

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112018\
 Data File : VL032779.D
 Acq On : 20 Nov 2018 15:32
 Operator : SY/AP
 Sample : J5961-03 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 21 04:05:56 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111418AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Nov 14 07:00:23 2018
 QLast Update : Wed Nov 14 07:00:23 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1436776	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3742160	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.26	117	3552111	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.60	95	2853980	10.74	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	107.40%

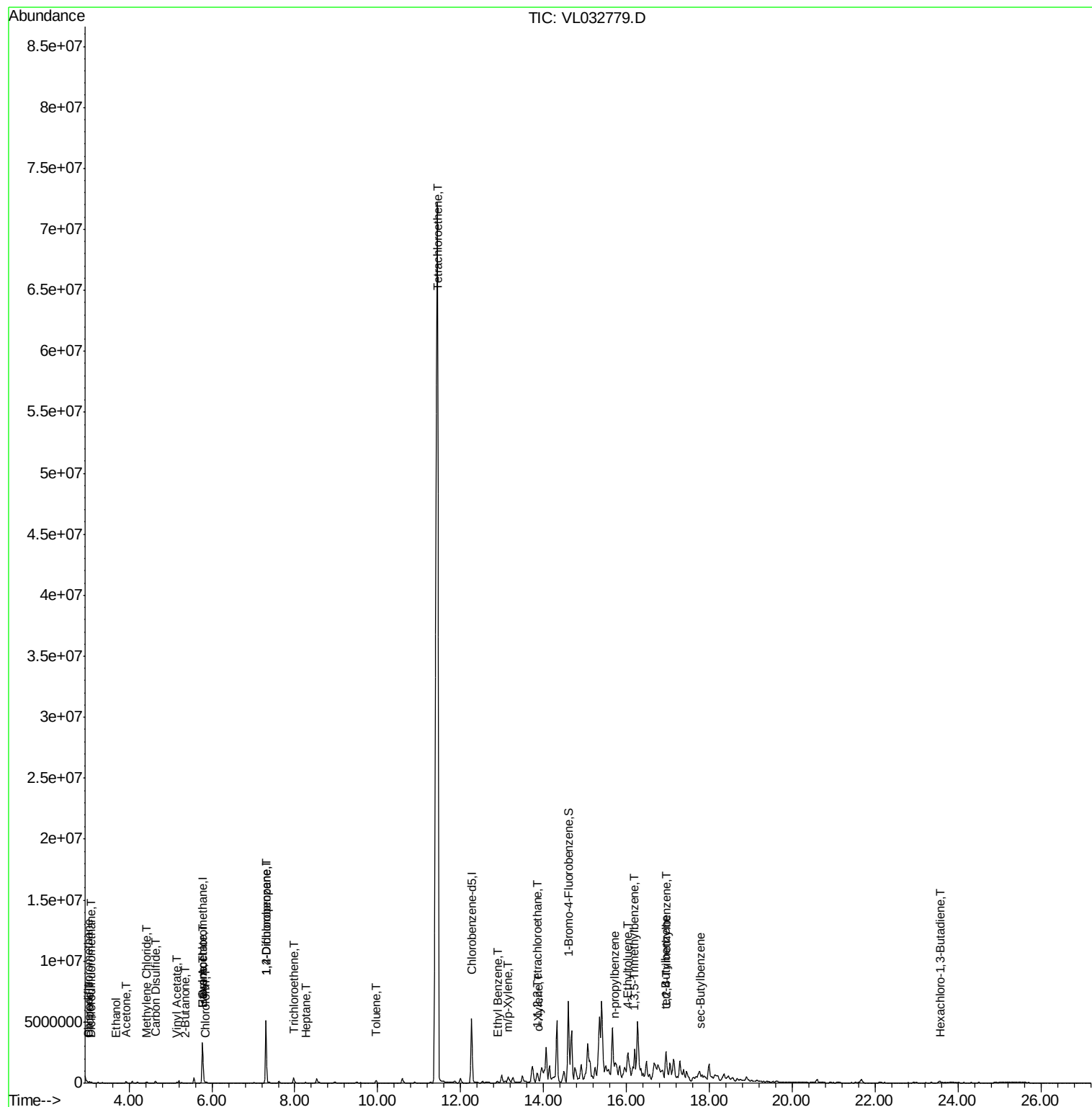
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.08	85	11052	0.054	ppbv 99
3) Chlorodifluoromethane	3.02	51	8888	0.078	ppbv 98
9) Propene	3.05	41	6848	0.150	ppbv 90
10) Heptane	8.25	43	10971	0.063	ppbv # 37
13) Ethanol	3.67	45	4192	0.281	ppbv # 39
15) Acetone	3.92	43	139098	1.060	ppbv 94
20) Methylene Chloride	4.42	84	23919	0.352	ppbv # 87
23) Vinyl Acetate	5.16	43	19852	0.083	ppbv # 71
25) Ethyl Acetate	5.79	43	109013	0.356	ppbv # 79
26) Hexane	5.79	57	156726	1.151	ppbv # 42
27) Carbon Disulfide	4.64	76	181235	1.050	ppbv 96
29) Chloroform	5.85	83	30823	0.127	ppbv 84
34) 2-Butanone	5.35	43	6511	0.034	ppbv # 53
38) Trichloroethene	7.97	130	127628	1.058	ppbv 89
39) 1,2-Dichloropropane	7.30	63	890272	7.841	ppbv # 23
52) Tetrachloroethene	11.44	164	33439388	322.581	ppbv 88
53) Toluene	9.96	91	164864	0.530	ppbv 99
58) Ethyl Benzene	12.89	91	104968	0.246	ppbv 96
59) m/p-Xylene	13.15	91	466230	1.225	ppbv 99
60) o-Xylene	13.88	91	80809	0.211	ppbv # 32
63) 1,1,2,2-Tetrachloroethane	13.85	83	10205	0.034	ppbv # 28
64) n-propylbenzene	15.74	120	15694	0.115	ppbv # 14
65) tert-Butylbenzene	16.94	119	21624	0.047	ppbv # 18
67) sec-Butylbenzene	17.79	105	34276	0.051	ppbv 93
72) 4-Ethyltoluene	16.02	105	114450	0.273	ppbv # 93
73) 1,3,5-Trimethylbenzene	16.18	105	46360	0.113	ppbv 87
74) 1,2,4-Trimethylbenzene	16.95	105	367402	0.837	ppbv # 70
78) Hexachloro-1,3-Butadiene	23.57	225	4284	0.034	ppbv # 19

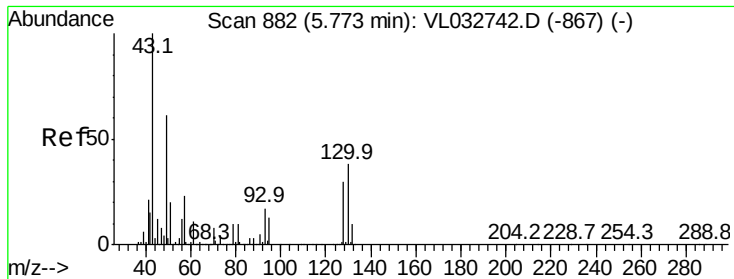
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Nov 14 07:00:23 2018
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 882

Delta R.T. 0.00 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :
MSVOA_L
ClientSampleId :

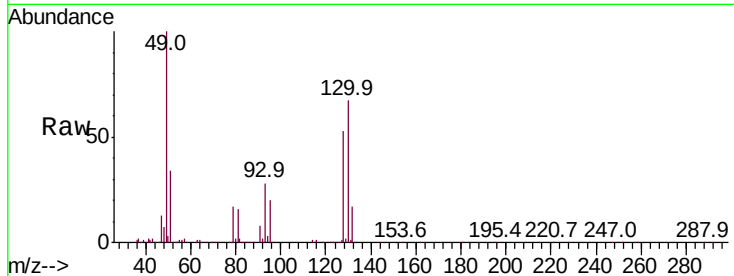
Tot Ion: 49 Resp: 1436776

Ion Ratio Lower Upper

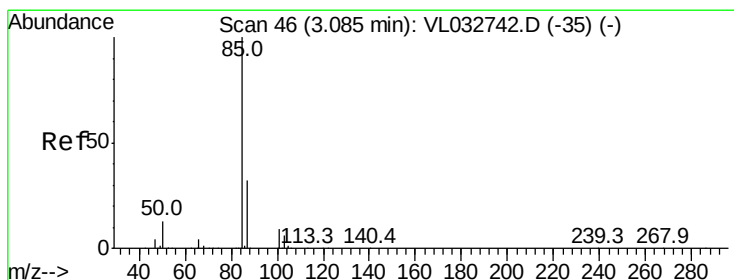
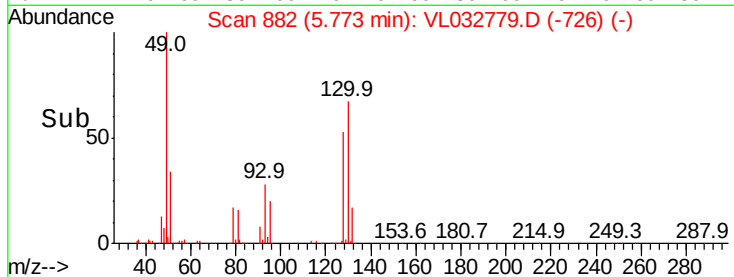
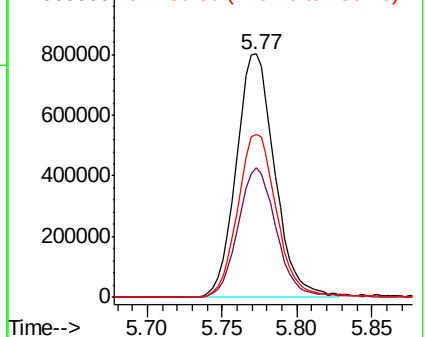
49 100

128 53.2 24.9 74.6

130 68.6 31.4 94.2



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.054 ppbv

RT: 3.08 min Scan# 46

Delta R.T. 0.00 min

Lab File: VL032779.D

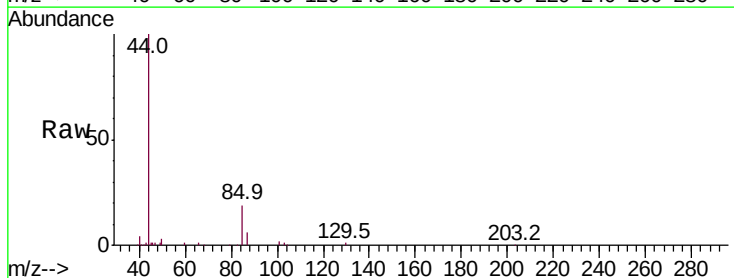
Acq: 20 Nov 2018 15:32

Tgt Ion: 85 Resp: 11052

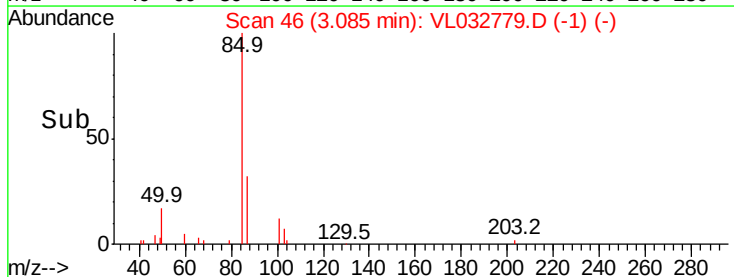
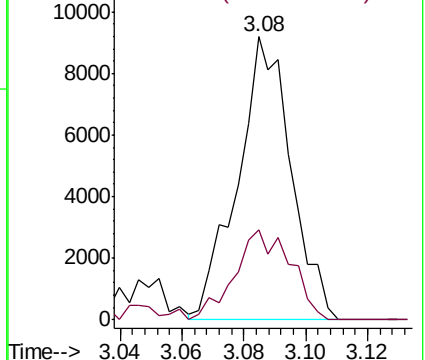
Ion Ratio Lower Upper

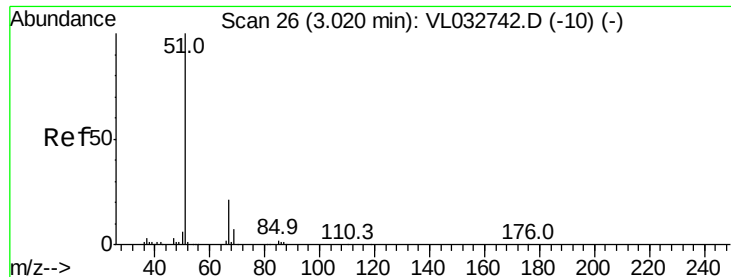
85 100

87 31.9 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.078 ppbv

RT: 3.02 min Scan# 27

Delta R.T. 0.00 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

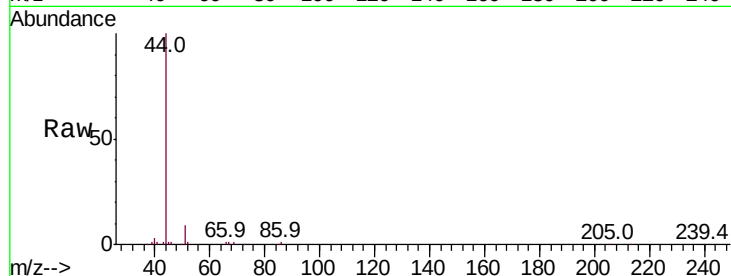
ClientSampleId :

Tot Ion: 51 Resp: 8888

Ion Ratio Lower Upper

51 100

67 19.0 16.1 24.1



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

8000

6000

4000

2000

0

Time-->

2.95

3.00

3.05

3.10

3.15

3.20

3.25

3.30

3.35

3.40

3.45

3.50

3.55

3.60

3.65

3.70

3.75

3.80

3.85

3.90

3.95

4.00

4.05

4.10

4.15

4.20

4.25

4.30

4.35

4.40

4.45

4.50

4.55

4.60

4.65

4.70

4.75

4.80

4.85

4.90

4.95

5.00

5.05

5.10

5.15

5.20

5.25

5.30

5.35

5.40

5.45

5.50

5.55

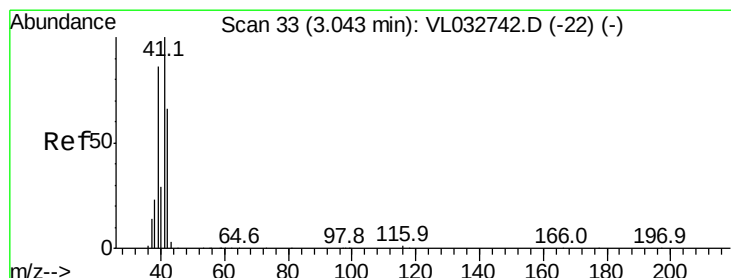
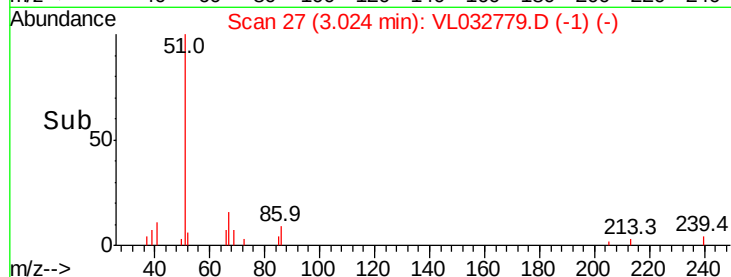
5.60

5.65

5.70

5.75

5.80



#9

Propene

Concen: 0.150 ppbv

RT: 3.05 min Scan# 35

Delta R.T. 0.01 min

Lab File: VL032779.D

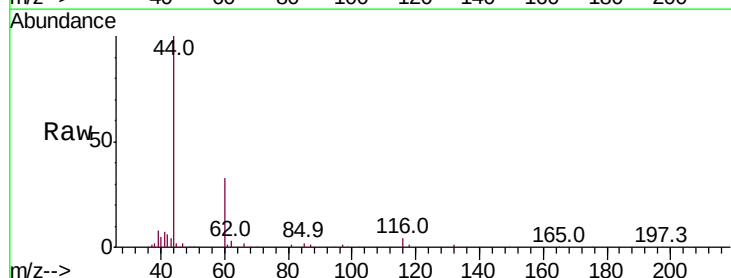
Acq: 20 Nov 2018 15:32

Tgt Ion: 41 Resp: 6848

Ion Ratio Lower Upper

41 100

42 76.9 55.0 82.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

5000

4000

3000

2000

1000

0

Time-->

3.02

3.04

3.06

3.08

3.10

3.12

3.14

3.16

3.18

3.20

3.22

3.24

3.26

3.28

3.30

3.32

3.34

3.36

3.38

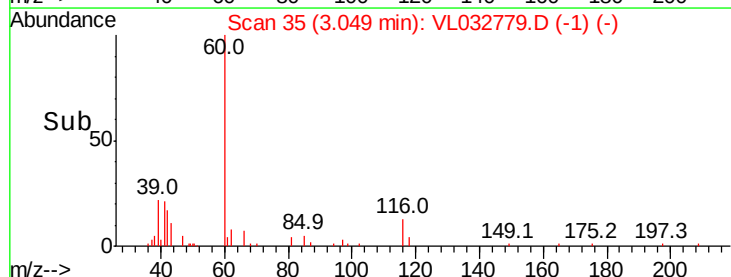
3.40

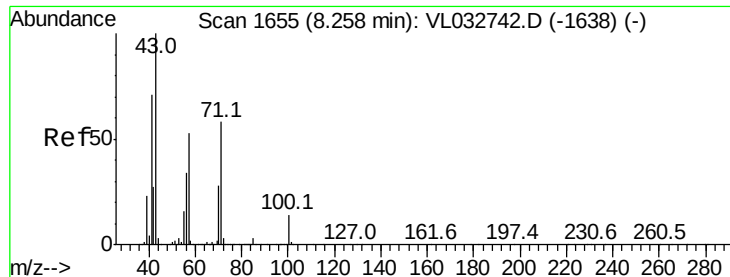
3.42

3.44

3.46

3.48





#10

Heptane

Concen: 0.063 ppbv

RT: 8.25 min Scan# 1654

Delta R.T. -0.00 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

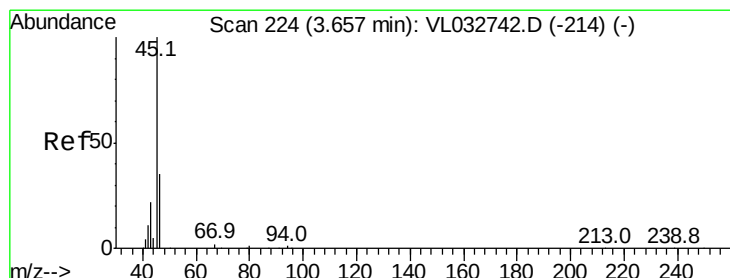
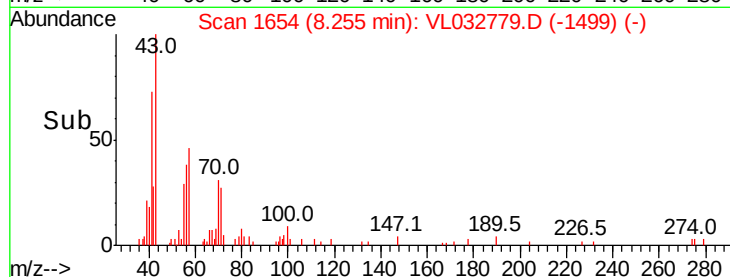
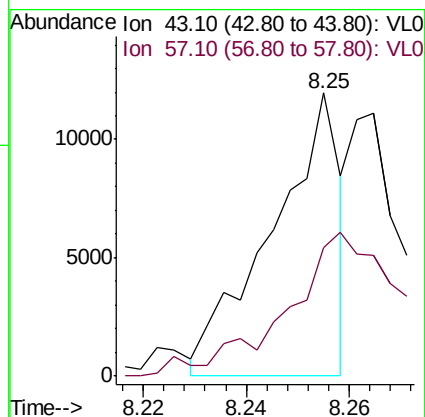
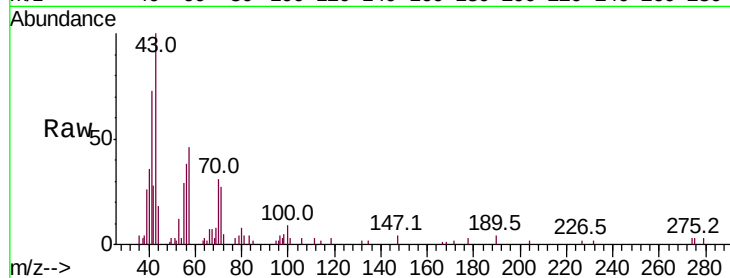
ClientSampleId :

Tot Ion: 43 Resp: 10971

Ion Ratio Lower Upper

43 100

57 96.8 41.8 62.8#



#13

Ethanol

Concen: 0.281 ppbv

RT: 3.67 min Scan# 228

Delta R.T. 0.01 min

Lab File: VL032779.D

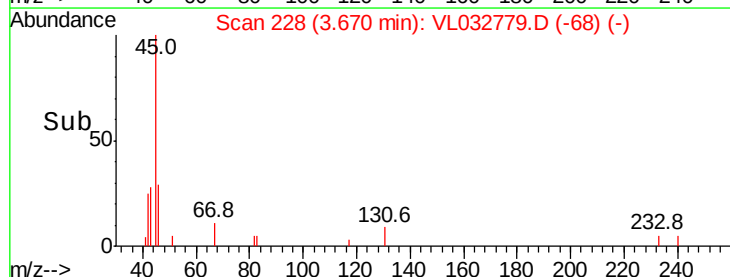
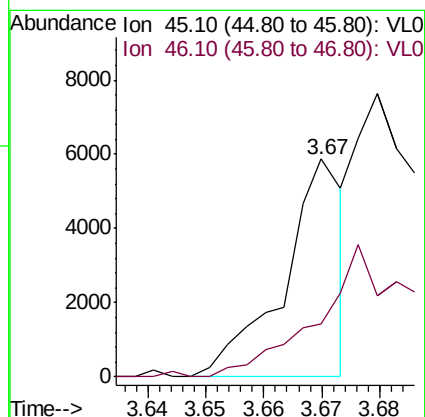
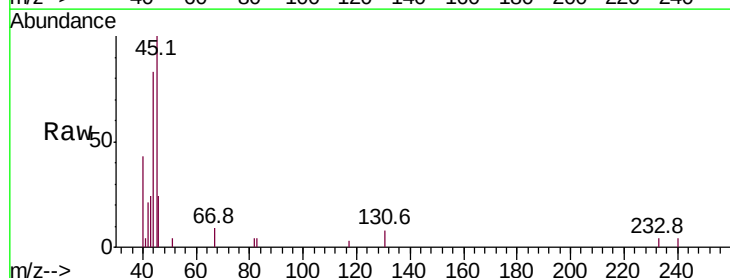
Acq: 20 Nov 2018 15:32

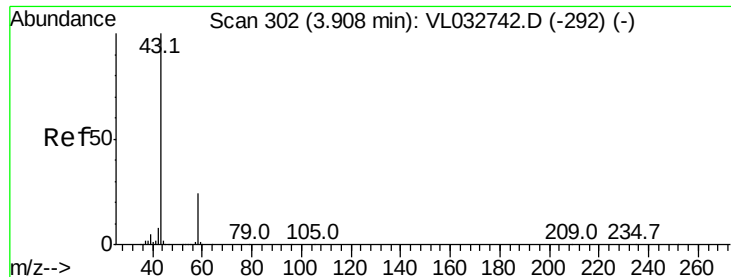
Tgt Ion: 45 Resp: 4192

Ion Ratio Lower Upper

45 100

46 0.0 14.5 57.9#





#15

Acetone

Concen: 1.060 ppbv

RT: 3.92 min Scan# 307

Delta R.T. 0.02 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

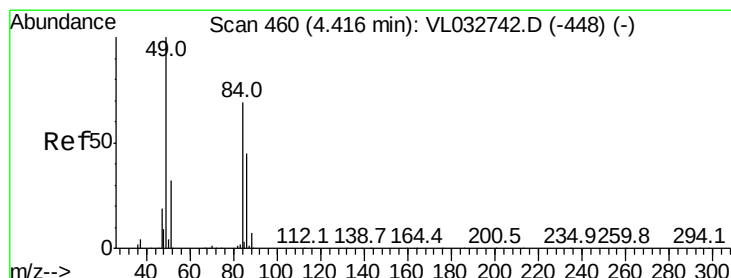
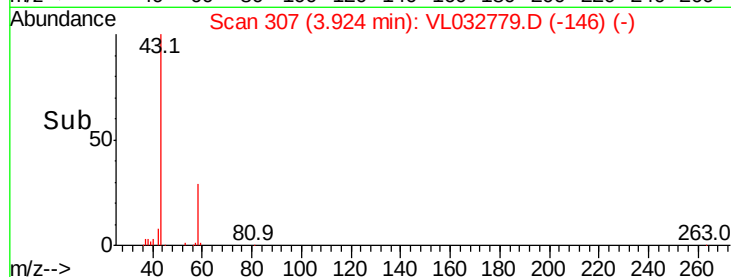
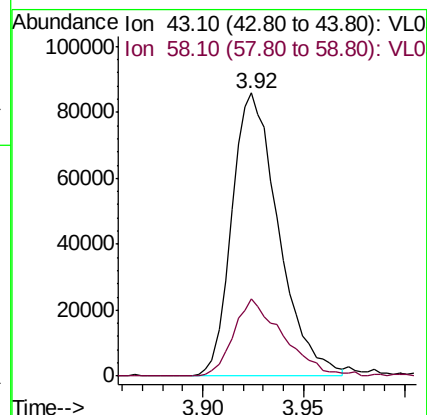
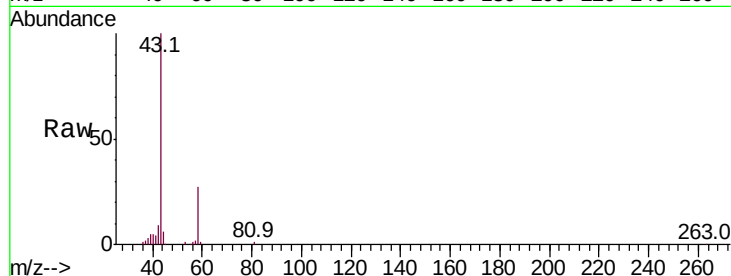
ClientSampleId :

Tot Ion: 43 Resp: 139098

Ion Ratio Lower Upper

43 100

58 29.5 21.1 31.7



#20

Methylene Chloride

Concen: 0.352 ppbv

RT: 4.42 min Scan# 462

Delta R.T. 0.01 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Tgt Ion: 84 Resp: 23919

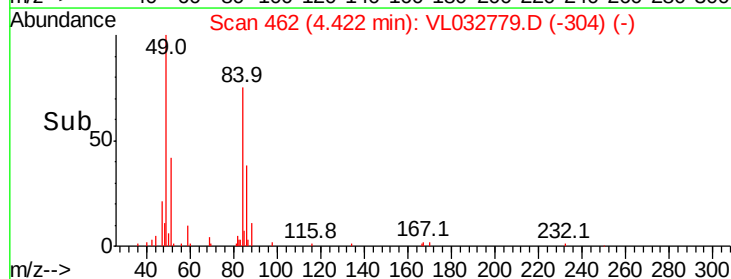
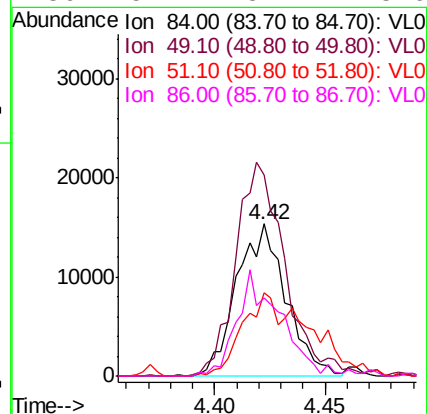
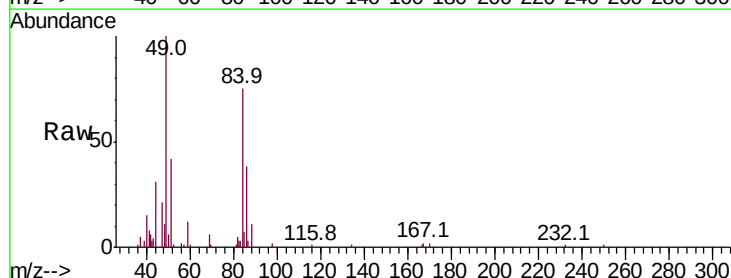
Ion Ratio Lower Upper

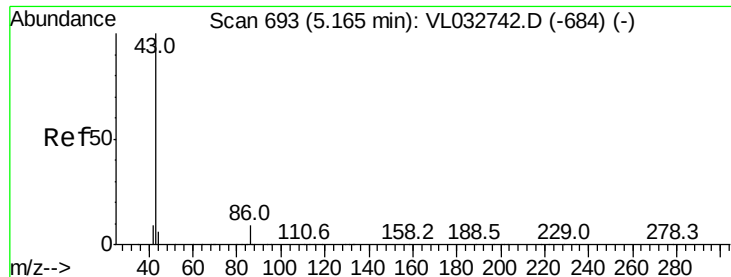
84 100

49 131.9 115.8 173.6

51 55.2 36.9 55.3

86 51.1 52.4 78.6#





#23

Vinyl Acetate

Concen: 0.083 ppbv

RT: 5.16 min Scan# 691

Delta R.T. -0.01 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 19852

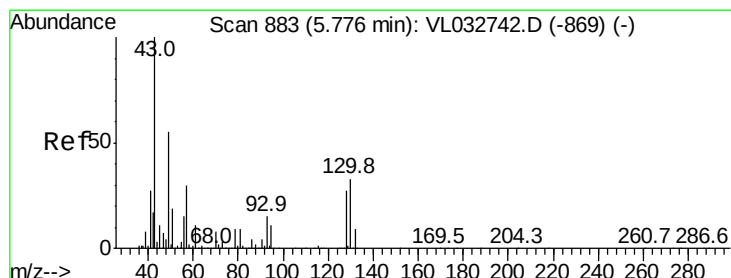
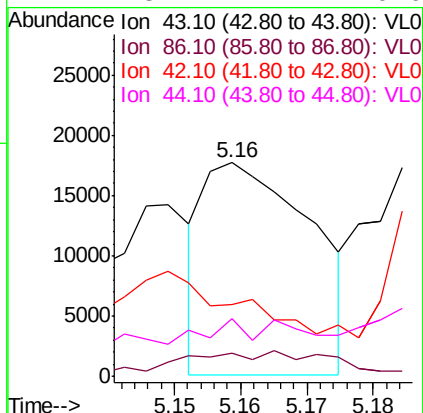
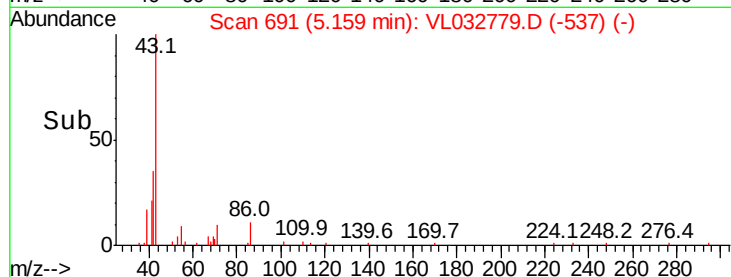
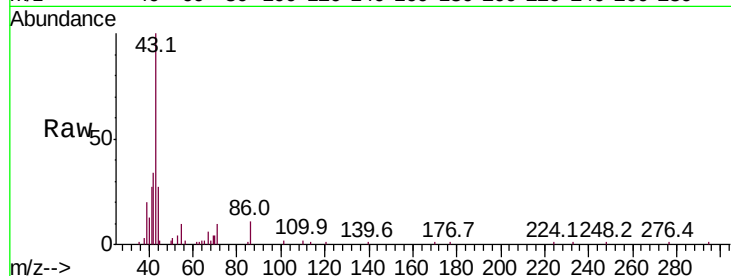
Ion Ratio Lower Upper

43 100

86 3.6 6.2 9.4#

42 23.6 7.8 11.6#

44 18.7 4.4 6.6#



#25

Ethyl Acetate

Concen: 0.356 ppbv

RT: 5.79 min Scan# 888

Delta R.T. 0.02 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Tgt Ion: 43 Resp: 109013

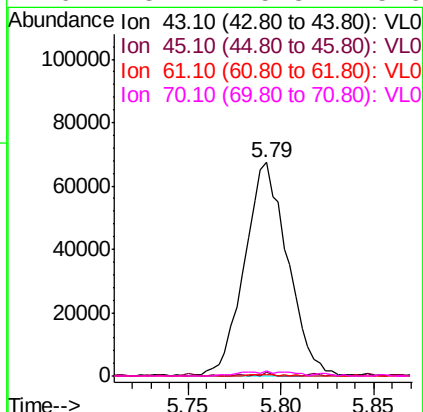
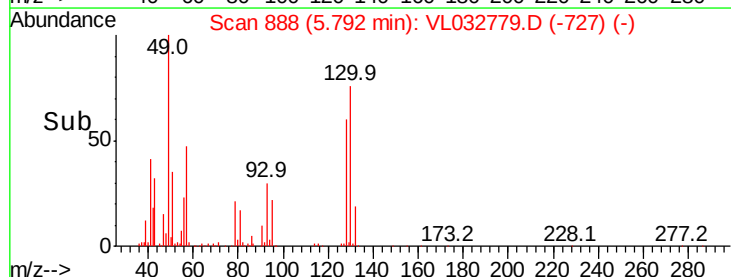
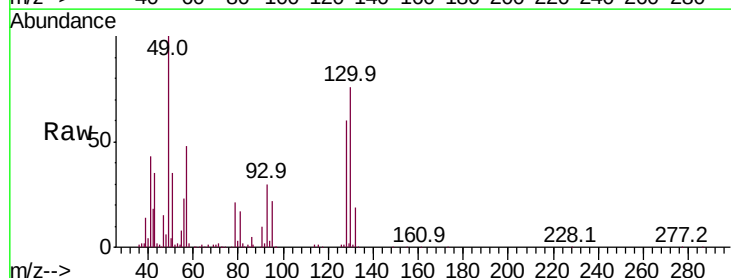
Ion Ratio Lower Upper

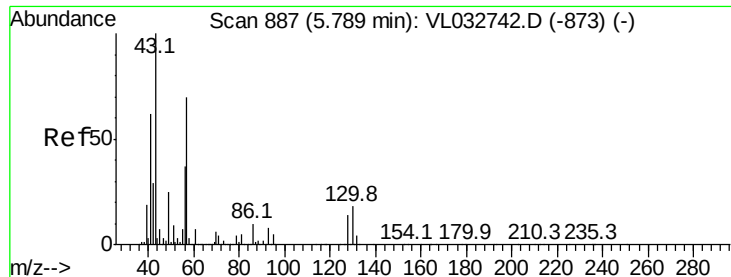
43 100

45 1.0 7.9 11.9#

61 0.5 7.8 11.6#

70 3.1 5.8 8.6#





#26

Hexane

Concen: 1.151 ppbv

RT: 5.79 min Scan# 888

Delta R.T. 0.00 min

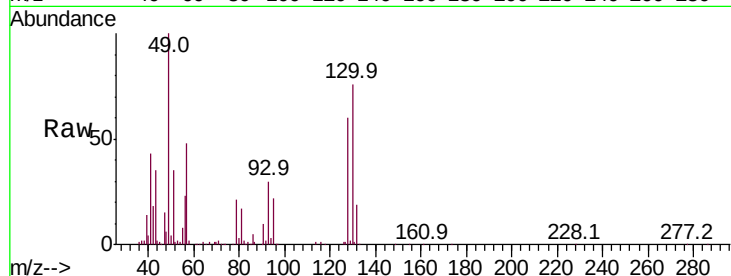
Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

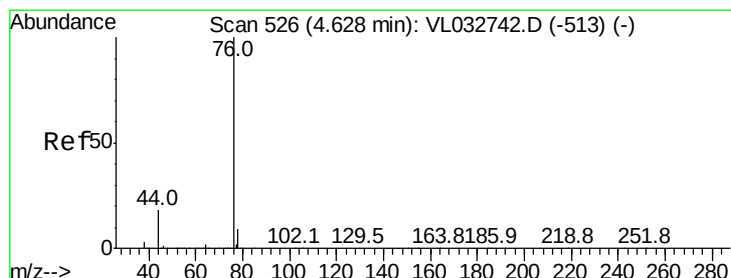
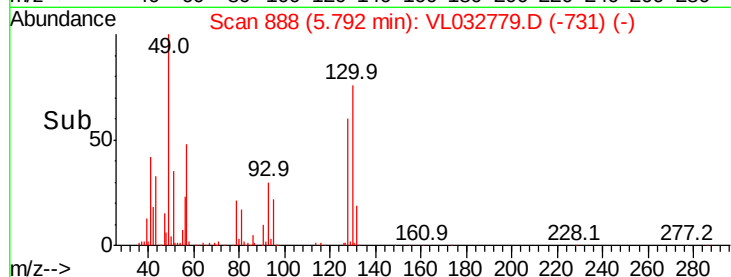
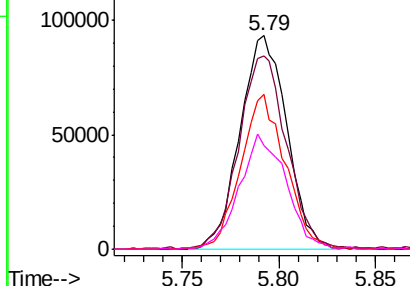
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 156726

Ion	Ratio	Lower	Upper
57	100		
41	93.8	70.3	105.5
43	70.3	174.0	261.0#
56	53.9	42.3	63.5



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0



#27

Carbon Disulfide

Concen: 1.050 ppbv

RT: 4.64 min Scan# 529

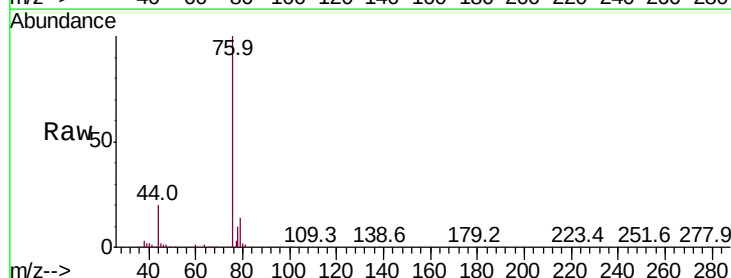
Delta R.T. 0.01 min

Lab File: VL032779.D

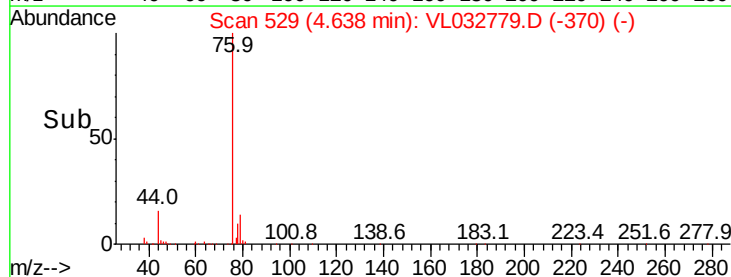
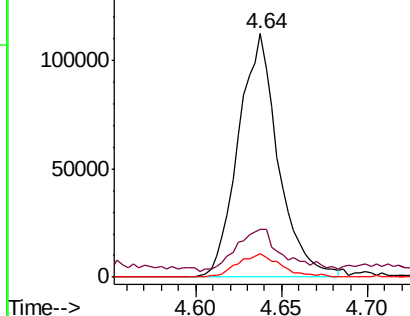
Acq: 20 Nov 2018 15:32

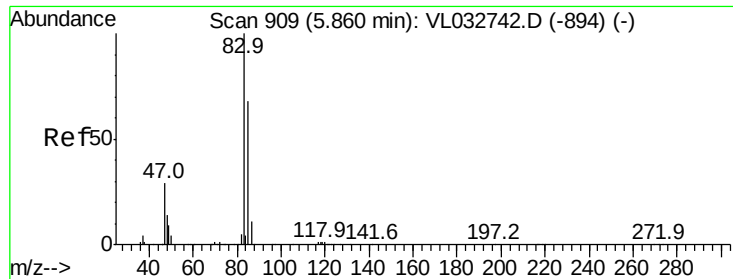
Tgt Ion: 76 Resp: 181235

Ion	Ratio	Lower	Upper
76	100		
44	19.9	14.4	21.6
78	10.3	7.7	11.5



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0

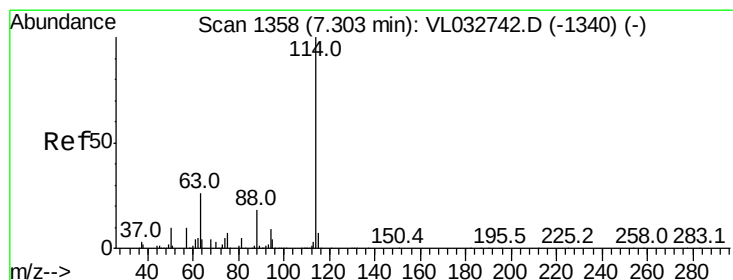
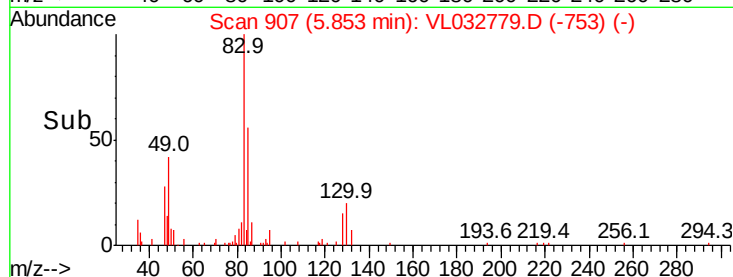
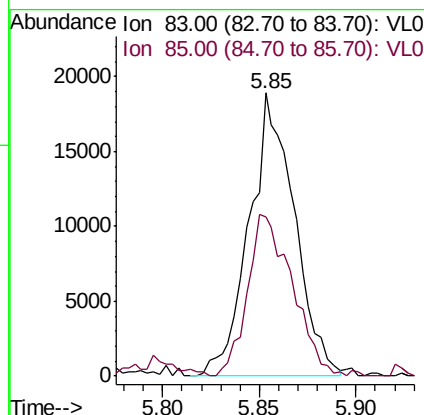
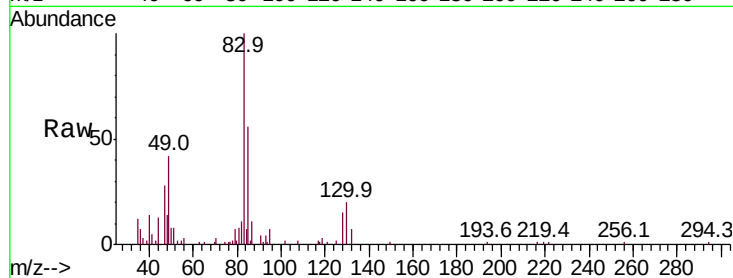




#29
Chloroform
Concen: 0.127 ppbv
RT: 5.85 min Scan# 907
Delta R.T. -0.01 min
Lab File: VL032779.D
Acq: 20 Nov 2018 15:32

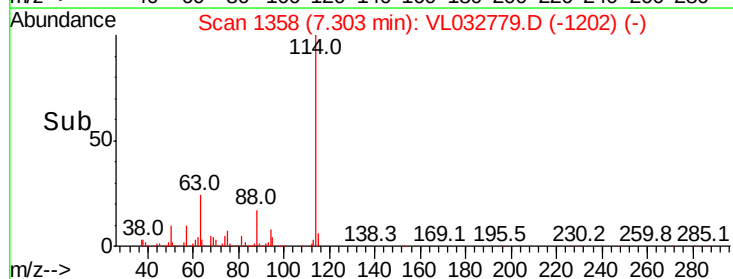
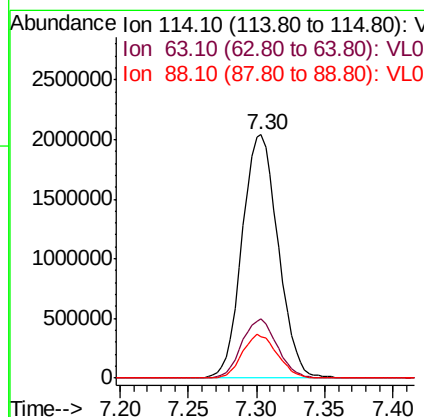
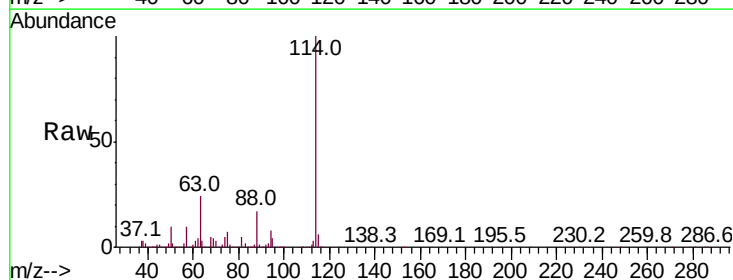
Instrument :
MSVOA_L
ClientSampleId :

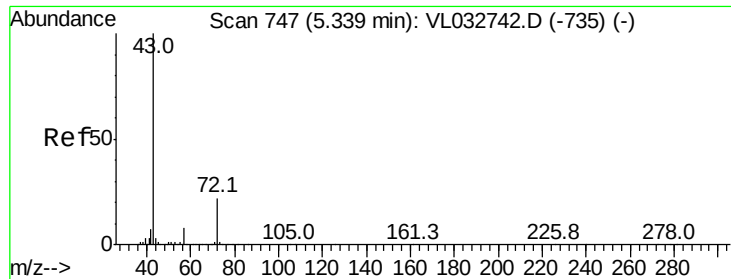
Tot Ion: 83 Resp: 30823
Ion Ratio Lower Upper
83 100
85 55.1 54.2 81.4



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.30 min Scan# 1358
Delta R.T. 0.00 min
Lab File: VL032779.D
Acq: 20 Nov 2018 15:32

Tgt Ion: 114 Resp: 3742160
Ion Ratio Lower Upper
114 100
63 23.9 20.9 31.3
88 17.6 14.4 21.6

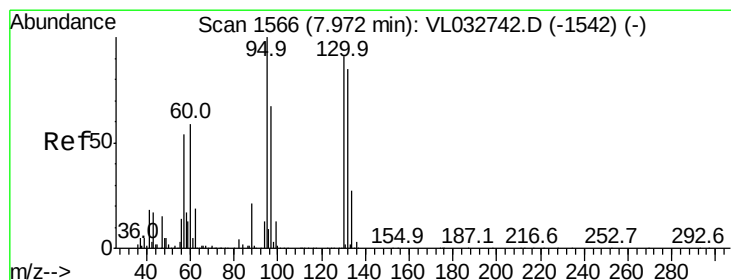
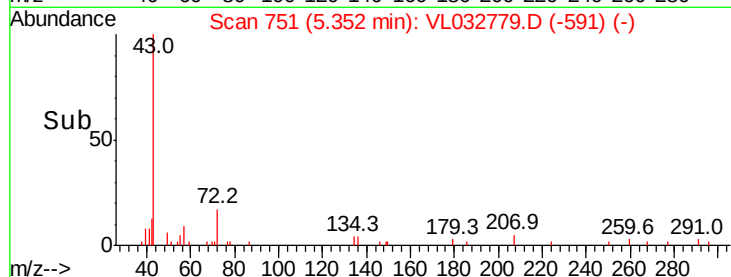
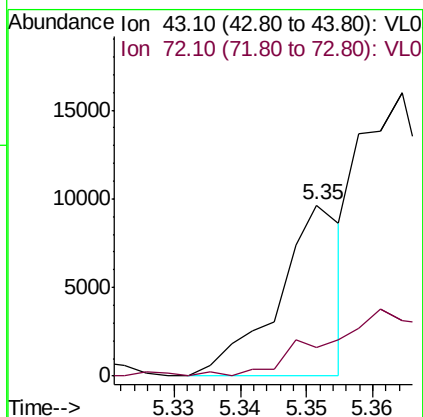
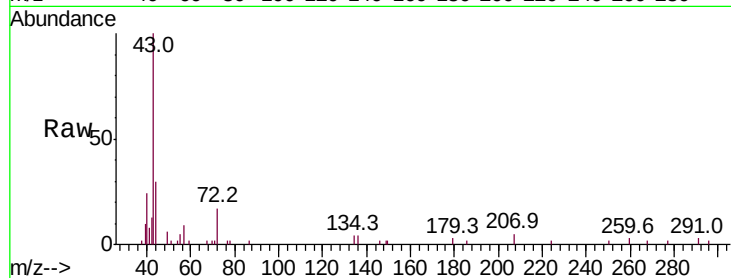




#34
2-Butanone
Concen: 0.034 ppbv
RT: 5.35 min Scan# 751
Delta R.T. 0.01 min
Lab File: VL032779.D
Acq: 20 Nov 2018 15:32

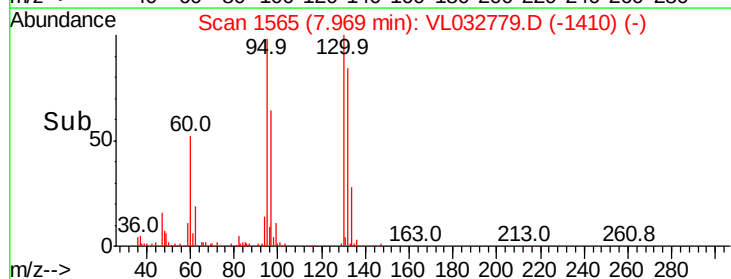
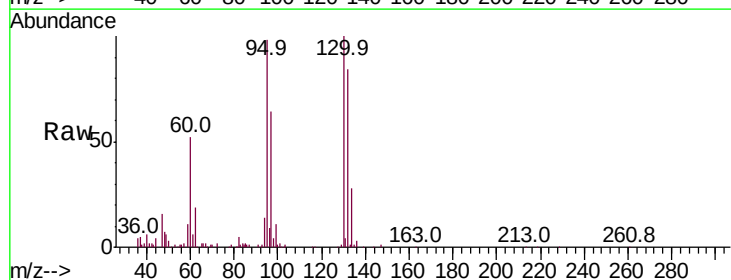
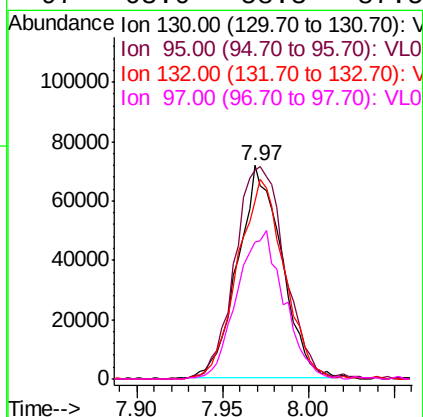
Instrument :
MSVOA_L
ClientSampleId :

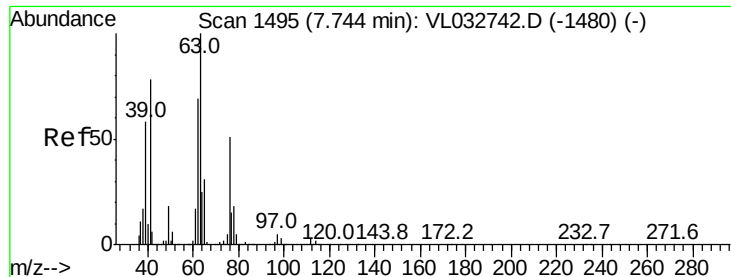
Tot Ion: 43 Resp: 6511
Ion Ratio Lower Upper
43 100
72 0.0 18.4 27.6#



#38
Trichloroethene
Concen: 1.058 ppbv
RT: 7.97 min Scan# 1565
Delta R.T. -0.00 min
Lab File: VL032779.D
Acq: 20 Nov 2018 15:32

Tgt Ion:130 Resp: 127628
Ion Ratio Lower Upper
130 100
95 97.6 87.7 131.5
132 83.4 74.6 111.8
97 63.0 58.3 87.5





#39

1,2-Dichloropropane

Concen: 7.841 ppbv

RT: 7.30 min Scan# 1358

Delta R.T. -0.44 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

ClientSampleId :

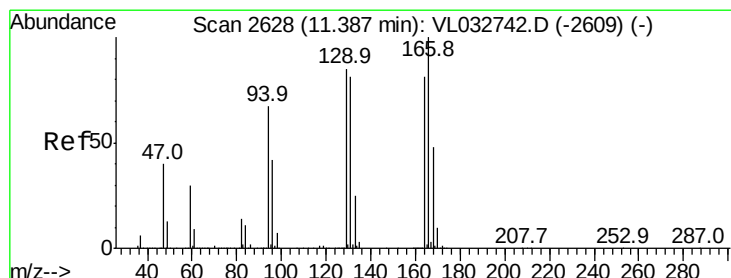
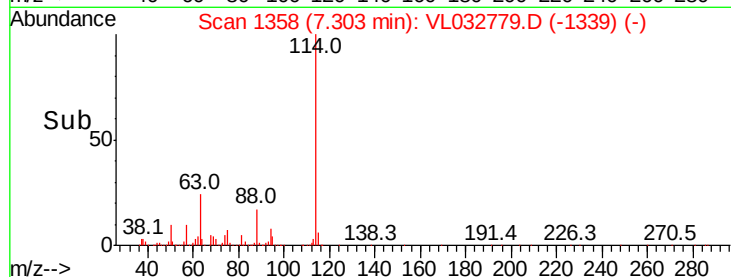
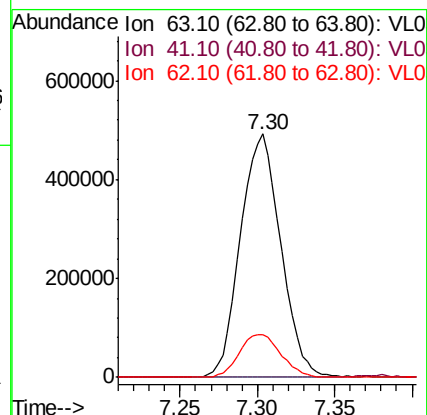
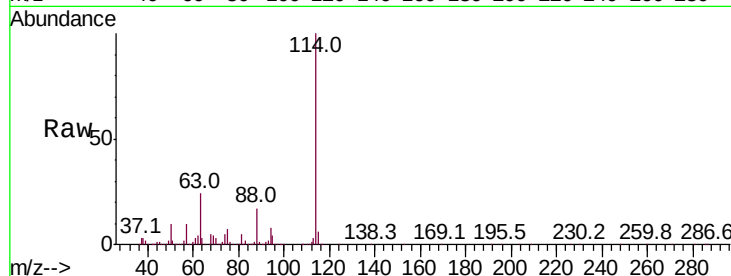
Tot Ion: 63 Resp: 890272

Ion Ratio Lower Upper

63 100

41 0.0 62.0 93.0#

62 17.2 55.4 83.2#



#52

Tetrachloroethene

Concen: 322.581 ppbv

RT: 11.44 min Scan# 2645

Delta R.T. 0.05 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Tgt Ion:164 Resp:33439388

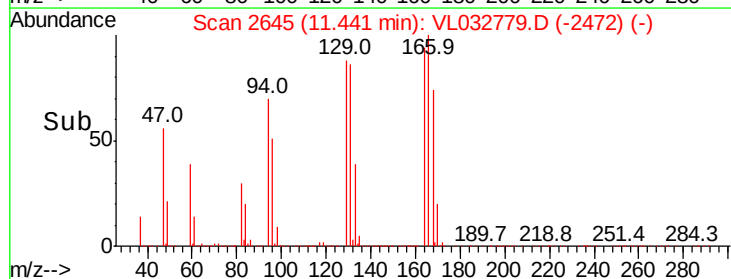
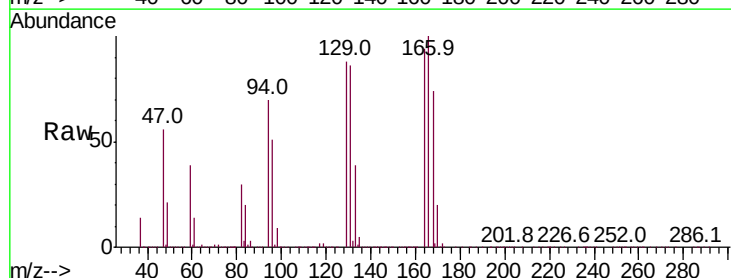
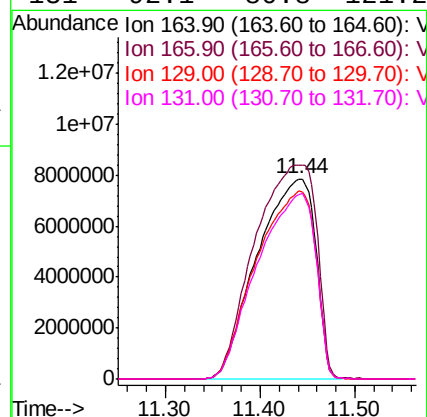
Ion Ratio Lower Upper

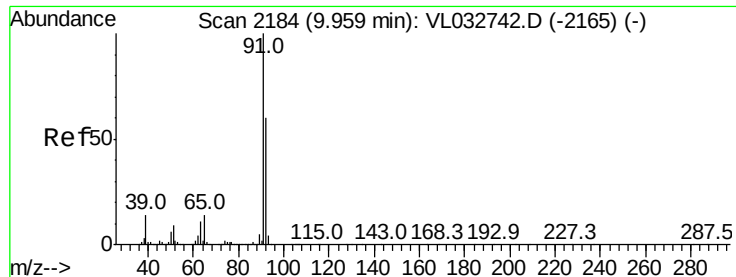
164 100

166 106.6 99.3 148.9

129 94.0 83.9 125.9

131 92.1 80.8 121.2





#53

Toluene

Concen: 0.530 ppbv

RT: 9.96 min Scan# 2185

Delta R.T. 0.00 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

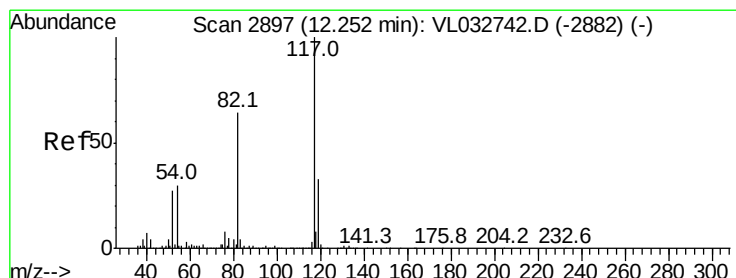
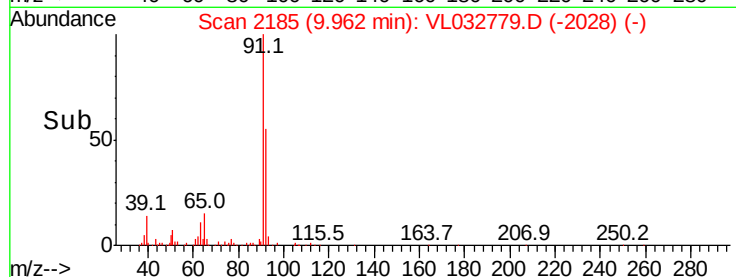
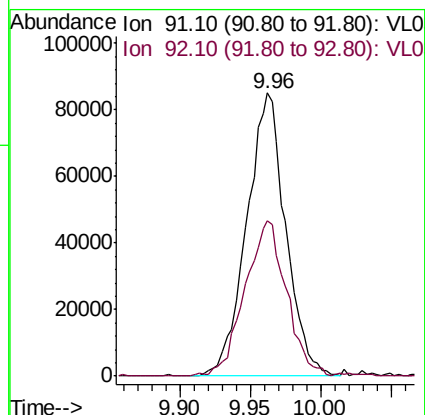
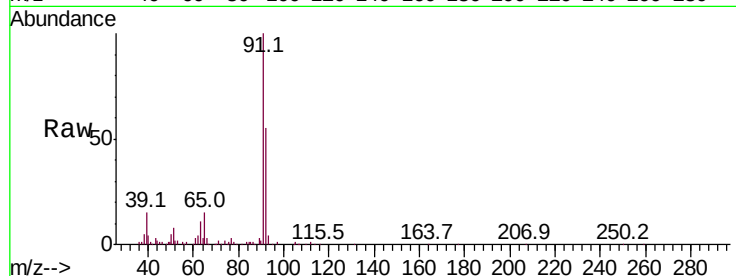
ClientSampleId :

Tot Ion: 91 Resp: 164864

Ion Ratio Lower Upper

91 100

92 59.0 47.9 71.9



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.26 min Scan# 2900

Delta R.T. 0.01 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

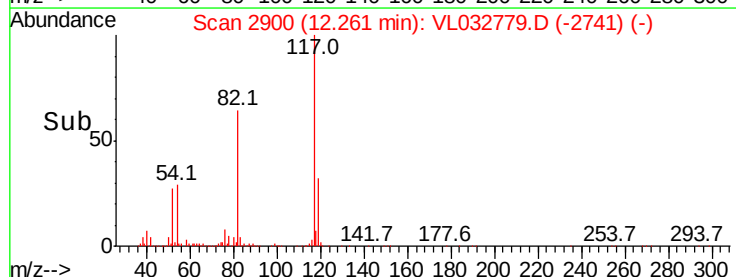
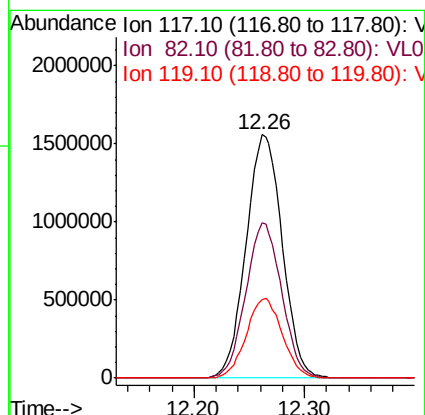
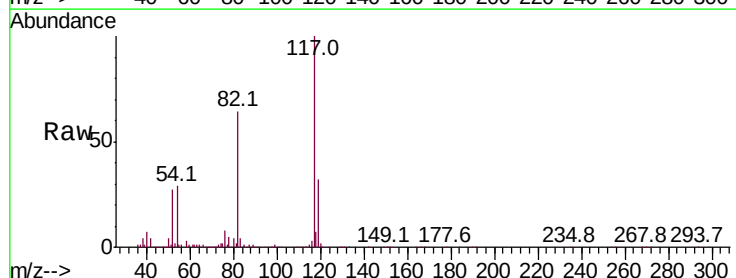
Tgt Ion: 117 Resp: 3552111

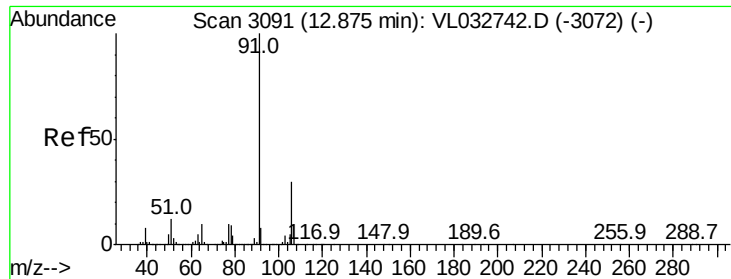
Ion Ratio Lower Upper

117 100

82 63.6 51.0 76.6

119 32.6 28.0 42.0





#58

Ethyl Benzene

Concen: 0.246 ppbv

RT: 12.89 min Scan# 3095

Delta R.T. 0.01 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

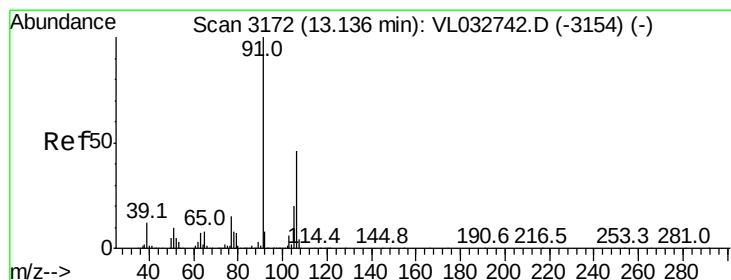
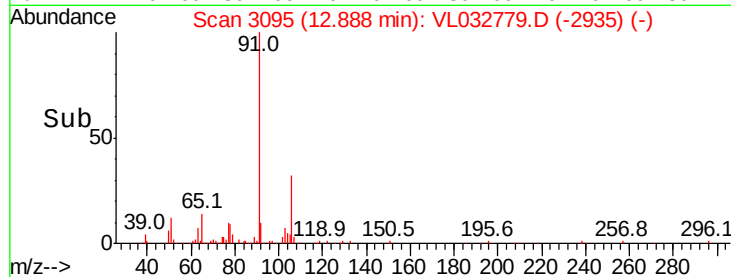
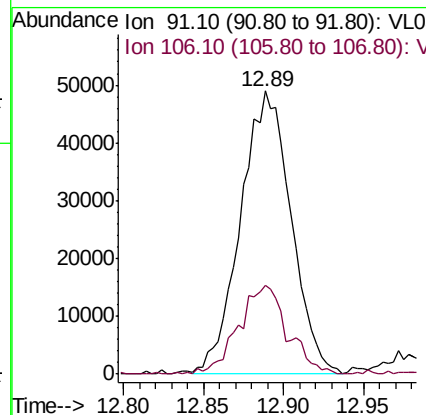
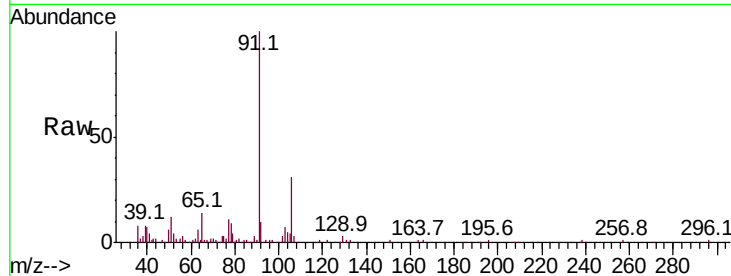
ClientSampled :

Tot Ion: 91 Resp: 104968

Ion Ratio Lower Upper

91 100

106 31.5 23.6 35.4



#59

m/p-Xylene

Concen: 1.225 ppbv

RT: 13.15 min Scan# 3175

Delta R.T. 0.01 min

Lab File: VL032779.D

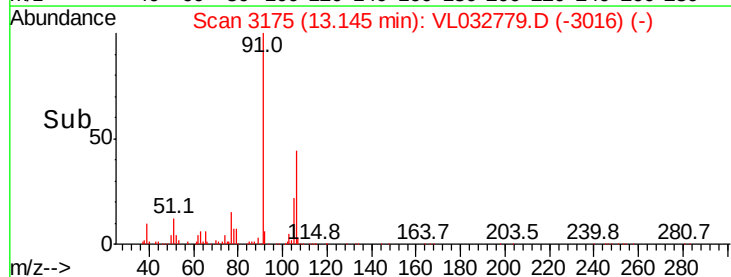
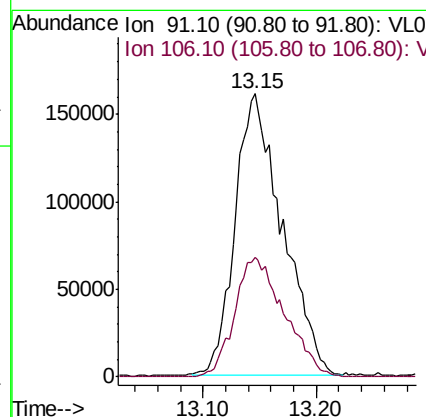
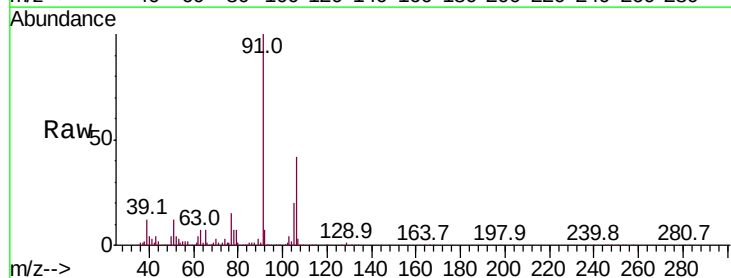
Acq: 20 Nov 2018 15:32

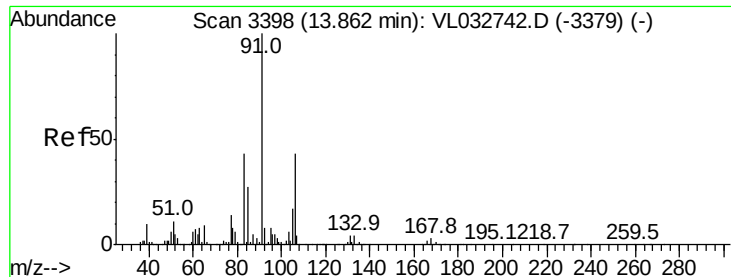
Tgt Ion: 91 Resp: 466230

Ion Ratio Lower Upper

91 100

106 44.6 36.1 54.1

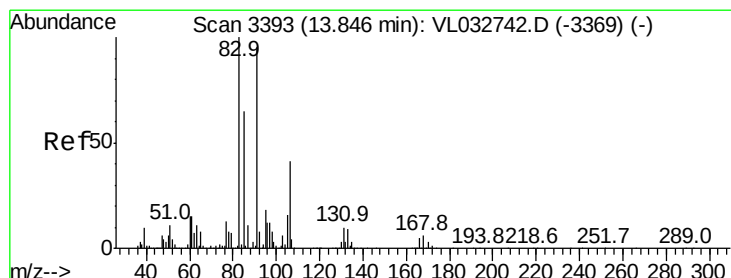
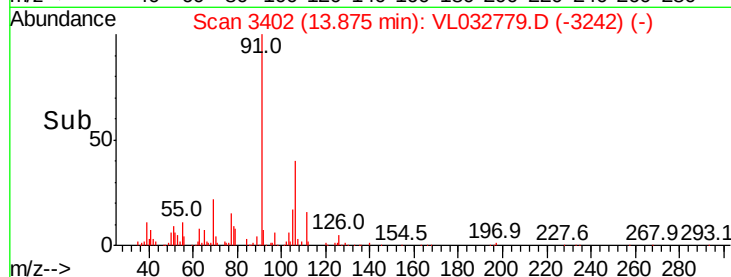
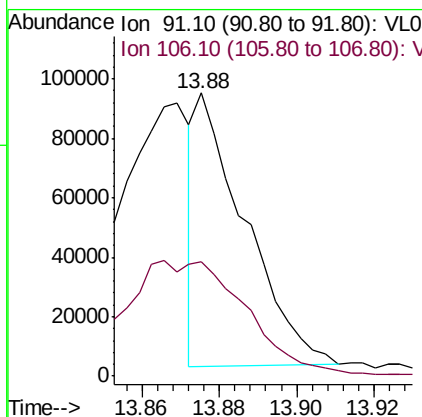
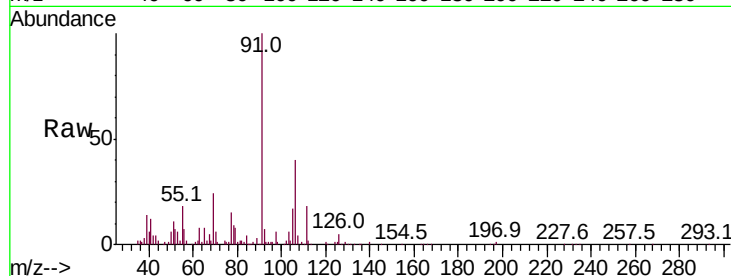




#60
o-Xylene
Concen: 0.211 ppbv
RT: 13.88 min Scan# 3402
Delta R.T. 0.01 min
Lab File: VL032779.D
Acq: 20 Nov 2018 15:32

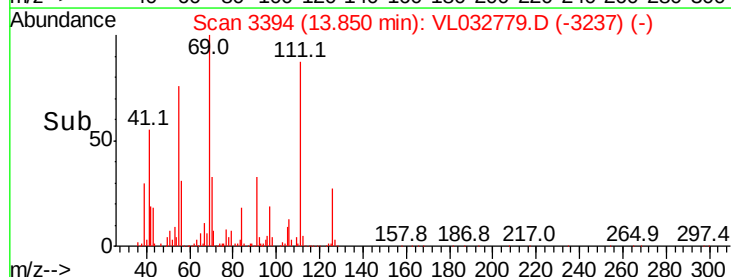
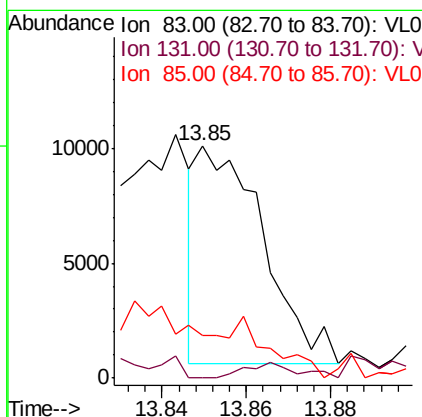
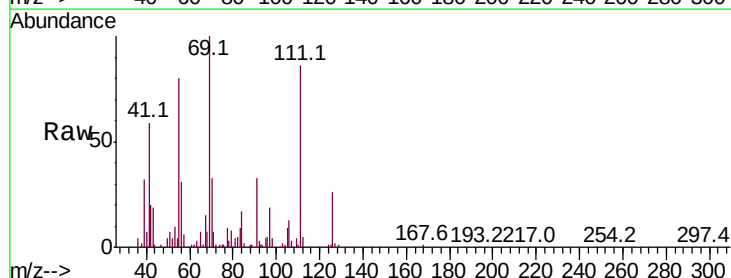
Instrument :
MSVOA_L
ClientSampled :

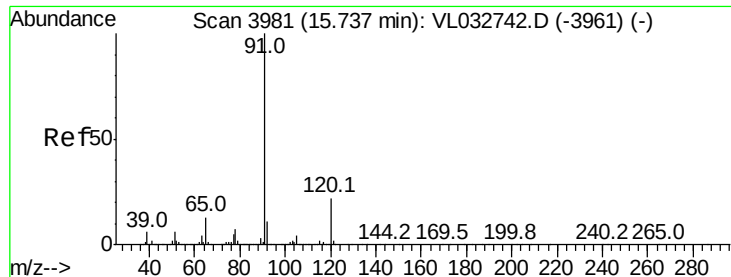
Tot Ion: 91 Resp: 80809
Ion Ratio Lower Upper
91 100
106 0.0 21.9 65.7#



#63
1,1,2,2-Tetrachloroethane
Concen: 0.034 ppbv
RT: 13.85 min Scan# 3394
Delta R.T. 0.00 min
Lab File: VL032779.D
Acq: 20 Nov 2018 15:32

Tgt Ion: 83 Resp: 10205
Ion Ratio Lower Upper
83 100
131 8.6 4.7 14.1
85 0.0 32.5 97.4#





#64

n-propylbenzene

Concen: 0.115 ppbv

RT: 15.74 min Scan# 3981

Delta R.T. 0.00 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

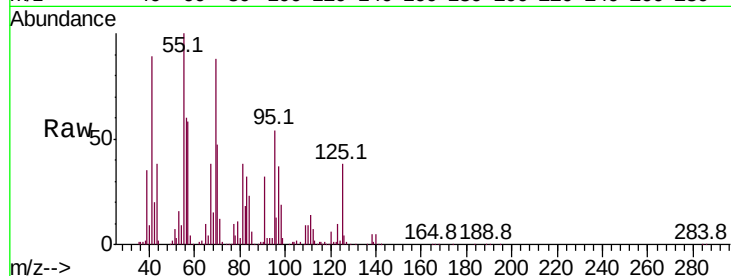
ClientSampled :

Tot Ion:120 Resp: 15694

Ion Ratio Lower Upper

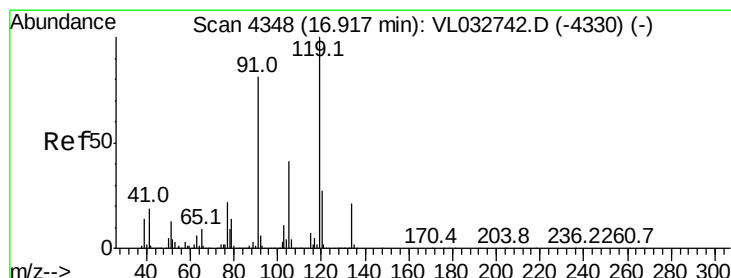
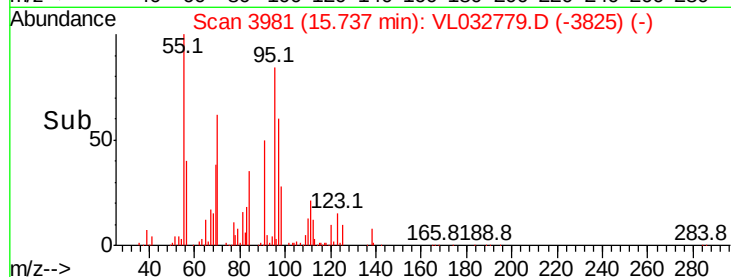
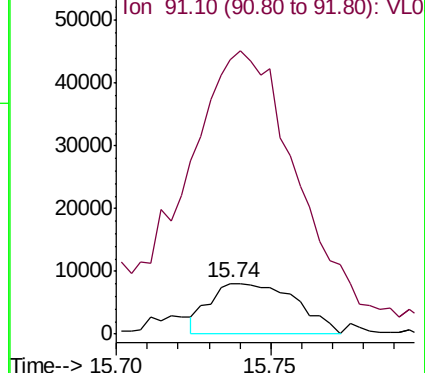
120 100

91 707.0 381.7 572.5#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#65

tert-Butylbenzene

Concen: 0.047 ppbv

RT: 16.94 min Scan# 4354

Delta R.T. 0.02 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

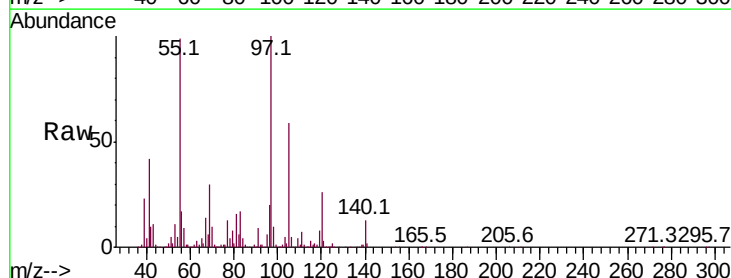
Tgt Ion:119 Resp: 21624

Ion Ratio Lower Upper

119 100

91 0.0 65.6 98.4#

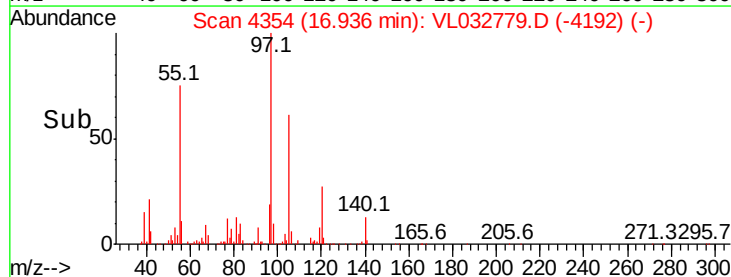
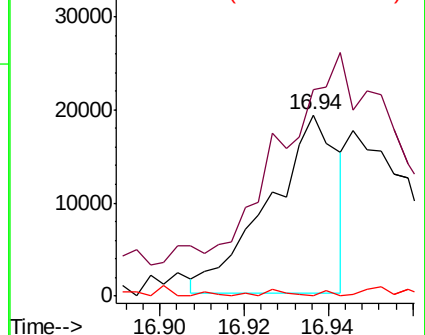
134 0.0 15.9 23.9#

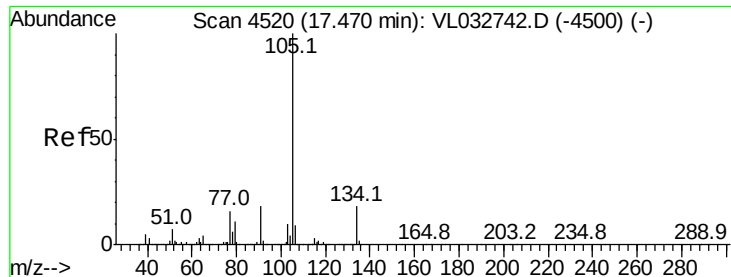


Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V

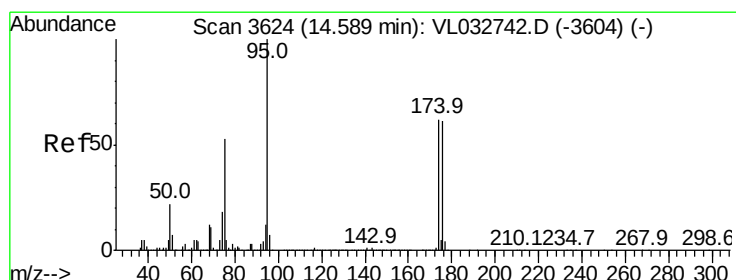
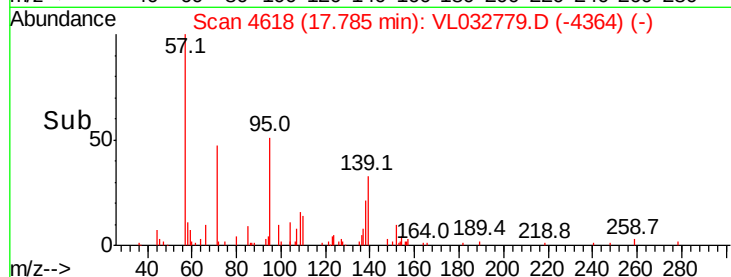
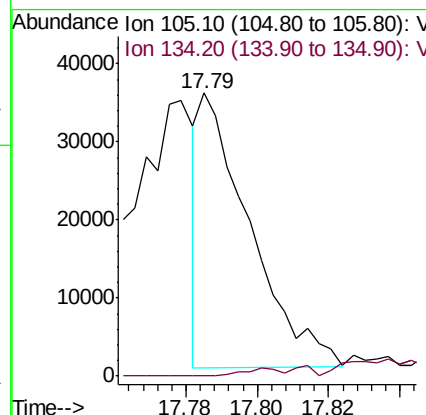
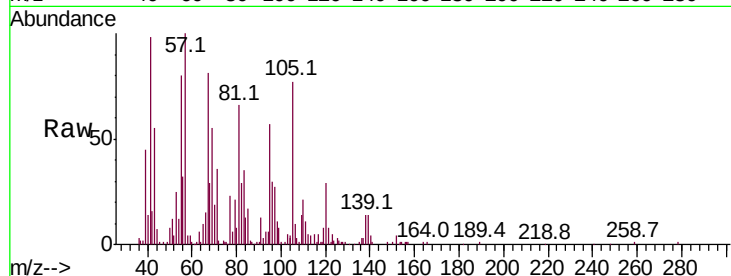




#67
 sec-Butylbenzene
 Concen: 0.051 ppbv
 RT: 17.79 min Scan# 4618
 Delta R.T. 0.32 min
 Lab File: VL032779.D
 Acq: 20 Nov 2018 15:32

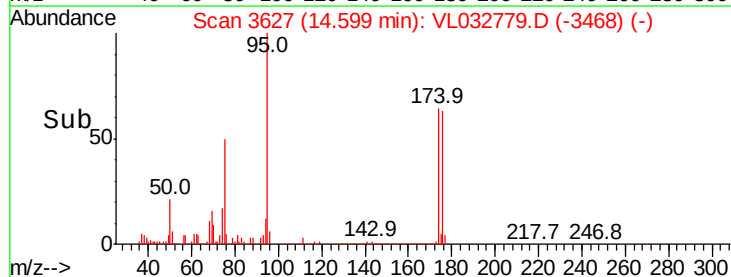
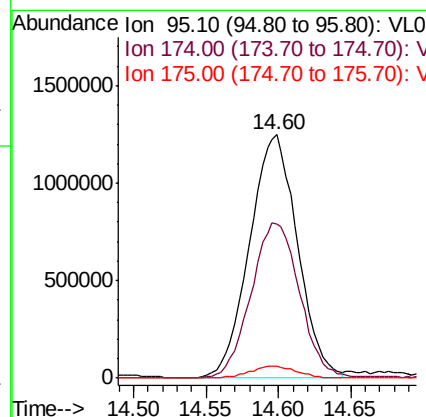
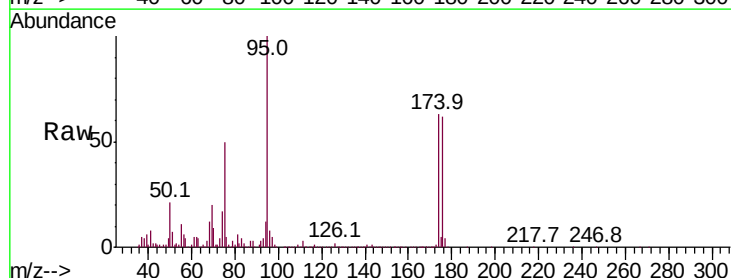
Instrument :
 MSVOA_L
 ClientSampleId :

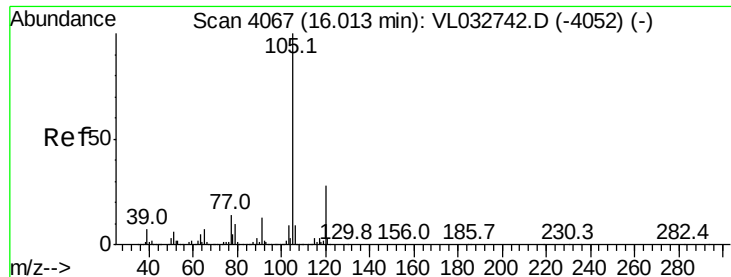
Tot Ion:105 Resp: 34276
 Ion Ratio Lower Upper
 105 100
 134 15.3 14.6 21.8



#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.742 ppbv
 RT: 14.60 min Scan# 3627
 Delta R.T. 0.01 min
 Lab File: VL032779.D
 Acq: 20 Nov 2018 15:32

Tgt Ion: 95 Resp: 2853980
 Ion Ratio Lower Upper
 95 100
 174 65.8 50.7 76.1
 175 4.9 3.8 5.6





#72

4-Ethyltoluene

Concen: 0.273 ppbv

RT: 16.02 min Scan# 4070

Delta R.T. 0.01 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 114450

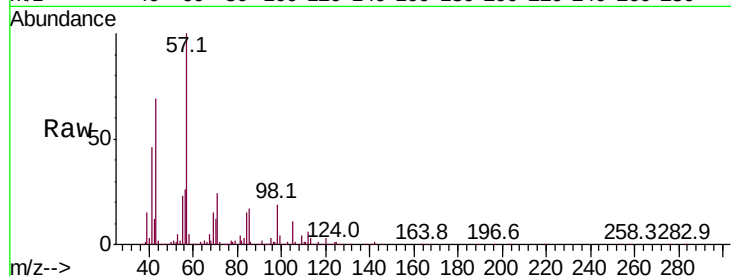
Ion Ratio Lower Upper

105 100

120 30.7 22.9 34.3

91 17.4 10.6 15.8#

77 17.9 11.4 17.2#

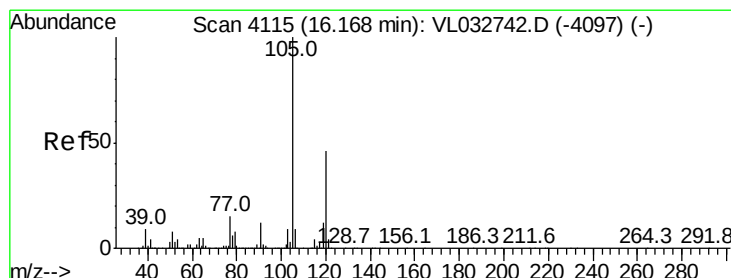
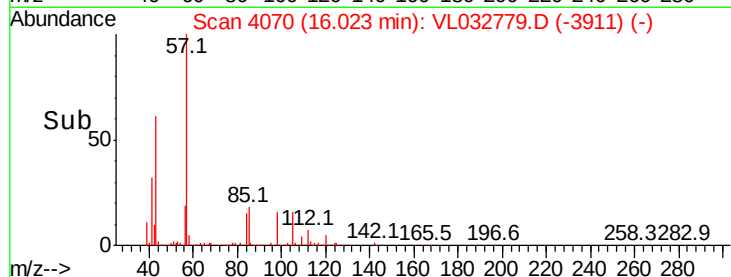
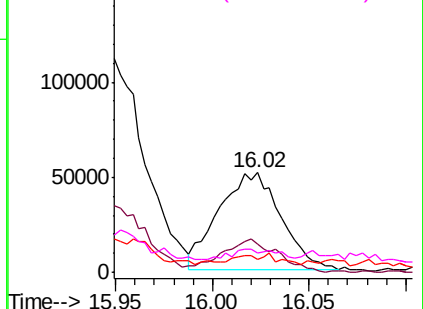


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#73

1,3,5-Trimethylbenzene

Concen: 0.113 ppbv

RT: 16.18 min Scan# 4119

Delta R.T. 0.01 min

Lab File: VL032779.D

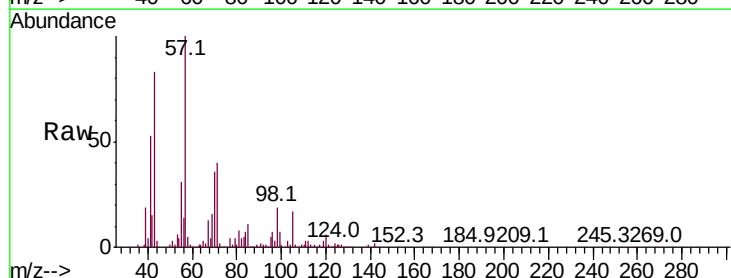
Acq: 20 Nov 2018 15:32

Tgt Ion:105 Resp: 46360

Ion Ratio Lower Upper

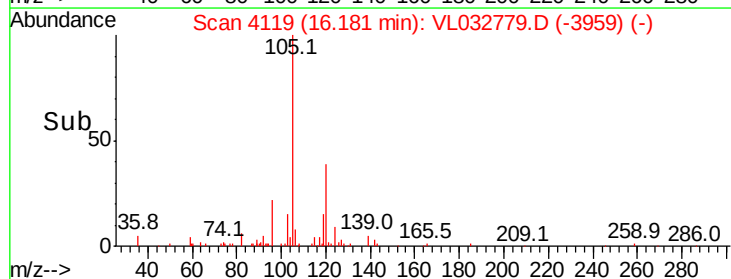
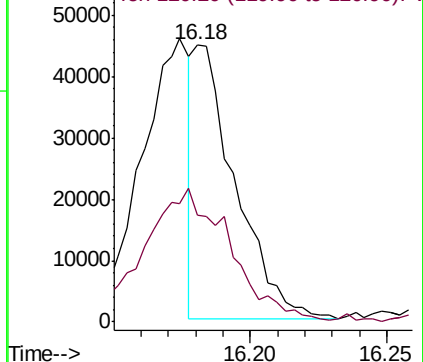
105 100

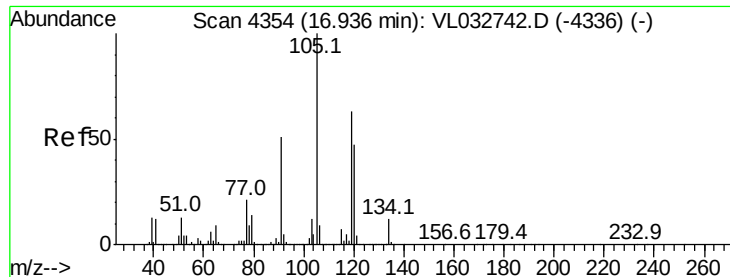
120 37.4 36.6 55.0



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74

1,2,4-Trimethylbenzene

Concen: 0.837 ppbv

RT: 16.95 min Scan# 4357

Delta R.T. 0.01 min

Lab File: VL032779.D

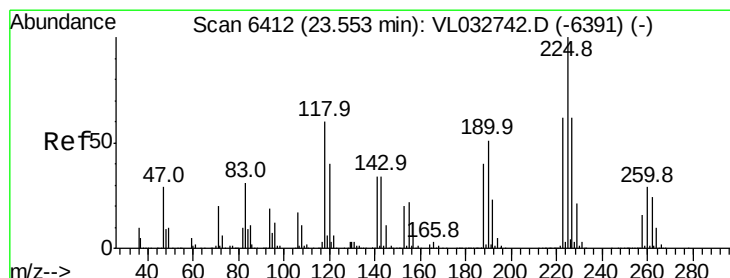
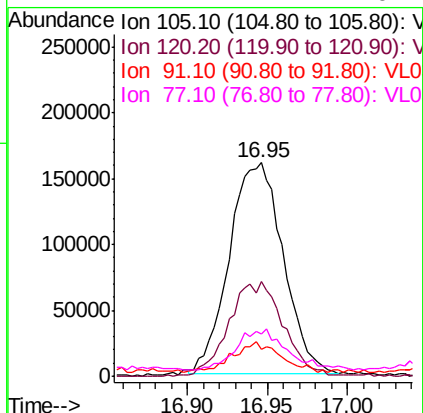
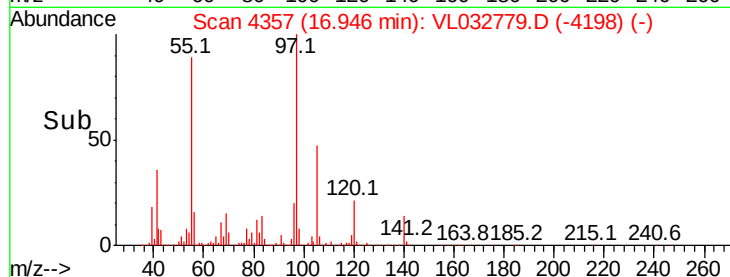
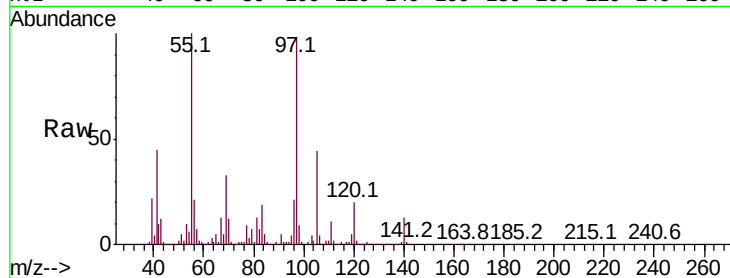
Acq: 20 Nov 2018 15:32

Instrument :

MSVOA_L

ClientSampled :

Tot Ion:	105	Resp:	367402
Ion	Ratio	Lower	Upper
105	100		
120	44.0	37.6	56.4
91	10.3	42.5	63.7#
77	17.1	17.4	26.2#



#78

Hexachloro-1,3-Butadiene

Concen: 0.034 ppbv

RT: 23.57 min Scan# 6416

Delta R.T. 0.01 min

Lab File: VL032779.D

Acq: 20 Nov 2018 15:32

Tgt Ion:	225	Resp:	4284
Ion	Ratio	Lower	Upper
225	100		
223	0.0	50.3	75.5#
227	0.0	50.2	75.4#

