

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL112018\
 Data File : VL032798.D
 Acq On : 21 Nov 2018 3:54
 Operator : SY/AP
 Sample : J5998-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 21 06:18:46 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	1288685	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3342890	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3099497	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.58	95	2273331	9.81	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.10%

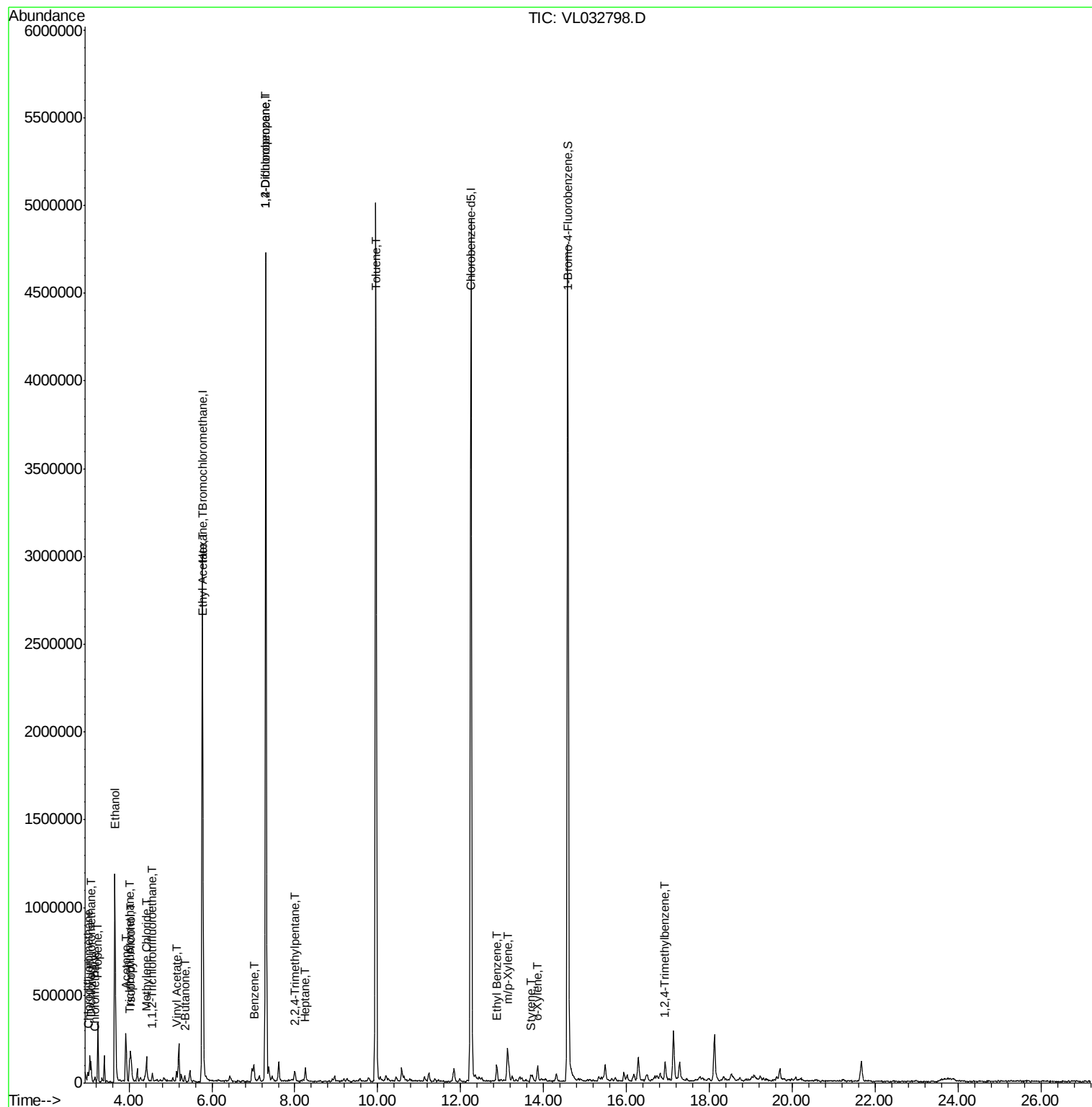
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.08	85	84665	0.457 ppbv	96
3) Chlorodifluoromethane	3.02	51	62663	0.613 ppbv #	83
4) Chloromethane	3.18	50	24409	0.431 ppbv	97
9) Propene	3.25	41	86665	2.120 ppbv	97
10) Heptane	8.25	43	24578	0.157 ppbv	94
11) Trichlorofluoromethane	4.01	101	80608	0.462 ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.56	101	13244	0.093 ppbv	97
13) Ethanol	3.66	45	1250547	93.382 ppbv	100
15) Acetone	3.91	43	277748	2.360 ppbv	98
19) Isopropyl Alcohol	4.04	45	196624	2.508 ppbv #	96
20) Methylene Chloride	4.42	84	47563	0.781 ppbv	99
23) Vinyl Acetate	5.15	43	33422	0.156 ppbv #	39
25) Ethyl Acetate	5.79	43	106129	0.387 ppbv #	85
26) Hexane	5.79	57	120643	0.988 ppbv #	48
34) 2-Butanone	5.34	43	17621	0.102 ppbv #	53
36) Benzene	7.01	78	57035	0.214 ppbv #	87
39) 1,2-Dichloropropane	7.30	63	811198	7.998 ppbv #	23
44) 2,2,4-Trimethylpentane	8.00	57	23222	0.052 ppbv #	16
53) Toluene	9.95	91	3830190	13.792 ppbv	100
58) Ethyl Benzene	12.88	91	73666	0.197 ppbv	97
59) m/p-Xylene	13.13	91	81694	0.246 ppbv #	6
60) o-Xylene	13.86	91	62781	0.188 ppbv	95
61) Styrene	13.70	104	8946	0.041 ppbv #	44
74) 1,2,4-Trimethylbenzene	16.94	105	60814	0.159 ppbv #	65

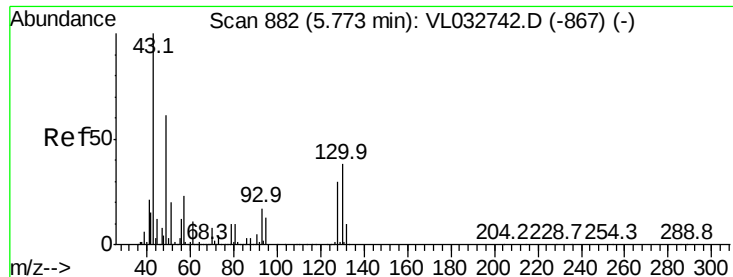
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 881

Delta R.T. -0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :
MSVOA_L
ClientSampleId :

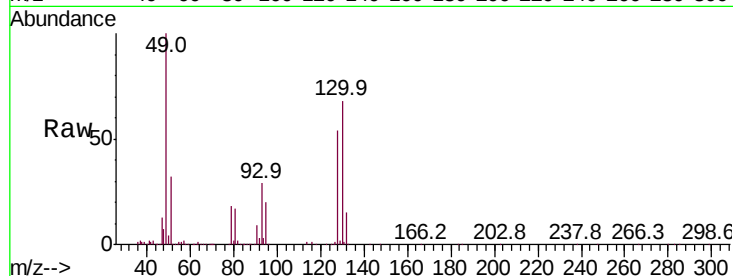
Tot Ion: 49 Resp: 1288685

Ion Ratio Lower Upper

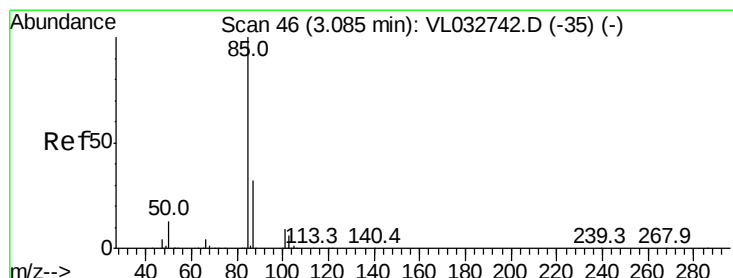
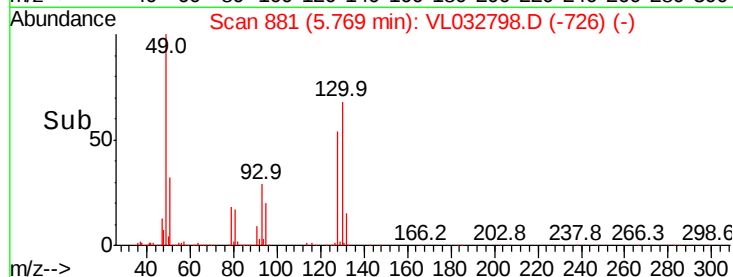
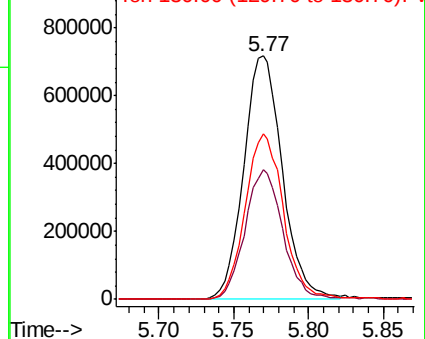
49 100

128 52.9 24.9 74.6

130 68.2 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: 0.457 ppbv

RT: 3.08 min Scan# 46

Delta R.T. -0.00 min

Lab File: VL032798.D

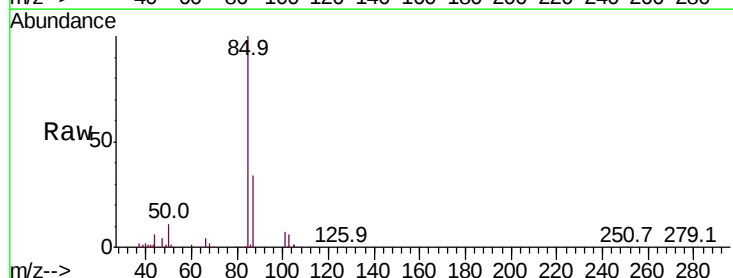
Acq: 21 Nov 2018 3:54

Tgt Ion: 85 Resp: 84665

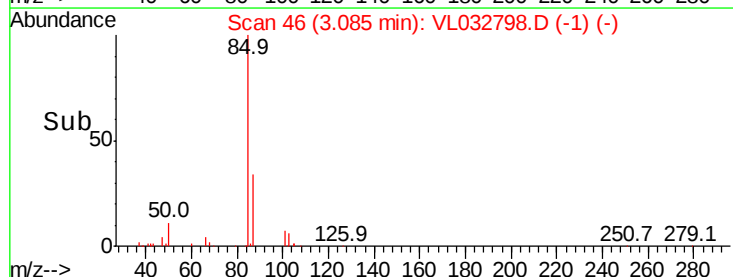
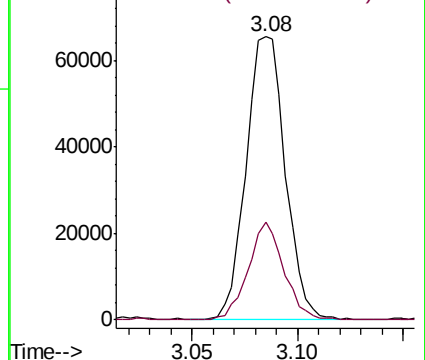
Ion Ratio Lower Upper

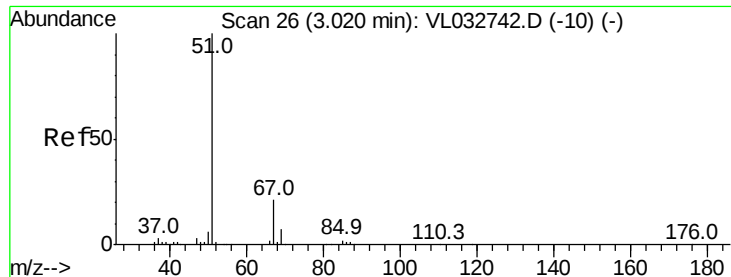
85 100

87 34.5 26.0 39.0



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

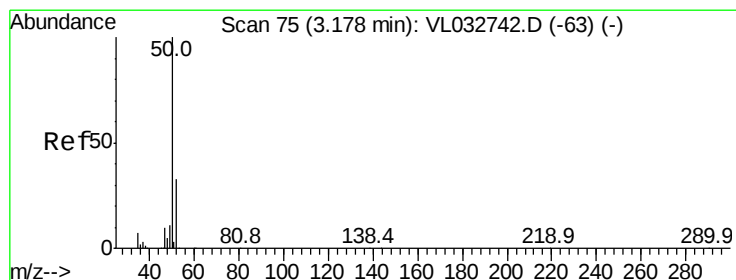
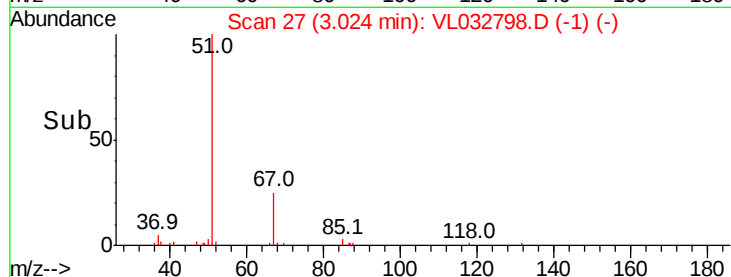
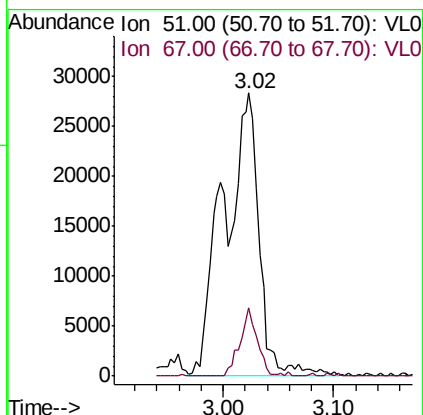
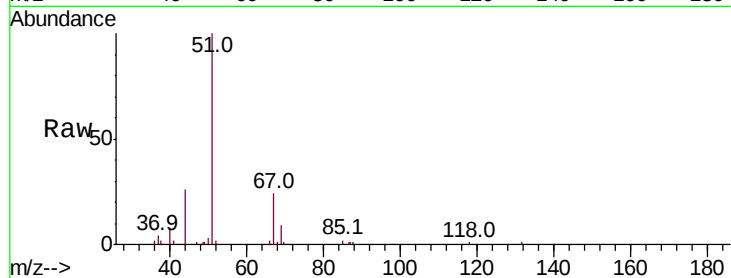




#3
 Chlorodifluoromethane
 Concen: 0.613 ppbv
 RT: 3.02 min Scan# 27
 Delta R.T. 0.00 min
 Lab File: VL032798.D
 Acq: 21 Nov 2018 3:54

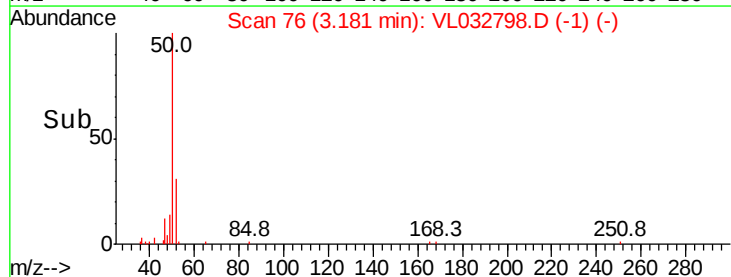
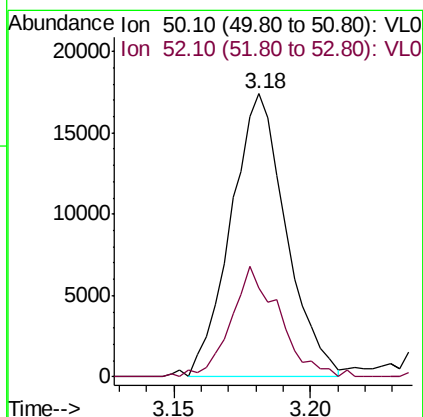
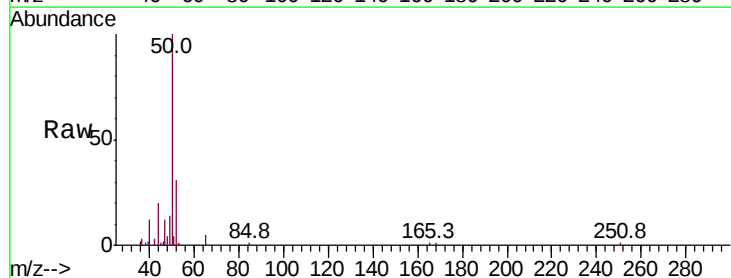
Instrument :
 MSVOA_L
 ClientSampleId :

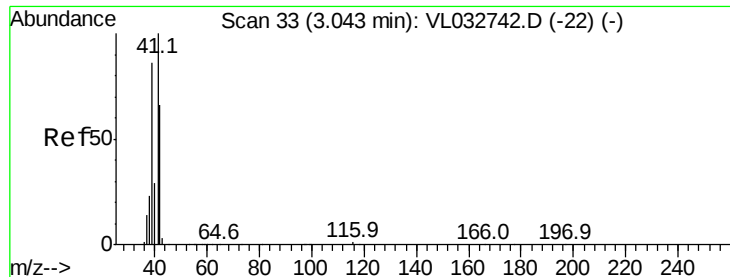
Tot Ion: 51 Resp: 62663
 Ion Ratio Lower Upper
 51 100
 67 12.2 16.1 24.1#



#4
 Chloromethane
 Concen: 0.431 ppbv
 RT: 3.18 min Scan# 76
 Delta R.T. 0.00 min
 Lab File: VL032798.D
 Acq: 21 Nov 2018 3:54

Tgt Ion: 50 Resp: 24409
 Ion Ratio Lower Upper
 50 100
 52 31.4 26.6 40.0





#9

Propene

Concen: 2.120 ppbv

RT: 3.25 min Scan# 96

Delta R.T. 0.20 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

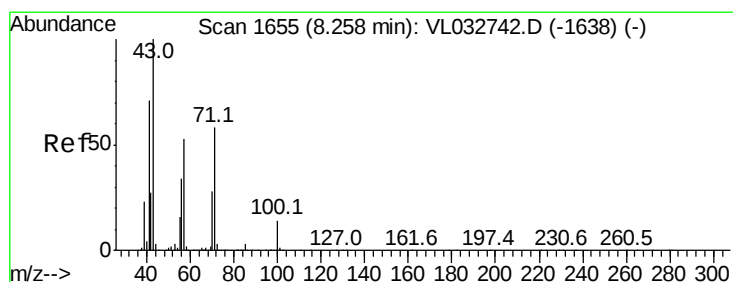
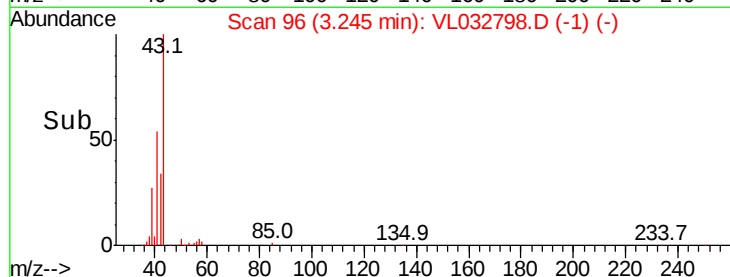
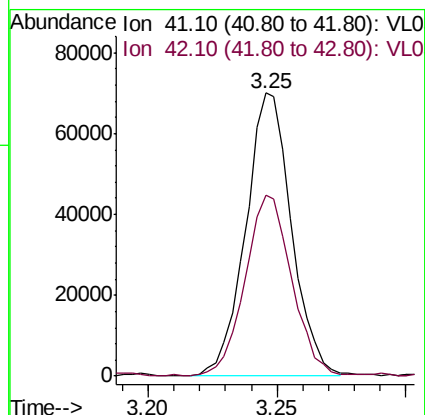
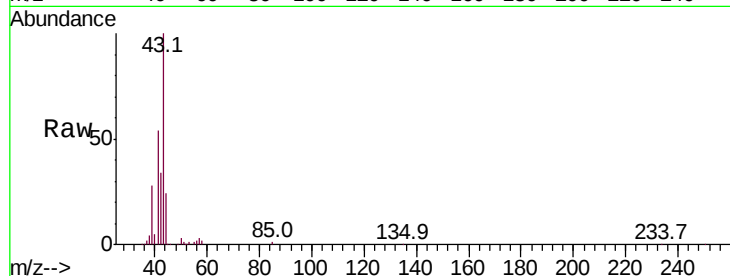
ClientSampleId :

Tot Ion: 41 Resp: 86665

Ion Ratio Lower Upper

41 100

42 66.6 55.0 82.6



#10

Heptane

Concen: 0.157 ppbv

RT: 8.25 min Scan# 1654

Delta R.T. -0.00 min

Lab File: VL032798.D

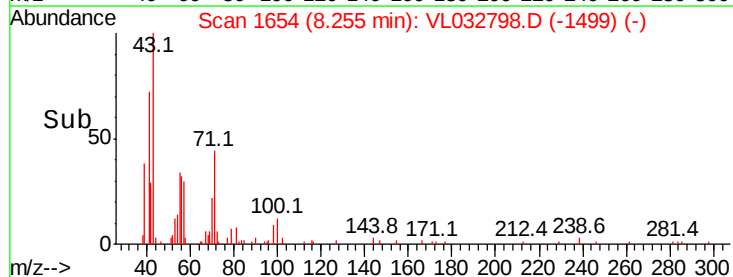
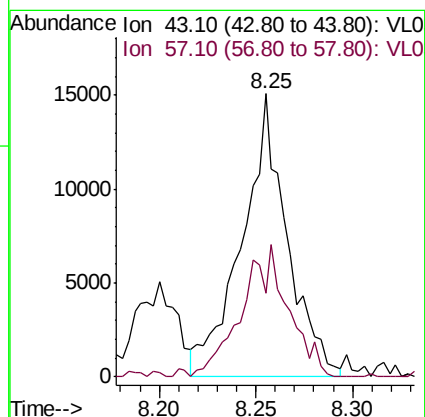
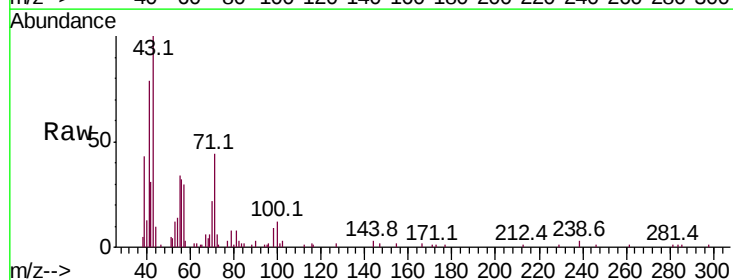
Acq: 21 Nov 2018 3:54

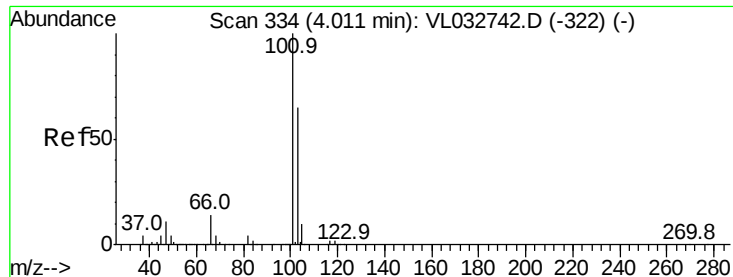
Tgt Ion: 43 Resp: 24578

Ion Ratio Lower Upper

43 100

57 48.0 41.8 62.8





#11

Trichlorofluoromethane

Concen: 0.462 ppbv

RT: 4.01 min Scan# 335

Delta R.T. 0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

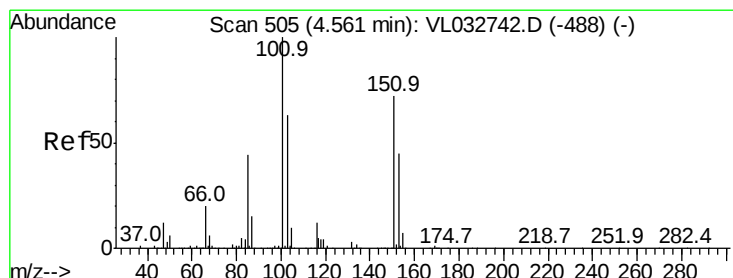
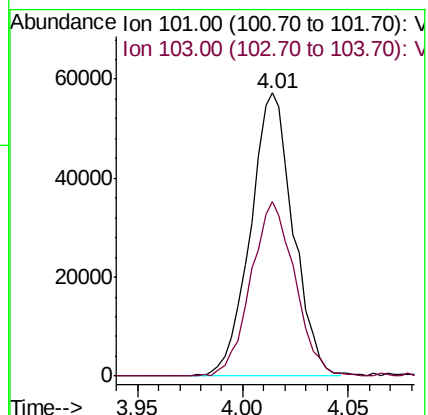
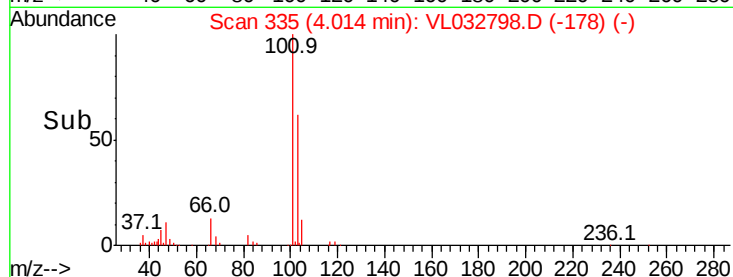
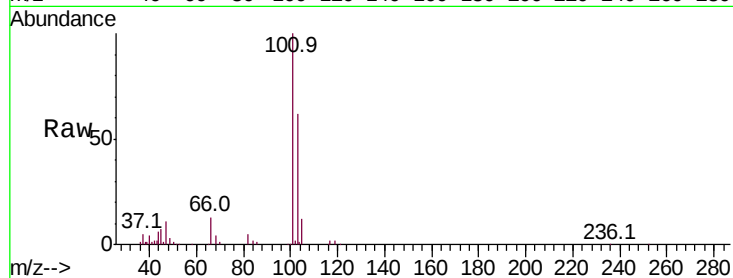
ClientSampleId :

Tot Ion:101 Resp: 80608

Ion Ratio Lower Upper

101 100

103 61.8 51.6 77.4



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.093 ppbv

RT: 4.56 min Scan# 504

Delta R.T. -0.00 min

Lab File: VL032798.D

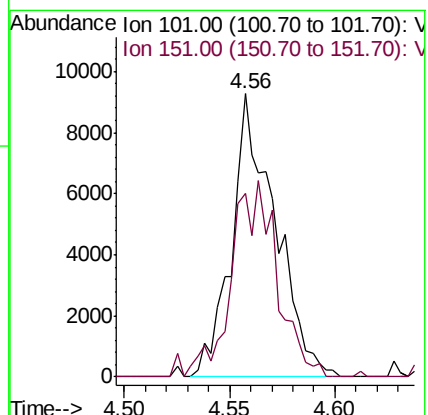
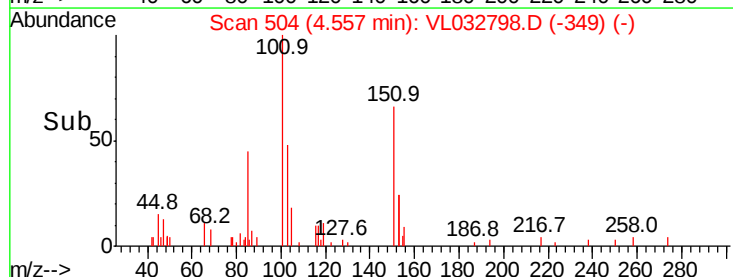
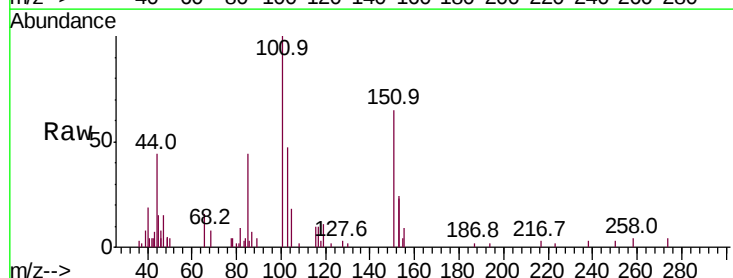
Acq: 21 Nov 2018 3:54

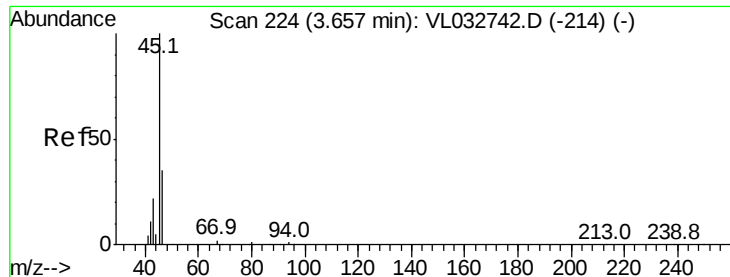
Tgt Ion:101 Resp: 13244

Ion Ratio Lower Upper

101 100

151 73.2 56.7 85.1





#13

Ethanol

Concen: 93.382 ppbv

RT: 3.66 min Scan# 224

Delta R.T. -0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

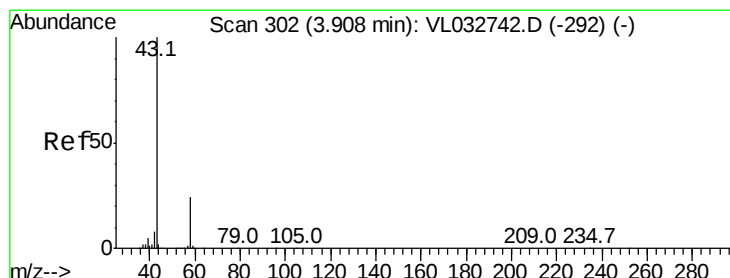
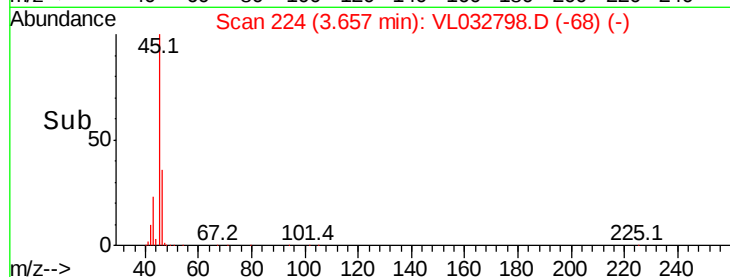
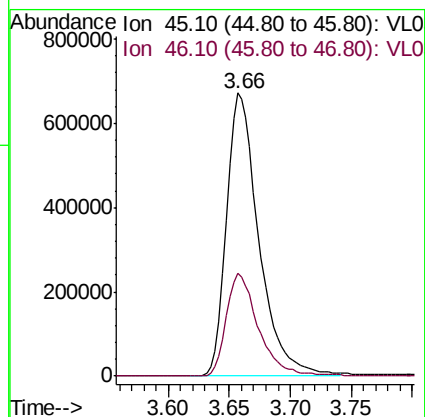
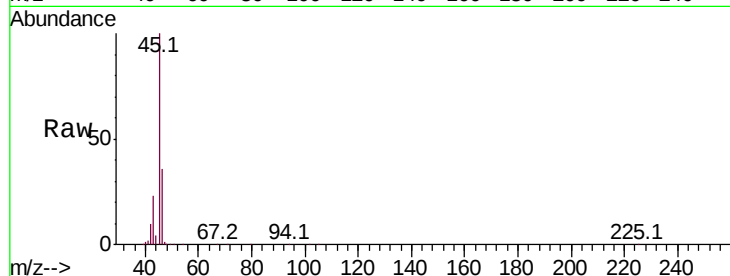
ClientSampleId :

Tot Ion: 45 Resp: 1250547

Ion Ratio Lower Upper

45 100

46 36.1 14.5 57.9



#15

Acetone

Concen: 2.360 ppbv

RT: 3.91 min Scan# 304

Delta R.T. 0.01 min

Lab File: VL032798.D

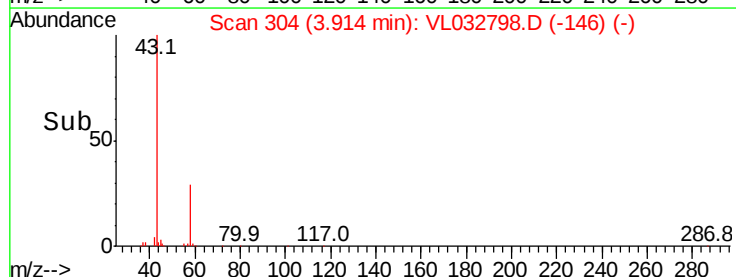
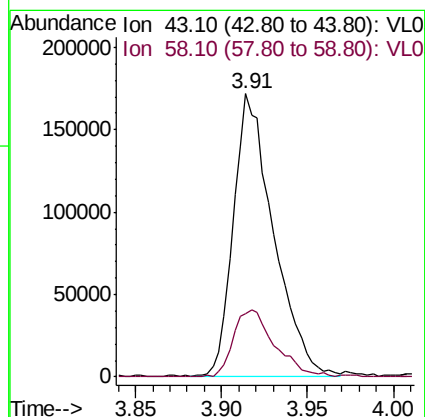
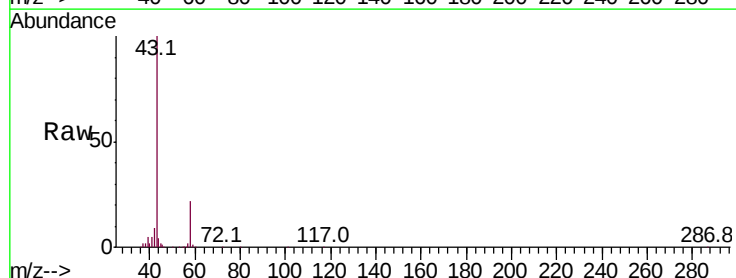
Acq: 21 Nov 2018 3:54

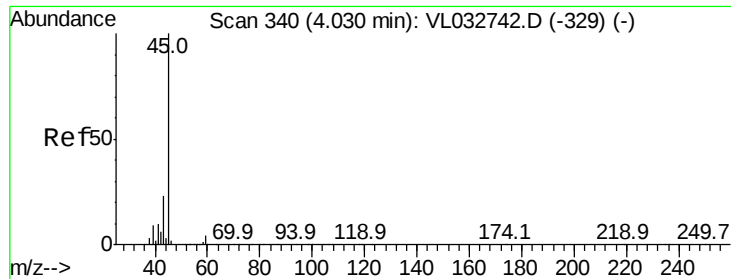
Tgt Ion: 43 Resp: 277748

Ion Ratio Lower Upper

43 100

58 25.2 21.1 31.7





#19

Isopropyl Alcohol

Concen: 2.508 ppbv

RT: 4.04 min Scan# 343

Delta R.T. 0.01 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

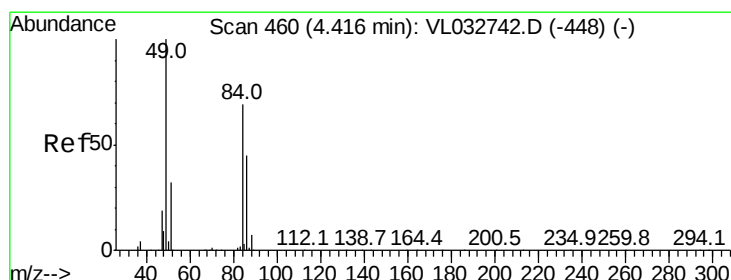
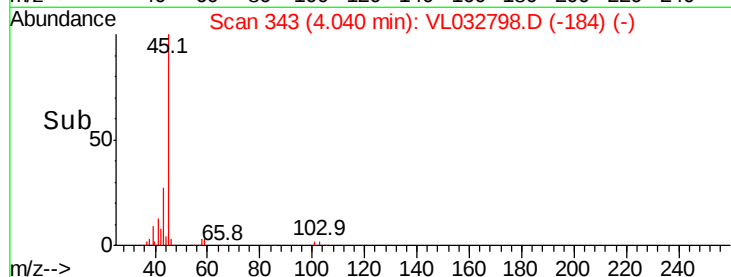
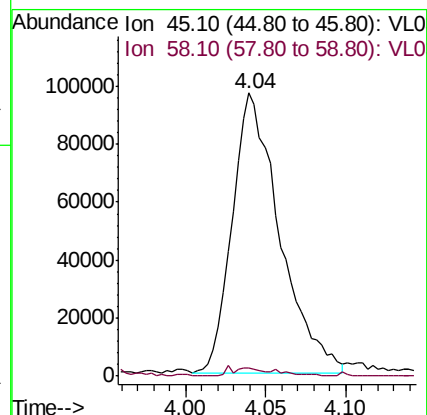
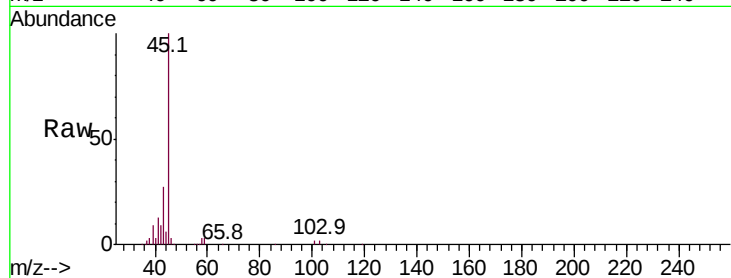
ClientSampled :

Tot Ion: 45 Resp: 196624

Ion Ratio Lower Upper

45 100

58 3.0 1.4 2.0#



#20

Methylene Chloride

Concen: 0.781 ppbv

RT: 4.42 min Scan# 461

Delta R.T. 0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Tgt Ion: 84 Resp: 47563

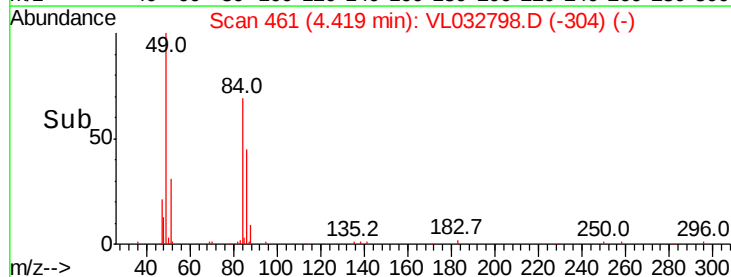
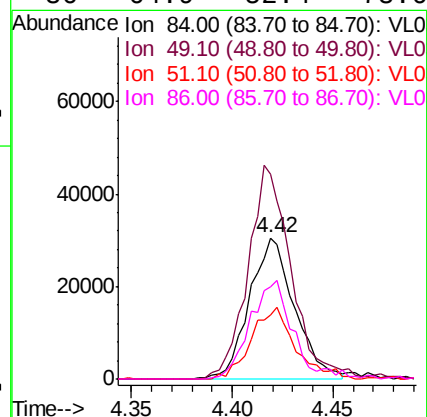
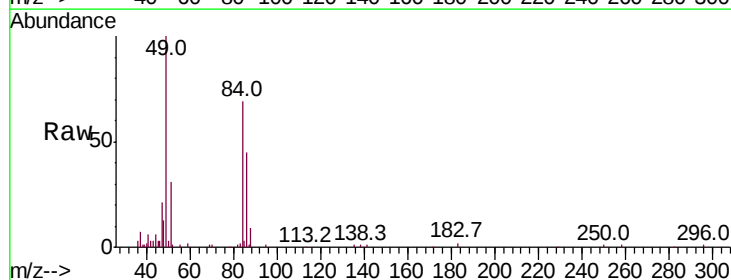
Ion Ratio Lower Upper

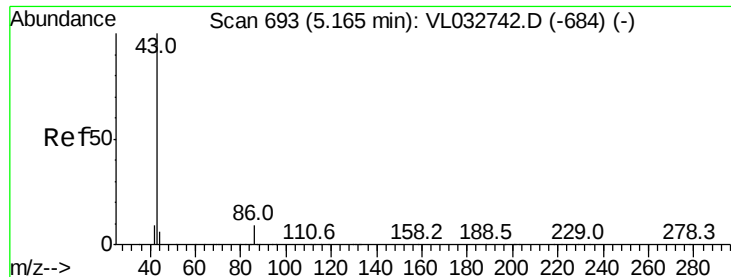
84 100

49 145.1 115.8 173.6

51 45.0 36.9 55.3

86 64.9 52.4 78.6





#23

Vinyl Acetate

Concen: 0.156 ppbv

RT: 5.15 min Scan# 689

Delta R.T. -0.01 min

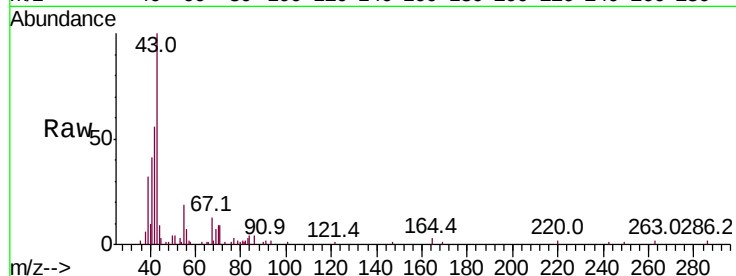
Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

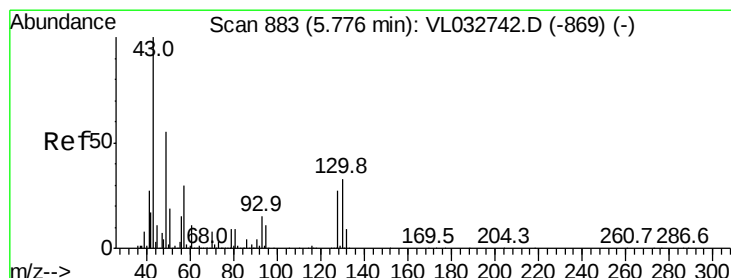
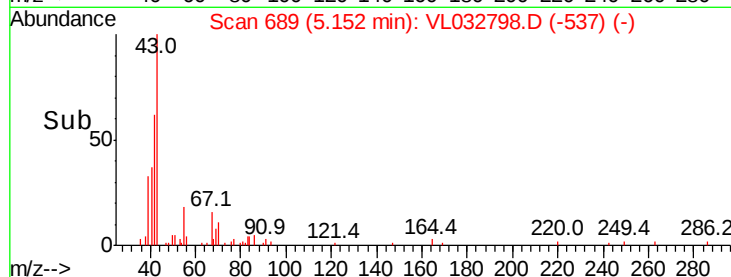
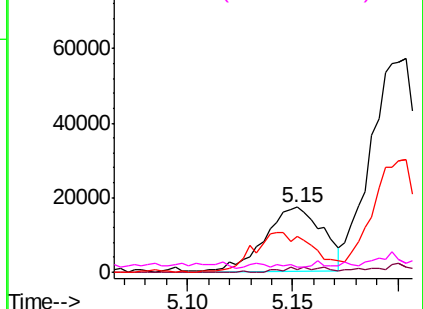
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 33422

Ion	Ratio	Lower	Upper
43	100		
86	4.3	6.2	9.4#
42	56.9	7.8	11.6#
44	0.0	4.4	6.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.387 ppbv

RT: 5.79 min Scan# 887

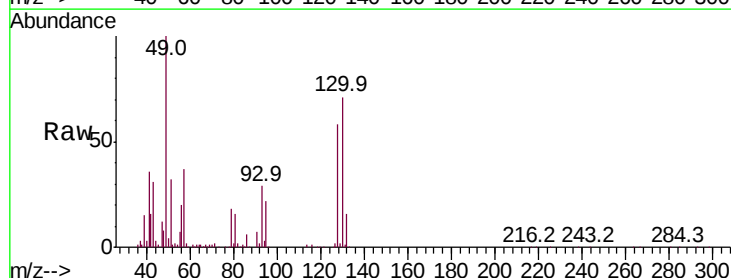
Delta R.T. 0.01 min

Lab File: VL032798.D

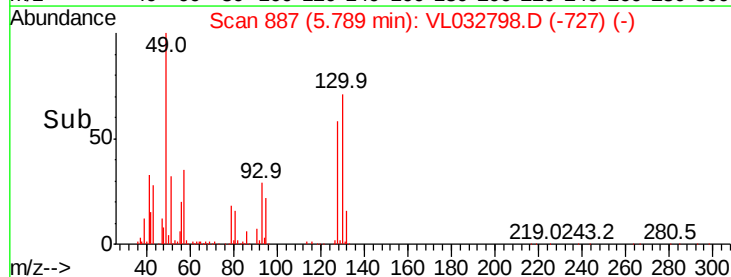
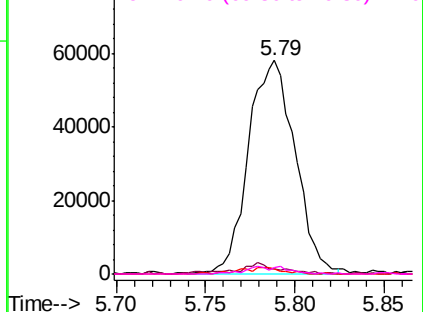
Acq: 21 Nov 2018 3:54

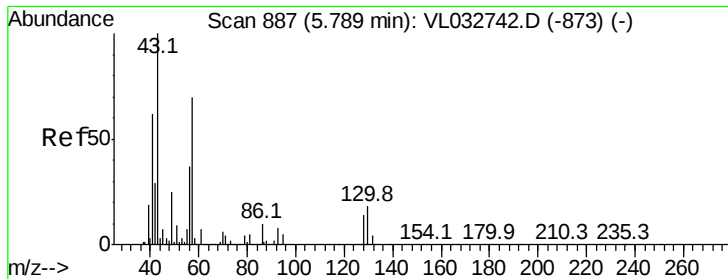
Tgt Ion: 43 Resp: 106129

Ion	Ratio	Lower	Upper
43	100		
45	4.7	7.9	11.9#
61	3.0	7.8	11.6#
70	3.3	5.8	8.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 0.988 ppbv

RT: 5.79 min Scan# 886

Delta R.T. -0.00 min

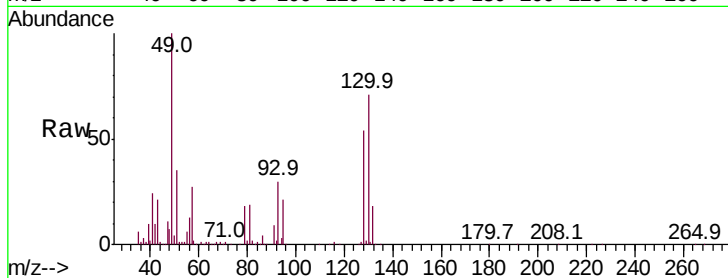
Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

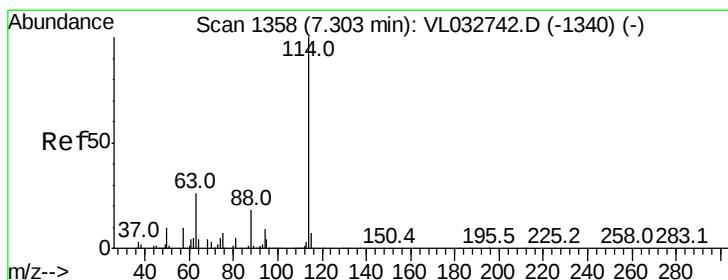
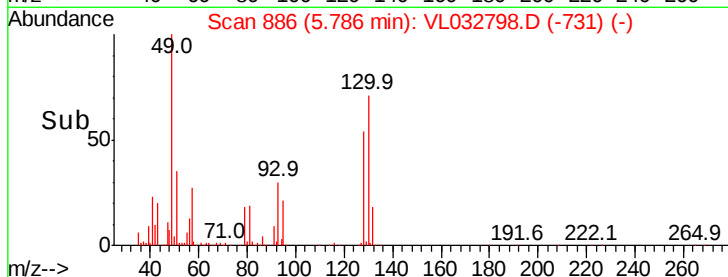
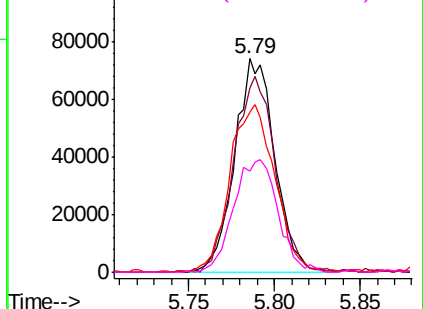
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 120643

Ion	Ratio	Lower	Upper
57	100		
41	96.0	70.3	105.5
43	89.0	174.0	261.0#
56	58.0	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



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.30 min Scan# 1356

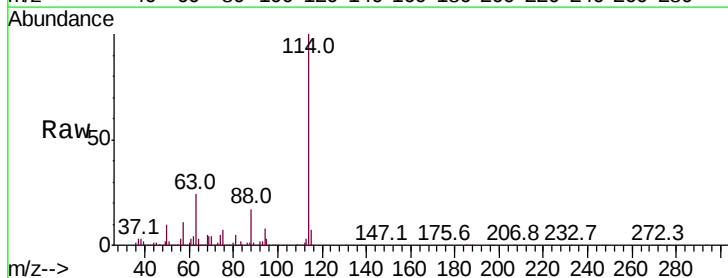
Delta R.T. -0.01 min

Lab File: VL032798.D

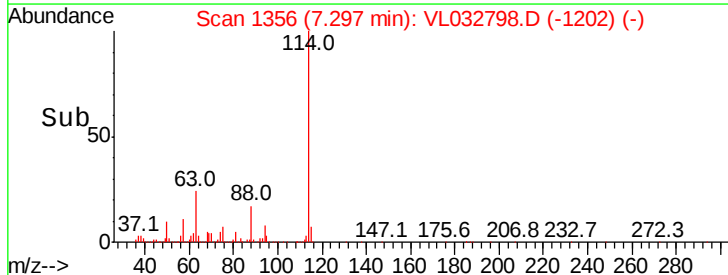
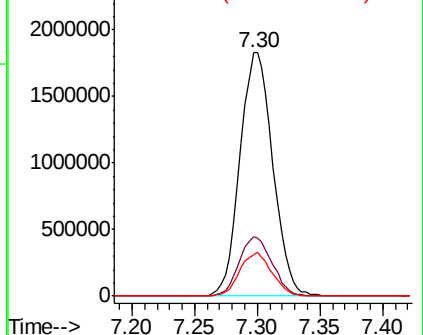
Acq: 21 Nov 2018 3:54

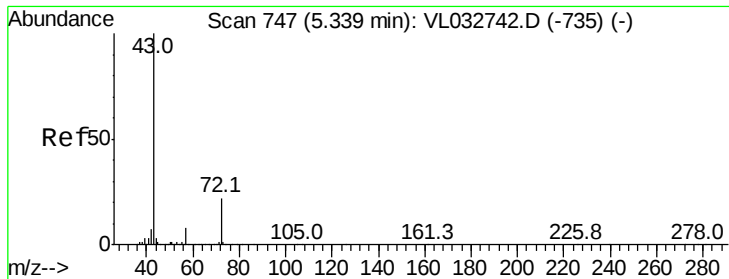
Tgt Ion:114 Resp: 3342890

Ion	Ratio	Lower	Upper
114	100		
63	24.4	20.9	31.3
88	17.5	14.4	21.6



Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 0.102 ppbv

RT: 5.34 min Scan# 748

Delta R.T. 0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

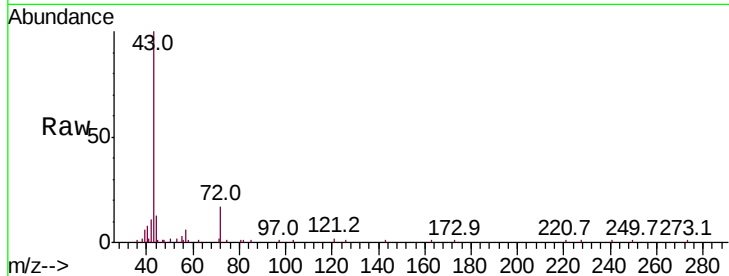
ClientSampled :

Tot Ion: 43 Resp: 17621

Ion Ratio Lower Upper

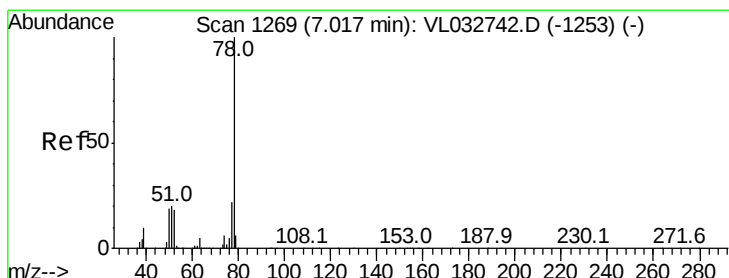
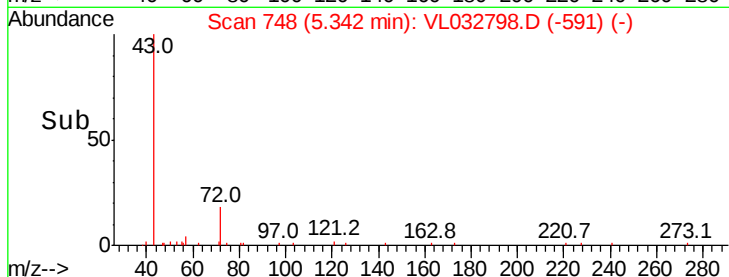
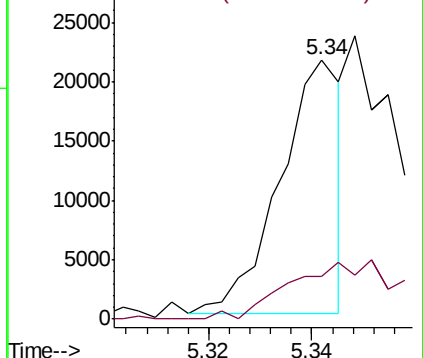
43 100

72 0.0 18.4 27.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#36

Benzene

Concen: 0.214 ppbv

RT: 7.01 min Scan# 1267

Delta R.T. -0.01 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

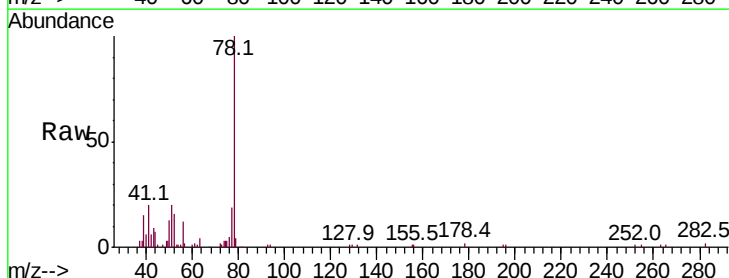
Tgt Ion: 78 Resp: 57035

Ion Ratio Lower Upper

78 100

77 17.7 17.8 26.8#

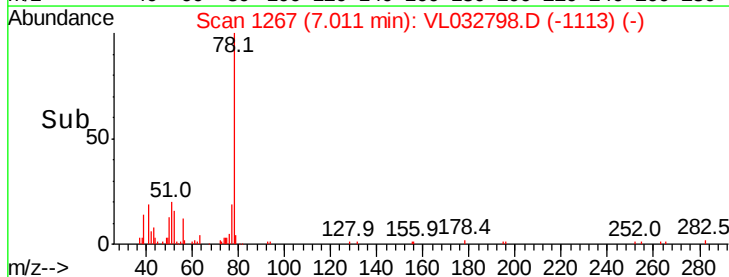
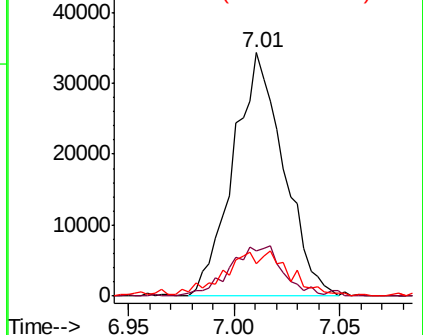
50 12.0 15.4 23.0#

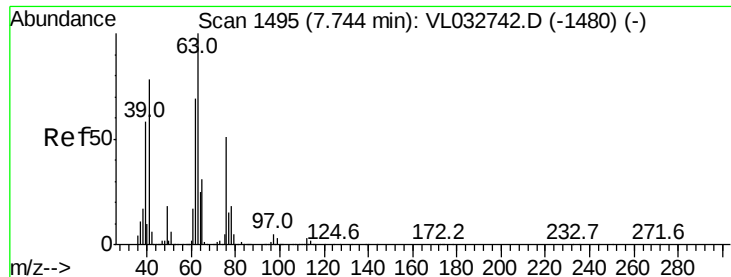


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0





#39

1,2-Dichloropropane

Concen: 7.998 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.45 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

ClientSampleId :

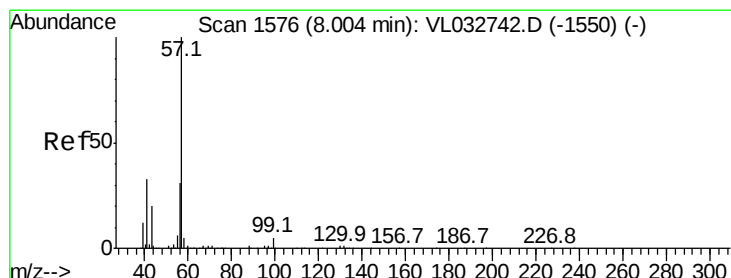
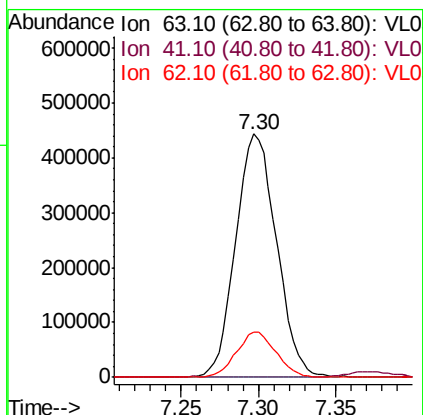
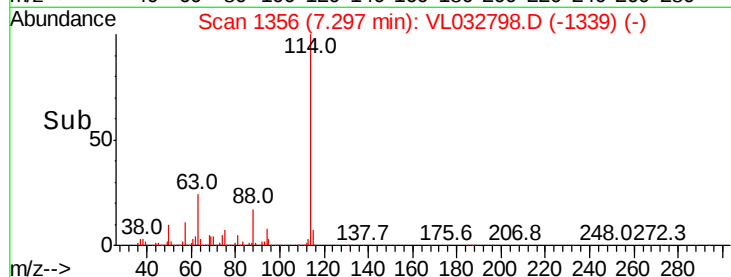
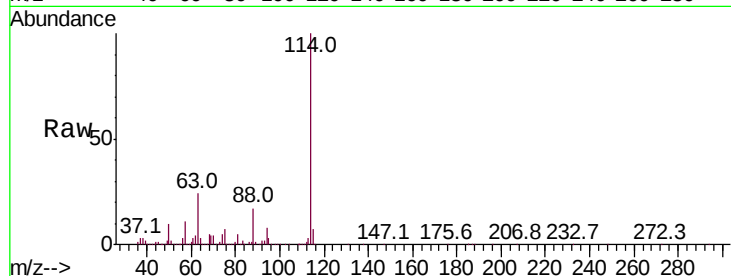
Tot Ion: 63 Resp: 811198

Ion Ratio Lower Upper

63 100

41 0.0 62.0 93.0#

62 18.5 55.4 83.2#



#44

2,2,4-Trimethylpentane

Concen: 0.052 ppbv

RT: 8.00 min Scan# 1574

Delta R.T. -0.01 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

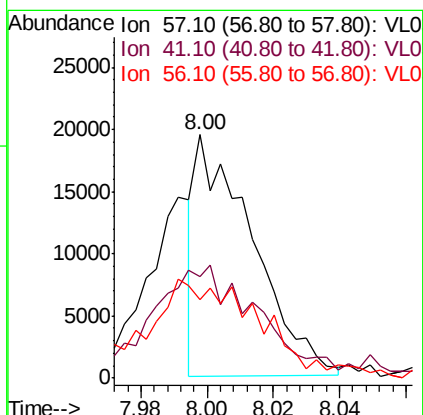
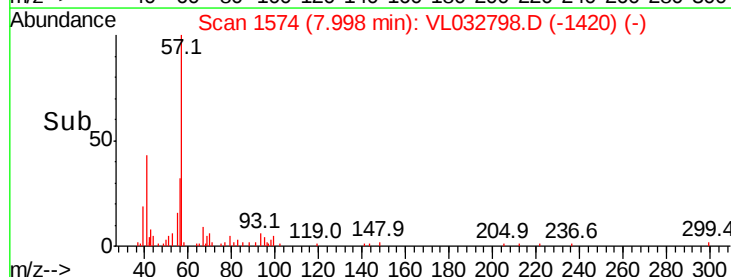
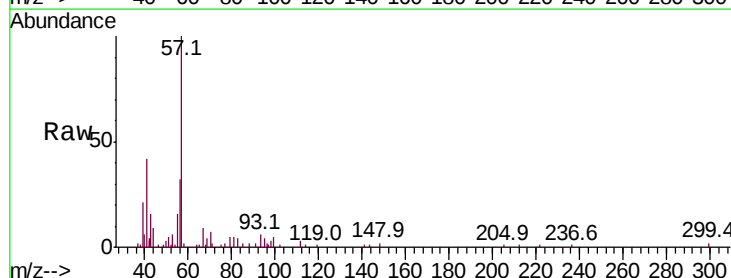
Tgt Ion: 57 Resp: 23222

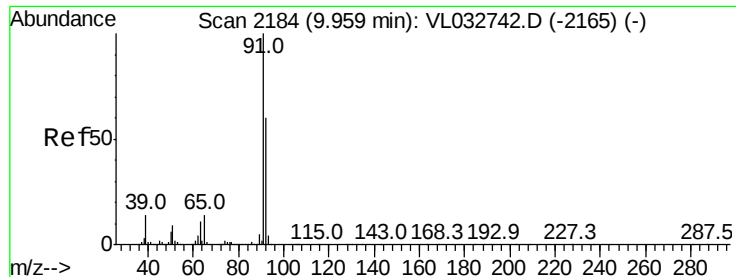
Ion Ratio Lower Upper

57 100

41 95.5 26.6 39.8#

56 0.0 24.8 37.2#





#53

Toluene

Concen: 13.792 ppbv

RT: 9.95 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

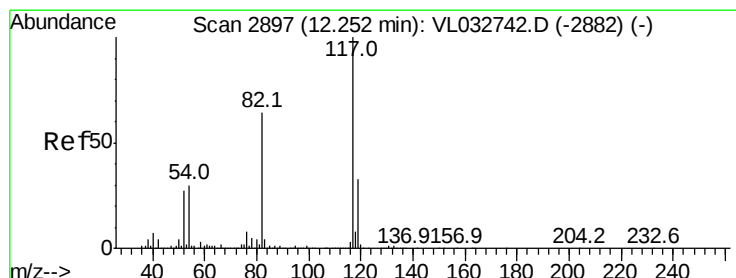
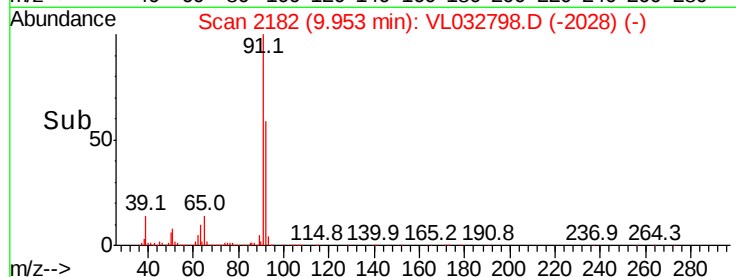
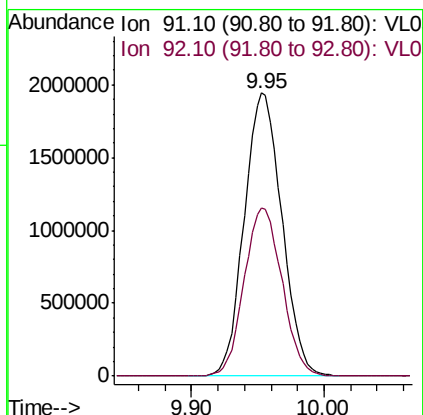
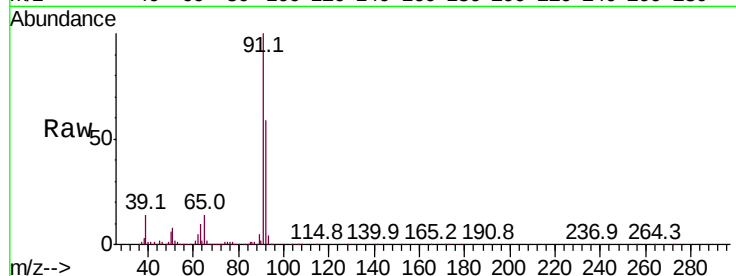
ClientSampleId :

Tot Ion: 91 Resp: 3830190

Ion Ratio Lower Upper

91 100

92 60.0 47.9 71.9



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2896

Delta R.T. -0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

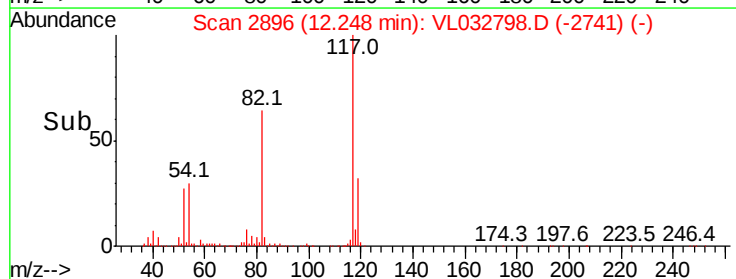
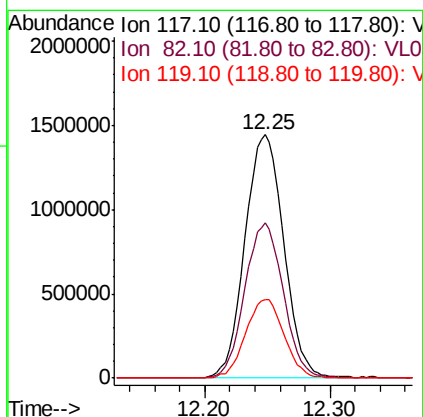
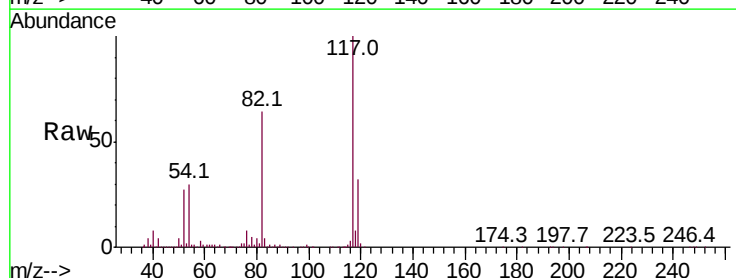
Tgt Ion: 117 Resp: 3099497

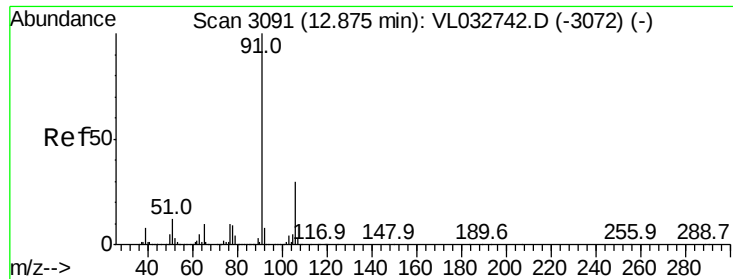
Ion Ratio Lower Upper

117 100

82 63.7 51.0 76.6

119 32.3 28.0 42.0





#58

Ethyl Benzene

Concen: 0.197 ppbv

RT: 12.88 min Scan# 3092

Delta R.T. 0.00 min

Lab File: VL032798.D

Acq: 21 Nov 2018 3:54

Instrument :

MSVOA_L

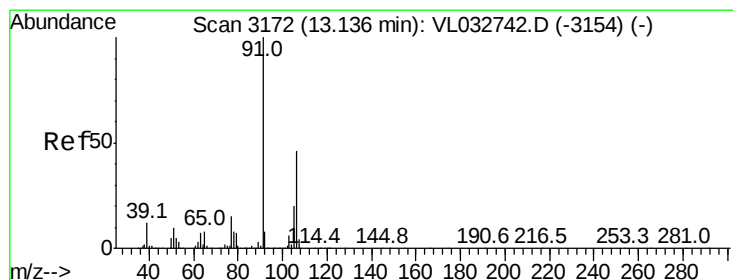
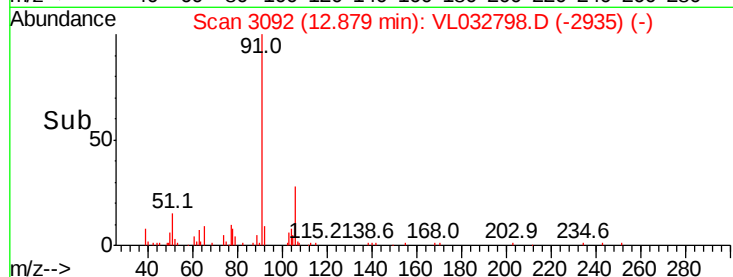
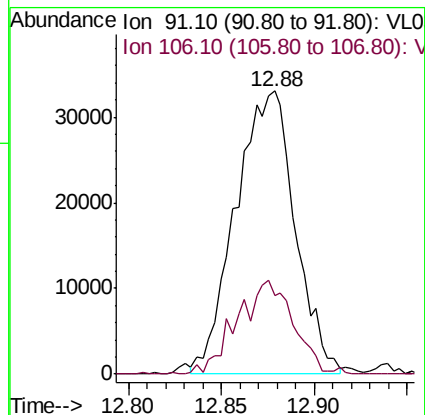
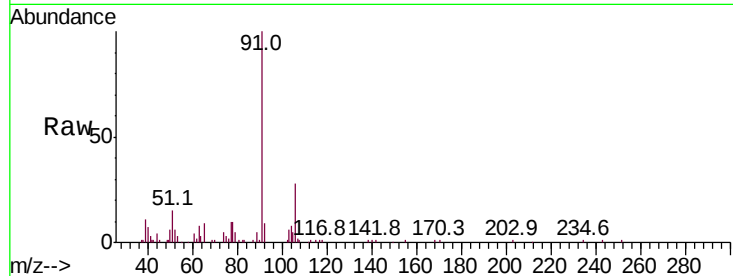
ClientSampleId :

Tot Ion: 91 Resp: 73666

Ion Ratio Lower Upper

91 100

106 27.7 23.6 35.4



#59

m/p-Xylene

Concen: 0.246 ppbv

RT: 13.13 min Scan# 3170

Delta R.T. -0.01 min

Lab File: VL032798.D

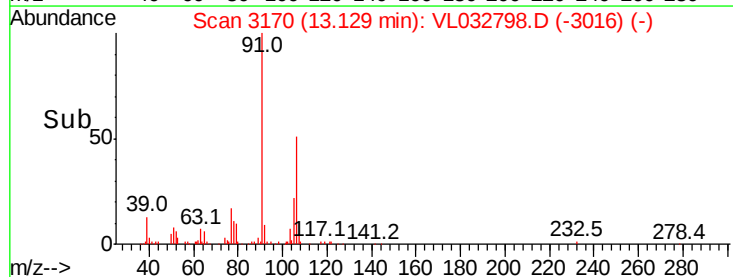
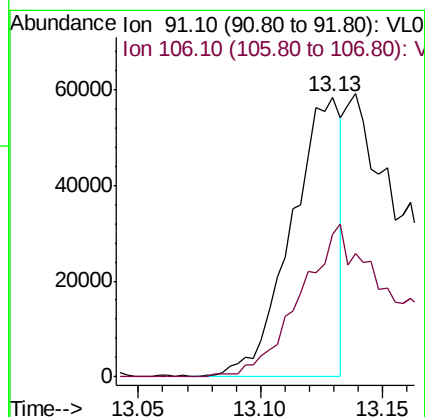
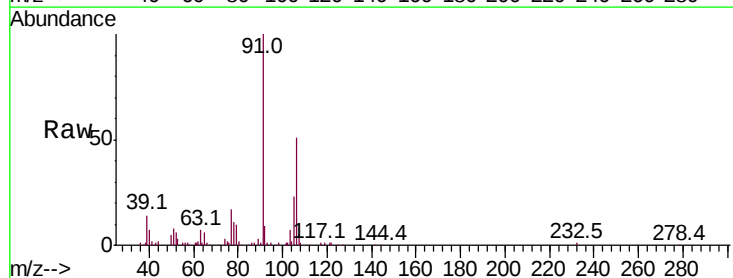
Acq: 21 Nov 2018 3:54

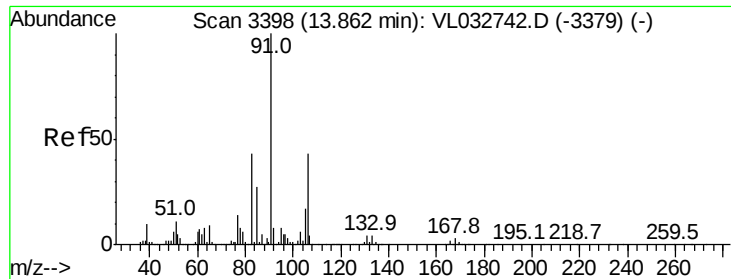
Tgt Ion: 91 Resp: 81694

Ion Ratio Lower Upper

91 100

106 106.4 36.1 54.1#

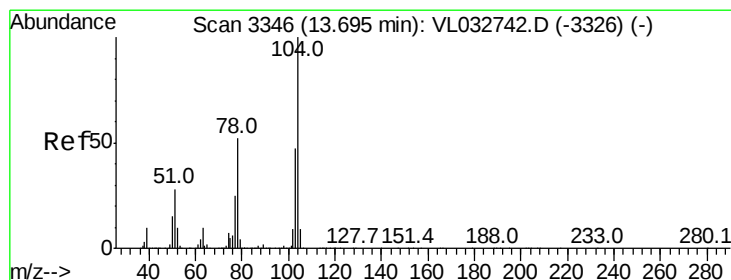
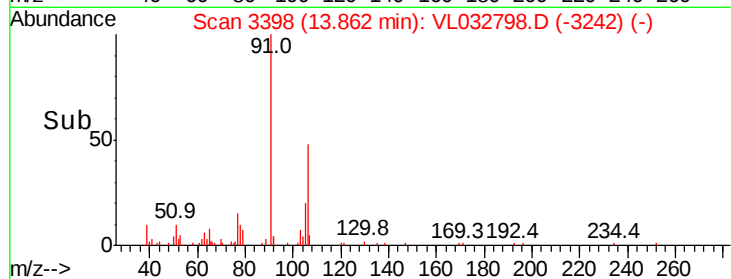
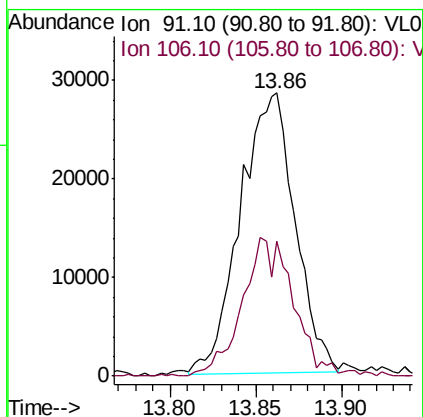
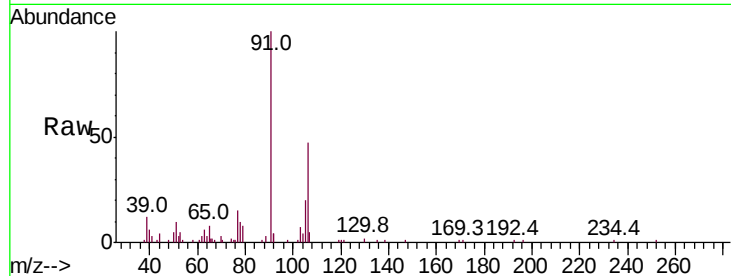




#60
o-Xylene
Concen: 0.188 ppbv
RT: 13.86 min Scan# 3398
Delta R.T. -0.00 min
Lab File: VL032798.D
Acq: 21 Nov 2018 3:54

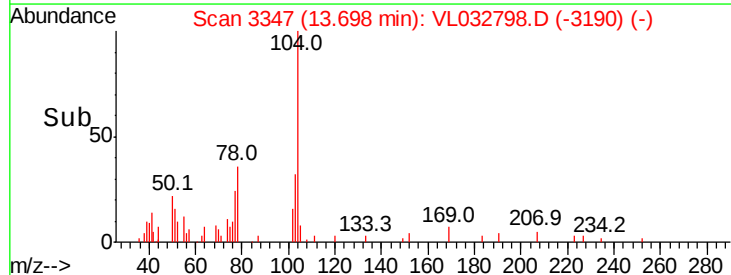
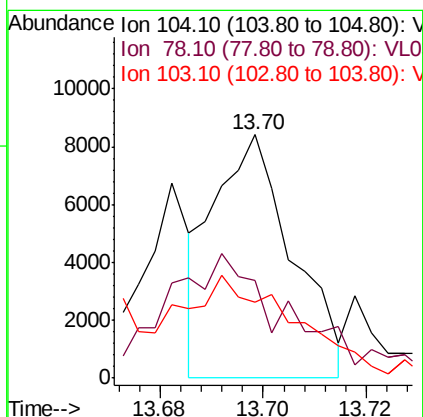
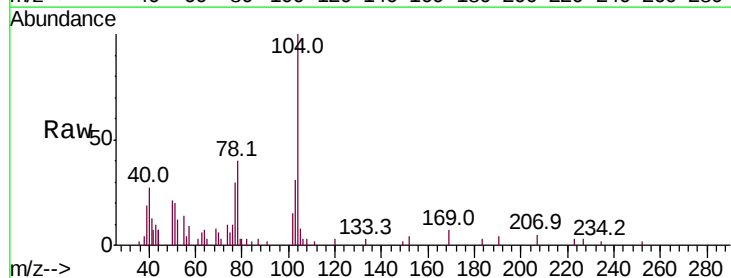
Instrument :
MSVOA_L
ClientSampleId :

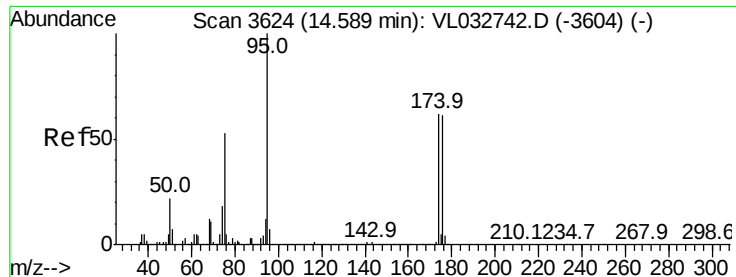
Tot Ion: 91 Resp: 62781
Ion Ratio Lower Upper
91 100
106 46.9 21.9 65.7



#61
Styrene
Concen: 0.041 ppbv
RT: 13.70 min Scan# 3347
Delta R.T. 0.00 min
Lab File: VL032798.D
Acq: 21 Nov 2018 3:54

Tgt Ion: 104 Resp: 8946
Ion Ratio Lower Upper
104 100
78 95.2 42.2 63.4#
103 81.8 38.2 57.2#

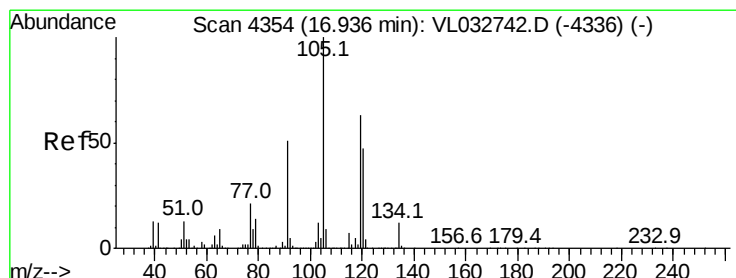
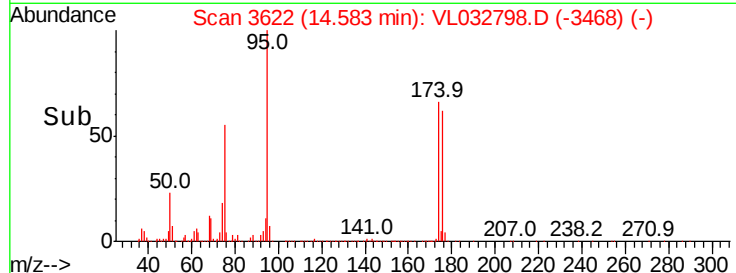
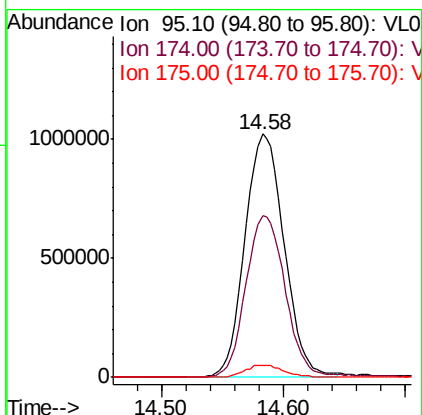
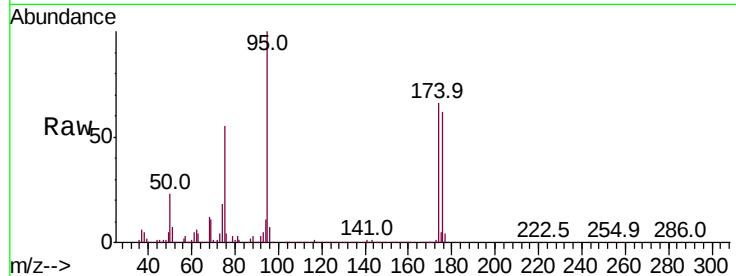




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.806 ppbv
 RT: 14.58 min Scan# 3622
 Delta R.T. -0.01 min
 Lab File: VL032798.D
 Acq: 21 Nov 2018 3:54

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion: 95 Resp: 2273331
 Ion Ratio Lower Upper
 95 100
 174 67.7 50.7 76.1
 175 5.1 3.8 5.6



#74
 1,2,4-Trimethylbenzene
 Concen: 0.159 ppbv
 RT: 16.94 min Scan# 4354
 Delta R.T. -0.00 min
 Lab File: VL032798.D
 Acq: 21 Nov 2018 3:54

Tgt Ion:105 Resp: 60814
 Ion Ratio Lower Upper
 105 100
 120 35.0 37.6 56.4#
 91 13.0 42.5 63.7#
 77 12.7 17.4 26.2#

