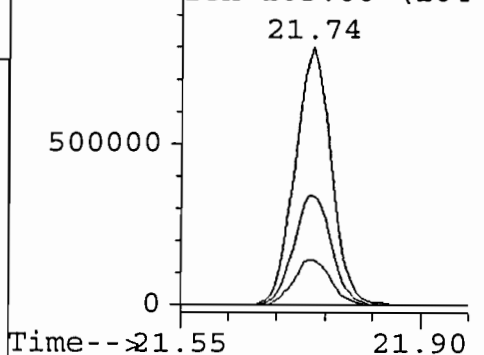
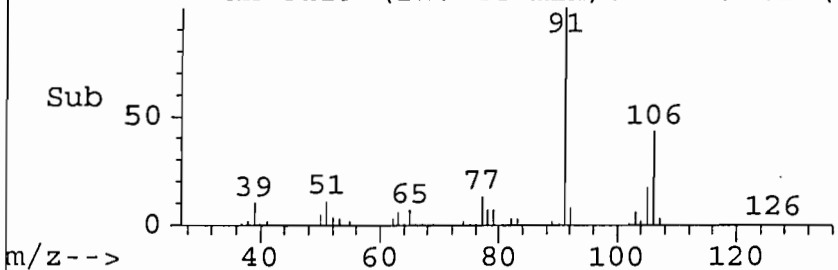
Tgt Ion	Ratio	Lower	Upper
91	100		
106	42.6	31.3	58.1
105	17.3	12.9	24.0
0	0.0	0.0	0.0

AbundanceScan 3129 (21.744 min): M13297.D (

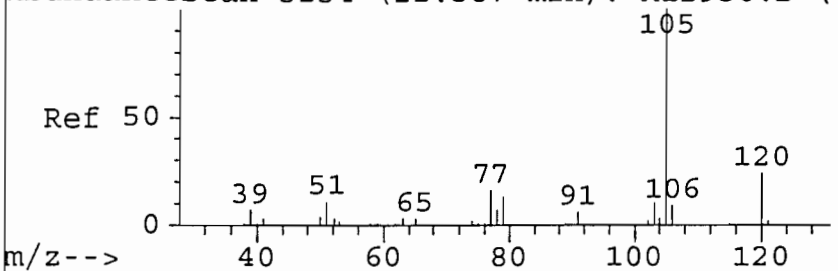


AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104

AbundanceScan 3129 (21.744 min): M13297.D (



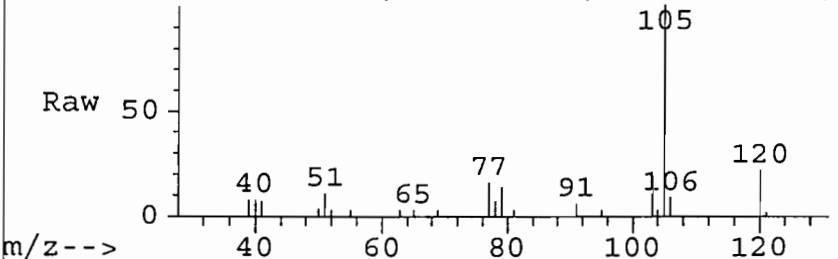
AbundanceScan 3234 (22.387 min): M12956.D (



#59
isopropylbenzene
Concen: 11.62 ug/L
RT: 22.46 min Scan# 3251
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

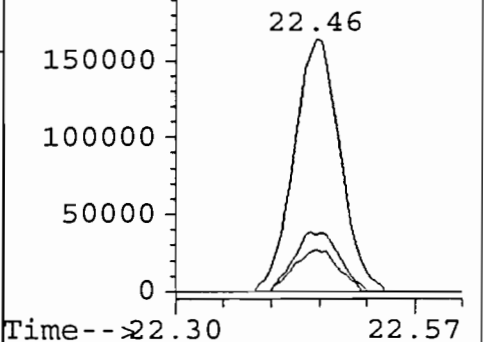
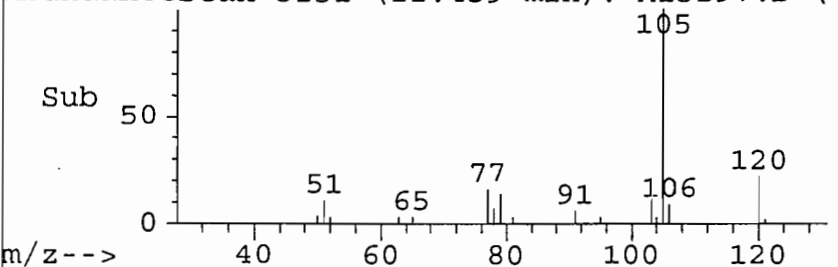
Tgt Ion	Ratio	Lower	Upper
105	100		
120	22.3	16.6	30.8
77	16.2	11.3	20.9
0	0.0	0.0	0.0

AbundanceScan 3251 (22.459 min): M13297.D (



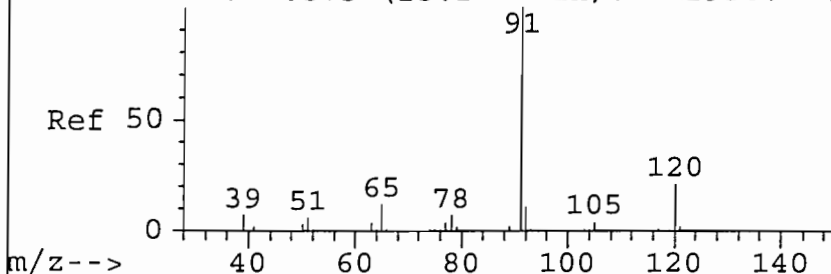
AbundanceIon 105.00 (104
Ion 120.00 (119
Ion 77.00 (76.

AbundanceScan 3251 (22.459 min): M13297.D (



000087

AbundanceScan 3373 (23.210 min): M12956.D (



#63

n-propylbenzene

Concen: 38.99 ug/L

RT: 23.28 min Scan# 3392

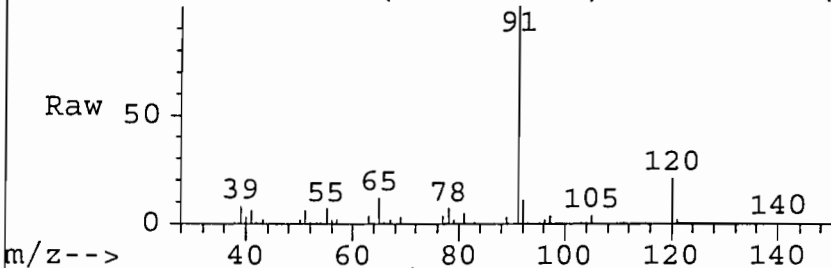
Delta R.T. 0.07 min

Lab File: M13297.D

Acq: 22 Oct 99 1:57 pm

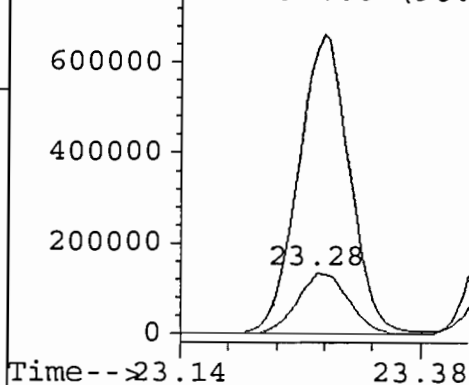
Tgt Ion:	120	Resp:	478966
Ion	Ratio	Lower	Upper
120	100		
91	473.8	340.6	632.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 3392 (23.279 min): M13297.D (

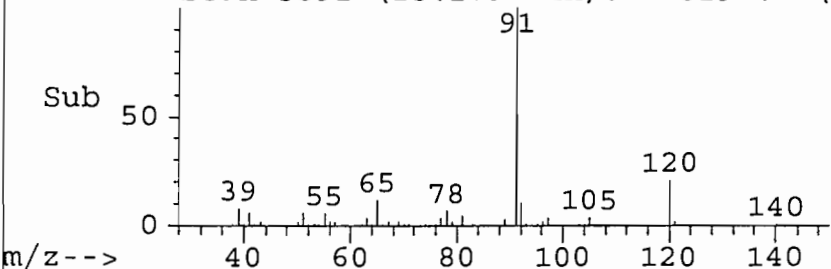


AbundanceIon 120.00 (119

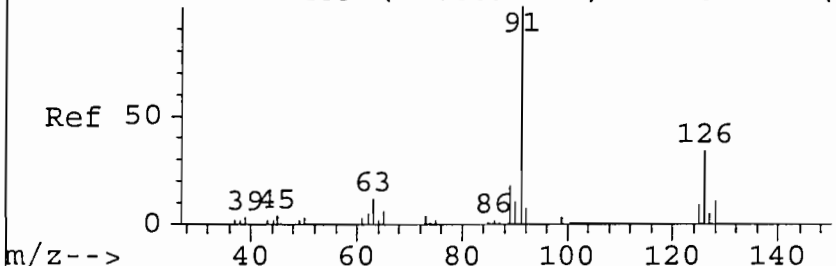
Ion 91.00 (90.



AbundanceScan 3392 (23.279 min): M13297.D (



AbundanceScan 3439 (23.601 min): M12956.D (



#64

2-chlorotoluene

Concen: 6.34 ug/L

RT: 23.66 min Scan# 3459

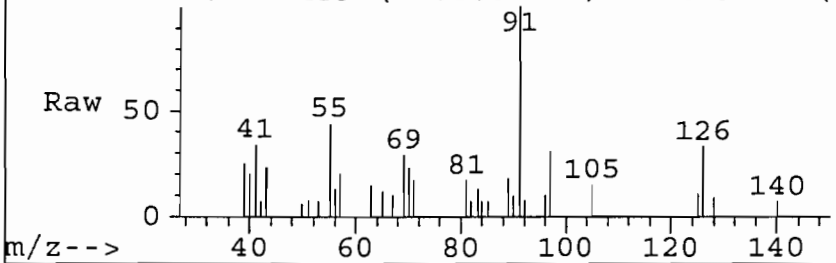
Delta R.T. 0.06 min

Lab File: M13297.D

Acq: 22 Oct 99 1:57 pm

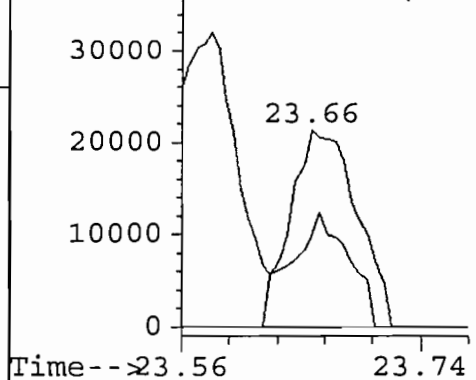
Tgt Ion:	126	Resp:	71992
Ion	Ratio	Lower	Upper
126	100		
63	46.6	17.0	80.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 3459 (23.660 min): M13297.D (

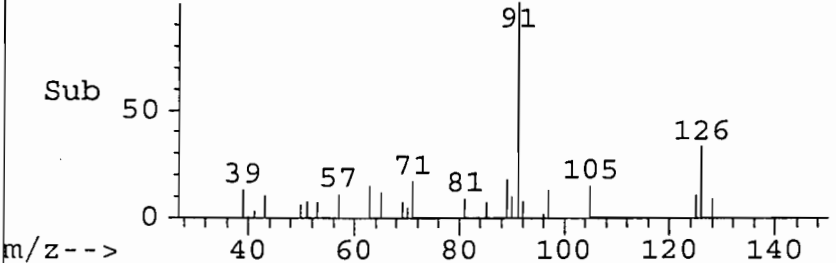


AbundanceIon 126.00 (125

Ion 63.00 (62.

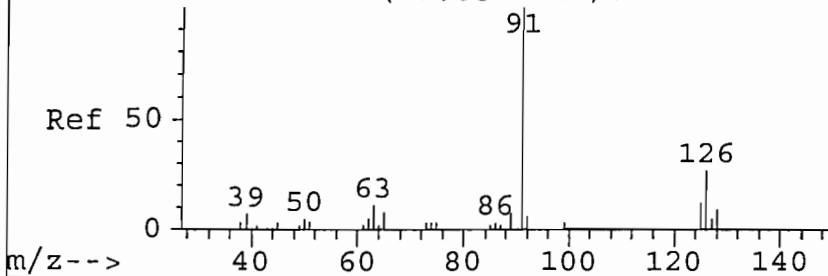


AbundanceScan 3459 (23.660 min): M13297.D (



000088

AbundanceScan 3453 (23.682 min): M12956.D (



#65

4-chlorotoluene

Concen: 6.11 ug/L

RT: 23.66 min Scan# 3459

Delta R.T. -0.02 min

Lab File: M13297.D

Acq: 22 Oct 99 1:57 pm

Tgt Ion:126 Resp: 71992

Ion Ratio Lower Upper

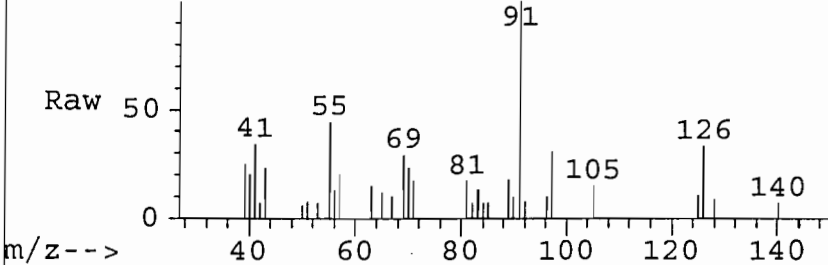
126 100

63 46.6 29.3 54.5

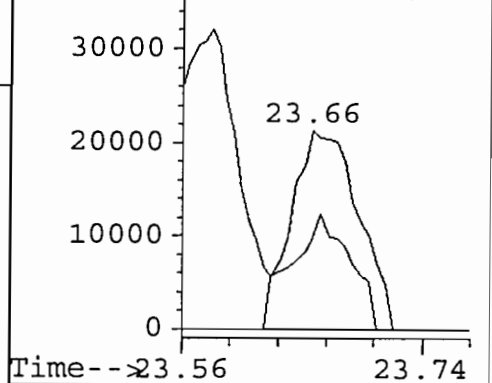
0 0.0 0.0 0.0

0 0.0 0.0 0.0

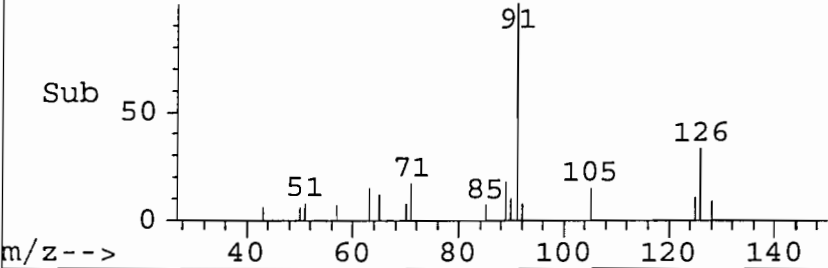
AbundanceScan 3459 (23.660 min): M13297.D (



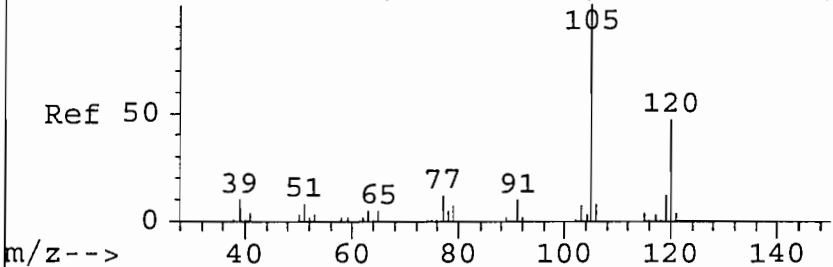
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 3459 (23.660 min): M13297.D (



AbundanceScan 3424 (23.513 min): M12956.D (



#66

1,3,5-trimethylbenzene

Concen: 59.55 ug/L

RT: 23.58 min Scan# 3445

Delta R.T. 0.07 min

Lab File: M13297.D

Acq: 22 Oct 99 1:57 pm

Tgt Ion:105 Resp: 2432579

Ion Ratio Lower Upper

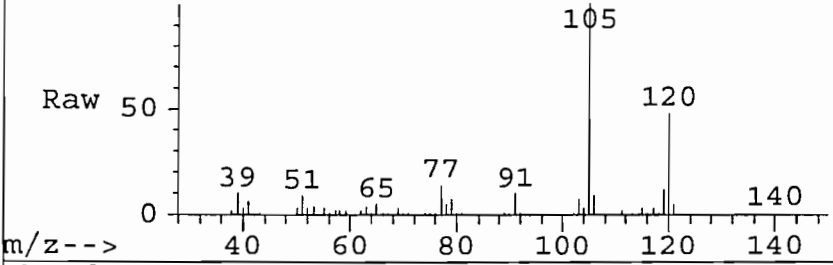
105 100

120 48.1 33.2 61.7

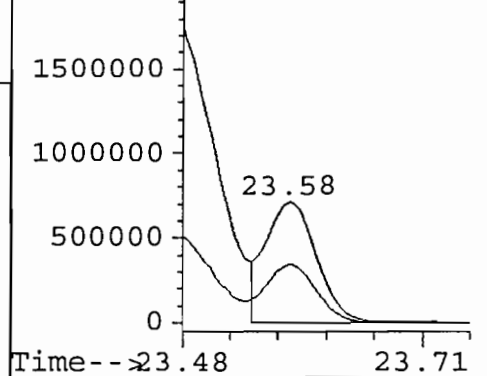
0 0.0 0.0 0.0

0 0.0 0.0 0.0

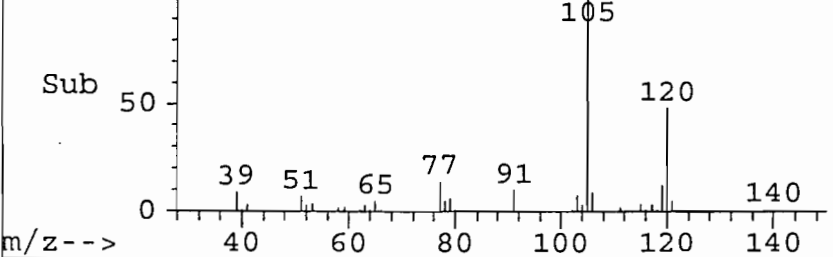
AbundanceScan 3445 (23.581 min): M13297.D (



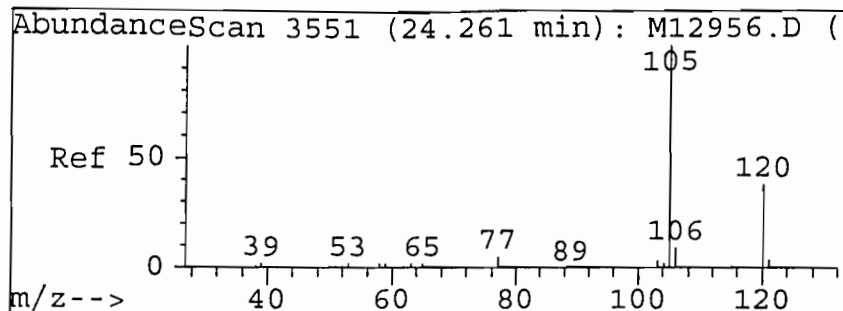
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 3445 (23.581 min): M13297.D (

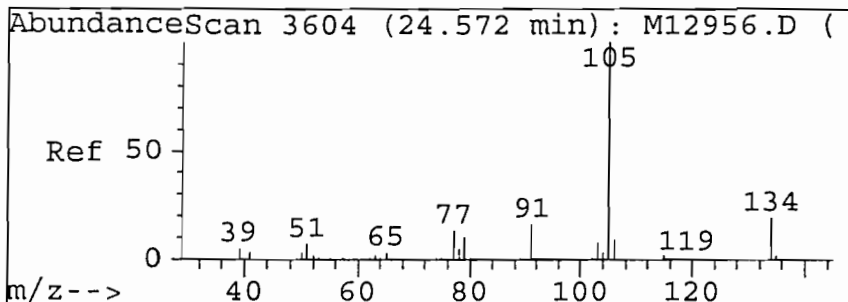
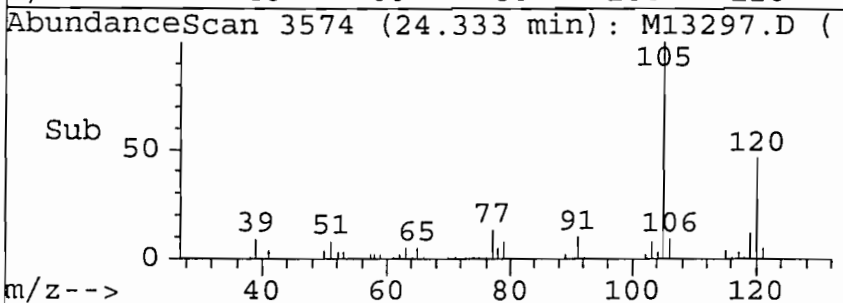
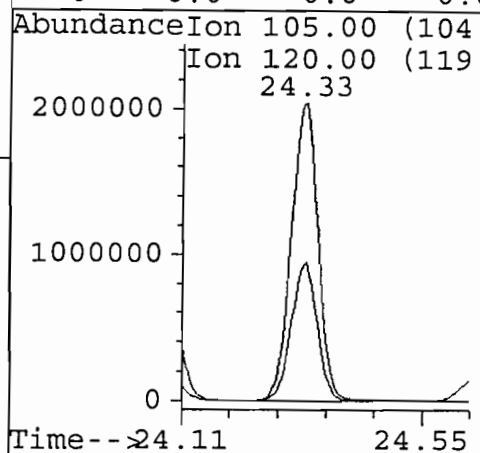
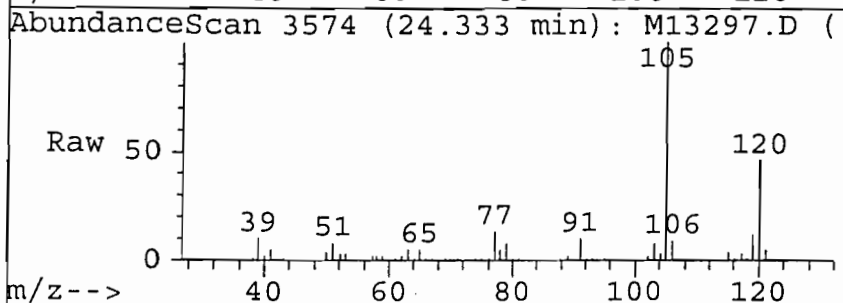


000089



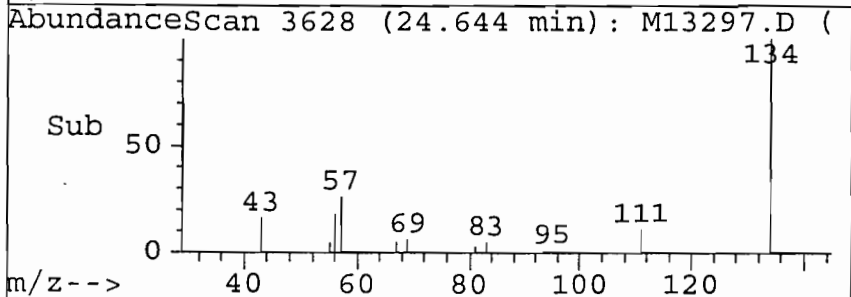
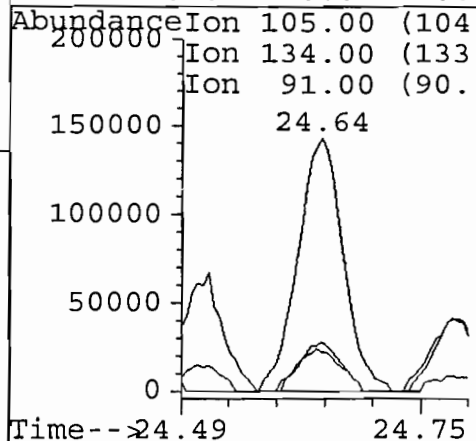
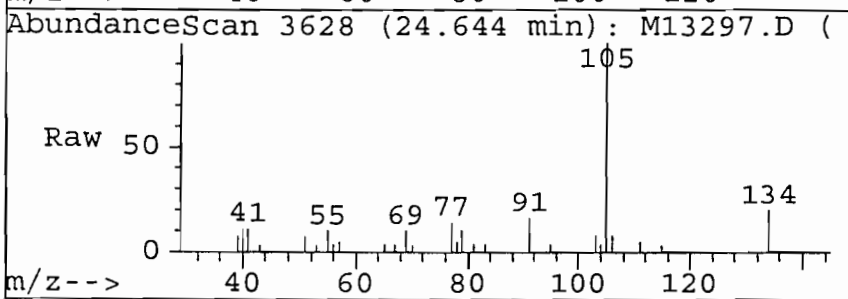
#68
1,2,4-trimethylbenzene
Concen: 189.59 ug/L
RT: 24.33 min Scan# 3574
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

Tgt Ion	Ratio	Lower	Upper
105	100		
120	46.2	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



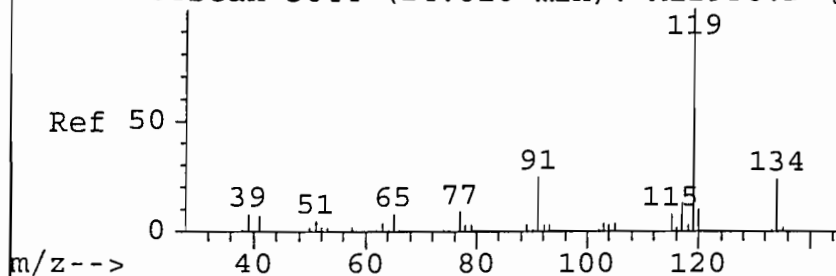
#69
sec-butylbenzene
Concen: 10.04 ug/L
RT: 24.64 min Scan# 3628
Delta R.T. 0.07 min
Lab File: M13297.D
Acq: 22 Oct 99 1:57 pm

Tgt Ion	Ratio	Lower	Upper
105	100		
134	19.5	13.4	25.0
91	15.5	11.1	20.5
0	0.0	0.0	0.0



000090

AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 11.98 ug/L

RT: 24.79 min Scan# 3653

Delta R.T. -0.02 min

Lab File: M13297.D

Acq: 22 Oct 99 1:57 pm

Tgt Ion:119 Resp: 536298

Ion Ratio Lower Upper

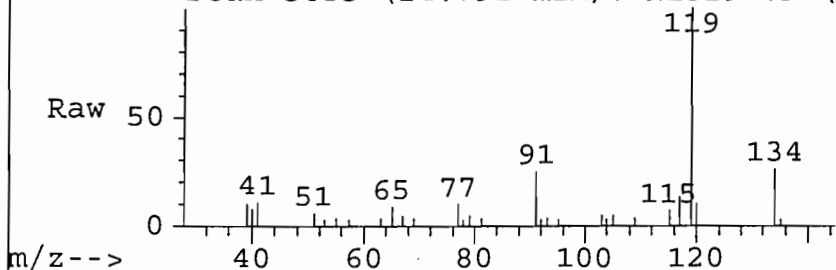
119 100

134 25.7 16.7 31.1

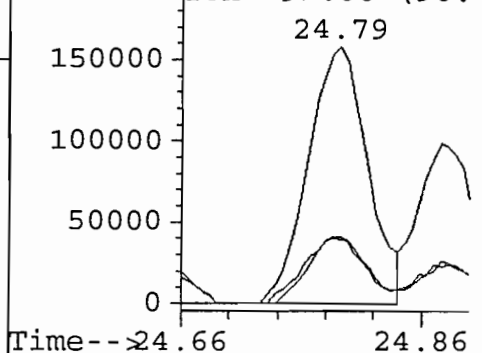
91 24.7 17.2 32.0

0 0.0 0.0 0.0

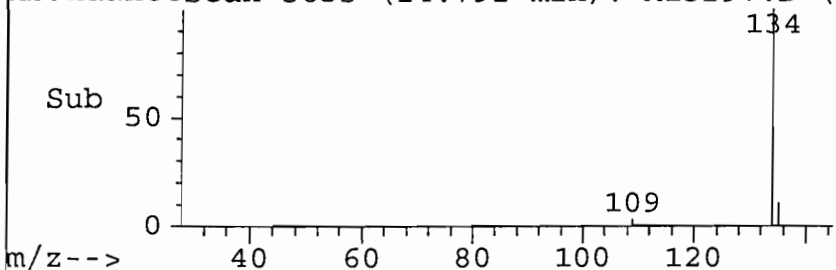
AbundanceScan 3653 (24.792 min): M13297.D (



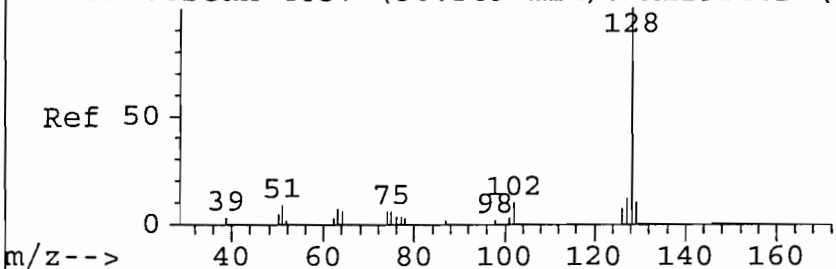
AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3653 (24.792 min): M13297.D (



AbundanceScan 4637 (30.569 min): M12956.D (



#78

naphthalene

Concen: 40.51 ug/L

RT: 30.68 min Scan# 4656

Delta R.T. 0.11 min

Lab File: M13297.D

Acq: 22 Oct 99 1:57 pm

Tgt Ion:128 Resp: 1268489

Ion Ratio Lower Upper

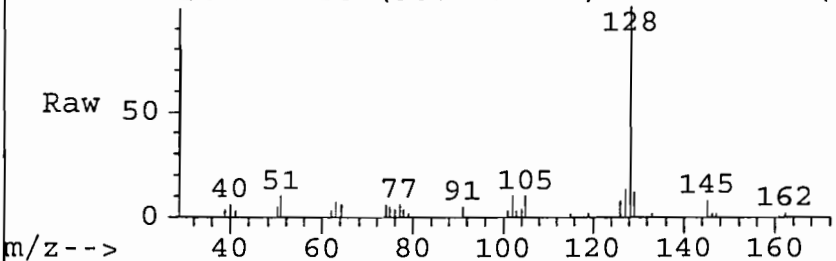
128 100

127 13.3 8.6 16.0

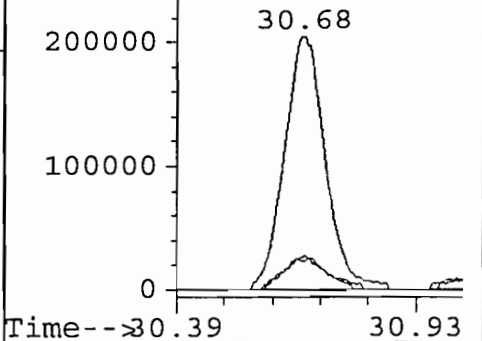
129 11.6 7.0 13.0

0 0.0 0.0 0.0

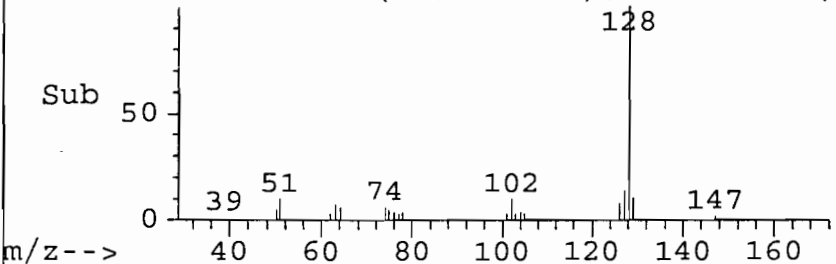
AbundanceScan 4656 (30.677 min): M13297.D (



AbundanceIon 128.00 (127
Ion 127.00 (126
Ion 129.00 (128



AbundanceScan 4656 (30.677 min): M13297.D (



000091

Library Search Compound Report

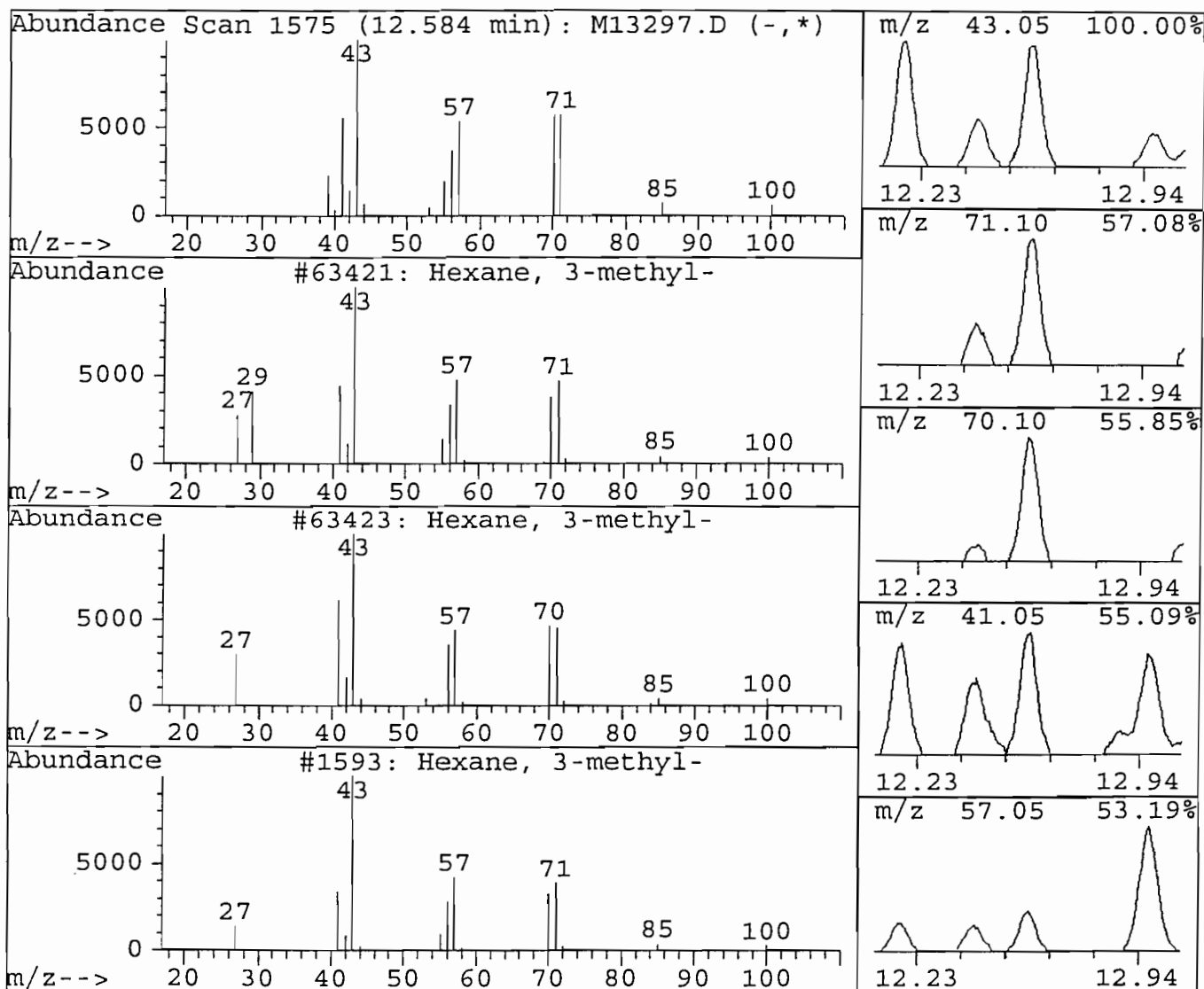
Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
12.58	22.57 ug/L	1946795	Fluorobenzene	14.16

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Hexane, 3-methyl-	63421	000589-34-4	91
2	Hexane, 3-methyl-	63423	000589-34-4	91
3	Hexane, 3-methyl-	1593	000589-34-4	80
4	Heptane, 4-methyl-	3096	000589-53-7	64
5	Pentane, 2,3,4-trimethyl-	3100	000565-75-3	64



000092

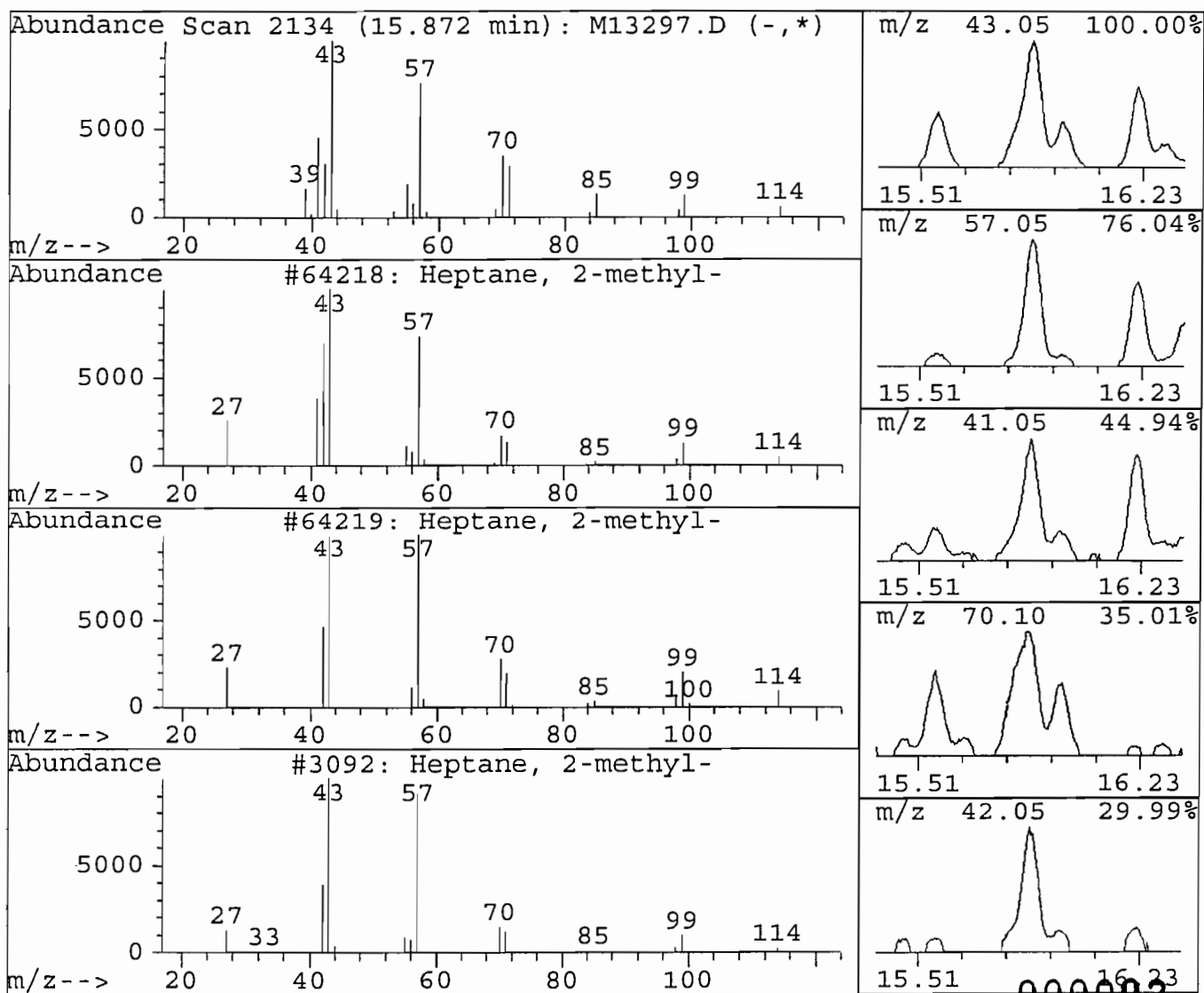
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
15.87	42.83 ug/L	3694360	Fluorobenzene	14.16	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Heptane, 2-methyl-		64218	000592-27-8	64
2	Heptane, 2-methyl-		64219	000592-27-8	58
3	Heptane, 2-methyl-		3092	000592-27-8	53
4	Heptane, 3,4-dimethyl-		65136	000922-28-1	53
5	Heptane, 3,4-dimethyl-		5155	000922-28-1	50



Library Search Compound Report

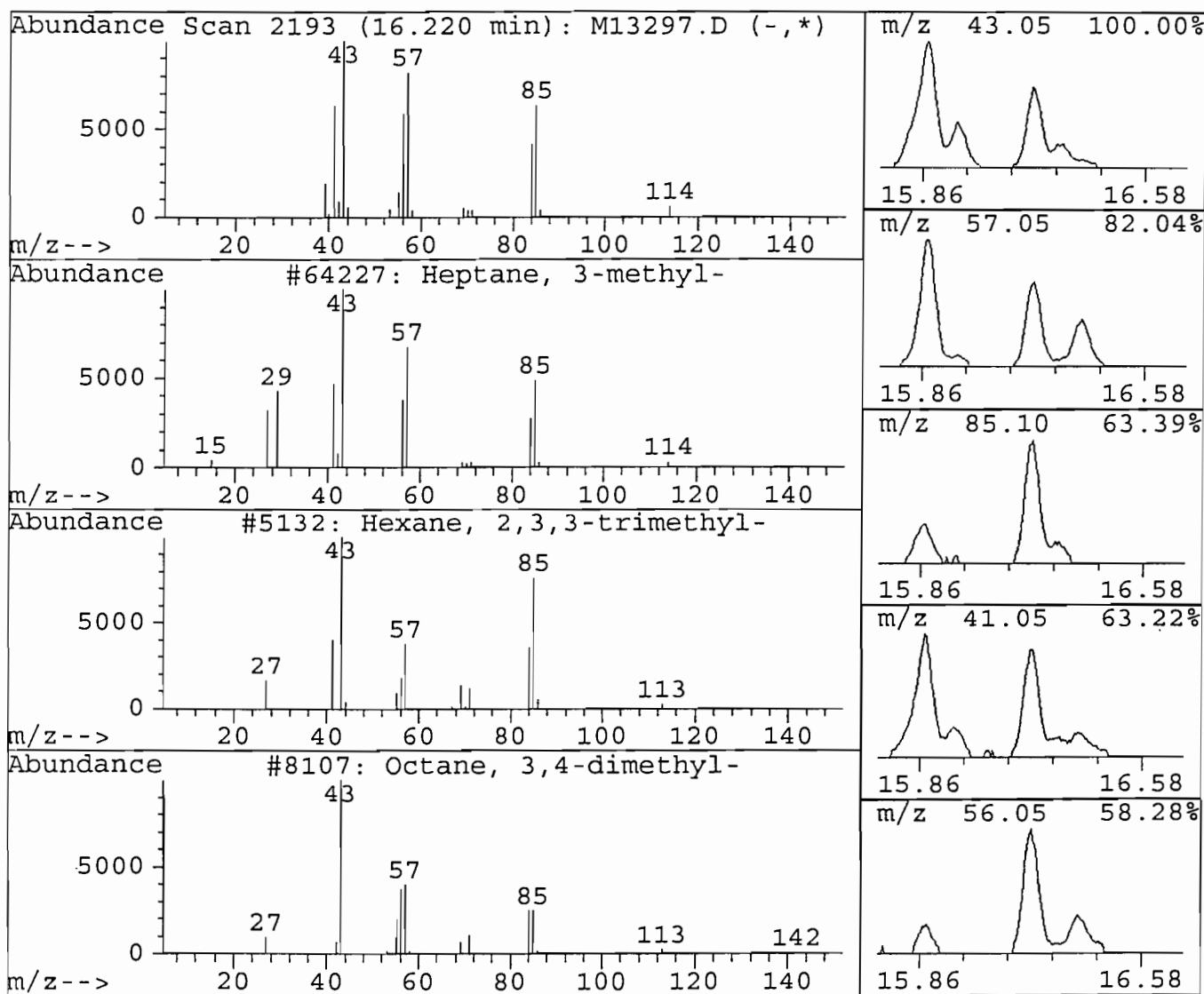
Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
16.22	24.58 ug/L	2120031	Fluorobenzene	14.16

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 3-methyl-	64227	000589-81-1	87
2	Hexane, 2,3,3-trimethyl-	5132	016747-28-7	64
3	Octane, 3,4-dimethyl-	8107	015869-92-8	59
4	Pentane, 3-ethyl-2,4-dimethyl-	5138	001068-87-7	53
5	Pentane, 3-ethyl-2,4-dimethyl-	65111	001068-87-7	53



000094

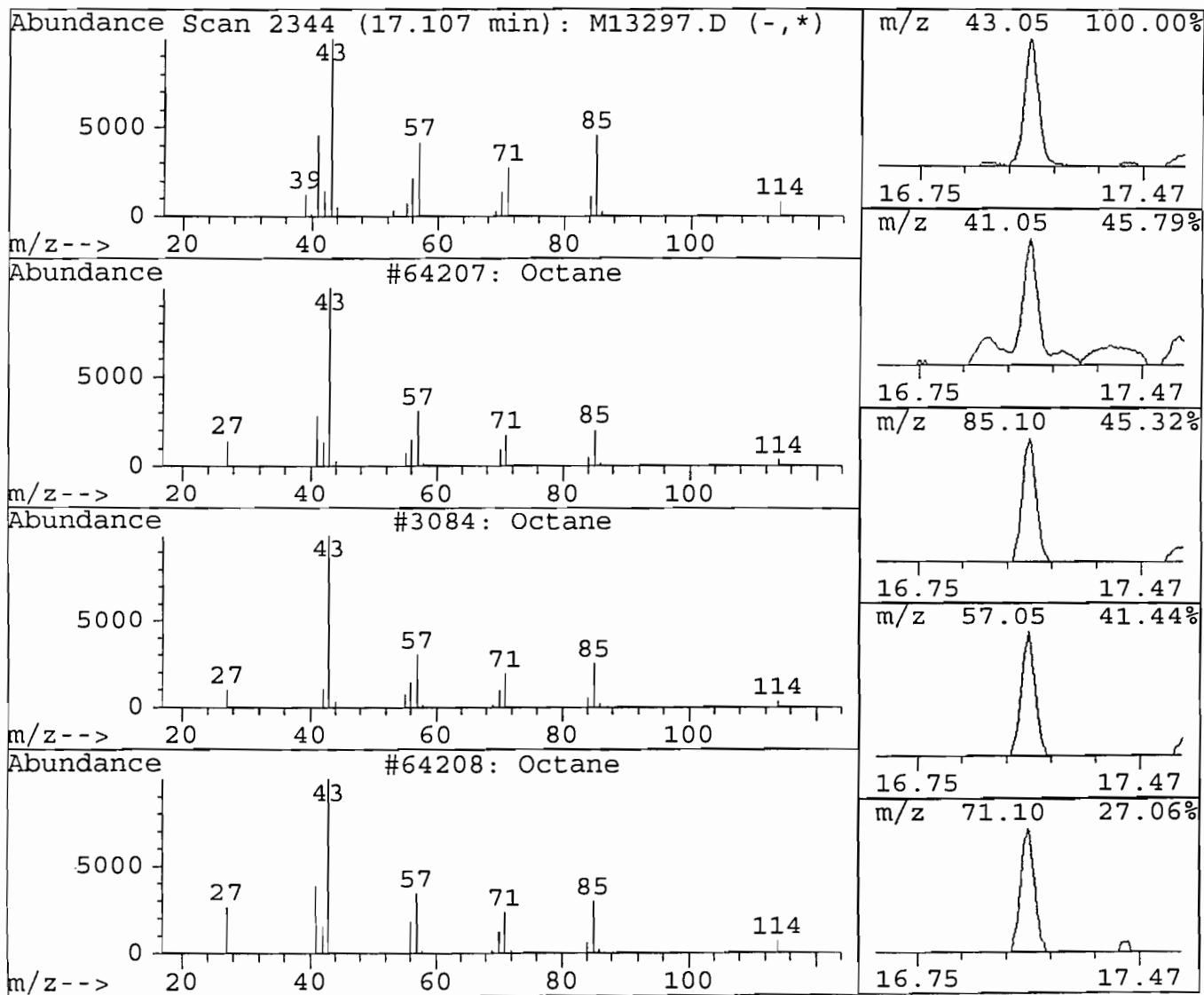
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
17.11	33.72 ug/L	2908876	Fluorobenzene	14.16	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octane		64207	000111-65-9	91
2	Octane		3084	000111-65-9	91
3	Octane		64208	000111-65-9	91
4	Octane		64209	000111-65-9	90
5	Heptane, 2,4-dimethyl-		5145	002213-23-2	78



000095

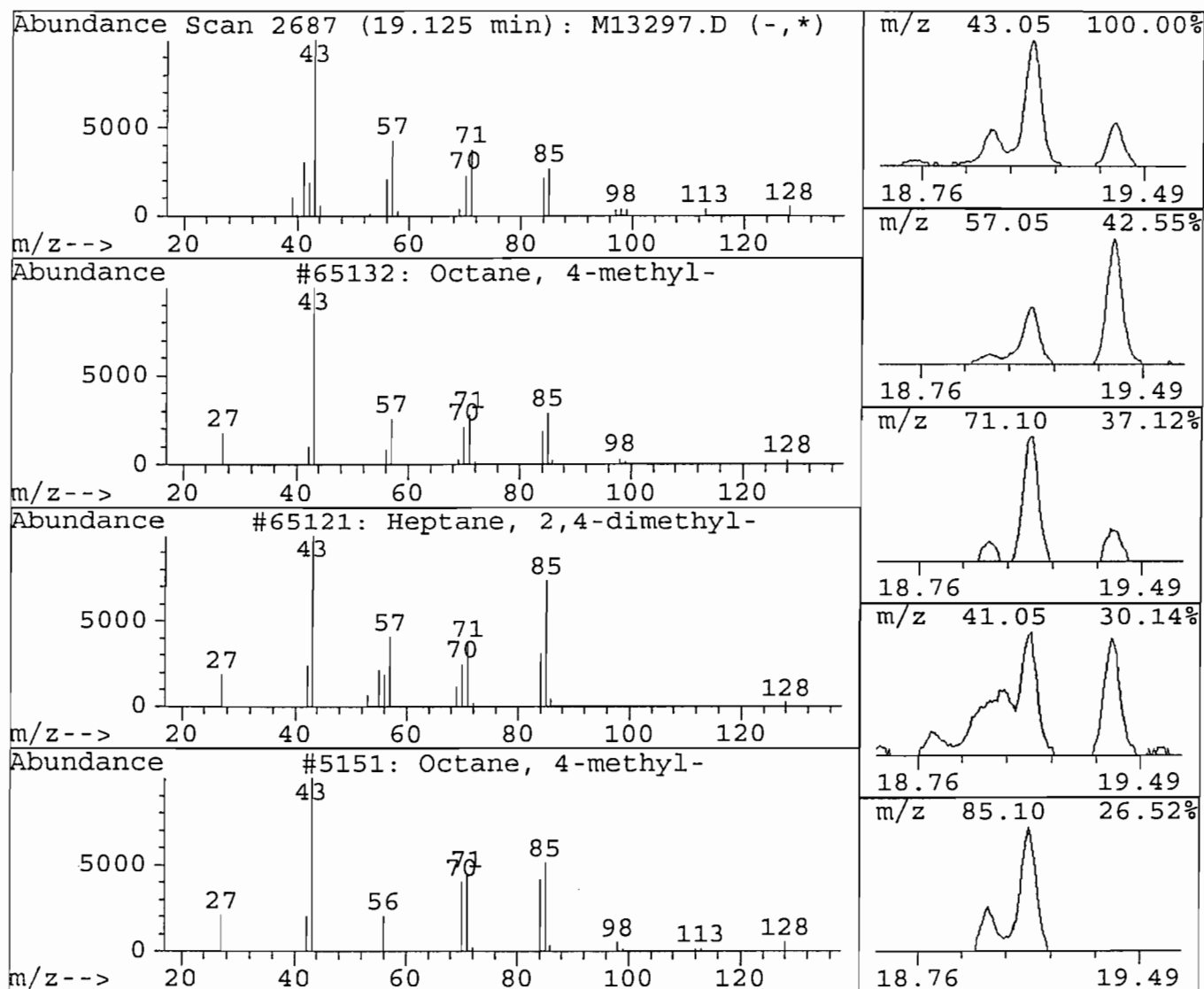
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
19.13	22.96 ug/L	2920906	Chlorobenzene-d5	20.52	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octane, 4-methyl-		65132	002216-34-4	72
2	Heptane, 2,4-dimethyl-		65121	002213-23-2	64
3	Octane, 4-methyl-		5151	002216-34-4	59
4	Octane		64207	000111-65-9	53
5	Hexane, 2,3,4-trimethyl-		5147	000921-47-1	50



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D

Acq Time : 22 Oct 99 1:57 pm

Sample : 13826ASP-87993 1:10 DIL

Misc : 5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

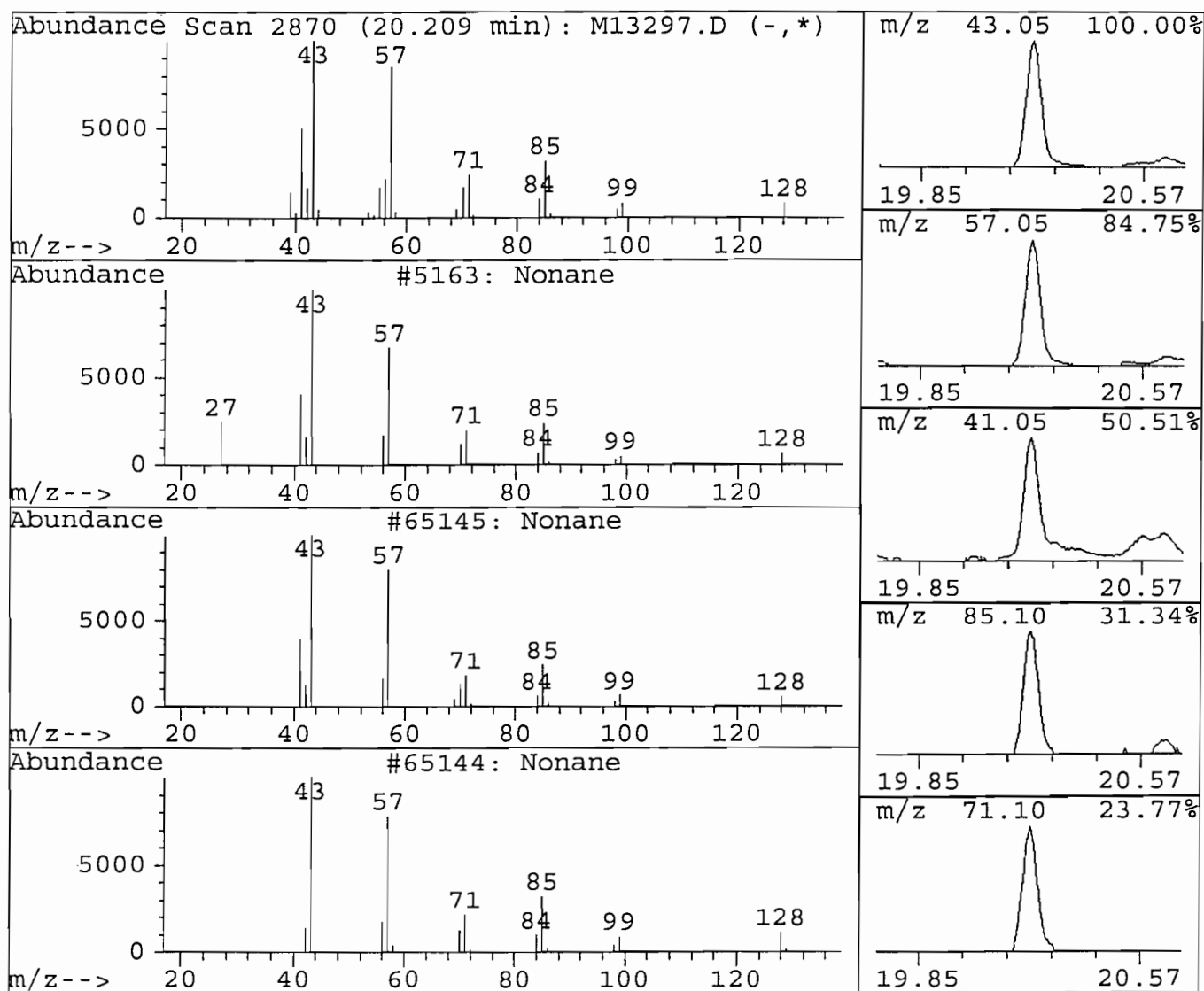
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
20.21	42.69 ug/L	5431595	Chlorobenzene-d5	20.52

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane	5163	000111-84-2	97
2	Nonane	65145	000111-84-2	96
3	Nonane	65144	000111-84-2	91
4	Nonane	65142	000111-84-2	91
5	Nonane	65143	000111-84-2	87



000097

Library Search Compound Report

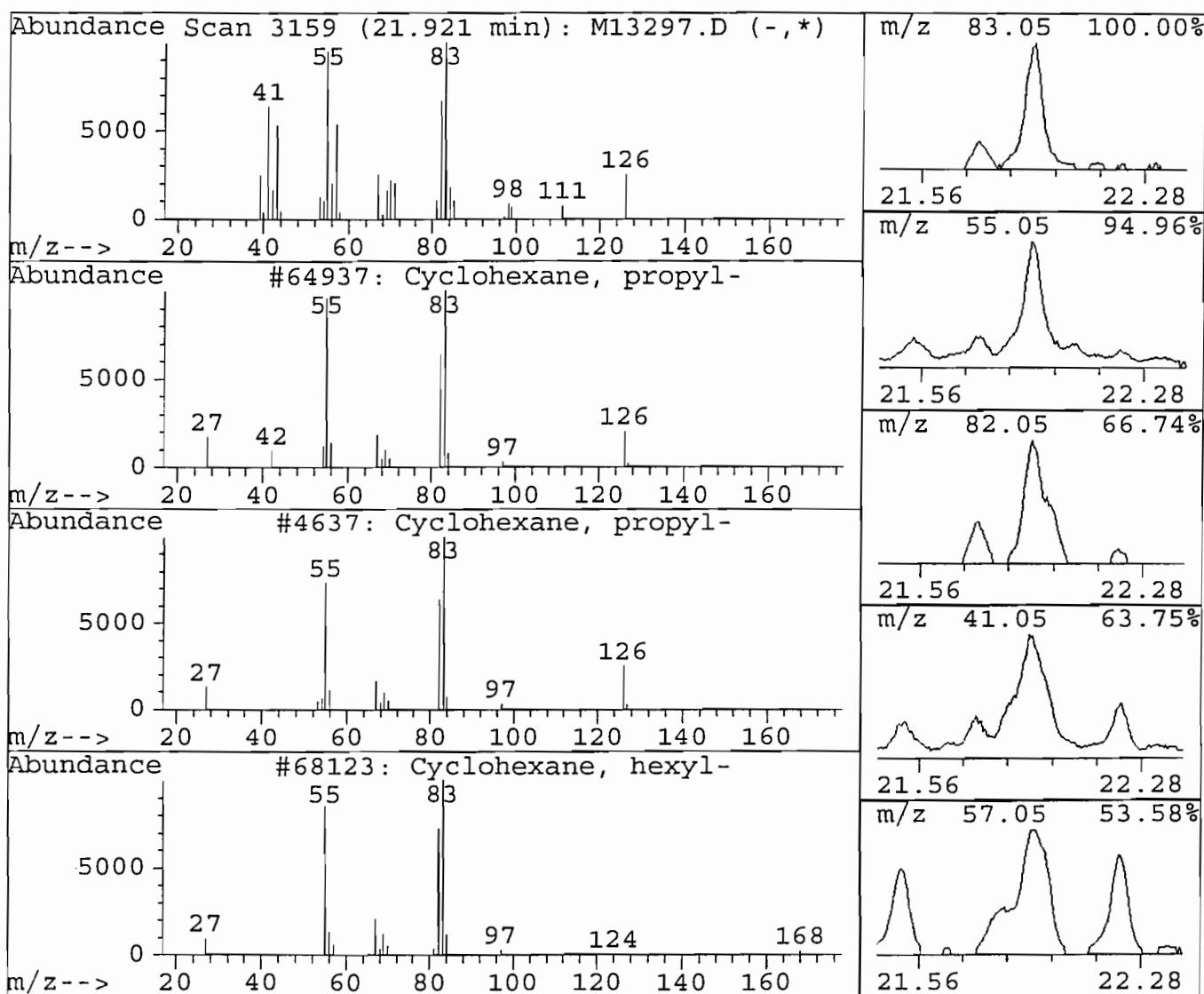
Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.92	44.61 ug/L	5676067	Chlorobenzene-d5	20.52

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, propyl-	64937	001678-92-8	72
2	Cyclohexane, propyl-	4637	001678-92-8	59
3	Cyclohexane, hexyl-	68123	004292-75-5	59
4	Cyclohexane, propyl-	64935	001678-92-8	59
5	Cyclohexane, (1-methylethyl)-	64963	000696-29-7	53



000098

Library Search Compound Report

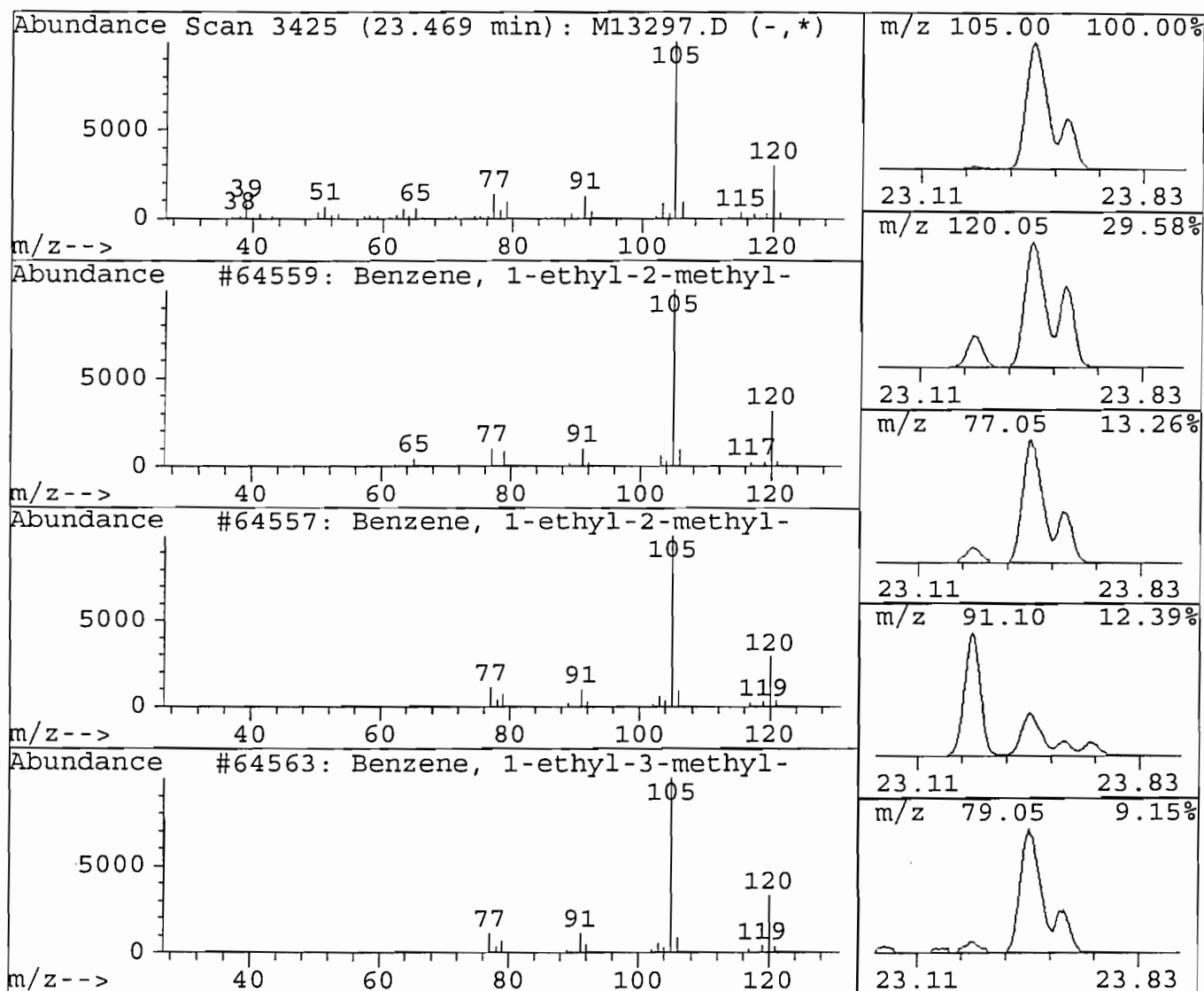
Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.47	77.95 ug/L	22032448	1,4-dichlorobenzene-d4	25.26

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2-methyl-	64559	000611-14-3	95
2	Benzene, 1-ethyl-2-methyl-	64557	000611-14-3	95
3	Benzene, 1-ethyl-3-methyl-	64563	000620-14-4	95
4	Benzene, 1-ethyl-4-methyl-	3770	000622-96-8	95
5	Benzene, 1-ethyl-2-methyl-	3765	000611-14-3	95



Library Search Compound Report

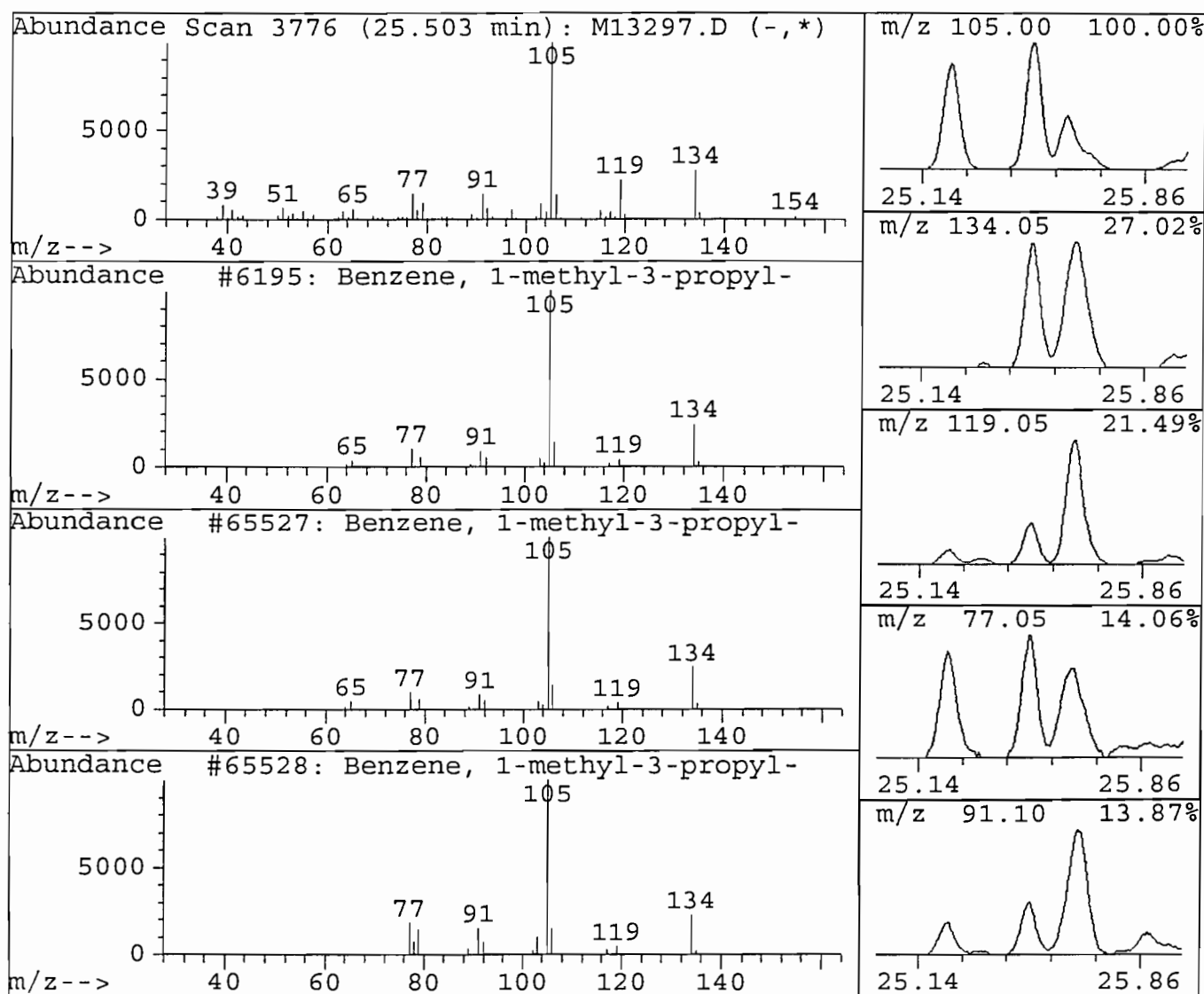
Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.50	31.92 ug/L	9021783	1,4-dichlorobenzene-d4	25.26

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-	6195	001074-43-7	93
2	Benzene, 1-methyl-3-propyl-	65527	001074-43-7	93
3	Benzene, 1-methyl-3-propyl-	65528	001074-43-7	89
4	Benzene, 1-methyl-2-propyl-	65584	001074-17-5	76
5	Benzene, (1-methylpropyl)-	65542	000135-98-8	70



000100

Library Search Compound Report

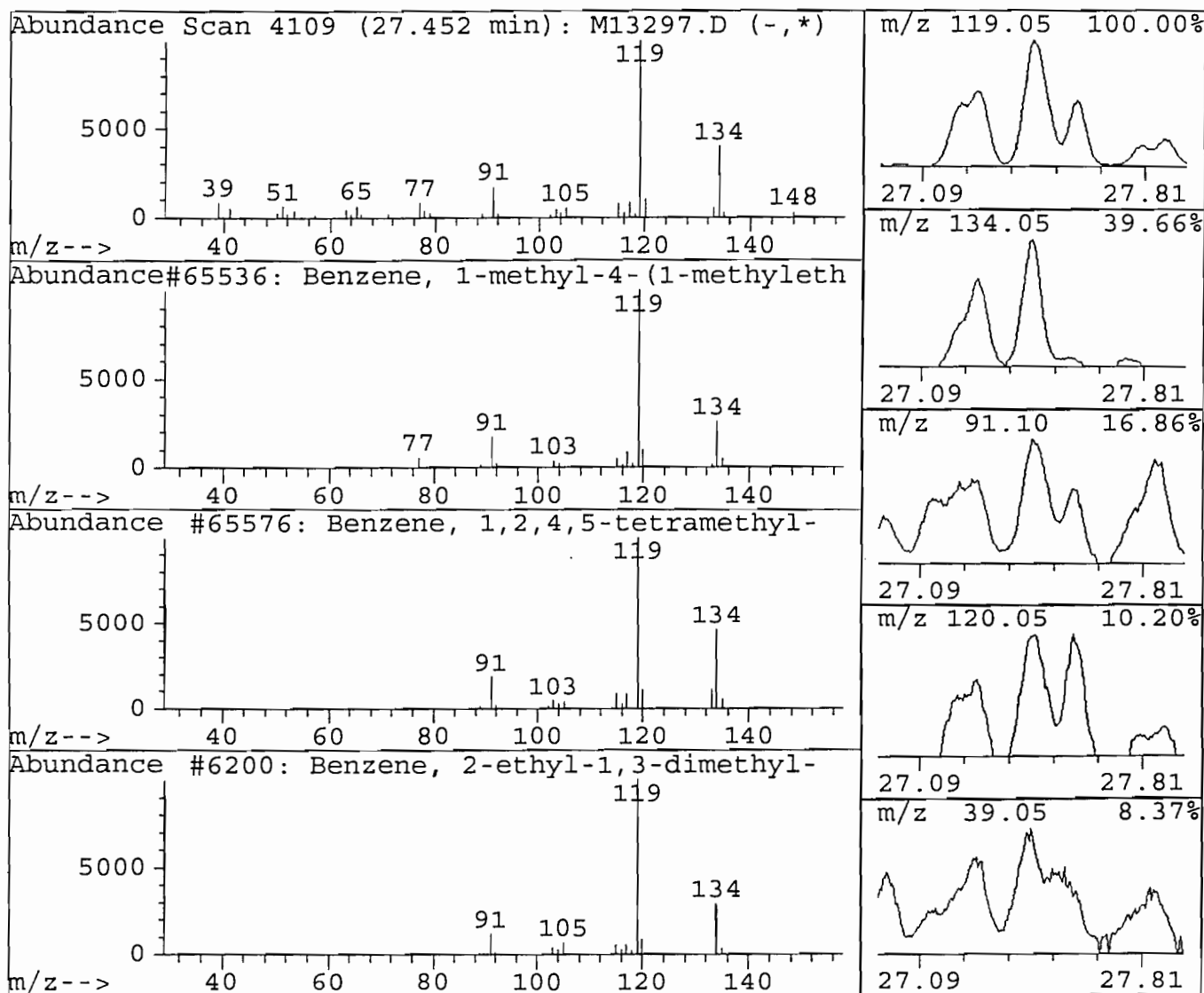
Data File : D:\HPCHEM\3\DATA\V3102299\M13297.D
Acq Time : 22 Oct 99 1:57 pm
Sample : 13826ASP-87993 1:10 DIL
Misc : 5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.45	27.13 ug/L	7667819	1,4-dichlorobenzene-d4	25.26

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	65536	000099-87-6	94
2	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	93
3	Benzene, 2-ethyl-1,3-dimethyl-	6200	002870-04-4	93
4	Benzene, 1-ethyl-3,5-dimethyl-	65553	000934-74-7	91
5	Benzene, 1-ethyl-3,5-dimethyl-	65554	000934-74-7	91



000101

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-010-SS15

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87994

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13290.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 8

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	220		U
74-87-3	Chloromethane	450		U
75-01-4	Vinyl Chloride	250		U
74-83-9	Bromomethane	510		U
75-00-3	Chloroethane	680		U
107-02-8	Acrolein	680		U
75-69-4	Trichlorofluoromethane	160		U
75-35-4	1,1-Dichloroethene	260		U
67-64-1	Acetone	680		U
75-15-0	Carbon Disulfide	680		U
75-09-2	Methylene Chloride	140		U
156-60-5	trans-1,2-Dichloroethene	580		U
107-13-1	Acrylonitrile	680		U
75-34-3	1,1-Dichloroethane	180		U
594-20-7	2,2-Dichloropropane	140		U
156-59-2	cis-1,2-dichloroethene	230		U
74-97-5	Bromochloromethane	230		U
67-66-3	Chloroform	160		U
71-55-6	1,1,1-Trichloroethane	120		U
108-05-4	Vinyl Acetate	680		U
78-93-3	2-Butanone	680		U
56-23-5	Carbon Tetrachloride	540		U
563-58-6	1,1-Dichloropropene	150		U
71-43-2	Benzene	140		U
107-06-2	1,2-Dichloroethane	140		U
79-01-6	Trichloroethene	350		U
78-87-5	1,2-Dichloropropane	460		U
74-95-3	Dibromomethane	200		U
75-27-4	Bromodichloromethane	140		U
110-07-3	2-Chloroethyl Vinyl Ether	680		U
10061-01-5	cis-1,3-Dichloropropene	140		U
108-88-3	Toluene	170		U
10061-02-6	trans-1,3-Dichloropropene	140		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-010-SS15

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87994

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13290.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 8

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

79-00-5	1,1,2-Trichloroethane	180	U
108-10-1	4-Methyl-2-Pentanone	680	U
127-18-4	Tetrachloroethene	150	U
142-28-9	1,3-Dichloropropane	160	U
124-48-1	Dibromochloromethane	95	U
106-93-4	1,2-Dibromoethane	220	U
591-78-6	2-Hexanone	680	U
108-90-7	Chlorobenzene	150	U
630-20-6	1,1,1,2-Tetrachloroethane	160	U
100-41-4	Ethylbenzene	150	U
136777-61-2	m&p-xylenes	310	U
95-47-6	o-xylene	160	U
100-42-5	Styrene	27	U
75-25-2	Bromoform	67	U
98-82-8	isopropylbenzene	180	U
108-86-1	Bromobenzene	140	U
79-34-5	1,1,2,2-Tetrachloroethane	220	U
96-18-4	1,2,3-Trichloropropane	340	U
103-65-1	n-Propylbenzene	180	U
95-49-8	2-Chlorotoluene	150	U
106-43-4	4-Chlorotoluene	140	U
108-67-8	1,3,5-Trimethylbenzene	1400	
98-06-6	tert-Butylbenzene	160	U
95-63-6	1,2,4-Trimethylbenzene	220	U
135-98-8	sec-Butylbenzene	160	U
541-73-1	1,3-Dichlorobenzene	160	U
99-87-6	4-Isopropyltoluene	720	
106-46-7	1,4-Dichlorobenzene	160	U
95-50-1	1,2-Dichlorobenzene	140	U
104-51-8	n-Butylbenzene	230	U
96-12-8	1,2-Dibromo-3-chloropropane	680	U
120-82-1	1,2,4-Trichlorobenzene	160	U
87-68-3	Hexachlorobutadiene	140	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-010-SS15

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87994
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13290.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 8 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 10 Concentration Units:
 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 14676-29-0	Heptane, 3-ethyl-2-methyl-	21.48	9200	J
2.	Unknown	21.91	37200	J
3.	Unknown	22.20	10400	J
4.	Unknown	22.36	18100	J
5.	Unknown	22.84	9300	J
6.	Unknown	23.42	14300	J
7.	Unknown	24.01	14900	J
8.	Unknown	24.46	16600	J
9.	Unknown	24.87	7200	J
10.	Unknown	26.55	7000	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000105

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
 Acq Time : 22 Oct 99 7:59 am
 Sample : 13826ASP-87994
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 22 10:48 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.16	96	2180567	50.00	ug/L	0.05
43) Chlorobenzene-d5	20.51	117	1957004	50.00	ug/L	0.05
58) 1,4-dichlorobenzene-d4	25.25	152	732172	50.00	ug/L	0.06
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.46	113	724843	53.44	ug/L	106.88%
30) 1,2-Dichlorethane-d4	13.50	65	770260	50.39	ug/L	100.78%
38) Toluene-d8	17.41	98	2206157	51.93	ug/L	103.86%
42) 4-Bromofluorobenzene	22.99	95	868193	48.34	ug/L	96.68%
Target Compounds						Qvalue
66) 1,3,5-trimethylbenzene	23.58	105	424494	10.63	ug/L m	99
<i>PH</i> 68) 1,2,4-trimethylbenzene	24.33	105	211802	5.53	ug/L m	99
71) 4-isopropyltoluene	24.78	119	232719	5.32	ug/L m	94
78) naphthalene	30.66	128	176994	5.78	ug/L m	56

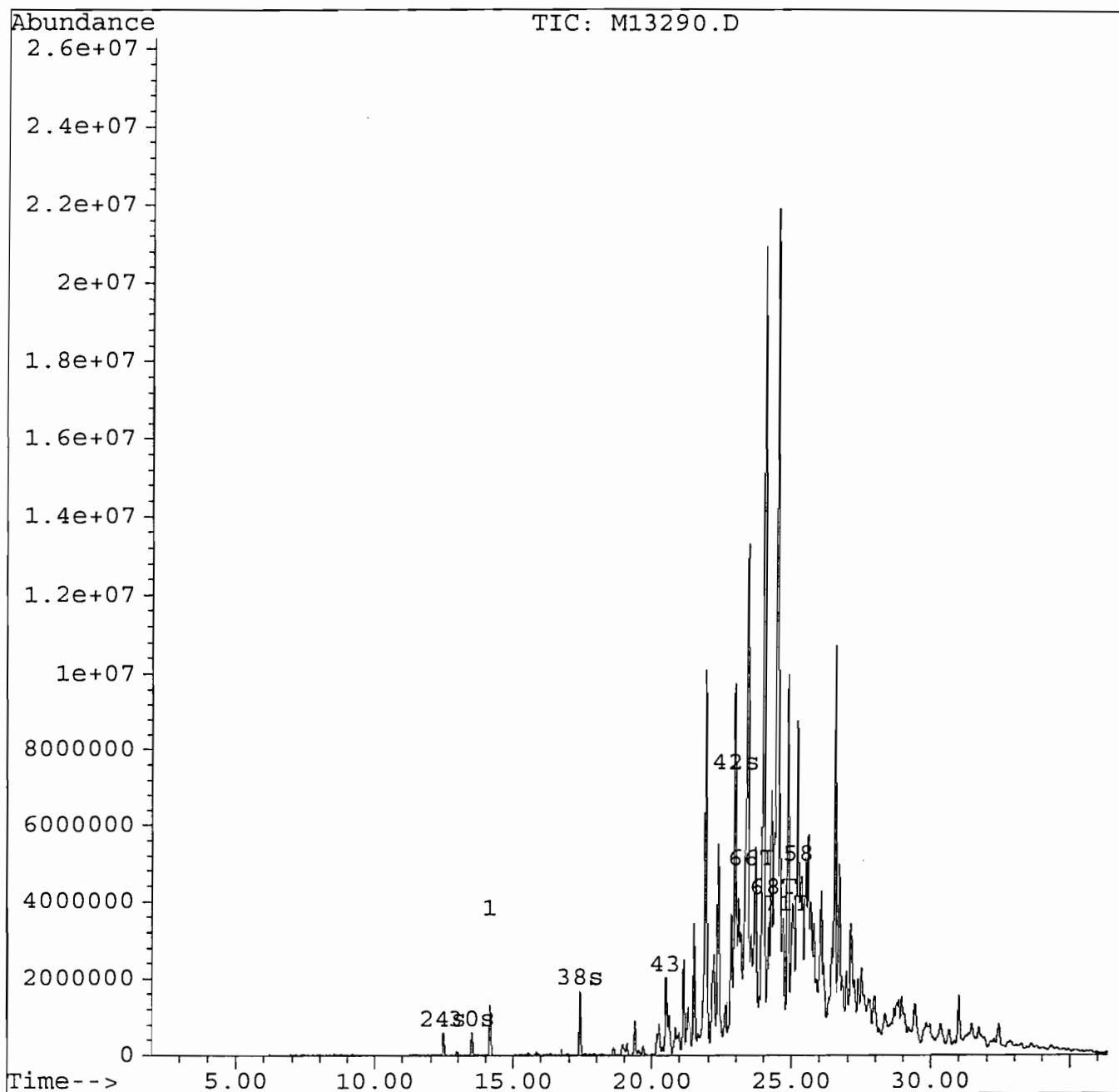
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Quantitation Report

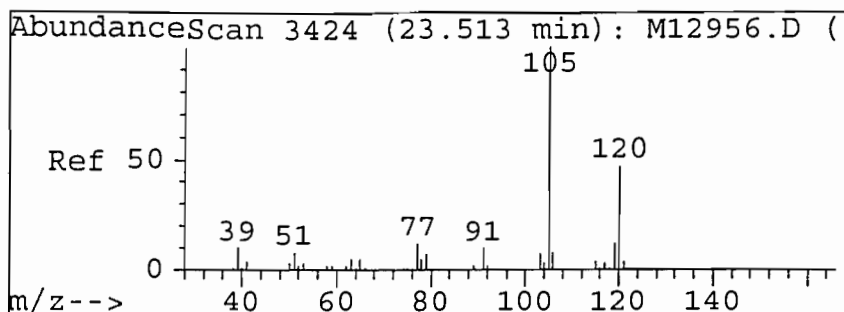
Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 22 10:48 1999

Operator: AV
Inst : voa3
Multiplr: 1.00

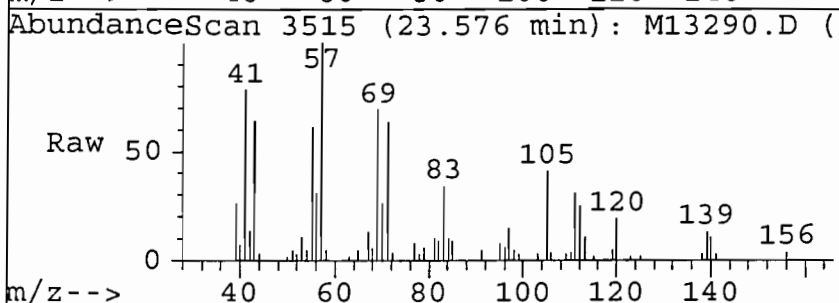
Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



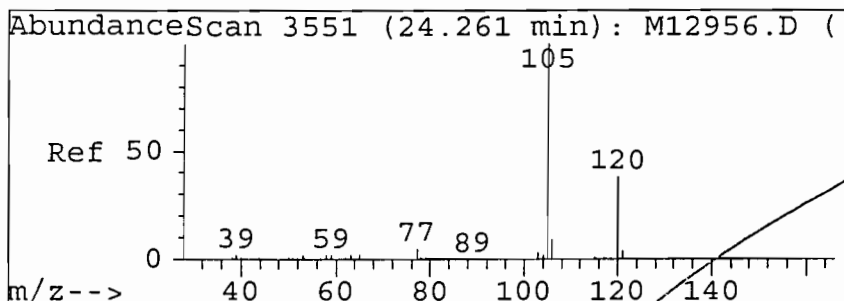
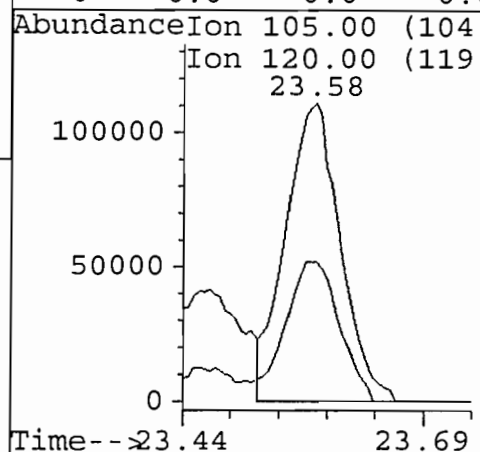
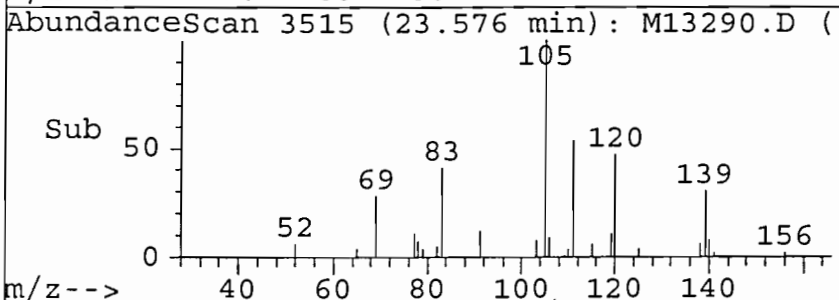
000107



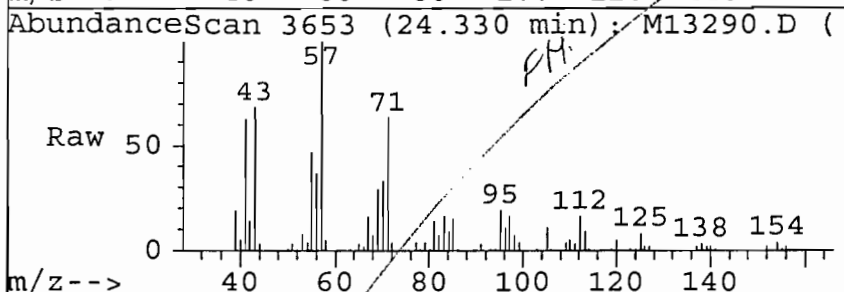
#66
1,3,5-trimethylbenzene
Concen: 10.63 ug/L m
RT: 23.58 min Scan# 3515
Delta R.T. 0.06 min
Lab File: M13290.D
Acq: 22 Oct 99 7:59 am



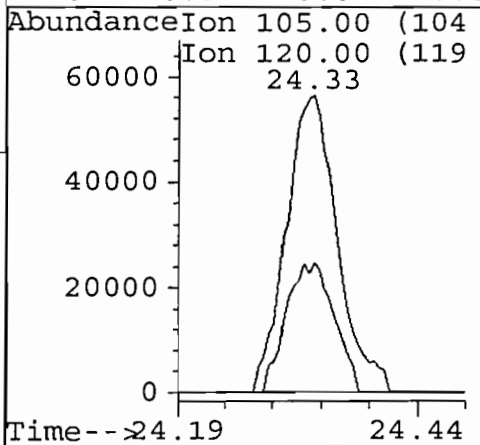
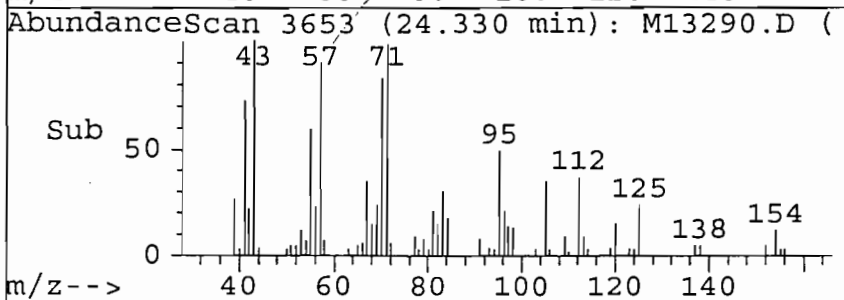
Tgt Ion	Ratio	Lower	Upper
105	100		
120	46.6	33.2	61.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#68
1,2,4-trimethylbenzene
Concen: 5.53 ug/L m
RT: 24.33 min Scan# 3653
Delta R.T. 0.07 min
Lab File: M13290.D
Acq: 22 Oct 99 7:59 am

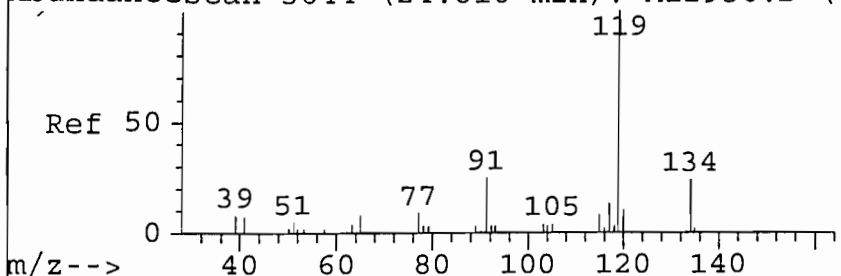


Tgt Ion	Ratio	Lower	Upper
105	100		
120	43.7	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000108

AbundanceScan 3644 (24.810 min): M12956.D (



#71

4-isopropyltoluene

Concen: 5.32 ug/L m

RT: 24.78 min Scan# 3737

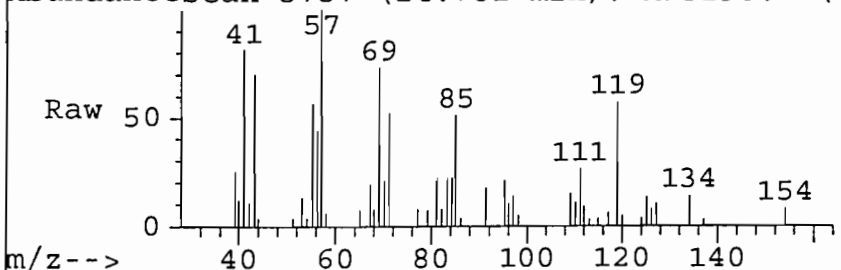
Delta R.T. -0.03 min

Lab File: M13290.D

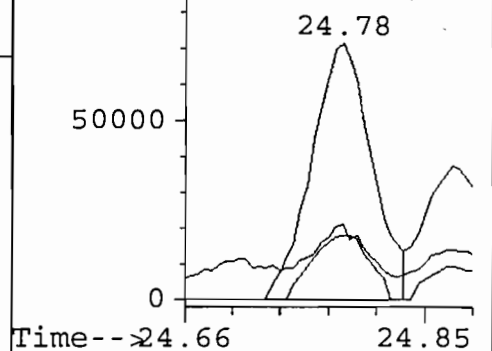
Acq: 22 Oct 99 7:59 am

Tgt Ion:	119	Resp:	232719
Ion	Ratio	Lower	Upper
119	100		
134	25.0	16.7	31.1
91	29.4	17.2	32.0
0	0.0	0.0	0.0

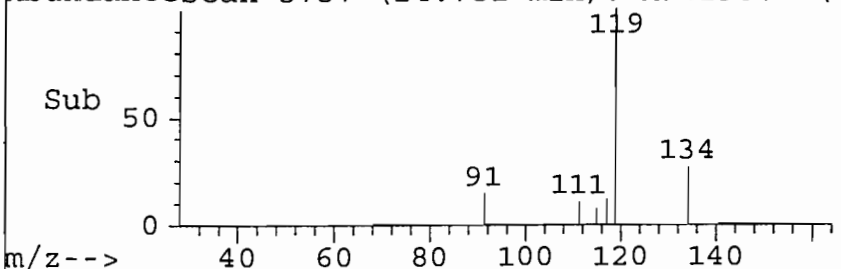
AbundanceScan 3737 (24.781 min): M13290.D (



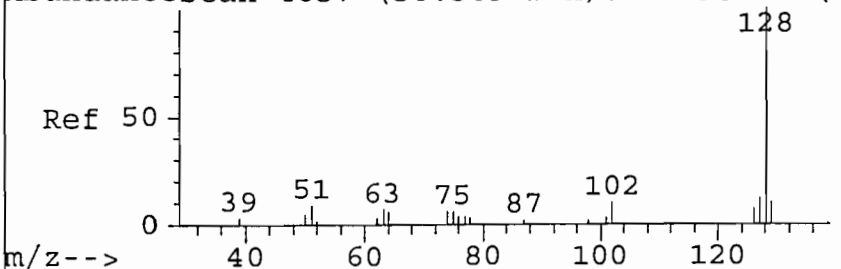
AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 3737 (24.781 min): M13290.D (



AbundanceScan 4637 (30.569 min): M12956.D (



#78

naphthalene

Concen: 5.78 ug/L m

RT: 30.66 min Scan# 4798

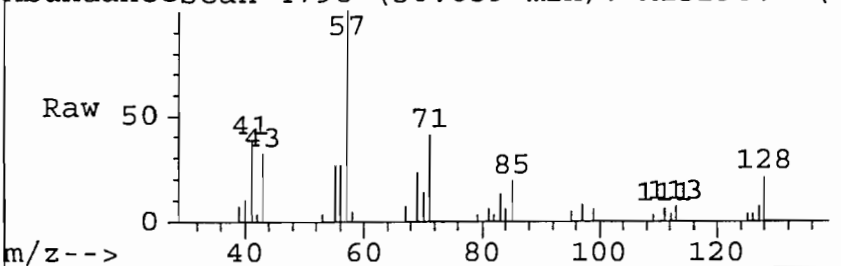
Delta R.T. 0.09 min

Lab File: M13290.D

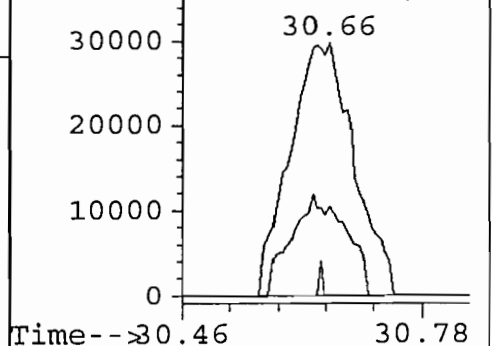
Acq: 22 Oct 99 7:59 am

Tgt Ion:	128	Resp:	176994
Ion	Ratio	Lower	Upper
128	100		
127	35.0	8.6	16.0#
129	0.0	7.0	13.0#
0	0.0	0.0	0.0

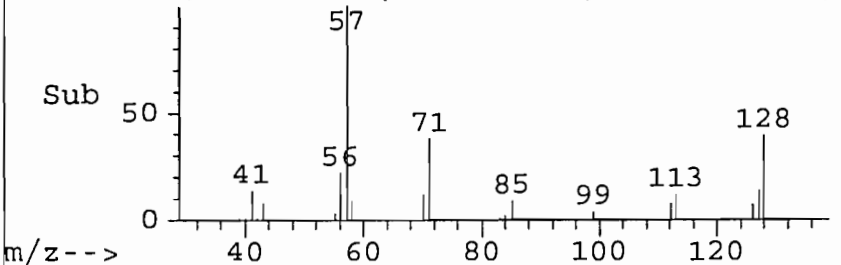
AbundanceScan 4798 (30.659 min): M13290.D (



AbundanceIon 128.00 (127
Ion 127.00 (126
Ion 129.00 (128



AbundanceScan 4798 (30.659 min): M13290.D (



000109

Library Search Compound Report

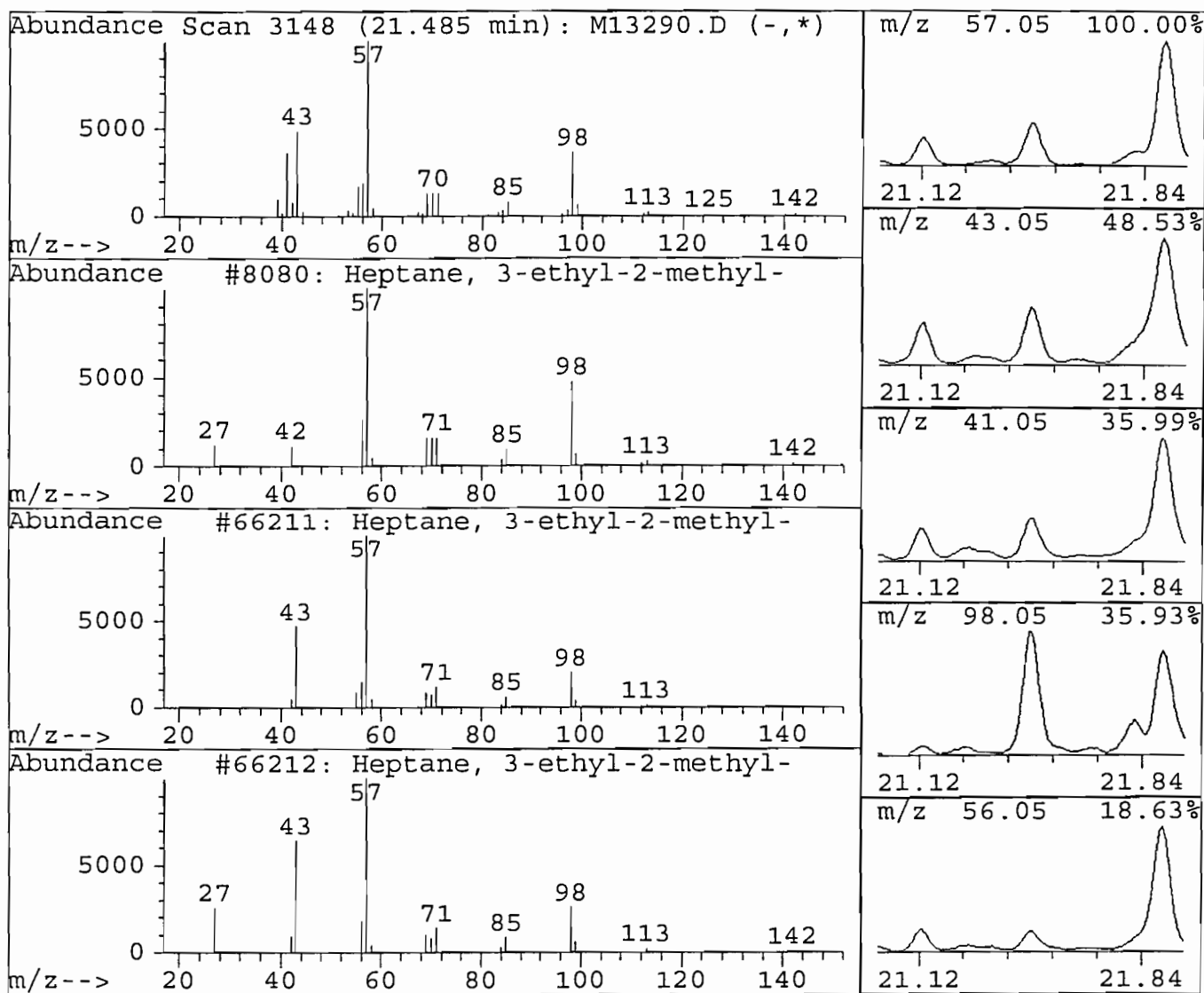
Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.48	67.47 ug/L	13271072	Chlorobenzene-d5	20.51

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-	8080	014676-29-0	93
2	Heptane, 3-ethyl-2-methyl-	66211	014676-29-0	90
3	Heptane, 3-ethyl-2-methyl-	66212	014676-29-0	78
4	Heptane, 4-propyl-	8079	003178-29-8	72
5	Octane, 2,3-dimethyl-	8085	007146-60-3	59



000110

Library Search Compound Report

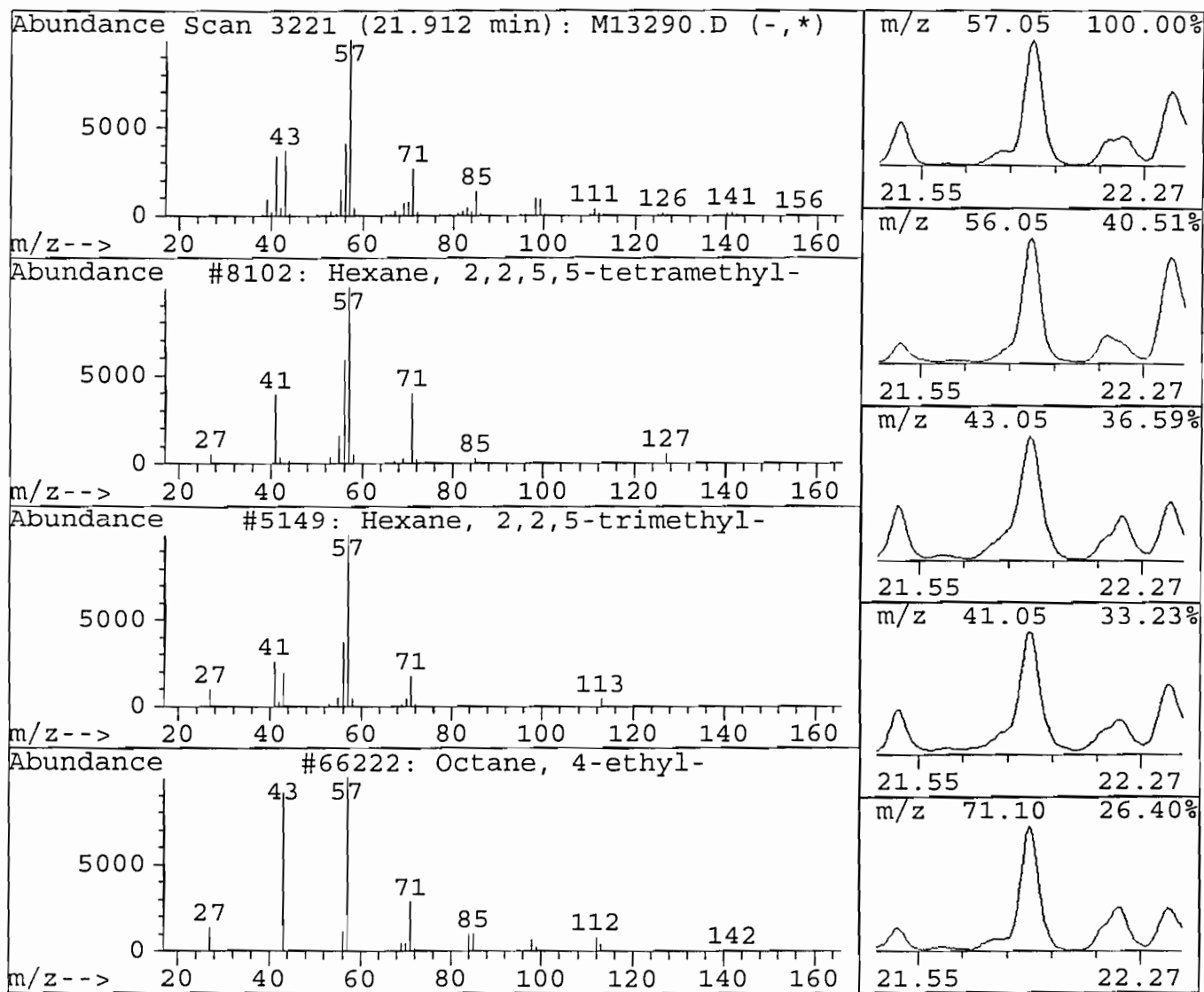
Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.91	273.57 ug/L	53805729	Chlorobenzene-d5	20.51

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Hexane, 2,2,5,5-tetramethyl-	8102	001071-81-4	53
2	Hexane, 2,2,5-trimethyl-	5149	003522-94-9	50
3	Octane, 4-ethyl-	66222	015869-86-0	47
4	Octane, 2,2-dimethyl-	8097	015869-87-1	47
5	Butane, 2,2,3,3-tetramethyl-	3090	000594-82-1	43



000111

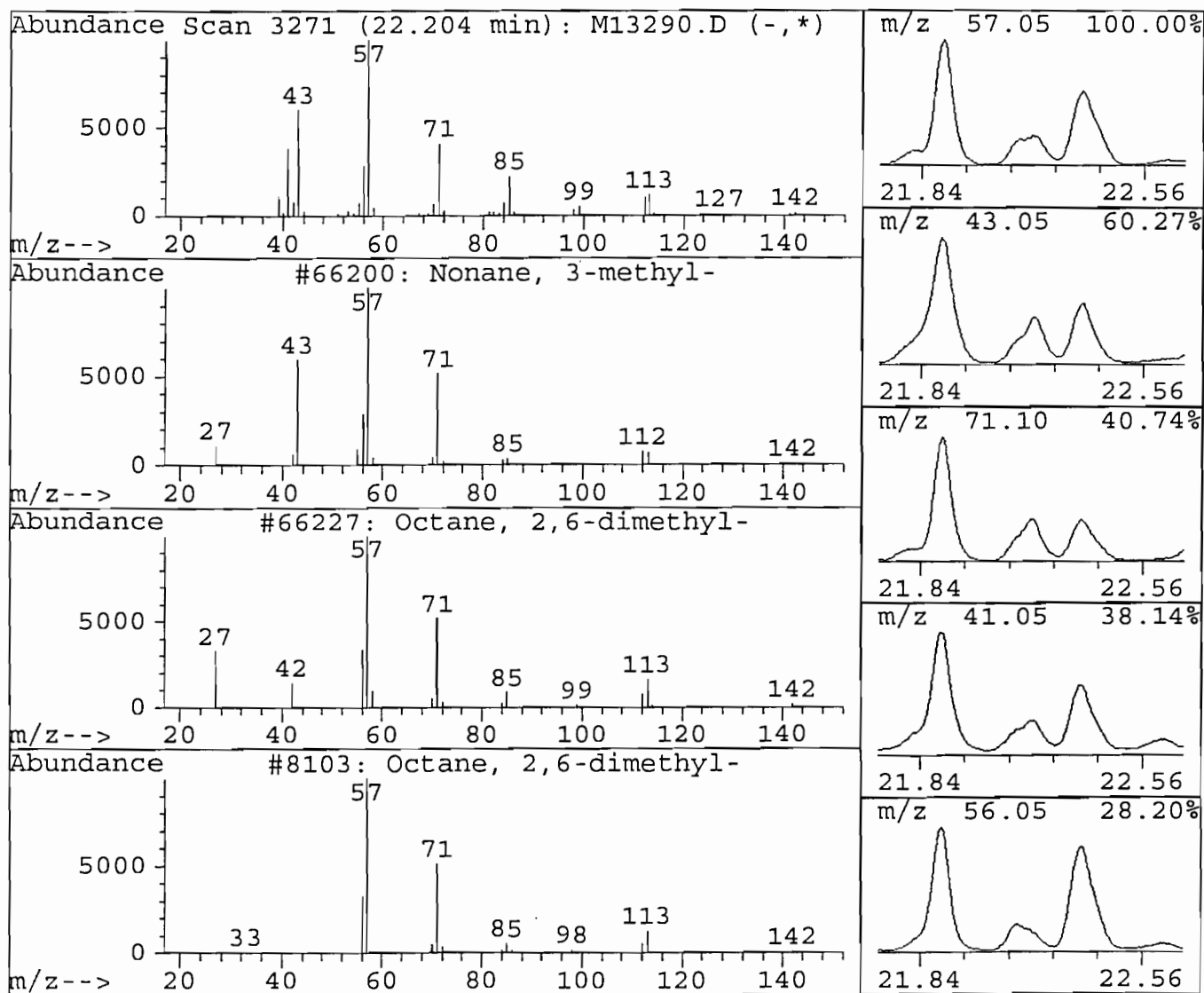
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
22.20	76.86 ug/L	15117565	Chlorobenzene-d5	20.51	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Nonane, 3-methyl-		66200	005911-04-6	81
2	Octane, 2,6-dimethyl-		66227	002051-30-1	72
3	Octane, 2,6-dimethyl-		8103	002051-30-1	64
4	Tetradecane		69657	000629-59-4	59
5	Dodecane		68250	000112-40-3	59



Library Search Compound Report

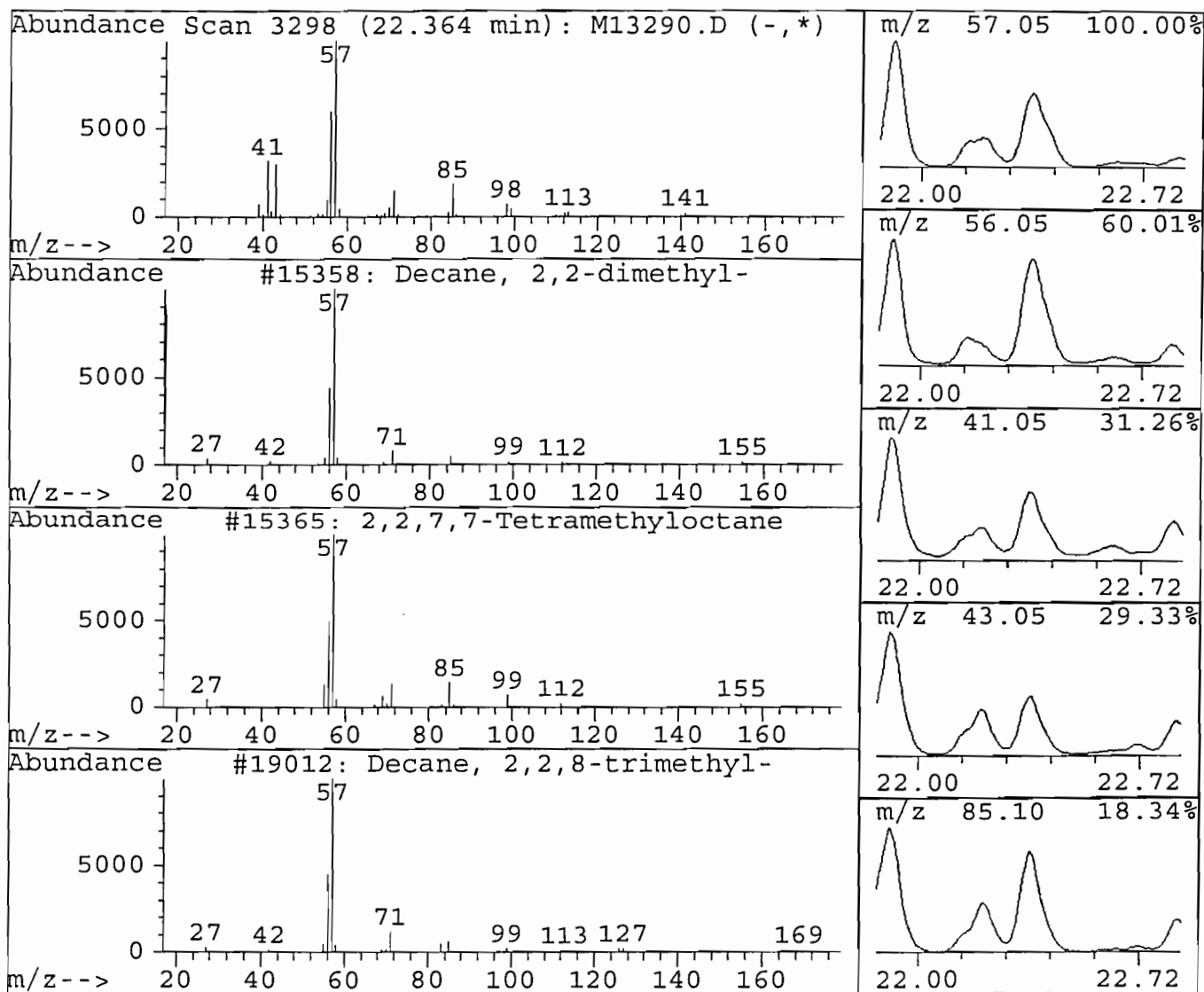
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Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.36	133.04 ug/L	26166904	Chlorobenzene-d5	20.51

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decane, 2,2-dimethyl-	15358	017302-37-3	78
2	2,2,7,7-Tetramethyloctane	15365	001071-31-4	72
3	Decane, 2,2,8-trimethyl-	19012	062238-01-1	64
4	Decane, 2,2,6-trimethyl-	18995	062237-97-2	64
5	Heptane, 2,2,4,6,6-pentamethyl-	68259	013475-82-6	59



000113

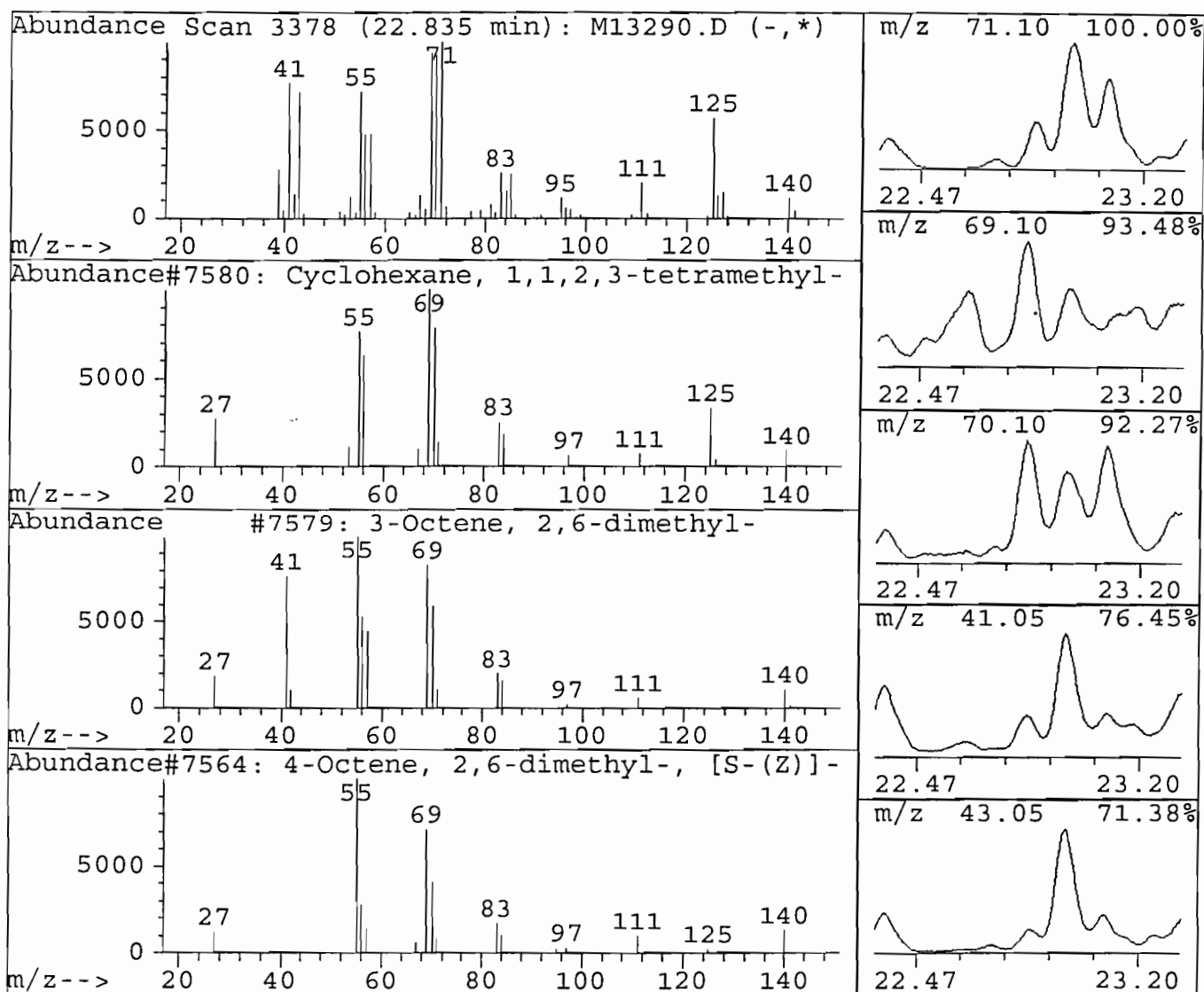
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
22.84	68.61 ug/L	13495297	Chlorobenzene-d5	20.51	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Cyclohexane, 1,1,2,3-tetramethyl-		7580	006783-92-2	50
2	3-Octene, 2,6-dimethyl-		7579	006874-28-8	41
3	4-Octene, 2,6-dimethyl-, [S-(Z)]-		7564	062960-77-4	38
4	2-Octene, 2,6-dimethyl-		7538	004057-42-5	38
5	2,4-Dimethyl-1-heptene		4662	019549-87-2	30



Library Search Compound Report

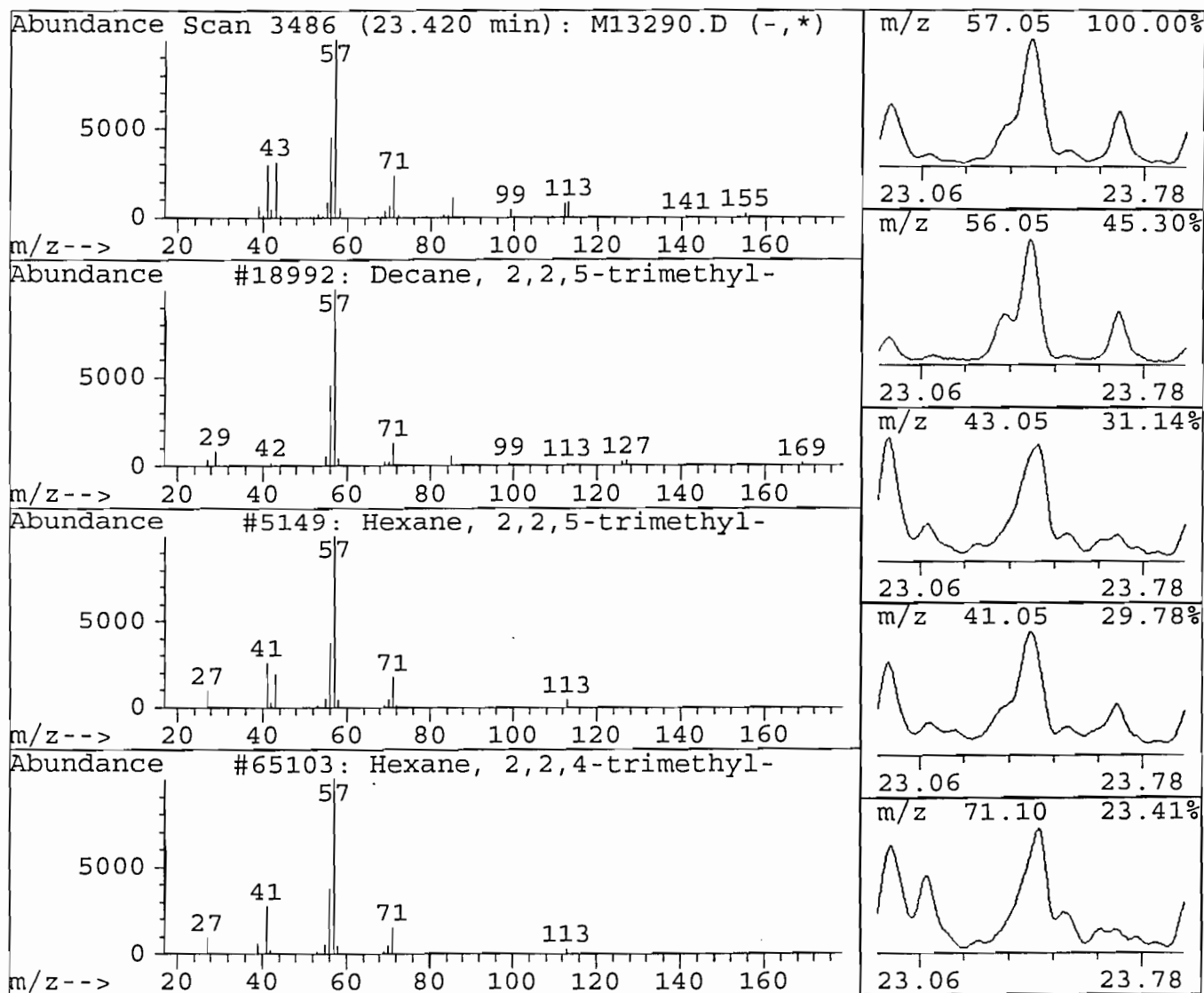
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Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.42	105.26 ug/L	90317290	1,4-dichlorobenzene-d4	25.25

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decane, 2,2,5-trimethyl-	18992	062237-96-1	72
2	Hexane, 2,2,5-trimethyl-	5149	003522-94-9	64
3	Hexane, 2,2,4-trimethyl-	65103	016747-26-5	64
4	Hexane, 2,2,5-trimethyl-	65129	003522-94-9	59
5	Heptane, 2,2,4,6,6-pentamethyl-	68259	013475-82-6	59



000115

Library Search Compound Report

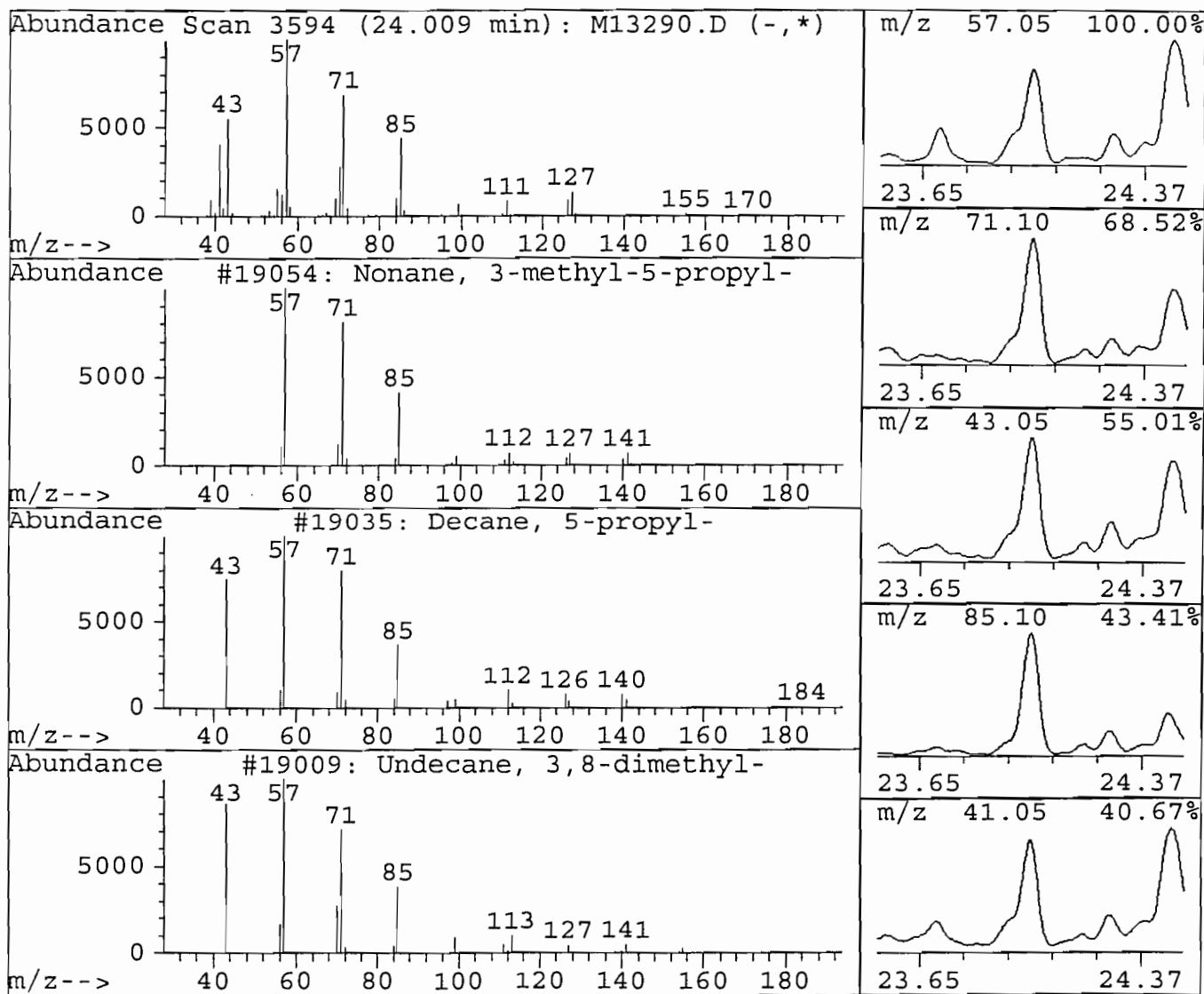
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Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.01	109.87 ug/L	94275716	1,4-dichlorobenzene-d4	25.25

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane, 3-methyl-5-propyl-	19054	031081-18-2	64
2	Decane, 5-propyl-	19035	017312-62-8	64
3	Undecane, 3,8-dimethyl-	19009	017301-30-3	59
4	Undecane, 4,7-dimethyl-	19020	017301-32-5	59
5	Undecane, 2,3-dimethyl-	18990	017312-77-5	59



000116

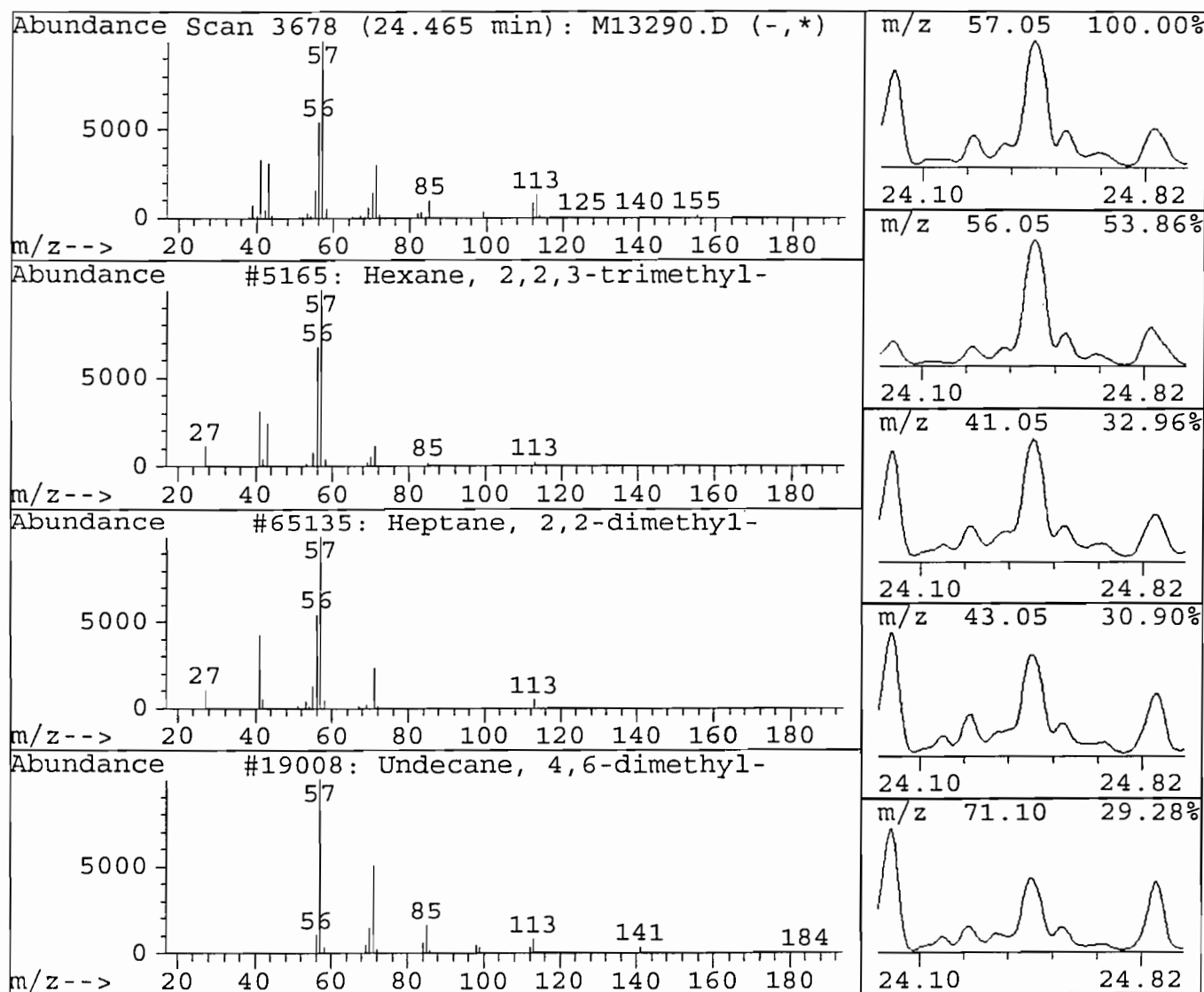
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D
Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.46	122.29 ug/L	104933662	1,4-dichlorobenzene-d4	25.25	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Hexane, 2,2,3-trimethyl-		5165	016747-25-4	64
2	Heptane, 2,2-dimethyl-		65135	001071-26-7	59
3	Undecane, 4,6-dimethyl-		19008	017312-82-2	53
4	Hexane, 2,2,5,5-tetramethyl-		66226	001071-81-4	53
5	Hexane, 2,2,5,5-tetramethyl-		8102	001071-81-4	53



Library Search Compound Report

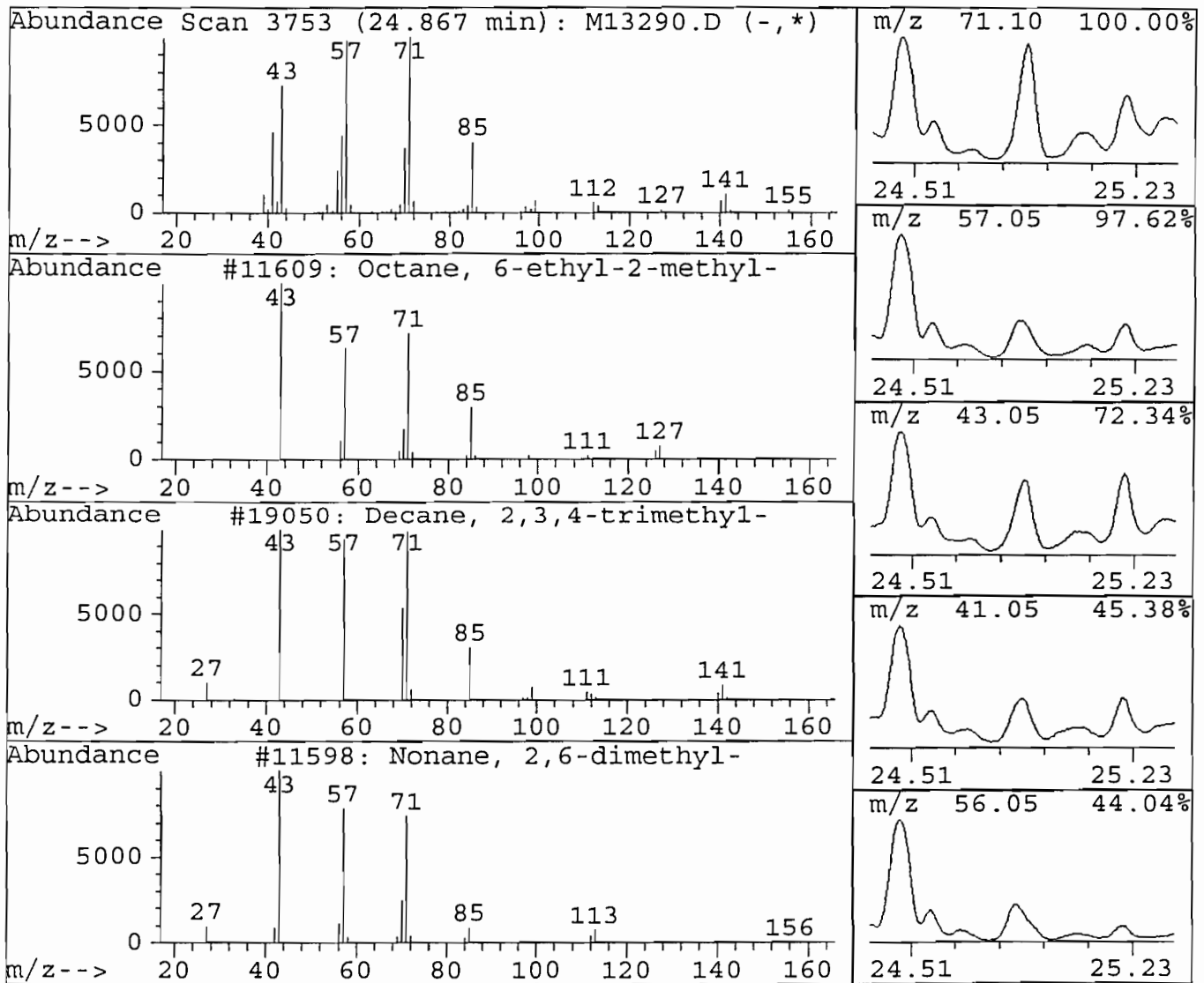
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Acq Time : 22 Oct 99 7:59 am
Sample : 13826ASP-87994
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.87	52.64 ug/L	45167619	1,4-dichlorobenzene-d4	25.25

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Octane, 6-ethyl-2-methyl-	11609	062016-19-7	53
2	Decane, 2,3,4-trimethyl-	19050	062238-15-7	50
3	Nonane, 2,6-dimethyl-	11598	017302-28-2	49
4	Undecane, 3-methyl-	15362	001002-43-3	47
5	Nonane, 3-methyl-5-propyl-	19054	031081-18-2	47



000118

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13290.D

Acq Time : 22 Oct 99 7:59 am

Sample : 13826ASP-87994

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: AV

Inst : voa3

Multiplr: 1.00

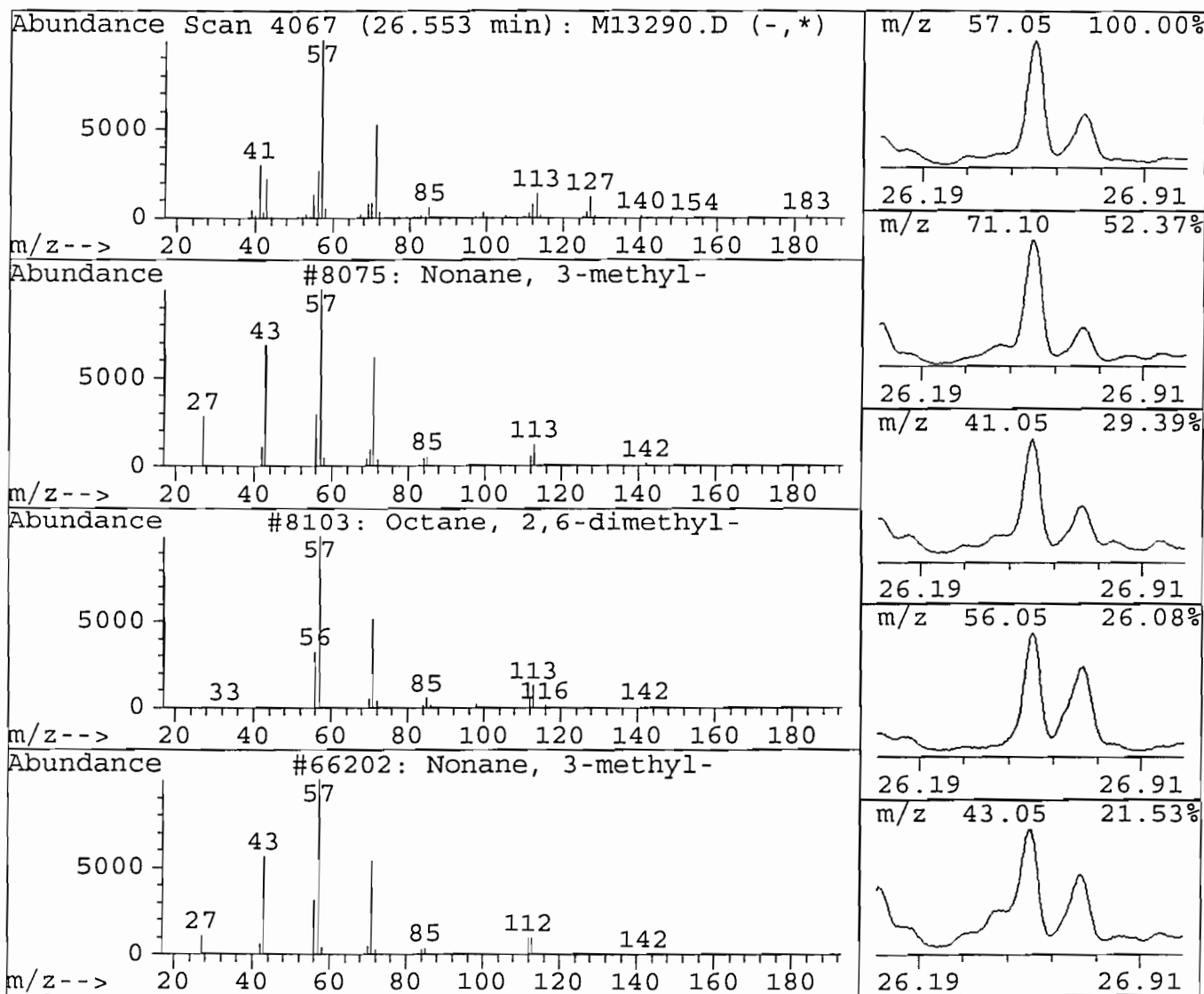
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.55	51.42 ug/L	44119775	1,4-dichlorobenzene-d4	25.25

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane, 3-methyl-	8075	005911-04-6	72
2	Octane, 2,6-dimethyl-	8103	002051-30-1	72
3	Nonane, 3-methyl-	66202	005911-04-6	72
4	Octane, 3,6-dimethyl-	8109	015869-94-0	64
5	Nonane, 3-methyl-	66200	005911-04-6	64



000119

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS15

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87995

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19260.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/20/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units:		Q
		(ug/L or ug/Kg)	ug/Kg	
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.4		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.1		U
107-02-8	Acrolein	5.1		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	5.1		U
75-15-0	Carbon Disulfide	5.1		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.3		U
107-13-1	Acrylonitrile	5.1		U
75-34-3	1,1-Dichloroethane	1.3		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	13		
74-97-5	Bromochloromethane	1.7		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.1		U
78-93-3	2-Butanone	5.1		U
56-23-5	Carbon Tetrachloride	4.1		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.6		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	25		
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	30		
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS15

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87995

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19260.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/20/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.1		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5.1		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	6.1		
136777-61-2	m&p-xylenes	27		
95-47-6	o-xylene	8.5		
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.3		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	4.2		
98-06-6	tert-Butylbenzene	1.2		U
95-63-6	1,2,4-Trimethylbenzene	13		
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.7		U
96-12-8	1,2-Dibromo-3-chloropropane	5.1		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

GP-011-SS15

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-008-SS

Lab Sample ID: O87995

Lab File ID: P19260.D

Date Received: 10/18/99

Date Analyzed: 10/20/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

CAS No.

Compound

(ug/L or ug/Kg)

ug/Kg

Q

Page 3 of 3

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-011-SS15

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87995
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19260.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/20/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	22.14	28	J
2.	Unknown	22.81	29	J
3. 1120-21-4	Undecane	24.07	27	J
4.	Unknown	24.86	19	J
5.	Unknown	25.98	16	J
6.	Unknown	26.28	88	J
7. 112-40-3	Dodecane	27.20	28	J
8.	Unknown	29.05	22	J
9.	Unknown	29.27	36	J
10.	Unknown	29.74	21	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
 Acq Time : 20 Oct 99 10:34 pm
 Sample : 13826ASP-87995
 Misc : 5G/5ML
 Quant Time: Oct 21 12:47 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.27	96	527962	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	620334	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	22.61	152	494336	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	374868	42.62	ug/L	85.23%
30) 1,2-Dichlorethane-d4	8.67	65	291697	42.20	ug/L	84.40%
38) Toluene-d8	12.77	98	491441	47.72	ug/L	95.45%
42) 4-Bromofluorobenzene	19.50	95	561914	53.16	ug/L	106.31%
Target Compounds						Qvalue
20) cis-1,2-dichloroethene	6.98	61	83003	12.67	ug/L m	97
36) 2-Chloroethyl Vinyl Ether	12.92	63	32866	24.59	ug/L m	85
39) toluene	12.92	91	304439	29.31	ug/L m	97
53) ethylbenzene	16.69	91	100407	5.93	ug/L	98
54) m&p-xylenes	17.01	106	152525	26.28	ug/L	87
55) o-xylene	18.04	91	140321	8.37	ug/L	99
66) 1,3,5-trimethylbenzene	20.66	105	81136	4.15	ug/L	99
68) 1,2,4-trimethylbenzene	21.67	105	260716	12.82	ug/L	97
~~67~~ 71) 4-isopropyltoluene	22.55	119	57533	2.47	ug/L	98
78) naphthalene	28.82	128	77875	4.89	ug/L	95

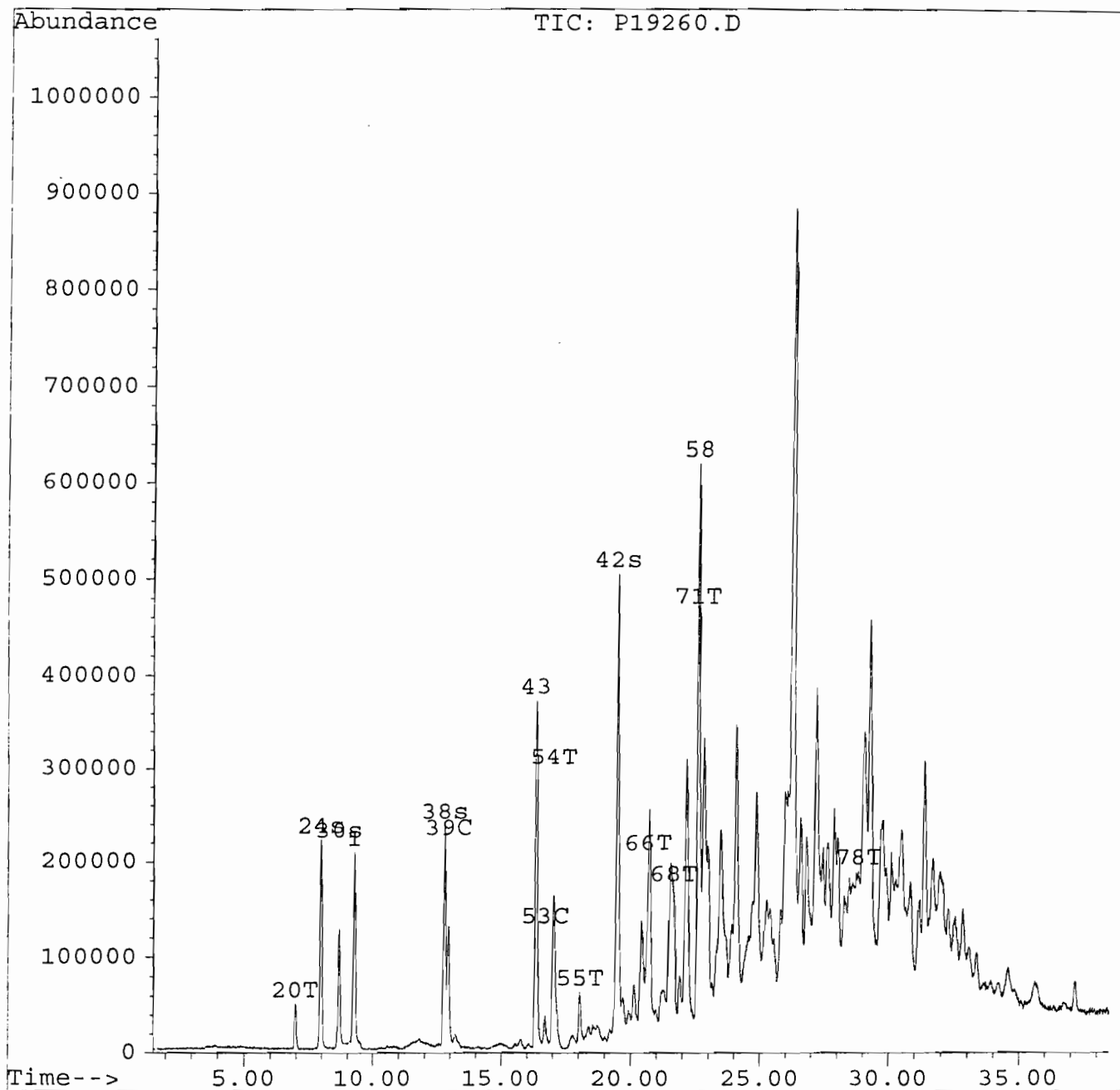
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Quantitation Report

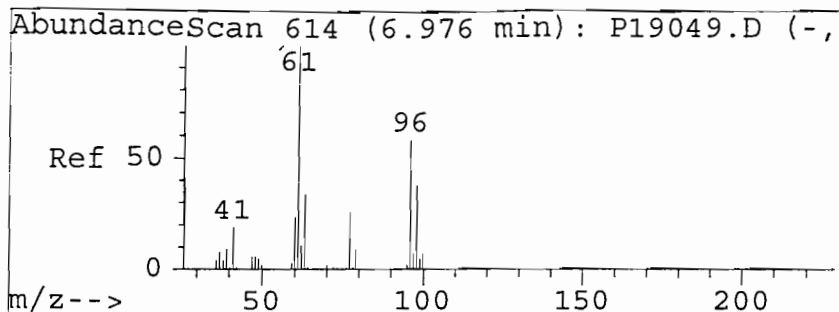
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Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML
Quant Time: Oct 21 12:47 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

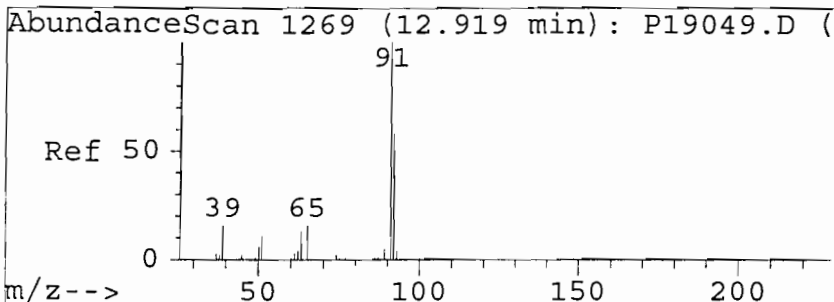
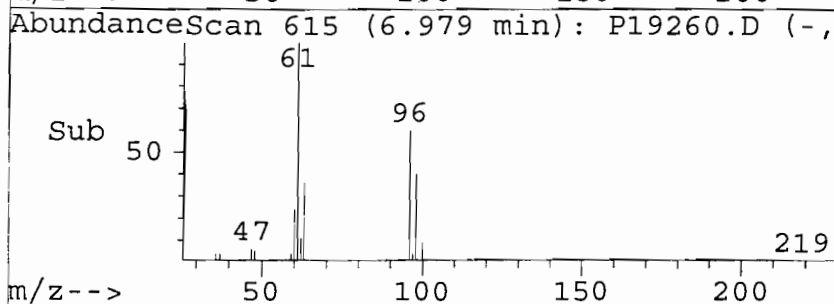
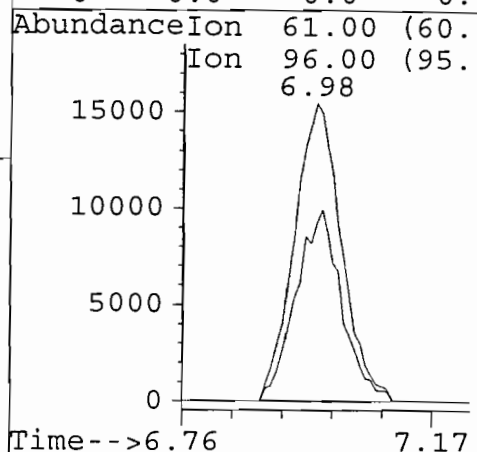
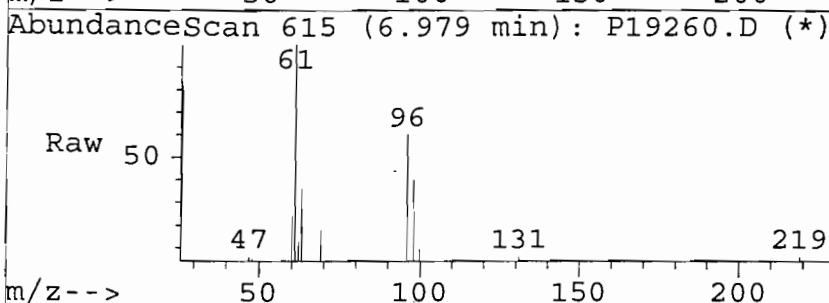


000125



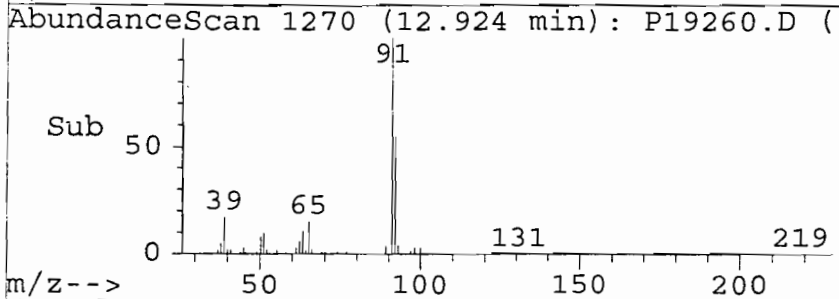
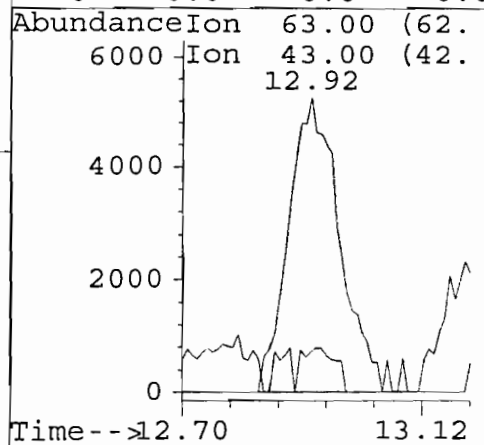
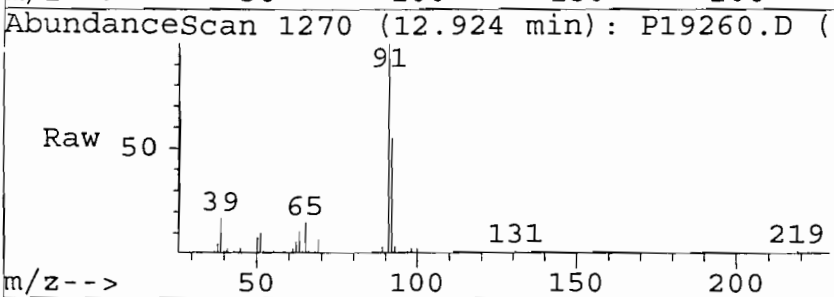
#20
 cis-1,2-dichloroethene
 Concen: 12.67 ug/L m
 RT: 6.98 min Scan# 615
 Delta R.T. 0.00 min
 Lab File: P19260.D
 Acq: 20 Oct 99 10:34 pm

Tgt Ion:	61	Resp:	83003
Ion Ratio	Lower	Upper	
61	100		
96	59.6	40.2	74.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



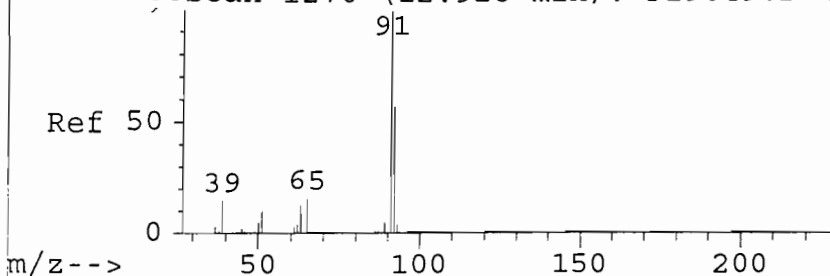
#36
 2-Chloroethyl Vinyl Ether
 Concen: 24.59 ug/L m
 RT: 12.92 min Scan# 1270
 Delta R.T. 0.01 min
 Lab File: P19260.D
 Acq: 20 Oct 99 10:34 pm

Tgt Ion:	63	Resp:	32866
Ion Ratio	Lower	Upper	
63	100		
43	10.0	2.5	7.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000126

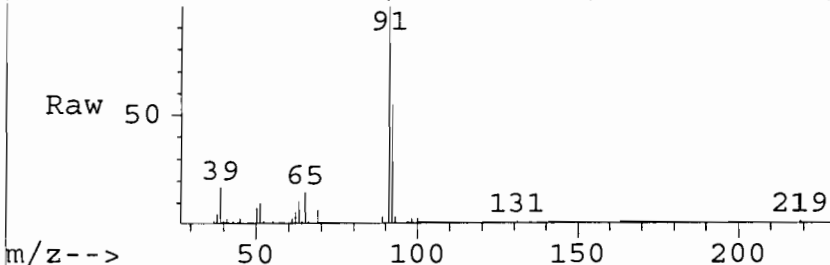
AbundanceScan 1270 (12.928 min): P19049.D (



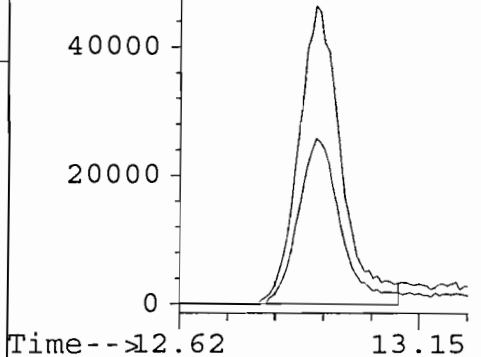
#39
toluene
Concen: 29.31 ug/L m
RT: 12.92 min Scan# 1270
Delta R.T. -0.00 min
Lab File: P19260.D
Acq: 20 Oct 99 10:34 pm

Tgt Ion:91	Resp: 304439
Ion Ratio	Lower Upper
91 100	
92 55.5	40.2 74.6
0 0.0	0.0 0.0
0 0.0	0.0 0.0

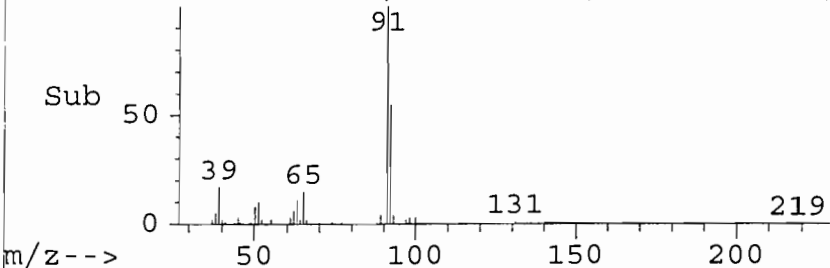
AbundanceScan 1270 (12.924 min): P19260.D (



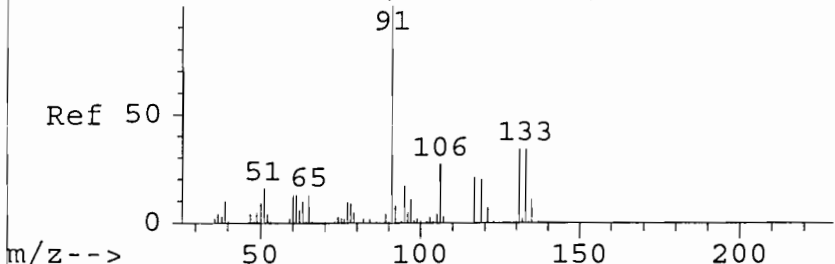
AbundanceIon 91.00 (90.
Ion 92.00 (91.
12.92



AbundanceScan 1270 (12.924 min): P19260.D (



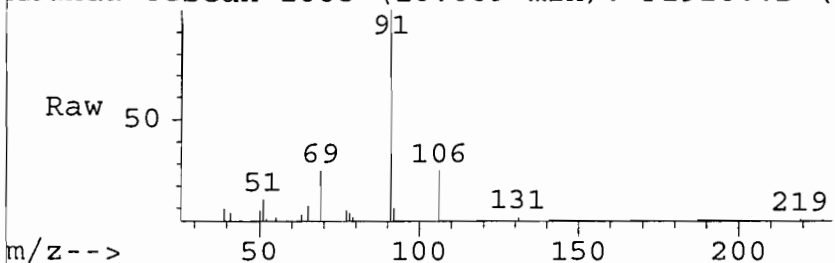
AbundanceScan 1684 (16.672 min): P19049.D (



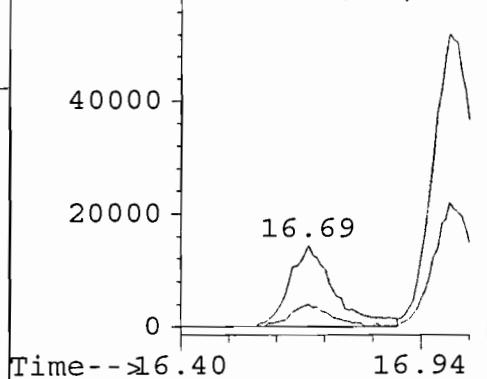
#53
ethylbenzene
Concen: 5.93 ug/L
RT: 16.69 min Scan# 1685
Delta R.T. 0.02 min
Lab File: P19260.D
Acq: 20 Oct 99 10:34 pm

Tgt Ion:91	Resp: 100407
Ion Ratio	Lower Upper
91 100	
106 27.3	18.3 33.9
0 0.0	0.0 0.0
0 0.0	0.0 0.0

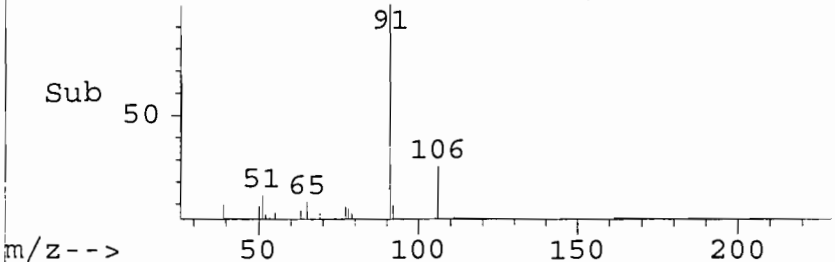
AbundanceScan 1685 (16.689 min): P19260.D (



AbundanceIon 91.00 (90.
Ion 106.00 (105

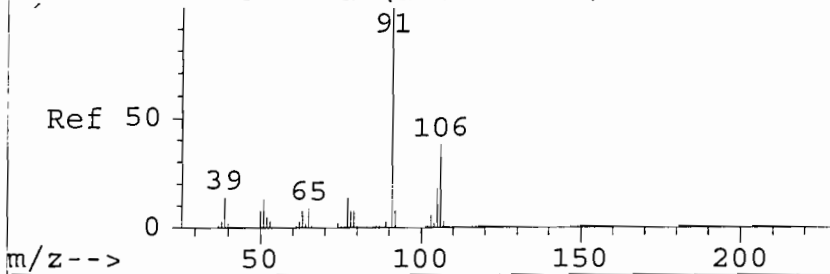


AbundanceScan 1685 (16.689 min): P19260.D (



000127

AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 26.28 ug/L

RT: 17.01 min Scan# 1720

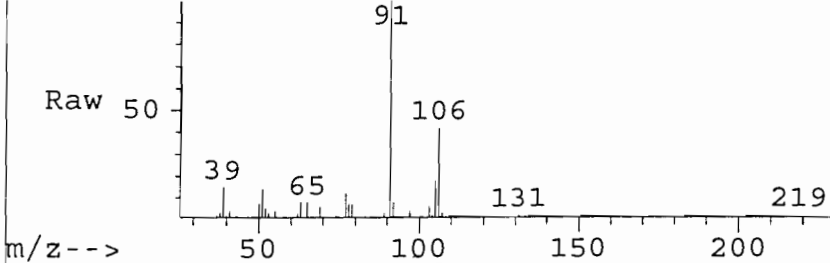
Delta R.T. 0.00 min

Lab File: P19260.D

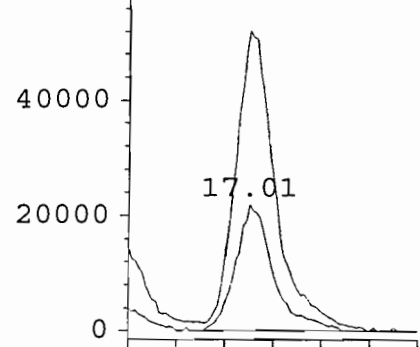
Acq: 20 Oct 99 10:34 pm

Tgt	Ion:106	Resp:	152525
Ion	Ratio	Lower	Upper
106	100		
91	238.6	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

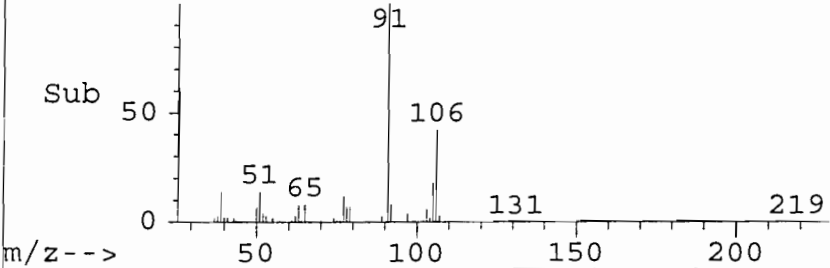
AbundanceScan 1720 (17.009 min): P19260.D (



AbundanceIon 106.00 (105
60000 Ion 91.00 (90.

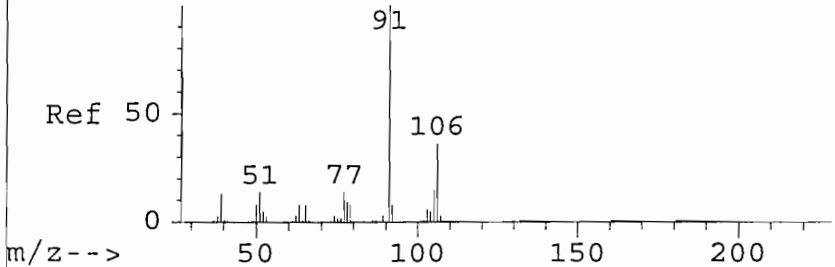


AbundanceScan 1720 (17.009 min): P19260.D (



Time-->16.69 17.33

AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 8.37 ug/L

RT: 18.04 min Scan# 1833

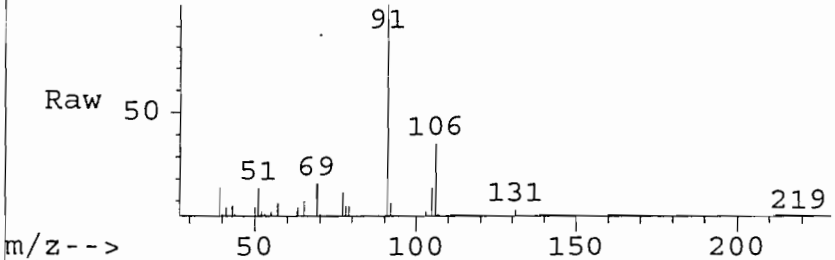
Delta R.T. 0.02 min

Lab File: P19260.D

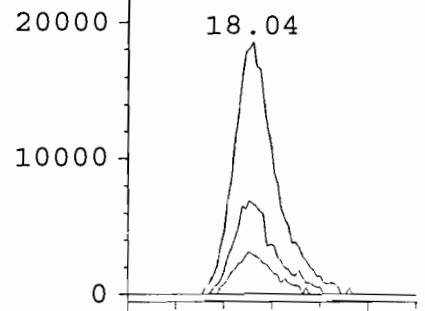
Acq: 20 Oct 99 10:34 pm

Tgt	Ion:91	Resp:	140321
Ion	Ratio	Lower	Upper
91	100		
106	36.1	25.4	47.2
105	15.7	10.1	18.8
0	0.0	0.0	0.0

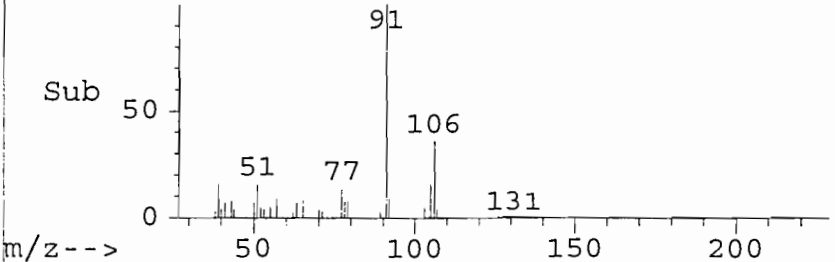
AbundanceScan 1833 (18.037 min): P19260.D (



AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104

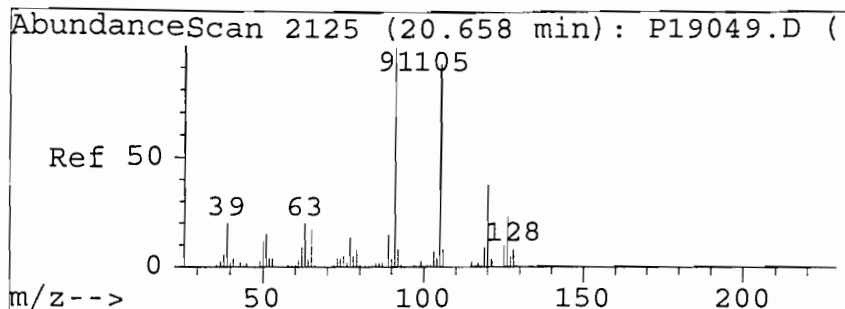


AbundanceScan 1833 (18.037 min): P19260.D (

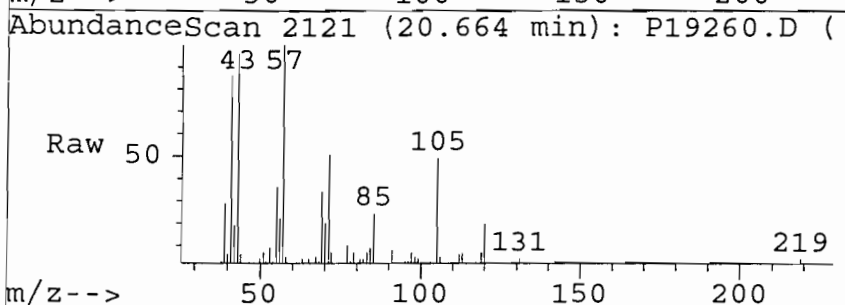


Time-->17.72 18.33

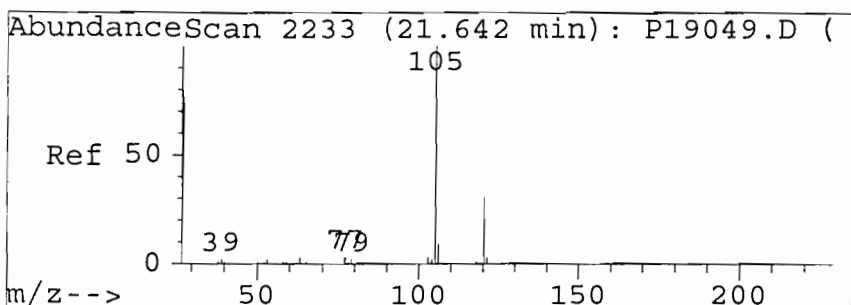
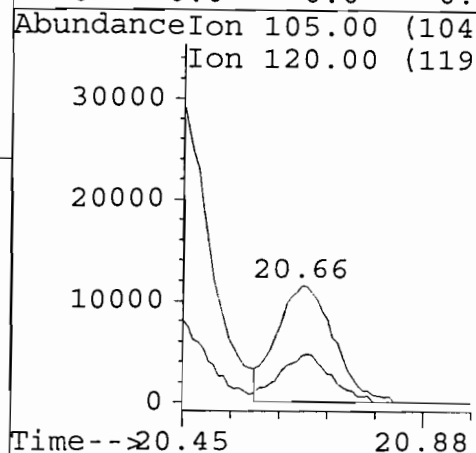
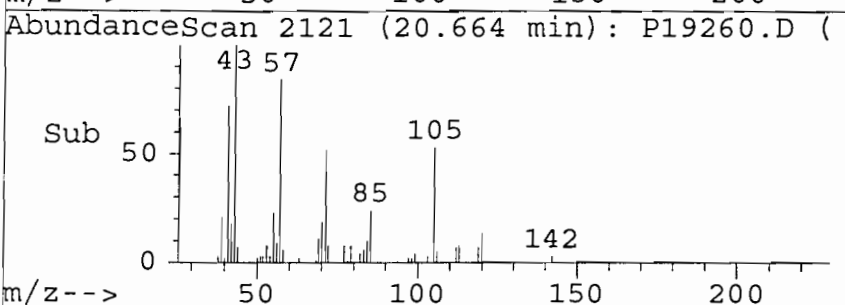
000128



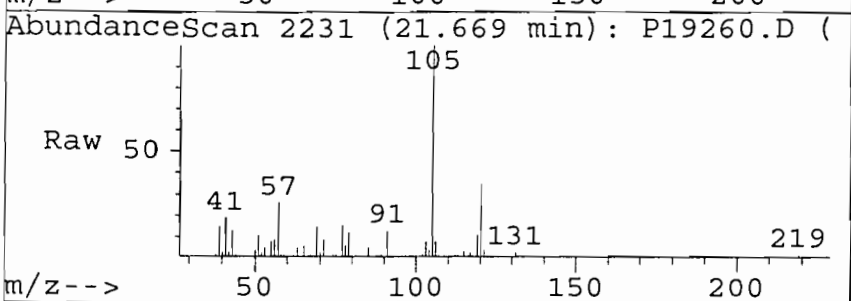
#66
1,3,5-trimethylbenzene
Concen: 4.15 ug/L
RT: 20.66 min Scan# 2121
Delta R.T. 0.01 min
Lab File: P19260.D
Acq: 20 Oct 99 10:34 pm



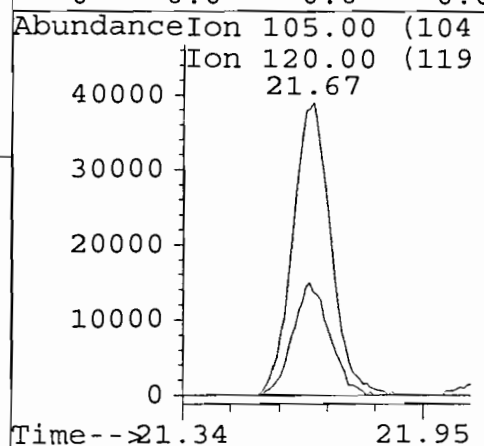
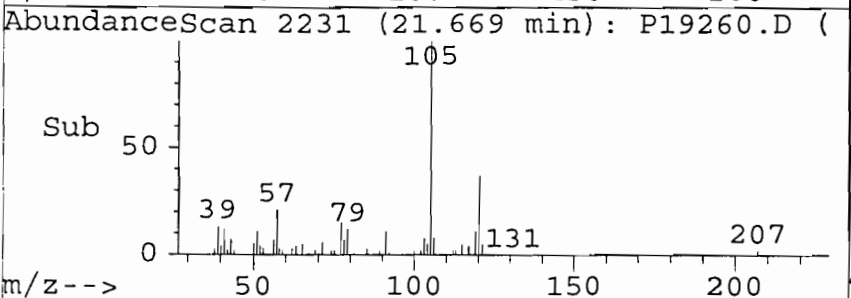
Tgt Ion	Ratio	Lower	Upper
105	100		
120	40.0	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#68
1,2,4-trimethylbenzene
Concen: 12.82 ug/L
RT: 21.67 min Scan# 2231
Delta R.T. 0.03 min
Lab File: P19260.D
Acq: 20 Oct 99 10:34 pm

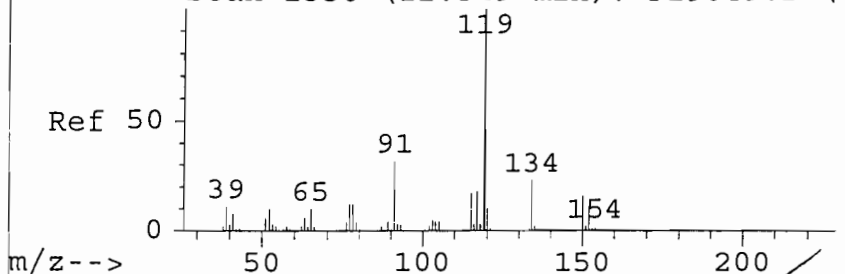


Tgt Ion	Ratio	Lower	Upper
105	100		
120	35.2	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000129

AbundanceScan 2330 (22.529 min): P19049.D (



#71

4-isopropyltoluene

Concen: 2.47 ug/L

RT: 22.55 min Scan# 2328

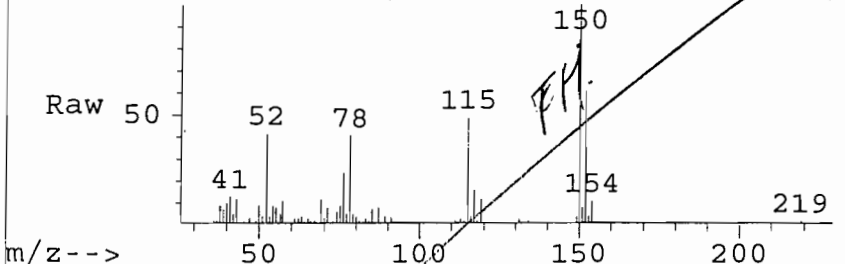
Delta R.T. 0.02 min

Lab File: P19260.D

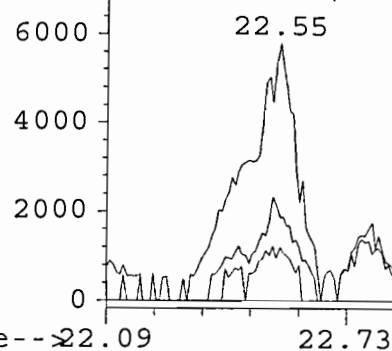
Acq: 20 Oct 99 10:34 pm

Tgt Ion:119	Resp:	57533
Ion Ratio	Lower	Upper
119	100	
134	20.4	15.9 29.5
91	32.3	22.6 42.0
0	0.0	0.0 0.0

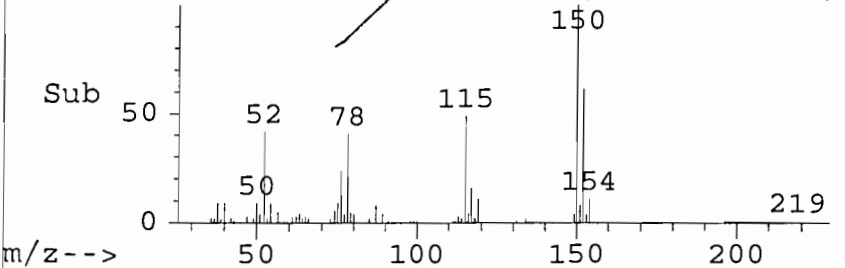
AbundanceScan 2328 (22.553 min): P19260.D (



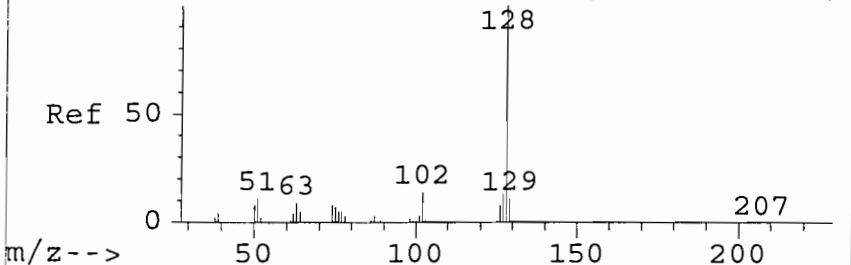
AbundanceIon 119.00 (118
8000 Ion 134.00 (133
Ion 91.00 (90.



AbundanceScan 2328 (22.553 min): P19260.D (



AbundanceScan 3018 (28.798 min): P19049.D (



#78

naphthalene

Concen: 4.89 ug/L

RT: 28.82 min Scan# 3018

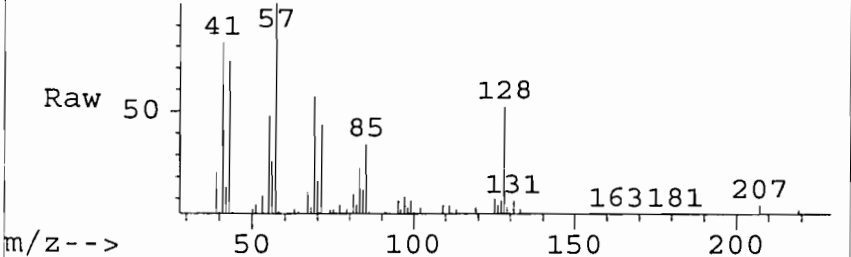
Delta R.T. 0.03 min

Lab File: P19260.D

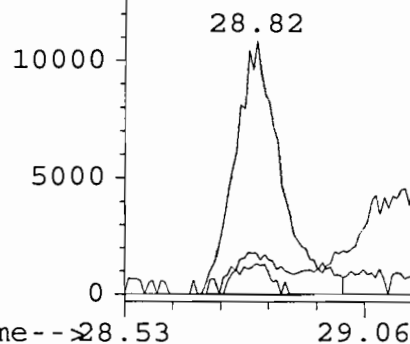
Acq: 20 Oct 99 10:34 pm

Tgt Ion:128	Resp:	77875
Ion Ratio	Lower	Upper
128	100	
127	16.6	9.4 17.4
129	12.4	8.1 15.1
0	0.0	0.0 0.0

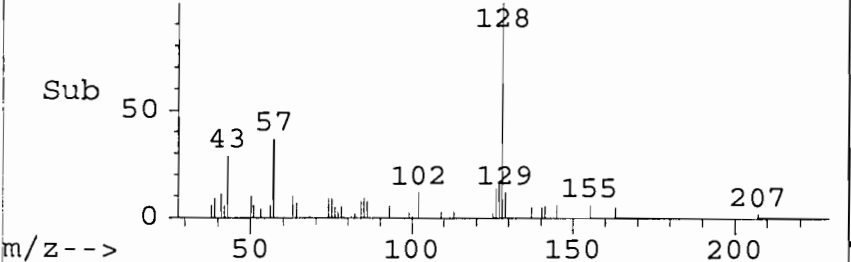
AbundanceScan 3018 (28.825 min): P19260.D (



AbundanceIon 128.00 (127
15000 Ion 127.00 (126
Ion 129.00 (128



AbundanceScan 3018 (28.825 min): P19260.D (



000130

Library Search Compound Report

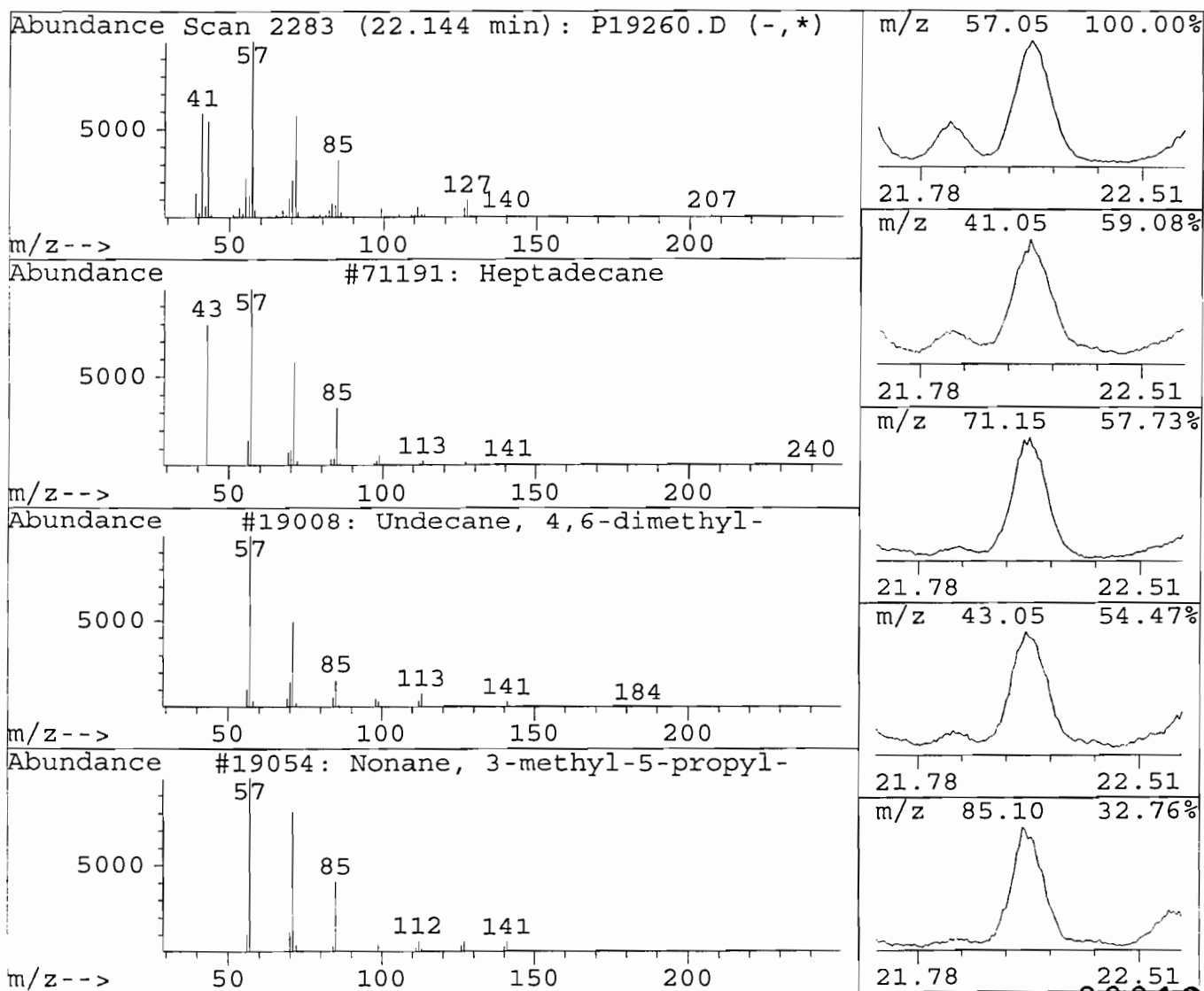
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.14	27.55 ug/L	2298576	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptadecane	71191	000629-78-7	59
2	Undecane, 4,6-dimethyl-	19008	017312-82-2	59
3	Nonane, 3-methyl-5-propyl-	19054	031081-18-2	59
4	Nonane, 5-(1-methylpropyl)-	19016	062185-54-0	53
5	Hexane, 3,3-dimethyl-	3095	000563-16-6	53



000131

Library Search Compound Report

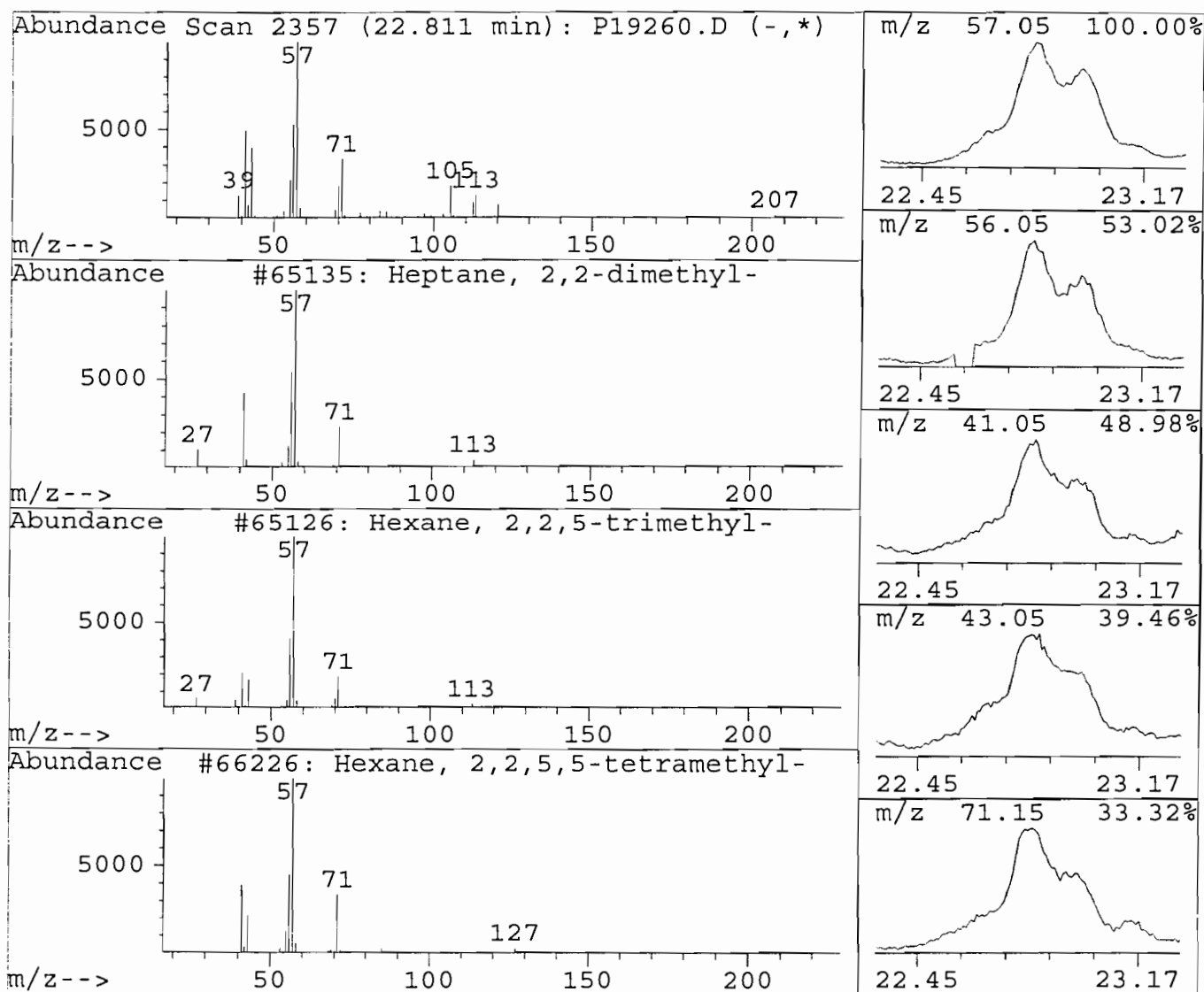
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.81	28.89 ug/L	2410891	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 2,2-dimethyl-	65135	001071-26-7	53
2	Hexane, 2,2,5-trimethyl-	65126	003522-94-9	50
3	Hexane, 2,2,5,5-tetramethyl-	66226	001071-81-4	47
4	Hexane, 2,2,5-trimethyl-	65129	003522-94-9	38
5	Hexane, 2,2,5,5-tetramethyl-	8102	001071-81-4	38



000132

Library Search Compound Report

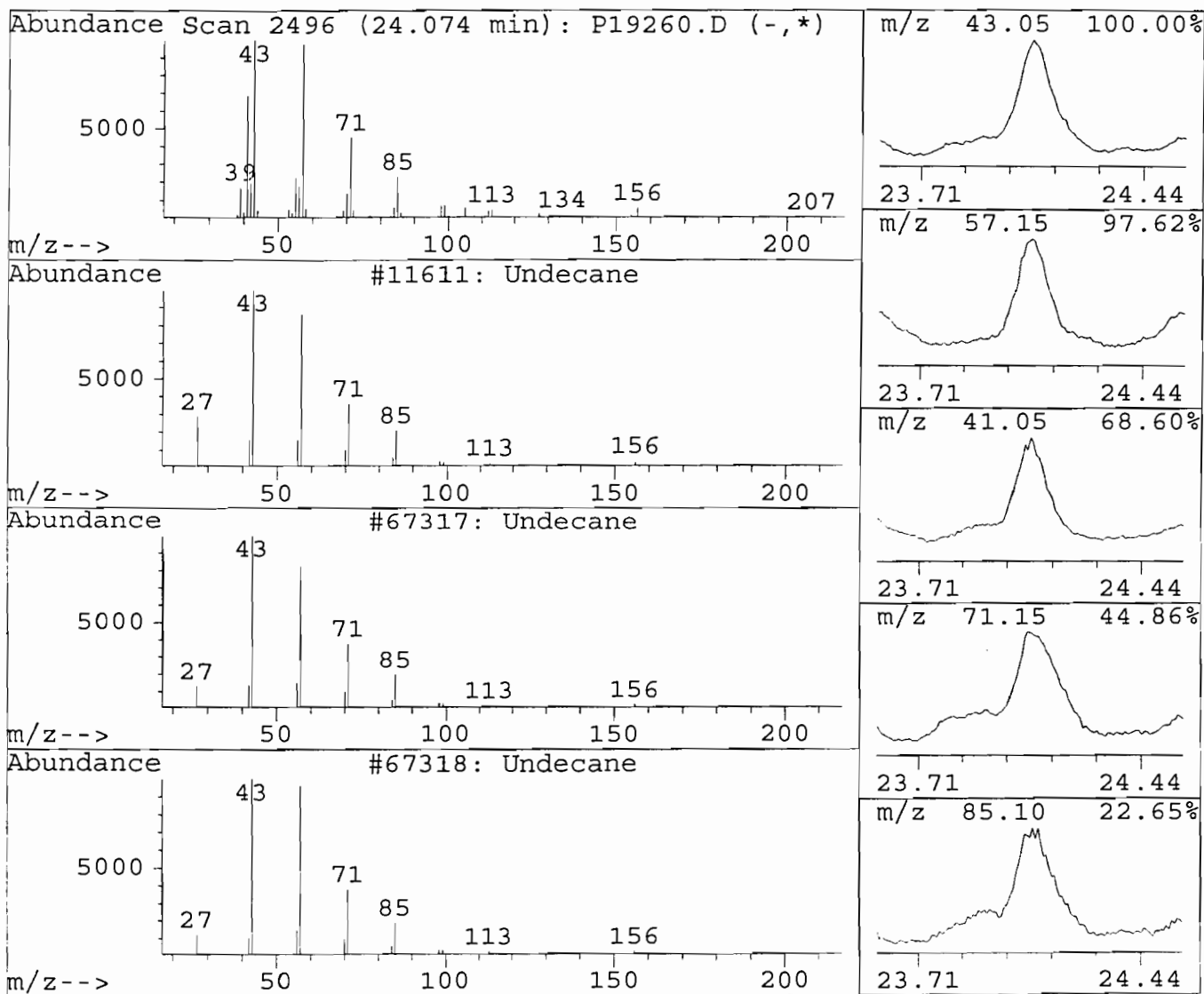
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.07	26.78 ug/L	2234406	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane	11611	001120-21-4	95
2	Undecane	67317	001120-21-4	91
3	Undecane	67318	001120-21-4	90
4	Dodecane	68250	000112-40-3	80
5	Decane, 2-methyl-	67320	006975-98-0	78



000133

Library Search Compound Report

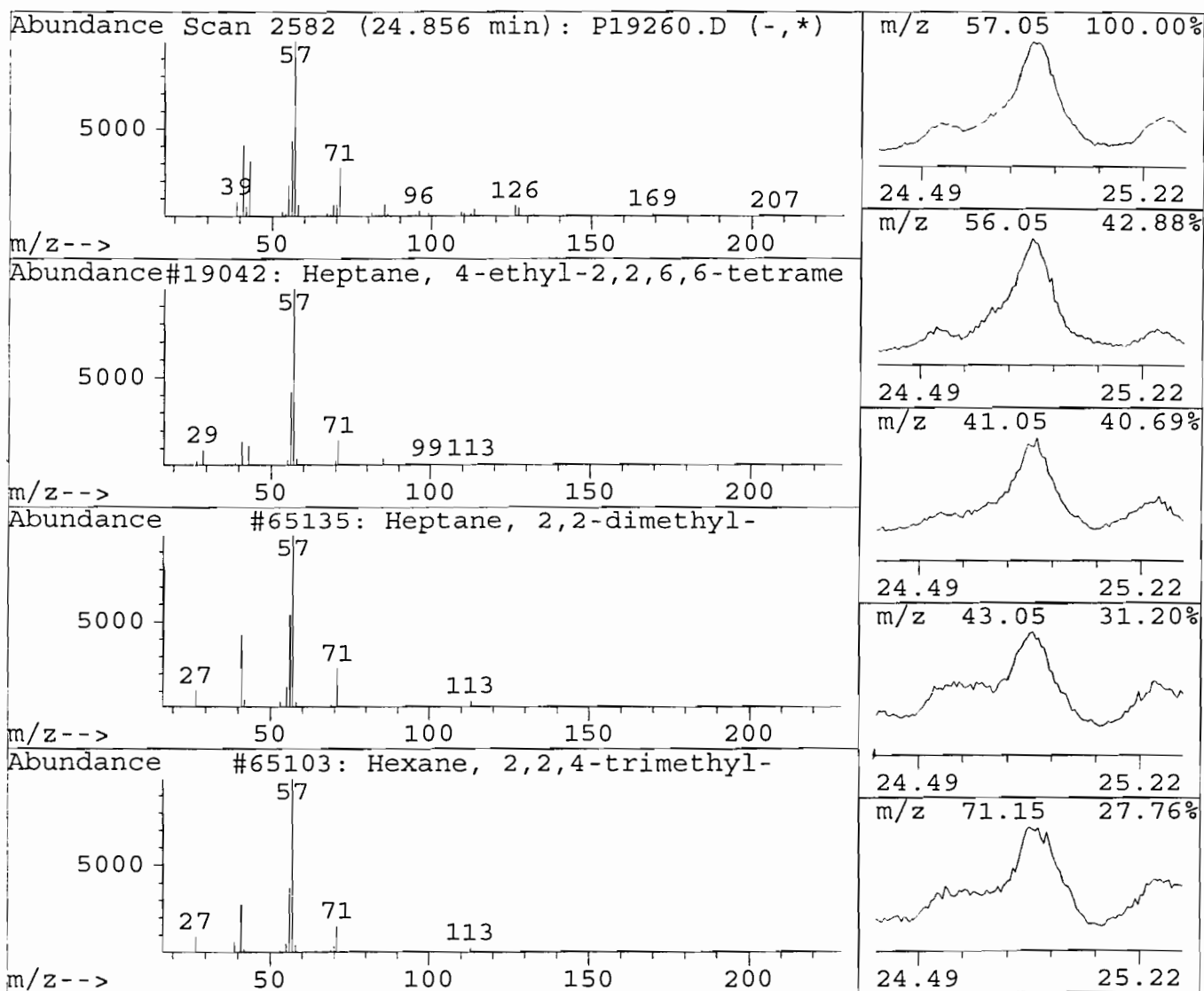
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.86	19.05 ug/L	1589953	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Heptane, 4-ethyl-2,2,6,6-tetramethyl-	19042	062108-31-0	64
2	Heptane, 2,2-dimethyl-	65135	001071-26-7	53
3	Hexane, 2,2,4-trimethyl-	65103	016747-26-5	53
4	Hexane, 2,2,5,5-tetramethyl-	8102	001071-81-4	50
5	Decane, 2,2,7-trimethyl-	19001	062237-99-4	50



000134

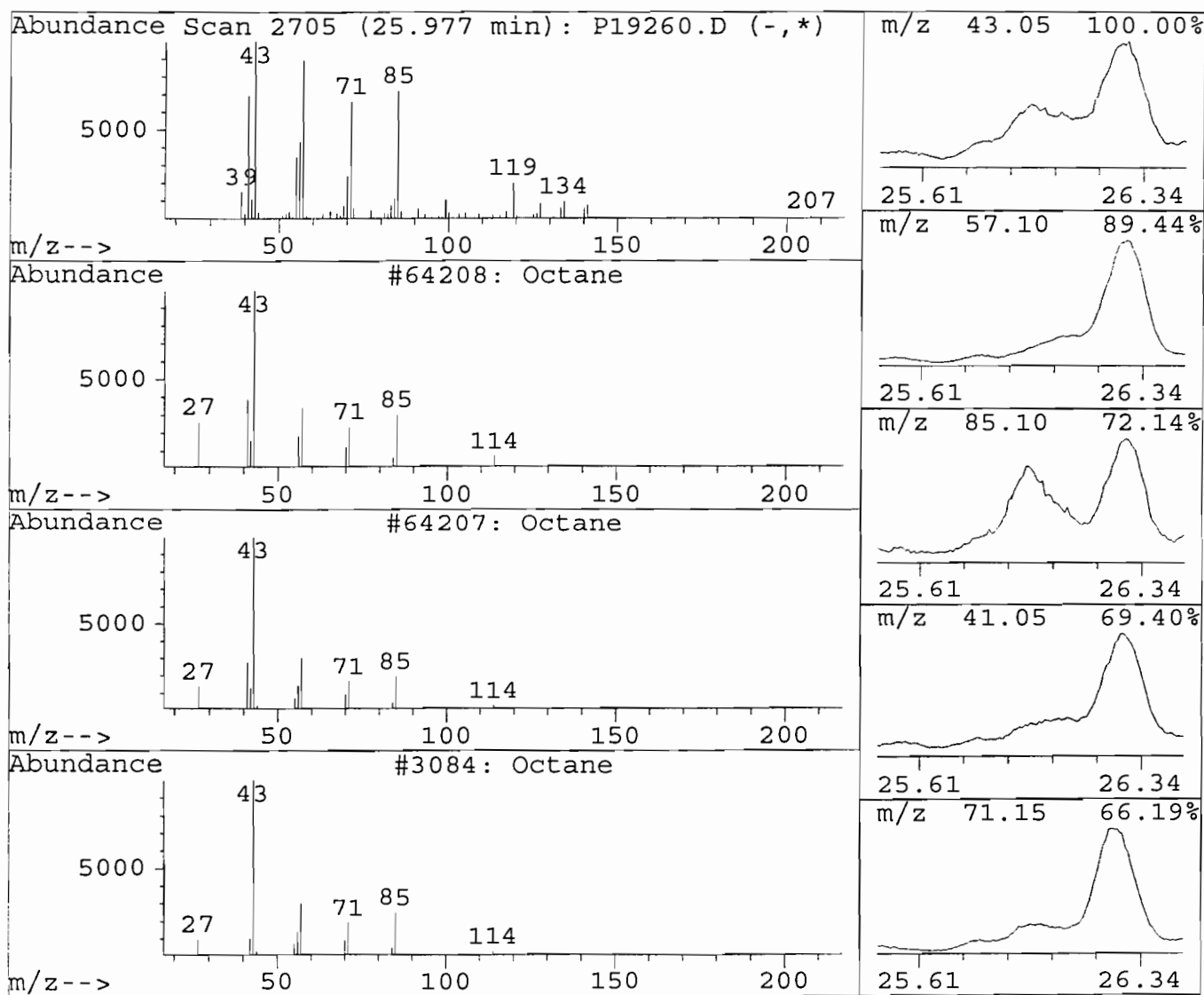
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.98	15.28 ug/L	1274567	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octane		64208	000111-65-9	64
2	Octane		64207	000111-65-9	64
3	Octane		3084	000111-65-9	53
4	Dodecane		15347	000112-40-3	50
5	Hexane, 3,3-dimethyl-		3095	000563-16-6	47



000135

Library Search Compound Report

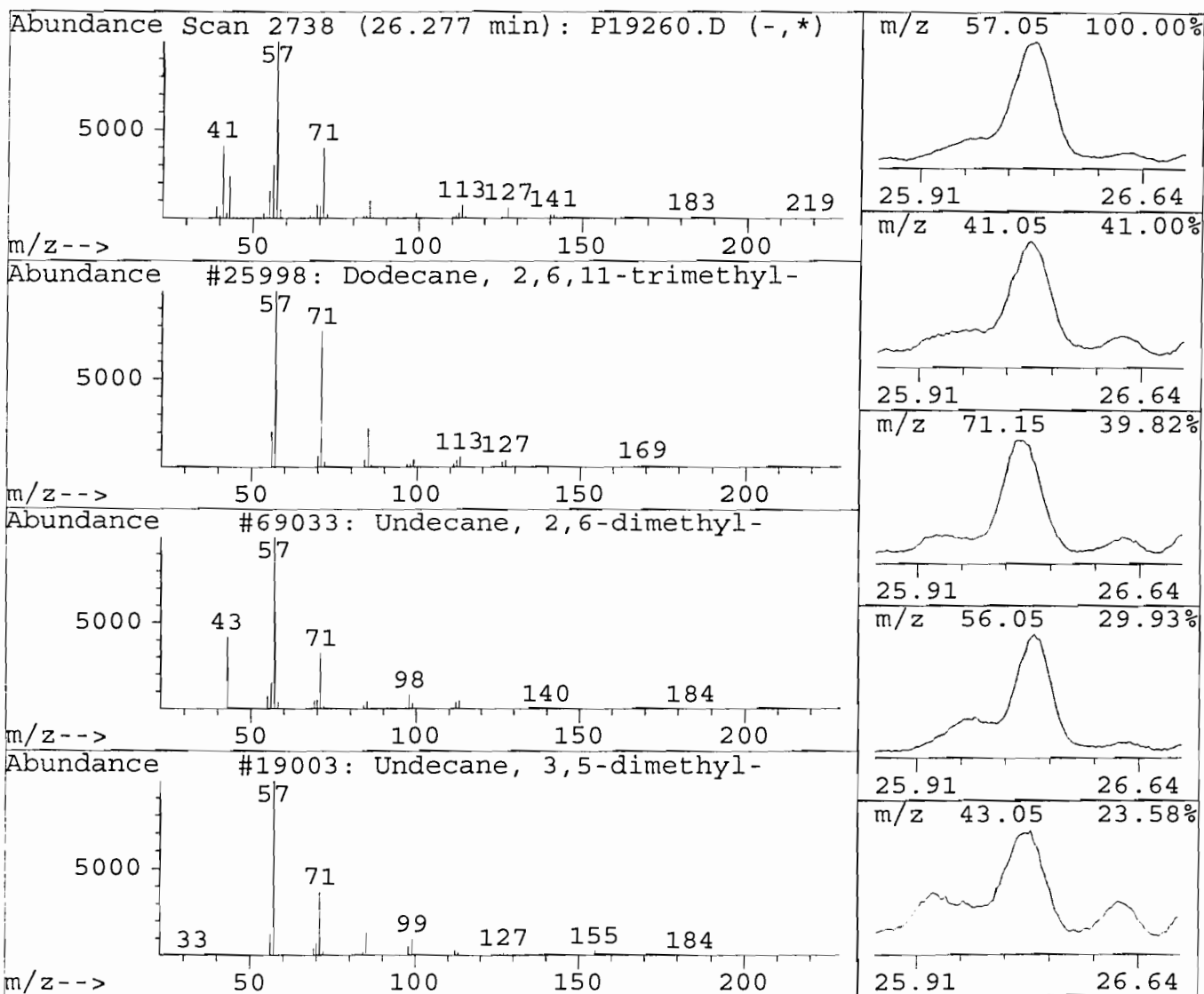
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.28	86.44 ug/L	7212221	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane, 2,6,11-trimethyl-	25998	031295-56-4	64
2	Undecane, 2,6-dimethyl-	69033	017301-23-4	59
3	Undecane, 3,5-dimethyl-	19003	017312-81-1	59
4	Octane, 4-ethyl-	66222	015869-86-0	59
5	Decane, 2,6,8-trimethyl-	19030	062108-26-3	59



000136

Library Search Compound Report

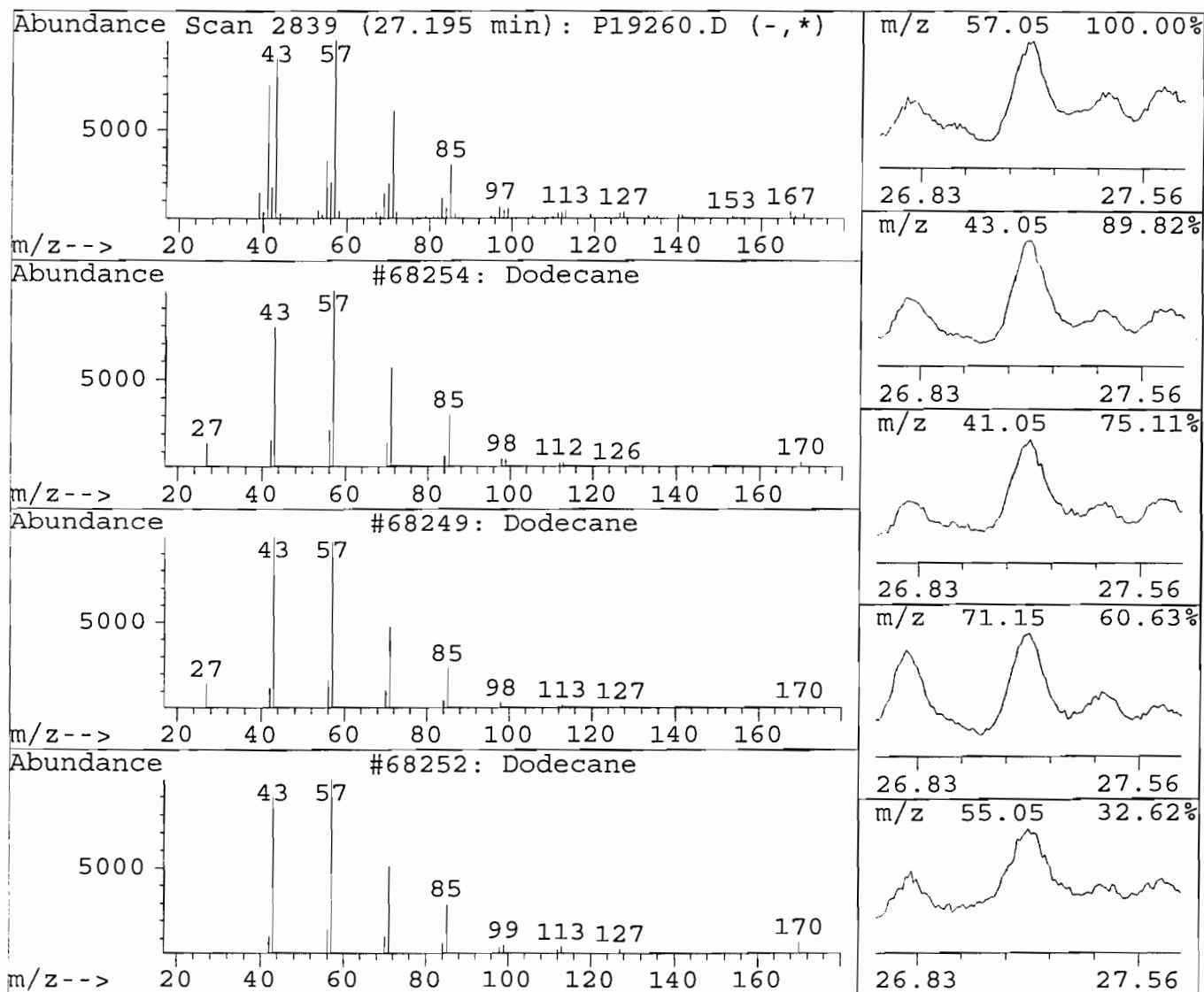
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.20	27.18 ug/L	2267963	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68254	000112-40-3	90
2	Dodecane	68249	000112-40-3	83
3	Dodecane	68252	000112-40-3	81
4	Pentadecane	26001	000629-62-9	80
5	Tridecane	69020	000629-50-5	80



000137

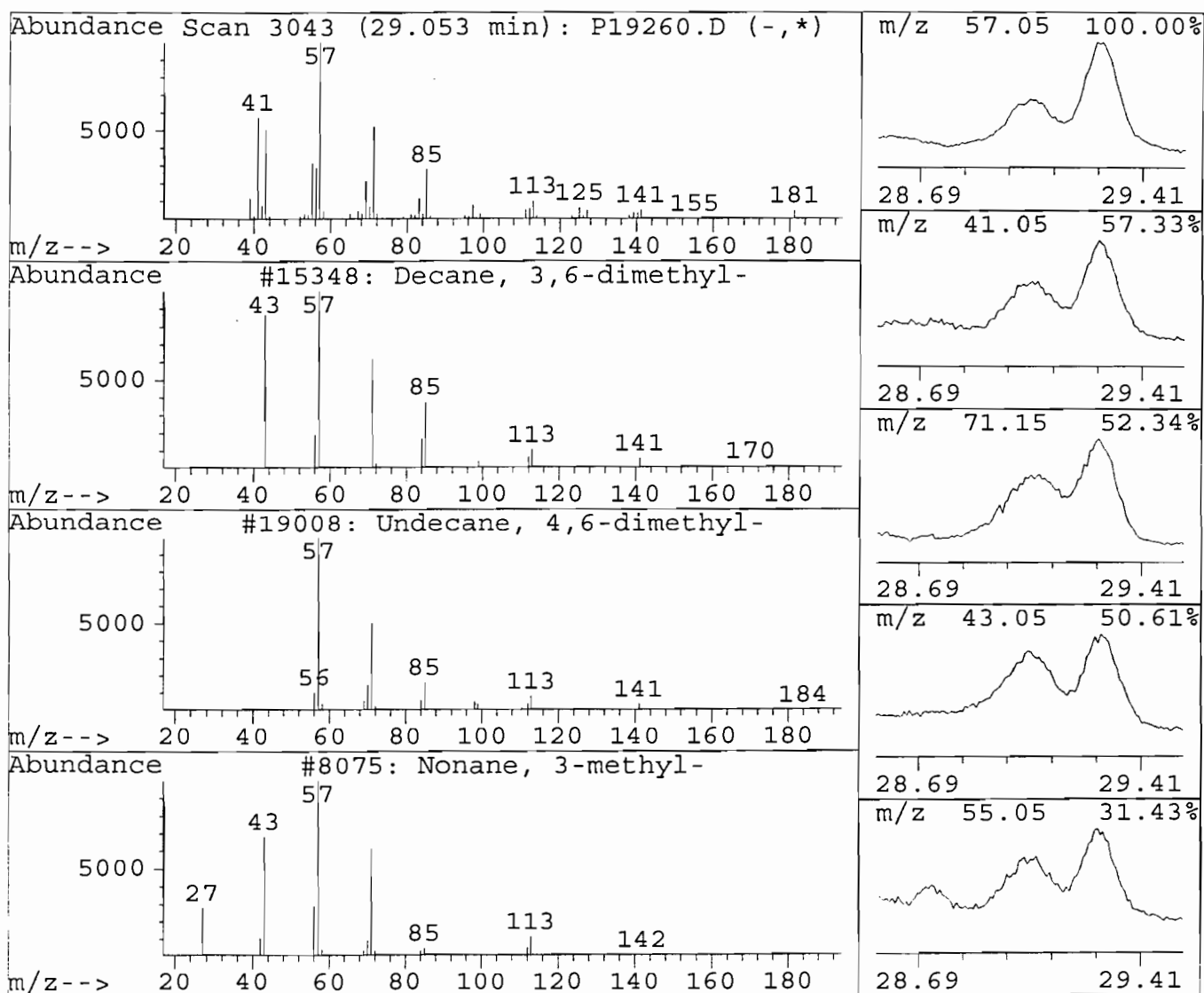
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.05	21.78 ug/L	1817514	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Decane, 3,6-dimethyl-		15348	017312-53-7	53
2	Undecane, 4,6-dimethyl-		19008	017312-82-2	53
3	Nonane, 3-methyl-		8075	005911-04-6	53
4	Undecane, 3-methyl-		15362	001002-43-3	50
5	Nonacosane		54526	000630-03-5	50



000138

Library Search Compound Report

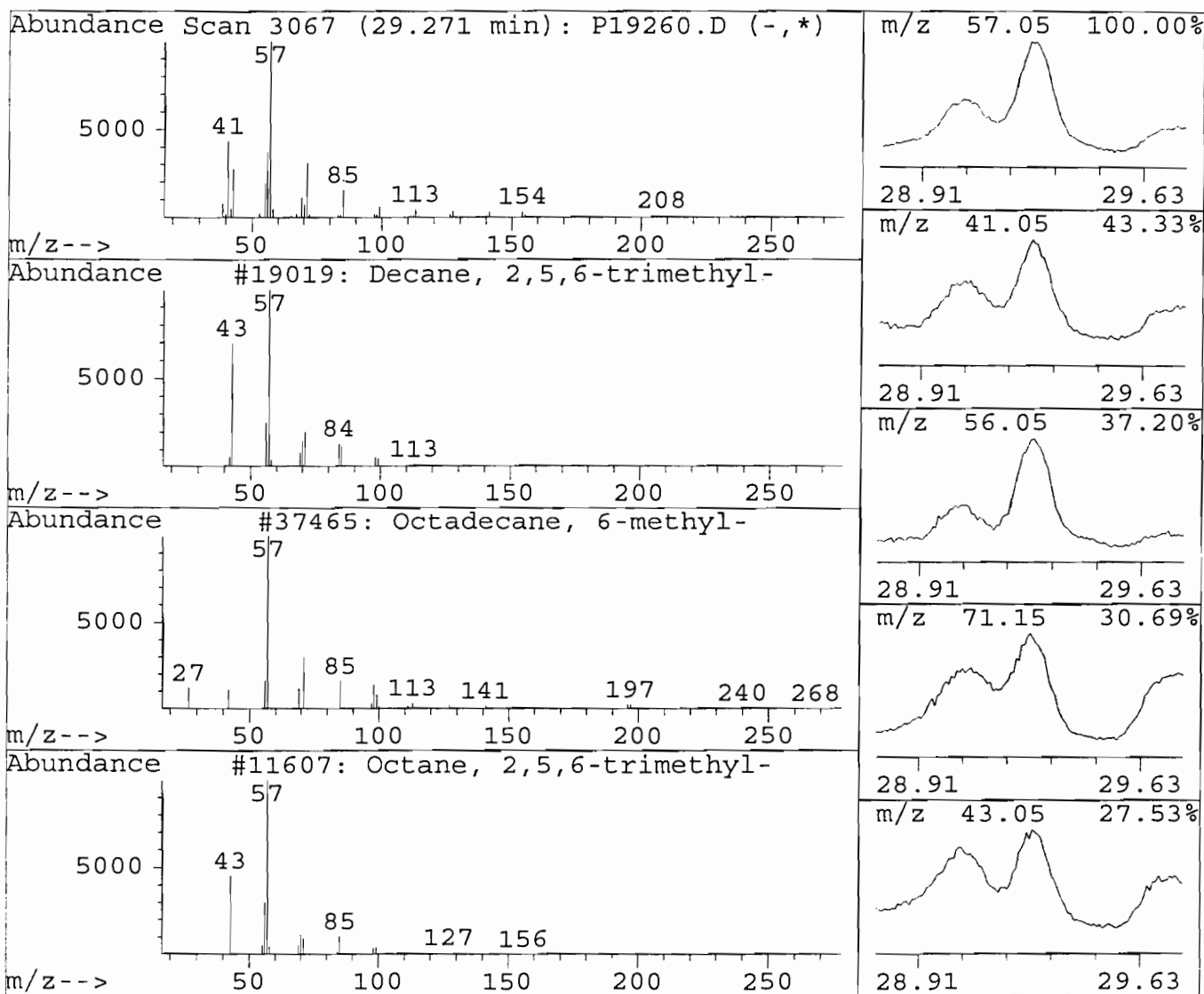
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.27	34.89 ug/L	2910857	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Decane, 2,5,6-trimethyl-	19019	062108-23-0	64
2	Octadecane, 6-methyl-	37465	010544-96-4	64
3	Octane, 2,5,6-trimethyl-	11607	062016-14-2	59
4	Dodecane, 3-methyl-	69025	017312-57-1	59
5	Decane, 3,8-dimethyl-	68255	017312-55-9	59



000139

Library Search Compound Report

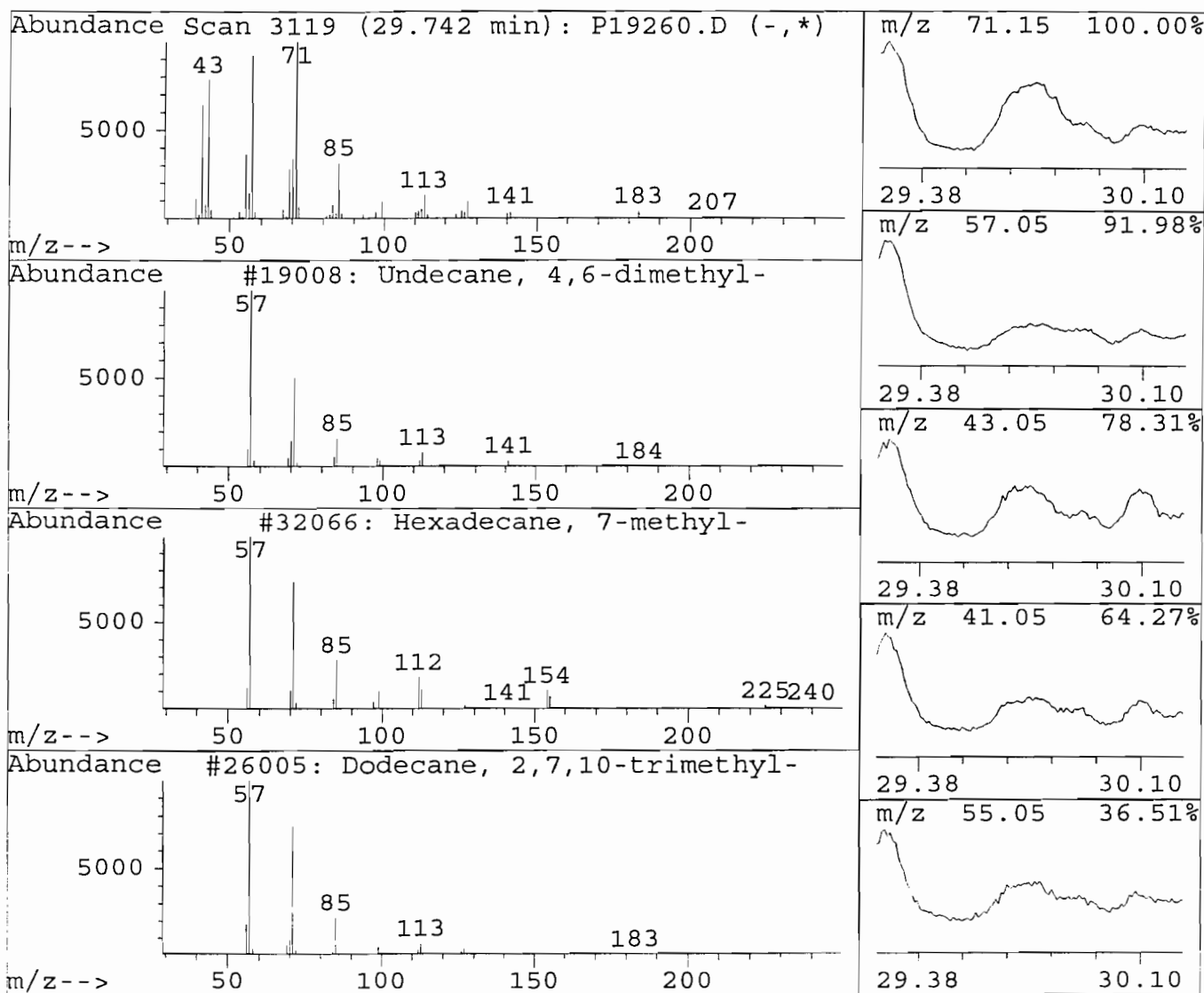
Data File : E:\HPCHEM\1\DATA\V2102099\P19260.D
Acq Time : 20 Oct 99 10:34 pm
Sample : 13826ASP-87995
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.74	20.19 ug/L	1684999	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 4,6-dimethyl-	19008	017312-82-2	72
2	Hexadecane, 7-methyl-	32066	026730-20-1	64
3	Dodecane, 2,7,10-trimethyl-	26005	074645-98-0	64
4	Undecane, 2,8-dimethyl-	18991	017301-25-6	64
5	Heptane, 2,5,5-trimethyl-	8087	001189-99-7	59



000140

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-012-SS15

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87996

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19261.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 5

Date Analyzed: 10/20/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS No.	Compound	Concentration Units:		Q
		(ug/L or ug/Kg)	<u>ug/Kg</u>	
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.5		U
75-01-4	Vinyl Chloride	2		U
74-83-9	Bromomethane	4		U
75-00-3	Chloroethane	5.3		U
107-02-8	Acrolein	5.3		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	5.3		U
75-15-0	Carbon Disulfide	5.3		U
75-09-2	Methylene Chloride	1.1		U
156-60-5	trans-1,2-Dichloroethene	4.5		U
107-13-1	Acrylonitrile	5.3		U
75-34-3	1,1-Dichloroethane	1.4		U
594-20-7	2,2-Dichloropropane	1.1		U
156-59-2	cis-1,2-dichloroethene	4.9		
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.3		U
78-93-3	2-Butanone	5.3		U
56-23-5	Carbon Tetrachloride	4.2		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1.1		U
107-06-2	1,2-Dichloroethane	1.1		U
79-01-6	Trichloroethene	2.7		U
78-87-5	1,2-Dichloropropane	3.6		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1.1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.3		U
10061-01-5	cis-1,3-Dichloropropene	1.1		U
108-88-3	Toluene	8.9		
10061-02-6	trans-1,3-Dichloropropene	1.1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-012-SS15

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87996

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19261.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 5

Date Analyzed: 10/20/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.3		U
127-18-4	Tetrachloroethene	1.2		U
142-28-9	1,3-Dichloropropane	1.3		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.7		U
591-78-6	2-Hexanone	5.3		U
108-90-7	Chlorobenzene	1.2		U
630-20-6	1,1,1,2-Tetrachloroethane	1.3		U
100-41-4	Ethylbenzene	1.2		U
136777-61-2	m&p-xylenes	8		
95-47-6	o-xylene	2.5		
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.4		U
108-86-1	Bromobenzene	1.1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.7		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.4		U
95-49-8	2-Chlorotoluene	1.2		U
106-43-4	4-Chlorotoluene	1.1		U
108-67-8	1,3,5-Trimethylbenzene	1.7		U
98-06-6	tert-Butylbenzene	1.3		U
95-63-6	1,2,4-Trimethylbenzene	4.6		
135-98-8	sec-Butylbenzene	1.3		U
541-73-1	1,3-Dichlorobenzene	1.3		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.3		U
95-50-1	1,2-Dichlorobenzene	1.1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.3		U
120-82-1	1,2,4-Trichlorobenzene	1.3		U
87-68-3	Hexachlorobutadiene	1.1		U

1A

GP-012-SS15

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O87996

Lab File ID: P19261.D

Date Received: 10/18/99

Date Analyzed: 10/20/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

Q

~~000~~143

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-012-SS15

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: O87996
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19261.D
Level: (low/med) LOW Date Received: 10/18/99
% Moisture: not dec. 5 Date Analyzed: 10/20/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	30.48	13	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000144

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19261.D
 Acq Time : 20 Oct 99 11:19 pm
 Sample : 13826ASP-87996
 Misc : 5G/5ML
 Quant Time: Oct 21 12:35 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	1194394	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	1295889	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	22.61	152	826396	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.98	113	850324	42.73	ug/L	85.46%
30) 1,2-Dichlorethane-d4	8.67	65	641402	41.02	ug/L	82.04%
38) Toluene-d8	12.77	98	1099996	47.22	ug/L	94.44%
42) 4-Bromofluorobenzene	19.49	95	1090151	45.59	ug/L	91.17%
Target Compounds						Qvalue
20) cis-1,2-dichloroethene	6.99	61	69167	4.67	ug/L	98
39) toluene	12.93	91	199751	8.50	ug/L	94
54) m&p-xylenes	17.01	106	92045	7.59	ug/L	82
55) o-xylene	18.03	91	82984	2.37	ug/L	96
68) 1,2,4-trimethylbenzene	21.67	105	147013	4.33	ug/L	99

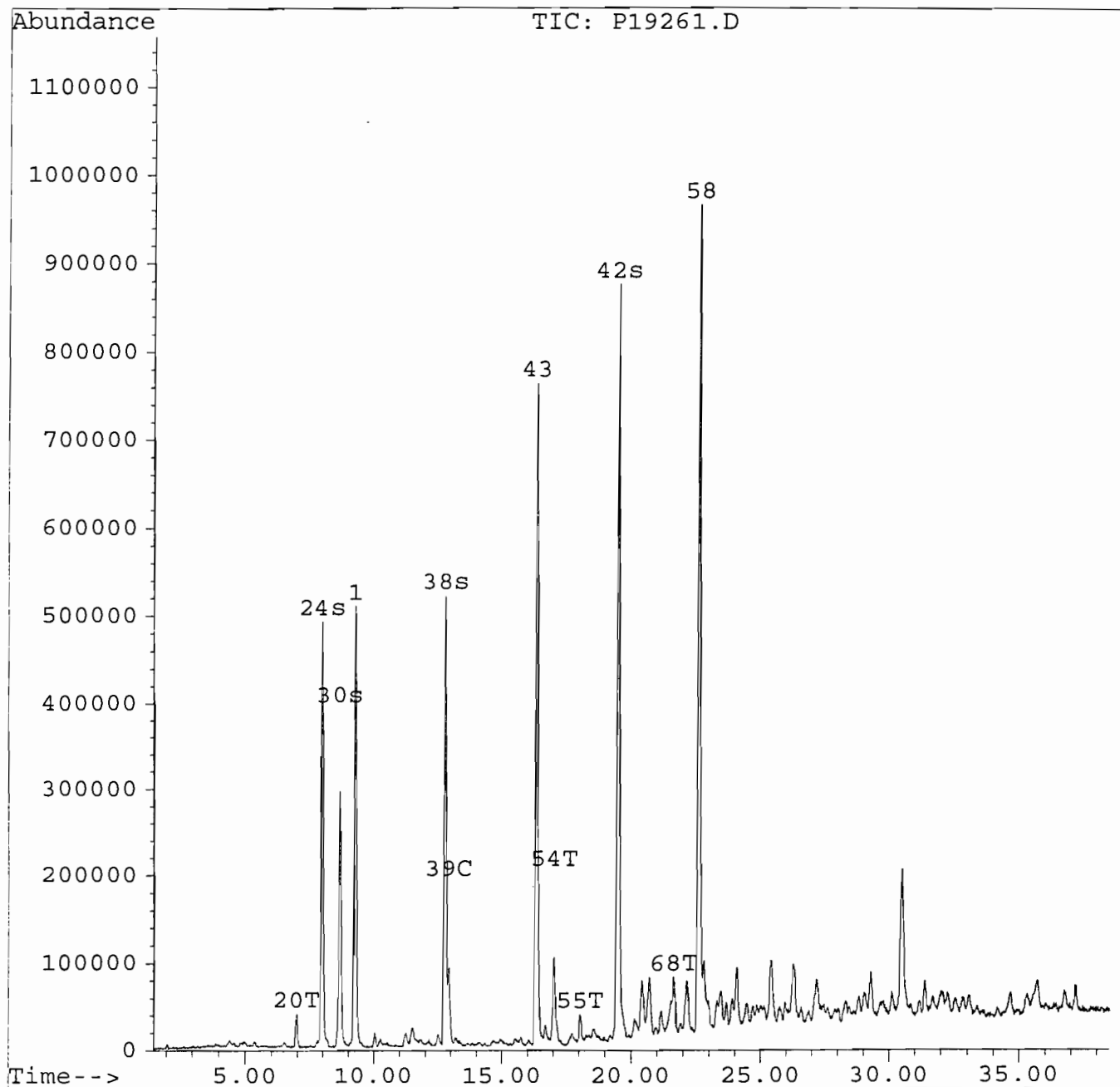
000145

Quantitation Report

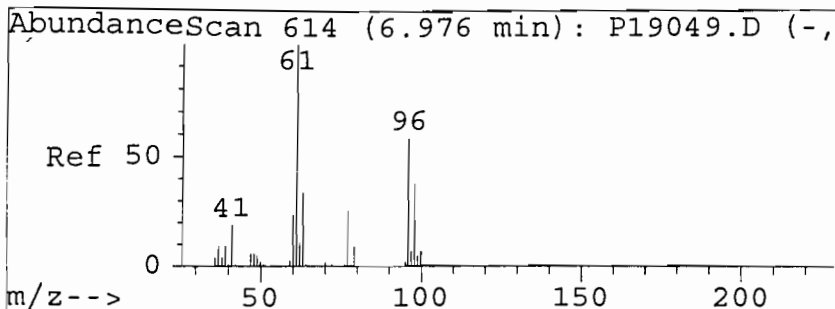
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Acq Time : 20 Oct 99 11:19 pm
Sample : 13826ASP-87996
Misc : 5G/5ML
Quant Time: Oct 21 12:35 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

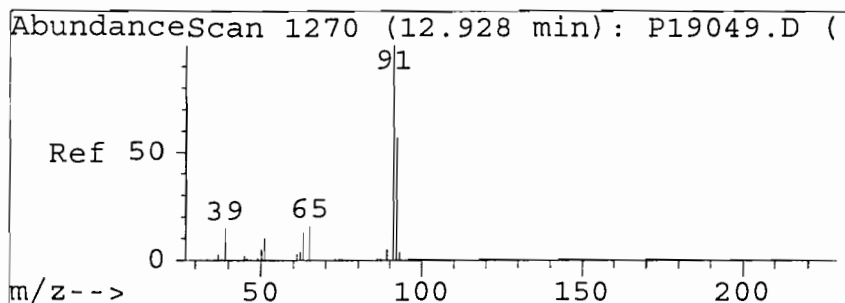
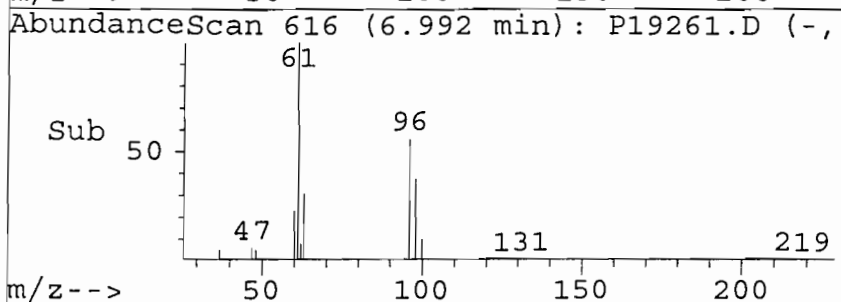
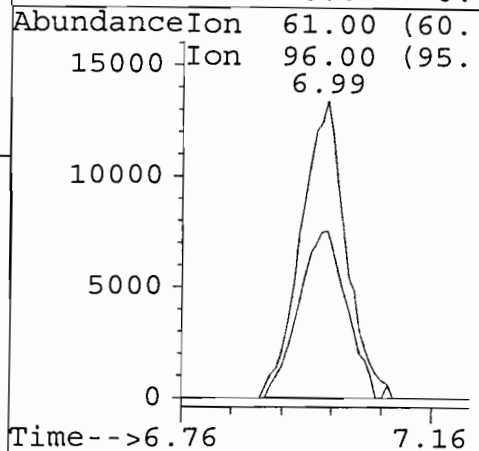
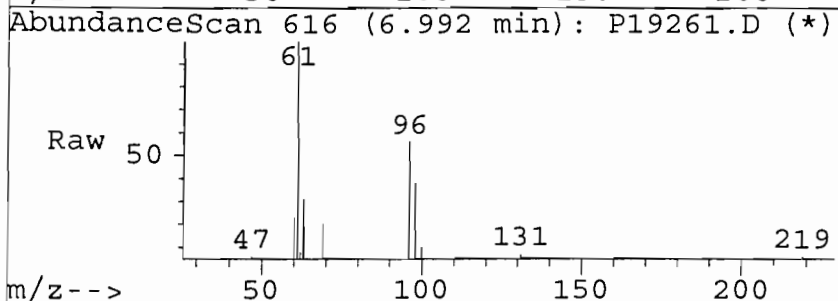


000146



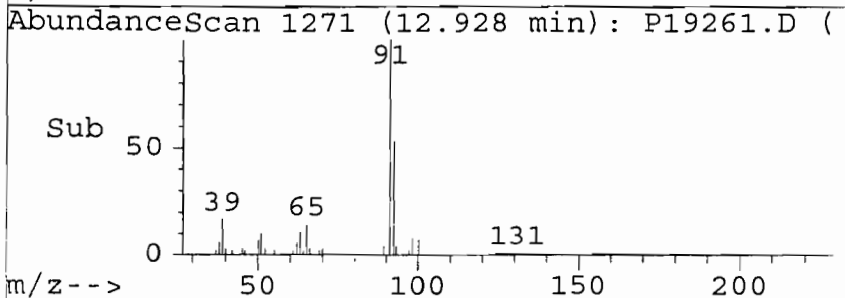
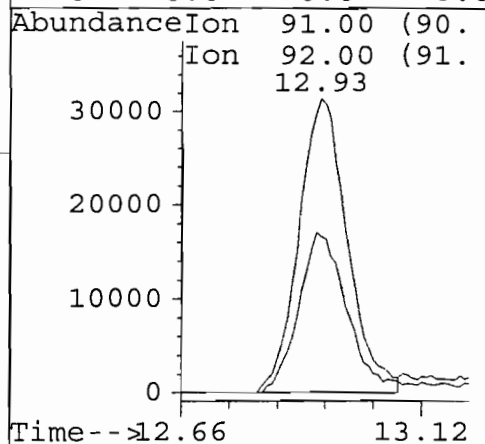
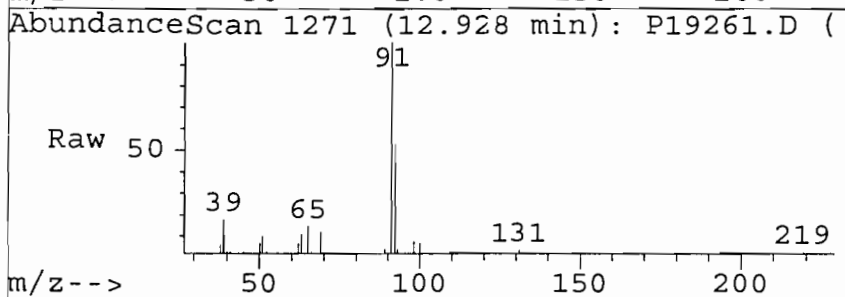
#20
cis-1,2-dichloroethene
Concen: 4.67 ug/L
RT: 6.99 min Scan# 616
Delta R.T. 0.02 min
Lab File: P19261.D
Acq: 20 Oct 99 11:19 pm

Tgt Ion:61	Resp:	69167
Ion	Ratio	Lower Upper
61	100	
96	56.2	40.2 74.7
0	0.0	0.0 0.0
0	0.0	0.0 0.0



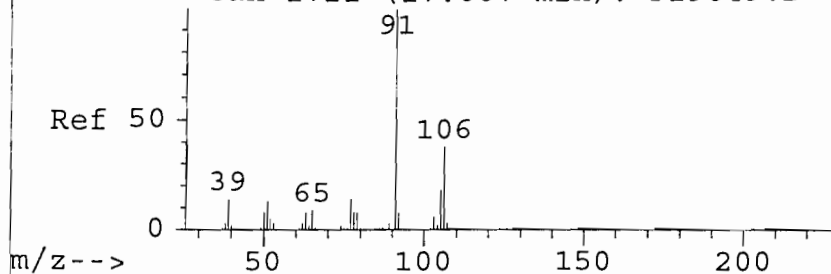
#39
toluene
Concen: 8.50 ug/L
RT: 12.93 min Scan# 1271
Delta R.T. 0.00 min
Lab File: P19261.D
Acq: 20 Oct 99 11:19 pm

Tgt Ion:91	Resp:	199751
Ion	Ratio	Lower Upper
91	100	
92	52.9	40.2 74.6
0	0.0	0.0 0.0
0	0.0	0.0 0.0

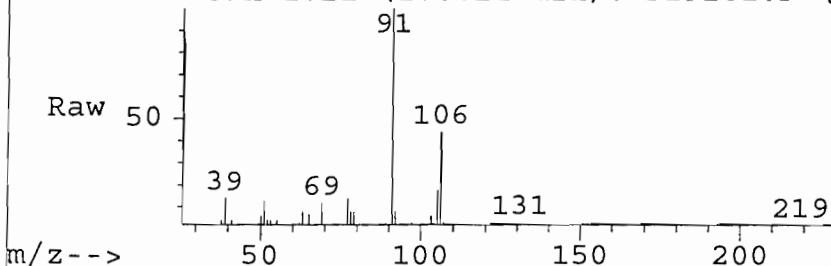


000147

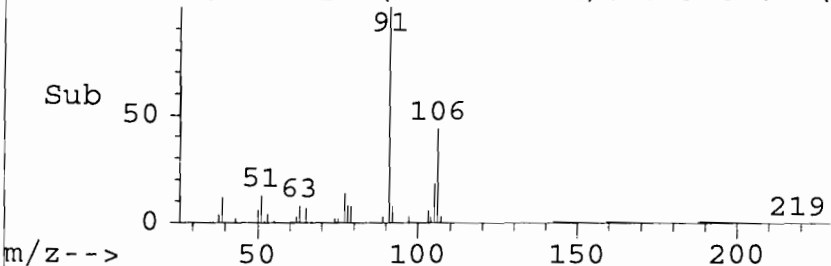
AbundanceScan 1721 (17.007 min): P19049.D (



AbundanceScan 1721 (17.011 min): P19261.D (



AbundanceScan 1721 (17.011 min): P19261.D (



#54

m&p-xylenes

Concen: 7.59 ug/L

RT: 17.01 min Scan# 1721

Delta R.T. 0.00 min

Lab File: P19261.D

Acq: 20 Oct 99 11:19 pm

Tgt Ion:106 Resp: 92045

Ion Ratio Lower Upper

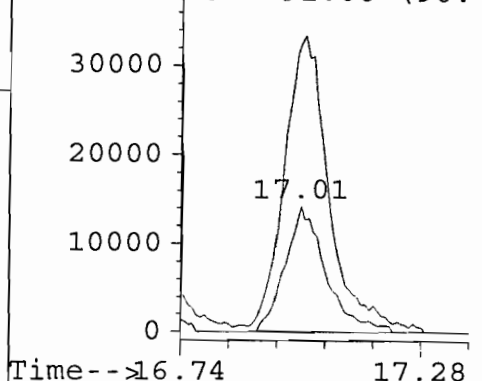
106 100

91 229.4 183.6 341.0

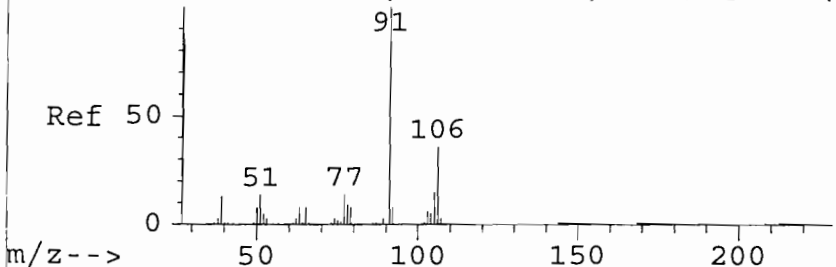
0 0.0 0.0 0.0

0 0.0 0.0 0.0

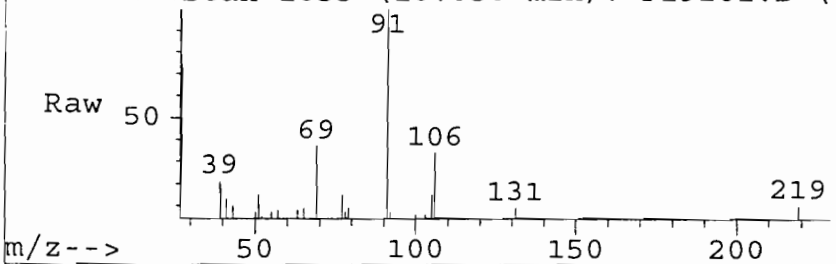
AbundanceIon 106.00 (105
Ion 91.00 (90.



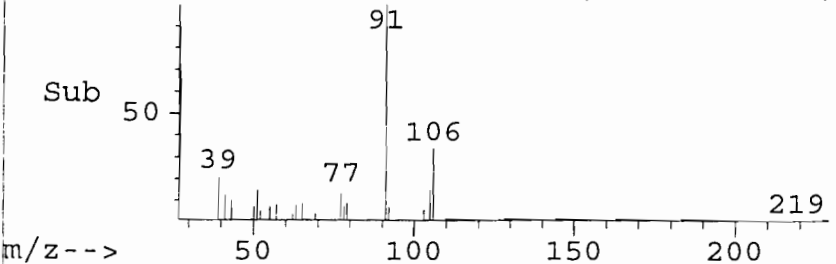
AbundanceScan 1832 (18.015 min): P19049.D (



AbundanceScan 1833 (18.030 min): P19261.D (



AbundanceScan 1833 (18.030 min): P19261.D (



#55

o-xylene

Concen: 2.37 ug/L

RT: 18.03 min Scan# 1833

Delta R.T. 0.01 min

Lab File: P19261.D

Acq: 20 Oct 99 11:19 pm

Tgt Ion:91 Resp: 82984

Ion Ratio Lower Upper

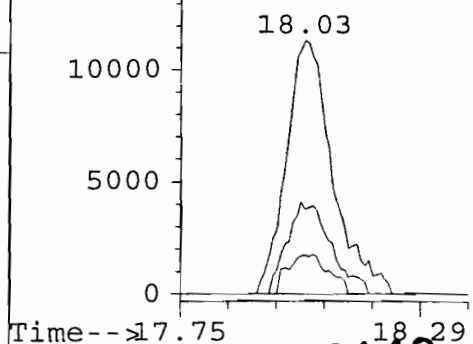
91 100

106 33.5 25.4 47.2

105 15.2 10.1 18.8

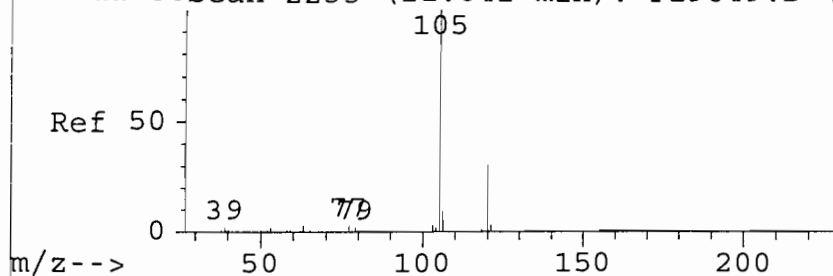
0 0.0 0.0 0.0

AbundanceIon 91.00 (90.
15000 Ion 106.00 (105
Ion 105.00 (104

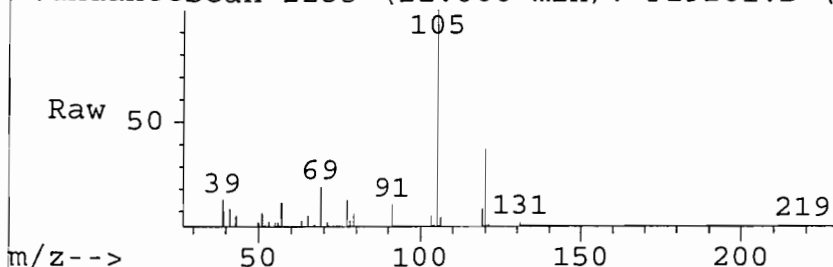


000148

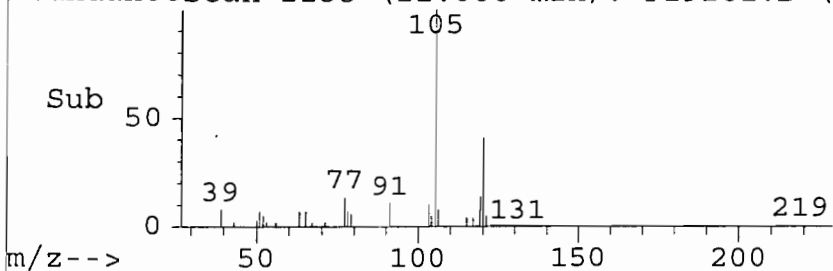
AbundanceScan 2233 (21.642 min): P19049.D (



AbundanceScan 2233 (21.666 min): P19261.D (



AbundanceScan 2233 (21.666 min): P19261.D (



#68

1,2,4-trimethylbenzene

Concen: 4.33 ug/L

RT: 21.67 min Scan# 2233

Delta R.T. 0.02 min

Lab File: P19261.D

Acq: 20 Oct 99 11:19 pm

Tgt Ion:105 Resp: 147013

Ion Ratio Lower Upper

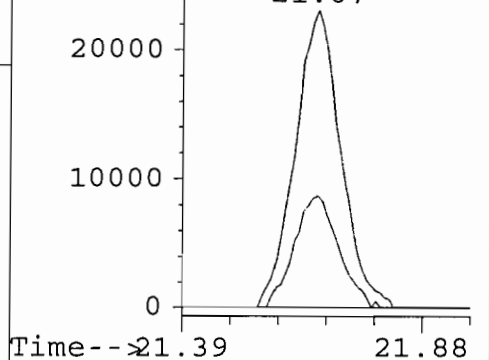
105 100

120 37.5 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 105.00 (104
Ion 120.00 (119
21.67



000149

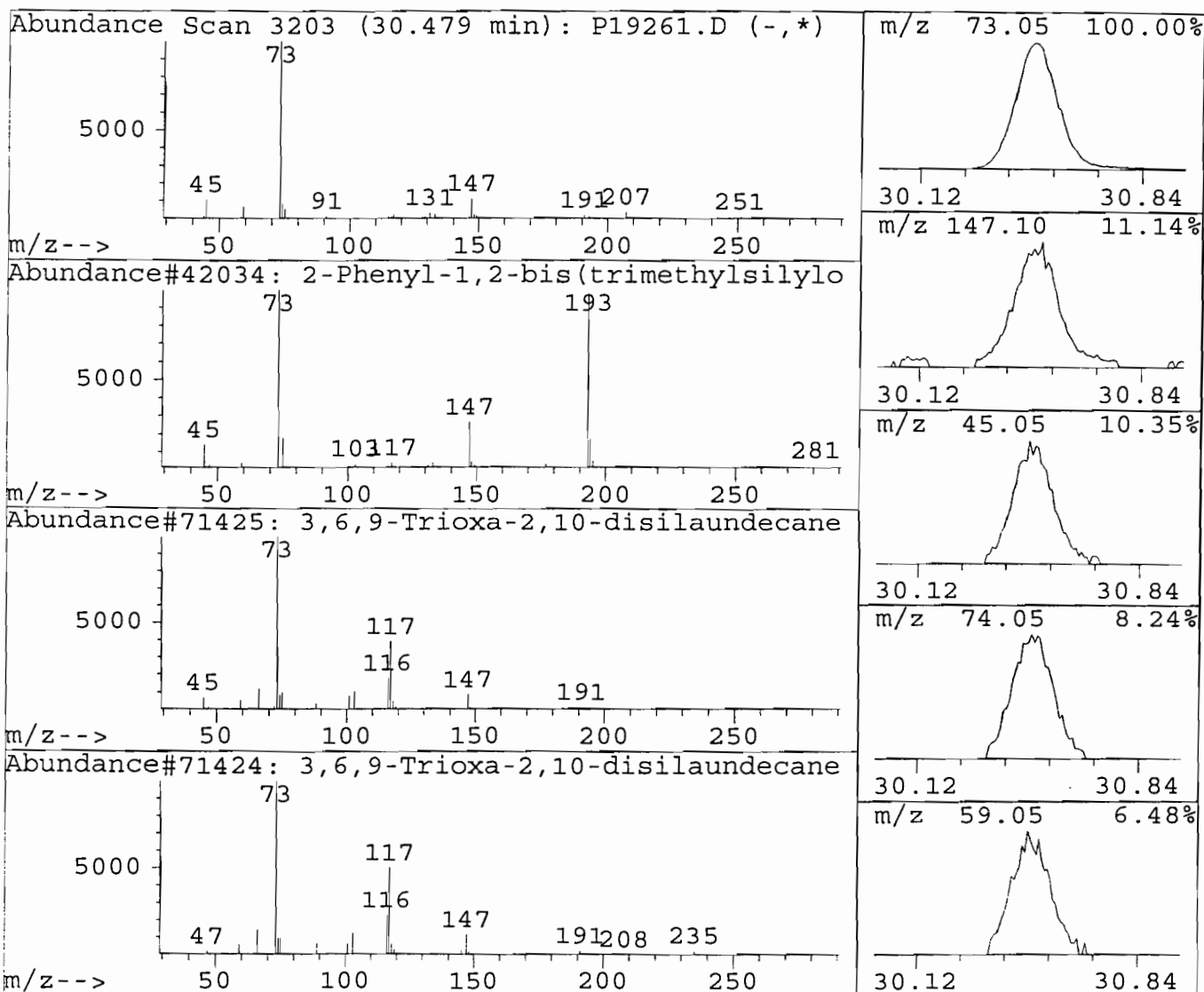
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19261.D
Acq Time : 20 Oct 99 11:19 pm
Sample : 13826ASP-87996
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.48	12.49 ug/L	1532730	1,4-dichlorobenzene-d4	22.61	
Hit# of	5	Tentative ID	Ref#	CAS#	Qual
1	2-Phenyl-1,2-bis(trimethylsilyloxy)		42034	000000-00-0	43
2	3,6,9-Trioxa-2,10-disilaundecane, 2		71425	016654-74-3	38
3	3,6,9-Trioxa-2,10-disilaundecane, 2		71424	016654-74-3	28
4	Ethanedioic acid, bis(trimethylsilyl		71005	018294-04-7	25
5	Ethanedioic acid, bis(trimethylsilyl		30580	018294-04-7	25



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87997

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19262.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 3

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.4		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	5.2		U
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.3		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	7.6		
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.1		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.7		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	400		E
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87997

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19262.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 3

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	<u>ug/Kg</u>	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	4.8		
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	360		E
136777-61-2	m&p-xylenes	710		E
95-47-6	o-xylene	690		E
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	180		
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	570		E
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	810		E
98-06-6	tert-Butylbenzene	7.2		
95-63-6	1,2,4-Trimethylbenzene	1500		E
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	100		
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	110		
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

GP-009-SS30

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O87997

Lab File ID: P19262.D

Date Received: 10/18/99

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

Q

Page 3 of 3

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-009-SS30

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87997
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19262.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/21/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
(ug/L or ug/Kg) ug/Kg

Number TICs found: 10

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 622-96-8	Benzene, 1-ethyl-4-methyl-	20.46	940	J
2. 622-96-8	Benzene, 1-ethyl-4-methyl-	21.19	290	J
3. 526-73-8	Benzene, 1,2,3-trimethyl-	22.82	470	J
4. 1120-21-4	Undecane	24.12	400	J
5. 874-41-9	Benzene, 1-ethyl-2,4-dimethy	24.48	400	J
6.	Unknown	27.12	690	J
7. 119-64-2	Naphthalene, 1,2,3,4-tetrahy	27.51	260	J
8. 629-50-5	Tridecane	30.12	250	J
9.	Unknown	30.55	250	J
10. 264-09-5	Benzocycloheptatriene	32.09	290	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000154

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML
Quant Time: Oct 21 12:35 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1102766	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	1181761	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	22.62	152	577061	50.00	ug/L	0.03

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	791061	43.05	ug/L	86.11%
30) 1,2-Dichlorethane-d4	8.67	65	627957	43.50	ug/L	86.99%
38) Toluene-d8	12.78	98	1000846	46.53	ug/L	93.06%
42) 4-Bromofluorobenzene	19.51	95	1122419	50.83	ug/L	101.67%

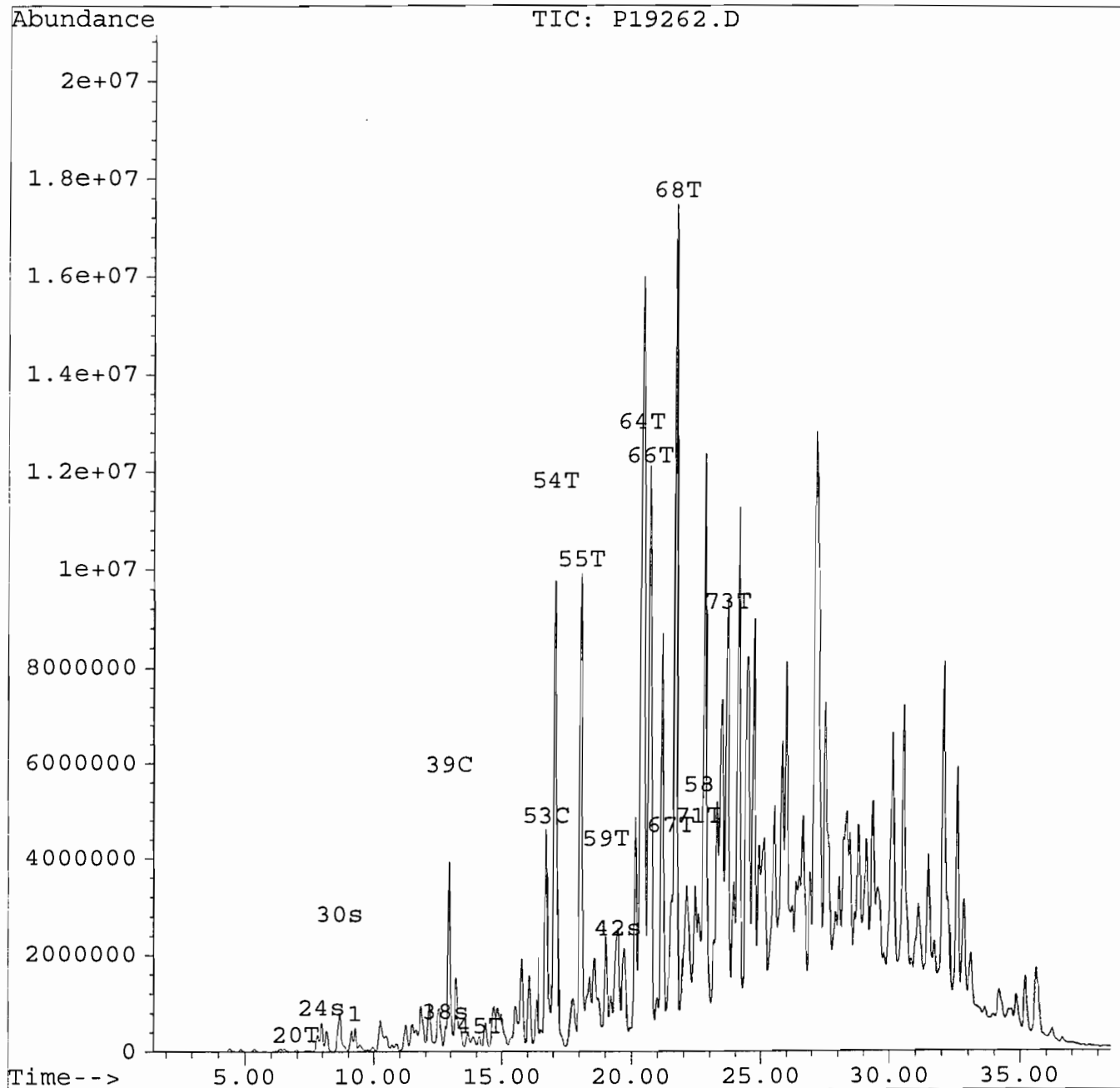
Target Compounds						Qvalue
20) cis-1,2-dichloroethene	6.99	61	100618	7.35	ug/L	93
39) toluene	12.93	91	8491322	391.41	ug/L	100
45) tetrachloroethene	14.16	166	55752	4.68	ug/L	96
53) ethylbenzene	16.70	91	11235225	348.20	ug/L	98
54) m&p-xylenes	17.03	106	7620337	689.28	ug/L	95
55) o-xylene	18.05	91	21317021	667.31	ug/L	98
59) isopropylbenzene	19.02	105	4310195	173.18	ug/L	98
64) 2-chlorotoluene	20.35	126	3395558	552.29	ug/L	72
66) 1,3,5-trimethylbenzene	20.70	105	17873807	783.87	ug/L	97
PH 67) tert-butylbenzene	21.50	119	154037	7.00	ug/L	78
68) 1,2,4-trimethylbenzene	21.70	105	35155264	1481.30	ug/L	96
71) 4-isopropyltoluene	22.56	119	2631800	96.85	ug/L	98
73) 1,2-dichlorobenzene	23.67	146	1529919	106.52	ug/L	94

Quantitation Report

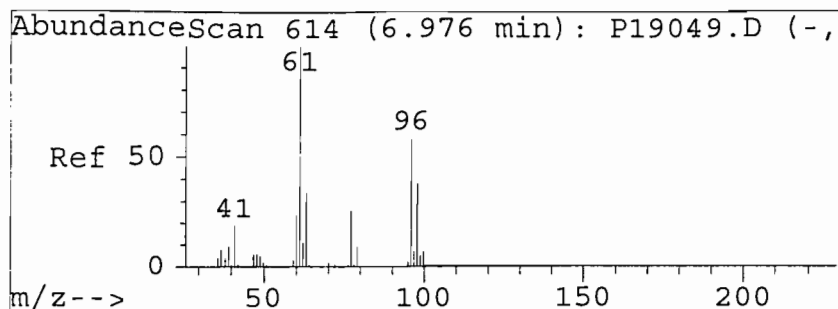
Data File : E:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML
Quant Time: Oct 21 12:35 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

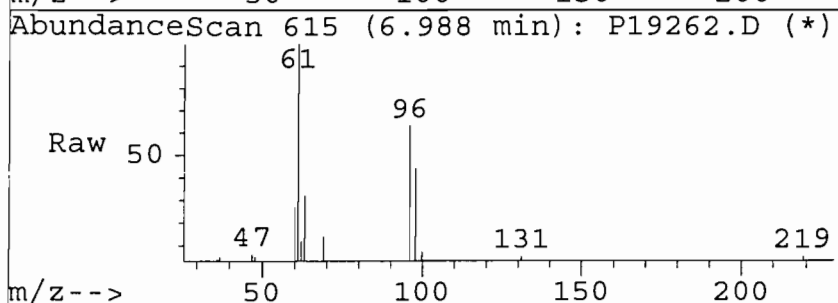
Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



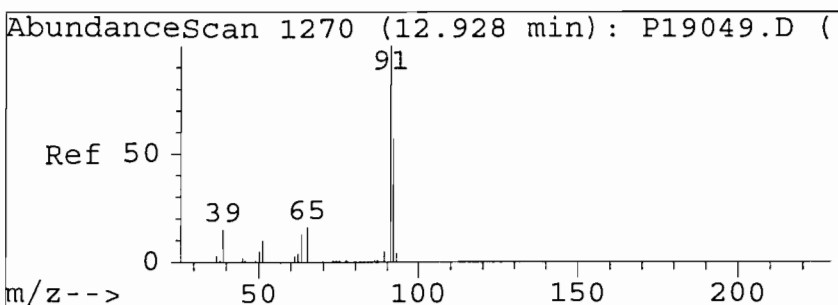
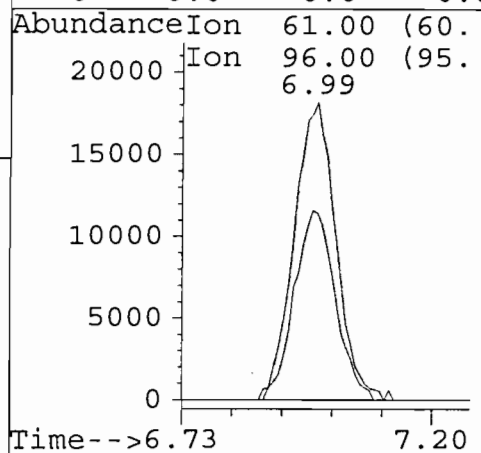
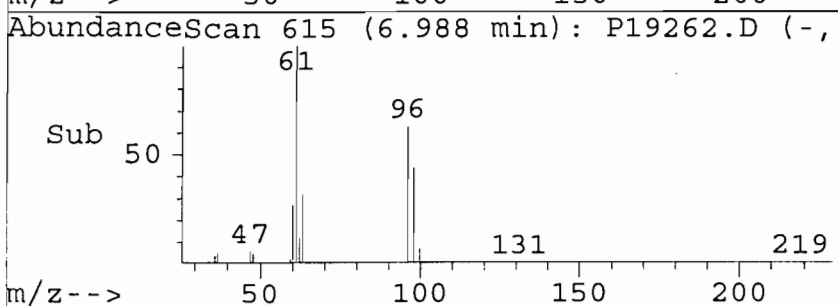
000156



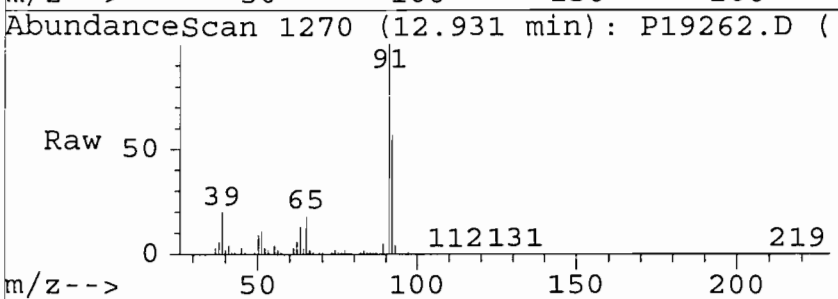
#20
 cis-1,2-dichloroethene
 Concen: 7.35 ug/L
 RT: 6.99 min Scan# 615
 Delta R.T. 0.01 min
 Lab File: P19262.D
 Acq: 21 Oct 99 12:04 am



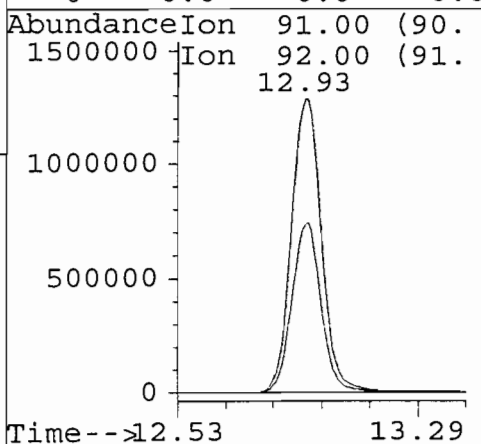
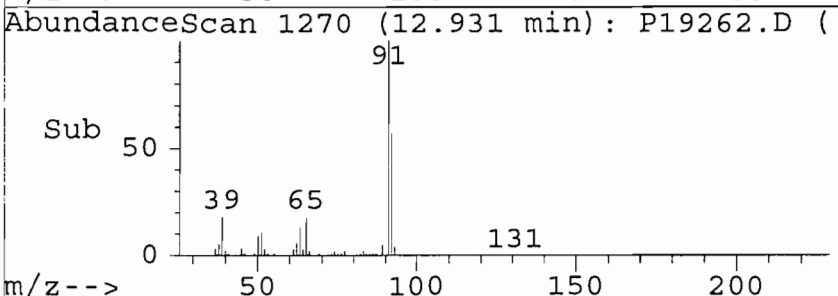
Tgt Ion:61 Resp: 100618
 Ion Ratio Lower Upper
 61 100
 96 62.7 40.2 74.7
 0 0.0 0.0 0.0
 0 0.0 0.0 0.0



#39
 toluene
 Concen: 391.41 ug/L
 RT: 12.93 min Scan# 1270
 Delta R.T. 0.00 min
 Lab File: P19262.D
 Acq: 21 Oct 99 12:04 am

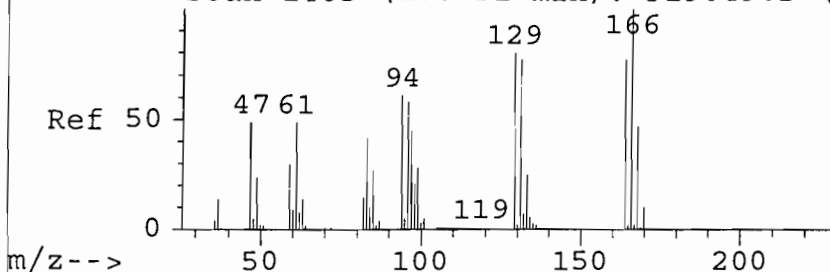


Tgt Ion:91 Resp: 8491322
 Ion Ratio Lower Upper
 91 100
 92 57.3 40.2 74.6
 0 0.0 0.0 0.0
 0 0.0 0.0 0.0



000157

AbundanceScan 1405 (14.151 min): P19049.D (



#45

tetrachloroethene

Concen: 4.68 ug/L

RT: 14.16 min Scan# 1406

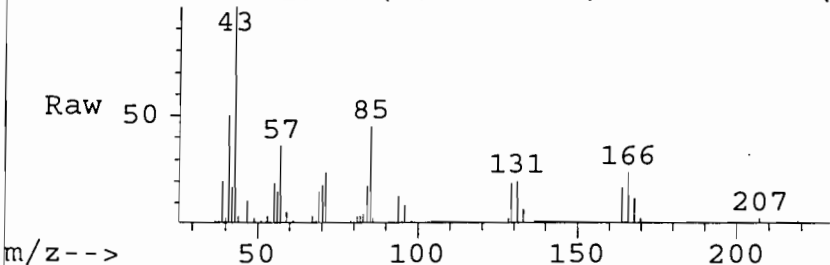
Delta R.T. 0.01 min

Lab File: P19262.D

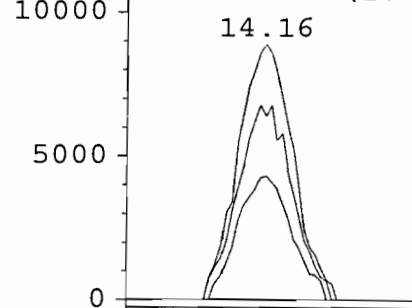
Acq: 21 Oct 99 12:04 am

Tgt	Ion:166	Resp:	55752
Ion	Ratio	Lower	Upper
166	100		
164	71.9	53.8	100.0
168	48.5	33.0	61.4
0	0.0	0.0	0.0

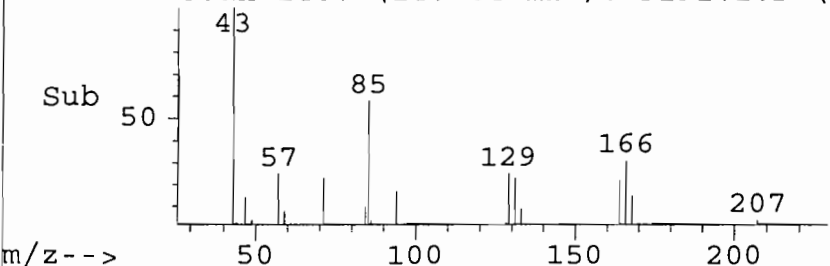
AbundanceScan 1406 (14.164 min): P19262.D (



AbundanceIon 166.00 (165
Ion 163.60 (163
Ion 168.00 (167

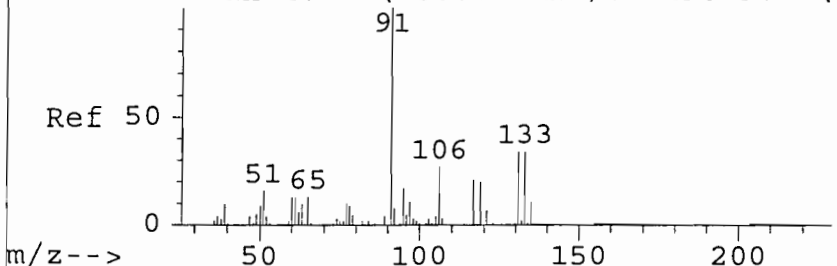


AbundanceScan 1406 (14.164 min): P19262.D (



Time-->13.94 14.33

AbundanceScan 1684 (16.672 min): P19049.D (



#53

ethylbenzene

Concen: 348.20 ug/L

RT: 16.70 min Scan# 1686

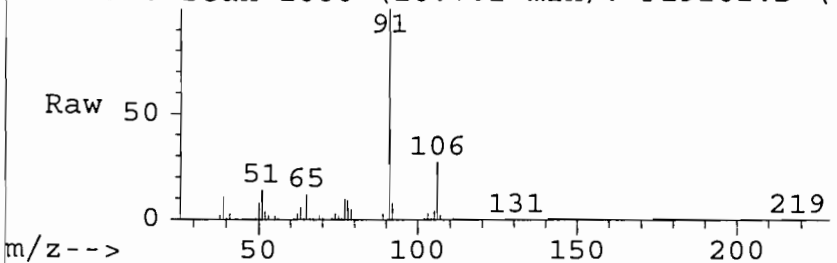
Delta R.T. 0.03 min

Lab File: P19262.D

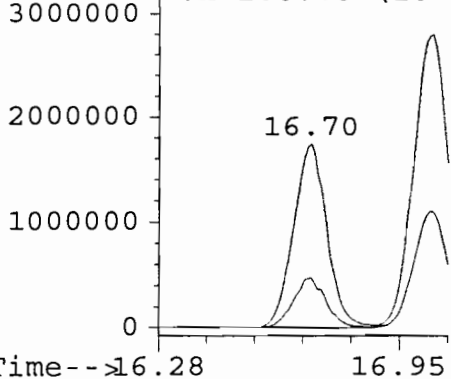
Acq: 21 Oct 99 12:04 am

Tgt	Ion:91	Resp:11235225	
Ion	Ratio	Lower	Upper
91	100		
106	26.9	18.3	33.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

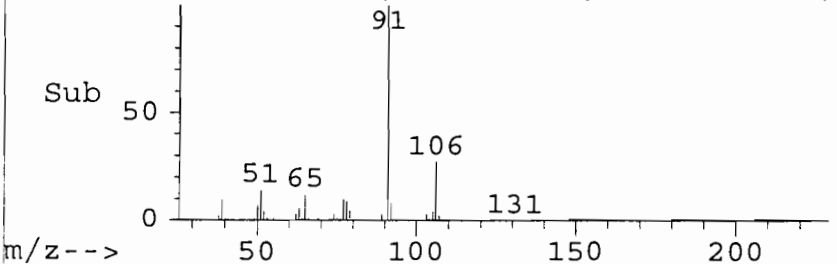
AbundanceScan 1686 (16.702 min): P19262.D (



AbundanceIon 91.00 (90.
Ion 106.00 (105



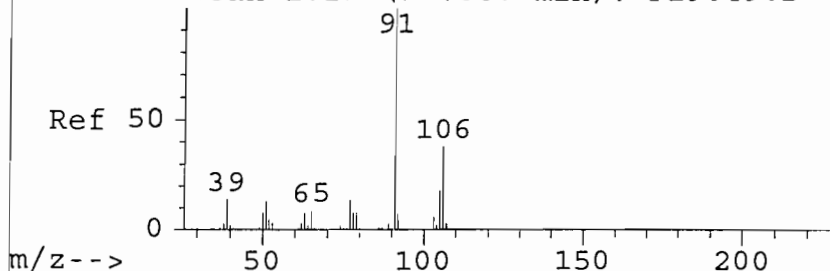
AbundanceScan 1686 (16.702 min): P19262.D (



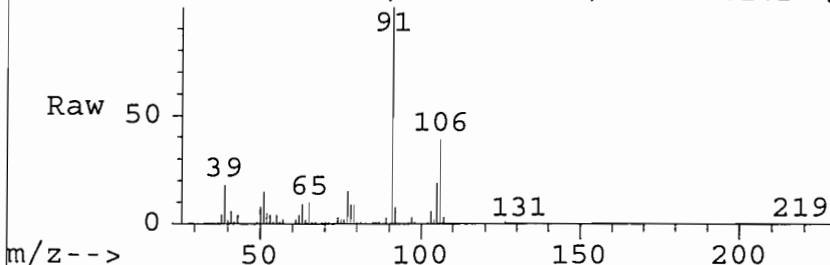
Time-->16.28

000158

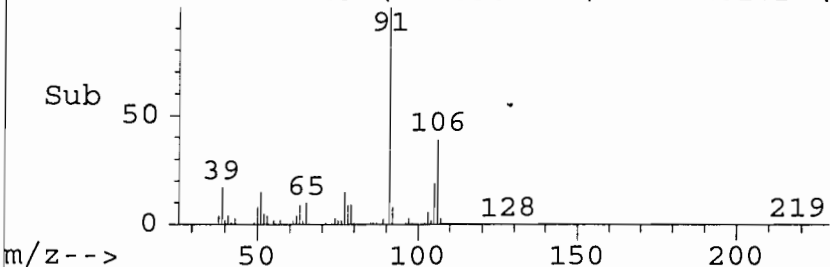
AbundanceScan 1721 (17.007 min): P19049.D (



AbundanceScan 1723 (17.030 min): P19262.D (



AbundanceScan 1723 (17.030 min): P19262.D (



#54

m&p-xylenes

Concen: 689.28 ug/L

RT: 17.03 min Scan# 1723

Delta R.T. 0.02 min

Lab File: P19262.D

Acq: 21 Oct 99 12:04 am

Tgt Ion:106 Resp: 7620337

Ion Ratio Lower Upper

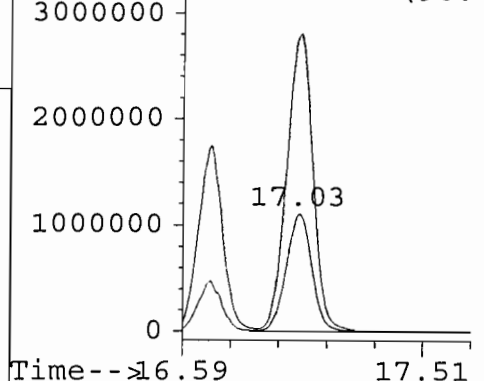
106 100

91 253.8 183.6 341.0

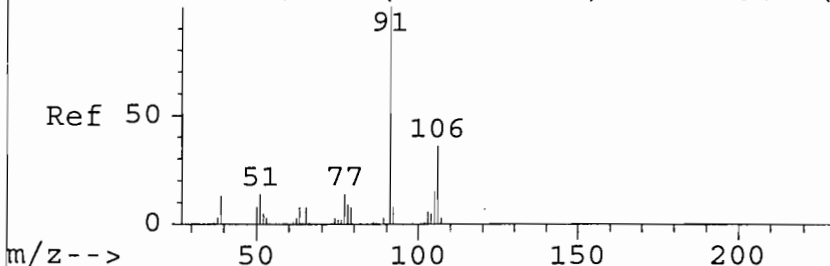
0 0.0 0.0 0.0

0 0.0 0.0 0.0

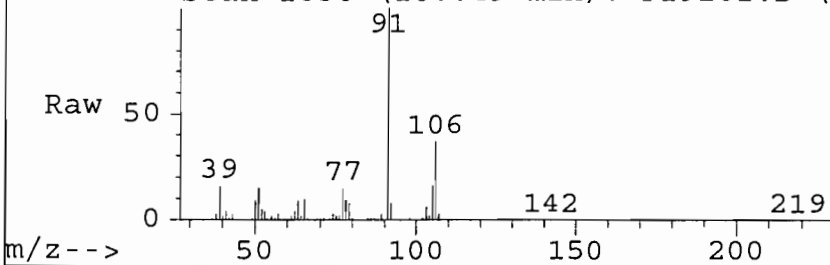
AbundanceIon 106.00 (105
Ion 91.00 (90.



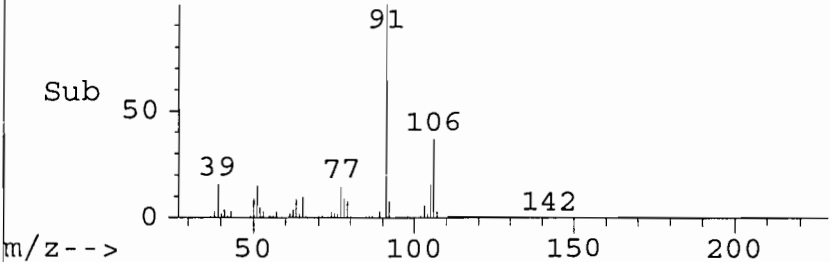
AbundanceScan 1832 (18.015 min): P19049.D (



AbundanceScan 1836 (18.049 min): P19262.D (



AbundanceScan 1836 (18.049 min): P19262.D (



#55

o-xylene

Concen: 667.31 ug/L

RT: 18.05 min Scan# 1836

Delta R.T. 0.03 min

Lab File: P19262.D

Acq: 21 Oct 99 12:04 am

Tgt Ion:91 Resp:21317021

Ion Ratio Lower Upper

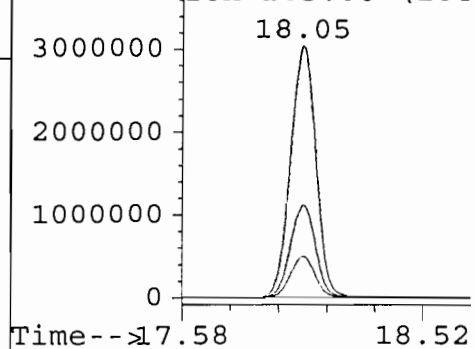
91 100

106 37.1 25.4 47.2

105 16.4 10.1 18.8

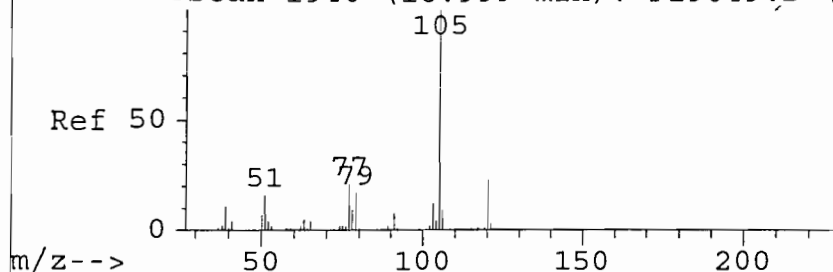
0 0.0 0.0 0.0

AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104



000159

AbundanceScan 1940 (18.999 min): P19049.D (



#59

isopropylbenzene

Concen: 173.18 ug/L

RT: 19.02 min Scan# 1944

Delta R.T. 0.02 min

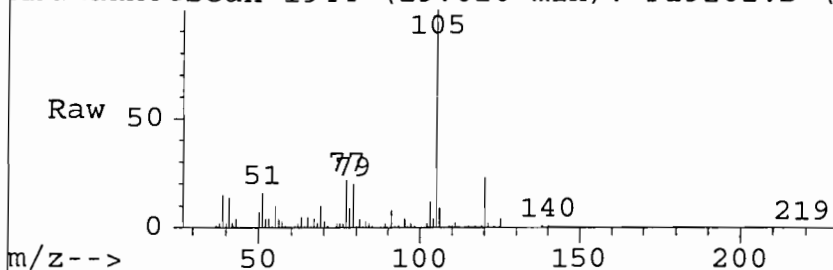
Lab File: P19262.D

Acq: 21 Oct 99 12:04 am

Tgt Ion:105 Resp: 4310195

Ion	Ratio	Lower	Upper
105	100		
120	23.3	16.0	29.8
77	21.9	14.6	27.0
0	0.0	0.0	0.0

AbundanceScan 1944 (19.020 min): P19262.D (



AbundanceIon 105.00 (104

800000 Ion 120.00 (119

Ion 77.00 (76.

19.02

600000

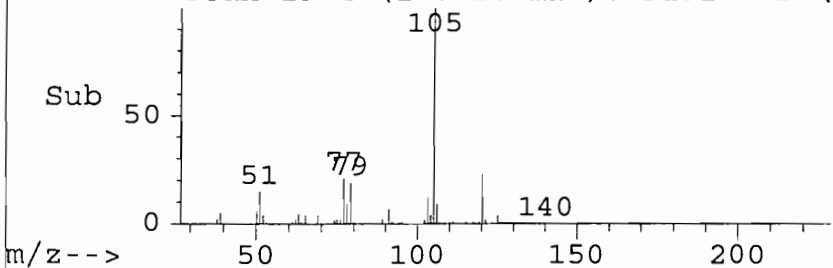
400000

200000

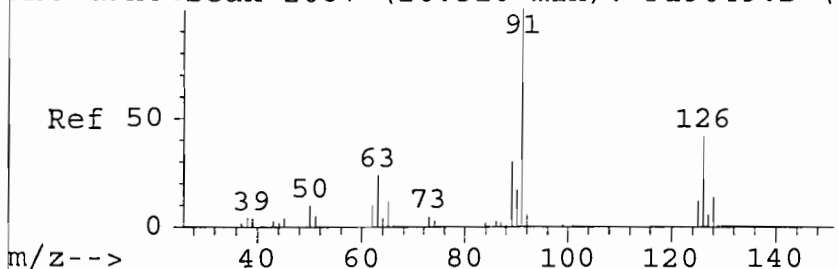
0

Time-->18.60 19.39

AbundanceScan 1944 (19.020 min): P19262.D (



AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 552.29 ug/L

RT: 20.35 min Scan# 2095

Delta R.T. 0.04 min

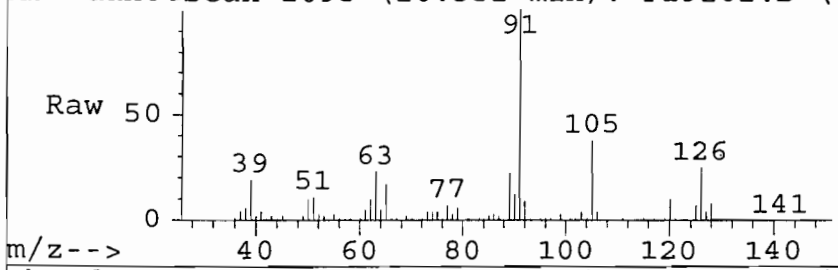
Lab File: P19262.D

Acq: 21 Oct 99 12:04 am

Tgt Ion:126 Resp: 3395558

Ion	Ratio	Lower	Upper
126	100		
63	94.2	25.0	117.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 2095 (20.352 min): P19262.D (



AbundanceIon 126.00 (125

600000 Ion 63.00 (62.

20.35

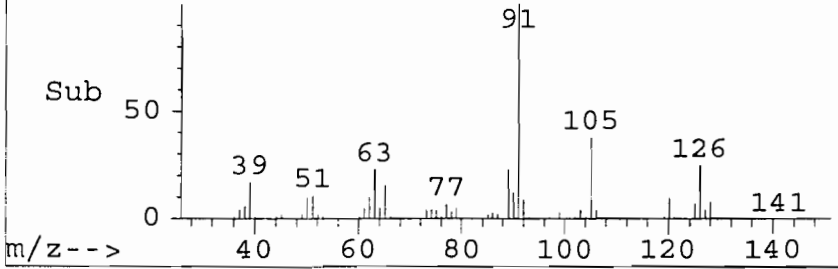
400000

200000

0

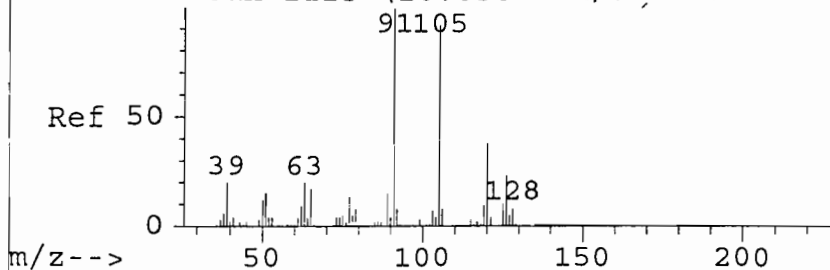
Time-->19.97 20.64

AbundanceScan 2095 (20.352 min): P19262.D (



000160

AbundanceScan 2125 (20.658 min): P19049.D (

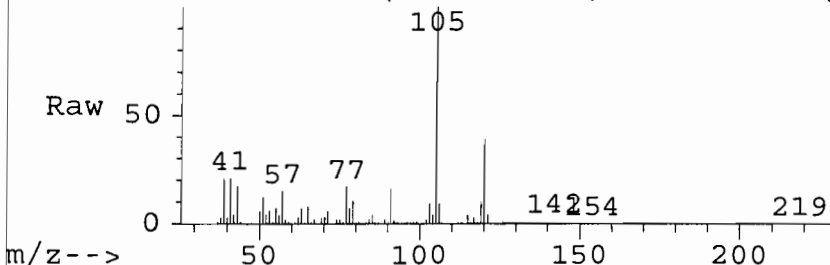


#66

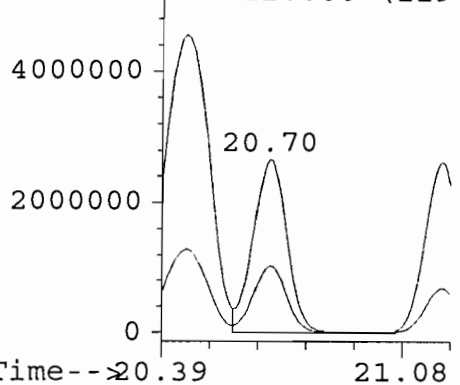
1,3,5-trimethylbenzene
Concen: 783.87 ug/L
RT: 20.70 min Scan# 2135
Delta R.T. 0.04 min
Lab File: P19262.D
Acq: 21 Oct 99 12:04 am

Tgt Ion:	105	Resp:	17873807
Ion	Ratio	Lower	Upper
105	100		
120	38.8	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

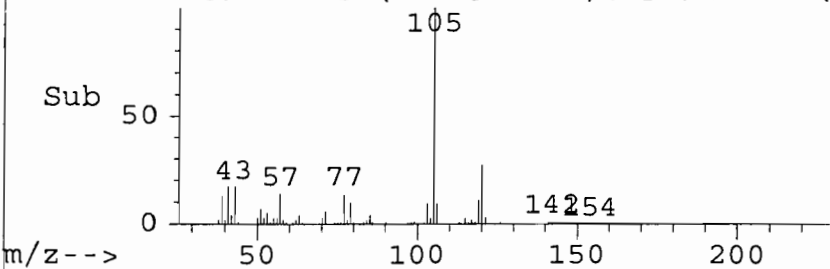
AbundanceScan 2135 (20.695 min): P19262.D (



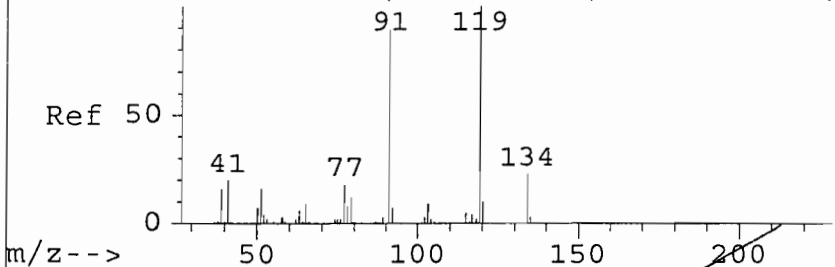
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 2135 (20.695 min): P19262.D (



AbundanceScan 2214 (21.469 min): P19049.D (

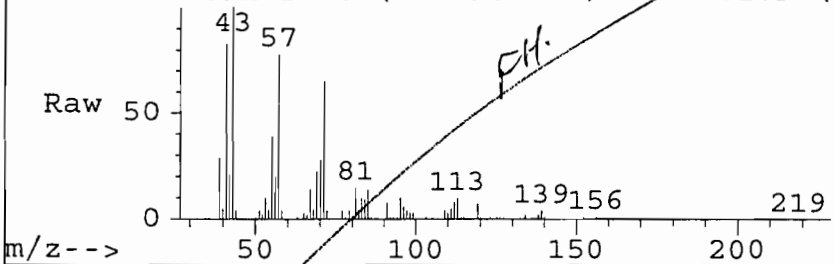


#67

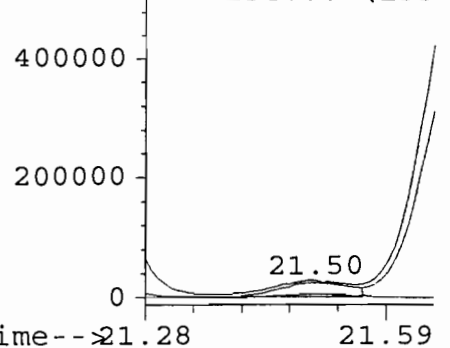
tert-butylbenzene
Concen: 7.00 ug/L
RT: 21.50 min Scan# 2228
Delta R.T. 0.03 min
Lab File: P19262.D
Acq: 21 Oct 99 12:04 am

Tgt Ion:	119	Resp:	154037
Ion	Ratio	Lower	Upper
119	100		
91	114.0	62.2	115.4
134	22.2	16.4	30.4
0	0.0	0.0	0.0

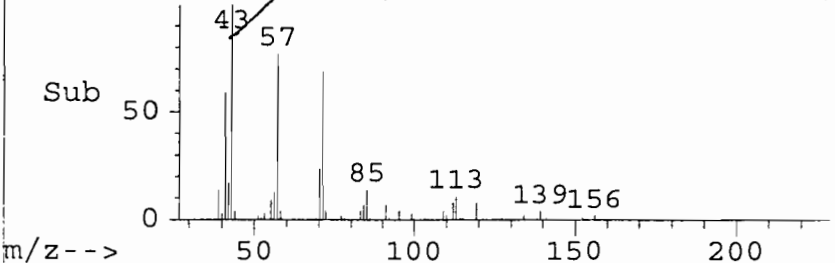
AbundanceScan 2228 (21.498 min): P19262.D (



AbundanceIon 119.00 (118
Ion 91.00 (90.
Ion 134.00 (133

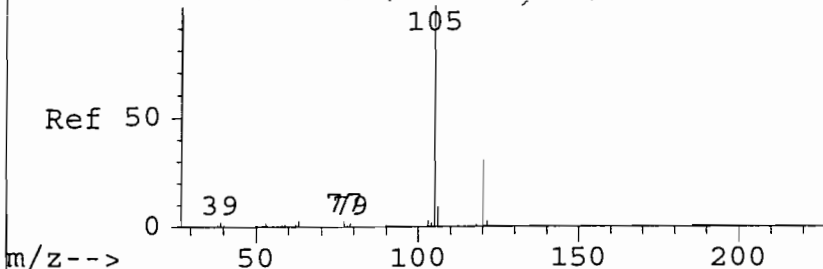


AbundanceScan 2228 (21.498 min): P19262.D (



000161

AbundanceScan 2233 (21.642 min): P19049.D (

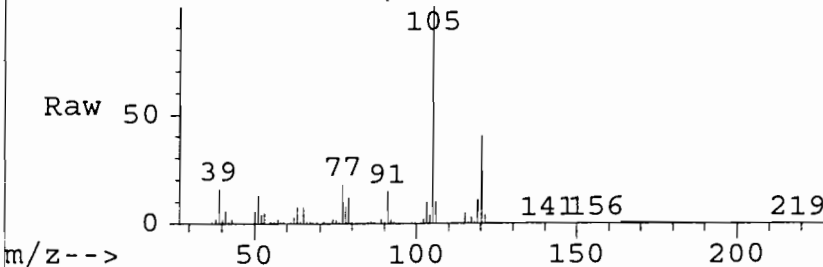


#68

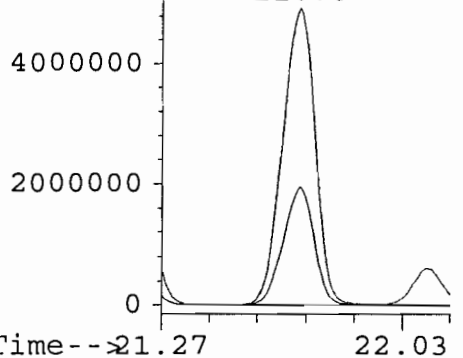
1,2,4-trimethylbenzene
Concen: 1481.30 ug/L
RT: 21.70 min Scan# 2252
Delta R.T. 0.06 min
Lab File: P19262.D
Acq: 21 Oct 99 12:04 am

Tgt Ion:	105	Resp:	35155264
Ion	Ratio	Lower	Upper
105	100		
120	39.6	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

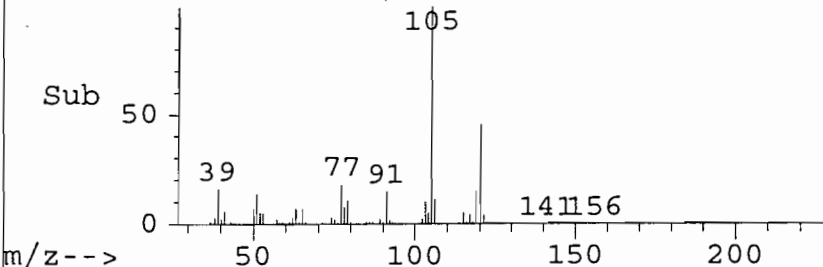
AbundanceScan 2252 (21.703 min): P19262.D (



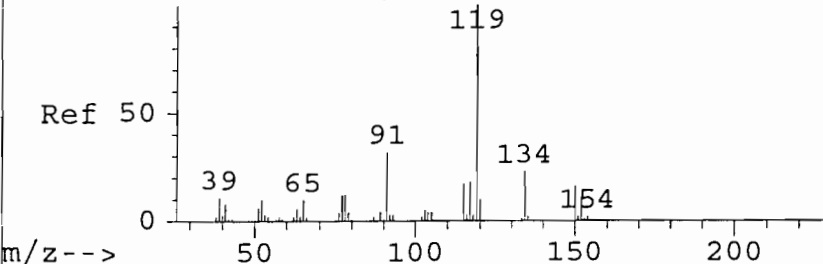
AbundanceIon 105.00 (104
Ion 120.00 (119
21.70



AbundanceScan 2252 (21.703 min): P19262.D (



AbundanceScan 2330 (22.529 min): P19049.D (

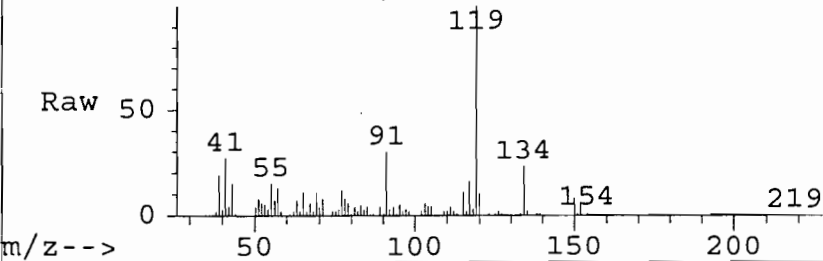


#71

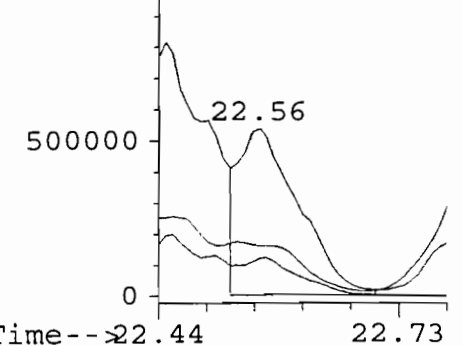
4-isopropyltoluene
Concen: 96.85 ug/L
RT: 22.56 min Scan# 2352
Delta R.T. 0.03 min
Lab File: P19262.D
Acq: 21 Oct 99 12:04 am

Tgt Ion:	119	Resp:	2631800
Ion	Ratio	Lower	Upper
119	100		
134	22.7	15.9	29.5
91	30.4	22.6	42.0
0	0.0	0.0	0.0

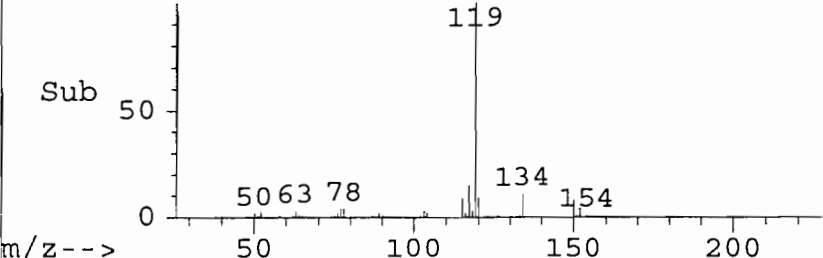
AbundanceScan 2352 (22.559 min): P19262.D (



AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.

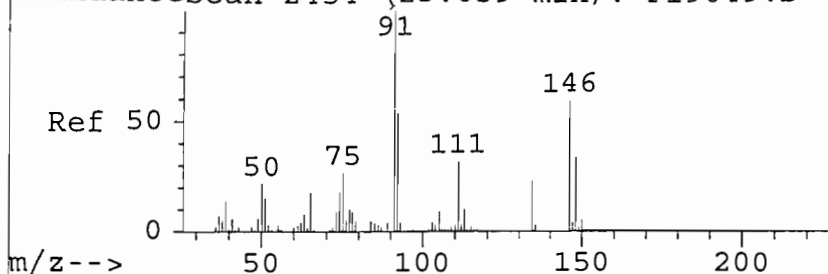


AbundanceScan 2352 (22.559 min): P19262.D (



000162

AbundanceScan 2454 (23.659 min): P19049.D (



#73

1,2-dichlorobenzene

Concen: 106.52 ug/L

RT: 23.67 min Scan# 2482

Delta R.T. 0.01 min

Lab File: P19262.D

Acq: 21 Oct 99 12:04 am

Tgt Ion:146 Resp: 1529919

Ion Ratio Lower Upper

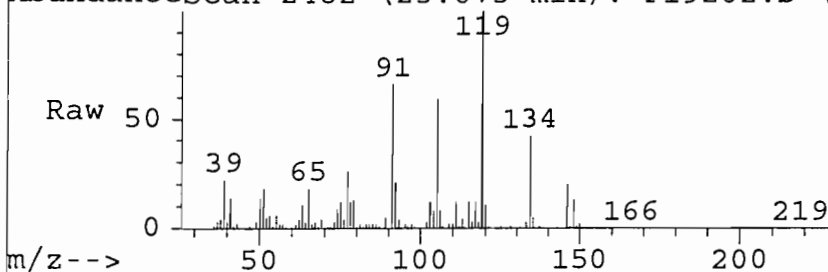
146 100

111 57.5 38.3 71.1

148 63.6 40.5 75.3

0 0.0 0.0 0.0

AbundanceScan 2482 (23.673 min): P19262.D (



AbundanceIon 146.00 (145

Ion 111.00 (110

Ion 148.00 (147

23.67

300000

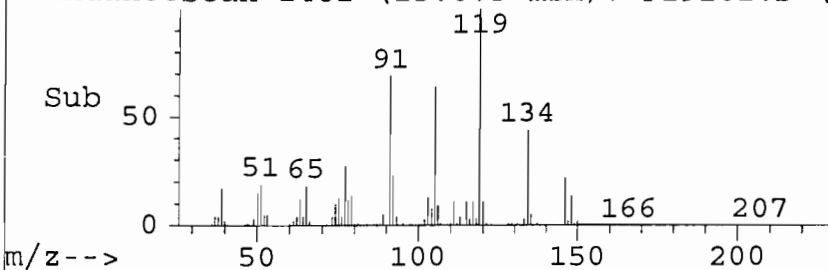
200000

100000

0

Time-->23.33 23.99

AbundanceScan 2482 (23.673 min): P19262.D (



000163

Library Search Compound Report

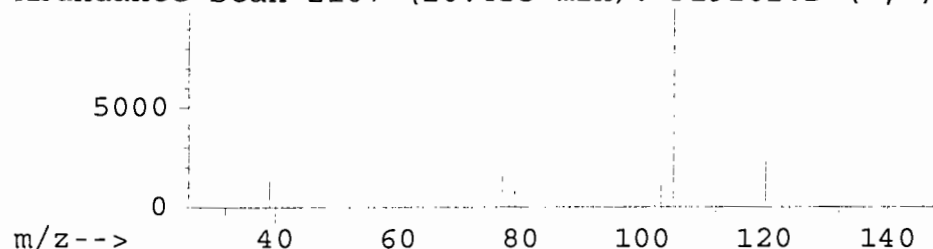
Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

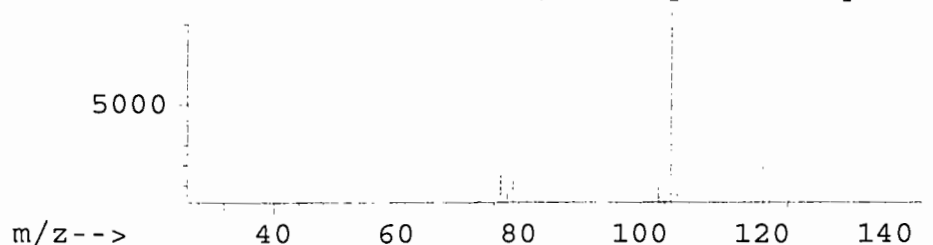
Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
20.46	912.14 ug/L	172575876	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-		64567	000622-96-8	97
2	Benzene, 1-ethyl-2-methyl-		64560	000611-14-3	97
3	Benzene, 1-ethyl-3-methyl-		64565	000620-14-4	95
4	Benzene, 1,3,5-trimethyl-		64570	000108-67-8	94
5	Benzene, 1-ethyl-2-methyl-		64559	000611-14-3	94

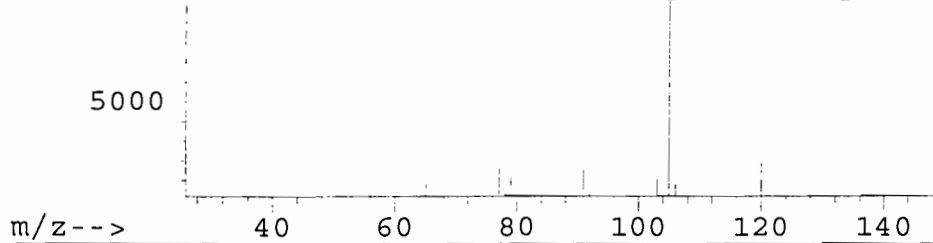
Abundance Scan 2107 (20.455 min): P19262.D (-,*)



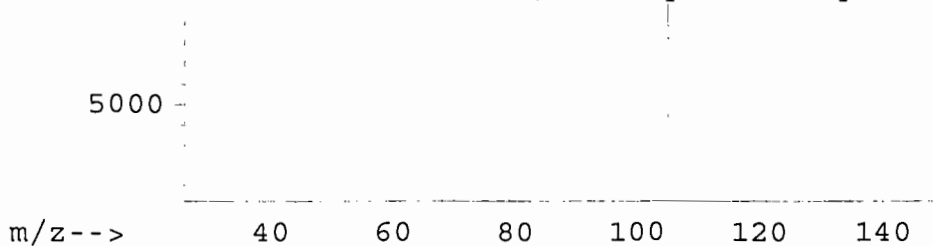
Abundance #64567: Benzene, 1-ethyl-4-methyl-



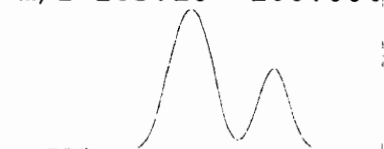
Abundance #64560: Benzene, 1-ethyl-2-methyl-



Abundance #64565: Benzene, 1-ethyl-3-methyl-

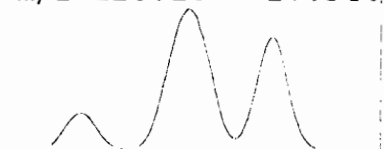


m/z 105.10 100.00%



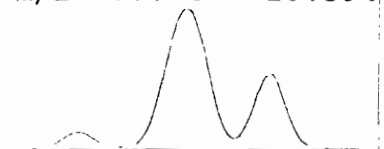
20.09 20.82

m/z 120.10 27.34%



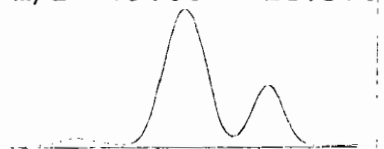
20.09 20.82

m/z 77.00 18.39%



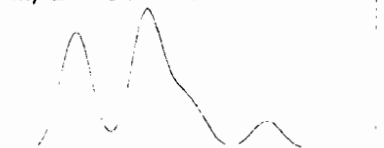
20.09 20.82

m/z 79.00 14.57%



20.09 20.82

m/z 91.00 13.71%



20.09 20.82

000164

Library Search Compound Report

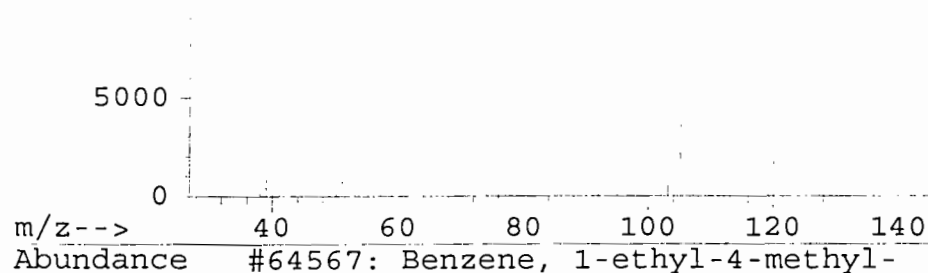
Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

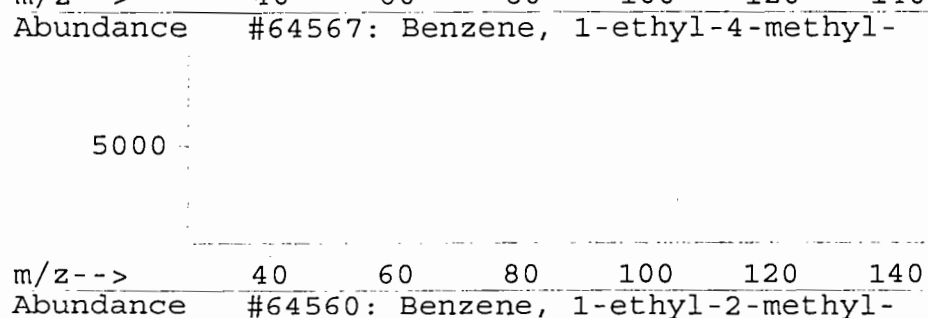
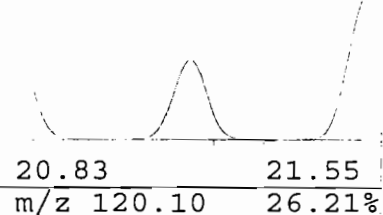
Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
21.19	278.53 ug/L	52698478	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-		64567	000622-96-8	97
2	Benzene, 1-ethyl-2-methyl-		64560	000611-14-3	95
3	Benzene, 1-ethyl-2-methyl-		64559	000611-14-3	94
4	Benzene, 1,3,5-trimethyl-		64570	000108-67-8	94
5	Benzene, 1,2,3-trimethyl-		3773	000526-73-8	91

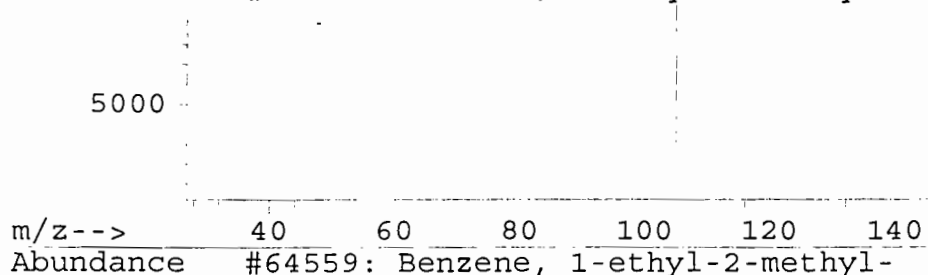
Abundance Scan 2192 (21.190 min): P19262.D (-,*)



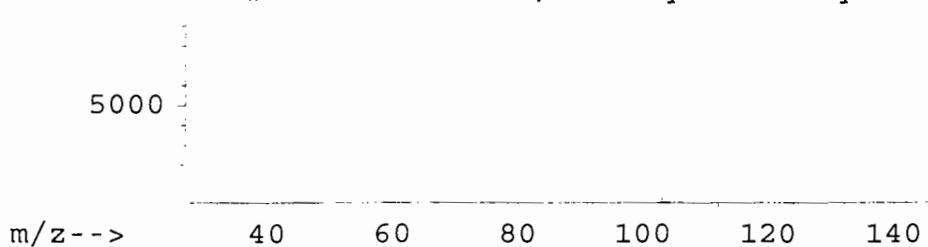
m/z 105.10 100.00%



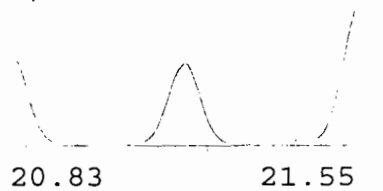
20.83 21.55
m/z 77.00 17.74%



20.83 21.55
m/z 79.00 15.37%



20.83 21.55
m/z 91.00 15.24%



000165

Library Search Compound Report

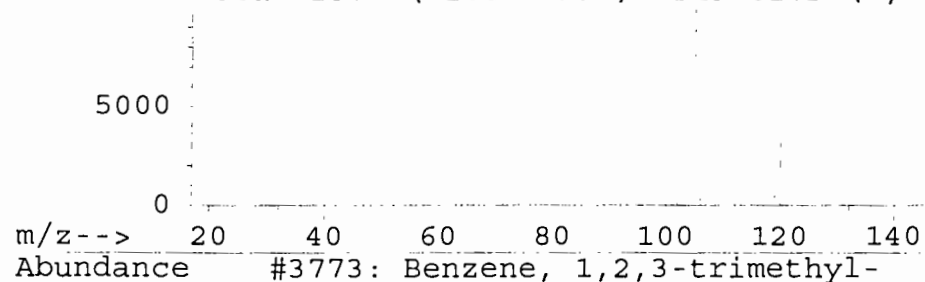
Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

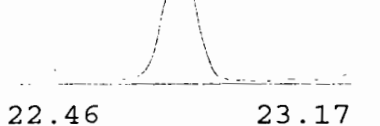
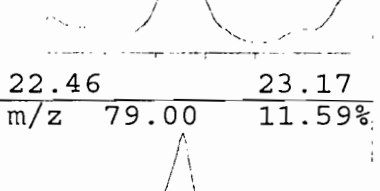
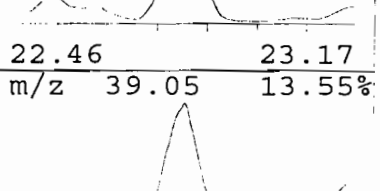
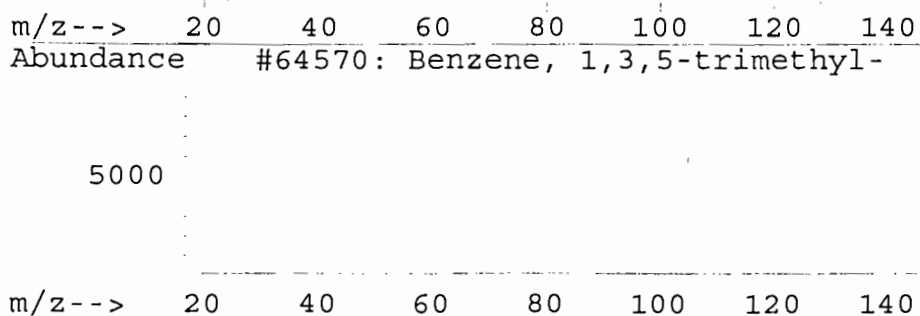
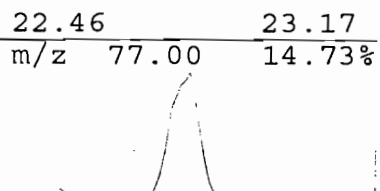
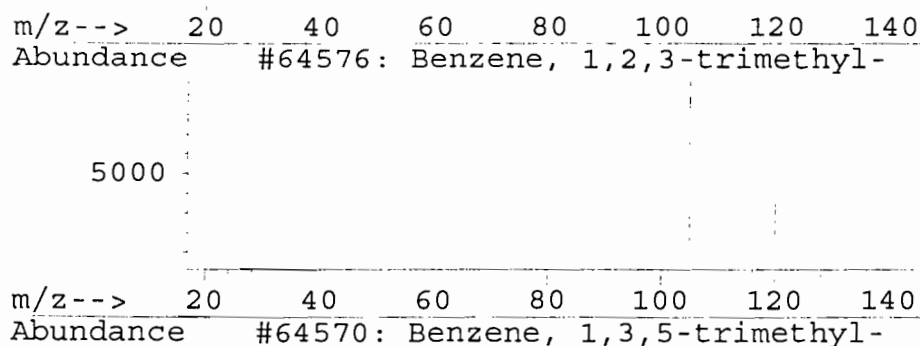
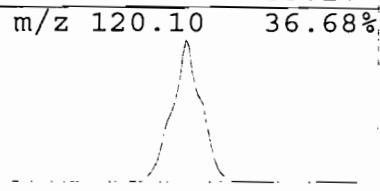
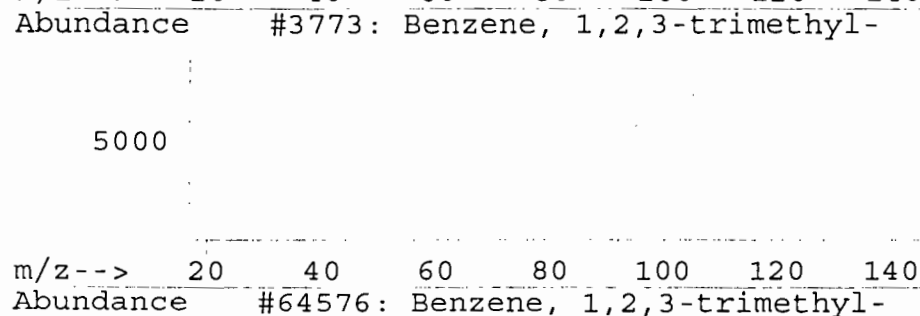
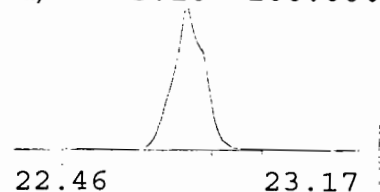
Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
22.82	453.52 ug/L	85805835	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-		3773	000526-73-8	97
2	Benzene, 1,2,3-trimethyl-		64576	000526-73-8	95
3	Benzene, 1,3,5-trimethyl-		64570	000108-67-8	94
4	Benzene, 1,2,3-trimethyl-		64573	000526-73-8	94
5	Benzene, 1-ethyl-3-methyl-		3769	000620-14-4	94

Abundance Scan 2382 (22.817 min): P19262.D (-,*)



m/z 105.10 100.00%



000166

Library Search Compound Report

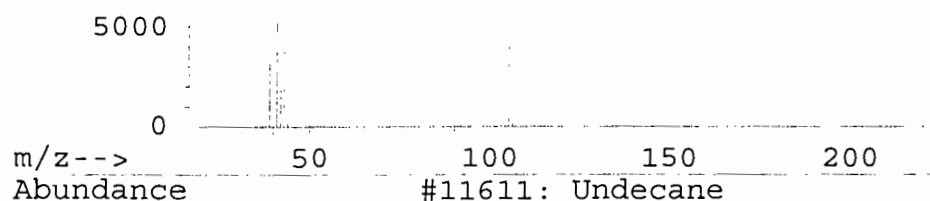
Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.12	392.02 ug/L	74170249	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane		11611	001120-21-4	95
2	Undecane		67319	001120-21-4	64
3	Undecane		67318	001120-21-4	64
4	Undecane		67317	001120-21-4	64
5	Dodecane		68249	000112-40-3	49

Abundance Scan 2534 (24.118 min): P19262.D (-,*)

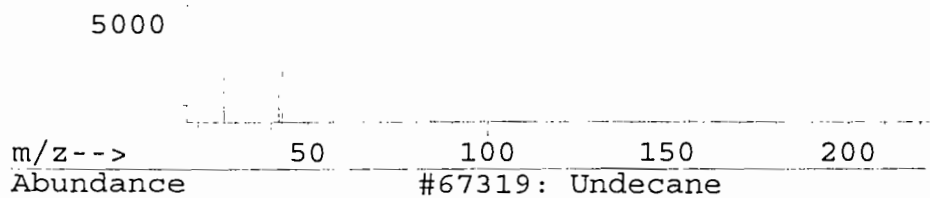


m/z 43.05 100.00%



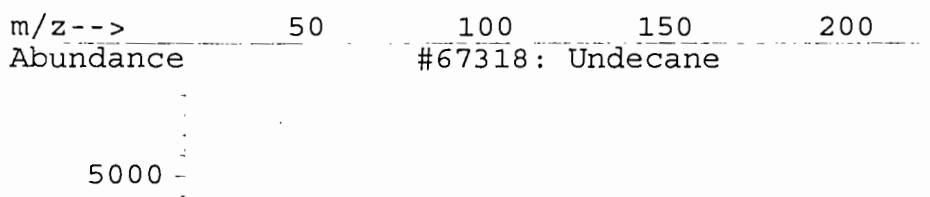
23.76 24.48

m/z 105.10 98.96%



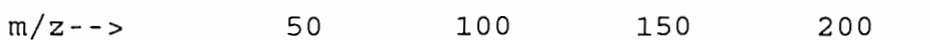
23.76 24.48

m/z 57.05 93.91%



23.76 24.48

m/z 41.05 82.75%



23.76 24.48

m/z 71.15 44.98%

000167

Library Search Compound Report

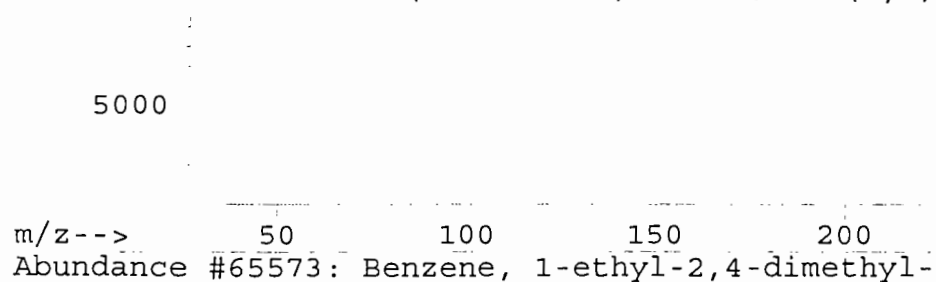
Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

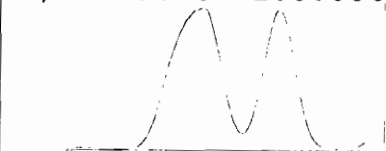
Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
24.48	384.95 ug/L	72831601	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-ethyl-2,4-dimethyl-		65573	000874-41-9	97
2	Benzene, 2-ethyl-1,3-dimethyl-		65533	002870-04-4	97
3	Benzene, 1-ethyl-2,3-dimethyl-		65556	000933-98-2	96
4	Benzene, 4-ethyl-1,2-dimethyl-		65569	000934-80-5	96
5	Benzene, 2-ethyl-1,3-dimethyl-		6200	002870-04-4	95

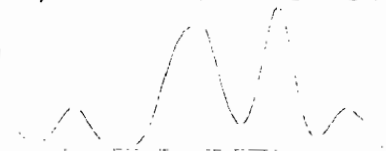
Abundance Scan 2576 (24.477 min): P19262.D (-,*)



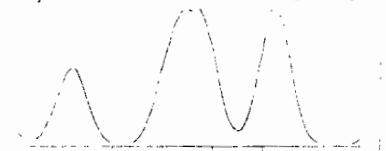
m/z 119.10 100.00%



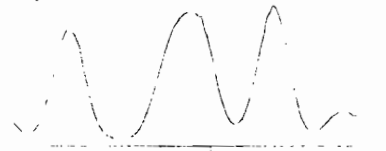
24.12 24.84
m/z 91.00 25.95%



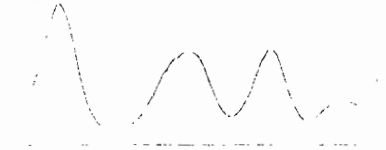
24.12 24.84
m/z 134.10 24.66%



24.12 24.84
m/z 77.00 14.71%



24.12 24.84
m/z 39.05 12.40%



24.12 24.84

m/z--> 50 100 150 200

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

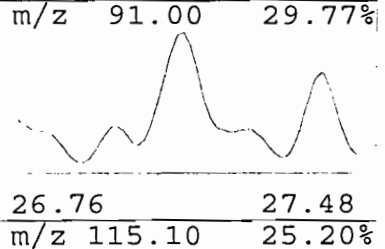
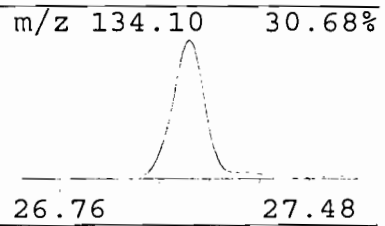
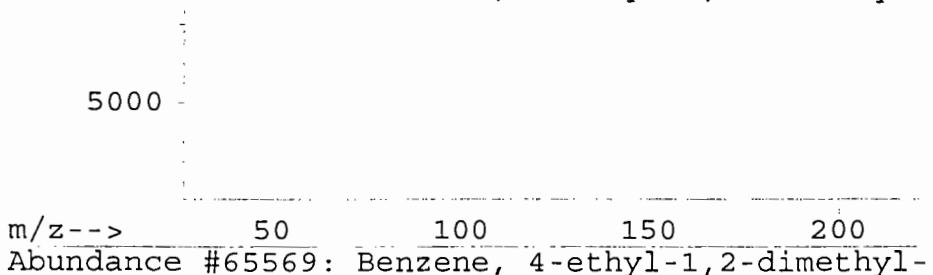
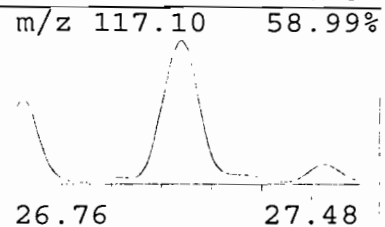
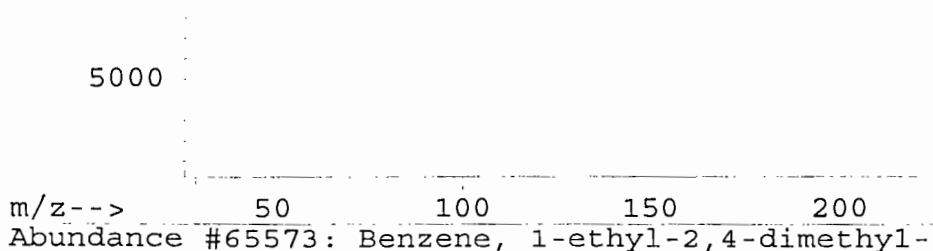
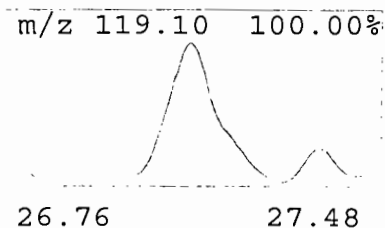
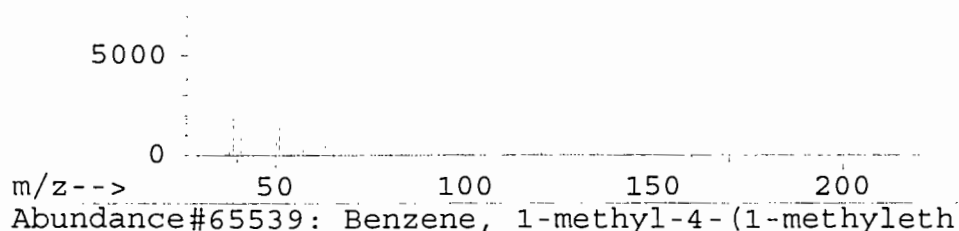
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.12	668.35 ug/L	126451188	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	65539	000099-87-6	60
2	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	58
3	Benzene, 4-ethyl-1,2-dimethyl-	65569	000934-80-5	58
4	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	58
5	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	58

Abundance Scan 2884 (27.119 min): P19262.D (-,*)



000169

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

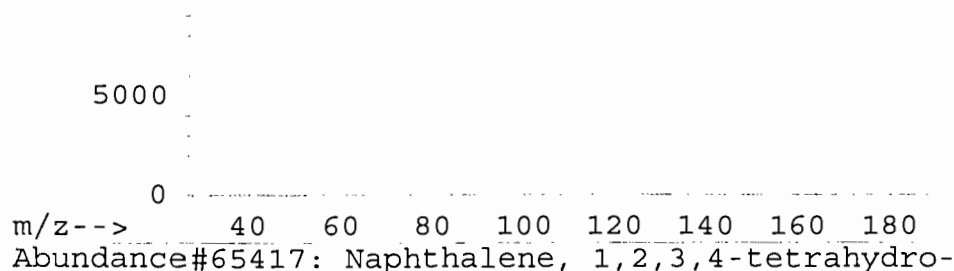
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

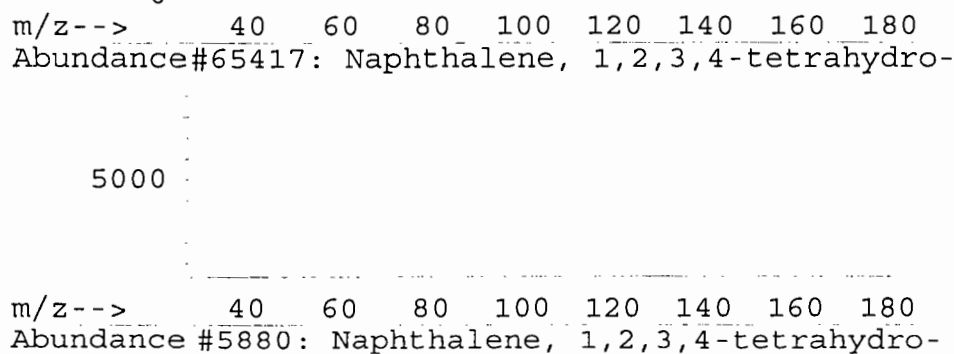
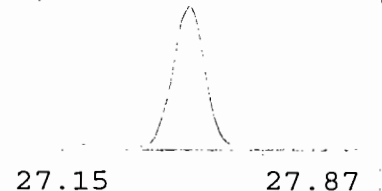
R.T.	Conc	Area	Relative to ISTD	R.T.
27.51	255.08 ug/L	48261572	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-	65417	000119-64-2	96
2	Naphthalene, 1,2,3,4-tetrahydro-	5880	000119-64-2	70
3	Naphthalene, 1,2,3,4-tetrahydro-	65416	000119-64-2	70
4	Naphthalene, 1,2,3,4-tetrahydro-	65414	000119-64-2	62
5	Naphthalene, 1,2,3,4-tetrahydro-	65415	000119-64-2	62

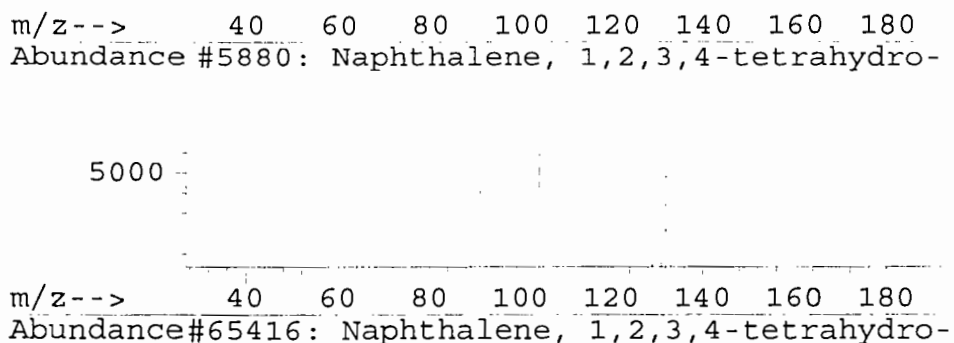
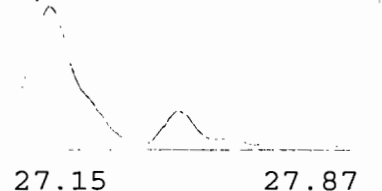
Abundance Scan 2930 (27.513 min): P19262.D (-,*)



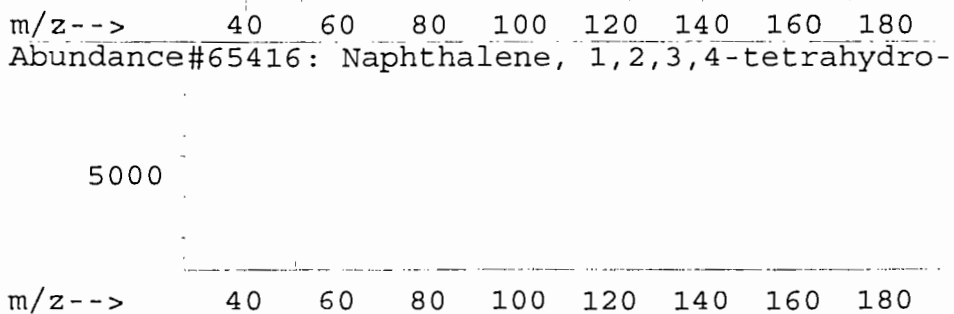
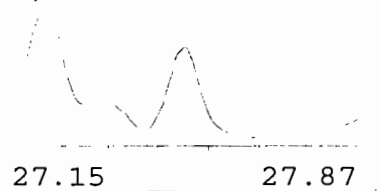
m/z 104.10 100.00%



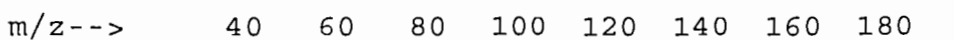
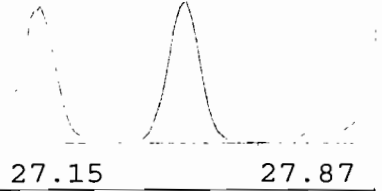
m/z 119.10 43.15%



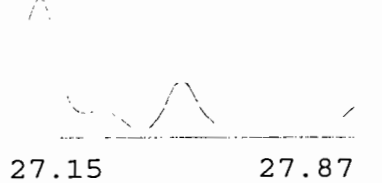
m/z 91.00 42.95%



m/z 132.10 33.10%



m/z 115.05 18.95%



000170

Library Search Compound Report

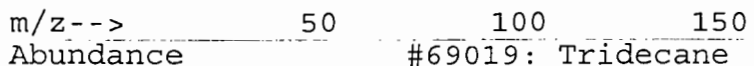
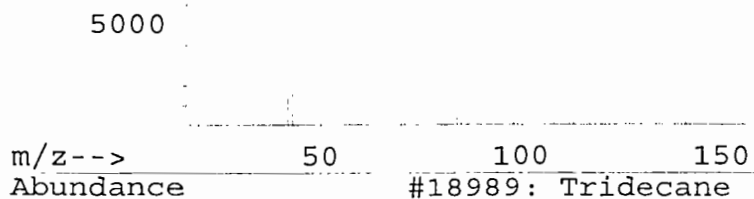
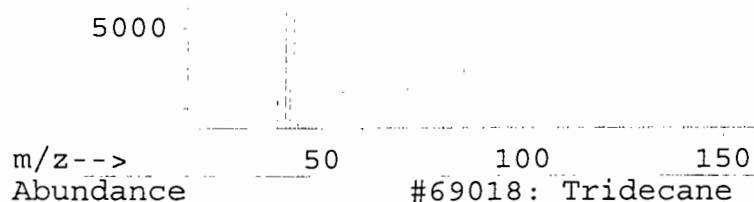
Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.12	246.21 ug/L	46582239	1,4-dichlorobenzene-d4	22.62	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tridecane		69018	000629-50-5	95
2	Tridecane		18989	000629-50-5	95
3	Tridecane		69019	000629-50-5	89
4	Decane		66204	000124-18-5	83
5	Heptane, 2,6-dimethyl-		5156	001072-05-5	80

Abundance Scan 3234 (30.124 min): P19262.D (-,*)



m/z 43.05 100.00%

29.76 30.48
m/z 57.05 94.88%

29.76 30.48
m/z 41.05 83.01%

29.76 30.48
m/z 71.15 52.43%

29.76 30.48
m/z 55.05 33.78%

29.76 30.48

000171

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
Acq Time : 21 Oct 99 12:04 am
Sample : 13826ASP-87997
Misc : 5G/5ML

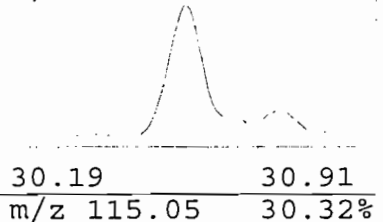
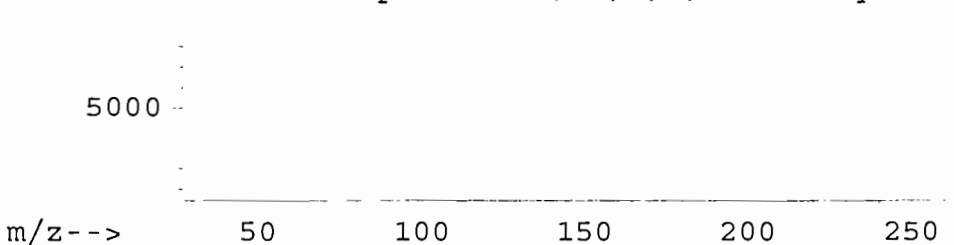
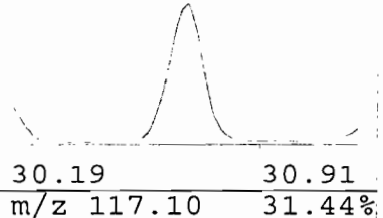
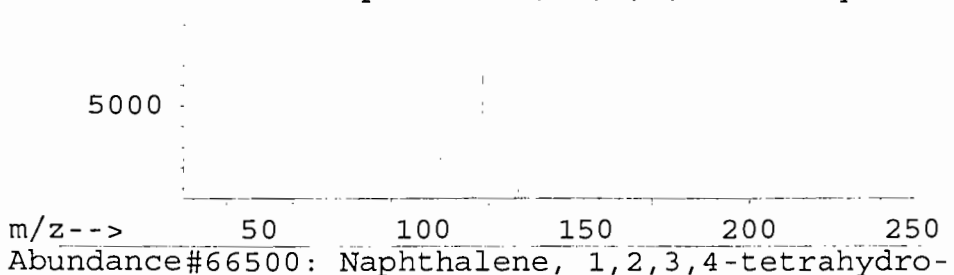
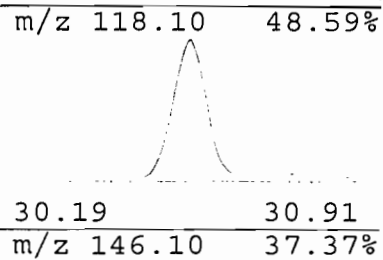
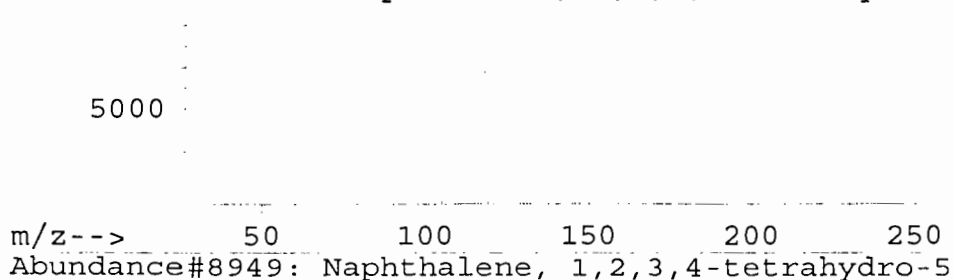
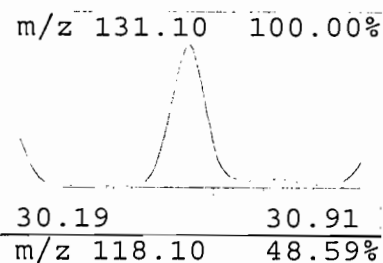
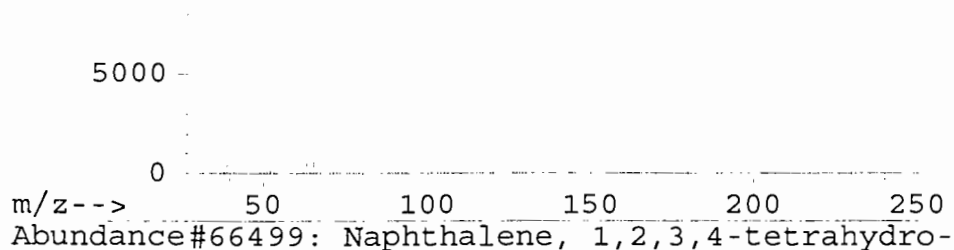
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.55	246.24 ug/L	46589224	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-6-m	66499	001680-51-9	76
2	Naphthalene, 1,2,3,4-tetrahydro-5-m	8949	002809-64-5	76
3	Naphthalene, 1,2,3,4-tetrahydro-6-m	66500	001680-51-9	72
4	Naphthalene, 1,2,3,4-tetrahydro-1-m	8942	001559-81-5	70
5	1H-Indene, 2,3-dihydro-4,7-dimethyl	8955	006682-71-9	70

Abundance Scan 3283 (30.546 min): P19262.D (-,*)



000172

Library Search Compound Report

Data File : G:\HPCHEM\1\DATA\V2102099\P19262.D
 Acq Time : 21 Oct 99 12:04 am
 Sample : 13826ASP-87997
 Misc : 5G/5ML

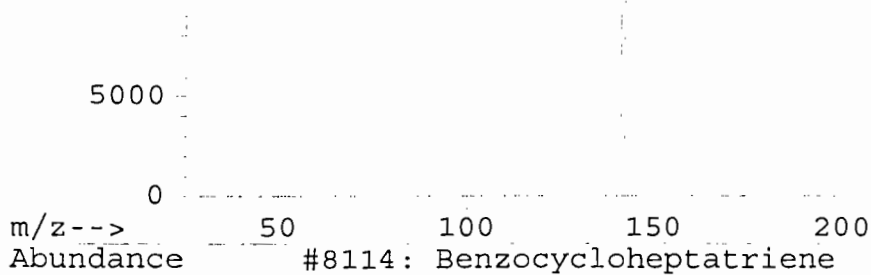
Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : G:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

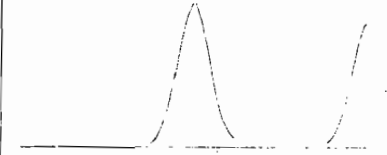
R.T.	Conc	Area	Relative to ISTD	R.T.
32.09	280.12 ug/L	52997953	1,4-dichlorobenzene-d4	22.62

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzocycloheptatriene	8114	000264-09-5	96
2	Naphthalene, 1-methyl-	66233	000090-12-0	93
3	Naphthalene, 1-methyl-	66231	000090-12-0	93
4	Naphthalene, 1-methyl-	8111	000090-12-0	90
5	Naphthalene, 2-methyl-	66236	000091-57-6	90

Abundance Scan 3462 (32.085 min): P19262.D (-,*)

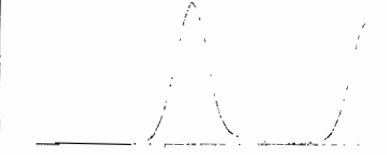


m/z 142.10 100.00%



31.73 32.45

m/z 141.10 95.25%



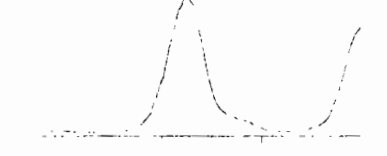
31.73 32.45

m/z 115.00 74.01%



31.73 32.45

m/z 63.05 18.83%



31.73 32.45

m/z 145.10 16.86%



31.73 32.45

m/z--> 50 100 150 200
 Abundance #66233: Naphthalene, 1-methyl-

m/z--> 50 100 150 200
 Abundance #66231: Naphthalene, 1-methyl-

m/z--> 50 100 150 200

000173

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS30DL

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87997DL

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19272.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 3

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

75-71-8	Dichlorodifluoromethane	17	UD
74-87-3	Chloromethane	34	UD
75-01-4	Vinyl Chloride	19	UD
74-83-9	Bromomethane	39	UD
75-00-3	Chloroethane	52	UD
107-02-8	Acrolein	52	UD
75-69-4	Trichlorofluoromethane	12	UD
75-35-4	1,1-Dichloroethene	20	UD
67-64-1	Acetone	52	UD
75-15-0	Carbon Disulfide	52	UD
75-09-2	Methylene Chloride	10	UD
156-60-5	trans-1,2-Dichloroethene	44	UD
107-13-1	Acrylonitrile	52	UD
75-34-3	1,1-Dichloroethane	13	UD
594-20-7	2,2-Dichloropropane	10	UD
156-59-2	cis-1,2-dichloroethene	18	UD
74-97-5	Bromochloromethane	18	UD
67-66-3	Chloroform	12	UD
71-55-6	1,1,1-Trichloroethane	9.3	UD
108-05-4	Vinyl Acetate	52	UD
78-93-3	2-Butanone	52	UD
56-23-5	Carbon Tetrachloride	41	UD
563-58-6	1,1-Dichloropropene	12	UD
71-43-2	Benzene	10	UD
107-06-2	1,2-Dichloroethane	10	UD
79-01-6	Trichloroethene	27	UD
78-87-5	1,2-Dichloropropane	35	UD
74-95-3	Dibromomethane	15	UD
75-27-4	Bromodichloromethane	10	UD
110-07-3	2-Chloroethyl Vinyl Ether	52	UD
10061-01-5	cis-1,3-Dichloropropene	10	UD
108-88-3	Toluene	170	D
10061-02-6	trans-1,3-Dichloropropene	10	UD

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS30DL

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87997DL

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19272.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 3

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	14		UD
108-10-1	4-Methyl-2-Pentanone	52		UD
127-18-4	Tetrachloroethene	11		UD
142-28-9	1,3-Dichloropropane	12		UD
124-48-1	Dibromochloromethane	7.2		UD
106-93-4	1,2-Dibromoethane	16		UD
591-78-6	2-Hexanone	52		UD
108-90-7	Chlorobenzene	11		UD
630-20-6	1,1,1,2-Tetrachloroethane	12		UD
100-41-4	Ethylbenzene	220		D
136777-61-2	m&p-xylenes	560		D
95-47-6	o-xylene	600		D
100-42-5	Styrene	2.1		UD
75-25-2	Bromoform	5.2		UD
98-82-8	isopropylbenzene	120		D
108-86-1	Bromobenzene	10		UD
79-34-5	1,1,2,2-Tetrachloroethane	16		UD
96-18-4	1,2,3-Trichloropropane	26		UD
103-65-1	n-Propylbenzene	13		UD
95-49-8	2-Chlorotoluene	490		D
106-43-4	4-Chlorotoluene	10		UD
108-67-8	1,3,5-Trimethylbenzene	940		D
98-06-6	tert-Butylbenzene	12		UD
95-63-6	1,2,4-Trimethylbenzene	1900		D
135-98-8	sec-Butylbenzene	12		UD
541-73-1	1,3-Dichlorobenzene	12		UD
99-87-6	4-Isopropyltoluene	130		D
106-46-7	1,4-Dichlorobenzene	12		UD
95-50-1	1,2-Dichlorobenzene	110		D
104-51-8	n-Butylbenzene	18		UD
96-12-8	1,2-Dibromo-3-chloropropane	52		UD
120-82-1	1,2,4-Trichlorobenzene	12		UD
87-68-3	Hexachlorobutadiene	10		UD

SAMPLE NO.

GP-009-SS30DL

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O87997DL

Lab File ID: P19272.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 10.0

Soil Aliquot Volume: (uL)

Concentration Units:

Q

000176
3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-009-SS30DL

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87997DL
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19272.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 3 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 10.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 622-96-8	Benzene, 1-ethyl-4-methyl-	20.39	1700	J
2. 95-36-3	1,2,4-Trimethylbenzene	22.76	1200	J
3. 1120-21-4	Undecane	24.06	1700	J
4. 99-87-6	Benzene, 1-methyl-4-(1-methy	24.42	1200	J
5.	Unknown	27.05	1400	J
6. 112-40-3	Dodecane	27.16	1200	J
7. 629-50-5	Tridecane	30.07	930	J
8. 2809-64-5	Naphthalene, 1,2,3,4-tetrahy	30.49	1200	J
9. 264-09-5	Benzocycloheptatriene	32.02	1400	J
10. 581-40-8	Naphthalene, 2,3-dimethyl-	35.56	1200	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
 Acq Time : 22 Oct 99 1:23 am
 Sample : 13826ASP-87997 1:10 DIL
 Misc : 5G/5ML
 Quant Time: Oct 22 11:34 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	983952	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1032062	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	670216	50.00	ug/L	-0.01
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	760298	46.38	ug/L	92.75%
30) 1,2-Dichlorethane-d4	8.66	65	558994	43.39	ug/L	86.79%
38) Toluene-d8	12.76	98	918679	47.87	ug/L	95.74%
42) 4-Bromofluorobenzene	19.48	95	945387	47.99	ug/L	95.97%
Target Compounds						Qvalue
13) methylene chloride	4.58	84	12830	2.78	ug/L	96
39) toluene	12.91	91	317844	16.42	ug/L	99
53) ethylbenzene	16.67	91	613642	21.78	ug/L	98
54) m&p-xylenes	16.99	106	527643	54.65	ug/L	97
55) o-xylene	18.01	91	1614901	57.89	ug/L	98
59) isopropylbenzene	18.99	105	332478	11.50	ug/L	97
64) 2-chlorotoluene	20.31	126	336304	47.10	ug/L	73
66) 1,3,5-trimethylbenzene	20.64	105	2426325	91.62	ug/L	98
68) 1,2,4-trimethylbenzene	21.63	105	5106886	185.27	ug/L	98
71) 4-isopropyltoluene	22.52	119	385688	12.22	ug/L	95
73) 1,2-dichlorobenzene	23.63	146	184720	11.07	ug/L	84

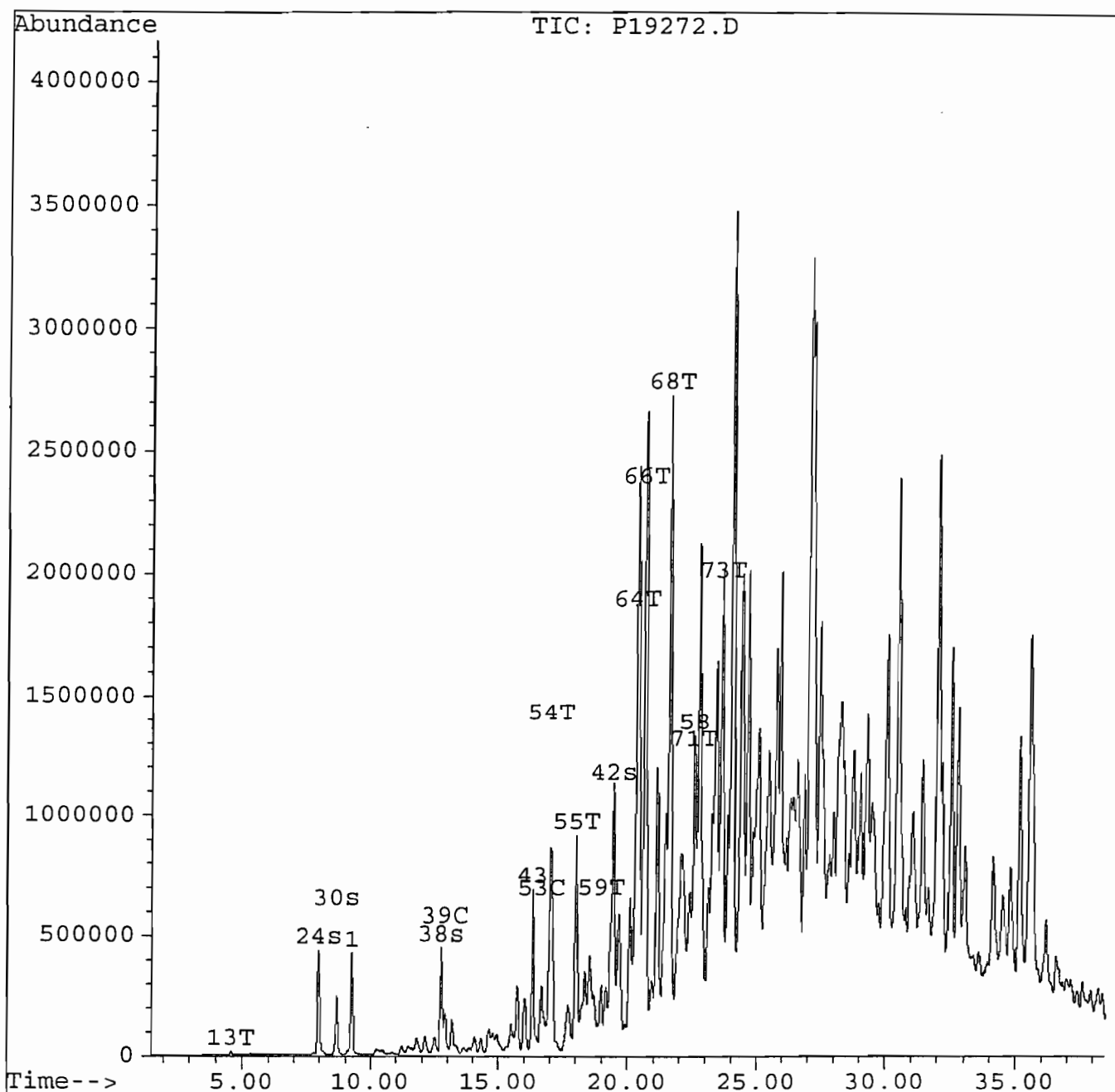
000178

Quantitation Report

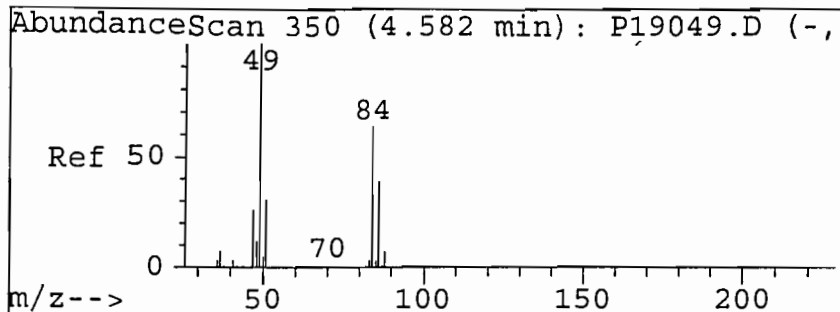
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Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML
Quant Time: Oct 22 11:34 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

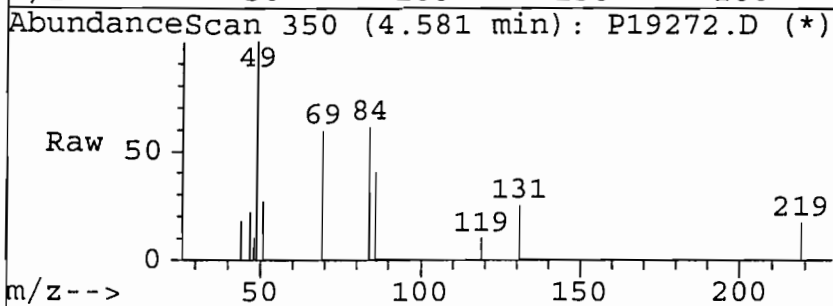


000179

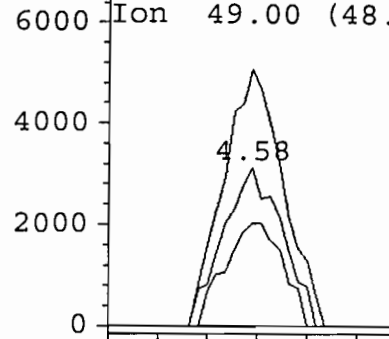


#13
methylene chloride
Concen: 2.78 ug/L
RT: 4.58 min Scan# 350
Delta R.T. -0.00 min
Lab File: P19272.D
Acq: 22 Oct 99 1:23 am

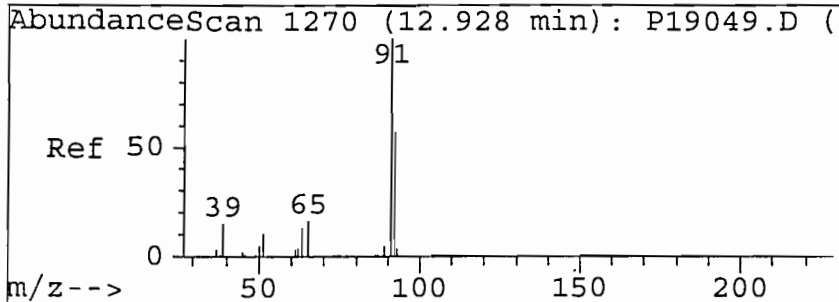
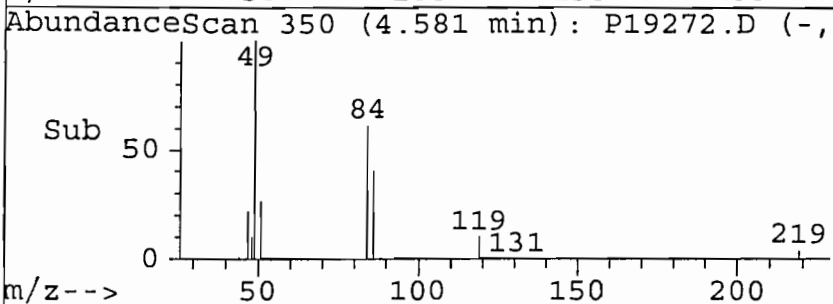
Tgt Ion:	84	Resp:	12830
Ion	Ratio	Lower	Upper
84	100		
86	64.6	43.3	80.3
49	162.9	110.4	205.0
0	0.0	0.0	0.0



Abundance	Ion	84.00 (83.
	Ion	86.00 (85.
	Ion	49.00 (48.

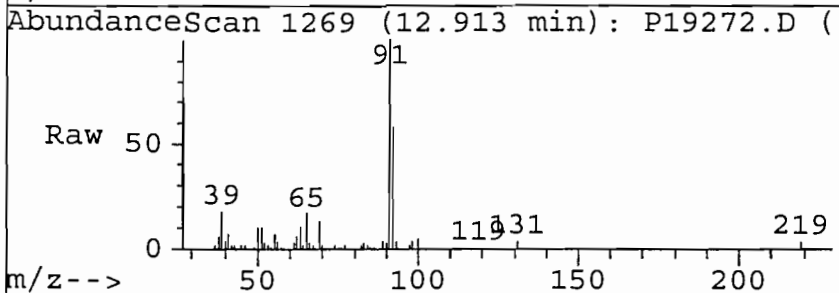


Time-->4.44 4.69

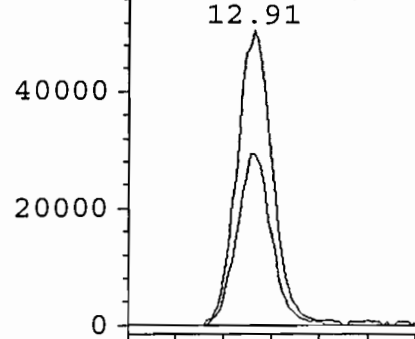


#39
toluene
Concen: 16.42 ug/L
RT: 12.91 min Scan# 1269
Delta R.T. -0.01 min
Lab File: P19272.D
Acq: 22 Oct 99 1:23 am

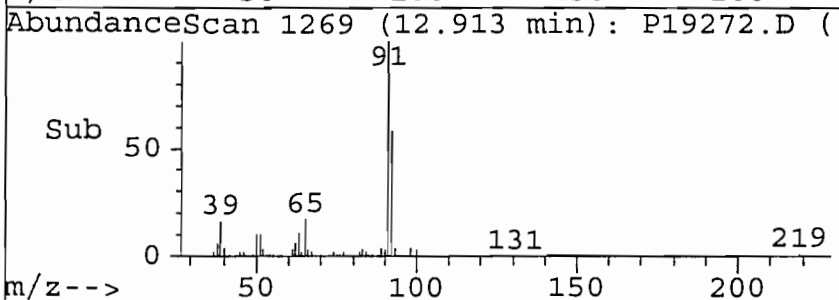
Tgt Ion:	91	Resp:	317844
Ion	Ratio	Lower	Upper
91	100		
92	57.9	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



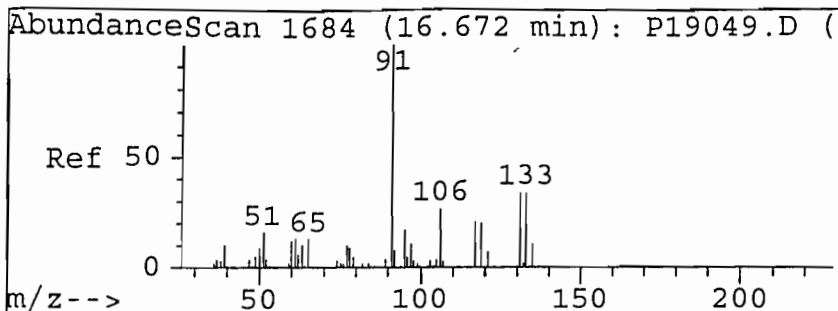
Abundance	Ion	91.00 (90.
	Ion	92.00 (91.



Time-->12.60 13.20

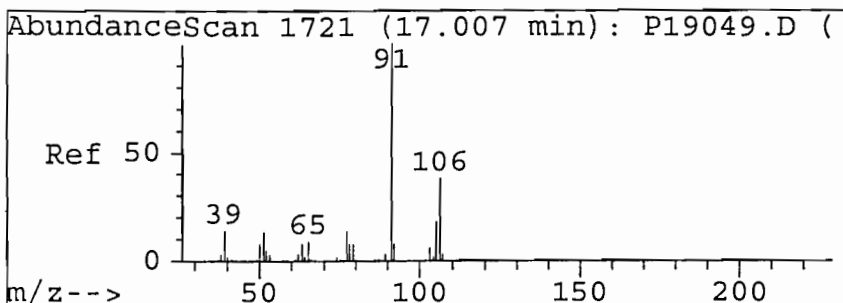
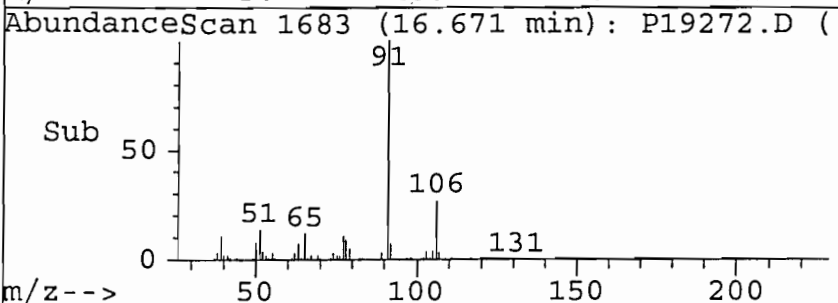
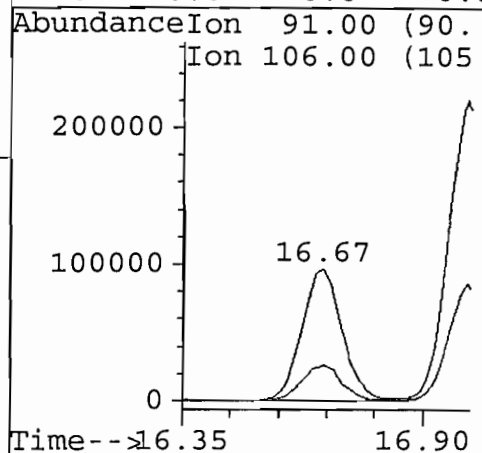
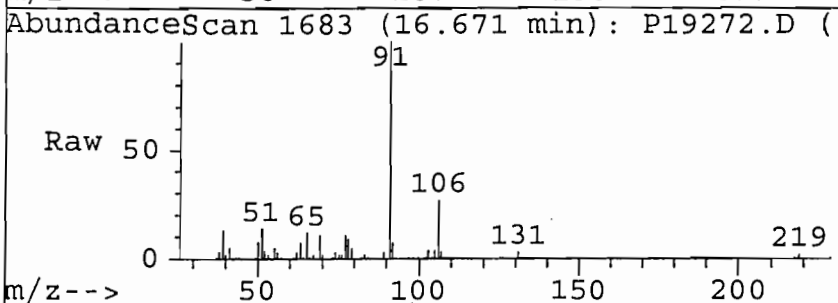


000180



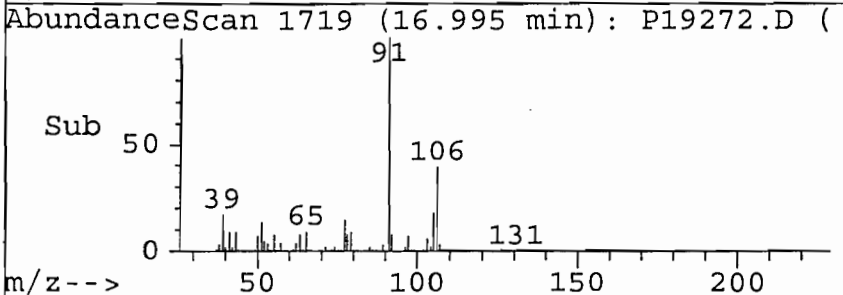
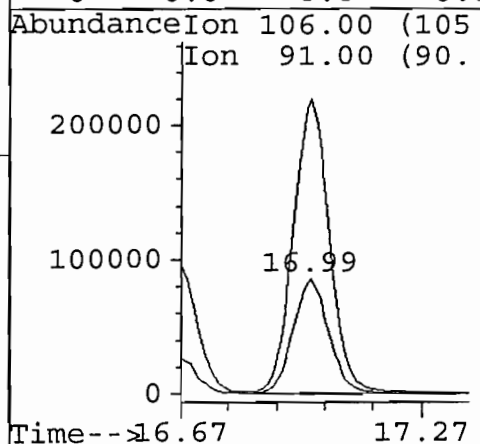
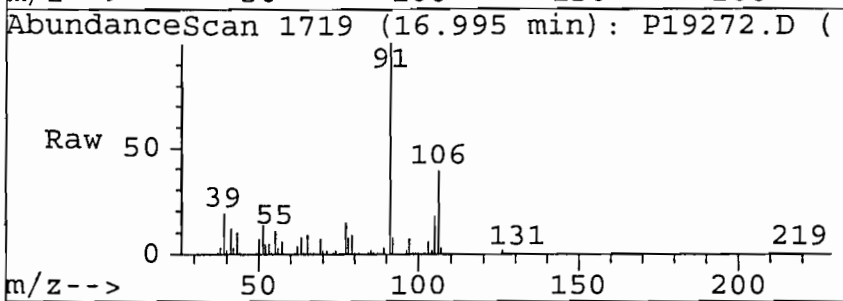
#53
ethylbenzene
Concen: 21.78 ug/L
RT: 16.67 min Scan# 1683
Delta R.T. -0.00 min
Lab File: P19272.D
Acq: 22 Oct 99 1:23 am

Tgt Ion:91 Resp: 613642
Ion Ratio Lower Upper
91 100
106 26.9 18.3 33.9
0 0.0 0.0 0.0
0 0.0 0.0 0.0



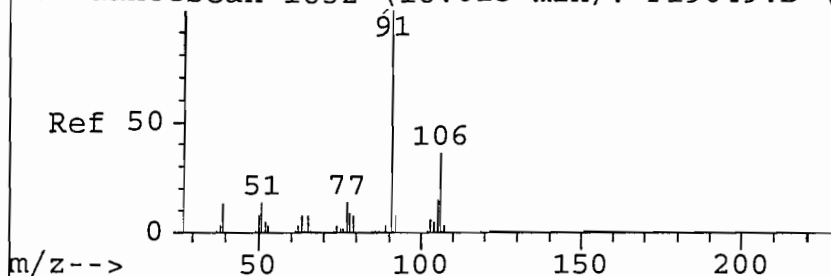
#54
m&p-xylenes
Concen: 54.65 ug/L
RT: 16.99 min Scan# 1719
Delta R.T. -0.01 min
Lab File: P19272.D
Acq: 22 Oct 99 1:23 am

Tgt Ion:106 Resp: 527643
Ion Ratio Lower Upper
106 100
91 256.8 183.6 341.0
0 0.0 0.0 0.0
0 0.0 0.0 0.0



000181

AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 57.89 ug/L

RT: 18.01 min Scan# 1831

Delta R.T. -0.01 min

Lab File: P19272.D

Acq: 22 Oct 99 1:23 am

Tgt Ion:91 Resp: 1614901

Ion Ratio Lower Upper

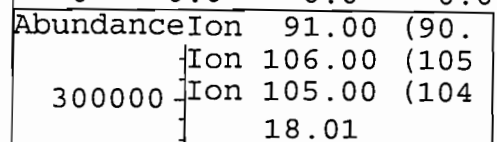
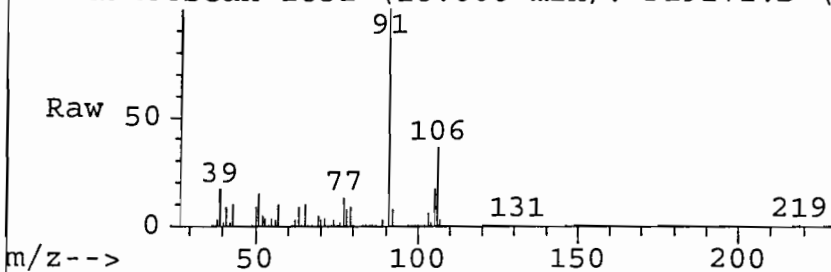
91 100

106 36.0 25.4 47.2

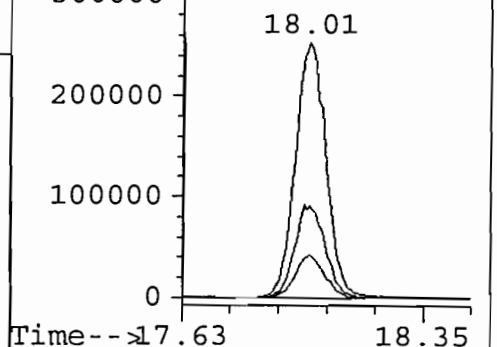
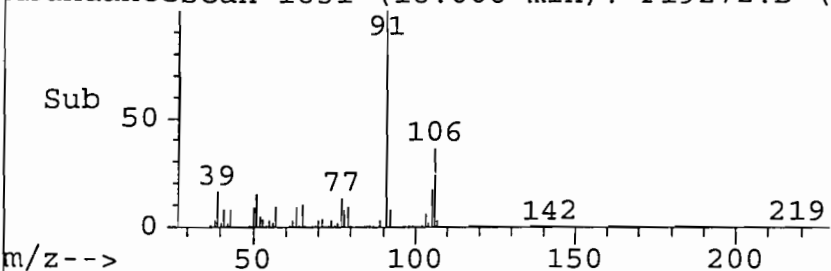
105 16.8 10.1 18.8

0 0.0 0.0 0.0

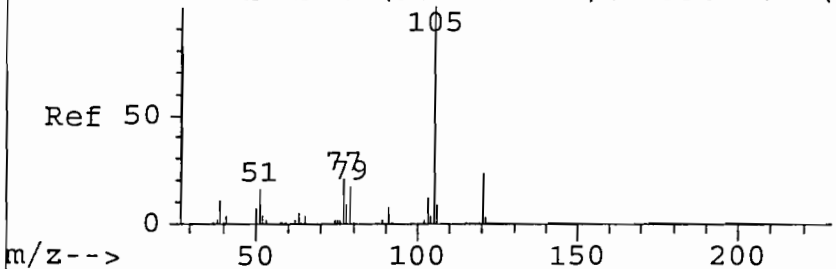
AbundanceScan 1831 (18.008 min): P19272.D (



AbundanceScan 1831 (18.008 min): P19272.D (



AbundanceScan 1940 (18.999 min): P19049.D (



#59

isopropylbenzene

Concen: 11.50 ug/L

RT: 18.99 min Scan# 1940

Delta R.T. -0.01 min

Lab File: P19272.D

Acq: 22 Oct 99 1:23 am

Tgt Ion:105 Resp: 332478

Ion Ratio Lower Upper

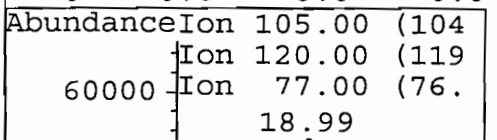
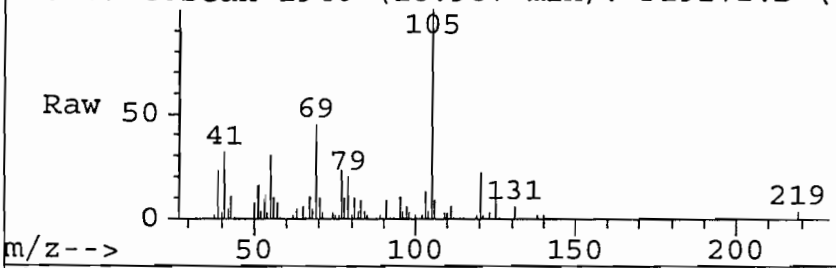
105 100

120 22.5 16.0 29.8

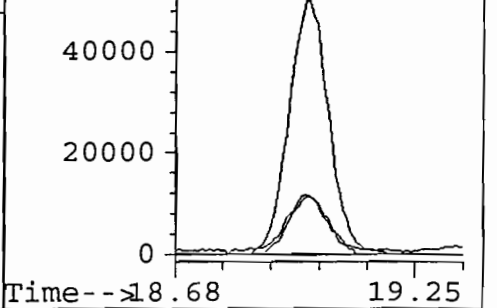
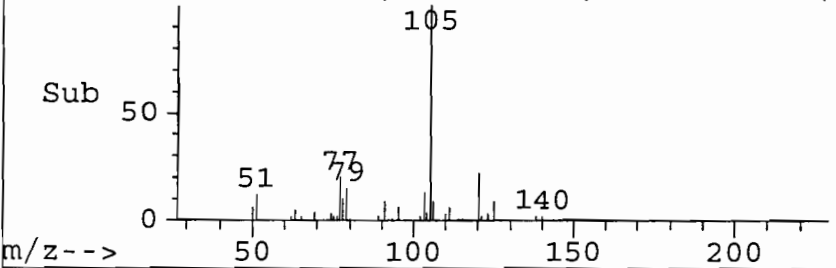
77 23.4 14.6 27.0

0 0.0 0.0 0.0

AbundanceScan 1940 (18.987 min): P19272.D (

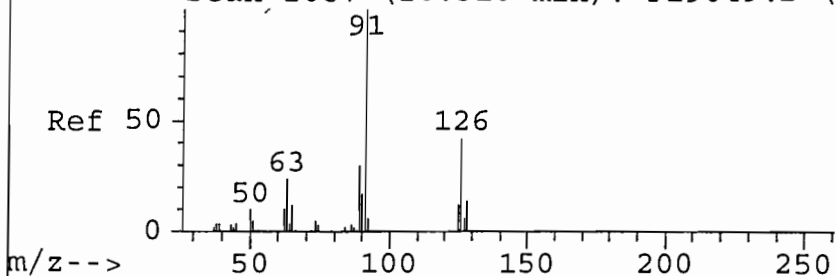


AbundanceScan 1940 (18.987 min): P19272.D (



000182

AbundanceScan 2087 (20.310 min): P19049.D (



#64

2-chlorotoluene

Concen: 47.10 ug/L

RT: 20.31 min Scan# 2089

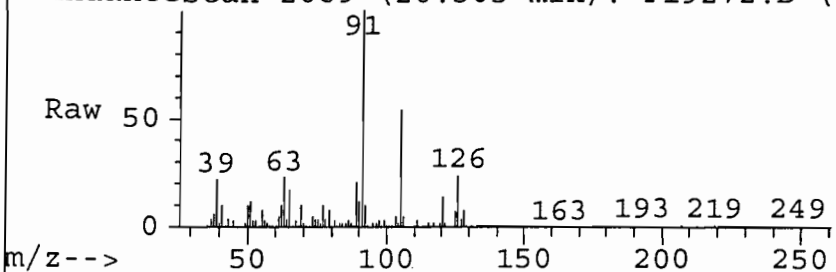
Delta R.T. -0.00 min

Lab File: P19272.D

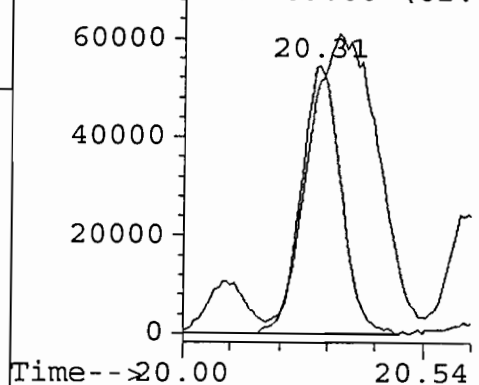
Acq: 22 Oct 99 1:23 am

Tgt Ion:126	Resp: 336304
Ion Ratio	Lower Upper
126 100	
63 94.2	25.0 117.8
0 0.0	0.0 0.0
0 0.0	0.0 0.0

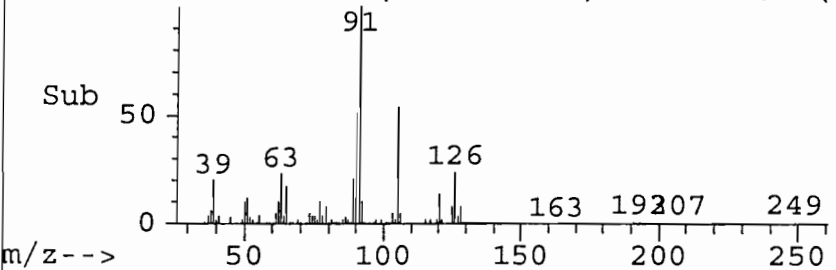
AbundanceScan 2089 (20.305 min): P19272.D (



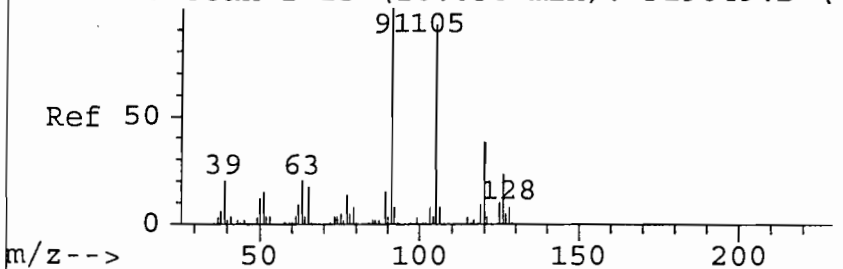
AbundanceIon 126.00 (125
Ion 63.00 (62.



AbundanceScan 2089 (20.305 min): P19272.D (



AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 91.62 ug/L

RT: 20.64 min Scan# 2128

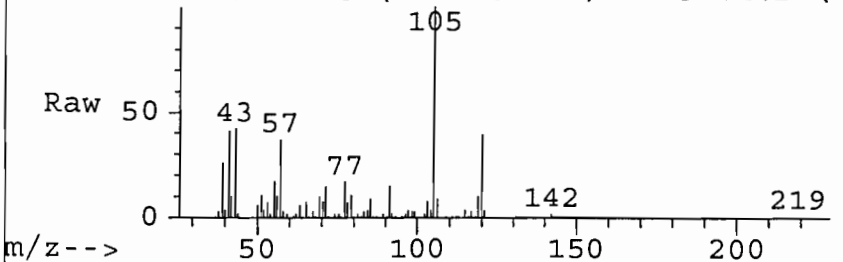
Delta R.T. -0.02 min

Lab File: P19272.D

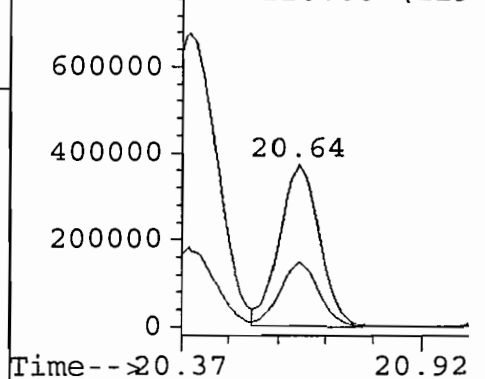
Acq: 22 Oct 99 1:23 am

Tgt Ion:105	Resp: 2426325
Ion Ratio	Lower Upper
105 100	
120 39.5	28.6 53.0
0 0.0	0.0 0.0
0 0.0	0.0 0.0

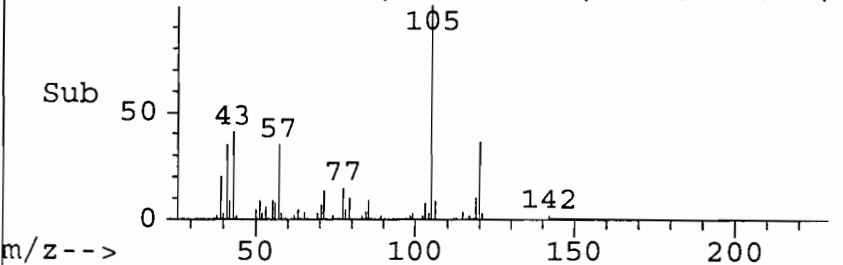
AbundanceScan 2128 (20.640 min): P19272.D (



AbundanceIon 105.00 (104
Ion 120.00 (119

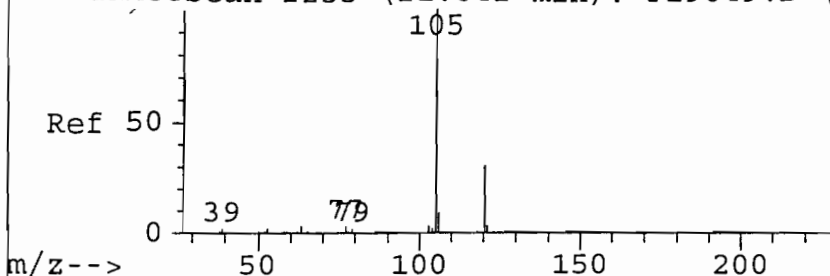


AbundanceScan 2128 (20.640 min): P19272.D (



000183

AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzene

Concen: 185.27 ug/L

RT: 21.63 min Scan# 2240

Delta R.T. -0.01 min

Lab File: P19272.D

Acq: 22 Oct 99 1:23 am

Tgt Ion:105 Resp: 5106886

Ion Ratio Lower Upper

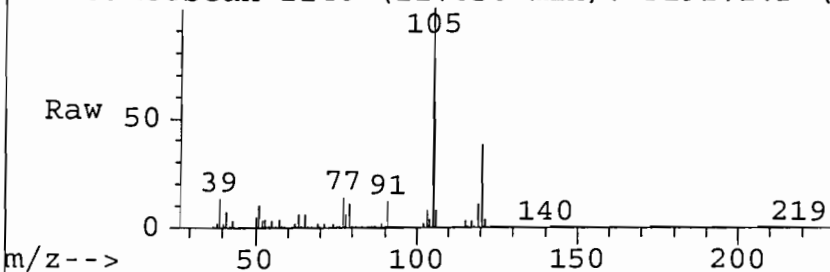
105 100

120 38.2 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

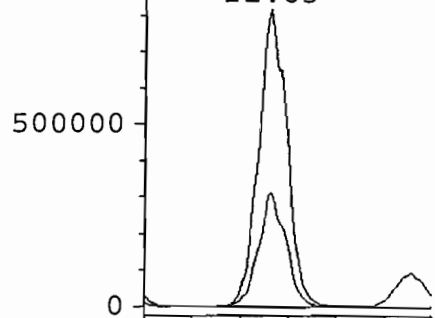
AbundanceScan 2240 (21.630 min): P19272.D (



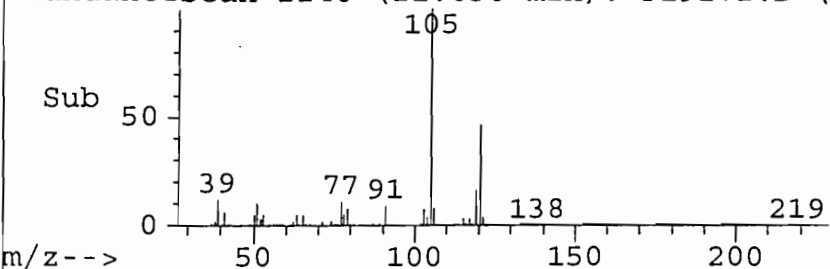
AbundanceIon 105.00 (104

Ion 120.00 (119

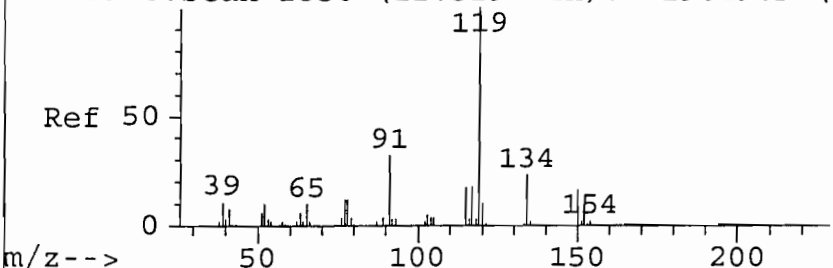
21.63



AbundanceScan 2240 (21.630 min): P19272.D (



AbundanceScan 2330 (22.529 min): P19049.D (



#71

4-isopropyltoluene

Concen: 12.22 ug/L

RT: 22.52 min Scan# 2342

Delta R.T. -0.01 min

Lab File: P19272.D

Acq: 22 Oct 99 1:23 am

Tgt Ion:119 Resp: 385688

Ion Ratio Lower Upper

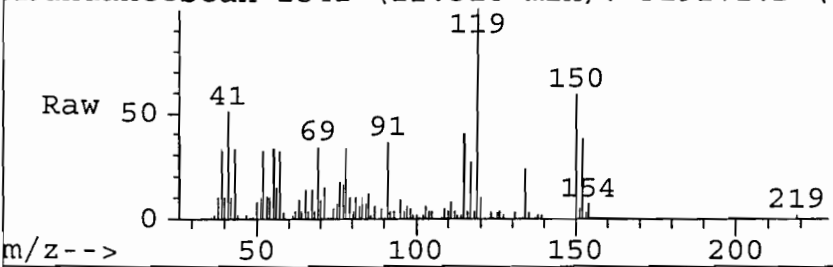
119 100

134 23.9 15.9 29.5

91 35.9 22.6 42.0

0 0.0 0.0 0.0

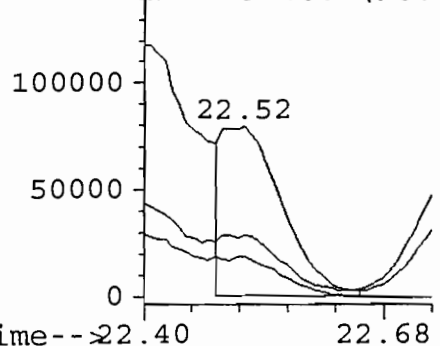
AbundanceScan 2342 (22.518 min): P19272.D (



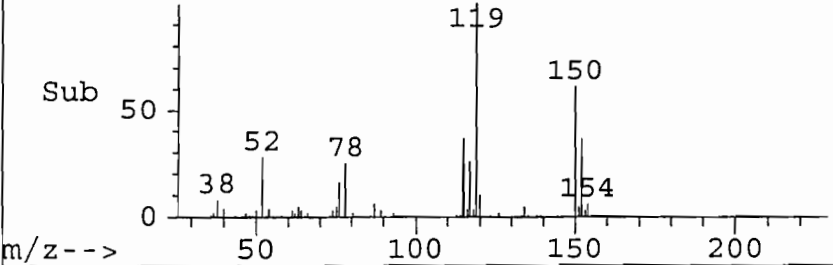
AbundanceIon 119.00 (118

Ion 134.00 (133

Ion 91.00 (90.

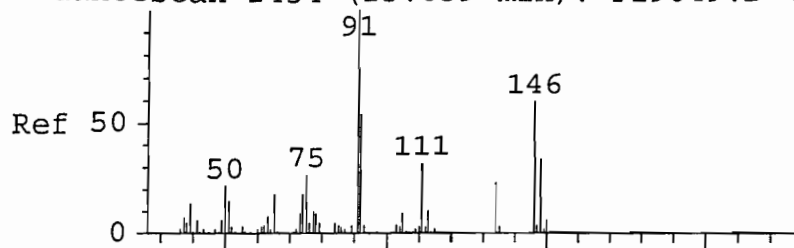


AbundanceScan 2342 (22.518 min): P19272.D (



000184

AbundanceScan 2454 (23.659 min): P19049.D (



#73

1,2-dichlorobenzene

Concen: 11.07 ug/L

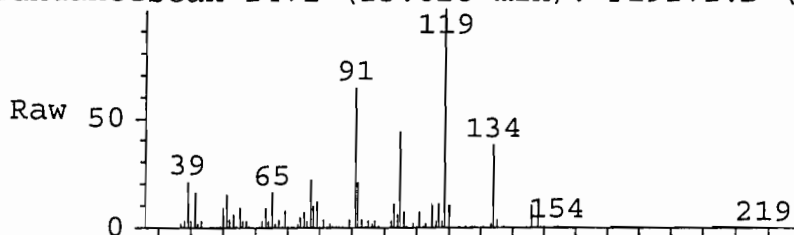
RT: 23.63 min Scan# 2471

Delta R.T. -0.03 min

Lab File: P19272.D

Acq: 22 Oct 99 1:23 am

AbundanceScan 2471 (23.628 min): P19272.D (



Tgt Ion:146 Resp: 184720

Ion	Ratio	Lower	Upper
146	100		
111	70.4	38.3	71.1
148	66.3	40.5	75.3
0	0.0	0.0	0.0

146 100

111 70.4 38.3 71.1

148 66.3 40.5 75.3

0 0.0 0.0 0.0

AbundanceIon 146.00 (145

40000 Ion 111.00 (110

Ion 148.00 (147

23.63

30000

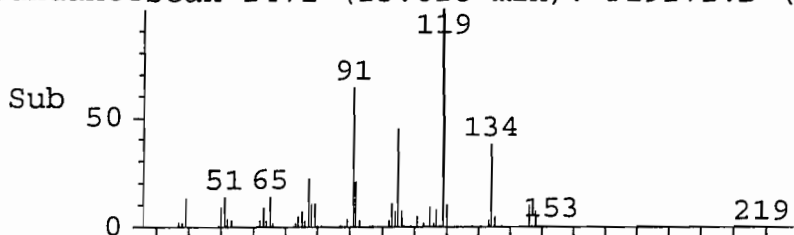
20000

10000

0

Time-->23.36 23.85

AbundanceScan 2471 (23.628 min): P19272.D (



Time-->23.36 23.85

000185

Library Search Compound Report

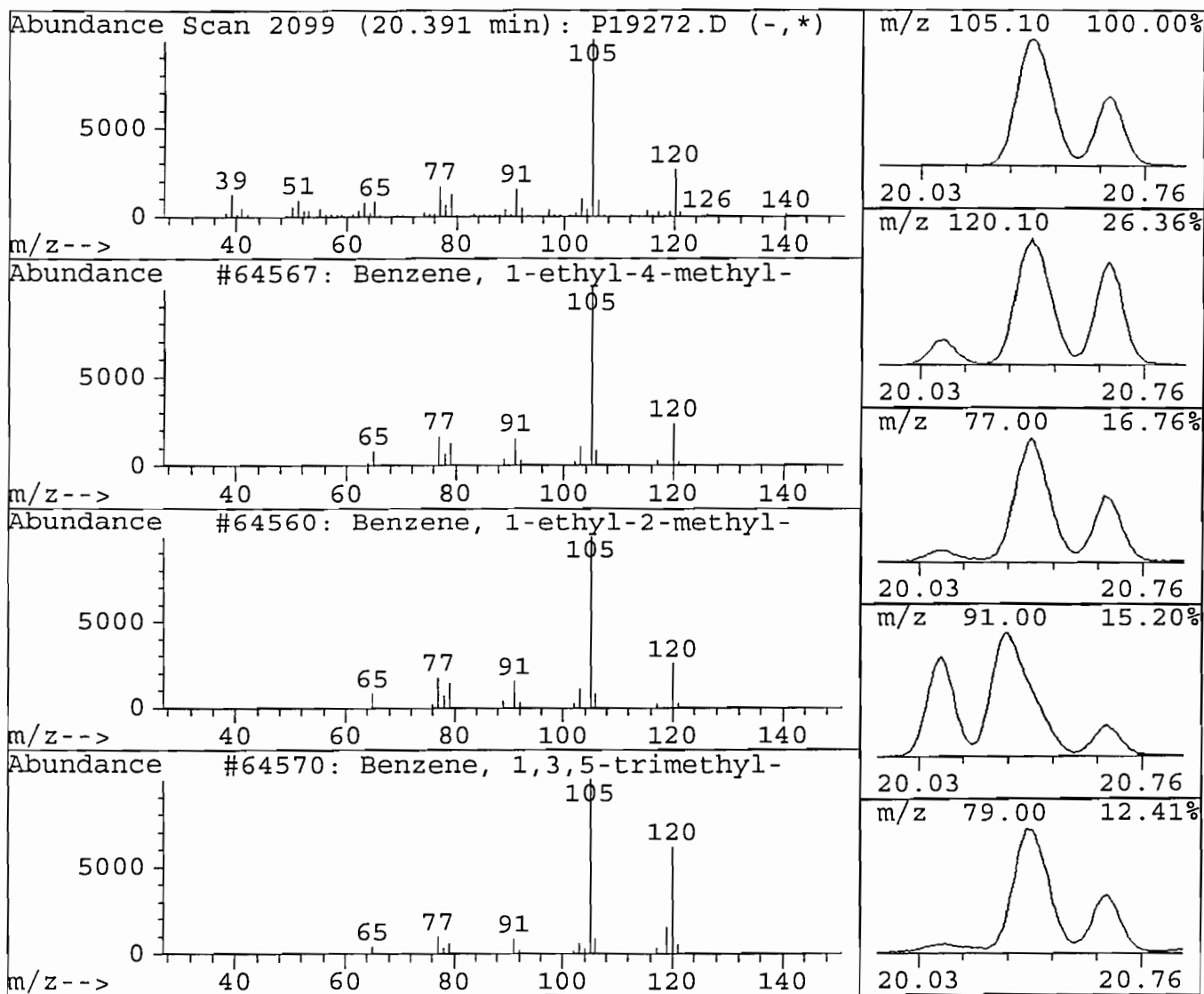
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
20.39	168.76 ug/L	22788365	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-ethyl-4-methyl-	64567	000622-96-8	95
2	Benzene, 1-ethyl-2-methyl-	64560	000611-14-3	93
3	Benzene, 1,3,5-trimethyl-	64570	000108-67-8	93
4	Benzene, 1-ethyl-2-methyl-	64557	000611-14-3	91
5	Benzene, 1-ethyl-2-methyl-	3765	000611-14-3	91



000186

Library Search Compound Report

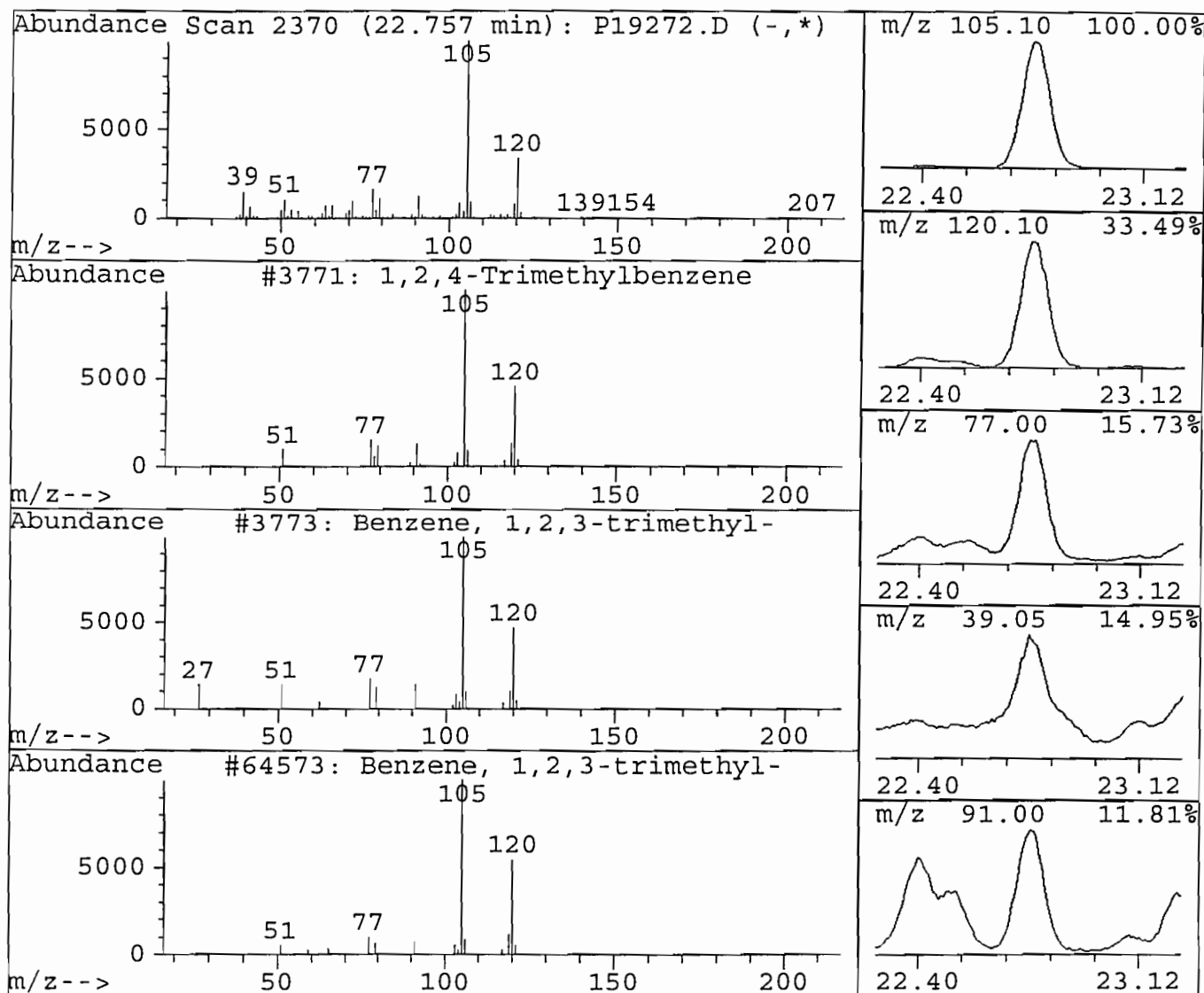
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.76	112.41 ug/L	15178566	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1,2,4-Trimethylbenzene	3771	000095-36-3	93
2	Benzene, 1,2,3-trimethyl-	3773	000526-73-8	93
3	Benzene, 1,2,3-trimethyl-	64573	000526-73-8	93
4	Benzene, 1,3,5-trimethyl-	64569	000108-67-8	90
5	Benzene, 1,2,3-trimethyl-	64574	000526-73-8	90



000187

Library Search Compound Report

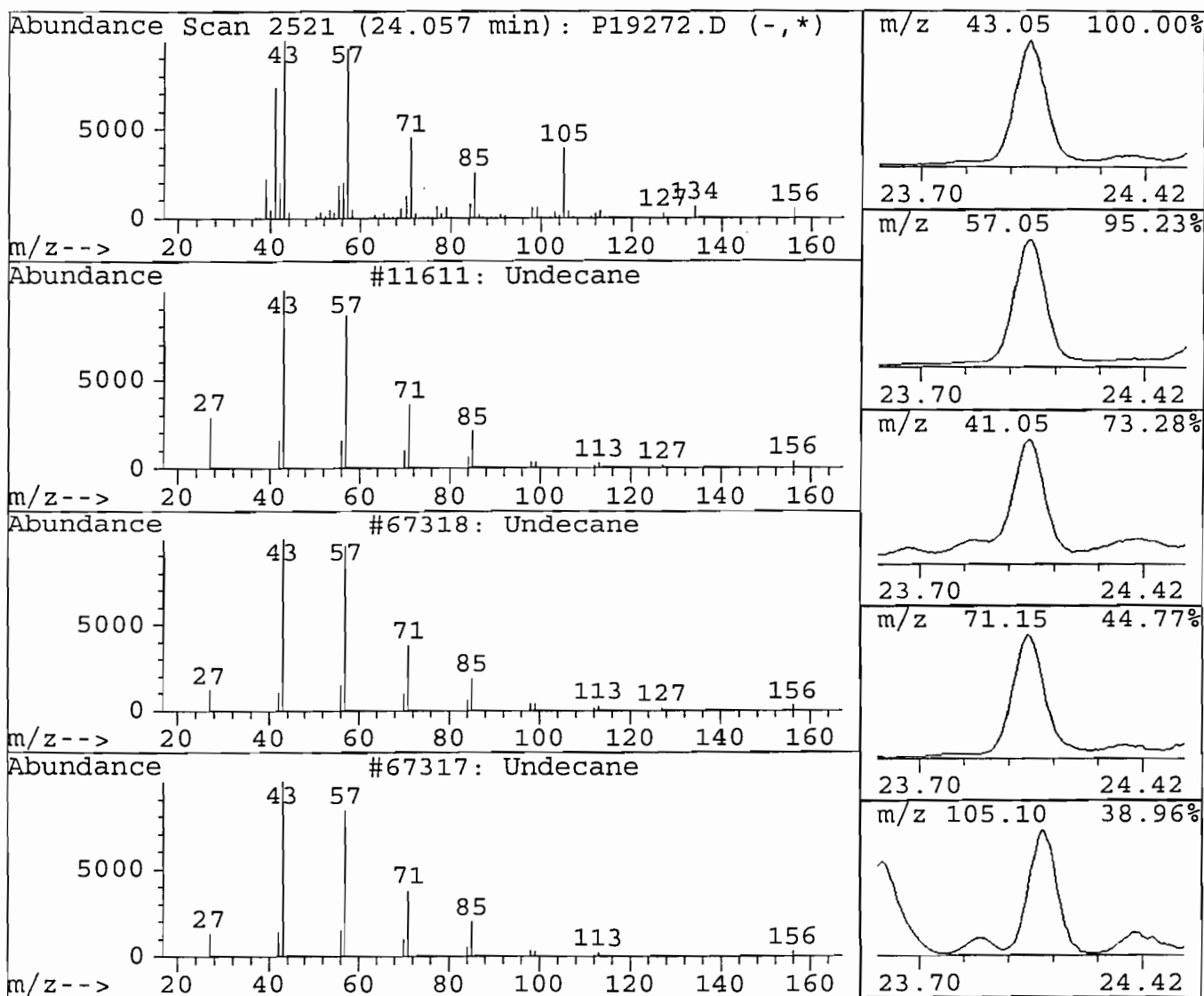
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.06	168.13 ug/L	22703363	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane	11611	001120-21-4	95
2	Undecane	67318	001120-21-4	93
3	Undecane	67317	001120-21-4	93
4	Decane, 2,9-dimethyl-	15361	001002-17-1	64
5	Dodecane	68249	000112-40-3	64



000188

Library Search Compound Report

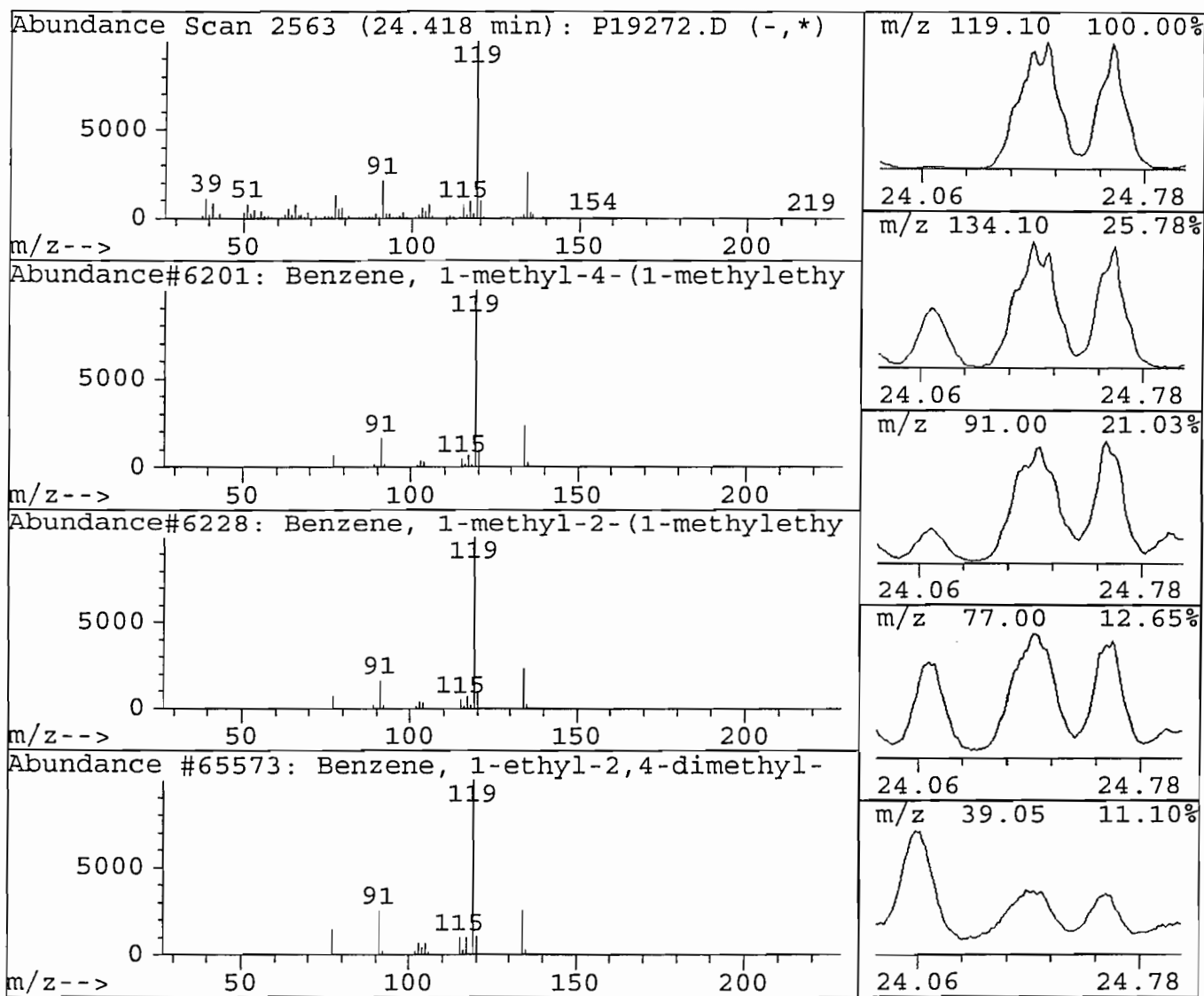
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.42	115.92 ug/L	15652955	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	97
2	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	97
3	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	97
4	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	97
5	Benzene, 1-methyl-3-(1-methylethyl)	6225	000535-77-3	97



000189

Library Search Compound Report

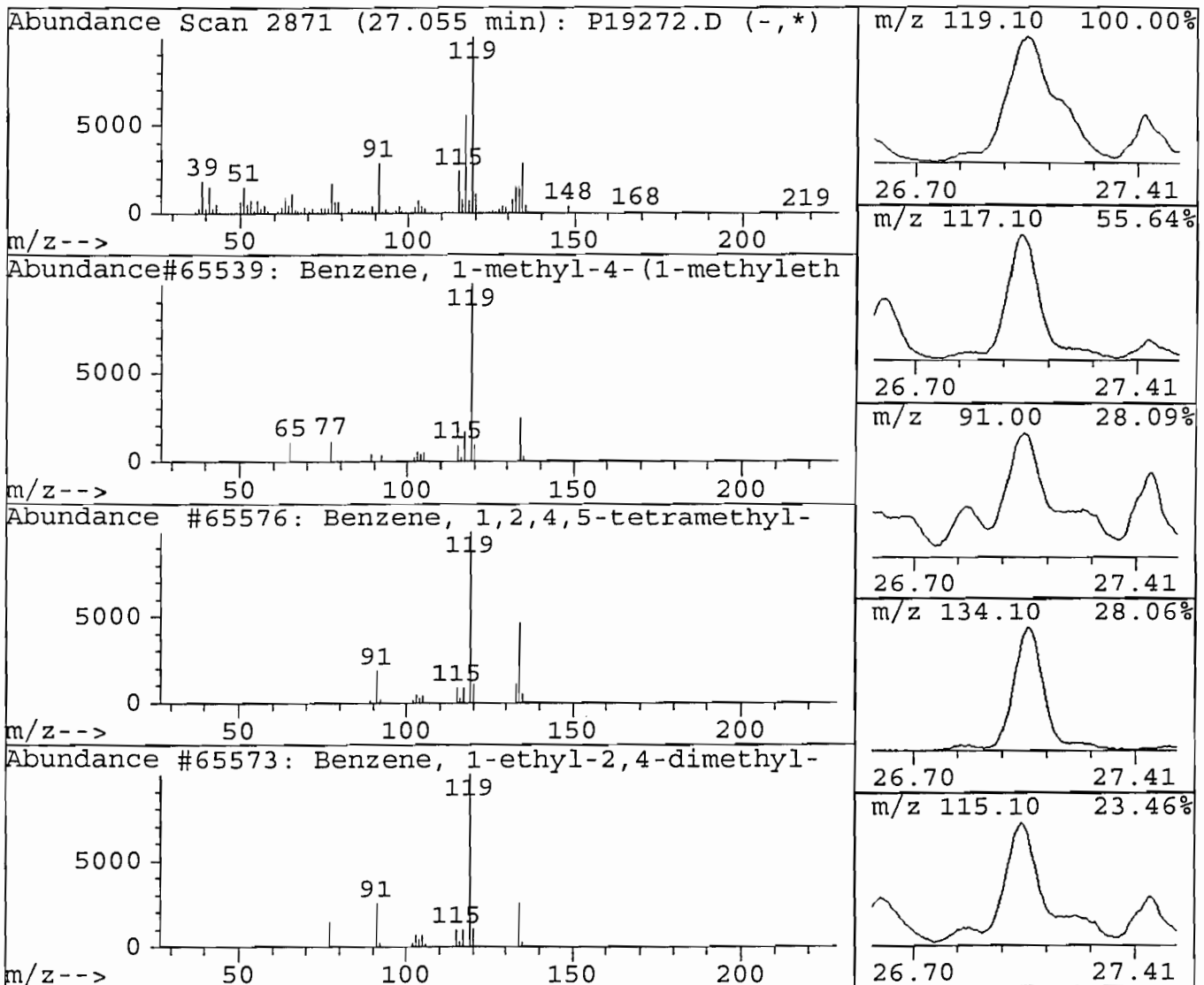
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.05	134.38 ug/L	18145870	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	65539	000099-87-6	60
2	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	58
3	Benzene, 1-ethyl-2,4-dimethyl-	65573	000874-41-9	58
4	Benzene, 4-ethyl-1,2-dimethyl-	65569	000934-80-5	53
5	Benzene, 1-ethyl-2,3-dimethyl-	65556	000933-98-2	53



000190

Library Search Compound Report

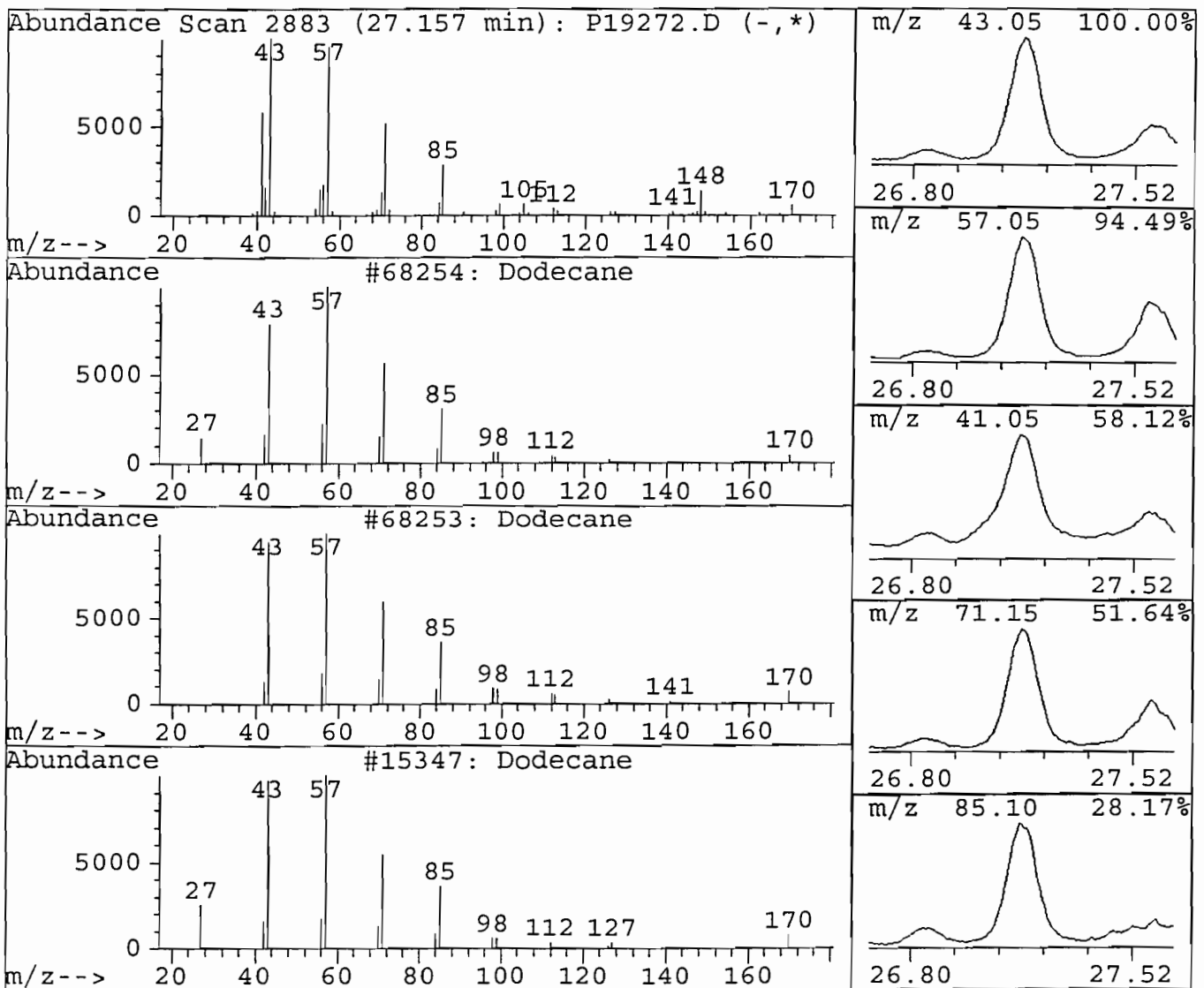
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.16	118.71 ug/L	16030445	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68254	000112-40-3	93
2	Dodecane	68253	000112-40-3	90
3	Dodecane	15347	000112-40-3	87
4	Dodecane	68252	000112-40-3	87
5	Dodecane	68251	000112-40-3	87



000191

Library Search Compound Report

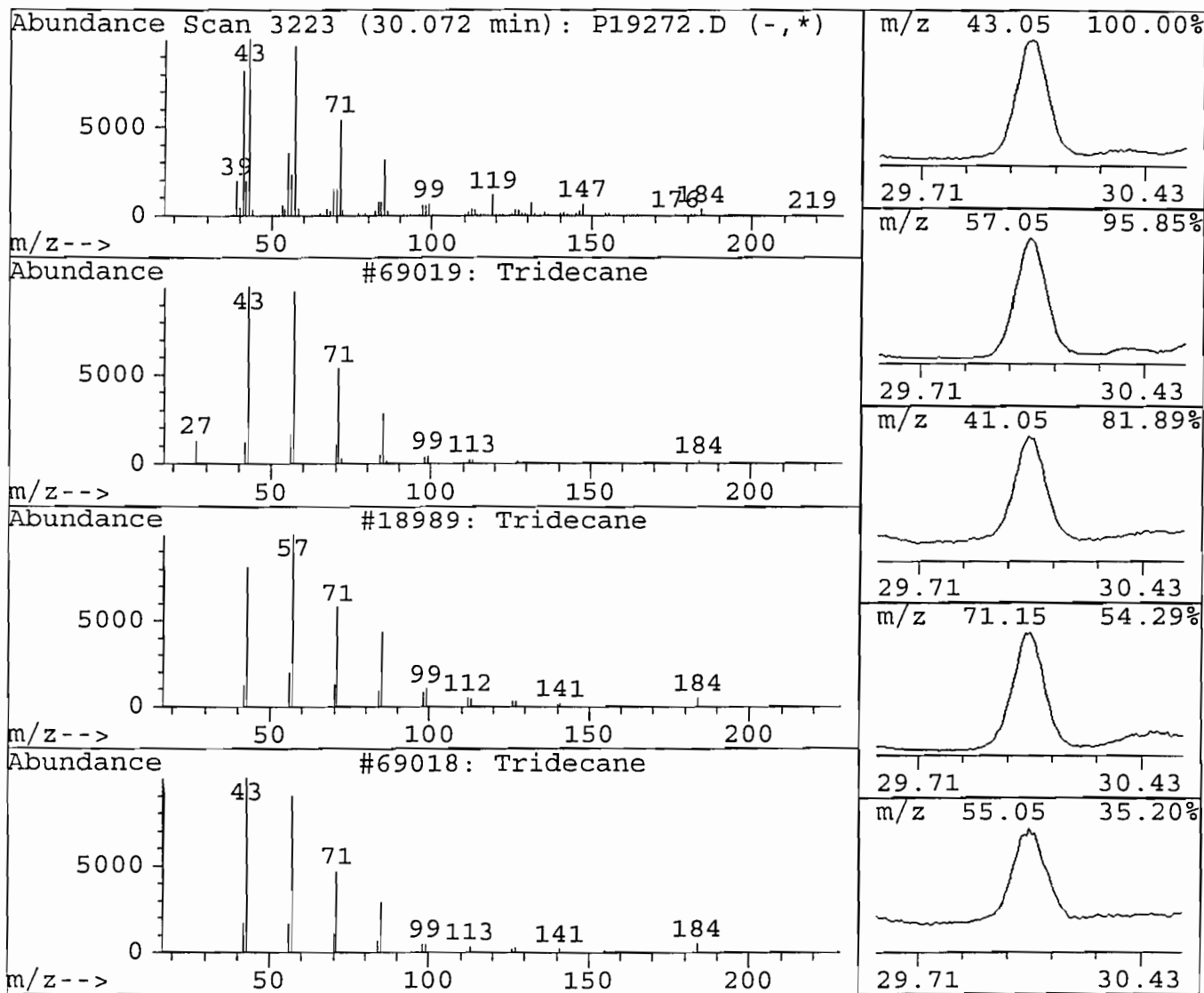
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Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.07	90.52 ug/L	12223652	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	69019	000629-50-5	95
2	Tridecane	18989	000629-50-5	90
3	Tridecane	69018	000629-50-5	89
4	Decane	66204	000124-18-5	74
5	Dodecane	68254	000112-40-3	72



Library Search Compound Report

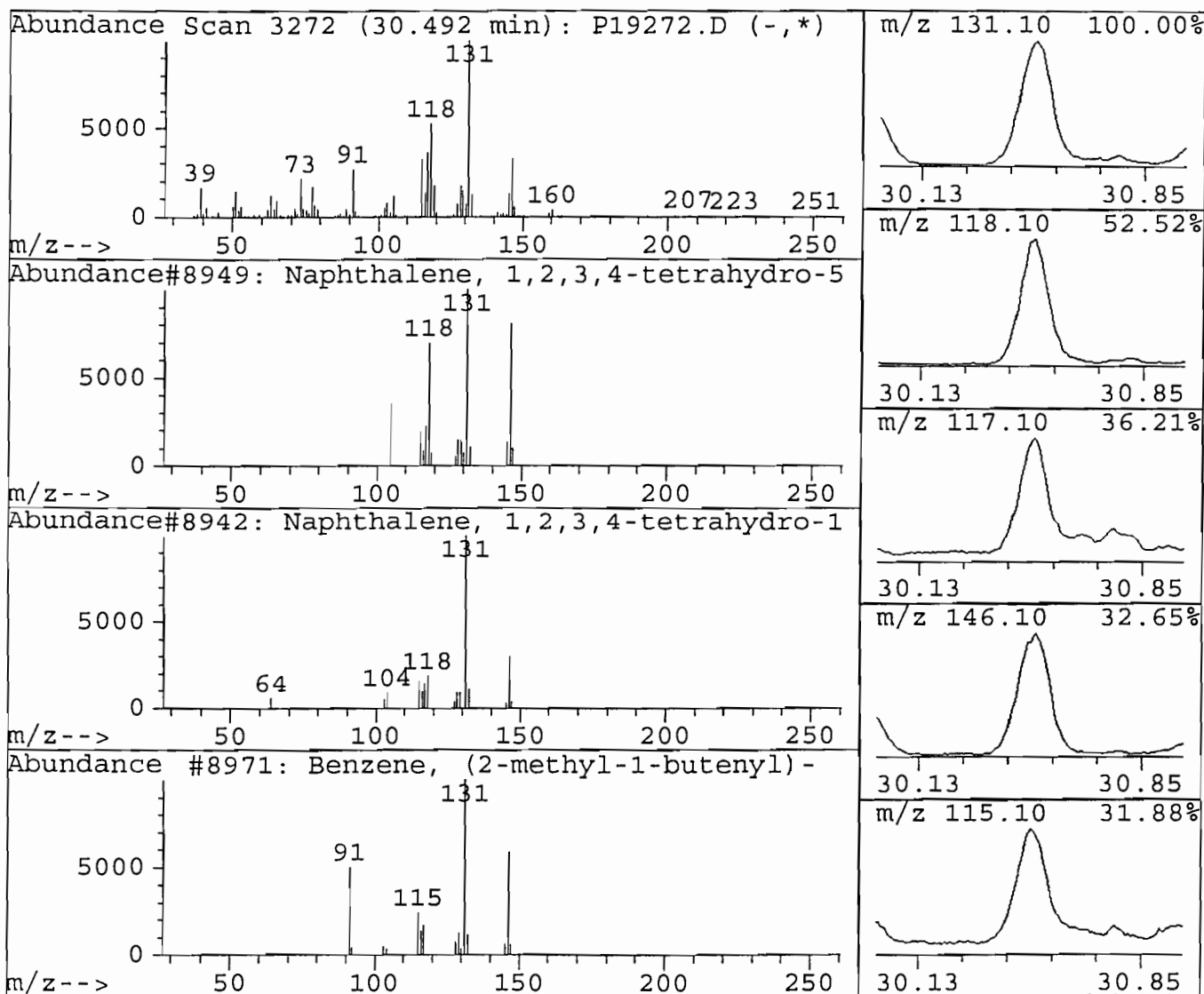
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.49	119.63 ug/L	16154320	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-5-m	8949	002809-64-5	81
2	Naphthalene, 1,2,3,4-tetrahydro-1-m	8942	001559-81-5	64
3	Benzene, (2-methyl-1-butenyl)-	8971	056253-64-6	64
4	1H-Indene, 2,3-dihydro-4,7-dimethyl	8955	006682-71-9	60
5	Naphthalene, 6-ethyl-1,2,3,4-tetra	12559	022531-20-0	60



000193

Library Search Compound Report

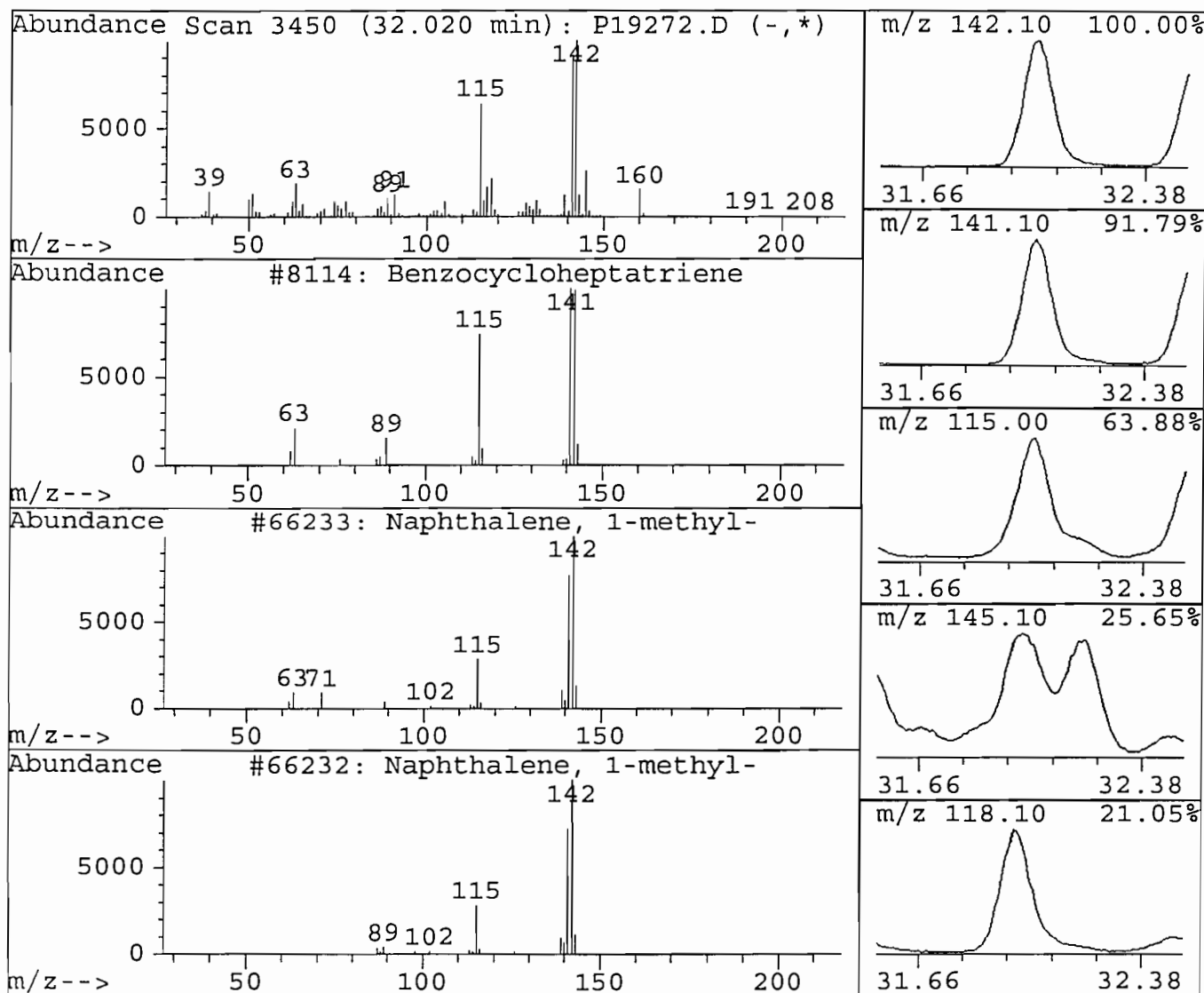
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Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.02	131.15 ug/L	17709096	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzocycloheptatriene	8114	000264-09-5	96
2	Naphthalene, 1-methyl-	66233	000090-12-0	89
3	Naphthalene, 1-methyl-	66232	000090-12-0	89
4	Naphthalene, 1-methyl-	66231	000090-12-0	89
5	Naphthalene, 2-methyl-	66237	000091-57-6	78



000194

Library Search Compound Report

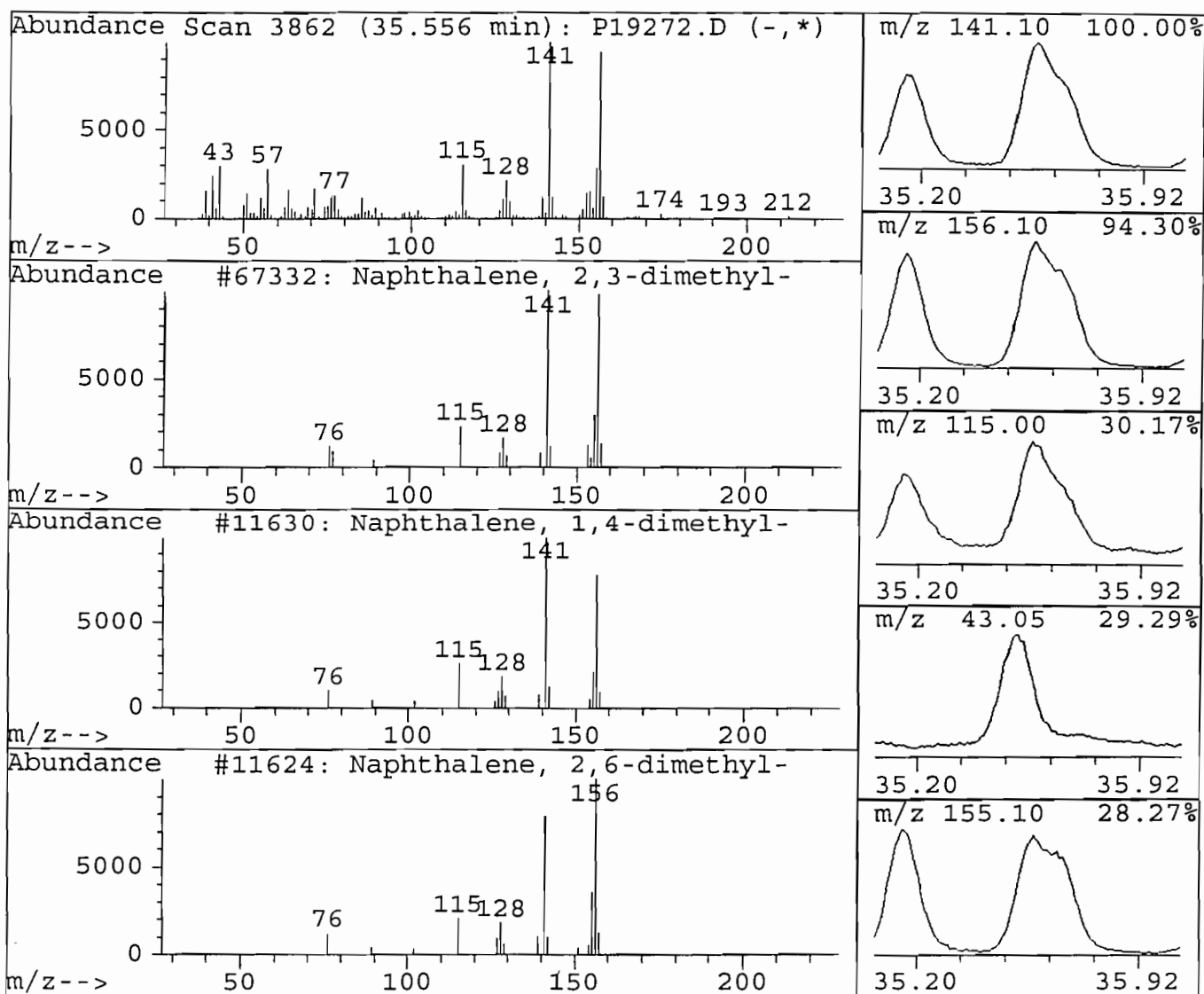
Data File : I:\HPCHEM\1\DATA\V2102199\P19272.D
Acq Time : 22 Oct 99 1:23 am
Sample : 13826ASP-87997 1:10 DIL
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.56	118.18 ug/L	15958295	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2,3-dimethyl-	67332	000581-40-8	98
2	Naphthalene, 1,4-dimethyl-	11630	000571-58-4	98
3	Naphthalene, 2,6-dimethyl-	11624	000581-42-0	97
4	Naphthalene, 1,3-dimethyl-	67344	000575-41-7	97
5	Naphthalene, 1,5-dimethyl-	11633	000571-61-9	97



000195

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87998

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19263.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 1

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.4		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.8		U
75-00-3	Chloroethane	5.1		U
107-02-8	Acrolein	5.1		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	1.9		U
67-64-1	Acetone	5.1		U
75-15-0	Carbon Disulfide	5.1		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.3		U
107-13-1	Acrylonitrile	5.1		U
75-34-3	1,1-Dichloroethane	1.3		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	3.8		
74-97-5	Bromochloromethane	1.7		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.1		U
78-93-3	2-Butanone	5.1		U
56-23-5	Carbon Tetrachloride	4		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.6		U
78-87-5	1,2-Dichloropropane	3.4		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.1		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	8.6		
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-009-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87998

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19263.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 1

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.1		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5.1		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	2		
136777-61-2	m&p-xylenes	8.3		
95-47-6	o-xylene	3.3		
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.3		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.5		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	2.6		
98-06-6	tert-Butylbenzene	1.2		U
95-63-6	1,2,4-Trimethylbenzene	7.5		
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.7		U
96-12-8	1,2-Dibromo-3-chloropropane	5.1		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

GP-009-SS45

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O87998

Lab File ID: P19263.D

Date Received: 10/18/99

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-009-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O87998
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19263.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 1 Date Analyzed: 10/21/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 112-40-3	Dodecane	27.19	13	J
2. 629-50-5	Tridecane	30.10	22	J
3.	Unknown	30.52	25	J
4. 264-09-5	Benzocycloheptatriene	32.05	38	J
5.	Unknown	32.23	13	J
6. 91-57-6	Naphthalene, 2-methyl-	32.56	22	J
7. 629-59-4	Tetradecane	32.82	22	J
8.	Unknown	34.17	12	J
9. 581-42-0	Naphthalene, 2,6-dimethyl-	35.18	24	J
10. 581-40-8	Naphthalene, 2,3-dimethyl-	35.59	57	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000199

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19263.D
 Acq Time : 21 Oct 99 12:49 am
 Sample : 13826ASP-87998
 Misc : 5G/5ML
 Quant Time: Oct 21 12:35 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.27	96	585195	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	676805	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	22.61	152	475053	50.00	ug/L	0.01
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	427543	43.85	ug/L	87.70%
30) 1,2-Dichlorethane-d4	8.67	65	333795	43.57	ug/L	87.14%
38) Toluene-d8	12.77	98	538069	47.14	ug/L	94.28%
42) 4-Bromofluorobenzene	19.49	95	582752	49.74	ug/L	99.47%
Target Compounds						Qvalue
20) cis-1,2-dichloroethene	6.99	61	27073	3.73	ug/L	97
39) toluene	12.93	91	98077	8.52	ug/L	99
53) ethylbenzene	16.69	91	37083	2.01	ug/L	96
54) m&p-xylenes	17.02	106	51890	8.20	ug/L	99
55) o-xylene	18.02	91	59632	3.26	ug/L	96
66) 1,3,5-trimethylbenzene	20.67	105	48833	2.60	ug/L	97
68) 1,2,4-trimethylbenzene	21.66	105	144867	7.41	ug/L	99

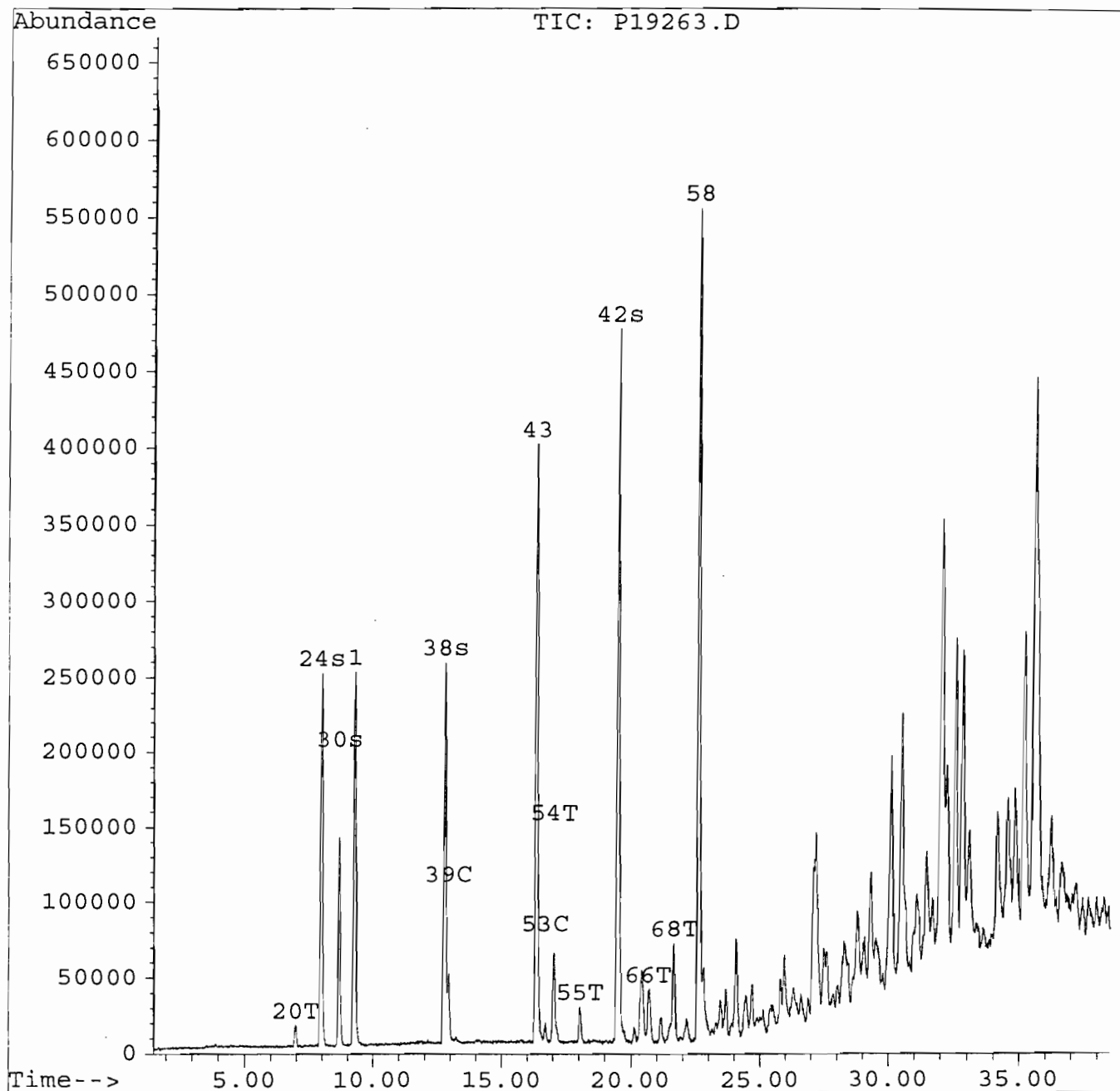
000200

Quantitation Report

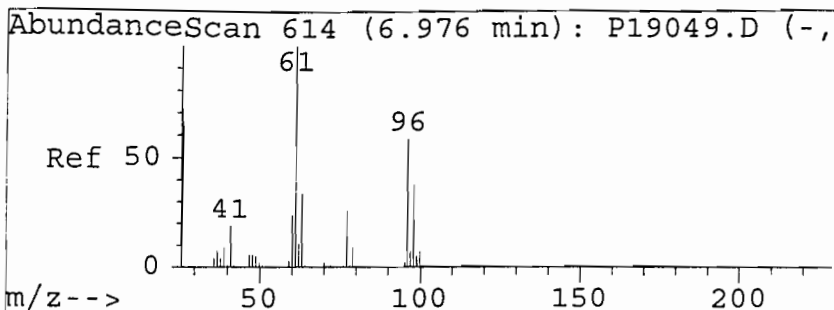
Data File : E:\HPCHEM\1\DATA\V2102099\P19263.D
Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML
Quant Time: Oct 21 12:35 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

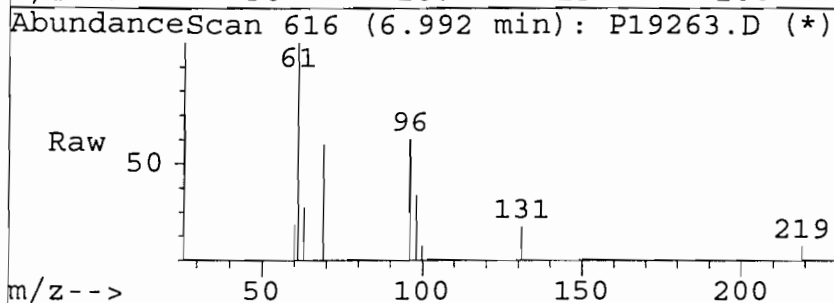


000201

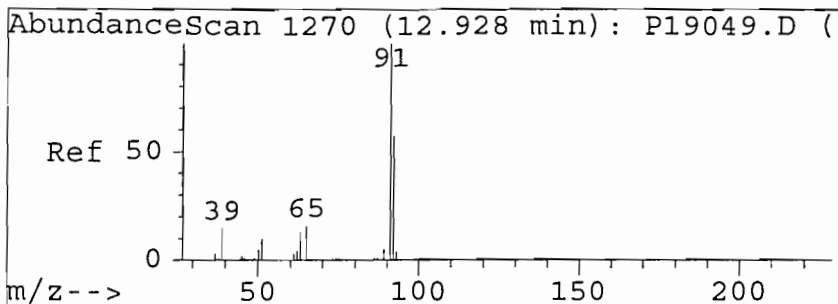
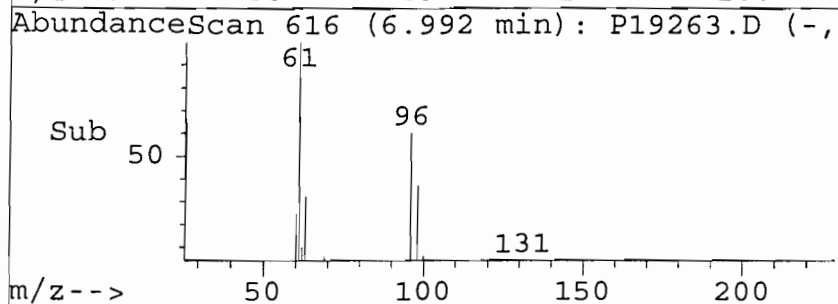
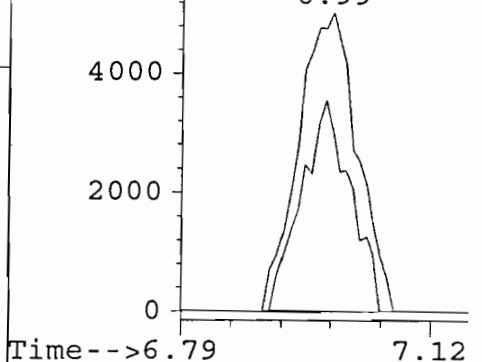


#20
cis-1,2-dichloroethene
Concen: 3.73 ug/L
RT: 6.99 min Scan# 616
Delta R.T. 0.02 min
Lab File: P19263.D
Acq: 21 Oct 99 12:49 am

Tgt	Ion:61	Resp:	27073
Ion	Ratio	Lower	Upper
61	100		
96	60.0	40.2	74.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

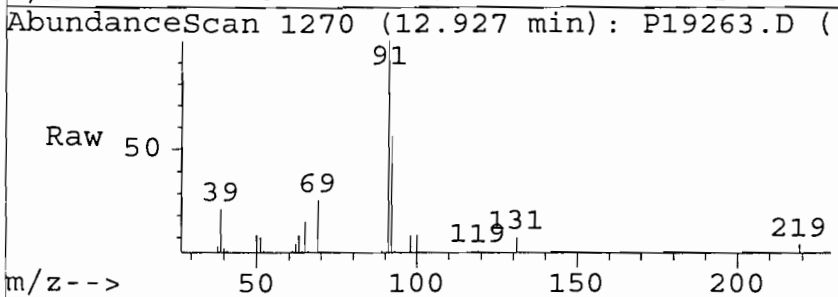


AbundanceIon 61.00 (60.
Ion 96.00 (95.
6.99

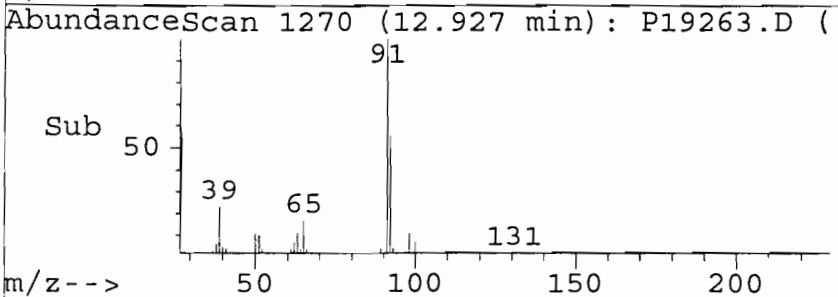
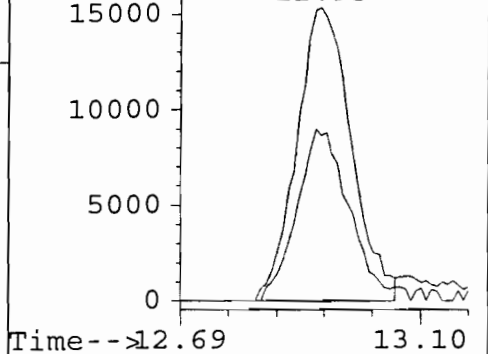


#39
toluene
Concen: 8.52 ug/L
RT: 12.93 min Scan# 1270
Delta R.T. -0.00 min
Lab File: P19263.D
Acq: 21 Oct 99 12:49 am

Tgt	Ion:91	Resp:	98077
Ion	Ratio	Lower	Upper
91	100		
92	56.3	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

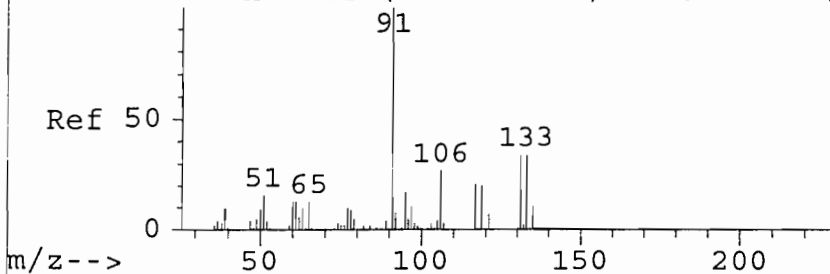


AbundanceIon 91.00 (90.
Ion 92.00 (91.
12.93



000202

AbundanceScan 1684 (16.672 min): P19049.D (



#53

ethylbenzene

Concen: 2.01 ug/L

RT: 16.69 min Scan# 1686

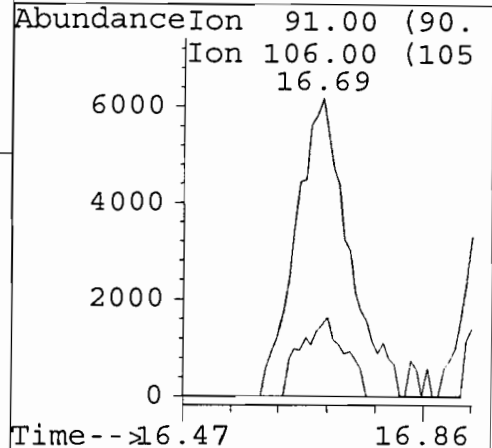
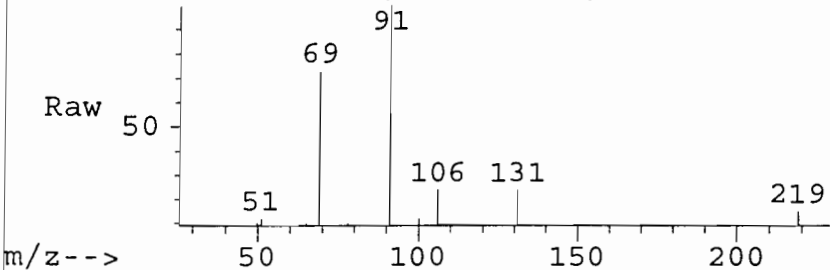
Delta R.T. 0.02 min

Lab File: P19263.D

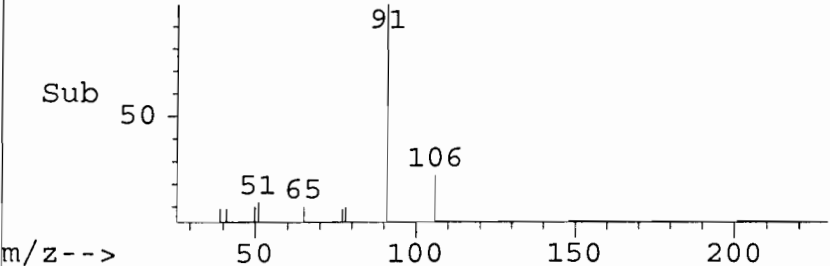
Acq: 21 Oct 99 12:49 am

Tgt Ion:	91	Resp:	37083
Ion	Ratio	Lower	Upper
91	100		
106	24.0	18.3	33.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

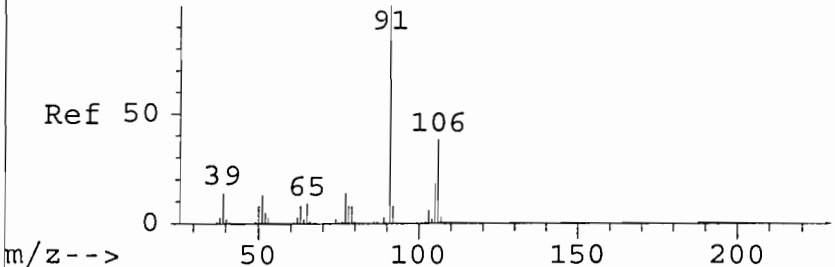
AbundanceScan 1686 (16.695 min): P19263.D (



AbundanceScan 1686 (16.695 min): P19263.D (



AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 8.20 ug/L

RT: 17.02 min Scan# 1722

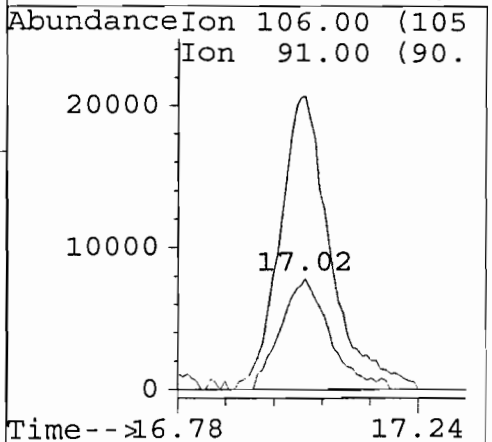
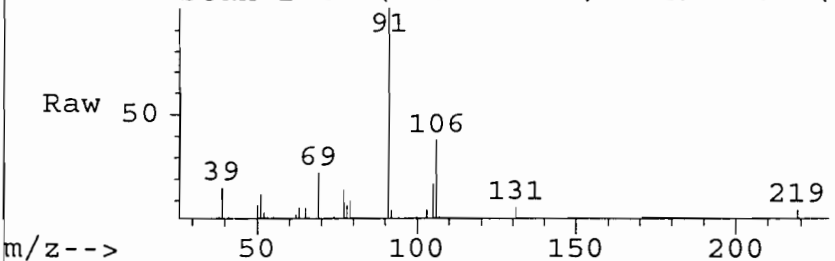
Delta R.T. 0.01 min

Lab File: P19263.D

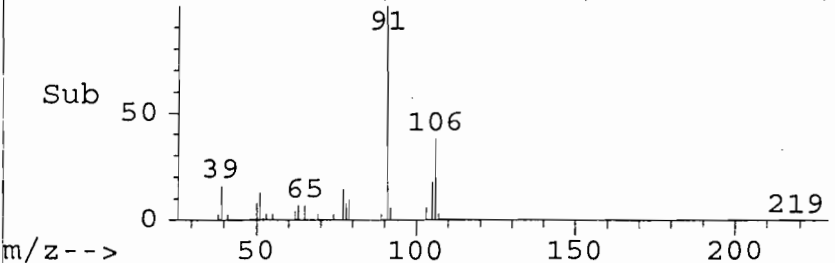
Acq: 21 Oct 99 12:49 am

Tgt Ion:	106	Resp:	51890
Ion	Ratio	Lower	Upper
106	100		
91	264.6	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 1722 (17.022 min): P19263.D (

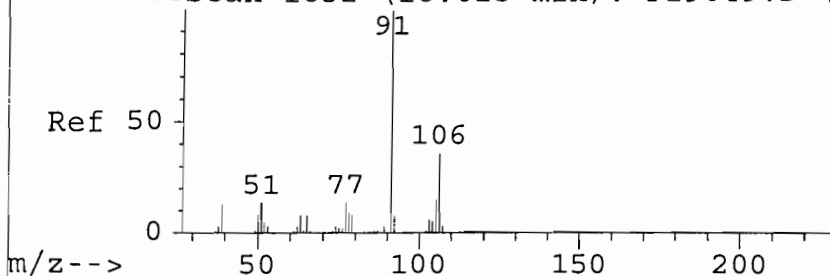


AbundanceScan 1722 (17.022 min): P19263.D (



000203

AbundanceScan 1832 (18.015 min): P19049.D (



#55

o-xylene

Concen: 3.26 ug/L

RT: 18.02 min Scan# 1832

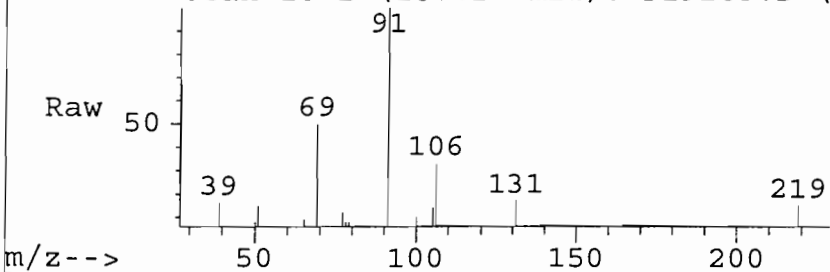
Delta R.T. 0.01 min

Lab File: P19263.D

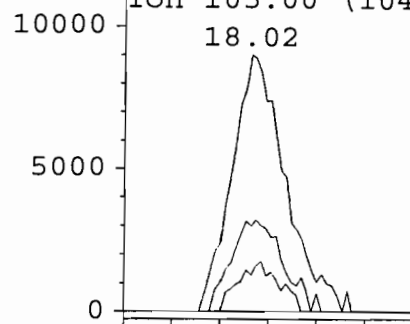
Acq: 21 Oct 99 12:49 am

Tgt Ion:91	Resp:	59632
Ion Ratio	Lower	Upper
91 100		
106 33.0	25.4	47.2
105 14.3	10.1	18.8
0 0.0	0.0	0.0

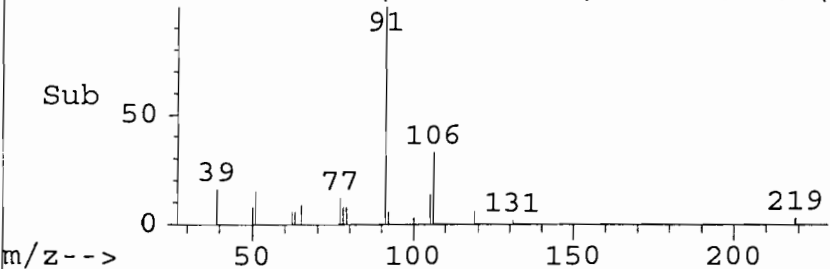
AbundanceScan 1832 (18.022 min): P19263.D (



AbundanceIon 91.00 (90.
Ion 106.00 (105
Ion 105.00 (104

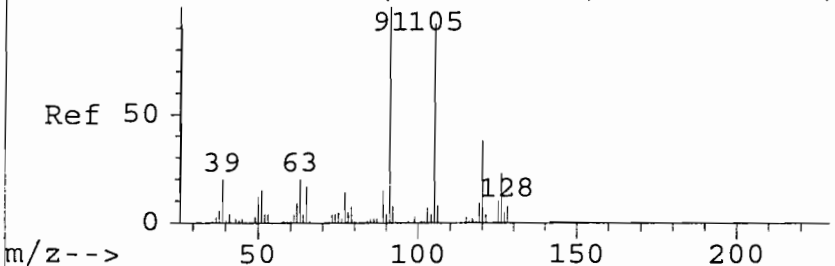


AbundanceScan 1832 (18.022 min): P19263.D (



Time-->17.79 18.23

AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 2.60 ug/L

RT: 20.67 min Scan# 2123

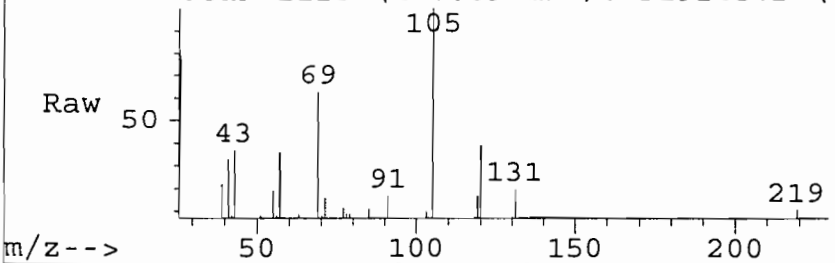
Delta R.T. 0.01 min

Lab File: P19263.D

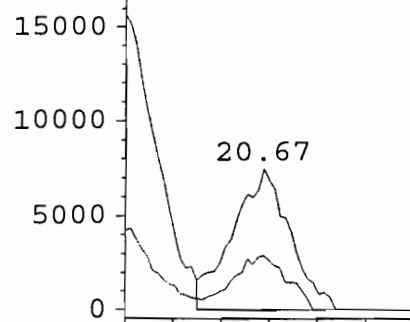
Acq: 21 Oct 99 12:49 am

Tgt Ion:105	Resp:	48833
Ion Ratio	Lower	Upper
105 100		
120 38.9	28.6	53.0
0 0.0	0.0	0.0
0 0.0	0.0	0.0

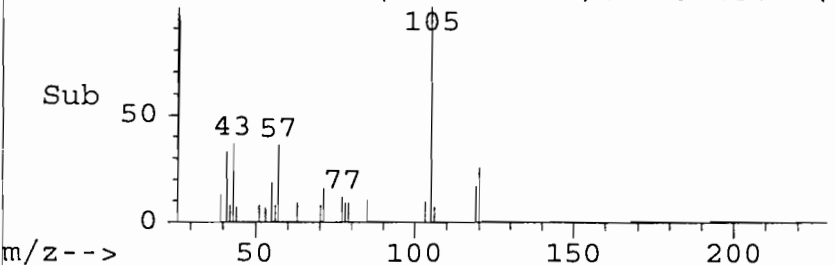
AbundanceScan 2123 (20.669 min): P19263.D (



AbundanceIon 105.00 (104
Ion 120.00 (119



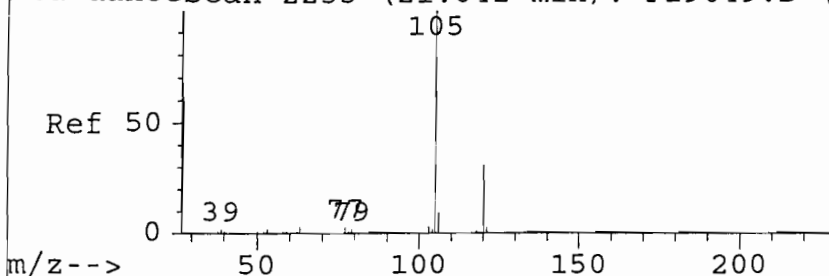
AbundanceScan 2123 (20.669 min): P19263.D (



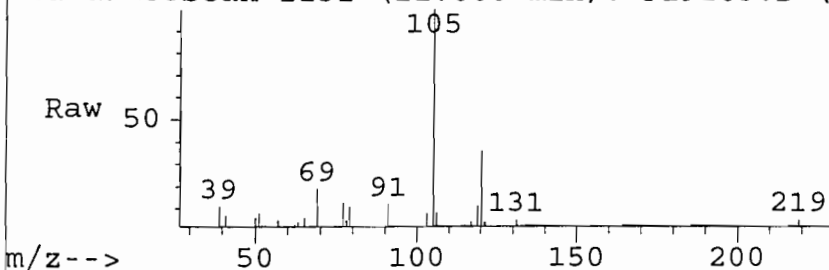
Time-->20.44 20.84

000204

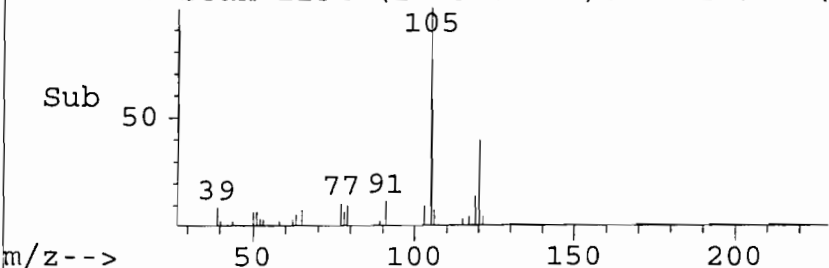
AbundanceScan 2233 (21.642 min): P19049.D (



AbundanceScan 2232 (21.660 min): P19263.D (



AbundanceScan 2232 (21.660 min): P19263.D (



#68

1,2,4-trimethylbenzene

Concen: 7.41 ug/L

RT: 21.66 min Scan# 2232

Delta R.T. 0.02 min

Lab File: P19263.D

Acq: 21 Oct 99 12:49 am

Tgt Ion:105 Resp: 144867

Ion Ratio Lower Upper

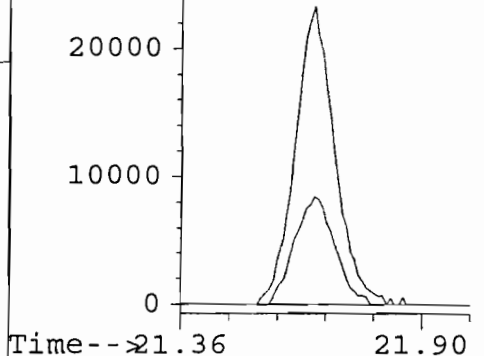
105 100

120 36.2 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 105.00 (104
Ion 120.00 (119
21.66



000205

Library Search Compound Report

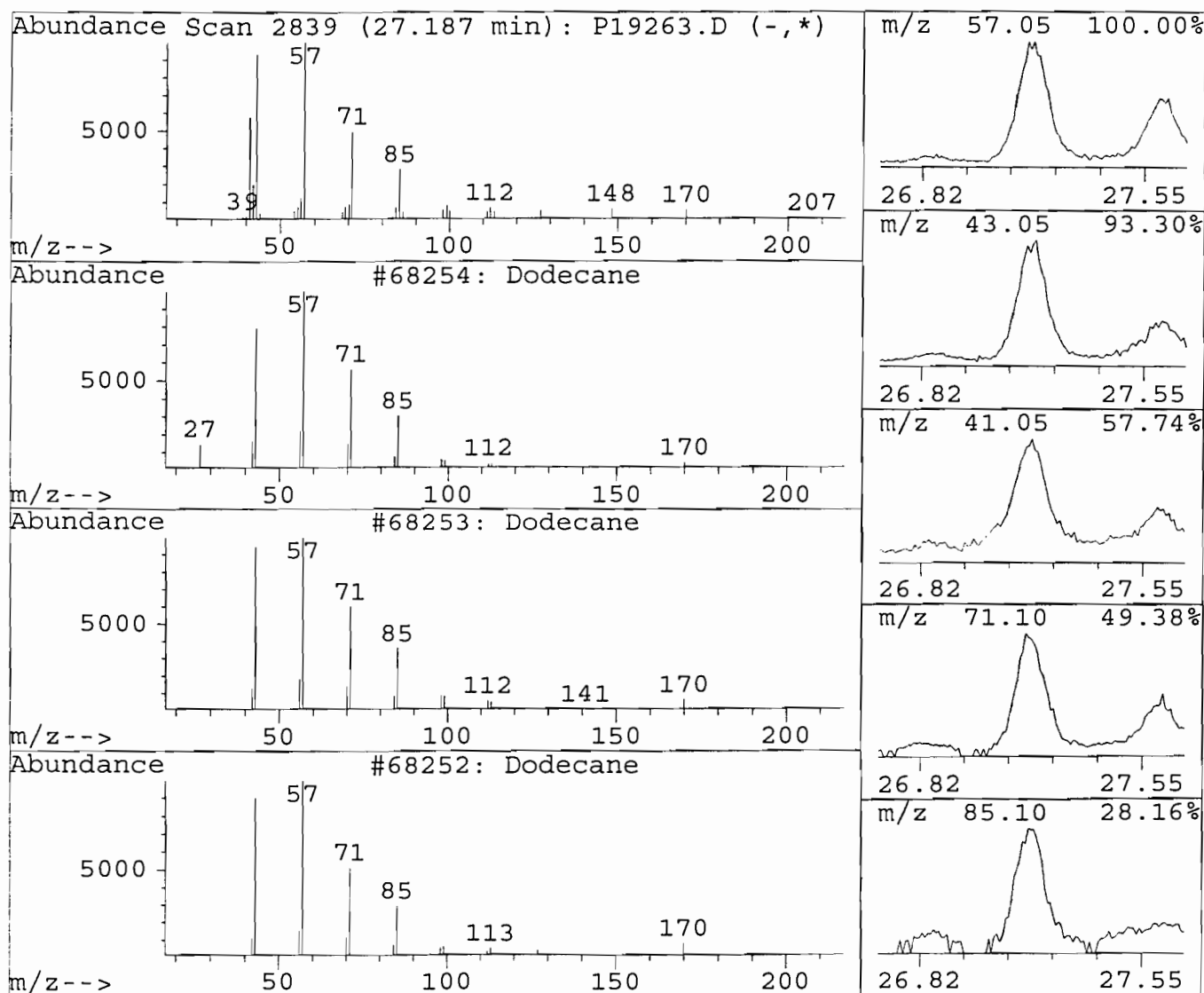
Data File : E:\HPCHEM\1\DATA\V2102099\P19263.D
Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.19	13.08 ug/L	917527	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Dodecane	68254	000112-40-3	87
2	Dodecane	68253	000112-40-3	81
3	Dodecane	68252	000112-40-3	81
4	Dodecane	68250	000112-40-3	76
5	Dodecane	68251	000112-40-3	76



000206

Library Search Compound Report

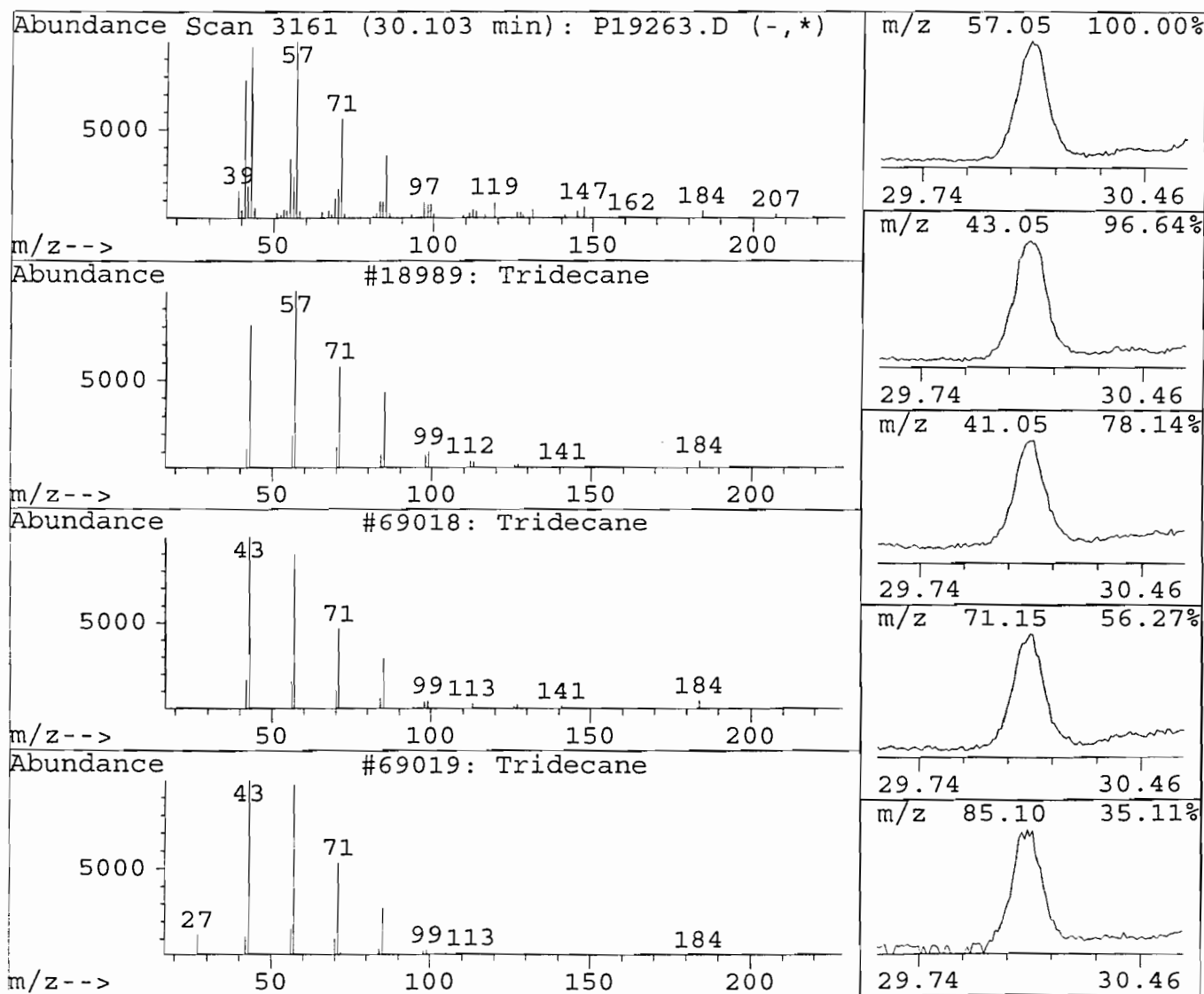
Data File : E:\HPCHEM\1\DATA\V2102099\P19263.D
Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.10	21.35 ug/L	1497844	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	18989	000629-50-5	95
2	Tridecane	69018	000629-50-5	89
3	Tridecane	69019	000629-50-5	76
4	Tridecane	69016	000629-50-5	64
5	Dodecane	68254	000112-40-3	64



000207

Library Search Compound Report

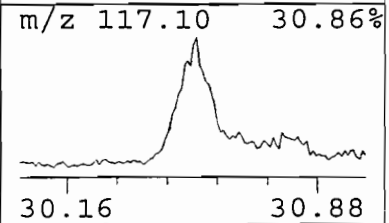
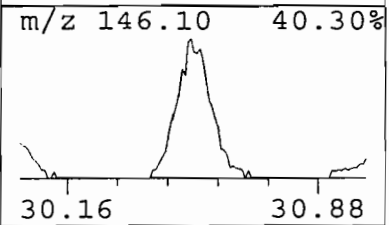
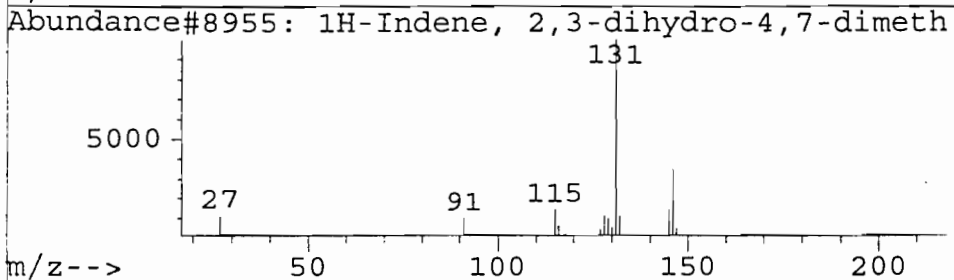
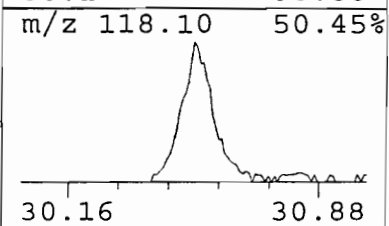
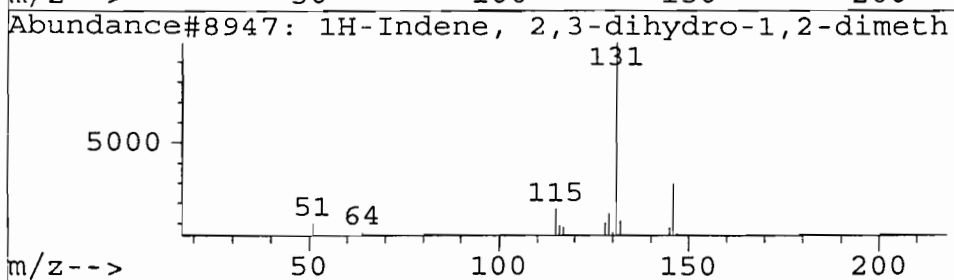
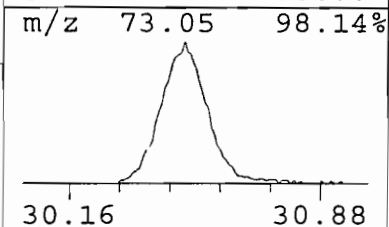
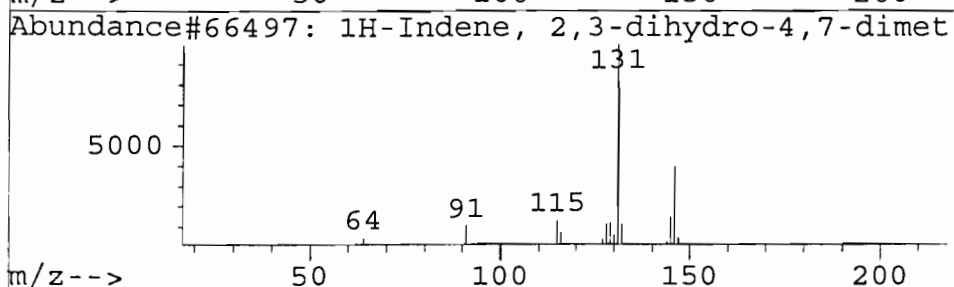
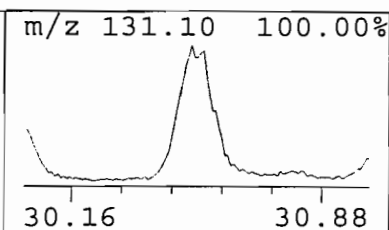
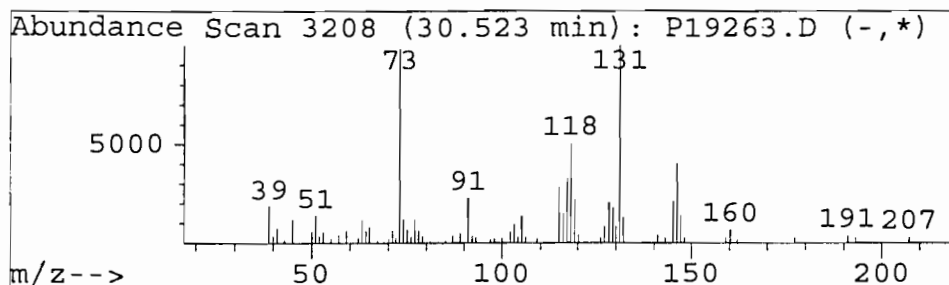
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Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.52	24.87 ug/L	1744973	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4,7-dimethyl	66497	006682-71-9	55
2	1H-Indene, 2,3-dihydro-1,2-dimethyl	8947	017057-82-8	49
3	1H-Indene, 2,3-dihydro-4,7-dimethyl	8955	006682-71-9	49
4	Benzene, (2-methyl-1-butenyl)-	8971	056253-64-6	49
5	Benzene, (1,1-dimethyl-2-propenyl)-	8972	018321-36-3	49



000208

Library Search Compound Report

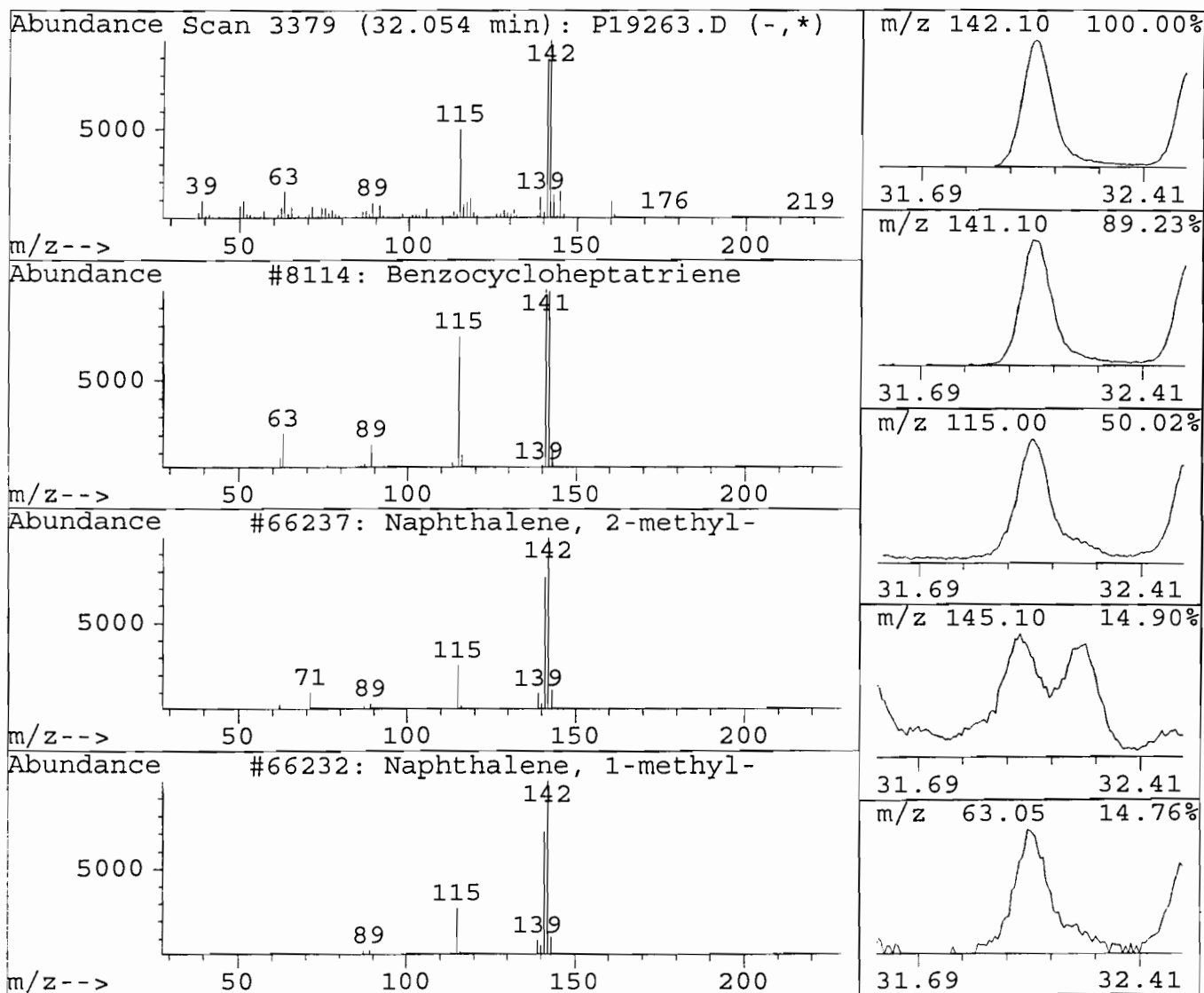
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Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.05	37.62 ug/L	2639416	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzocycloheptatriene	8114	000264-09-5	93
2	Naphthalene, 2-methyl-	66237	000091-57-6	92
3	Naphthalene, 1-methyl-	66232	000090-12-0	91
4	Naphthalene, 1-methyl-	66231	000090-12-0	89
5	Naphthalene, 2-methyl-	66236	000091-57-6	87



000209

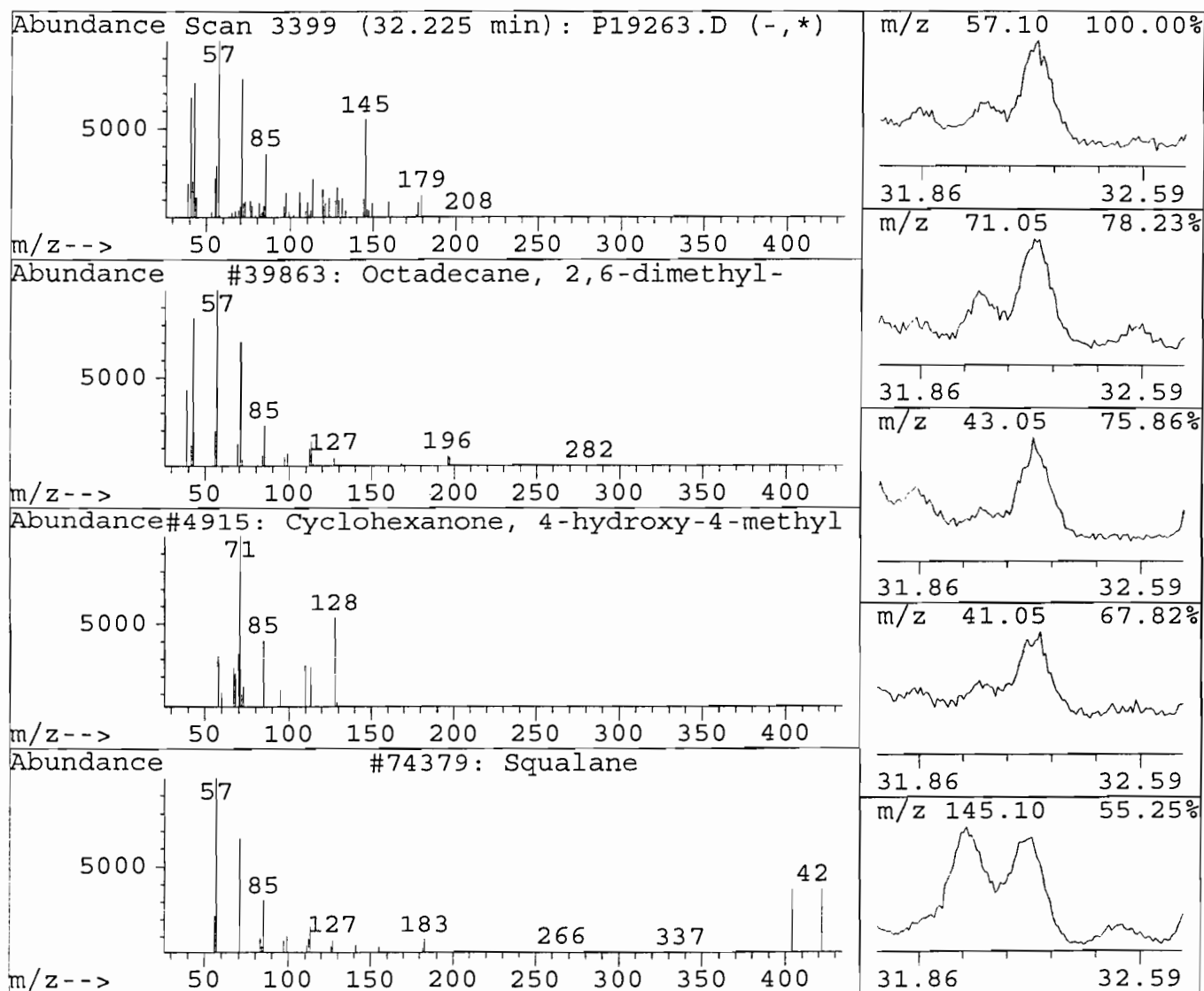
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19263.D
Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
32.23	12.39 ug/L	869329	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octadecane, 2,6-dimethyl-		39863	075163-97-2	47
2	Cyclohexanone, 4-hydroxy-4-methyl-		4915	017429-02-6	47
3	Squalane		74379	000111-01-3	47
4	Nonane, 3,7-dimethyl-		11601	017302-32-8	38
5	Tetratetracontane		61068	007098-22-8	38



Library Search Compound Report

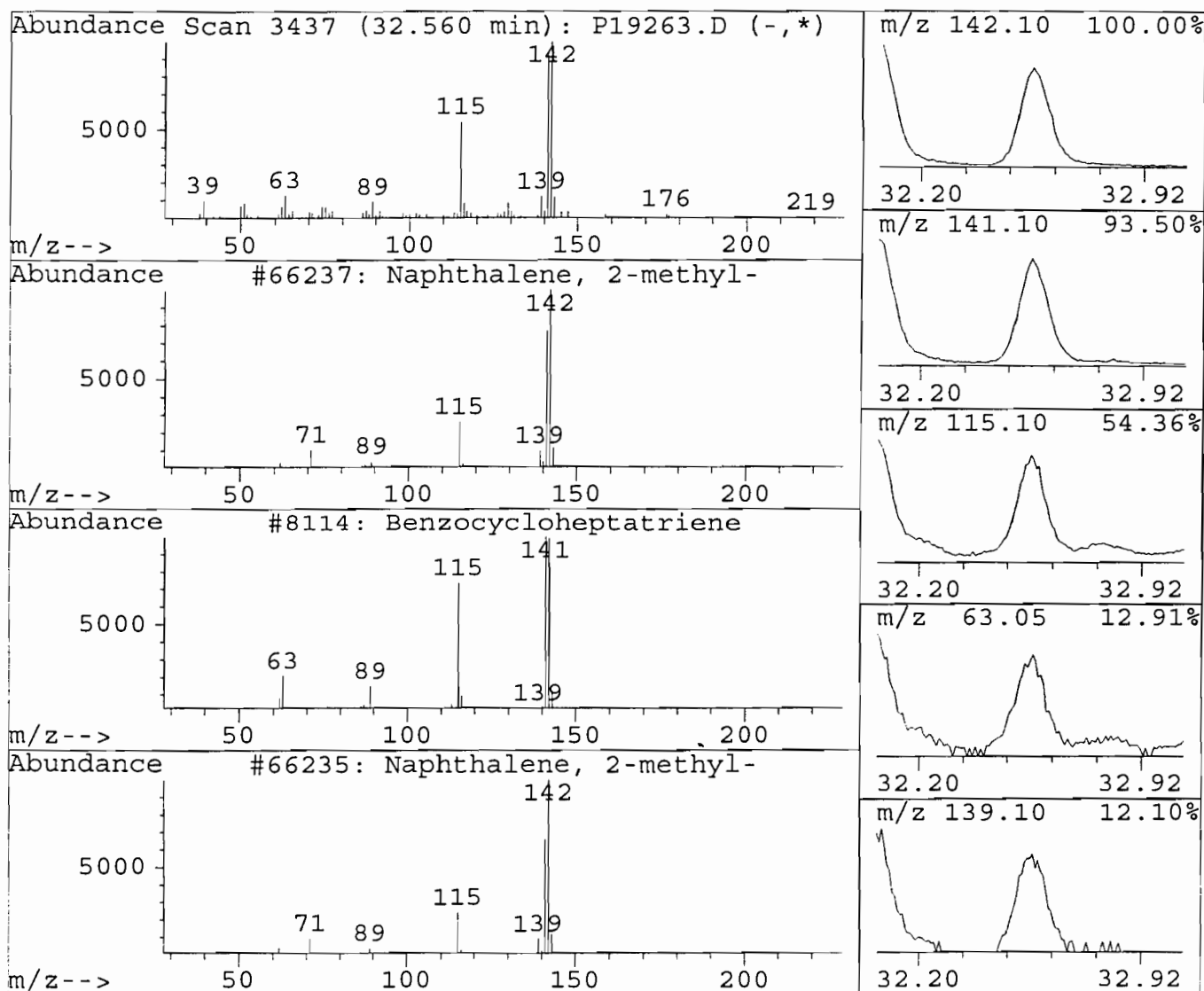
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Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.56	22.12 ug/L	1551585	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2-methyl-	66237	000091-57-6	95
2	Benzocycloheptatriene	8114	000264-09-5	93
3	Naphthalene, 2-methyl-	66235	000091-57-6	93
4	Naphthalene, 1-methyl-	66233	000090-12-0	93
5	Naphthalene, 1-methyl-	66232	000090-12-0	93



000211

Library Search Compound Report

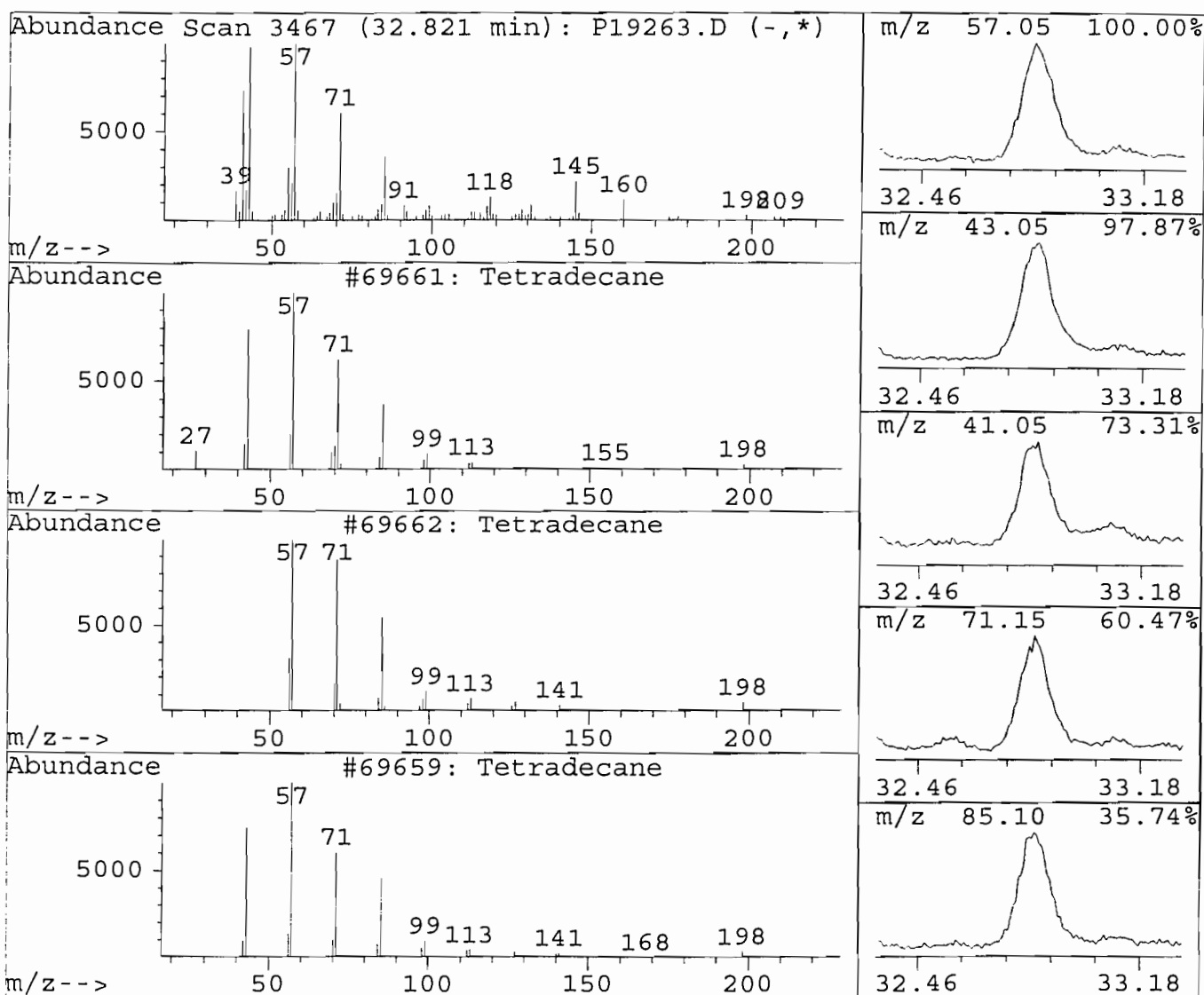
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Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.82	22.20 ug/L	1557543	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tetradecane	69661	000629-59-4	96
2	Tetradecane	69662	000629-59-4	91
3	Tetradecane	69659	000629-59-4	90
4	Tetradecane	22534	000629-59-4	83
5	Tetradecane	69658	000629-59-4	83



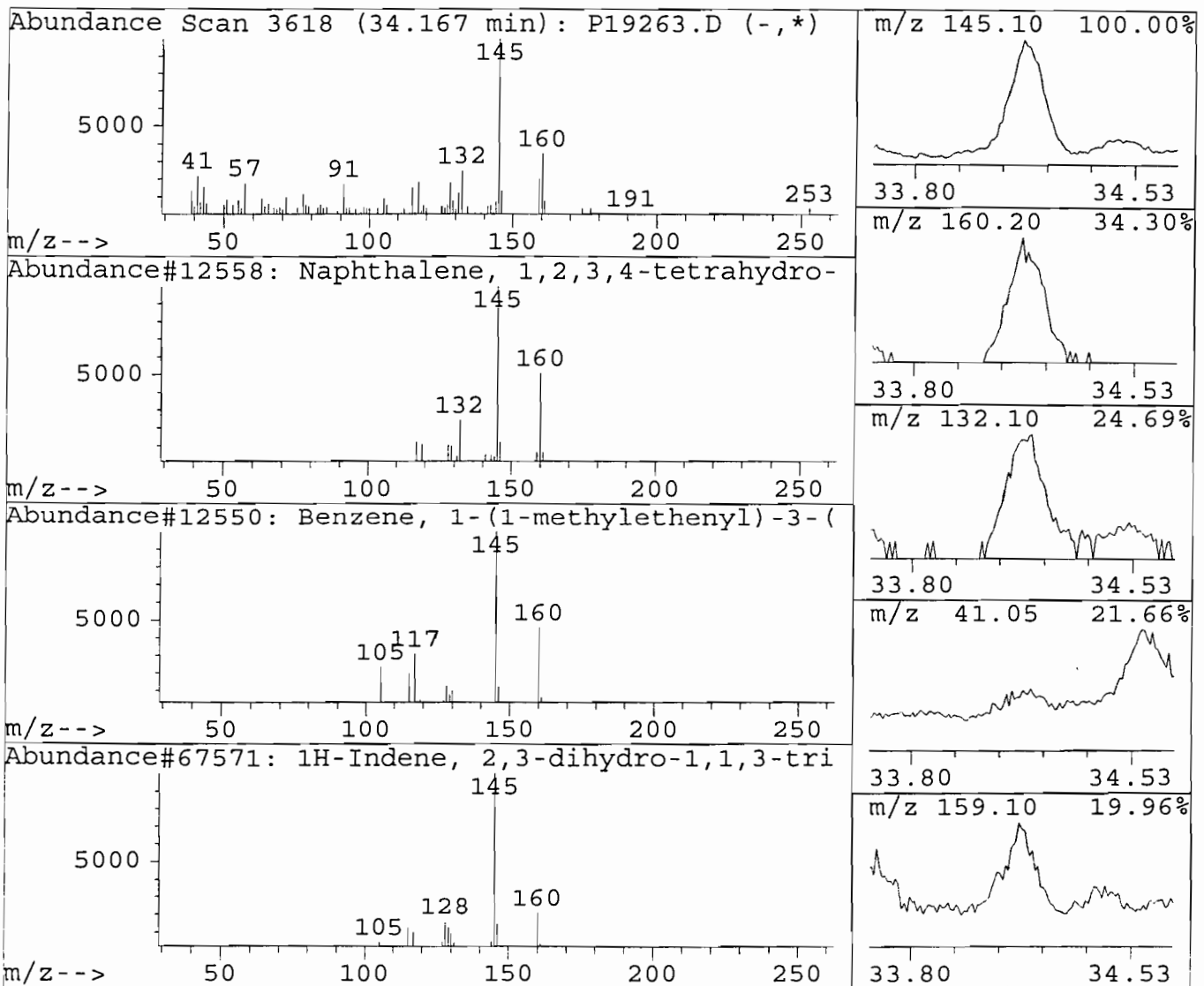
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19263.D
Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
34.17	11.64 ug/L	816595	1,4-dichlorobenzene-d4	22.61	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-5,6		12558	020027-77-4	64
2	Benzene, 1-(1-methylethenyl)-3-(1-m		12550	001129-29-9	62
3	1H-Indene, 2,3-dihydro-1,1,3-trimet		67571	002613-76-5	62
4	Benzene, 1-(1-methylethenyl)-2-(1-m		12568	005557-93-7	58
5	Benzene, (2,2-dimethyl-1-methylenep		12535	005676-29-9	58



000213

Library Search Compound Report

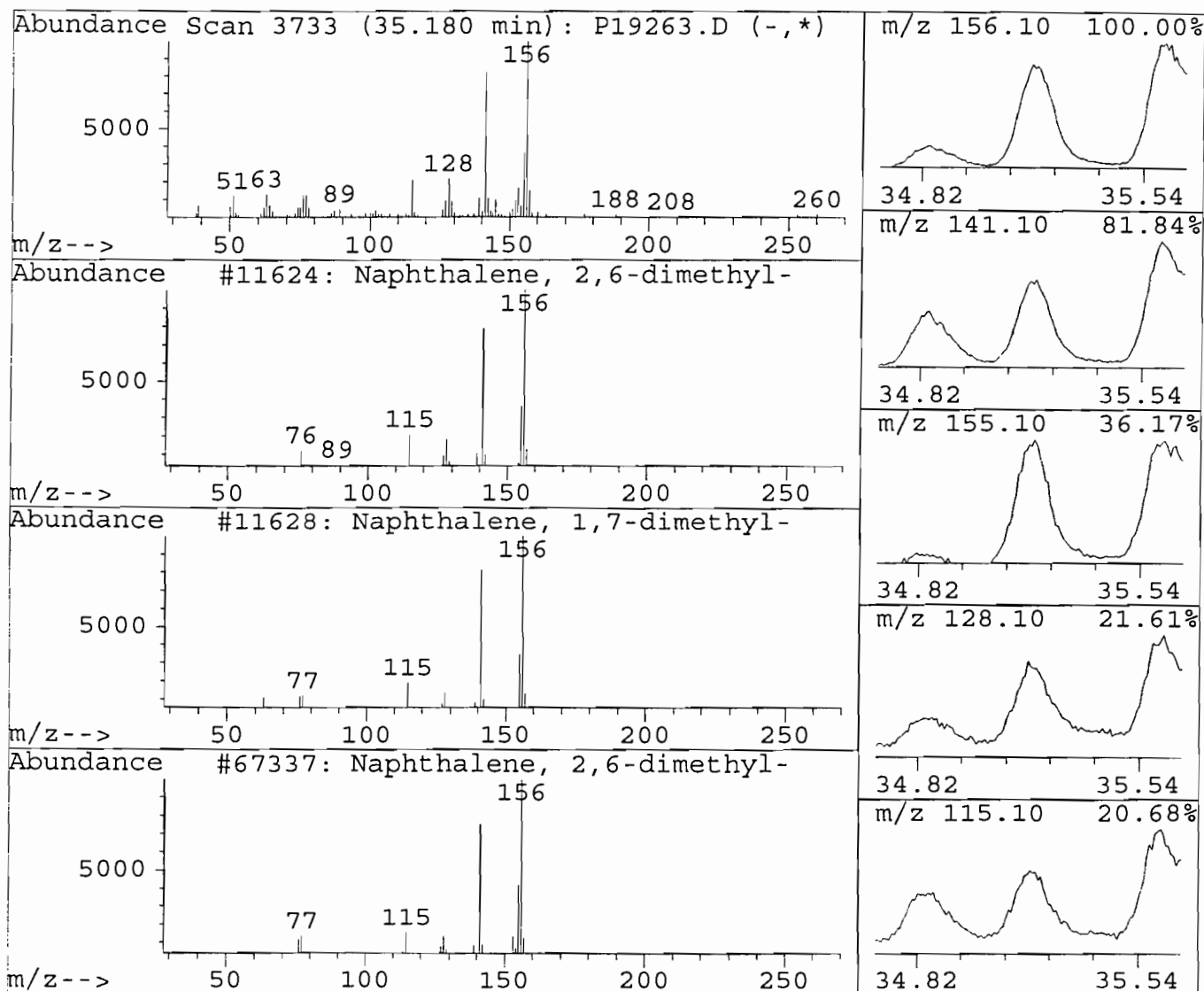
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Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.18	23.56 ug/L	1652729	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2,6-dimethyl-	11624	000581-42-0	98
2	Naphthalene, 1,7-dimethyl-	11628	000575-37-1	97
3	Naphthalene, 2,6-dimethyl-	67337	000581-42-0	96
4	Naphthalene, 1,6-dimethyl-	67351	000575-43-9	96
5	Naphthalene, 1,7-dimethyl-	67343	000575-37-1	96



000214

Library Search Compound Report

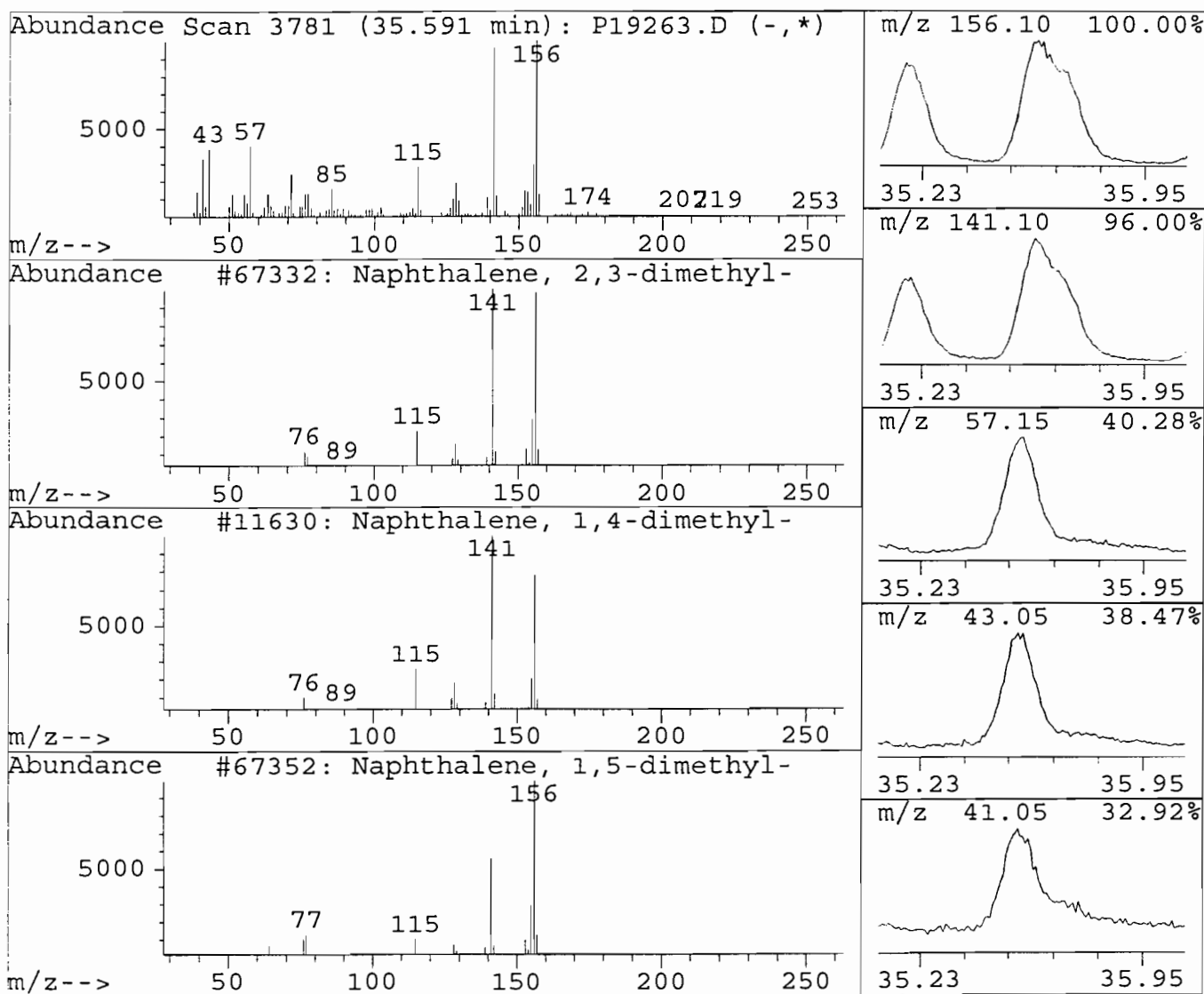
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Acq Time : 21 Oct 99 12:49 am
Sample : 13826ASP-87998
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.59	56.17 ug/L	3940593	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2,3-dimethyl-	67332	000581-40-8	98
2	Naphthalene, 1,4-dimethyl-	11630	000571-58-4	98
3	Naphthalene, 1,5-dimethyl-	67352	000571-61-9	97
4	Naphthalene, 2,3-dimethyl-	11622	000581-40-8	97
5	Naphthalene, 1,3-dimethyl-	67344	000575-41-7	97



000215

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-010-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87999

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19264.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/21/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.5		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	5.2		U
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.4		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.2		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.7		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	3.4		
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-010-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O87999

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19264.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.3		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.7		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.3		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	3.7		
95-47-6	o-xylene	1.3		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.4		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.7		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.4		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.7		U
98-06-6	tert-Butylbenzene	1.3		U
95-63-6	1,2,4-Trimethylbenzene	2.5		
135-98-8	sec-Butylbenzene	1.3		U
541-73-1	1,3-Dichlorobenzene	1.3		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.3		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.3		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

GP-010-SS30

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O87999

Lab File ID: P19264.D

Date Received: 10/18/99

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

Page 3 of 3

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-010-SS30

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: O87999
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19264.D
Level: (low/med) LOW Date Received: 10/18/99
% Moisture: not dec. 4 Date Analyzed: 10/21/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown\	23.57	28	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19264.D
 Acq Time : 21 Oct 99 1:34 am
 Sample : 13826ASP-87999
 Misc : 5G/5ML
 Quant Time: Oct 21 12:36 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.27	96	1154368	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	1257828	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.61	152	865727	50.00	ug/L	0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	804610	41.83	ug/L	83.67%
30) 1,2-Dichlorethane-d4	8.67	65	614132	40.64	ug/L	81.27%
38) Toluene-d8	12.77	98	1030032	45.75	ug/L	91.50%
42) 4-Bromofluorobenzene	19.49	95	1079161	46.69	ug/L	93.38%
Target Compounds						Qvalue
39) toluene	12.93	91	74439	3.28	ug/L	98
54) m&p-xylenes	17.03	106	41588	3.53	ug/L	85
68) 1,2,4-trimethylbenzene	21.67	105	84446	2.37	ug/L	97

000220

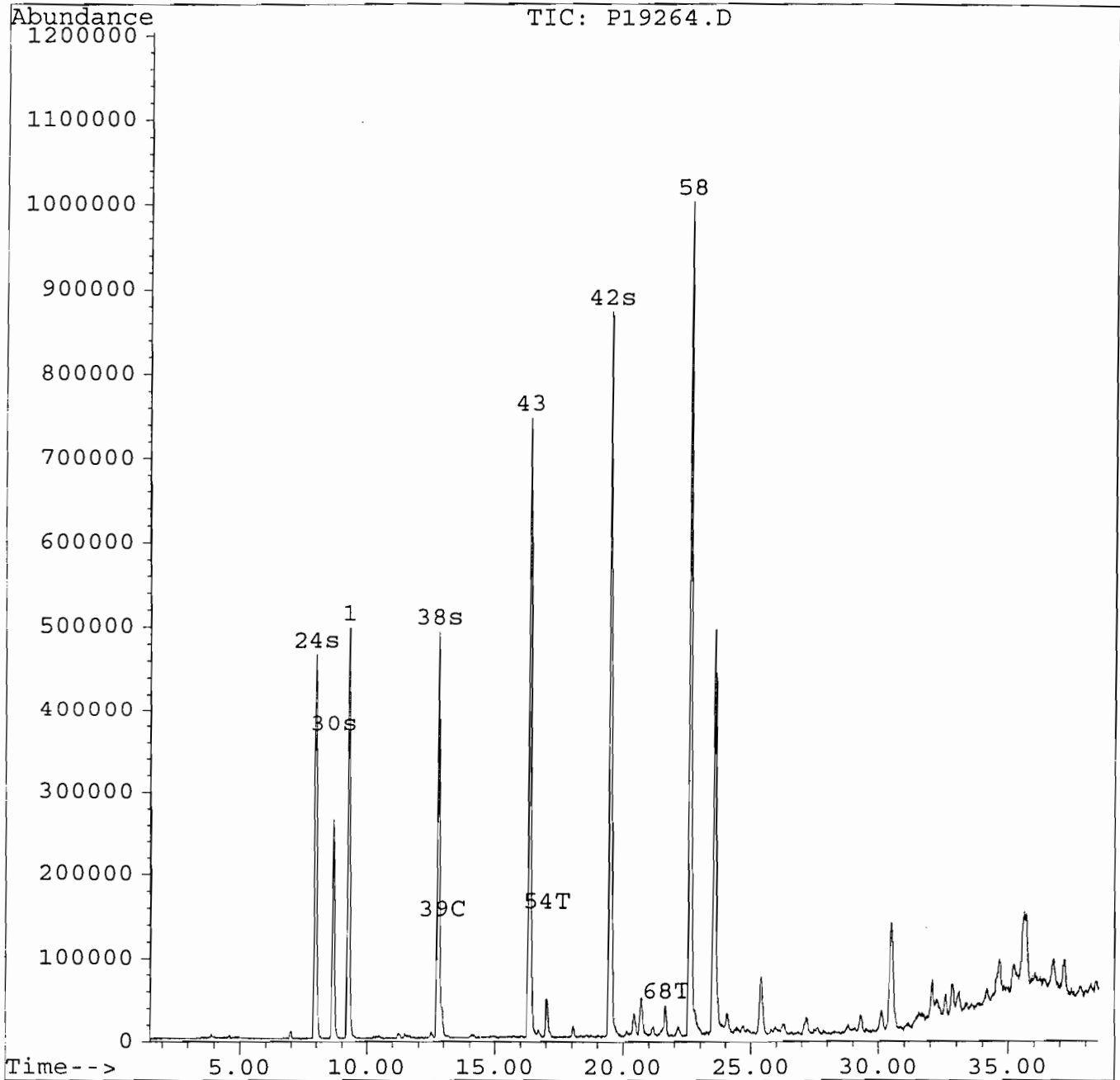
(#) = qualifier out of range (m) = manual integration

Quantitation Report

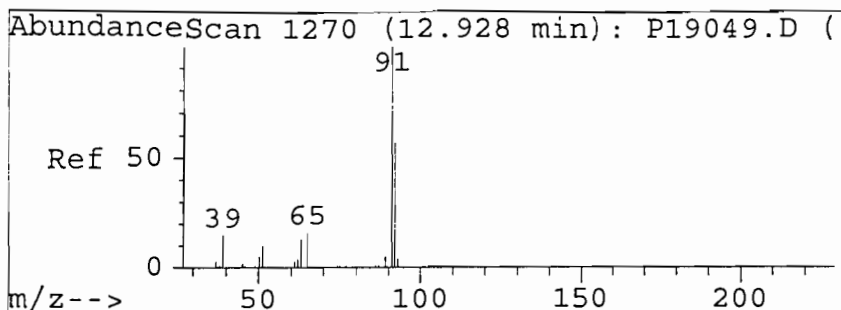
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Acq Time : 21 Oct 99 1:34 am
Sample : 13826ASP-87999
Misc : 5G/5ML
Quant Time: Oct 21 12:36 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

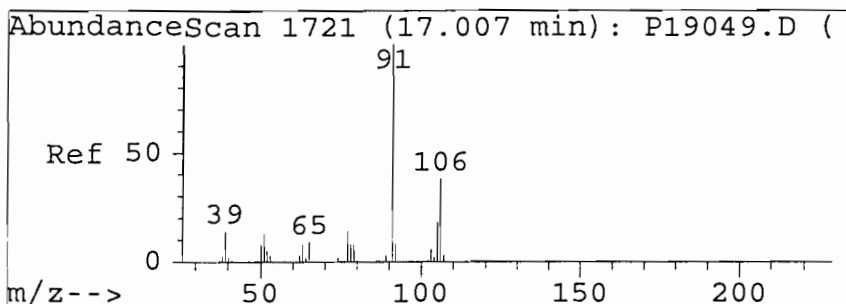
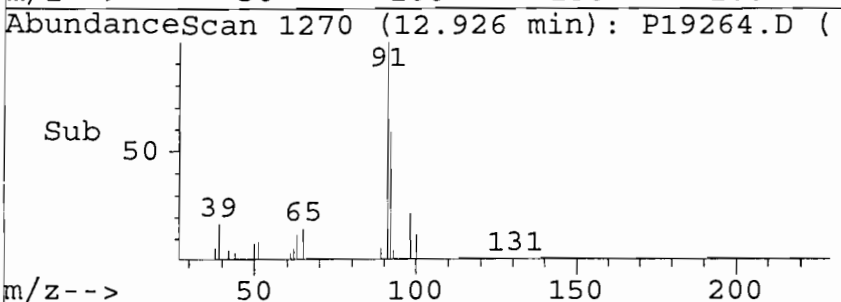
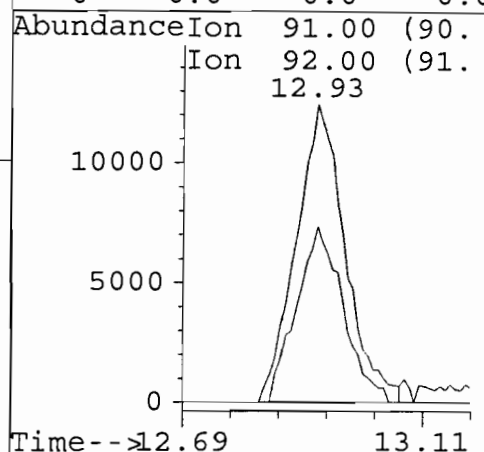
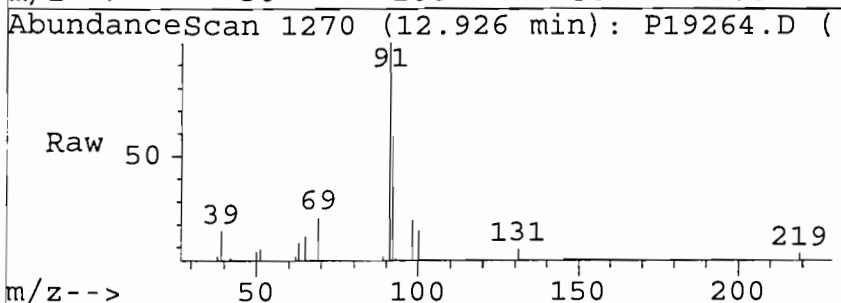


000221



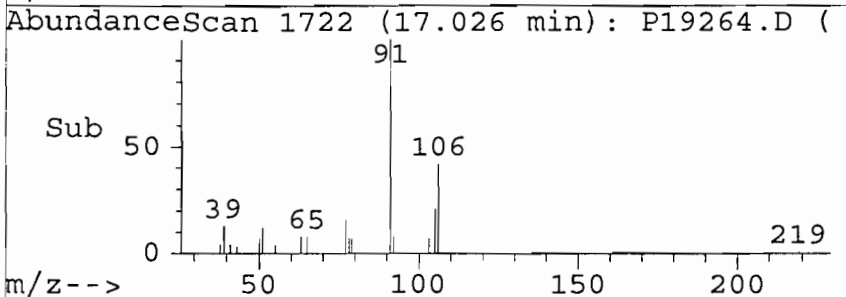
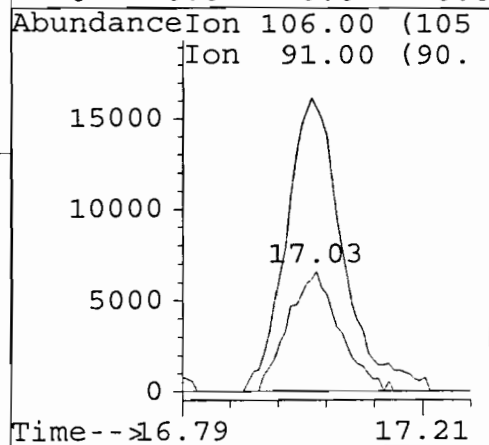
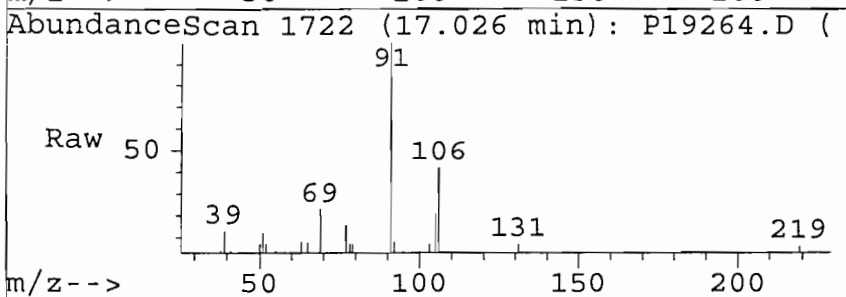
#39
toluene
Concen: 3.28 ug/L
RT: 12.93 min Scan# 1270
Delta R.T. -0.00 min
Lab File: P19264.D
Acq: 21 Oct 99 1:34 am

Tgt Ion	Ratio	Lower	Upper
91	100		
92	59.2	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



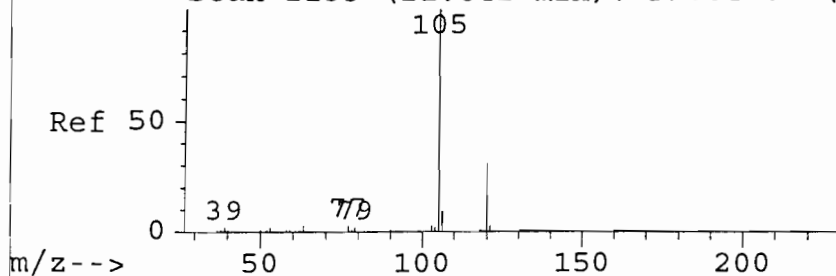
#54
m&p-xylenes
Concen: 3.53 ug/L
RT: 17.03 min Scan# 1722
Delta R.T. 0.02 min
Lab File: P19264.D
Acq: 21 Oct 99 1:34 am

Tgt Ion	Ratio	Lower	Upper
106	100		
91	235.8	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000222

AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzène

Concen: 2.37 ug/L

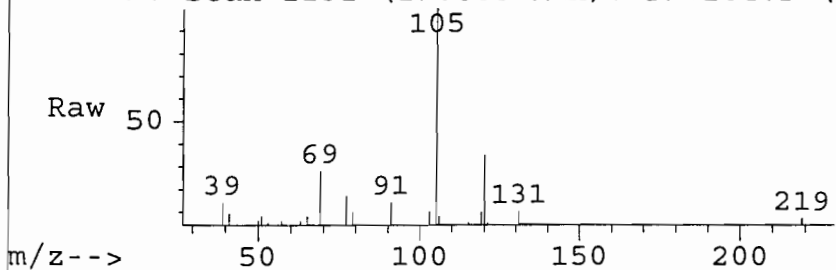
RT: 21.67 min Scan# 2232

Delta R.T. 0.02 min

Lab File: P19264.D

Acq: 21 Oct 99 1:34 am

AbundanceScan 2232 (21.665 min): P19264.D (



Tgt Ion:105 Resp: 84446

Ion Ratio Lower Upper

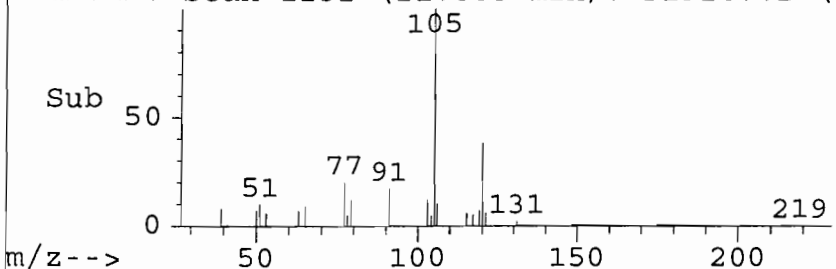
105 100

120 35.4 26.0 48.2

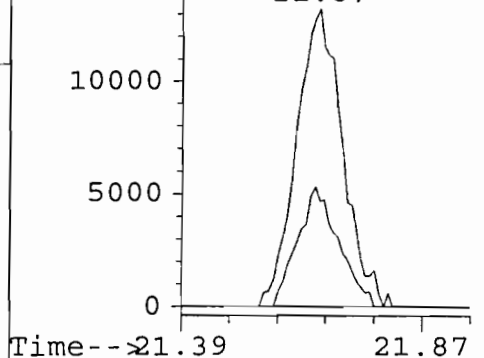
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2232 (21.665 min): P19264.D (



AbundanceIon 105.00 (104
15000 Ion 120.00 (119
21.67



000223

Library Search Compound Report

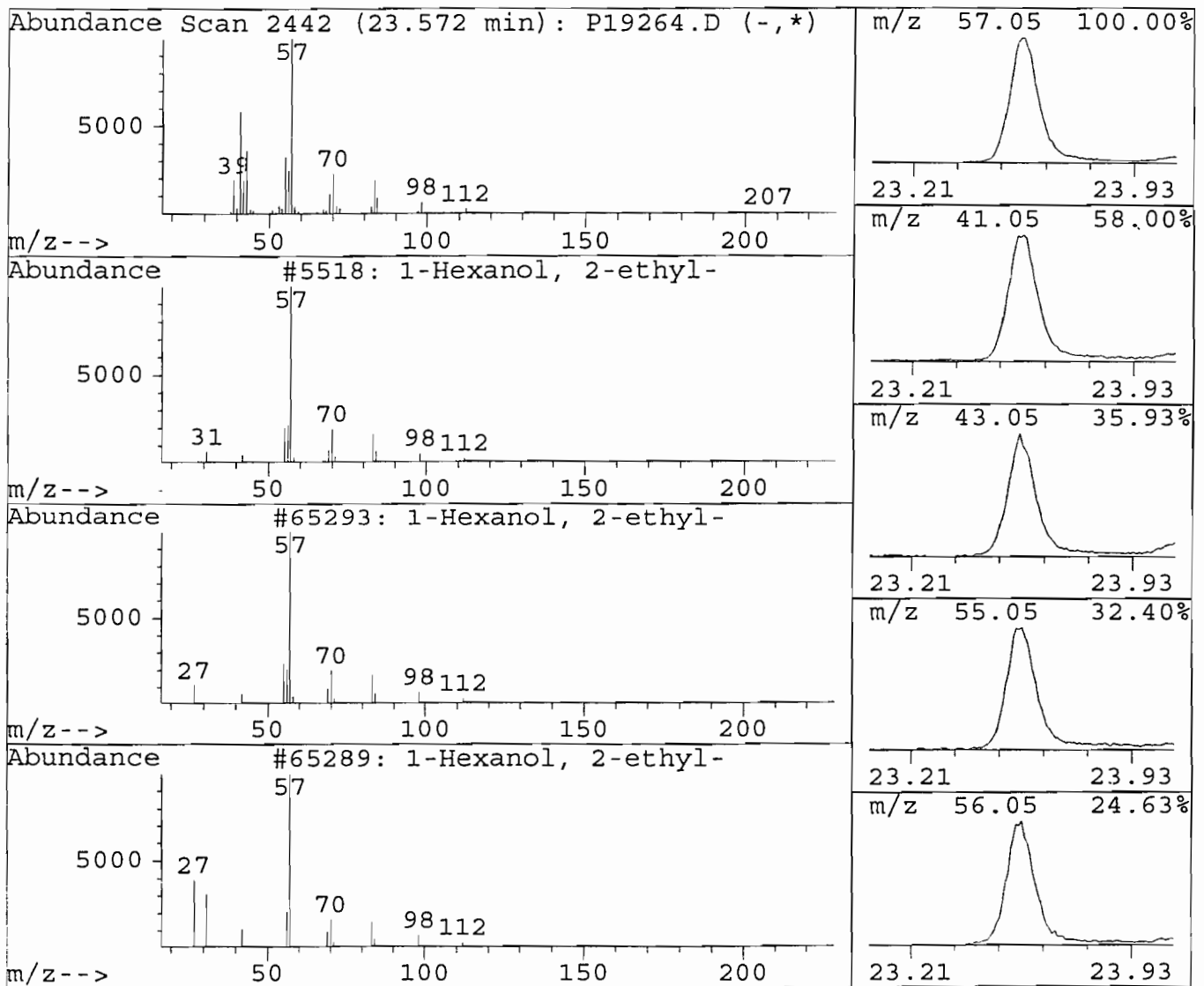
Data File : E:\HPCHEM\1\DATA\V2102099\P19264.D
Acq Time : 21 Oct 99 1:34 am
Sample : 13826ASP-87999
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.57	26.68 ug/L	3379404	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1-Hexanol, 2-ethyl-	5518	000104-76-7	83
2	1-Hexanol, 2-ethyl-	65293	000104-76-7	83
3	1-Hexanol, 2-ethyl-	65289	000104-76-7	78
4	1-Hexanol, 2-ethyl-	65290	000104-76-7	78
5	1-Hexanol, 2-ethyl-	65294	000104-76-7	59



000224

Library Search Compound Report

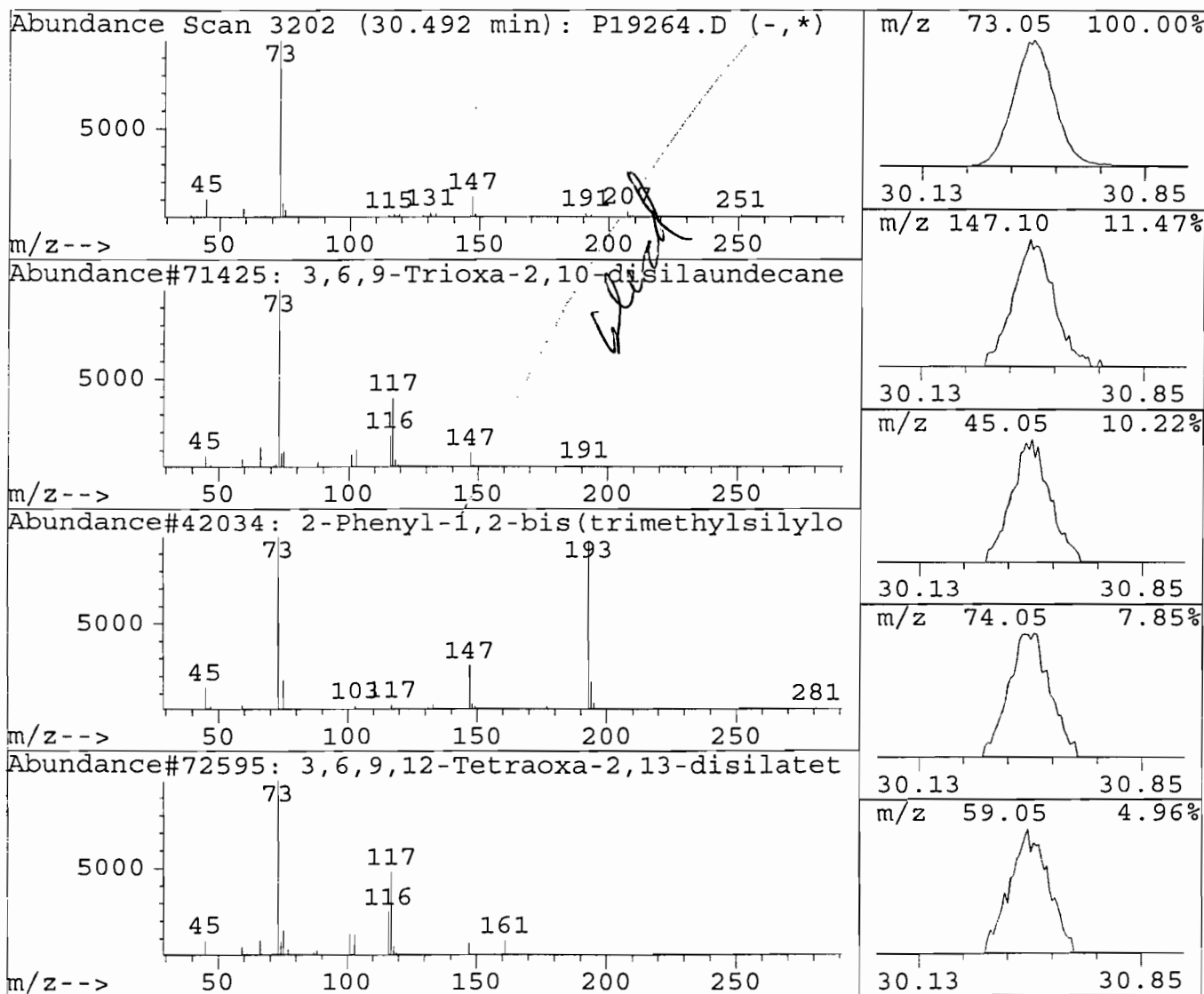
Data File : E:\HPCHEM\1\DATA\V2102099\P19264.D
Acq Time : 21 Oct 99 1:34 am
Sample : 13826ASP-87999
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.49	9.97 ug/L	1262988	1,4-dichlorobenzene-d4	22.61

Hit#	of	5	Tentative ID	Ref#	CAS#	Qual
1			3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	50
2			2-Phenyl-1,2-bis(trimethylsilyloxy)	42034	000000-00-0	43
3			3,6,9,12-Tetraoxa-2,13-disilatetrad	72595	062185-58-4	38
4			3,6,9-Trioxa-2,10-disilaundecane, 2	71424	016654-74-3	28
5			3,6,9-Trioxa-2,10-disilaundecane, 2	33793	016654-74-3	28



000225

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-010-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88000

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19265.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.5		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	8.2		
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.4		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.2		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.7		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	2.9		
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-010-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88000

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19265.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.3		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.7		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.3		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	3.1		
95-47-6	o-xylene	1.3		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.4		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.7		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.4		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.7		U
98-06-6	tert-Butylbenzene	1.3		U
95-63-6	1,2,4-Trimethylbenzene	1.7		U
135-98-8	sec-Butylbenzene	1.3		U
541-73-1	1,3-Dichlorobenzene	1.3		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.3		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.3		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

GP-010-SS45

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-008-SS

Lab Sample ID: O88000

Lab File ID: P19265.D

Date Received: 10/18/99

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-010-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88000
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19265.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/21/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	23.57	12	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19265.D
 Acq Time : 21 Oct 99 2:19 am
 Sample : 13826ASP-88000
 Misc : 5G/5ML
 Quant Time: Oct 21 12:36 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1164733	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.34	117	1169912	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.60	152	815451	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.98	113	810330	41.76	ug/L	83.51%
30) 1,2-Dichlorethane-d4	8.67	65	620989	40.73	ug/L	81.45%
38) Toluene-d8	12.77	98	1018635	44.84	ug/L	89.68%
42) 4-Bromofluorobenzene	19.49	95	993746	42.61	ug/L	85.22%

Target Compounds						Qvalue
10) Acetone	3.90	43	16346	7.83	ug/L	85
39) toluene	12.93	91	64793	2.83	ug/L	94
54) m&p-xylenes	17.01	106	32037	2.93	ug/L	99

000230

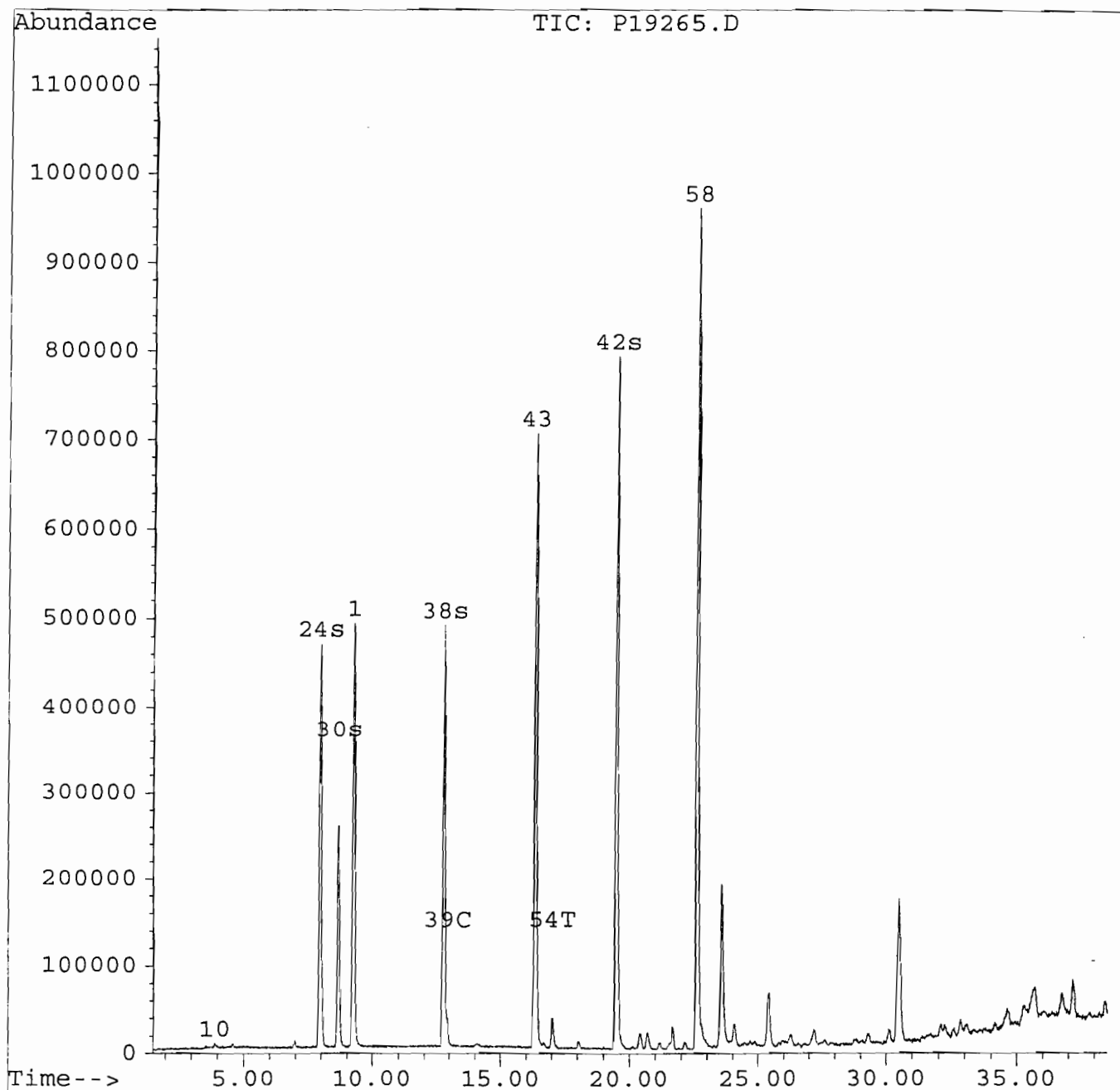
(#) = qualifier out of range (m) = manual integration

Quantitation Report

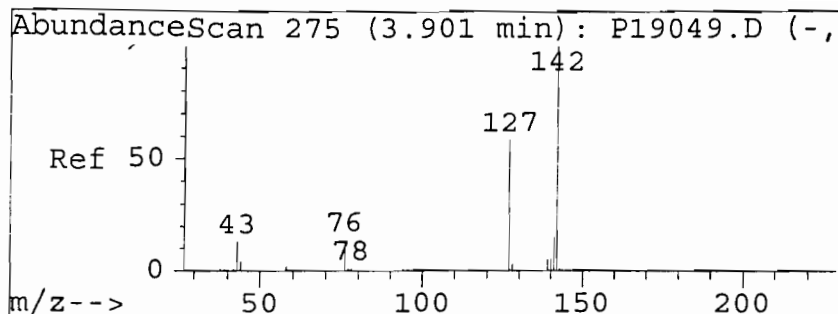
Data File : E:\HPCHEM\1\DATA\V2102099\P19265.D
Acq Time : 21 Oct 99 2:19 am
Sample : 13826ASP-88000
Misc : 5G/5ML
Quant Time: Oct 21 12:36 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

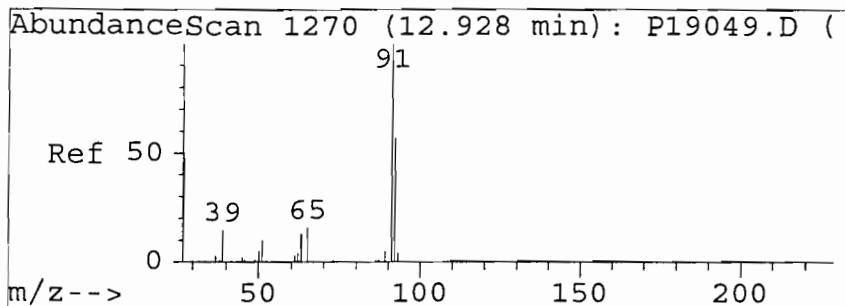
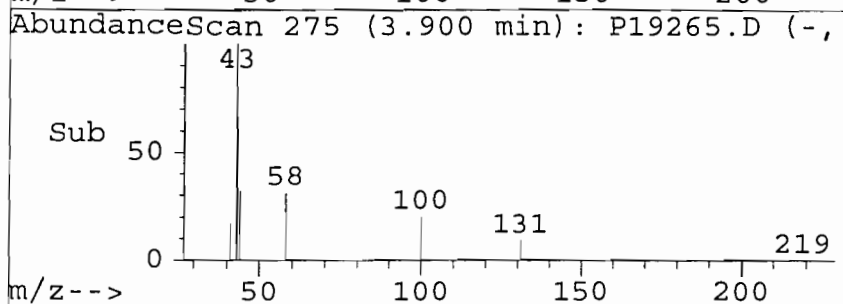
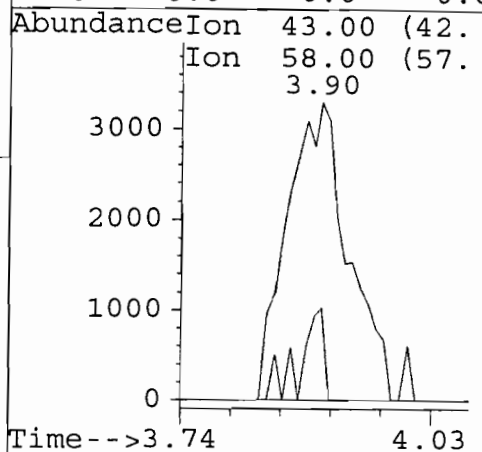
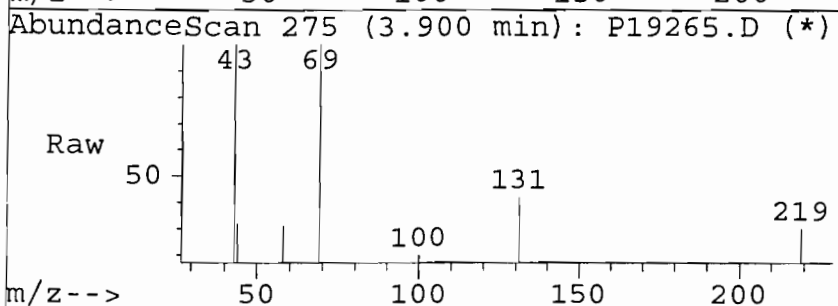


000231



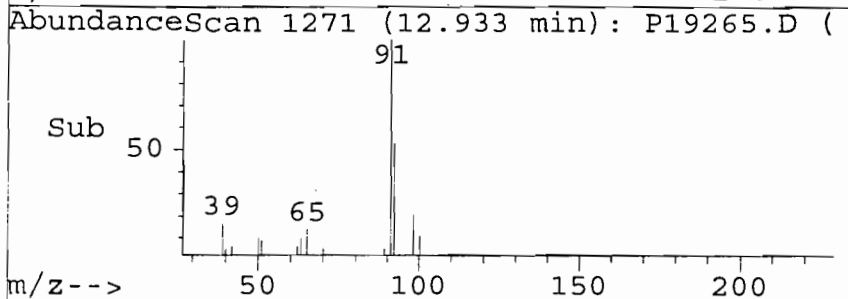
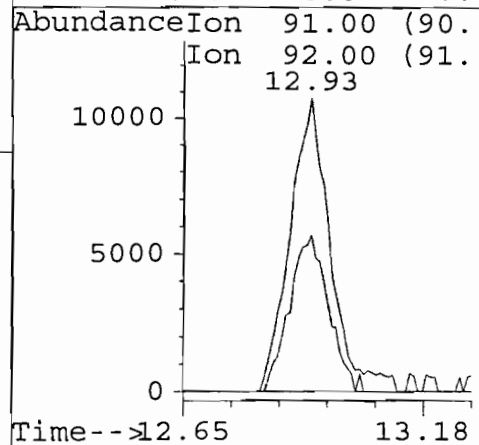
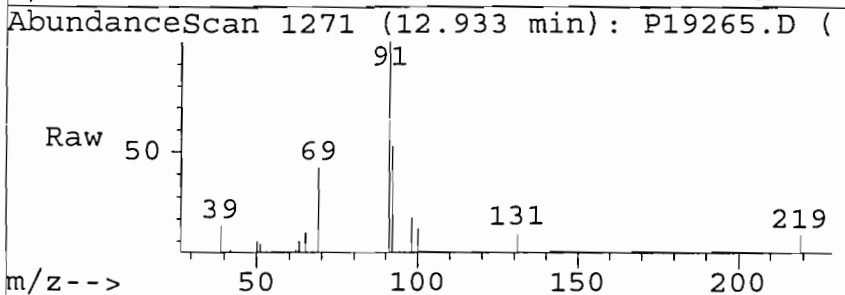
#10
Acetone
Concen: 7.83 ug/L
RT: 3.90 min Scan# 275
Delta R.T. -0.00 min
Lab File: P19265.D
Acq: 21 Oct 99 2:19 am

Tgt Ion:	43	Resp:	16346
Ion	Ratio	Lower	Upper
43	100		
58	10.5	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



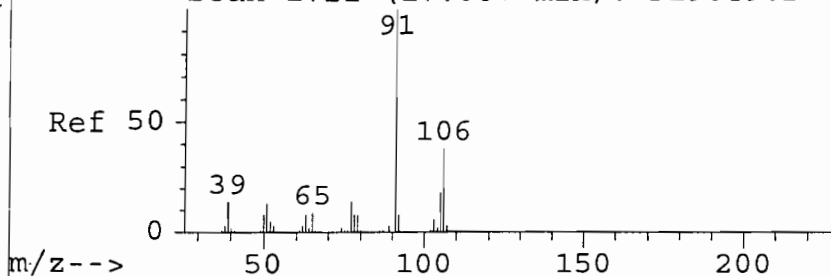
#39
toluene
Concen: 2.83 ug/L
RT: 12.93 min Scan# 1271
Delta R.T. 0.01 min
Lab File: P19265.D
Acq: 21 Oct 99 2:19 am

Tgt Ion:	91	Resp:	64793
Ion	Ratio	Lower	Upper
91	100		
92	53.0	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000232

AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 2.93 ug/L

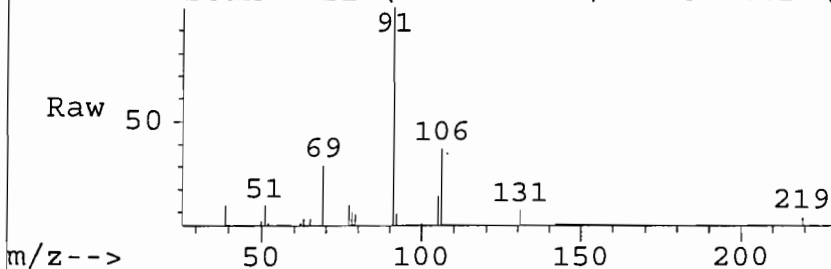
RT: 17.01 min Scan# 1721

Delta R.T. 0.00 min

Lab File: P19265.D

Acq: 21 Oct 99 2:19 am

AbundanceScan 1721 (17.012 min): P19265.D (



Tgt Ion:106 Resp: 32037

Ion Ratio Lower Upper

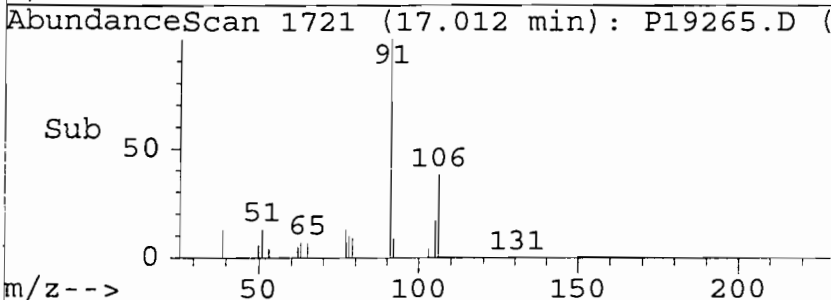
106 100

91 261.0 183.6 341.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 1721 (17.012 min): P19265.D (



AbundanceIon 106.00 (105

15000 Ion 91.00 (90.

10000

5000

0

17.01

16.79

17.20

Time-->16.79 17.20

000233

Library Search Compound Report

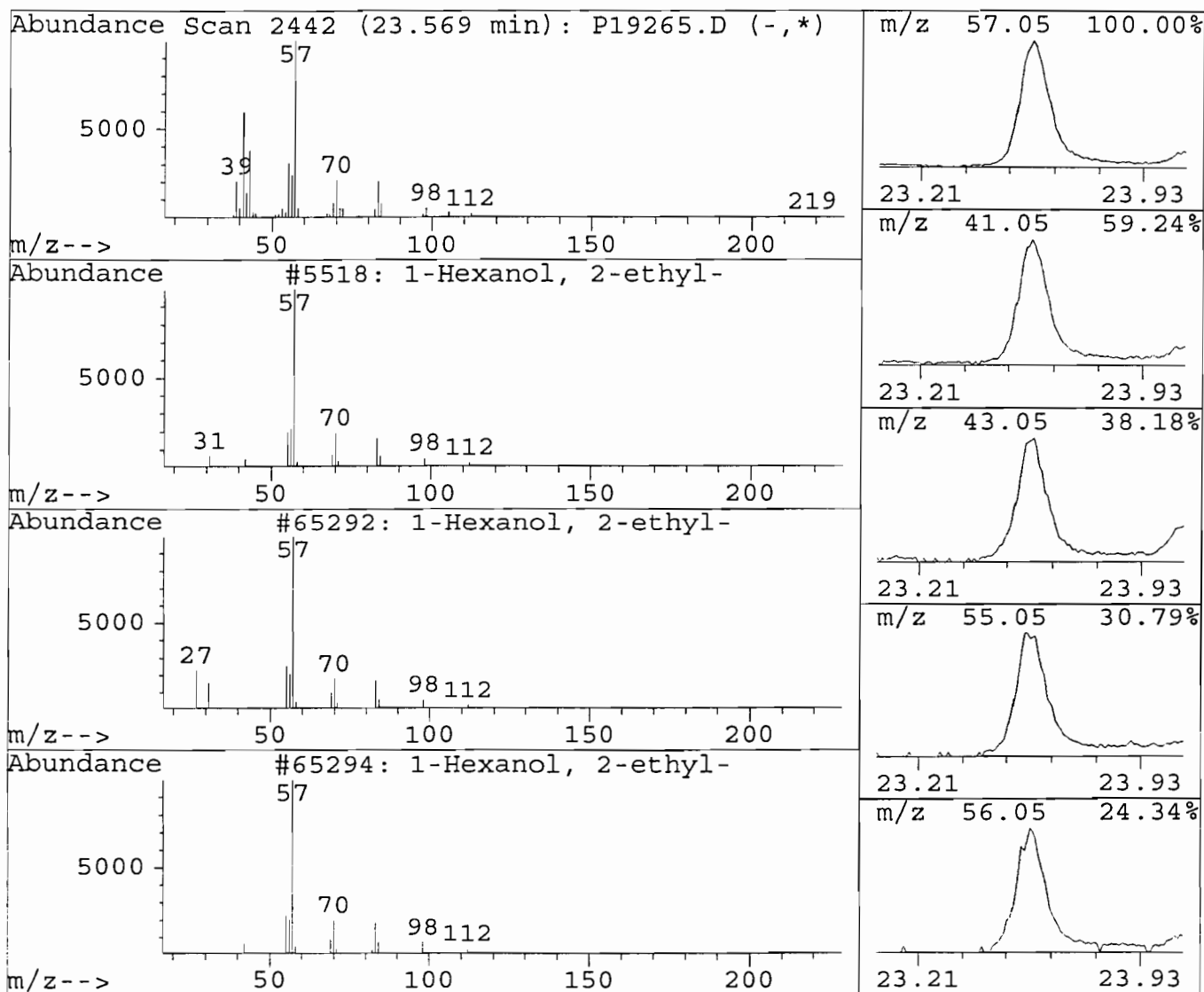
Data File : E:\HPCHEM\1\DATA\V2102099\P19265.D
Acq Time : 21 Oct 99 2:19 am
Sample : 13826ASP-88000
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.57	11.39 ug/L	1400575	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1-Hexanol, 2-ethyl-	5518	000104-76-7	72
2	1-Hexanol, 2-ethyl-	65292	000104-76-7	59
3	1-Hexanol, 2-ethyl-	65294	000104-76-7	56
4	1-Hexanol, 2-ethyl-	65291	000104-76-7	53
5	1-Hexanol, 2-ethyl-	65290	000104-76-7	50



000234

Library Search Compound Report

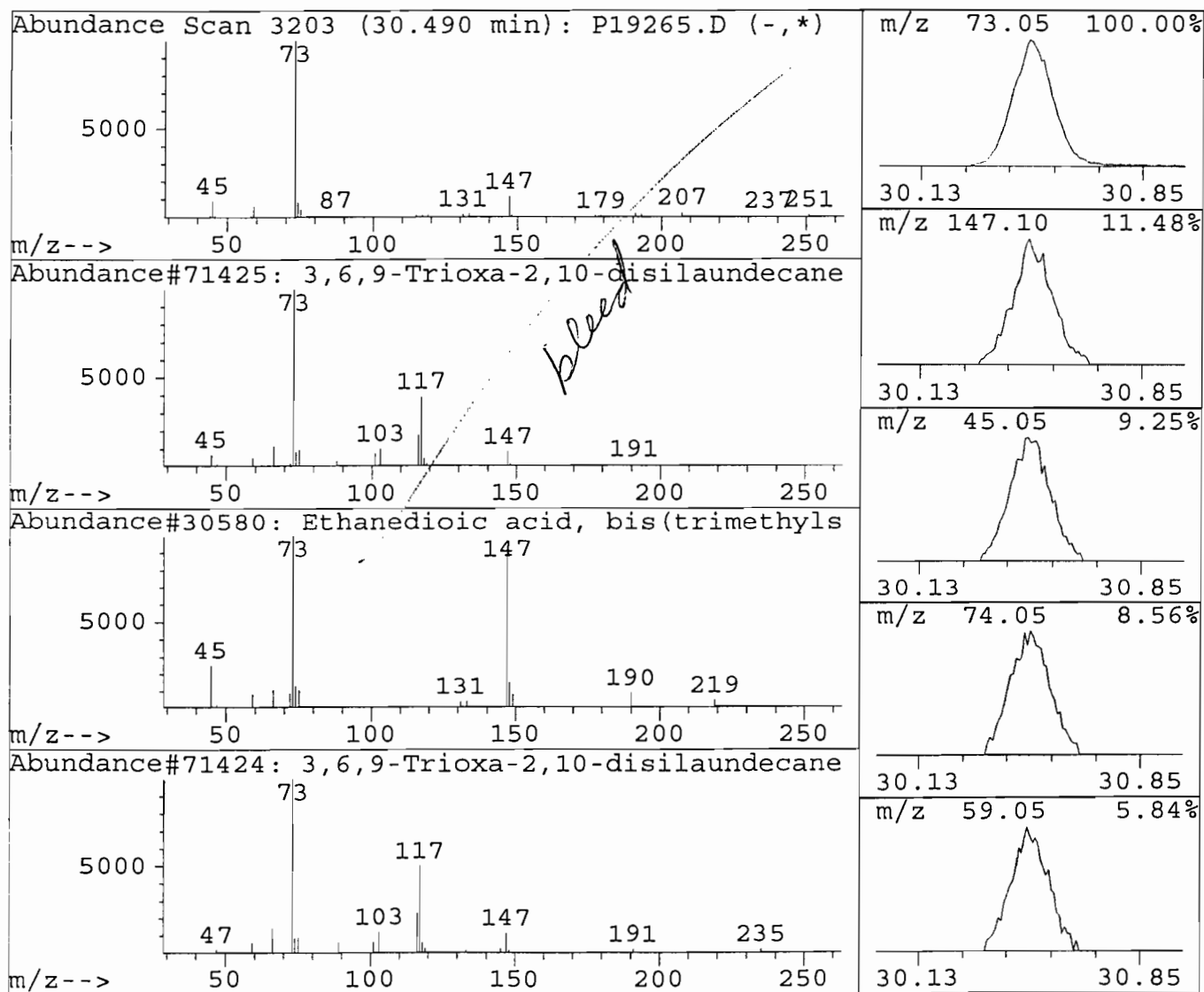
Data File : E:\HPCHEM\1\DATA\V2102099\P19265.D
Acq Time : 21 Oct 99 2:19 am
Sample : 13826ASP-88000
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.49	12.65 ug/L	1555921	1,4-dichlorobenzene-d4	22.60

Hit# of	4	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	45	
2	Ethanedioic acid, bis(trimethylsilyl)	30580	018294-04-7	37	
3	3,6,9-Trioxa-2,10-disilaundecane, 2	71424	016654-74-3	25	
4	Ethanedioic acid, bis(trimethylsilyl)	71006	018294-04-7	10	



000235

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19273.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.5		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	5.2		U
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.4		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.2		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.7		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	1.3		U
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: PI9273.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	<u>ug/Kg</u>	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.3		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.7		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.3		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.4		U
95-47-6	o-xylene	1.3		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.4		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.7		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.4		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.7		U
98-06-6	tert-Butylbenzene	1.3		U
95-63-6	1,2,4-Trimethylbenzene	1.7		U
135-98-8	sec-Butylbenzene	1.3		U
541-73-1	1,3-Dichlorobenzene	1.3		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.3		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.3		U
87-68-3	Hexachlorobutadiene	1		U

GP-011-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19273.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

Concentration Units:

CAS No.

Compound

(ug/L or ug/Kg)

ug/Kg

O

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-011-SS30

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88001
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19273.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
 Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 582-16-1	Naphthalene, 2,7-dimethyl-	35.56	7.5	J
2.				
3.				
4.				
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28.				
29.				
30.				

000239

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19273.D
 Acq Time : 22 Oct 99 2:07 am
 Sample : 13826ASP-88001
 Misc : 5G/5ML
 Quant Time: Oct 22 11:35 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

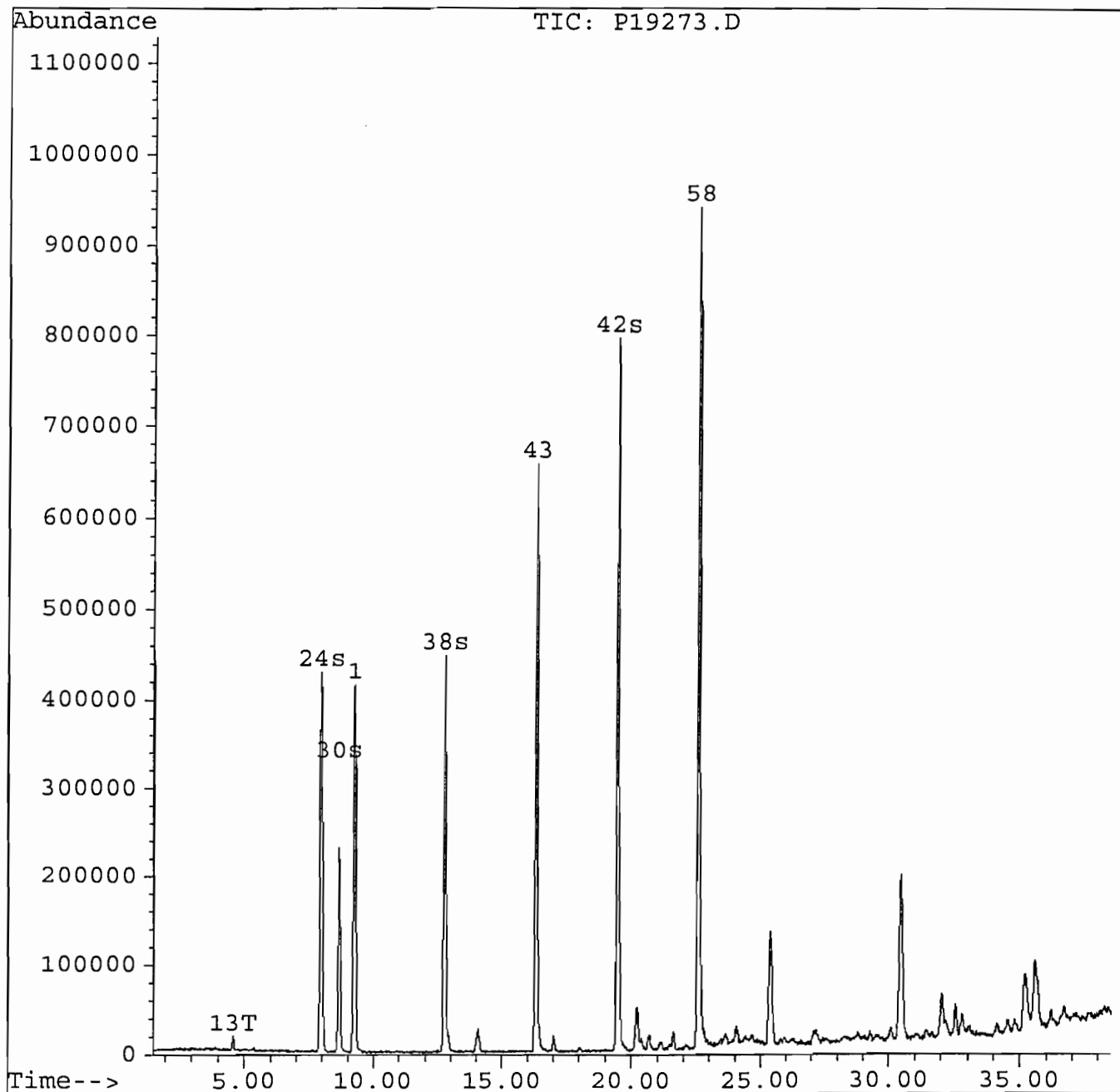
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	956371	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1069996	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	797999	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	751403	47.16	ug/L	94.31%
30) 1,2-Dichlorethane-d4	8.66	65	571513	45.65	ug/L	91.29%
38) Toluene-d8	12.76	98	914112	49.01	ug/L	98.01%
42) 4-Bromofluorobenzene	19.47	95	959756	50.12	ug/L	100.24%
Target Compounds						Qvalue
13) methylene chloride	4.59	84	13034	2.90	ug/L	97

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19273.D
Acq Time : 22 Oct 99 2:07 am
Sample : 13826ASP-88001
Misc : 5G/5ML
Quant Time: Oct 22 11:35 1999

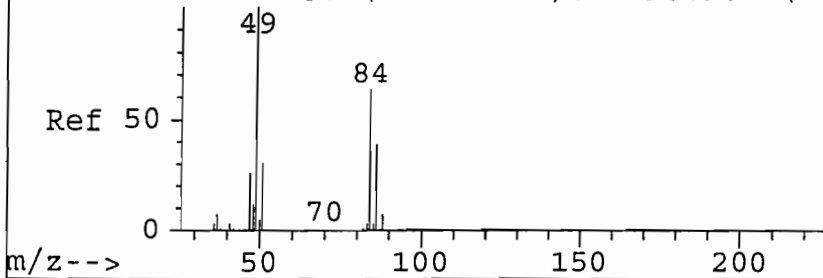
Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000241

AbundanceScan 350 (4.582 min): P19049.D (-,



#13

methylene chloride

Concen: 2.90 ug/L

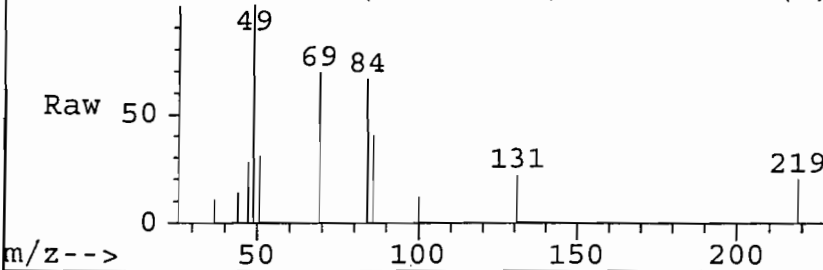
RT: 4.59 min Scan# 351

Delta R.T. 0.01 min

Lab File: P19273.D

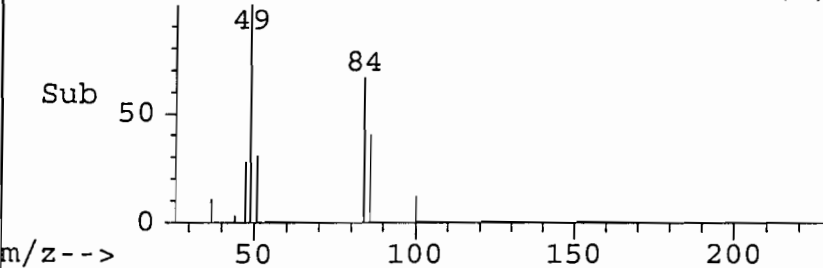
Acq: 22 Oct 99 2:07 am

AbundanceScan 351 (4.587 min): P19273.D (*)

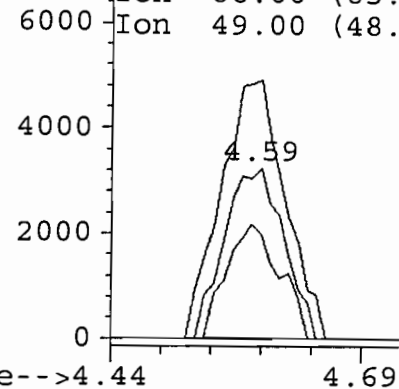


Tgt Ion:	84	Resp:	13034
Ion	Ratio	Lower	Upper
84	100		
86	61.4	43.3	80.3
49	151.9	110.4	205.0
0	0.0	0.0	0.0

AbundanceScan 351 (4.587 min): P19273.D (-,



Abundance	Ion	84.00	(83.
	Ion	86.00	(85.
	Ion	49.00	(48.



000242

Library Search Compound Report

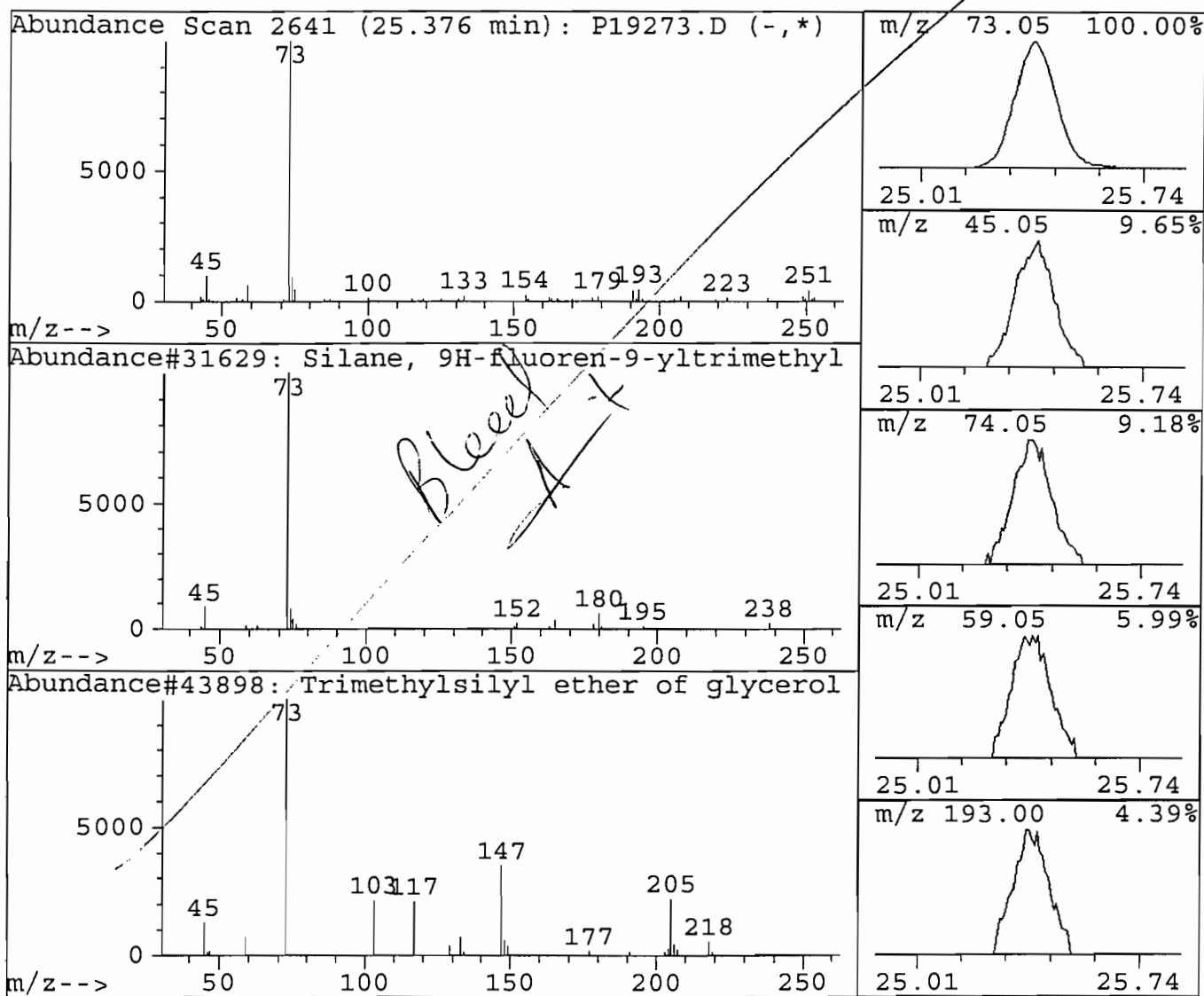
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Acq Time : 22 Oct 99 2:07 am
Sample : 13826ASP-88001
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
25.38	9.18 ug/L	1121080	1,4-dichlorobenzene-d4	22.59

Hit# of	2	Tentative ID	Ref#	CAS#	Qual
1	Silane, 9H-fluoren-9-yltrimethyl-	31629	007385-10-6	38	
2	Trimethylsilyl ether of glycerol	43898	006787-10-6	23	



000243

Library Search Compound Report

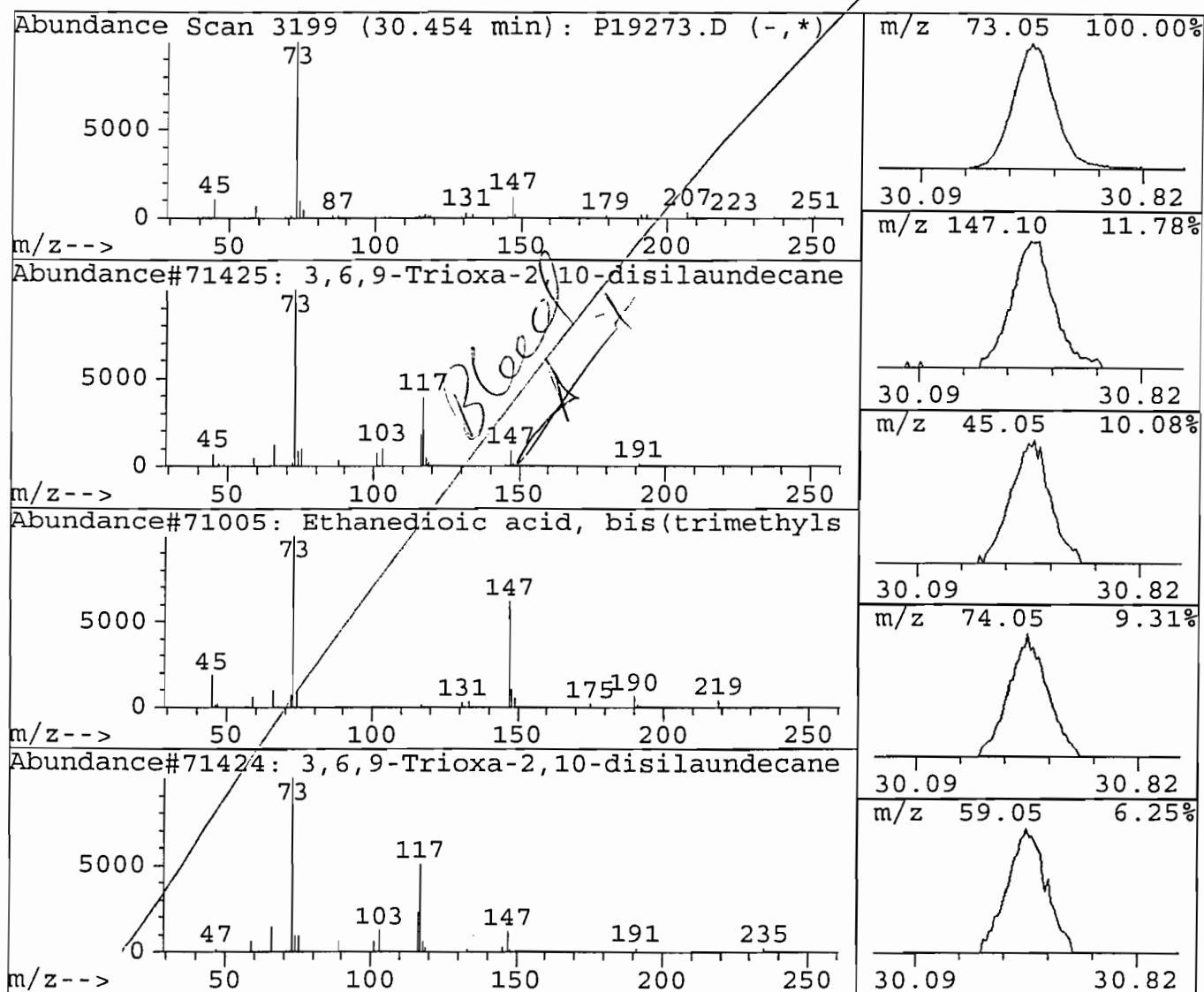
Data File : I:\HPCHEM\1\DATA\V2102199\P19273.D
Acq Time : 22 Oct 99 2:07 am
Sample : 13826ASP-88001
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.45	13.90 ug/L	1698317	1,4-dichlorobenzene-d4	22.59

Hit# of	3	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	39	
2	Ethanedioic acid, bis(trimethylsilyl)	71005	018294-04-7	33	
3	3,6,9-Trioxa-2,10-disilaundecane, 2	71424	016654-74-3	33	



000244

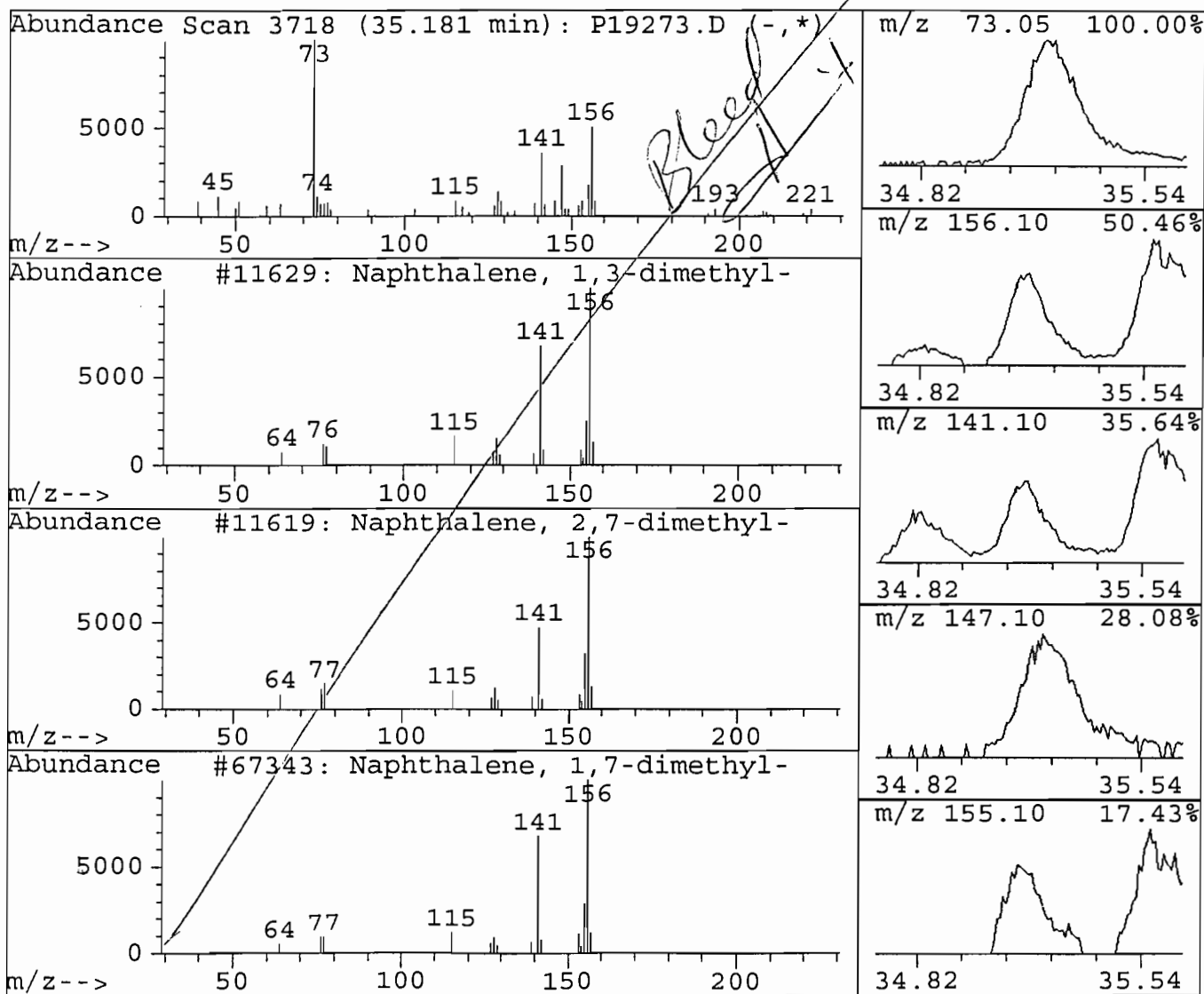
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19273.D
Acq Time : 22 Oct 99 2:07 am
Sample : 13826ASP-88001
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
35.18	6.34 ug/L	775008	1,4-dichlorobenzene-d4	22.59	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Naphthalene, 1,3-dimethyl-		11629	000575-41-7	91
2	Naphthalene, 2,7-dimethyl-		11619	000582-16-1	87
3	Naphthalene, 1,7-dimethyl-		67343	000575-37-1	87
4	Naphthalene, 2,7-dimethyl-		67330	000582-16-1	60
5	Naphthalene, 2,6-dimethyl-		11624	000581-42-0	60



000245

Library Search Compound Report

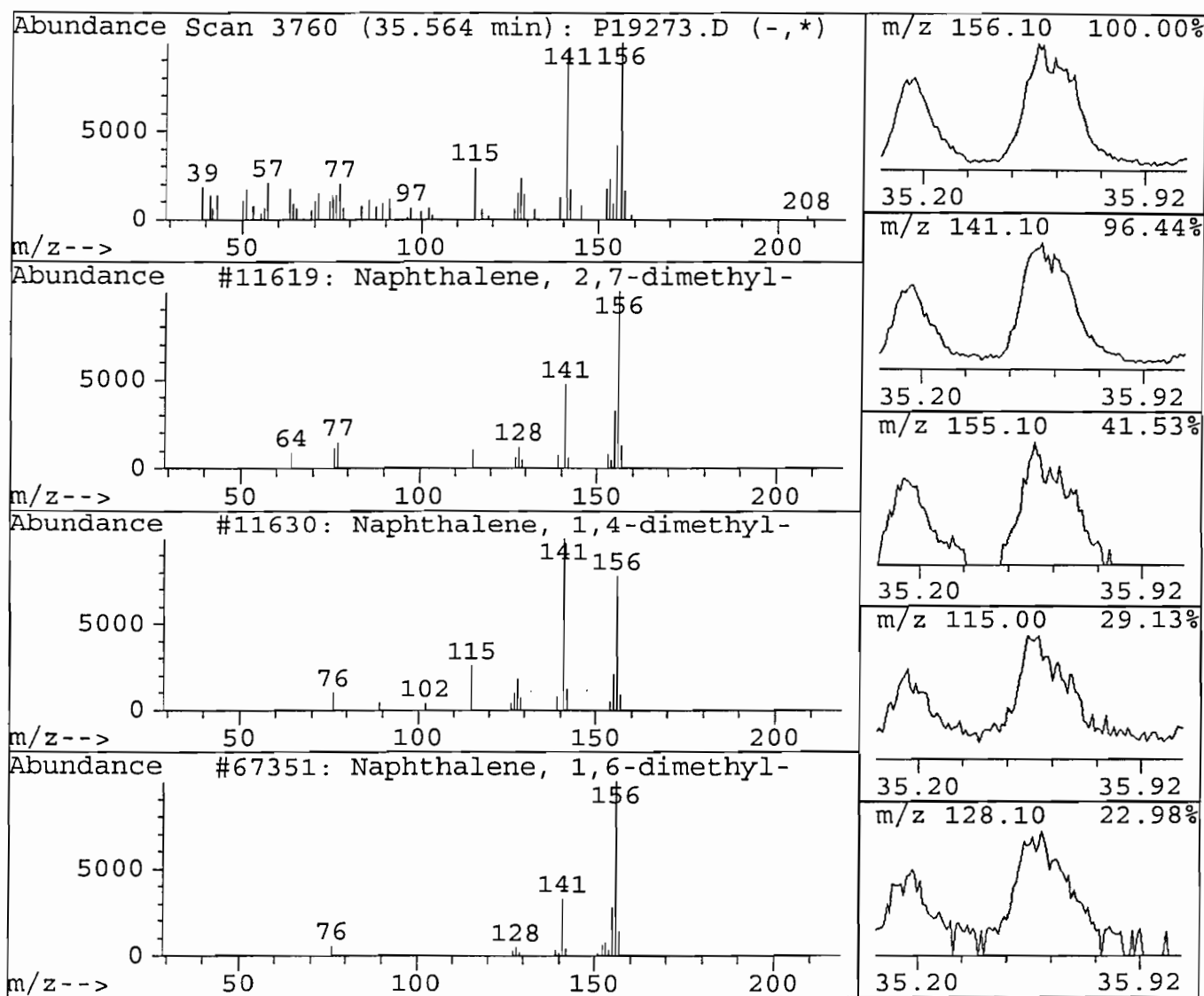
Data File : I:\HPCHEM\1\DATA\V2102199\P19273.D
Acq Time : 22 Oct 99 2:07 am
Sample : 13826ASP-88001
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.56	7.17 ug/L	876097	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 2,7-dimethyl-	11619	000582-16-1	95
2	Naphthalene, 1,4-dimethyl-	11630	000571-58-4	95
3	Naphthalene, 1,6-dimethyl-	67351	000575-43-9	95
4	Naphthalene, 2,6-dimethyl-	11624	000581-42-0	94
5	Naphthalene, 2,3-dimethyl-	67332	000581-40-8	94



000246

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88002

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19276.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.4		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.1		U
107-02-8	Acrolein	5.1		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	5.1		U
75-15-0	Carbon Disulfide	5.1		U
75-09-2	Methylene Chloride	3.3		
156-60-5	trans-1,2-Dichloroethene	4.3		U
107-13-1	Acrylonitrile	5.1		U
75-34-3	1,1-Dichloroethane	1.3		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.7		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.1		U
78-93-3	2-Butanone	5.1		U
56-23-5	Carbon Tetrachloride	4.1		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.6		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.1		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	1.3		U
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88002

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19276.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.1		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5.1		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.3		U
95-47-6	o-xylene	1.2		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.3		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.6		U
98-06-6	tert-Butylbenzene	1.2		U
95-63-6	1,2,4-Trimethylbenzene	4.9		
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.7		U
96-12-8	1,2-Dibromo-3-chloropropane	5.1		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

GP-011-SS45

Contract: IMPACT ENVIRONMENTAL

Site:

Location:

Group: GP-008-SS

Lab Sample ID: O88002

Lab File ID: P19276.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-011-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88002
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19276.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 2 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 1 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	23.54	28	J
2.				
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19276.D
 Acq Time : 22 Oct 99 4:22 am
 Sample : 13826ASP-88002
 Misc : 5G/5ML
 Quant Time: Oct 22 11:36 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	707856	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.31	117	829139	50.00	ug/L	-0.02
58) 1,4-dichlorobenzene-d4	22.57	152	599966	50.00	ug/L	-0.02
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	600705	50.93	ug/L	101.87%
30) 1,2-Dichlorethane-d4	8.66	65	489188	52.79	ug/L	105.58%
38) Toluene-d8	12.77	98	681618	49.37	ug/L	98.74%
42) 4-Bromofluorobenzene	19.46	95	770373	54.36	ug/L	108.71%
Target Compounds						Qvalue
13) methylene chloride	4.59	84	10825	3.26	ug/L	85
54) m&p-xylenes	16.99	106	19526	2.52	ug/L	95
66) 1,3,5-trimethylbenzene	20.64	105	50631	2.14	ug/L	81
68) 1,2,4-trimethylbenzene	21.65	105	117750	4.77	ug/L	92

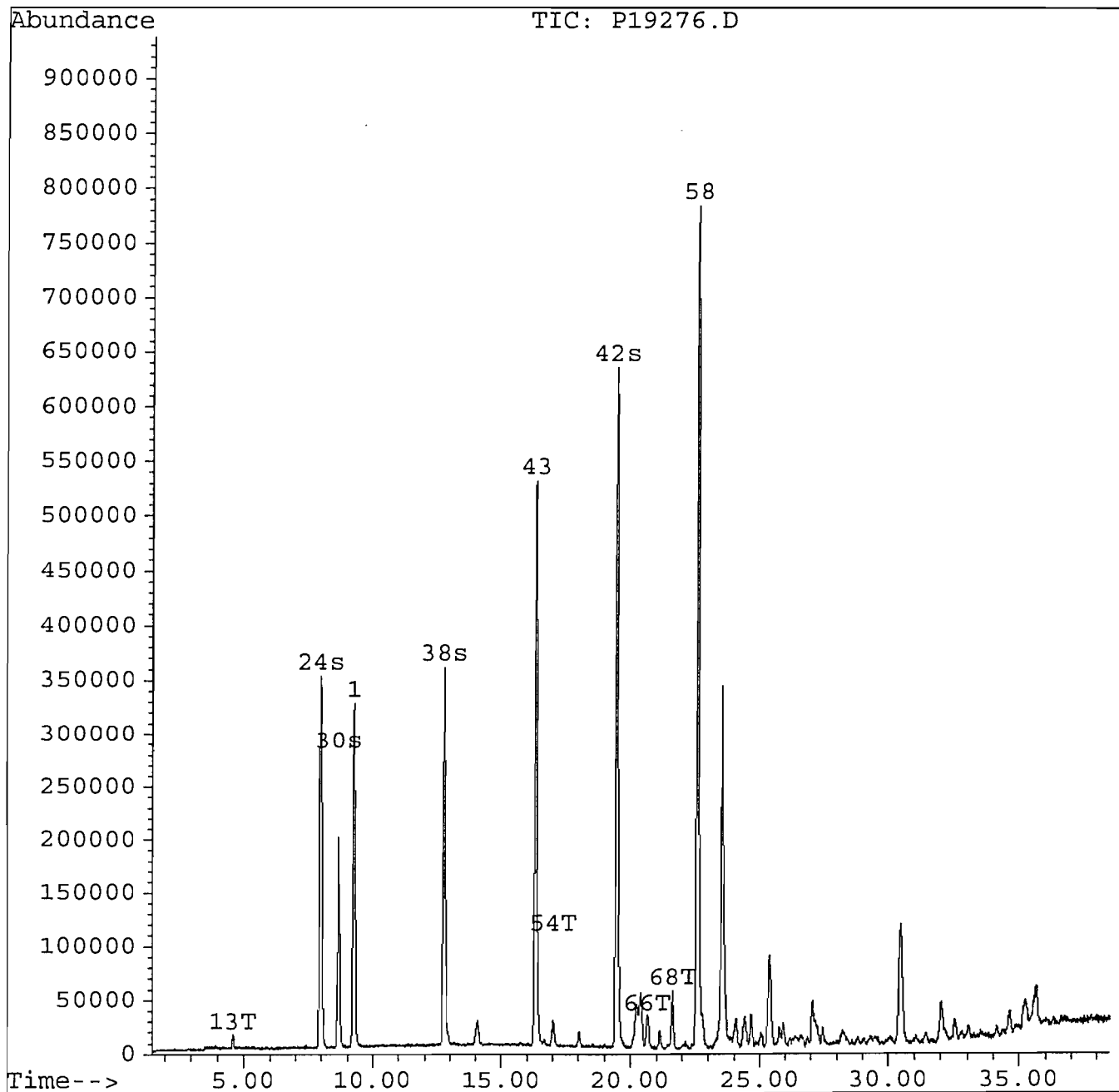
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Quantitation Report

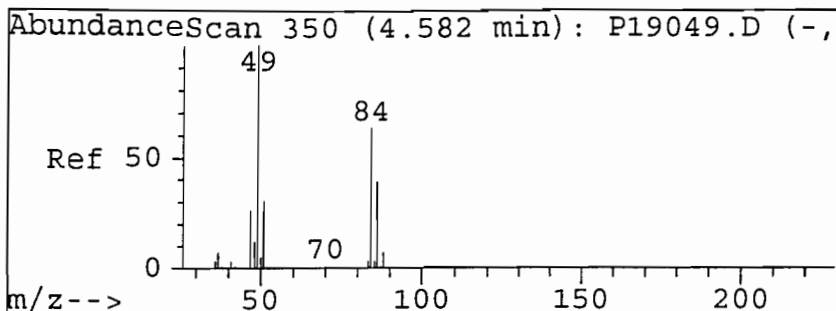
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Acq Time : 22 Oct 99 4:22 am
Sample : 13826ASP-88002
Misc : 5G/5ML
Quant Time: Oct 22 11:36 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

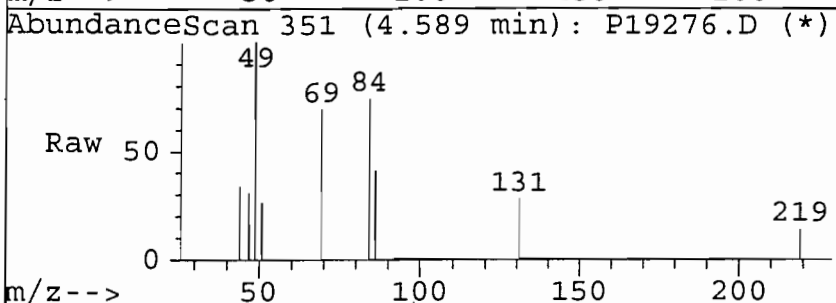


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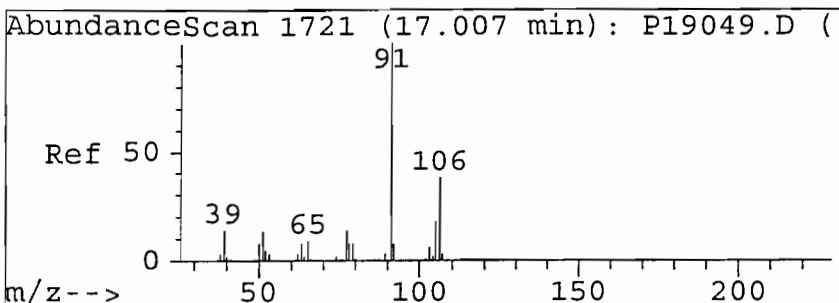
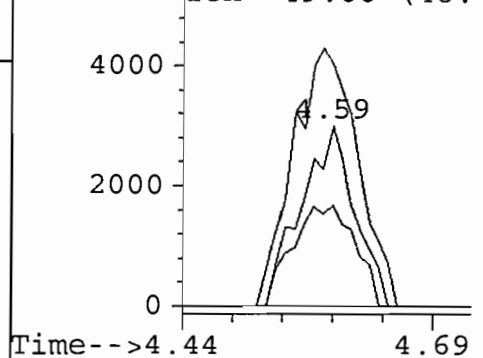
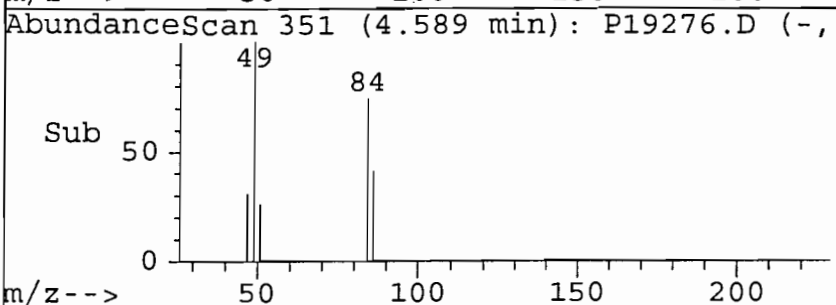


#13
methylene chloride
Concen: 3.26 ug/L
RT: 4.59 min Scan# 351
Delta R.T. 0.01 min
Lab File: P19276.D
Acq: 22 Oct 99 4:22 am

Tgt Ion:	84	Resp:	10825
Ion	Ratio	Lower	Upper
84	100		
86	55.9	43.3	80.3
49	134.9	110.4	205.0
0	0.0	0.0	0.0

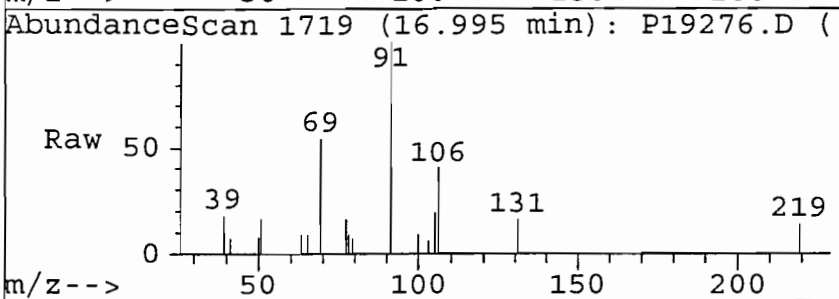


Abundance	Ion	84.00 (83.
6000	Ion	86.00 (85.
	Ion	49.00 (48.

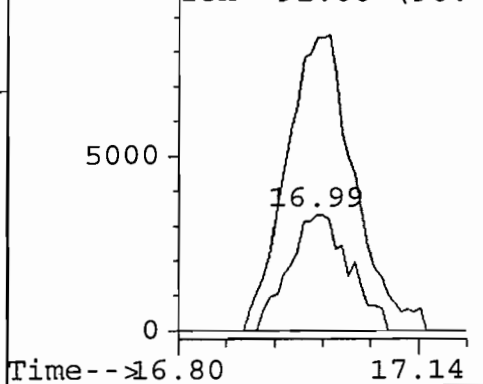
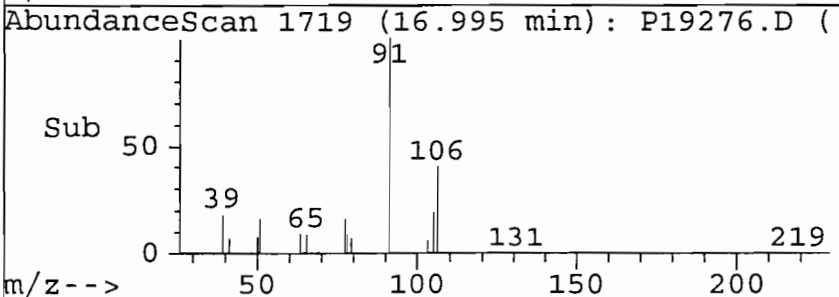


#54
m&p-xylenes
Concen: 2.52 ug/L
RT: 16.99 min Scan# 1719
Delta R.T. -0.01 min
Lab File: P19276.D
Acq: 22 Oct 99 4:22 am

Tgt Ion:	106	Resp:	19526
Ion	Ratio	Lower	Upper
106	100		
91	252.9	183.6	341.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

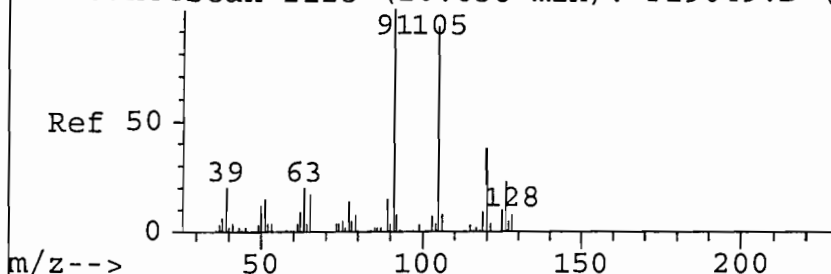


Abundance	Ion	106.00 (105
10000	Ion	91.00 (90.



000253

AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 2.14 ug/L

RT: 20.64 min Scan# 2120

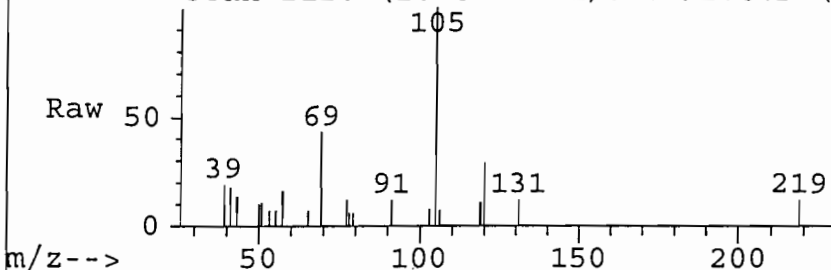
Delta R.T. -0.02 min

Lab File: P19276.D

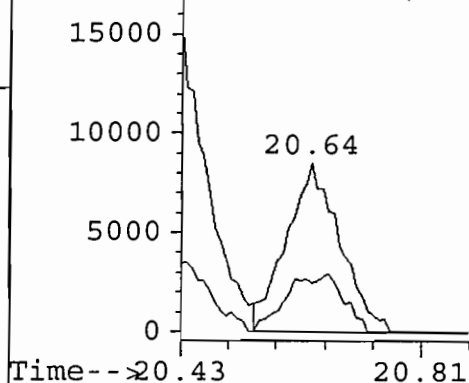
Acq: 22 Oct 99 4:22 am

Tgt Ion:	105	Resp:	50631
Ion	Ratio	Lower	Upper
105	100		
120	29.0	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

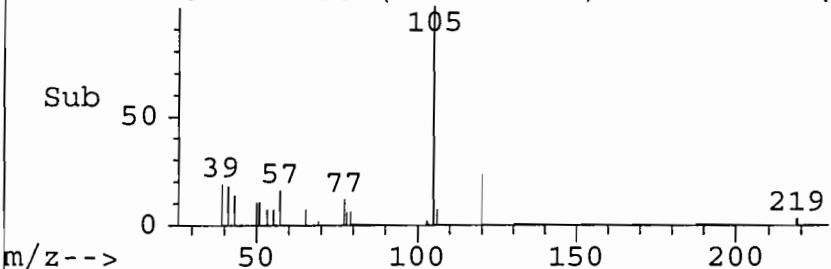
AbundanceScan 2120 (20.635 min): P19276.D (



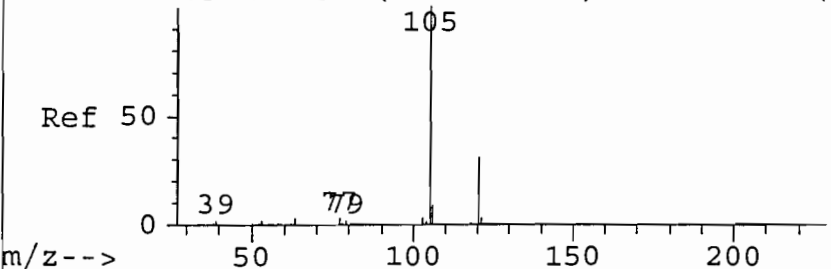
AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 2120 (20.635 min): P19276.D (



AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzene

Concen: 4.77 ug/L

RT: 21.65 min Scan# 2231

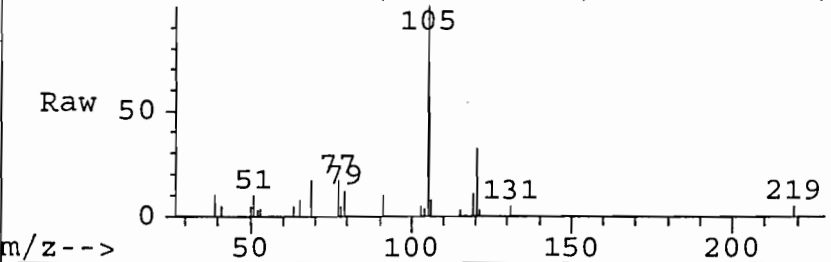
Delta R.T. 0.00 min

Lab File: P19276.D

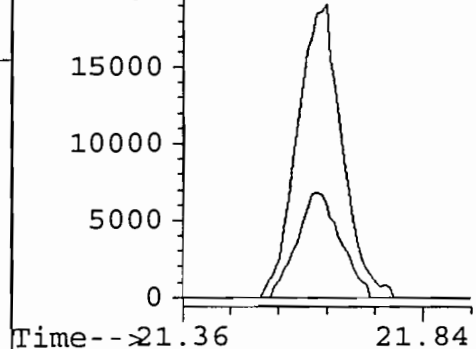
Acq: 22 Oct 99 4:22 am

Tgt Ion:	105	Resp:	117750
Ion	Ratio	Lower	Upper
105	100		
120	32.3	26.0	48.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

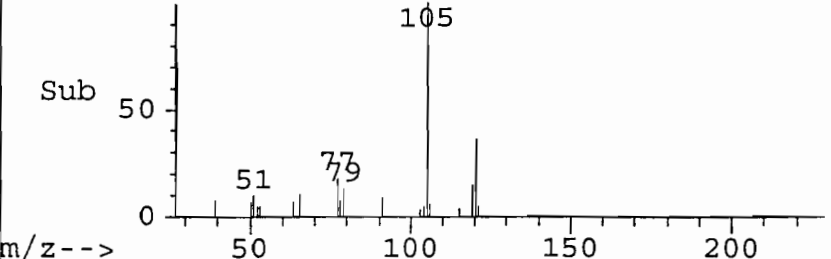
AbundanceScan 2231 (21.646 min): P19276.D (



AbundanceIon 105.00 (104
Ion 120.00 (119



AbundanceScan 2231 (21.646 min): P19276.D (



000254

Library Search Compound Report

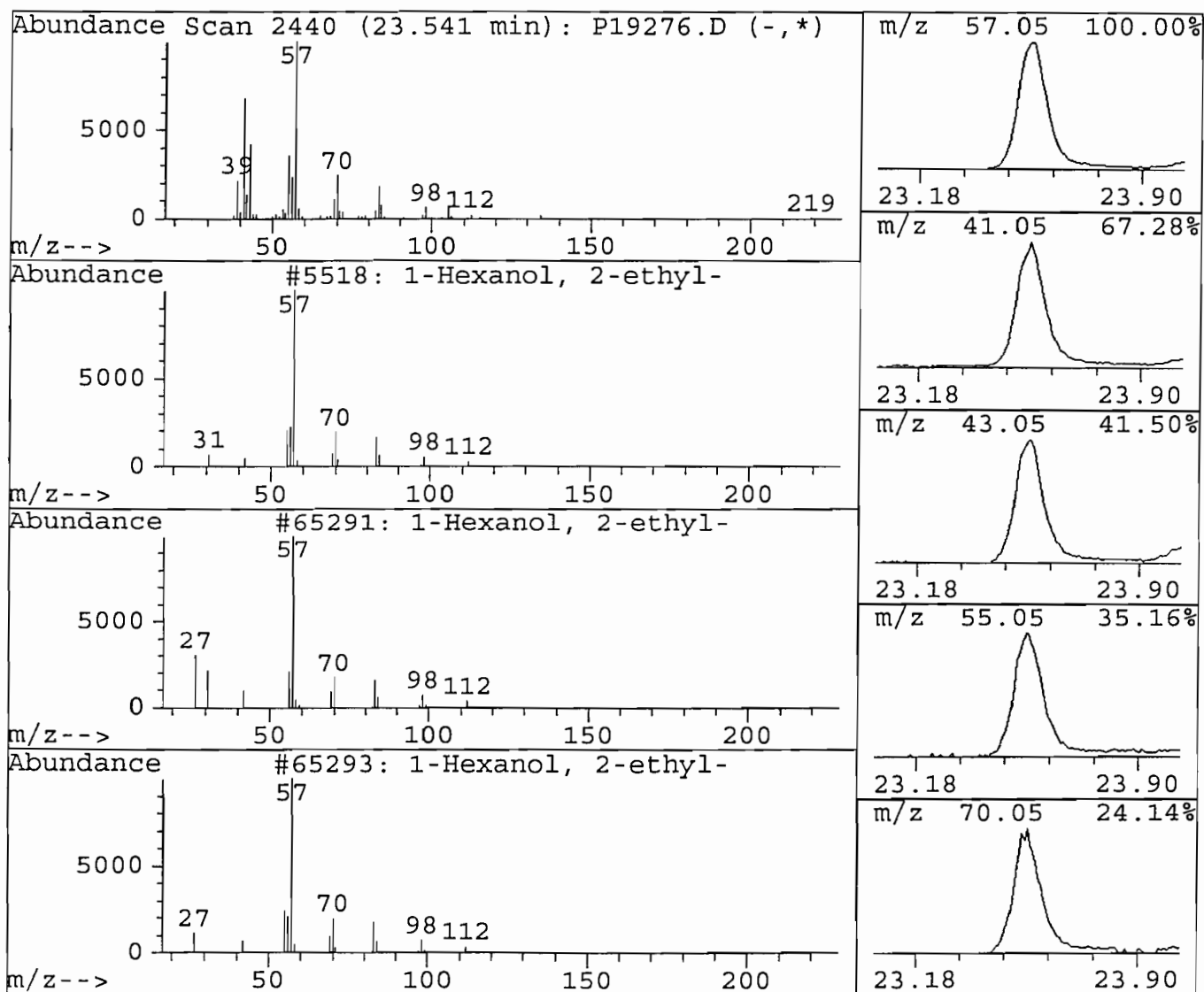
Data File : I:\HPCHEM\1\DATA\V2102199\P19276.D
Acq Time : 22 Oct 99 4:22 am
Sample : 13826ASP-88002
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.54	27.30 ug/L	2604351	1,4-dichlorobenzene-d4	22.57

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1-Hexanol, 2-ethyl-	5518	000104-76-7	72
2	1-Hexanol, 2-ethyl-	65291	000104-76-7	72
3	1-Hexanol, 2-ethyl-	65293	000104-76-7	64
4	1-Hexanol, 2-ethyl-	65290	000104-76-7	64
5	Octane, 2,3-dimethyl-	66214	007146-60-3	64



000255

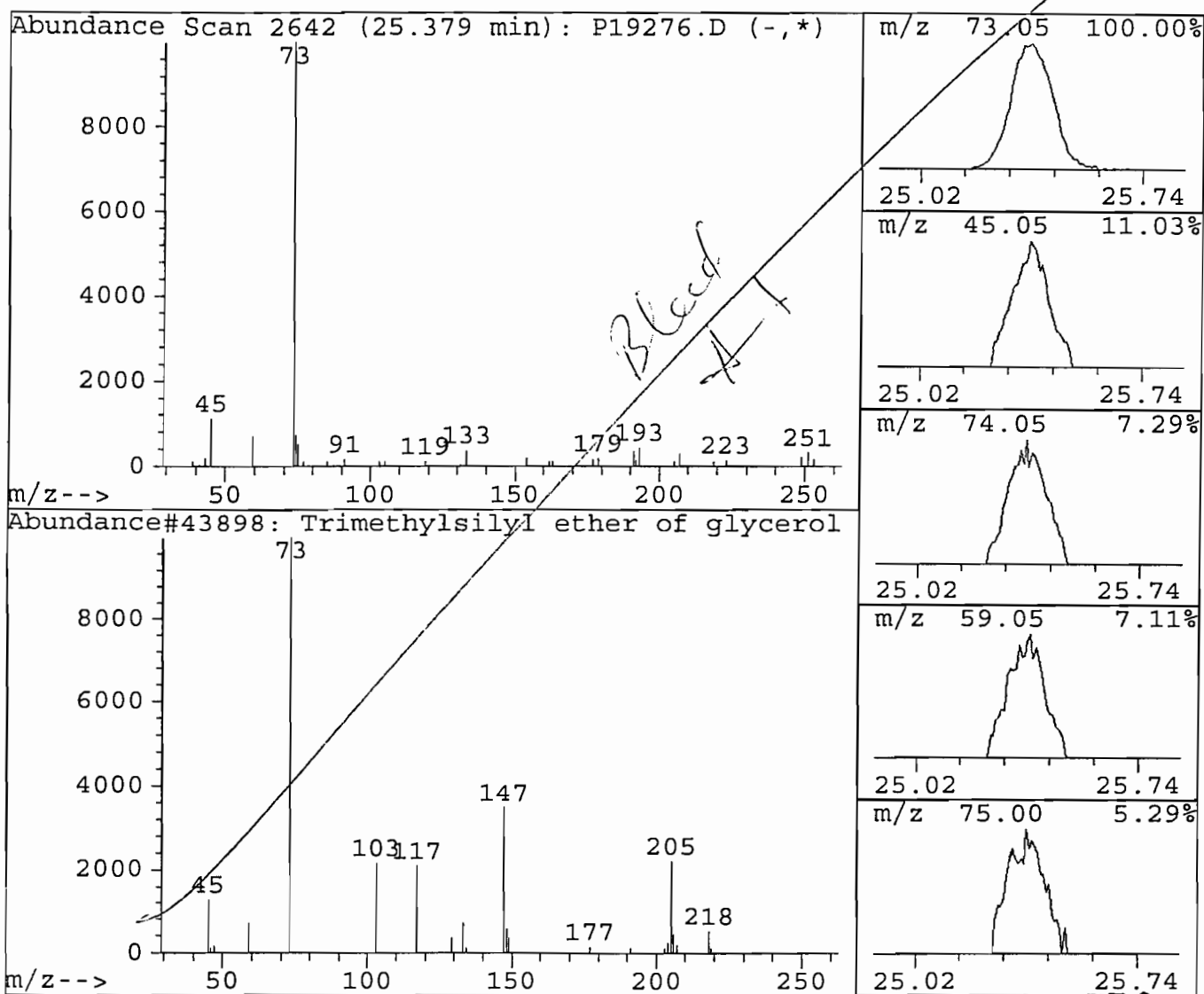
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19276.D
Acq Time : 22 Oct 99 4:22 am
Sample : 13826ASP-88002
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.38	8.56 ug/L	816851	1,4-dichlorobenzene-d4	22.57	
Hit# of	1	Tentative ID	Ref#	CAS#	Qual
1	Trimethylsilyl ether of glycerol		43898	006787-10-6	28



000256

Library Search Compound Report

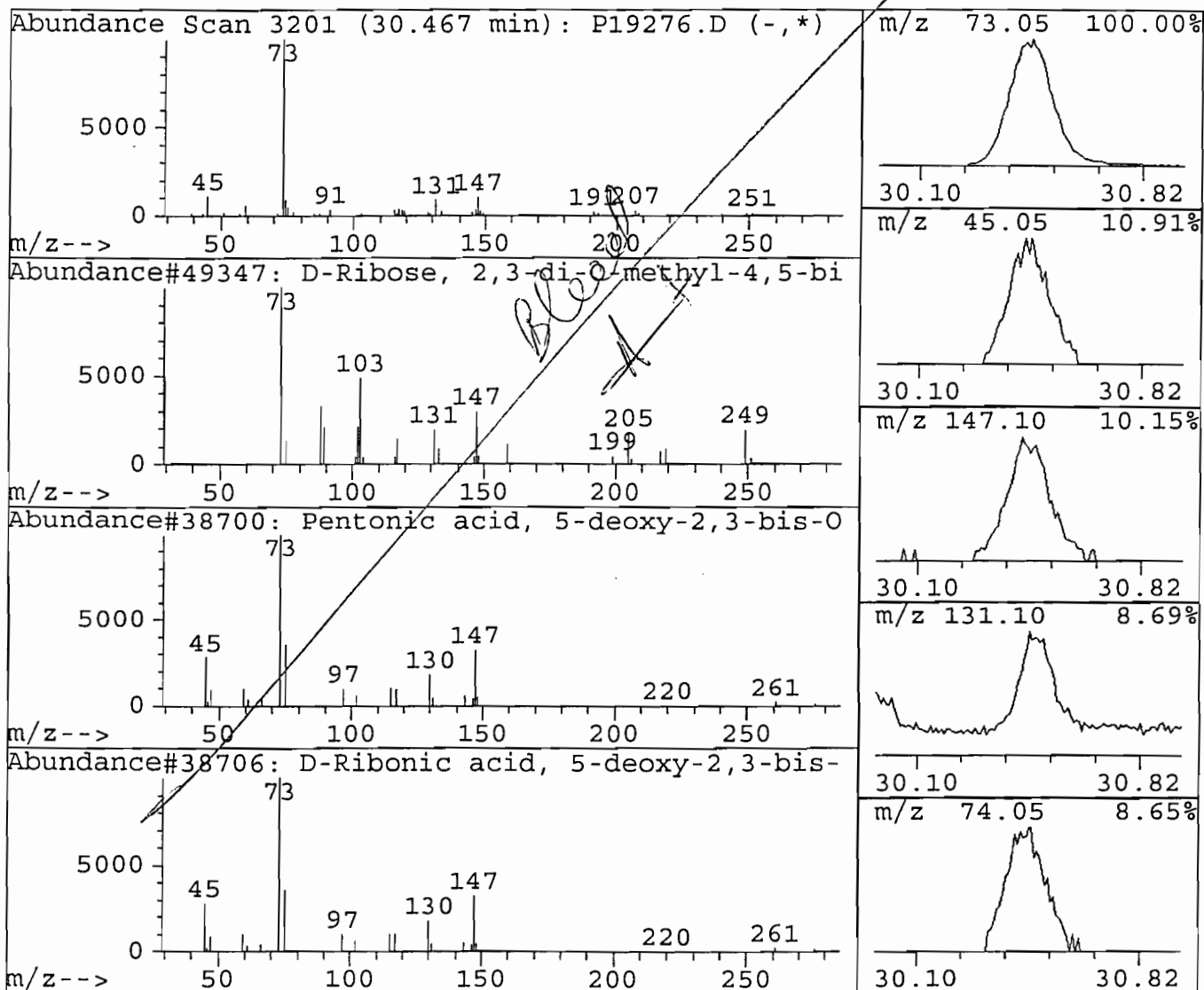
Data File : I:\HPCHEM\1\DATA\V2102199\P19276.D
Acq Time : 22 Oct 99 4:22 am
Sample : 13826ASP-88002
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.47	11.21 ug/L	1069730	1,4-dichlorobenzene-d4	22.57

Hit# of 12	Tentative ID	Ref#	CAS#	Qual
1	D-Ribose, 2,3-di-O-methyl-4,5-bis-O	49347	056196-37-3	40
2	Pentonic acid, 5-deoxy-2,3-bis-O-(t	38700	074742-33-9	39
3	D-Ribonic acid, 5-deoxy-2,3-bis-O-(	38706	062338-19-6	39
4	3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	38
5	1,8-cis-Undecadien-5-yne 3,7-bis-tr	46079	000000-00-0	37



000257

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-012-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88003

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19277.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.4		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.1		U
107-02-8	Acrolein	5.1		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	24		
75-15-0	Carbon Disulfide	5.1		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.3		U
107-13-1	Acrylonitrile	5.1		U
75-34-3	1,1-Dichloroethane	1.3		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.7		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.1		U
78-93-3	2-Butanone	5.1		U
56-23-5	Carbon Tetrachloride	4.1		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.6		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.1		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	1.3		U
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-012-SS30

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88003

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19277.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 2

Date Analyzed: 10/22/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	<u>ug/Kg</u>	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.1		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5.1		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.3		U
95-47-6	o-xylene	1.2		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.3		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.6		U
98-06-6	tert-Butylbenzene	1.2		U
95-63-6	1,2,4-Trimethylbenzene	1.6		U
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.7		U
96-12-8	1,2-Dibromo-3-chloropropane	5.1		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-012-SS30

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: O88003
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19277.D
Level: (low/med) LOW Date Received: 10/18/99
% Moisture: not dec. 2 Date Analyzed: 10/22/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0 Concentration Units:
(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000261

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19277.D
 Acq Time : 22 Oct 99 5:07 am
 Sample : 13826ASP-88003
 Misc : 5G/5ML
 Quant Time: Oct 22 11:36 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.26	96	732106	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	814209	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	594536	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	607647	49.82	ug/L	99.63%
30) 1,2-Dichlorethane-d4	8.66	65	486512	50.76	ug/L	101.52%
38) Toluene-d8	12.76	98	719809	50.41	ug/L	100.82%
42) 4-Bromofluorobenzene	19.47	95	753267	51.39	ug/L	102.78%
Target Compounds						Qvalue
10) Acetone	3.89	43	30323	23.11	ug/L	94
13) methylene chloride	4.58	84	8973	2.61	ug/L	92

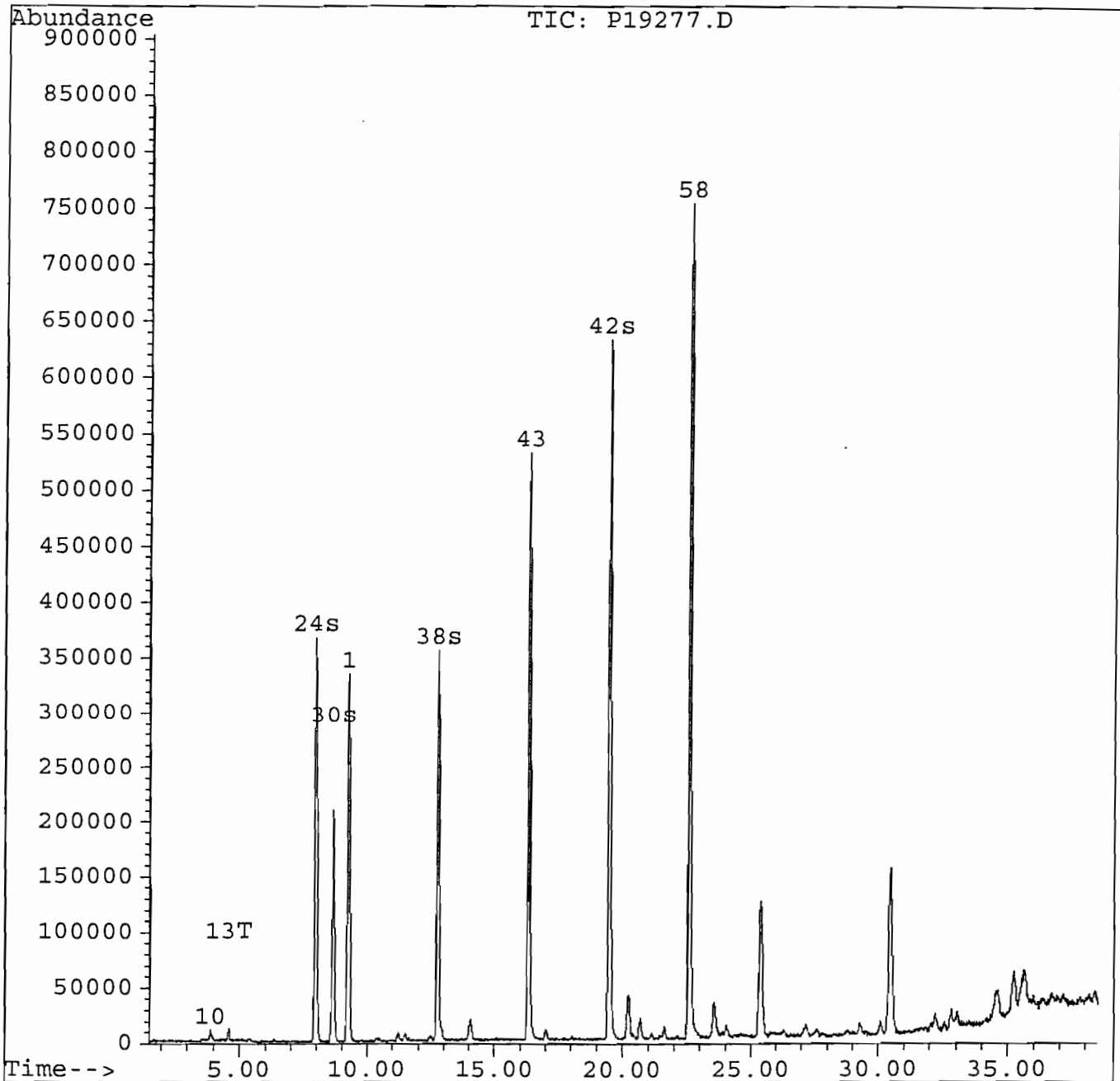
000262

Quantitation Report

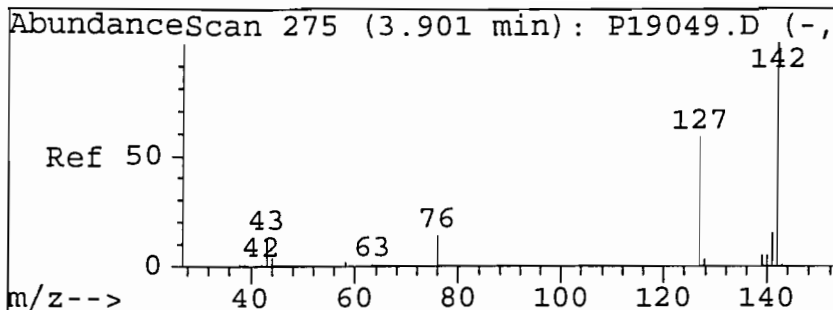
Data File : I:\HPCHEM\1\DATA\V2102199\P19277.D
Acq Time : 22 Oct 99 5:07 am
Sample : 13826ASP-88003
Misc : 5G/5ML
Quant Time: Oct 22 11:36 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

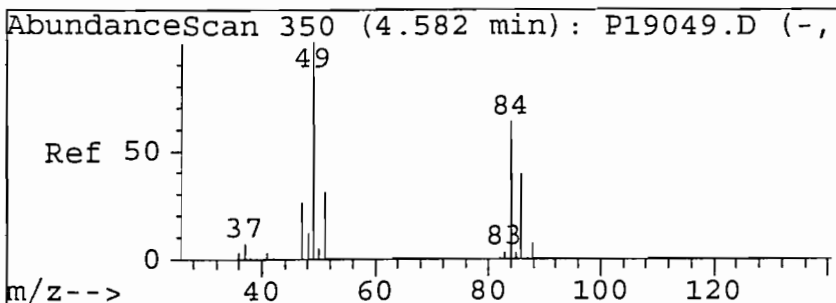
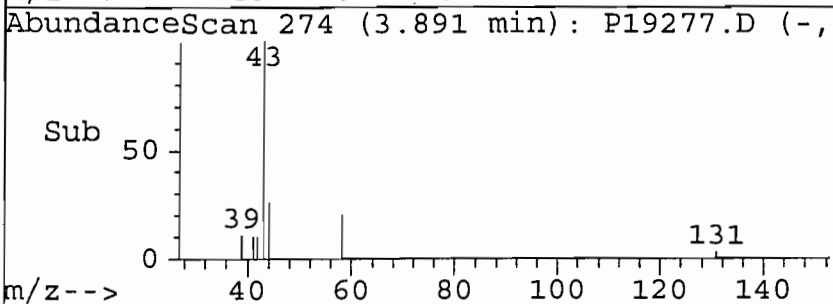
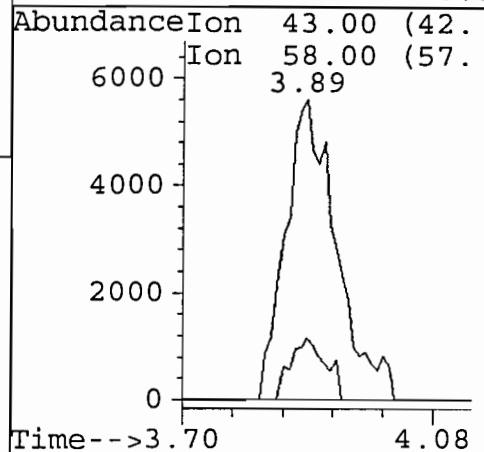
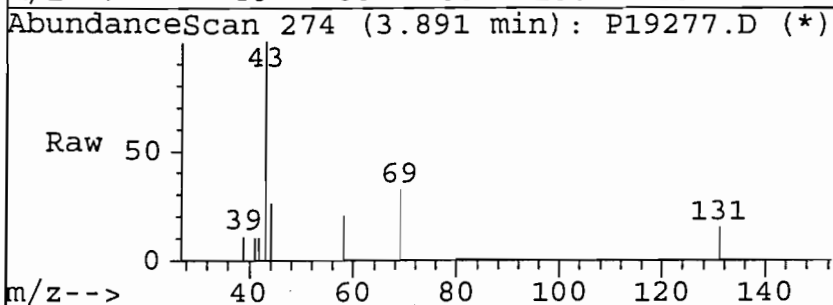


000263



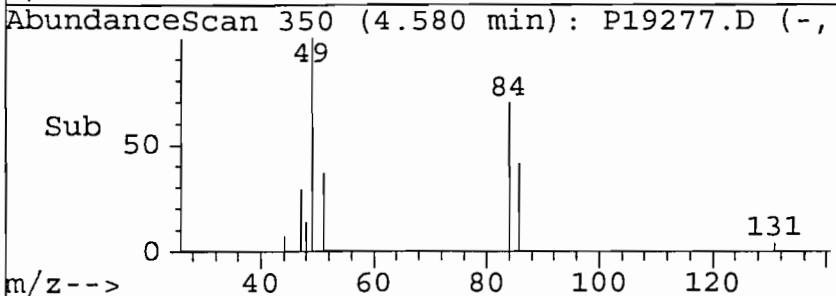
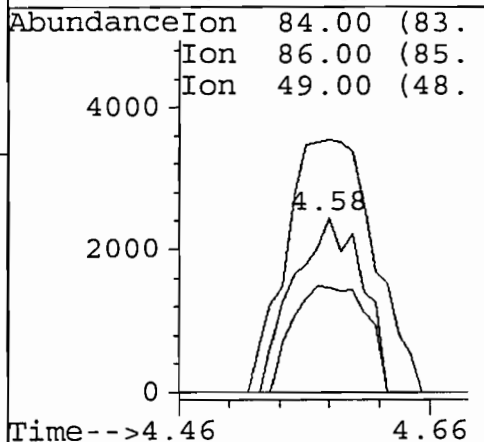
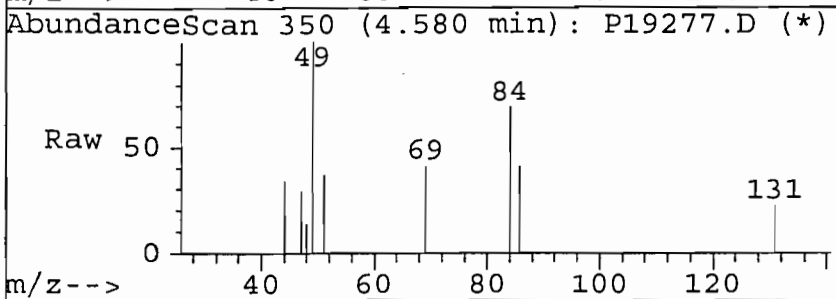
#10
Acetone
Concen: 23.11 ug/L
RT: 3.89 min Scan# 274
Delta R.T. -0.01 min
Lab File: P19277.D
Acq: 22 Oct 99 5:07 am

Tgt Ion:43	Resp:	30323
Ion Ratio	Lower	Upper
43 100		
58 14.2	0.0	34.0
0 0.0	0.0	0.0
0 0.0	0.0	0.0



#13
methylene chloride
Concen: 2.61 ug/L
RT: 4.58 min Scan# 350
Delta R.T. -0.00 min
Lab File: P19277.D
Acq: 22 Oct 99 5:07 am

Tgt Ion:84	Resp:	8973
Ion Ratio	Lower	Upper
84 100		
86 59.9	43.3	80.3
49 145.0	110.4	205.0
0 0.0	0.0	0.0



000264

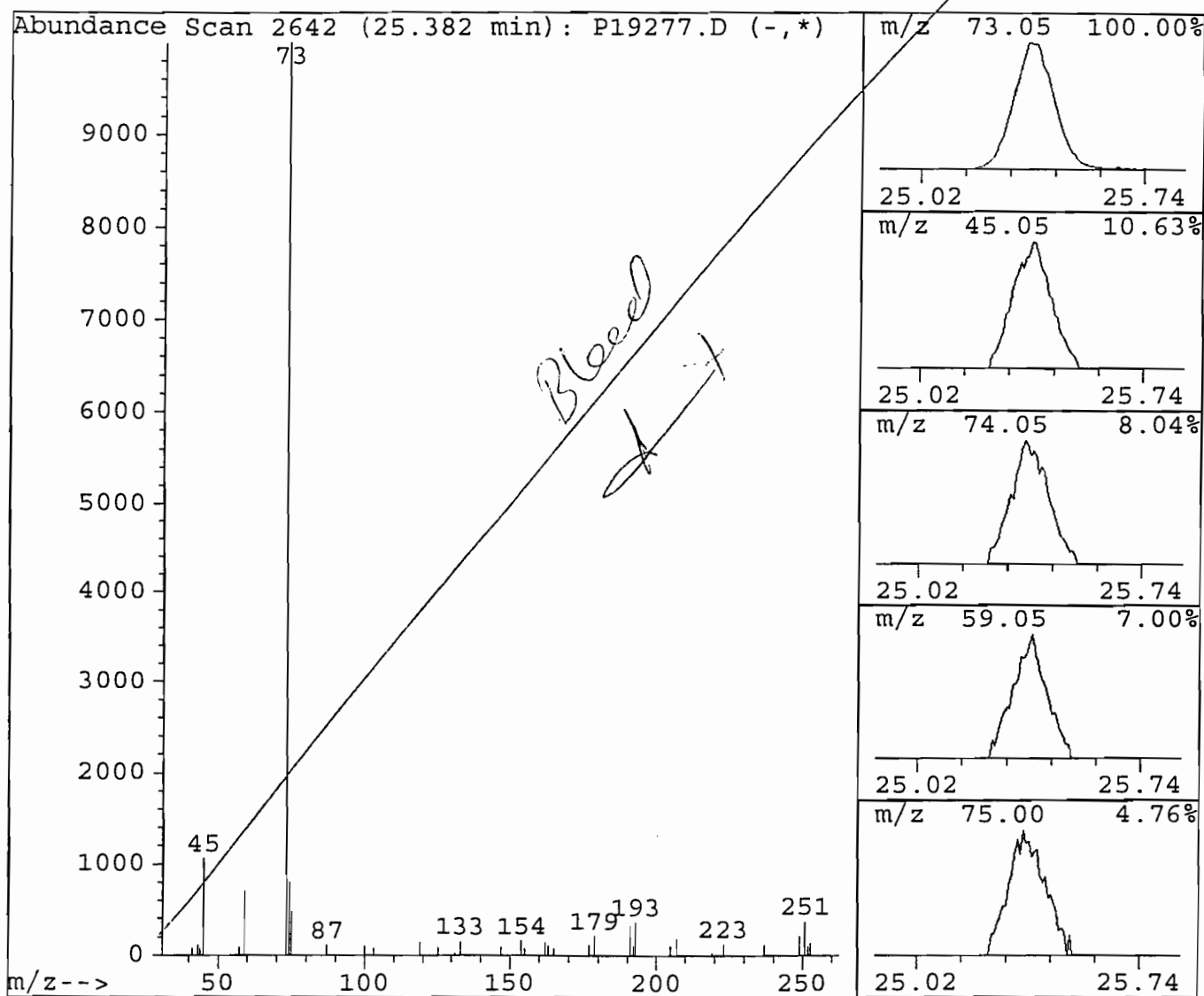
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19277.D
Acq Time : 22 Oct 99 5:07 am
Sample : 13826ASP-88003
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.38	11.30 ug/L	1067362	1,4-dichlorobenzene-d4	22.58	
Hit# of	0	Tentative ID	Ref#	CAS#	Qual
1	Unknown		0	000000-00-0	0



000265

Library Search Compound Report

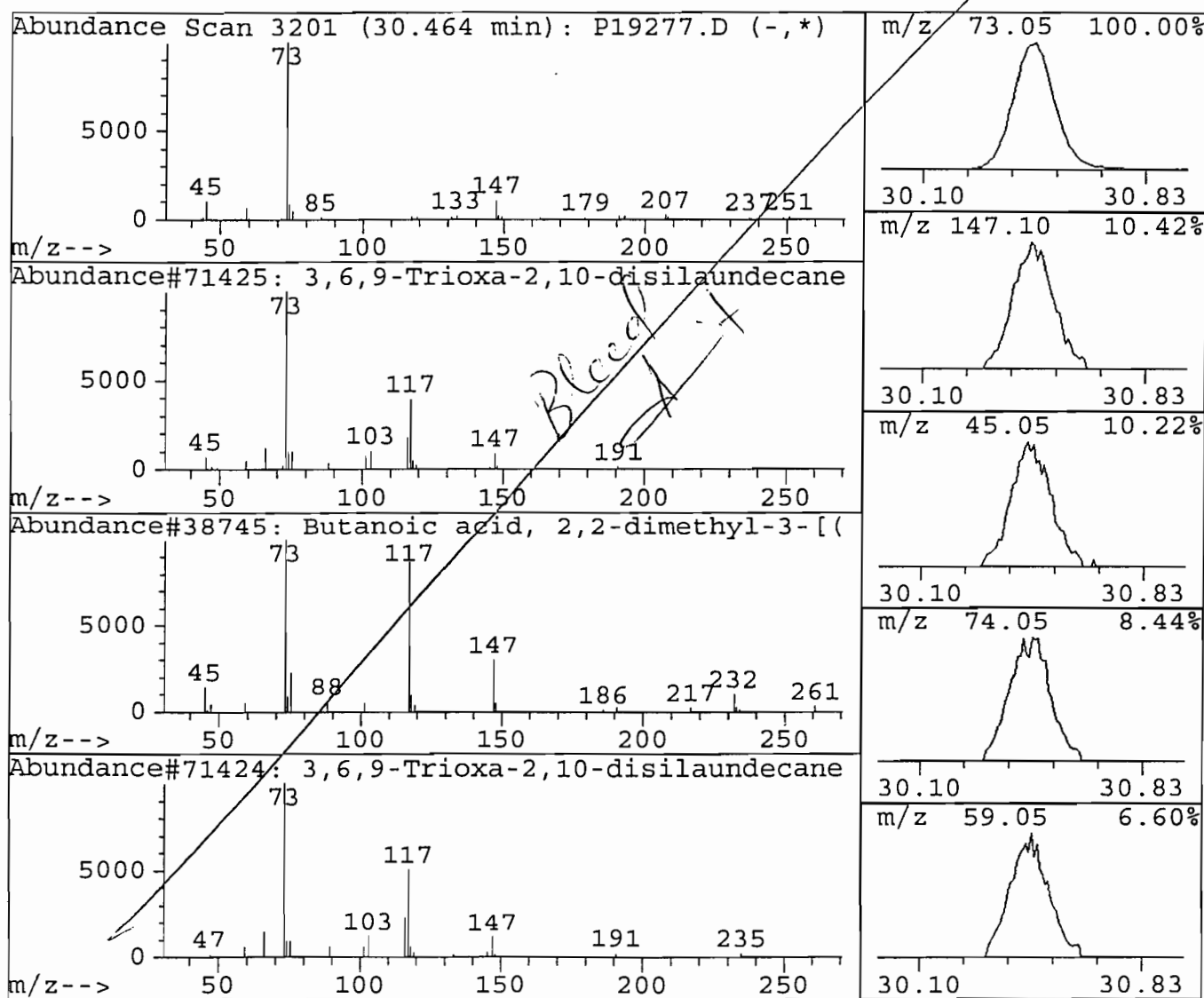
Data File : I:\HPCHEM\1\DATA\V2102199\P19277.D
Acq Time : 22 Oct 99 5:07 am
Sample : 13826ASP-88003
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.46	14.59 ug/L	1378355	1,4-dichlorobenzene-d4	22.58

Hit# of	4	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane, 2	71425	016654-74-3	38	
2	Butanoic acid, 2,2-dimethyl-3-[(tri	38745	055530-56-8	25	
3	3,6,9-Trioxa-2,10-disilaundecane, 2	71424	016654-74-3	25	
4	Butanoic acid, 2-methyl-3-[(trimeth	36153	055557-17-0	8	



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-012-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS

Matrix: (soil/water) SOIL Lab Sample ID: O88004

Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19278.D

Level: (low/med) LOW Date Received: 10/18/99

% Moisture: not dec. 3 Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.4		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	2		U
67-64-1	Acetone	18		
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	1		U
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.3		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.1		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	1		U
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	2.7		U
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	1.3		U
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-012-SS45

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88004

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19278.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 3

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.4		U
95-47-6	o-xylene	1.2		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.3		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.6		U
98-06-6	tert-Butylbenzene	1.2		U
95-63-6	1,2,4-Trimethylbenzene	8		
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-012-SS45

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: O88004
Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19278.D
Level: (low/med) LOW Date Received: 10/18/99
% Moisture: not dec. 3 Date Analyzed: 10/22/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:
Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1. 1120-21-4	Undecane	24.05	39	J
2. 112-40-3	Dodecane	27.15	84	J
3. 17301-23-4	Undecane, 2,6-dimethyl-	27.58	39	J
4.	Unknown	29.28	35	J
5. 629-50-5	Tridecane	30.06	65	J
6.	Unknown	30.48	31	J
7. 264-09-5	Benzocycloheptatriene	32.02	30	J
8.	Unknown	32.20	25	J
9. 629-59-4	Tetradecane	32.80	39	J
10. 571-58-4	Naphthalene, 1,4-dimethyl-	35.54	72	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
 Acq Time : 22 Oct 99 5:52 am
 Sample : 13826ASP-88004
 Misc : 5G/5ML
 Quant Time: Oct 22 11:36 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	707230	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.32	117	743064	50.00	ug/L	-0.02
58) 1,4-dichlorobenzene-d4	22.59	152	567701	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	572733	48.61	ug/L	97.21%
30) 1,2-Dichlorethane-d4	8.66	65	472013	50.98	ug/L	101.96%
38) Toluene-d8	12.77	98	669890	48.56	ug/L	97.13%
42) 4-Bromofluorobenzene	19.46	95	707976	50.00	ug/L	99.99%
Target Compounds						Qvalue
10) Acetone	3.90	43	22694	17.91	ug/L	91
13) methylene chloride	4.59	84	9902	2.98	ug/L	88
54) m&p-xylenes	17.00	106	14019	2.02	ug/L	90
66) 1,3,5-trimethylbenzene	20.64	105	61816	2.76	ug/L	97
68) 1,2,4-trimethylbenzene	21.63	105	181827	7.79	ug/L	93

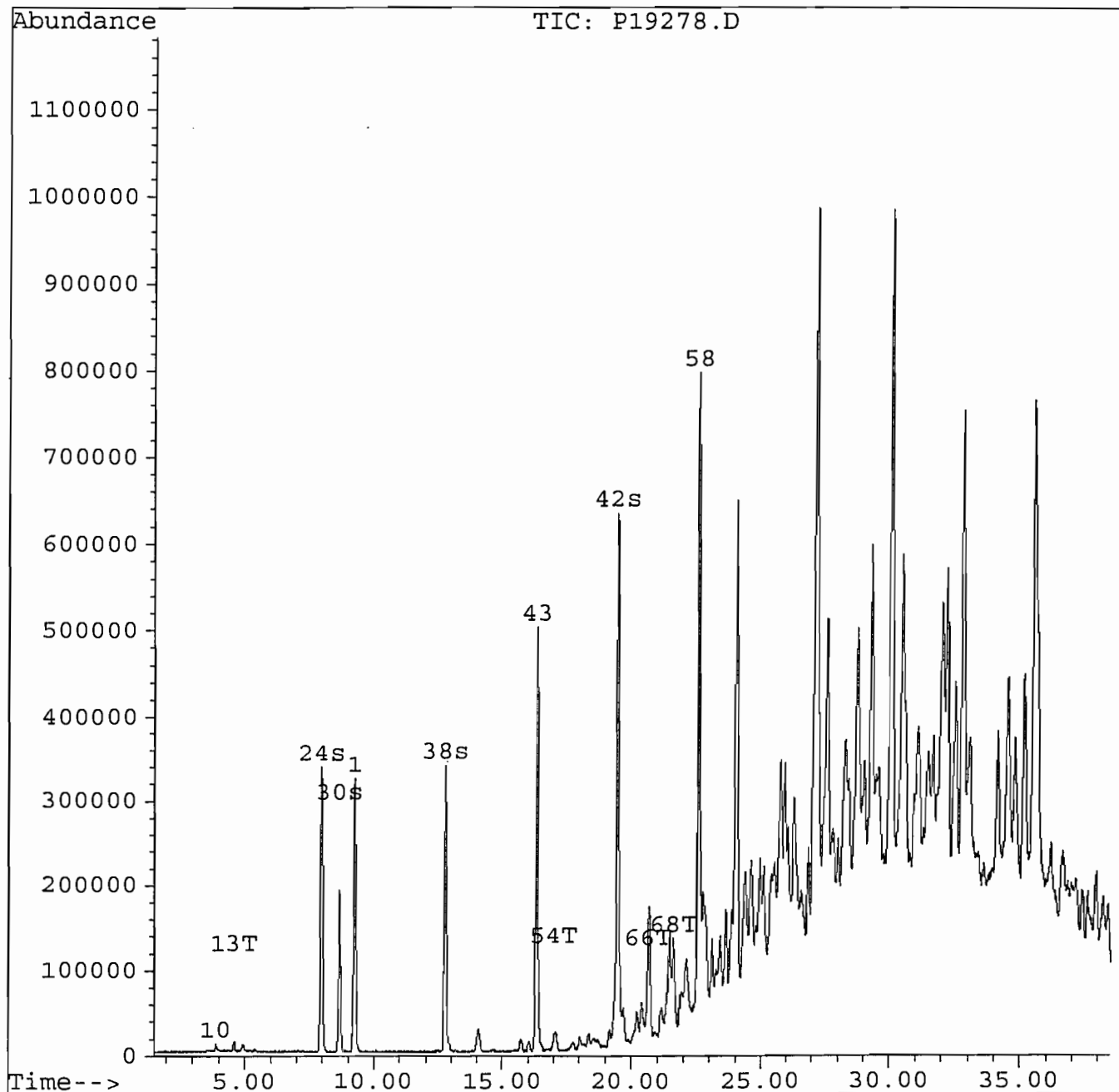
000271

Quantitation Report

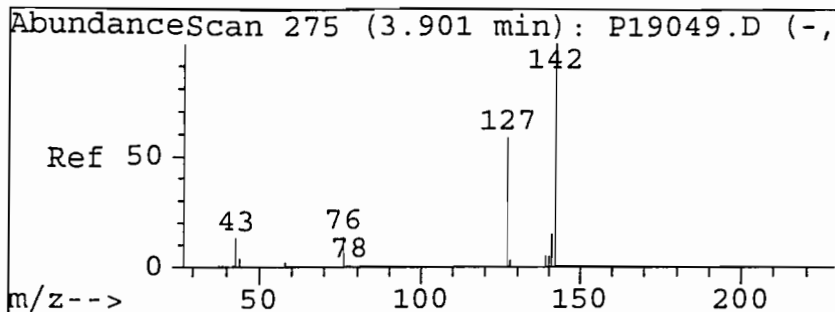
Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML
Quant Time: Oct 22 11:36 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

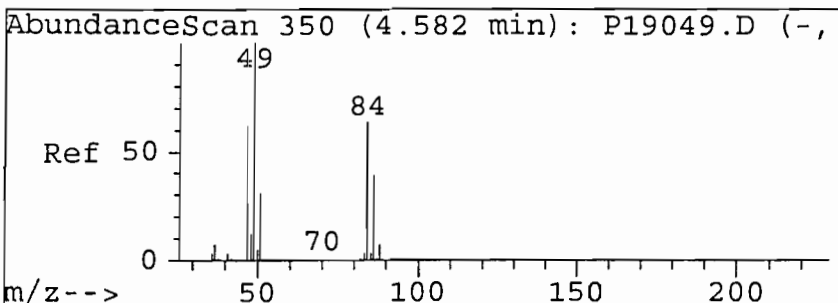
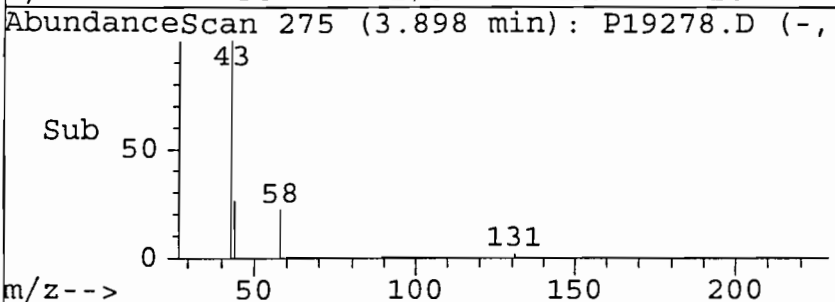
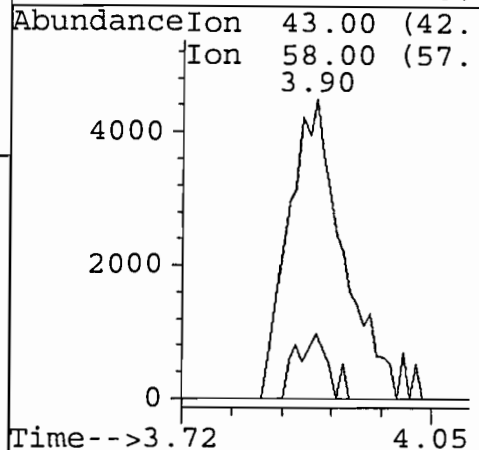
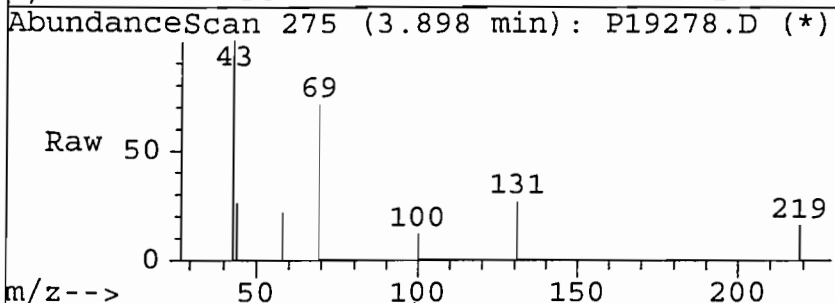


000272



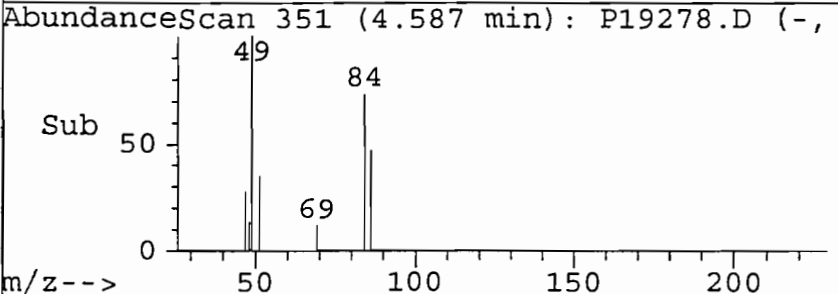
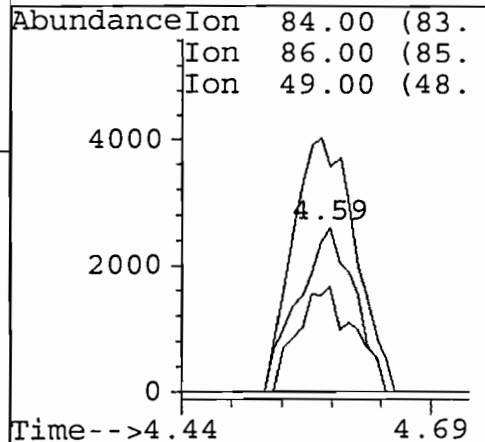
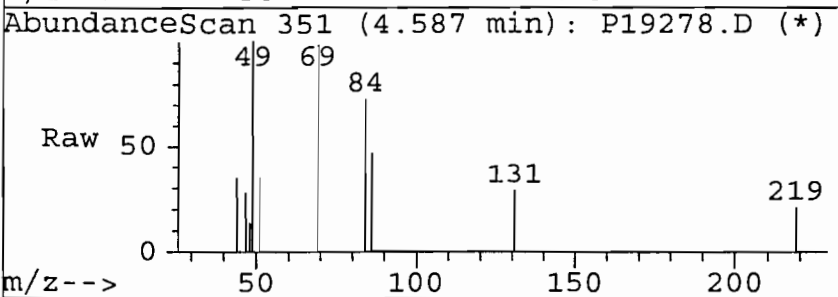
#10
Acetone
Concen: 17.91 ug/L
RT: 3.90 min Scan# 275
Delta R.T. -0.00 min
Lab File: P19278.D
Acq: 22 Oct 99 5:52 am

Tgt Ion:43	Resp:	22694
Ion Ratio	Lower	Upper
43 100		
58 13.3	0.0	34.0
0 0.0	0.0	0.0
0 0.0	0.0	0.0



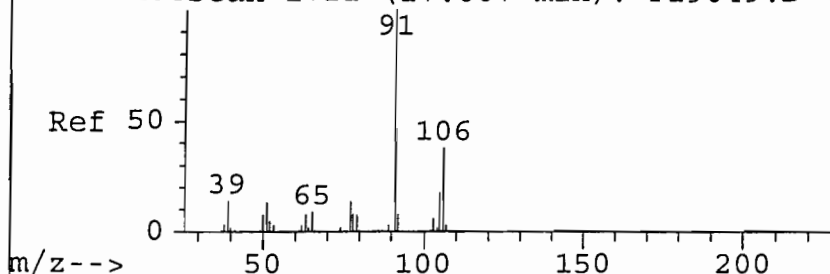
#13
methylene chloride
Concen: 2.98 ug/L
RT: 4.59 min Scan# 351
Delta R.T. 0.01 min
Lab File: P19278.D
Acq: 22 Oct 99 5:52 am

Tgt Ion:84	Resp:	9902
Ion Ratio	Lower	Upper
84 100		
86 63.8	43.3	80.3
49 137.0	110.4	205.0
0 0.0	0.0	0.0



000273

AbundanceScan 1721 (17.007 min): P19049.D (



#54

m&p-xylenes

Concen: 2.02 ug/L

RT: 17.00 min Scan# 1722

Delta R.T. -0.00 min

Lab File: P19278.D

Acq: 22 Oct 99 5:52 am

Tgt Ion:106 Resp: 14019

Ion Ratio Lower Upper

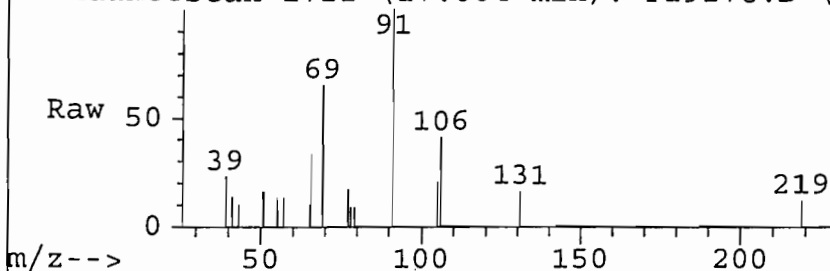
106 100

91 245.0 183.6 341.0

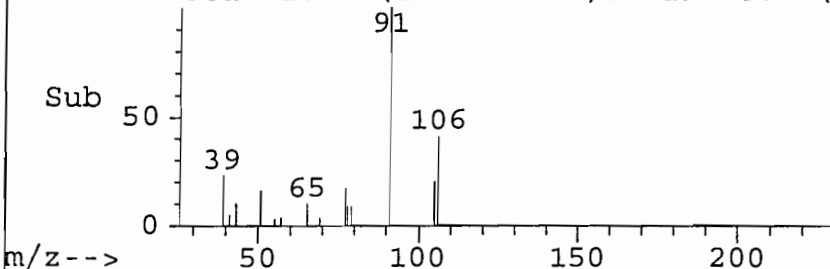
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 1722 (17.004 min): P19278.D (

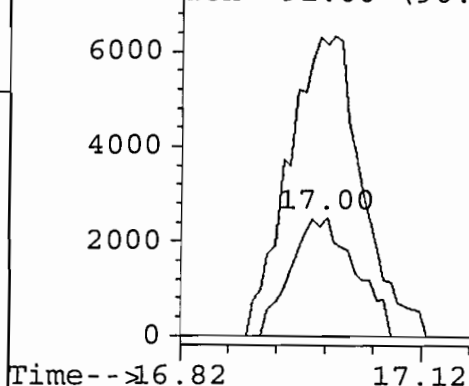


AbundanceScan 1722 (17.004 min): P19278.D (

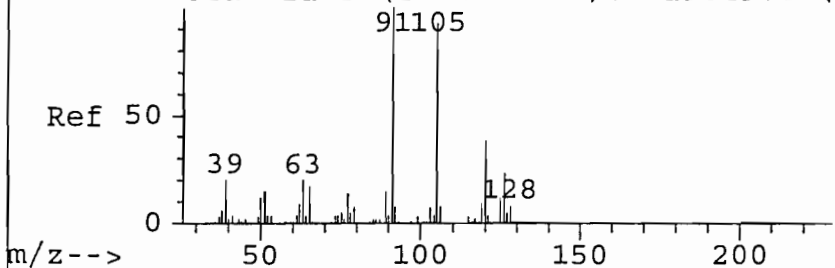


AbundanceIon 106.00 (105

Ion 91.00 (90.



AbundanceScan 2125 (20.658 min): P19049.D (



#66

1,3,5-trimethylbenzene

Concen: 2.76 ug/L

RT: 20.64 min Scan# 2123

Delta R.T. -0.02 min

Lab File: P19278.D

Acq: 22 Oct 99 5:52 am

Tgt Ion:105 Resp: 61816

Ion Ratio Lower Upper

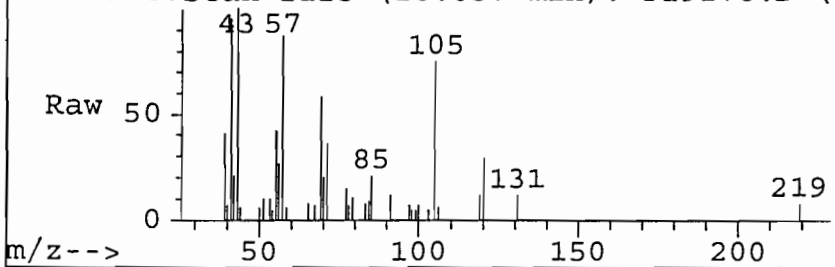
105 100

120 39.1 28.6 53.0

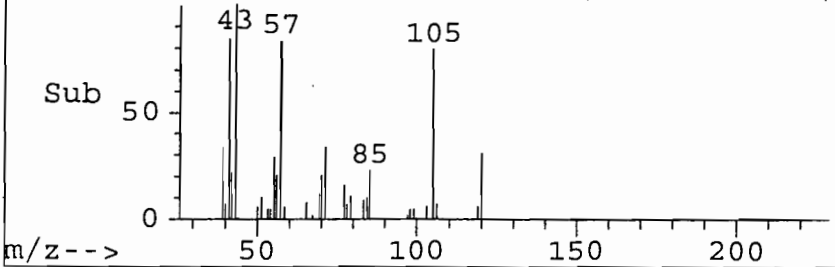
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2123 (20.637 min): P19278.D (

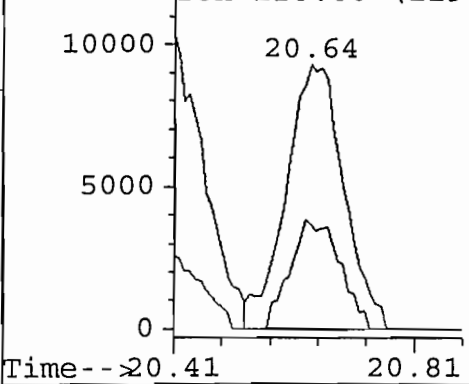


AbundanceScan 2123 (20.637 min): P19278.D (



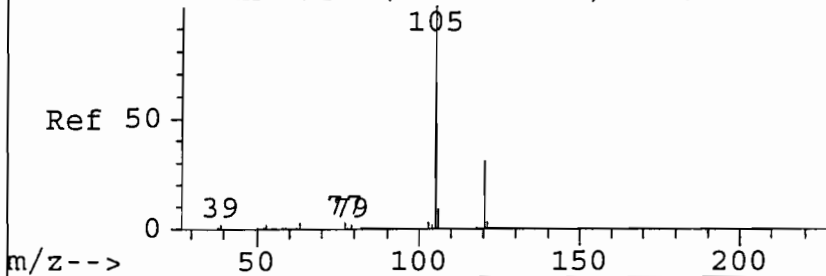
AbundanceIon 105.00 (104

Ion 120.00 (119



000274

AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzene

Concen: 7.79 ug/L

RT: 21.63 min Scan# 2232

Delta R.T. -0.01 min

Lab File: P19278.D

Acq: 22 Oct 99 5:52 am

Tgt Ion:105 Resp: 181827

Ion Ratio Lower Upper

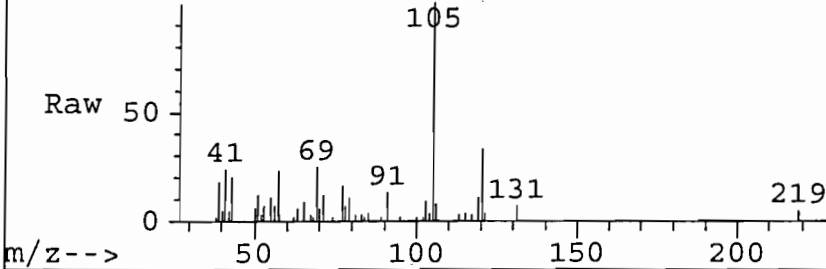
105 100

120 33.2 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

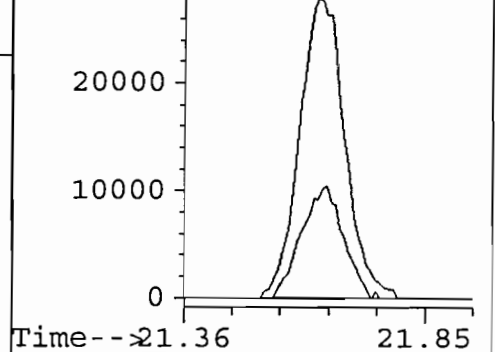
AbundanceScan 2232 (21.629 min): P19278.D (



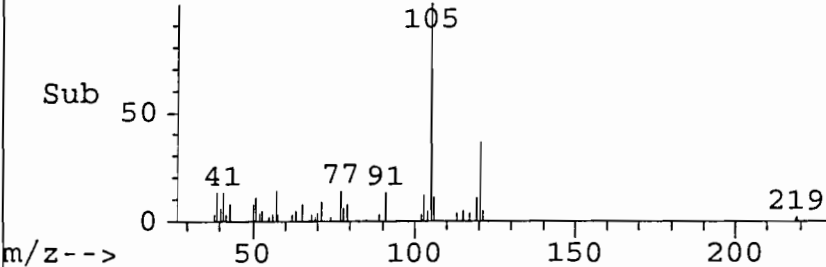
AbundanceIon 105.00 (104

Ion 120.00 (119

21.63



AbundanceScan 2232 (21.629 min): P19278.D (



000275

Library Search Compound Report

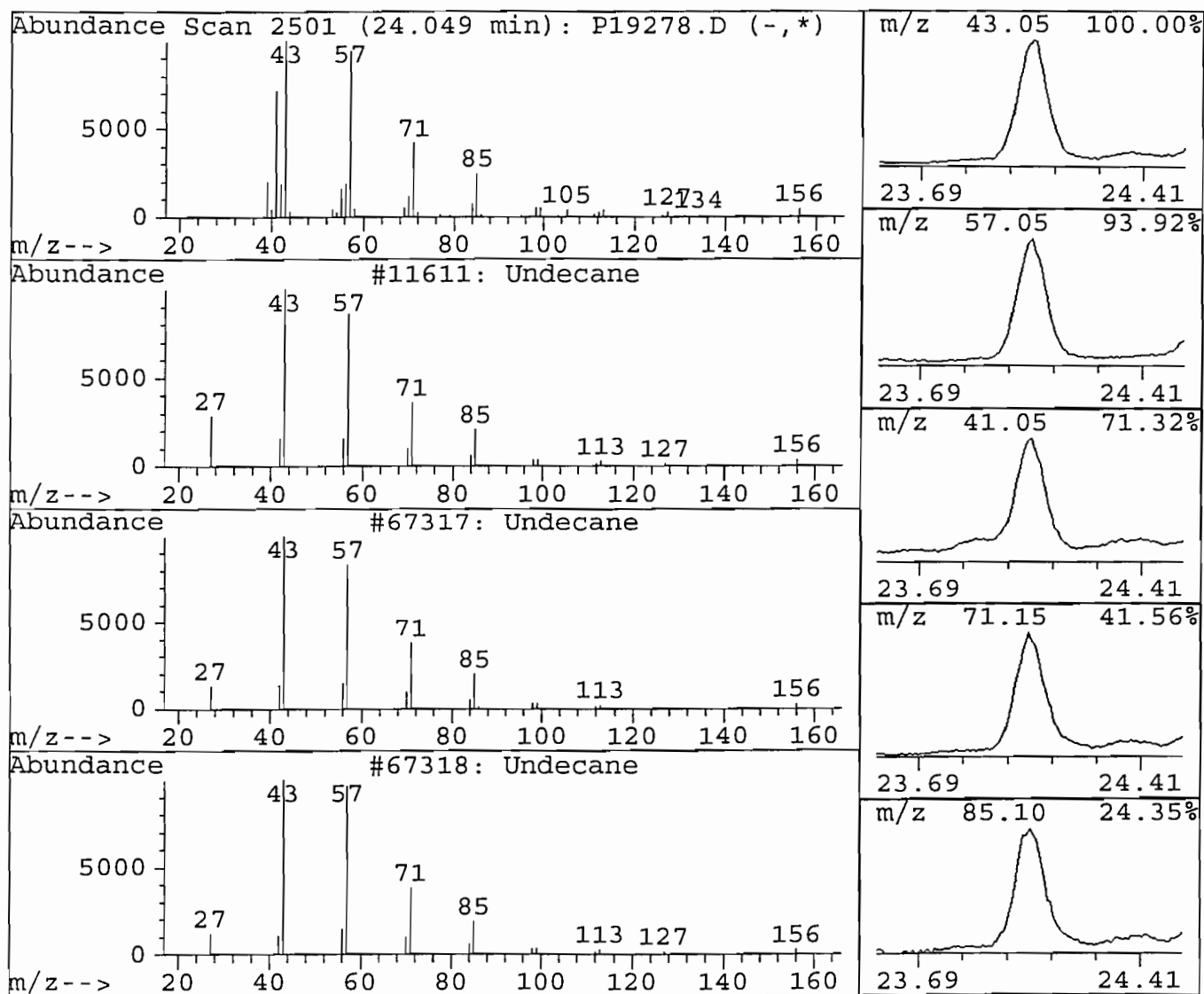
Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
24.05	37.68 ug/L	3855419	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane	11611	001120-21-4	97
2	Undecane	67317	001120-21-4	94
3	Undecane	67318	001120-21-4	94
4	Decane	66205	000124-18-5	90
5	Tridecane	69019	000629-50-5	90



000276

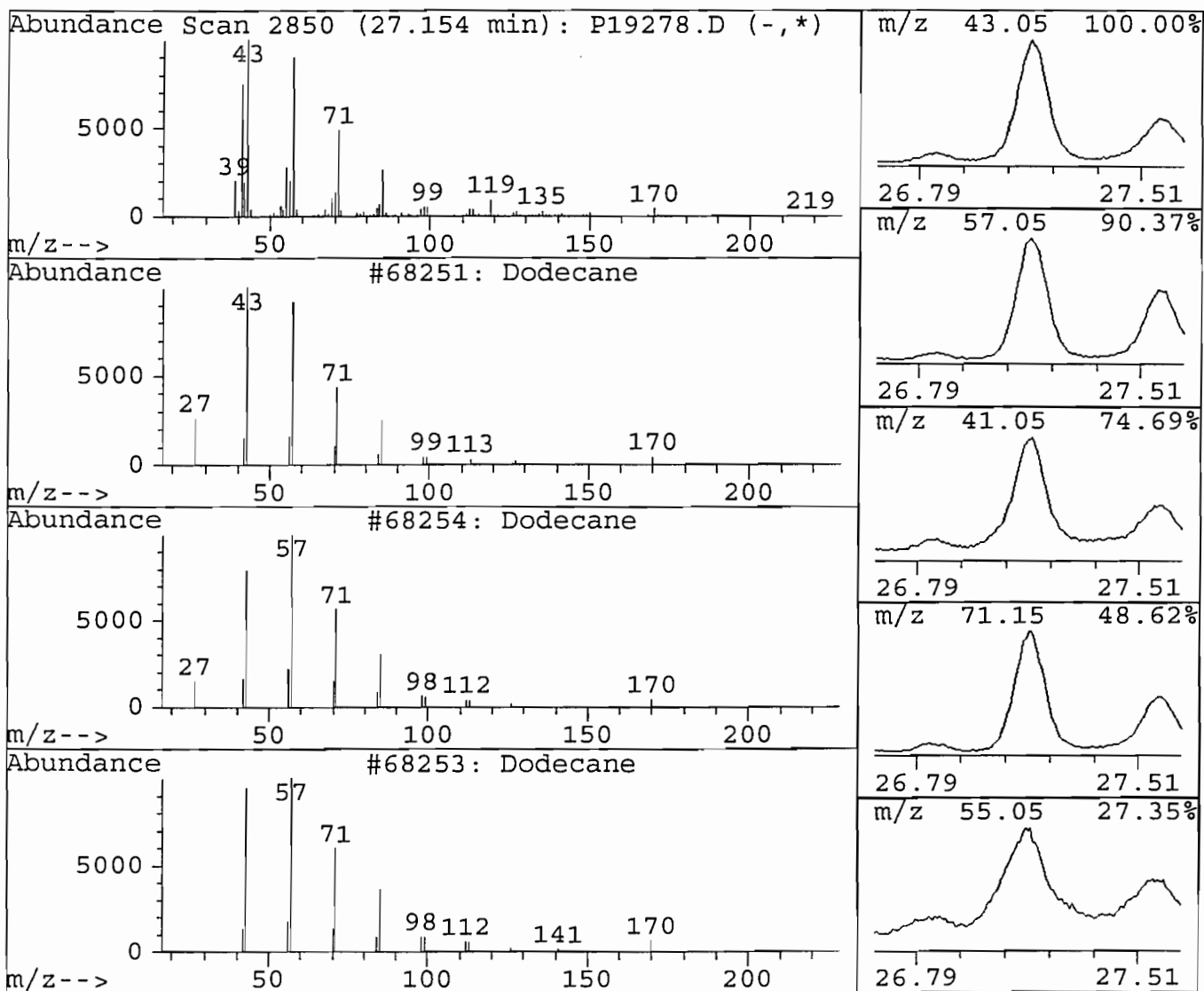
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.15	81.03 ug/L	8291000	1,4-dichlorobenzene-d4	22.59	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68251	000112-40-3	95
2	Dodecane		68254	000112-40-3	94
3	Dodecane		68253	000112-40-3	91
4	Dodecane		68249	000112-40-3	81
5	Undecane		11611	001120-21-4	80



000277

Library Search Compound Report

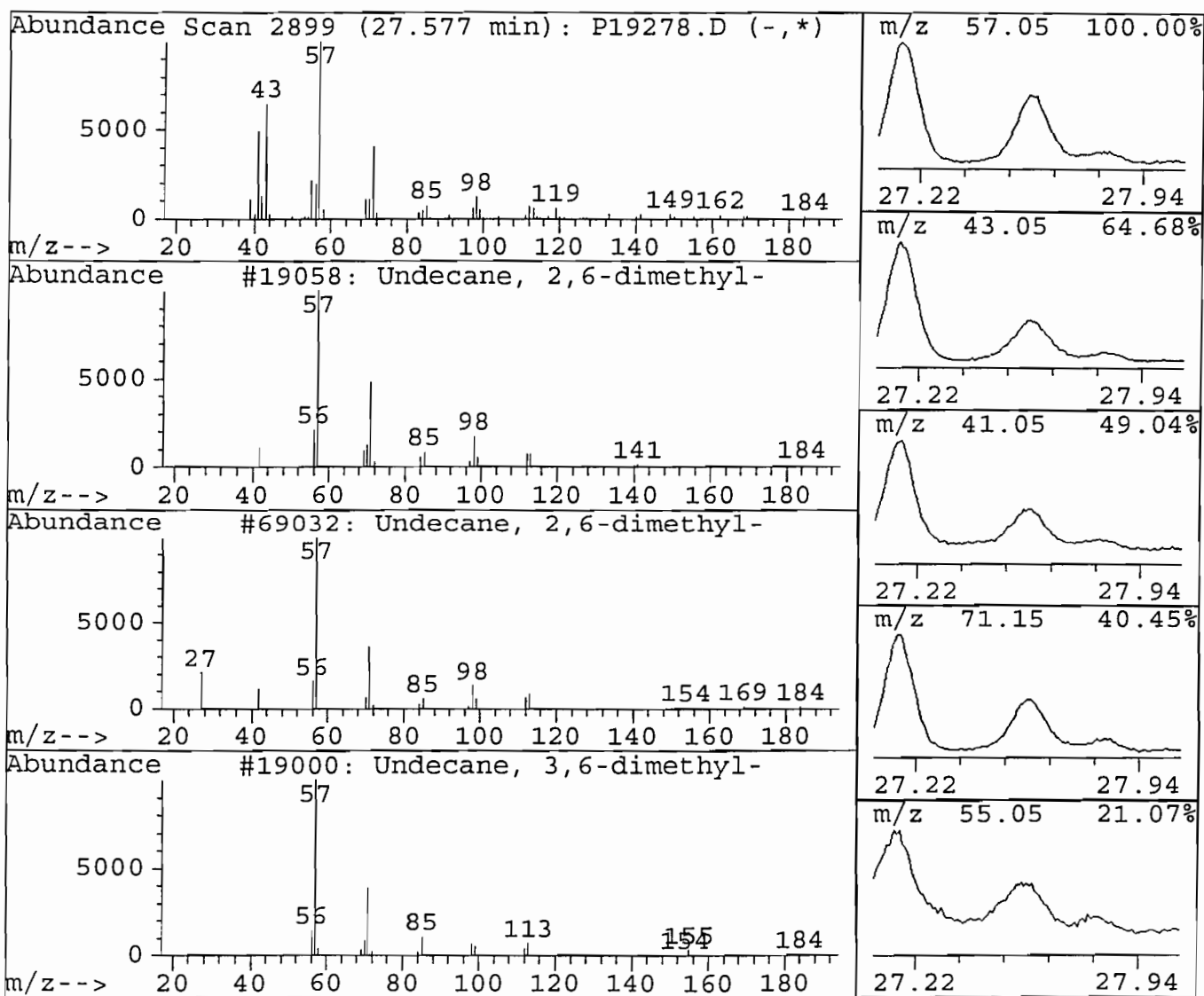
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Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.58	37.99 ug/L	3887283	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Undecane, 2,6-dimethyl-	19058	017301-23-4	95
2	Undecane, 2,6-dimethyl-	69032	017301-23-4	87
3	Undecane, 3,6-dimethyl-	19000	017301-28-9	83
4	Undecane, 2,6-dimethyl-	69033	017301-23-4	78
5	Tetradecane, 6,9-dimethyl-	29253	055045-13-1	64



000278

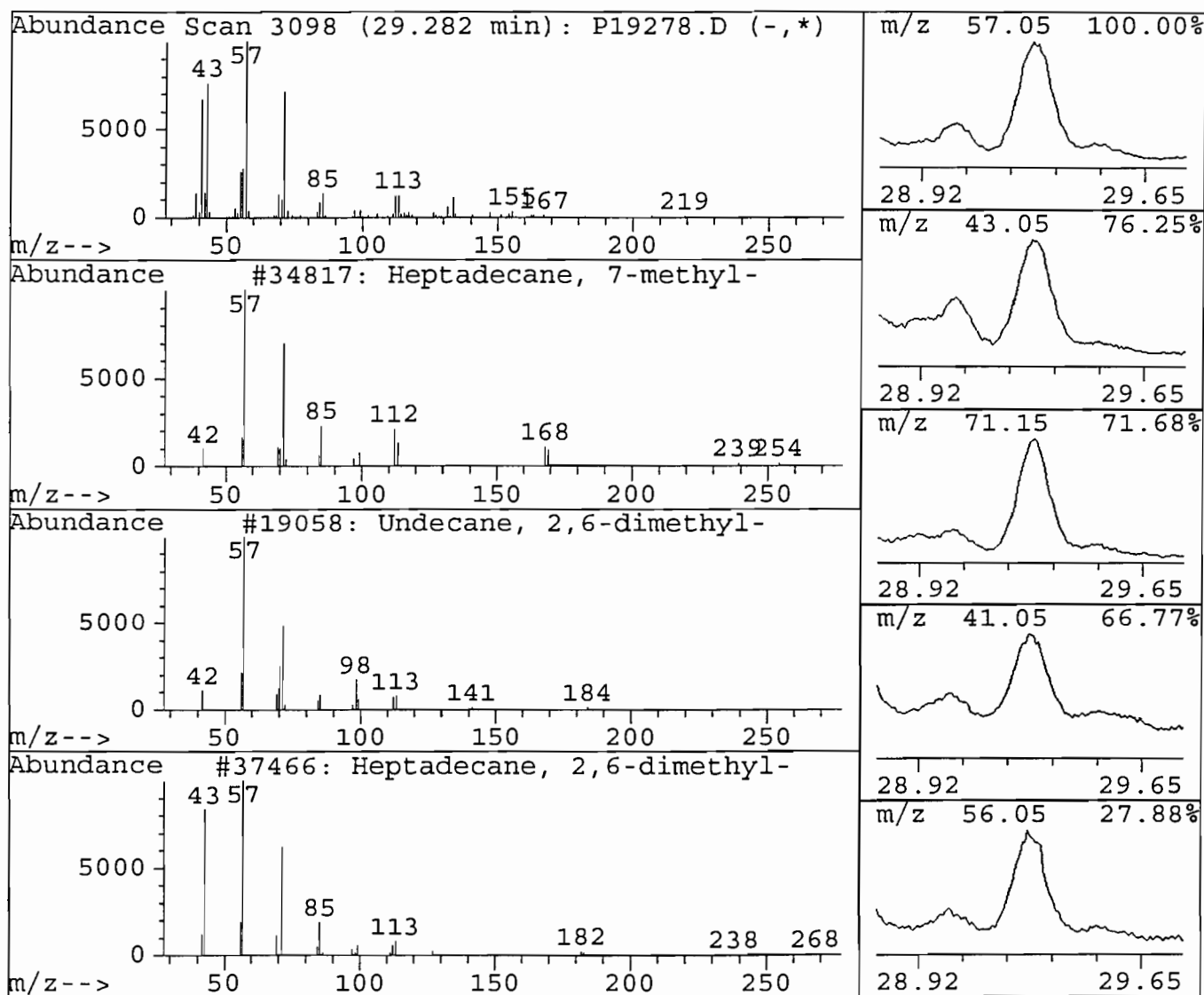
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.28	33.88 ug/L	3466131	1,4-dichlorobenzene-d4	22.59	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Heptadecane, 7-methyl-		34817	020959-33-5	59
2	Undecane, 2,6-dimethyl-		19058	017301-23-4	53
3	Heptadecane, 2,6-dimethyl-		37466	054105-67-8	50
4	Dodecane, 4,6-dimethyl-		22539	061141-72-8	49
5	Dodecane, 4,6-dimethyl-		69666	061141-72-8	47



000279

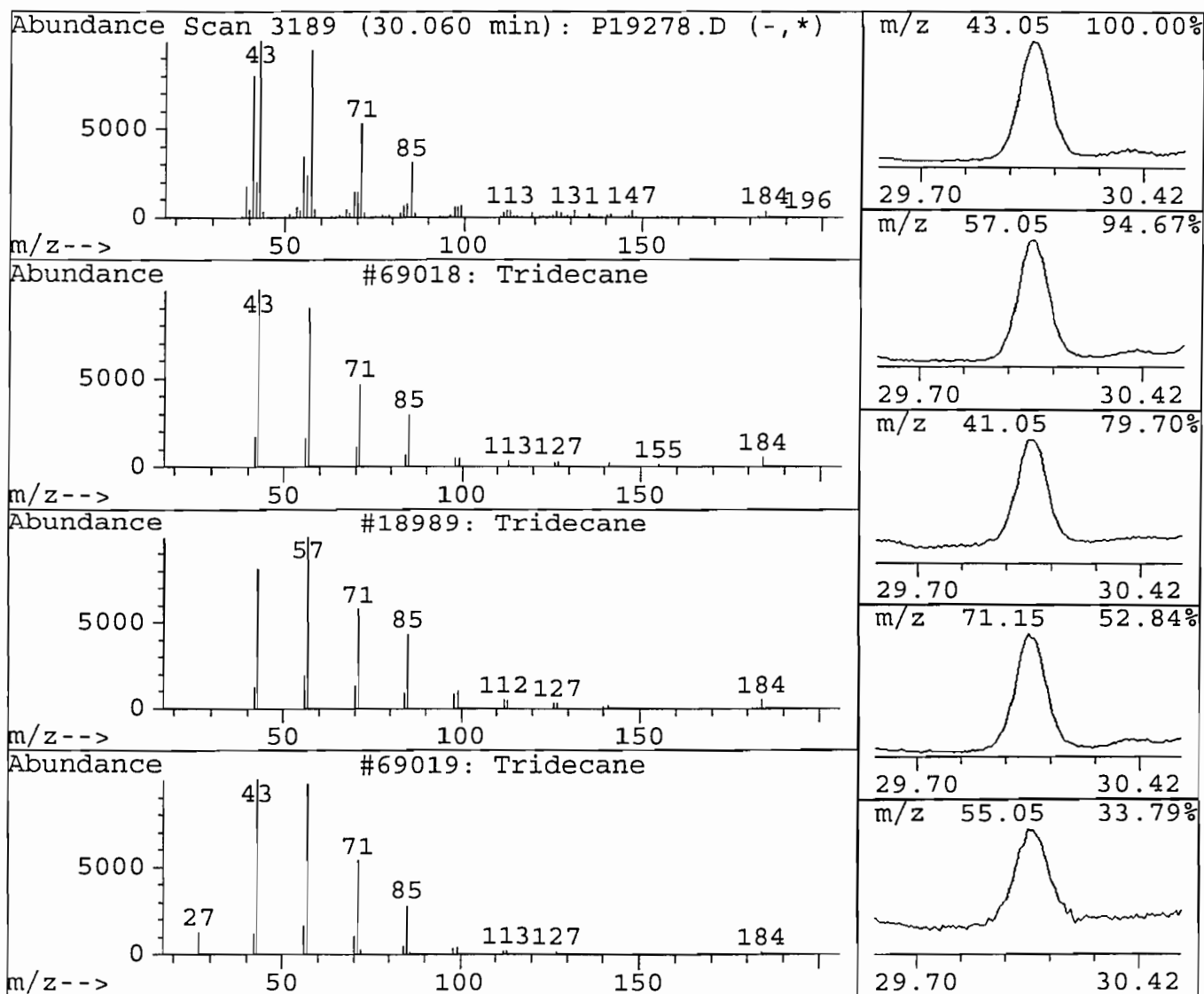
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.06	62.60 ug/L	6404991	1,4-dichlorobenzene-d4	22.59	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Tridecane		69018	000629-50-5	93
2	Tridecane		18989	000629-50-5	91
3	Tridecane		69019	000629-50-5	89
4	Dodecane		68254	000112-40-3	86
5	Tetradecane		69661	000629-59-4	78



000280

Library Search Compound Report

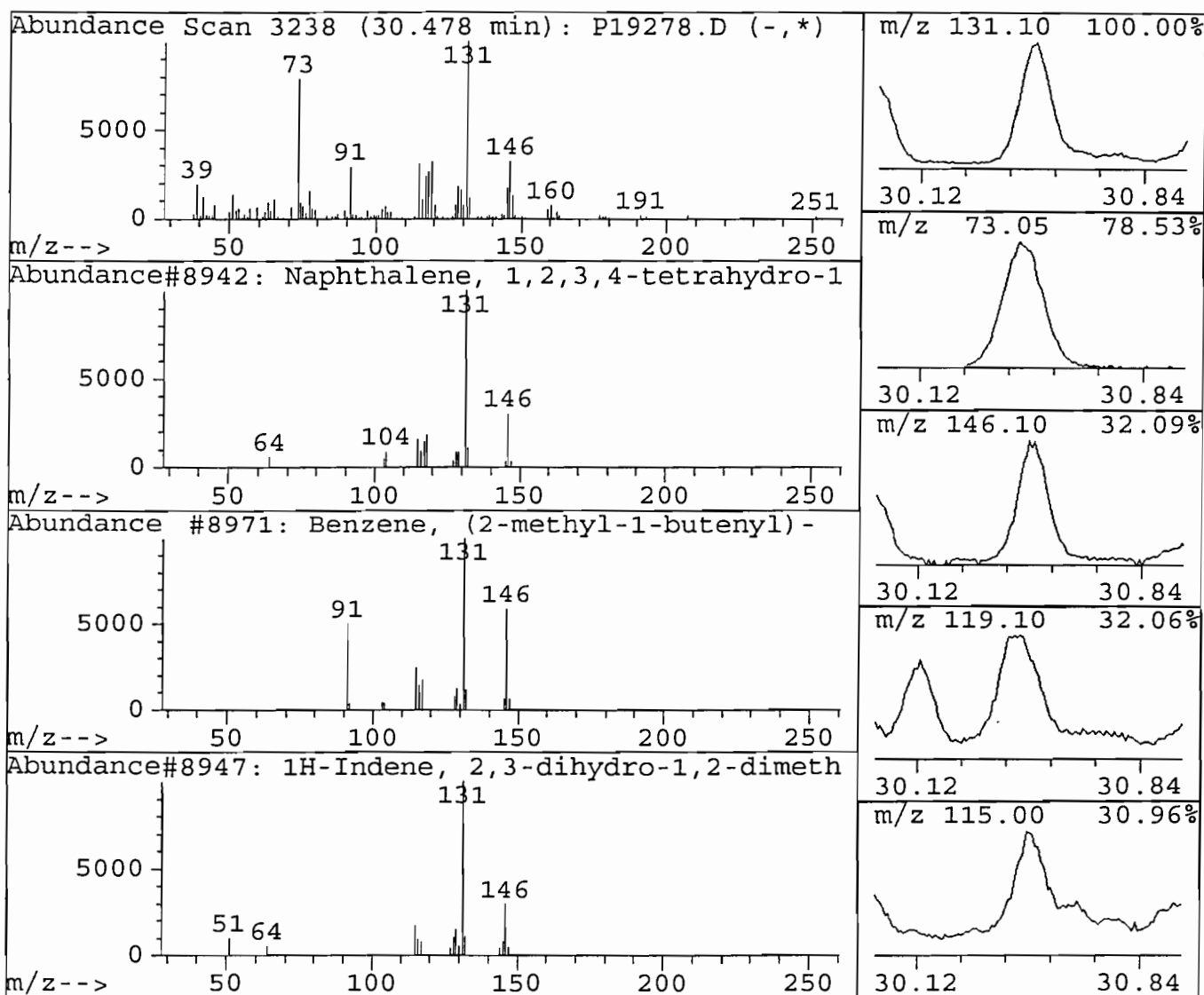
Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.48	30.31 ug/L	3101082	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,2,3,4-tetrahydro-1-m	8942	001559-81-5	70
2	Benzene, (2-methyl-1-butenyl)-	8971	056253-64-6	64
3	1H-Indene, 2,3-dihydro-1,2-dimethyl	8947	017057-82-8	60
4	1H-Indene, 2,3-dihydro-4,7-dimethyl	8955	006682-71-9	60
5	Naphthalene, 1,2,3,4-tetrahydro-1-m	66489	001559-81-5	58



000281

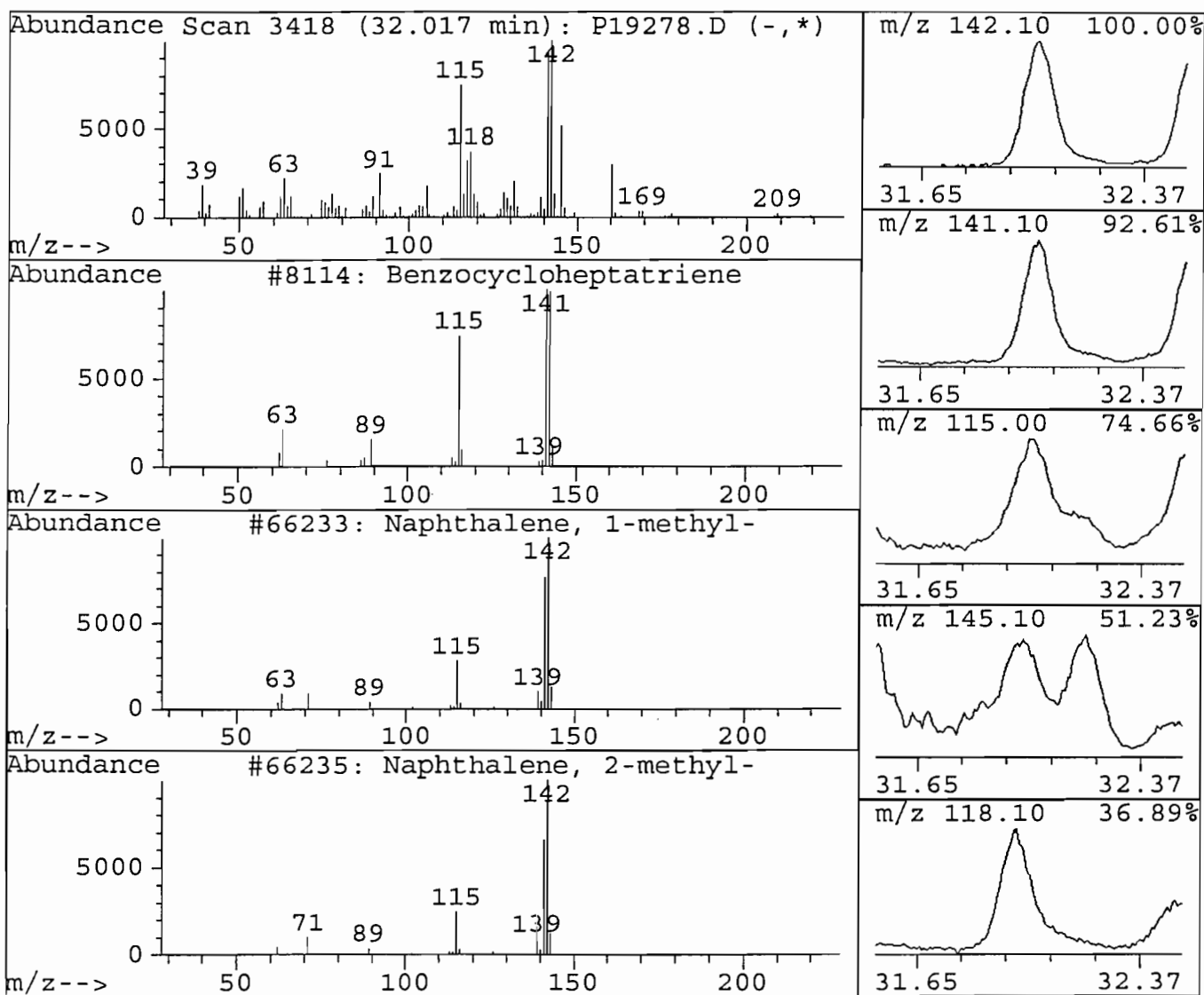
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
32.02	29.26 ug/L	2993429	1,4-dichlorobenzene-d4	22.59	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzocycloheptatriene		8114	000264-09-5	96
2	Naphthalene, 1-methyl-		66233	000090-12-0	95
3	Naphthalene, 2-methyl-		66235	000091-57-6	91
4	Naphthalene, 2-methyl-		66237	000091-57-6	86
5	Naphthalene, 1-methyl-		66232	000090-12-0	78



000282

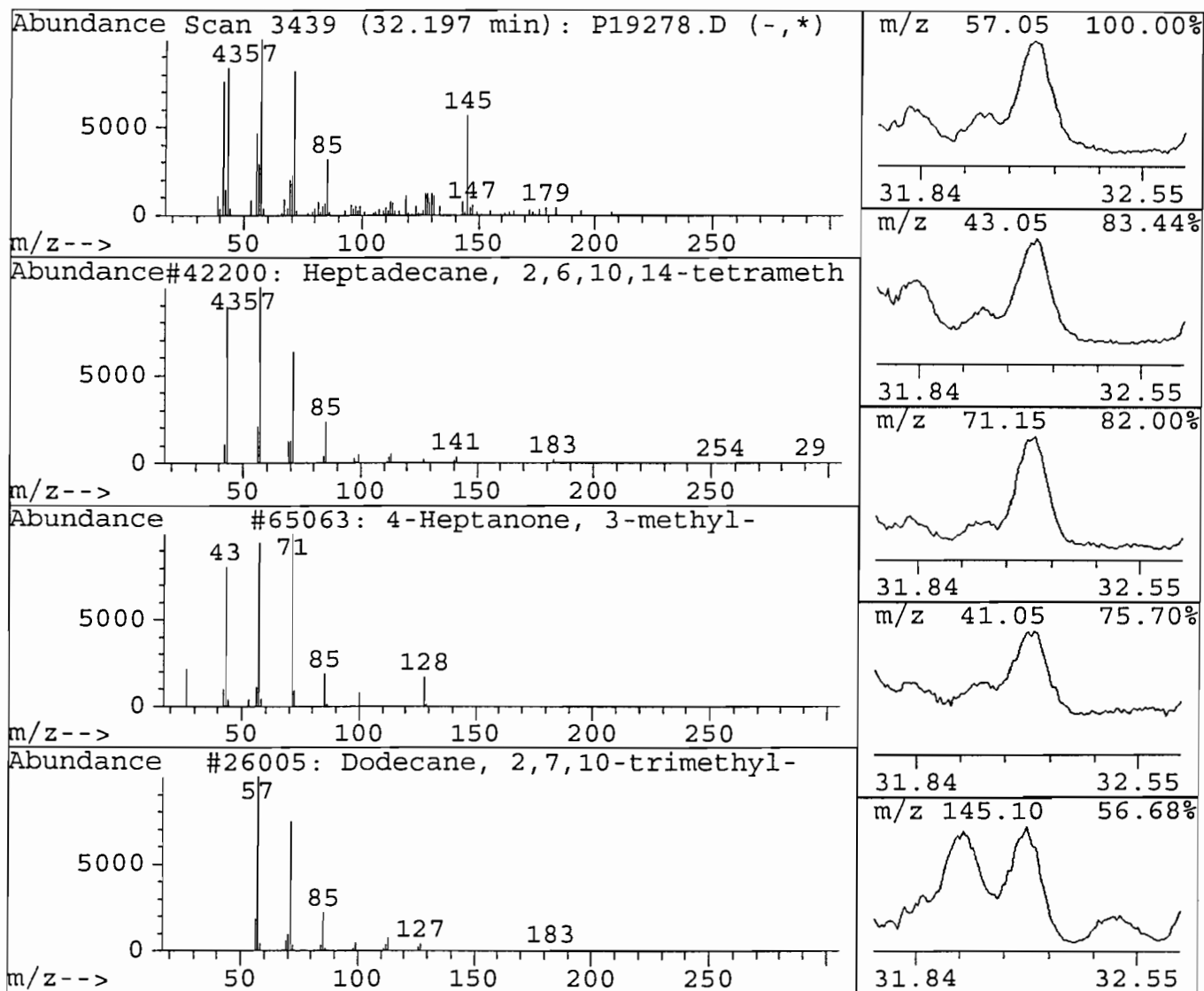
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
32.20	24.01 ug/L	2456606	1,4-dichlorobenzene-d4	22.59	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Heptadecane, 2,6,10,14-tetramethyl-		42200	018344-37-1	46
2	4-Heptanone, 3-methyl-		65063	015726-15-5	46
3	Dodecane, 2,7,10-trimethyl-		26005	074645-98-0	43
4	4-Heptanone, 3-methyl-		5060	015726-15-5	43
5	Dodecane, 2,6,11-trimethyl-		25998	031295-56-4	38



000283

Library Search Compound Report

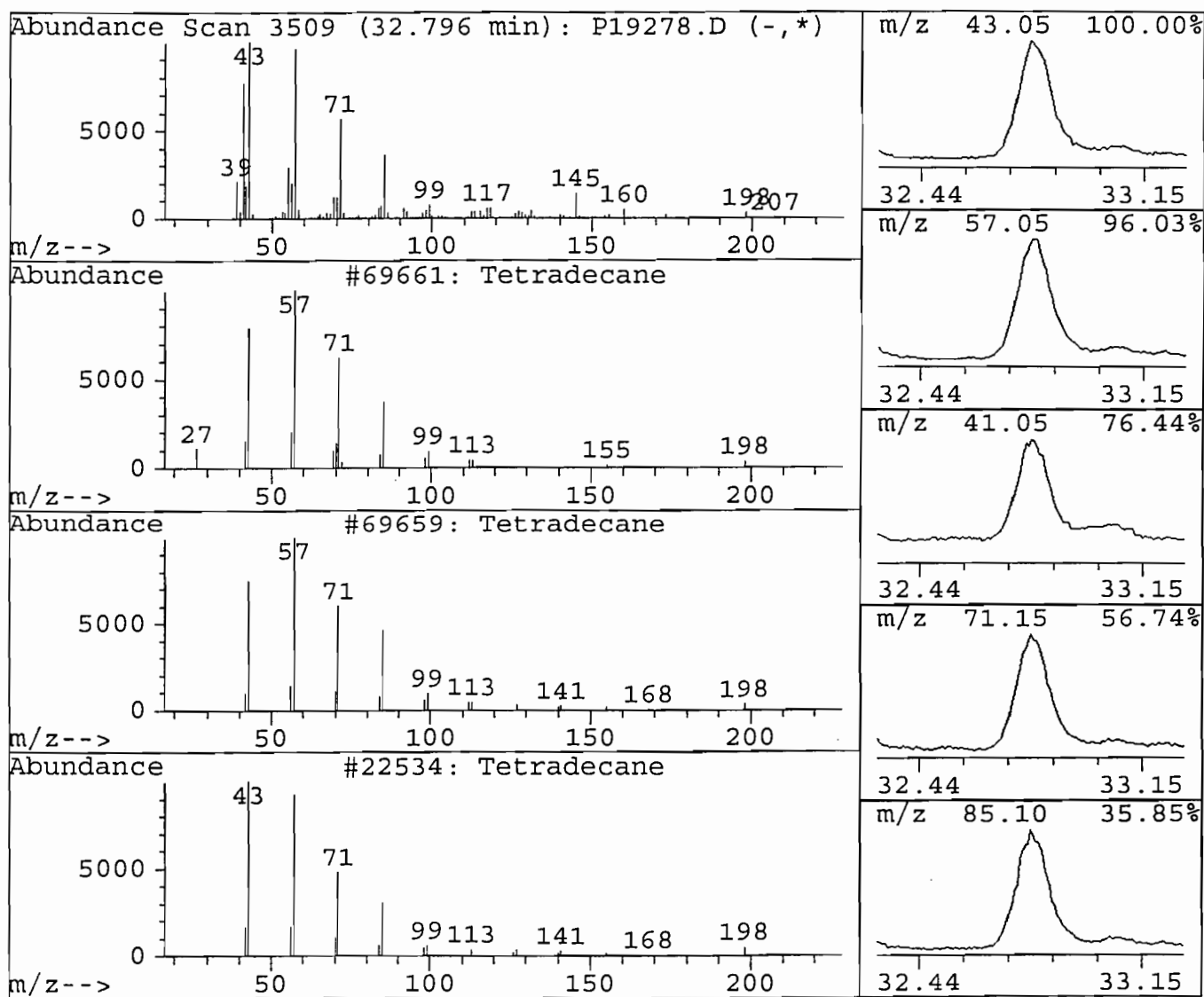
Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
32.80	38.17 ug/L	3905782	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tetradecane	69661	000629-59-4	96
2	Tetradecane	69659	000629-59-4	93
3	Tetradecane	22534	000629-59-4	93
4	Tetradecane	69658	000629-59-4	90
5	Tetradecane	69662	000629-59-4	86



000284

Library Search Compound Report

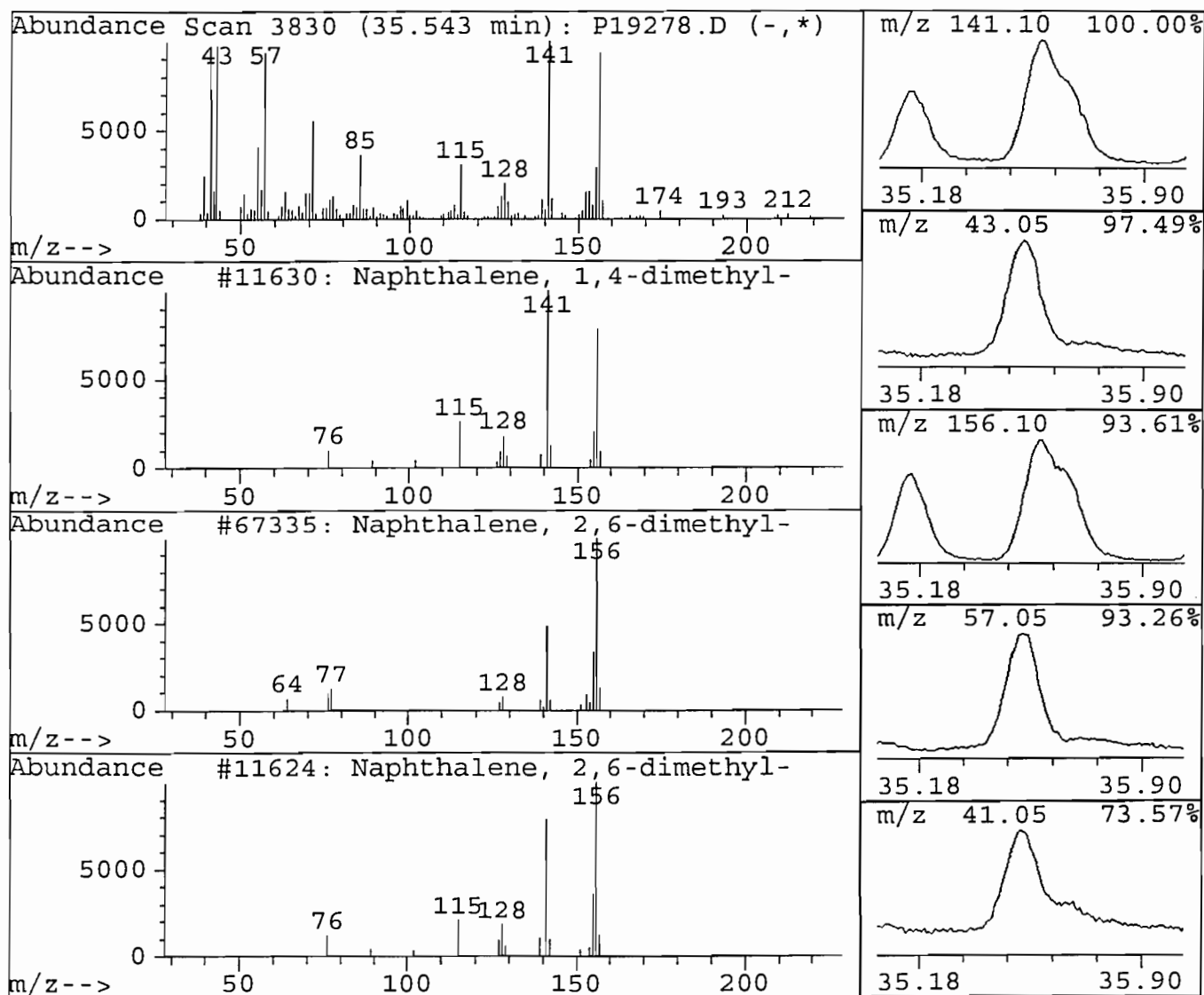
Data File : I:\HPCHEM\1\DATA\V2102199\P19278.D
Acq Time : 22 Oct 99 5:52 am
Sample : 13826ASP-88004
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.54	70.16 ug/L	7178651	1,4-dichlorobenzene-d4	22.59

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, 1,4-dimethyl-	11630	000571-58-4	98
2	Naphthalene, 2,6-dimethyl-	67335	000581-42-0	97
3	Naphthalene, 2,6-dimethyl-	11624	000581-42-0	97
4	Naphthalene, 1,5-dimethyl-	11633	000571-61-9	97
5	Naphthalene, 1,3-dimethyl-	11629	000575-41-7	97



000285

SAMPLE NO.

GP-013-SS8

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O88005

Lab File ID: P19279.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

FORM I VOA000286^{3/90}

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

GP-013-SS8

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88005
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19279.D
 Level: (low/med) LOW Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	19.66	280	J
2.	Unknown	21.54	470	J
3.	Unknown	22.13	460	J
4.	Unknown	22.81	400	J
5. 493-02-7	Naphthalene, decahydro-, tra	23.31	230	J
6.	Unknown	23.49	270	J
7.	Unknown	25.16	220	J
8. 112-40-3	Dodecane	27.18	340	J
9. 17301-23-4	Undecane, 2,6-dimethyl-	27.60	330	J
10.	Unknown	29.29	260	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
 Acq Time : 22 Oct 99 6:36 am
 Sample : 13826ASP-88005
 Misc : 5G/5ML
 Quant Time: Oct 22 11:45 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	571726	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	573327	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.60	152	434158	50.00	ug/L	0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.98	113	502150	52.72	ug/L	105.43%
30) 1,2-Dichlorethane-d4	8.67	65	405639	54.19	ug/L	108.39%
38) Toluene-d8	12.77	98	545116	48.88	ug/L	97.77%
42) 4-Bromofluorobenzene	19.49	95	604242	52.78	ug/L	105.57%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
10) Acetone	3.89	43	23200	22.64	ug/L	84
13) methylene chloride	4.58	84	11027	4.11	ug/L	82
~~FH 41) 1,1,2-trichloroethane~~	14.42	97	10600	3.17	ug/L	87
~~FH 49) 2-Hexanone~~	14.63	43	67101	30.71	ug/L	68
~~FH 65) 4-chlorotoluene~~	20.66	126	12983	2.74	ug/L m	85
~~FH 74) n-butylbenzene False Peak~~	23.89	91	162308	7.85	ug/L m	84

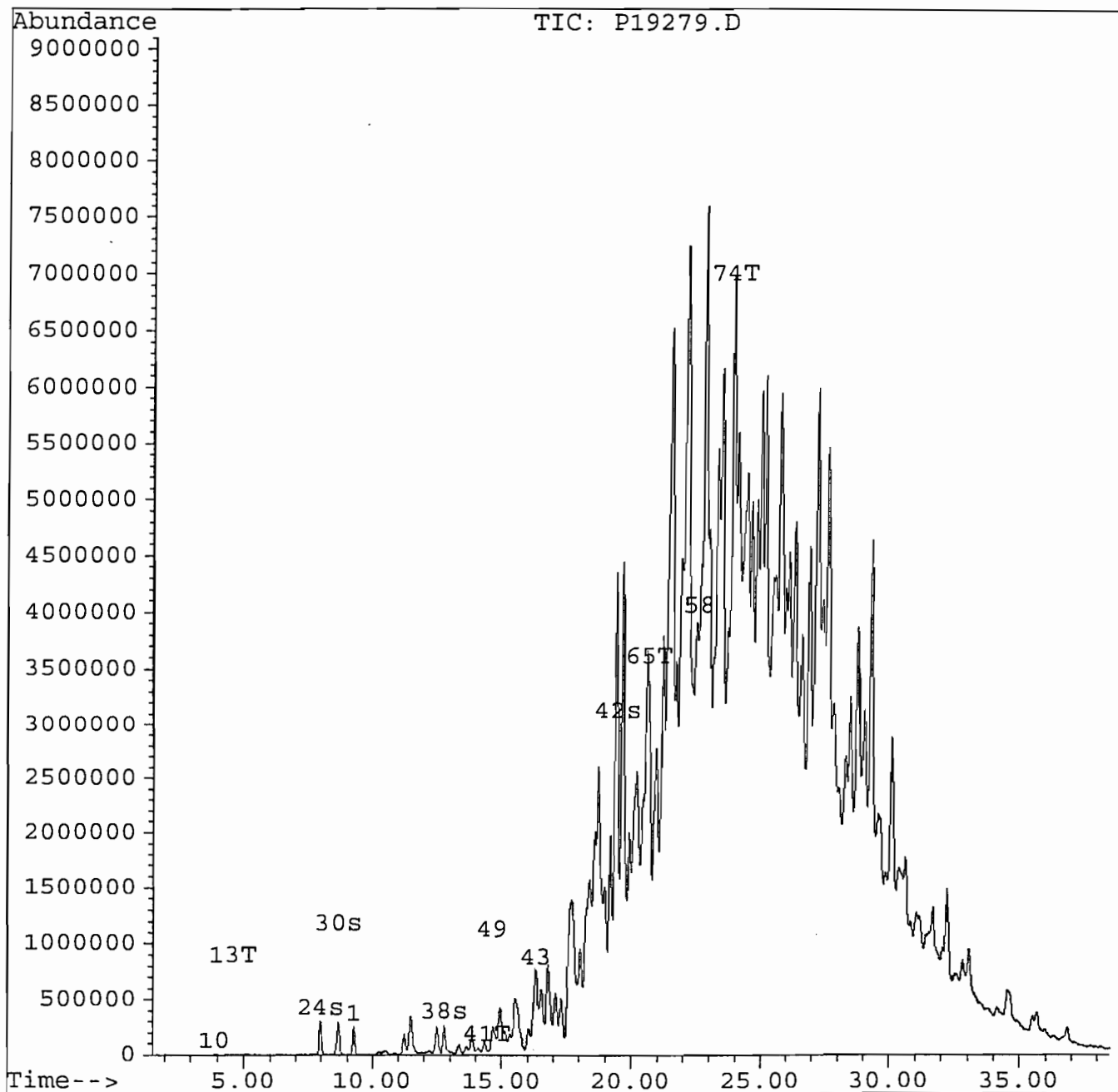
000288

Quantitation Report

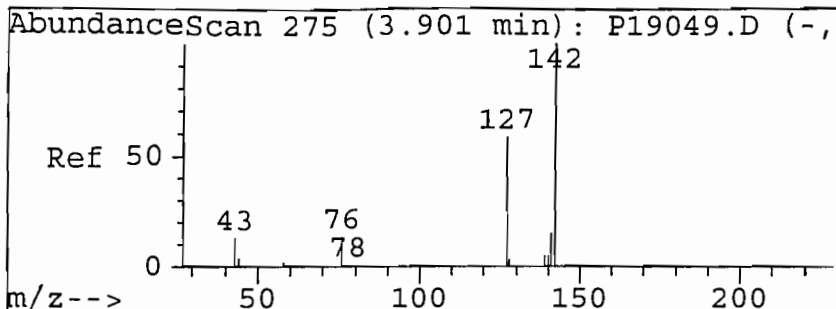
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Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML
Quant Time: Oct 22 11:45 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

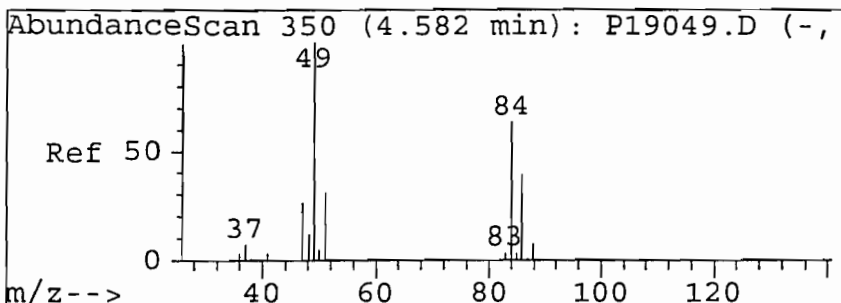
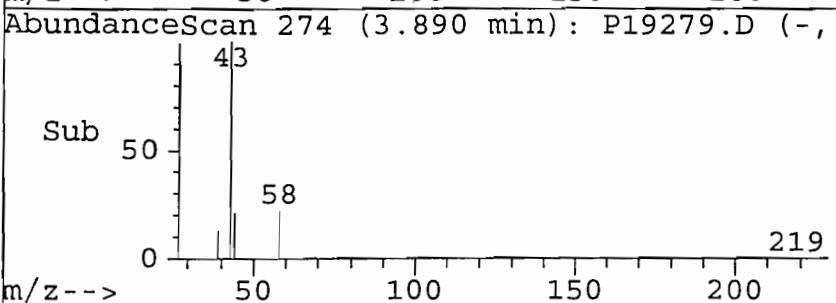
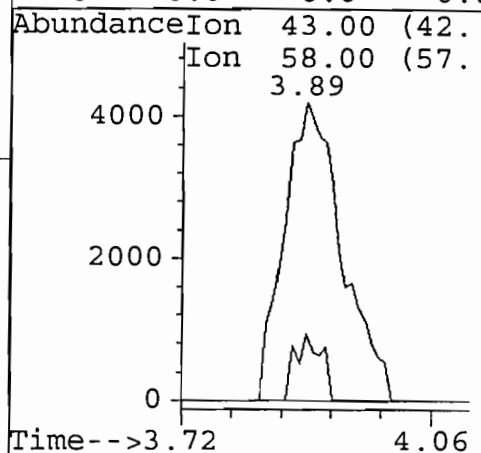
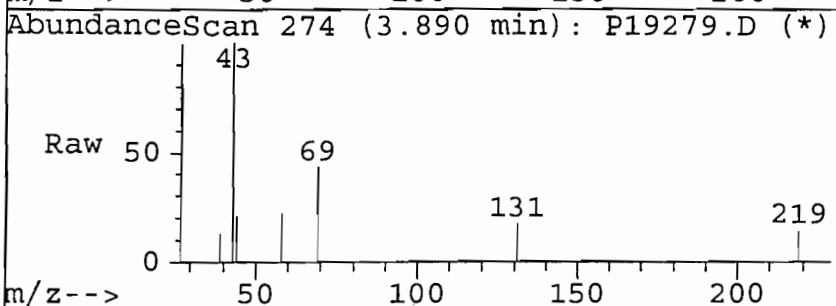


000289



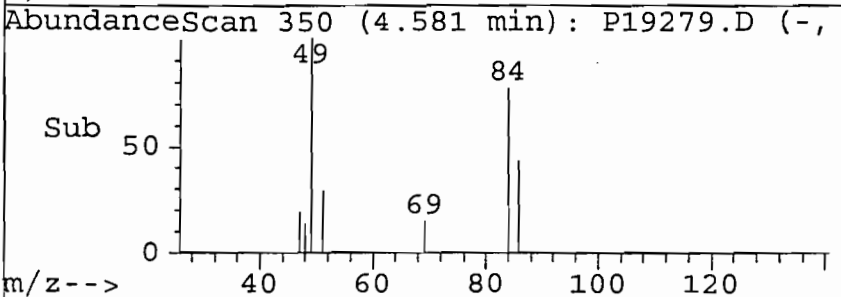
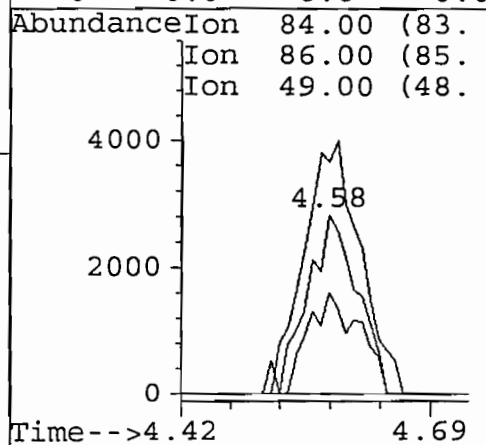
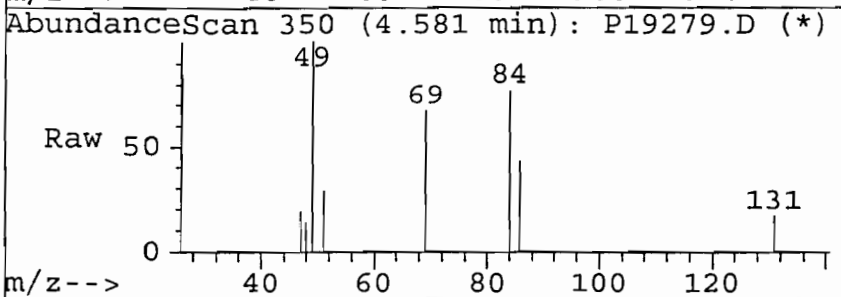
#10
Acetone
Concen: 22.64 ug/L
RT: 3.89 min Scan# 274
Delta R.T. -0.01 min
Lab File: P19279.D
Acq: 22 Oct 99 6:36 am

Tgt Ion:	43	Resp:	23200
Ion	Ratio	Lower	Upper
43	100		
58	10.0	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



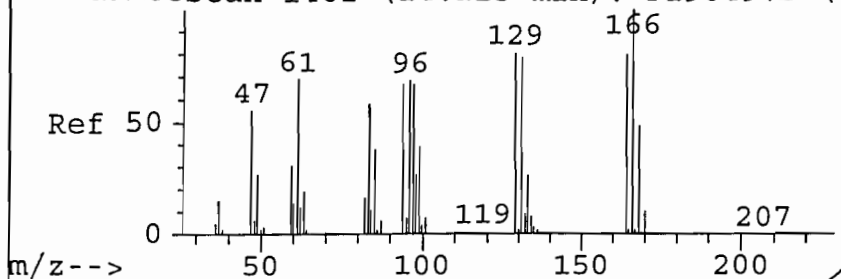
#13
methylene chloride
Concen: 4.11 ug/L
RT: 4.58 min Scan# 350
Delta R.T. -0.00 min
Lab File: P19279.D
Acq: 22 Oct 99 6:36 am

Tgt Ion:	84	Resp:	11027
Ion	Ratio	Lower	Upper
84	100		
86	56.3	43.3	80.3
49	129.5	110.4	205.0
0	0.0	0.0	0.0

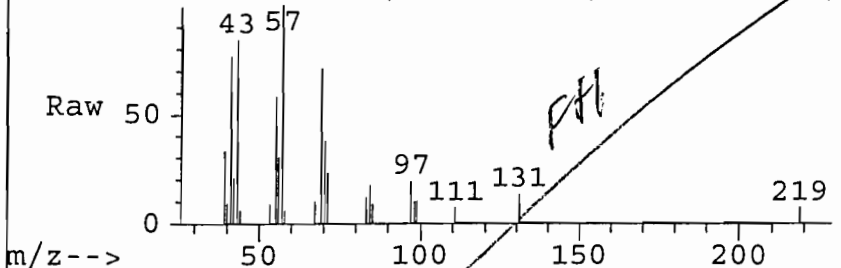


000290

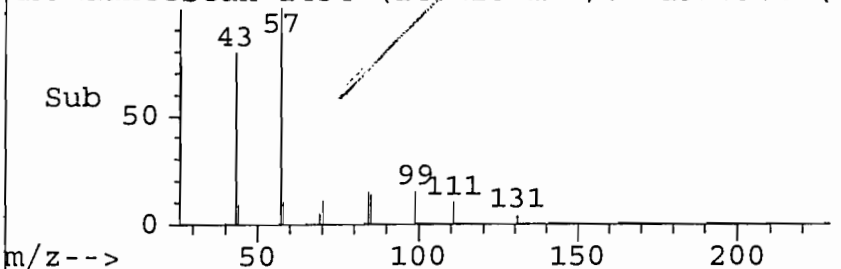
AbundanceScan 1402 (14.123 min): P19049.D (



AbundanceScan 1434 (14.423 min): P19279.D (



AbundanceScan 1434 (14.423 min): P19279.D (



#41

1,1,2-trichloroethane

Concen: 3.17 ug/L

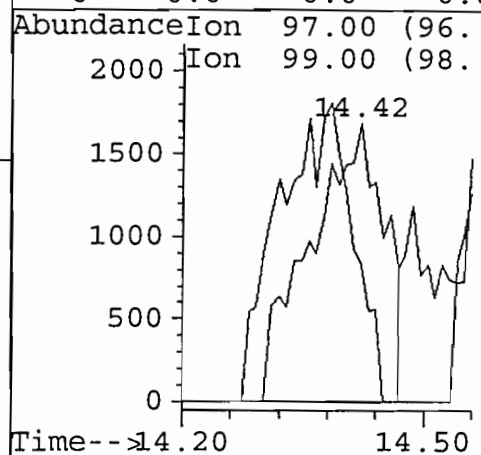
RT: 14.42 min Scan# 1434

Delta R.T. 0.30 min

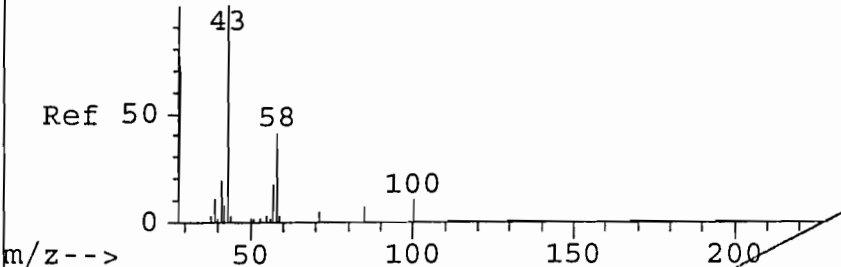
Lab File: P19279.D

Acq: 22 Oct 99 6:36 am

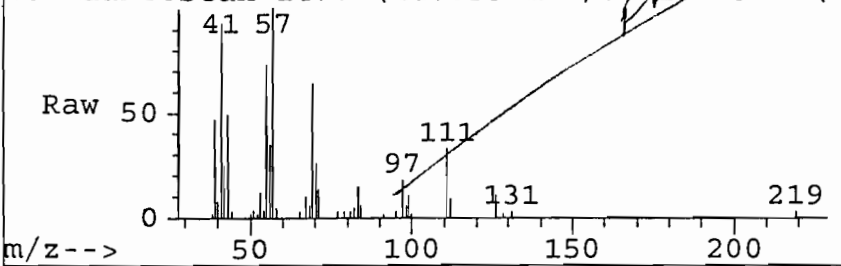
Tgt Ion:	97	Resp:	10600
Ion	Ratio	Lower	Upper
97	100		
99	49.4	41.4	77.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



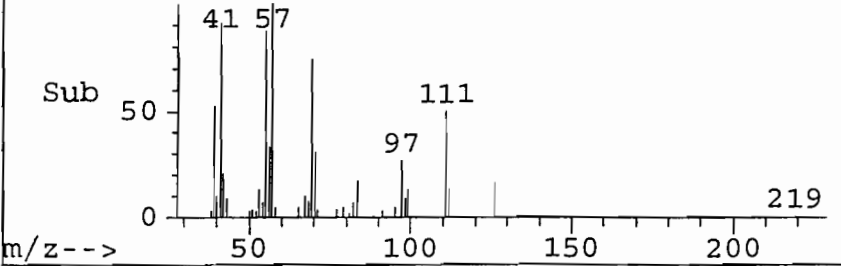
AbundanceScan 1475 (14.784 min): P19049.D (



AbundanceScan 1457 (14.633 min): P19279.D (



AbundanceScan 1457 (14.633 min): P19279.D (



#49

2-Hexanone

Concen: 30.71 ug/L

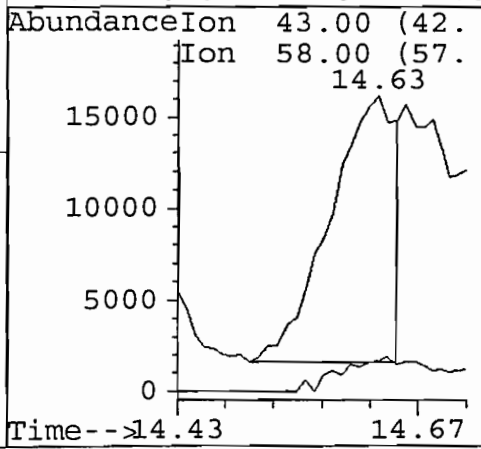
RT: 14.63 min Scan# 1457

Delta R.T. -0.15 min

Lab File: P19279.D

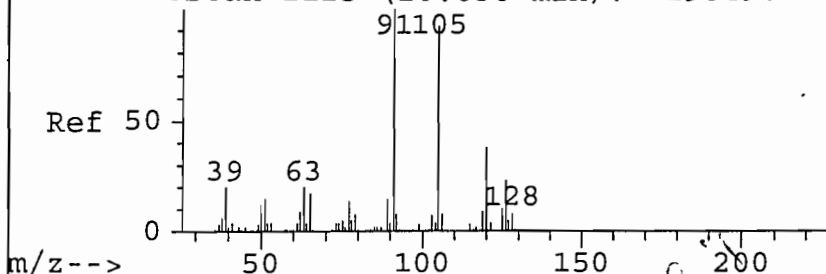
Acq: 22 Oct 99 6:36 am

Tgt Ion:	43	Resp:	67101
Ion	Ratio	Lower	Upper
43	100		
58	19.7	19.6	58.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000291

AbundanceScan 2125 (20.658 min): P19049.D (



#65

4-chlorotoluene

Concen: 2.74 ug/L m

RT: 20.66 min Scan# 2128

Delta R.T. 0.01 min

Lab File: P19279.D

Acq: 22 Oct 99 6:36 am

Tgt Ion:126 Resp: 12983

Ion Ratio Lower Upper

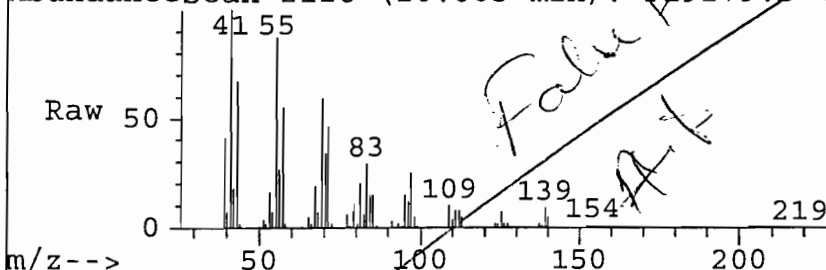
126 100

63 75.8 62.8 116.6

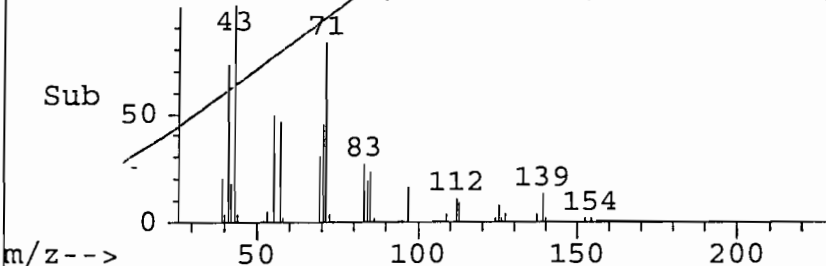
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 2128 (20.663 min): P19279.D (



AbundanceScan 2128 (20.663 min): P19279.D (



AbundanceIon 126.00 (125

8000 Ion 63.00 (62.

6000 20.66

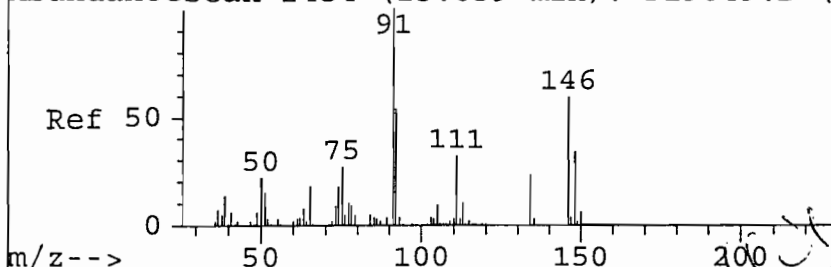
4000

2000

0

Time-->20.62 20.73

AbundanceScan 2454 (23.659 min): P19049.D (



#74

n-butylbenzene

Concen: 7.85 ug/L m

RT: 23.89 min Scan# 2504

Delta R.T. 0.23 min

Lab File: P19279.D

Acq: 22 Oct 99 6:36 am

Tgt Ion:91 Resp: 162308

Ion Ratio Lower Upper

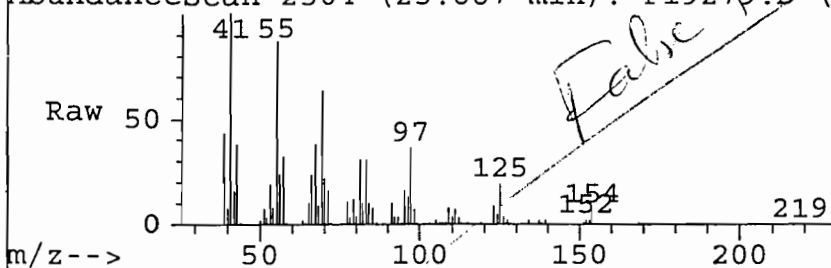
91 100

92 37.7 37.5 69.7

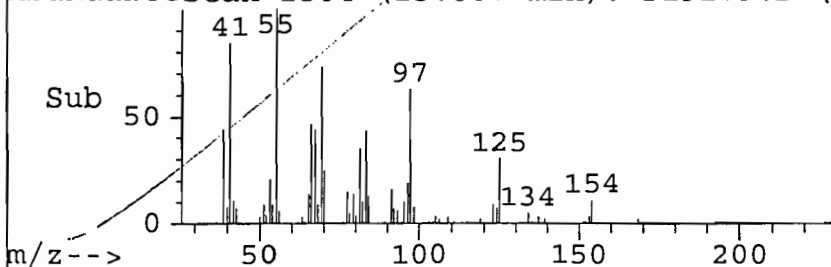
134 23.2 16.2 30.0

0 0.0 0.0 0.0

AbundanceScan 2504 (23.887 min): P19279.D (



AbundanceScan 2504 (23.887 min): P19279.D (



AbundanceIon 91.00 (90.

100000 Ion 92.00 (91.

50000 Ion 134.00 (133

23.89

0

Time-->23.74 23.91

000292

Library Search Compound Report

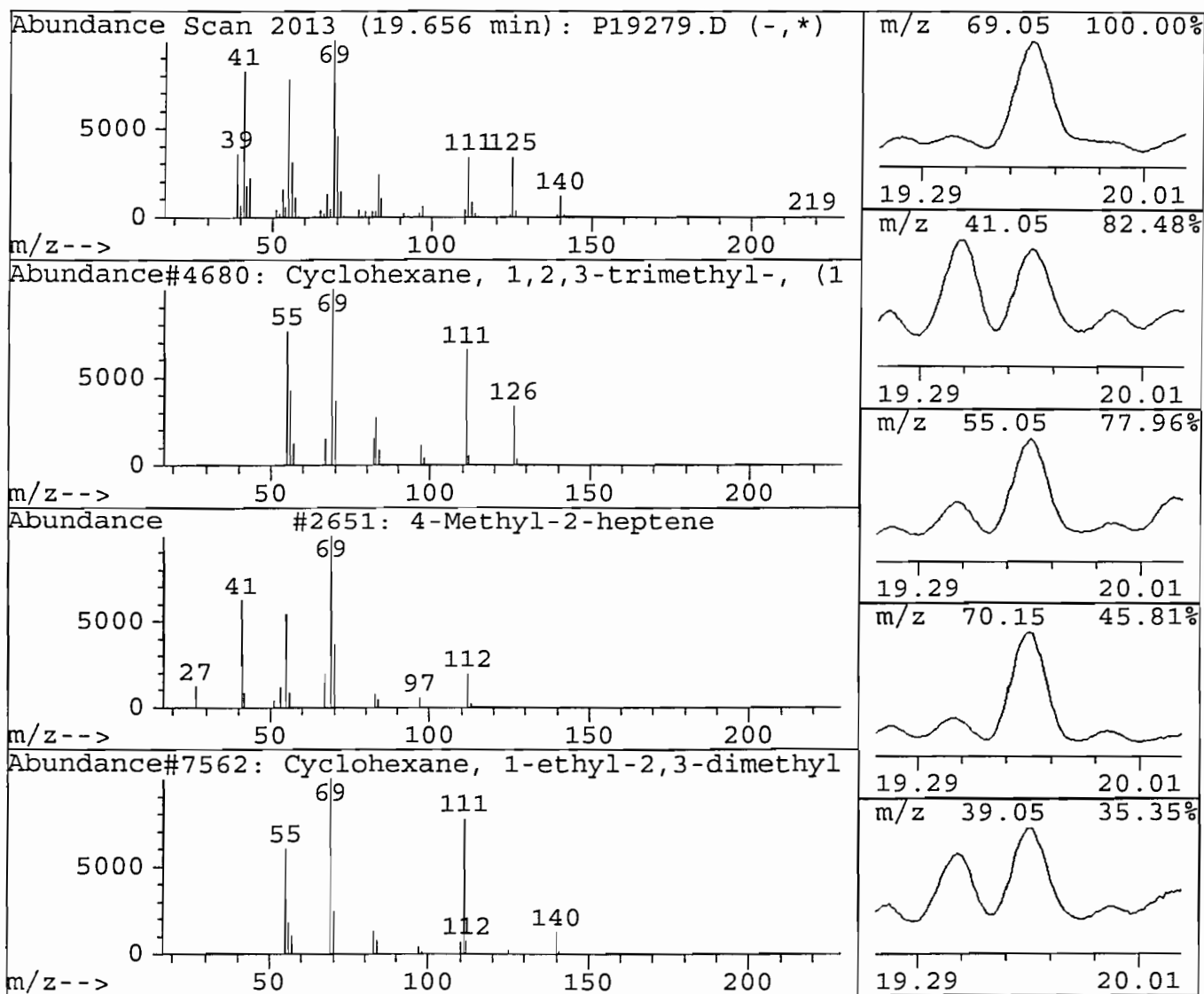
Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
19.66	272.00 ug/L	23317679	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexane, 1,2,3-trimethyl-, (1.a	4680	001678-81-5	64
2	4-Methyl-2-heptene	2651	003404-56-6	58
3	Cyclohexane, 1-ethyl-2,3-dimethyl-	7562	007058-05-1	52
4	2-Heptene, 4-methyl-, (E)-	2648	066225-17-0	52
5	Cyclohexane, 1,1,2,3-tetramethyl-	7580	006783-92-2	49



000293

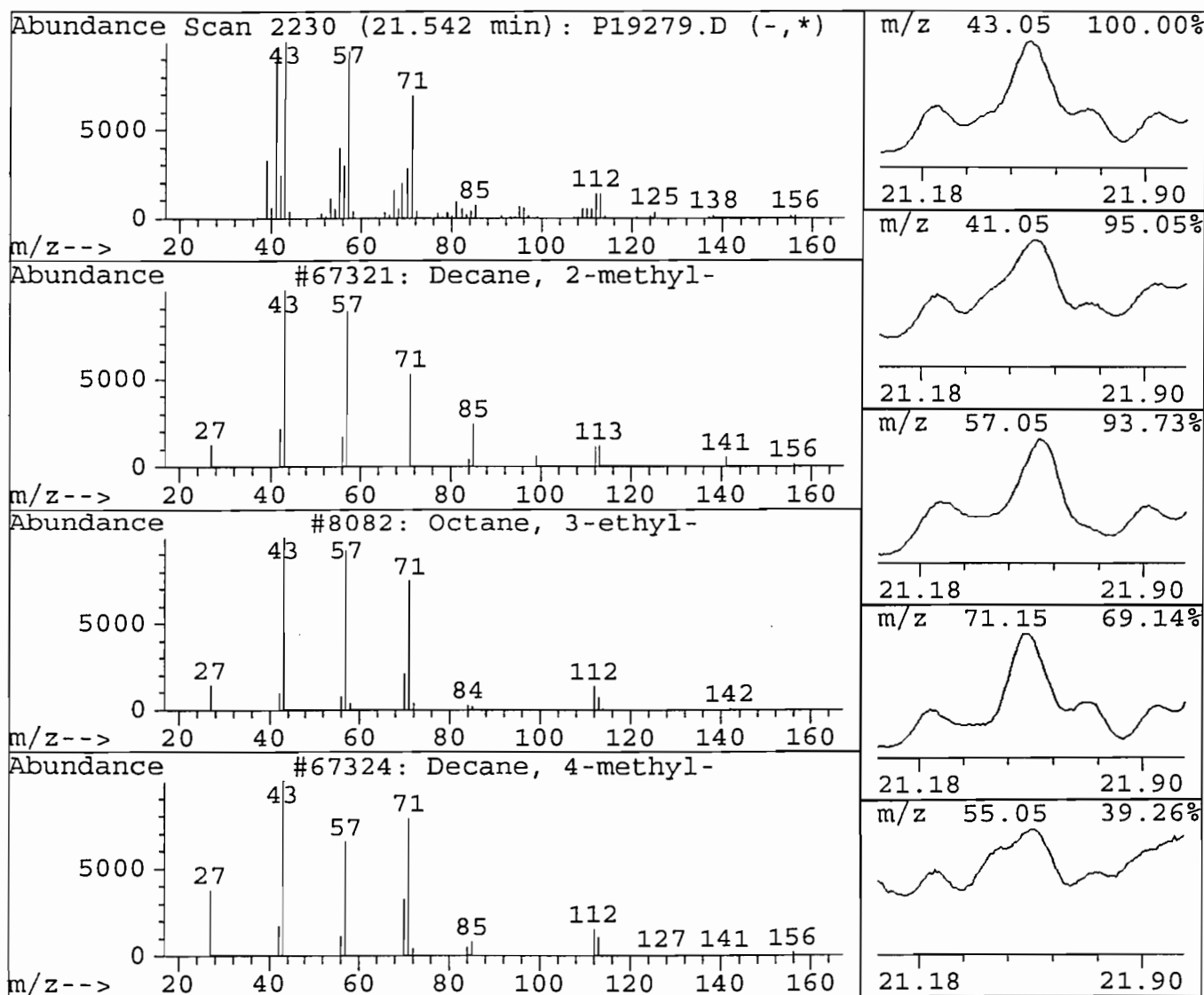
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
21.54	449.56 ug/L	38539601	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Decane, 2-methyl-		67321	006975-98-0	68
2	Octane, 3-ethyl-		8082	005881-17-4	64
3	Decane, 4-methyl-		67324	002847-72-5	62
4	Nonane, 3-methyl-		66202	005911-04-6	59
5	Decane, 4-methyl-		11615	002847-72-5	58



000294

Library Search Compound Report

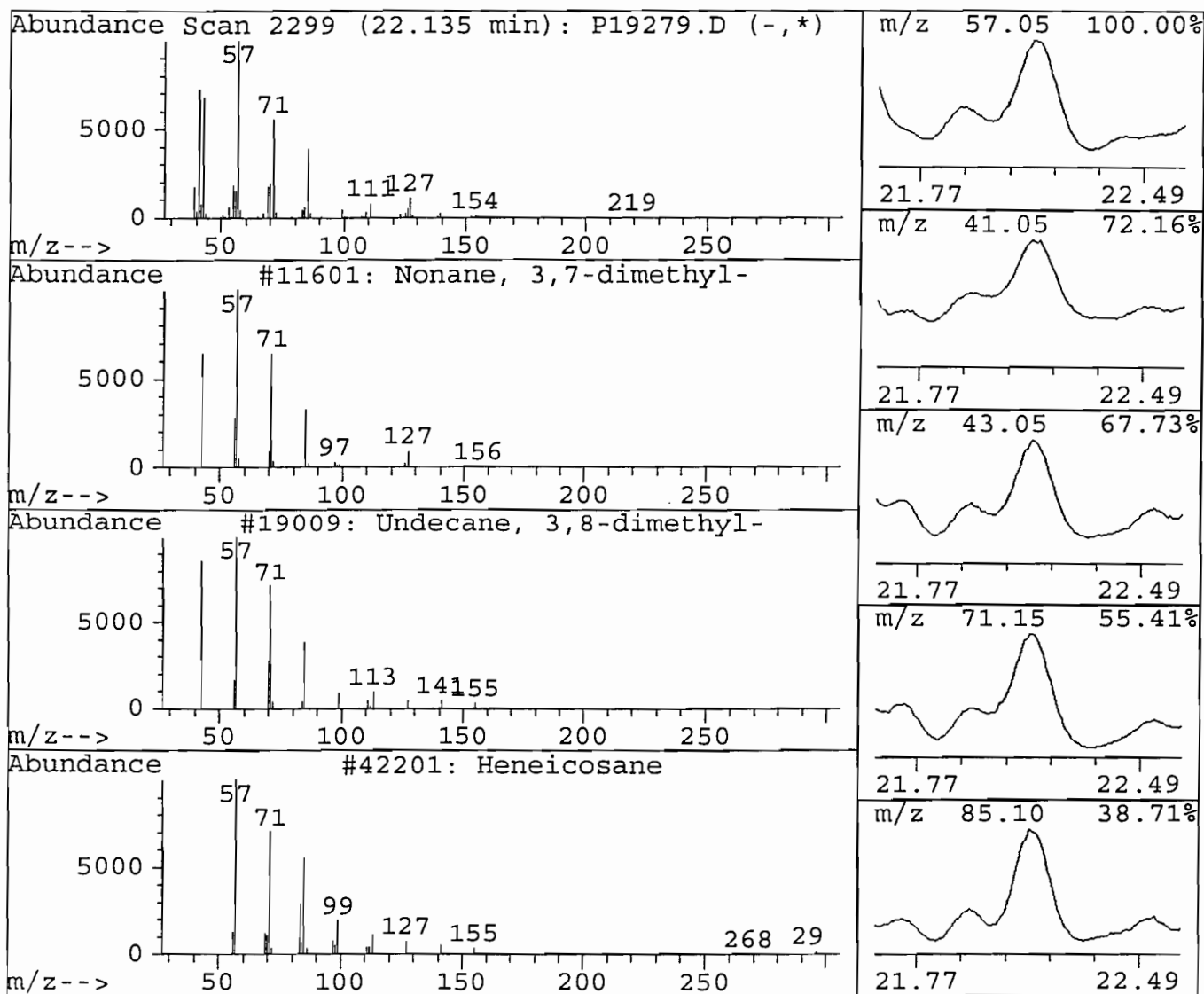
Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.13	443.97 ug/L	38060050	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Nonane, 3,7-dimethyl-	11601	017302-32-8	64
2	Undecane, 3,8-dimethyl-	19009	017301-30-3	64
3	Heneicosane	42201	000629-94-7	64
4	Tetratetracontane	74745	007098-22-8	59
5	Heptadecane, 2,6,10,14-tetramethyl-	42200	018344-37-1	53



000295

Library Search Compound Report

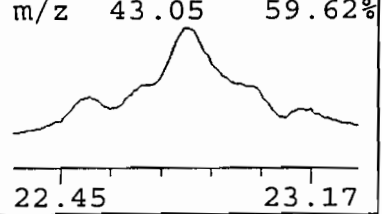
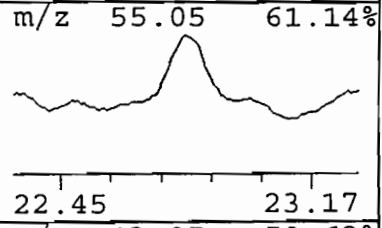
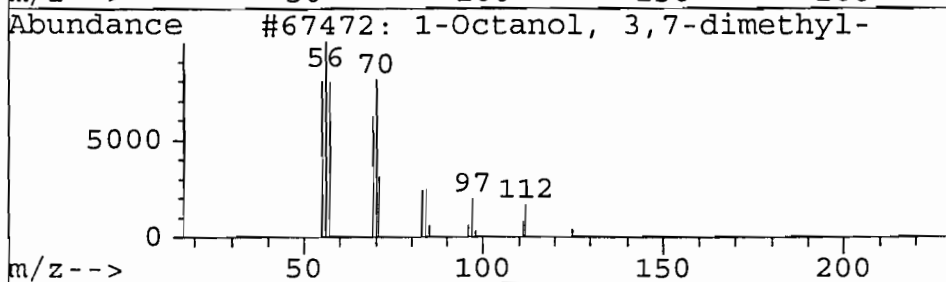
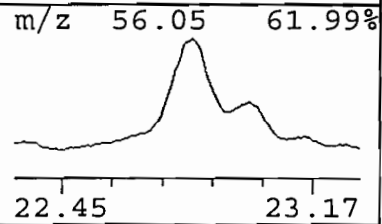
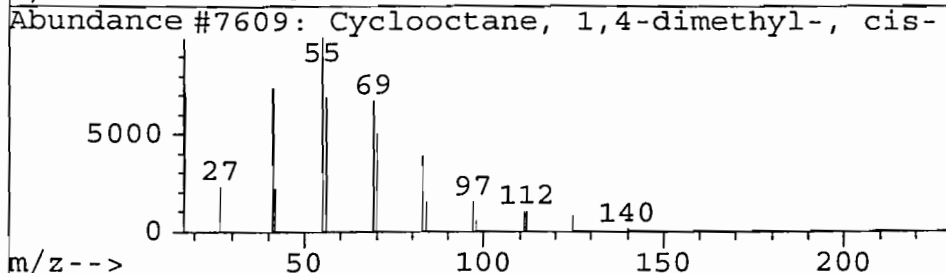
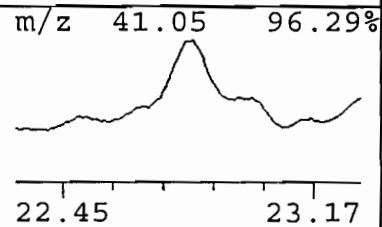
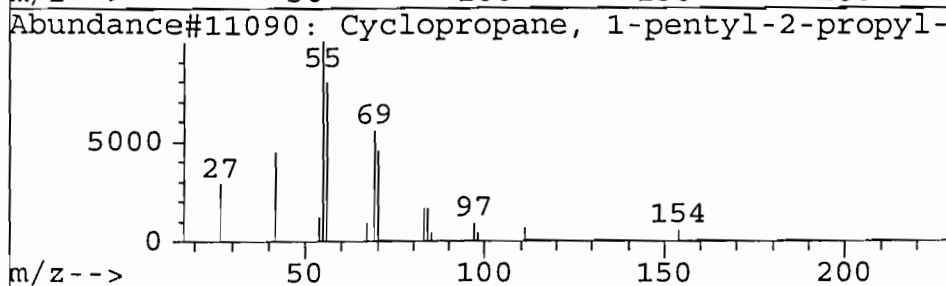
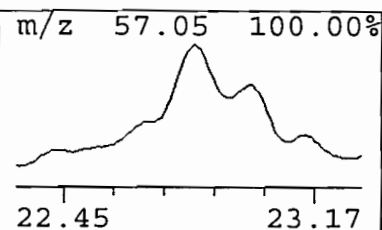
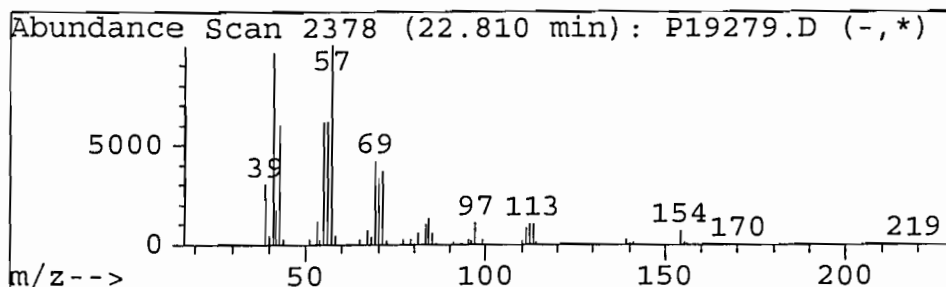
Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
22.81	383.60 ug/L	32884782	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclopropane, 1-pentyl-2-propyl-	11090	041977-33-7	60
2	Cyclooctane, 1,4-dimethyl-, cis-	7609	013151-99-0	60
3	1-Octanol, 3,7-dimethyl-	67472	000106-21-8	59
4	2-Decene, 8-methyl-, (Z)-	11058	074630-25-4	58
5	2-Heptenal, (Z)-	2610	057266-86-1	52



000296

Library Search Compound Report

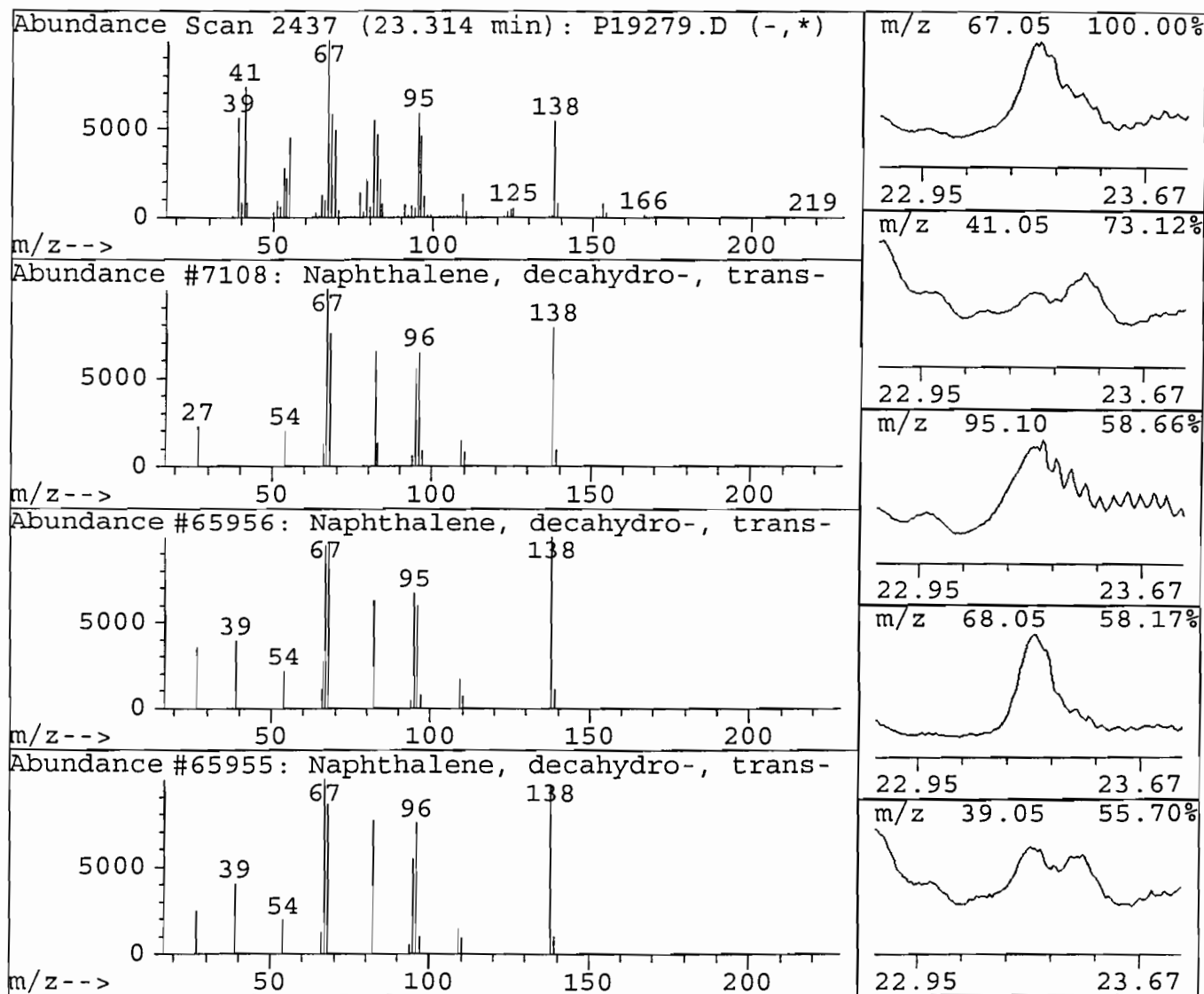
Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.31	222.89 ug/L	19107845	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Naphthalene, decahydro-, trans-	7108	000493-02-7	91
2	Naphthalene, decahydro-, trans-	65956	000493-02-7	76
3	Naphthalene, decahydro-, trans-	65955	000493-02-7	70
4	Spiro[4.4]nonan-2-one	6991	034177-18-9	68
5	Cyclopentane, (3-methylbutylidene)-	7111	053366-51-1	58



000297

Library Search Compound Report

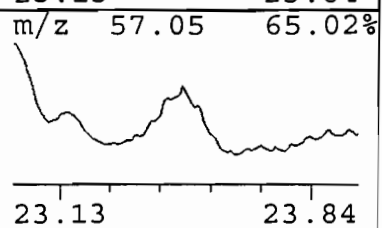
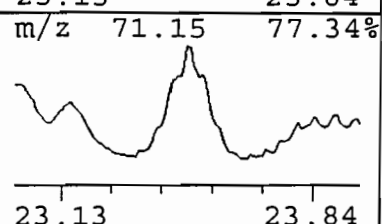
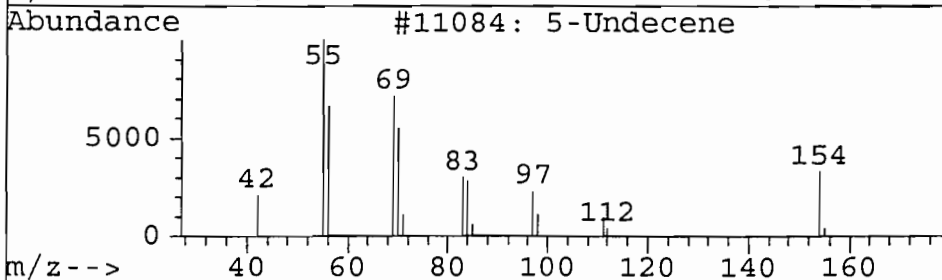
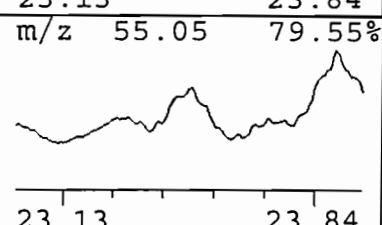
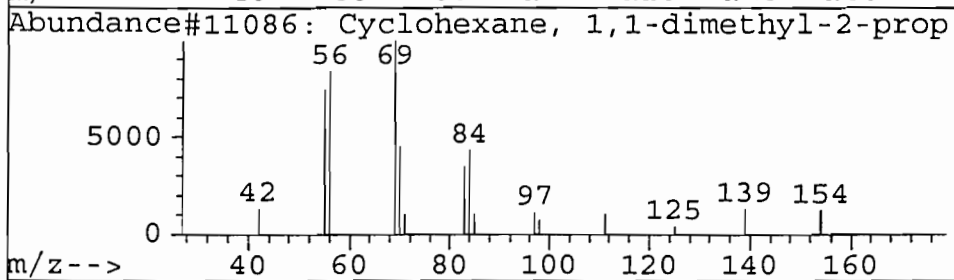
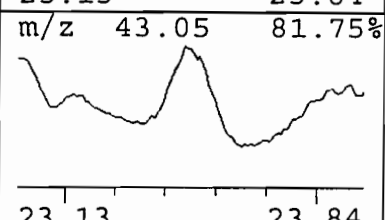
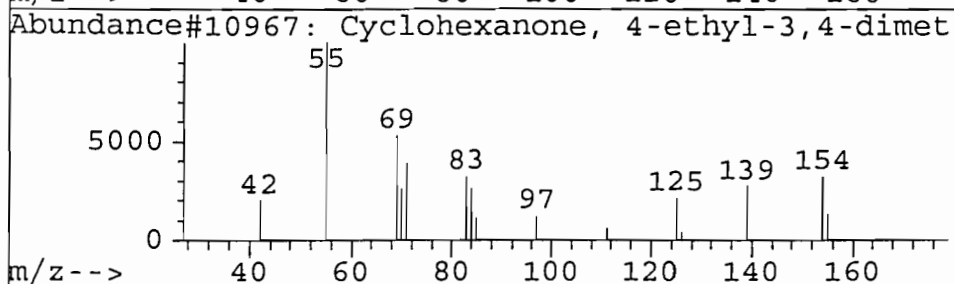
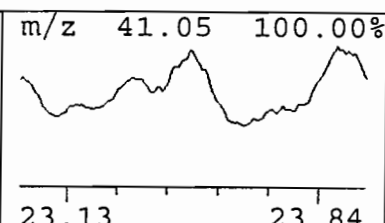
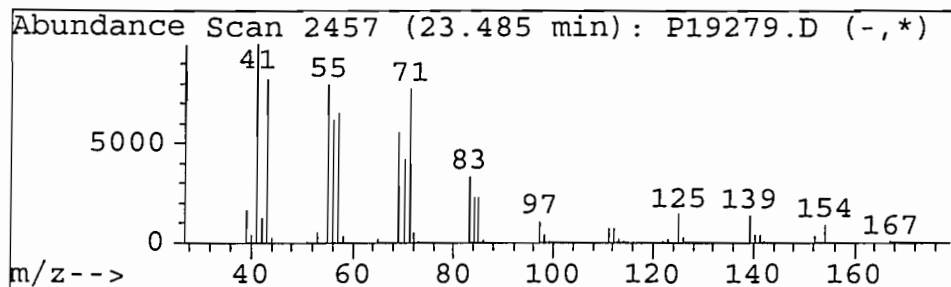
Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
23.48	254.94 ug/L	21855636	1,4-dichlorobenzene-d4	22.60

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Cyclohexanone, 4-ethyl-3,4-dimethyl	10967	017429-42-4	50
2	Cyclohexane, 1,1-dimethyl-2-propyl-	11086	081983-71-3	50
3	5-Undecene	11084	004941-53-1	46
4	Cyclooctane, 1,4-dimethyl-, trans-	7608	013151-98-9	46
5	Cyclopropane, 1-pentyl-2-propyl-	11090	041977-33-7	43



000298

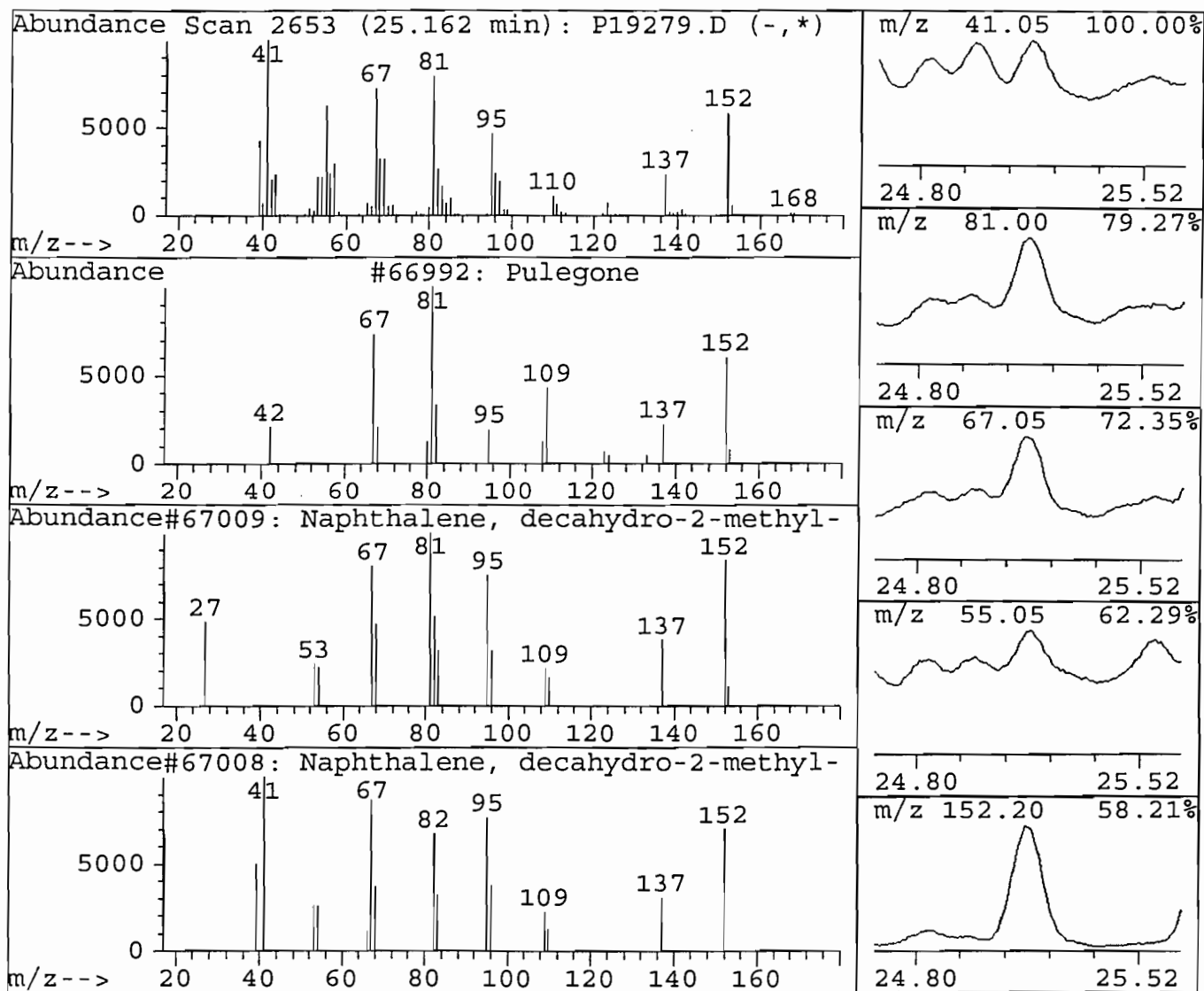
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.16	211.23 ug/L	18108280	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Pulegone		66992	000089-82-7	70
2	Naphthalene, decahydro-2-methyl-		67009	002958-76-1	64
3	Naphthalene, decahydro-2-methyl-		67008	002958-76-1	55
4	Pulegone		66995	000089-82-7	52
5	Cyclohexanone, 5-methyl-2-(1-methyl		10356	015932-80-6	52



000299

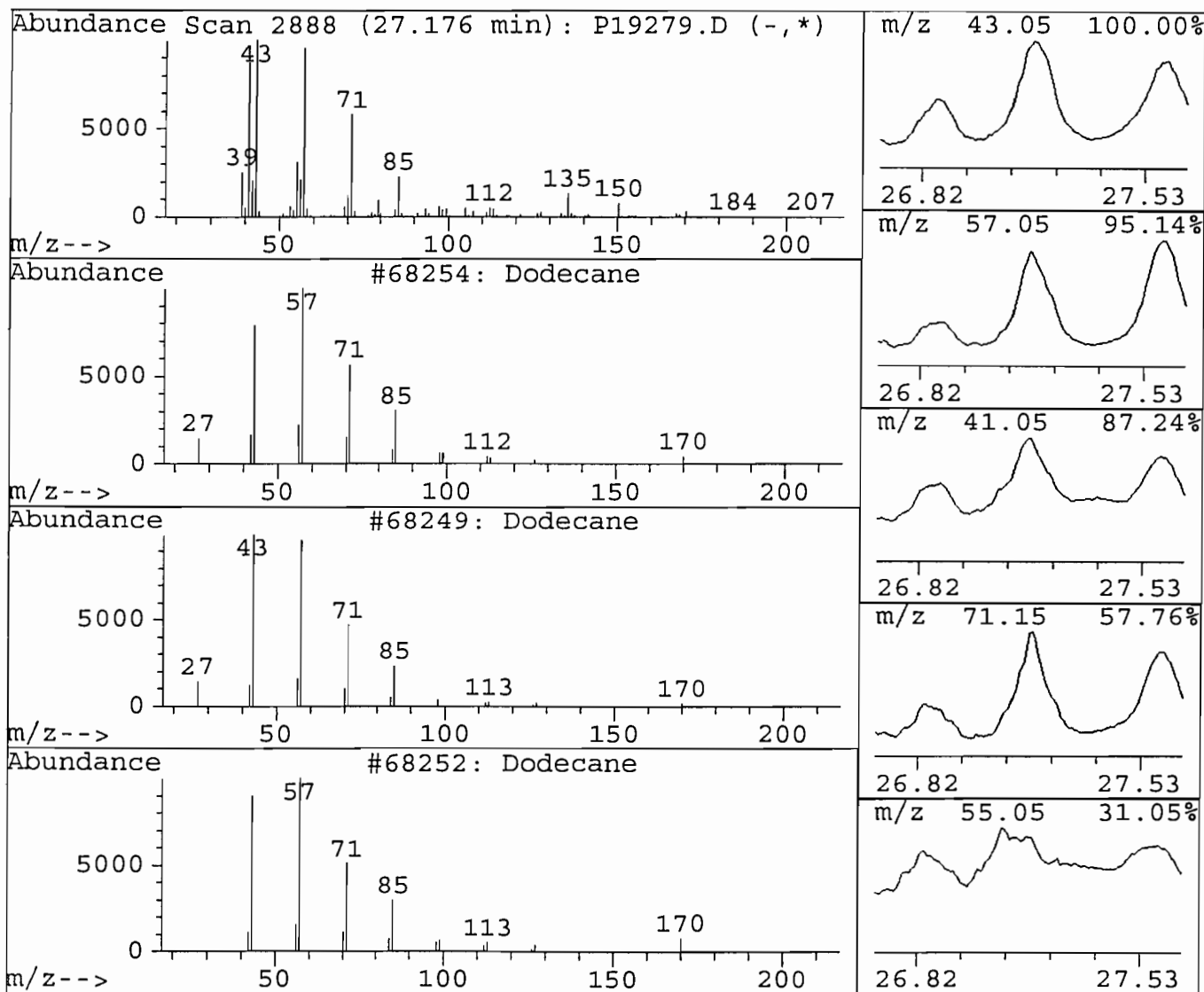
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.18	326.79 ug/L	28015116	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		68254	000112-40-3	90
2	Dodecane		68249	000112-40-3	81
3	Dodecane		68252	000112-40-3	68
4	Heptadecane, 2,6,10,14-tetramethyl-		42200	018344-37-1	59
5	Decane, 2-methyl-		11614	006975-98-0	53



000300

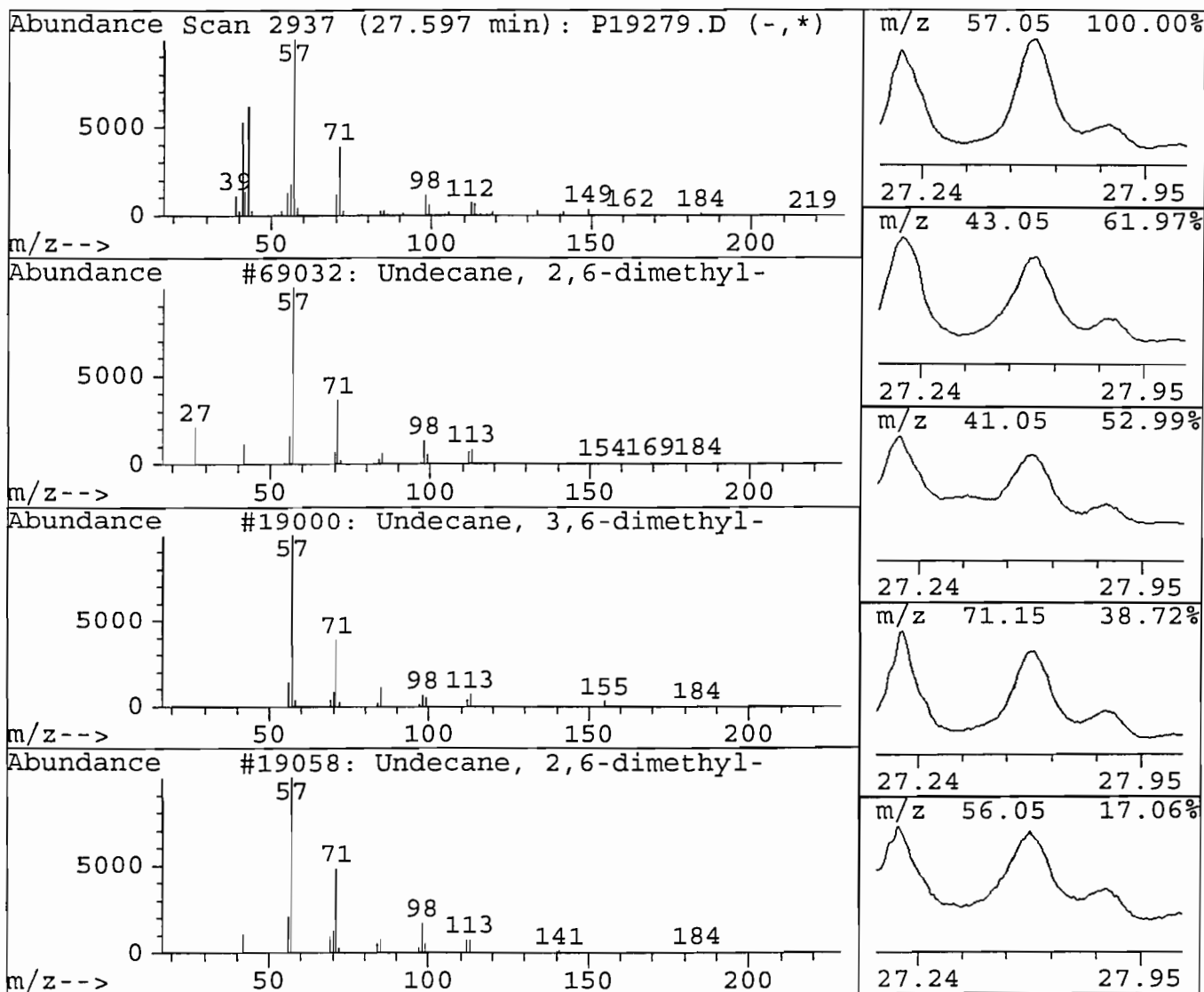
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.60	315.97 ug/L	27086870	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Undecane, 2,6-dimethyl-		69032	017301-23-4	91
2	Undecane, 3,6-dimethyl-		19000	017301-28-9	90
3	Undecane, 2,6-dimethyl-		19058	017301-23-4	90
4	Undecane, 2,6-dimethyl-		69033	017301-23-4	86
5	Octane, 4-ethyl-		8095	015869-86-0	78



000301

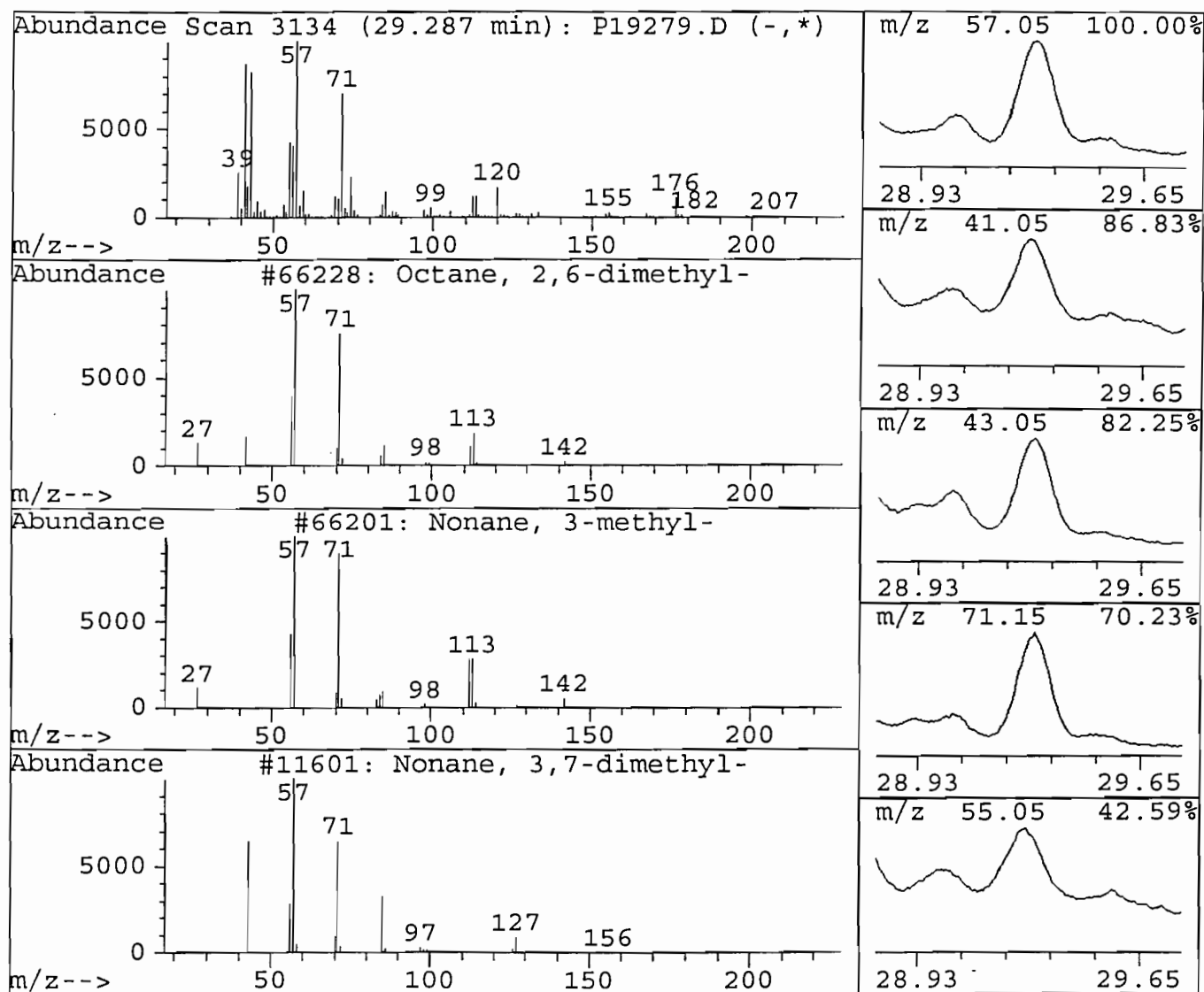
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19279.D
Acq Time : 22 Oct 99 6:36 am
Sample : 13826ASP-88005
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.29	253.78 ug/L	21756202	1,4-dichlorobenzene-d4	22.60	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Octane, 2,6-dimethyl-		66228	002051-30-1	53
2	Nonane, 3-methyl-		66201	005911-04-6	53
3	Nonane, 3,7-dimethyl-		11601	017302-32-8	46
4	Butane, 2,2-dimethyl-		732	000075-83-2	43
5	Heptadecane, 2,6-dimethyl-		37466	054105-67-8	43



000302

GP-013-SS12

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88006

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13299.D

Level: (low/med) MED

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

GP-013-SS12

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: O88006
 Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13299.D
 Level: (low/med) MED Date Received: 10/18/99
 % Moisture: not dec. 4 Date Analyzed: 10/22/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
 Number TICs found: 10 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.	Unknown	21.93	3000	J
2.	Unknown	25.52	2500	J
3. 99-87-6	Benzene, 1-methyl-4-(1-methy	26.49	2900	J
4. 527-53-7	Benzene, 1,2,3,5-tetramethyl	27.30	3000	J
5. 112-40-3	Dodecane	27.43	4200	J
6. 2870-04-4	Benzene, 2-ethyl-1,3-dimethy	27.61	1700	J
7. 768-00-3	Benzene, (1-methyl-1-propeny	28.37	1800	J
8.	Unknown	28.83	2100	J
9.	Unknown	29.46	1600	J
10. 629-50-5	Tridecane	29.88	1800	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000304

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
 Acq Time : 22 Oct 99 3:29 pm
 Sample : 13826ASP-88006
 Misc : 100uL/5MLS 4G/10 mL MeOH
 Quant Time: Oct 22 16:07 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.17	96	1904206	50.00	ug/L	0.07
43) Chlorobenzene-d5	20.54	117	1697440	50.00	ug/L	0.09
58) 1,4-dichlorobenzene-d4	25.28	152	761528	50.00	ug/L	0.10
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.46	113	630824	53.26	ug/L	106.52%
30) 1,2-Dichlorethane-d4	13.50	65	722627	54.13	ug/L	108.26%
38) Toluene-d8	17.43	98	2012121	54.24	ug/L	108.48%
42) 4-Bromofluorobenzene	23.02	95	899730	57.37	ug/L	114.73%
Target Compounds						Qvalue
13) methylene chloride	8.60	84	41350	3.60	ug/L	91
54) m&p-xylenes	20.84	106	201120	10.91	ug/L	94
55) o-xylene	21.75	91	469579	11.02	ug/L	98
66) 1,3,5-trimethylbenzene	23.60	105	1780706	42.86	ug/L	100
68) 1,2,4-trimethylbenzene	24.34	105	3236820	81.22	ug/L	100
71) 4-isopropyltoluene	24.81	119	348165	7.65	ug/L	97
78) naphthalene	30.70	128	500097	15.70	ug/L	95

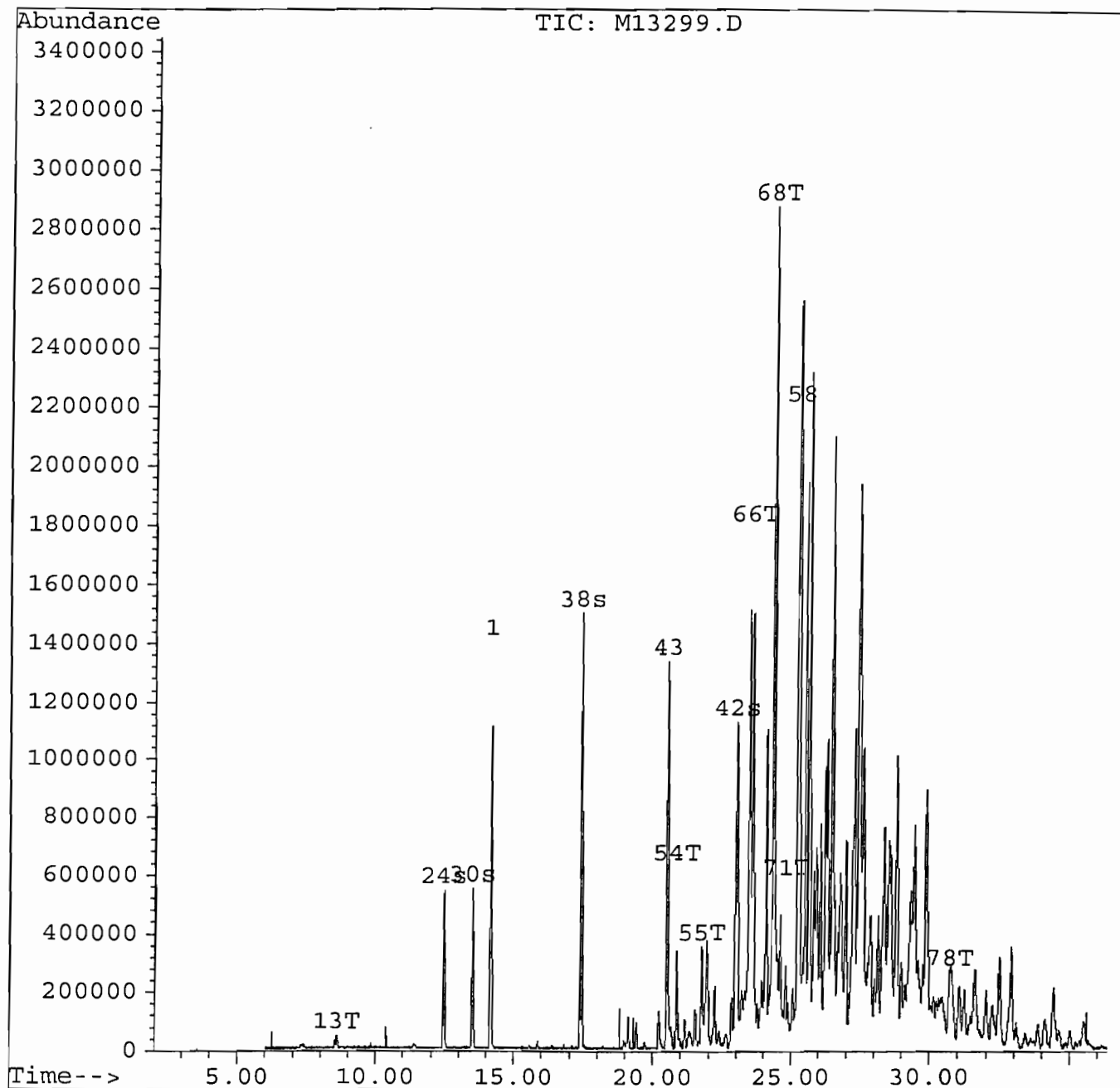
000305

Quantitation Report

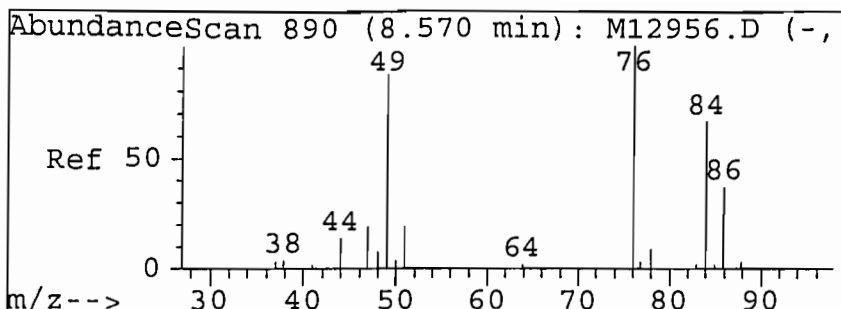
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Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH
Quant Time: Oct 22 16:07 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

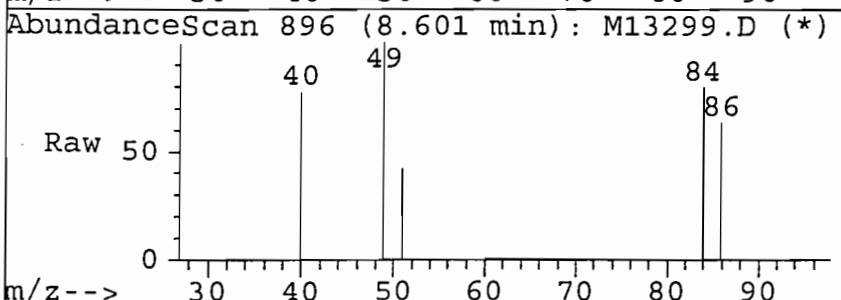
Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



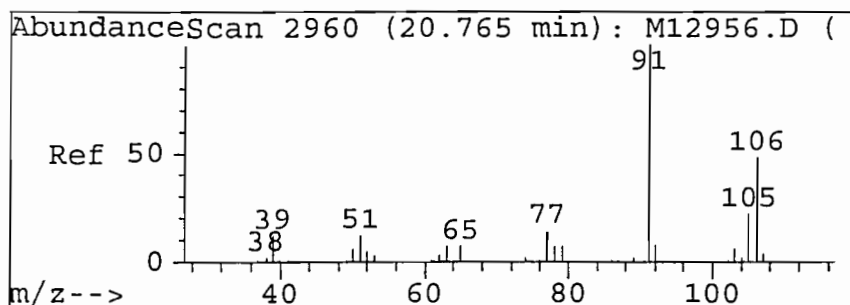
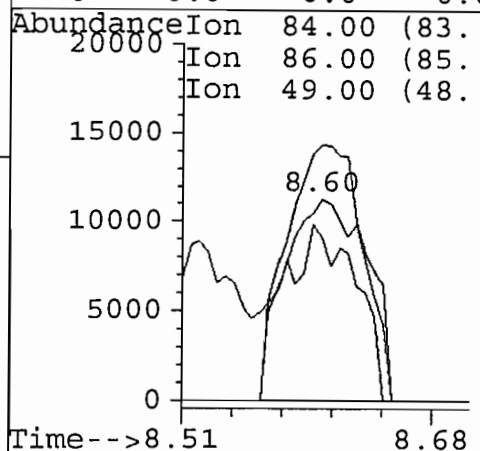
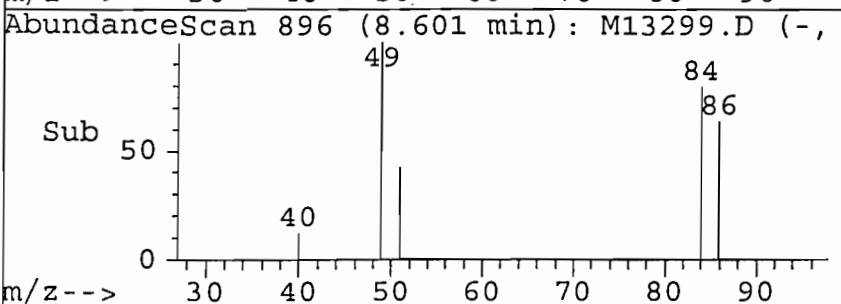
000306



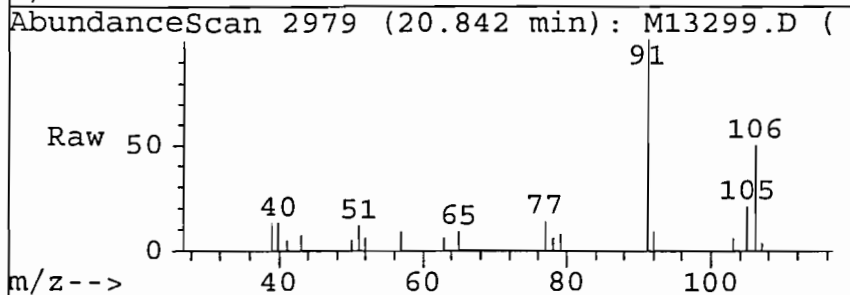
#13
methylene chloride
Concen: 3.60 ug/L
RT: 8.60 min Scan# 896
Delta R.T. 0.03 min
Lab File: M13299.D
Acq: 22 Oct 99 3:29 pm



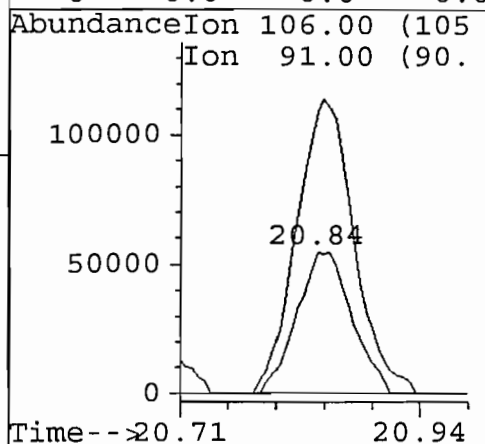
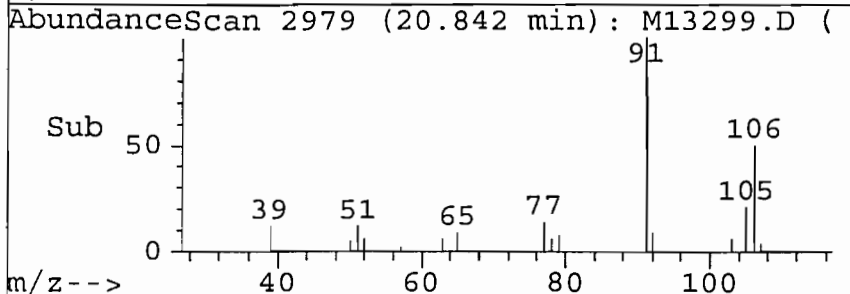
Tgt Ion:84 Resp: 41350
Ion Ratio Lower Upper
84 100
86 80.4 45.0 83.6
49 127.4 92.0 170.9
0 0.0 0.0 0.0



#54
m&p-xylenes
Concen: 10.91 ug/L
RT: 20.84 min Scan# 2979
Delta R.T. 0.08 min
Lab File: M13299.D
Acq: 22 Oct 99 3:29 pm

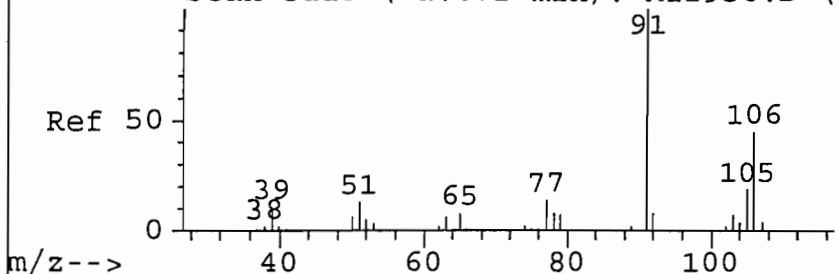


Tgt Ion:106 Resp: 201120
Ion Ratio Lower Upper
106 100
91 200.9 146.7 272.4
0 0.0 0.0 0.0
0 0.0 0.0 0.0



000307

AbundanceScan 3113 (21.672 min): M12956.D (



#55

o-xylene

Concen: 11.02 ug/L

RT: 21.75 min Scan# 3133

Delta R.T. 0.08 min

Lab File: M13299.D

Acq: 22 Oct 99 3:29 pm

Tgt Ion:91 Resp: 469579

Ion Ratio Lower Upper

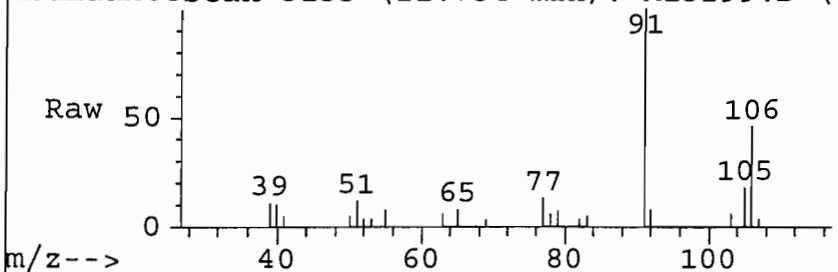
91 100

106 46.3 31.3 58.1

105 17.6 12.9 24.0

0 0.0 0.0 0.0

AbundanceScan 3133 (21.754 min): M13299.D (



AbundanceIon 91.00 (90.

Ion 106.00 (105

Ion 105.00 (104

21.75

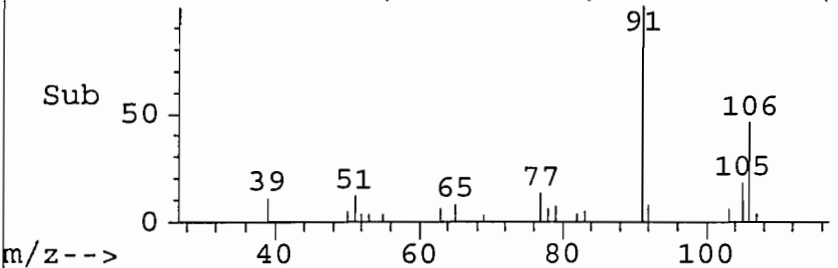
150000

100000

50000

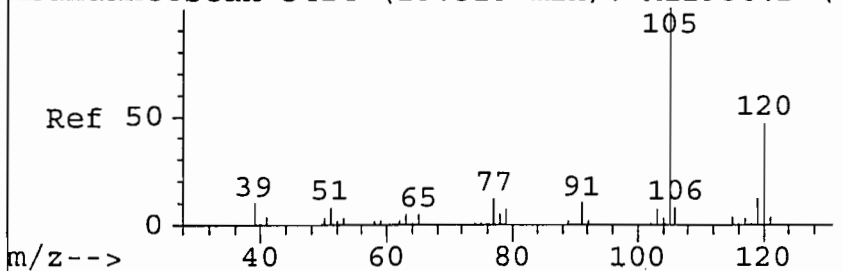
0

AbundanceScan 3133 (21.754 min): M13299.D (



Time-->21.60 21.87

AbundanceScan 3424 (23.513 min): M12956.D (



#66

1,3,5-trimethylbenzene

Concen: 42.86 ug/L

RT: 23.60 min Scan# 3446

Delta R.T. 0.09 min

Lab File: M13299.D

Acq: 22 Oct 99 3:29 pm

Tgt Ion:105 Resp: 1780706

Ion Ratio Lower Upper

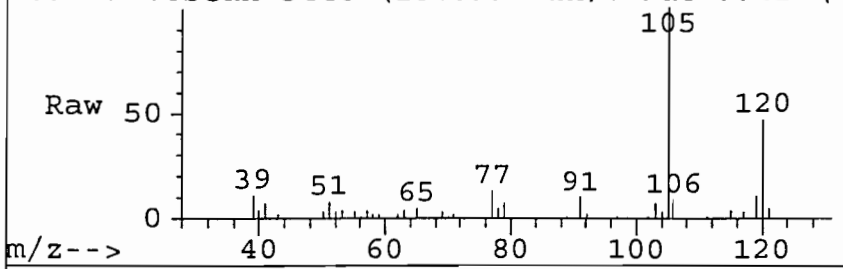
105 100

120 47.3 33.2 61.7

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 3446 (23.599 min): M13299.D (



AbundanceIon 105.00 (104

Ion 120.00 (119

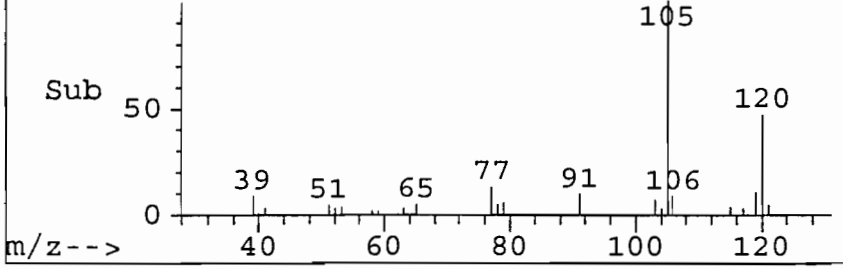
23.60

400000

200000

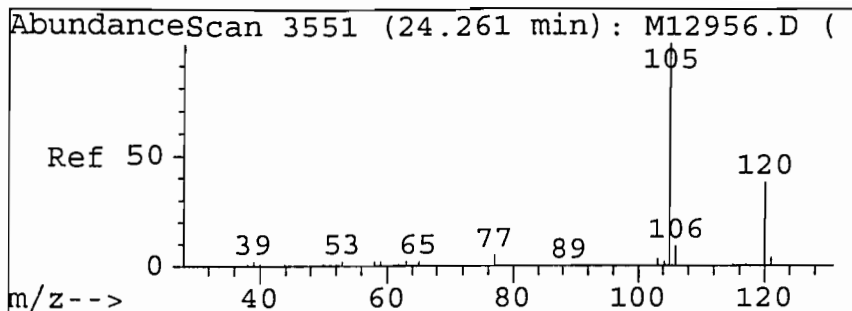
0

AbundanceScan 3446 (23.599 min): M13299.D (



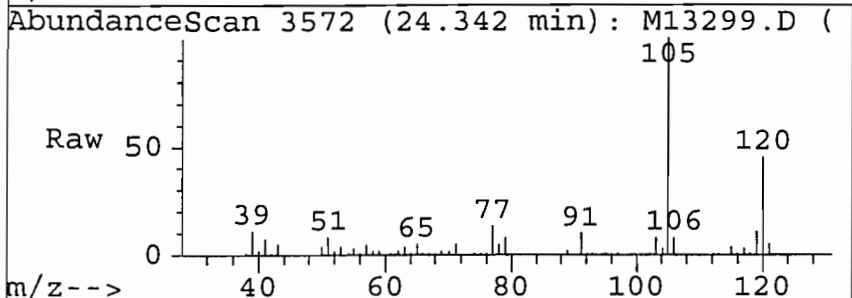
Time-->23.47 23.73

000308

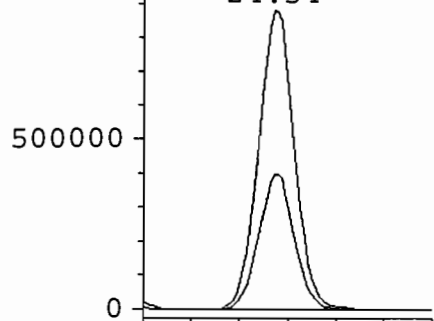


#68
1,2,4-trimethylbenzene
Concen: 81.22 ug/L
RT: 24.34 min Scan# 3572
Delta R.T. 0.08 min
Lab File: M13299.D
Acq: 22 Oct 99 3:29 pm

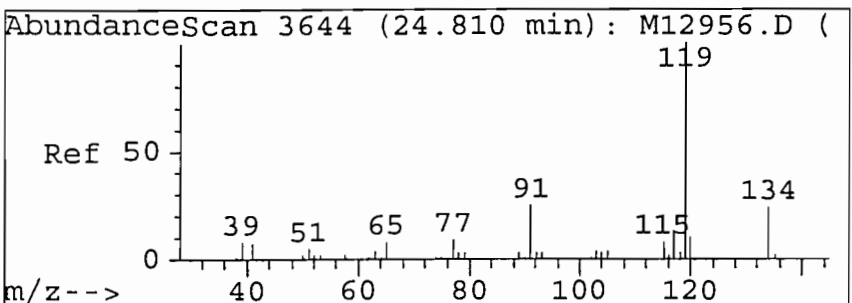
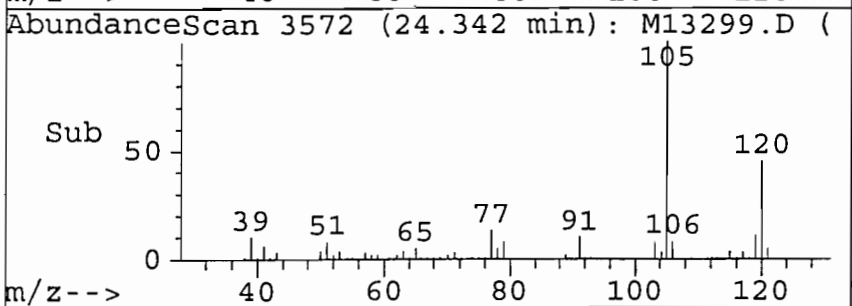
Tgt Ion:	105	Resp:	3236820
Ion	Ratio	Lower	Upper
105	100		
120	44.9	31.2	58.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



AbundanceIon 105.00 (104
1000000 Ion 120.00 (119
24.34

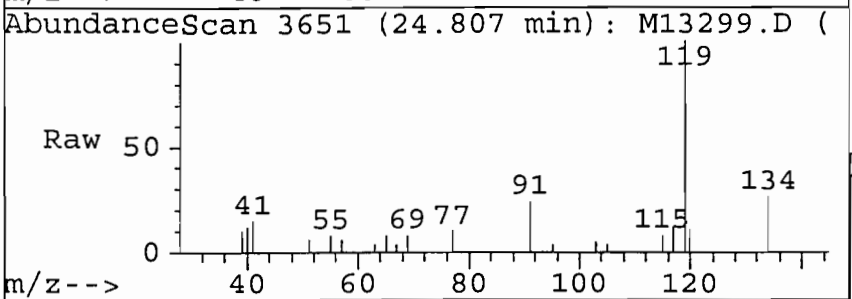


Time-->24.16 24.50

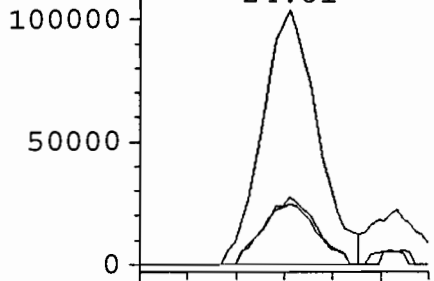


#71
4-isopropyltoluene
Concen: 7.65 ug/L
RT: 24.81 min Scan# 3651
Delta R.T. -0.00 min
Lab File: M13299.D
Acq: 22 Oct 99 3:29 pm

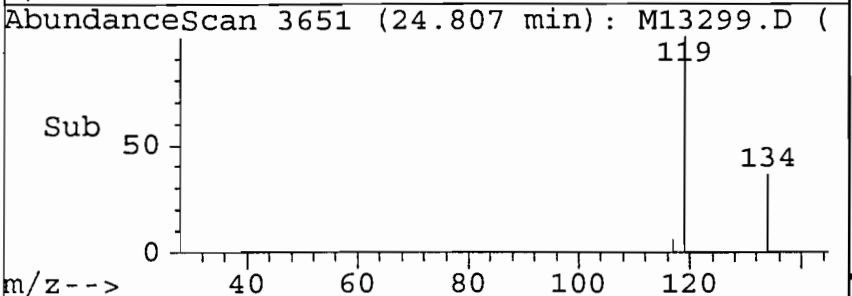
Tgt Ion:	119	Resp:	348165
Ion	Ratio	Lower	Upper
119	100		
134	26.3	16.7	31.1
91	23.7	17.2	32.0
0	0.0	0.0	0.0



AbundanceIon 119.00 (118
Ion 134.00 (133
Ion 91.00 (90.
24.81

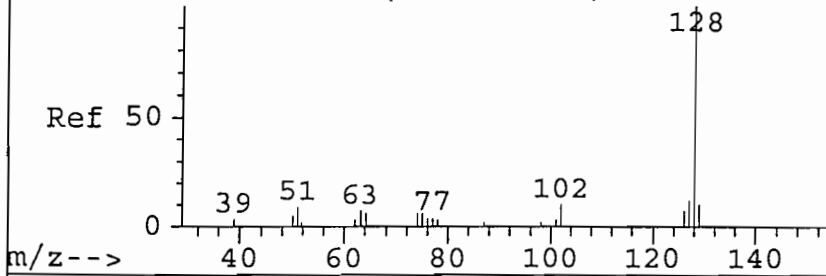


Time-->24.68 24.89



000309

AbundanceScan 4637 (30.569 min): M12956.D (



#78

naphthalene

Concen: 15.70 ug/L

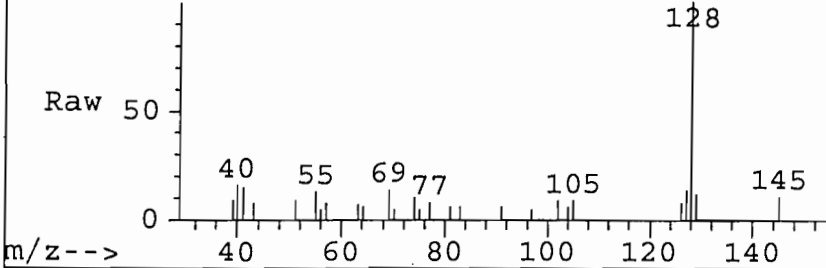
RT: 30.70 min Scan# 4661

Delta R.T. 0.13 min

Lab File: M13299.D

Acq: 22 Oct 99 3:29 pm

AbundanceScan 4661 (30.702 min): M13299.D (



Tgt Ion:128 Resp: 500097

Ion Ratio Lower Upper

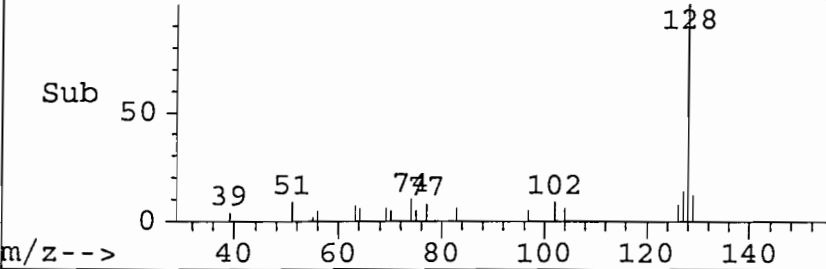
128 100

127 14.2 8.6 16.0

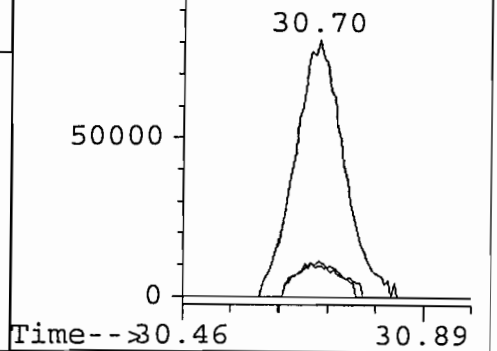
129 11.8 7.0 13.0

0 0.0 0.0 0.0

AbundanceScan 4661 (30.702 min): M13299.D (



AbundanceIon 128.00 (127
Ion 127.00 (126
Ion 129.00 (128



000310

Library Search Compound Report

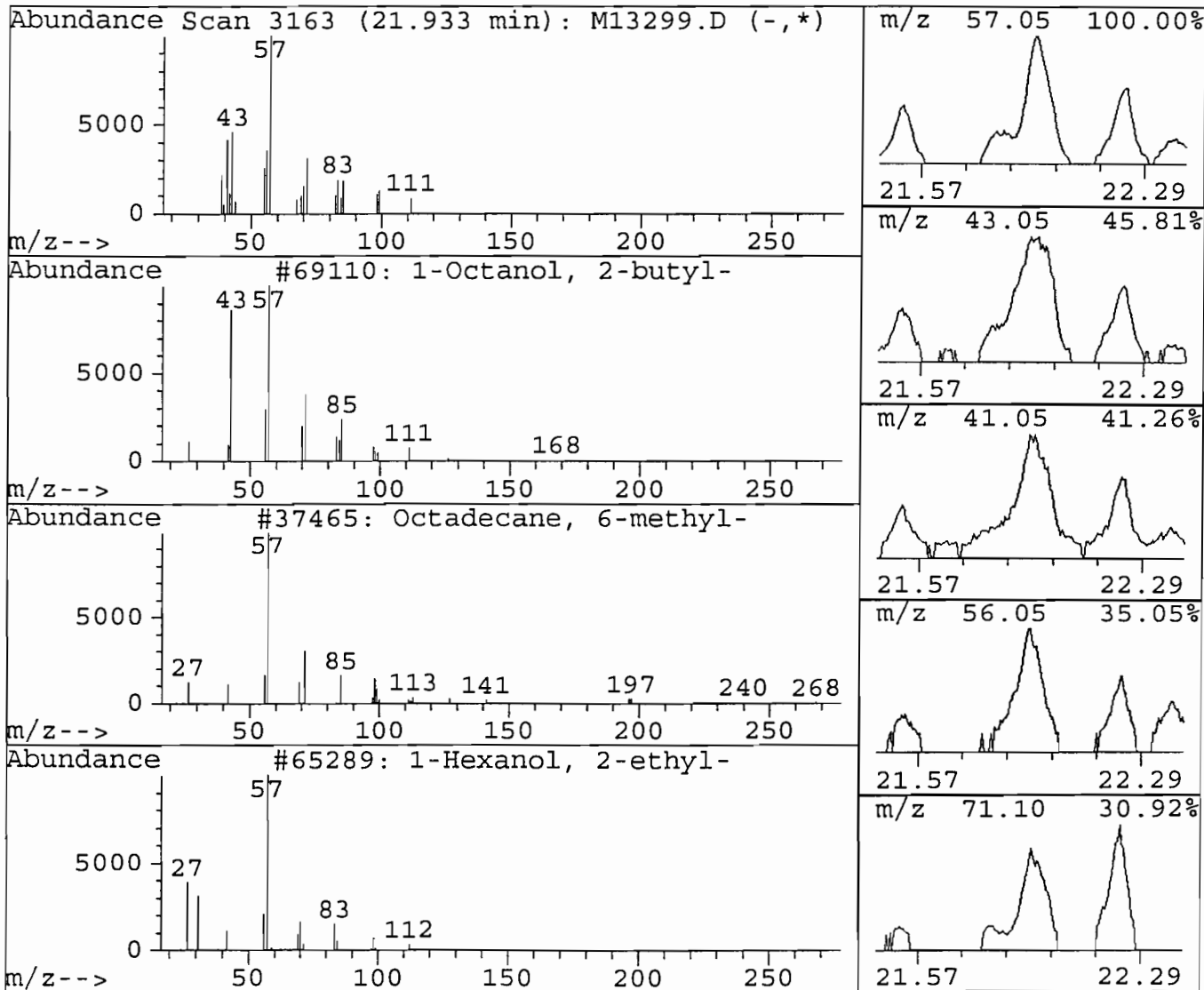
Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
21.93	23.30 ug/L	2372415	Chlorobenzene-d5	20.54

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	1-Octanol, 2-butyl-	69110	003913-02-8	59
2	Octadecane, 6-methyl-	37465	010544-96-4	50
3	1-Hexanol, 2-ethyl-	65289	000104-76-7	47
4	Hexane, 1-(hexyloxy)-5-methyl-	23021	074421-19-5	43
5	1-Decanol, 2-ethyl-	19527	021078-65-9	40



000311

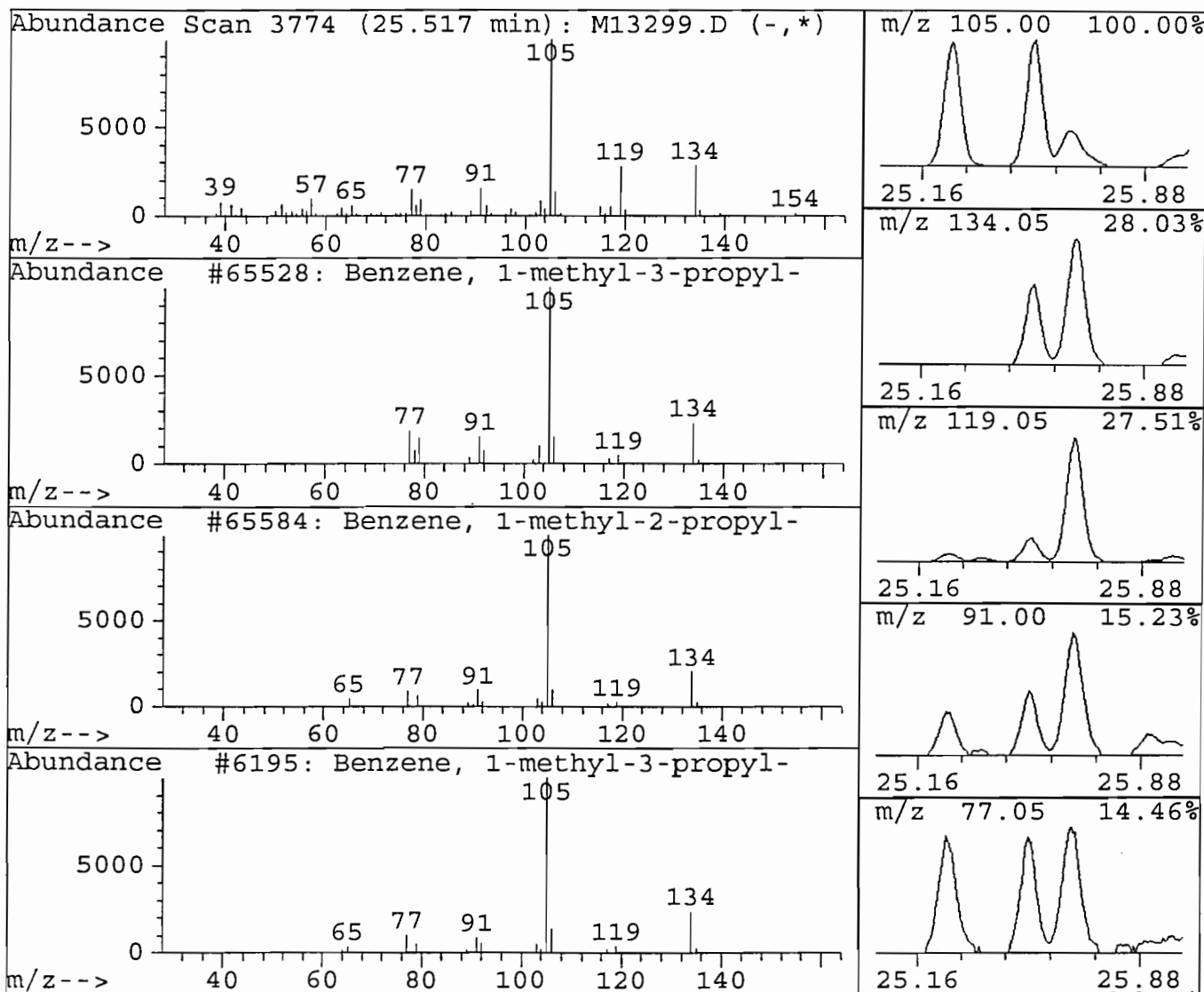
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.52	19.55 ug/L	6222725	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 1-methyl-3-propyl-		65528	001074-43-7	76
2	Benzene, 1-methyl-2-propyl-		65584	001074-17-5	76
3	Benzene, 1-methyl-3-propyl-		6195	001074-43-7	76
4	Benzene, 1-methyl-3-propyl-		65527	001074-43-7	76
5	Benzene, (1-methylpropyl)-		65544	000135-98-8	70



000312

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D

Acq Time : 22 Oct 99 3:29 pm

Sample : 13826ASP-88006

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

Multiplr: 1.00

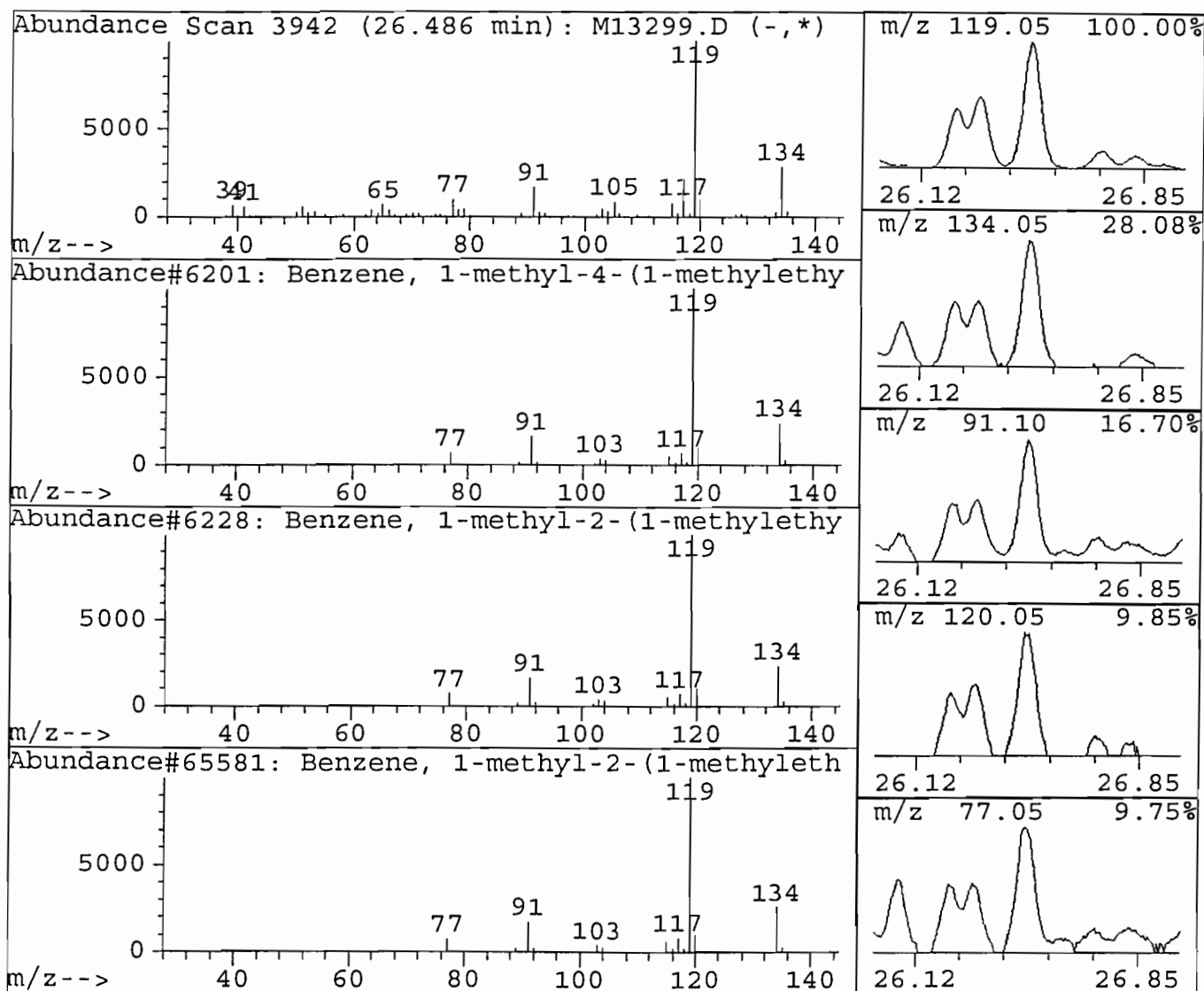
Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
26.49	22.57 ug/L	7182619	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1-methyl-4-(1-methylethyl)	6201	000099-87-6	97
2	Benzene, 1-methyl-2-(1-methylethyl)	6228	000527-84-4	97
3	Benzene, 1-methyl-2-(1-methylethyl)	65581	000527-84-4	97
4	Benzene, 1-methyl-3-(1-methylethyl)	65579	000535-77-3	97
5	Benzene, 1-methyl-3-(1-methylethyl)	6225	000535-77-3	95



000313

Library Search Compound Report

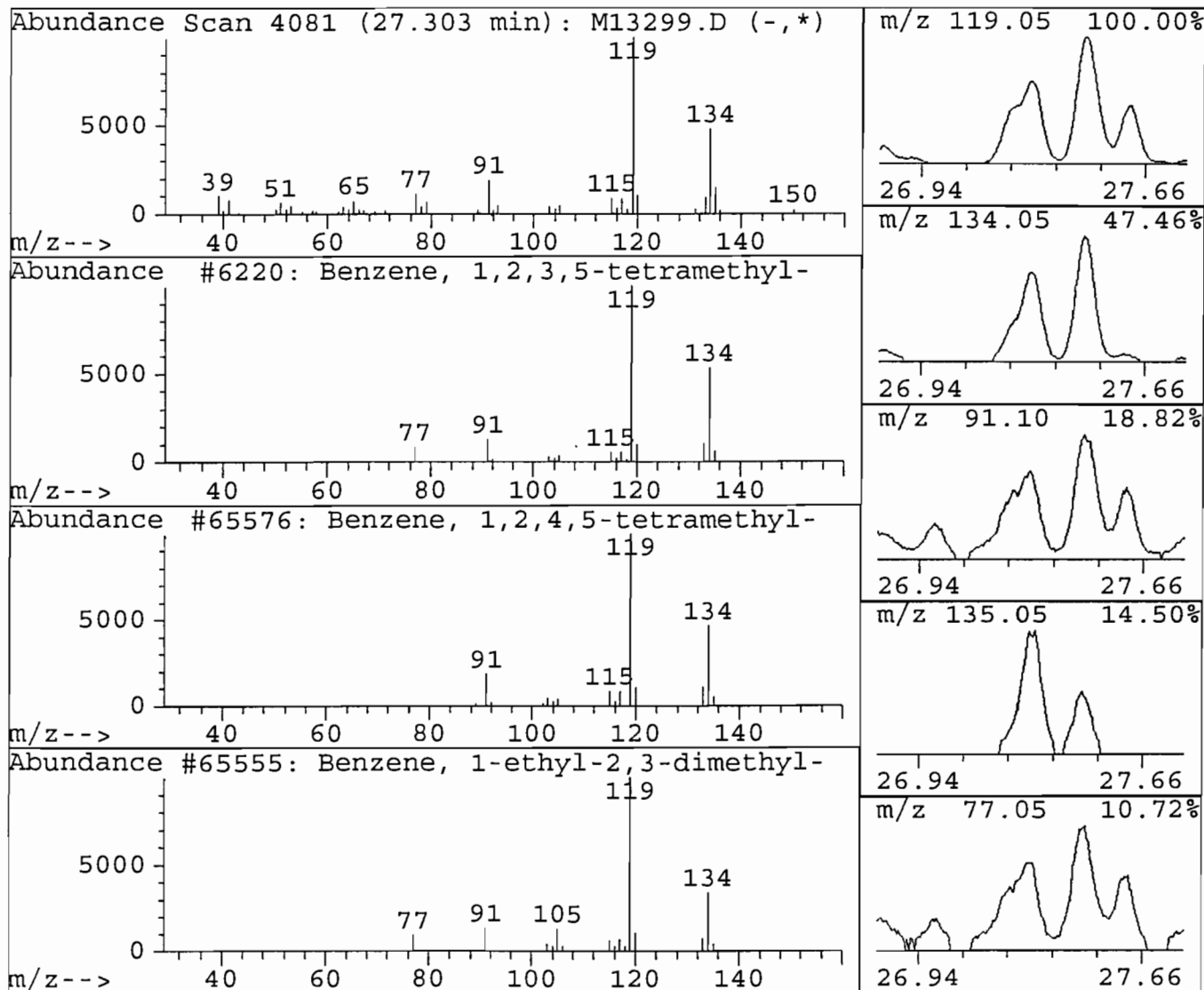
Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.30	23.18 ug/L	7376995	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 1,2,3,5-tetramethyl-	6220	000527-53-7	94
2	Benzene, 1,2,4,5-tetramethyl-	65576	000095-93-2	94
3	Benzene, 1-ethyl-2,3-dimethyl-	65555	000933-98-2	91
4	Benzene, 1,2,4,5-tetramethyl-	65574	000095-93-2	91
5	Benzene, 1-methyl-4-(1-methylethyl)	65536	000099-87-6	91



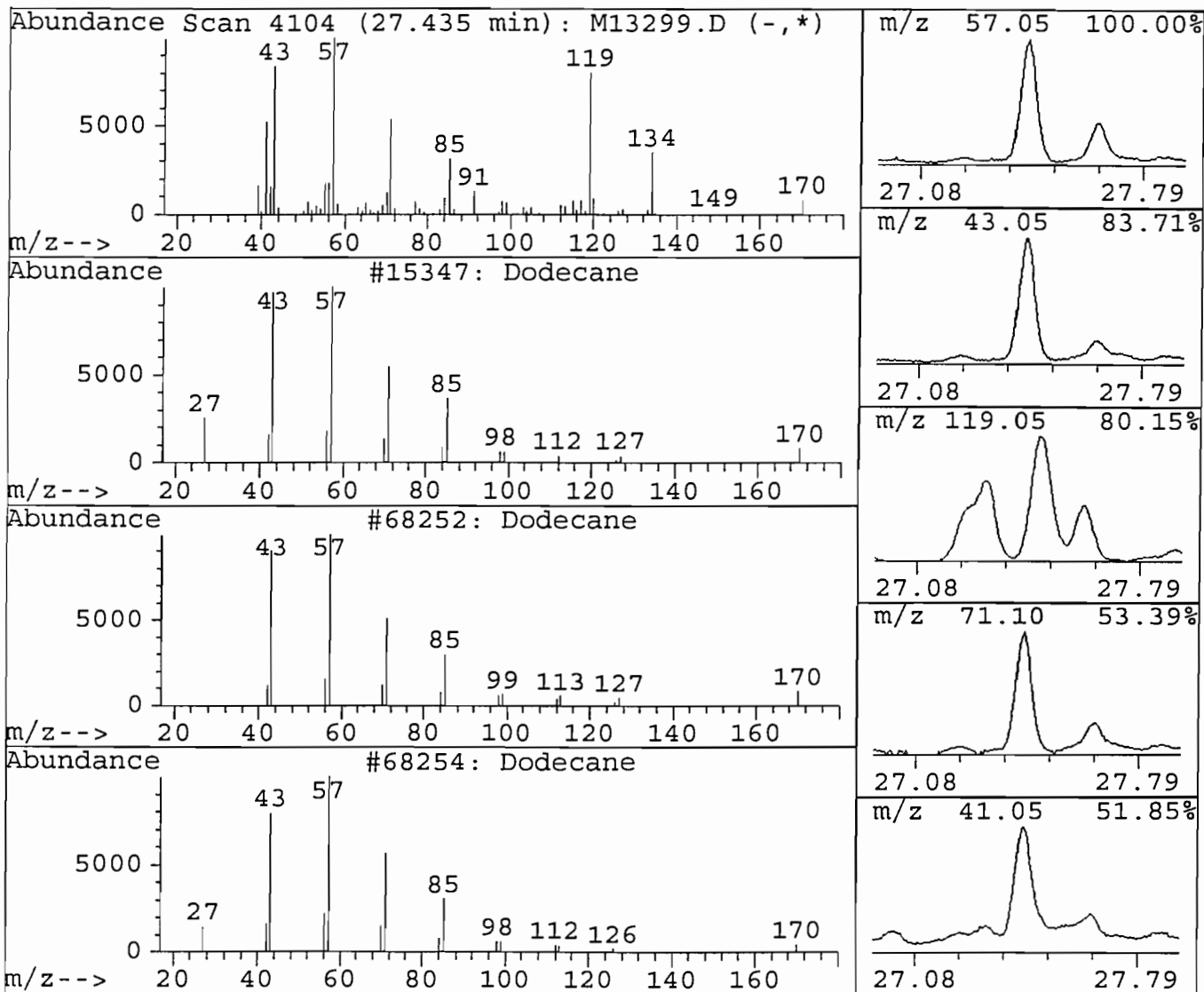
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
27.43	32.19 ug/L	10246324	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Dodecane		15347	000112-40-3	93
2	Dodecane		68252	000112-40-3	89
3	Dodecane		68254	000112-40-3	87
4	Dodecane		68253	000112-40-3	86
5	Dodecane		68251	000112-40-3	56



000315

Library Search Compound Report

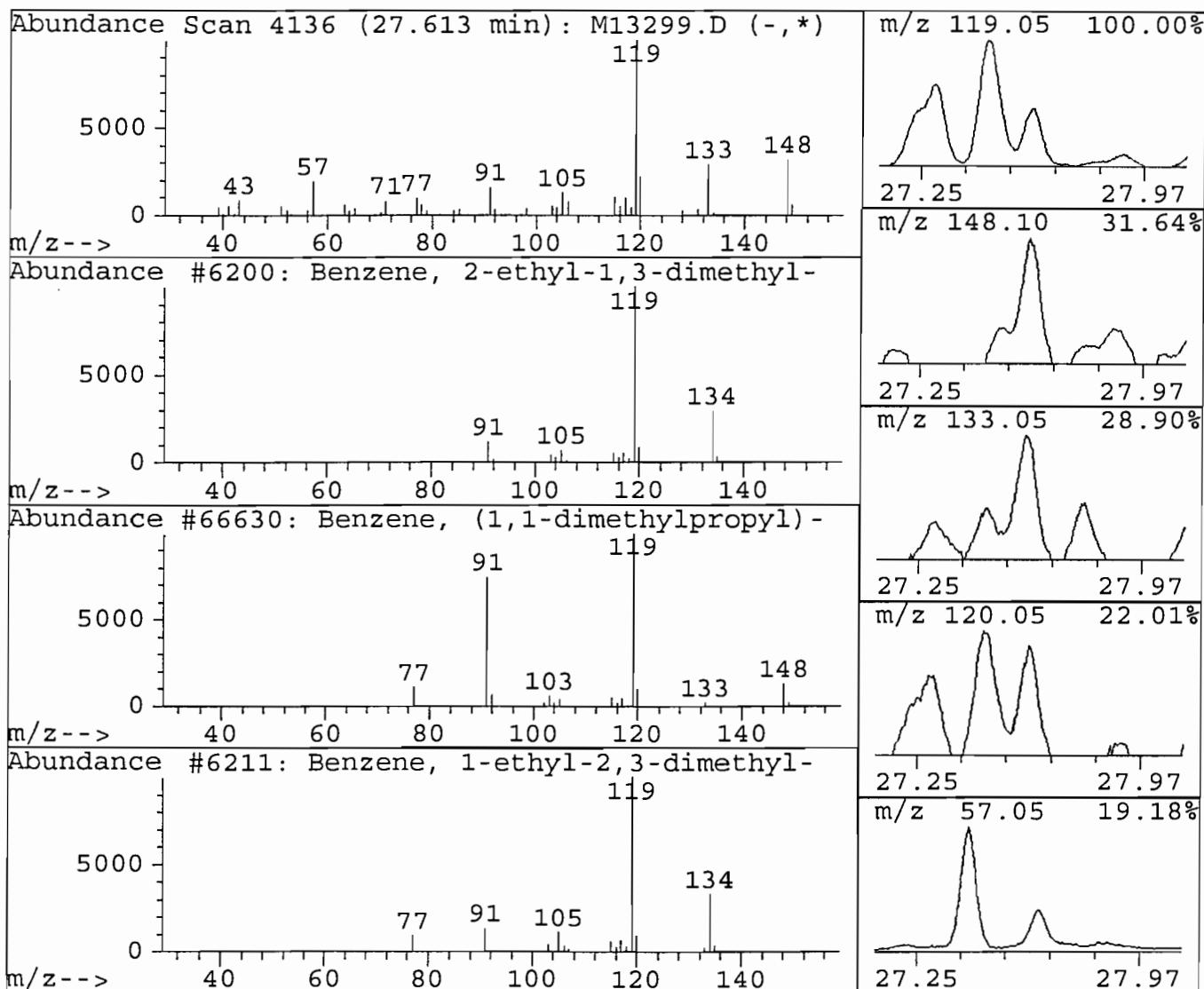
Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
27.61	13.21 ug/L	4205737	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Benzene, 2-ethyl-1,3-dimethyl-	6200	002870-04-4	58
2	Benzene, (1,1-dimethylpropyl)-	66630	002049-95-8	58
3	Benzene, 1-ethyl-2,3-dimethyl-	6211	000933-98-2	53
4	Benzene, 1-ethyl-2,4-dimethyl-	65572	000874-41-9	53
5	Benzene, 1,2,3,4-tetramethyl-	65540	000488-23-3	53



000316

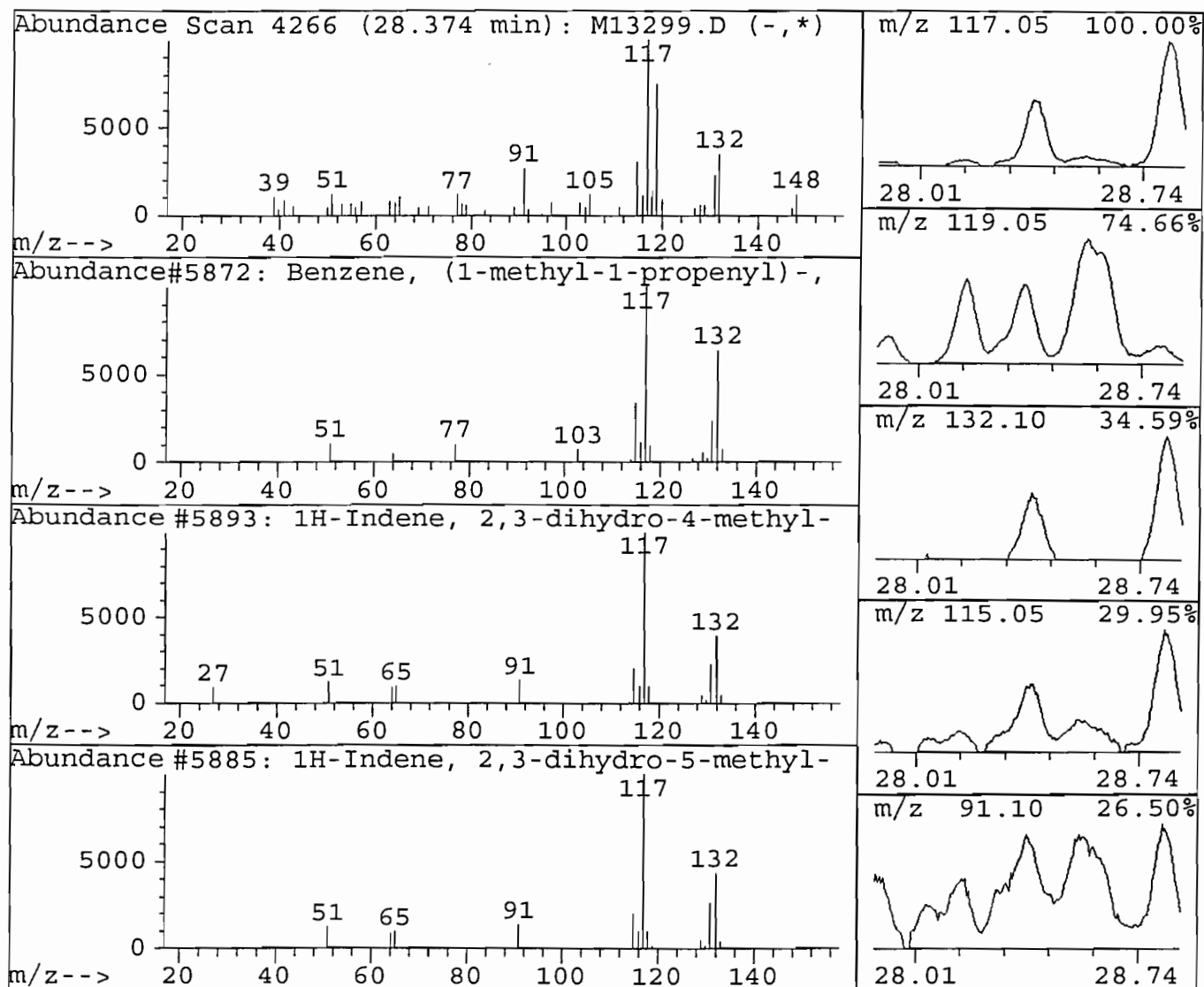
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
28.37	13.99 ug/L	4451771	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, (1-methyl-1-propenyl)-, (E		5872	000768-00-3	60
2	1H-Indene, 2,3-dihydro-4-methyl-		5893	000824-22-6	60
3	1H-Indene, 2,3-dihydro-5-methyl-		5885	000874-35-1	60
4	Benzene, 1-methyl-2-(2-propenyl)-		65419	001587-04-8	55
5	Benzene, (2-methyl-1-propenyl)-		65428	000768-49-0	49



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D

Acq Time : 22 Oct 99 3:29 pm

Sample : 13826ASP-88006

Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ

Inst : voa3

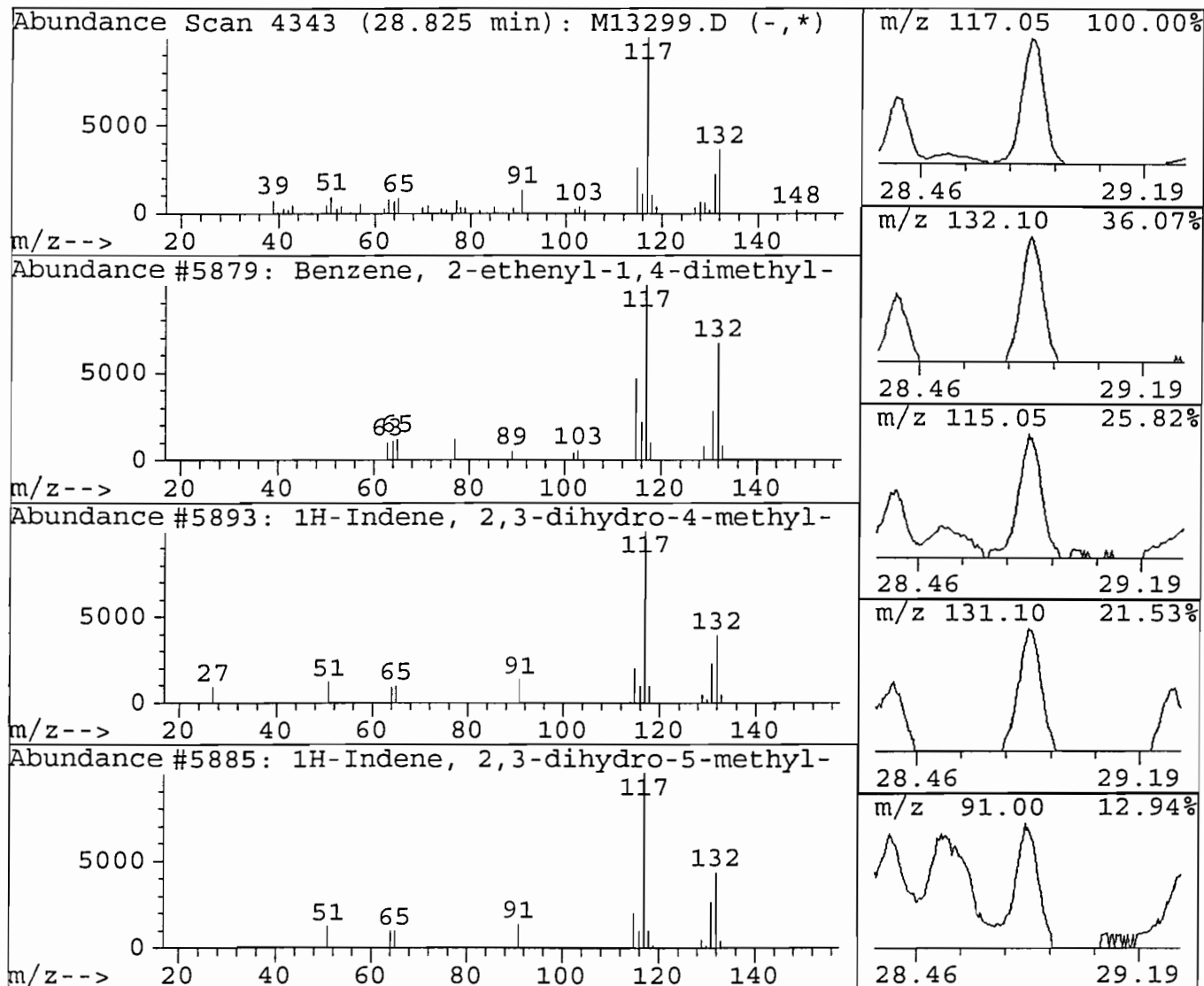
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA

Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
28.83	15.84 ug/L	5042130	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	Benzene, 2-ethenyl-1,4-dimethyl-		5879	002039-89-6	95
2	1H-Indene, 2,3-dihydro-4-methyl-		5893	000824-22-6	93
3	1H-Indene, 2,3-dihydro-5-methyl-		5885	000874-35-1	93
4	2,3-Dihydro-1-methylindene		5901	027133-93-3	93
5	Indan, 1-methyl-		5882	000767-58-8	87



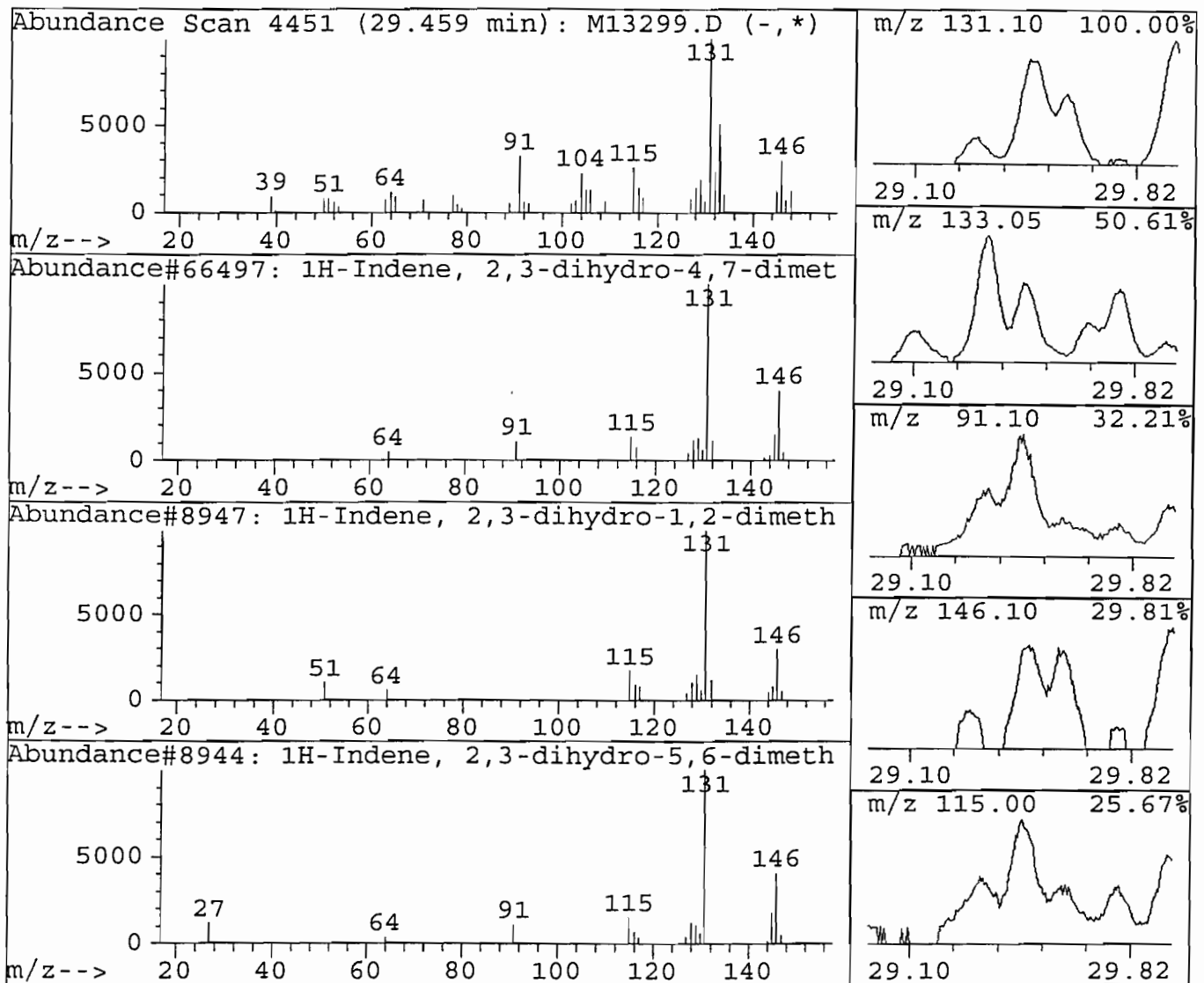
Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
29.46	12.03 ug/L	3830230	1,4-dichlorobenzene-d4	25.28	
Hit# of 20	Tentative ID		Ref#	CAS#	Qual
1	1H-Indene, 2,3-dihydro-4,7-dimethyl		66497	006682-71-9	60
2	1H-Indene, 2,3-dihydro-1,2-dimethyl		8947	017057-82-8	60
3	1H-Indene, 2,3-dihydro-5,6-dimethyl		8944	001075-22-5	49
4	Naphthalene, 1,2,3,4-tetrahydro-1-m		8942	001559-81-5	49
5	1H-Indene, 2,3-dihydro-1,6-dimethyl		8967	017059-48-2	49



000319

Library Search Compound Report

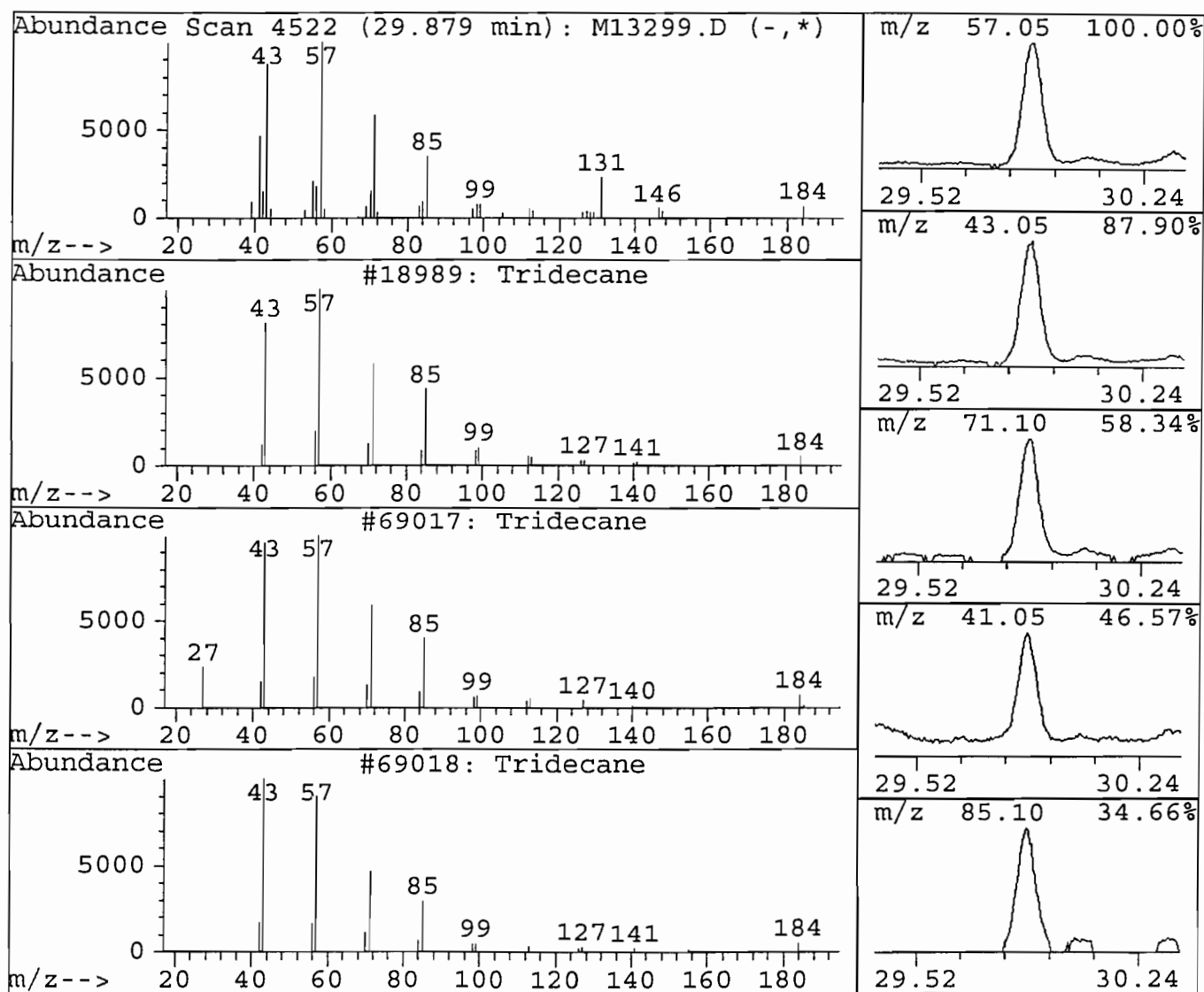
Data File : D:\HPCHEM\3\DATA\V3102299\M13299.D
Acq Time : 22 Oct 99 3:29 pm
Sample : 13826ASP-88006
Misc : 100uL/5MLS 4G/10 mL MeOH

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
29.88	13.70 ug/L	4359852	1,4-dichlorobenzene-d4	25.28

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	Tridecane	18989	000629-50-5	96
2	Tridecane	69017	000629-50-5	95
3	Tridecane	69018	000629-50-5	94
4	Tridecane	69019	000629-50-5	76
5	Tridecane	69020	000629-50-5	76



000320

CHEMTECH CONSULTING GROUP

VOLATILES

CALIBRATION DATA

000321

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Instrument ID: VOA 2

Calibration Date(s): '10/6/99 '10/6/99

Heated Purge: (Y/N) Y

Calibration Times: 1753 2135

GC Column RTX624

ID: 0.53 (mm)

Lab File ID:	RRF005 = P19054.D	RRF20 = P19053.D
RRF50 = P19049.D	RRF100 = P19052.D	RRF200 = P19051.D

COMPOUND	RRF005	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Dichlorodifluoromethane	0.454	0.473	0.390	0.421	0.410	0.430	7.8
Chloromethane *	0.236	0.267	0.198	0.227	0.222	0.230	10.9 *
Vinyl Chloride	0.218	0.232	0.196	0.225	0.224	0.219	6.4
Bromomethane	0.277	0.286	0.210	0.240	0.225	0.247	13.3
Chloroethane	0.129	0.133	0.097	0.104	0.100	0.113	15.3
Acrolein	0.012	0.013	0.012	0.013	0.012	0.013	5.3
Trichlorofluoromethane	1.197	1.222	0.985	1.088	0.833	1.065	15.1
1,1-Dichloroethene	0.535	0.574	0.503	0.549	0.484	0.529	6.8
Acetone	0.107	0.082	0.120	0.065	0.074	0.090	25.8
Carbon Disulfide	0.511	0.578	0.553	0.582	0.511	0.547	6.3
Methylene Chloride	0.264	0.243	0.220	0.235	0.212	0.235	8.6
trans-1,2-Dichloroethene	0.422	0.482	0.453	0.477	0.412	0.449	7.0
Acrylonitrile	0.032	0.036	0.034	0.036	0.032	0.034	6.2
1,1-Dichloroethane *	0.740	0.811	0.684	0.736	0.679	0.730	7.3 *
2,2-Dichloropropane	0.758	0.854	0.740	0.766	0.649	0.753	9.7
cis-1,2-dichloroethene	0.635	0.691	0.597	0.634	0.546	0.621	8.6
Bromochloromethane	0.383	0.429	0.373	0.393	0.354	0.386	7.2
Chloroform	0.997	1.128	0.947	1.019	0.895	0.997	8.8
1,1,1-Trichloroethane	0.981	1.149	1.025	1.086	0.989	1.046	6.8
Vinyl Acetate	0.670	0.786	0.720	0.785	0.686	0.729	7.4
2-Butanone	0.132	0.116	0.148	0.116	0.120	0.126	11.1
Carbon Tetrachloride	0.542	0.636	0.561	0.623	0.540	0.580	7.9
1,1-Dichloropropene	0.547	0.634	0.562	0.605	0.534	0.576	7.2
Benzene	0.791	0.833	0.788	0.812	0.733	0.792	4.7
1,2-Dichloroethane	0.732	0.815	0.660	0.732	0.645	0.717	9.5
Trichloroethene	0.432	0.501	0.466	0.497	0.449	0.469	6.4
1,2-Dichloropropane	0.322	0.381	0.342	0.391	0.365	0.360	7.8
Dibromomethane	0.359	0.431	0.377	0.395	0.361	0.384	7.7
Bromodichloromethane	0.802	1.010	0.898	1.027	0.979	0.943	9.9
2-Chloroethyl Vinyl Ether	0.136	0.133	0.123	0.130	0.112	0.127	7.6
cis-1,3-Dichloropropene	0.485	0.609	0.531	0.596	0.549	0.554	9.1
Toluene	1.059	1.069	0.959	0.987	0.845	0.984	9.2
trans-1,3-Dichloropropene	0.471	0.582	0.510	0.579	0.540	0.536	8.7
1,1,2-Trichloroethane	0.281	0.295	0.297	0.312	0.278	0.293	4.8
4-Methyl-2-Pentanone	0.351	0.242	0.252	0.262	0.243	0.270	17.1
Tetrachloroethene	0.496	0.507	0.533	0.536	0.447	0.504	7.2

* Compounds with required minimum RRF and maximum %RSD values.

All other compounds must meet a minimum RRF of 0.010.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SSInstrument ID: VOA 2Calibration Date(s): '10/6/99 '10/6/99Heated Purge: (Y/N) YCalibration Times: 1753 2135GC Column RTX624ID: 0.53 (mm)

Lab File ID:		RRF005 = P19054.D		RRF20 = P19053.D			
RRF50 = P19049.D		RRF100 = P19052.D		RRF200 = P19051.D			
COMPOUND	RRF005	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
1,3-Dichloropropane	0.451	0.481	0.470	0.521	0.497	0.484	5.5
Dibromochloromethane	0.758	0.583	0.656	0.734	0.706	0.687	10.1
1,2-Dibromoethane	0.479	0.535	0.504	0.559	0.537	0.523	6.0
2-Hexanone	0.171	0.156	0.217	0.197	0.212	0.191	13.8
Chlorobenzene *	0.865	0.867	0.784	0.805	0.731	0.810	7.1
1,1,1,2-Tetrachloroethane	0.402	0.425	0.490	0.511	0.466	0.459	9.9
Ethylbenzene	1.450	1.436	1.334	1.362	1.245	1.365	6.1
m&p-xylenes	0.495	0.502	0.438	0.480	0.423	0.468	7.5
o-xylene	1.483	1.462	1.235	1.327	1.251	1.352	8.6
Styrene	0.731	0.856	0.728	0.824	0.754	0.778	7.5
Bromoform *	0.396	0.523	0.561	0.616	0.612	0.542	16.6
isopropylbenzene	2.149	2.110	2.168	2.181	2.174	2.157	1.3
Bromobenzene	1.530	1.450	1.499	1.487	1.437	1.481	2.6
1,1,2,2-Tetrachloroethane *	0.848	0.806	0.884	0.892	0.851	0.856	4.0
1,2,3-Trichloropropane	0.681	0.591	0.631	0.657	0.640	0.640	5.2
n-Propylbenzene	1.430	0.777	0.836	0.813	0.794	0.930	30.2
2-Chlorotoluene	0.529	0.535	0.541	0.542	0.517	0.533	1.9
4-Chlorotoluene	0.542	0.540	0.547	0.562	0.540	0.546	1.7
1,3,5-Trimethylbenzene	1.768	1.961	2.053	2.037	2.060	1.976	6.2
tert-Butylbenzene	1.953	1.867	1.896	1.887	1.933	1.907	1.8
1,2,4-Trimethylbenzene	3.268	2.045	1.990	2.038	2.064	2.281	24.2
sec-Butylbenzene	2.547	2.568	2.509	2.643	2.524	2.558	2.1
1,3-Dichlorobenzene	1.361	1.301	1.289	1.283	1.250	1.297	3.1
4-Isopropyltoluene	2.564	2.319	2.315	2.311	2.264	2.355	5.1
1,4-Dichlorobenzene	1.351	1.386	1.271	1.305	1.263	1.315	4.0
1,2-Dichlorobenzene	1.247	1.242	1.241	1.265	1.228	1.244	1.1
n-Butylbenzene	2.904	2.200	2.233	2.304	2.259	2.380	12.4
1,2-Dibromo-3-chloropropane	0.276	0.281	0.301	0.342	0.360	0.312	11.9
1,2,4-Trichlorobenzene	1.069	1.009	1.054	1.125	1.152	1.082	5.3
Hexachlorobutadiene	0.827	0.894	0.871	0.891	0.904	0.877	3.5
Naphthalene	1.852	1.517	1.493	1.573	1.613	1.610	8.9
1,2,3-Trichlorobenzene	0.975	0.942	0.946	0.943	1.020	0.965	3.5

* Compounds with required minimum RRF and maximum %RSD values.

All other compounds must meet a minimum RRF of 0.010.

Lab Name: _____ Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Instrument ID: _____ Calibration Date(s): _____

Heated Purge: (Y/N) _____ Calibration Times: _____

GC Column: _____ ID: _____ (mm)

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Response Factor Report voa2

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Initial Calibration

Calibration Files

50 =P19049.D 200 =P19051.D 100 =P19052.D
 20 =P19053.D 5 =P19054.D

Compound		50	200	100	20	5	Avg	%RSD
-----ISTD-----								
1)	Fluorobenzene	0.390	0.410	0.421	0.473	0.454	0.430	7.83
2) T	dichlorodifluoromethane	0.198	0.222	0.227	0.267	0.236	0.230	10.92#
3) P	chloromethane	0.196	0.224	0.225	0.232	0.218	0.219	6.44
4) C	vinyl chloride	0.210	0.225	0.240	0.285	0.277	0.247	13.32
5) T	bromomethane	0.097	0.100	0.104	0.133	0.129	0.113	15.25
6) T	chloroethane	0.012	0.012	0.013	0.013	0.012	0.012	5.37
7)	Acrolein	0.985	0.833	1.088	1.222	1.197	1.065	15.05
8) T	trichlorofluoromethane	0.503	0.484	0.549	0.574	0.535	0.529	6.81
9) C	1,1-dichloroethene	0.120	0.074	0.065	0.082	0.107	0.090	25.79
10)	Acetone	0.553	0.511	0.582	0.578	0.511	0.547	6.34
11)	Carbon Disulfide	0.754	0.731	0.806	0.819	0.693	0.761	6.89
12)	Iodo Methane	0.220	0.212	0.235	0.243	0.264	0.235	8.58
13) T	methylene chloride	0.453	0.412	0.477	0.482	0.422	0.449	7.03
14) T	trans-1,2-dichloroethene	0.030	0.032	0.032	0.033	0.038	0.033	9.33
15)	TBA	0.897	0.807	0.918	0.909	0.816	0.869	6.14
16)	MTBE	0.034	0.032	0.036	0.036	0.032	0.034	6.26
17)	Acrylonitrile	0.684	0.679	0.736	0.811	0.740	0.730	7.30#
18) P	1,1-dichloroethane	0.740	0.649	0.766	0.854	0.758	0.753	9.73
19) T	2,2-dichloropropane	0.597	0.546	0.633	0.691	0.635	0.621	8.62
20) T	cis-1,2-dichloroethene	0.373	0.354	0.392	0.429	0.383	0.386	7.19
21) T	bromochloromethane	0.947	0.894	1.019	1.128	0.997	0.997	8.80
22) C	chloroform	1.025	0.989	1.086	1.149	0.981	1.046	6.78
23) T	1,1,1-trichloroethane	0.794	0.764	0.860	0.929	0.818	0.833	7.72
24) S	Dibromofluoromethane	0.720	0.686	0.785	0.786	0.670	0.730	7.44
25)	Vinyl Acetate	0.148	0.120	0.116	0.115	0.132	0.126	11.05
26)	2-Butanone	0.561	0.540	0.623	0.636	0.542	0.580	7.91
27) T	carbon tetrachloride	0.562	0.534	0.605	0.634	0.547	0.576	7.25
28) T	1,1-dichloropropene	0.788	0.733	0.812	0.833	0.791	0.792	4.70
29) T	benzene	0.623	0.612	0.658	0.744	0.635	0.655	8.10
30) S	1,2-Dichloroethane-d4	0.660	0.645	0.732	0.815	0.732	0.717	9.51
31) T	1,2-dichloroethane	0.466	0.449	0.497	0.501	0.432	0.469	6.40
32) T	trichloroethene	0.342	0.365	0.391	0.381	0.322	0.360	7.81
33) C	1,2-dichloropropane	0.377	0.361	0.395	0.431	0.359	0.384	7.69
34) T	dibromomethane	0.898	0.979	1.027	1.010	0.802	0.943	9.89
35) T	bromodichloromethane	0.123	0.112	0.130	0.133	0.135	0.127	7.61
36)	2-Chloroethyl Vinyl Ether	0.530	0.549	0.596	0.609	0.485	0.554	9.12
37) T	cis-1,3-dichloropropene	0.956	0.864	0.991	1.053	1.012	0.975	7.34
38) S	Toluene-d8	0.959	0.845	0.987	1.069	1.059	0.984	9.20
39) C	toluene	0.510	0.540	0.579	0.582	0.471	0.536	8.73
40) T	trans-1,3-dichloropropene	0.297	0.278	0.312	0.295	0.281	0.293	4.76
41) T	1,1,2-trichloroethane	0.916	0.907	0.970	1.188	1.024	1.001	11.43
42) S	4-Bromofluorobenzene	-----ISTD-----						
43)	Chlorobenzene-d5	-----ISTD-----						

000325

Response Factor Report voa2

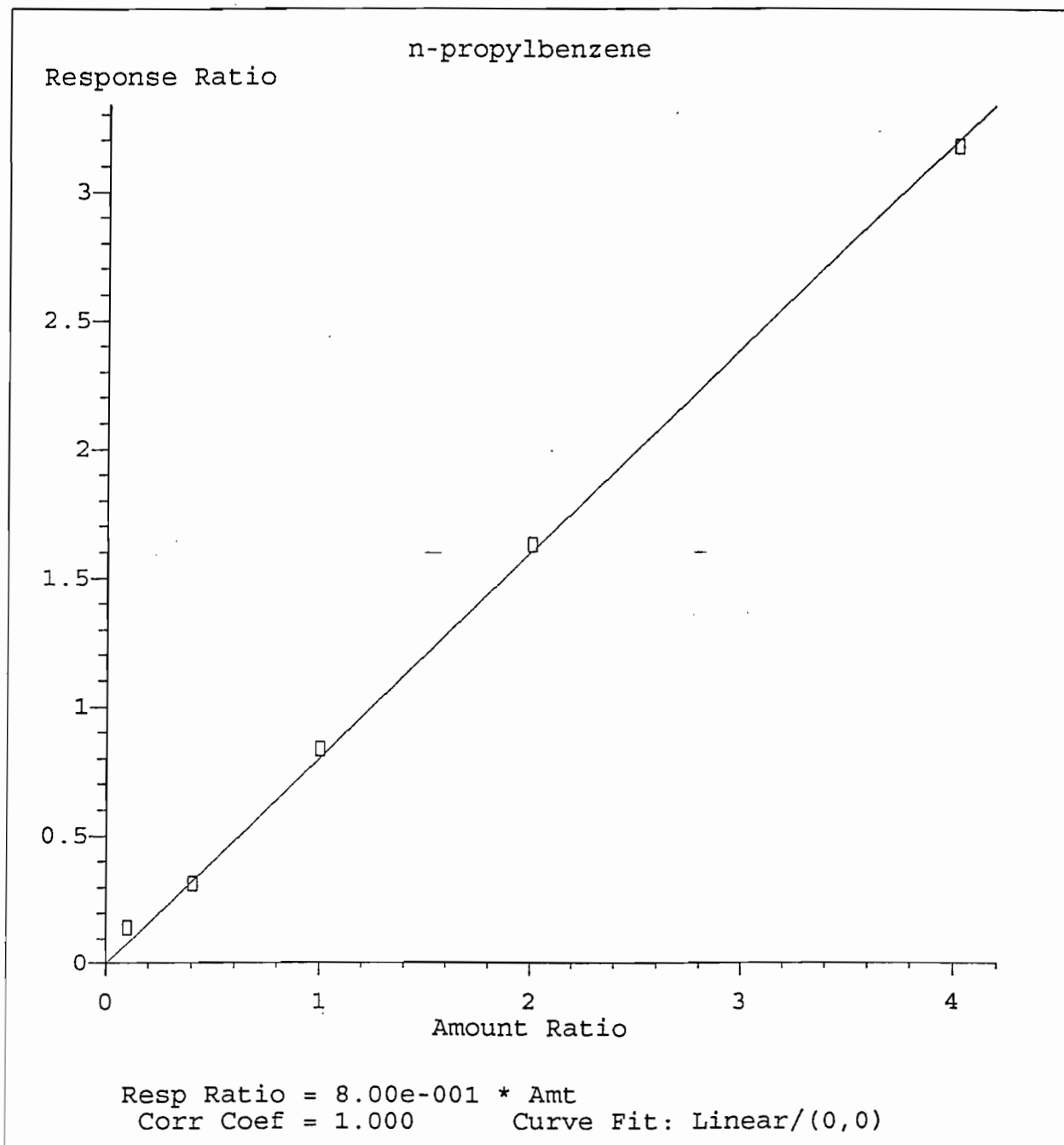
Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Initial Calibration

Calibration Files

50 =P19049.D 200 =P19051.D 100 =P19052.D
 20 =P19053.D 5 =P19054.D

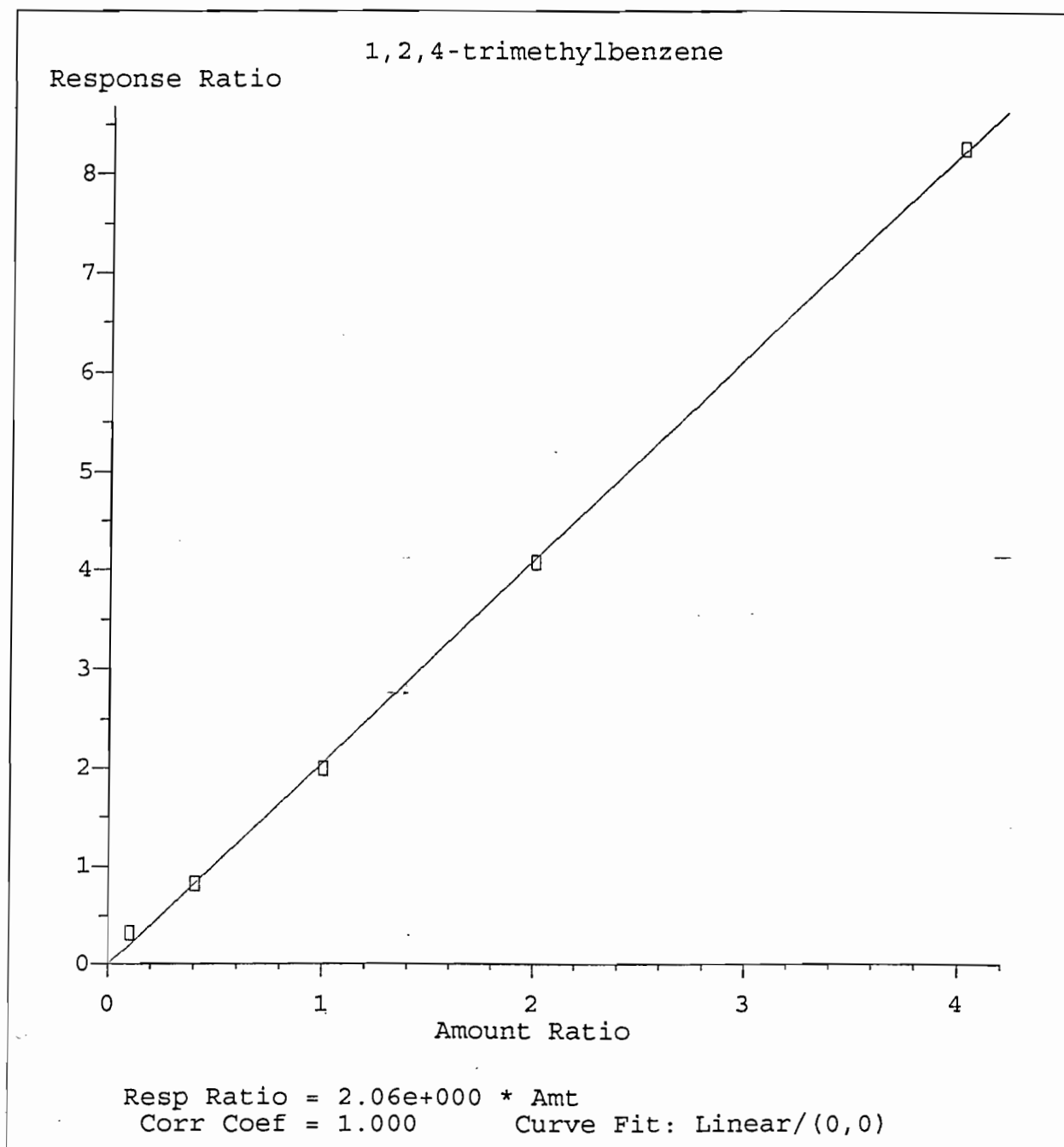
	Compound	50	200	100	20	5	Avg	%RSD
44)	4-Methyl-2-Pentanone	0.252	0.243	0.262	0.242	0.351	0.270	17.07
45) T	tetrachloroethene	0.533	0.447	0.536	0.507	0.496	0.504	7.17
46) T	1,3-dichloropropane	0.470	0.497	0.521	0.481	0.451	0.484	5.50
47) T	dibromochloromethane	0.656	0.706	0.734	0.583	0.758	0.687	10.14
48) T	1,2-dibromoethane	0.504	0.537	0.559	0.535	0.479	0.523	5.99
49)	2-Hexanone	0.217	0.212	0.197	0.156	0.171	0.191	13.76
50) P	chlorobenzene	0.784	0.731	0.805	0.867	0.864	0.810	7.07#
51)	1-Chlorohexane	0.456	0.417	0.466	0.475	0.460	0.455	4.85
52) T	1,1,1,2-tetrachloroethane	0.489	0.466	0.511	0.425	0.402	0.459	9.87
53) C	ethylbenzene	1.334	1.245	1.362	1.436	1.450	1.365	6.08
54) T	m&p-xylenes	0.438	0.423	0.480	0.502	0.495	0.468	7.52
55) T	o-xylene	1.235	1.251	1.327	1.462	1.483	1.352	8.58
56) T	styrene	0.728	0.754	0.824	0.856	0.731	0.778	7.47
57) P	bromoform	0.561	0.612	0.616	0.523	0.396	0.542	16.62#
58)	1,4-dichlorobenzene-d4	-----ISTD-----						
59) T	isopropylbenzene	2.168	2.174	2.181	2.110	2.149	2.156	1.31
60) T	bromobenzene	1.498	1.437	1.487	1.450	1.530	1.481	2.55
61) P	1,1,2,2-tetrachloroethane	0.884	0.851	0.892	0.806	0.848	0.856	4.01#
62)	1,2,3-trichloropropane	0.631	0.640	0.657	0.591	0.681	0.640	5.22
63) T	n-propylbenzene	0.836	0.794	0.813	0.777	1.430	0.930	30.16
64) T	2-chlorotoluene	0.541	0.517	0.541	0.535	0.529	0.533	1.87
65) T	4-chlorotoluene	0.547	0.540	0.562	0.540	0.542	0.546	1.68
66) T	1,3,5-trimethylbenzene	2.053	2.060	2.037	1.961	1.768	1.976	6.21
67) T	tert-butylbenzene	1.896	1.933	1.887	1.867	1.953	1.907	1.84
68) T	1,2,4-trimethylbenzene	1.990	2.064	2.038	2.045	3.268	2.281	24.21
69) T	sec-butylbenzene	2.509	2.524	2.643	2.568	2.547	2.558	2.05
70) T	1,3-dichlorobenzene	1.289	1.250	1.283	1.301	1.361	1.297	3.14
71) T	4-isopropyltoluene	2.315	2.263	2.311	2.319	2.564	2.355	5.06
72) T	1,4-dichlorobenzene	1.270	1.263	1.305	1.386	1.351	1.315	4.02
73) T	1,2-dichlorobenzene	1.241	1.227	1.265	1.242	1.247	1.244	1.08
74) T	n-butylbenzene	2.233	2.259	2.304	2.200	2.904	2.380	12.41
75) T	1,2-dibromo-3-chloropropa	0.301	0.360	0.341	0.281	0.276	0.312	11.94
76) T	1,2,4-trichlorobenzene	1.054	1.152	1.125	1.008	1.069	1.082	5.27
77) T	hexachlorobutadiene	0.871	0.904	0.891	0.894	0.827	0.877	3.46
78) T	naphthalene	1.493	1.613	1.573	1.517	1.852	1.610	8.91
79) T	1,2,3-trichlorobenzene	0.946	1.020	0.943	0.942	0.975	0.965	3.48

000326



Method Name: I:\HPCHEM\1\METHODS\V21006CS.M
Calibration Table Last Updated: Thu Oct 07 12:17:46 1999

000327



Method Name: I:\HPCHEM\1\METHODS\V21006CS.M
Calibration Table Last Updated: Thu Oct 07 12:18:32 1999

000328

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19049.D
 Acq Time : 6 Oct 99 5:53 pm
 Sample : 50PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 11:56 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	1148289	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1165750	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	798958	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	912061	50.00	ug/L	100.00%
30) 1,2-Dichlorethane-d4	8.67	65	715315	50.00	ug/L	100.00%
38) Toluene-d8	12.76	98	1097980	50.00	ug/L	100.00%
42) 4-Bromofluorobenzene	19.48	95	1052170	50.00	ug/L	100.00%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	447926	50.00	ug/L	100
3) chloromethane	1.95	50	227311	50.00	ug/L	100
4) vinyl chloride	2.07	62	224498	50.00	ug/L	100
5) bromomethane	2.47	94	240595	50.00	ug/L	100
6) chloroethane	2.60	64	110867	50.00	ug/L	100
7) Acrolein	3.64	56	140677	500.00	ug/L	100
8) trichlorofluoromethane	2.90	101	1130865	50.00	ug/L	100
9) 1,1-dichloroethene	3.66	61	577581	50.00	ug/L	100
10) Acetone	3.90	43	137649	50.00	ug/L	100
11) Carbon Disulfide	3.95	76	635258	50.00	ug/L	100
12) Iodo Methane	3.91	142	865693	50.00	ug/L	100
13) methylene chloride	4.58	84	252701	50.00	ug/L	100
14) trans-1,2-dichloroethene	4.97	61	520029	50.00	ug/L	100
15) TBA	4.96	59	345045	500.00	ug/L	100
16) MTBE	5.01	73	1030296	50.00	ug/L	100
17) Acrylonitrile	5.16	53	387805	500.00	ug/L	100
18) 1,1-dichloroethane	5.83	63	785448	50.00	ug/L	100
19) 2,2-dichloropropane	6.89	77	849624	50.00	ug/L	100
20) cis-1,2-dichloroethene	6.98	61	685832	50.00	ug/L	100
21) bromochloromethane	7.45	49	428603	50.00	ug/L	100
22) chloroform	7.64	83	1087118	50.00	ug/L	100
23) 1,1,1-trichloroethane	7.86	97	1176692	50.00	ug/L	100
25) Vinyl Acetate	5.97	43	826581	50.00	ug/L	100
26) 2-Butanone	7.10	43	170015	50.00	ug/L	100
27) carbon tetrachloride	8.10	117	644091	50.00	ug/L	100
28) 1,1-dichloropropene	8.18	75	644885	50.00	ug/L	100
29) benzene	8.60	78	904978	50.00	ug/L	100
31) 1,2-dichloroethane	8.82	62	758278	50.00	ug/L	100
32) trichloroethene	10.03	130	534952	50.00	ug/L	100
33) 1,2-dichloropropane	10.60	63	392751	50.00	ug/L	100
34) dibromomethane	10.86	174	432824	50.00	ug/L	100
35) bromodichloromethane	11.25	83	1031054	50.00	ug/L	100
36) 2-Chloroethyl Vinyl Ether	12.92	63	140712	50.00	ug/L	100

000329

(#) = qualifier out of range (m) = manual integration
 P19049.D V21006CS.M Thu Oct 07 12:28:47 1999

VOA3

Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19049.D
Acq Time : 6 Oct 99 5:53 pm
Sample : 50PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 11:56 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration

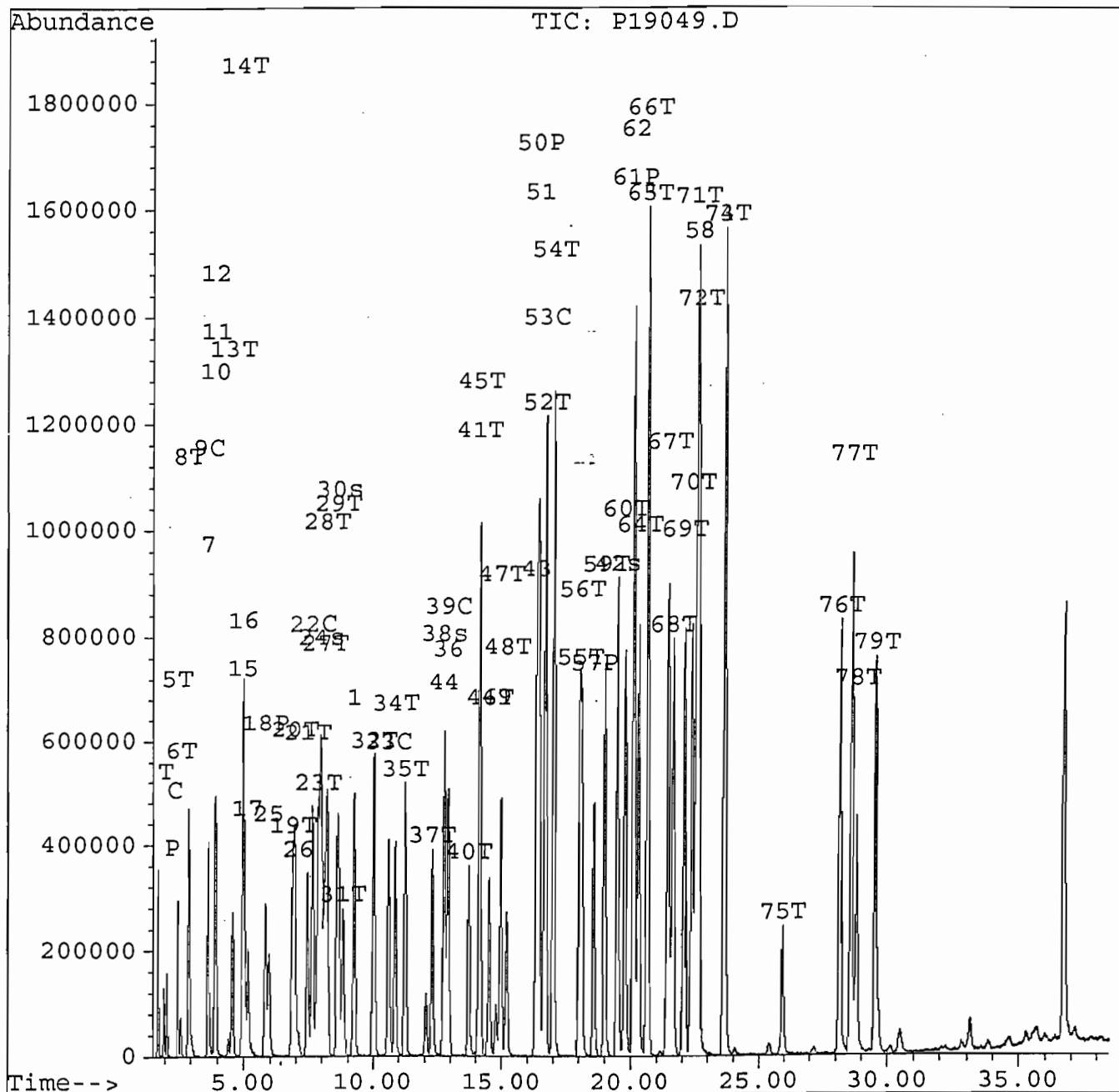
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.30	75	609135	50.00	ug/L	100
39) toluene	12.93	91	1101041	50.00	ug/L	100
40) trans-1,3-dichloropropene	13.72	75	585865	50.00	ug/L	100
41) 1,1,2-trichloroethane	14.12	97	341453	50.00	ug/L	100
44) 4-Methyl-2-Pentanone	12.73	43	293883	50.00	ug/L	100
45) tetrachloroethene	14.15	166	620928	50.00	ug/L	100
46) 1,3-dichloropropane	14.51	76	548001	50.00	ug/L	100
47) dibromochloromethane	14.96	129	764865	50.00	ug/L	100
48) 1,2-dibromoethane	15.19	107	588044	50.00	ug/L	100
49) 2-Hexanone	14.78	43	253299	50.00	ug/L	100
50) chlorobenzene	16.40	112	913644	50.00	ug/L	100
51) 1-Chlorohexane	16.46	91	532074	50.00	ug/L	100
52) 1,1,1,2-tetrachloroethane	16.69	133	570609	50.00	ug/L	100
53) ethylbenzene	16.67	91	1554847	50.00	ug/L	100
54) m&p-xylenes	17.01	106	1021816	100.00	ug/L	100
55) o-xylene	18.02	91	1439526	50.00	ug/L	100
56) styrene	18.11	104	848124	50.00	ug/L	100
57) bromoform	18.57	173	653423	50.00	ug/L	100
59) isopropylbenzene	19.00	105	1732273	50.00	ug/L	100
60) bromobenzene	19.77	77	1197229	50.00	ug/L	100
61) 1,1,2,2-tetrachloroethane	20.09	83	706560	50.00	ug/L	100
62) 1,2,3-trichloropropane	20.14	75	504175	50.00	ug/L	100
63) n-propylbenzene	20.65	120	667764	50.00	ug/L	100
64) 2-chlorotoluene	20.31	126	432178	50.00	ug/L	100
65) 4-chlorotoluene	20.66	126	436963	50.00	ug/L	100
66) 1,3,5-trimethylbenzene	20.66	105	1640050	50.00	ug/L	100
67) tert-butylbenzene	21.47	119	1514444	50.00	ug/L	100
68) 1,2,4-trimethylbenzene	21.64	105	1589882	50.00	ug/L	100
69) sec-butylbenzene	22.08	105	2004513	50.00	ug/L	100
70) 1,3-dichlorobenzene	22.37	146	1029529	50.00	ug/L	100
71) 4-isopropyltoluene	22.53	119	1849785	50.00	ug/L	100
72) 1,4-dichlorobenzene	22.66	146	1015048	50.00	ug/L	100
73) 1,2-dichlorobenzene	23.66	146	991849	50.00	ug/L	100
74) n-butylbenzene	23.66	91	1783911	50.00	ug/L	100
75) 1,2-dibromo-3-chloropropan	25.93	75	240278	50.00	ug/L	100
76) 1,2,4-trichlorobenzene	28.15	180	842149	50.00	ug/L	100
77) hexachlorobutadiene	28.61	225	695536	50.00	ug/L	100
78) naphthalene	28.80	128	1193149	50.00	ug/L	100
79) 1,2,3-trichlorobenzene	29.53	180	755518	50.00	ug/L	100

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19049.D
 Acq Time : 6 Oct 99 5:53 pm
 Sample : 50PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 11:56 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration



000331

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19051.D
 Acq Time : 6 Oct 99 7:23 pm
 Sample : 200PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:14 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	988101	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.32	117	973341	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	660407	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	754830	48.09	ug/L	96.18%
30) 1,2-Dichlorethane-d4	8.65	65	604779	49.13	ug/L	98.25%
38) Toluene-d8	12.75	98	853418	45.16	ug/L	90.33%
42) 4-Bromofluorobenzene	19.47	95	896299	49.50	ug/L	99.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.72	85	1618728	209.98	ug/L m	99
3) chloromethane	1.94	50	876033	223.93	ug/L m	100
4) vinyl chloride	2.07	62	883463	228.66	ug/L m	98
5) bromomethane	2.47	94	887357	214.30	ug/L m	74
6) chloroethane	2.59	64	396791	207.96	ug/L m	96
7) Acrolein	3.66	56	458002	1891.75	ug/L m	100
8) trichlorofluoromethane	2.88	101	3293258	169.21	ug/L m	96
9) 1,1-dichloroethene	3.64	61	1912784	192.43	ug/L m	98
10) Acetone	3.94	43	290816	122.76	ug/L m	98
11) Carbon Disulfide	3.92	76	2020066	184.77	ug/L m	99
12) Iodo Methane	3.89	142	2889332	193.93	ug/L m	97
13) methylene chloride	4.56	84	839022	192.92	ug/L m	98
14) trans-1,2-dichloroethene	4.96	61	1628736	181.99	ug/L m	98
15) TBA	5.05	59	1277686	2151.63	ug/L m	95
16) MTBE	5.00	73	3190721	179.95	ug/L m	95
17) Acrylonitrile	5.19	53	1247606	1869.32	ug/L m	96
18) 1,1-dichloroethane	5.83	63	2684912	198.62	ug/L m	96
19) 2,2-dichloropropane	6.88	77	2563316	175.31	ug/L m	94
20) cis-1,2-dichloroethene	6.97	61	2158845	182.90	ug/L m	98
21) bromochloromethane	7.43	49	1399667	189.75	ug/L m	97
22) chloroform	7.63	83	3535348	188.96	ug/L m	97
23) 1,1,1-trichloroethane	7.85	97	3909417	193.05	ug/L m	97
25) Vinyl Acetate	5.97	43	2711383	190.60	ug/L m	100
26) 2-Butanone	7.12	43	473252	161.74	ug/L m	99
27) carbon tetrachloride	8.09	117	2134317	192.54	ug/L m	97
28) 1,1-dichloropropene	8.19	75	2110029	190.12	ug/L m	94
29) benzene	8.58	78	2898564	186.11	ug/L m	99
31) 1,2-dichloroethane	8.82	62	2547365	195.20	ug/L m	100
32) trichloroethene	10.01	130	1775120	192.81	ug/L m	97
33) 1,2-dichloropropane	10.59	63	1443058	213.49	ug/L m	99
34) dibromomethane	10.85	174	1425216	191.33	ug/L m	95
35) bromodichloromethane	11.25	83	3870512	218.13	ug/L m	98
36) 2-Chloroethyl Vinyl Ether	12.90	63	441272	182.22	ug/L m	89

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19051.D
Acq Time : 6 Oct 99 7:23 pm
Sample : 200PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 12:14 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration

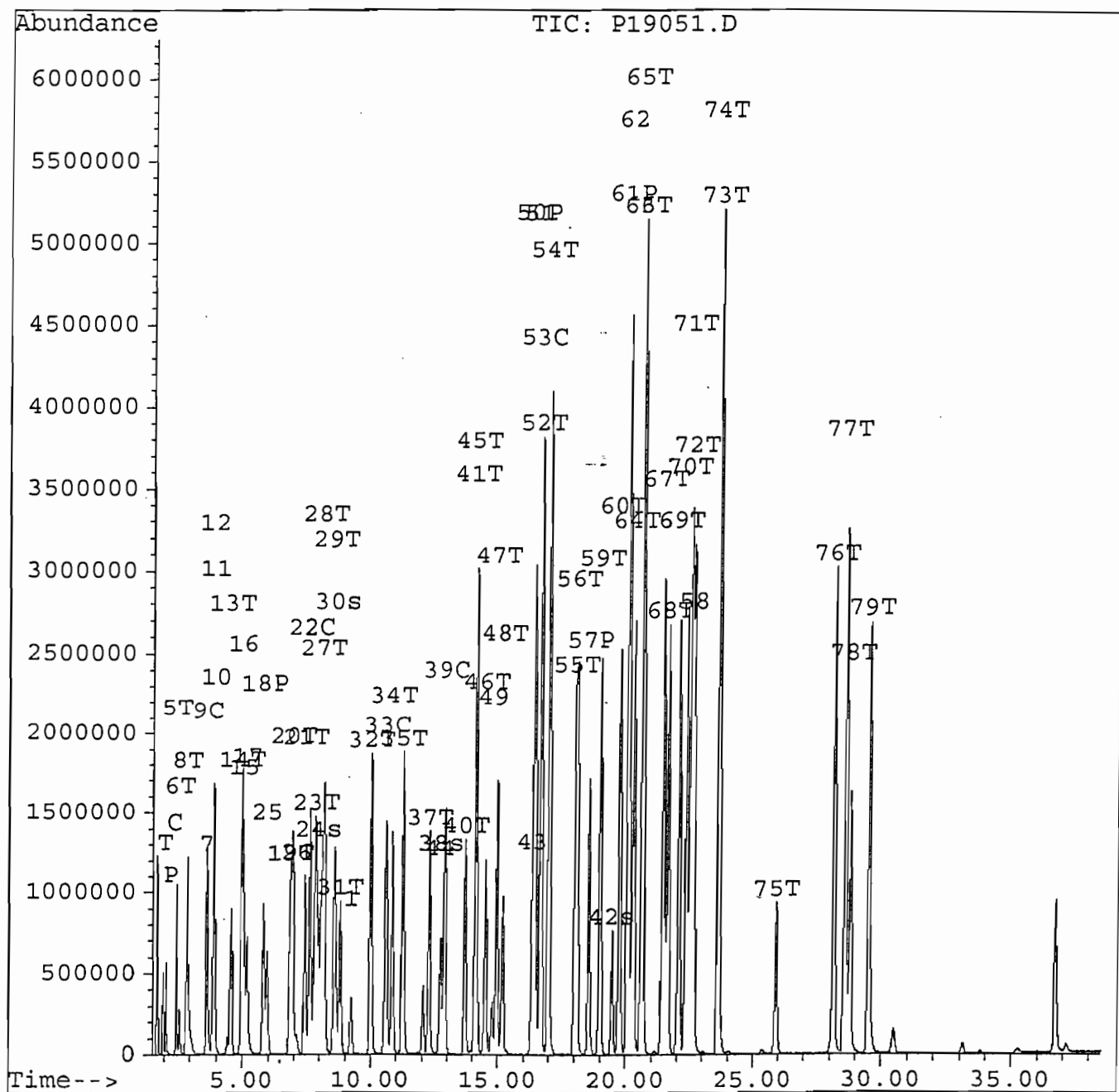
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	cis-1,3-dichloropropene	12.28	75	2169868	206.99	ug/L m	95
39)	toluene	12.90	91	3339792	176.25	ug/L m	98
40)	trans-1,3-dichloropropene	13.71	75	2133233	211.57	ug/L m	98
41)	1,1,2-trichloroethane	14.11	97	1096991	186.68	ug/L m	97
44)	4-Methyl-2-Pentanone	12.71	43	945054	192.57	ug/L	97
45)	tetrachloroethene	14.14	166	1738566	167.67	ug/L	97
46)	1,3-dichloropropane	14.51	76	1935547	211.51	ug/L	99
47)	dibromochloromethane	14.95	129	2747951	215.15	ug/L	92
48)	1,2-dibromoethane	15.19	107	2090776	212.92	ug/L	97
49)	2-Hexanone	14.77	43	823530	194.70	ug/L	99
50)	chlorobenzene	16.39	112	2847411	186.63	ug/L	98
51)	1-Chlorohexane	16.45	91	1625290	182.92	ug/L	100
52)	1,1,1,2-tetrachloroethane	16.68	133	1814479	190.42	ug/L	99
53)	ethylbenzene	16.67	91	4846740	186.67	ug/L	100
54)	m&p-xylenes	17.00	106	3295317	386.25	ug/L	98
55)	o-xylene	18.01	91	4871819	202.67	ug/L	97
56)	styrene	18.10	104	2934540	207.20	ug/L	92
57)	bromoform	18.56	173	2383379	218.43	ug/L	97
59)	isopropylbenzene	19.00	105	5742834	200.54	ug/L	99
60)	bromobenzene	19.76	77	3794833	191.73	ug/L	99
61)	1,1,2,2-tetrachloroethane	20.08	83	2248415	192.49	ug/L	95
62)	1,2,3-trichloropropane	20.13	75	1690253	202.79	ug/L	99
63)	n-propylbenzene	20.65	120	2097660	190.02	ug/L	69
64)	2-chlorotoluene	20.31	126	1366757	191.30	ug/L	91
65)	4-chlorotoluene	20.65	126	1427219	197.57	ug/L	92
66)	1,3,5-trimethylbenzene	20.64	105	5442508	200.74	ug/L	96
67)	tert-butylbenzene	21.45	119	5106569	203.97	ug/L m	91
68)	1,2,4-trimethylbenzene	21.64	105	5453231	207.48	ug/L	97
69)	sec-butylbenzene	22.07	105	6667300	201.20	ug/L	99
70)	1,3-dichlorobenzene	22.36	146	3301007	193.95	ug/L	97
71)	4-isopropyltoluene	22.53	119	5979204	195.53	ug/L	97
72)	1,4-dichlorobenzene	22.65	146	3336806	198.85	ug/L	97
73)	1,2-dichlorobenzene	23.64	146	3242491	197.75	ug/L	94
74)	n-butylbenzene	23.66	91	5967774	202.36	ug/L	99
75)	1,2-dibromo-3-chloropropan	25.92	75	950971	239.41	ug/L	94
76)	1,2,4-trichlorobenzene	28.15	180	3042121	218.51	ug/L	99
77)	hexachlorobutadiene	28.61	225	2387480	207.64	ug/L	99
78)	naphthalene	28.79	128	4261429	216.04	ug/L	98
79)	1,2,3-trichlorobenzene	29.51	180	2694376	215.72	ug/L	98

Quantitation Report

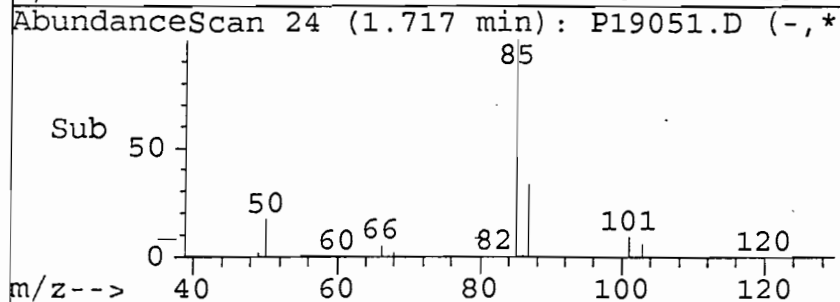
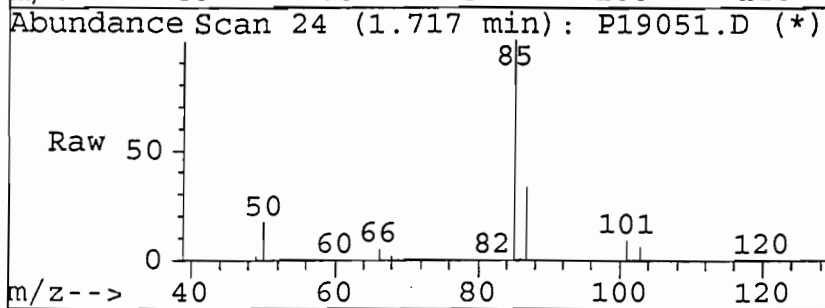
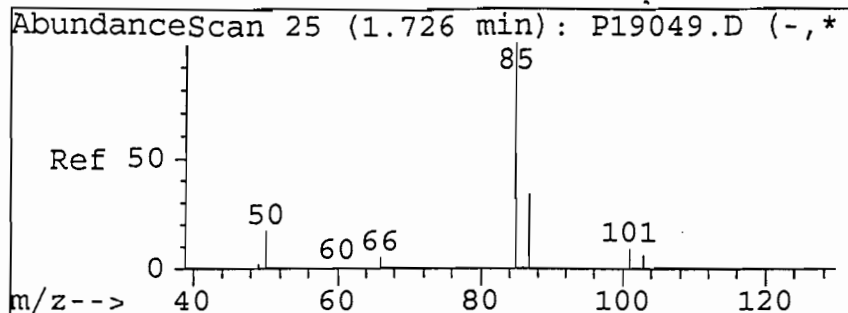
Data File : I:\HPCHEM\1\DATA\V2100699\P19051.D
 Acq Time : 6 Oct 99 7:23 pm
 Sample : 200PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:14 1999

Operator: AV
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Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

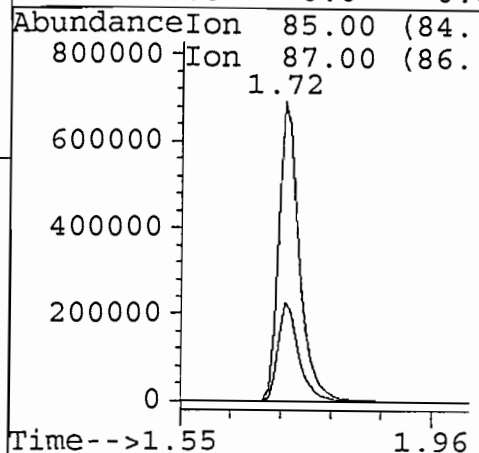


000334



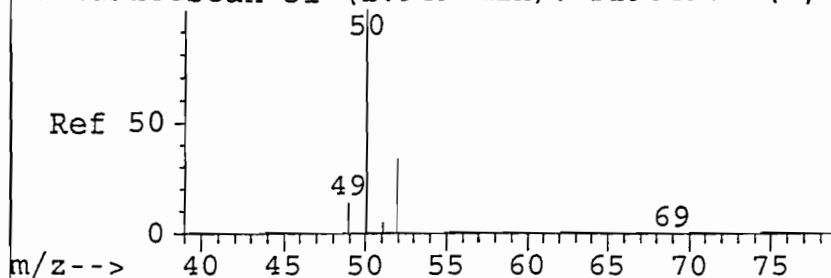
#2
 dichlorodifluoromethane
 Concen: 209.98 ug/L m
 RT: 1.72 min Scan# 24
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion	85	Resp	1618728
Ion Ratio	100		
Lower	23.5		
Upper	43.7		
0	0.0	0.0	0.0
0	0.0	0.0	0.0

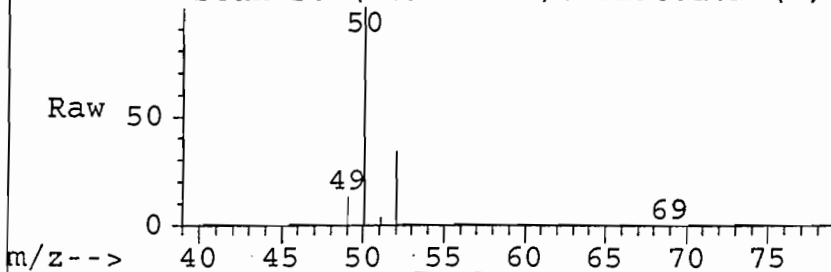


000335

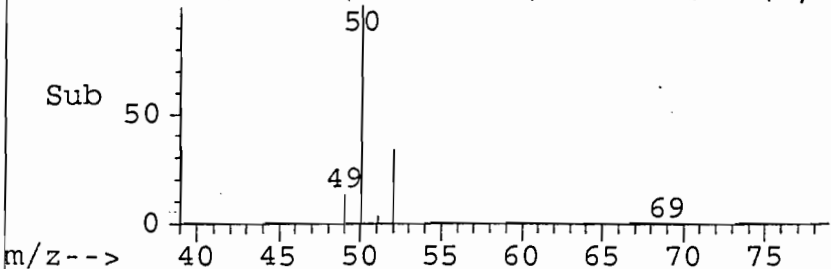
AbundanceScan 51 (1.949 min): P19049.D (-,*



AbundanceScan 50 (1.941 min): P19051.D (*)



AbundanceScan 50 (1.941 min): P19051.D (-,*



#3

chloromethane

Concen: 223.93 ug/L m

RT: 1.94 min Scan# 50

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:50 Resp: 876033

Ion Ratio Lower Upper

50 100

52 34.3 23.9 44.5

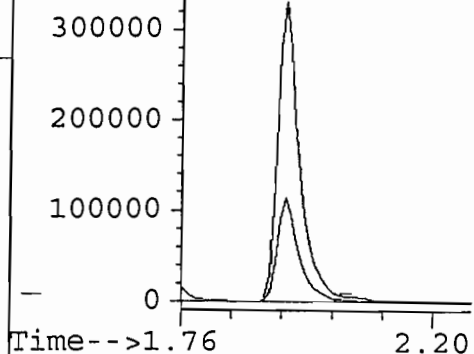
0 0.0 0.0 0.0

0 0.0 0.0 0.0

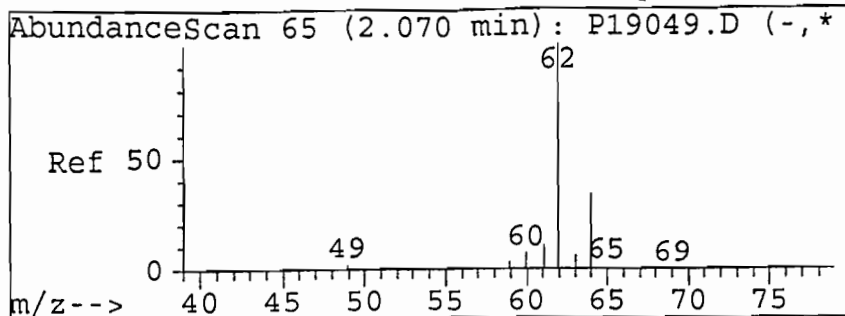
AbundanceIon 50.00 (49.

Ion 52.00 (51.

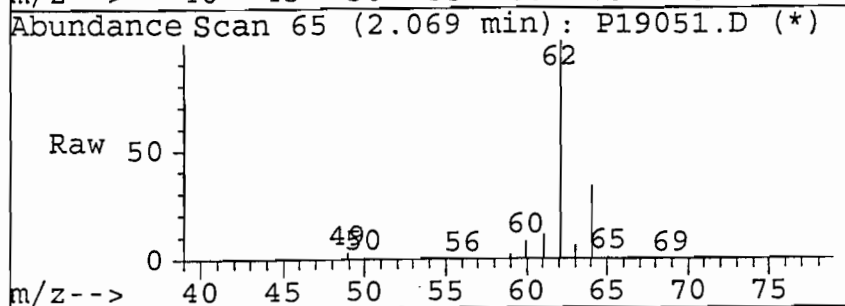
1.94



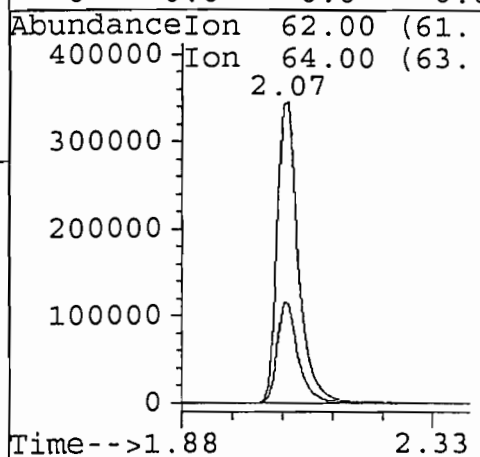
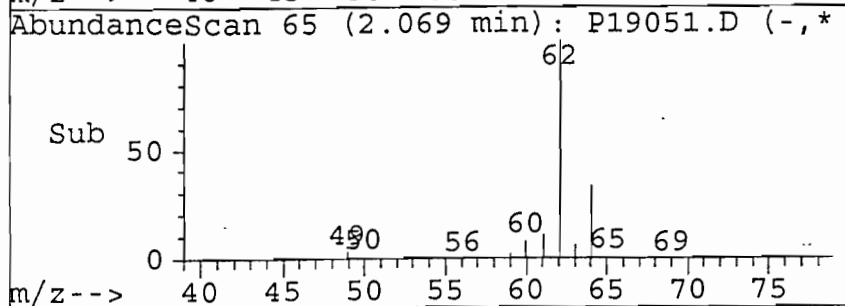
000336



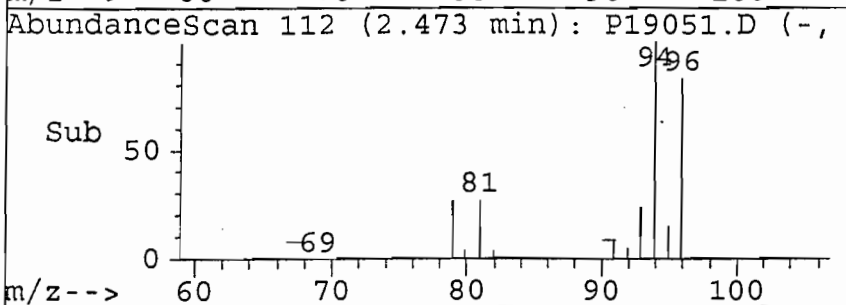
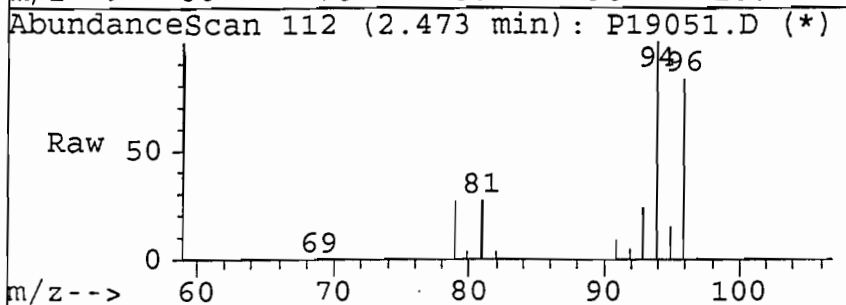
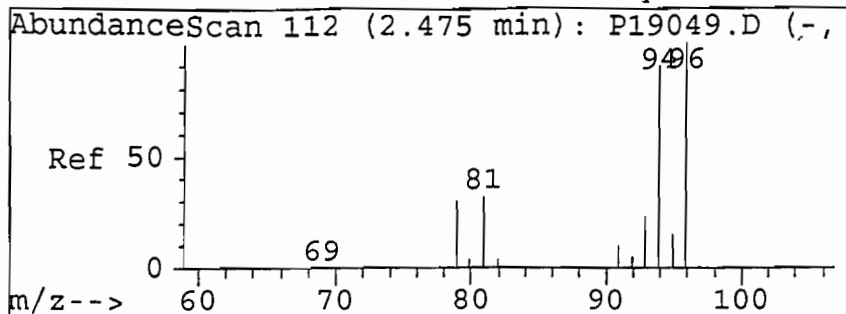
#4
vinyl chloride
Concen: 228.66 ug/L m
RT: 2.07 min Scan# 65
Delta R.T. -0.00 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm



Tgt Ion	Ratio	Lower	Upper
62	100		
64	33.1	23.8	44.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

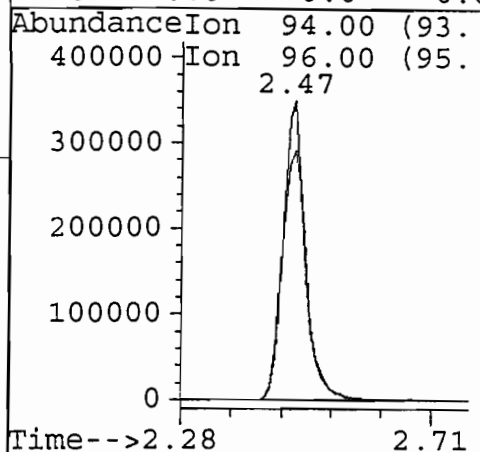


000337



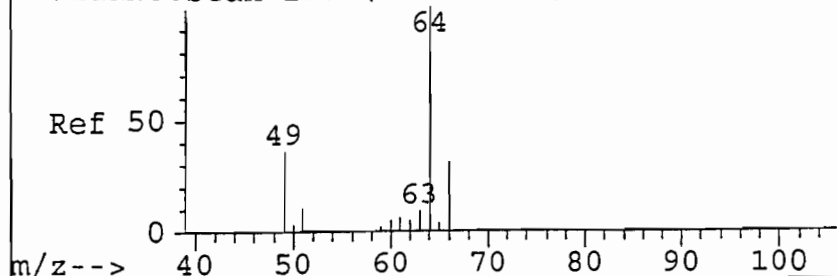
#5
bromomethane
Concen: 214.30 ug/L m
RT: 2.47 min Scan# 112
Delta R.T. -0.00 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23.pm

Tgt Ion	Ratio	Lower	Upper
94	100		
96	83.2	77.8	144.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

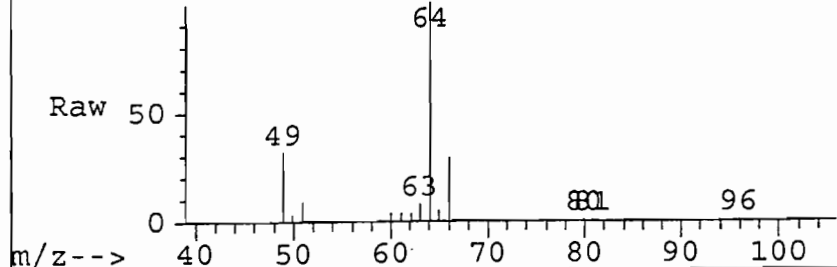


000338

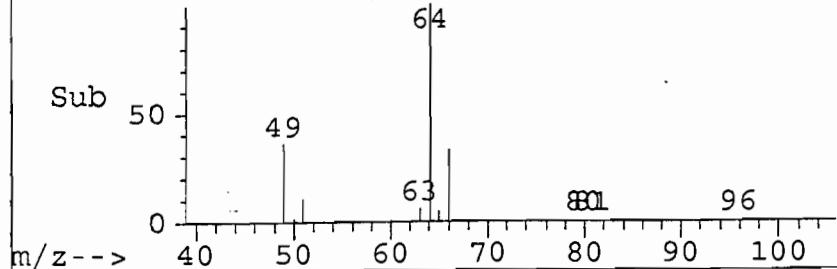
AbundanceScan 127 (2.605 min): P19049.D (-,



AbundanceScan 126 (2.593 min): P19051.D (*,



AbundanceScan 126 (2.593 min): P19051.D (-,



#6

chloroethane

Concen: 207.96 ug/L m

RT: 2.59 min Scan# 126

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:64 Resp: 396791

Ion Ratio Lower Upper

64 100

66 28.6 21.6 40.0

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 64.00 (63.

Ion 66.00 (65.

150000 2.59

100000

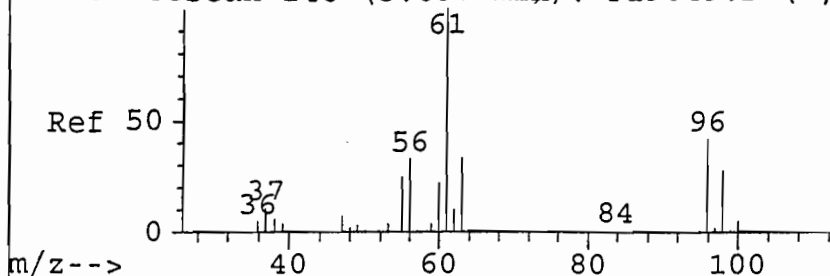
50000

0

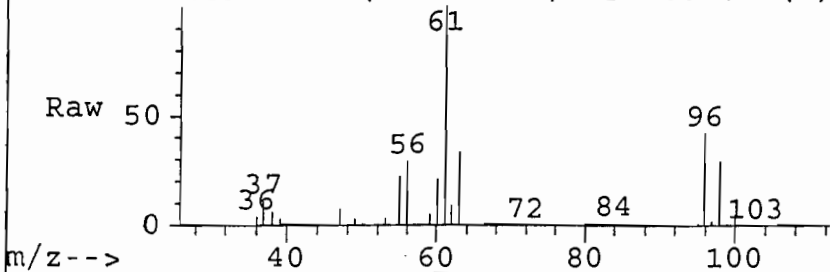
Time-->2.42 2.77

000339

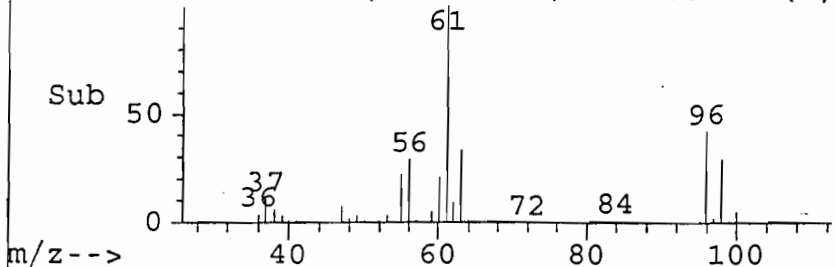
AbundanceScan 246 (3.637 min): P19049.D (-,



AbundanceScan 249 (3.660 min): P19051.D (*)



AbundanceScan 249 (3.660 min): P19051.D (-,



#7

Acrolein

Concen: 1891.75 ug/L m

RT: 3.66 min Scan# 249

Delta R.T. 0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:56 Resp: 458002

Ion Ratio Lower Upper

56 100

55 72.7 36.5 109.5

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 56.00 (55.

100000 Ion 55.00 (54.

3.66

50000

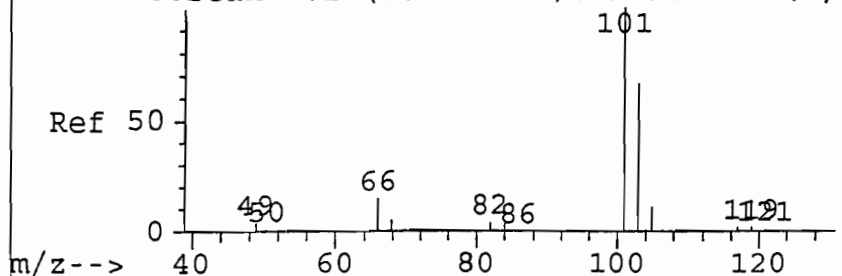
0

Time-->3.40

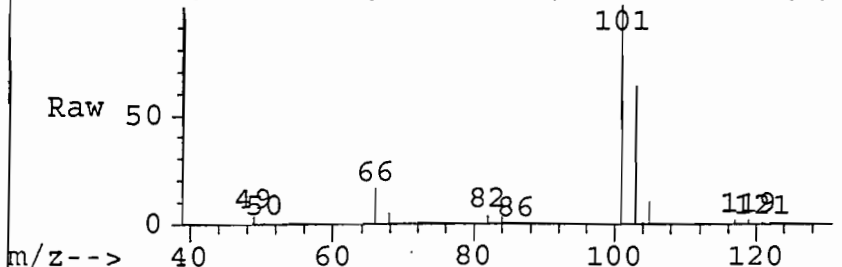
3.97

000340

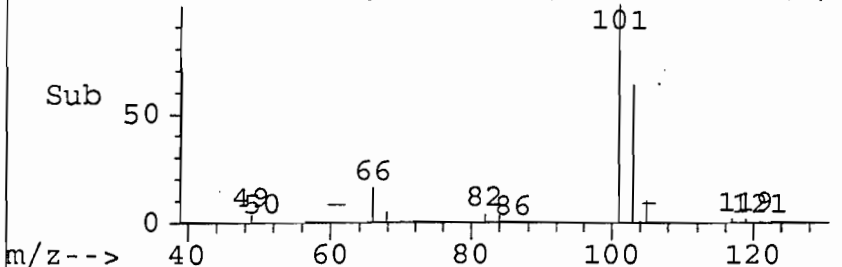
AbundanceScan 161 (2.897 min): P19049.D (-,



AbundanceScan 159 (2.879 min): P19051.D (*)

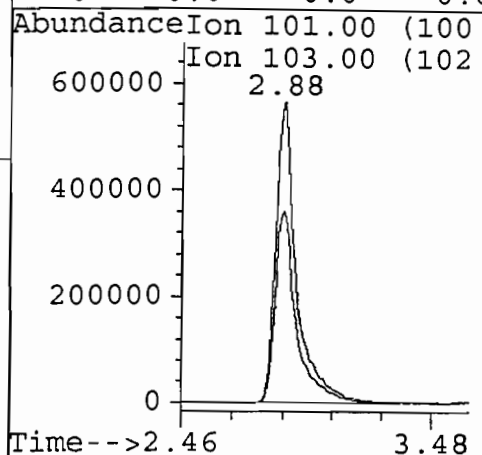


AbundanceScan 159 (2.879 min): P19051.D (-,

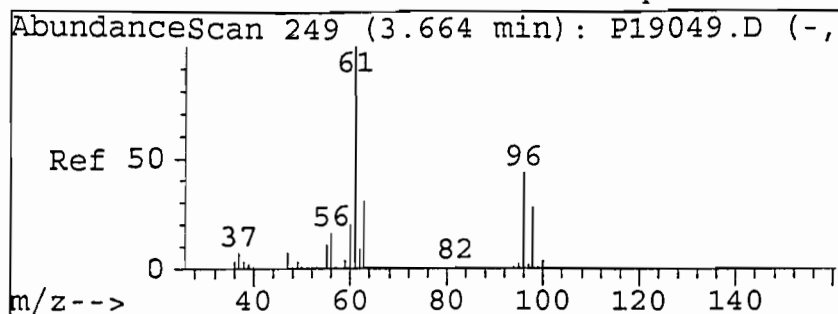


#8
trichlorofluoromethane
Concen: 169.21 ug/L m
RT: 2.88 min Scan# 159
Delta R.T. -0.02 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

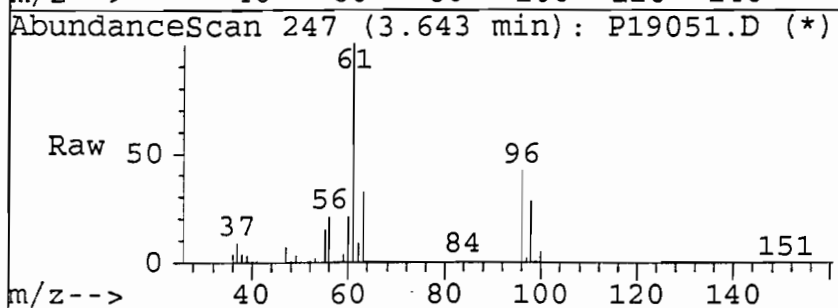
Tgt Ion:101 Resp: 3293258
Ion Ratio Lower Upper
101 100
103 62.9 46.3 85.9
0 0.0 0.0 0.0
0 0.0 0.0 0.0



000341

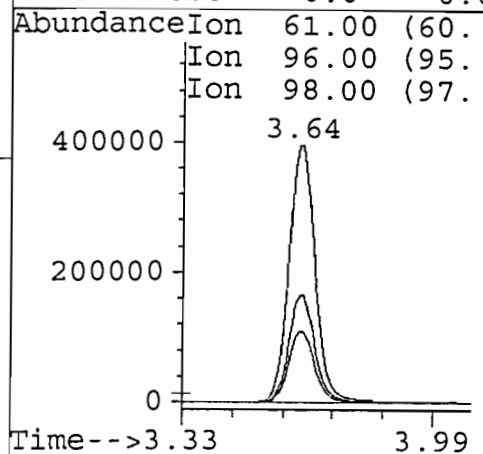
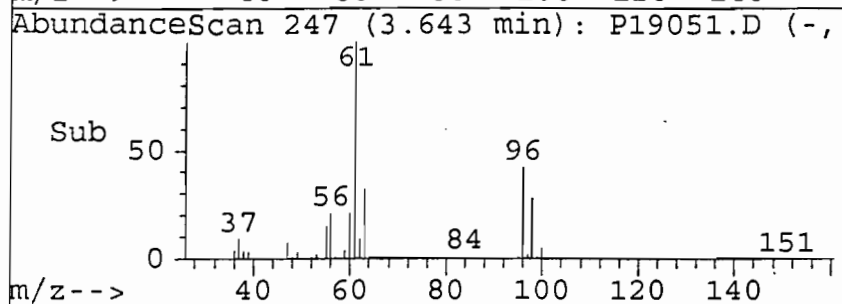


#9
 1,1-dichloroethene
 Concen: 192.43 ug/L m
 RT: 3.64 min Scan# 247
 Delta R.T. -0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

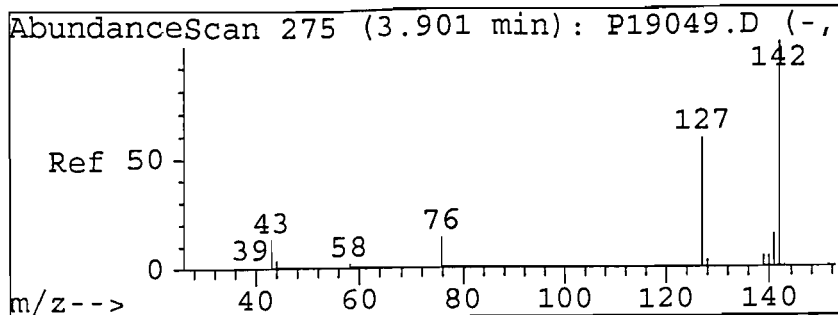


Tgt Ion:61 Resp: 1912784

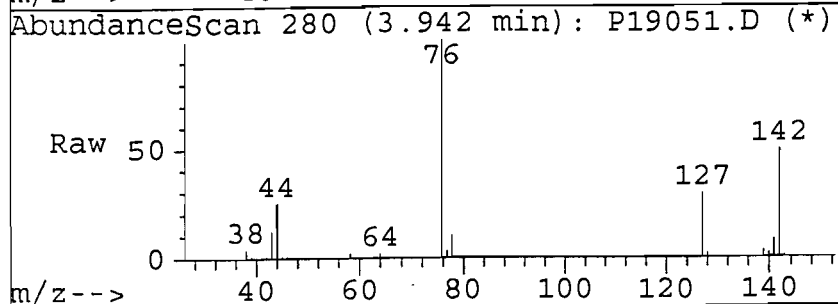
Ion	Ratio	Lower	Upper
61	100		
96	41.7	30.1	55.9
98	27.5	19.8	36.8
0	0.0	0.0	0.0



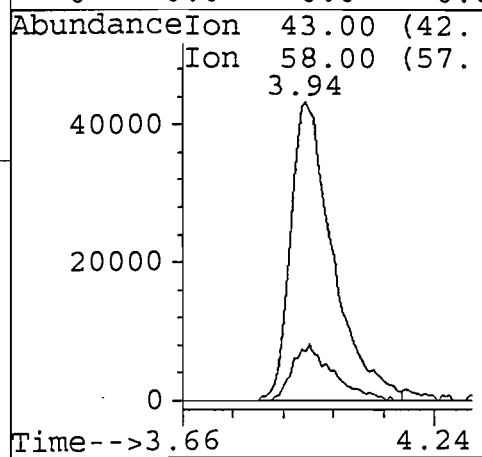
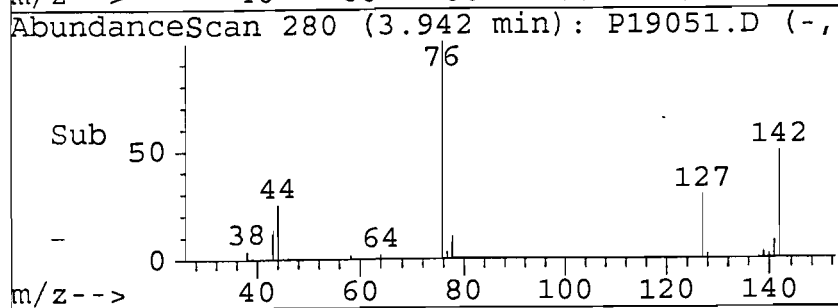
000342



#10
 Acetone
 Concen: 122.76 ug/L m
 RT: 3.94 min Scan# 280
 Delta R.T. 0.04 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

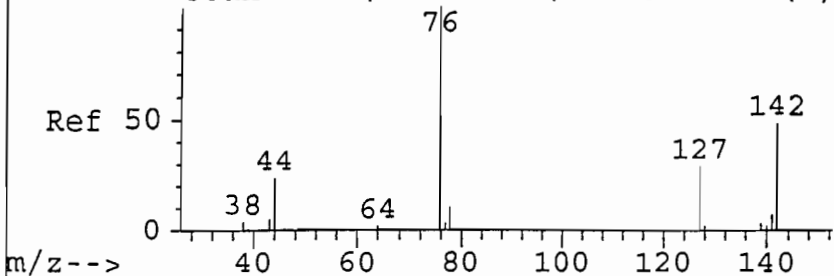


Tgt Ion:	43	Resp:	290816
Ion	Ratio	Lower	Upper
43	100		
58	17.7	0.0	34.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000343

AbundanceScan 280 (3.945 min): P19049.D (-,



#11

Carbon Disulfide

Concen: 184.77 ug/L m

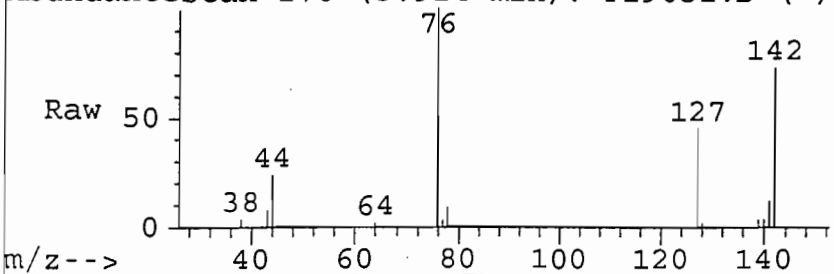
RT: 3.92 min Scan# 278

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 278 (3.924 min): P19051.D (*)



Tgt Ion:76 Resp: 2020066

Ion Ratio Lower Upper

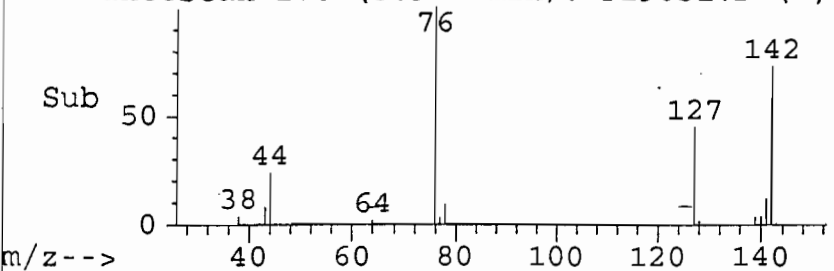
76 100

44 24.6 12.0 36.1

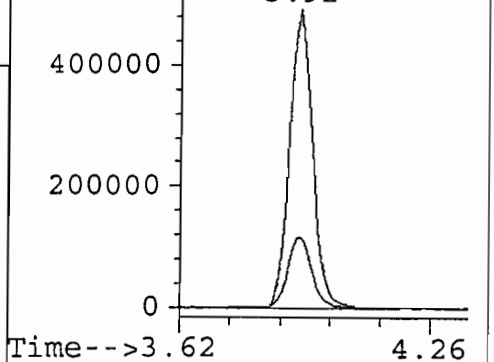
0 0.0 0.0 0.0

0 0.0 0.0 0.0

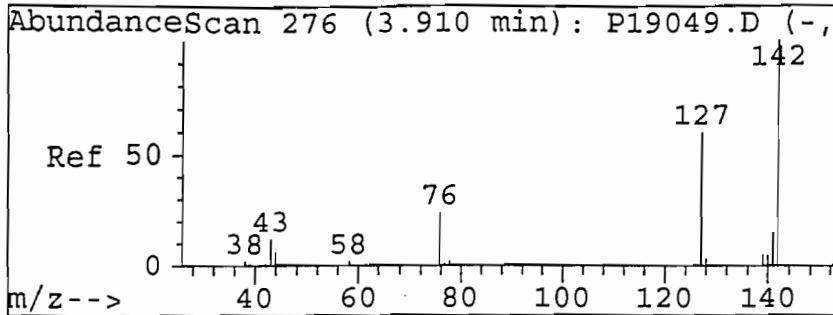
AbundanceScan 278 (3.924 min): P19051.D (-,



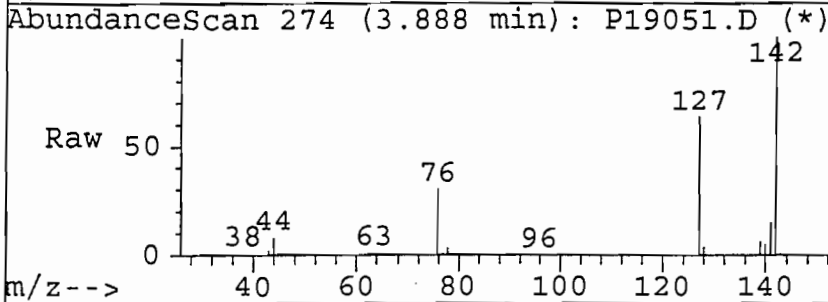
AbundanceIon 76.00 (75.
Ion 44.00 (43.
3.92



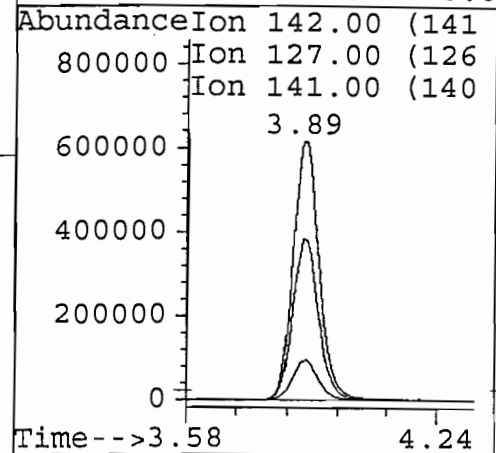
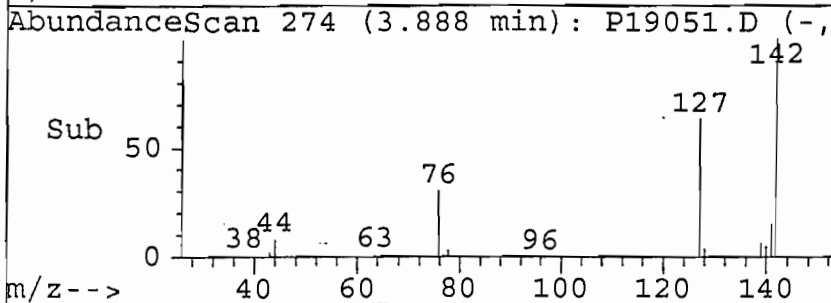
000344



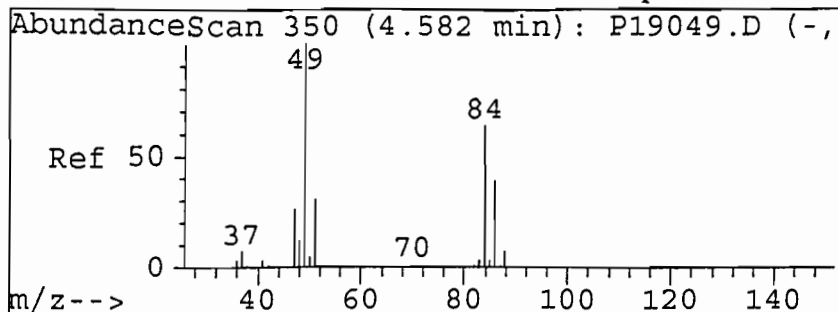
#12
 Iodo Methane
 Concen: 193.93 ug/L m
 RT: 3.89 min Scan# 274
 Delta R.T. -0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm



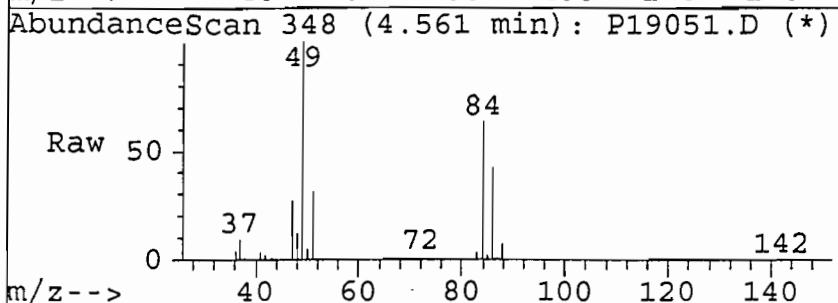
Tgt Ion	Ratio	Lower	Upper
142	100		
127	62.2	29.5	88.6
141	15.3	12.2	18.2
0	0.0	0.0	0.0



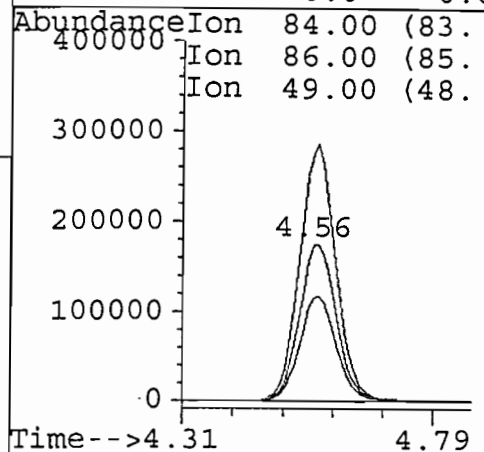
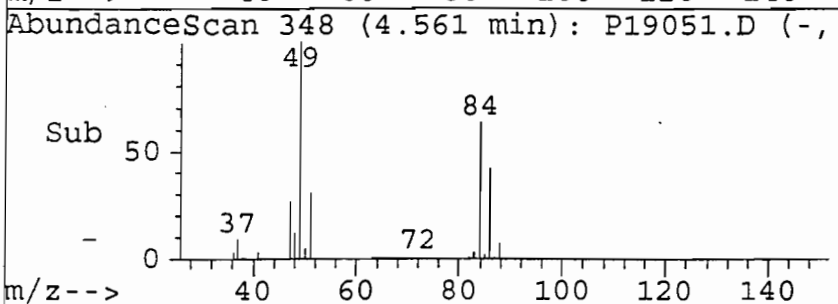
000345



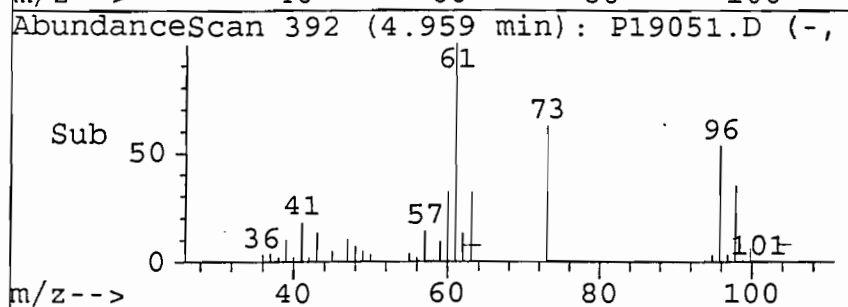
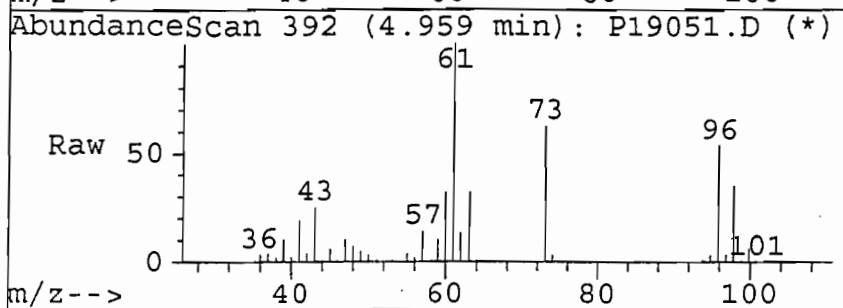
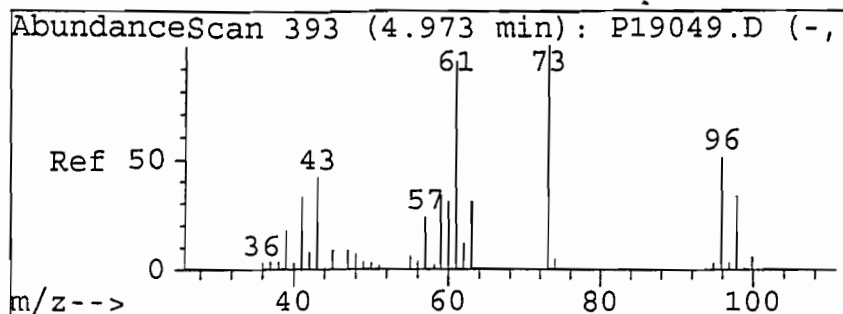
#13
 methylene chloride
 Concen: 192.92 ug/L m
 RT: 4.56 min Scan# 348
 Delta R.T. -0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm



Tgt Ion:	84	Resp:	839022
Ion	Ratio	Lower	Upper
84	100		
86	66.4	43.3	80.3
49	158.1	110.4	205.0
0	0.0	0.0	0.0

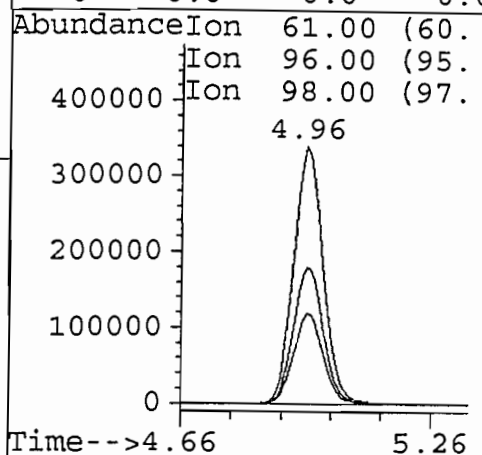


000346

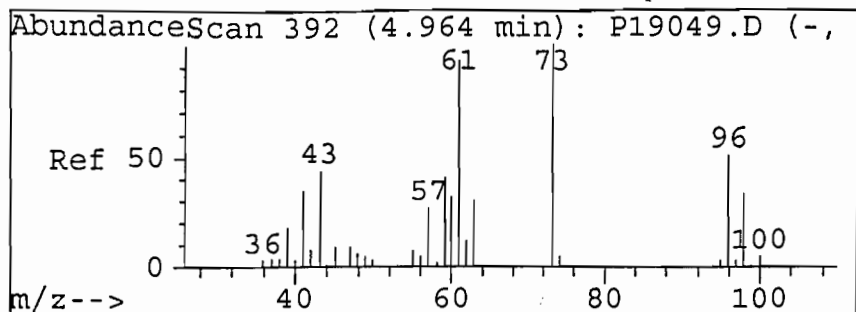


#14
trans-1,2-dichloroethene
Concen: 181.99 ug/L m
RT: 4.96 min Scan# 392
Delta R.T. -0.01 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

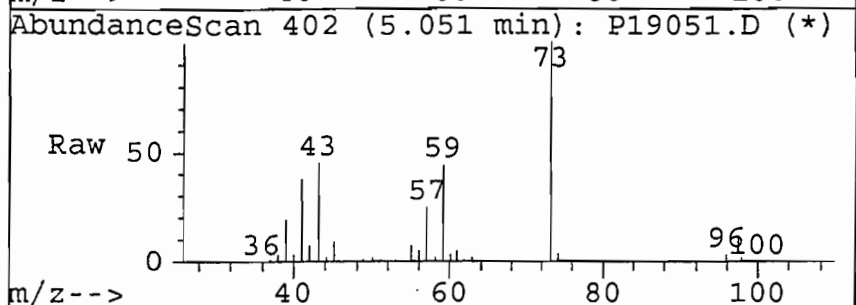
Tgt Ion:61 Resp: 1628736
Ion Ratio Lower Upper
61 100
96 53.0 38.4 71.4
98 34.7 25.2 46.8
0 0.0 0.0 0.0



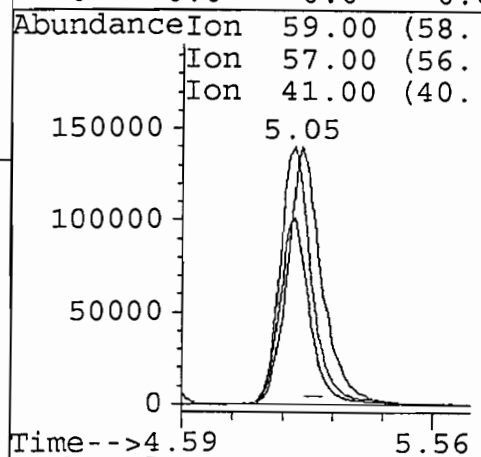
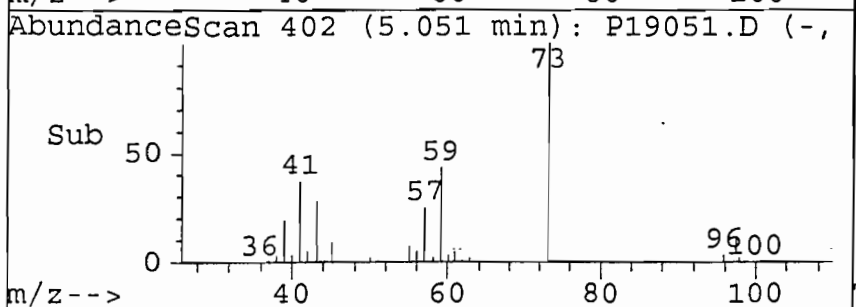
000347



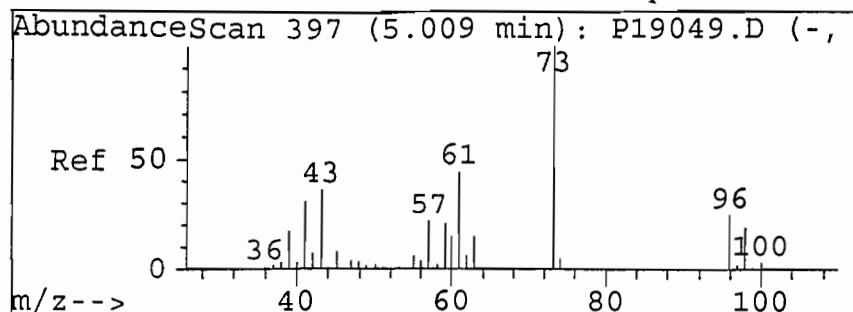
#15
TBA
Concen: 2151.63 ug/L m
RT: 5.05 min Scan# 402
Delta R.T. 0.09 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm



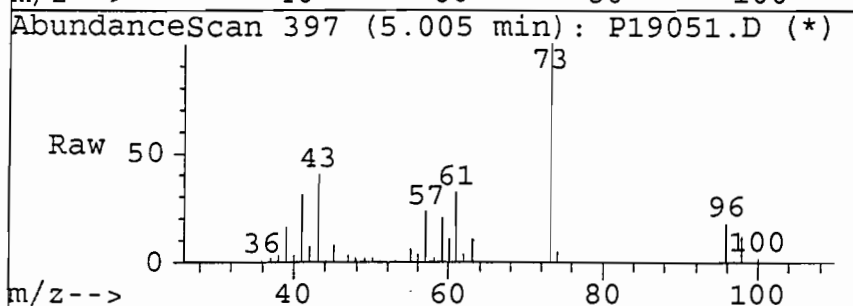
Tgt Ion:	59	Resp:	1277686
Ion	Ratio	Lower	Upper
59	100		
57	56.6	45.1	83.7
41	84.5	59.6	110.8
0	0.0	0.0	0.0



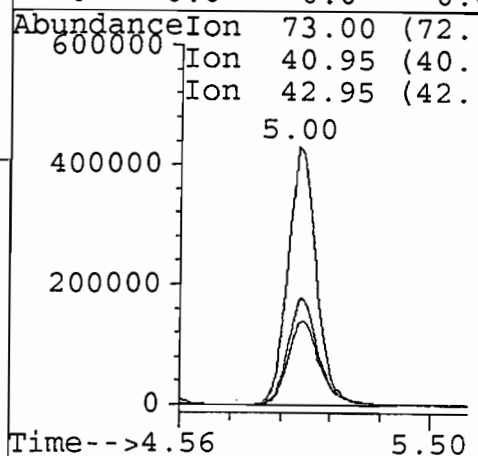
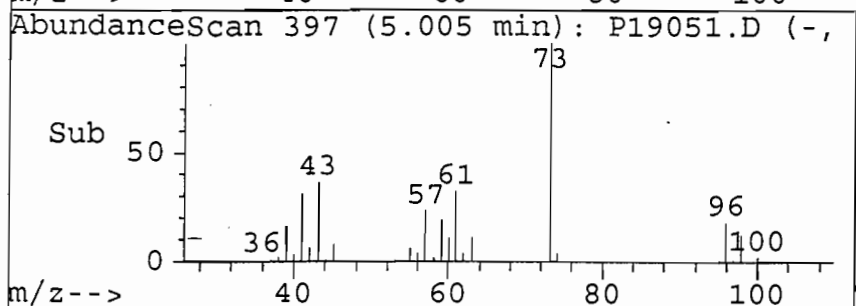
000348



#16
 MTBE
 Concen: 179.95 ug/L m
 RT: 5.00 min Scan# 397
 Delta R.T. -0.00 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

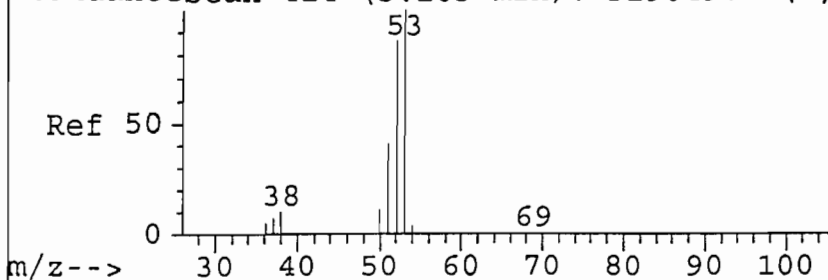


Tgt Ion:	73	Resp:	3190721
Ion	Ratio	Lower	Upper
73	100		
41	36.4	16.9	50.6
43	44.0	20.2	60.6
0	0.0	0.0	0.0



000349

AbundanceScan 414 (5.163 min): P19049.D (-,



#17

Acrylonitrile

Concen: 1869.32 ug/L m

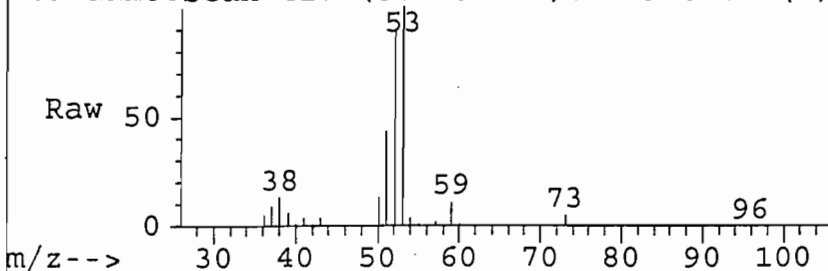
RT: 5.19 min Scan# 417

Delta R.T. 0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 417 (5.185 min): P19051.D (*)



Tgt Ion:53 Resp: 1247606

Ion Ratio Lower Upper

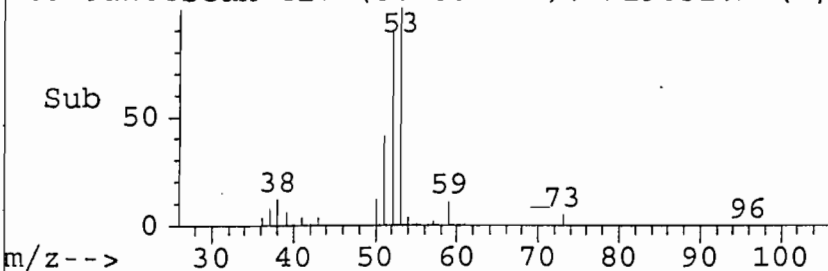
53 100

52 93.7 44.8 134.3

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 417 (5.185 min): P19051.D (-,



AbundanceIon 53.00 (52.

Ion 52.00 (51.

5.19

200000

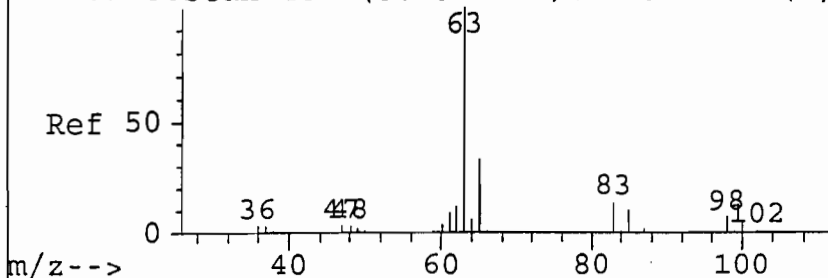
100000

0

Time-->4.90 5.47

000350

AbundanceScan 488 (5.833 min): P19049.D (-,



#18

1,1-dichloroethane

Concen: 198.62 ug/L m

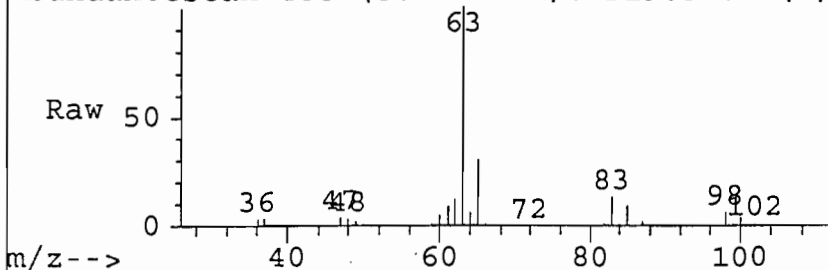
RT: 5.83 min Scan# 488

Delta R.T. -0.00 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

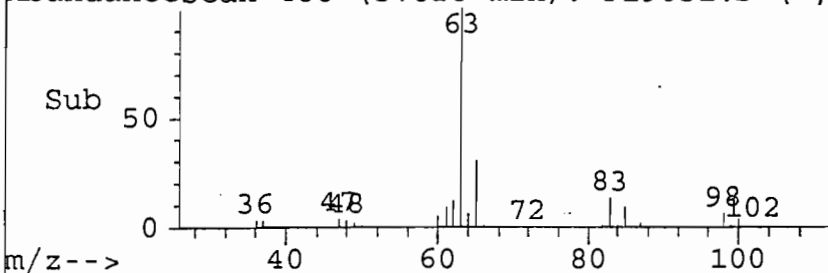
AbundanceScan 488 (5.828 min): P19051.D (*)



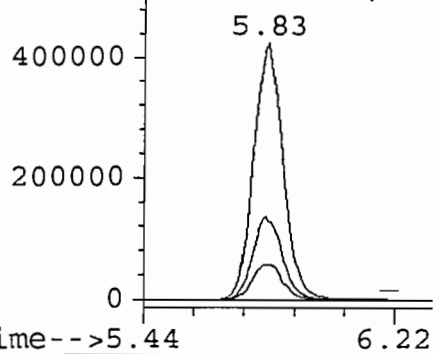
Tgt Ion:63 Resp: 2684912

Ion	Ratio	Lower	Upper
63	100		
65	30.1	23.0	42.8
83	13.2	9.9	18.3
0	0.0	0.0	0.0

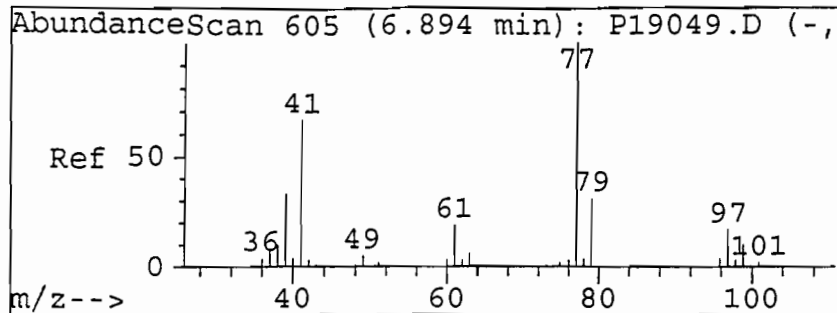
AbundanceScan 488 (5.828 min): P19051.D (-,



AbundanceIon 63.00 (62.
Ion 65.00 (64.
Ion 83.00 (82.



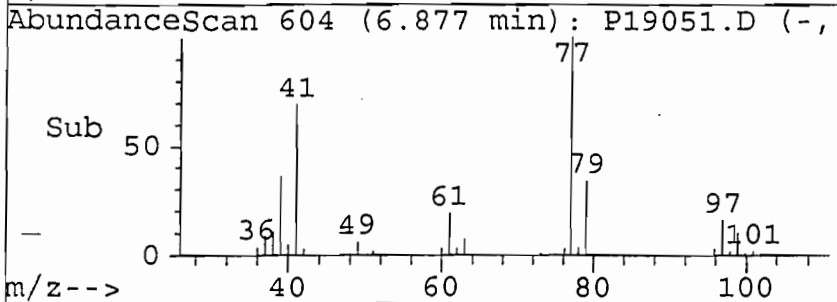
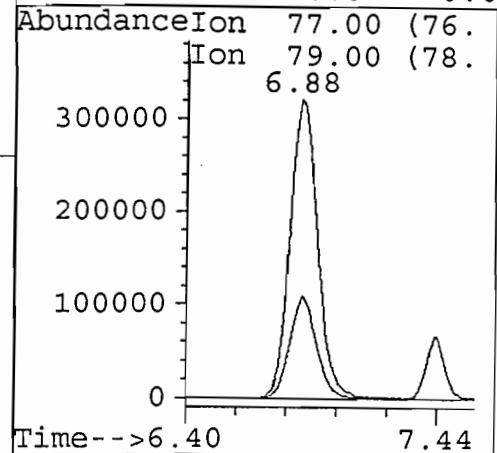
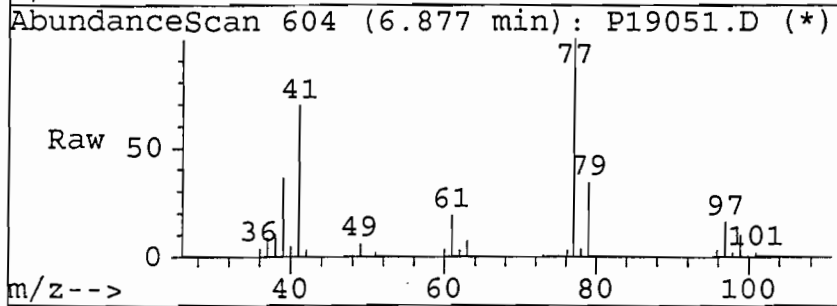
000351



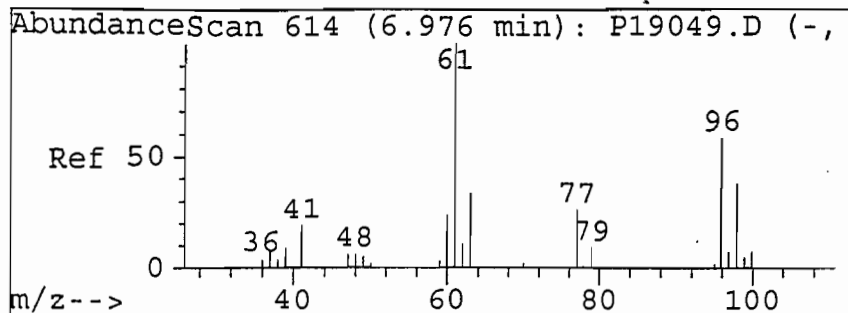
#19
 2,2-dichloropropane
 Concen: 175.31 ug/L m
 RT: 6.88 min Scan# 604
 Delta R.T. -0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion:77 Resp: 2563316

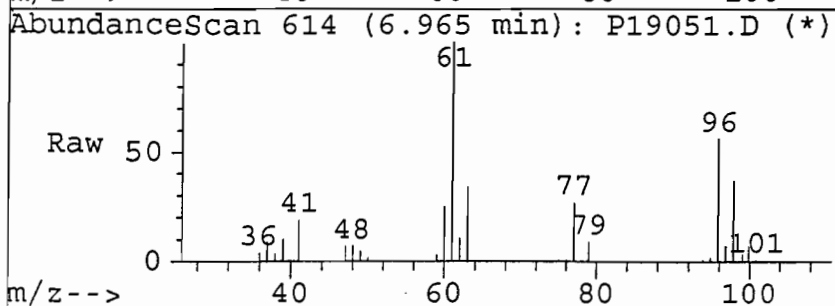
Ion	Ratio	Lower	Upper
77	100		
79	33.9	21.5	39.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000352

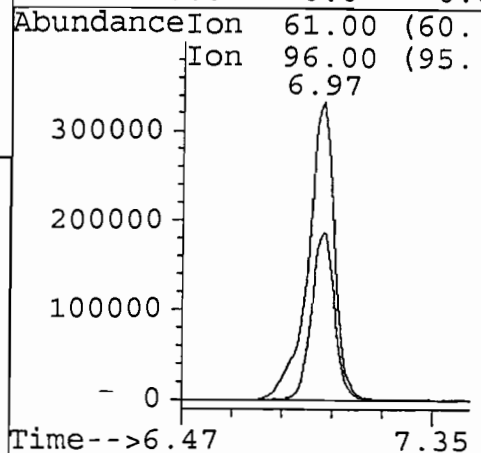
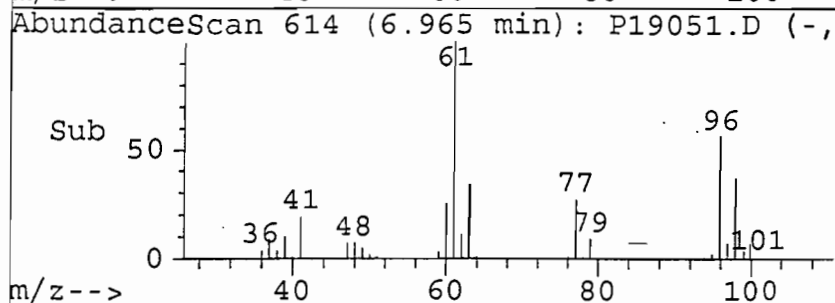


#20
 cis-1,2-dichloroethene
 Concen: 182.90 ug/L m
 RT: 6.97 min Scan# 614
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm



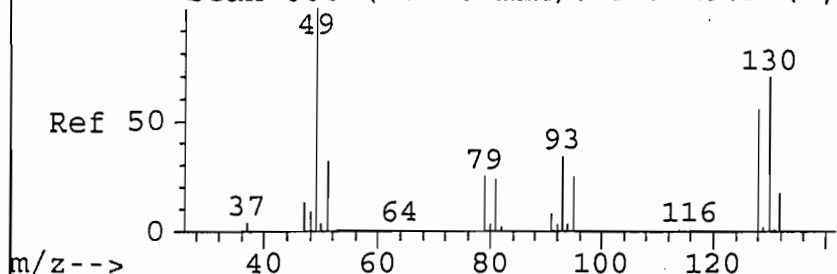
Tgt Ion:61 Resp: 2158845

Ion	Ratio	Lower	Upper
61	100		
96	56.3	40.2	74.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0



000353

AbundanceScan 666 (7.446 min): P19049.D (-,



#21

bromochloromethane

Concen: 189.75 ug/L m

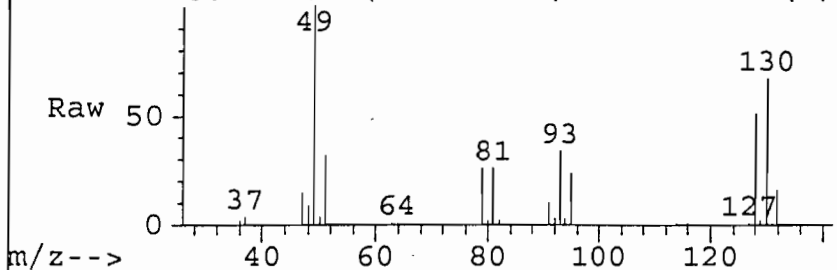
RT: 7.43 min Scan# 665

Delta R.T. -0.02 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 665 (7.429 min): P19051.D (*)



Tgt Ion:49 Resp: 1399667

Ion Ratio Lower Upper

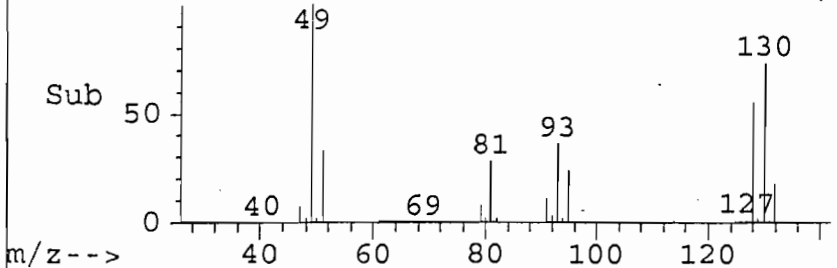
49 100

128 50.9 38.4 71.4

130 67.2 48.0 89.2

0 0.0 0.0 0.0

AbundanceScan 665 (7.429 min): P19051.D (-,



AbundanceIon 49.00 (48.

Ion 127.65 (127

Ion 129.75 (129

300000 7.43

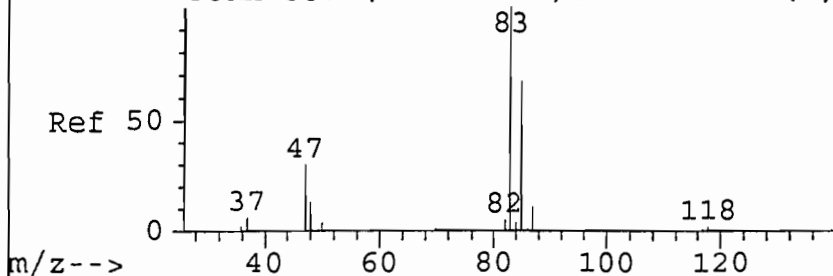
200000

100000

0

Time-->7.16 7.60

AbundanceScan 687 (7.638 min): P19049.D (-,



#22

chloroform

Concen: 188.96 ug/L m

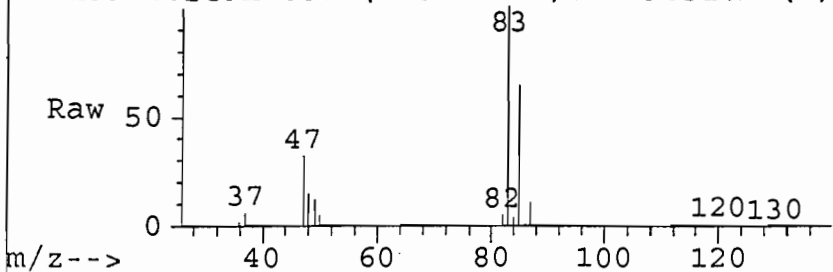
RT: 7.63 min Scan# 687

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

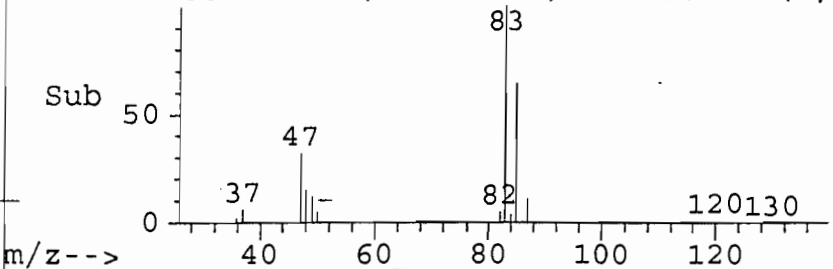
AbundanceScan 687 (7.626 min): P19051.D (*)



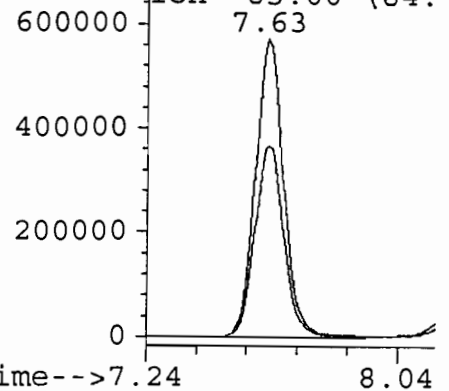
Tgt Ion:83 Resp: 3535348

Ion	Ratio	Lower	Upper
83	100		
85	64.0	46.6	86.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

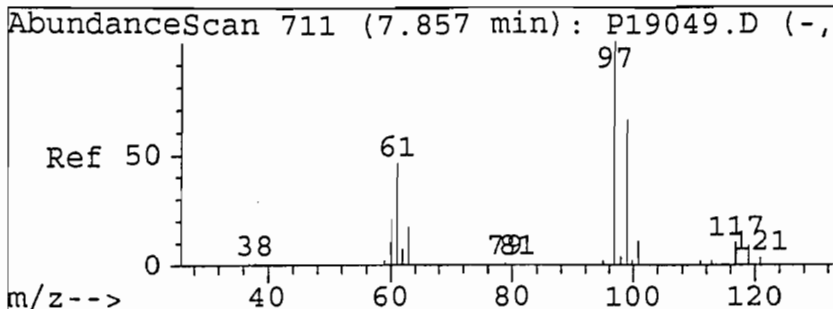
AbundanceScan 687 (7.626 min): P19051.D (-,



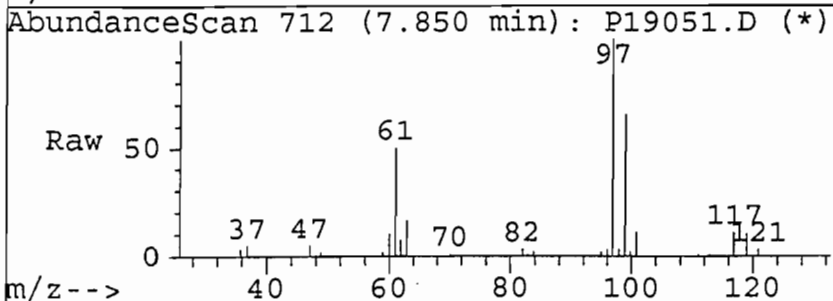
AbundanceIon 83.00 (82.
Ion 85.00 (84.
7.63



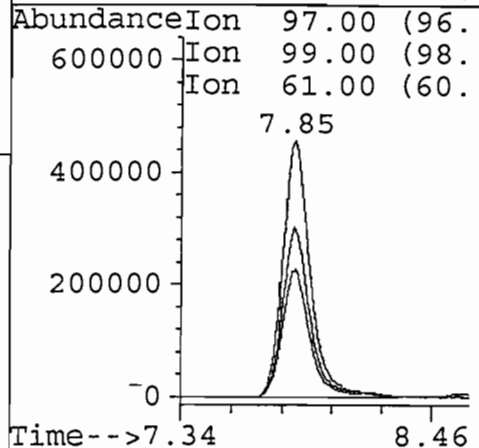
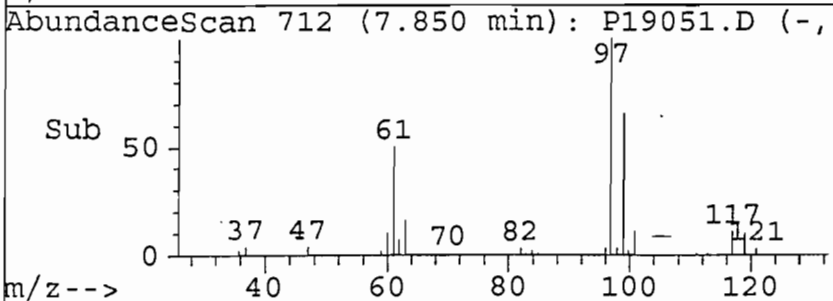
000355



#23
 1,1,1-trichloroethane
 Concen: 193.05 ug/L m
 RT: 7.85 min Scan# 712
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

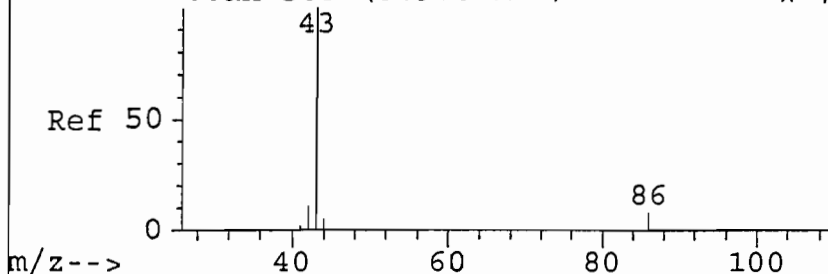


Tgt Ion	Ratio	Lower	Upper
97	100		
99	64.8	45.3	84.1
61	50.1	32.4	60.2
0	0.0	0.0	0.0



000356

AbundanceScan 503 (5.970 min): P19049.D (-,



#25

Vinyl Acetate

Concen: 190.60 ug/L m

RT: 5.97 min Scan# 504

Delta R.T. 0.00 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:43 Resp: 2711383

Ion Ratio Lower Upper

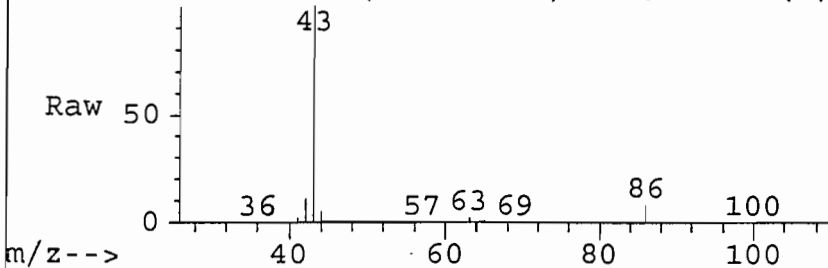
43 100

86 7.8 4.0 11.9

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 504 (5.973 min): P19051.D (*)



AbundanceIon 43.00 (42.

Ion 86.00 (85.

5.97

400000

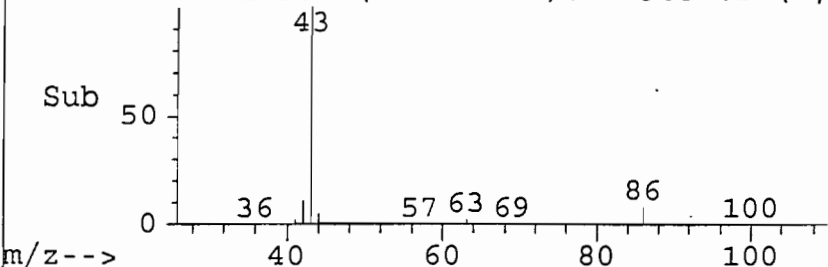
200000

0

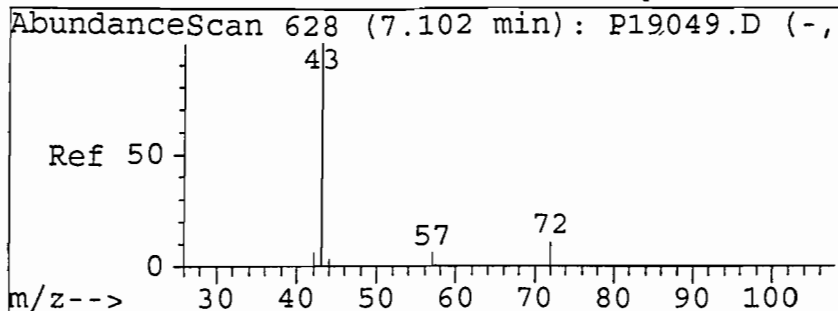
Time-->5.55

6.52

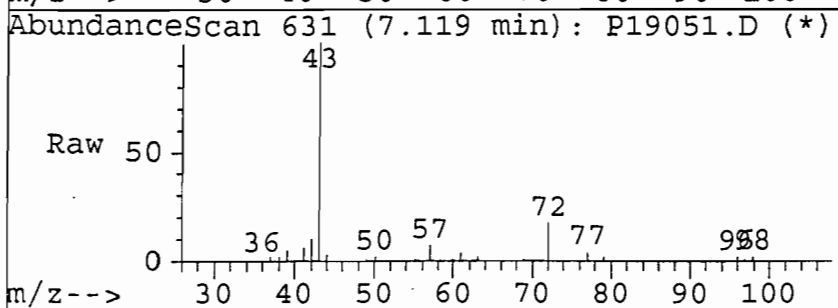
AbundanceScan 504 (5.973 min): P19051.D (-,



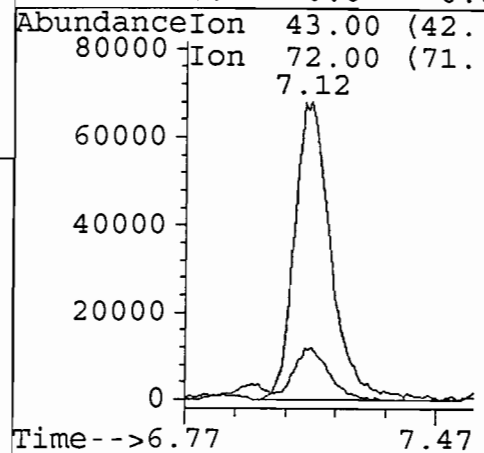
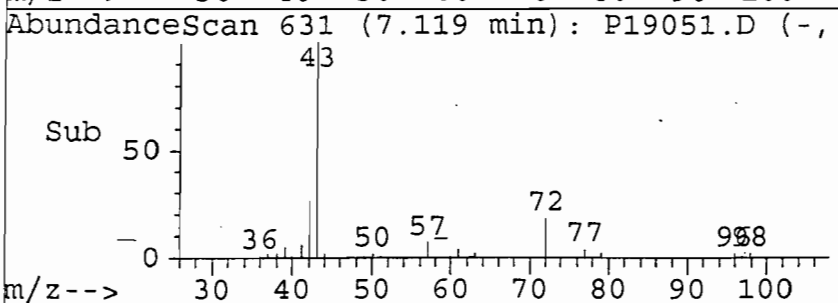
000357



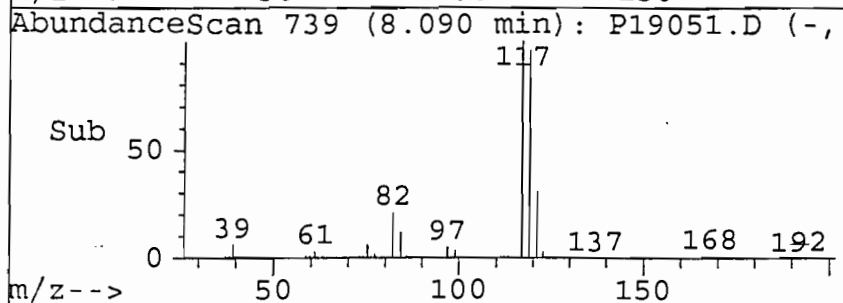
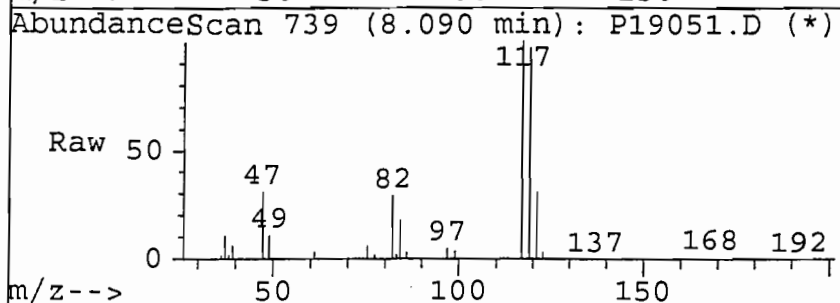
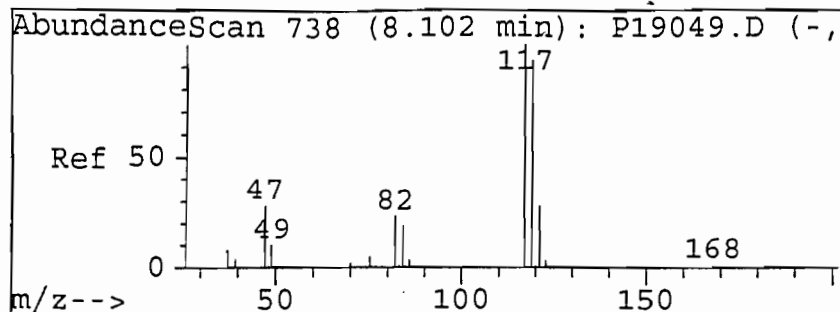
#26
 2-Butanone
 Concen: 161.74 ug/L m
 RT: 7.12 min Scan# 631
 Delta R.T. 0.02 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm



Tgt Ion:43 Resp: 473252
 Ion Ratio Lower Upper
 43 100
 72 16.8 8.2 24.5
 0 0.0 0.0 0.0
 0 0.0 0.0 0.0

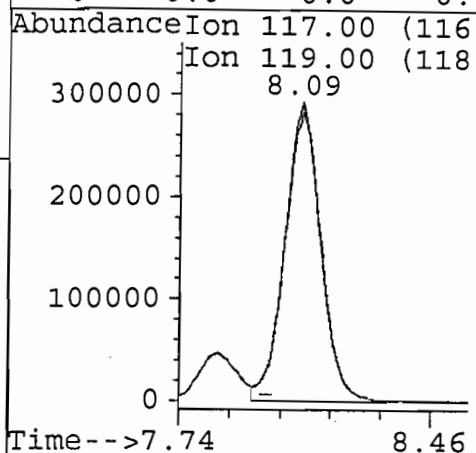


000358

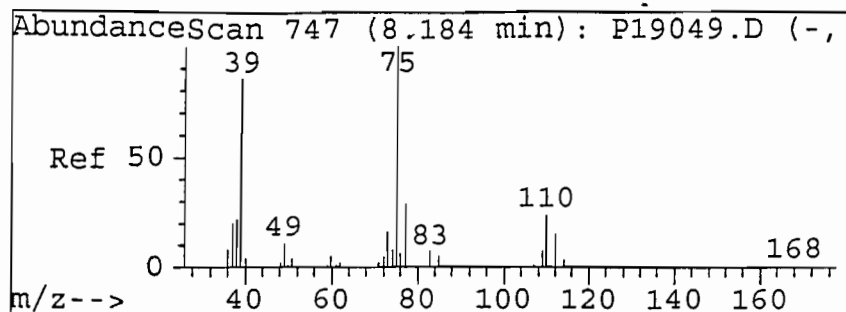


#27
 carbon tetrachloride
 Concen: 192.54 ug/L m
 RT: 8.09 min Scan# 739
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion:117	Resp: 2134317
Ion Ratio	Lower Upper
117	100
119	96.5 65.6 121.8
0	0.0 0.0 0.0
0	0.0 0.0 0.0



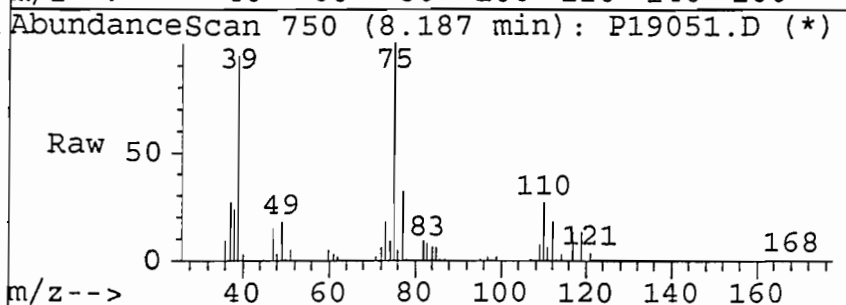
000359



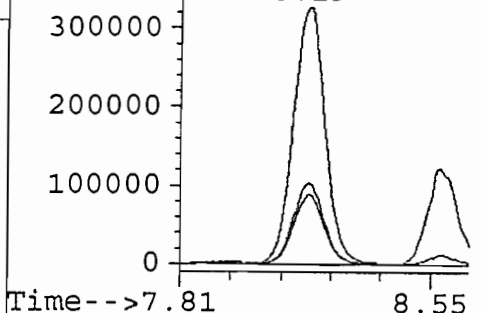
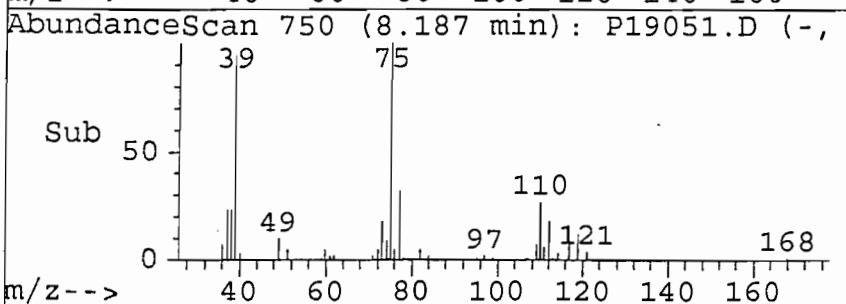
#28
 1,1-dichloropropene
 Concen: 190.12 ug/L m
 RT: 8.19 min Scan# 750
 Delta R.T. 0.00 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion:75 Resp: 2110029

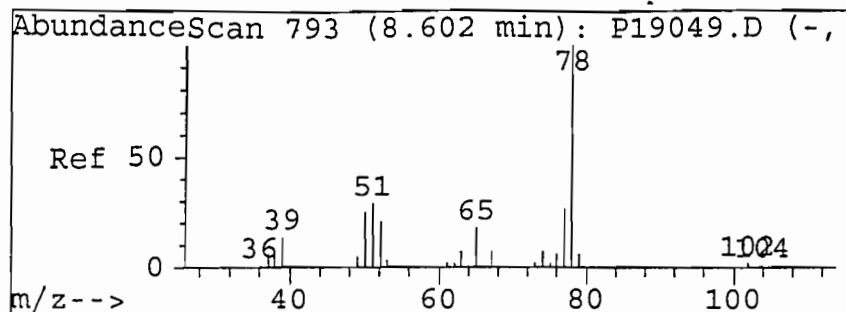
Ion	Ratio	Lower	Upper
75	100		
110	27.3	16.8	31.2
77	31.9	20.0	37.2
0	0.0	0.0	0.0



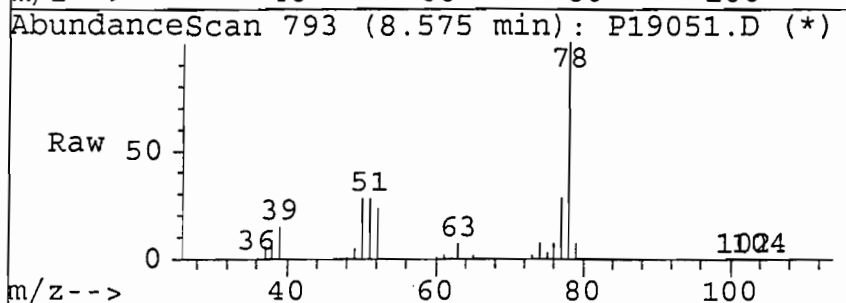
AbundanceIon 75.00 (74.
 Ion 110.00 (109
 Ion 77.00 (76.
 8.19



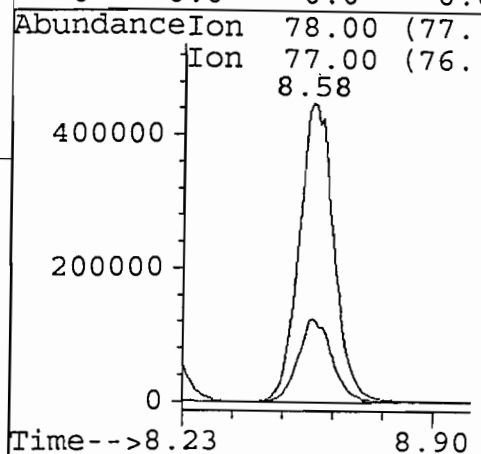
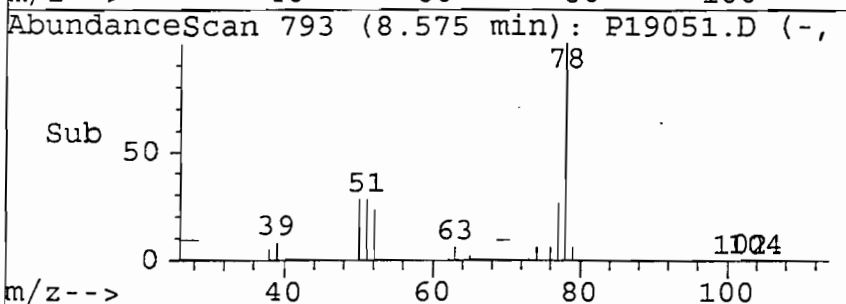
000360



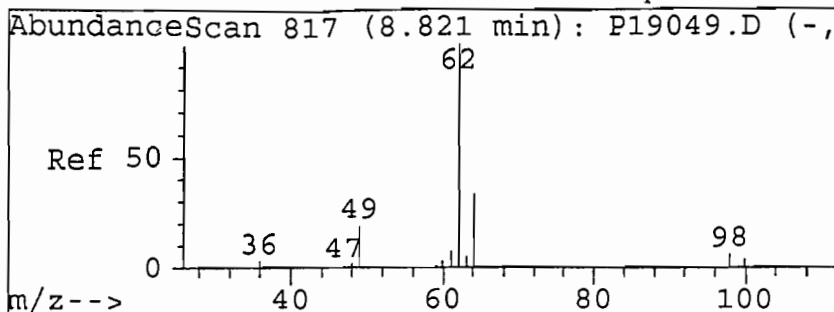
#29
benzene
Concen: 186.11 ug/L m
RT: 8.58 min Scan# 793
Delta R.T. -0.03 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm



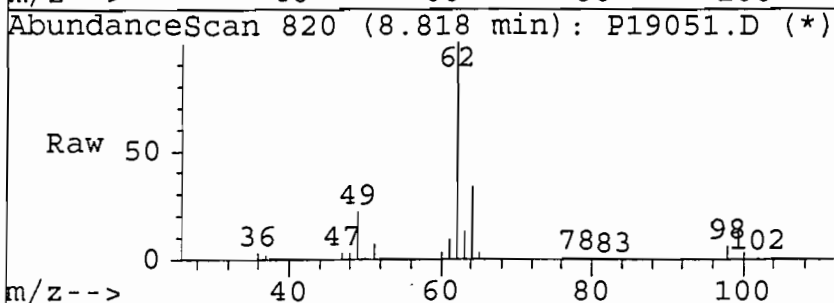
Tgt Ion	Ratio	Lower	Upper
78	100		
77	27.8	19.2	35.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0



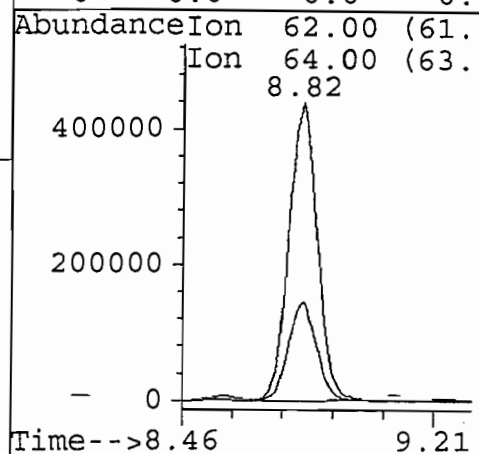
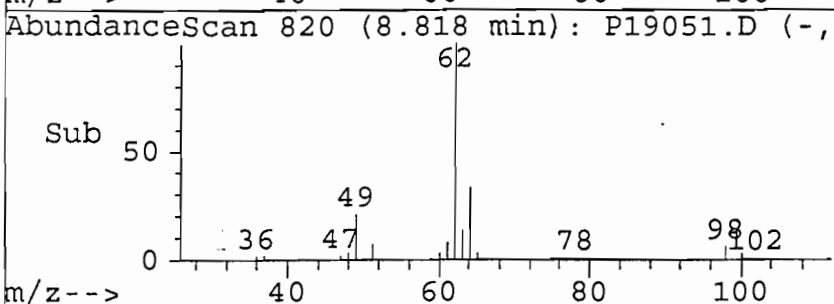
000361



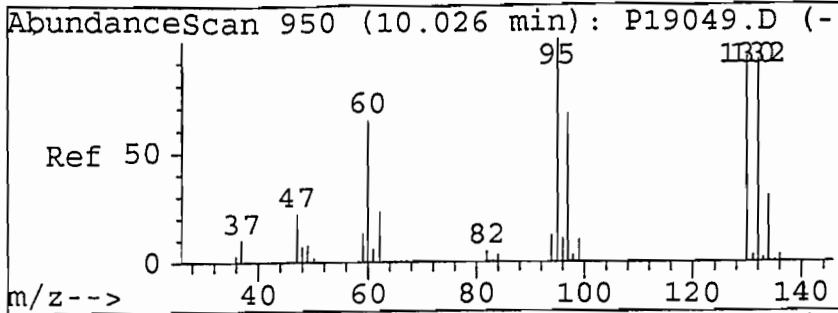
#31
 1,2-dichloroethane
 Concen: 195.20 ug/L m
 RT: 8.82 min Scan# 820
 Delta R.T. -0.00 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm



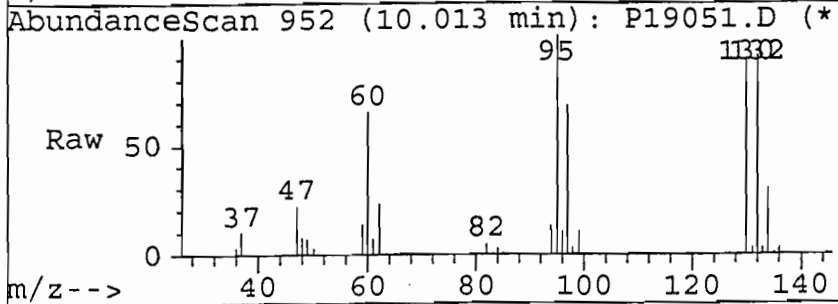
Tgt	Ion:62	Resp: 2547365	
Ion	Ratio	Lower	Upper
62	100		
64	32.8	23.0	42.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0



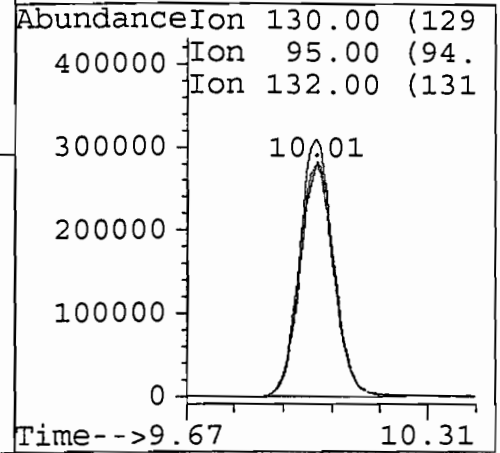
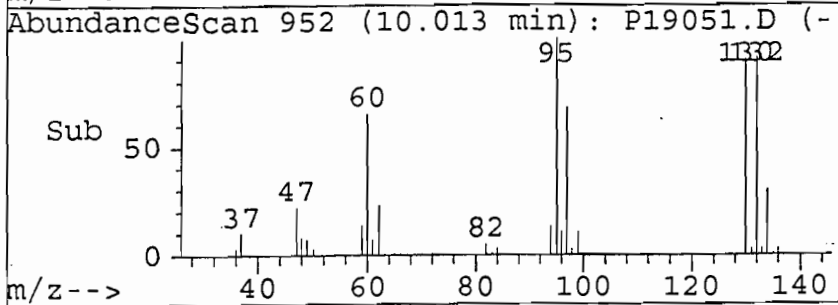
000362



#32
trichloroethene
Concen: 192.81 ug/L m
RT: 10.01 min Scan# 952
Delta R.T. -0.01 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

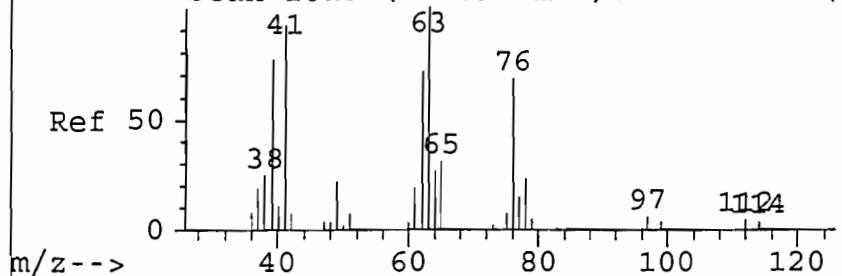


Tgt Ion	Ratio	Lower	Upper
130	100		
95	110.8	75.7	140.7
132	101.4	68.9	127.9
0	0.0	0.0	0.0

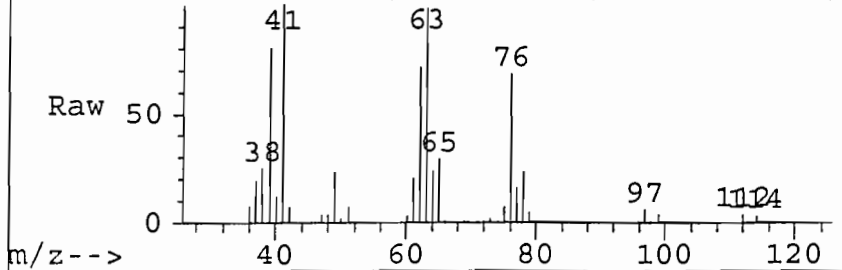


000363

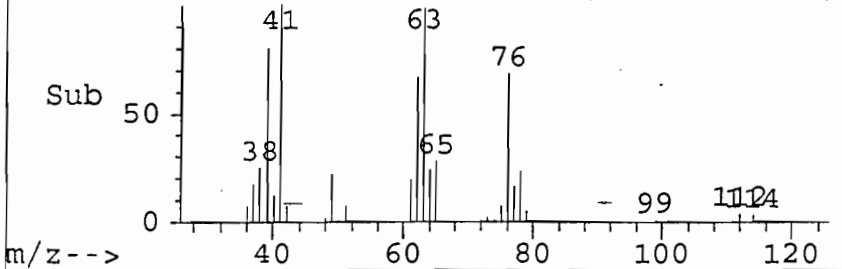
AbundanceScan 1013 (10.597 min): P19049.D (



AbundanceScan 1016 (10.594 min): P19051.D (



AbundanceScan 1016 (10.594 min): P19051.D (



#33

1,2-dichloropropane

Concen: 213.49 ug/L m

RT: 10.59 min Scan# 1016

Delta R.T. -0.00 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:63 Resp: 1443058

Ion Ratio Lower Upper

63 100

62 71.8 50.0 92.8

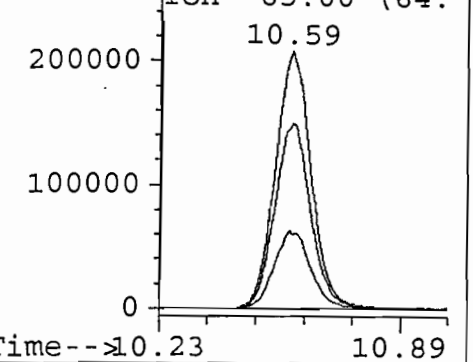
65 29.1 21.6 40.2

0 0.0 0.0 0.0

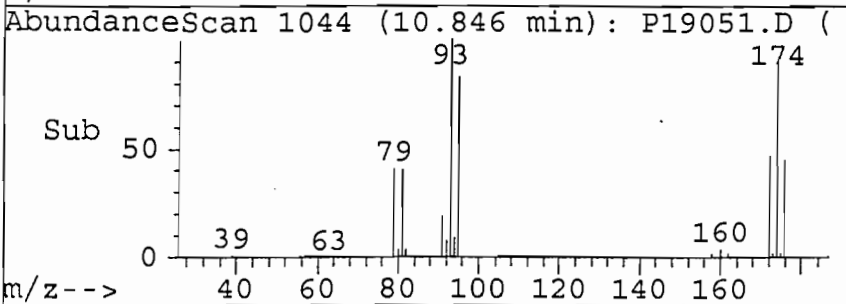
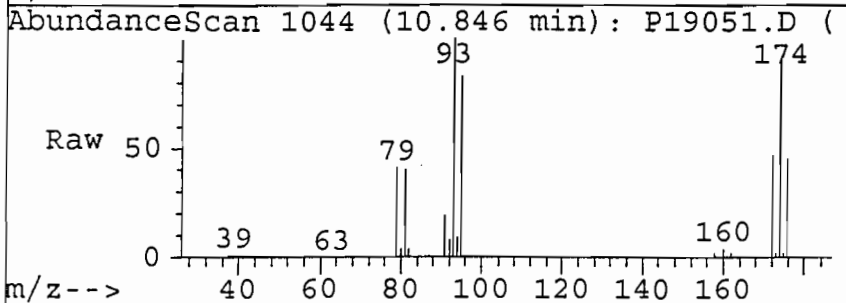
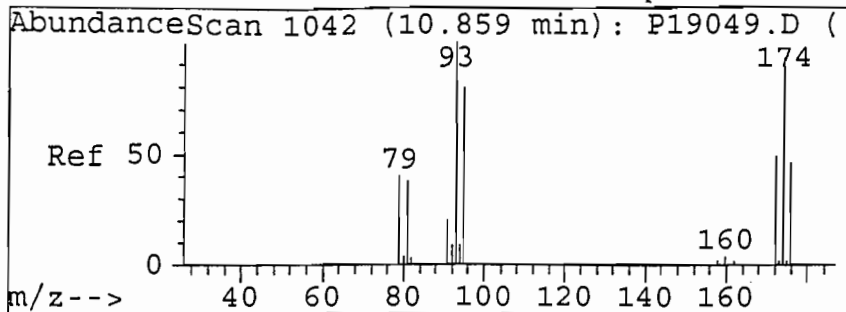
AbundanceIon 63.00 (62.

Ion 62.00 (61.

Ion 65.00 (64.

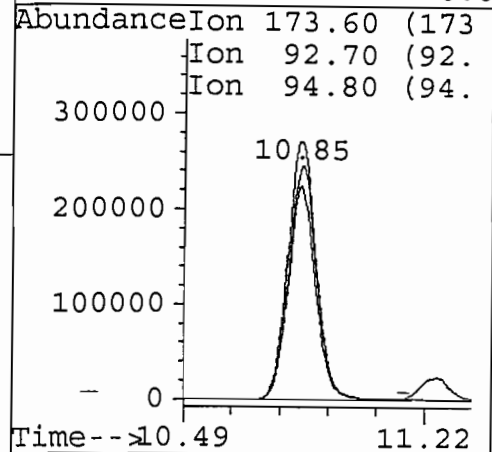


000364



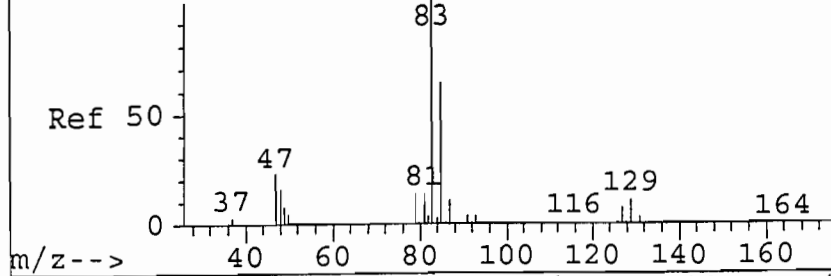
#34
 dibromomethane
 Concen: 191.33 ug/L m
 RT: 10.85 min Scan# 1044
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

Tgt Ion	Ratio	Lower	Upper
174	100		
93	110.5	75.1	139.5
95	91.7	59.5	110.5
0	0.0	0.0	0.0



000365

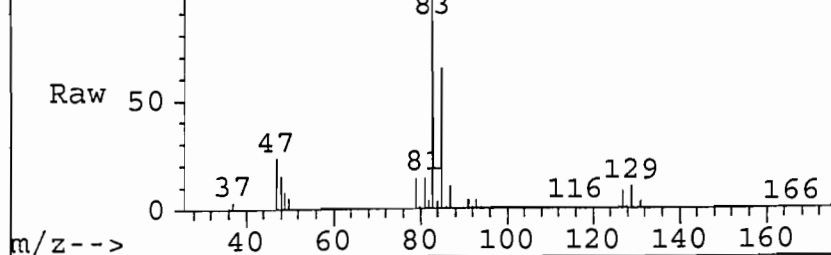
AbundanceScan 1085 (11.247 min): P19049.D (



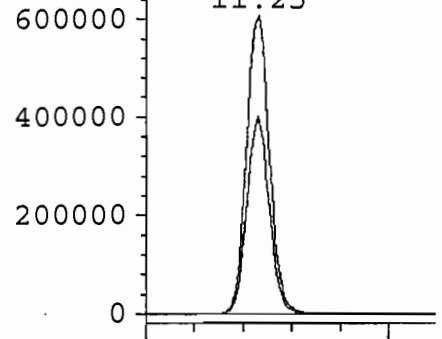
#35
bromodichloromethane
Concen: 218.13 ug/L m
RT: 11.25 min Scan# 1089
Delta R.T. 0.00 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

Tgt Ion:	83	Resp:	3870512
Ion	Ratio	Lower	Upper
83	100		
85	64.0	43.8	81.4
0	0.0	0.0	0.0
0	0.0	0.0	0.0

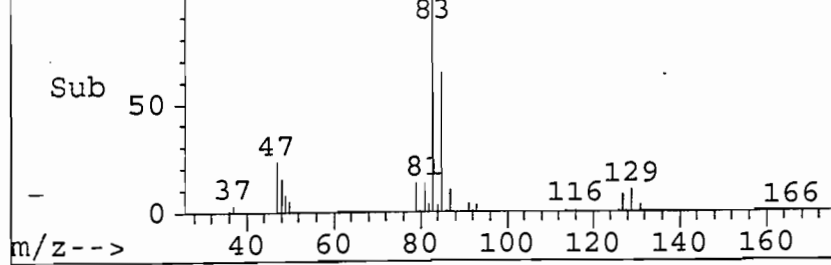
AbundanceScan 1089 (11.251 min): P19051.D (



AbundanceIon 83.00 (82.
Ion 85.00 (84.
11.25



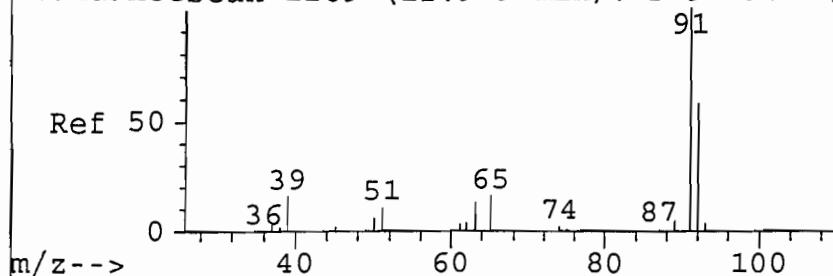
AbundanceScan 1089 (11.251 min): P19051.D (



Time-->10.80 11.77

000366

AbundanceScan 1269 (12.919 min): P19049.D (



#36

2-Chloroethyl Vinyl Ether

Concen: 182.22 ug/L m

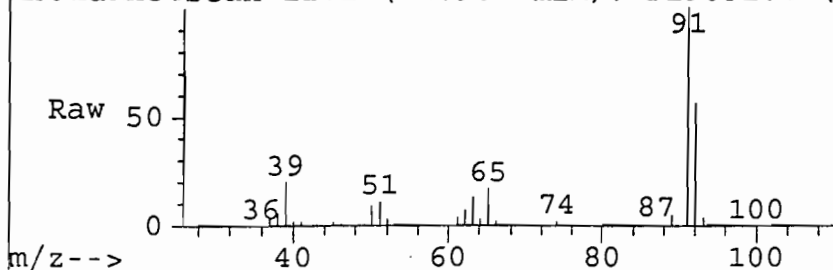
RT: 12.90 min Scan# 1272

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

AbundanceScan 1272 (12.904 min): P19051.D (



Tgt Ion:63 Resp: 441272

Ion Ratio Lower Upper

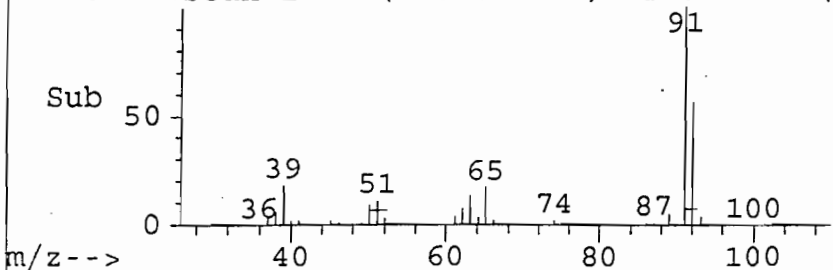
63 100

43 8.6 2.5 7.5#

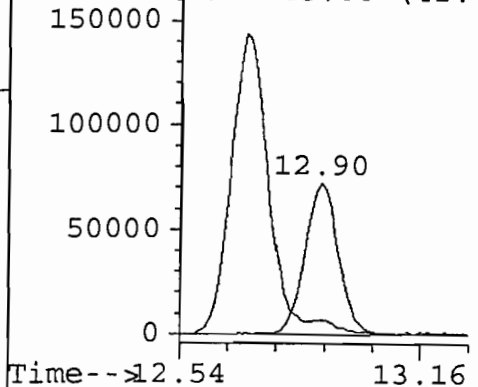
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceScan 1272 (12.904 min): P19051.D (

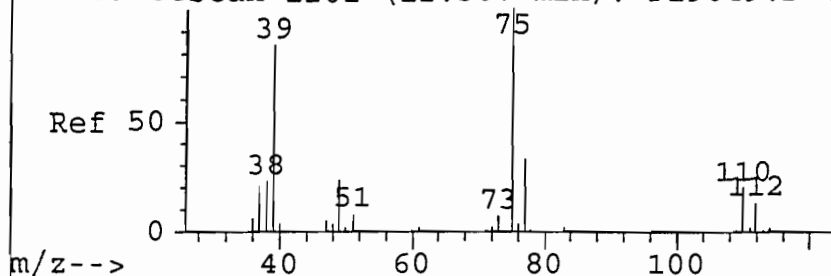


AbundanceIon 63.00 (62.
Ion 43.00 (42.

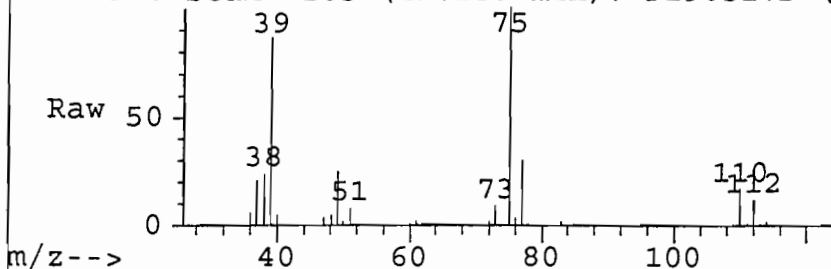


000367

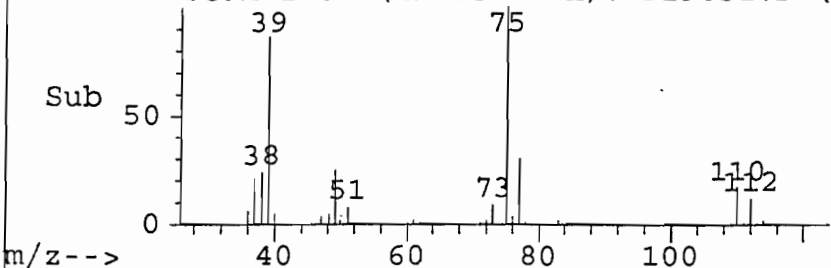
AbundanceScan 1201 (12.300 min): P19049.D (



AbundanceScan 1203 (12.283 min): P19051.D (



AbundanceScan 1203 (12.283 min): P19051.D (



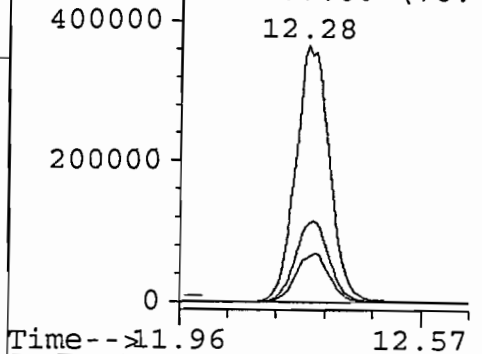
#37

cis-1,3-dichloropropene
Concen: 206.99 ug/L m
RT: 12.28 min Scan# 1203
Delta R.T. -0.02 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

Tgt Ion:75 Resp: 2169868

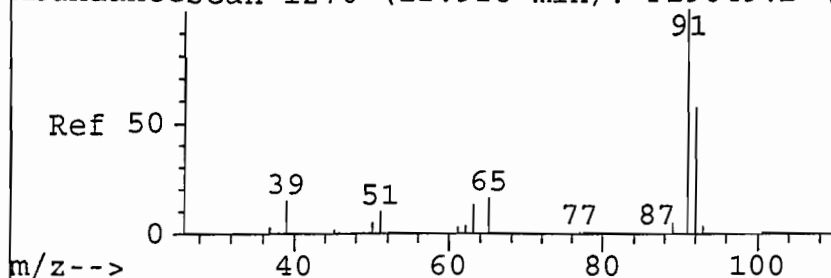
Ion	Ratio	Lower	Upper
75	100		
110	17.5	14.3	26.6
77	30.3	22.9	42.5
0	0.0	0.0	0.0

AbundanceIon 75.00 (74.
Ion 110.00 (109
Ion 77.00 (76.



000368

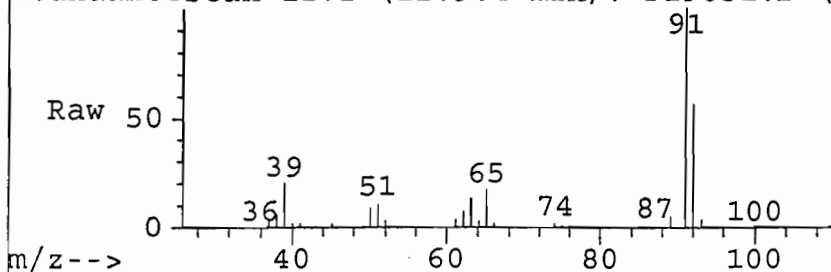
AbundanceScan 1270 (12.928 min): P19049.D (



#39
toluene
Concen: 176.25 ug/L m
RT: 12.90 min Scan# 1272
Delta R.T. -0.02 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm

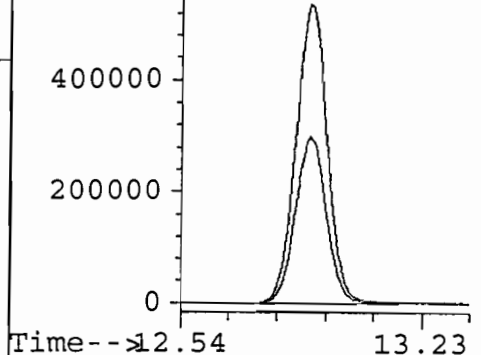
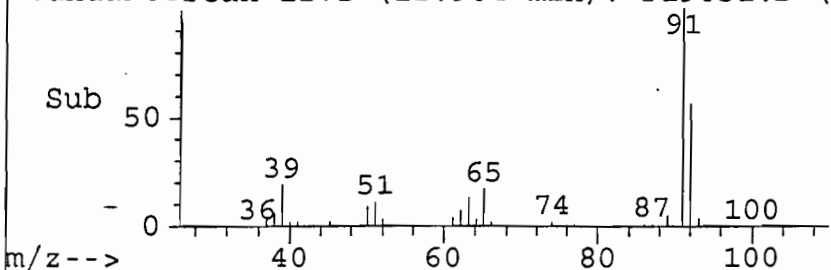
Tgt Ion	Ratio	Lower	Upper
91	100		
92	55.9	40.2	74.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 1272 (12.904 min): P19051.D (



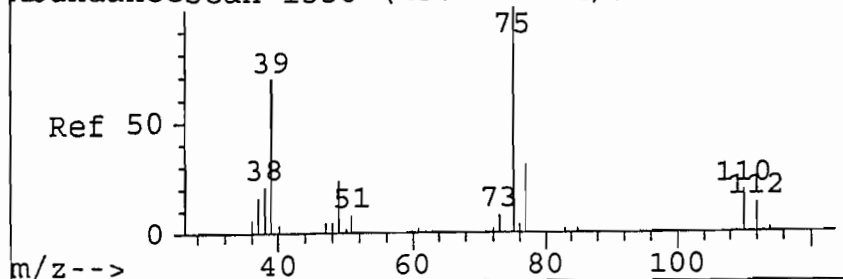
AbundanceIon 91.00 (90.
600000 Ion 92.00 (91.
12.90

AbundanceScan 1272 (12.904 min): P19051.D (

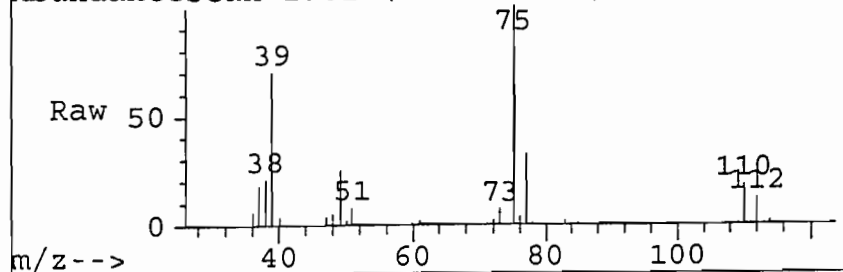


000369

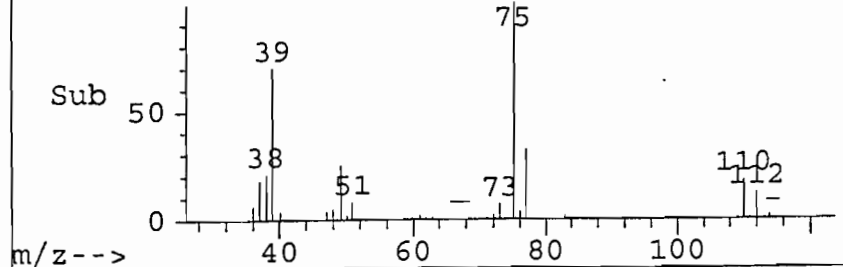
AbundanceScan 1358 (13.724 min): P19049.D (



AbundanceScan 1361 (13.710 min): P19051.D (



AbundanceScan 1361 (13.710 min): P19051.D (



#40

trans-1,3-dichloropropene

Concen: 211.57 ug/L m

RT: 13.71 min Scan# 1361

Delta R.T. -0.01 min

Lab File: P19051.D

Acq: 6 Oct 99 7:23 pm

Tgt Ion:75 Resp: 2133233

Ion Ratio Lower Upper

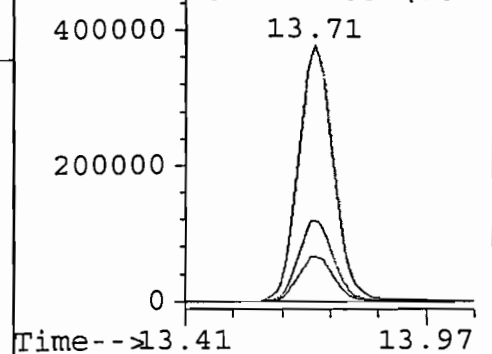
75 100

110 17.5 13.2 24.4

77 31.5 21.7 40.3

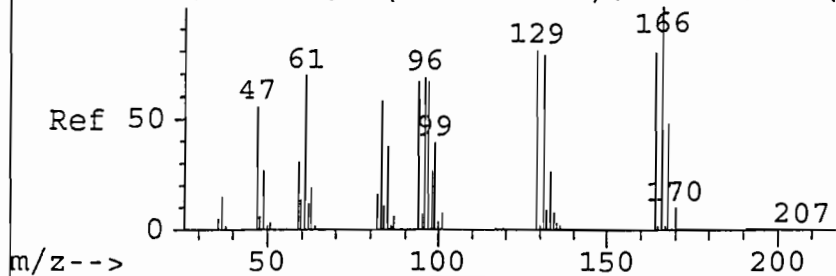
0 0.0 0.0 0.0

AbundanceIon 75.00 (74.
Ion 110.00 (109
Ion 77.00 (76.

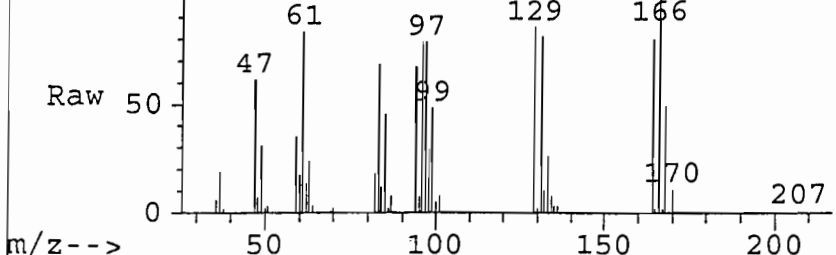


000370

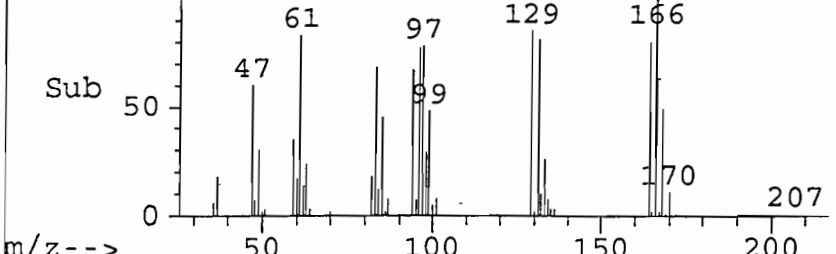
AbundanceScan 1402 (14.123 min): P19049.D (



AbundanceScan 1405 (14.109 min): P19051.D (

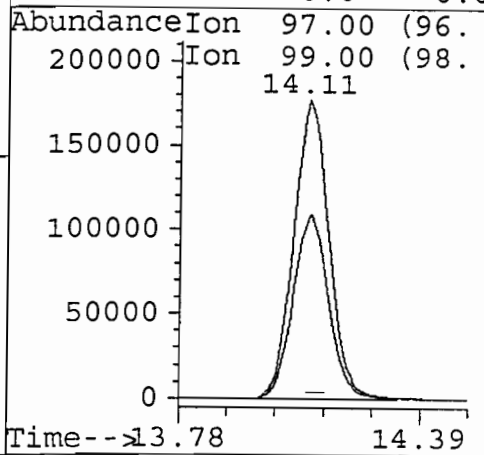


AbundanceScan 1405 (14.109 min): P19051.D (

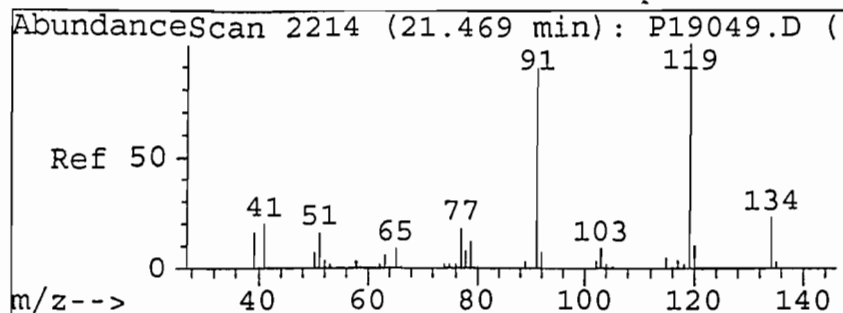


#41
 1,1,2-trichloroethane
 Concen: 186.68 ug/L m
 RT: 14.11 min Scan# 1405
 Delta R.T. -0.01 min
 Lab File: P19051.D
 Acq: 6 Oct 99 7:23 pm

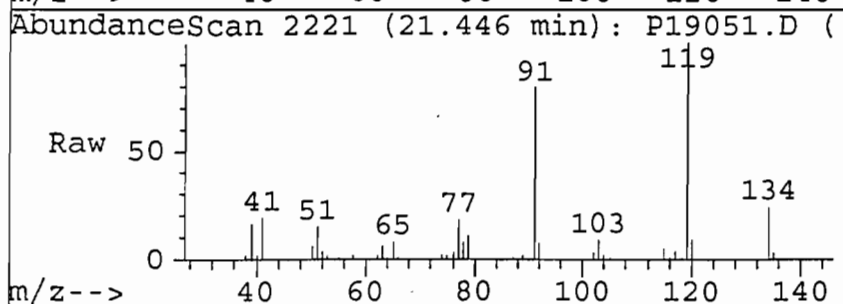
Tgt Ion:97	Resp: 1096991
Ion Ratio	Lower Upper
97 100	
99 61.1	41.4 77.0
0 0.0	0.0 0.0
0 0.0	0.0 0.0



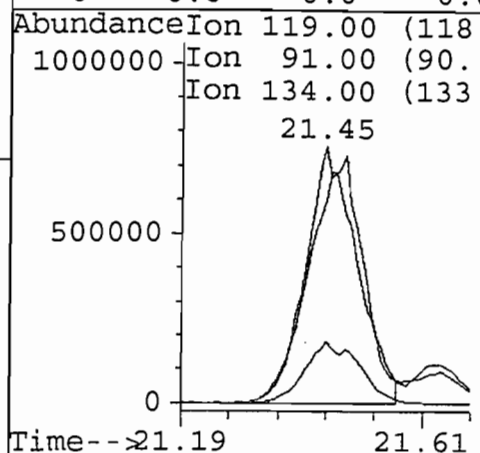
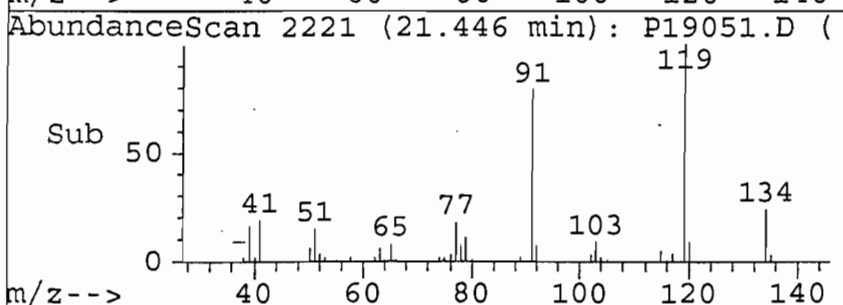
000371



#67
tert-butylbenzene
Concen: 203.97 ug/L m
RT: 21.45 min Scan# 2221
Delta R.T. -0.02 min
Lab File: P19051.D
Acq: 6 Oct 99 7:23 pm



Tgt Ion:119 Resp: 5106569
Ion Ratio Lower Upper
119 100
91 79.0 62.2 115.4
134 24.0 16.4 30.4
0 0.0 0.0 0.0



000372

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19052.D

Acq Time : 6 Oct 99 8:07 pm

Sample : 100PPB ICC

Misc : 5G/5ML

Quant Time: Oct 7 12:02 1999

Operator: AV

Inst : voa2

Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M

Title : VOA

Last Update : Thu Oct 07 12:18:47 1999

Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	1012065	50.00	ug/L	-0.02
43) Chlorobenzene-d5	16.32	117	1021234	50.00	ug/L	-0.01
58) 1,4-dichlorobenzene-d4	22.58	152	732833	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	870329	54.13	ug/L	108.27%
30) 1,2-Dichlorethane-d4	8.65	65	666179	52.83	ug/L	105.67%
38) Toluene-d8	12.75	98	1002685	51.81	ug/L	103.61%
42) 4-Bromofluorobenzene	19.47	95	982140	52.95	ug/L	105.91%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	852647	107.99	ug/L	99
3) chloromethane	1.94	50	459691	114.73	ug/L	95
4) vinyl chloride	2.07	62	456274	115.30	ug/L	100
5) bromomethane	2.47	94	485991	114.59	ug/L	88
6) chloroethane	2.59	64	209579	107.24	ug/L	91
7) Acrolein	3.63	56	262303	1057.77	ug/L	99
8) trichlorofluoromethane	2.88	101	2202471	110.49	ug/L	100
9) 1,1-dichloroethene	3.65	61	1111300	109.15	ug/L	98
10) Acetone	3.91	43	131622	54.25	ug/L	97
11) Carbon Disulfide	3.94	76	1177701	105.17	ug/L	100
12) Iodo Methane	3.90	142	1631132	106.89	ug/L	97
13) methylene chloride	4.58	84	474831	106.60	ug/L	94
14) trans-1,2-dichloroethene	4.97	61	966129	105.40	ug/L	94
15) TBA	4.98	59	642064	1055.64	ug/L	94
16) MTBE	4.98	73	1858251	102.32	ug/L	98
17) Acrylonitrile	5.17	53	724917	1060.44	ug/L	97
18) 1,1-dichloroethane	5.83	63	1490317	107.64	ug/L	99
19) 2,2-dichloropropane	6.88	77	1550321	103.52	ug/L	97
20) cis-1,2-dichloroethene	6.96	61	1282242	106.06	ug/L	94
21) bromochloromethane	7.43	49	794371	105.14	ug/L	98
22) chloroform	7.63	83	2062443	107.63	ug/L	98
23) 1,1,1-trichloroethane	7.85	97	2197681	105.95	ug/L	97
25) Vinyl Acetate	5.96	43	1588621	109.03	ug/L	99
26) 2-Butanone	7.10	43	234075	78.11	ug/L	100
27) carbon tetrachloride	8.08	117	1261566	111.12	ug/L	98
28) 1,1-dichloropropene	8.19	75	1224253	107.70	ug/L	92
29) benzene	8.59	78	1644383	103.08	ug/L	99
31) 1,2-dichloroethane	8.82	62	1481621	110.85	ug/L	99
32) trichloroethene	10.01	130	1005489	106.63	ug/L	98
33) 1,2-dichloropropane	10.59	63	791258	114.29	ug/L	100
34) dibromomethane	10.86	174	798846	104.70	ug/L	96
35) bromodichloromethane	11.25	83	2078504	114.36	ug/L	100
36) 2-Chloroethyl Vinyl Ether	12.90	63	263691	106.31	ug/L	93

(#) = qualifier out of range (m) = manual integration

P19052.D V21006CS.M

Thu Oct 07 12:31:22 1999

VOA3

Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19052.D
 Acq Time : 6 Oct 99 8:07 pm
 Sample : 100PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:02 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	cis-1,3-dichloropropene	12.29	75	1207291	112.44	ug/L	99
39)	toluene	12.91	91	1997408	102.91	ug/L	97
40)	trans-1,3-dichloropropene	13.70	75	1171678	113.45	ug/L	97
41)	1,1,2-trichloroethane	14.13	97	632427	105.07	ug/L	96
44)	4-Methyl-2-Pentanone	12.72	43	534557	103.82	ug/L	97
45)	tetrachloroethene	14.14	166	1094509	100.61	ug/L	90
46)	1,3-dichloropropane	14.51	76	1063471	110.76	ug/L	95
47)	dibromochloromethane	14.95	129	1499309	111.88	ug/L	95
48)	1,2-dibromoethane	15.19	107	1140978	110.74	ug/L	95
49)	2-Hexanone	14.76	43	401938	90.57	ug/L	98
50)	chlorobenzene	16.39	112	1644097	102.71	ug/L	99
51)	1-Chlorohexane	16.44	91	952493	102.17	ug/L	100
52)	1,1,1,2-tetrachloroethane	16.68	133	1044466	104.47	ug/L	97
53)	ethylbenzene	16.67	91	2781521	102.10	ug/L	99
54)	m&p-xylenes	16.99	106	1960420	219.01	ug/L	93
55)	o-xylene	18.01	91	2709872	107.44	ug/L	99
56)	styrene	18.10	104	1682969	113.26	ug/L	94
57)	bromoform	18.56	173	1258711	109.95	ug/L	98
59)	isopropylbenzene	18.99	105	3196167	100.58	ug/L	99
60)	bromobenzene	19.75	77	2180052	99.26	ug/L	97
61)	1,1,2,2-tetrachloroethane	20.09	83	1307643	100.89	ug/L	98
62)	1,2,3-trichloropropane	20.13	75	963376	104.16	ug/L	97
63)	n-propylbenzene	20.63	120	1191669	97.28	ug/L m	96
64)	2-chlorotoluene	20.31	126	793623	100.10	ug/L	98
65)	4-chlorotoluene	20.64	126	823541	102.74	ug/L	95
66)	1,3,5-trimethylbenzene	20.66	105	2985109	99.22	ug/L m	92
67)	tert-butylbenzene	21.46	119	2765990	99.56	ug/L	98
68)	1,2,4-trimethylbenzene	21.64	105	2987562	102.43	ug/L	96
69)	sec-butylbenzene	22.07	105	3873570	105.34	ug/L	98
70)	1,3-dichlorobenzene	22.36	146	1879857	99.53	ug/L	98
71)	4-isopropyltoluene	22.52	119	3387514	99.83	ug/L	98
72)	1,4-dichlorobenzene	22.64	146	1912157	102.69	ug/L	98
73)	1,2-dichlorobenzene	23.64	146	1853336	101.86	ug/L	91
74)	n-butylbenzene	23.64	91	3376795	103.19	ug/L	92
75)	1,2-dibromo-3-chloropropan	25.91	75	500523	113.55	ug/L	91
76)	1,2,4-trichlorobenzene	28.15	180	1648357	106.70	ug/L	97
77)	hexachlorobutadiene	28.59	225	1306154	102.37	ug/L	97
78)	naphthalene	28.79	128	2305612	105.34	ug/L	99
79)	1,2,3-trichlorobenzene	29.51	180	1382158	99.72	ug/L	89

000374

(#) = qualifier out of range (m) = manual integration
 P19052.D V21006CS.M Thu Oct 07 12:31:24 1999

VOA3

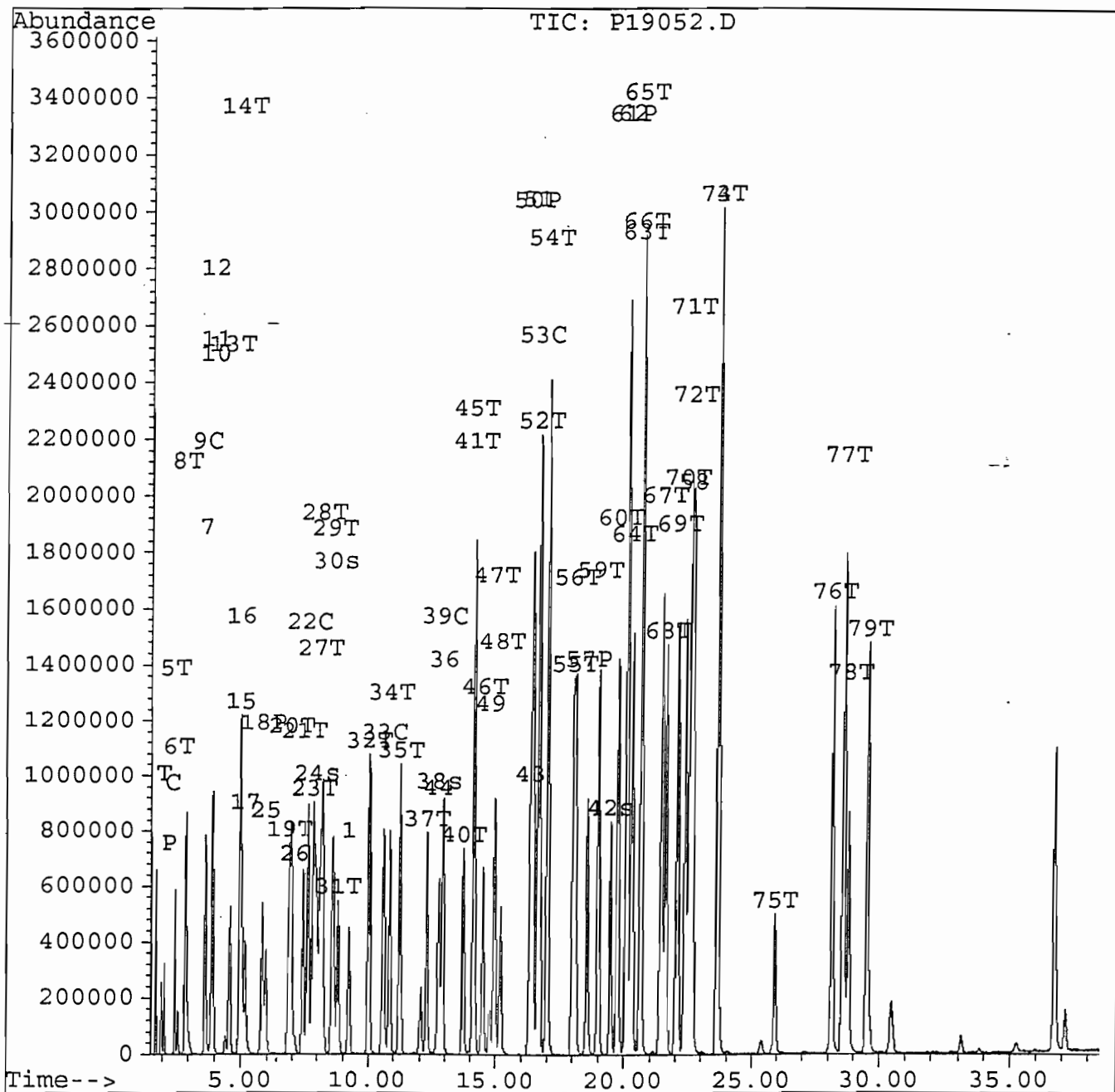
Page 2

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19052.D
Acq Time : 6 Oct 99 8:07 pm
Sample : 100PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 12:02 1999

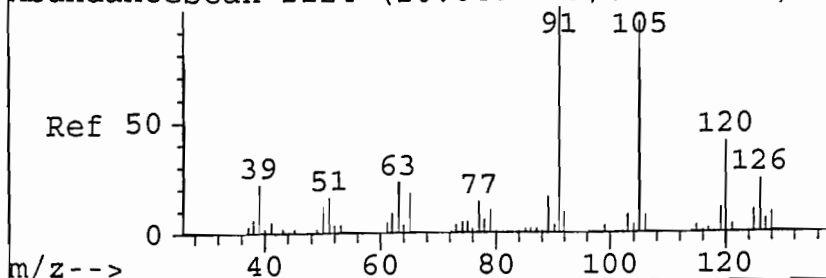
Operator: AV
Inst : voa2
Multiplr: 1.00

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Method      : I:\HPCHEM\1\METHODS\V21006CS.M
Title       : VOA
Last Update  : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration
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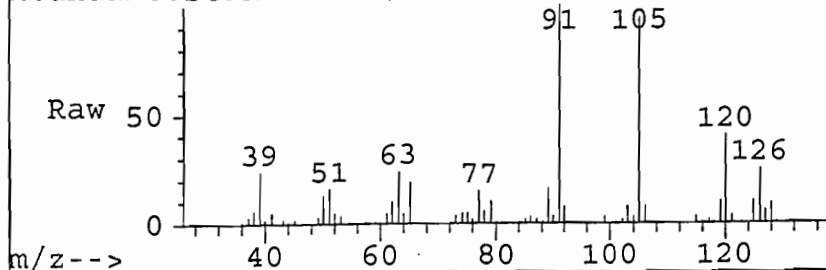


000375

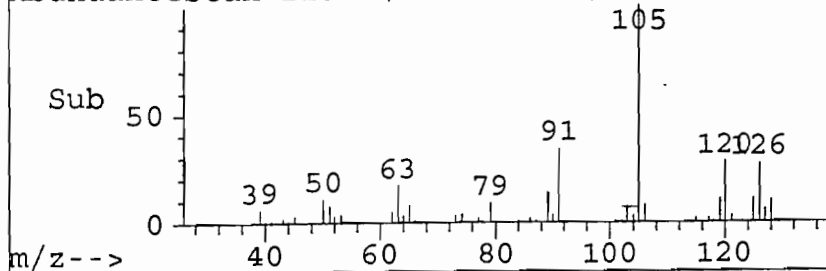
AbundanceScan 2124 (20.648 min): P19049.D (



AbundanceScan 2130 (20.631 min): P19052.D (



AbundanceScan 2130 (20.631 min): P19052.D (



#63

n-propylbenzene

Concen: 97.28 ug/L m

RT: 20.63 min Scan# 2130

Delta R.T. -0.02 min

Lab File: P19052.D

Acq: 6 Oct 99 8:07 pm

Tgt Ion:120 Resp: 1191669

Ion Ratio Lower Upper

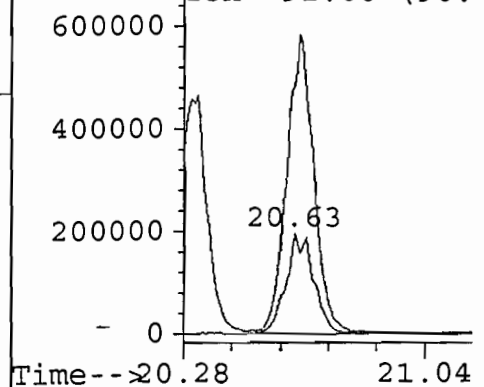
120 100

91 249.2 170.7 316.9

0 0.0 0.0 0.0

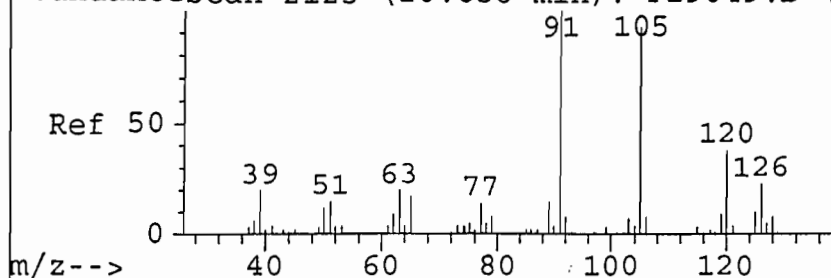
0 0.0 0.0 0.0

AbundanceIon 120.00 (119
Ion 91.00 (90.



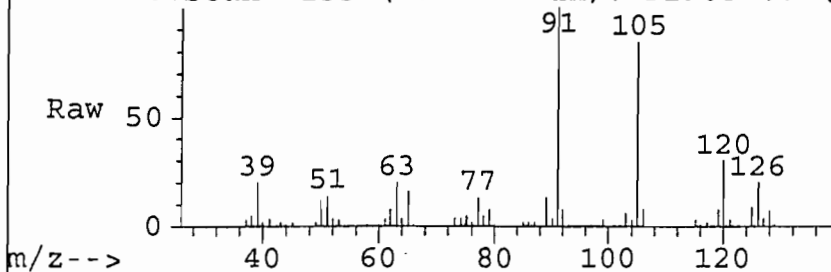
000376

AbundanceScan 2125 (20.658 min): P19049.D (



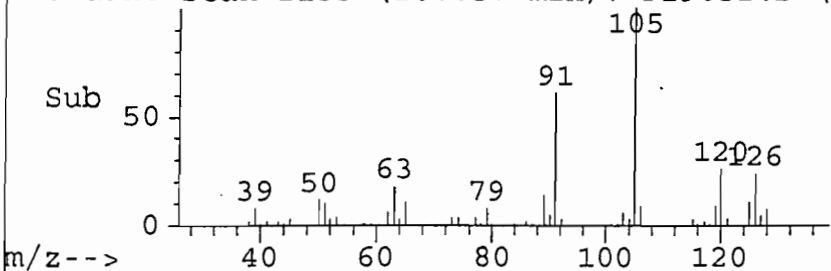
m/z-->

AbundanceScan 2133 (20.657 min): P19052.D (



m/z-->

AbundanceScan 2133 (20.657 min): P19052.D (



m/z-->

#66

1,3,5-trimethylbenzene

Concen: 99.22 ug/L m

RT: 20.66 min Scan# 2133

Delta R.T. -0.00 min

Lab File: P19052.D

Acq: 6 Oct 99 8:07 pm

Tgt Ion:105 Resp: 2985109

Ion Ratio Lower Upper

105 100

120 35.5 28.6 53.0

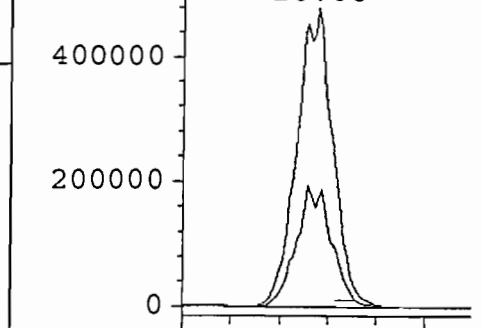
0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 105.00 (104

Ion 120.00 (119

20.66



Time-->20.33 20.92

000377

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19053.D
 Acq Time : 6 Oct 99 8:51 pm
 Sample : 20PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:01 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.24	96	826982	50.00	ug/L	-0.03
43) Chlorobenzene-d5	16.34	117	920924	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.57	152	767847	50.00	ug/L	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.95	113	768632	58.51	ug/L	117.02%
30) 1,2-Dichloroethane-d4	8.65	65	615500	59.74	ug/L	119.48%
38) Toluene-d8	12.75	98	871046	55.08	ug/L	110.15%
42) 4-Bromofluorobenzene	19.47	95	982457	64.83	ug/L	129.65%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.73	85	156473	24.25	ug/L	100
3) chloromethane	1.94	50	88365	26.99	ug/L	100
4) vinyl chloride	2.07	62	76891	23.78	ug/L	97
5) bromomethane	2.47	94	94426	27.25	ug/L	88
6) chloroethane	2.60	64	44116	27.63	ug/L	90
7) Acrolein	3.63	56	44052	217.40	ug/L	99
8) trichlorofluoromethane	2.90	101	404307	24.82	ug/L	97
9) 1,1-dichloroethene	3.65	61	189981	22.84	ug/L	97
10) Acetone	3.88	43	27257	13.75	ug/L	85
11) Carbon Disulfide	3.93	76	191190	20.89	ug/L	97
12) Iodo Methane	3.92	142	271039	21.74	ug/L	98
13) methylene chloride	4.56	84	80436	22.10	ug/L	98
14) trans-1,2-dichloroethene	4.96	61	159460	21.29	ug/L	97
15) TBA	4.93	59	109396	220.12	ug/L m	75
16) MTBE	4.98	73	300577	20.25	ug/L	96
17) Acrylonitrile	5.15	53	119846	214.55	ug/L	99
18) 1,1-dichloroethane	5.82	63	268259	23.71	ug/L	98
19) 2,2-dichloropropane	6.88	77	282488	23.08	ug/L	98
20) cis-1,2-dichloroethene	6.96	61	228696	23.15	ug/L	96
21) bromochloromethane	7.42	49	141932	22.99	ug/L	91
22) chloroform	7.63	83	373265	23.84	ug/L	100
23) 1,1,1-trichloroethane	7.84	97	380076	22.43	ug/L	95
25) Vinyl Acetate	5.95	43	260145	21.85	ug/L	97
26) 2-Butanone	7.09	43	38201	15.60	ug/L	92
27) carbon tetrachloride	8.10	117	210377	22.68	ug/L	96
28) 1,1-dichloropropene	8.19	75	209648	22.57	ug/L	95
29) benzene	8.58	78	275530	21.14	ug/L	98
31) 1,2-dichloroethane	8.82	62	269704	24.69	ug/L	97
32) trichloroethene	10.02	130	165748	21.51	ug/L	94
33) 1,2-dichloropropane	10.59	63	125993	22.27	ug/L	91
34) dibromomethane	10.85	174	142412	22.84	ug/L	90
35) bromodichloromethane	11.25	83	334026	22.49	ug/L	97
36) 2-Chloroethyl Vinyl Ether	12.91	63	43943	21.68	ug/L m	87

(#) = qualifier out of range (m) = manual integration
 P19053.D V21006CS.M Thu Oct 07 12:32:24 1999

VOA3

Page 1

000378

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19053.D
Acq Time : 6 Oct 99 8:51 pm
Sample : 20PPB ICC
Misc : 5G/5ML
Quant Time: Oct 7 12:01 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.29	75	201523	22.97	ug/L	98
39) toluene	12.91	91	353619	22.30	ug/L	95
40) trans-1,3-dichloropropene	13.72	75	192402	22.80	ug/L	98
41) 1,1,2-trichloroethane	14.12	97	97452	19.81	ug/L	94
44) 4-Methyl-2-Pentanone	12.71	43	89095	19.19	ug/L	86
45) tetrachloroethene	14.14	166	186813	19.04	ug/L	97
46) 1,3-dichloropropane	14.50	76	177273	20.47	ug/L	100
47) dibromochloromethane	14.95	129	214678	17.76	ug/L	99
48) 1,2-dibromoethane	15.18	107	197136	21.22	ug/L	94
49) 2-Hexanone	14.78	43	57573	14.39	ug/L	69
50) chlorobenzene	16.39	112	319391	22.13	ug/L	97
51) 1-Chlorohexane	16.45	91	174798	20.79	ug/L	96
52) 1,1,1,2-tetrachloroethane	16.67	133	156458	17.35	ug/L	89
53) ethylbenzene	16.66	91	528813	21.53	ug/L	95
54) m&p-xylenes	17.01	106	370002	45.84	ug/L	87
55) o-xylene	18.00	91	538397	23.67	ug/L	98
56) styrene	18.10	104	315320	23.53	ug/L	91
57) bromoform	18.56	173	192756	18.67	ug/L	99
59) isopropylbenzene	18.99	105	648156	19.47	ug/L	99
60) bromobenzene	19.76	77	445357	19.35	ug/L	94
61) 1,1,2,2-tetrachloroethane	20.08	83	247532	18.23	ug/L	81
62) 1,2,3-trichloropropane	20.13	75	181576	18.74	ug/L	97
63) n-propylbenzene	20.65	120	238605	18.59	ug/L	67
64) 2-chlorotoluene	20.32	126	164259	19.77	ug/L	98
65) 4-chlorotoluene	20.65	126	165793	19.74	ug/L	96
66) 1,3,5-trimethylbenzene	20.64	105	602273	19.11	ug/L	95
67) tert-butylbenzene	21.45	119	573320	19.70	ug/L	98
68) 1,2,4-trimethylbenzene	21.64	105	628112	20.55	ug/L	99
69) sec-butylbenzene	22.06	105	788664	20.47	ug/L	99
70) 1,3-dichlorobenzene	22.36	146	399625	20.19	ug/L	98
71) 4-isopropyltoluene	22.53	119	712351	20.04	ug/L	96
72) 1,4-dichlorobenzene	22.65	146	425798	21.82	ug/L	92
73) 1,2-dichlorobenzene	23.64	146	381316	20.00	ug/L	92
74) n-butylbenzene	23.65	91	675835	19.71	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.92	75	86408	18.71	ug/L	89
76) 1,2,4-trichlorobenzene	28.15	180	309747	19.14	ug/L	98
77) hexachlorobutadiene	28.60	225	274446	20.53	ug/L	97
78) naphthalene	28.80	128	466056	20.32	ug/L	98
79) 1,2,3-trichlorobenzene	29.51	180	289280	19.92	ug/L	100

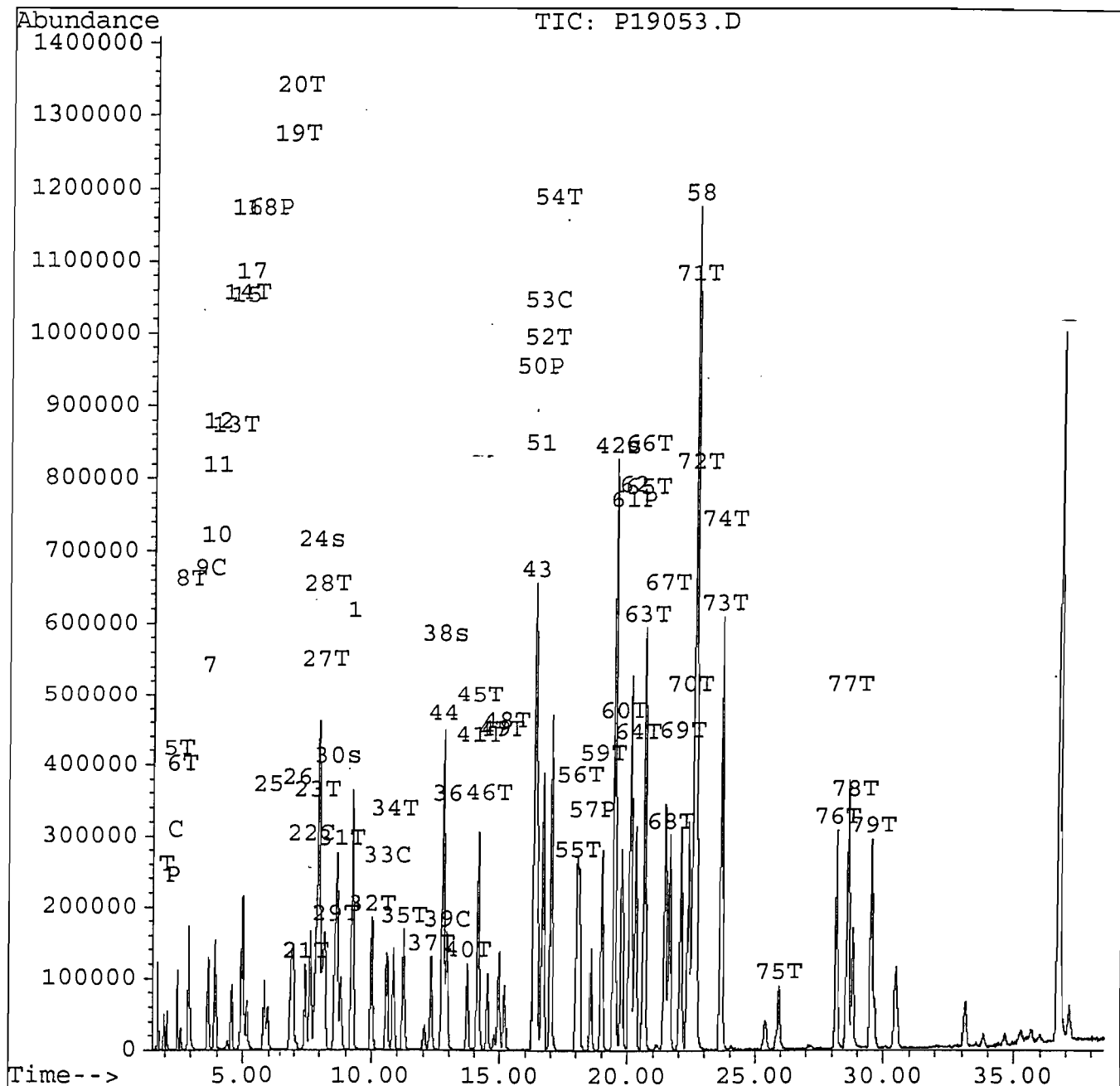
000379

Quantitation Report

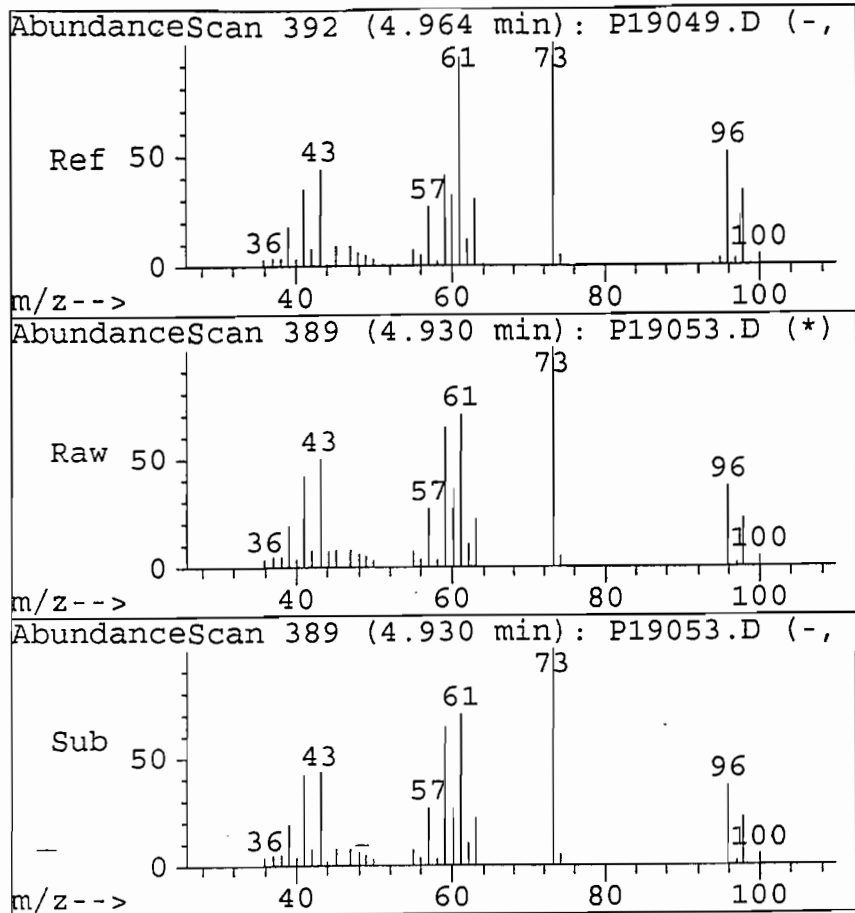
Data File : I:\HPCHEM\1\DATA\V2100699\P19053.D
 Acq Time : 6 Oct 99 8:51 pm
 Sample : 20PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:01 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

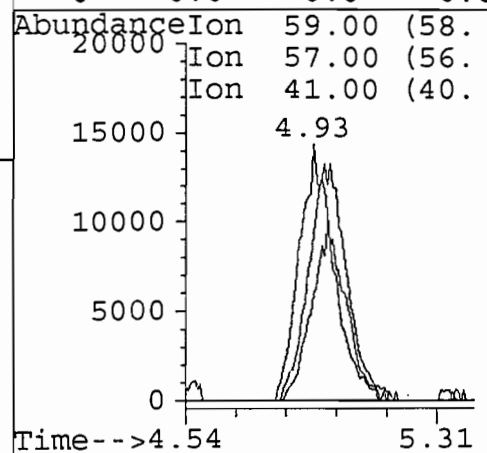


000380



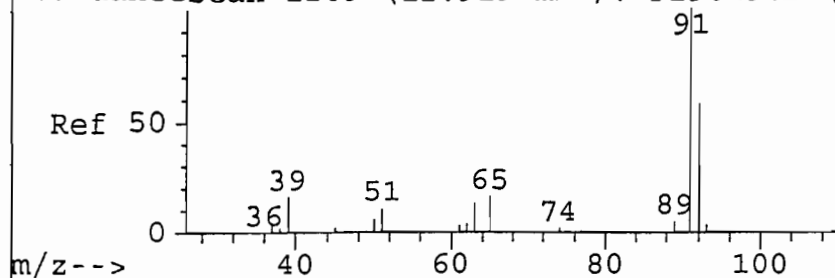
#15
TBA
Concen: 220.12 ug/L m
RT: 4.93 min Scan# 389
Delta R.T. -0.03 min
Lab File: P19053.D
Acq: 6 Oct 99 8:51 pm

Tgt Ion	Ratio	Lower	Upper
59	100		
57	42.0	45.1	83.7#
41	65.3	59.6	110.8
0	0.0	0.0	0.0

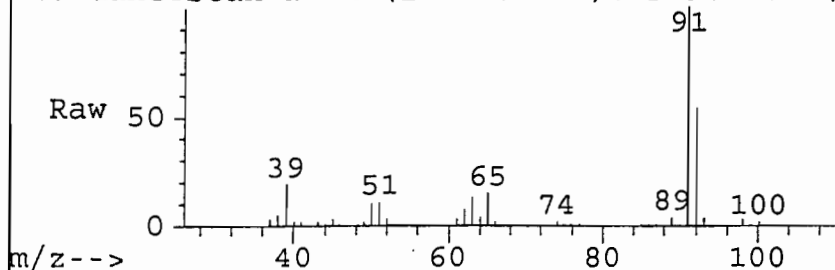


000381

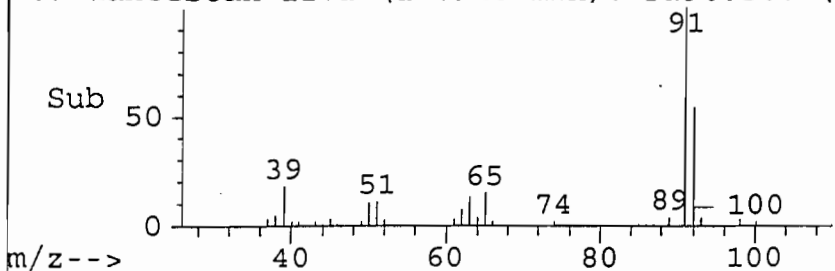
AbundanceScan 1269 (12.919 min): P19049.D (



AbundanceScan 1271 (12.910 min): P19053.D (



AbundanceScan 1271 (12.910 min): P19053.D (



#36

2-Chloroethyl Vinyl Ether

Concen: 21.68 ug/L m

RT: 12.91 min Scan# 1271

Delta R.T. -0.01 min

Lab File: P19053.D

Acq: 6 Oct 99 8:51 pm

Tgt Ion:63 Resp: 43943

Ion Ratio Lower Upper

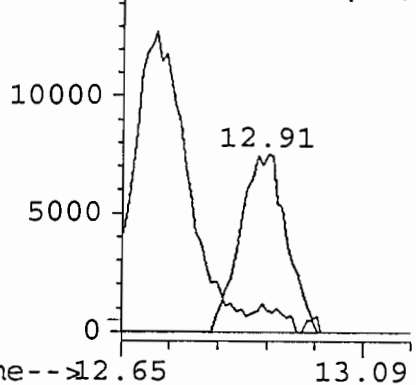
63 100

43 11.8 2.5 7.5#

0 0.0 0.0 0.0

0 0.0 0.0 0.0

AbundanceIon 63.00 (62.
15000 Ion 43.00 (42.



000382

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19054.D
 Acq Time : 6 Oct 99 9:35 pm
 Sample : 5PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:13 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	953518	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.30	117	1033013	50.00	ug/L	-0.03
58) 1,4-dichlorobenzene-d4	22.58	152	762249	50.00	ug/L	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	779680	51.47	ug/L	102.95%
30) 1,2-Dichlorethane-d4	8.65	65	605872	51.00	ug/L	102.00%
38) Toluene-d8	12.75	98	965112	52.93	ug/L	105.85%
42) 4-Bromofluorobenzene	19.47	95	976181	55.86	ug/L	111.73%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	1.73	85	43304	5.82	ug/L	99
3) chloromethane	1.95	50	22534	5.97	ug/L	92
4) vinyl chloride	2.07	62	20808	5.58	ug/L	99
5) bromomethane	2.48	94	26422	6.61	ug/L	85
6) chloroethane	2.61	64	12268	6.66	ug/L	97
7) Acrolein	3.64	56	11756	50.32	ug/L	97
8) trichlorofluoromethane	2.91	101	114122	6.08	ug/L	94
9) 1,1-dichloroethene	3.65	61	51013	5.32	ug/L	95
10) Acetone	3.88	43	10215	4.47	ug/L m	61
11) Carbon Disulfide	3.94	76	48705	4.62	ug/L	88
12) Iodo Methane	3.90	142	66075	4.60	ug/L	98
13) methylene chloride	4.57	84	25136	5.99	ug/L	97
14) trans-1,2-dichloroethene	4.97	61	40263	4.66	ug/L	93
15) TBA	4.92	59	36448	63.60	ug/L m	62
16) MTBE	4.98	73	77794	4.55	ug/L m	81
17) Acrylonitrile	5.17	53	30559	47.45	ug/L	99
18) 1,1-dichloroethane	5.82	63	70534	5.41	ug/L	99
19) 2,2-dichloropropane	6.89	77	72238	5.12	ug/L	91
20) cis-1,2-dichloroethene	6.97	61	60502	5.31	ug/L	89
21) bromochloromethane	7.44	49	36475	5.12	ug/L	97
22) chloroform	7.61	83	95105	5.27	ug/L	100
23) 1,1,1-trichloroethane	7.85	97	93521	4.79	ug/L	92
25) Vinyl Acetate	5.96	43	63925	4.66	ug/L m	92
26) 2-Butanone	7.10	43	12567	4.45	ug/L m	62
27) carbon tetrachloride	8.09	117	51665	4.83	ug/L	100
28) 1,1-dichloropropene	8.20	75	52179	4.87	ug/L	96
29) benzene	8.58	78	75409	5.02	ug/L	91
31) 1,2-dichloroethane	8.81	62	69777	5.54	ug/L	100
32) trichloroethene	10.00	130	41152	4.63	ug/L	95
33) 1,2-dichloropropane	10.60	63	30726	4.71	ug/L	93
34) dibromomethane	10.85	174	34242	4.76	ug/L	93
35) bromodichloromethane	11.24	83	76453	4.46	ug/L	100
36) 2-Chloroethyl Vinyl Ether	12.89	63	12917	5.53	ug/L m	87

(#) = qualifier out of range (m) = manual integration
 P19054.D V21006CS.M Thu Oct 07 12:33:26 1999

VOA3

Page 1

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2100699\P19054.D
 Acq Time : 6 Oct 99 9:35 pm
 Sample : 5PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:13 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

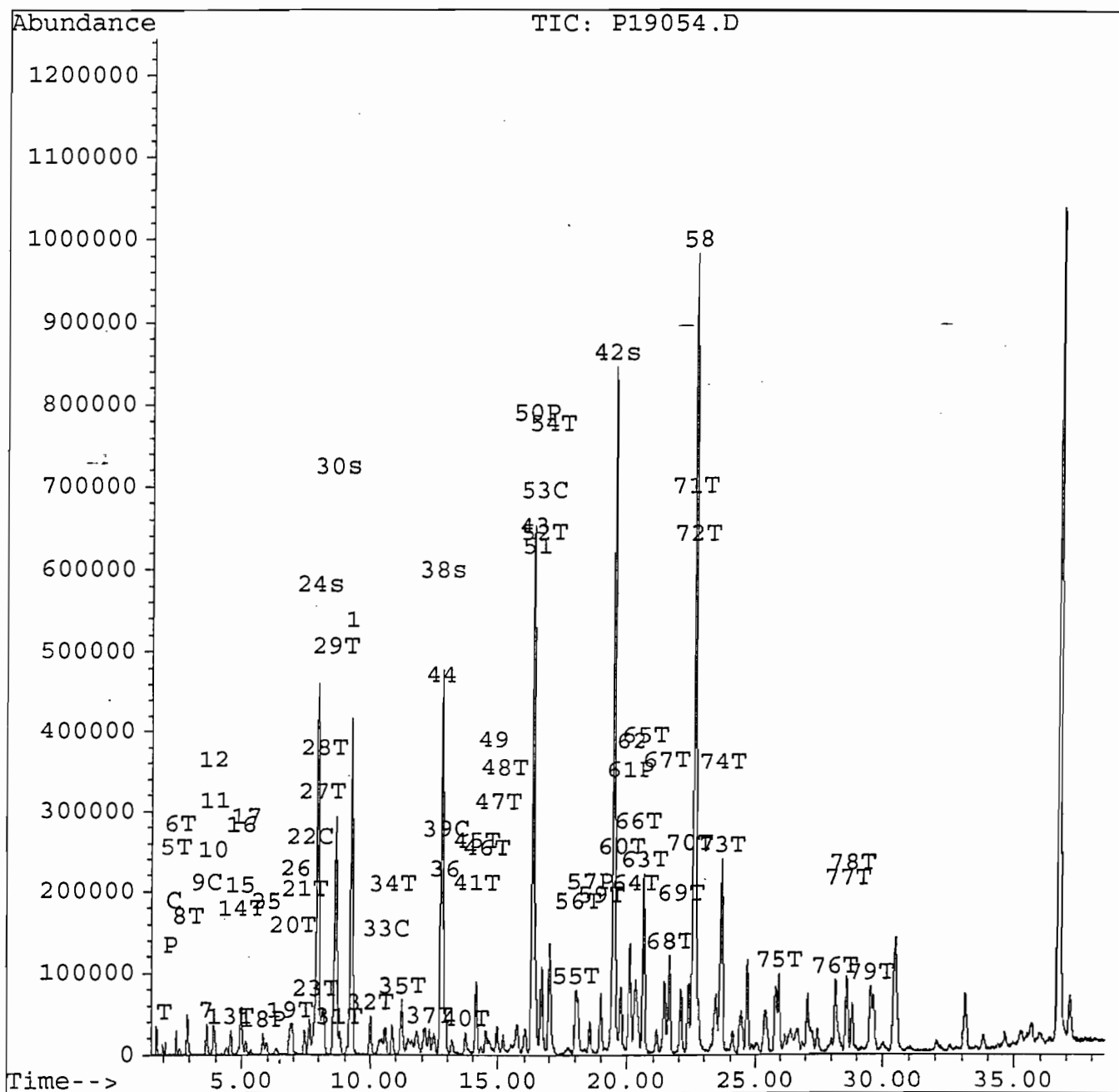
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.29	75	46235	4.57	ug/L	95
39) toluene	12.91	91	100931	5.52	ug/L	98
40) trans-1,3-dichloropropene	13.73	75	44953	4.62	ug/L	98
41) 1,1,2-trichloroethane	14.13	97	26810	4.73	ug/L	98
44) 4-Methyl-2-Pentanone	12.71	43	36261	6.96	ug/L m	55
45) tetrachloroethene	14.13	166	51246	4.66	ug/L	93
46) 1,3-dichloropropane	14.51	76	46547	4.79	ug/L	99
47) dibromochloromethane	14.93	129	78302	5.78	ug/L m	99
48) 1,2-dibromoethane	15.19	107	49449	4.74	ug/L	99
49) 2-Hexanone	14.78	43	17657	3.93	ug/L	73
50) chlorobenzene	16.38	112	89300	5.51	ug/L	95
51) 1-Chlorohexane	16.43	91	47507	5.04	ug/L	79
52) 1,1,1,2-tetrachloroethane	16.68	133	41479	4.10	ug/L	95
53) ethylbenzene	16.67	91	149770	5.44	ug/L	100
54) m&p-xylenes	17.00	106	102309	11.30	ug/L	97
55) o-xylene	18.02	91	153238	6.01	ug/L	97
56) styrene	18.09	104	75511	5.02	ug/L	88
57) bromoform	18.57	173	40912	3.53	ug/L	92
59) isopropylbenzene	18.98	105	163827	4.96	ug/L	96
60) bromobenzene	19.76	77	116655	5.11	ug/L	97
61) 1,1,2,2-tetrachloroethane	20.08	83	64624	4.79	ug/L	100
62) 1,2,3-trichloropropane	20.14	75	51926	5.40	ug/L	95
63) n-propylbenzene	20.64	120	109016	8.56	ug/L m	66
64) 2-chlorotoluene	20.30	126	40319	4.89	ug/L	95
65) 4-chlorotoluene	20.65	126	41336	4.96	ug/L	92
66) 1,3,5-trimethylbenzene	20.40	105	134758	4.31	ug/L m	96
67) tert-butylbenzene	21.47	119	148837	5.15	ug/L	97
68) 1,2,4-trimethylbenzene	21.63	105	249093	8.21	ug/L m	100
69) sec-butylbenzene	22.09	105	194126	5.08	ug/L	96
70) 1,3-dichlorobenzene	22.37	146	103747	5.28	ug/L	94
71) 4-isopropyltoluene	22.52	119	195423	5.54	ug/L	94
72) 1,4-dichlorobenzene	22.64	146	103003	5.32	ug/L	96
73) 1,2-dichlorobenzene	23.64	146	95075	5.02	ug/L	91
74) n-butylbenzene	23.65	91	221376	6.50	ug/L m	82
75) 1,2-dibromo-3-chloropropan	25.94	75	21024	4.59	ug/L m	69
76) 1,2,4-trichlorobenzene	28.14	180	81498	5.07	ug/L m	75
77) hexachlorobutadiene	28.60	225	63069	4.75	ug/L	90
78) naphthalene	28.79	128	141195	6.20	ug/L m	98
79) 1,2,3-trichlorobenzene	29.52	180	74328	5.16	ug/L	93

Quantitation Report

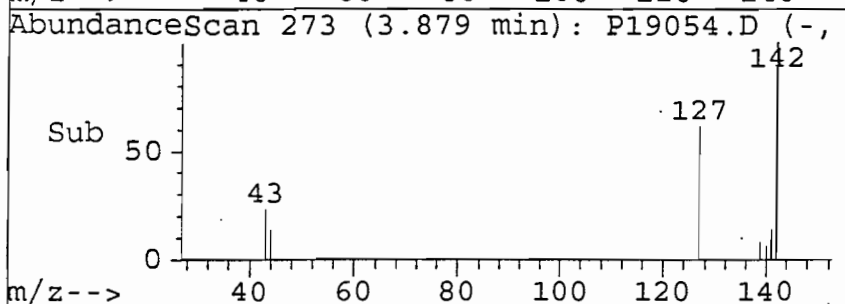
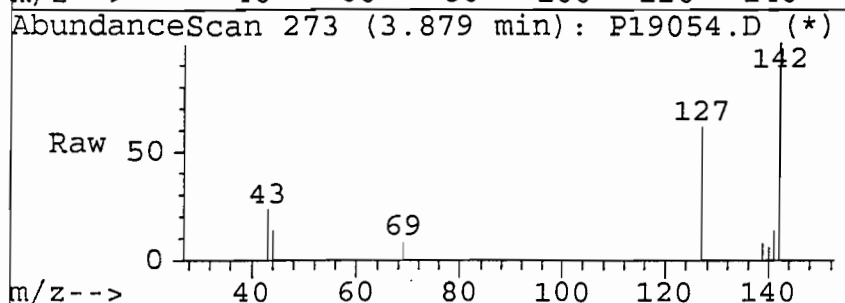
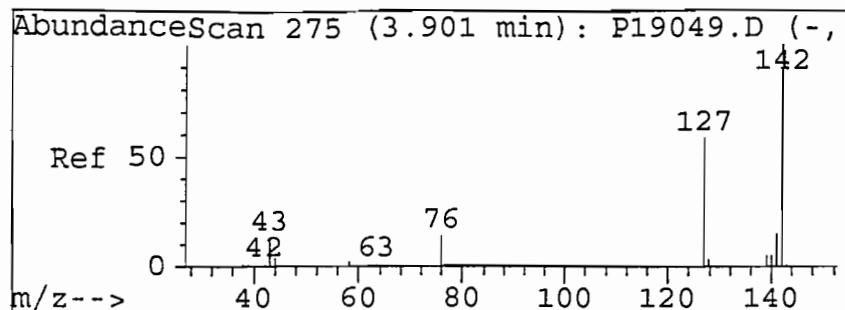
Data File : I:\HPCHEM\1\DATA\V2100699\P19054.D
 Acq Time : 6 Oct 99 9:35 pm
 Sample : 5PPB ICC
 Misc : 5G/5ML
 Quant Time: Oct 7 12:13 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Single Level Calibration

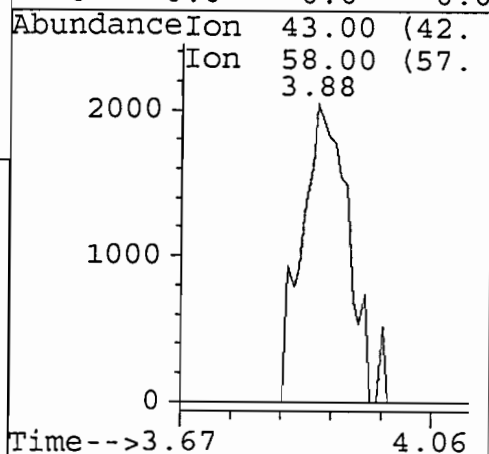


000385

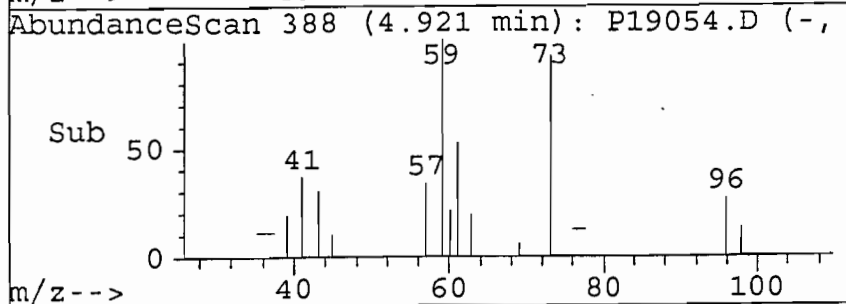
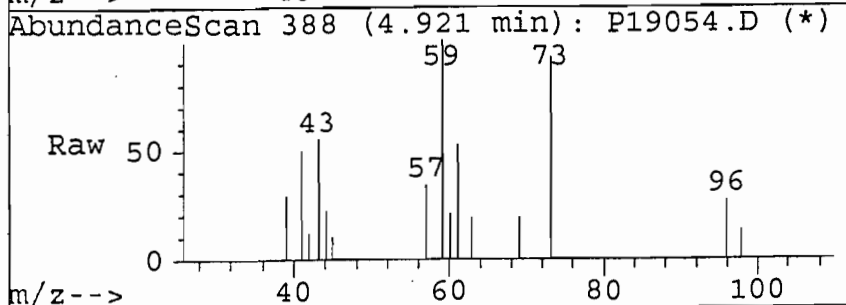
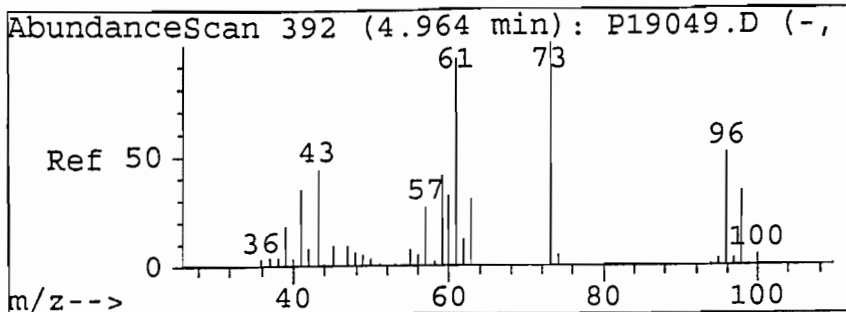


#10
Acetone
Concen: 4.47 ug/L m
RT: 3.88 min Scan# 273
Delta R.T. -0.02 min
Lab File: P19054.D
Acq: 6 Oct 99 9:35 pm

Tgt Ion	Ratio	Resp	Lower	Upper
43	100			
58	0.0	0.0	34.0	
0	0.0	0.0	0.0	
0	0.0	0.0	0.0	



000386



#15

TBA

Concen: 63.60 ug/L m

RT: 4.92 min Scan# 388

Delta R.T. -0.04 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion: 59 Resp: 36448

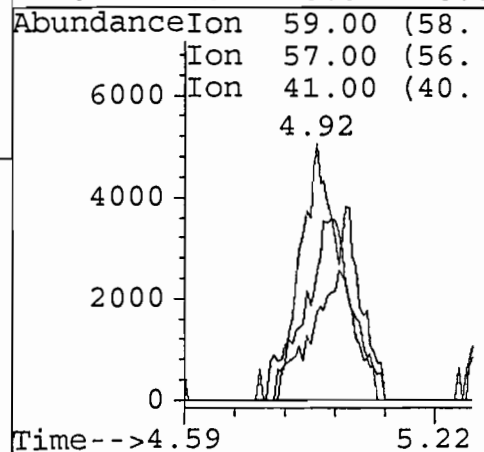
Ion Ratio Lower Upper

59 100

57 34.3 45.1 83.7#

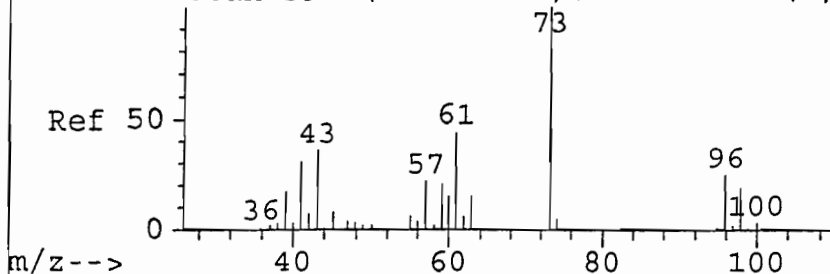
41 50.5 59.6 110.8#

0 0.0 0.0 0.0

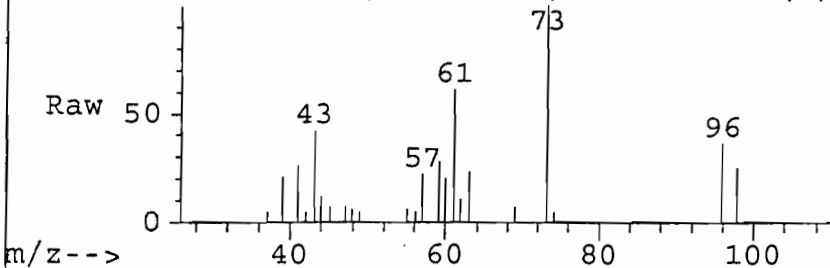


000387

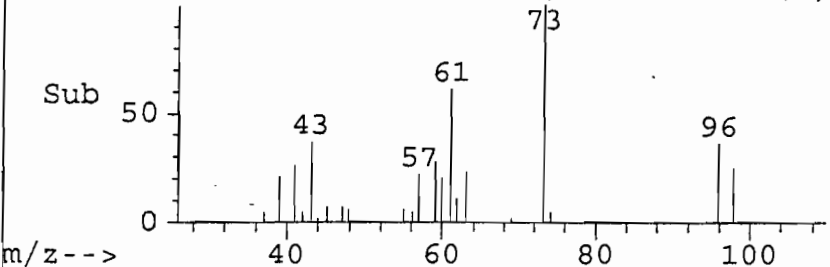
AbundanceScan 397 (5.009 min): P19049.D (-,



AbundanceScan 395 (4.984 min): P19054.D (*)



AbundanceScan 395 (4.984 min): P19054.D (-,



#16

MTBE

Concen: 4.55 ug/L m

RT: 4.98 min Scan# 395

Delta R.T. -0.03 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion: 73 Resp: 77794

Ion Ratio Lower Upper

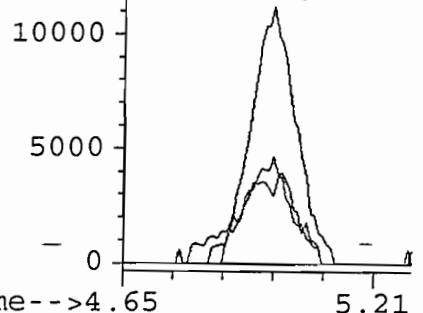
73 100

41 26.5 16.9 50.6

43 41.5 20.2 60.6

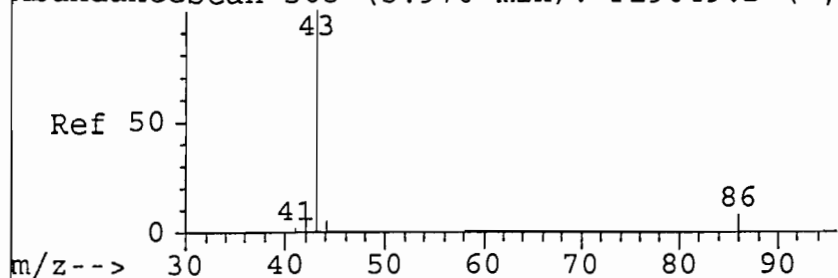
0 0.0 0.0 0.0

AbundanceIon 73.00 (72.
15000 Ion 40.95 (40.
Ion 42.95 (42.
4.98



000388

AbundanceScan 503 (5.970 min): P19049.D (-,



#25

Vinyl Acetate

Concen: 4.66 ug/L m

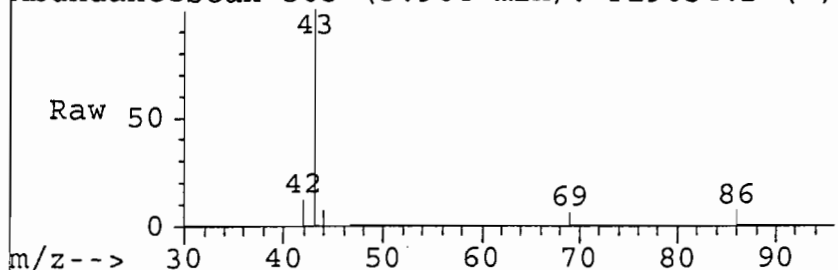
RT: 5.96 min Scan# 503

Delta R.T. -0.01 min

Lab File: P19054.D

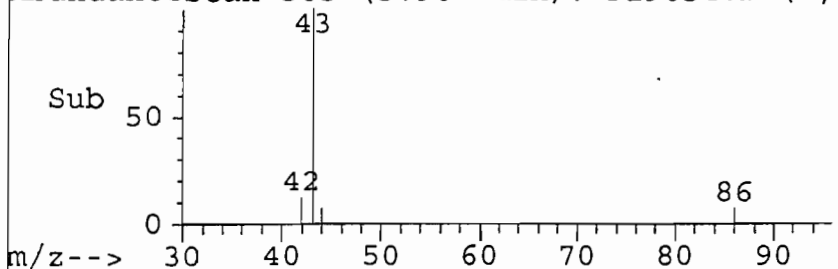
Acq: 6 Oct 99 9:35 pm

AbundanceScan 503 (5.964 min): P19054.D (*)

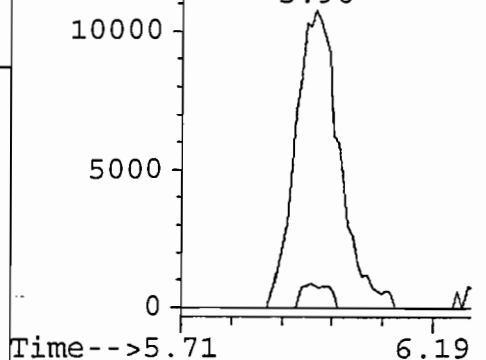


Tgt Ion:	43	Resp:	63925
Ion	Ratio	Lower	Upper
43	100		
86	7.5	4.0	11.9
0	0.0	0.0	0.0
0	0.0	0.0	0.0

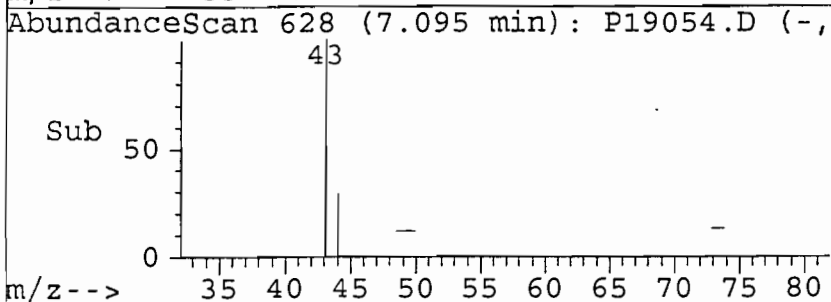
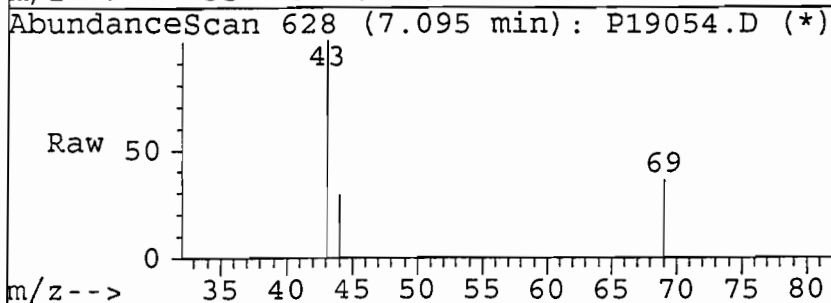
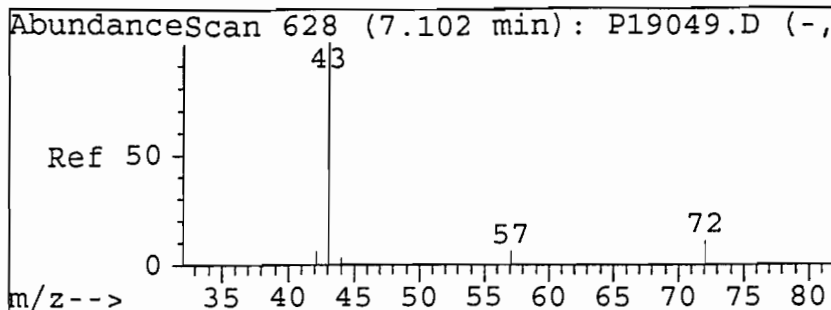
AbundanceScan 503 (5.964 min): P19054.D (-,



AbundanceIon 43.00 (42.
Ion 86.00 (85.
5.96



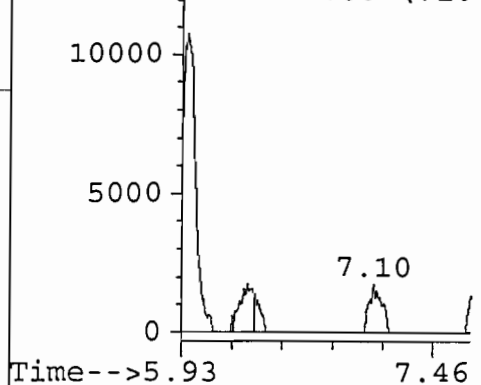
000389



#26
 2-Butanone
 Concen: 4.45 ug/L m
 RT: 7.10 min Scan# 628
 Delta R.T. -0.01 min
 Lab File: P19054.D
 Acq: 6 Oct 99 9:35 pm

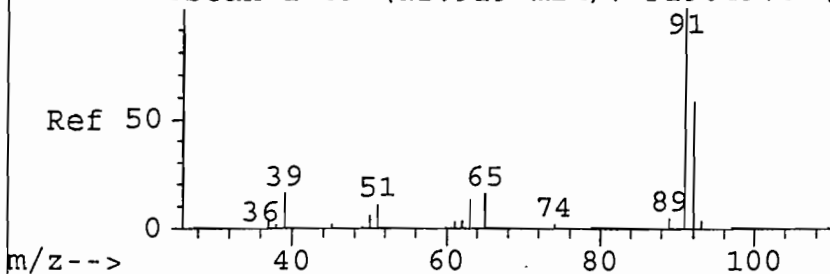
Tgt Ion:	43	Resp:	12567
Ion	Ratio	Lower	Upper
43	100		
72	0.0	8.2	24.5#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceIon 43.00 (42.
 Ion 72.00 (71.



000390

AbundanceScan 1269 (12.919 min): P19049.D (



#36

2-Chloroethyl Vinyl Ether

Concen: 5.53 ug/L m

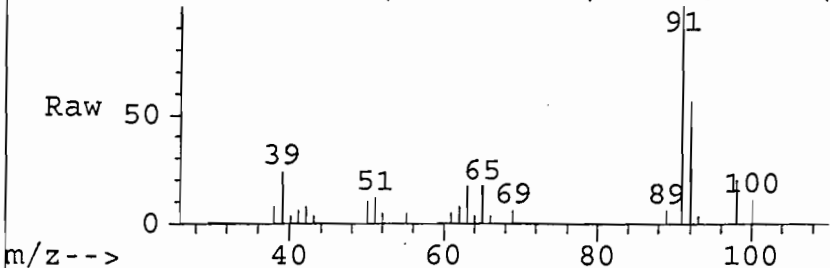
RT: 12.89 min Scan# 1268

Delta R.T. -0.02 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 1268 (12.893 min): P19054.D (



Tgt Ion:63 Resp: 12917

Ion Ratio Lower Upper

63 100

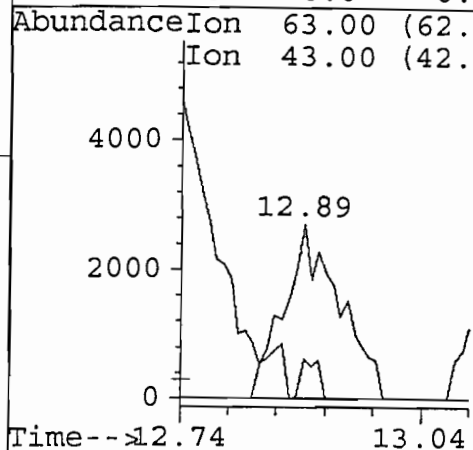
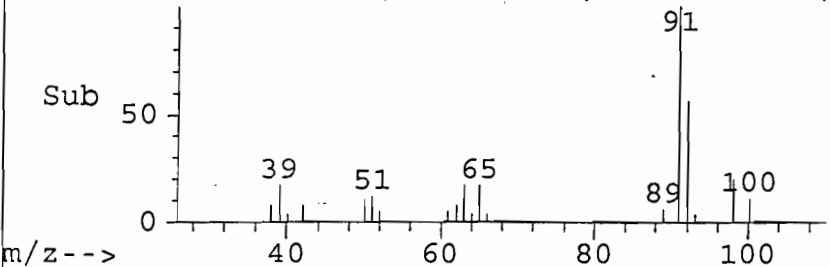
43 22.6 2.5 7.5#

0 0.0 0.0 0.0

0 0.0 0.0 0.0

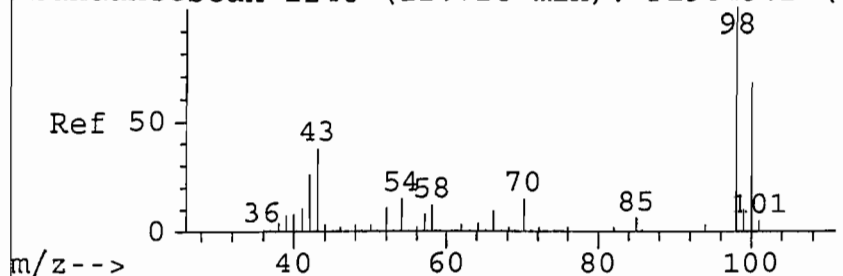
AbundanceIon 63.00 (62.
Ion 43.00 (42.

AbundanceScan 1268 (12.893 min): P19054.D (



000391

AbundanceScan 1248 (12.728 min): P19049.D (



#44

4-Methyl-2-Pentanone

Concen: 6.96 ug/L m

RT: 12.71 min Scan# 1248

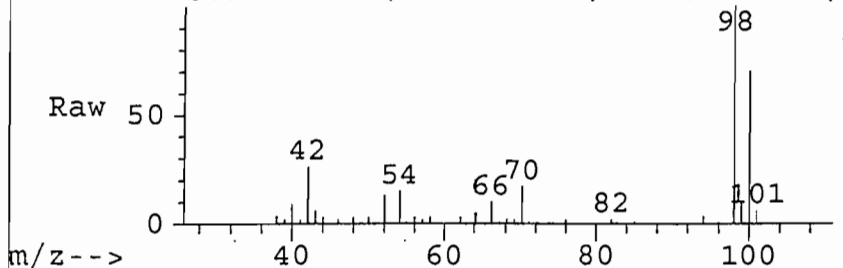
Delta R.T. -0.02 min

Lab File: P19054.D

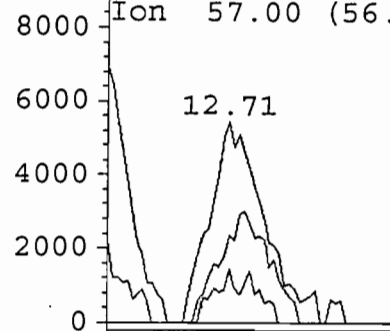
Acq: 6 Oct 99 9:35 pm

Tgt Ion:	43	Resp:	36261
Ion	Ratio	Lower	Upper
43	100		
58	43.4	17.0	50.9
57	26.8	11.2	33.5
0	0.0	0.0	0.0

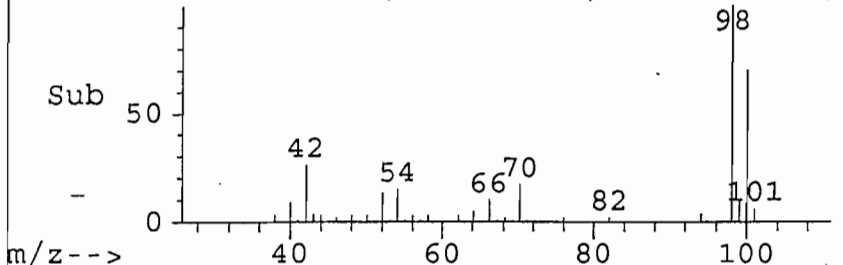
AbundanceScan 1248 (12.712 min): P19054.D (



AbundanceIon 43.00 (42.
Ion 58.00 (57.
Ion 57.00 (56.

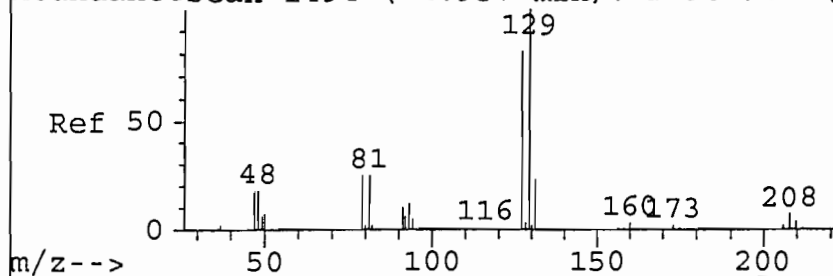


AbundanceScan 1248 (12.712 min): P19054.D (



000392

AbundanceScan 1494 (14.957 min): P19049.D (



#47

dibromochloromethane

Concen: 5.78 ug/L m

RT: 14.93 min Scan# 1493

Delta R.T. -0.02 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion: 128.75 Resp: 78302

Ion Ratio Lower Upper

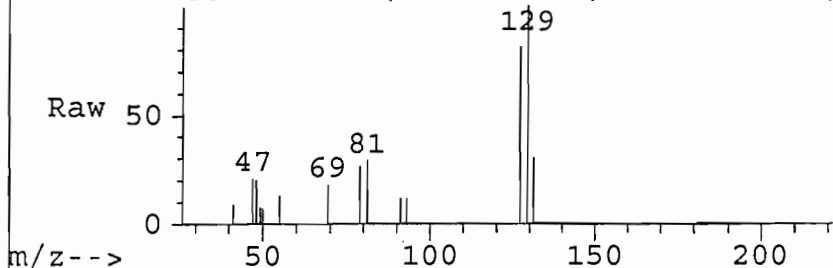
129 100

127 81.3 56.4 104.7

0 0.0 0.0 0.0

0 0.0 0.0 0.0

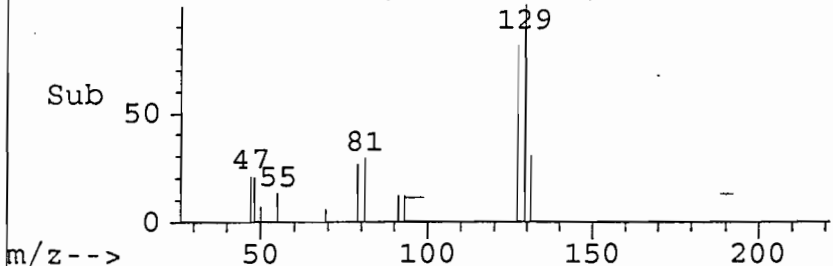
AbundanceScan 1493 (14.934 min): P19054.D (



AbundanceIon 128.75 (128
Ion 126.70 (126
14.93

5000

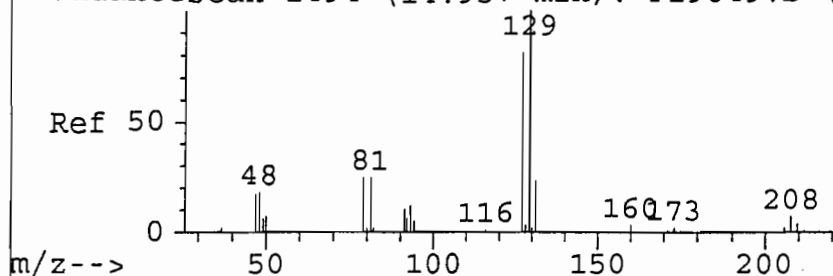
AbundanceScan 1493 (14.934 min): P19054.D (



Time--> 13.61 15.28

000393

AbundanceScan 1494 (14.957 min): P19049.D (

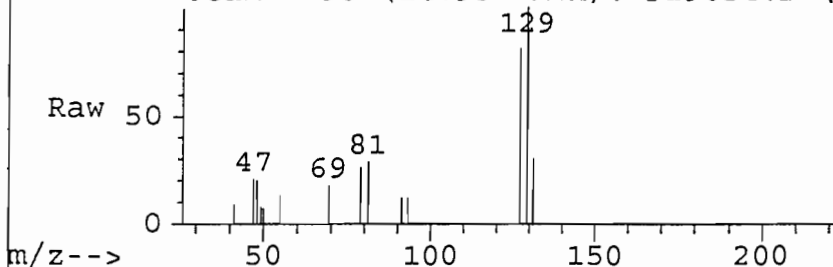


#47
dibromochloromethane
Concen: 5.78 ug/L m
RT: 14.93 min Scan# 1493
Delta R.T. -0.02 min
Lab File: P19054.D
Acq: 6 Oct 99 9:35 pm

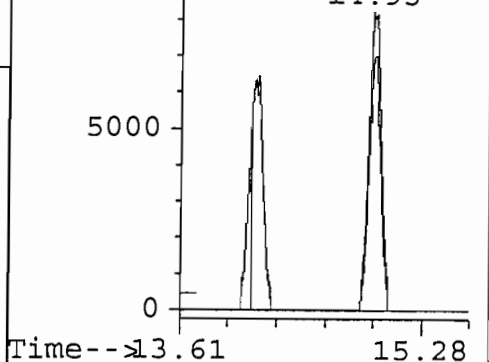
Tgt Ion:128.75 Resp: 78302

Ion	Ratio	Lower	Upper
129	100		
127	81.3	56.4	104.7
0	0.0	0.0	0.0
0	0.0	0.0	0.0

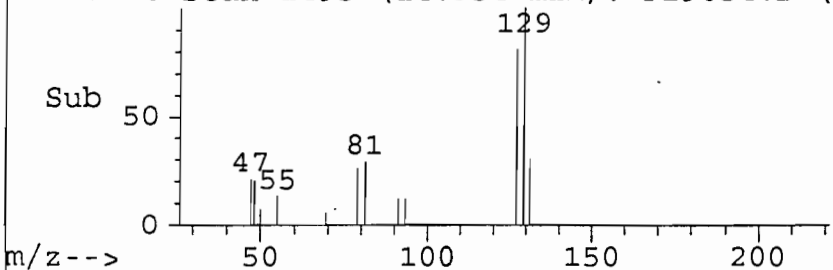
AbundanceScan 1493 (14.934 min): P19054.D (



AbundanceIon 128.75 (128
Ion 126.70 (126
14.93

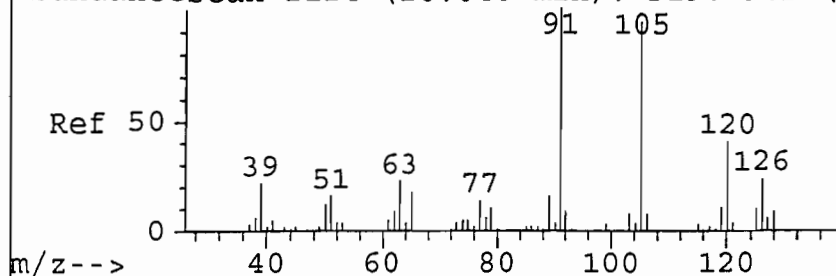


AbundanceScan 1493 (14.934 min): P19054.D (

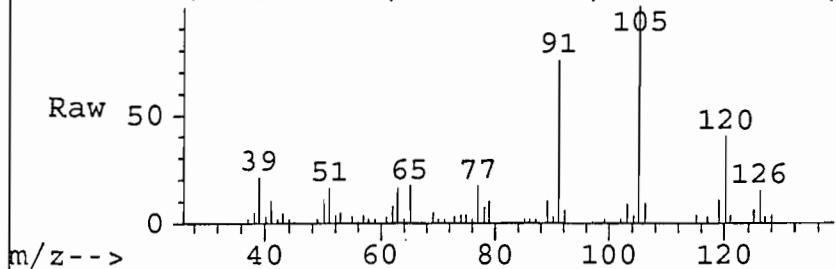


000394

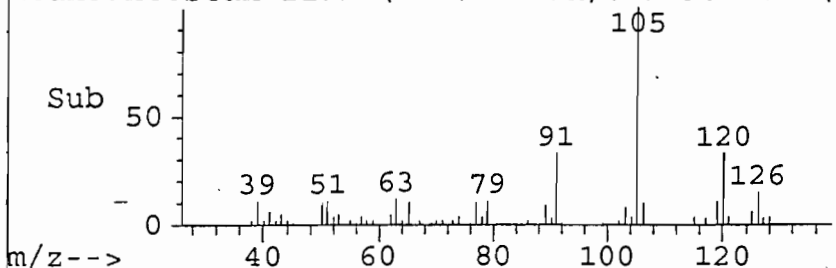
AbundanceScan 2124 (20.648 min): P19049.D (



AbundanceScan 2122 (20.641 min): P19054.D (



AbundanceScan 2122 (20.641 min): P19054.D (



#63

n-propylbenzene

Concen: 8.56 ug/L m

RT: 20.64 min Scan# 2122

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:120 Resp: 109016

Ion Ratio Lower Upper

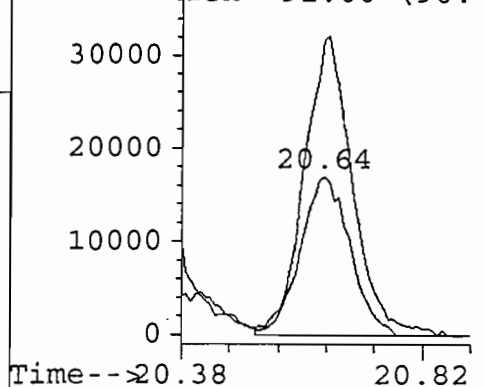
120 100

91 241.0 170.7 316.9

0 0.0 0.0 0.0

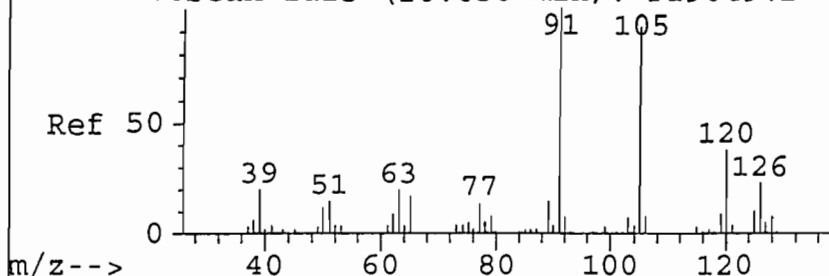
0 0.0 0.0 0.0

AbundanceIon 120.00 (119
Ion 91.00 (90.



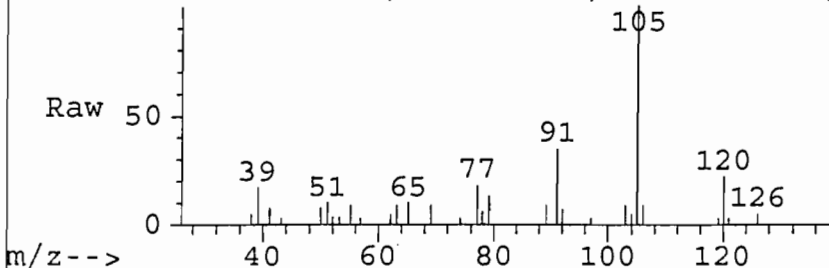
000395

AbundanceScan 2125 (20.658 min): P19049.D (



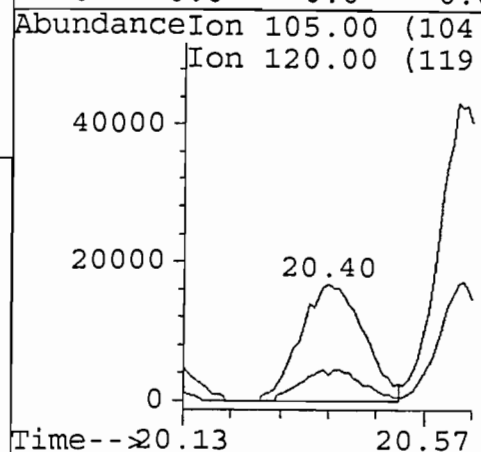
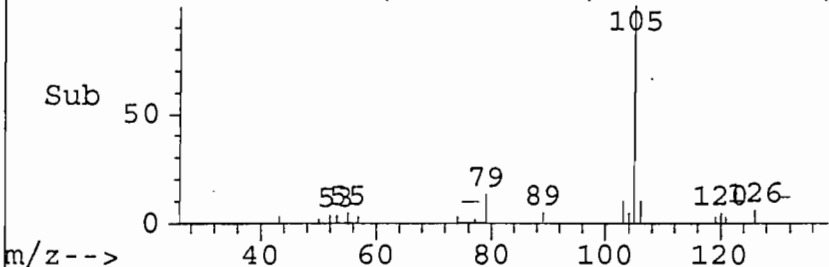
#66
1,3,5-trimethylbenzene
Concen: 4.31 ug/L m
RT: 20.40 min Scan# 2095
Delta R.T. -0.26 min
Lab File: P19054.D
Acq: 6 Oct 99 9:35'pm

AbundanceScan 2095 (20.395 min): P19054.D (



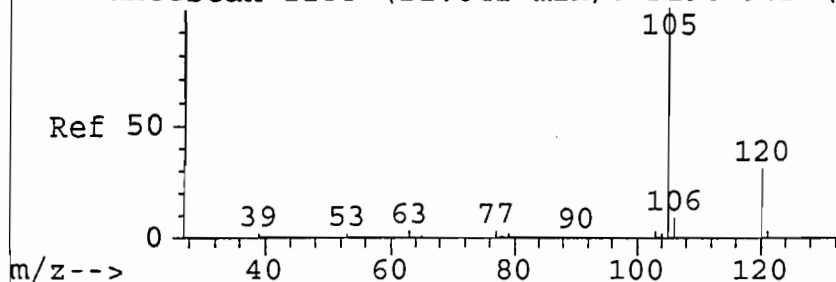
Tgt Ion	Ratio	Lower	Upper
105	100		
120	40.9	28.6	53.0
0	0.0	0.0	0.0
0	0.0	0.0	0.0

AbundanceScan 2095 (20.395 min): P19054.D (



000396

AbundanceScan 2233 (21.642 min): P19049.D (



#68

1,2,4-trimethylbenzene

Concen: 8.21 ug/L m

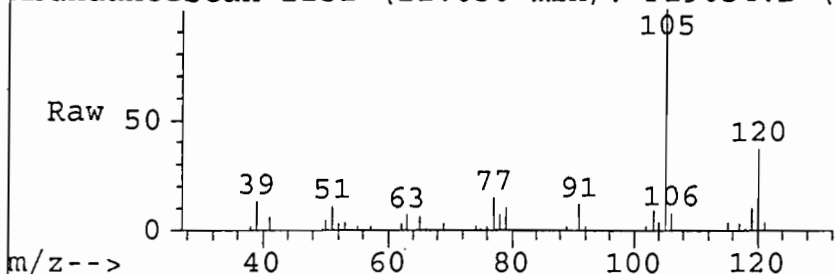
RT: 21.63 min Scan# 2231

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 2231 (21.630 min): P19054.D (



Tgt Ion:105 Resp: 249093

Ion Ratio Lower Upper

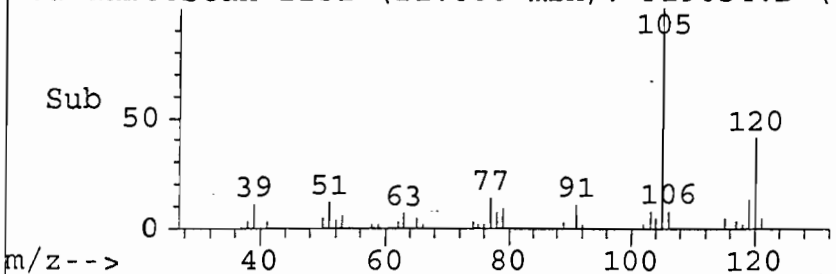
105 100

120 30.8 26.0 48.2

0 0.0 0.0 0.0

0 0.0 0.0 0.0

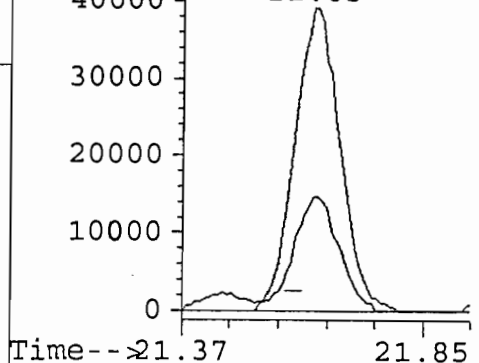
AbundanceScan 2231 (21.630 min): P19054.D (



AbundanceIon 105.00 (104

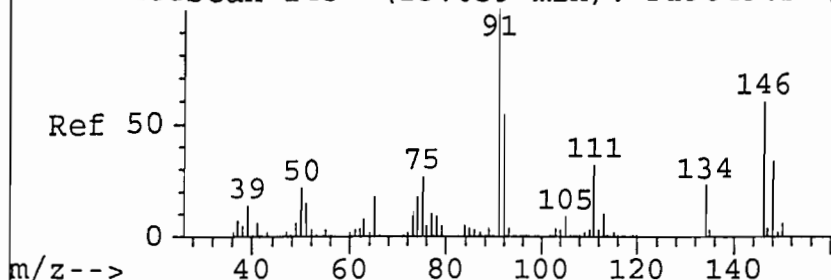
Ion 120.00 (119

21.63



000397

AbundanceScan 2454 (23.659 min): P19049.D (



#74

n-butylbenzene

Concen: 6.50 ug/L m

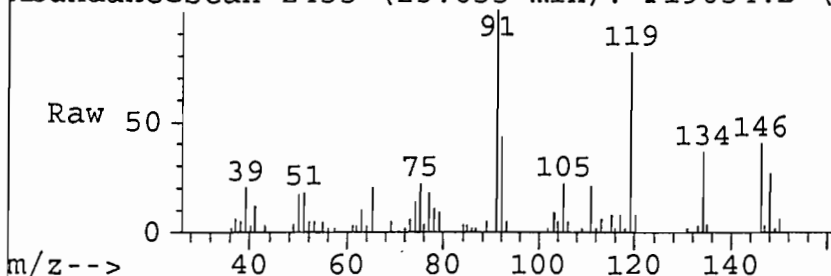
RT: 23.65 min Scan# 2455

Delta R.T. -0.00 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

AbundanceScan 2455 (23.655 min): P19054.D (



Tgt Ion:91 Resp: 221376

Ion Ratio Lower Upper

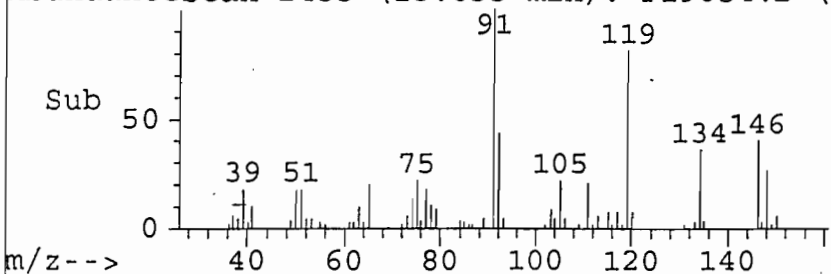
91 100

92 43.4 37.5 69.7

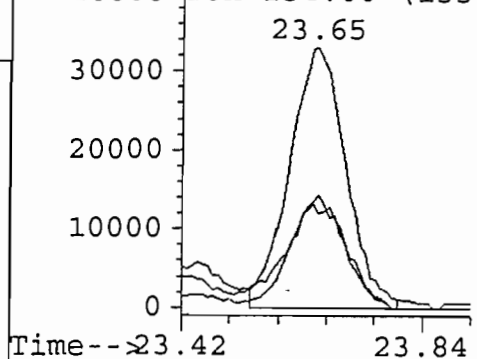
134 36.5 16.2 30.0#

0 0.0 0.0 0.0

AbundanceScan 2455 (23.655 min): P19054.D (

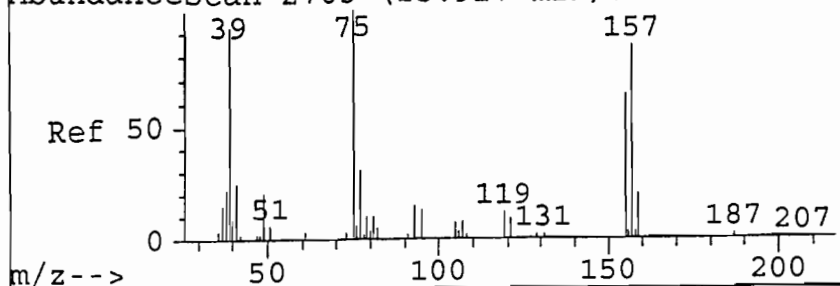


AbundanceIon 91.00 (90.
Ion 92.00 (91.
Ion 134.00 (133



000398

AbundanceScan 2703 (25.927 min): P19049.D (



#75

1,2-dibromo-3-chloropropane

Concen: 4.59 ug/L m

RT: 25.94 min Scan# 2706

Delta R.T. 0.01 min

Lab File: P19054.D

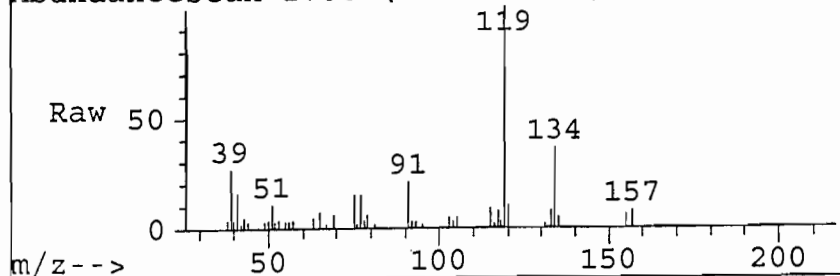
Acq: 6 Oct 99 9:35'pm

Tgt Ion:75 Resp: 21024

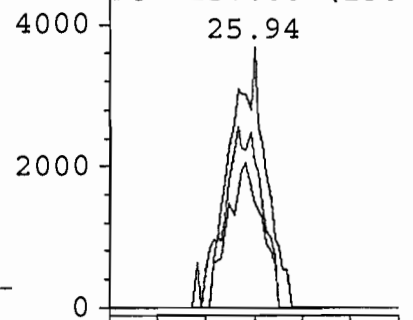
Ion Ratio Lower Upper

75	100		
155	39.9	44.3	82.3#
157	55.2	59.0	109.6#
0	0.0	0.0	0.0

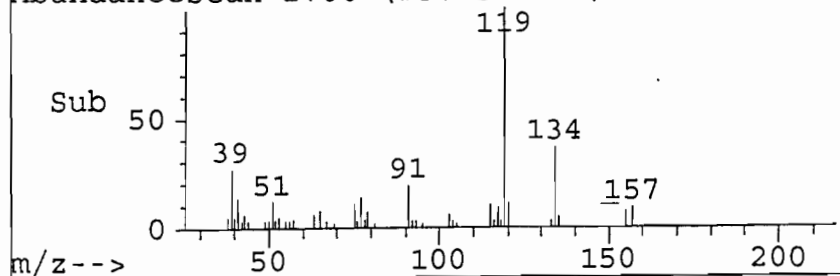
AbundanceScan 2706 (25.937 min): P19054.D (



AbundanceIon 75.00 (74.
Ion 155.00 (154
Ion 157.00 (156



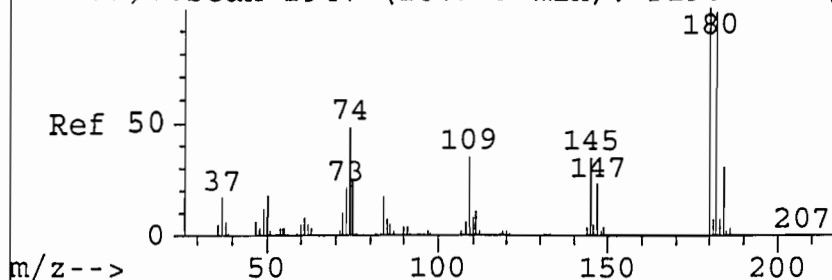
AbundanceScan 2706 (25.937 min): P19054.D (



Time-->25.62 26.15

000399

AbundanceScan 2947 (28.149 min): P19049.D (



#76

1,2,4-trichlorobenzene

Concen: 5.07 ug/L m

RT: 28.14 min Scan# 2948

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:179.7 Resp: 81498

Ion Ratio Lower Upper

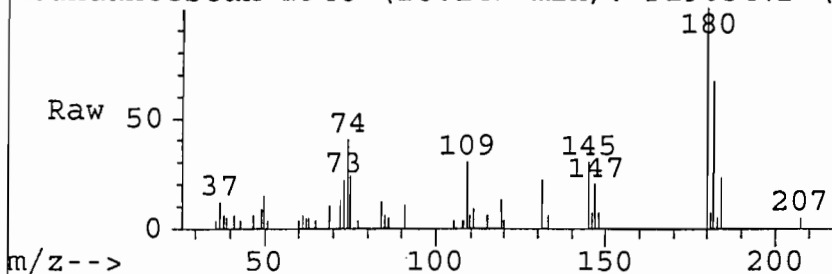
180 100

182 67.4 68.5 127.3#

145 29.6 24.3 45.1

0 0.0 0.0 0.0

AbundanceScan 2948 (28.141 min): P19054.D (



AbundanceIon 179.70 (179

20000 Ion 181.80 (181

Ion 144.70 (144

28.14

15000

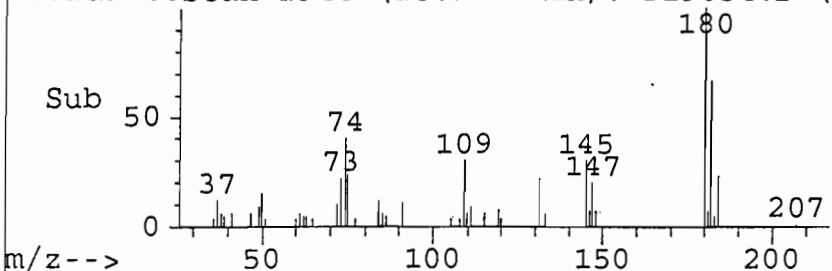
10000

5000

0

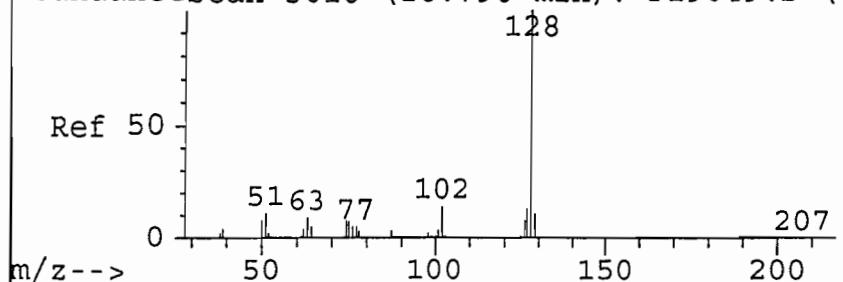
Time-->27.83 28.42

AbundanceScan 2948 (28.141 min): P19054.D (



000400

AbundanceScan 3018 (28.798 min): P19049.D (



#78

naphthalene

Concen: 6.20 ug/L m

RT: 28.79 min Scan# 3020

Delta R.T. -0.01 min

Lab File: P19054.D

Acq: 6 Oct 99 9:35 pm

Tgt Ion:128 Resp: 141195

Ion Ratio Lower Upper

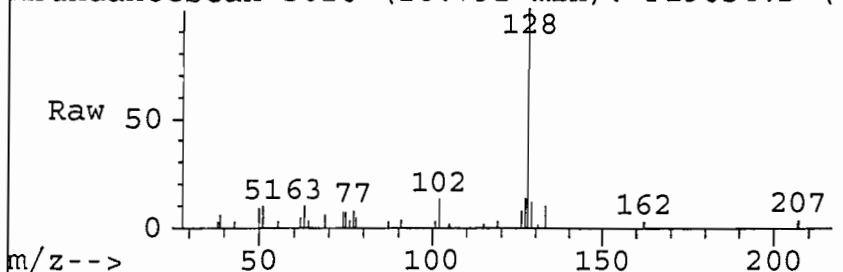
128 100

127 14.2 9.4 17.4

129 12.0 8.1 15.1

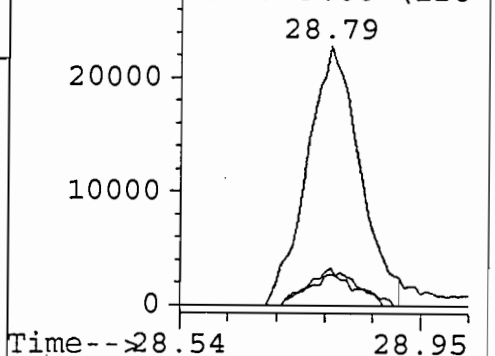
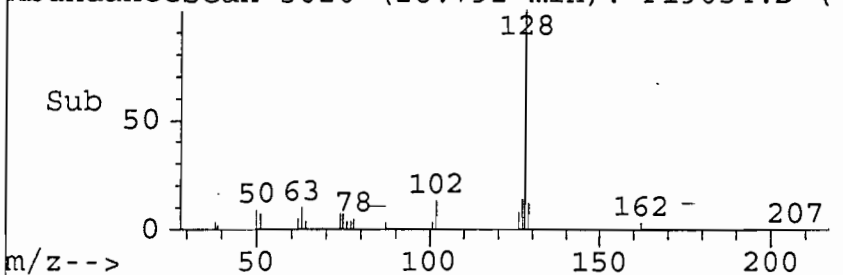
0 0.0 0.0 0.0

AbundanceScan 3020 (28.792 min): P19054.D (



AbundanceIon 128.00 (127
30000 Ion 127.00 (126
Ion 129.00 (128

AbundanceScan 3020 (28.792 min): P19054.D (



000401

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Instrument ID: VOA 2 Calibration Date: '10/20/99 Time: 1550
 Lab File ID: P19251.D Init. Calib. Date(s): '10/6/99 '10/6/99
 Heated Purge: (Y/N) Y Init. Calib. Times: 1753 2135
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.430	0.466		-8.4	
Chloromethane	0.230	0.259	0.100	-12.6	
Vinyl Chloride	0.219	0.255		-16.4	20.0
Bromomethane	0.247	0.259		-4.9	
Chloroethane	0.113	0.121		-7.1	
Acrolein	0.012	0.015		-25.0	
Trichlorofluoromethane	1.065	1.223		-14.8	
1,1-Dichloroethene	0.529	0.629		-18.9	20.0
Acetone	0.090	0.144		-60.0	
Carbon Disulfide	0.547	0.767		-40.2	
Methylene Chloride	0.235	0.294		-25.1	
trans-1,2-Dichloroethene	0.449	0.548		-22.0	
Acrylonitrile	0.034	0.039		-14.7	
1,1-Dichloroethane	0.730	0.874	0.100	-19.7	
2,2-Dichloropropane	0.753	0.904		-20.1	
cis-1,2-dichloroethene	0.621	0.726		-16.9	
Bromochloromethane	0.386	0.440		-14.0	
Chloroform	0.997	1.127		-13.0	20.0
1,1,1-Trichloroethane	1.046	1.111		-6.2	
Vinyl Acetate	0.730	0.774		-6.0	
2-Butanone	0.126	0.154		-22.2	
Carbon Tetrachloride	0.580	0.652		-12.4	
1,1-Dichloropropene	0.576	0.647		-12.3	
Benzene	0.792	0.899		-13.5	
1,2-Dichloroethane	0.717	0.755		-5.3	
Trichloroethene	0.469	0.507		-8.1	
1,2-Dichloropropane	0.360	0.380		-5.6	20.0
Dibromomethane	0.384	0.390		-1.6	
Bromodichloromethane	0.943	0.984		-4.3	
2-Chloroethyl Vinyl Ether	0.127	0.131		-3.1	
cis-1,3-Dichloropropene	0.554	0.583		-5.2	
Toluene	0.984	1.046		-6.3	20.0
trans-1,3-Dichloropropene	0.536	0.541		-0.9	
1,1,2-Trichloroethane	0.293	0.306		-4.4	
4-Methyl-2-Pentanone	0.270	0.239		11.5	
Tetrachloroethene	0.504	0.555		-10.1	

All other compounds must meet a minimum RRF of 0.010.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Instrument ID: VOA 2 Calibration Date: '10/20/99 Time: 1550
 Lab File ID: P19251.D Init. Calib. Date(s): '10/6/99 '10/6/99
 Heated Purge: (Y/N) Y Init. Calib. Times: 1753 2135
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
1,3-Dichloropropane	0.484	0.528		-9.1	
Dibromochloromethane	0.687	0.732	0.300	-6.6	
1,2-Dibromoethane	0.523	0.564		-7.8	
2-Hexanone	0.191	0.197		-3.1	
Chlorobenzene	0.810	0.875		-8.0	
1,1,1,2-Tetrachloroethane	0.459	0.504		-9.8	
Ethylbenzene	1.365	1.492		-9.3	20.0
m&p-xylenes	0.468	0.502	0.100	-7.3	
o-xylene	1.352	1.447		-7.0	
Styrene	0.778	0.822		-5.7	
Bromoform	0.542	0.558	0.300	-3.0	
isopropylbenzene	2.156	2.413		-11.9	
Bromobenzene	1.481	1.700		-14.8	
1,1,2,2-Tetrachloroethane	0.856	0.986		-15.2	
1,2,3-Trichloropropane	0.640	0.691		-8.0	
n-Propylbenzene	0.930	0.898		3.4	
2-Chlorotoluene	0.533	0.615		-15.4	
4-Chlorotoluene	0.546	0.637		-16.7	
1,3,5-Trimethylbenzene	1.976	2.210		-11.8	
tert-Butylbenzene	1.907	2.011		-5.5	
1,2,4-Trimethylbenzene	2.281	2.354		-3.2	
sec-Butylbenzene	2.558	2.827		-10.5	
1,3-Dichlorobenzene	1.297	1.393		-7.4	
4-Isopropyltoluene	2.355	2.569		-9.1	
1,4-Dichlorobenzene	1.315	1.433		-9.0	
1,2-Dichlorobenzene	1.244	1.396		-12.2	
n-Butylbenzene	2.380	2.578		-8.3	
1,2-Dibromo-3-chloropropane	0.312	0.314		-0.6	
1,2,4-Trichlorobenzene	1.082	1.187		-9.7	
Hexachlorobutadiene	0.877	0.991		-13.0	
Naphthalene	1.610	1.714		-6.5	
1,2,3-Trichlorobenzene	0.965	1.087		-12.6	

All other compounds must meet a minimum RRF of 0.010.

000403

GC Column: ID: (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dibromofluoromethane	0.833	0.797		4.3	
1,2-Dichlorethane-d4	0.655	0.586		10.5	
Toluene-d8	0.975	0.873		10.5	
4-Bromofluorobenzene	1.001	0.840		16.1	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 21 12:07 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	1012306	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	964865	50.00	ug/L	0.01
58) 1,4-dichlorobenzene-d4	22.60	152	651058	50.00	ug/L	0.01

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	806322	47.81	ug/L	95.61%
30) 1,2-Dichlorethane-d4	8.68	65	593159	44.76	ug/L	89.51%
38) Toluene-d8	12.78	98	883584	44.75	ug/L	89.50%
42) 4-Bromofluorobenzene	19.50	95	850370	41.95	ug/L	83.91%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.74	85	471300	54.19	ug/L	97
3) chloromethane	1.95	50	261892	56.23	ug/L	100
4) vinyl chloride	2.07	62	258603	58.32	ug/L	100
5) bromomethane	2.48	94	262024	52.32	ug/L	84
6) chloroethane	2.60	64	122640	53.84	ug/L	98
7) Acrolein	3.64	56	153153	605.71	ug/L	100
8) trichlorofluoromethane	2.91	101	1238225	57.42	ug/L	95
9) 1,1-dichloroethene	3.66	61	636700	59.44	ug/L m	96
10) Acetone	3.90	43	145563	80.24	ug/L	97
11) Carbon Disulfide	3.95	76	776091	70.08	ug/L m	96
12) Iodo Methane	3.91	142	934682	60.70	ug/L	97
13) methylene chloride	4.58	84	298020	62.71	ug/L	94
14) trans-1,2-dichloroethene	4.97	61	554449	60.95	ug/L m	98
15) TBA	4.97	59	312186	466.15	ug/L	94
16) MTBE	5.00	73	915204	51.99	ug/L	99
17) Acrylonitrile	5.18	53	394864	575.55	ug/L	99
18) 1,1-dichloroethane	5.83	63	884615	59.85	ug/L m	94
19) 2,2-dichloropropane	6.89	77	915159	60.01	ug/L	99
20) cis-1,2-dichloroethene	6.98	61	734924	58.49	ug/L	100
21) bromochloromethane	7.45	49	445539	56.97	ug/L	99
22) chloroform	7.65	83	1140367	56.48	ug/L	100
23) 1,1,1-trichloroethane	7.86	97	1124449	53.10	ug/L	97
25) Vinyl Acetate	5.98	43	783222	53.03	ug/L	99
26) 2-Butanone	7.11	43	156353	61.22	ug/L	96
27) carbon tetrachloride	8.12	117	660357	56.20	ug/L	98
28) 1,1-dichloropropene	8.22	75	654792	56.12	ug/L	93
29) benzene	8.61	78	910512	56.82	ug/L	100
31) 1,2-dichloroethane	8.84	62	764669	52.69	ug/L	96
32) trichloroethene	10.04	130	513702	54.11	ug/L	98
33) 1,2-dichloropropane	10.62	63	384810	52.76	ug/L	95
34) dibromomethane	10.87	174	394538	50.70	ug/L	92
35) bromodichloromethane	11.26	83	995862	52.15	ug/L	96
36) 2-Chloroethyl Vinyl Ether	12.92	63	132904	51.87	ug/L m	85

000405

(#) = qualifier out of range (m) = manual integration
 P19251.D V21006CS.M Thu Oct 21 12:08:23 1999

VOA1

Page 1

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
Acq Time : 20 Oct 99 3:50 pm
Sample : 50PPB CCC
Misc : 5G/5ML
Quant Time: Oct 21 12:07 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.31	75	590495	52.65	ug/L	92
39) toluene	12.93	91	1058915	53.17	ug/L	98
40) trans-1,3-dichloropropene	13.73	75	547637	50.43	ug/L	98
41) 1,1,2-trichloroethane	14.13	97	309417	52.23	ug/L	98
44) 4-Methyl-2-Pentanone	12.73	43	230547	44.27	ug/L	100
45) tetrachloroethene	14.16	166	535131	55.06	ug/L	99
46) 1,3-dichloropropane	14.52	76	509108	54.51	ug/L	99
47) dibromochloromethane	14.97	129	706478	53.26	ug/L	84
48) 1,2-dibromoethane	15.21	107	543884	53.91	ug/L	88
49) 2-Hexanone	14.79	43	190270	51.74	ug/L	95
50) chlorobenzene	16.42	112	844033	53.98	ug/L	99
51) 1-Chlorohexane	16.46	91	491199	55.95	ug/L	99
52) 1,1,1,2-tetrachloroethane	16.70	133	486331	54.95	ug/L	96
53) ethylbenzene	16.69	91	1439180	54.63	ug/L	100
54) m&p-xylenes	17.02	106	969600	107.42	ug/L	96
55) o-xylene	18.03	91	1396117	53.53	ug/L	99
56) styrene	18.12	104	793499	52.82	ug/L	98
57) bromoform	18.59	173	538503	51.52	ug/L	90
59) isopropylbenzene	19.02	105	1570839	55.94	ug/L	99
60) bromobenzene	19.79	77	1106929	57.42	ug/L	95
61) 1,1,2,2-tetrachloroethane	20.11	83	641960	57.58	ug/L	99
62) 1,2,3-trichloropropane	20.16	75	450177	54.01	ug/L	96
63) n-propylbenzene	20.66	120	584492	56.12	ug/L	68
64) 2-chlorotoluene	20.34	126	400290	57.71	ug/L	96
65) 4-chlorotoluene	20.67	126	414664	58.30	ug/L	90
66) 1,3,5-trimethylbenzene	20.66	105	1438838	55.93	ug/L	99
67) tert-butylbenzene	21.48	119	1309226	52.72	ug/L	94
68) 1,2,4-trimethylbenzene	21.65	105	1532850	57.25	ug/L	98
69) sec-butylbenzene	22.09	105	1840749	55.26	ug/L	100
70) 1,3-dichlorobenzene	22.38	146	907230	53.74	ug/L	97
71) 4-isopropyltoluene	22.54	119	1672764	54.56	ug/L	97
72) 1,4-dichlorobenzene	22.67	146	933125	54.49	ug/L	99
73) 1,2-dichlorobenzene	23.67	146	908814	56.09	ug/L	92
74) n-butylbenzene	23.68	91	1678543	54.16	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.94	75	204190	50.28	ug/L	97
76) 1,2,4-trichlorobenzene	28.17	180	772708	54.87	ug/L	98
77) hexachlorobutadiene	28.61	225	645448	56.50	ug/L	98
78) naphthalene	28.81	128	1115938	53.23	ug/L	99
79) 1,2,3-trichlorobenzene	29.54	180	707628	56.31	ug/L	99

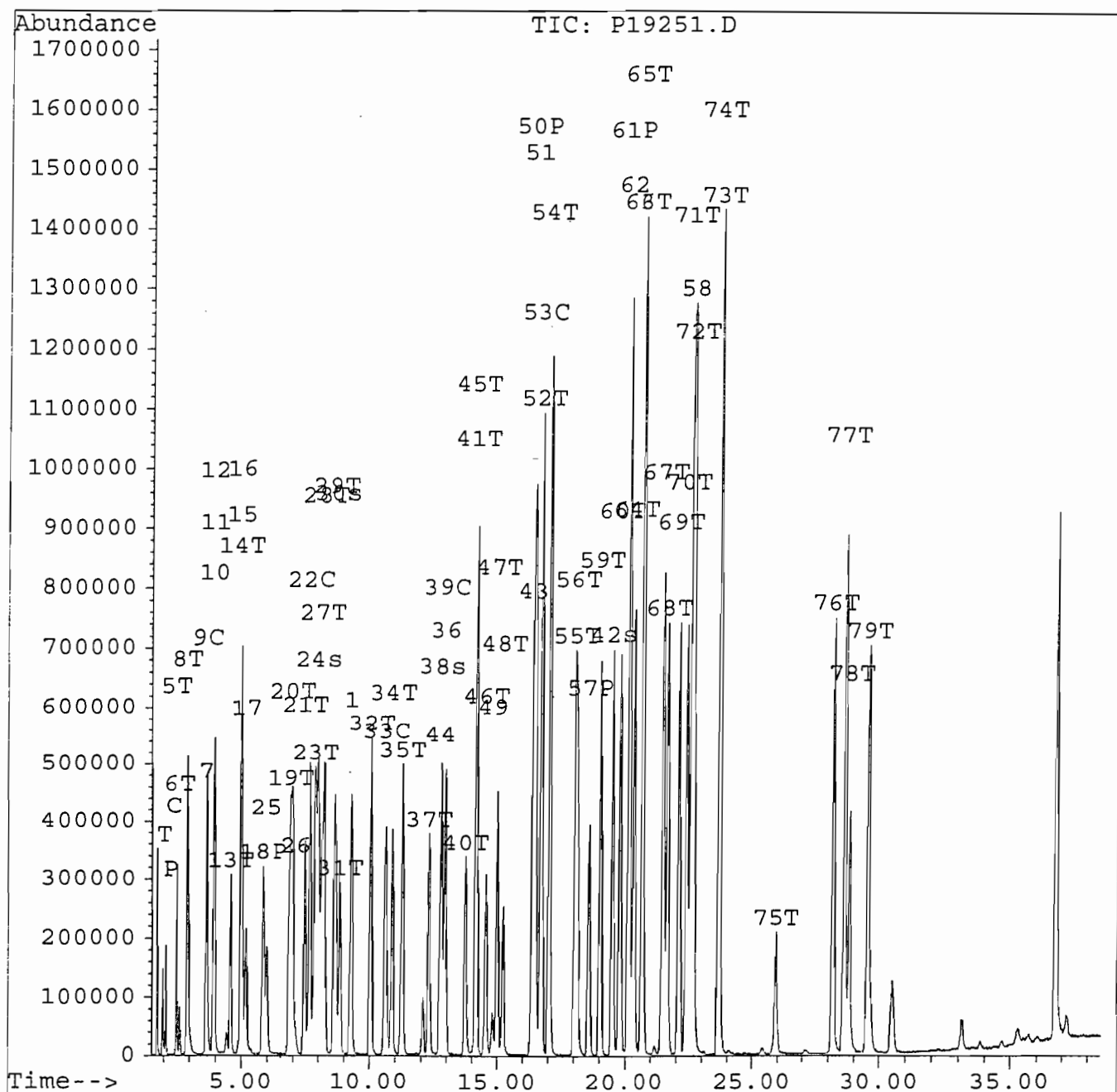
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Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 21 12:07 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000407

Evaluate Continuing Calibration Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev (Min)
1	Fluorobenzene	1.000	1.000	0.0	88	0.00
2 T	dichlorodifluoromethane	0.430	0.466	-8.4	105	0.00
3 P	chloromethane	0.230	0.259	-12.5	115	0.00
4 C	vinyl chloride	0.219	0.255	-16.6#	115	0.00
5 T	bromomethane	0.247	0.259	-4.6	109	0.00
6 T	chloroethane	0.113	0.121	-7.7	111	0.00
7	Acrolein	0.012	0.015	-21.1#	109	0.00
8 T	trichlorofluoromethane	1.065	1.223	-14.8	109	0.01
9 C	1,1-dichloroethene	0.529	0.629	-18.9#	110	0.00
10	Acetone	0.090	0.144	-60.5#	106	0.00
11	Carbon Disulfide	0.547	0.767	-40.2#	122	0.00
12	Iodo Methane	0.761	0.923	-21.4#	108	0.00
13 T	methylene chloride	0.235	0.294	-25.4#	118	0.00
14 T	trans-1,2-dichloroethene	0.449	0.548	-21.9#	107	0.00
15	TBA	0.033	0.031	6.8	90	0.00
16	MTBE	0.869	0.904	-4.0	89	0.00
17	Acrylonitrile	0.034	0.039	-15.1	102	0.01
18 P	1,1-dichloroethane	0.730	0.874	-19.7	113	0.00
19 T	2,2-dichloropropane	0.753	0.904	-20.0#	108	0.00
20 T	cis-1,2-dichloroethene	0.621	0.726	-17.0	107	0.00
21 T	bromochloromethane	0.386	0.440	-13.9	104	0.00
22 C	chloroform	0.997	1.127	-13.0#	105	0.00
23 T	1,1,1-trichloroethane	1.046	1.111	-6.2	96	0.00
24 S	Dibromofluoromethane	0.833	0.797	4.4	88	0.00
25	Vinyl Acetate	0.730	0.774	-6.1	95	0.01
26	2-Butanone	0.126	0.154	-22.4#	92	0.00
27 T	carbon tetrachloride	0.580	0.652	-12.4	103	0.01
28 T	1,1-dichloropropene	0.576	0.647	-12.2	102	0.03
29 T	benzene	0.792	0.899	-13.6	101	0.00
30 S	1,2-Dichlorethane-d4	0.655	0.586	10.5	83	0.01
31 T	1,2-dichloroethane	0.717	0.755	-5.4	101	0.02
32 T	trichloroethene	0.469	0.507	-8.2	96	0.01
33 C	1,2-dichloropropane	0.360	0.380	-5.5#	98	0.02
34 T	dibromomethane	0.384	0.390	-1.4	91	0.02
35 T	bromodichloromethane	0.943	0.984	-4.3	97	0.02
36	2-Chloroethyl Vinyl Ether	0.127	0.131	-3.7	94	0.00
37 T	cis-1,3-dichloropropene	0.554	0.583	-5.3	97	0.00
38 S	Toluene-d8	0.975	0.873	10.5	80	0.02
39 C	toluene	0.984	1.046	-6.3#	96	0.00
40 T	trans-1,3-dichloropropene	0.536	0.541	-0.9	93	0.00
41 T	1,1,2-trichloroethane	0.293	0.306	-4.5	91	0.00
42 S	4-Bromofluorobenzene	1.001	0.840	16.1	81	0.02

Evaluate Continuing Calibration Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	83	0.01
44	4-Methyl-2-Pentanone	0.270	0.239	11.5	78	0.00
45 T	tetrachloroethene	0.504	0.555	-10.1	86	0.00
46 T	1,3-dichloropropane	0.484	0.528	-9.0	93	0.00
47 T	dibromochloromethane	0.687	0.732	-6.5	92	0.00
48 T	1,2-dibromoethane	0.523	0.564	-7.8	92	0.02
49	2-Hexanone	0.191	0.197	-3.5	75	0.01
50 P	chlorobenzene	0.810	0.875	-8.0	92	0.02
51	1-Chlorohexane	0.455	0.509	-11.9	92	0.00
52 T	1,1,1,2-tetrachloroethane	0.459	0.504	-9.9	85	0.00
53 C	ethylbenzene	1.365	1.492	-9.3#	93	0.02
54 T	m&p-xylenes	0.468	0.502	-7.4	95	0.00
55 T	o-xylene	1.352	1.447	-7.1	97	0.02
56 T	styrene	0.778	0.822	-5.6	94	0.01
57 P	bromoform	0.542	0.558	-3.0	82	0.02
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	81	0.01
59 T	isopropylbenzene	2.156	2.413	-11.9	91	0.02
60 T	bromobenzene	1.481	1.700	-14.8	92	0.02
61 P	1,1,2,2-tetrachloroethane	0.856	0.986	-15.2	91	0.02
62	1,2,3-trichloropropane	0.640	0.691	-8.0	89	0.02
63 T	n-propylbenzene	0.930	0.898	3.5	88	0.02
64 T	2-chlorotoluene	0.533	0.615	-15.4	93	0.03
65 T	4-chlorotoluene	0.546	0.637	-16.6	95	0.02
66 T	1,3,5-trimethylbenzene	1.976	2.210	-11.9	88	0.00
67 T	tert-butylbenzene	1.907	2.011	-5.4	86	0.01
68 T	1,2,4-trimethylbenzene	2.281	2.354	-3.2	96	0.01
69 T	sec-butylbenzene	2.558	2.827	-10.5	92	0.00
70 T	1,3-dichlorobenzene	1.297	1.393	-7.5	88	0.00
71 T	4-isopropyltoluene	2.355	2.569	-9.1	90	0.01
72 T	1,4-dichlorobenzene	1.315	1.433	-9.0	92	0.02
73 T	1,2-dichlorobenzene	1.244	1.396	-12.2	92	0.00
74 T	n-butylbenzene	2.380	2.578	-8.3	94	0.02
75 T	1,2-dibromo-3-chloropropane	0.312	0.314	-0.6	85	0.01
76 T	1,2,4-trichlorobenzene	1.082	1.187	-9.7	92	0.02
77 T	hexachlorobutadiene	0.877	0.991	-13.0	93	0.00
78 T	naphthalene	1.610	1.714	-6.5	94	0.01
79 T	1,2,3-trichlorobenzene	0.965	1.087	-12.6	94	0.01

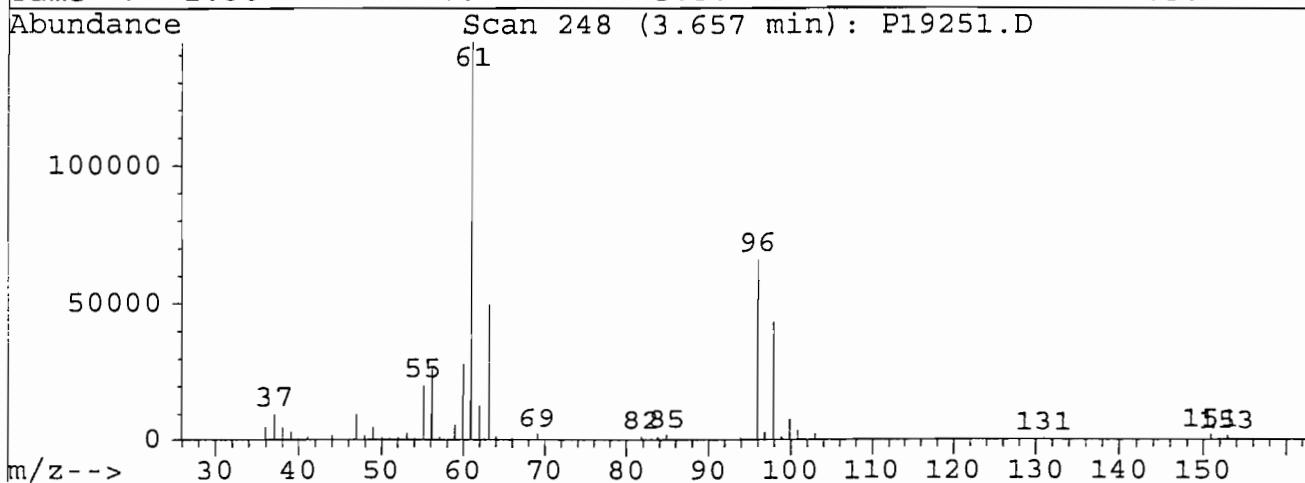
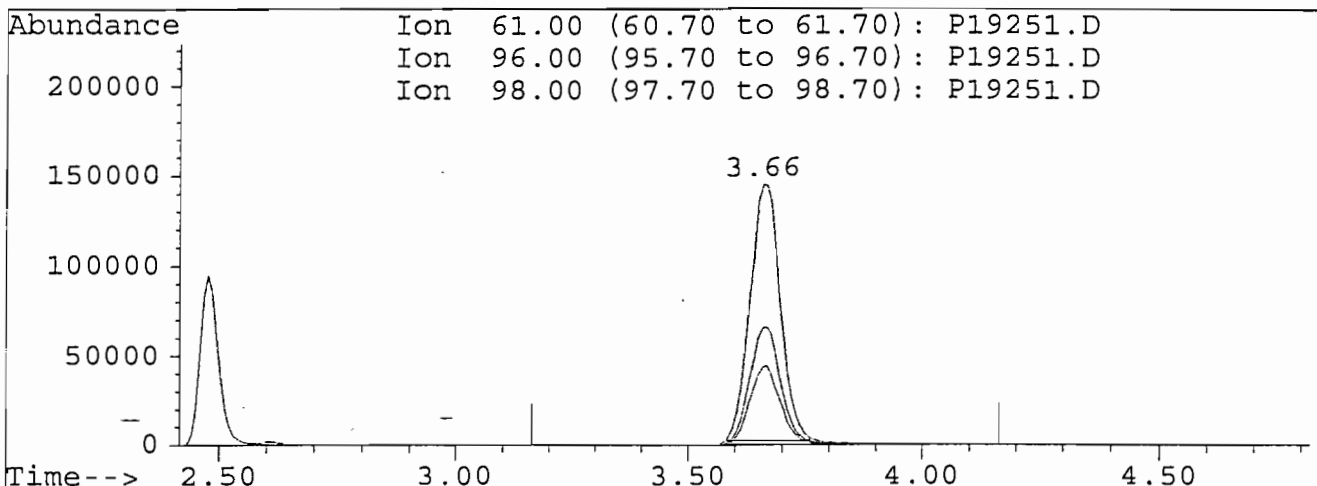
000409

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 21 11:54 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19251.D

(9) 1,1-dichloroethene (C)

3.66min 59.44ug/L m

response 636700

Ion	Exp%	Act%
61.00	100	100
96.00	43.00	45.45
98.00	28.30	29.92
0.00	0.00	0.00

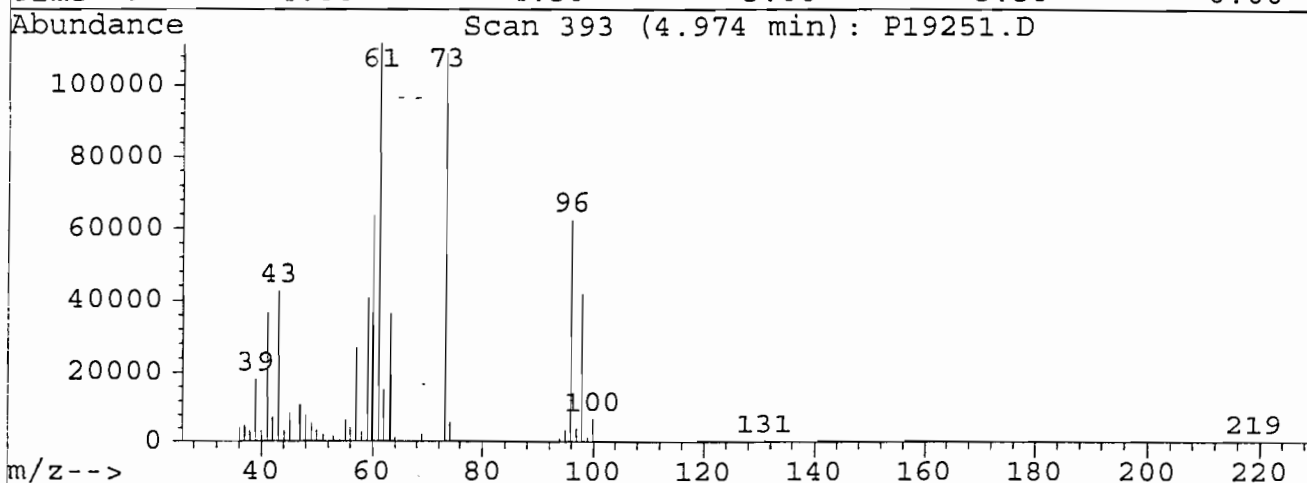
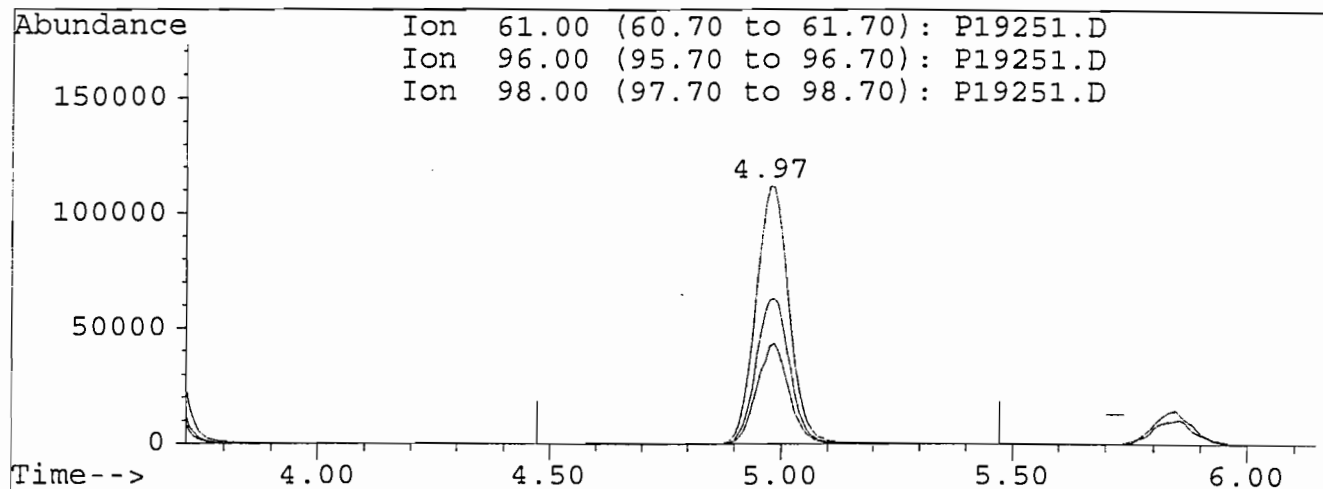
000410

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 21 11:57 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19251.D

(14) trans-1,2-dichloroethene (T)

4.97min 60.95ug/L m

response 554449

Ion	Exp%	Act%
61.00	100	100
96.00	54.90	55.83
98.00	36.00	37.56
0.00	0.00	0.00

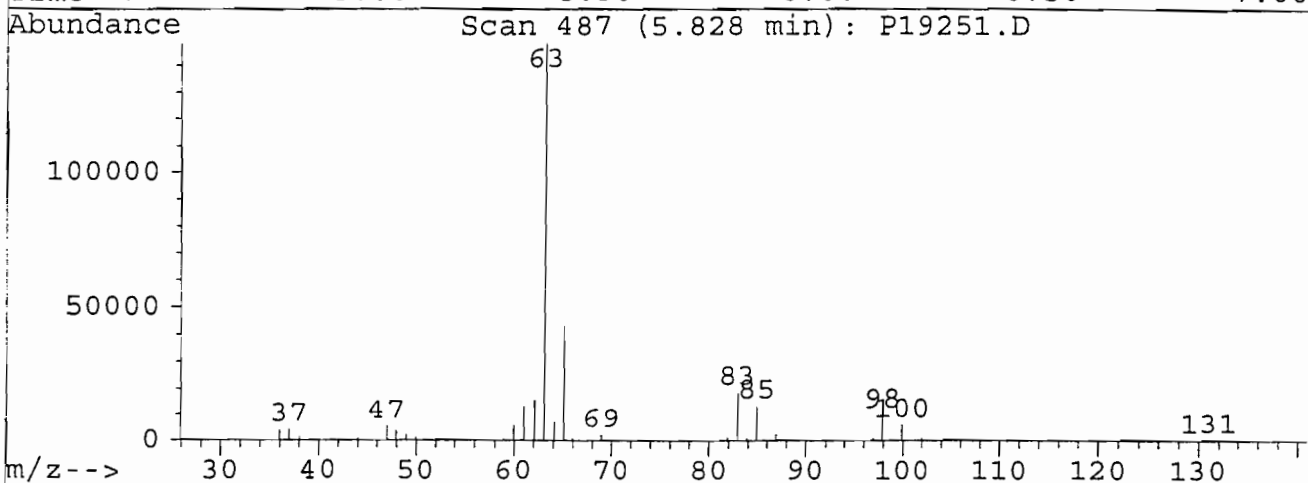
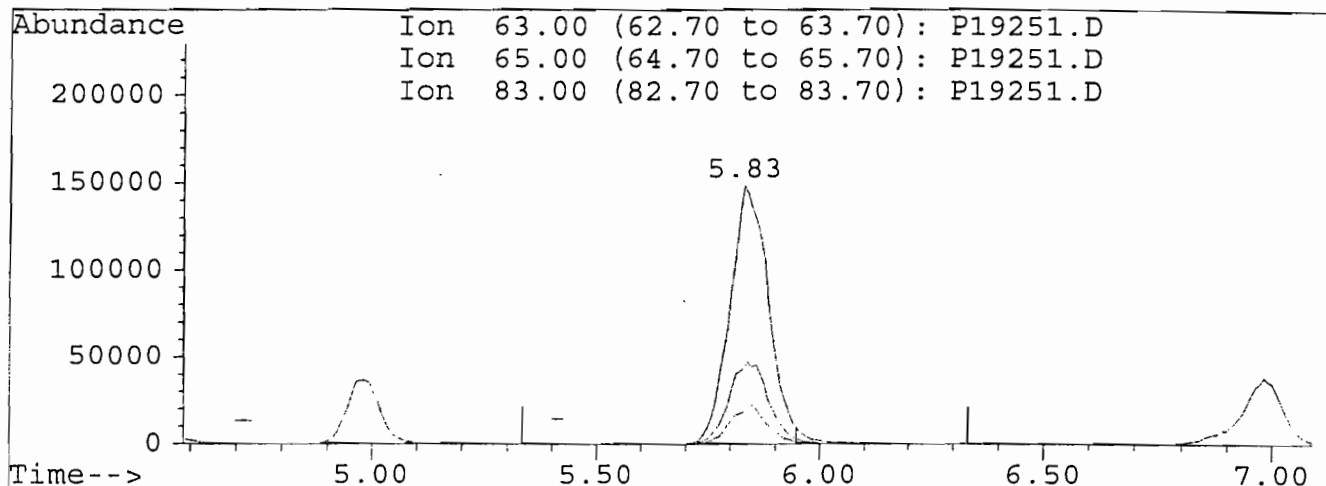
000411

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 21 11:57 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19251.D

(18) 1,1-dichloroethane (P)

5.83min 59.85ug/L m

response 884615

Ion	Exp%	Act%
63.00	100	100
65.00	32.90	29.20
83.00	14.10	12.23
0.00	0.00	0.00

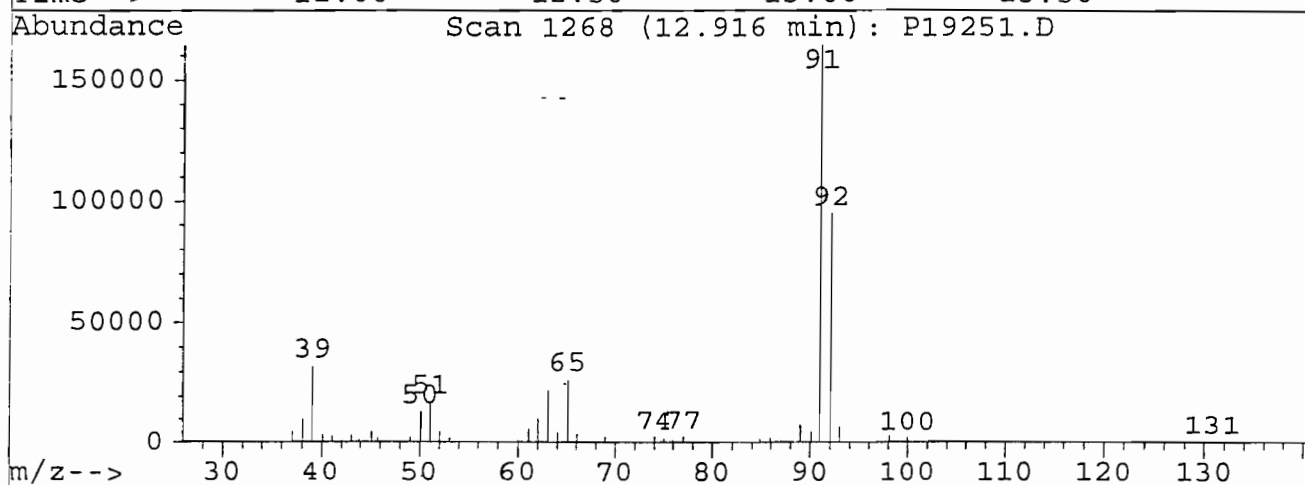
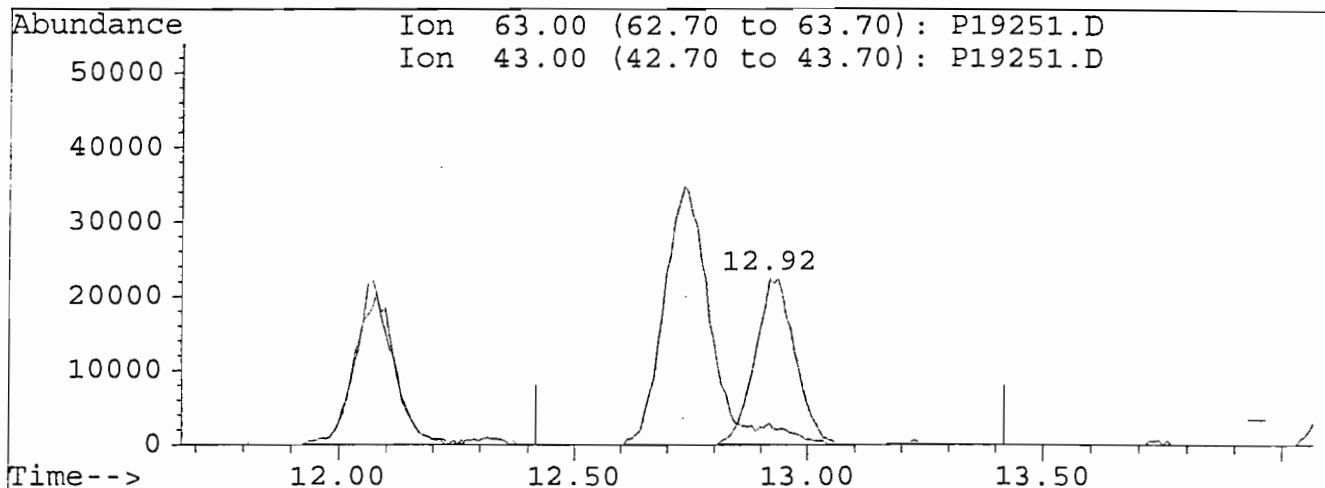
000412

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19251.D
 Acq Time : 20 Oct 99 3:50 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 21 12:07 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



TIC: P19251.D

(36) 2-Chloroethyl Vinyl Ether

12.92min 51.87ug/L m

response 132904

Ion	Exp%	Act%
63.00	100	100
43.00	5.00	12.82
0.00	0.00	0.00
0.00	0.00	0.00

000413

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No. 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Instrument ID: VOA 2Calibration Date: '10/21/99Time: 2223Lab File ID: P19268.DInit. Calib. Date(s): '10/6/99 '10/6/99Heated Purge: (Y/N) YInit. Calib. Times: 1753 2135GC Column: RTX624ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.430	0.405		5.8	
Chloromethane	0.230	0.225	0.100	2.2	
Vinyl Chloride	0.219	0.210		4.1	20.0
Bromomethane	0.247	0.223		9.7	
Chloroethane	0.113	0.102		9.7	
Acrolein	0.012	0.014		-16.7	
Trichlorofluoromethane	1.065	1.054		1.0	
1,1-Dichloroethene	0.529	0.567		-7.2	20.0
Acetone	0.090	0.132		-46.7	
Carbon Disulfide	0.547	0.644		-17.7	
Methylene Chloride	0.235	0.235		0.0	
trans-1,2-Dichloroethene	0.449	0.504		-12.2	
Acrylonitrile	0.034	0.035		-2.9	
1,1-Dichloroethane	0.730	0.757	0.100	-3.7	
2,2-Dichloropropane	0.753	0.810		-7.6	
cis-1,2-dichloroethene	0.621	0.660		-6.3	
Bromochloromethane	0.386	0.397		-2.8	
Chloroform	0.997	1.021		-2.4	20.0
1,1,1-Trichloroethane	1.046	1.003		4.1	
Vinyl Acetate	0.730	0.699		4.2	
2-Butanone	0.126	0.143		-13.5	
Carbon Tetrachloride	0.580	0.635		-9.5	
1,1-Dichloropropene	0.576	0.585		-1.6	
Benzene	0.792	0.803		-1.4	
1,2-Dichloroethane	0.717	0.687		4.2	
Trichloroethene	0.469	0.472		-0.6	
1,2-Dichloropropane	0.360	0.339		5.8	20.0
Dibromomethane	0.384	0.367		4.4	
Bromodichloromethane	0.943	0.918		2.7	
2-Chloroethyl Vinyl Ether	0.127	0.128		-0.8	
cis-1,3-Dichloropropene	0.554	0.531		4.2	
Toluene	0.984	1.003		-1.9	20.0
trans-1,3-Dichloropropene	0.536	0.485		9.5	
1,1,2-Trichloroethane	0.293	0.275		6.1	
4-Methyl-2-Pentanone	0.270	0.223		17.4	
Tetrachloroethene	0.504	0.534		-6.0	

All other compounds must meet a minimum RRF of 0.010.

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Instrument ID: VOA 2 Calibration Date: '10/21/99 Time: 2223
 Lab File ID: P19268.D Init. Calib. Date(s): '10/6/99 '10/6/99
 Heated Purge: (Y/N) Y Init. Calib. Times: 1753 2135
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
1,3-Dichloropropane	0.484	0.490		-1.2	
Dibromochloromethane	0.687	0.675	0.300	1.7	
1,2-Dibromoethane	0.523	0.523		0.0	
2-Hexanone	0.191	0.195		-2.1	
Chlorobenzene	0.810	0.828		-2.2	
1,1,1,2-Tetrachloroethane	0.459	0.476		-3.7	
Ethylbenzene	1.365	1.408		-3.2	20.0
m&p-xylenes	0.468	0.503	0.100	-7.5	
o-xylene	1.352	1.395		-3.2	
Styrene	0.778	0.815		-4.8	
Bromoform	0.542	0.554	0.300	-2.2	
isopropylbenzene	2.156	2.238		-3.8	
Bromobenzene	1.481	1.459		1.5	
1,1,2,2-Tetrachloroethane	0.856	0.832		2.8	
1,2,3-Trichloropropane	0.640	0.595		7.0	
n-Propylbenzene	0.930	0.793		14.7	
2-Chlorotoluene	0.533	0.543		-1.9	
4-Chlorotoluene	0.546	0.560		-2.6	
1,3,5-Trimethylbenzene	1.976	1.993		-0.9	
tert-Butylbenzene	1.907	1.942		-1.8	
1,2,4-Trimethylbenzene	2.281	2.018		11.5	
sec-Butylbenzene	2.558	2.581		-0.9	
1,3-Dichlorobenzene	1.297	1.303		-0.5	
4-Isopropyltoluene	2.355	2.391		-1.5	
1,4-Dichlorobenzene	1.315	1.348		-2.5	
1,2-Dichlorobenzene	1.244	1.334		-7.2	
n-Butylbenzene	2.380	2.426		-1.9	
1,2-Dibromo-3-chloropropane	0.312	0.290		7.1	
1,2,4-Trichlorobenzene	1.082	1.134		-4.8	
Hexachlorobutadiene	0.877	0.964		-9.9	
Naphthalene	1.610	1.584		1.6	
1,2,3-Trichlorobenzene	0.965	1.052		-9.0	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 11:24 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	9.26	96	1104200	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	1019715	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	762688	50.00	ug/L	0.00

System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	869179	47.25	ug/L	94.49%
30) 1,2-Dichlorethane-d4	8.66	65	667588	46.18	ug/L	92.36%
38) Toluene-d8	12.77	98	957576	44.46	ug/L	88.93%
42) 4-Bromofluorobenzene	19.47	95	905508	40.96	ug/L	81.91%

Target Compounds						Qvalue
2) dichlorodifluoromethane	1.73	85	446852	47.10	ug/L	98
3) chloromethane	1.95	50	248815	48.98	ug/L	98
4) vinyl chloride	2.07	62	232069	47.98	ug/L	100
5) bromomethane	2.48	94	246257	45.08	ug/L	86
6) chloroethane	2.60	64	112417	45.25	ug/L	93
7) Acrolein	3.64	56	149609	542.45	ug/L	100
8) trichlorofluoromethane	2.90	101	1164331	49.50	ug/L	100
9) 1,1-dichloroethene	3.66	61	626054	53.58	ug/L	99
10) Acetone	3.91	43	145857	73.71	ug/L	99
11) Carbon Disulfide	3.95	76	711481	58.90	ug/L	96
12) Iodo Methane	3.91	142	914301	54.43	ug/L	97
13) methylene chloride	4.58	84	259926	50.14	ug/L	96
14) trans-1,2-dichloroethene	4.98	61	555987	56.03	ug/L	98
15) TBA	4.96	59	305729	418.52	ug/L	93
16) MTBE	5.01	73	944917	49.21	ug/L	99
17) Acrylonitrile	5.17	53	381677	510.03	ug/L	98
18) 1,1-dichloroethane	5.83	63	835378	51.81	ug/L	99
19) 2,2-dichloropropane	6.88	77	894541	53.78	ug/L	97
20) cis-1,2-dichloroethene	6.97	61	728483	53.16	ug/L	98
21) bromochloromethane	7.45	49	437988	51.34	ug/L	99
22) chloroform	7.64	83	1127671	51.21	ug/L	99
23) 1,1,1-trichloroethane	7.86	97	1107222	47.94	ug/L	99
25) Vinyl Acetate	5.98	43	772283	47.94	ug/L	99
26) 2-Butanone	7.11	43	157800	56.65	ug/L	98
27) carbon tetrachloride	8.11	117	700632	54.66	ug/L	95
28) 1,1-dichloropropene	8.20	75	646482	50.80	ug/L	96
29) benzene	8.59	78	886940	50.74	ug/L	99
31) 1,2-dichloroethane	8.83	62	758145	47.89	ug/L	98
32) trichloroethene	10.02	130	520637	50.28	ug/L	97
33) 1,2-dichloropropane	10.60	63	374551	47.08	ug/L	92
34) dibromomethane	10.85	174	405460	47.77	ug/L	95
35) bromodichloromethane	11.25	83	1013962	48.68	ug/L	94
36) 2-Chloroethyl Vinyl Ether	12.91	63	141643	50.68	ug/L	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 11:24 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	12.30	75	585881	47.89	ug/L	98
39) toluene	12.91	91	1107882	51.00	ug/L	100
40) trans-1,3-dichloropropene	13.71	75	535494	45.21	ug/L	99
41) 1,1,2-trichloroethane	14.12	97	303482	46.96	ug/L	98
44) 4-Methyl-2-Pentanone	12.72	43	227074	41.25	ug/L	98
45) tetrachloroethene	14.13	166	544020	52.96	ug/L	97
46) 1,3-dichloropropane	14.50	76	499884	50.65	ug/L	99
47) dibromochloromethane	14.95	129	688050	49.08	ug/L	95
48) 1,2-dibromoethane	15.17	107	533072	50.00	ug/L	94
49) 2-Hexanone	14.76	43	198517	51.08	ug/L	98
50) chlorobenzene	16.39	112	844597	51.11	ug/L	100
51) 1-Chlorohexane	16.44	91	487190	52.51	ug/L	99
52) 1,1,1,2-tetrachloroethane	16.68	133	485092	51.86	ug/L	99
53) ethylbenzene	16.66	91	1435305	51.55	ug/L	99
54) m&p-xylenes	17.00	106	1025202	107.47	ug/L	99
55) o-xylene	18.01	91	1422228	51.60	ug/L	98
56) styrene	18.10	104	831260	52.36	ug/L	92
57) bromoform	18.56	173	564493	51.10	ug/L	94
59) isopropylbenzene	19.00	105	1706608	51.88	ug/L	97
60) bromobenzene	19.75	77	1112589	49.26	ug/L	97
61) 1,1,2,2-tetrachloroethane	20.09	83	634733	48.60	ug/L	98
62) 1,2,3-trichloropropane	20.12	75	453737	46.47	ug/L	98
63) n-propylbenzene	20.64	120	604912	49.58	ug/L	63
64) 2-chlorotoluene	20.31	126	413800	50.92	ug/L	95
65) 4-chlorotoluene	20.64	126	426762	51.22	ug/L	93
66) 1,3,5-trimethylbenzene	20.64	105	1520340	50.45	ug/L	98
67) tert-butylbenzene	21.46	119	1481465	50.93	ug/L	100
68) 1,2,4-trimethylbenzene	21.63	105	1538855	49.06	ug/L	99
69) sec-butylbenzene	22.06	105	1968409	50.45	ug/L	98
70) 1,3-dichlorobenzene	22.35	146	994137	50.26	ug/L	98
71) 4-isopropyltoluene	22.52	119	1823839	50.78	ug/L	99
72) 1,4-dichlorobenzene	22.65	146	1028439	51.26	ug/L	98
73) 1,2-dichlorobenzene	23.63	146	1017651	53.61	ug/L	93
74) n-butylbenzene	23.65	91	1850192	50.96	ug/L	98
75) 1,2-dibromo-3-chloropropan	25.91	75	220961	46.45	ug/L	96
76) 1,2,4-trichlorobenzene	28.15	180	864873	52.42	ug/L	91
77) hexachlorobutadiene	28.59	225	734867	54.91	ug/L	98
78) naphthalene	28.79	128	1208181	49.20	ug/L	99
79) 1,2,3-trichlorobenzene	29.50	180	802236	54.49	ug/L	96

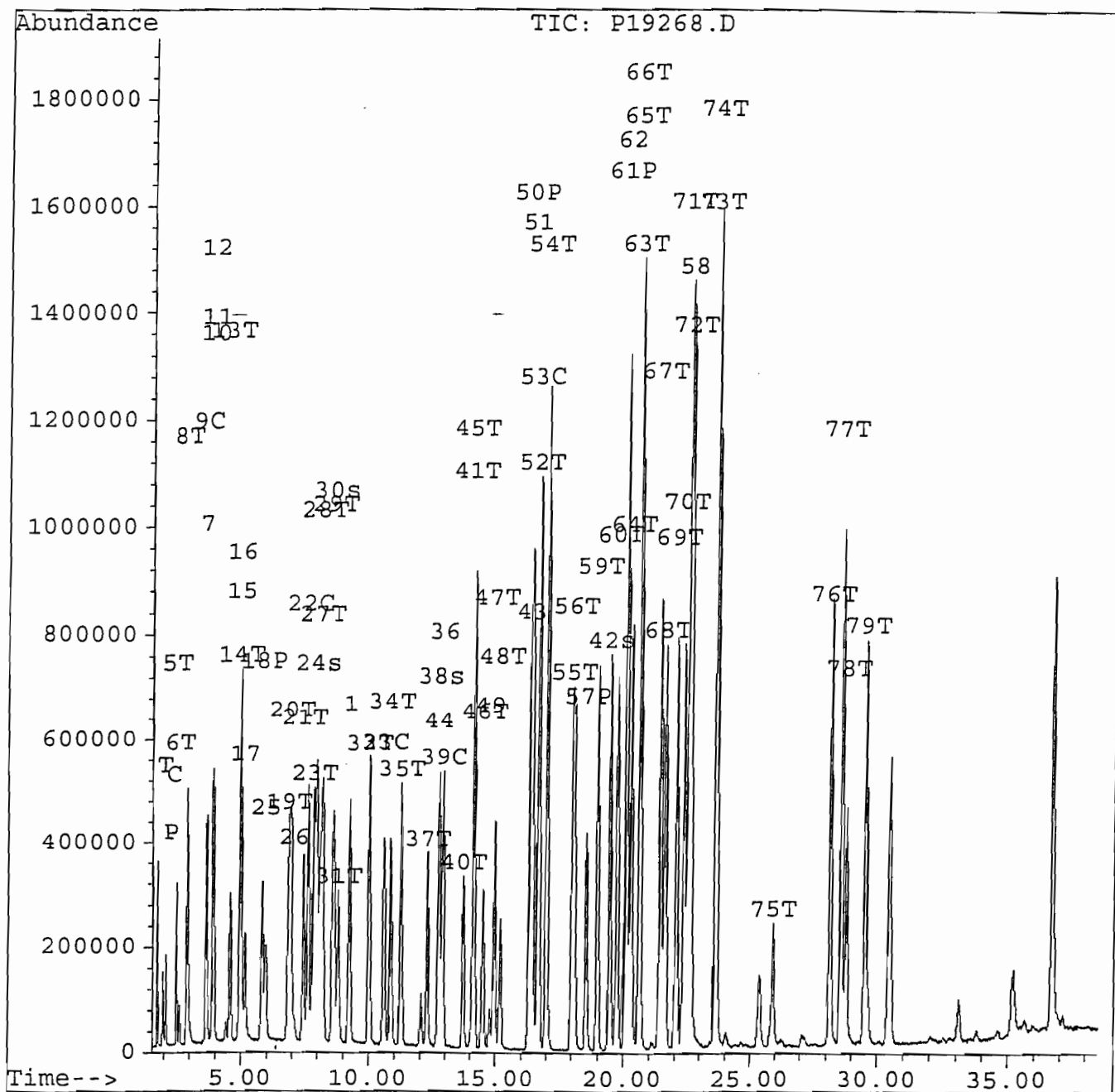
000418

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML
 Quant Time: Oct 22 11:24 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration



000419

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	96	0.00
2 T	dichlorodifluoromethane	0.430	0.405	5.8	100	0.00
3 P	chloromethane	0.230	0.225	2.0	109	0.00
4 C	vinyl chloride	0.219	0.210	4.0#	103	0.00
5 T	bromomethane	0.247	0.223	9.8	102	0.00
6 T	chloroethane	0.113	0.102	9.5	101	0.00
7	Acrolein	0.012	0.014	-8.5	106	0.00
8 T	trichlorofluoromethane	1.065	1.054	1.0	103	0.00
9 C	1,1-dichloroethene	0.529	0.567	-7.2#	108	0.00
10	Acetone	0.090	0.132	-47.4#	106	0.00
11	Carbon Disulfide	0.547	0.644	-17.8	112	0.00
12	Iodo Methane	0.761	0.828	-8.9	106	0.00
13 T	methylene chloride	0.235	0.235	-0.3	103	0.00
14 T	trans-1,2-dichloroethene	0.449	0.504	-12.1	107	0.00
15	TBA	0.033	0.028	16.3	89	0.00
16	MTBE	0.869	0.856	1.6	92	0.00
17	Acrylonitrile	0.034	0.035	-2.0	98	0.00
18 P	1,1-dichloroethane	0.730	0.757	-3.6	106	0.00
19 T	2,2-dichloropropane	0.753	0.810	-7.6	105	0.00
20 T	cis-1,2-dichloroethene	0.621	0.660	-6.3	106	0.00
21 T	bromochloromethane	0.386	0.397	-2.7	102	0.00
22 C	chloroform	0.997	1.021	-2.4#	104	0.00
23 T	1,1,1-trichloroethane	1.046	1.003	4.1	94	0.00
24 s	Dibromofluoromethane	0.833	0.787	5.5	95	0.00
25	Vinyl Acetate	0.730	0.699	4.1	93	0.00
26	2-Butanone	0.126	0.143	-13.3	93	0.00
27 T	carbon tetrachloride	0.580	0.635	-9.3	109	0.00
28 T	1,1-dichloropropene	0.576	0.585	-1.6	100	0.02
29 T	benzene	0.792	0.803	-1.5	98	-0.01
30 s	1,2-Dichlorethane-d4	0.655	0.605	7.6	93	0.00
31 T	1,2-dichloroethane	0.717	0.687	4.2	100	0.00
32 T	trichloroethene	0.469	0.472	-0.6	97	0.00
33 C	1,2-dichloropropane	0.360	0.339	5.8#	95	0.00
34 T	dibromomethane	0.384	0.367	4.5	94	0.00
35 T	bromodichloromethane	0.943	0.918	2.6	98	0.00
36	2-Chloroethyl Vinyl Ether	0.127	0.128	-1.4	101	0.00
37 T	cis-1,3-dichloropropene	0.554	0.531	4.2	96	0.00
38 s	Toluene-d8	0.975	0.867	11.1	87	0.00
39 C	toluene	0.984	1.003	-2.0#	101	-0.01
40 T	trans-1,3-dichloropropene	0.536	0.485	9.6	91	-0.01
41 T	1,1,2-trichloroethane	0.293	0.275	6.1	89	0.00
42 s	4-Bromofluorobenzene	1.001	0.820	18.1	86	0.00

(#) = Out of Range

P19268.D V21006CS.M

Fri Oct 22 11:25:14 1999

VOA3

Page 1

000420

Evaluate Continuing Calibration Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19268.D
 Acq Time : 21 Oct 99 10:23 pm
 Sample : 50PPB CCC
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	87	0.00
44	4-Methyl-2-Pentanone	0.270	0.223	17.5	77	0.00
45 T	tetrachloroethene	0.504	0.534	-5.9	88	-0.02
46 T	1,3-dichloropropane	0.484	0.490	-1.3	91	-0.01
47 T	dibromochloromethane	0.687	0.675	1.8	90	-0.01
48 T	1,2-dibromoethane	0.523	0.523	0.0	91	-0.02
49	2-Hexanone	0.191	0.195	-2.2	78	-0.02
50 P	chlorobenzene	0.810	0.828	-2.2	92	-0.01
51	1-Chlorohexane	0.455	0.478	-5.0	92	-0.01
52 T	1,1,1,2-tetrachloroethane	0.459	0.476	-3.7	85	-0.01
53 C	ethylbenzene	1.365	1.408	-3.1#	92	-0.01
54 T	m&p-xylenes	0.468	0.503	-7.5	100	-0.01
55 T	o-xylene	1.352	1.395	-3.2	99	0.00
56 T	styrene	0.778	0.815	-4.7	98	0.00
57 P	bromoform	0.542	0.554	-2.2	86	-0.01
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
59 T	isopropylbenzene	2.156	2.238	-3.8	99	0.00
60 T	bromobenzene	1.481	1.459	1.5	93	-0.02
61 P	1,1,2,2-tetrachloroethane	0.856	0.832	2.8	90	0.00
62	1,2,3-trichloropropane	0.640	0.595	7.1	90	-0.02
63 T	n-propylbenzene	0.930	0.793	14.7	91	0.00
64 T	2-chlorotoluene	0.533	0.543	-1.8	96	0.00
65 T	4-chlorotoluene	0.546	0.560	-2.4	98	-0.02
66 T	1,3,5-trimethylbenzene	1.976	1.993	-0.9	93	-0.02
67 T	tert-butylbenzene	1.907	1.942	-1.9	98	-0.01
68 T	1,2,4-trimethylbenzene	2.281	2.018	11.5	97	-0.01
69 T	sec-butylbenzene	2.558	2.581	-0.9	98	-0.02
70 T	1,3-dichlorobenzene	1.297	1.303	-0.5	97	-0.03
71 T	4-isopropyltoluene	2.355	2.391	-1.6	99	-0.01
72 T	1,4-dichlorobenzene	1.315	1.348	-2.5	101	-0.01
73 T	1,2-dichlorobenzene	1.244	1.334	-7.2	103	-0.03
74 T	n-butylbenzene	2.380	2.426	-1.9	104	0.00
75 T	1,2-dibromo-3-chloropropane	0.312	0.290	7.1	92	-0.02
76 T	1,2,4-trichlorobenzene	1.082	1.134	-4.8	103	0.00
77 T	hexachlorobutadiene	0.877	0.964	-9.8	106	-0.02
78 T	naphthalene	1.610	1.584	1.6	101	0.00
79 T	1,2,3-trichlorobenzene	0.965	1.052	-9.0	106	-0.03

000421

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SSInstrument ID: VOA 3Calibration Date(s): '10/9/99 '10/9/99Heated Purge: (Y/N) NCalibration Times: 0832 1235GC Column RTX624 ID: 0.53 (mm)

Lab File ID:		RRF005 = M12959.D			RRF20 = M12957.D		
RRF50 = M12956.D		RRF100 = M12955.D			RRF200 = M12954.D		
COMPOUND	RRF005	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
Dichlorodifluoromethane	0.248	0.272	0.287	0.296	0.327	0.286	10.3
Chloromethane *	0.342	0.374	0.407	0.426	0.465	0.403	11.8
Vinyl Chloride	0.297	0.306	0.302	0.307	0.323	0.307	3.2
Bromomethane	0.237	0.253	0.238	0.200	0.112	0.208	27.4
Chloroethane	0.197	0.200	0.220	0.193	0.117	0.185	21.3
Acrolein	0.039	0.039	0.040	0.041	0.040	0.040	2.4
Trichlorofluoromethane	0.455	0.466	0.448	0.415	0.418	0.441	5.2
1,1-Dichloroethene	0.393	0.415	0.412	0.410	0.433	0.413	3.4
Acetone	0.278	0.137	0.143	0.162	0.164	0.177	32.6
Carbon Disulfide	0.932	0.982	0.940	0.947	0.951	0.950	2.0
Methylene Chloride	0.271	0.304	0.301	0.317	0.317	0.302	6.2
trans-1,2-Dichloroethene	0.400	0.437	0.409	0.424	0.424	0.419	3.4
Acrylonitrile	0.098	0.102	0.102	0.105	0.101	0.102	2.3
1,1-Dichloroethane *	0.533	0.593	0.550	0.557	0.571	0.561	4.0
2,2-Dichloropropane	0.444	0.459	0.451	0.469	0.482	0.461	3.3
cis-1,2-dichloroethene	0.435	0.478	0.457	0.473	0.450	0.459	3.8
Bromochloromethane	0.285	0.319	0.309	0.316	0.312	0.308	4.4
Chloroform	0.557	0.603	0.573	0.587	0.594	0.583	3.1
1,1,1-Trichloroethane	0.436	0.475	0.474	0.484	0.487	0.471	4.4
Vinyl Acetate	0.945	1.023	0.971	0.992	0.989	0.984	2.9
2-Butanone	0.220	0.171	0.186	0.197	0.180	0.191	9.9
Carbon Tetrachloride	0.380	0.412	0.403	0.411	0.422	0.405	3.9
1,1-Dichloropropene	0.390	0.415	0.405	0.411	0.411	0.406	2.4
Benzene	1.131	1.171	1.109	1.066	1.021	1.100	5.3
1,2-Dichloroethane	0.434	0.452	0.457	0.462	0.457	0.452	2.4
Trichloroethene	0.305	0.351	0.330	0.336	0.333	0.331	5.1
1,2-Dichloropropane	0.291	0.332	0.318	0.318	0.317	0.315	4.8
Dibromomethane	0.192	0.227	0.234	0.231	0.236	0.224	8.2
Bromodichloromethane	0.459	0.490	0.480	0.485	0.485	0.480	2.6
2-Chloroethyl Vinyl Ether	0.152	0.176	0.188	0.197	0.199	0.183	10.6
cis-1,3-Dichloropropene	0.510	0.553	0.528	0.539	0.538	0.533	3.0
Toluene	1.291	1.251	1.183	1.167	1.126	1.204	5.5
trans-1,3-Dichloropropene	0.456	0.484	0.484	0.489	0.497	0.482	3.2
1,1,2-Trichloroethane	0.259	0.282	0.277	0.278	0.278	0.275	3.3
4-Methyl-2-Pentanone	0.303	0.323	0.365	0.361	0.289	0.328	10.4
Tetrachloroethene	0.397	0.394	0.382	0.375	0.380	0.385	2.4

* Compounds with required minimum RRF and maximum %RSD values.

All other compounds must meet a minimum RRF of 0.010.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SSInstrument ID: VOA 3Calibration Date(s): '10/9/99 '10/9/99Heated Purge: (Y/N) NCalibration Times: 0832 1235GC Column RTX624ID: 0.53 (mm)

Lab File ID:	RRF005 = M12959.D	RRF20 = M12957.D					
RRF50 = M12956.D	RRF100 = M12955.D	RRF200 = M12954.D					
COMPOUND	RRF005	RRF20	RRF50	RRF100	RRF200	RRF	% RSD
1,3-Dichloropropane	0.638	0.617	0.616	0.596	0.591	0.612	3.1
Dibromochloromethane	0.411	0.423	0.421	0.420	0.426	0.420	1.4
1,2-Dibromoethane	0.355	0.367	0.372	0.363	0.360	0.363	1.8
2-Hexanone	0.139	0.203	0.266	0.283	0.268	0.232	25.9
Chlorobenzene *	0.973	0.925	0.906	0.892	0.876	0.914	4.1 *
1,1,1,2-Tetrachloroethane	0.325	0.341	0.336	0.308	0.321	0.326	4.0
Ethylbenzene	1.747	1.735	1.643	1.451	1.414	1.598	9.8
m&p-xylenes	0.601	0.565	0.555	0.506	0.488	0.543	8.4
o-xylene	1.368	1.309	1.255	1.207	1.140	1.256	7.0
Styrene	1.024	0.992	1.003	0.931	0.904	0.971	5.3
Bromoform *	0.266	0.277	0.282	0.279	0.261	0.273	3.3 *
isopropylbenzene	3.374	3.483	3.381	3.292	3.407	3.387	2.0
Bromobenzene	1.534	1.556	1.501	1.470	1.416	1.495	3.7
1,1,2,2-Tetrachloroethane *	0.999	1.016	1.027	1.015	0.918	0.995	4.4 *
1,2,3-Trichloropropane	0.716	0.733	0.728	0.734	0.658	0.713	4.5
n-Propylbenzene	0.794	0.845	0.838	0.829	0.817	0.825	2.4
2-Chlorotoluene	0.792	0.793	0.789	0.732	0.685	0.758	6.4
4-Chlorotoluene	0.774	0.820	0.778	0.776	0.785	0.787	2.4
1,3,5-Trimethylbenzene	2.861	2.841	2.672	2.685	2.579	2.728	4.4
tert-Butylbenzene	2.769	2.482	2.385	2.335	2.559	2.506	6.8
1,2,4-Trimethylbenzene	2.834	2.820	2.804	2.601	2.607	2.733	4.3
sec-Butylbenzene	3.511	3.495	3.407	3.245	3.183	3.368	4.4
1,3-Dichlorobenzene	1.563	1.622	1.576	1.510	1.432	1.541	4.7
4-Isopropyltoluene	3.222	3.058	2.915	2.853	2.893	2.988	5.1
1,4-Dichlorobenzene	1.633	1.659	1.603	1.580	1.517	1.598	3.4
1,2-Dichlorobenzene	1.486	1.533	1.540	1.457	1.391	1.482	4.1
n-Butylbenzene	2.968	2.907	2.740	2.756	2.693	2.813	4.2
1,2-Dibromo-3-chloropropane	0.175	0.132	0.157	0.166	0.158	0.157	10.2
1,2,4-Trichlorobenzene	0.958	1.066	1.048	1.090	1.165	1.065	7.0
Hexachlorobutadiene	0.467	0.517	0.531	0.538	0.563	0.523	6.7
Naphthalene	2.053	2.264	2.092	2.085	1.962	2.091	5.2
1,2,3-Trichlorobenzene	0.856	0.907	0.911	0.914	0.956	0.909	3.9

* Compounds with required minimum RRF and maximum %RSD values.

All other compounds must meet a minimum RRF of 0.010.

Lab Name: _____ Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Instrument ID: _____ Calibration Date(s): _____

Heated Purge: (Y/N) _____ Calibration Times: _____

GC Column: _____ ID: _____ (mm)

[illegible]

All other compounds must meet a minimum RRF of 0.010.

Response Factor Report voa3

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:23:48 1999
 Response via : Initial Calibration

Calibration Files

50 =M12956.D 200 =M12954.D 100 =M12955.D
 20 =M12957.D 5 =M12959.D

Compound		50	200	100	20	5	Avg	%RSD
-----ISTD-----								
1)	Fluorobenzene							
2) T	dichlorodifluoromethane	0.287	0.327	0.296	0.272	0.247	0.286	10.31
3) P	chloromethane	0.407	0.465	0.426	0.374	0.342	0.403	11.78#
4) C	vinyl chloride	0.302	0.323	0.307	0.306	0.297	0.307	3.17
5) T	bromomethane	0.238	0.112	0.200	0.253	0.237	0.208	27.37
6) T	chloroethane	0.219	0.117	0.193	0.200	0.197	0.185	21.29
7)	Acrolein	0.040	0.040	0.041	0.039	0.039	0.040	2.41
8) T	trichlorofluoromethane	0.448	0.418	0.415	0.466	0.455	0.441	5.17
9) C	1,1-dichloroethene	0.412	0.433	0.410	0.415	0.393	0.413	3.40
10)	Acetone	0.143	0.164	0.162	0.137	0.278	0.177	32.63
11)	Carbon Disulfide	0.940	0.951	0.947	0.982	0.932	0.950	1.98
12)	Iodo Methane	0.497	0.551	0.511	0.473	0.429	0.492	9.23
13) T	methylene chloride	0.301	0.317	0.317	0.304	0.271	0.302	6.23
14) T	trans-1,2-dichloroethene	0.409	0.424	0.424	0.437	0.400	0.419	3.44
15)	TBA	0.021	0.021	0.022	0.019	0.014	0.019	17.50
16)	MTBE	0.814	0.826	0.824	0.804	0.780	0.810	2.31
17)	Acrylonitrile	0.102	0.101	0.105	0.101	0.098	0.102	2.32
18) P	1,1-dichloroethane	0.550	0.571	0.557	0.593	0.533	0.561	4.02#
19) T	2,2-dichloropropane	0.451	0.482	0.469	0.459	0.443	0.461	3.29
20) T	cis-1,2-dichloroethene	0.457	0.450	0.473	0.478	0.435	0.459	3.76
21) T	bromochloromethane	0.309	0.312	0.316	0.319	0.285	0.308	4.38
22) C	chloroform	0.573	0.594	0.587	0.603	0.557	0.583	3.07
23) T	1,1,1-trichloroethane	0.474	0.487	0.484	0.475	0.436	0.471	4.36
24) S	Dibromofluoromethane	0.328	0.322	0.324	0.316	0.266	0.311	8.20
25)	Vinyl Acetate	0.970	0.989	0.992	1.023	0.945	0.984	2.95
26)	2-Butanone	0.186	0.180	0.197	0.171	0.220	0.191	9.91
27) T	carbon tetrachloride	0.403	0.422	0.411	0.412	0.380	0.405	3.90
28) T	1,1-dichloropropene	0.404	0.410	0.411	0.415	0.390	0.406	2.39
29) T	benzene	1.109	1.021	1.066	1.171	1.131	1.100	5.27
30) S	1,2-Dichloroethane-d4	0.360	0.363	0.365	0.362	0.302	0.351	7.68
31) T	1,2-dichloroethane	0.457	0.457	0.462	0.452	0.434	0.452	2.36
32) T	trichloroethene	0.330	0.332	0.336	0.351	0.305	0.331	5.06
33) C	1,2-dichloropropane	0.318	0.317	0.318	0.332	0.291	0.315	4.78
34) T	dibromomethane	0.234	0.236	0.231	0.227	0.191	0.224	8.23
35) T	bromodichloromethane	0.480	0.485	0.485	0.490	0.459	0.480	2.56
36)	2-Chloroethyl Vinyl Ether	0.188	0.199	0.197	0.176	0.152	0.183	10.57
37) T	cis-1,3-dichloropropene	0.528	0.538	0.539	0.553	0.509	0.533	2.98
38) S	Toluene-d8	1.022	0.966	0.974	1.014	0.895	0.974	5.16
39) C	toluene	1.183	1.126	1.167	1.251	1.291	1.204	5.51
40) T	trans-1,3-dichloropropene	0.484	0.497	0.489	0.484	0.456	0.482	3.20
41) T	1,1,2-trichloroethane	0.277	0.277	0.278	0.282	0.259	0.275	3.28
42) S	4-Bromofluorobenzene	0.431	0.392	0.412	0.442	0.382	0.412	6.17

43) Chlorobenzene-d5

-----ISTD-----

000425

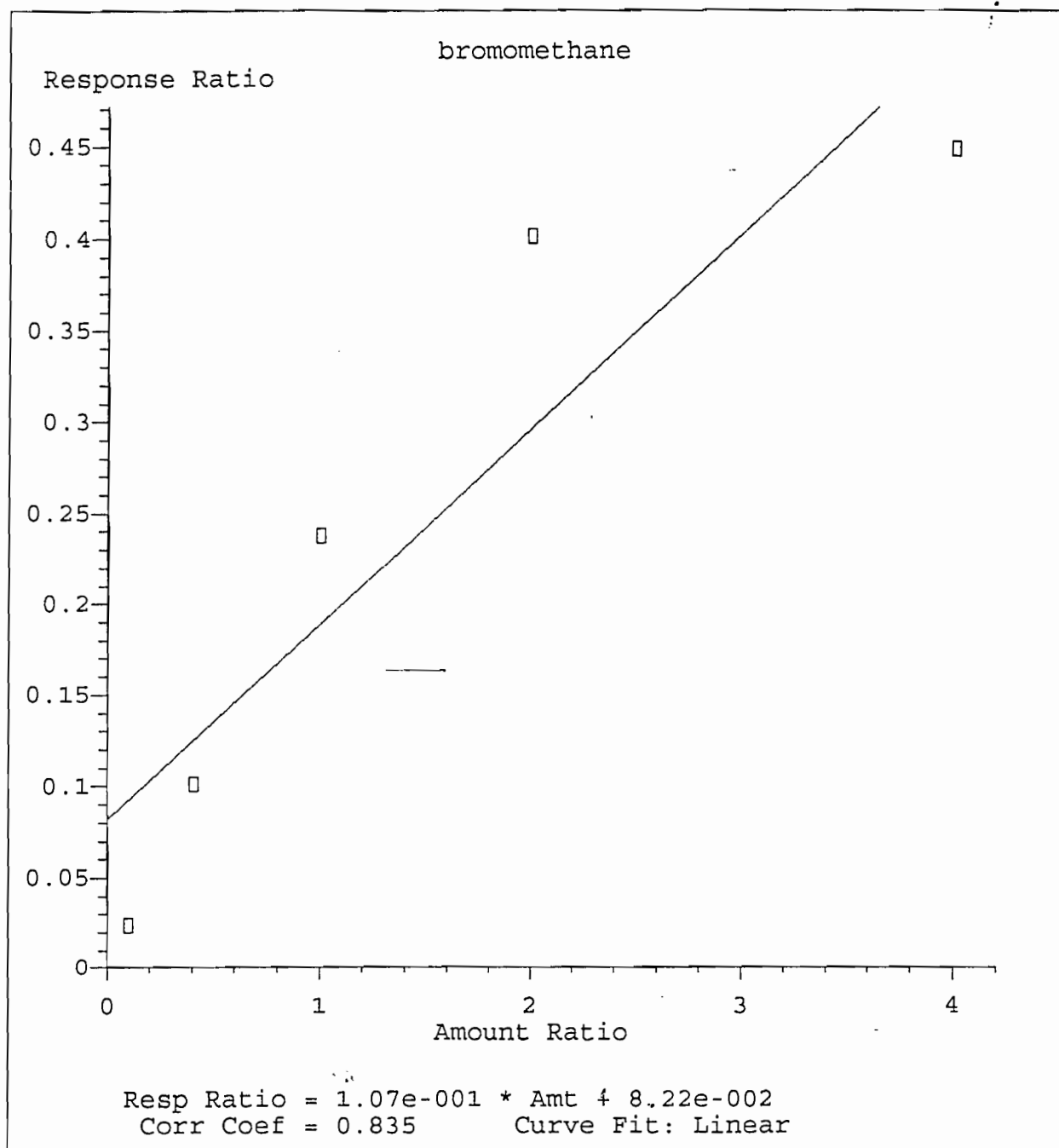
Response Factor Report voa3

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:23:48 1999
 Response via : Initial Calibration

Calibration Files

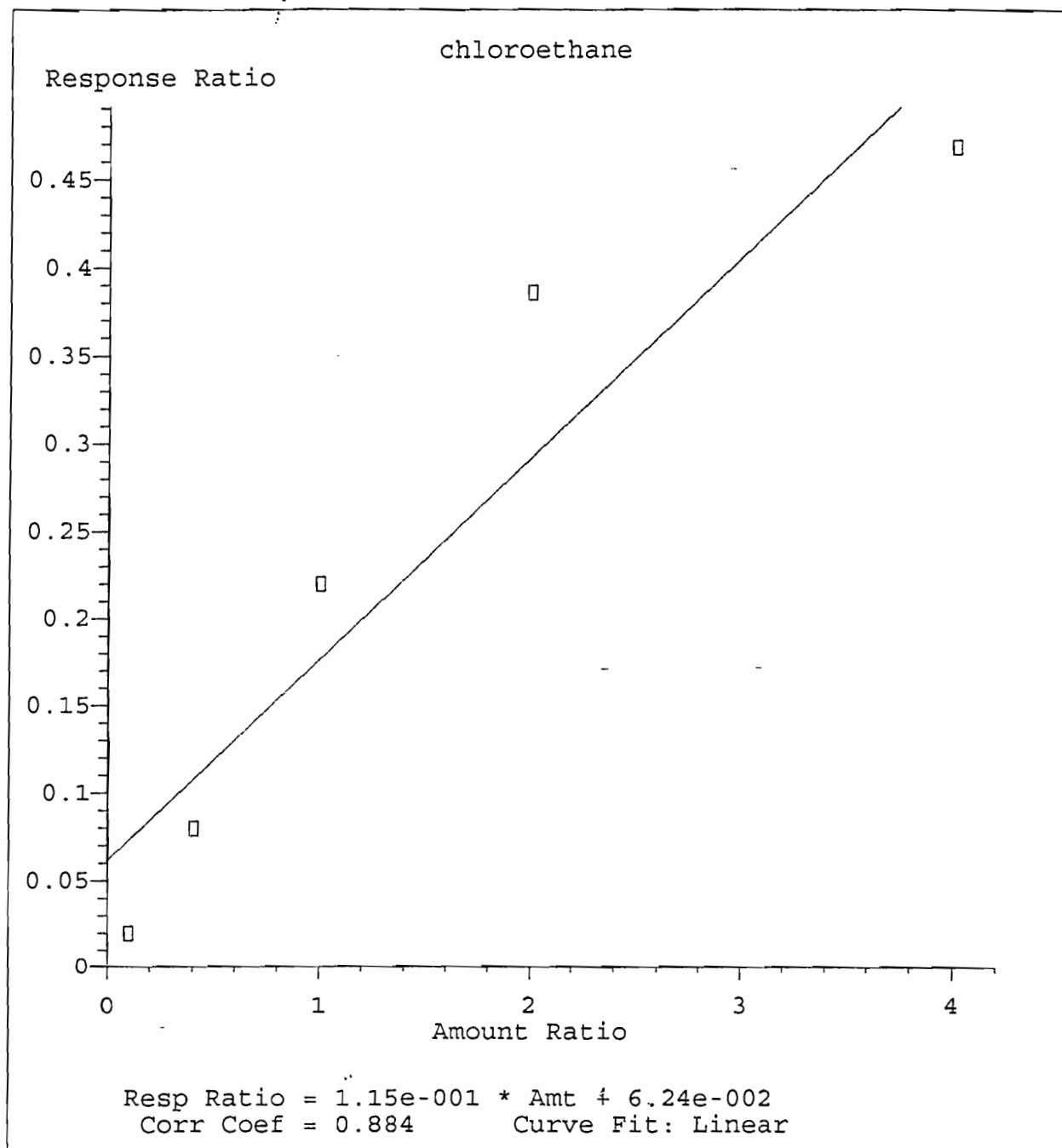
50 =M12956.D 200 =M12954.D 100 =M12955.D
 20 =M12957.D 5 =M12959.D

Compound	50	200	100	20	5	Avg	%RSD
44) 4-Methyl-2-Pentanone	0.365	0.289	0.361	0.323	0.303	0.328	10.36
45) T tetrachloroethene	0.381	0.380	0.375	0.394	0.396	0.385	2.44
46) T 1,3-dichloropropane	0.616	0.591	0.596	0.617	0.638	0.612	3.07
47) T dibromochloromethane	0.421	0.426	0.420	0.423	0.411	0.420	1.39
48) T 1,2-dibromoethane	0.372	0.360	0.363	0.367	0.355	0.363	1.81
49) 2-Hexanone	0.266	0.268	0.283	0.203	0.139	0.232	25.95
50) P chlorobenzene	0.905	0.876	0.892	0.925	0.973	0.914	4.09#
51) 1-Chlorohexane	0.605	0.569	0.571	0.627	0.616	0.598	4.42
52) T 1,1,1,2-tetrachloroethane	0.336	0.321	0.308	0.341	0.325	0.326	4.01
53) C ethylbenzene	1.643	1.414	1.451	1.735	1.747	1.598	9.81
54) T m&p-xylenes	0.555	0.488	0.506	0.565	0.601	0.543	8.40
55) T o-xylene	1.255	1.140	1.207	1.309	1.368	1.256	7.04
56) T styrene	1.003	0.904	0.931	0.992	1.024	0.971	5.27
57) P bromoform	0.282	0.261	0.279	0.277	0.266	0.273	3.29#
58) 1,4-dichlorobenzene-d4	-----ISTD-----						
59) T isopropylbenzene	3.381	3.407	3.292	3.483	3.373	3.387	2.03
60) T bromobenzene	1.501	1.416	1.470	1.556	1.534	1.495	3.69
61) P 1,1,2,2-tetrachloroethane	1.027	0.918	1.015	1.015	0.999	0.995	4.44#
62) 1,2,3-trichloropropane	0.728	0.658	0.734	0.733	0.715	0.713	4.49
63) T n-propylbenzene	0.838	0.817	0.829	0.845	0.794	0.825	2.44
64) T 2-chlorotoluene	0.789	0.685	0.732	0.793	0.791	0.758	6.39
65) T 4-chlorotoluene	0.778	0.785	0.776	0.820	0.774	0.787	2.44
66) T 1,3,5-trimethylbenzene	2.672	2.579	2.685	2.841	2.861	2.728	4.40
67) T tert-butylbenzene	2.385	2.559	2.335	2.482	2.769	2.506	6.82
68) T 1,2,4-trimethylbenzene	2.804	2.607	2.600	2.820	2.834	2.733	4.34
69) T sec-butylbenzene	3.407	3.183	3.245	3.495	3.511	3.368	4.39
70) T 1,3-dichlorobenzene	1.576	1.432	1.510	1.622	1.563	1.541	4.71
71) T 4-isopropyltoluene	2.915	2.893	2.853	3.058	3.222	2.988	5.09
72) T 1,4-dichlorobenzene	1.603	1.517	1.580	1.659	1.633	1.598	3.40
73) T 1,2-dichlorobenzene	1.540	1.391	1.457	1.533	1.486	1.482	4.13
74) T n-butylbenzene	2.740	2.693	2.756	2.907	2.968	2.813	4.20
75) T 1,2-dibromo-3-chloropropane	0.157	0.158	0.166	0.132	0.175	0.157	10.14
76) T 1,2,4-trichlorobenzene	1.048	1.165	1.090	1.066	0.958	1.065	7.03
77) T hexachlorobutadiene	0.530	0.563	0.538	0.516	0.467	0.523	6.74
78) T naphthalene	2.092	1.962	2.085	2.264	2.053	2.091	5.24
79) T 1,2,3-trichlorobenzene	0.911	0.956	0.914	0.907	0.856	0.909	3.90



Method Name: D:\HPCHEM\3\METHODS\V31009CW.M
Calibration Table Last Updated: Sat Oct 09 13:27:32 1999

000427



Method Name: D:\HPCHEM\3\METHODS\V31009CW.M
Calibration Table Last Updated: Sat Oct 09 13:25:34 1999

000428

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.09	96	1903300	50.00	ug/L	-0.02
43) Chlorobenzene-d5	20.45	117	1642878	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	691708	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.38	113	2449880	196.49	ug/L	392.99%
30) 1,2-Dichlorethane-d4	13.42	65	2764536	201.47	ug/L	402.94%
38) Toluene-d8	17.35	98	7352218	189.05	ug/L	378.11%
42) 4-Bromofluorobenzene	22.94	95	2981787	181.58	ug/L	363.16%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.46	85	2491100	228.35	ug/L	98
3) chloromethane	4.01	50	3540749	228.38	ug/L	97
4) vinyl chloride	4.13	62	2457774	213.75	ug/L	99
5) bromomethane	5.00	94	854007	94.41	ug/L	97
6) chloroethane	5.17	64	891670	106.73	ug/L m	96
7) Acrolein	6.97	56	3042013	2006.54	ug/L	100
8) trichlorofluoromethane	5.76	101	3183243	186.62	ug/L	99
9) 1,1-dichloroethene	7.32	61	3294579	209.95	ug/L	94
10) Acetone	7.23	43	1249007	229.44	ug/L	94
11) Carbon Disulfide	8.47	76	7238749	202.27	ug/L	100
12) Iodo Methane	8.05	142	4194438	221.59	ug/L	98
13) methylene chloride	8.53	84	2414305	210.77	ug/L	99
14) trans-1,2-dichloroethene	9.22	61	3229023	207.46	ug/L	99
15) TBA	8.42	59	1633441	2079.38	ug/L m	61
16) MTBE	9.00	73	6288893	202.86	ug/L	99
17) Acrylonitrile	8.92	53	7700273	1979.49	ug/L	100
18) 1,1-dichloroethane	10.21	63	4346828	207.46	ug/L	97
19) 2,2-dichloropropane	11.46	77	3669646	213.88	ug/L	99
20) cis-1,2-dichloroethene	11.56	61	3424642	196.72	ug/L	98
21) bromochloromethane	12.25	49	2378013	202.29	ug/L	98
22) chloroform	11.92	83	4521741	207.22	ug/L	97
23) 1,1,1-trichloroethane	12.75	97	3706008	205.55	ug/L	98
25) Vinyl Acetate	10.27	43	7529314	203.82	ug/L	99
26) 2-Butanone	11.26	43	1373157	194.08	ug/L	98
27) carbon tetrachloride	13.30	117	3212183	209.53	ug/L	97
28) 1,1-dichloropropene	13.08	75	3124866	202.96	ug/L	99
29) benzene	13.65	78	7774178	184.12	ug/L	99
31) 1,2-dichloroethane	13.62	62	3479210	200.09	ug/L	99
32) trichloroethene	14.91	130	2531154	201.48	ug/L	98
33) 1,2-dichloropropane	15.27	63	2416539	199.67	ug/L	98
34) dibromomethane	15.87	174	1797435	202.03	ug/L	98
35) bromodichloromethane	15.75	83	3693010	202.13	ug/L	100
36) 2-Chloroethyl Vinyl Ether	16.34	63	1514029	211.18	ug/L	98

(#) = qualifier out of range (m) = manual integration
 M12954.D V31009CW.M Sat Oct 09 12:06:06 1999

VOA3 000429 Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

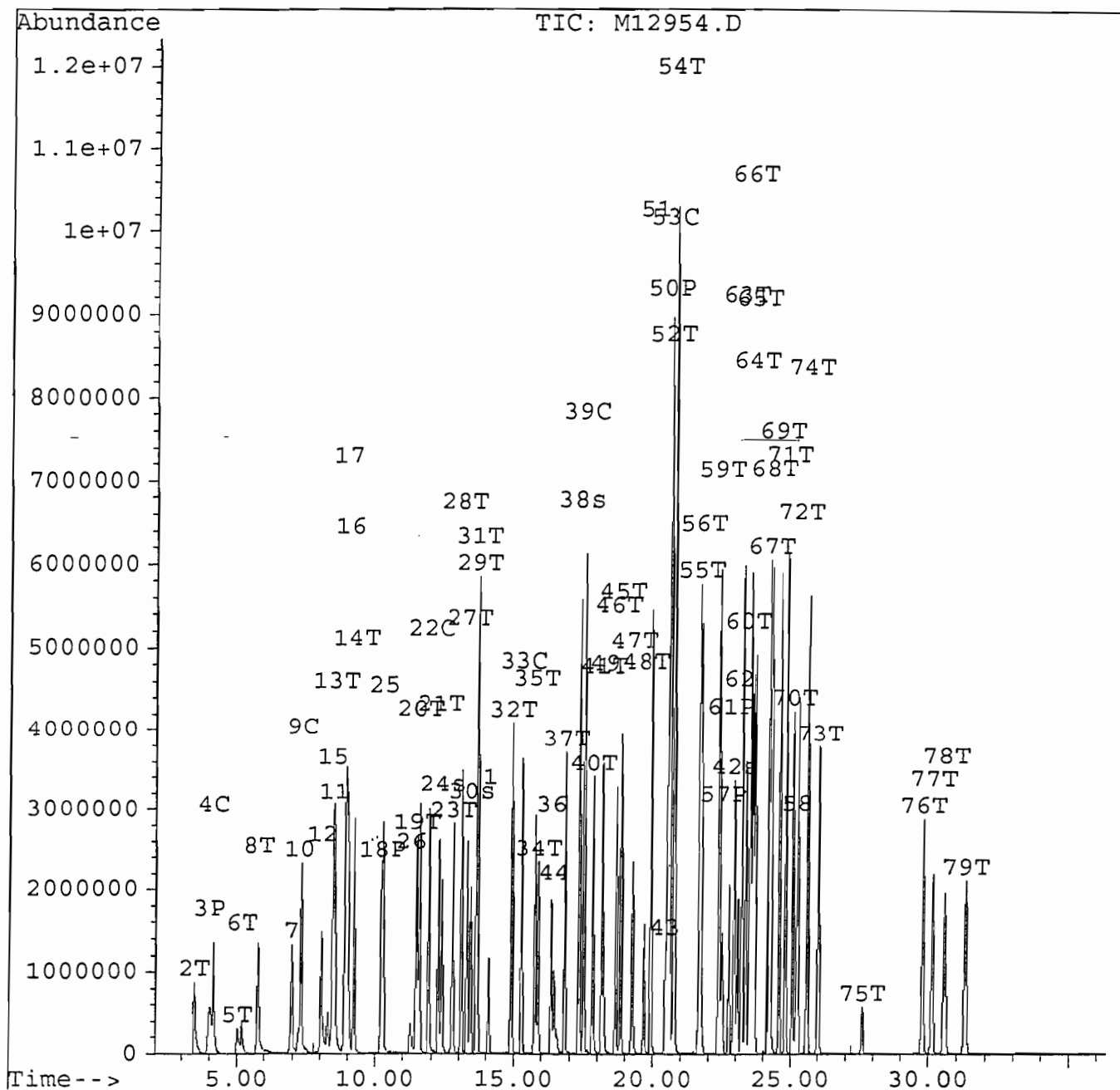
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	4092696	203.53	ug/L	97
39) toluene	17.51	91	8575587	190.43	ug/L	99
40) trans-1,3-dichloropropene	17.84	75	3780432	205.29	ug/L	99
41) 1,1,2-trichloroethane	18.18	97	2112654	200.67	ug/L	95
44) 4-Methyl-2-Pentanone	16.45	43	1899221	158.55	ug/L	96
45) tetrachloroethene	18.85	166	2496850	199.19	ug/L	99
46) 1,3-dichloropropane	18.69	76	3882371	191.90	ug/L	100
47) dibromochloromethane	19.26	129	2800559	202.44	ug/L	98
48) 1,2-dibromoethane	19.68	107	2366688	193.49	ug/L	95
49) 2-Hexanone	18.24	43	1758592	201.32	ug/L	99
50) chlorobenzene	20.53	112	5756825	193.49	ug/L	98
51) 1-Chlorohexane	19.94	91	3738584	187.92	ug/L	99
52) 1,1,1,2-tetrachloroethane	20.59	133	2109595	191.14	ug/L	99
53) ethylbenzene	20.61	91	9291842	172.15	ug/L	97
54) m&p-xylenes	20.77	106	6413781	351.58	ug/L	95
55) o-xylene	21.67	91	7488867	181.55	ug/L	99
56) styrene	21.74	104	5938683	180.16	ug/L	99
57) bromoform	22.51	173	1717768	185.31	ug/L	100
59) isopropylbenzene	22.39	105	9425809	201.52	ug/L	98
60) bromobenzene	23.36	77	3917834	188.65	ug/L	98
61) 1,1,2,2-tetrachloroethane	22.76	83	2539894	178.71	ug/L	96
62) 1,2,3-trichloropropane	23.06	75	1819389	180.75	ug/L	96
63) n-propylbenzene	23.22	120	2259949	194.85	ug/L	91
64) 2-chlorotoluene	23.61	126	1894925	173.56	ug/L	97
65) 4-chlorotoluene	23.69	126	2172653	201.78	ug/L	96
66) 1,3,5-trimethylbenzene	23.52	105	7135734	193.03	ug/L	97
67) tert-butylbenzene	24.20	119	7080854	214.63	ug/L	99
68) 1,2,4-trimethylbenzene	24.27	105	7212414	185.94	ug/L	98
69) sec-butylbenzene	24.58	105	8807846	186.88	ug/L	98
70) 1,3-dichlorobenzene	25.06	146	3963151	181.75	ug/L	99
71) 4-isopropyltoluene	24.81	119	8005258	198.52	ug/L	98
72) 1,4-dichlorobenzene	25.26	146	4197744	189.29	ug/L	98
73) 1,2-dichlorobenzene	26.01	146	3849046	180.62	ug/L	98
74) n-butylbenzene	25.60	91	7451529	196.57	ug/L	95
75) 1,2-dibromo-3-chloropropan	27.63	75	437146	201.85	ug/L	98
76) 1,2,4-trichlorobenzene	29.79	180	3223039	222.25	ug/L	97
77) hexachlorobutadiene	30.13	225	1556387	212.08	ug/L	97
78) naphthalene	30.57	128	5428522	187.54	ug/L	97
79) 1,2,3-trichlorobenzene	31.29	180	2645573	209.92	ug/L	97

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



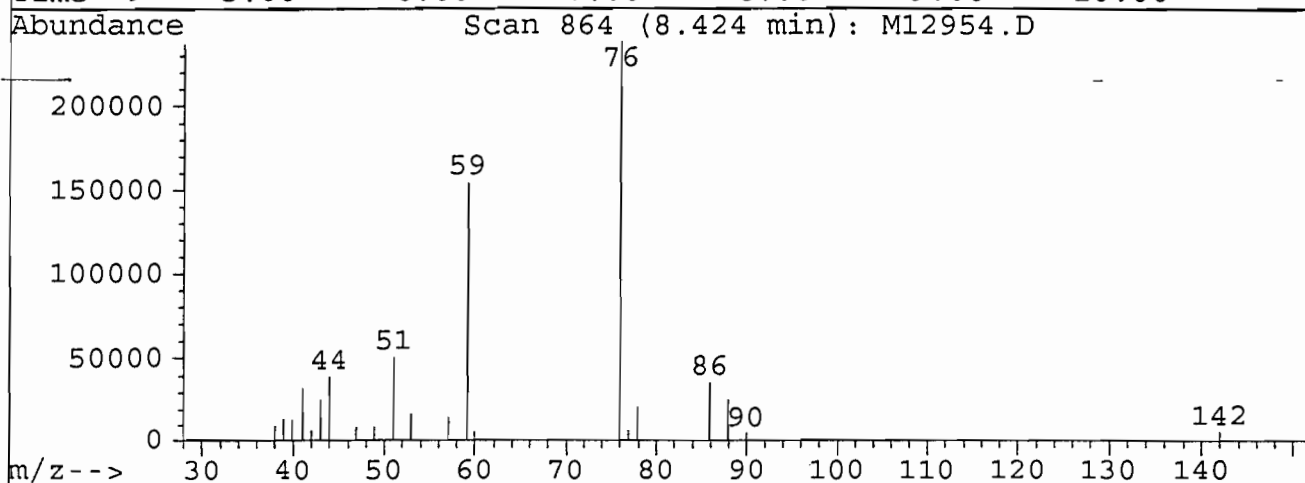
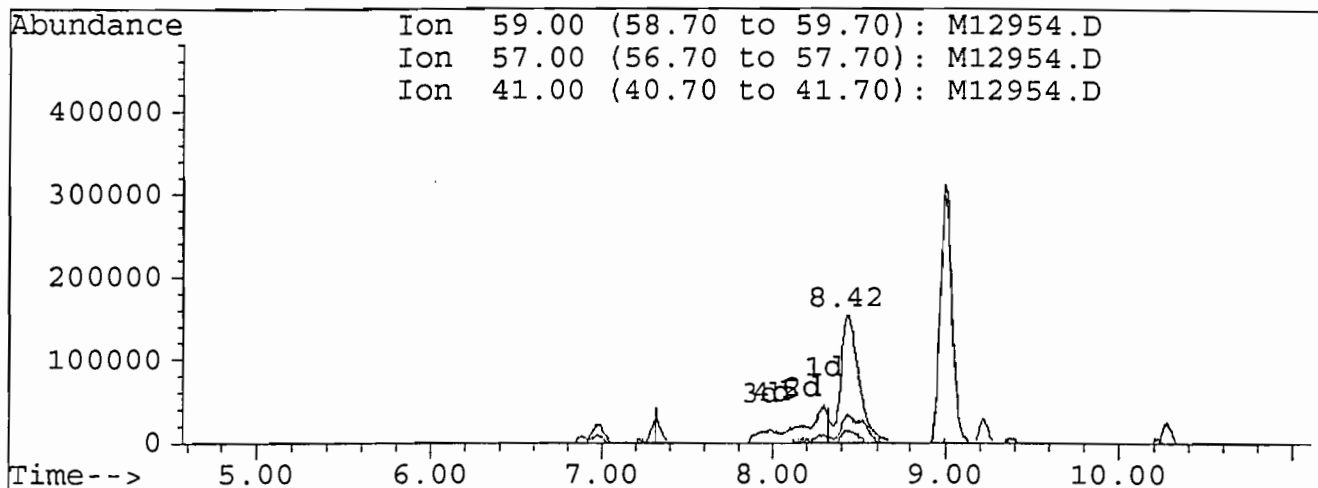
000431

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12954.D
 Acq Time : 9 Oct 99 8:32 am
 Sample : 200 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:04 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12954.D

(15) TBA

8.42min 2079.38ug/L m

response 1633441

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	9.20
41.00	20.60	20.70
0.00	0.00	0.00

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.11	96	2034665	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.46	117	1763980	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	750397	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.40	113	1318836	98.95	ug/L	197.90%
30) 1,2-Dichlorethane-d4	13.44	65	1484370	101.19	ug/L	202.39%
38) Toluene-d8	17.36	98	3965441	95.38	ug/L	190.77%
42) 4-Bromofluorobenzene	22.93	95	1678001	95.59	ug/L	191.17%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.50	85	1203188	103.17	ug/L	100
3) chloromethane	4.02	50	1735316	104.70	ug/L	100
4) vinyl chloride	4.17	62	1248604	101.58	ug/L	100
5) bromomethane	5.06	94	815381	84.32	ug/L	99
6) chloroethane	5.25	64	784503	87.84	ug/L	98
7) Acrolein	7.00	56	1663688	1026.53	ug/L	100
8) trichlorofluoromethane	5.86	101	1689106	92.63	ug/L	100
9) 1,1-dichloroethene	7.38	61	1669921	99.55	ug/L	97
10) Acetone	7.22	43	659187	113.27	ug/L	95
11) Carbon Disulfide	8.53	76	3853718	100.73	ug/L	100
12) Iodo Methane	8.10	142	2078220	102.70	ug/L	100
13) methylene chloride	8.57	84	1289321	105.29	ug/L	100
14) trans-1,2-dichloroethene	9.26	61	1725700	103.71	ug/L	98
15) TBA	8.20	59	897239	1068.44	ug/L m	87
16) MTBE	9.00	73	3351522	101.13	ug/L	99
17) Acrylonitrile	8.92	53	4263940	1025.35	ug/L	100
18) 1,1-dichloroethane	10.25	63	2266798	101.20	ug/L	98
19) 2,2-dichloropropane	11.49	77	1907809	104.02	ug/L	98
20) cis-1,2-dichloroethene	11.59	61	1924608	103.42	ug/L	99
21) bromochloromethane	12.28	49	1285335	102.28	ug/L	94
22) chloroform	11.93	83	2387734	102.36	ug/L	97
23) 1,1,1-trichloroethane	12.79	97	1969182	102.17	ug/L	95
25) Vinyl Acetate	10.29	43	4037018	102.23	ug/L	99
26) 2-Butanone	11.26	43	803378	106.22	ug/L	99
27) carbon tetrachloride	13.32	117	1671798	102.01	ug/L	95
28) 1,1-dichloropropene	13.11	75	1670619	101.50	ug/L	98
29) benzene	13.67	78	4339325	96.14	ug/L	100
31) 1,2-dichloroethane	13.63	62	1878652	101.06	ug/L	99
32) trichloroethene	14.92	130	1367319	101.81	ug/L	99
33) 1,2-dichloropropane	15.28	63	1295011	100.10	ug/L	99
34) dibromomethane	15.88	174	939498	98.78	ug/L	99
35) bromodichloromethane	15.76	83	1974386	101.09	ug/L	98
36) 2-Chloroethyl Vinyl Ether	16.35	63	803037	104.78	ug/L	98

(#) = qualifier out of range (m) = manual integration
 M12955.D V31009CW.M Sat Oct 09 12:09:13 1999

000433
 VOA3 Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	cis-1,3-dichloropropene	16.85	75	2192721	102.01	ug/L	96
39)	toluene	17.52	91	4750698	98.68	ug/L	97
40)	trans-1,3-dichloropropene	17.85	75	1991220	101.15	ug/L	98
41)	1,1,2-trichloroethane	18.18	97	1133003	100.67	ug/L	96
44)	4-Methyl-2-Pentanone	16.43	43	1274072	99.06	ug/L	97
45)	tetrachloroethene	18.85	166	1321299	98.17	ug/L	97
46)	1,3-dichloropropane	18.69	76	2103790	96.85	ug/L	99
47)	dibromochloromethane	19.26	129	1480879	99.69	ug/L	99
48)	1,2-dibromoethane	19.68	107	1279989	97.46	ug/L	97
49)	2-Hexanone	18.18	43	997845	106.39	ug/L	99
50)	chlorobenzene	20.53	112	3145689	98.47	ug/L	98
51)	1-Chlorohexane	19.94	91	2015464	94.35	ug/L	98
52)	1,1,1,2-tetrachloroethane	20.60	133	1086208	91.66	ug/L	100
53)	ethylbenzene	20.61	91	5120586	88.36	ug/L	99
54)	m&p-xylenes	20.77	106	3569379	182.23	ug/L	99
55)	o-xylene	21.67	91	4257439	96.13	ug/L	100
56)	styrene	21.73	104	3283045	92.76	ug/L	99
57)	bromoform	22.48	173	985589	99.03	ug/L	98
59)	isopropylbenzene	22.39	105	4940762	97.37	ug/L	98
60)	bromobenzene	23.36	77	2205709	97.90	ug/L	100
61)	1,1,2,2-tetrachloroethane	22.74	83	1523552	98.82	ug/L	97
62)	1,2,3-trichloropropane	23.05	75	1101258	100.85	ug/L	97
63)	n-propylbenzene	23.21	120	1243578	98.83	ug/L	96
64)	2-chlorotoluene	23.60	126	1097980	92.70	ug/L	98
65)	4-chlorotoluene	23.68	126	1164365	99.68	ug/L	99
66)	1,3,5-trimethylbenzene	23.52	105	4030072	100.49	ug/L	99
67)	tert-butylbenzene	24.19	119	3503800	97.90	ug/L	99
68)	1,2,4-trimethylbenzene	24.26	105	3902812	92.75	ug/L	99
69)	sec-butylbenzene	24.57	105	4869531	95.24	ug/L	99
70)	1,3-dichlorobenzene	25.05	146	2265702	95.78	ug/L	99
71)	4-isopropyltoluene	24.81	119	4281282	97.87	ug/L	98
72)	1,4-dichlorobenzene	25.25	146	2371219	98.56	ug/L	100
73)	1,2-dichlorobenzene	25.99	146	2186791	94.59	ug/L	98
74)	n-butylbenzene	25.59	91	4136137	100.58	ug/L	100
75)	1,2-dibromo-3-chloropropan	27.63	75	249505	106.20	ug/L	99
76)	1,2,4-trichlorobenzene	29.79	180	1636042	103.99	ug/L	99
77)	hexachlorobutadiene	30.14	225	807222	101.39	ug/L	97
78)	naphthalene	30.57	128	3128419	99.62	ug/L	98
79)	1,2,3-trichlorobenzene	31.29	180	1372093	100.36	ug/L	98

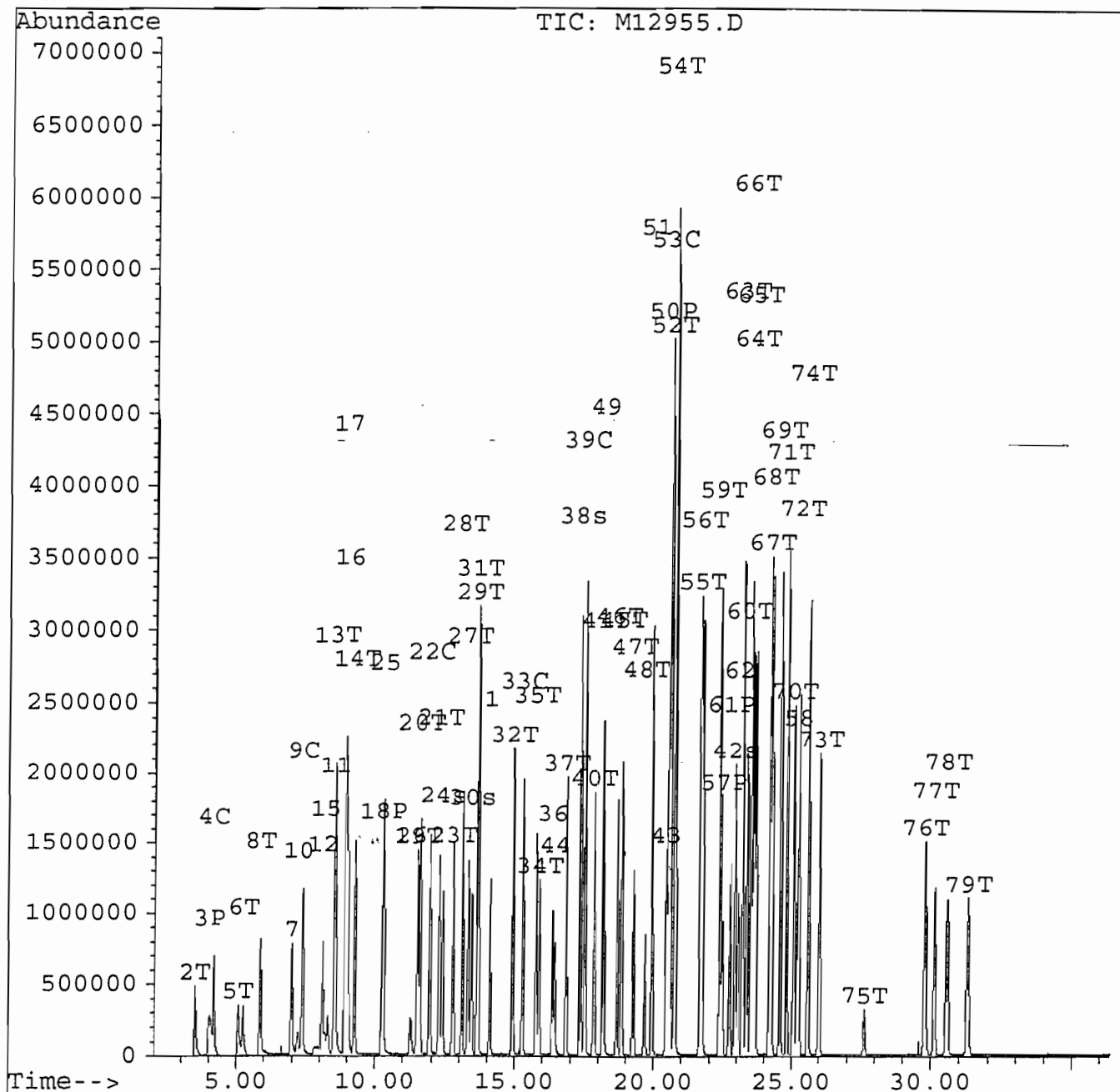
000434

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



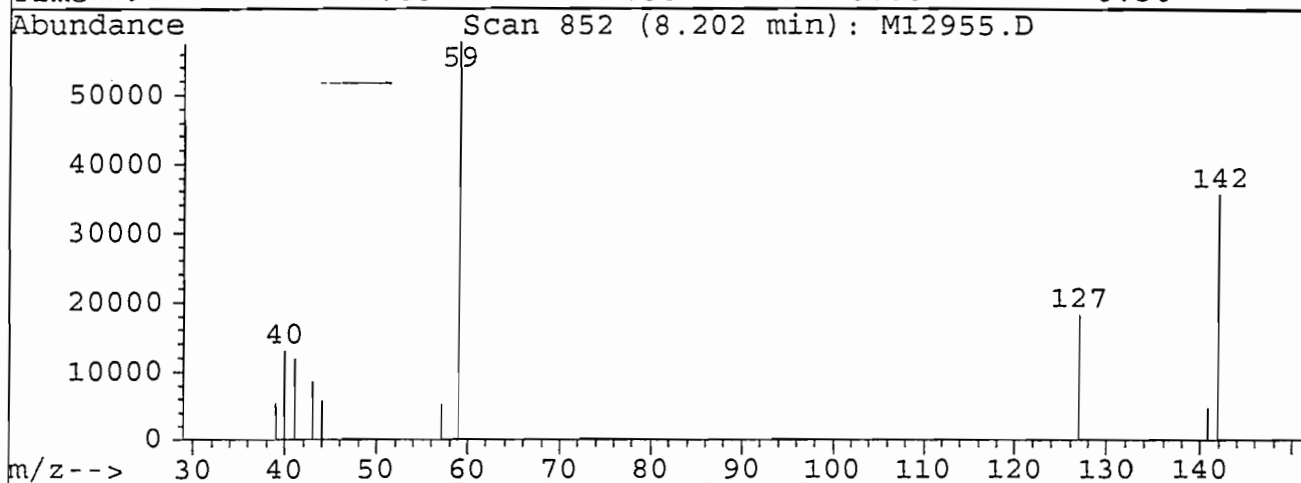
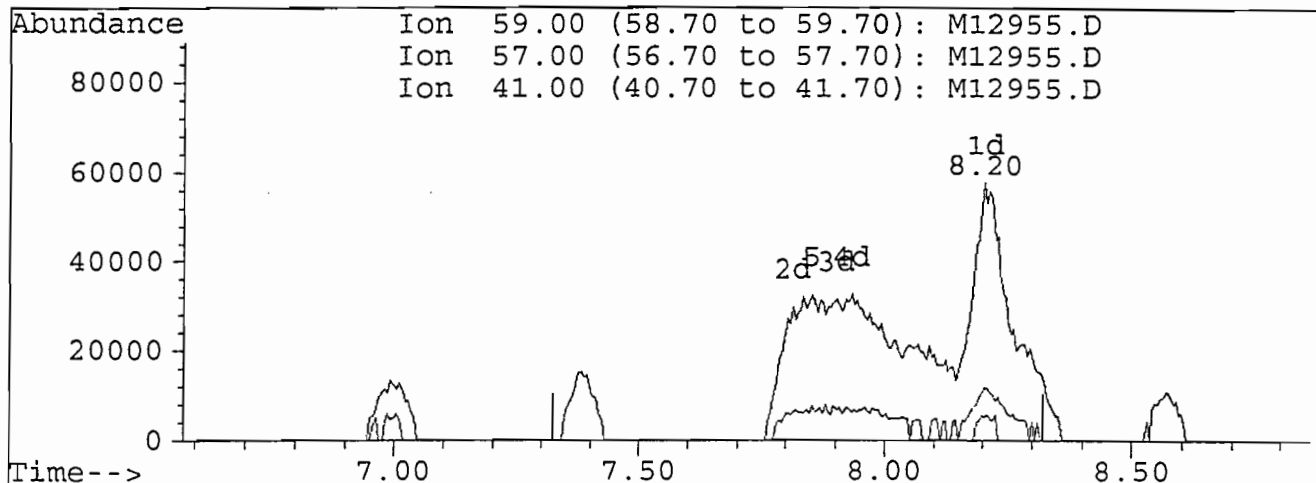
000435

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12955.D
 Acq Time : 9 Oct 99 9:17 am
 Sample : 100 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:08 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12955.D

(15) TBA
 8.20min 1068.44ug/L m
 response 897239

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	9.01
41.00	20.60	20.54
0.00	0.00	0.00

000436

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.10	96	2018190	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.45	117	1680493	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.18	152	736615	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.40	113	661026	50.00	ug/L	100.00%
30) 1,2-Dichlorethane-d4	13.44	65	727499	50.00	ug/L	100.00%
38) Toluene-d8	17.36	98	2061848	50.00	ug/L	100.00%
42) 4-Bromofluorobenzene	22.93	95	870630	50.00	ug/L	100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.50	85	578378	50.00	ug/L	100
3) chloromethane	4.03	50	821965	50.00	ug/L	100
4) vinyl chloride	4.18	62	609612	50.00	ug/L	100
5) bromomethane	5.09	94	479574	50.00	ug/L	100
6) chloroethane	5.27	64	442937	50.00	ug/L	100
7) Acrolein	6.98	56	803781	500.00	ug/L	100
8) trichlorofluoromethane	5.88	101	904364	50.00	ug/L	100
9) 1,1-dichloroethene	7.40	61	831960	50.00	ug/L	100
10) Acetone	7.19	43	288612	50.00	ug/L	100
11) Carbon Disulfide	8.55	76	1897407	50.00	ug/L	100
12) Iodo Methane	8.11	142	1003564	50.00	ug/L	100
13) methylene chloride	8.57	84	607308	50.00	ug/L	100
14) trans-1,2-dichloroethene	9.27	61	825216	50.00	ug/L	100
15) TBA	7.82	59	416421	499.93	ug/L m	61
16) MTBE	9.00	73	1643609	50.00	ug/L	100
17) Acrylonitrile	8.91	53	2062427	500.00	ug/L	100
18) 1,1-dichloroethane	10.25	63	1110847	50.00	ug/L	100
19) 2,2-dichloropropane	11.50	77	909649	50.00	ug/L	100
20) cis-1,2-dichloroethene	11.59	61	922986	50.00	ug/L	100
21) bromochloromethane	12.28	49	623248	50.00	ug/L	100
22) chloroform	11.94	83	1156930	50.00	ug/L	100
23) 1,1,1-trichloroethane	12.78	97	955892	50.00	ug/L	100
25) Vinyl Acetate	10.28	43	1958579	50.00	ug/L	100
26) 2-Butanone	11.25	43	375108	50.00	ug/L	100
27) carbon tetrachloride	13.32	117	812791	50.00	ug/L	100
28) 1,1-dichloropropene	13.11	75	816277	50.00	ug/L	100
29) benzene	13.67	78	2238612	50.00	ug/L	100
31) 1,2-dichloroethane	13.63	62	921906	50.00	ug/L	100
32) trichloroethene	14.93	130	666064	50.00	ug/L	100
33) 1,2-dichloropropane	15.28	63	641648	50.00	ug/L	100
34) dibromomethane	15.88	174	471687	50.00	ug/L	100
35) bromodichloromethane	15.77	83	968677	50.00	ug/L	100
36) 2-Chloroethyl Vinyl Ether	16.35	63	380102	50.00	ug/L	100

(#) = qualifier out of range (m) = manual integration
 M12956.D V31009CW.M Sat Oct 09 11:46:45 1999

VOA3

Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
Acq Time : 9 Oct 99 10:02 am
Sample : 50 PPB ICC
Misc : 5MLS
Quant Time: Oct 9 11:46 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 11:41:15 1999
Response via : Single Level Calibration

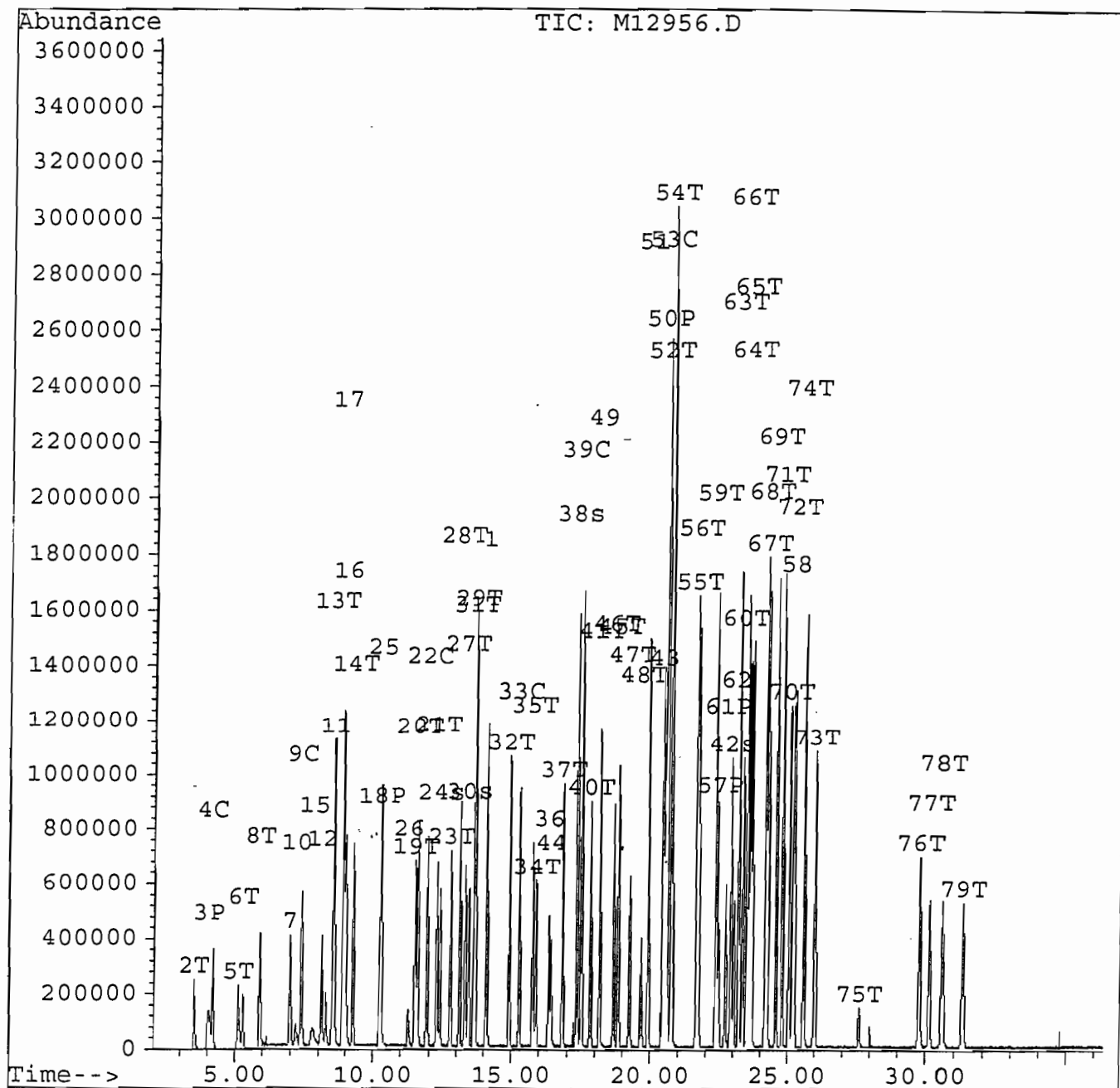
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	1066104	50.00	ug/L	100
39) toluene	17.52	91	2387530	50.00	ug/L	100
40) trans-1,3-dichloropropene	17.85	75	976341	50.00	ug/L	100
41) 1,1,2-trichloroethane	18.18	97	558187	50.00	ug/L	100
44) 4-Methyl-2-Pentanone	16.42	43	612644	50.00	ug/L	100
45) tetrachloroethene	18.86	166	641087	50.00	ug/L	100
46) 1,3-dichloropropane	18.68	76	1034705	50.00	ug/L	100
47) dibromochloromethane	19.26	129	707555	50.00	ug/L	100
48) 1,2-dibromoethane	19.68	107	625595	50.00	ug/L	100
49) 2-Hexanone	18.18	43	446755	50.00	ug/L	100
50) chlorobenzene	20.53	112	1521658	50.00	ug/L	100
51) 1-Chlorohexane	19.94	91	1017520	50.00	ug/L	100
52) 1,1,1,2-tetrachloroethane	20.59	133	564476	50.00	ug/L	100
53) ethylbenzene	20.61	91	2760535	50.00	ug/L	100
54) m&p-xylenes	20.77	106	1866060	100.00	ug/L	100
55) o-xylene	21.67	91	2109673	50.00	ug/L	100
56) styrene	21.74	104	1685864	50.00	ug/L	100
57) bromoform	22.48	173	474089	50.00	ug/L	100
59) isopropylbenzene	22.39	105	2490466	50.00	ug/L	100
60) bromobenzene	23.36	77	1105790	50.00	ug/L	100
61) 1,1,2,2-tetrachloroethane	22.73	83	756747	50.00	ug/L	100
62) 1,2,3-trichloropropane	23.04	75	535961	50.00	ug/L	100
63) n-propylbenzene	23.21	120	617575	50.00	ug/L	100
64) 2-chlorotoluene	23.60	126	580568	49.93	ug/L	100
65) 4-chlorotoluene	23.68	126	573325	50.00	ug/L	100
66) 1,3,5-trimethylbenzene	23.51	105	1968351	50.00	ug/L	100
67) tert-butylbenzene	24.19	119	1756645	50.00	ug/L	100
68) 1,2,4-trimethylbenzene	24.26	105	2065384	50.00	ug/L	100
69) sec-butylbenzene	24.57	105	2509584	50.00	ug/L	100
70) 1,3-dichlorobenzene	25.05	146	1161072	50.00	ug/L	100
71) 4-isopropyltoluene	24.81	119	2147163	50.00	ug/L	100
72) 1,4-dichlorobenzene	25.25	146	1180830	50.00	ug/L	100
73) 1,2-dichlorobenzene	26.00	146	1134705	50.00	ug/L	100
74) n-butylbenzene	25.60	91	2018461	50.00	ug/L	100
75) 1,2-dibromo-3-chloropropan	27.62	75	115314	50.00	ug/L	100
76) 1,2,4-trichlorobenzene	29.78	180	772176	50.00	ug/L	100
77) hexachlorobutadiene	30.13	225	390749	50.00	ug/L	100
78) naphthalene	30.57	128	1541290	50.00	ug/L	100
79) 1,2,3-trichlorobenzene	31.29	180	671060	50.00	ug/L	100

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct .9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



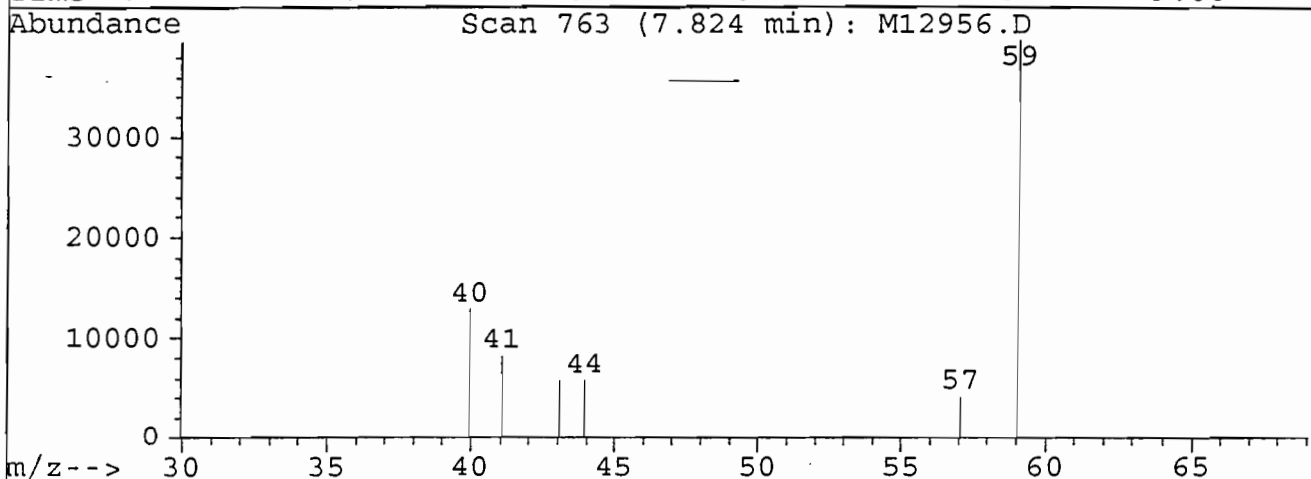
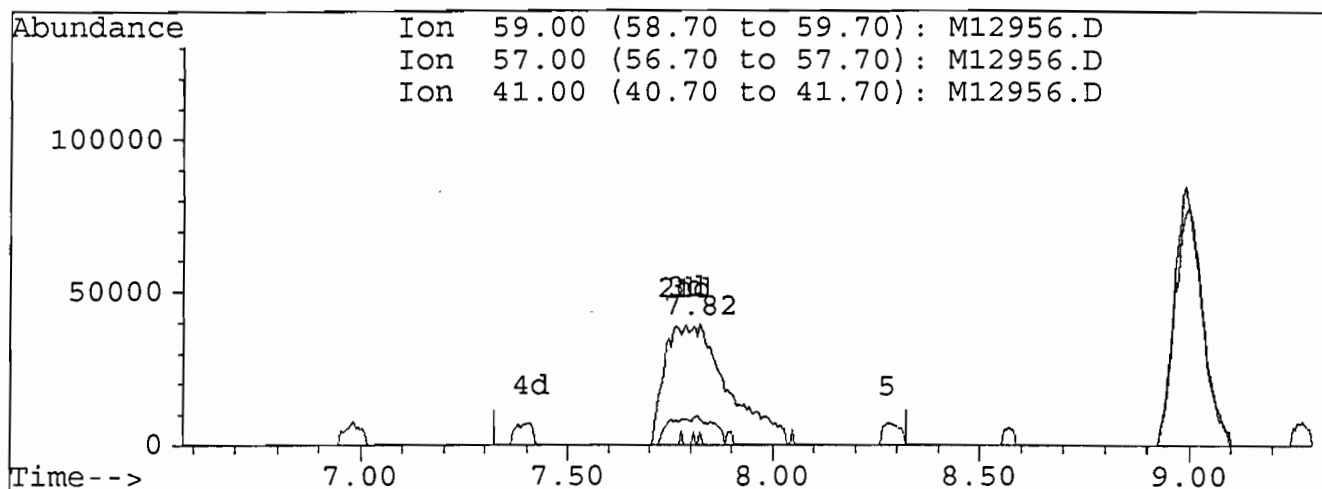
000439

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12956.D
 Acq Time : 9 Oct 99 10:02 am
 Sample : 50 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 11:46 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12956.D

(15) TBA
 7.82min 499.93ug/L m
 response 416421

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	10.38
41.00	20.60	20.65
0.00	0.00	0.00

000440

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Fluorobenzene	14.10	96	2139904	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.45	117	1788656	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	25.19	152	783692	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.40	113	270072	19.27	ug/L	38.53%
30) 1,2-Dichlorethane-d4	13.44	65	309675	20.07	ug/L	40.15%
38) Toluene-d8	17.36	98	867519	19.84	ug/L	39.68%
42) 4-Bromofluorobenzene	22.92	95	378169	20.48	ug/L	40.97%
Target Compounds						Qvalue
2) dichlorodifluoromethane	3.50	85	232757	18.98	ug/L	99
3) chloromethane	4.02	50	320445	18.38	ug/L	95
4) vinyl chloride	4.18	62	261808	20.25	ug/L	98
5) bromomethane	5.11	94	216213	21.26	ug/L	95
6) chloroethane	5.29	64	171152	18.22	ug/L	99
7) Acrolein	6.98	56	332244	194.92	ug/L	99
8) trichlorofluoromethane	5.90	101	398949	20.80	ug/L	98
9) 1,1-dichloroethene	7.40	61	355507	20.15	ug/L	98
10) Acetone	7.18	43	117257	19.16	ug/L	92
11) Carbon Disulfide	8.54	76	840249	20.88	ug/L	98
12) Iodo Methane	8.12	142	404581	19.01	ug/L	99
13) methylene chloride	8.57	84	259864	20.18	ug/L	96
14) trans-1,2-dichloroethene	9.28	61	373916	21.37	ug/L	98
15) TBA	7.74	59	160061	181.23	ug/L m	90
16) MTBE	8.99	73	688317	19.75	ug/L	99
17) Acrylonitrile	8.90	53	868513	198.58	ug/L	97
18) 1,1-dichloroethane	10.26	63	507407	21.54	ug/L	96
19) 2,2-dichloropropane	11.50	77	393264	20.39	ug/L	99
20) cis-1,2-dichloroethene	11.59	61	409054	20.90	ug/L	94
21) bromochloromethane	12.28	49	273367	20.68	ug/L	99
22) chloroform	11.93	83	515906	21.03	ug/L	99
23) 1,1,1-trichloroethane	12.78	97	406244	20.04	ug/L	98
25) Vinyl Acetate	10.29	43	875897	21.09	ug/L	99
26) 2-Butanone	11.26	43	146075	18.36	ug/L	90
27) carbon tetrachloride	13.32	117	352646	20.46	ug/L	91
28) 1,1-dichloropropene	13.11	75	354861	20.50	ug/L	99
29) benzene	13.67	78	1002252	21.11	ug/L	96
31) 1,2-dichloroethane	13.64	62	386513	19.77	ug/L	97
32) trichloroethene	14.93	130	300818	21.30	ug/L	98
33) 1,2-dichloropropane	15.29	63	284270	20.89	ug/L	97
34) dibromomethane	15.88	174	194638	19.46	ug/L	95
35) bromodichloromethane	15.76	83	419798	20.44	ug/L	99
36) 2-Chloroethyl Vinyl Ether	16.35	63	150704	18.70	ug/L	100

000441

(#) = qualifier out of range (m) = manual integration
 M12957.D V31009CW.M Sat Oct 09 12:13:26 1999

VOA3

Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

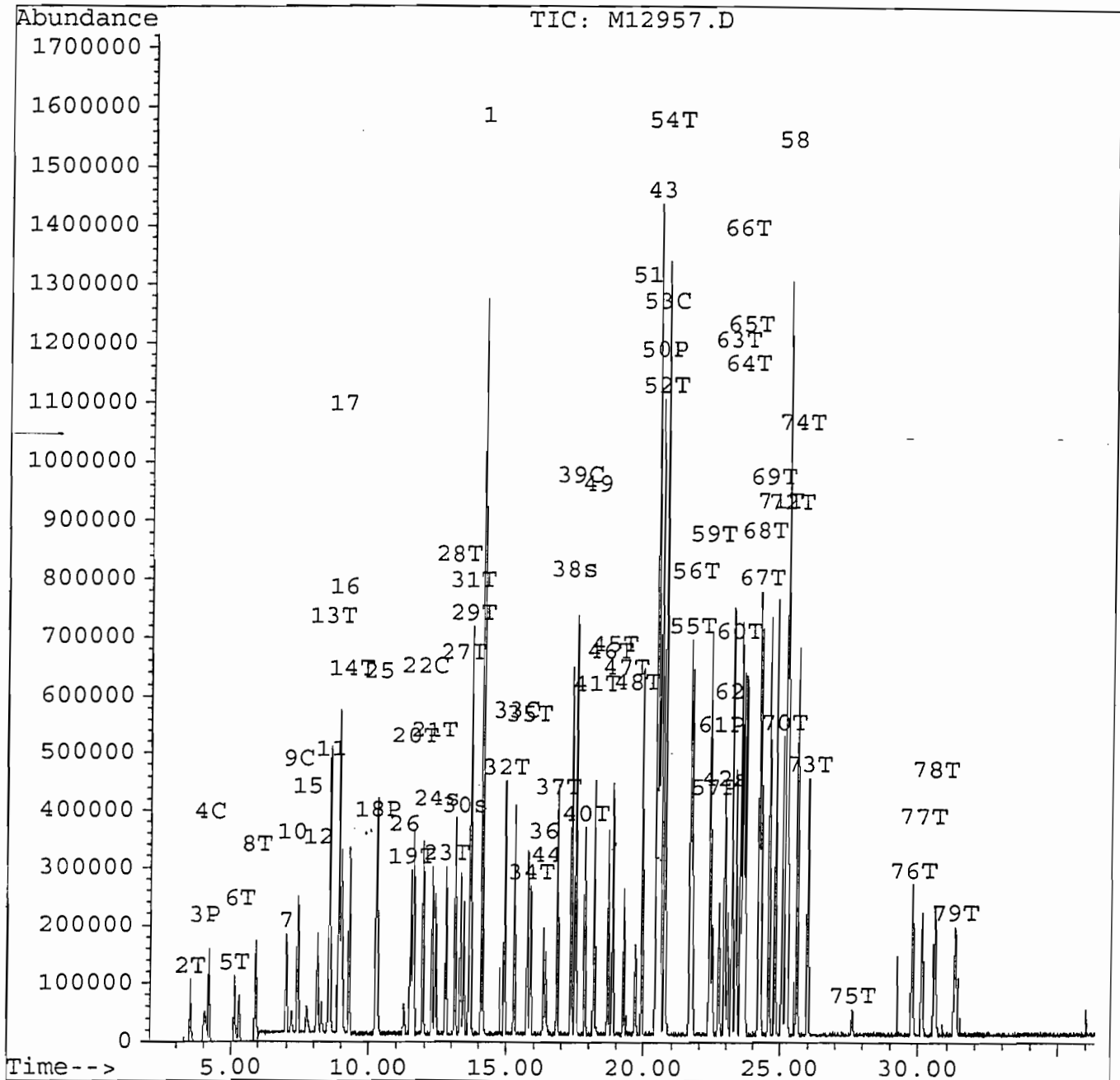
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37)	cis-1,3-dichloropropene	16.84	75	472958	20.92	ug/L	97
39)	toluene	17.52	91	1071183	21.16	ug/L	98
40)	trans-1,3-dichloropropene	17.84	75	414308	20.01	ug/L	99
41)	1,1,2-trichloroethane	18.18	97	241242	20.38	ug/L	97
44)	4-Methyl-2-Pentanone	16.43	43	231137	17.72	ug/L	94
45)	tetrachloroethene	18.85	166	281637	20.64	ug/L	96
46)	1,3-dichloropropane	18.69	76	441536	20.05	ug/L	100
47)	dibromochloromethane	19.27	129	302645	20.09	ug/L	99
48)	1,2-dibromoethane	19.69	107	262625	19.72	ug/L	97
49)	2-Hexanone	18.19	43	144926	15.24	ug/L	96
50)	chlorobenzene	20.53	112	661535	20.42	ug/L	99
51)	1-Chlorohexane	19.93	91	448846	20.72	ug/L	98
52)	1,1,1,2-tetrachloroethane	20.60	133	244141	20.32	ug/L	99
53)	ethylbenzene	20.61	91	1241433	21.13	ug/L	100
54)	m&p-xylenes	20.76	106	807790	40.67	ug/L	99
55)	o-xylene	21.67	91	936267	20.85	ug/L	99
56)	styrene	21.73	104	709639	19.77	ug/L	96
57)	bromoform	22.49	173	198227	19.64	ug/L	96
59)	isopropylbenzene	22.38	105	1091938	20.61	ug/L	99
60)	bromobenzene	23.36	77	487771	20.73	ug/L	99
61)	1,1,2,2-tetrachloroethane	22.73	83	318332	19.77	ug/L	98
62)	1,2,3-trichloropropane	23.03	75	229668	20.14	ug/L	98
63)	n-propylbenzene	23.21	120	264986	20.17	ug/L	97
64)	2-chlorotoluene	23.60	126	248658	20.10	ug/L	100
65)	4-chlorotoluene	23.68	126	257125	21.08	ug/L	100
66)	1,3,5-trimethylbenzene	23.51	105	890501	21.26	ug/L	97
67)	tert-butylbenzene	24.18	119	778154	20.82	ug/L	96
68)	1,2,4-trimethylbenzene	24.26	105	883992	20.11	ug/L	99
69)	sec-butylbenzene	24.57	105	1095541	20.52	ug/L	99
70)	1,3-dichlorobenzene	25.05	146	508510	20.58	ug/L	98
71)	4-isopropyltoluene	24.81	119	958624	20.98	ug/L	99
72)	1,4-dichlorobenzene	25.25	146	520044	20.70	ug/L	98
73)	1,2-dichlorobenzene	25.99	146	480662	19.91	ug/L	98
74)	n-butylbenzene	25.59	91	911368	21.22	ug/L	94
75)	1,2-dibromo-3-chloropropan	27.63	75	41362	16.86	ug/L	96
76)	1,2,4-trichlorobenzene	29.79	180	334240	20.34	ug/L	99
77)	hexachlorobutadiene	30.13	225	161901	19.47	ug/L	97
78)	naphthalene	30.56	128	709742	21.64	ug/L	99
79)	1,2,3-trichlorobenzene	31.29	180	284363	19.91	ug/L m	96

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



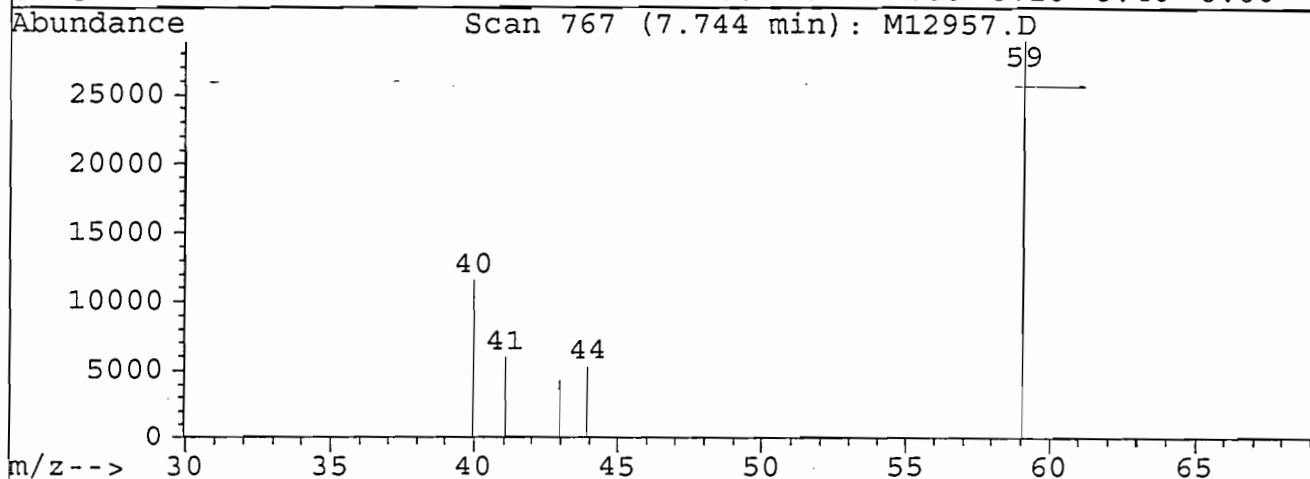
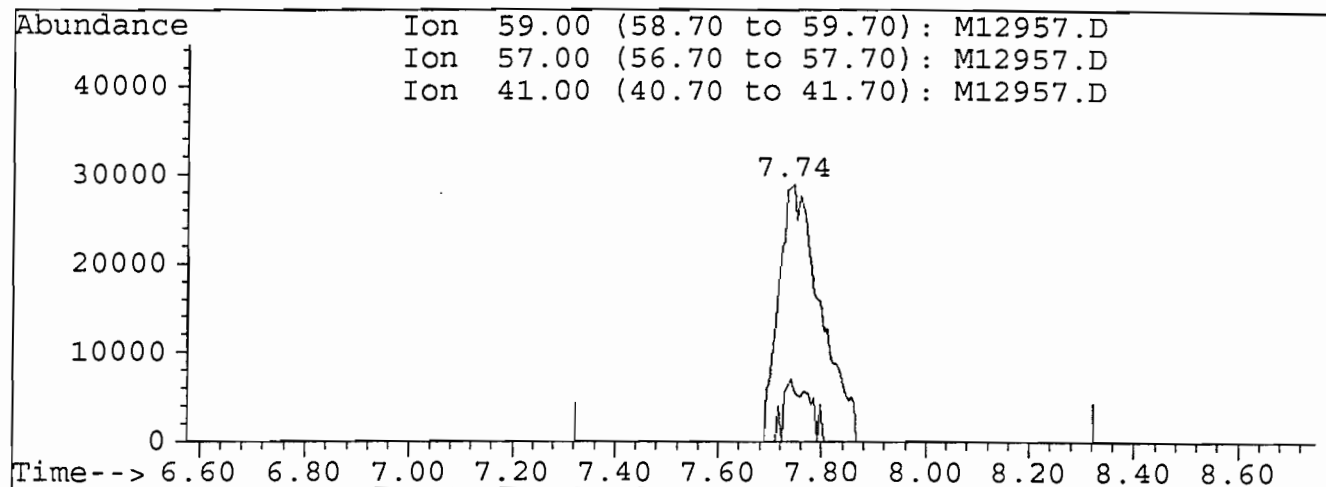
000443

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12957.D

(15) TBA
 7.74min 181.23ug/L m
 response 160061

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	0.00
41.00	20.60	20.39
0.00	0.00	0.00

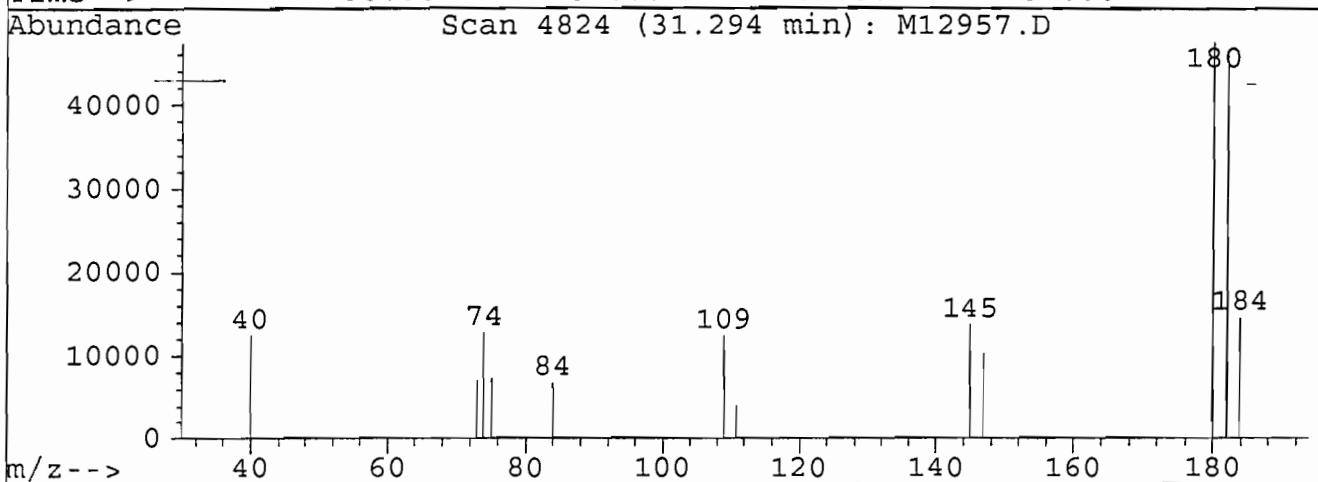
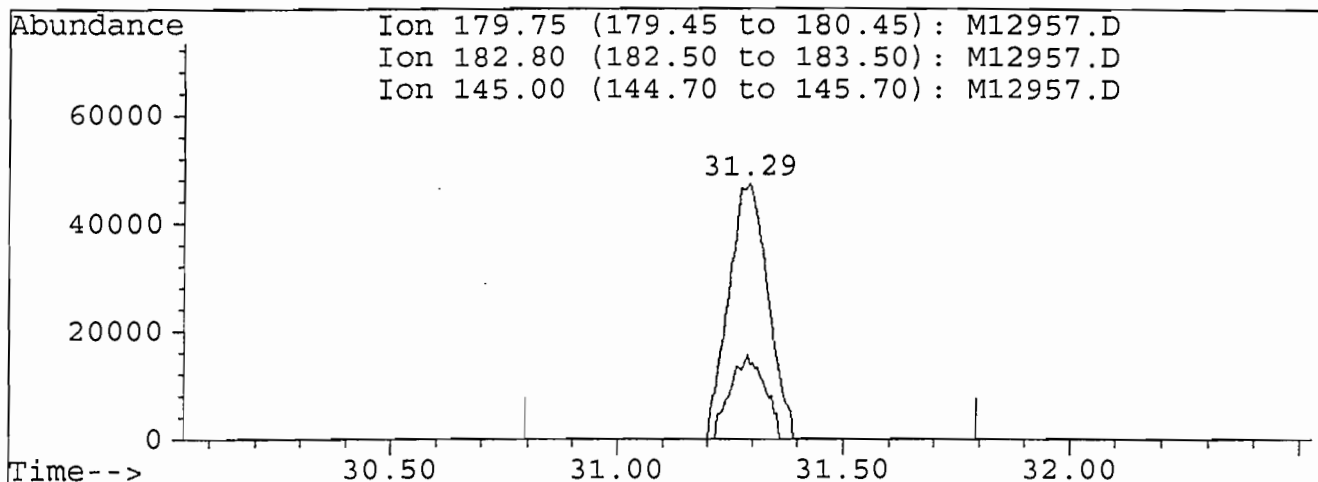
000444

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12957.D
 Acq Time : 9 Oct 99 10:49 am
 Sample : 20 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 12:12 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12957.D

(79) 1,2,3-trichlorobenzene (T)

31.29min 19.91ug/L m

response 284363

Ion	Exp%	Act%
179.75	100	100
182.80	5.60	0.00
145.00	29.90	28.73
0.00	0.00	0.00

000445

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.10	96	2241534	50.00	ug/L	0.00
43) Chlorobenzene-d5	20.44	117	1811208	50.00	ug/L	-0.01
58) 1,4-dichlorobenzene-d4	25.17	152	843471	50.00	ug/L	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.39	113	59639	4.06	ug/L	8.12%
30) 1,2-Dichlorethane-d4	13.44	65	67795	4.20	ug/L	8.39%
38) Toluene-d8	17.35	98	200644	4.38	ug/L	8.76%
42) 4-Bromofluorobenzene	22.92	95	85615	4.43	ug/L	8.85%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.48	85	55470	4.32	ug/L	100
3) chloromethane	3.99	50	76558	4.19	ug/L	99
4) vinyl chloride	4.16	62	66556	4.91	ug/L	96
5) bromomethane	5.10	94	53184	4.99	ug/L	98
6) chloroethane	5.29	64	44100	4.48	ug/L	100
7) Acrolein	6.97	56	86310	48.34	ug/L	98
8) trichlorofluoromethane	5.90	101	102053	5.08	ug/L	96
9) 1,1-dichloroethene	7.39	61	88177	4.77	ug/L	93
10) Acetone	7.17	43	62266	9.71	ug/L m	55
11) Carbon Disulfide	8.54	76	209004	4.96	ug/L	89
12) Iodo Methane	8.10	142	96062	4.31	ug/L m	88
13) methylene chloride	8.57	84	60738	4.50	ug/L	88
14) trans-1,2-dichloroethene	9.26	61	89680	4.89	ug/L	94
15) TBA	7.73	59	30714	33.20	ug/L m	61
16) MTBE	9.00	73	174819	4.79	ug/L	95
17) Acrylonitrile	8.90	53	220106	48.04	ug/L	98
18) 1,1-dichloroethane	10.25	63	119416	4.84	ug/L	97
19) 2,2-dichloropropane	11.49	77	99409	4.92	ug/L	98
20) cis-1,2-dichloroethene	11.59	61	97607	4.76	ug/L	92
21) bromochloromethane	12.27	49	63932	4.62	ug/L	94
22) chloroform	11.93	83	124916	4.86	ug/L	99
23) 1,1,1-trichloroethane	12.78	97	97653	4.60	ug/L	98
25) Vinyl Acetate	10.29	43	211736	4.87	ug/L	89
26) 2-Butanone	11.25	43	49291	5.92	ug/L m	59
27) carbon tetrachloride	13.31	117	85159	4.72	ug/L	87
28) 1,1-dichloropropene	13.11	75	87398	4.82	ug/L	96
29) benzene	13.67	78	253606	5.10	ug/L	97
31) 1,2-dichloroethane	13.63	62	97350	4.75	ug/L	98
32) trichloroethene	14.93	130	68375	4.62	ug/L	89
33) 1,2-dichloropropane	15.28	63	65161	4.57	ug/L	96
34) dibromomethane	15.88	174	42921	4.10	ug/L	90
35) bromodichloromethane	15.76	83	102884	4.78	ug/L	96
36) 2-Chloroethyl Vinyl Ether	16.35	63	34088	4.04	ug/L	97

(#) = qualifier out of range (m) = manual integration
 M12959.D V31009CW.M Sat Oct 09 13:22:16 1999

000446
 VOA3 Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
Acq Time : 9 Oct 99 12:35 pm
Sample : 5 PPB ICC
Misc : 5MLS
Quant Time: Oct 9 13:21 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 11:41:15 1999
Response via : Single Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.84	75	114206	4.82	ug/L	96
39) toluene	17.52	91	289385	5.46	ug/L	95
40) trans-1,3-dichloropropene	17.85	75	102212	4.71	ug/L	97
41) 1,1,2-trichloroethane	18.17	97	58048	4.68	ug/L	94
44) 4-Methyl-2-Pentanone	16.44	43	54831	4.15	ug/L m	61
45) tetrachloroethene	18.84	166	71806	5.20	ug/L	94
46) 1,3-dichloropropane	18.68	76	115548	5.18	ug/L	92
47) dibromochloromethane	19.26	129	74373	4.88	ug/L	97
48) 1,2-dibromoethane	19.68	107	64305	4.77	ug/L	96
49) 2-Hexanone	18.21	43	25237	2.62	ug/L m	45
50) chlorobenzene	20.52	112	176188	5.37	ug/L	98
51) 1-Chlorohexane	19.93	91	111515	5.08	ug/L	98
52) 1,1,1,2-tetrachloroethane	20.59	133	58804	4.83	ug/L	97
53) ethylbenzene	20.60	91	316414	5.32	ug/L	95
54) m&p-xylenes	20.75	106	217536	10.82	ug/L	98
55) o-xylene	21.65	91	247787	5.45	ug/L	92
56) styrene	21.72	104	185541	5.11	ug/L	93
57) bromoform	22.47	173	48192	4.72	ug/L	97
59) isopropylbenzene	22.38	105	284543	4.99	ug/L	96
60) bromobenzene	23.34	77	129373	5.11	ug/L	95
61) 1,1,2,2-tetrachloroethane	22.73	83	84294	4.86	ug/L	96
62) 1,2,3-trichloropropane	23.03	75	60350	4.92	ug/L	97
63) n-propylbenzene	23.20	120	66990	4.74	ug/L	92
64) 2-chlorotoluene	23.59	126	66757	5.01	ug/L	94
65) 4-chlorotoluene	23.67	126	65304	4.97	ug/L	90
66) 1,3,5-trimethylbenzene	23.50	105	241336	5.35	ug/L	95
67) tert-butylbenzene	24.17	119	233576	5.81	ug/L	97
68) 1,2,4-trimethylbenzene	24.25	105	239071	5.05	ug/L	97
69) sec-butylbenzene	24.56	105	296131	5.15	ug/L	99
70) 1,3-dichlorobenzene	25.04	146	131818	4.96	ug/L	98
71) 4-isopropyltoluene	24.79	119	271802	5.53	ug/L	98
72) 1,4-dichlorobenzene	25.23	146	137701	5.09	ug/L	93
73) 1,2-dichlorobenzene	25.99	146	125352	4.82	ug/L	97
74) n-butylbenzene	25.57	91	250330	5.42	ug/L	95
75) 1,2-dibromo-3-chloropropan	27.63	75	14719	5.57	ug/L	99
76) 1,2,4-trichlorobenzene	29.76	180	80771	4.57	ug/L	97
77) hexachlorobutadiene	30.11	225	39426	4.41	ug/L	96
78) naphthalene	30.54	128	173141	4.91	ug/L m	71
79) 1,2,3-trichlorobenzene	31.25	180	72238	4.70	ug/L m	51

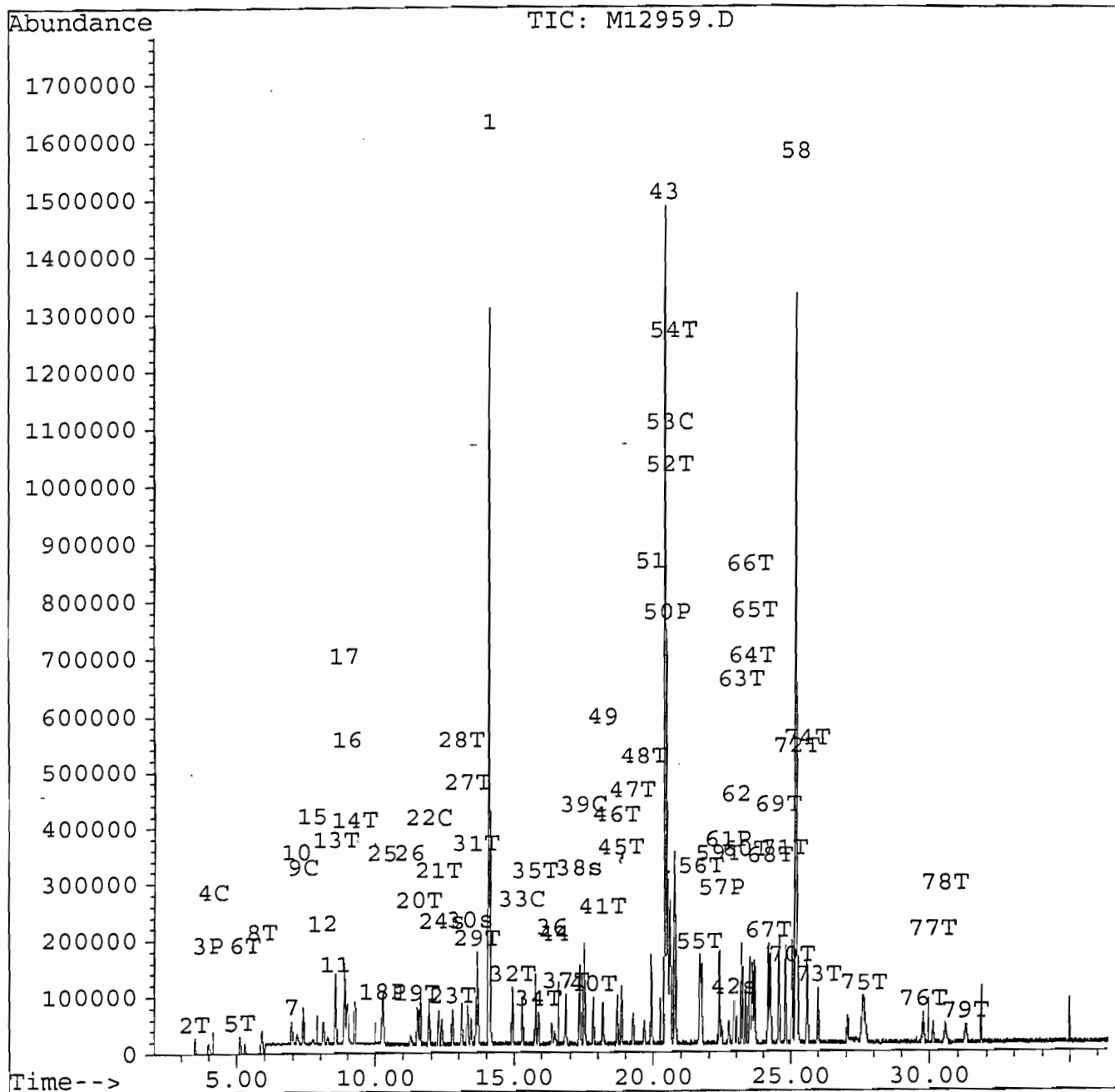
000447

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration

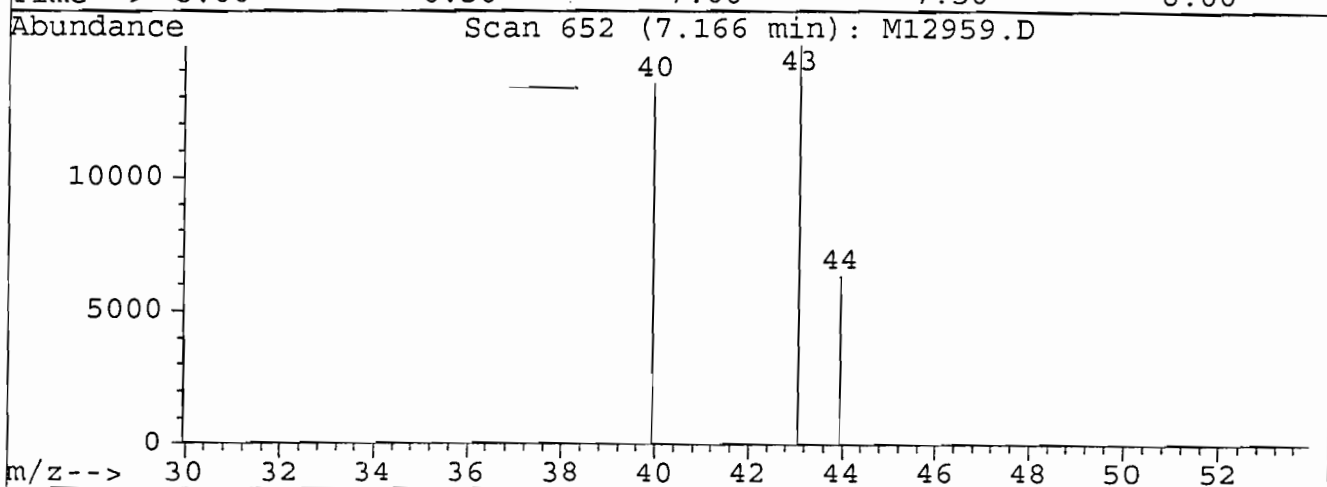
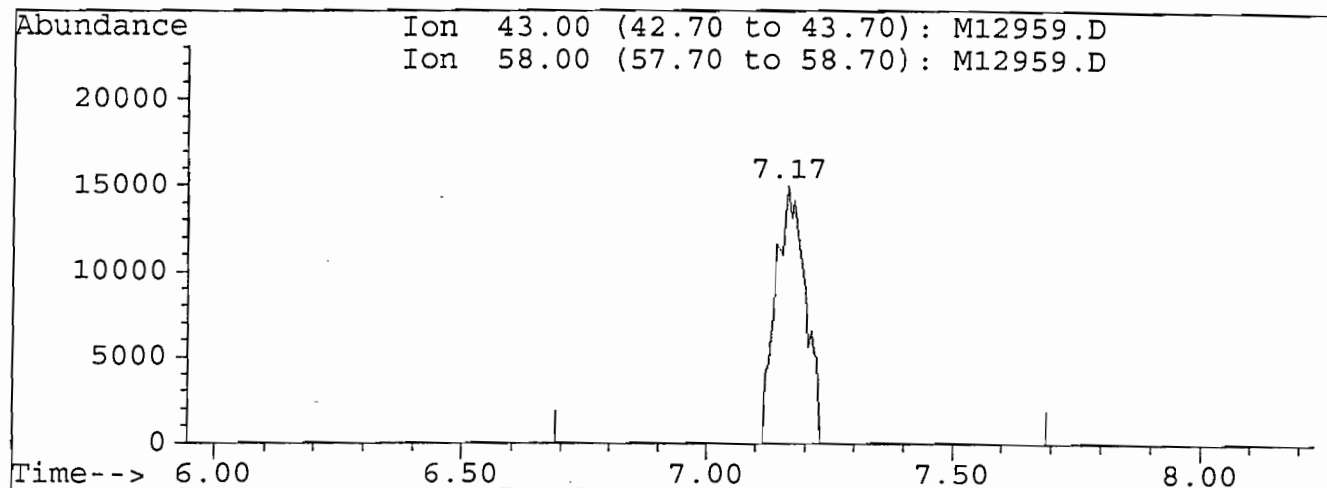


Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(10) Acetone

7.17min 9.71ug/L m

response 62266

Ion			Exp%	Act%
43.00			100	100
58.00			21.20	0.00
0.00			0.00	0.00
0.00			0.00	0.00

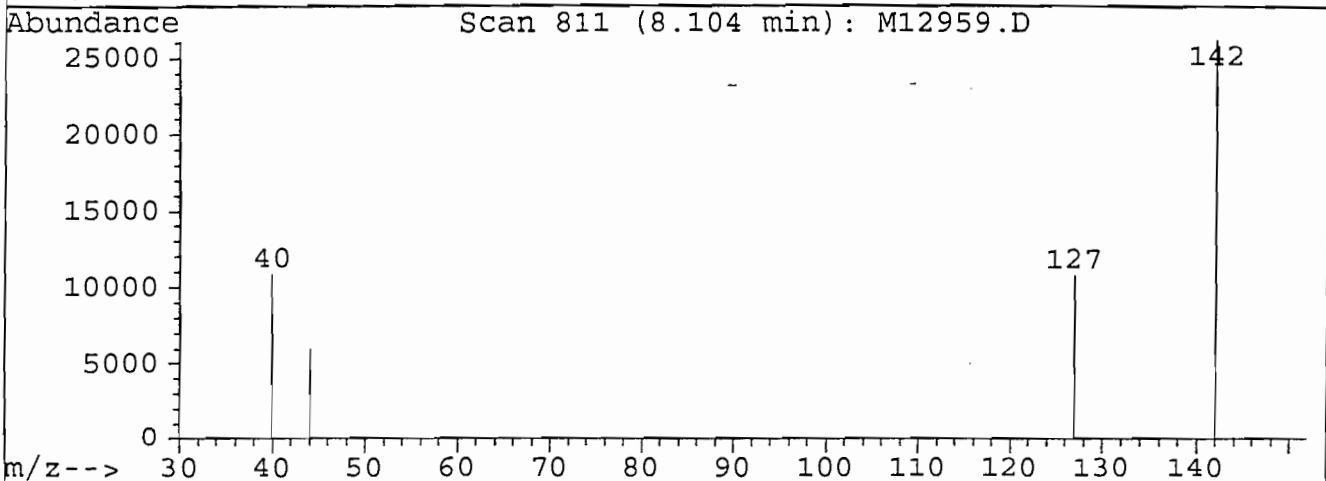
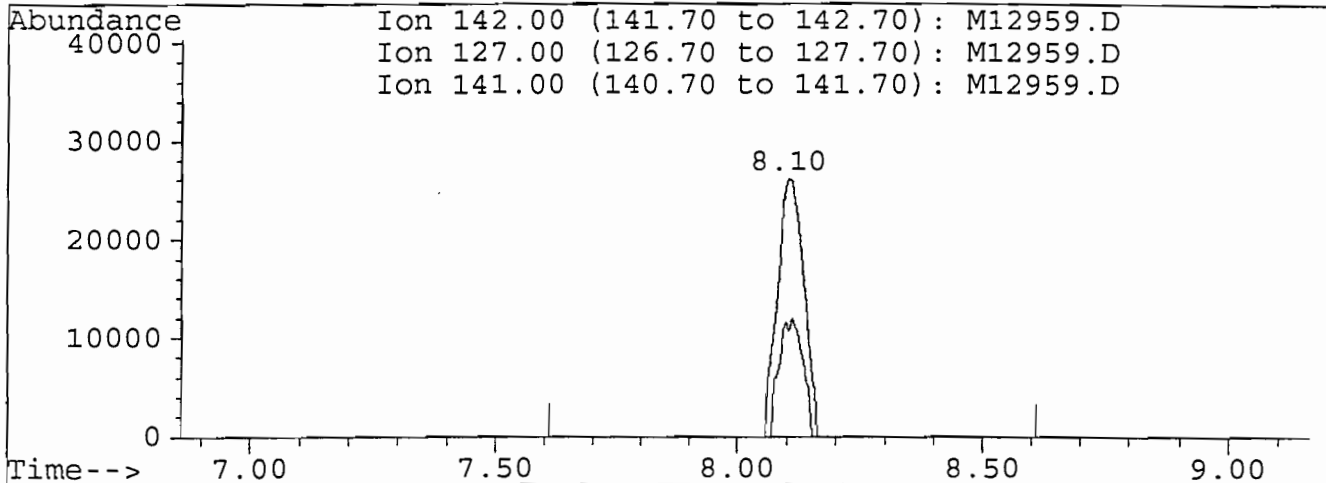
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(12) Iodo Methane
 8.10min 4.31ug/L m
 response 96062

Ion	Exp%	Act%
142.00	100	100
127.00	45.70	40.84
141.00	13.20	0.00
0.00	0.00	0.00

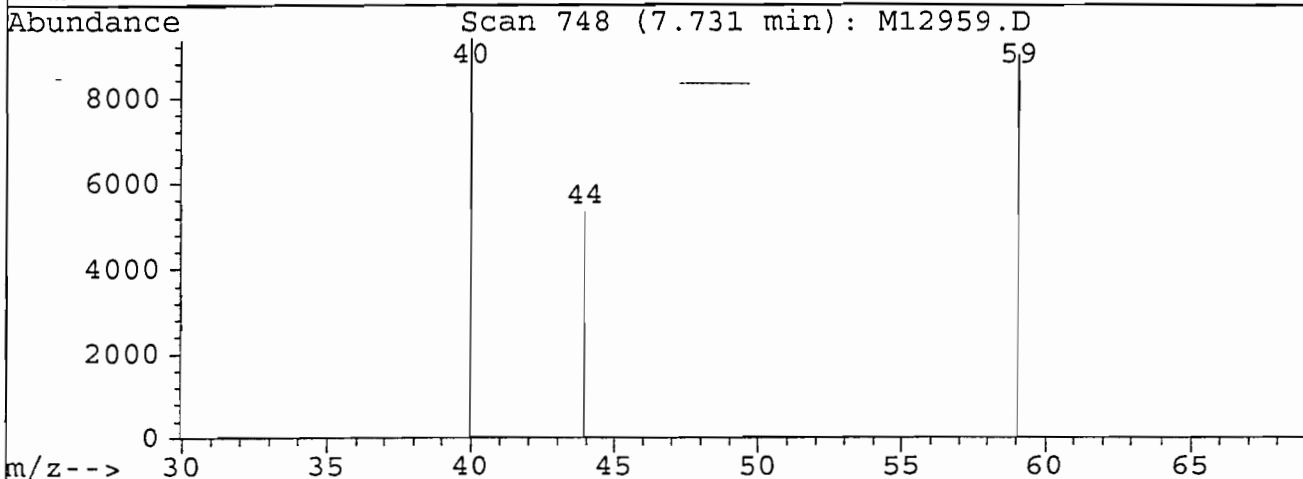
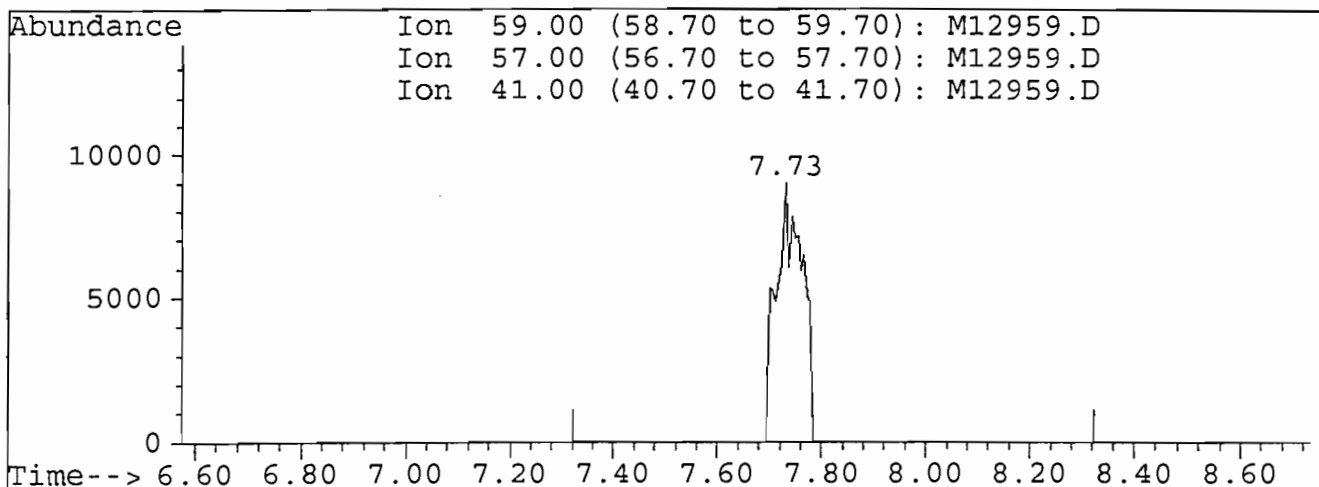
000450

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(15) TBA
 7.73min 33.20ug/L m
 response 30714

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	0.00
41.00	20.60	0.00
0.00	0.00	0.00

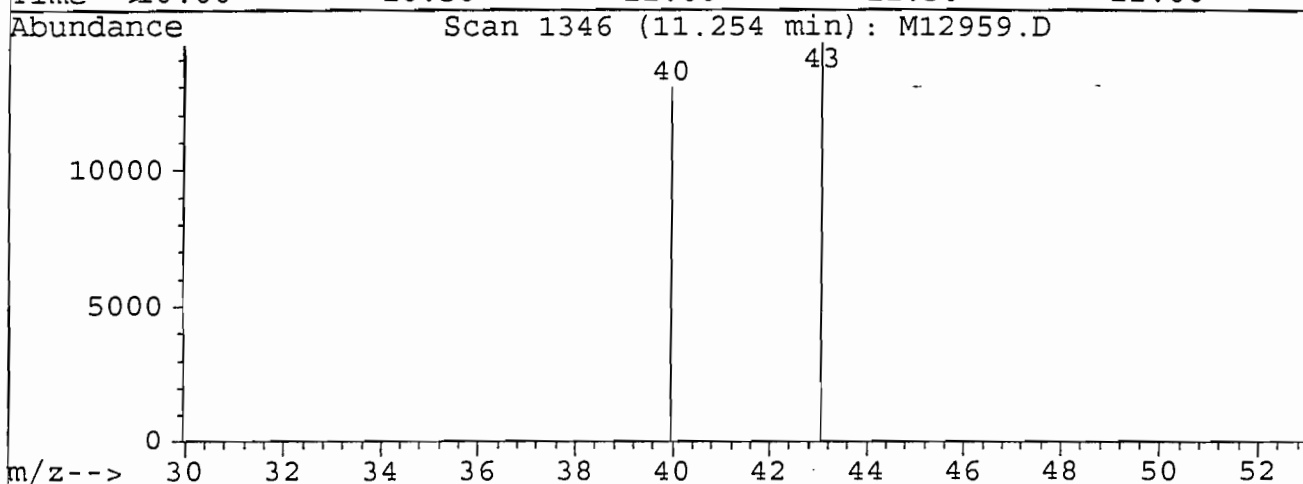
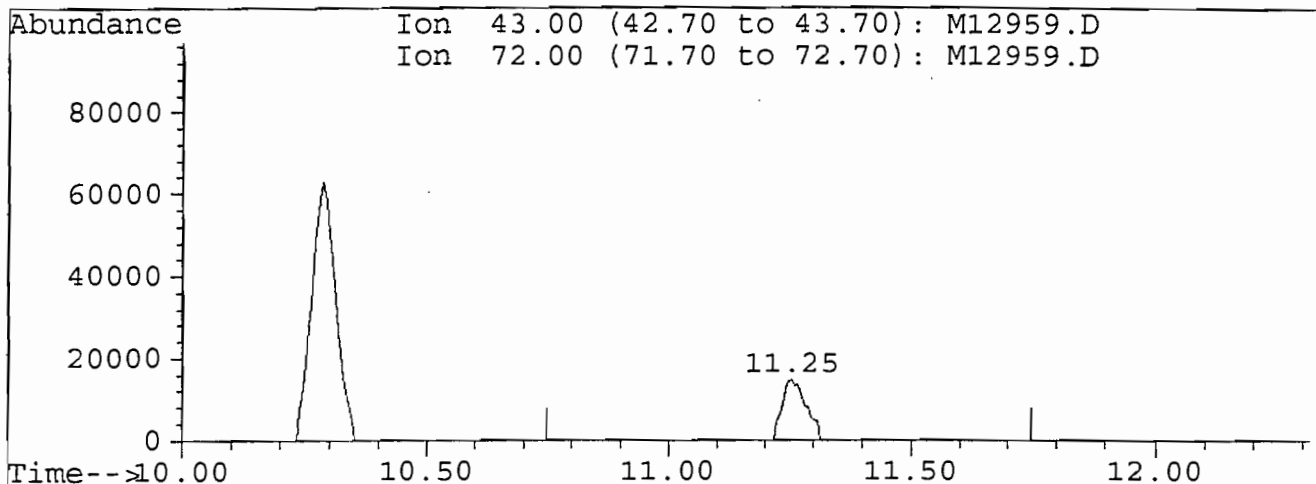
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:20 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(26) 2-Butanone

11.25min 5.92ug/L m

response 49291

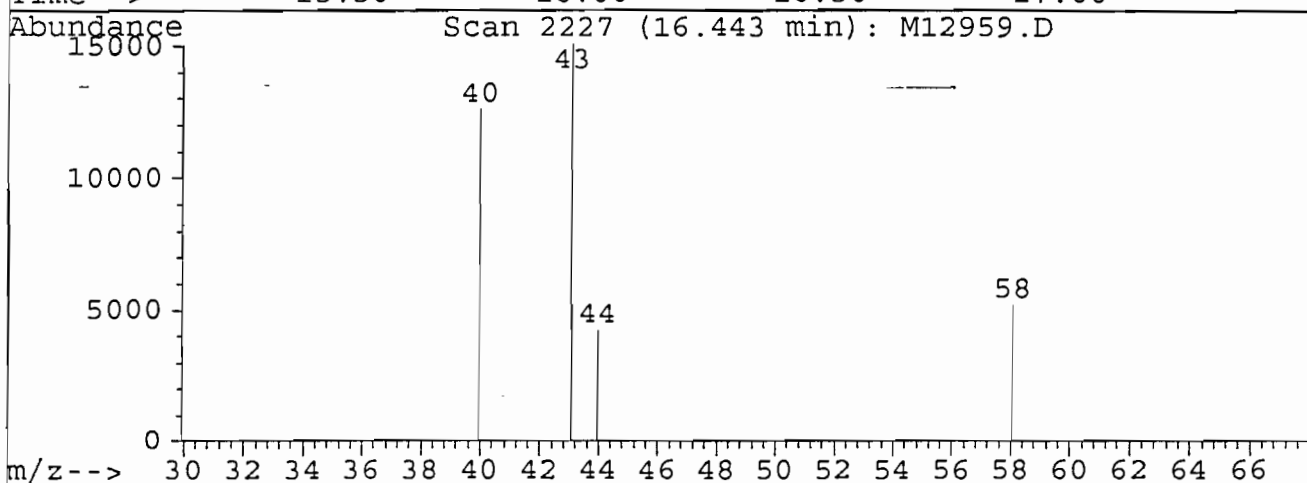
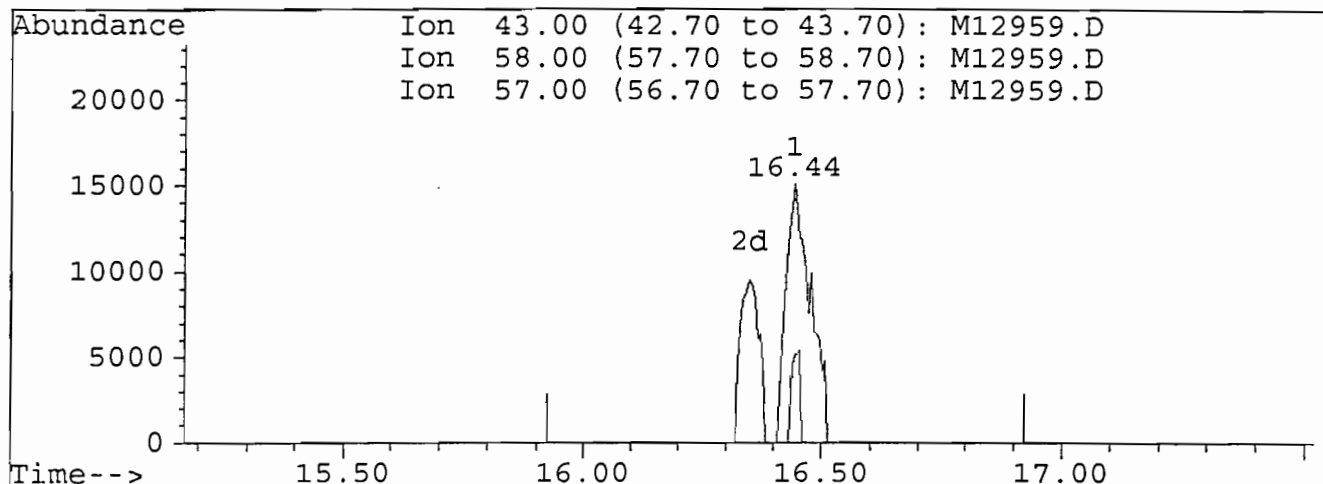
Ion	Exp%	Act%
43.00	100	100
72.00	18.30	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:20 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(44) 4-Methyl-2-Pentanone

16.44min 4.15ug/L m

response 54831

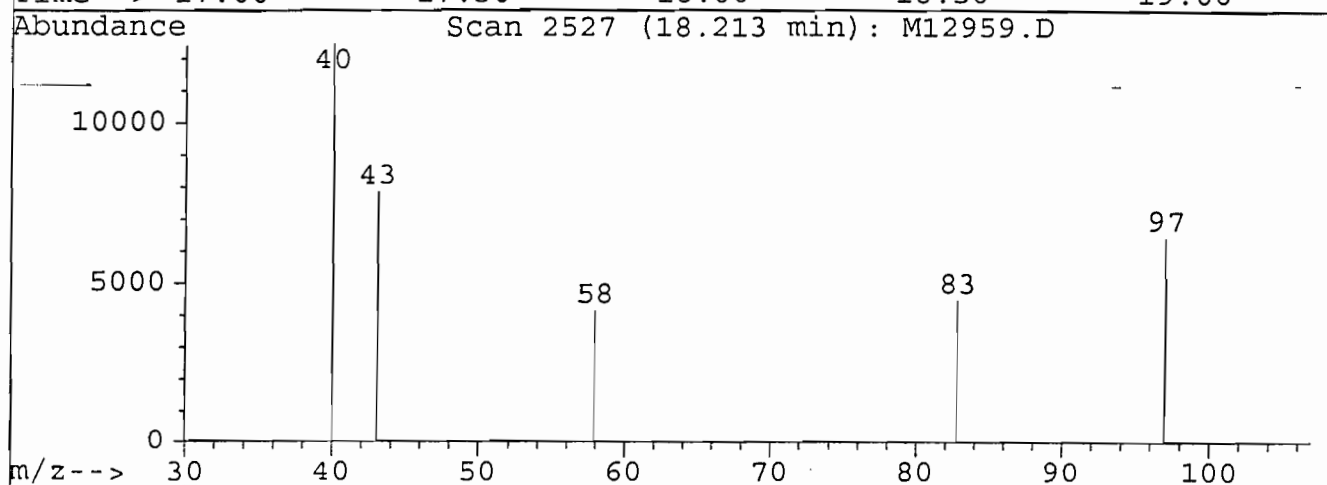
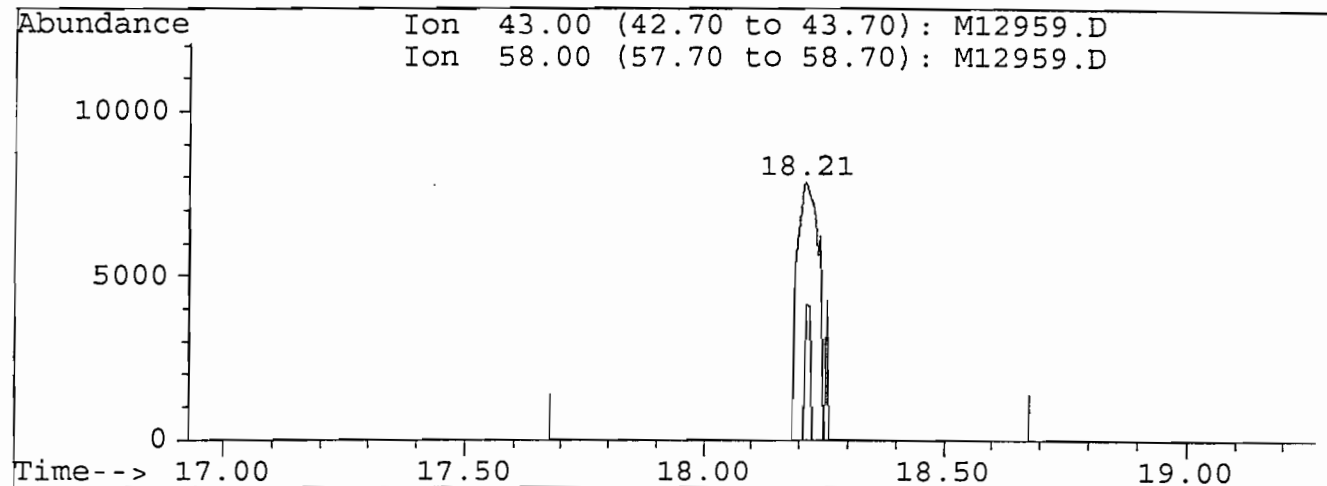
Ion	Exp%	Act%
43.00	100	100
58.00	33.60	34.24
57.00	20.60	0.00
0.00	0.00	0.00

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(49) 2-Hexanone

18.21min 2.62ug/L m

response 25237

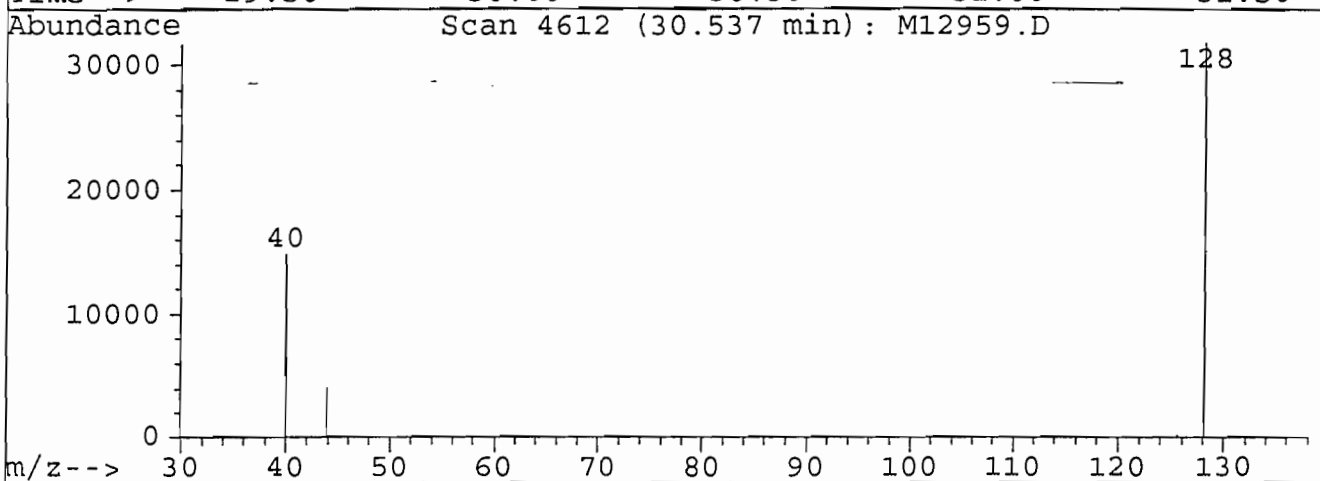
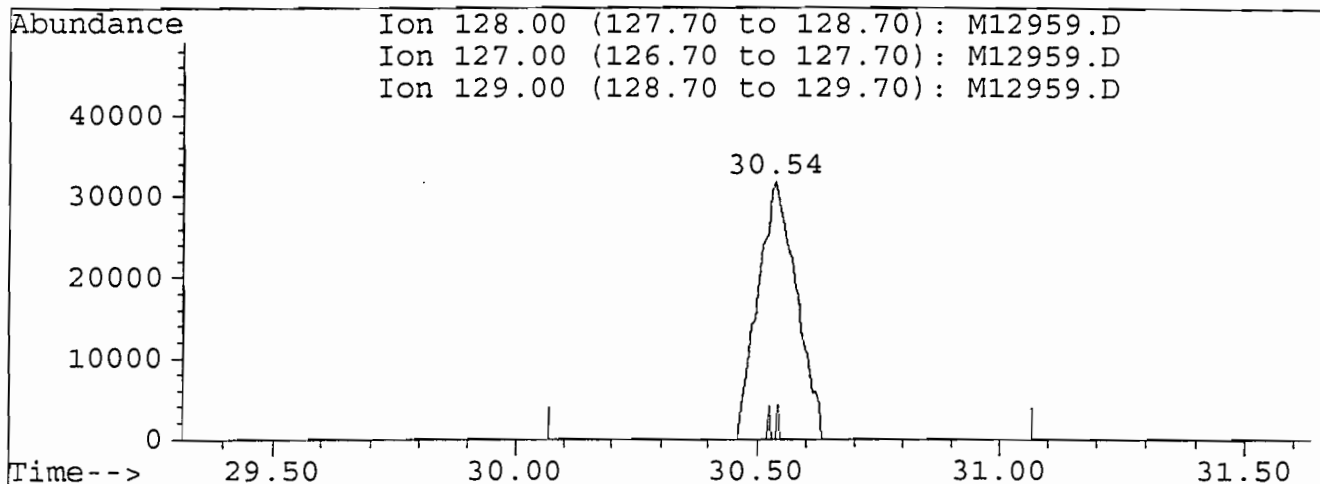
Ion	Exp%	Act%
43.00	100	100
58.00	48.80	52.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(78) naphthalene (T)

30.54min 4.91ug/L m

response 173141

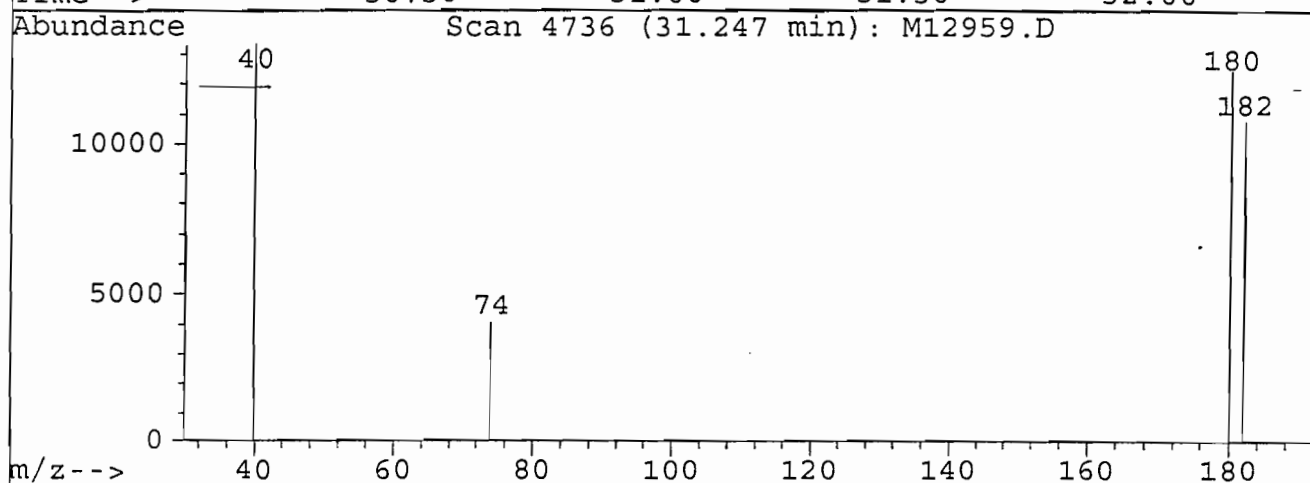
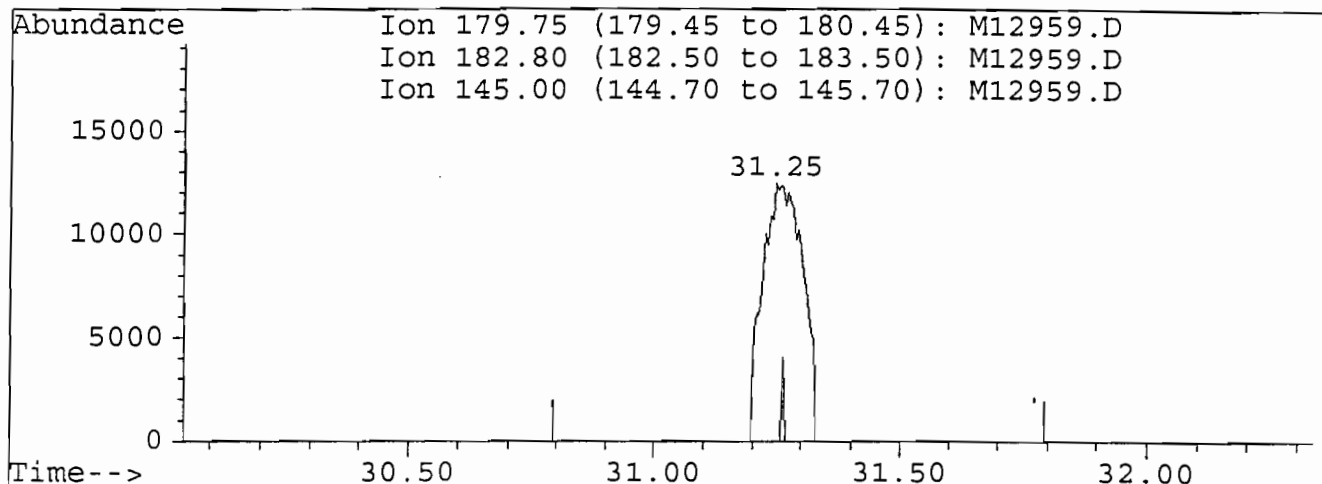
Ion	Exp%	Act%
128.00	100	100
127.00	12.30	0.00
129.00	10.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3100999\M12959.D
 Acq Time : 9 Oct 99 12:35 pm
 Sample : 5 PPB ICC
 Misc : 5MLS
 Quant Time: Oct 9 13:21 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 11:41:15 1999
 Response via : Single Level Calibration



TIC: M12959.D

(79) 1,2,3-trichlorobenzene (T)

31.25min 4.70ug/L m

response 72238

Ion	Exp%	Act%
179.75	100	100
182.80	5.60	0.00
145.00	29.90	0.00
0.00	0.00	0.00

000456

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Instrument ID: VOA 3 Calibration Date: '10/21/99 Time: 2040
 Lab File ID: M13275.D Init. Calib. Date(s): '10/9/99 '10/9/99
 Heated Purge: (Y/N) N Init. Calib. Times: 0832 1235
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.286	0.287		-0.3	
Chloromethane	0.403	0.439	0.100	-8.9	
Vinyl Chloride	0.307	0.325		-5.9	20.0
Bromomethane	0.208	0.224		-7.7	
Chloroethane	0.185	0.220		-18.9	
Acrolein	0.040	0.040		0.0	
Trichlorofluoromethane	0.441	0.424		3.9	
1,1-Dichloroethene	0.413	0.459		-11.1	20.0
Acetone	0.177	0.163		7.9	
Carbon Disulfide	0.950	1.052		-10.7	
Methylene Chloride	0.302	0.336		-11.3	
trans-1,2-Dichloroethene	0.419	0.452		-7.9	
Acrylonitrile	0.102	0.108		-5.9	
1,1-Dichloroethane	0.561	0.595	0.100	-6.1	
2,2-Dichloropropane	0.461	0.495		-7.4	
cis-1,2-dichloroethene	0.459	0.510		-11.1	
Bromochloromethane	0.308	0.335		-8.8	
Chloroform	0.583	0.644		-10.5	20.0
1,1,1-Trichloroethane	0.471	0.508		-7.9	
Vinyl Acetate	0.984	0.952		3.3	
2-Butanone	0.191	0.202		-5.8	
Carbon Tetrachloride	0.405	0.440		-8.6	
1,1-Dichloropropene	0.406	0.464		-14.3	
Benzene	1.100	1.241		-12.8	
1,2-Dichloroethane	0.452	0.490		-8.4	
Trichloroethene	0.331	0.368		-11.2	
1,2-Dichloropropane	0.315	0.352		-11.7	20.0
Dibromomethane	0.224	0.239		-6.7	
Bromodichloromethane	0.480	0.517		-7.7	
2-Chloroethyl Vinyl Ether	0.183	0.210		-14.8	
cis-1,3-Dichloropropene	0.533	0.582		-9.2	
Toluene	1.204	1.293		-7.4	20.0
trans-1,3-Dichloropropene	0.482	0.523		-8.5	
1,1,2-Trichloroethane	0.275	0.299		-8.7	
4-Methyl-2-Pentanone	0.328	0.366		-11.6	
Tetrachloroethene	0.385	0.414		-7.5	

All other compounds must meet a minimum RRF of 0.010.

000457

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Instrument ID: VOA 3 Calibration Date: '10/21/99 Time: 2040
 Lab File ID: M13275.D Init. Calib. Date(s): '10/9/99 '10/9/99
 Heated Purge: (Y/N) N Init. Calib. Times: 0832 1235
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
1,3-Dichloropropane	0.612	0.649		-6.0	
Dibromochloromethane	0.420	0.441	0.300	-5.0	
1,2-Dibromoethane	0.363	0.389		-7.2	
2-Hexanone	0.232	0.285		-22.8	
Chlorobenzene	0.914	0.984		-7.7	
1,1,1,2-Tetrachloroethane	0.326	0.360		-10.4	
Ethylbenzene	1.598	1.775		-11.1	20.0
m&p-xylenes	0.543	0.594	0.100	-9.4	
o-xylene	1.256	1.373		-9.3	
Styrene	0.971	1.079		-11.1	
Bromoform	0.273	0.292	0.300	-7.0	
isopropylbenzene	3.387	3.485		-2.9	
Bromobenzene	1.495	1.519		-1.6	
1,1,2,2-Tetrachloroethane	0.995	0.998		-0.3	
1,2,3-Trichloropropane	0.713	0.712		0.1	
n-Propylbenzene	0.825	0.876		-6.2	
2-Chlorotoluene	0.758	0.784		-3.4	
4-Chlorotoluene	0.787	0.844		-7.2	
1,3,5-Trimethylbenzene	2.728	2.832		-3.8	
tert-Butylbenzene	2.506	2.837		-13.2	
1,2,4-Trimethylbenzene	2.733	2.712		0.8	
sec-Butylbenzene	3.368	3.585		-6.4	
1,3-Dichlorobenzene	1.541	1.629		-5.7	
4-Isopropyltoluene	2.988	3.102		-3.8	
1,4-Dichlorobenzene	1.598	1.663		-4.1	
1,2-Dichlorobenzene	1.482	1.537		-3.7	
n-Butylbenzene	2.813	3.025		-7.5	
1,2-Dibromo-3-chloropropane	0.157	0.137		12.7	
1,2,4-Trichlorobenzene	1.065	1.032		3.1	
Hexachlorobutadiene	0.523	0.559		-6.9	
Naphthalene	2.091	1.891		9.6	
1,2,3-Trichlorobenzene	0.909	0.868		4.5	

All other compounds must meet a minimum RRF of 0.010.

Lab Name: _____ Contract: _____

Project No.: _____ Site: _____ Location: _____ Group: _____

Instrument ID: _____ Calibration Date: _____ Time: _____

Lab File ID: _____ Init. Calib. Date(s): _____

Heated Purge: (Y/N) _____ Init. Calib. Times: _____

GC Column: _____ ID: _____ (mm)

COMPOUND	<u>RRF</u>	RRF50	MIN RRF	% D	MAX %D
Dibromofluoromethane	0.311	0.322		-3.5	
1,2-Dichlorethane-d4	0.351	0.340		3.1	
Toluene-d8	0.974	1.037		-6.5	
4-Bromofluorobenzene	0.412	0.449		-9.0	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13275.D
 Acq Time : 21 Oct 99 8:40 pm
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 21 21:33 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.14	96	2197275	50.00	ug/L	0.03
43) Chlorobenzene-d5	20.48	117	1885468	50.00	ug/L	0.03
58) 1,4-dichlorobenzene-d4	25.21	152	877326	50.00	ug/L	0.03

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.43	113	706655	51.70	ug/L	103.41%
30) 1,2-Dichloroethane-d4	13.47	65	746482	48.46	ug/L	96.92%
38) Toluene-d8	17.38	98	2277952	53.21	ug/L	106.43%
42) 4-Bromofluorobenzene	22.96	95	987363	54.56	ug/L	109.11%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.53	85	630846	50.23	ug/L	97
3) chloromethane	4.05	50	965040	54.50	ug/L	99
4) vinyl chloride	4.21	62	713309	52.89	ug/L	99
5) bromomethane	5.13	94	492581	66.48	ug/L	98
6) chloroethane	5.30	64	483190	68.58	ug/L	97
7) Acrolein	7.02	56	874949	502.81	ug/L	99
8) trichlorofluoromethane	5.92	101	932079	48.15	ug/L	99
9) 1,1-dichloroethene	7.43	61	1007946	55.56	ug/L	98
10) Acetone	7.23	43	357177	45.98	ug/L	96
11) Carbon Disulfide	8.58	76	2311482	55.34	ug/L	100
12) Iodo Methane	8.15	142	1195807	55.30	ug/L	99
13) methylene chloride	8.61	84	737606	55.60	ug/L	100
14) trans-1,2-dichloroethene	9.31	61	992545	53.93	ug/L	98
15) TBA	7.83	59	450428	530.84	ug/L	m 61
16) MTBE	9.04	73	1805015	50.73	ug/L	99
17) Acrylonitrile	8.95	53	2383259	534.01	ug/L	99
18) 1,1-dichloroethane	10.29	63	1307745	53.06	ug/L	98
19) 2,2-dichloropropane	11.53	77	1088269	53.73	ug/L	97
20) cis-1,2-dichloroethene	11.62	61	1120739	55.60	ug/L	98
21) bromochloromethane	12.31	49	736448	54.35	ug/L	98
22) chloroform	11.97	83	1415766	55.28	ug/L	99
23) 1,1,1-trichloroethane	12.82	97	1115752	53.91	ug/L	98
25) Vinyl Acetate	10.32	43	2091083	48.36	ug/L	99
26) 2-Butanone	11.28	43	443439	52.87	ug/L	100
27) carbon tetrachloride	13.35	117	967068	54.27	ug/L	97
28) 1,1-dichloropropene	13.15	75	1018742	57.10	ug/L	99
29) benzene	13.71	78	2726087	56.40	ug/L	99
31) 1,2-dichloroethane	13.67	62	1077547	54.22	ug/L	99
32) trichloroethene	14.96	130	809151	55.63	ug/L	100
33) 1,2-dichloropropane	15.31	63	773844	55.85	ug/L	99
34) dibromomethane	15.92	174	524315	53.28	ug/L	98
35) bromodichloromethane	15.80	83	1134920	53.81	ug/L	99
36) 2-Chloroethyl Vinyl Ether	16.38	63	461398	57.52	ug/L	98

(#) = qualifier out of range (m) = manual integration
 M13275.D V31009CW.M Fri Oct 22 08:06:08 1999

VOA3

000460 Page 1

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13275.D
 Acq Time : 21 Oct 99 8:40 pm
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 21 21:33 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

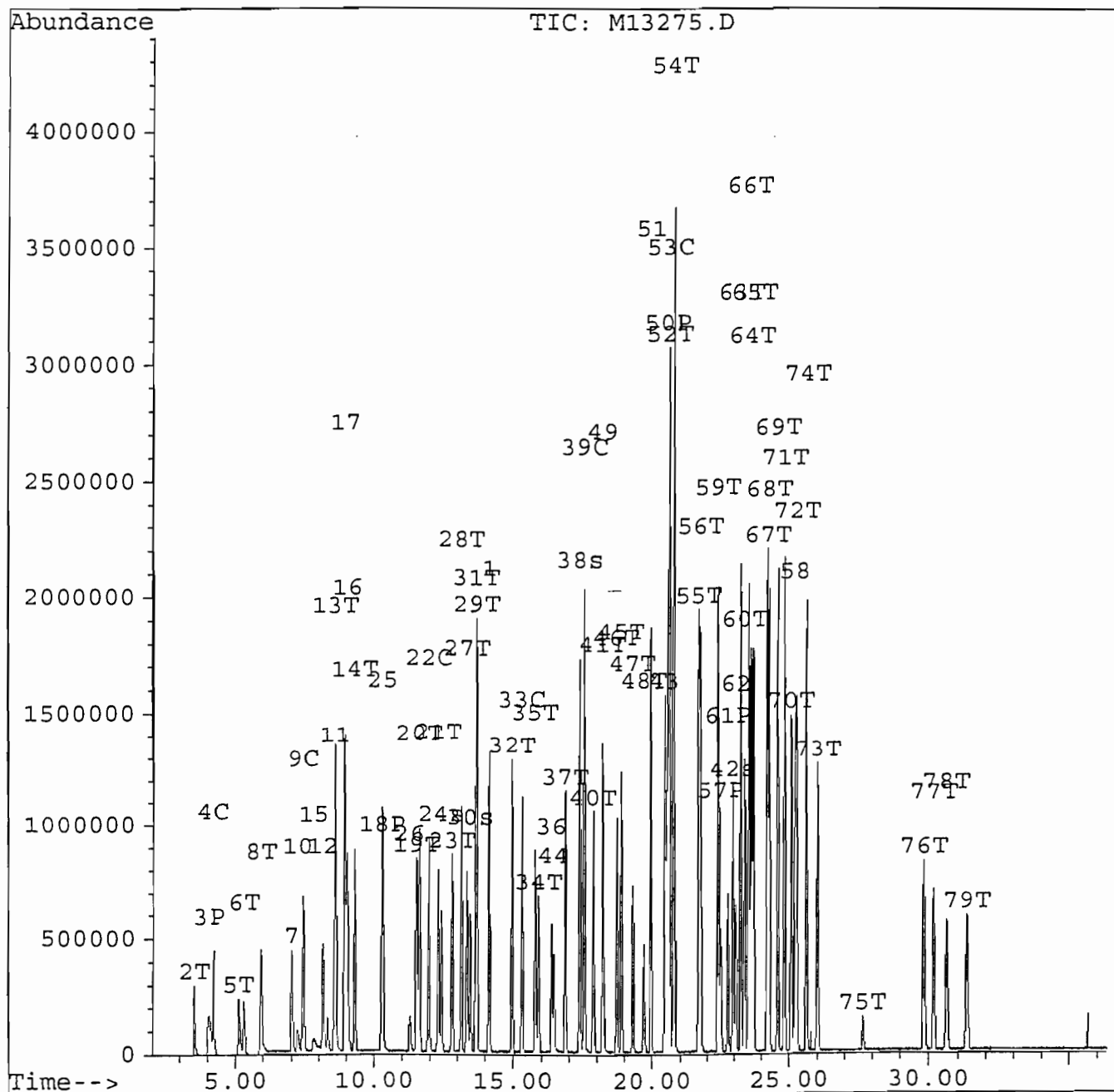
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.88	75	1279191	54.58	ug/L	99
39) toluene	17.55	91	2841039	53.70	ug/L	99
40) trans-1,3-dichloropropene	17.88	75	1149026	54.25	ug/L	98
41) 1,1,2-trichloroethane	18.21	97	657340	54.46	ug/L	96
44) 4-Methyl-2-Pentanone	16.46	43	690868	55.84	ug/L	100
45) tetrachloroethene	18.88	166	780591	53.74	ug/L	96
46) 1,3-dichloropropane	18.72	76	1224286	53.09	ug/L	99
47) dibromochloromethane	19.29	129	831250	52.47	ug/L	99
48) 1,2-dibromoethane	19.71	107	733431	53.51	ug/L	94
49) 2-Hexanone	18.21	43	537837	61.57	ug/L	99
50) chlorobenzene	20.56	112	1855620	53.83	ug/L	98
51) 1-Chlorohexane	19.96	91	1299446	57.65	ug/L	100
52) 1,1,1,2-tetrachloroethane	20.62	133	679535	55.25	ug/L	98
53) ethylbenzene	20.64	91	3346034	55.53	ug/L	98
54) m&p-xylenes	20.79	106	2240418	109.45	ug/L	98
55) o-xylene	21.70	91	2588928	54.67	ug/L	97
56) styrene	21.76	104	2035075	55.59	ug/L	96
57) bromoform	22.51	173	551448	53.53	ug/L	98
59) isopropylbenzene	22.42	105	3057644	51.44	ug/L	98
60) bromobenzene	23.38	77	1332614	50.79	ug/L	97
61) 1,1,2,2-tetrachloroethane	22.77	83	875525	50.14	ug/L	94
62) 1,2,3-trichloropropane	23.07	75	624816	49.91	ug/L	100
63) n-propylbenzene	23.25	120	768964	53.43	ug/L	92
64) 2-chlorotoluene	23.63	126	688005	51.72	ug/L	94
65) 4-chlorotoluene	23.71	126	740334	53.63	ug/L	100
66) 1,3,5-trimethylbenzene	23.54	105	2484908	51.92	ug/L	100
67) tert-butylbenzene	24.21	119	2489315	56.61	ug/L	100
68) 1,2,4-trimethylbenzene	24.28	105	2379726	51.83	ug/L	99
69) sec-butylbenzene	24.60	105	3145647	53.23	ug/L	99
70) 1,3-dichlorobenzene	25.08	146	1428947	52.86	ug/L	99
71) 4-isopropyltoluene	24.84	119	2721266	51.90	ug/L	99
72) 1,4-dichlorobenzene	25.28	146	1458703	52.01	ug/L	100
73) 1,2-dichlorobenzene	26.02	146	1348368	51.87	ug/L	99
74) n-butylbenzene	25.62	91	2654051	53.77	ug/L	94
75) 1,2-dibromo-3-chloropropan	27.67	75	119855	43.38	ug/L	96
76) 1,2,4-trichlorobenzene	29.83	180	905577	48.44	ug/L	95
77) hexachlorobutadiene	30.17	225	490317	53.44	ug/L	98
78) naphthalene	30.60	128	1658987	45.21	ug/L	99
79) 1,2,3-trichlorobenzene	31.34	180	761411	47.74	ug/L	97

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13275.D
 Acq Time : 21 Oct 99 8:40 pm
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 21 21:33 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration



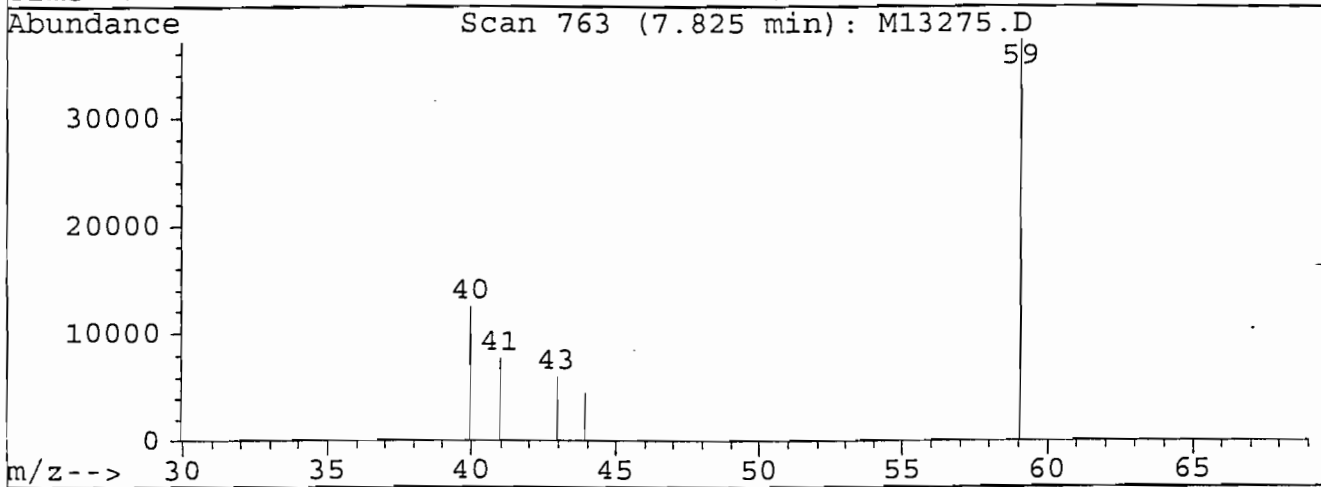
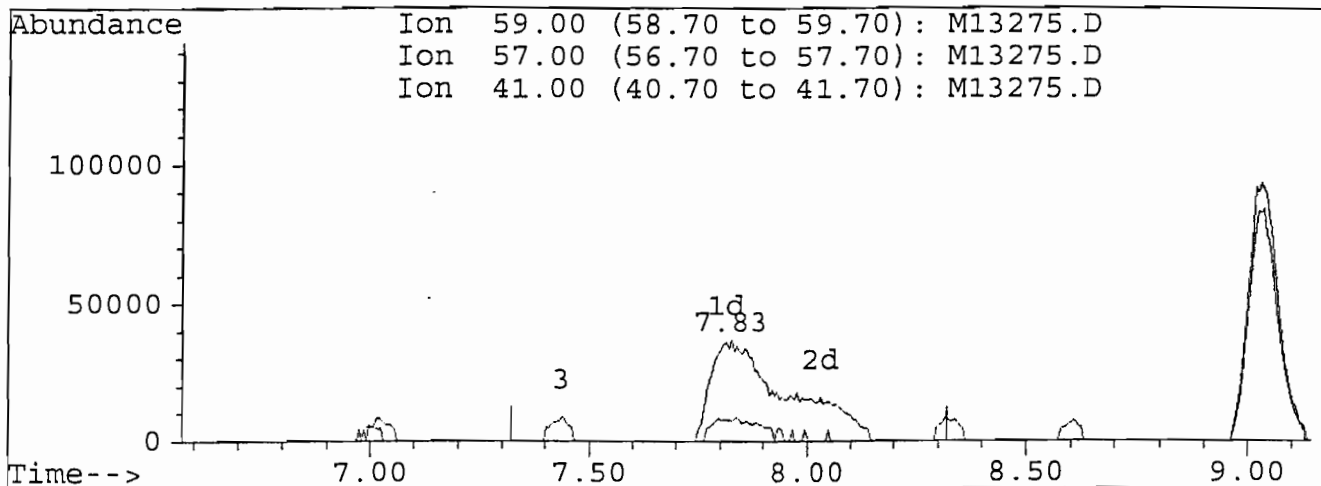
000462

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13275.D
Acq Time : 21 Oct 99 8:40 pm
Sample : 50 PPB CCC
Misc : 5MLS
Quant Time: Oct 21 21:33 1999

```
Operator: AV
Inst      : voa3
Multiplr: 1.00
```

```
Method      : D:\HPCHEM\3\METHODS\V31009CW.M
Title       : VOA
Last Update  : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration
```



TIC: M13275.D

(15) TBA

7.83min 530.84ug/L m

```
response      450428
```

Ion	Exp%	Act%
59.00	100	100
57.00	10.40	0.00
41.00	20.60	20.46
0.00	0.00	0.00

000463

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13275.D
 Acq Time : 21 Oct 99 8:40 pm
 Sample : 50 PPB CCC
 Misc : 5MLS

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	109	0.03
2 T	dichlorodifluoromethane	0.286	0.287	-0.5	109	0.03
3 P	chloromethane	0.403	0.439	-9.0	117	0.02
4 C	vinyl chloride	0.307	0.325	-5.8#	117	0.02
5 T	bromomethane	0.208	0.224	-7.8	103	0.04
6 T	chloroethane	0.185	0.220	-18.7	109	0.03
7	Acrolein	0.040	0.040	-0.6	109	0.04
8 T	trichlorofluoromethane	0.441	0.424	3.7	103	0.04
9 C	1,1-dichloroethene	0.413	0.459	-11.1#	121	0.03
10	Acetone	0.177	0.163	8.0	124	0.04
11	Carbon Disulfide	0.950	1.052	-10.7	122	0.04
12	Iodo Methane	0.492	0.544	-10.6	119	0.04
13 T	methylene chloride	0.302	0.336	-11.2	121	0.04
14 T	trans-1,2-dichloroethene	0.419	0.452	-7.9	120	0.04
15	TBA	0.019	0.020	-6.2	108	0.00
16	MTBE	0.810	0.821	-1.5	110	0.04
17	Acrylonitrile	0.102	0.108	-6.8	116	0.04
18 P	1,1-dichloroethane	0.561	0.595	-6.1	118	0.03
19 T	2,2-dichloropropane	0.461	0.495	-7.5	120	0.03
20 T	cis-1,2-dichloroethene	0.459	0.510	-11.2	121	0.03
21 T	bromochloromethane	0.308	0.335	-8.7	118	0.04
22 C	chloroform	0.583	0.644	-10.6#	122	0.03
23 T	1,1,1-trichloroethane	0.471	0.508	-7.8	117	0.04
24 s	Dibromofluoromethane	0.311	0.322	-3.4	107	0.03
25	Vinyl Acetate	0.984	0.952	3.3	107	0.04
26	2-Butanone	0.191	0.202	-5.7	118	0.03
27 T	carbon tetrachloride	0.405	0.440	-8.5	119	0.03
28 T	1,1-dichloropropene	0.406	0.464	-14.2	125	0.04
29 T	benzene	1.100	1.241	-12.8	122	0.03
30 s	1,2-Dichloroethane-d4	0.351	0.340	3.1	103	0.03
31 T	1,2-dichloroethane	0.452	0.490	-8.4	117	0.04
32 T	trichloroethene	0.331	0.368	-11.3	121	0.03
33 C	1,2-dichloropropane	0.315	0.352	-11.7#	121	0.03
34 T	dibromomethane	0.224	0.239	-6.6	111	0.04
35 T	bromodichloromethane	0.480	0.517	-7.6	117	0.03
36	2-Chloroethyl Vinyl Ether	0.183	0.210	-15.0	121	0.03
37 T	cis-1,3-dichloropropene	0.533	0.582	-9.2	120	0.03
38 s	Toluene-d8	0.974	1.037	-6.4	110	0.03
39 C	toluene	1.204	1.293	-7.4#	119	0.03
40 T	trans-1,3-dichloropropene	0.482	0.523	-8.5	118	0.03
41 T	1,1,2-trichloroethane	0.275	0.299	-8.9	118	0.03
42 s	4-Bromofluorobenzene	0.412	0.449	-9.1	113	0.03

(#) = Out of Range

M13275.D V31009CW.M

Fri Oct 22 08:07:32 1999

VOA3

000464
 Page 1

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13275.D
 Acq Time : 21 Oct 99 8:40 pm
 Sample : 50 PPB CCC
 Misc : 5MLS

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	112	0.03
44	4-Methyl-2-Pentanone	0.328	0.366	-11.7	113	0.03
45 T	tetrachloroethene	0.385	0.414	-7.5	122	0.03
46 T	1,3-dichloropropane	0.612	0.649	-6.2	118	0.03
47 T	dibromochloromethane	0.420	0.441	-4.9	117	0.03
48 T	1,2-dibromoethane	0.363	0.389	-7.0	117	0.03
49	2-Hexanone	0.232	0.285	-23.1#	120	0.03
50 P	chlorobenzene	0.914	0.984	-7.7	122	0.03
51	1-Chlorohexane	0.598	0.689	-15.3	128	0.02
52 T	1,1,1,2-tetrachloroethane	0.326	0.360	-10.5	120	0.03
53 C	ethylbenzene	1.598	1.775	-11.1#	121	0.03
54 T	m&p-xylenes	0.543	0.594	-9.5	120	0.03
55 T	o-xylene	1.256	1.373	-9.3	123	0.02
56 T	styrene	0.971	1.079	-11.2	121	0.03
57 P	bromoform	0.273	0.292	-7.1	116	0.03
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	119	0.03
59 T	isopropylbenzene	3.387	3.485	-2.9	123	0.03
60 T	bromobenzene	1.495	1.519	-1.6	121	0.03
61 P	1,1,2,2-tetrachloroethane	0.995	0.998	-0.3	116	0.03
62	1,2,3-trichloropropane	0.713	0.712	0.2	117	0.04
63 T	n-propylbenzene	0.825	0.876	-6.3	125	0.04
64 T	2-chlorotoluene	0.758	0.784	-3.4	118	0.03
65 T	4-chlorotoluene	0.787	0.844	-7.3	129	0.02
66 T	1,3,5-trimethylbenzene	2.728	2.832	-3.8	126	0.02
67 T	tert-butylbenzene	2.506	2.837	-13.2	142	0.03
68 T	1,2,4-trimethylbenzene	2.733	2.712	0.8	115	0.02
69 T	sec-butylbenzene	3.368	3.585	-6.5	125	0.03
70 T	1,3-dichlorobenzene	1.541	1.629	-5.7	123	0.03
71 T	4-isopropyltoluene	2.988	3.102	-3.8	127	0.03
72 T	1,4-dichlorobenzene	1.598	1.663	-4.0	124	0.02
73 T	1,2-dichlorobenzene	1.482	1.537	-3.7	119	0.02
74 T	n-butylbenzene	2.813	3.025	-7.5	131	0.02
75 T	1,2-dibromo-3-chloropropane	0.157	0.137	13.2	104	0.04
76 T	1,2,4-trichlorobenzene	1.065	1.032	3.1	117	0.05
77 T	hexachlorobutadiene	0.523	0.559	-6.9	125	0.05
78 T	naphthalene	2.091	1.891	9.6	108	0.04
79 T	1,2,3-trichlorobenzene	0.909	0.868	4.5	113	0.04

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECHContract: IMPACT ENVIRONMENTALProject No. 13826ASP

Site: _____

Location: _____

Group: GP-008-SS3Instrument ID: VOA 3Calibration Date: '10/22/99Time: 0937Lab File ID: M13292.DInit. Calib. Date(s): '10/9/99 '10/9/99Heated Purge: (Y/N) NInit. Calib. Times: 0832 1235GC Column: RTX624ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.286	0.276		3.5	
Chloromethane	0.403	0.403	0.100	0.0	
Vinyl Chloride	0.307	0.311		-1.3	20.0
Bromomethane	0.208	0.207		0.5	
Chloroethane	0.185	0.211		-14.1	
Acrolein	0.040	0.043		-7.5	
Trichlorofluoromethane	0.441	0.400		9.3	
1,1-Dichloroethene	0.413	0.422		-2.2	20.0
Acetone	0.177	0.171		3.4	
Carbon Disulfide	0.950	0.958		-0.8	
Methylene Chloride	0.302	0.314		-4.0	
trans-1,2-Dichloroethene	0.419	0.423		-1.0	
Acrylonitrile	0.102	0.111		-8.8	
1,1-Dichloroethane	0.561	0.607	0.100	-8.2	
2,2-Dichloropropane	0.461	0.466		-1.1	
cis-1,2-dichloroethene	0.459	0.486		-5.9	
Bromochloromethane	0.308	0.316		-2.6	
Chloroform	0.583	0.613		-5.1	20.0
1,1,1-Trichloroethane	0.471	0.493		-4.7	
Vinyl Acetate	0.984	1.043		-6.0	
2-Butanone	0.191	0.215		-12.6	
Carbon Tetrachloride	0.405	0.401		1.0	
1,1-Dichloropropene	0.406	0.433		-6.7	
Benzene	1.100	1.159		-5.4	
1,2-Dichloroethane	0.452	0.476		-5.3	
Trichloroethene	0.331	0.358		-8.2	
1,2-Dichloropropane	0.315	0.329		-4.4	20.0
Dibromomethane	0.224	0.246		-9.8	
Bromodichloromethane	0.480	0.488		-1.7	
2-Chloroethyl Vinyl Ether	0.183	0.209		-14.2	
cis-1,3-Dichloropropene	0.533	0.555		-4.1	
Toluene	1.204	1.242		-3.2	20.0
trans-1,3-Dichloropropene	0.482	0.515		-6.8	
1,1,2-Trichloroethane	0.275	0.301		-9.5	
4-Methyl-2-Pentanone	0.328	0.358		-9.1	
Tetrachloroethene	0.385	0.401		-4.2	

All other compounds must meet a minimum RRF of 0.010.

000466

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 13826ASP Site: _____ Location: _____ Group: GP-008-SS3
 Instrument ID: VOA 3 Calibration Date: '10/22/99 Time: 0937
 Lab File ID: M13292.D Init. Calib. Date(s): '10/9/99 '10/9/99
 Heated Purge: (Y/N) N Init. Calib. Times: 0832 1235
 GC Column: RTX624 ID: 0.53 (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
1,3-Dichloropropane	0.612	0.628		-2.6	
Dibromochloromethane	0.420	0.437	0.300	-4.0	
1,2-Dibromoethane	0.363	0.393		-8.3	
2-Hexanone	0.232	0.301		-29.7	
Chlorobenzene	0.914	0.969		-6.0	
1,1,1,2-Tetrachloroethane	0.326	0.339		-4.0	
Ethylbenzene	1.598	1.629		-1.9	20.0
m&p-xylenes	0.543	0.578	0.100	-6.4	
o-xylene	1.256	1.270		-1.1	
Styrene	0.971	1.030		-6.1	
Bromoform	0.273	0.301	0.300	-10.3	
isopropylbenzene	3.387	3.332		1.6	
Bromobenzene	1.495	1.466		1.9	
1,1,2,2-Tetrachloroethane	0.995	1.040		-4.5	
1,2,3-Trichloropropane	0.713	0.735		-3.1	
n-Propylbenzene	0.825	0.839		-1.7	
2-Chlorotoluene	0.758	0.769		-1.5	
4-Chlorotoluene	0.787	0.769		2.3	
1,3,5-Trimethylbenzene	2.728	2.723		0.2	
tert-Butylbenzene	2.506	2.384		4.9	
1,2,4-Trimethylbenzene	2.733	2.722		0.4	
sec-Butylbenzene	3.368	3.388		-0.6	
1,3-Dichlorobenzene	1.541	1.559		-1.2	
4-Isopropyltoluene	2.988	2.978		0.3	
1,4-Dichlorobenzene	1.598	1.623		-1.6	
1,2-Dichlorobenzene	1.482	1.497		-1.0	
n-Butylbenzene	2.813	2.854		-1.5	
1,2-Dibromo-3-chloropropane	0.157	0.155		1.3	
1,2,4-Trichlorobenzene	1.065	1.090		-2.3	
Hexachlorobutadiene	0.523	0.577		-10.3	
Naphthalene	2.091	2.152		-2.9	
1,2,3-Trichlorobenzene	0.909	0.940		-3.4	

All other compounds must meet a minimum RRF of 0.010.

000467

Lab Name: _____ Contract: _____

Project No.: _____ Site: _____ Location: _____

Group:

Instrument ID: _____ Calibration Date: _____

Time:

Lab File ID: _____ Init. Calib. Date(s): _____

Heated Purge: (Y/N) Init. Calib. Times:

GC Column: ID: (mm)

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Dibromofluoromethane	0.311	0.317		-1.9	
1,2-Dichlorethane-d4	0.351	0.342		2.6	
Toluene-d8	0.974	0.991		-1.7	
4-Bromofluorobenzene	0.412	0.427		-3.6	

All other compounds must meet a minimum RRF of 0.010.

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13292.D
 Acq Time : 22 Oct 99 9:37 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 22 10:15 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.16	96	2115828	50.00	ug/L	0.05
43) Chlorobenzene-d5	20.50	117	1819804	50.00	ug/L	0.05
58) 1,4-dichlorobenzene-d4	25.24	152	830163	50.00	ug/L	0.05

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.45	113	669685	50.89	ug/L	101.77%
30) 1,2-Dichlorethane-d4	13.49	65	723144	48.75	ug/L	97.51%
38) Toluene-d8	17.41	98	2096349	50.86	ug/L	101.71%
42) 4-Bromofluorobenzene	22.98	95	903446	51.84	ug/L	103.68%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) dichlorodifluoromethane	3.52	85	584974	48.37	ug/L	100
3) chloromethane	4.05	50	852851	50.02	ug/L	98
4) vinyl chloride	4.20	62	658831	50.73	ug/L	98
5) bromomethane	5.11	94	438314	58.51	ug/L	95
6) chloroethane	5.29	64	446116	64.64	ug/L	97
7) Acrolein	7.02	56	901738	538.15	ug/L	99
8) trichlorofluoromethane	5.92	101	847173	45.44	ug/L	99
9) 1,1-dichloroethene	7.43	61	893550	51.15	ug/L	95
10) Acetone	7.24	43	362111	48.41	ug/L	93
11) Carbon Disulfide	8.59	76	2027764	50.42	ug/L	97
12) Iodo Methane	8.15	142	1127112	54.13	ug/L	99
13) methylene chloride	8.61	84	665239	52.07	ug/L	97
14) trans-1,2-dichloroethene	9.31	61	894520	50.47	ug/L	97
15) TBA	7.82	59	496840	608.08	ug/L m	61
16) MTBE	9.04	73	1842670	53.78	ug/L	99
17) Acrylonitrile	8.96	53	2351444	547.17	ug/L	100
18) 1,1-dichloroethane	10.30	63	1283853	54.10	ug/L	98
19) 2,2-dichloropropane	11.54	77	986609	50.59	ug/L	100
20) cis-1,2-dichloroethene	11.64	61	1029336	53.03	ug/L	99
21) bromochloromethane	12.32	49	667604	51.17	ug/L	97
22) chloroform	11.98	83	1296466	52.57	ug/L	100
23) 1,1,1-trichloroethane	12.83	97	1043338	52.36	ug/L	99
25) Vinyl Acetate	10.33	43	2206424	53.00	ug/L	99
26) 2-Butanone	11.30	43	454144	56.24	ug/L	99
27) carbon tetrachloride	13.37	117	848892	49.47	ug/L	94
28) 1,1-dichloropropene	13.16	75	915374	53.28	ug/L	98
29) benzene	13.73	78	2451573	52.68	ug/L	99
31) 1,2-dichloroethane	13.69	62	1006497	52.59	ug/L	99
32) trichloroethene	14.98	130	757428	54.08	ug/L	99
33) 1,2-dichloropropane	15.33	63	696619	52.21	ug/L	99
34) dibromomethane	15.94	174	520471	54.93	ug/L	99
35) bromodichloromethane	15.82	83	1033532	50.89	ug/L	100
36) 2-Chloroethyl Vinyl Ether	16.39	63	441604	57.17	ug/L	99

030469

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13292.D
 Acq Time : 22 Oct 99 9:37 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 22 10:15 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
37) cis-1,3-dichloropropene	16.90	75	1173330	51.99	ug/L	98
39) toluene	17.57	91	2627595	51.58	ug/L	96
40) trans-1,3-dichloropropene	17.90	75	1090465	53.47	ug/L	98
41) 1,1,2-trichloroethane	18.23	97	637238	54.83	ug/L	97
44) 4-Methyl-2-Pentanone	16.48	43	652059	54.60	ug/L	95
45) tetrachloroethene	18.90	166	730525	52.11	ug/L	98
46) 1,3-dichloropropane	18.74	76	1141984	51.30	ug/L	99
47) dibromochloromethane	19.32	129	795620	52.03	ug/L	98
48) 1,2-dibromoethane	19.74	107	715441	54.08	ug/L	100
49) 2-Hexanone	18.23	43	547692	64.96	ug/L	100
50) chlorobenzene	20.58	112	1762671	52.98	ug/L	99
51) 1-Chlorohexane	19.98	91	1157165	53.19	ug/L	98
52) 1,1,1,2-tetrachloroethane	20.65	133	617334	52.01	ug/L	100
53) ethylbenzene	20.66	91	2964432	50.97	ug/L	98
54) m&p-xylenes	20.82	106	2102954	106.44	ug/L	100
55) o-xylene	21.72	91	2311354	50.57	ug/L	99
56) styrene	21.79	104	1874408	53.05	ug/L	97
57) bromoform	22.54	173	547347	55.05	ug/L	97
59) isopropylbenzene	22.44	105	2766005	49.18	ug/L	99
60) bromobenzene	23.41	77	1217100	49.02	ug/L	97
61) 1,1,2,2-tetrachloroethane	22.79	83	863195	52.25	ug/L	96
62) 1,2,3-trichloropropane	23.10	75	610433	51.53	ug/L	98
63) n-propylbenzene	23.26	120	696606	51.15	ug/L	99
64) 2-chlorotoluene	23.65	126	638768	50.75	ug/L	95
65) 4-chlorotoluene	23.65	126	638768	48.90	ug/L	95
66) 1,3,5-trimethylbenzene	23.56	105	2260421	49.91	ug/L	99
67) tert-butylbenzene	24.23	119	1979064	47.56	ug/L	100
68) 1,2,4-trimethylbenzene	24.30	105	2259629	52.01	ug/L	99
69) sec-butylbenzene	24.62	105	2812448	50.29	ug/L	100
70) 1,3-dichlorobenzene	25.11	146	1294067	50.59	ug/L	98
71) 4-isopropyltoluene	24.86	119	2472050	49.82	ug/L	99
72) 1,4-dichlorobenzene	25.30	146	1347018	50.76	ug/L	99
73) 1,2-dichlorobenzene	26.05	146	1243086	50.53	ug/L	96
74) n-butylbenzene	25.65	91	2369245	50.73	ug/L	96
75) 1,2-dibromo-3-chloropropan	27.70	75	128264	49.07	ug/L	97
76) 1,2,4-trichlorobenzene	29.86	180	904726	51.14	ug/L	100
77) hexachlorobutadiene	30.20	225	478599	55.12	ug/L	98
78) naphthalene	30.64	128	1786217	51.45	ug/L	98
79) 1,2,3-trichlorobenzene	31.37	180	780704	51.73	ug/L	98

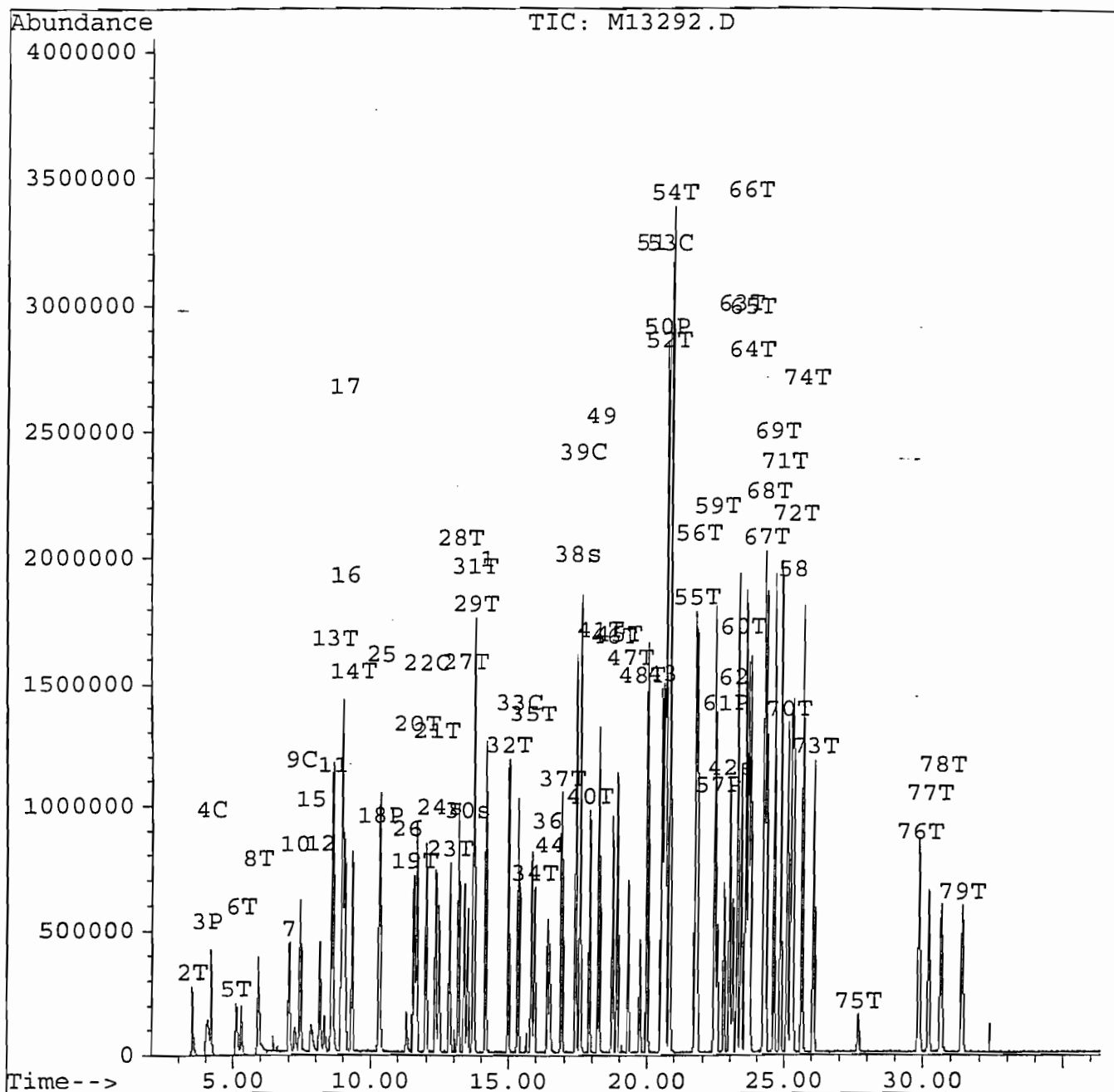
000470

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13292.D
 Acq Time : 22 Oct 99 9:37 am
 Sample : 50 PPB CCC
 Misc : 5MLS
 Quant Time: Oct 22 10:15 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration



000471

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13292.D
 Acq Time : 22 Oct 99 9:37 am
 Sample : 50 PPB CCC
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)
1	Fluorobenzene	1.000	1.000	0.0	105	0.05
2 T	dichlorodifluoromethane	0.286	0.276	3.3	101	0.01
3 P	chloromethane	0.403	0.403	-0.0	104	0.02
4 C	vinyl chloride	0.307	0.311	-1.5#	108	0.02
5 T	bromomethane	0.208	0.207	0.4	91	0.02
6 T	chloroethane	0.185	0.211	-13.8	101	0.02
7	Acrolein	0.040	0.043	-7.6	112	0.04
8 T	trichlorofluoromethane	0.441	0.400	9.1	94	0.04
9 C	1,1-dichloroethene	0.413	0.422	-2.3#	107	0.04
10	Acetone	0.177	0.171	3.2	125	0.05
11	Carbon Disulfide	0.950	0.958	-0.8	107	0.04
12	Iodo Methane	0.492	0.533	-8.3	112	0.04
13 T	methylene chloride	0.302	0.314	-4.1	110	0.04
14 T	trans-1,2-dichloroethene	0.419	0.423	-0.9	108	0.04
15	TBA	0.019	0.023	-21.6#	119	0.00
16	MTBE	0.810	0.871	-7.6	112	0.05
17	Acrylonitrile	0.102	0.111	-9.4	114	0.05
18 P	1,1-dichloroethane	0.561	0.607	-8.2	116	0.04
19 T	2,2-dichloropropane	0.461	0.466	-1.2	108	0.04
20 T	cis-1,2-dichloroethene	0.459	0.486	-6.1	112	0.05
21 T	bromochloromethane	0.308	0.316	-2.3	107	0.04
22 C	chloroform	0.583	0.613	-5.1#	112	0.04
23 T	1,1,1-trichloroethane	0.471	0.493	-4.7	109	0.05
24 s	Dibromofluoromethane	0.311	0.317	-1.8	101	0.05
25	Vinyl Acetate	0.984	1.043	-6.0	113	0.05
26	2-Butanone	0.191	0.215	-12.5	121	0.05
27 T	carbon tetrachloride	0.405	0.401	1.1	104	0.05
28 T	1,1-dichloropropene	0.406	0.433	-6.6	112	0.05
29 T	benzene	1.100	1.159	-5.4	110	0.05
30 s	1,2-Dichlorethane-d4	0.351	0.342	2.5	99	0.05
31 T	1,2-dichloroethane	0.452	0.476	-5.2	109	0.06
32 T	trichloroethene	0.331	0.358	-8.2	114	0.05
33 C	1,2-dichloropropane	0.315	0.329	-4.4#	109	0.05
34 T	dibromomethane	0.224	0.246	-9.9	110	0.06
35 T	bromodichloromethane	0.480	0.488	-1.8	107	0.05
36	2-Chloroethyl Vinyl Ether	0.183	0.209	-14.3	116	0.04
37 T	cis-1,3-dichloropropene	0.533	0.555	-4.0	110	0.06
38 s	Toluene-d8	0.974	0.991	-1.7	102	0.05
39 C	toluene	1.204	1.242	-3.2#	110	0.06
40 T	trans-1,3-dichloropropene	0.482	0.515	-6.9	112	0.05
41 T	1,1,2-trichloroethane	0.275	0.301	-9.7	114	0.05
42 s	4-Bromofluorobenzene	0.412	0.427	-3.7	104	0.05

(#) = Out of Range

M13292.D V31009CW.M

Fri Oct 22 10:32:04 1999

VOA3

Page 1

000472

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13292.D
 Acq Time : 22 Oct 99 9:37 am
 Sample : 50 PPB CCC
 Misc : 5MLS

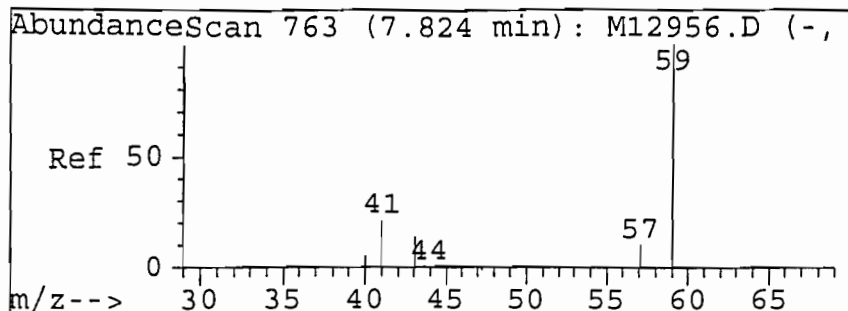
Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 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	AvgRRF	CCRRF	%Dev	Area%	Dev (Min)
43	Chlorobenzene-d5	1.000	1.000	0.0	108	0.05
44	4-Methyl-2-Pentanone	0.328	0.358	-9.2	106	0.05
45 T	tetrachloroethene	0.385	0.401	-4.2	114	0.05
46 T	1,3-dichloropropane	0.612	0.628	-2.6	110	0.06
47 T	dibromochloromethane	0.420	0.437	-4.1	112	0.06
48 T	1,2-dibromoethane	0.363	0.393	-8.2	114	0.06
49	2-Hexanone	0.232	0.301	-29.9#	123	0.05
50 P	chlorobenzene	0.914	0.969	-6.0	116	0.05
51	1-Chlorohexane	0.598	0.636	-6.4	114	0.05
52 T	1,1,1,2-tetrachloroethane	0.326	0.339	-4.0	109	0.06
53 C	ethylbenzene	1.598	1.629	-1.9#	107	0.05
54 T	m&p-xylenes	0.543	0.578	-6.4	113	0.05
55 T	o-xylene	1.256	1.270	-1.1	110	0.05
56 T	styrene	0.971	1.030	-6.1	111	0.05
57 P	bromoform	0.273	0.301	-10.1	115	0.06
58	1,4-dichlorobenzene-d4	1.000	1.000	0.0	113	0.05
59 T	isopropylbenzene	3.387	3.332	1.6	111	0.05
60 T	bromobenzene	1.495	1.466	2.0	110	0.05
61 P	1,1,2,2-tetrachloroethane	0.995	1.040	-4.5	114	0.05
62	1,2,3-trichloropropane	0.713	0.735	-3.1	114	0.06
63 T	n-propylbenzene	0.825	0.839	-1.8	113	0.05
64 T	2-chlorotoluene	0.758	0.769	-1.5	110	0.05
65 T	4-chlorotoluene	0.787	0.769	2.2	111	-0.03
66 T	1,3,5-trimethylbenzene	2.728	2.723	0.2	115	0.05
67 T	tert-butylbenzene	2.506	2.384	4.9	113	0.05
68 T	1,2,4-trimethylbenzene	2.733	2.722	0.4	109	0.04
69 T	sec-butylbenzene	3.368	3.388	-0.6	112	0.05
70 T	1,3-dichlorobenzene	1.541	1.559	-1.2	111	0.05
71 T	4-isopropyltoluene	2.988	2.978	0.4	115	0.05
72 T	1,4-dichlorobenzene	1.598	1.623	-1.5	114	0.05
73 T	1,2-dichlorobenzene	1.482	1.497	-1.1	110	0.05
74 T	n-butylbenzene	2.813	2.854	-1.5	117	0.05
75 T	1,2-dibromo-3-chloropropane	0.157	0.155	1.9	111	0.07
76 T	1,2,4-trichlorobenzene	1.065	1.090	-2.3	117	0.08
77 T	hexachlorobutadiene	0.523	0.577	-10.2	122	0.08
78 T	naphthalene	2.091	2.152	-2.9	116	0.07
79 T	1,2,3-trichlorobenzene	0.909	0.940	-3.5	116	0.07

000473



#15

TBA

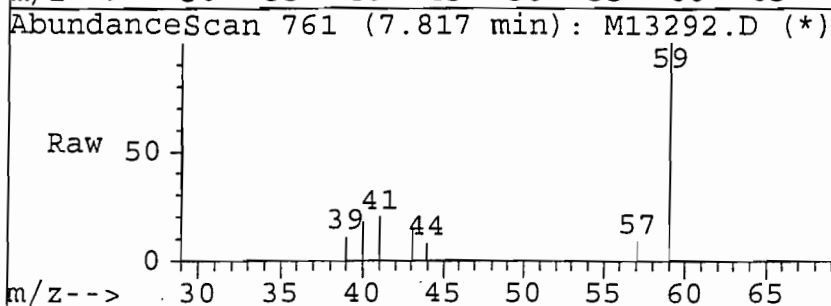
Concen: 608.08 ug/L m

RT: 7.82 min Scan# 761

Delta R.T. -0.01 min

Lab File: M13292.D

Acq: 22 Oct 99 9:37 am



Tgt Ion:59 Resp: 496840

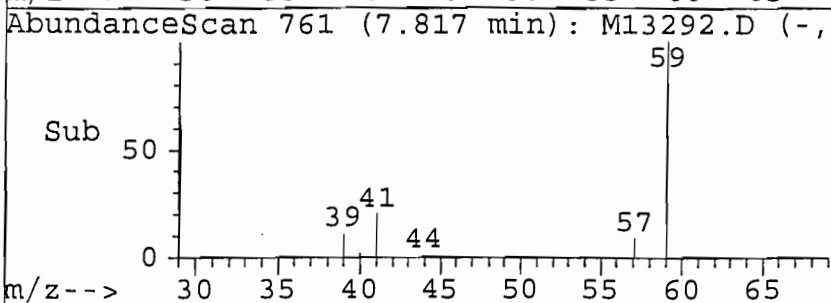
Ion Ratio Lower Upper

59 100

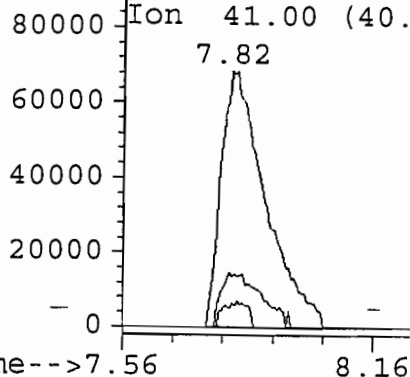
57 9.4 7.3 13.5

41 20.0 14.4 26.8

0 0.0 0.0 0.0



AbundanceIon 59.00 (58.
Ion 57.00 (56.
Ion 41.00 (40.



000474

CHEMTECH CONSULTING GROUP

VOLATILES

RAW QC DATA

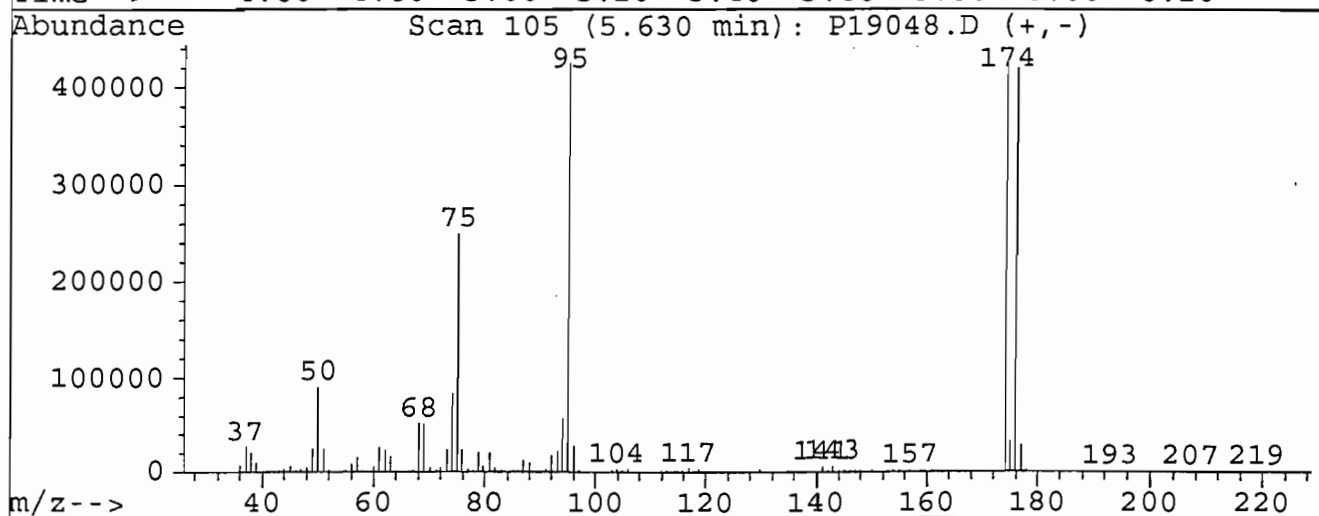
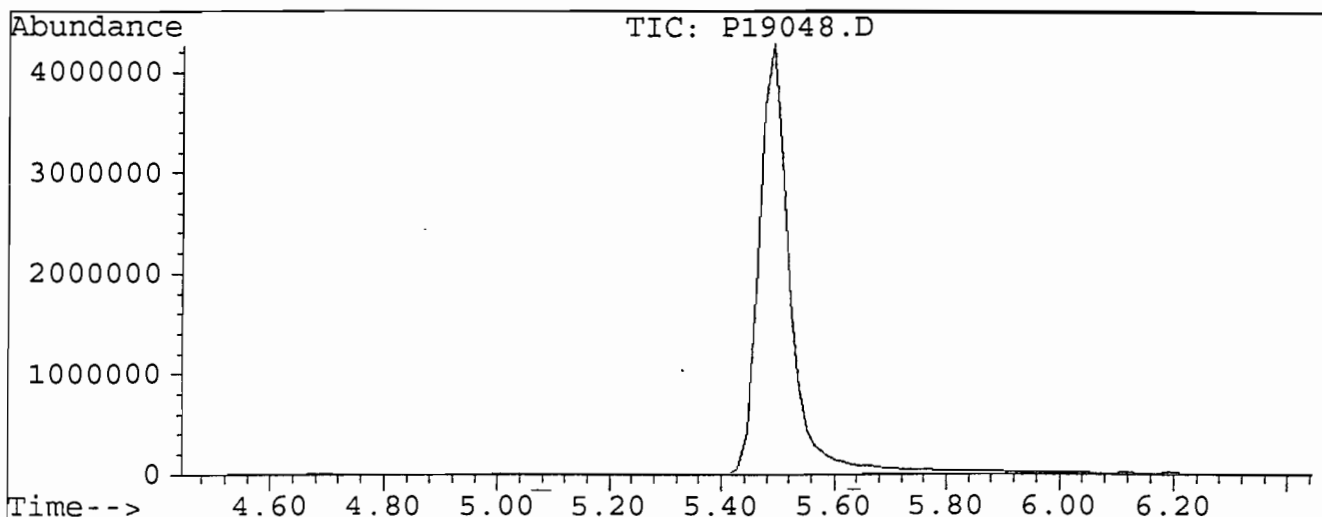
000475

BFB

Data File : I:\HPCHEM\1\DATA\V2100699\P19048.D
 Acq Time : 6 Oct 99 5:15 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 93

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	89648	PASS
75	95	30	60	58.3	247453	PASS
95	95	100	100	100.0	424464	PASS
96	95	5	9	6.3	26812	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	99.4	421933	PASS
175	174	5	9	7.4	31270	PASS
176	174	95	101	99.1	418178	PASS
177	176	5	9	6.5	27174	PASS

BFB

A. T. Vidy

Data File : E:\HPCHEM\1\DATA\V2102099\P19250.D

Acq Time : 20 Oct 99 3:12 pm

Sample : BFB TUNE CHECK

Misc : 5G/5ML

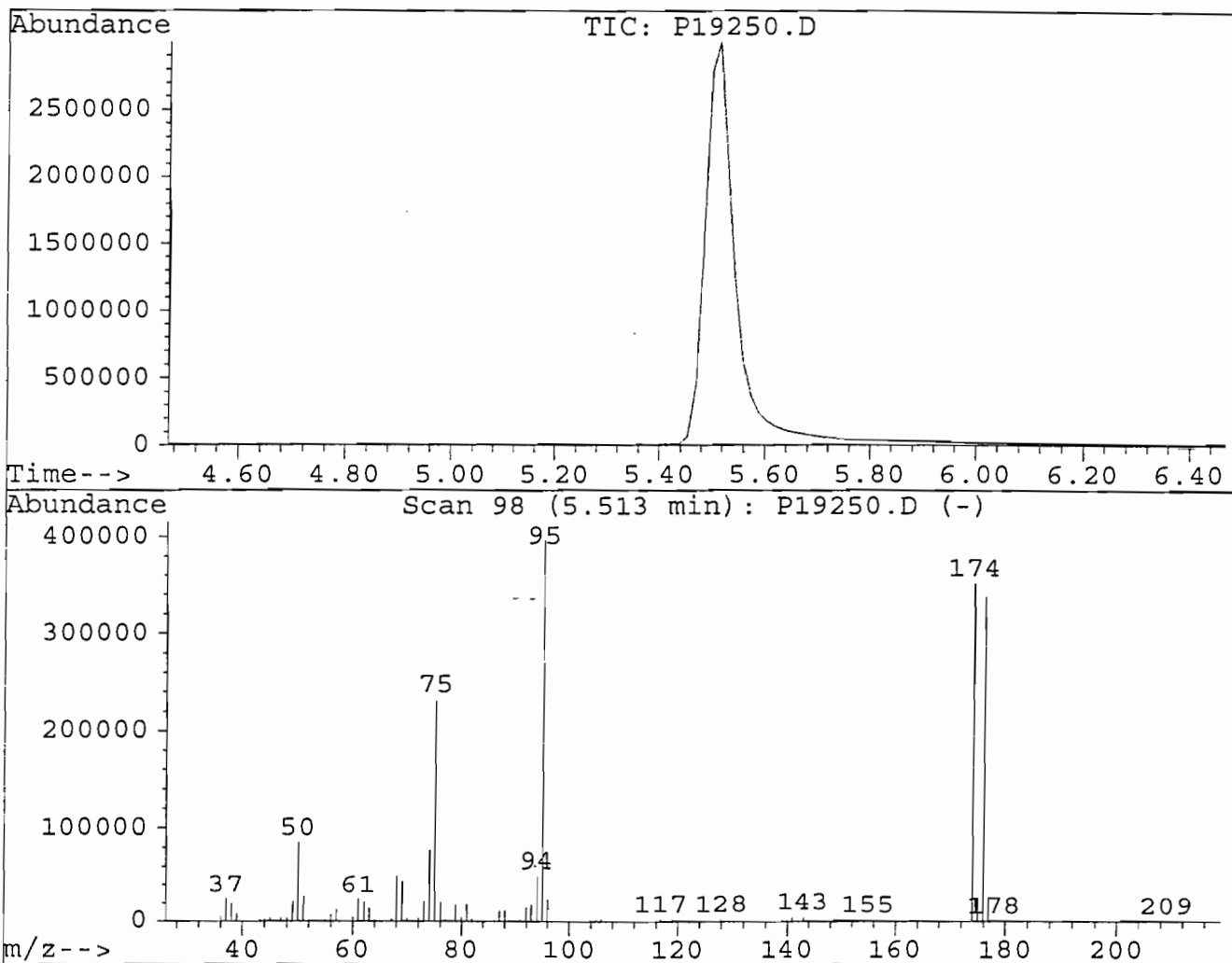
Operator: AV

Inst : voa2

Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M

Title : VOA



Peak Apex is scan: 95

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.2	83936	PASS
75	95	30	60	58.2	230368	PASS
95	95	100	100	100.0	396064	PASS
96	95	5	9	6.0	23582	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	88.7	351200	PASS
175	174	5	9	7.3	25758	PASS
176	174	95	101	96.2	337952	PASS
177	176	5	9	6.5	21828	PASS

000477

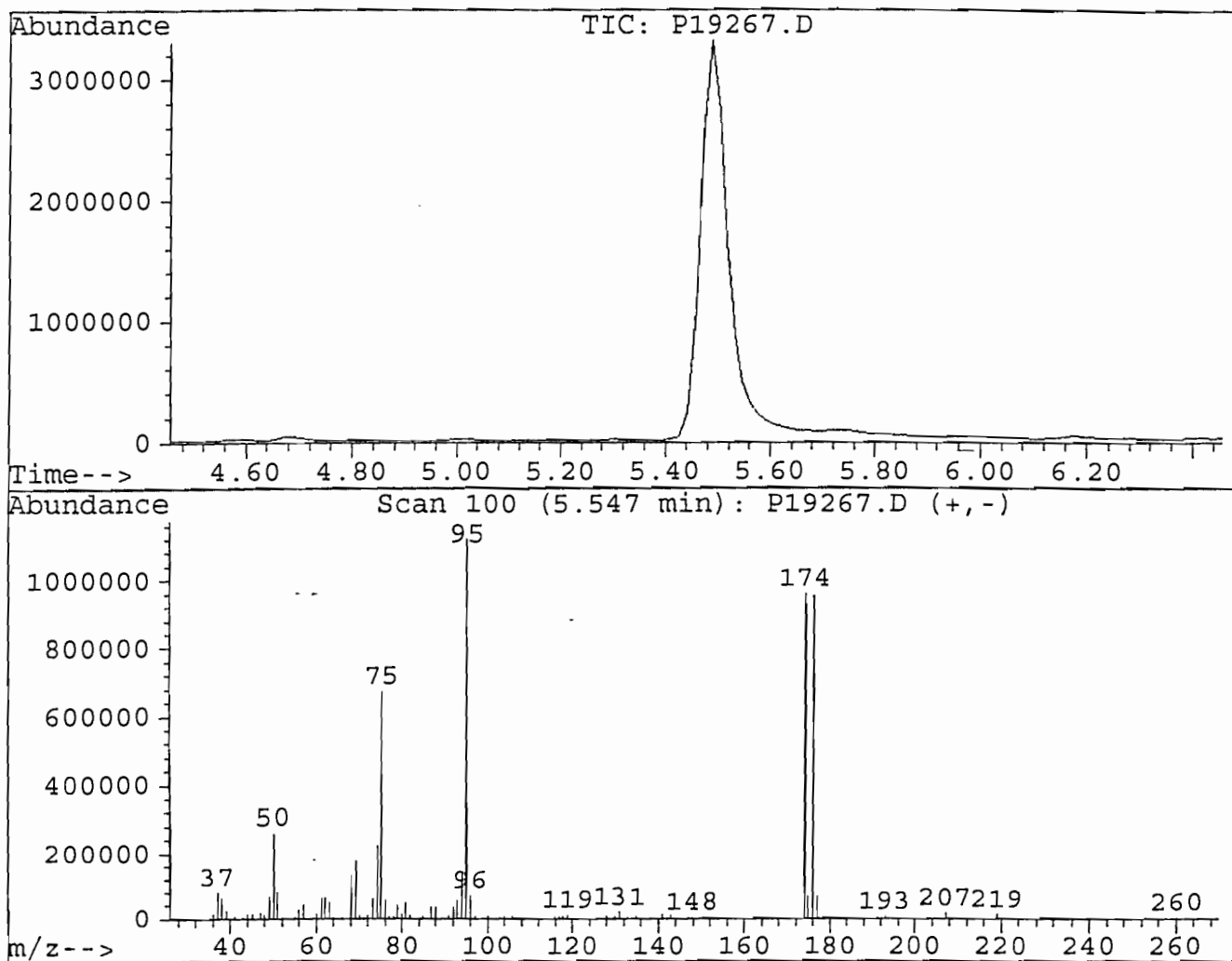
BFB

A. T. V. dy

Data File : I:\HPCHEM\1\DATA\V2102199\P19267.D
 Acq Time : 21 Oct 99 9:45 pm
 Sample : BFB TUNE CHECK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA



Peak Apex is scan: 94

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.2	260432	PASS
75	95	30	60	59.9	671240	PASS
95	95	100	100	100.0	1120904	PASS
96	95	5	9	6.3	70492	PASS
173	174	0	2	0.0	0	PASS
174	95	50	100	85.6	959112	PASS
175	174	5	9	6.9	65872	PASS
176	174	95	101	99.4	953332	PASS
177	176	5	9	6.8	64988	PASS

BFB

JJ 10-9-99

Data File : D:\HPCHEM\3\DATA\V3100999\M12953.D

Acq Time : 9 Oct 99 8:04 am

Sample : BFB TUNE CHECK

Misc : 5MLS

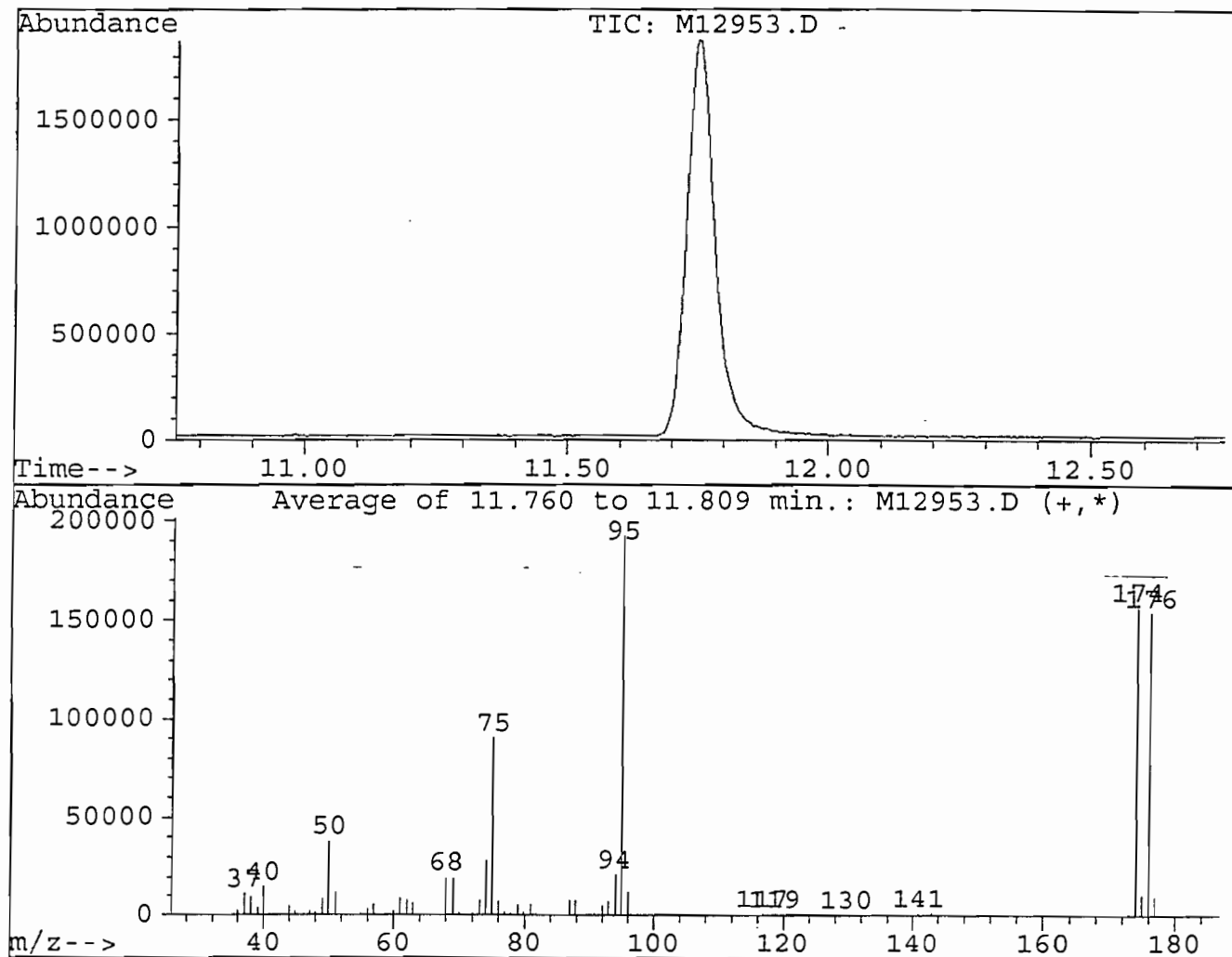
Operator: JJ

Inst : voa3

Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M

Title : VOA



Peak Apex is scan: 974

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.6	37712	PASS
75	95	30	60	46.7	89873	PASS
95	95	100	100	100.0	192474	PASS
96	95	5	9	6.2	12005	PASS
173	174	0	2	0.1	215	PASS
174	95	50	100	81.3	156516	PASS
175	174	5	9	6.9	10770	PASS
176	174	95	101	98.2	153652	PASS
177	176	5	9	6.1	9368	PASS

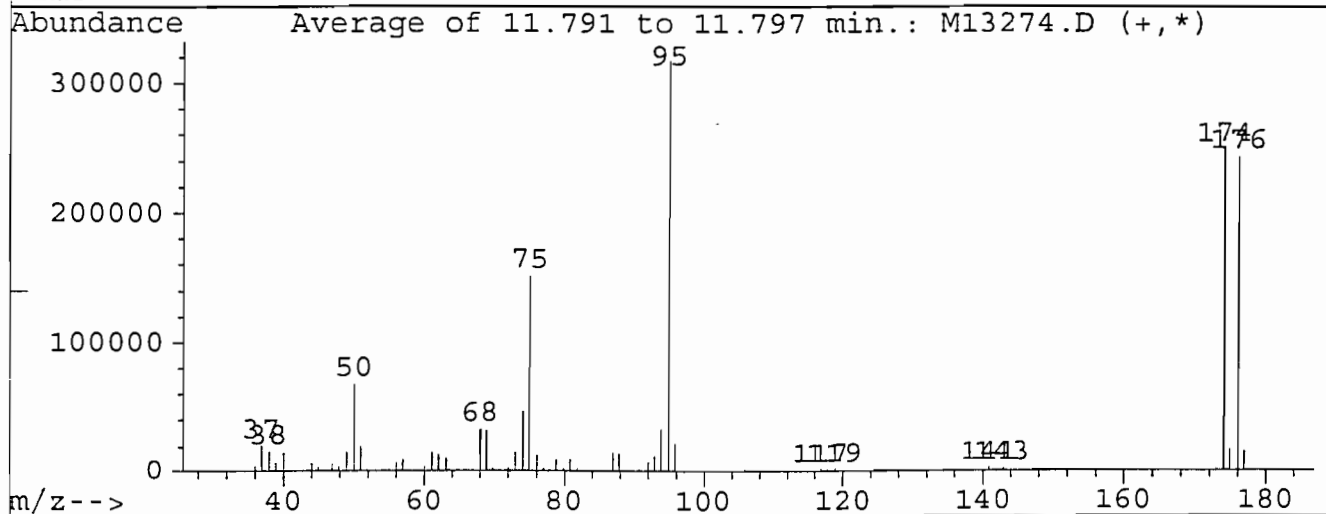
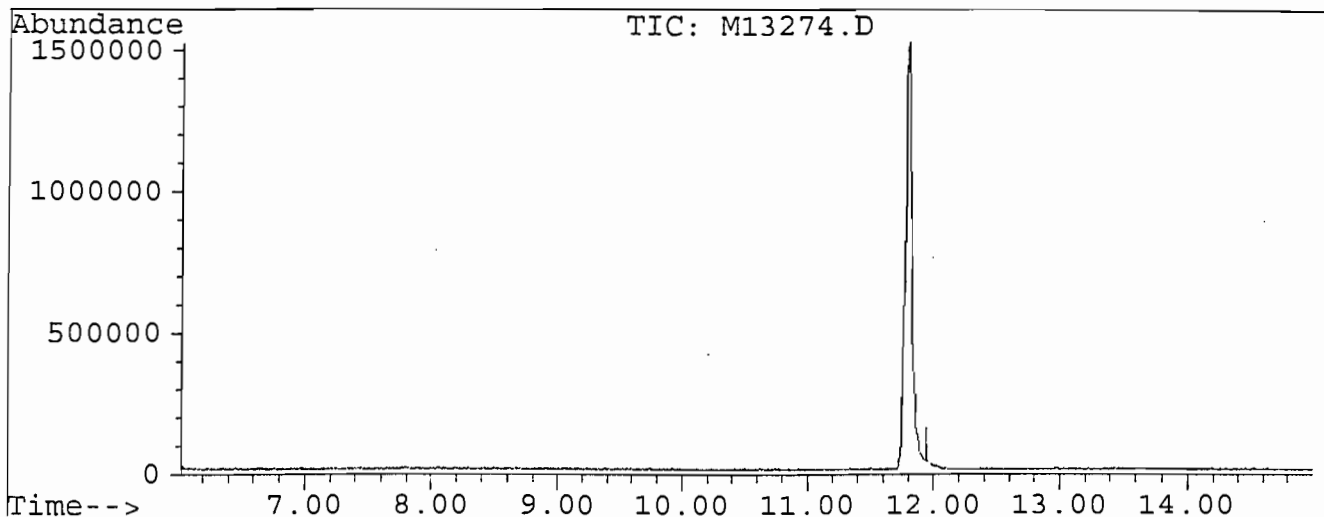
BFB

98 10-22-99

Data File : D:\HPCHEM\3\DATA\V3102199\M13274.D
 Acq Time : 21 Oct 99 8:13 pm
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: AV
 Inst : voa3
 Multiplr: 1.00

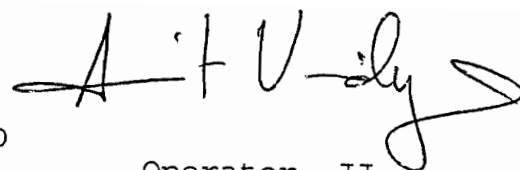
Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA



Peak Apex is scan: AVERAGE

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.3	67524	PASS
75	95	30	60	47.6	150976	PASS
95	95	100	100	100.0	317312	PASS
96	95	5	9	6.7	21396	PASS
173	174	0	2	0.3	852	PASS
174	95	50	100	78.4	248704	PASS
175	174	5	9	6.8	16904	PASS
176	174	95	101	97.7	243008	PASS
177	176	5	9	6.4	15537	PASS

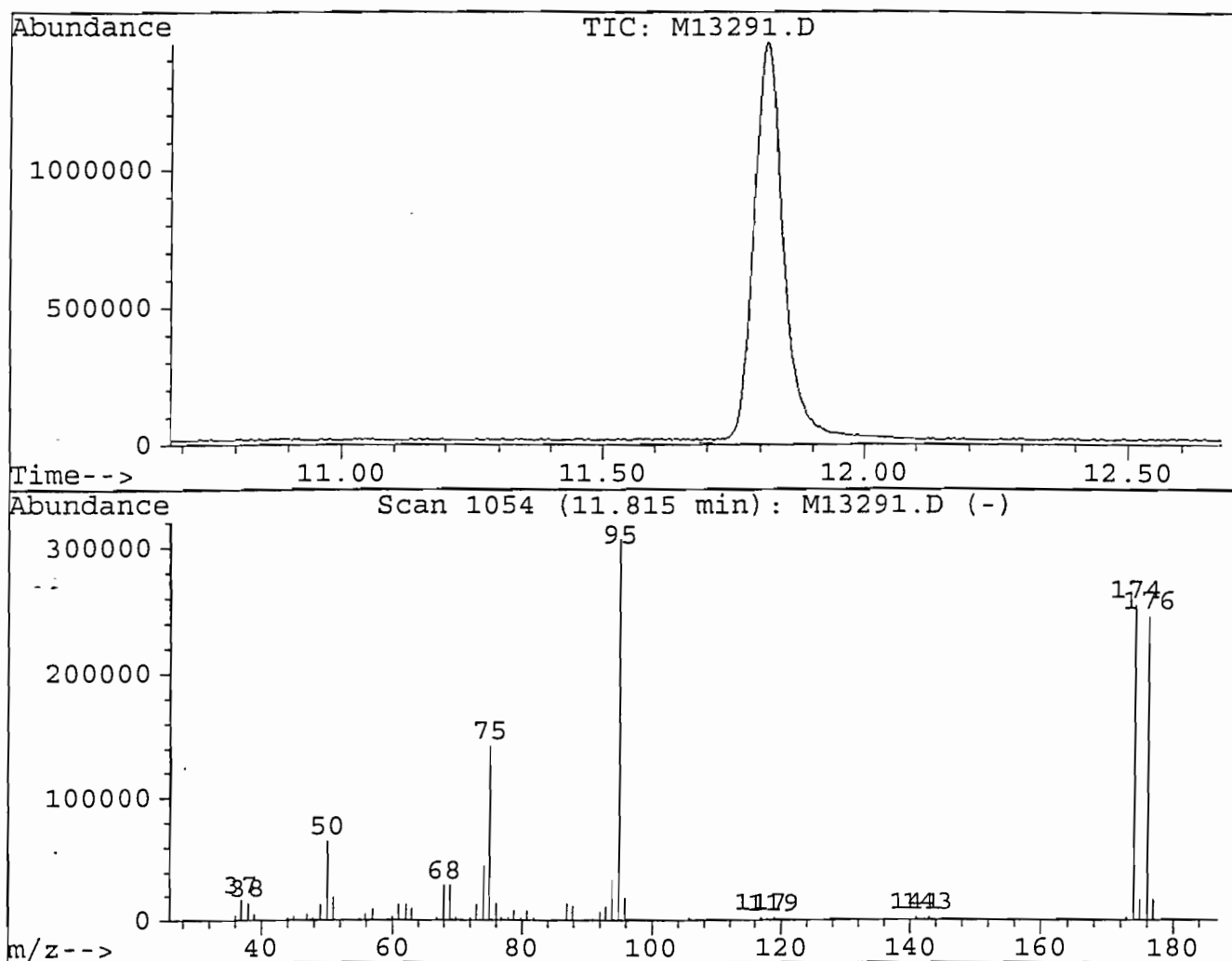
BFB



Data File : D:\HPCHEM\3\DATA\V3102299\M13291.D
 Acq Time : 22 Oct 99 9:09 am
 Sample : BFB TUNE CHECK
 Misc : 5MLS

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA



Peak Apex is scan: 1027

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.1	64608	PASS
75	95	30	60	46.1	141120	PASS
95	95	100	100	100.0	306368	PASS
96	95	5	9	5.9	18208	PASS
173	174	0	2	0.8	1950	PASS
174	95	50	100	83.0	254144	PASS
175	174	5	9	6.6	16864	PASS
176	174	95	101	96.5	245312	PASS
177	176	5	9	6.9	16816	PASS

000431

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19252.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/20/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

75-71-8	Dichlorodifluoromethane	1.7	U
74-87-3	Chloromethane	3.3	U
75-01-4	Vinyl Chloride	1.9	U
74-83-9	Bromomethane	3.8	U
75-00-3	Chloroethane	5	U
107-02-8	Acrolein	5	U
75-69-4	Trichlorofluoromethane	1.2	U
75-35-4	1,1-Dichloroethene	1.9	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	4.2	U
107-13-1	Acrylonitrile	5	U
75-34-3	1,1-Dichloroethane	1.3	U
594-20-7	2,2-Dichloropropane	1	U
156-59-2	cis-1,2-dichloroethene	1.7	U
74-97-5	Bromochloromethane	1.7	U
67-66-3	Chloroform	1.2	U
71-55-6	1,1,1-Trichloroethane	0.9	U
108-05-4	Vinyl Acetate	5	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	4	U
563-58-6	1,1-Dichloropropene	1.1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2.6	U
78-87-5	1,2-Dichloropropane	3.4	U
74-95-3	Dibromomethane	1.4	U
75-27-4	Bromodichloromethane	1	U
110-07-3	2-Chloroethyl Vinyl Ether	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1.2	U
10061-02-6	trans-1,3-Dichloropropene	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS

Matrix: (soil/water) SOIL Lab Sample ID: VBK01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19252.D

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. 0 Date Analyzed: 10/20/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.2		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.6		U
591-78-6	2-Hexanone	5		U
108-90-7	Chlorobenzene	1.1		U
630-20-6	1,1,1,2-Tetrachloroethane	1.2		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.3		U
95-47-6	o-xylene	1.2		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.3		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.6		U
96-18-4	1,2,3-Trichloropropane	2.5		U
103-65-1	n-Propylbenzene	1.3		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.6		U
98-06-6	tert-Butylbenzene	1.2		U
95-63-6	1,2,4-Trimethylbenzene	1.6		U
135-98-8	sec-Butylbenzene	1.2		U
541-73-1	1,3-Dichlorobenzene	1.2		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.2		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.7		U
96-12-8	1,2-Dibromo-3-chloropropane	5		U
120-82-1	1,2,4-Trichlorobenzene	1.2		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

VBLK01

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: VBLK01

Lab File ID: P19252.D

Date Received:

Date Analyzed: 10/20/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VLBK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No. 1382

Site: _____

Location: _____

Group: GP-008-S

Matrix: (soil/water) SOIL

Lab Sample ID: VLBK01

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19252.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/20/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 0

(ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
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30.				

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19252.D
 Acq Time : 20 Oct 99 4:36 pm
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 21 12:12 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.27	96	775458	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.35	117	900342	50.00	ug/L	0.02
58) 1,4-dichlorobenzene-d4	22.61	152	726741	50.00	ug/L	0.01
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.97	113	671119	51.94	ug/L	103.89%
30) 1,2-Dichlorethane-d4	8.68	65	507084	49.95	ug/L	99.90%
38) Toluene-d8	12.77	98	742547	49.09	ug/L	98.19%
42) 4-Bromofluorobenzene	19.49	95	866574	55.81	ug/L	111.63%

Target Compounds

Qvalue

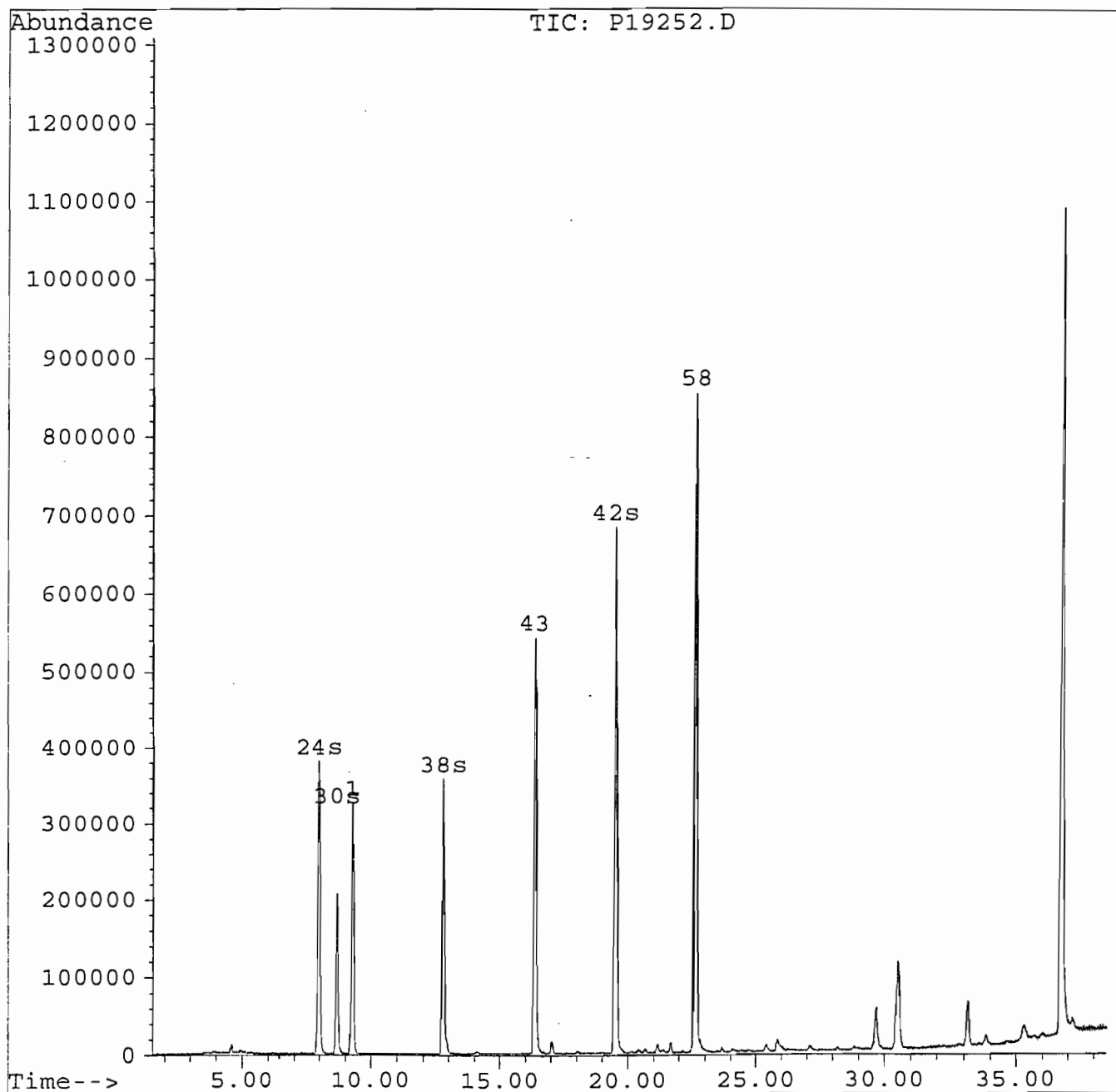
000486

Quantitation Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19252.D
Acq Time : 20 Oct 99 4:36 pm
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 21 12:12 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000487

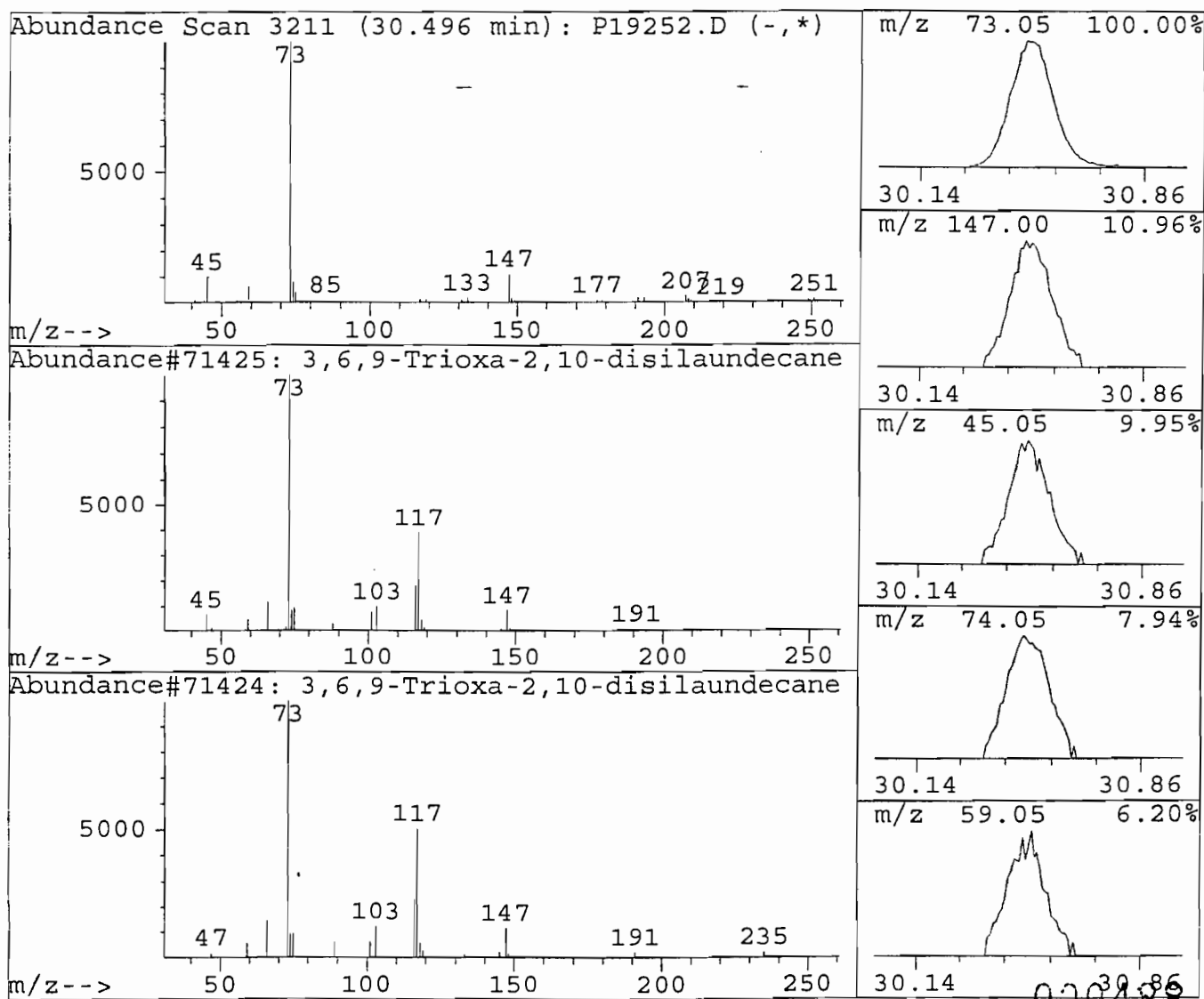
Library Search Compound Report

Data File : E:\HPCHEM\1\DATA\V2102099\P19252.D
Acq Time : 20 Oct 99 4:36 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
30.50	9.49 ug/L	1041834	1,4-dichlorobenzene-d4	22.61	
Hit# of	2	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane,	2	71425	016654-74-3	39
2	3,6,9-Trioxa-2,10-disilaundecane,	2	71424	016654-74-3	28



Library Search Compound Report

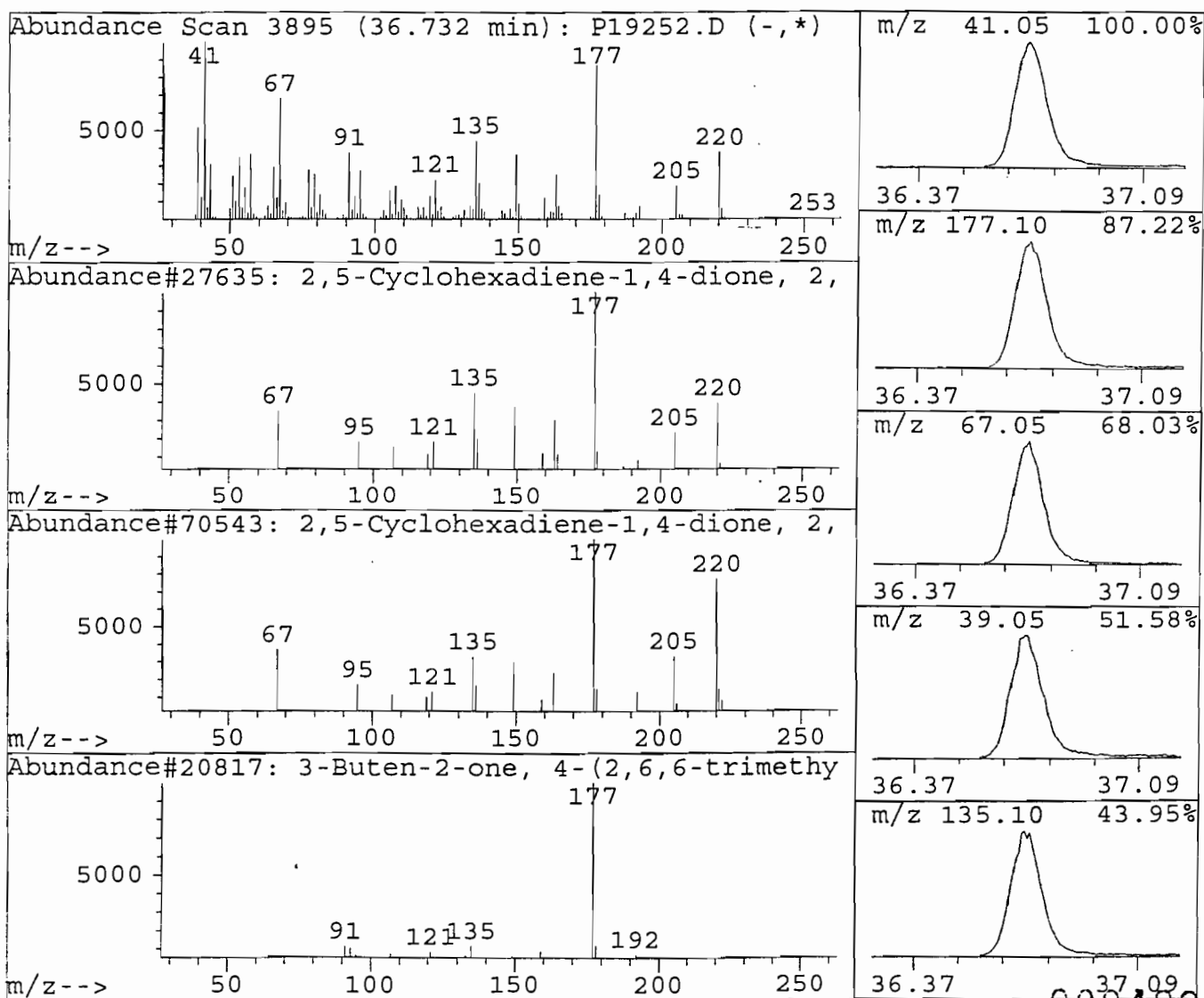
Data File : E:\HPCHEM\1\DATA\V2102099\P19252.D
Acq Time : 20 Oct 99 4:36 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : E:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : E:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
36.73	70.02 ug/L	7687378	1,4-dichlorobenzene-d4	22.61

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,5-Cyclohexadiene-1,4-dione, 2,6-b	27635	000719-22-2	99
2	2,5-Cyclohexadiene-1,4-dione, 2,6-b	70543	000719-22-2	96
3	3-Buten-2-one, 4-(2,6,6-trimethyl-1	20817	014901-07-6	38
4	3-Buten-2-one, 4-(2,6,6-trimethyl-1	69317	000079-77-6	30
5	1,4-Benzenediamine, N,N'-bis(1-meth	20786	004251-01-8	30



000489

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK02

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19269.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/21/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

75-71-8	Dichlorodifluoromethane	1.7	U
74-87-3	Chloromethane	3.3	U
75-01-4	Vinyl Chloride	1.9	U
74-83-9	Bromomethane	3.8	U
75-00-3	Chloroethane	5	U
107-02-8	Acrolein	5	U
75-69-4	Trichlorofluoromethane	1.2	U
75-35-4	1,1-Dichloroethene	1.9	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-09-2	Methylene Chloride	1	U
156-60-5	trans-1,2-Dichloroethene	4.2	U
107-13-1	Acrylonitrile	5	U
75-34-3	1,1-Dichloroethane	1.3	U
594-20-7	2,2-Dichloropropane	1	U
156-59-2	cis-1,2-dichloroethene	1.7	U
74-97-5	Bromochloromethane	1.7	U
67-66-3	Chloroform	1.2	U
71-55-6	1,1,1-Trichloroethane	0.9	U
108-05-4	Vinyl Acetate	5	U
78-93-3	2-Butanone	5	U
56-23-5	Carbon Tetrachloride	4	U
563-58-6	1,1-Dichloropropene	1.1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	2.6	U
78-87-5	1,2-Dichloropropane	3.4	U
74-95-3	Dibromomethane	1.4	U
75-27-4	Bromodichloromethane	1	U
110-07-3	2-Chloroethyl Vinyl Ether	5	U
10061-01-5	cis-1,3-Dichloropropene	1	U
108-88-3	Toluene	1.2	U
10061-02-6	trans-1,3-Dichloropropene	1	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK02

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK02

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19269.D

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

79-00-5	1,1,2-Trichloroethane	1.4	U
108-10-1	4-Methyl-2-Pentanone	5	U
127-18-4	Tetrachloroethene	1.1	U
142-28-9	1,3-Dichloropropane	1.2	U
124-48-1	Dibromochloromethane	0.7	U
106-93-4	1,2-Dibromoethane	1.6	U
591-78-6	2-Hexanone	5	U
108-90-7	Chlorobenzene	1.1	U
630-20-6	1,1,1,2-Tetrachloroethane	1.2	U
100-41-4	Ethylbenzene	1.1	U
136777-61-2	m&p-xylenes	2.3	U
95-47-6	o-xylene	1.2	U
100-42-5	Styrene	0.2	U
75-25-2	Bromoform	0.5	U
98-82-8	isopropylbenzene	1.3	U
108-86-1	Bromobenzene	1	U
79-34-5	1,1,2,2-Tetrachloroethane	1.6	U
96-18-4	1,2,3-Trichloropropane	2.5	U
103-65-1	n-Propylbenzene	1.3	U
95-49-8	2-Chlorotoluene	1.1	U
106-43-4	4-Chlorotoluene	1	U
108-67-8	1,3,5-Trimethylbenzene	1.6	U
98-06-6	tert-Butylbenzene	1.2	U
95-63-6	1,2,4-Trimethylbenzene	1.6	U
135-98-8	sec-Butylbenzene	1.2	U
541-73-1	1,3-Dichlorobenzene	1.2	U
99-87-6	4-Isopropyltoluene	0.9	U
106-46-7	1,4-Dichlorobenzene	1.2	U
95-50-1	1,2-Dichlorobenzene	1	U
104-51-8	n-Butylbenzene	1.7	U
96-12-8	1,2-Dibromo-3-chloropropane	5	U
120-82-1	1,2,4-Trichlorobenzene	1.2	U
87-68-3	Hexachlorobutadiene	1	U

SAMPLE NO.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBK02

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
 Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
 Matrix: (soil/water) SOIL Lab Sample ID: VBK02
 Sample wt/vol: 5.0 (g/mL) G Lab File ID: P19269.D
 Level: (low/med) LOW Date Received: _____
 % Moisture: not dec. 0 Date Analyzed: 10/21/99
 GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
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Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
 Acq Time : 21 Oct 99 11:08 pm
 Sample : PRO BLK
 Misc : 5G/5ML
 Quant Time: Oct 22 11:27 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.25	96	890527	50.00	ug/L	-0.01
43) Chlorobenzene-d5	16.33	117	1087899	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	796990	50.00	ug/L	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	7.96	113	727099	49.01	ug/L	98.01%
30) 1,2-Dichlorethane-d4	8.66	65	545465	46.79	ug/L	93.57%
38) Toluene-d8	12.75	98	854462	49.19	ug/L	98.39%
42) 4-Bromofluorobenzene	19.48	95	962272	53.97	ug/L	107.94%

Target Compounds Qvalue

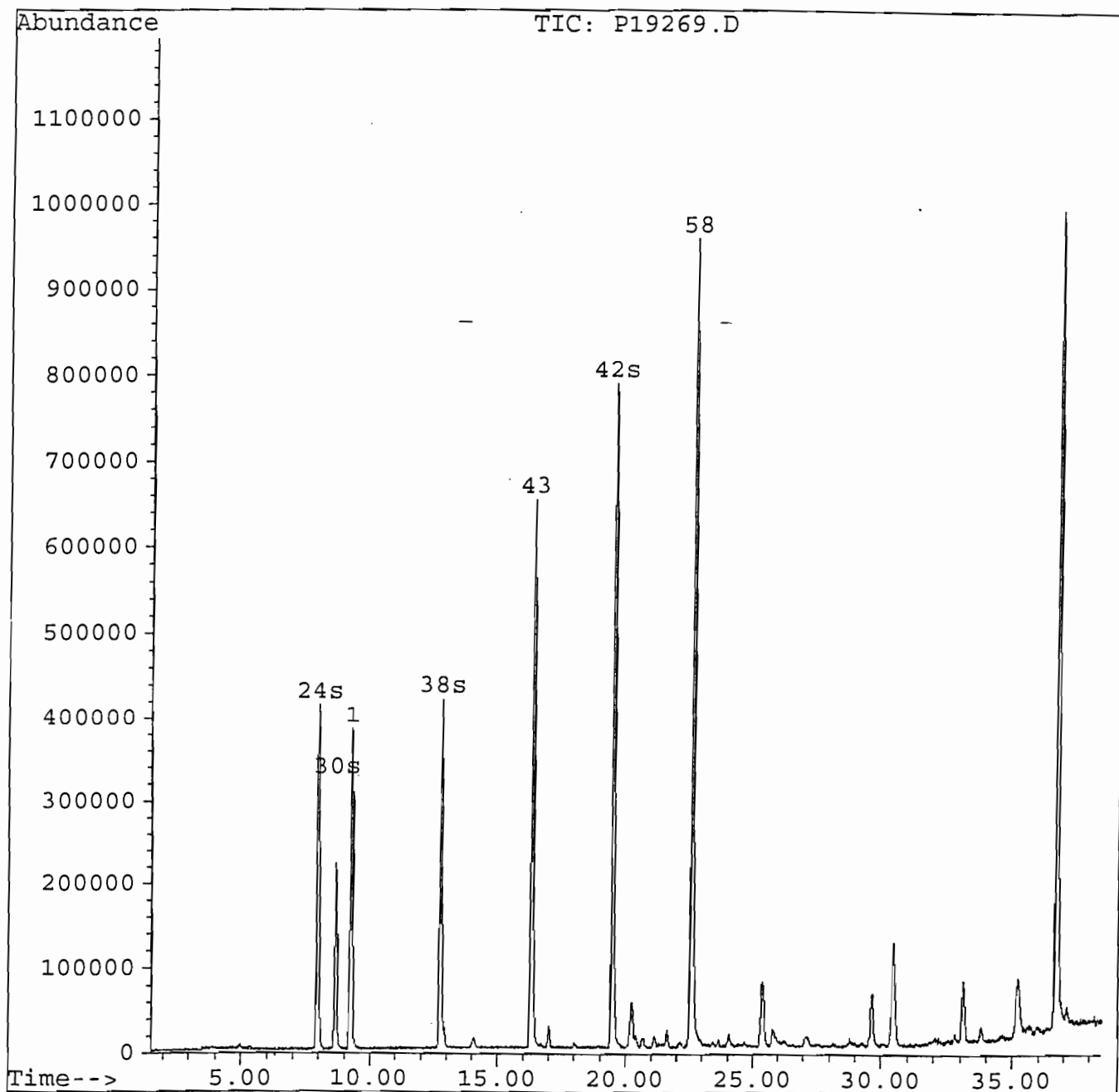
000494

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML
Quant Time: Oct 22 11:27 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000495

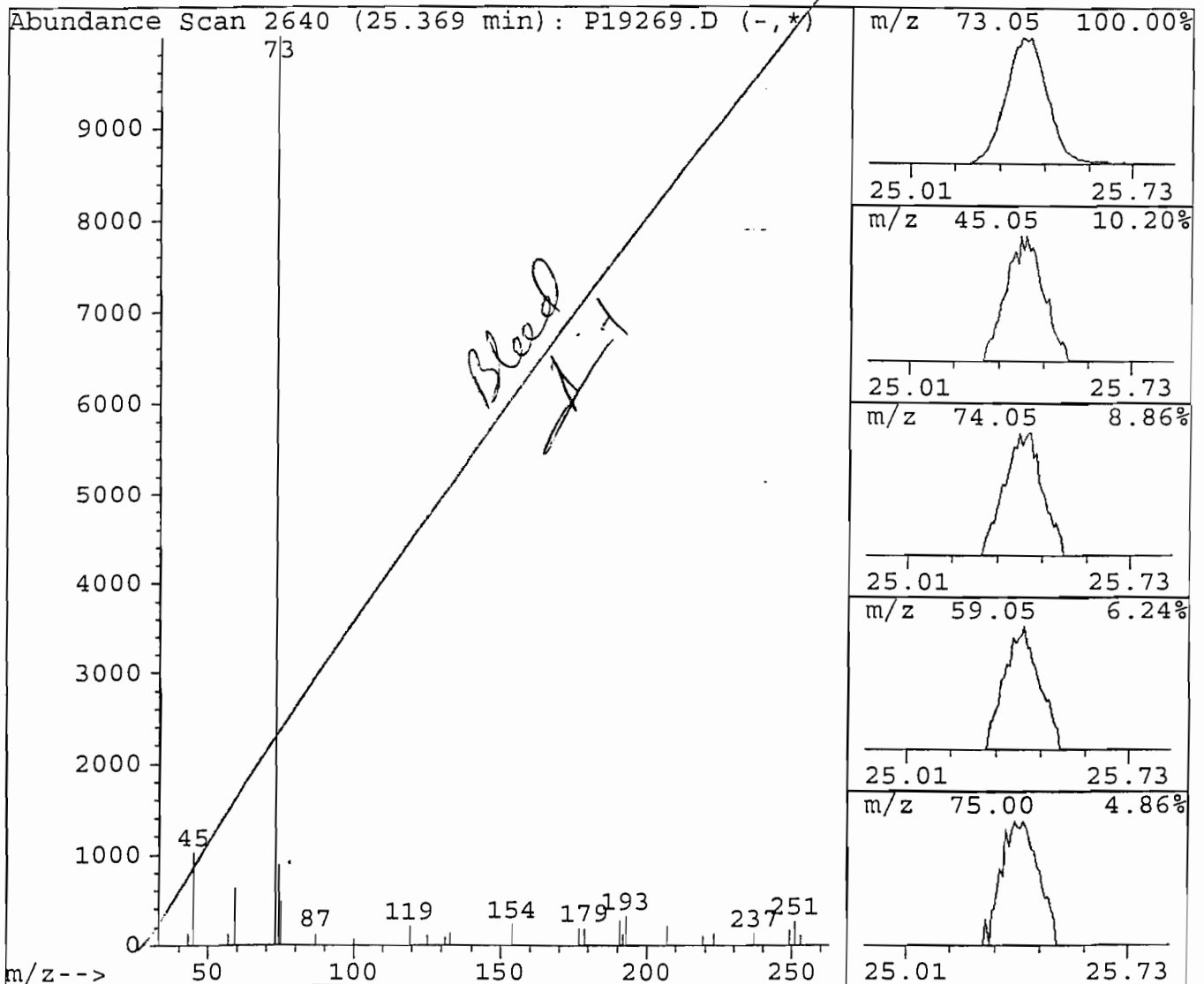
Library Search Compound Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
 Acq Time : 21 Oct 99 11:08 pm
 Sample : PRO BLK
 Misc : 5G/5ML

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.	
25.37	5.35 ug/L	678472	1,4-dichlorobenzene-d4	22.58	
Hit# of	0	Tentative ID	Ref#	CAS#	Qual
1	Unknown		0	000000-00-0	0



000496

Library Search Compound Report

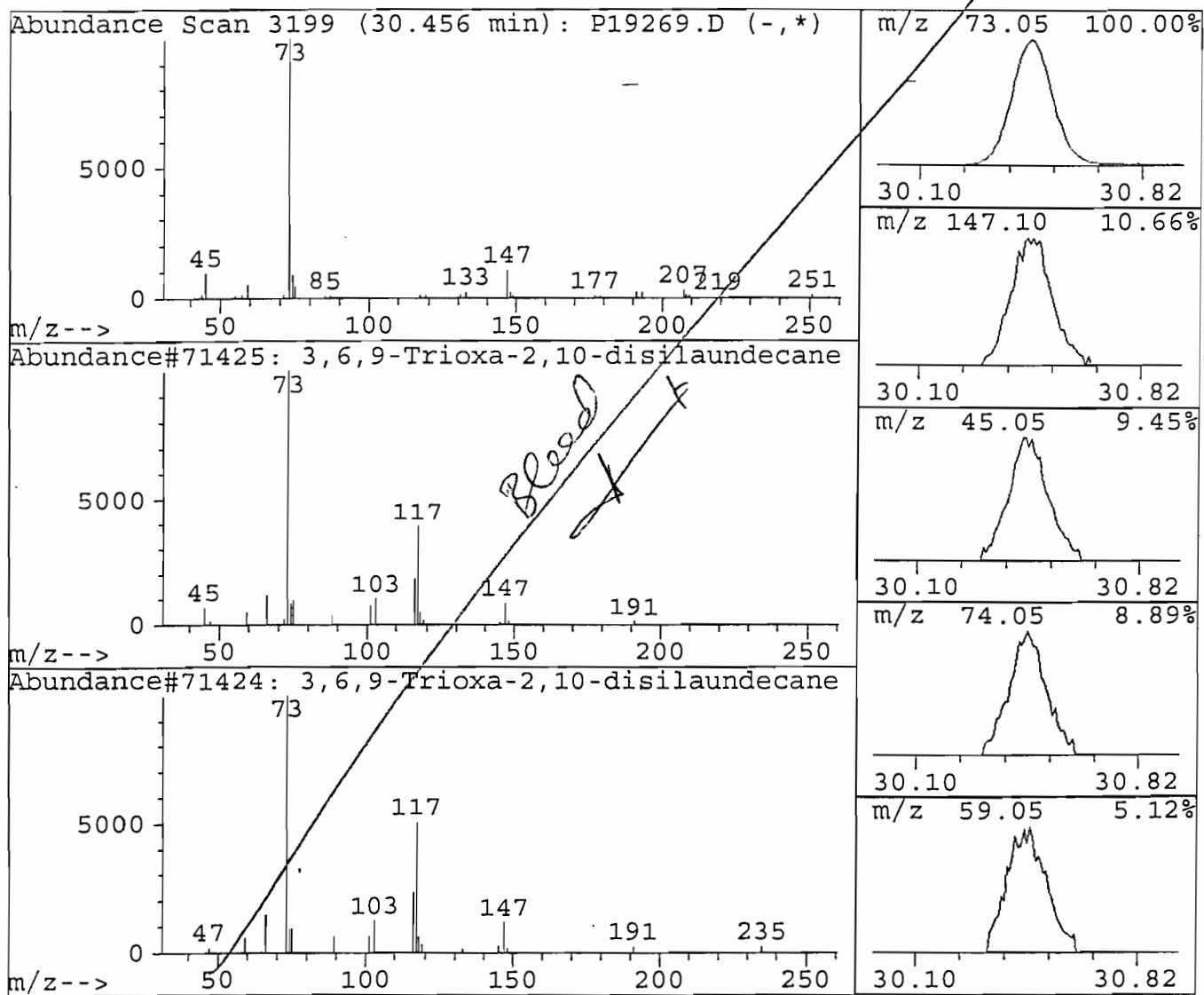
Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
30.46	9.06 ug/L	1148627	1,4-dichlorobenzene-d4	22.58

Hit#	of	2	Tentative ID	Ref#	CAS#	Qual
1	3,6,9-Trioxa-2,10-disilaundecane,	2	71425	016654-74-3	50	
2	3,6,9-Trioxa-2,10-disilaundecane,	2	71424	016654-74-3	33	



000497

Library Search Compound Report

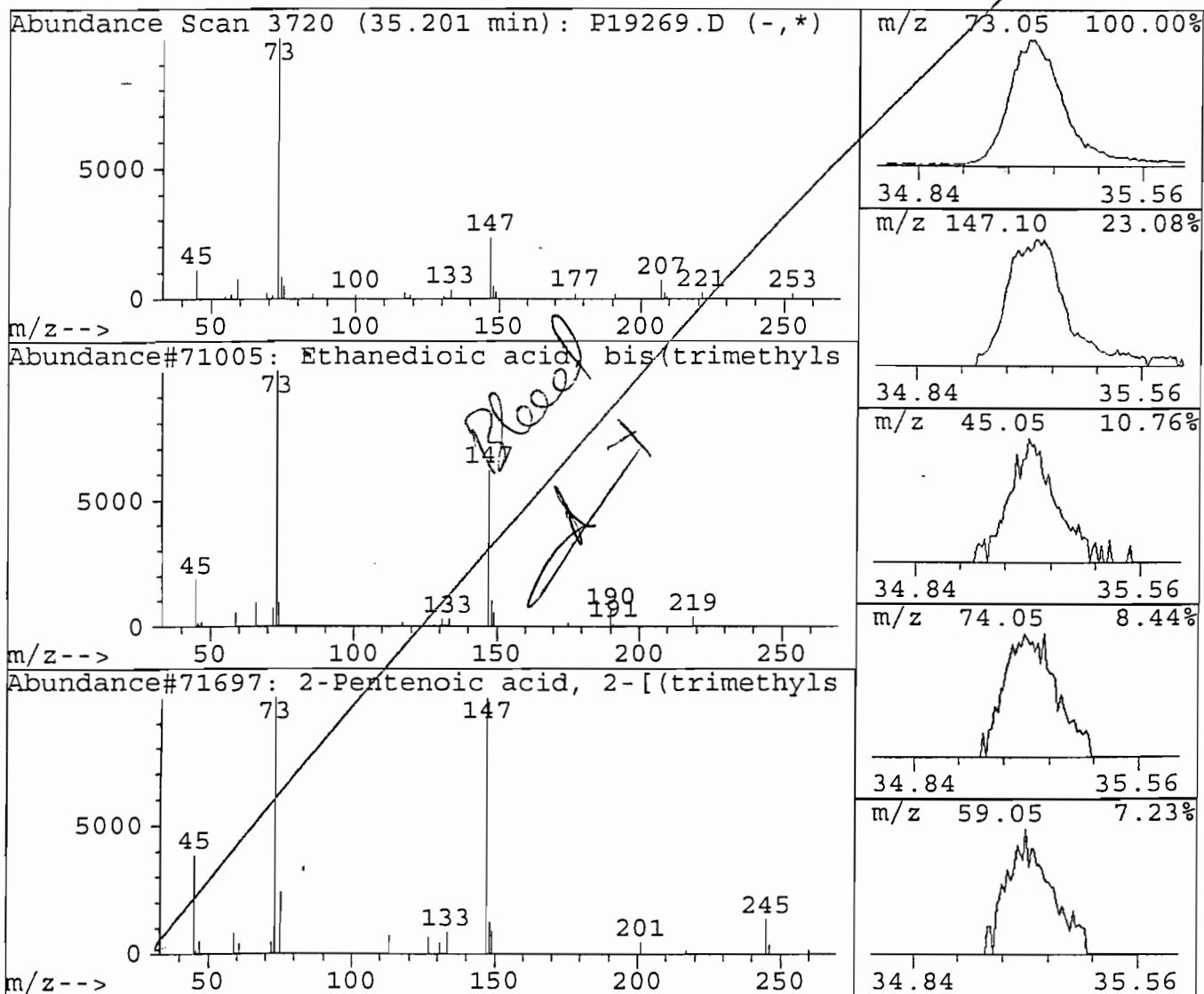
Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
35.20	6.61 ug/L	838029	1,4-dichlorobenzene-d4	22.58

Hit# of	2	Tentative ID	Ref#	CAS#	Qual
1	Ethanedioic acid, bis(trimethylsilyl	71005	018294-04-7	40	
2	2-Pentenoic acid, 2-[(trimethylsilyl	71697	055045-17-5	23	



000498

Library Search Compound Report

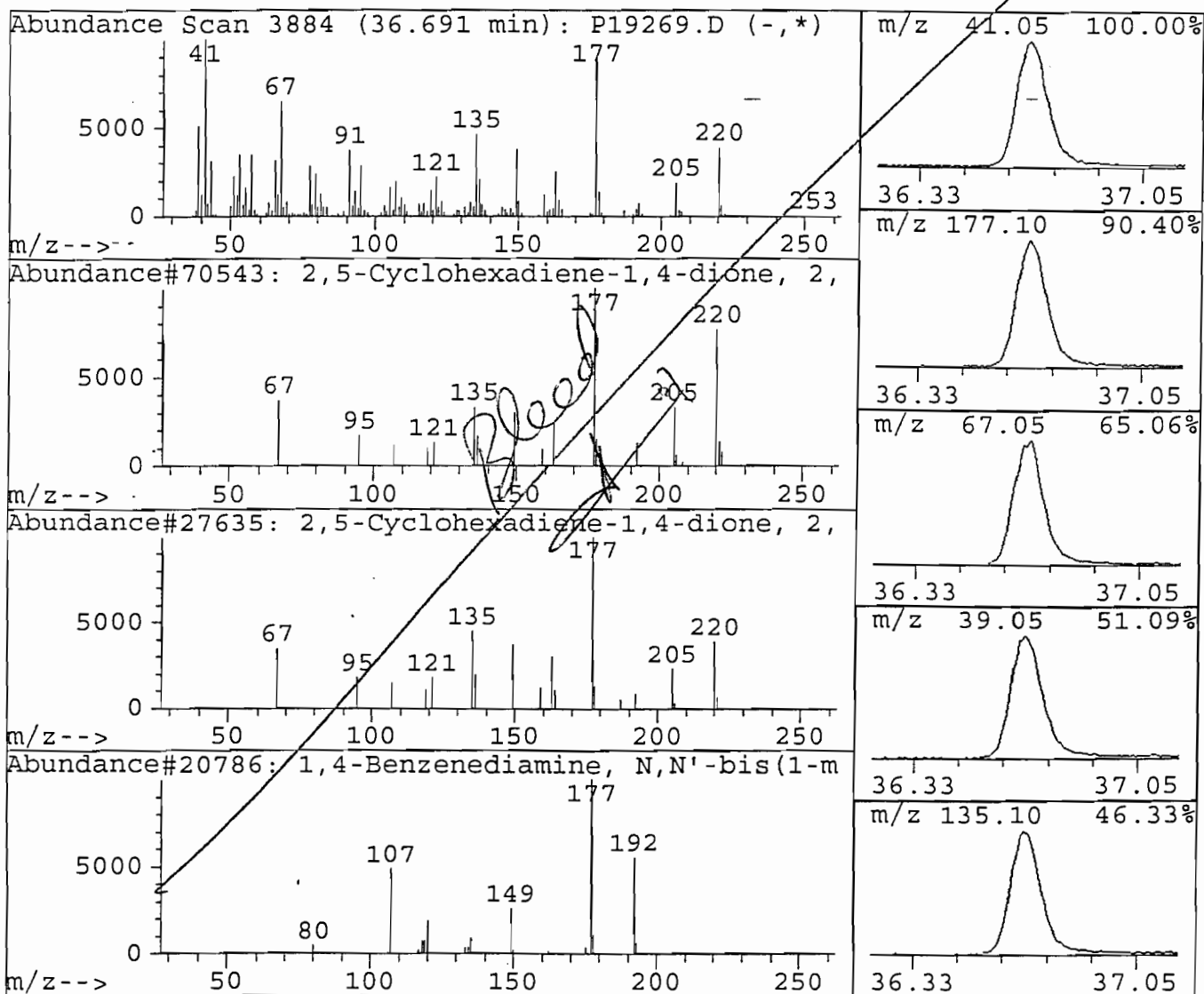
Data File : I:\HPCHEM\1\DATA\V2102199\P19269.D
Acq Time : 21 Oct 99 11:08 pm
Sample : PRO BLK
Misc : 5G/5ML

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Library : C:\DATABASE\NBS75K.L

R.T.	Conc	Area	Relative to ISTD	R.T.
36.69	56.41 ug/L	7153611	1,4-dichlorobenzene-d4	22.58

Hit# of 20	Tentative ID	Ref#	CAS#	Qual
1	2,5-Cyclohexadiene-1,4-dione, 2,6-b	70543	000719-22-2	96
2	2,5-Cyclohexadiene-1,4-dione, 2,6-b	27635	000719-22-2	81
3	1,4-Benzenediamine, N,N'-bis(1-meth	20786	004251-01-8	27
4	3-Buten-2-one, 4-(2,6,6-trimethyl-1	69317	000079-77-6	25
5	3-Buten-2-one, 4-(2,6,6-trimethyl-1	20817	014901-07-6	25



000499

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site:

Location:

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK01

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13276.D

Level: (low/med) MED

Date Received:

% Moisture: not dec. 0

Date Analyzed: 10/21/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

75-71-8	Dichlorodifluoromethane	210	U
74-87-3	Chloromethane	420	U
75-01-4	Vinyl Chloride	230	U
74-83-9	Bromomethane	470	U
75-00-3	Chloroethane	630	U
107-02-8	Acrolein	630	U
75-69-4	Trichlorofluoromethane	140	U
75-35-4	1,1-Dichloroethene	240	U
67-64-1	Acetone	630	U
75-15-0	Carbon Disulfide	630	U
75-09-2	Methylene Chloride	130	U
156-60-5	trans-1,2-Dichloroethene	530	U
107-13-1	Acrylonitrile	630	U
75-34-3	1,1-Dichloroethane	160	U
594-20-7	2,2-Dichloropropane	130	U
156-59-2	cis-1,2-dichloroethene	220	U
74-97-5	Bromochloromethane	210	U
67-66-3	Chloroform	150	U
71-55-6	1,1,1-Trichloroethane	110	U
108-05-4	Vinyl Acetate	630	U
78-93-3	2-Butanone	630	U
56-23-5	Carbon Tetrachloride	500	U
563-58-6	1,1-Dichloropropene	140	U
71-43-2	Benzene	130	U
107-06-2	1,2-Dichloroethane	130	U
79-01-6	Trichloroethene	320	U
78-87-5	1,2-Dichloropropane	430	U
74-95-3	Dibromomethane	180	U
75-27-4	Bromodichloromethane	130	U
110-07-3	2-Chloroethyl Vinyl Ether	630	U
10061-01-5	cis-1,3-Dichloropropene	130	U
108-88-3	Toluene	160	U
10061-02-6	trans-1,3-Dichloropropene	130	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBLK01

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13276.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No. Compound (ug/L or ug/Kg) ug/Kg Q

79-00-5	1,1,2-Trichloroethane	170	U
108-10-1	4-Methyl-2-Pentanone	630	U
127-18-4	Tetrachloroethene	140	U
142-28-9	1,3-Dichloropropane	150	U
124-48-1	Dibromochloromethane	87	U
106-93-4	1,2-Dibromoethane	200	U
591-78-6	2-Hexanone	630	U
108-90-7	Chlorobenzene	140	U
630-20-6	1,1,1,2-Tetrachloroethane	150	U
100-41-4	Ethylbenzene	140	U
136777-61-2	m&p-xylenes	290	U
95-47-6	o-xylene	150	U
100-42-5	Styrene	25	U
75-25-2	Bromoform	62	U
98-82-8	isopropylbenzene	160	U
108-86-1	Bromobenzene	130	U
79-34-5	1,1,2,2-Tetrachloroethane	200	U
96-18-4	1,2,3-Trichloropropane	310	U
103-65-1	n-Propylbenzene	160	U
95-49-8	2-Chlorotoluene	140	U
106-43-4	4-Chlorotoluene	130	U
108-67-8	1,3,5-Trimethylbenzene	200	U
98-06-6	tert-Butylbenzene	150	U
95-63-6	1,2,4-Trimethylbenzene	200	U
135-98-8	sec-Butylbenzene	150	U
541-73-1	1,3-Dichlorobenzene	150	U
99-87-6	4-Isopropyltoluene	110	U
106-46-7	1,4-Dichlorobenzene	150	U
95-50-1	1,2-Dichlorobenzene	130	U
104-51-8	n-Butylbenzene	210	U
96-12-8	1,2-Dibromo-3-chloropropane	630	U
120-82-1	1,2,4-Trichlorobenzene	150	U
87-68-3	Hexachlorobutadiene	130	U

SAMPLE NO.

VBLK01

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: VBLK01

Lab File ID: M13276.D

Date Received:

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

Q

3/90

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBLK01

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: Location: Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: VBLK01
Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13276.D
Level: (low/med) MED Date Received:
% Moisture: not dec. 0 Date Analyzed: 10/21/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:

Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
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000503

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13276.D
 Acq Time : 21 Oct 99 9:33 pm
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 22 8:08 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.14	96	2496814	50.00	ug/L	0.04
43) Chlorobenzene-d5	20.48	117	2039879	50.00	ug/L	0.03
58) 1,4-dichlorobenzene-d4	25.21	152	974986	50.00	ug/L	0.03

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	%Recovery
24) Dibromofluoromethane	12.44	113	796603	51.29	ug/L	102.59%
30) 1,2-Dichlorethane-d4	13.48	65	840352	48.01	ug/L	96.02%
38) Toluene-d8	17.39	98	2536814	52.15	ug/L	104.30%
42) 4-Bromofluorobenzene	22.96	95	1130433	54.97	ug/L	109.94%

Target Compounds Qvalue

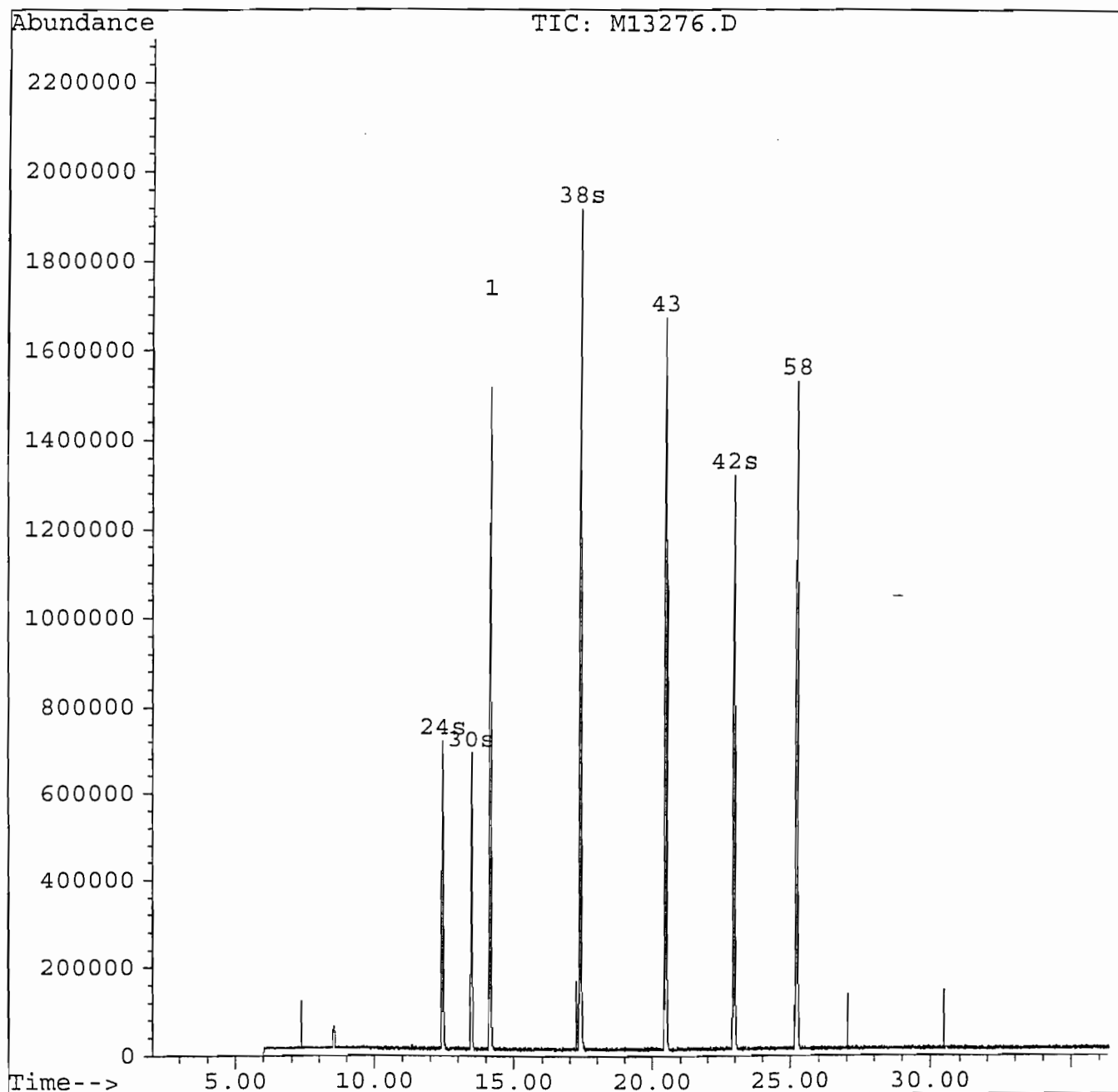
000504

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13276.D
Acq Time : 21 Oct 99 9:33 pm
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 22 8:08 1999

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13276.D
Acq Time : 21 Oct 99 9:33 pm
Sample : PRO BLK
Misc : 5MLS

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

000506

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK02

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS

Matrix: (soil/water) SOIL Lab Sample ID: VBK02

Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13293.D

Level: (low/med) MED Date Received: _____

% Moisture: not dec. 0 Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	210		U
74-87-3	Chloromethane	420		U
75-01-4	Vinyl Chloride	230		U
74-83-9	Bromomethane	470		U
75-00-3	Chloroethane	630		U
107-02-8	Acrolein	630		U
75-69-4	Trichlorofluoromethane	140		U
75-35-4	1,1-Dichloroethene	240		U
67-64-1	Acetone	630		U
75-15-0	Carbon Disulfide	630		U
75-09-2	Methylene Chloride	130		U
156-60-5	trans-1,2-Dichloroethene	530		U
107-13-1	Acrylonitrile	630		U
75-34-3	1,1-Dichloroethane	160		U
594-20-7	2,2-Dichloropropane	130		U
156-59-2	cis-1,2-dichloroethene	220		U
74-97-5	Bromochloromethane	210		U
67-66-3	Chloroform	150		U
71-55-6	1,1,1-Trichloroethane	110		U
108-05-4	Vinyl Acetate	630		U
78-93-3	2-Butanone	630		U
56-23-5	Carbon Tetrachloride	500		U
563-58-6	1,1-Dichloropropene	140		U
71-43-2	Benzene	130		U
107-06-2	1,2-Dichloroethane	130		U
79-01-6	Trichloroethene	320		U
78-87-5	1,2-Dichloropropane	430		U
74-95-3	Dibromomethane	180		U
75-27-4	Bromodichloromethane	130		U
110-07-3	2-Chloroethyl Vinyl Ether	630		U
10061-01-5	cis-1,3-Dichloropropene	130		U
108-88-3	Toluene	160		U
10061-02-6	trans-1,3-Dichloropropene	130		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

VBK02

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: VBK02

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13293.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

CAS No.	Compound	Concentration Units:		Q
		(ug/L or ug/Kg)	<u>ug/Kg</u>	
79-00-5	1,1,2-Trichloroethane	170		U
108-10-1	4-Methyl-2-Pentanone	630		U
127-18-4	Tetrachloroethene	140		U
142-28-9	1,3-Dichloropropane	150		U
124-48-1	Dibromochloromethane	87		U
106-93-4	1,2-Dibromoethane	200		U
591-78-6	2-Hexanone	630		U
108-90-7	Chlorobenzene	140		U
630-20-6	1,1,1,2-Tetrachloroethane	150		U
100-41-4	Ethylbenzene	140		U
136777-61-2	m&p-xylenes	290		U
95-47-6	o-xylene	150		U
100-42-5	Styrene	25		U
75-25-2	Bromoform	62		U
98-82-8	isopropylbenzene	160		U
108-86-1	Bromobenzene	130		U
79-34-5	1,1,2,2-Tetrachloroethane	200		U
96-18-4	1,2,3-Trichloropropane	310		U
103-65-1	n-Propylbenzene	160		U
95-49-8	2-Chlorotoluene	140		U
106-43-4	4-Chlorotoluene	130		U
108-67-8	1,3,5-Trimethylbenzene	200		U
98-06-6	tert-Butylbenzene	150		U
95-63-6	1,2,4-Trimethylbenzene	200		U
135-98-8	sec-Butylbenzene	150		U
541-73-1	1,3-Dichlorobenzene	150		U
99-87-6	4-Isopropyltoluene	110		U
106-46-7	1,4-Dichlorobenzene	150		U
95-50-1	1,2-Dichlorobenzene	130		U
104-51-8	n-Butylbenzene	210		U
96-12-8	1,2-Dibromo-3-chloropropane	630		U
120-82-1	1,2,4-Trichlorobenzene	150		U
87-68-3	Hexachlorobutadiene	130		U

SAMPLE NO.

VBLK02

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: VBLK02

Lab File ID: M13293.D

Date Received:

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q

[illegible]

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

VBK02

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL
Project No. 1382 Site: _____ Location: _____ Group: GP-008-S
Matrix: (soil/water) SOIL Lab Sample ID: VBK02
Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13293.D
Level: (low/med) MED Date Received: _____
% Moisture: not dec. 0 Date Analyzed: 10/22/99
GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0
Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:
Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

CAS Number	Compound Name	RT	Est. Conc.	Q
1.				
2.				
3.				
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Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13293.D
 Acq Time : 22 Oct 99 10:52 am
 Sample : PRO BLK
 Misc : 5MLS
 Quant Time: Oct 22 12:19 1999

Operator: JJ
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.16	96	2157213	50.00	ug/L	0.06
43) Chlorobenzene-d5	20.51	117	1836170	50.00	ug/L	0.06
58) 1,4-dichlorobenzene-d4	25.25	152	845379	50.00	ug/L	0.07
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.45	113	660492	49.22	ug/L	98.45%
30) 1,2-Dichlorethane-d4	13.49	65	711414	47.04	ug/L	94.08%
38) Toluene-d8	17.41	98	2116406	50.36	ug/L	100.72%
42) 4-Bromofluorobenzene	22.99	95	898921	50.59	ug/L	101.18%

Target Compounds

Qvalue

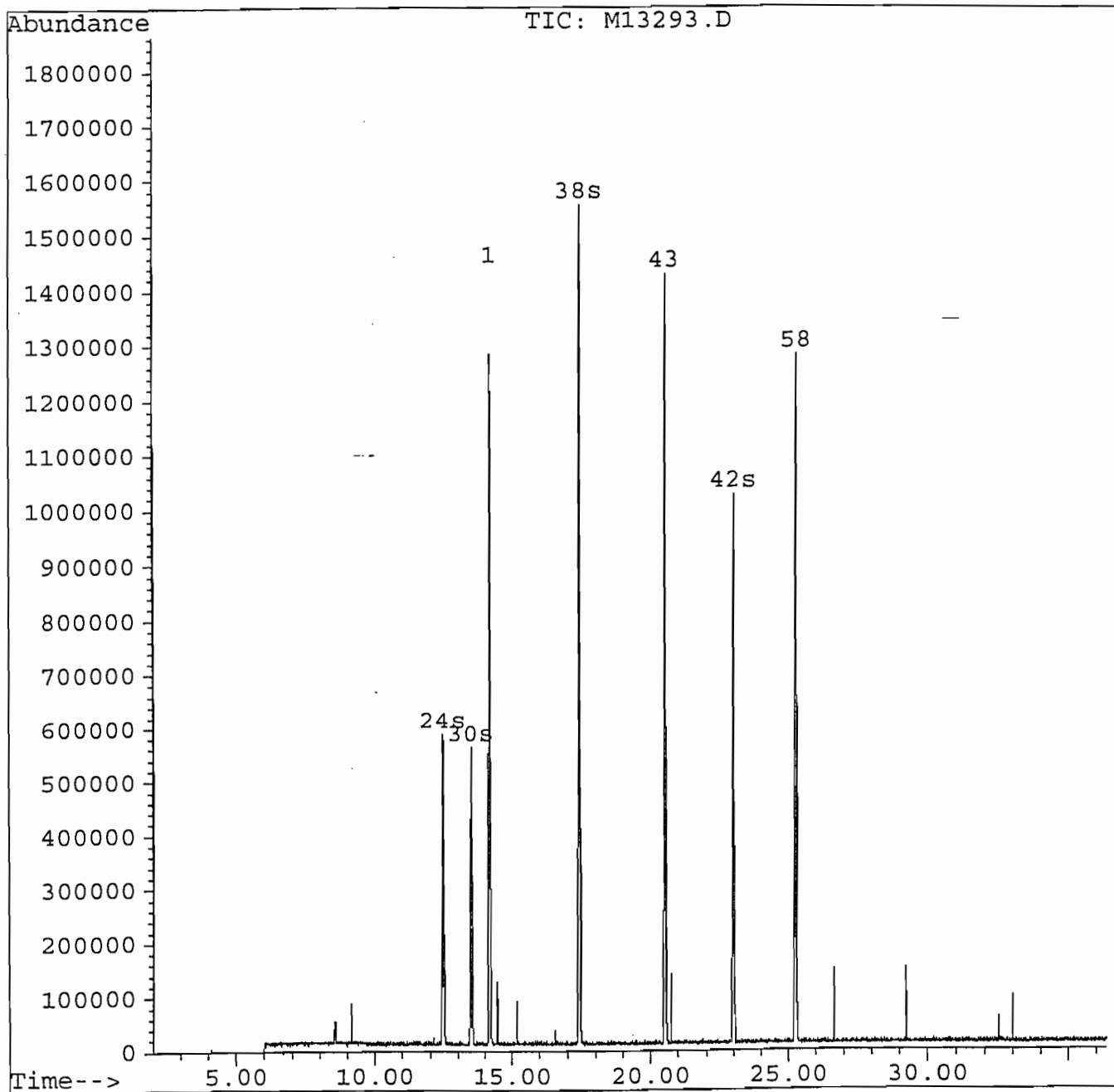
000511

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13293.D
Acq Time : 22 Oct 99 10:52 am
Sample : PRO BLK
Misc : 5MLS
Quant Time: Oct 22 12:19 1999

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000512

Library Search Compound Report

Data File : D:\HPCHEM\3\DATA\V3102299\M13293.D
Acq Time : 22 Oct 99 10:52 am
Sample : PRO BLK
Misc : 5MLS

Operator: JJ
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Library : NBS75K.L

No Library Search Compounds Detected

000513

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

BLKSPK

Lab Name: CHEMTECH Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP Site: _____ Location: _____ Group: GP-008-SS

Matrix: (soil/water) SOIL Lab Sample ID: BLKSPK

Sample wt/vol: 4.0 (g/mL) G Lab File ID: M13277.D

Level: (low/med) MED Date Received: _____

% Moisture: not dec. 0 Date Analyzed: 10/21/99

GC Column: RTX624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL) Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	210		U
74-87-3	Chloromethane	420		U
75-01-4	Vinyl Chloride	230		U
74-83-9	Bromomethane	470		U
75-00-3	Chloroethane	630		U
107-02-8	Acrolein	630		U
75-69-4	Trichlorofluoromethane	140		U
75-35-4	1,1-Dichloroethene	5000		
67-64-1	Acetone	630		U
75-15-0	Carbon Disulfide	630		U
75-09-2	Methylene Chloride	130		U
156-60-5	trans-1,2-Dichloroethene	530		U
107-13-1	Acrylonitrile	630		U
75-34-3	1,1-Dichloroethane	160		U
594-20-7	2,2-Dichloropropane	130		U
156-59-2	cis-1,2-dichloroethene	220		U
74-97-5	Bromochloromethane	210		U
67-66-3	Chloroform	150		U
71-55-6	1,1,1-Trichloroethane	110		U
108-05-4	Vinyl Acetate	630		U
78-93-3	2-Butanone	630		U
56-23-5	Carbon Tetrachloride	500		U
563-58-6	1,1-Dichloropropene	140		U
71-43-2	Benzene	6400		
107-06-2	1,2-Dichloroethane	130		U
79-01-6	Trichloroethene	6000		
78-87-5	1,2-Dichloropropane	430		U
74-95-3	Dibromomethane	180		U
75-27-4	Bromodichloromethane	130		U
110-07-3	2-Chloroethyl Vinyl Ether	630		U
10061-01-5	cis-1,3-Dichloropropene	130		U
108-88-3	Toluene	6600		
10061-02-6	trans-1,3-Dichloropropene	130		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

BLKSPK

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: BLKSPK

Sample wt/vol: 4.0 (g/mL) G

Lab File ID: M13277.D

Level: (low/med) MED

Date Received: _____

% Moisture: not dec. 0

Date Analyzed: 10/21/99

GC Column: RTX624

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: 10000 (uL)

Soil Aliquot Volume: 100 (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	<u>ug/Kg</u>	Q
79-00-5	1,1,2-Trichloroethane	170		U
108-10-1	4-Methyl-2-Pentanone	630		U
127-18-4	Tetrachloroethene	140		U
142-28-9	1,3-Dichloropropane	150		U
124-48-1	Dibromochloromethane	87		U
106-93-4	1,2-Dibromoethane	200		U
591-78-6	2-Hexanone	630		U
108-90-7	Chlorobenzene	6600		
630-20-6	1,1,1,2-Tetrachloroethane	150		U
100-41-4	Ethylbenzene	140		U
136777-61-2	m&p-xylenes	290		U
95-47-6	o-xylene	150		U
100-42-5	Styrene	25		U
75-25-2	Bromoform	62		U
98-82-8	isopropylbenzene	160		U
108-86-1	Bromobenzene	130		U
79-34-5	1,1,2,2-Tetrachloroethane	200		U
96-18-4	1,2,3-Trichloropropane	310		U
103-65-1	n-Propylbenzene	160		U
95-49-8	2-Chlorotoluene	140		U
106-43-4	4-Chlorotoluene	130		U
108-67-8	1,3,5-Trimethylbenzene	200		U
98-06-6	tert-Butylbenzene	150		U
95-63-6	1,2,4-Trimethylbenzene	200		U
135-98-8	sec-Butylbenzene	150		U
541-73-1	1,3-Dichlorobenzene	150		U
99-87-6	4-Isopropyltoluene	110		U
106-46-7	1,4-Dichlorobenzene	150		U
95-50-1	1,2-Dichlorobenzene	130		U
104-51-8	n-Butylbenzene	210		U
96-12-8	1,2-Dibromo-3-chloropropane	630		U
120-82-1	1,2,4-Trichlorobenzene	150		U
87-68-3	Hexachlorobutadiene	130		U

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: BLKSPK

Lab File ID: M13277.D

Date Received:

Date Analyzed: 10/21/99

Dilution Factor: 1.0

Soil Aliquot Volume: 100 (uL)

Q

000516
-3/90

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13277.D
 Acq Time : 21 Oct 99 10:18 pm
 Sample : BLK SPK
 Misc : 5MLS
 Quant Time: Oct 22 8:09 1999

Operator: AV
 Inst : voa3
 Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
 Title : VOA
 Last Update : Sat Oct 09 13:27:42 1999
 Response via : Multiple Level Calibration

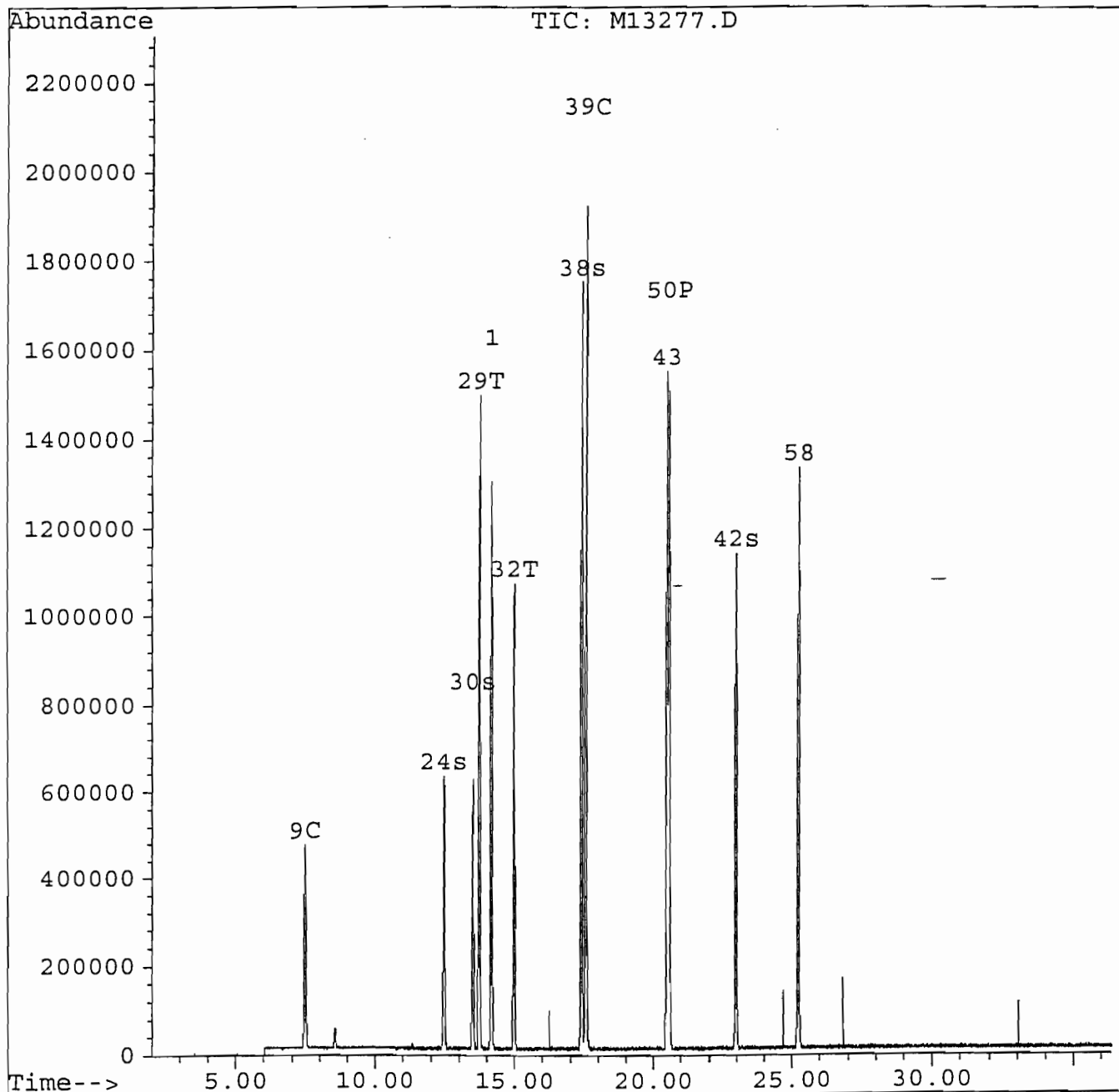
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	14.16	96	2167745	50.00	ug/L	0.05
43) Chlorobenzene-d5	20.49	117	1853391	50.00	ug/L	0.04
58) 1,4-dichlorobenzene-d4	25.22	152	868169	50.00	ug/L	0.04
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	12.45	113	720695	53.45	ug/L	106.90%
30) 1,2-Dichlorethane-d4	13.49	65	776843	51.12	ug/L	102.24%
38) Toluene-d8	17.40	98	2307598	54.64	ug/L	109.28%
42) 4-Bromofluorobenzene	22.97	95	966294	54.12	ug/L	108.24%
Target Compounds						Qvalue
9) 1,1-dichloroethene	7.47	61	717615	40.10	ug/L	99
29) benzene	13.72	78	2432101	51.01	ug/L	99
32) trichloroethene	14.97	130	684272	47.68	ug/L	98
39) toluene	17.56	91	2736151	52.42	ug/L	90
50) chlorobenzene	20.57	112	1800652	53.14	ug/L	96

Quantitation Report

Data File : D:\HPCHEM\3\DATA\V3102199\M13277.D
Acq Time : 21 Oct 99 10:18 pm
Sample : BLK SPK
Misc : 5MLS
Quant Time: Oct 22 8:09 1999

Operator: AV
Inst : voa3
Multiplr: 1.00

Method : D:\HPCHEM\3\METHODS\V31009CW.M
Title : VOA
Last Update : Sat Oct 09 13:27:42 1999
Response via : Multiple Level Calibration



000518

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS30MS

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001MS

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19274.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.5		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	42		
67-64-1	Acetone	5.2		U
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	2.8		
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.4		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.2		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	50		
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	44		
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	53		
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS30MS

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001MS

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19274.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.3		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.7		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	51		
630-20-6	1,1,1,2-Tetrachloroethane	1.3		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.4		U
95-47-6	o-xylene	1.3		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.4		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.7		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.4		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.7		U
98-06-6	tert-Butylbenzene	1.3		U
95-63-6	1,2,4-Trimethylbenzene	1.7		U
135-98-8	sec-Butylbenzene	1.3		U
541-73-1	1,3-Dichlorobenzene	1.3		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.3		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.3		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

GP-011-SS30MS

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab Sample ID: O88001MS

Lab File ID: P19274.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

(ug/L or ug/Kg)

ug/Kg

Q

[illegible]

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS30MSD

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001SD

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19275.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
75-71-8	Dichlorodifluoromethane	1.7		U
74-87-3	Chloromethane	3.5		U
75-01-4	Vinyl Chloride	1.9		U
74-83-9	Bromomethane	3.9		U
75-00-3	Chloroethane	5.2		U
107-02-8	Acrolein	5.2		U
75-69-4	Trichlorofluoromethane	1.2		U
75-35-4	1,1-Dichloroethene	37		
67-64-1	Acetone	5.2		U
75-15-0	Carbon Disulfide	5.2		U
75-09-2	Methylene Chloride	2.9		
156-60-5	trans-1,2-Dichloroethene	4.4		U
107-13-1	Acrylonitrile	5.2		U
75-34-3	1,1-Dichloroethane	1.4		U
594-20-7	2,2-Dichloropropane	1		U
156-59-2	cis-1,2-dichloroethene	1.8		U
74-97-5	Bromochloromethane	1.8		U
67-66-3	Chloroform	1.2		U
71-55-6	1,1,1-Trichloroethane	0.9		U
108-05-4	Vinyl Acetate	5.2		U
78-93-3	2-Butanone	5.2		U
56-23-5	Carbon Tetrachloride	4.2		U
563-58-6	1,1-Dichloropropene	1.2		U
71-43-2	Benzene	45		
107-06-2	1,2-Dichloroethane	1		U
79-01-6	Trichloroethene	39		
78-87-5	1,2-Dichloropropane	3.5		U
74-95-3	Dibromomethane	1.5		U
75-27-4	Bromodichloromethane	1		U
110-07-3	2-Chloroethyl Vinyl Ether	5.2		U
10061-01-5	cis-1,3-Dichloropropene	1		U
108-88-3	Toluene	47		
10061-02-6	trans-1,3-Dichloropropene	1		U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

GP-011-SS30MSD

Lab Name: CHEMTECH

Contract: IMPACT ENVIRONMENTAL

Project No.: 13826ASP

Site: _____

Location: _____

Group: GP-008-SS

Matrix: (soil/water) SOIL

Lab Sample ID: O88001SD

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: P19275.D

Level: (low/med) LOW

Date Received: 10/18/99

% Moisture: not dec. 4

Date Analyzed: 10/22/99

GC Column: RTX624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Concentration Units:

CAS No.	Compound	(ug/L or ug/Kg)	ug/Kg	Q
79-00-5	1,1,2-Trichloroethane	1.4		U
108-10-1	4-Methyl-2-Pentanone	5.2		U
127-18-4	Tetrachloroethene	1.1		U
142-28-9	1,3-Dichloropropane	1.3		U
124-48-1	Dibromochloromethane	0.7		U
106-93-4	1,2-Dibromoethane	1.7		U
591-78-6	2-Hexanone	5.2		U
108-90-7	Chlorobenzene	44		
630-20-6	1,1,1,2-Tetrachloroethane	1.3		U
100-41-4	Ethylbenzene	1.1		U
136777-61-2	m&p-xylenes	2.4		U
95-47-6	o-xylene	1.3		U
100-42-5	Styrene	0.2		U
75-25-2	Bromoform	0.5		U
98-82-8	isopropylbenzene	1.4		U
108-86-1	Bromobenzene	1		U
79-34-5	1,1,2,2-Tetrachloroethane	1.7		U
96-18-4	1,2,3-Trichloropropane	2.6		U
103-65-1	n-Propylbenzene	1.4		U
95-49-8	2-Chlorotoluene	1.1		U
106-43-4	4-Chlorotoluene	1		U
108-67-8	1,3,5-Trimethylbenzene	1.7		U
98-06-6	tert-Butylbenzene	1.3		U
95-63-6	1,2,4-Trimethylbenzene	1.7		U
135-98-8	sec-Butylbenzene	1.3		U
541-73-1	1,3-Dichlorobenzene	1.3		U
99-87-6	4-Isopropyltoluene	0.9		U
106-46-7	1,4-Dichlorobenzene	1.3		U
95-50-1	1,2-Dichlorobenzene	1		U
104-51-8	n-Butylbenzene	1.8		U
96-12-8	1,2-Dibromo-3-chloropropane	5.2		U
120-82-1	1,2,4-Trichlorobenzene	1.3		U
87-68-3	Hexachlorobutadiene	1		U

SAMPLE NO.

Contract: IMPACT ENVIRONMENTAL

Group: GP-008-SS

Lab File ID: P19275.D

Date Received: 10/18/99

Date Analyzed: 10/22/99

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Q

[illegible]

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19274.D
 Acq Time : 22 Oct 99 2:52 am
 Sample : 13826ASP-88001 MS
 Misc : 5G/5ML
 Quant Time: Oct 22 12:56 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	955241	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.32	117	978520	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.58	152	733080	50.00	ug/L	-0.01
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.96	113	731166	45.94	ug/L	91.88%
30) 1,2-Dichlorethane-d4	8.67	65	566978	45.34	ug/L	90.68%
38) Toluene-d8	12.77	98	875210	46.98	ug/L	93.95%
42) 4-Bromofluorobenzene	19.47	95	913584	47.77	ug/L	95.53%
Target Compounds						Qvalue
9) 1,1-dichloroethene	3.66	61	412031	40.76	ug/L	97
13) methylene chloride	4.59	84	11997	2.68	ug/L	92
29) benzene	8.59	78	723866	47.87	ug/L	99
32) trichloroethene	10.02	130	380863	42.52	ug/L	94
39) toluene	12.91	91	951809	50.65	ug/L	96
50) chlorobenzene	16.39	112	779871	49.18	ug/L	97

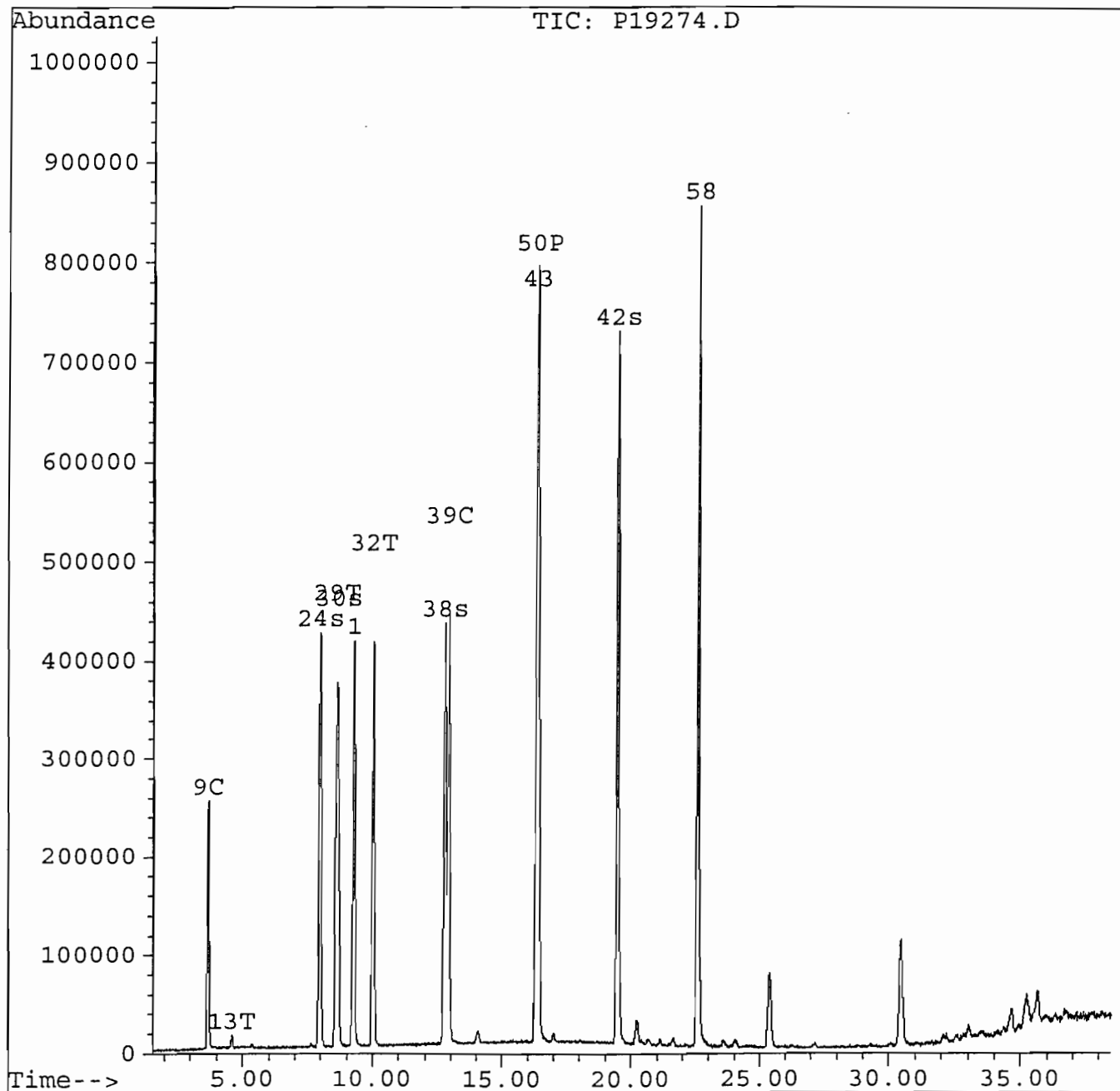
000525

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19274.D
Acq Time : 22 Oct 99 2:52 am
Sample : 13826ASP-88001 MS
Misc : 5G/5ML
Quant Time: Oct 22 12:56 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000526

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19275.D
 Acq Time : 22 Oct 99 3:37 am
 Sample : 13826ASP-88001 MSD
 Misc : 5G/5ML
 Quant Time: Oct 22 12:56 1999

Operator: AV
 Inst : voa2
 Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
 Title : VOA
 Last Update : Thu Oct 07 12:18:47 1999
 Response via : Multiple Level Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.26	96	781715	50.00	ug/L	0.00
43) Chlorobenzene-d5	16.33	117	861259	50.00	ug/L	0.00
58) 1,4-dichlorobenzene-d4	22.59	152	677298	50.00	ug/L	0.00
System Monitoring Compounds						%Recovery
24) Dibromofluoromethane	7.95	113	657374	50.47	ug/L	100.95%
30) 1,2-Dichlorethane-d4	8.65	65	523487	51.15	ug/L	102.30%
38) Toluene-d8	12.76	98	737948	48.40	ug/L	96.80%
42) 4-Bromofluorobenzene	19.47	95	849140	54.25	ug/L	108.50%
Target Compounds						Qvalue
9) 1,1-dichloroethene	3.66	61	290546	35.13	ug/L	99
13) methylene chloride	4.58	84	10396	2.83	ug/L	98
29) benzene	8.59	78	535122	43.24	ug/L	98
32) trichloroethene	10.02	130	275660	37.60	ug/L	95
39) toluene	12.91	91	688274	44.76	ug/L	98
50) chlorobenzene	16.39	112	592875	42.48	ug/L	95

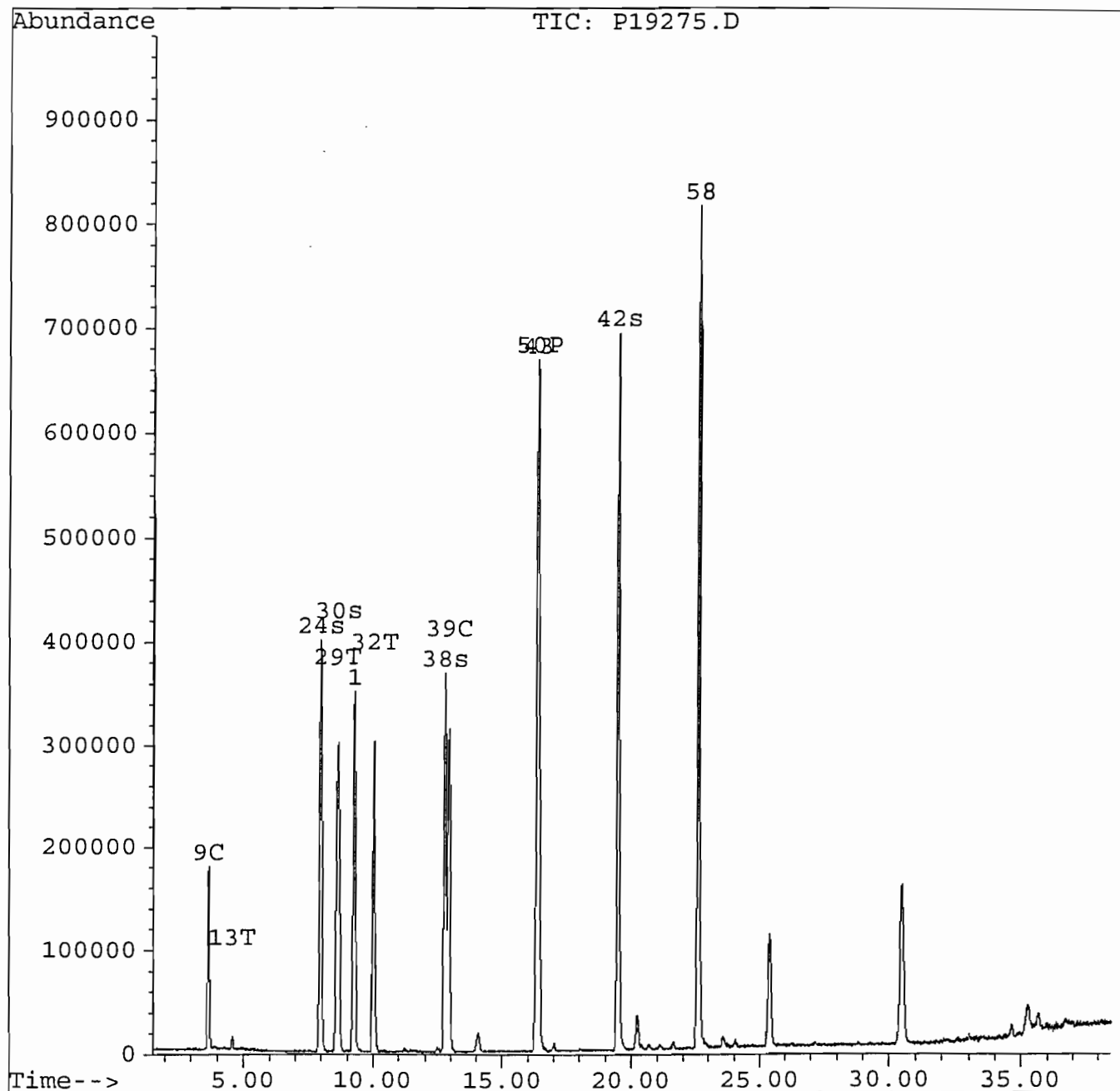
000527

Quantitation Report

Data File : I:\HPCHEM\1\DATA\V2102199\P19275.D
Acq Time : 22 Oct 99 3:37 am
Sample : 13826ASP-88001 MSD
Misc : 5G/5ML
Quant Time: Oct 22 12:56 1999

Operator: AV
Inst : voa2
Multiplr: 1.00

Method : I:\HPCHEM\1\METHODS\V21006CS.M
Title : VOA
Last Update : Thu Oct 07 12:18:47 1999
Response via : Multiple Level Calibration



000528

CHEMTECH CONSULTING GROUP

MISCELLANEOUS DATA

000529

Start Date: 10/6/99 End Date: 10/6/99 Analyst: A. T Review By: A. T

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	—	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1085
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	V1089, V1090	Meth	V21006CS.M

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19048			ok
2	SOPPB ICC	P19049	8260/s	} - V21006CS.M	ok
3	SOPPB ICC	P19050	1		not needed
4	200PPB ICC	P19051	1		ok
5	100PPB ICC	P19052	1		ok
6	20PPB ICC	P19053	1		ok
7	5PPB ICC	P19054	1		ok
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

000530

Start Date: 10/20/99 End Date: 10/20/99 Analyst: A-L Review By: A-7

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1102	Isd	V1101
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	Meth	V21006CS.

1012306
964865
651058

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19250			ok 3:12pm
2	50PPB CCC	P19251	8260/s	Seg	ok
3	PRO BLANK	P19252			ok
4	BLANK SPIKE	P19253			ok
5	13754DEC- 87173	P19254			ok
6	↓ 87174	P19255			Isd low w/ P19211
7	13826ASP- 87491	P19256			ok
8	87492	P19257			ok RR: 1:10 D
9	87493	P19258			Bad analysis RR: 1:10 D
10	87494	P19259			ok
11	87495	P19260			ok RR: 1:10 D
12	87496	P19261			ok
13	87497	P19262			ok RR: 1:10
14	87498	P19263			ok
15	87499	P19264			ok
16	↓ 89070	P19265			ok
17	13817LP- 87889	P19266			ok
18					
19					
20					

Start Date: 10/21/99 End Date: 10/22/99 Analyst A. J. Review By: A. J.

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1102	Isd	V1103
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	—	Meth	V31009CLO.M

1104200
1019715
762658

SR #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	P19267			ok 9:45pm
2	SOPPB CCC	P19268	8260/3	Sg	ok
3	PRO BLANK	P19269			ok
4	BLANK SPIKE	P19270			ok
5	13826ASP-87992	P19271		1:10D1	OK RE METH
6	87997	P19272		1:10D1	ok
7	88001	P19273		Sg	ok
8	88001MS	P19274			ok
9	88001MSD	P19275			ok
10	88002	P19276			ok
11	88003	P19277			ok
12	88004	P19278			ok
13	88005	P19279			ok
14	88006	P19280			Isd low RE 1:10
15	13827ASP-88007	P19281			ok
16	88007MS	P19282			NG
17	88007MSD	P19283			↓
18					
19					
20					

CHEMTECHDaily Analysis Runlog For GC #: GCMSVOA3Start Date: 10/9/99 End Date: / / Analyst: Review By:

<u>STD. NAME</u>	<u>STD REF. #:</u>	<u>STD NAME</u>	<u>STD REF. #:</u>
CCC	—	Spike Std.	V1091
Surrogate Stds.	V1088	ISD	V1087
QC Check Std.	—	BFB	V1072
Initial Calibration Stds.	V1089, V1090	METH	V31009 CW.M

<u>SR. #:</u>	<u>Sample ID</u>	<u>Data File Name</u>	<u>Method #:</u>	<u>Run Information</u>	<u>Comment</u>
1	BFB	M12953			OK 8:04
2	200 PPB ICC	M12954			OK
3	100 PPB ICC	M12955		METH V31009 CW.M	OK
4	50 PPB ICC	M12956			OK
5	20 PPB ICC	M12957			OK
6	5 PPB ICC	M12958			OK
7	5 PPB ICC	M12959			OK
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					000533

000010

CHEMTECHDaily Analysis Runlog For GC #: GCMSVOA3Start Date: 10/21/99 End Date: 10/22/99 Analyst A-T Review By: gg

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1084, V1090	Spike Std.	V1091
Surrogate Stds.	V1086	Isd	V1087
QC Check Std.	_____	BFB	V1072
Initial Calibration Stds.	_____	Metu	V31009CW.M

2197275
1885468
877326

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M13274			OK 8:43
2	SOPPB CCC	M13275	8260		OK
3	PRO BLANK	M13276			OK
4	BLANK SPIKE	M13277			OK
5	13816 ^{NS} -87894	M13278		Sols	OK
6	↓ -87895	M13279			OK
7	13845 ^C -88178	M13280			OK
8	↓ -88179	M13281			OK
9	13833 ^{ASP} -88091	M13282			OK
10	↓ -88092	M13283			OK RR 5X
11	↓ -88093	M13284			OK
12	13845 ^C -88173	M13285			OK
13	↓ -88174	M13286			OK
14	↓ -88175	M13287			OK
15	↓ -88176	M13288			OK
16	13826 ^{ASP} -87993	M13289			OK RR 10X
17	↓ -87994	M13290			OK RR pos Co
18					
19					
20					000534

000033

Start Date: 10/22/99 End Date: 10/22/99 Analyst JJ Review By: [Signature]

STD. NAME	STD REF. #:	STD NAME	STD REF. #:
CCC	V1089, V1090	Spike Std.	V1091
Surrogate Stds.	V1088	Isd -	V1087
QC Check Std.	_____	BFB	V1072
Initial Calibration Stds.	_____	Meth	V31009CW:K

2115828
1819804
830163

SR. #:	Sample ID	Data File Name	Method #:	Run Information	Comment
1	BFB	M13291			ok 9:09am
2	SOPPB CCC	M13292	8260%	Sul	ok
3	PRO-BLANK	M13293			ok
4	BLANK SPIKE	M13294			ok
5	13845C-88177	M13295		↓	ok
6	13833ASP-88092	M13296		1:SDJ --	RR STR
7	13826ASP-87993	M13297		4g/10ul 1:10DJ	ok
8	87992	M13298		4g/10ul 100ul/sul	ok
9	88006	M13299	↓	↓	ok
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					000535

CASE NARRATIVE SUPPORT DOCUMENT

Project No.: 13826ASP.

Date: 10/22/99

Project Name: Impact "Environmental"

Analyst: Amir VAIDYA

Supervisor:

Department Head:

QC.Review by:

SAMPLE NO.	COMMENTS
87992	Due to the nature of the samples they had to be analyzed as Medium level soils
87993	
87994	
88006	
87997	Sample required a 10x dilution
GENERAL COMMENTS: 8260B	
A. T. U. J.	

NOTES:

1. Please report unusual (e.g. different matrix, analytical problems, etc.) items.
2. For no unusual items, please write 'NONE.'
3. Return the completed document to QC Department with the analytical data.

000536

SHIPPING AND RECEIVING DOCUMENTATION

000537

CHAIN OF CUSTODY RECORD

☐ 110 Route 4
Englewood, NJ 07631
(201) 567-6868
Fax (201) 567-1333

☐ 205 Campus Plaza 1
Edison, NJ 08837
(732) 225-4111
Fax (732) 225-4110

☐ 515 Route 9 South
Barnegat, NJ 08005
(609) 698-0199
Fax (609) 698-0910

CHEMTECH JOB NO.:
CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Impact Environmental

ADDRESS: 1 Village Plaza

CITY: Kings Park STATE: NY ZIP: 11354

ATTENTION: Kevin Klecka

PHONE: (516) 269-8800 FAX: (516) 269-1599

DATA TURNAROUND INFORMATION

FAX: _____ DAYS: _____
HARD COPY: _____ DAYS: _____
EOD: _____ DAYS: _____

* TO BE APPROVED BY CHEMTECH
** NORMAL TURNAROUND TIME - 14 DAYS

PROJECT INFORMATION

PROJECT NAME: # 1-30-0435

PROJECT NO.: 98-335 Westbury

PROJECT MANAGER: Richard Parrish

LOCATION: 299 Main St, Westbury, NY

PHONE: - FAX: -

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☒ NYS ASP "B"
☐ NJ REDUCED ☐ NYS ASP "A"
☐ NJ CLP ☐ EDD
☐ EDD FORMAT: _____

BILLING INFORMATION

BILL TO: Client PO #:

ADDRESS:

CITY: STATE: ZIP:

ATTENTION: PHONE:

ANALYSIS

ANALYSIS	1	2	3	4	5	6	7	8	9
1. RESIDUAL TEST 1st									
2. 3370 BVL									
3. 3360 VOC									
4. 8015 TOL									
5. 8010 METALS									

PRESERVATIVES

← Specify Preservatives	1	2	3	4	5	6	7	8	9
A - HCl									
B - HNO ₃									
C - H ₂ SO ₄									
D - NaOH									
E - ICE									
F - Other									

COMMENTS

40C
1 X
2 X
3 X
4 X
5 X
6 X
7 X
8 X
9 X

NO OF BOTTLES

1

SAMPLE COLLECTION

DATE TIME

SAMPLE MATRIX

S

SAMPLE IDENTIFICATION

335-GP-008-SS30

CHEMTECH SAMPLE ID

335-GP-008-SS45

RELINQUISHED BY: SAMPLER:

1. [Signature]

RELINQUISHED BY:

2. [Signature]

RELINQUISHED BY:

3. [Signature]

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY: SAMPLER:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. <u>[Signature]</u>	<u>10/15/99 8:10</u>	<u>[Signature]</u>	<u>10/15/99 8:10</u>
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
2. <u>[Signature]</u>		<u>[Signature]</u>	
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY: LAB BY:	DATE/TIME:
3. <u>[Signature]</u>		<u>[Signature]</u>	<u>10/18/99 14:48</u>

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler 4C

Comments: * RIFS included. / [Signature]; Denotes a clerical error (Do not run method for these sp is)

Page 1 of 1 Shipment Complete: Yes ☐ No ☐

**110 Route 4
Englewood,
(201) 567-68
Fax (201) 56**

CHAIN OF CUSTODY RECORD

Please check one:

☐ 205 Campus Plaza 1
 Edison, NJ 08837
 (732) 225-4111
 Fax (732) 225-4110

☐ 515 Route 9 South
 Barnegat, NJ 08005
 (609) 698-0199
 Fax (609) 698-0910

CHEMTECH JOB NO.:

CHEMTECH QUOTE NO.:

CLIENT INFORMATION				PROJECT INFORMATION				BILLING INFORMATION								
COMPANY: Impact Environmental				PROJECT NAME: # 1-30-0435				BILL TO: Client								
ADDRESS: Village Plaza				PROJECT NO.: 98-335 Westbury				ADDRESS:								
CITY: King Park STATE: NY ZIP: 11754				PROJECT MANAGER: Richard Parrish				CITY: STATE: ZIP:								
ATTENTION: Kevin Klecka				LOCATION: 299 Main St. Westbury, NY				ATTENTION: PHONE:								
PHONE: (516) 269-8800 FAX: (516) 269-1599				PHONE: FAX:				ANALYSIS								
DATA TURNAROUND INFORMATION				DATA DELIVERABLE INFORMATION				PRESERVATIVES								
FAX: _____ DAYS: _____ HARD COPY: _____ DAYS: _____ EDD: _____ DAYS: _____ * TO BE APPROVED BY CHEMTECH ** NORMAL TURNAROUND TIME - 14 DAYS				☐ RESULTS ONLY ☐ USE PACLP ☐ RESULTS + QC ☒ NY'S ASP "B" ☐ NJ REDUCED ☐ NY'S ASP "A" ☐ NJ CLP ☐ EDD ☐ EDD FORMAT: _____				1 2 3 4 5 6 7 8 9 8370 BN 8360 VOC 6010 metals 8015 TALL 8031 (STRS) 8030 (STRS) 8370 (STRS)								
CHEMTECH SAMPLE ID		SAMPLE IDENTIFICATION		SAMPLE MATRIX		SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES		PRESERVATIVES		COMMENTS		
				COMB		GRAB		DATE		TIME		1 2 3 4 5 6 7 8 9		← Specify Preservatives A - HCl B - HNO ₃ C - H ₂ SO ₄ D - NaOH E - ICE F - Other		
1.	335-GP-011-SS15			S	X			10/13/99	8 ²⁰	2		X	X			
2.	335-GP-011-SS30			S	X			10/13/99	10 ³⁰	2		X	X			
3.	335-GP-011-SS45			S	X			10/13/99	10 ¹³	2		X	X			
4.	335-GP-012-SS15			S	X			10/13/99	12 ¹²	2		X	X			
5.	335-GP-012-SS30			S	X			10/13/99	2 ⁴⁹	2		X	X			
6.	335-GP-012-SS45			S	X			10/13/99	3 ⁴²	2		X	X			
7.	335-GP-013-SS8			S	X			10/14/99	9 ²⁰	2				X	X	
8.	335-GP-013-SS12			S	X			10/14/99	10 ⁰⁰	2				X	X	
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY																
RELINQUISHED BY SAMPLER:				DATE/TIME: 2 ¹⁰				RECEIVED BY:				DATE/TIME: 10/15/99				
RELINQUISHED BY: 1. K. K.				DATE/TIME: 10/15/99				RECEIVED BY: 1. [Signature]				DATE/TIME: 10/15/99				
RELINQUISHED BY: 2.				DATE/TIME:				RECEIVED BY: 2.				DATE/TIME:				
RELINQUISHED BY: 3.				DATE/TIME: 10/18/99 1400				RECEIVED BY: 3. [Signature]				DATE/TIME: 10/18/99 1400				
Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non-Compliant ☐ Temp. of Cooler 4°C Comments: [Signature] : Denotes a clerical error (Do not run method for these sps.)																
Shipment Complete: Yes No Page of																

RECORD OF COMMUNICATION
VERBAL/ TELEPHONE COMMUNICATION LOG

Date 10/20/99 Client IMPACT
Chemtech Project No. 13826 ASP Chain of Custody No. 29273 & 28989
Chemtech Contact JOE DOCKERY Client Contact KEVIN KLEAKA
Project Reference 229 MAIN STREET
Call Initiated By: ☒ Chemtech ☐ Client

In reference to the following: TAL metals list submitted
By IMPACT

Questions/ Issues IS Total Cyanide required
as PART of The TAL Metals
analysis

Resolution Perform Total Cyanide on the
following samples

87993	-	GP-009-SS10
87994	-	GP 010 SS15
87995	-	GP 011 SS15
87996	-	GP 012 SS15

Signature John Scarpia Date 10/20/99

000540