

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL101221\
 Data File : VL037832.D
 Acq On : 12 Oct 2021 16:37
 Operator : SY/AP
 Sample : M4079-04DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P47DUP

Quant Time: Oct 14 01:04:47 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL100421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021
 QLast Update : Mon Oct 04 17:43:54 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1209517	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3579777	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	3077755	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	2115192	9.83	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.30%

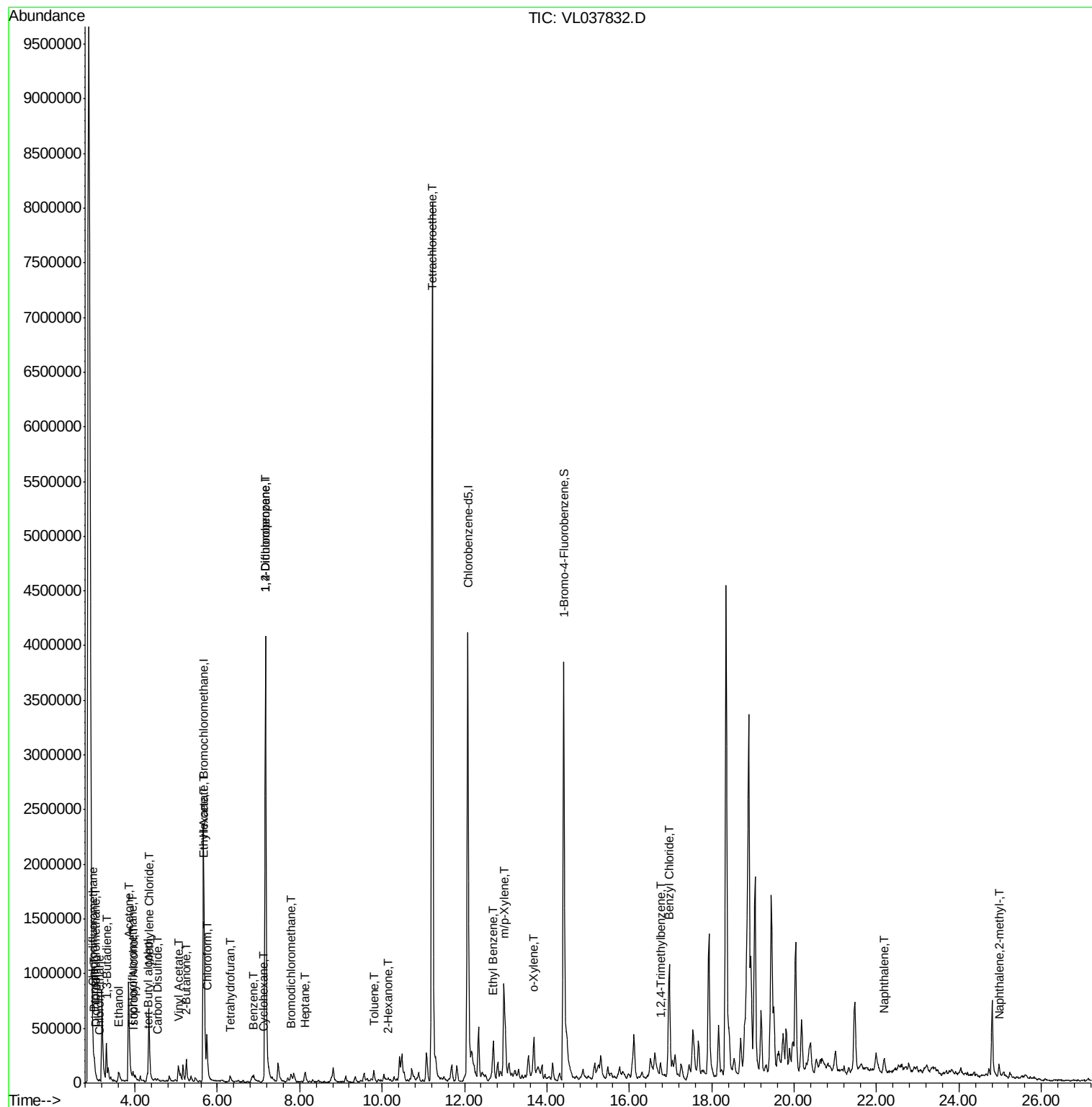
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.05	85	26961	0.140	ppbv	97
3) Chlorodifluoromethane	2.99	51	39094	0.168	ppbv #	91
4) Chloromethane	3.15	50	3613	0.042	ppbv #	76
9) Propene	3.01	41	56707	0.663	ppbv	100
10) Heptane	8.12	43	9493	0.049	ppbv #	1
11) Trichlorofluoromethane	3.95	101	21566	0.125	ppbv	85
13) Ethanol	3.61	45	114789	16.415	ppbv	97
15) Acetone	3.85	43	1178379	10.853	ppbv	90
16) 1,3-Butadiene	3.31	39	102002	1.291	ppbv #	20
17) tert-Butyl alcohol	4.31	59	54544	0.488	ppbv #	83
19) Isopropyl Alcohol	3.97	45	10402	0.154	ppbv #	96
20) Methylene Chloride	4.34	84	280406	5.111	ppbv	95
23) Vinyl Acetate	5.06	43	42987	0.264	ppbv #	83
25) Ethyl Acetate	5.69	43	160892	0.528	ppbv #	82
26) Hexane	5.68	57	225125	1.501	ppbv #	44
27) Carbon Disulfide	4.55	76	17559	0.132	ppbv #	1
29) Chloroform	5.74	83	276645	1.290	ppbv	95
30) Cyclohexane	7.12	84	3093	0.024	ppbv #	1
34) 2-Butanone	5.24	43	268003	1.854	ppbv	99
36) Benzene	6.89	78	38261	0.125	ppbv #	84
39) 1,2-Dichloropropane	7.17	63	817498	7.108	ppbv #	28
41) Tetrahydrofuran	6.30	42	1445	0.020	ppbv #	42
42) Bromodichloromethane	7.78	83	9430	0.045	ppbv #	27
51) 2-Hexanone	10.14	43	11788	0.140	ppbv #	1
52) Tetrachloroethene	11.22	164	2361070	19.848	ppbv	97
53) Toluene	9.80	91	22481	0.066	ppbv #	1
58) Ethyl Benzene	12.70	91	260426	0.630	ppbv	93
59) m/p-Xylene	12.96	91	994678	2.804	ppbv	96
60) o-Xylene	13.68	91	318352	0.936	ppbv	96
66) Benzyl Chloride	16.97	91	593	0.029	ppbv #	81
74) 1,2,4-Trimethylbenzene	16.75	105	43624	0.118	ppbv #	80
79) Naphthalene	22.18	128	25889	0.115	ppbv #	91
80) Naphthalene,2-methyl-	24.97	142	4729	0.078	ppbv #	67

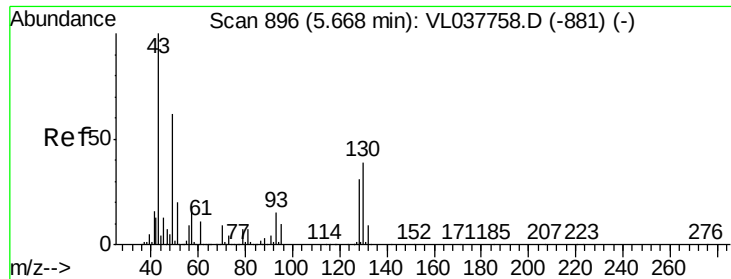
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :
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ClientSampleId :
C0P47DUP

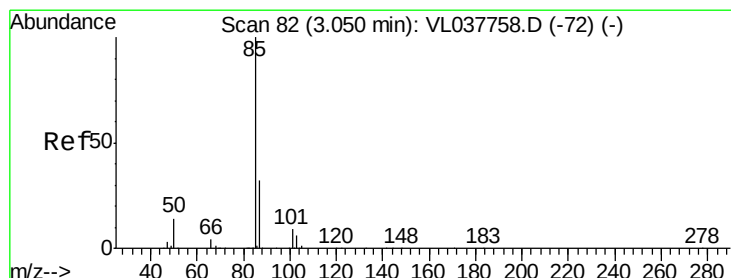
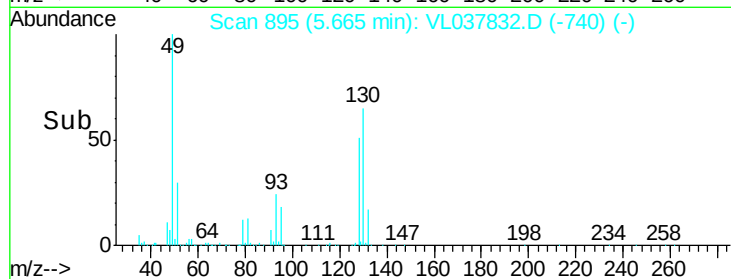
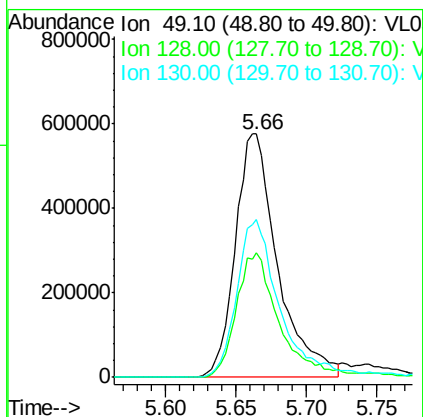
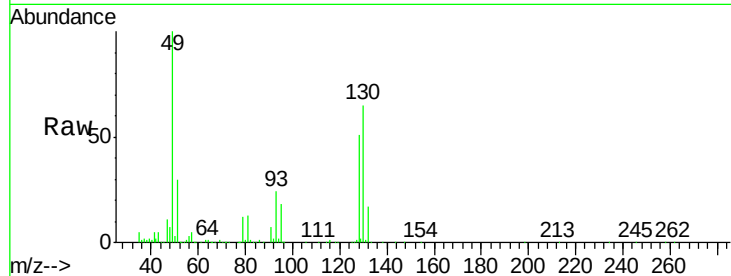
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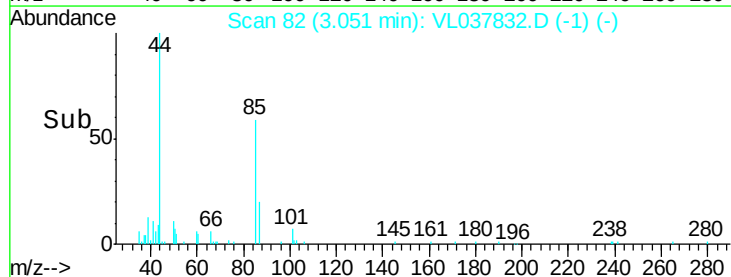
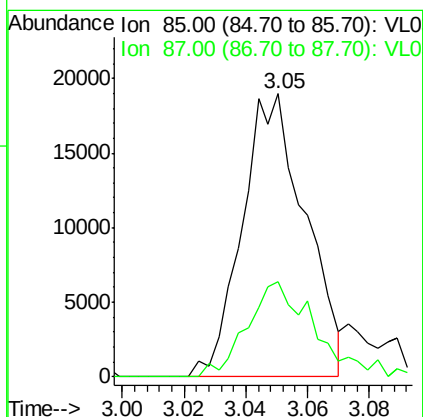
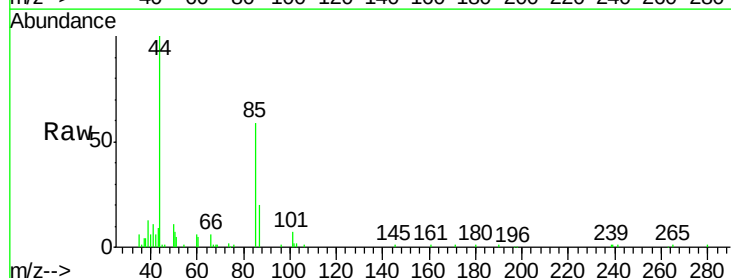
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.66
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId:
 C0P47DUP
 Acq: 12 Oct 2021 16:37

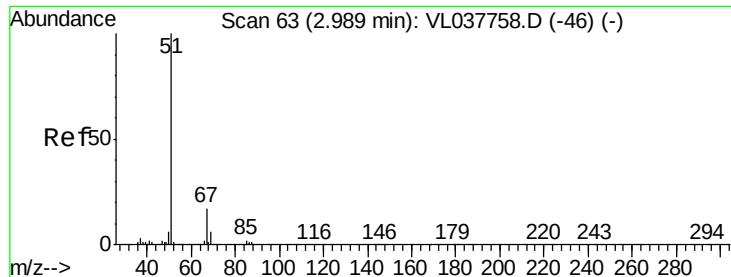
Tgt Ion: 49 Resp: 1209517
 Ion Ratio Lower Upper
 49 100
 128 53.1 27.1 81.3
 130 69.2 33.2 99.6



#2
 Dichlorodifluoromethane
 Concen: 0.140 ppbv
 RT: 3.05 min Scan# 82
 Delta R.T.: 0.00 min
 Lab File: VL037832.D
 Acq: 12 Oct 2021 16:37

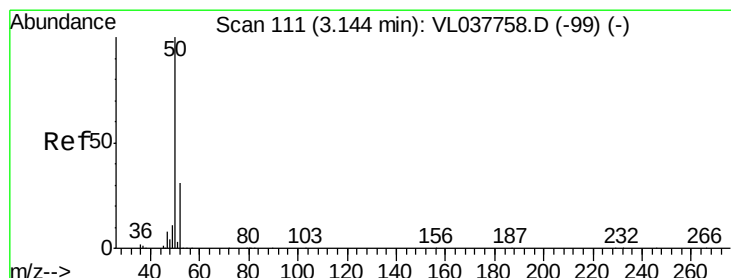
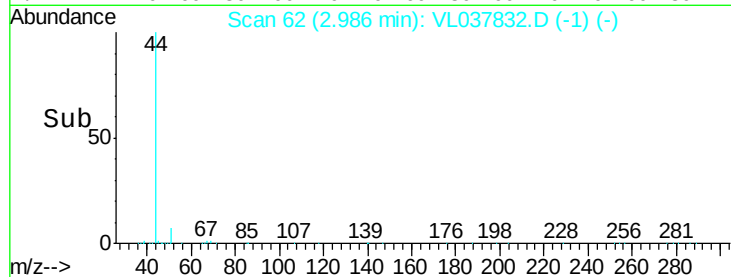
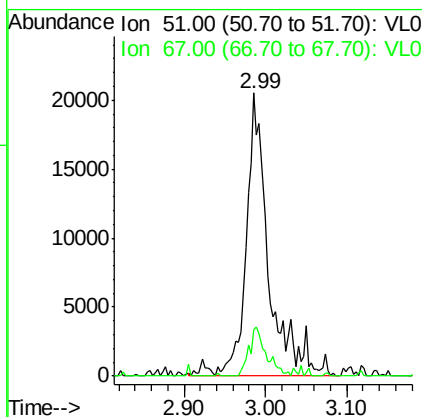
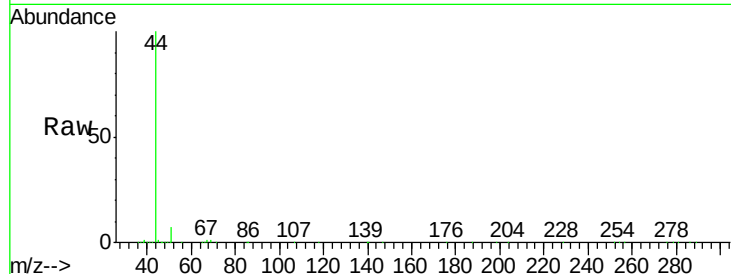
Tgt Ion: 85 Resp: 26961
 Ion Ratio Lower Upper
 85 100
 87 33.6 25.7 38.5





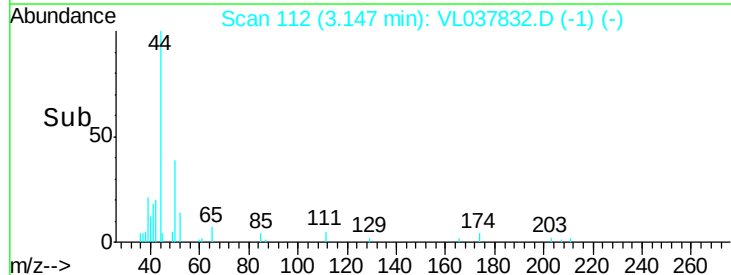
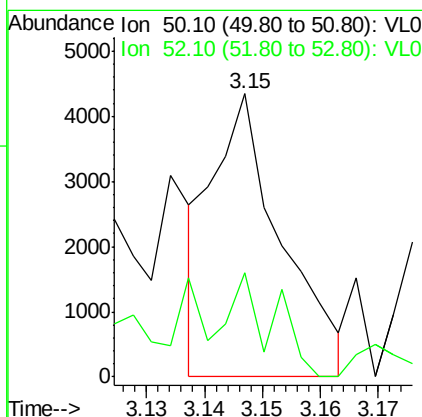
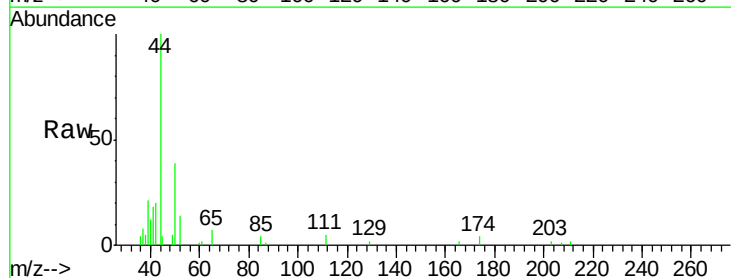
#3
 Chlorodifluoromethane
 Concen: 0.168 ppbv
 RT: 2.99
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0P47DUP
 Acq: 12 Oct 2021 16:37

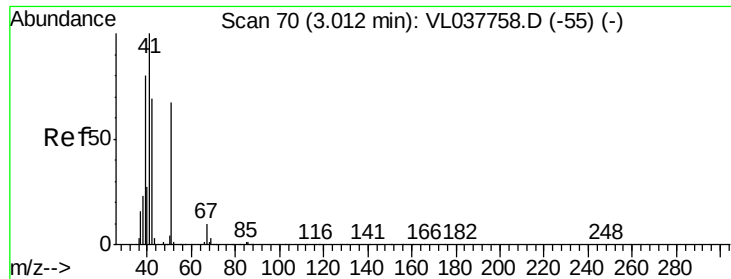
Tgt Ion: 51 Resp: 39094
 Ion Ratio Lower Upper
 51 100
 67 13.1 13.5 20.3#



#4
 Chloromethane
 Concen: 0.042 ppbv
 RT: 3.15 min Scan# 112
 Delta R.T. 0.00 min
 Lab File: VL037832.D
 Acq: 12 Oct 2021 16:37

Tgt Ion: 50 Resp: 3613
 Ion Ratio Lower Upper
 50 100
 52 43.4 24.4 36.6#





#9

Propene

Concen: 0.663 ppbv

RT: 3.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

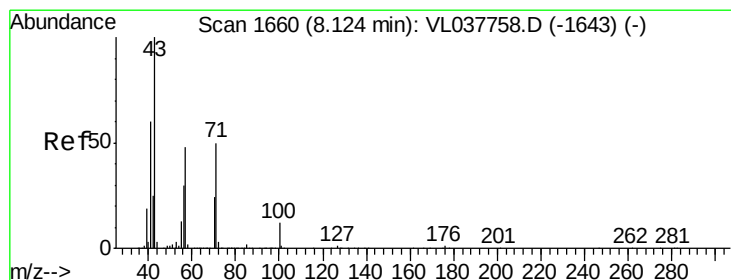
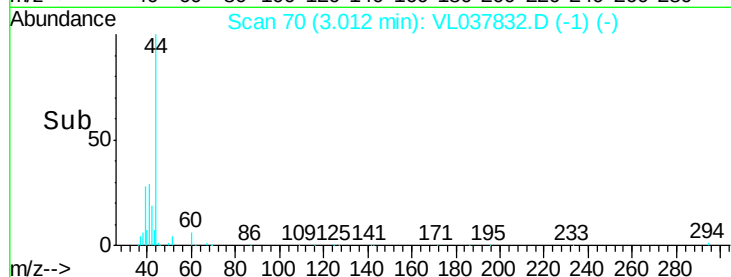
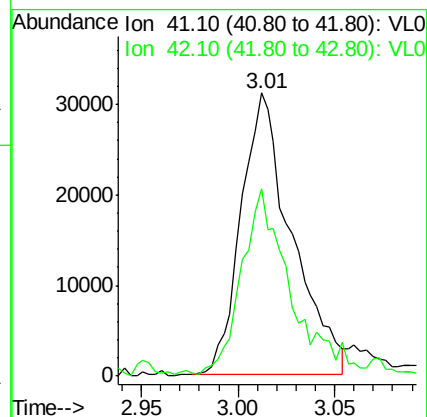
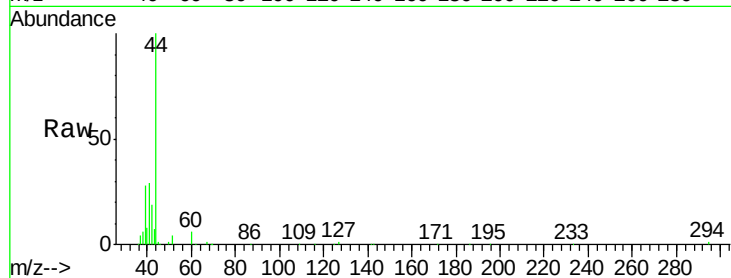
Acq: 12 Oct 2021 16:37

Tgt Ion: 41 Resp: 56707

Ion Ratio Lower Upper

41 100

42 67.9 54.2 81.2



#10

Heptane

Concen: 0.049 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.01 min

Lab File: VL037832.D

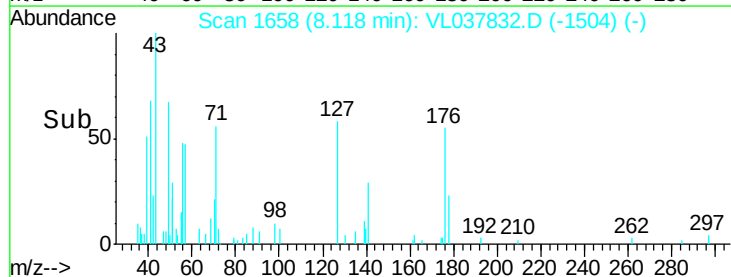
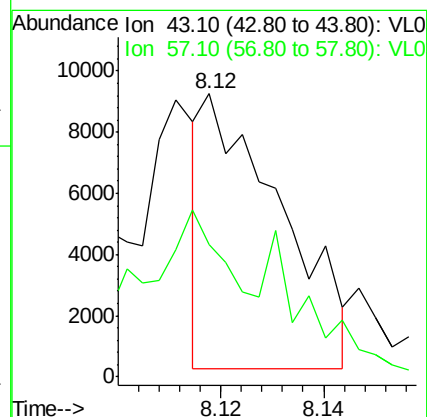
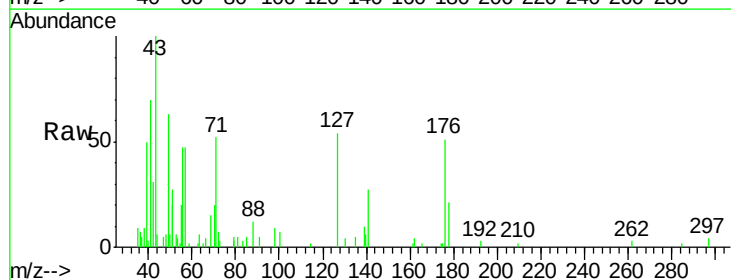
Acq: 12 Oct 2021 16:37

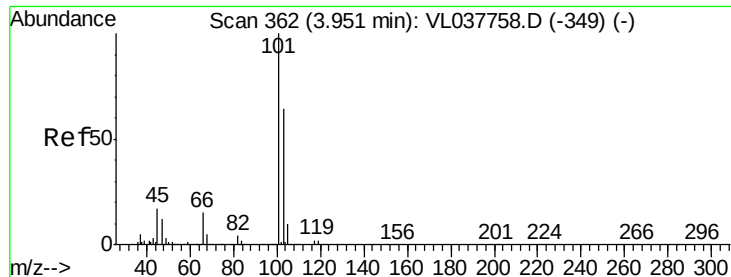
Tgt Ion: 43 Resp: 9493

Ion Ratio Lower Upper

43 100

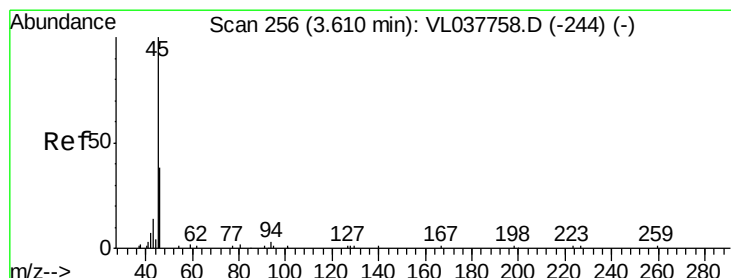
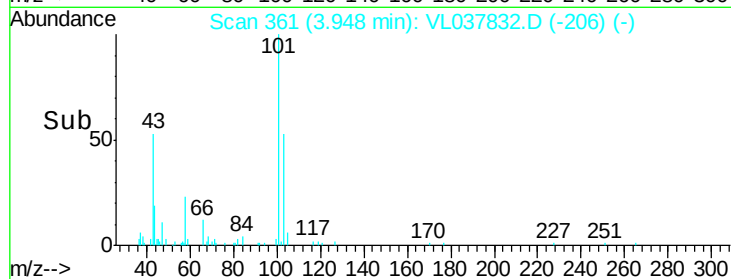
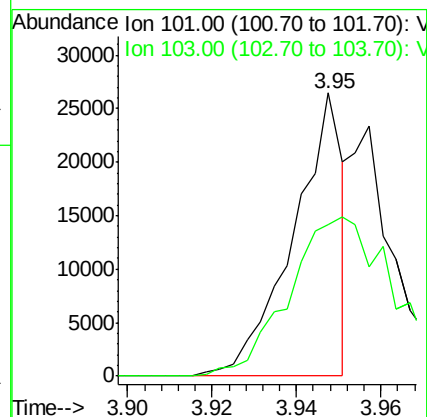
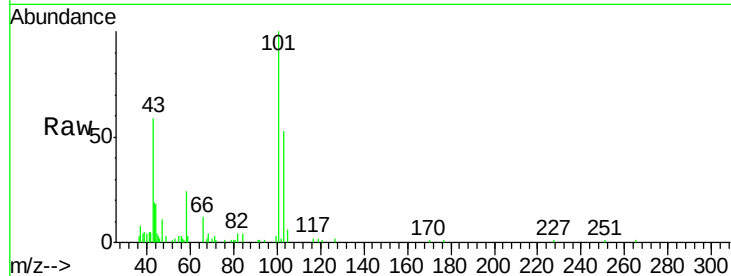
57 132.5 40.0 60.0#





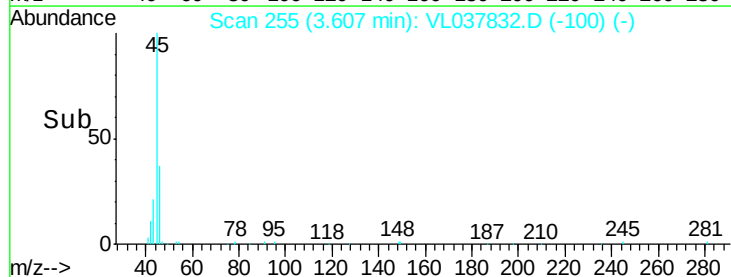
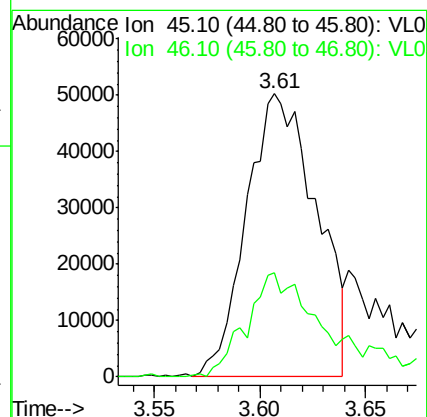
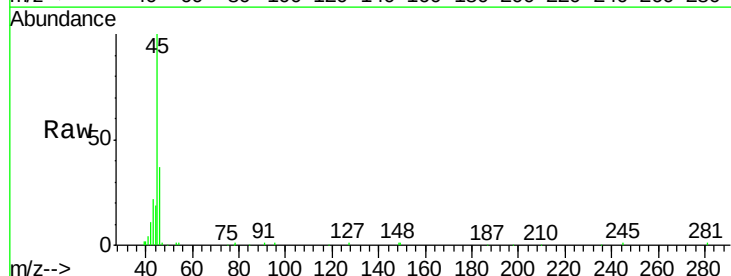
#11
 Trichlorofluoromethane
 Concen: 0.125 ppbv
 RT: 3.95
 Delta R.T.:
 Lab File: MSVOA_L
 ClientSampleId: C0P47DUP
 Acq: 12 Oct 2021 16:37

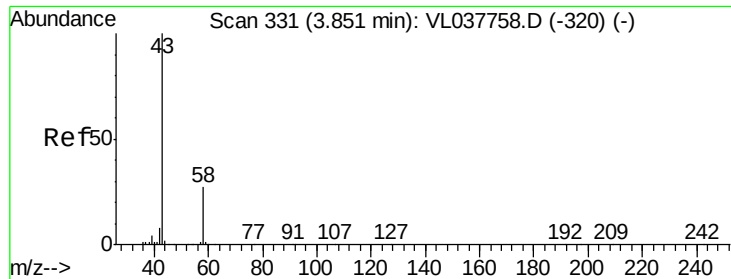
Tgt Ion: 101 Resp: 21566
 Ion Ratio Lower Upper
 101 100
 103 52.7 51.5 77.3



#13
 Ethanol
 Concen: 16.415 ppbv
 RT: 3.61 min Scan# 255
 Delta R.T.: -0.00 min
 Lab File: VL037832.D
 Acq: 12 Oct 2021 16:37

Tgt Ion: 45 Resp: 114789
 Ion Ratio Lower Upper
 45 100
 46 48.7 20.2 81.0





#15

Acetone

Concen: 10.853 ppbv

RT: 3.85 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

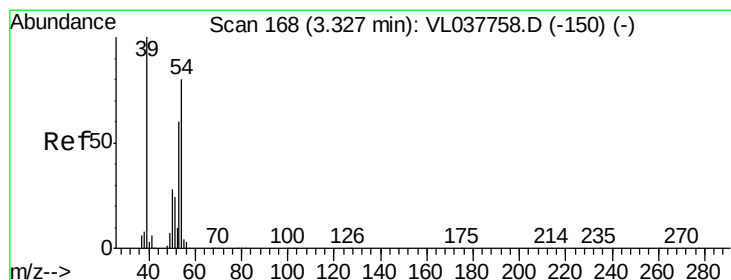
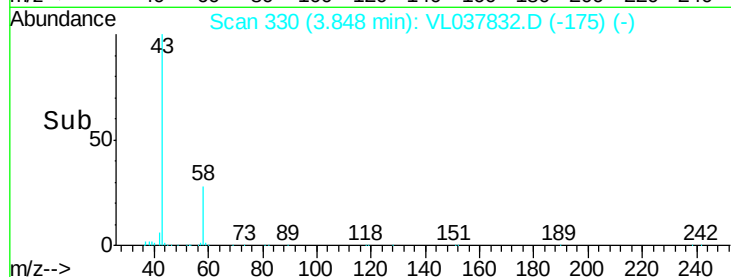
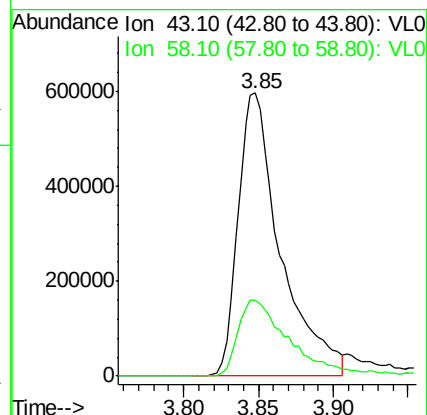
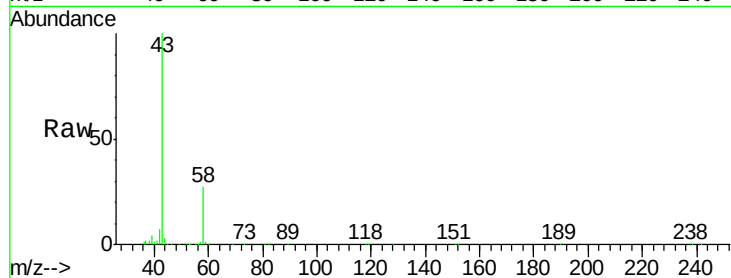
Acq: 12 Oct 2021 16:37

Tgt Ion: 43 Resp: 1178379

Ion Ratio Lower Upper

43 100

58 34.3 23.0 34.6



#16

1,3-Butadiene

Concen: 1.291 ppbv

RT: 3.31 min Scan# 163

Delta R.T. -0.02 min

Lab File: VL037832.D

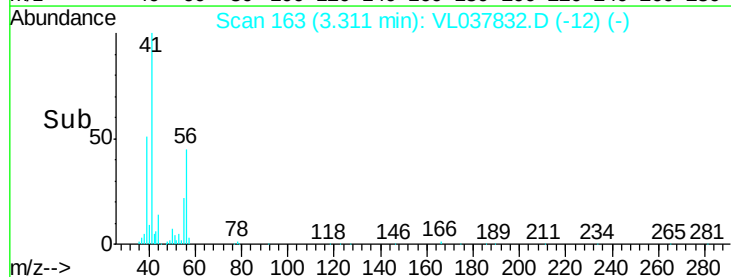
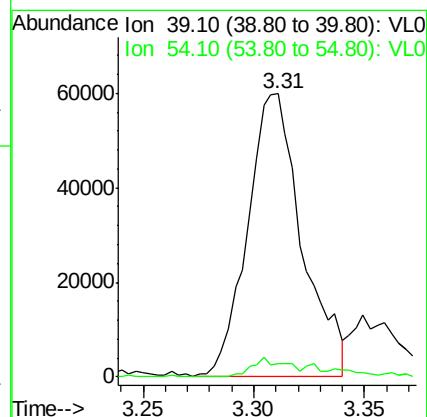
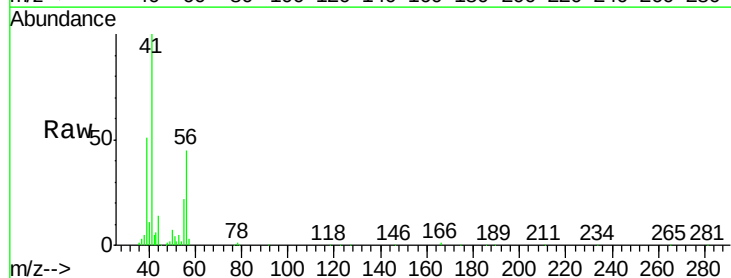
Acq: 12 Oct 2021 16:37

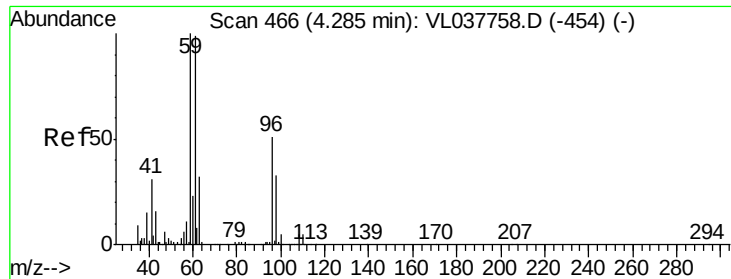
Tgt Ion: 39 Resp: 102002

Ion Ratio Lower Upper

39 100

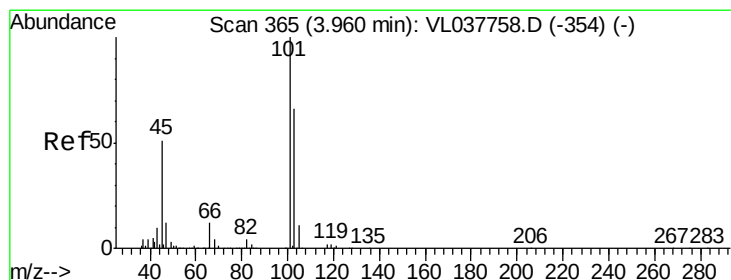
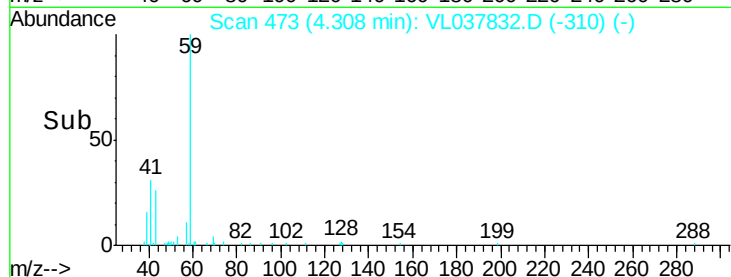
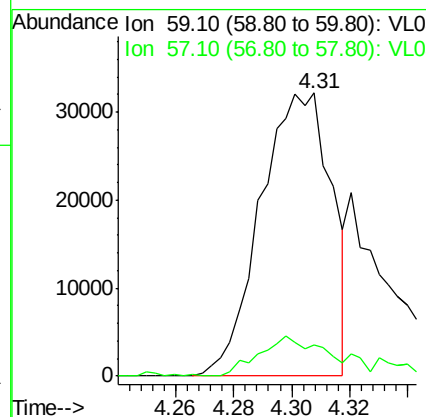
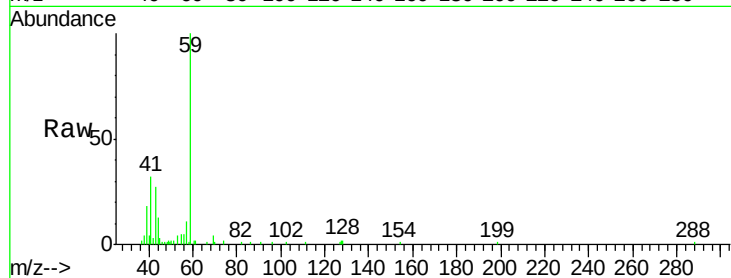
54 7.9 61.7 92.5#





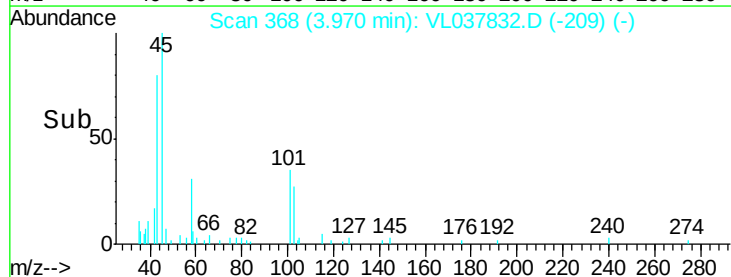
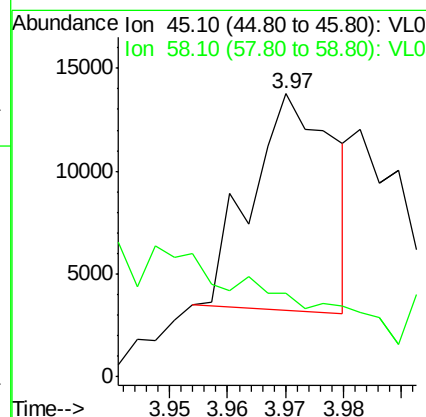
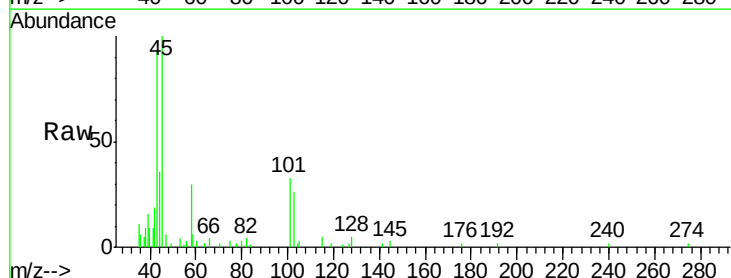
#17
 tert-Butyl alcohol
 Concen: 0.488 ppbv
 RT: 4.31
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 C0P47DUP
 Acq: 12 Oct 2021 16:37

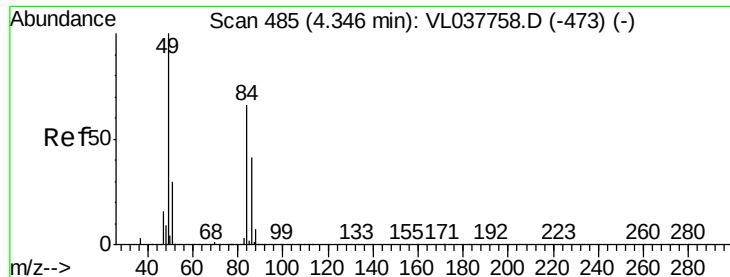
Tgt Ion: 59 Resp: 54544
 Ion Ratio Lower Upper
 59 100
 57 17.1 8.6 13.0#



#19
 Isopropyl Alcohol
 Concen: 0.154 ppbv
 RT: 3.97 min Scan# 368
 Delta R.T. 0.01 min
 Lab File: VL037832.D
 Acq: 12 Oct 2021 16:37

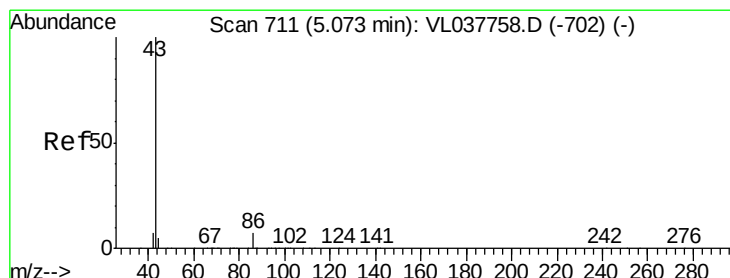
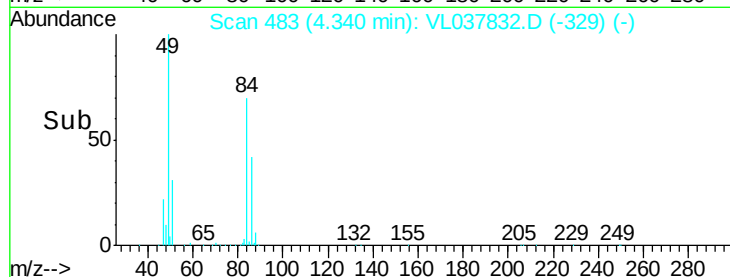
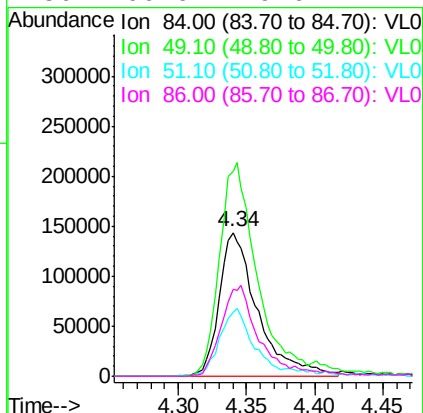
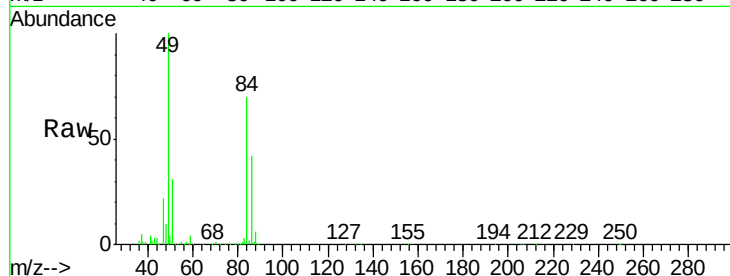
Tgt Ion: 45 Resp: 10402
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.1 1.7#





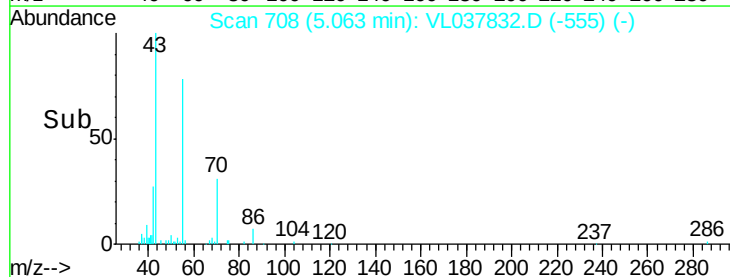
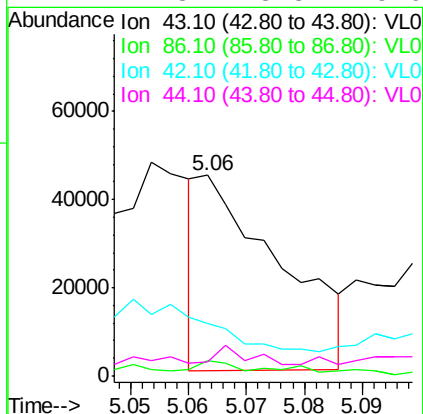
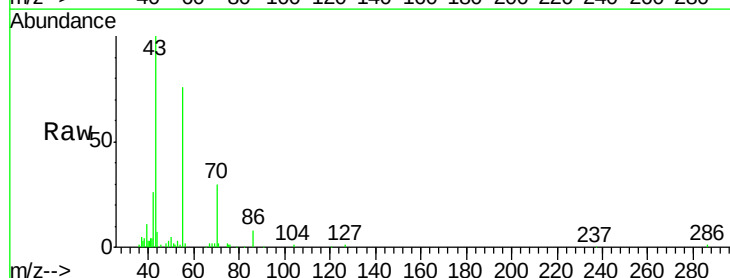
#20
Methylene Chloride
Concen: 5.111 ppbv
RT: 4.34
Delta R.T.: MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Oct 2021 16:37

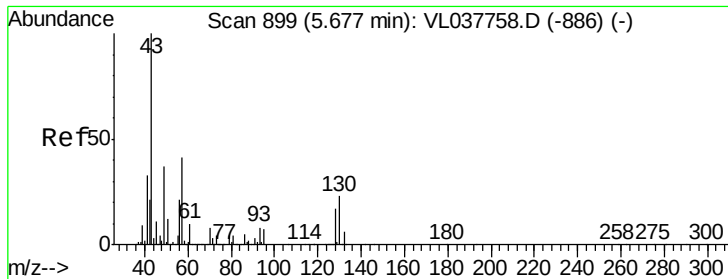
Tgt Ion:	84	Resp:	280406
Ion	Ratio	Lower	Upper
84	100		
49	142.4	120.7	181.1
51	44.6	36.2	54.4
86	60.6	49.6	74.4



#23
Vinyl Acetate
Concen: 0.264 ppbv
RT: 5.06 min Scan# 708
Delta R.T.: -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

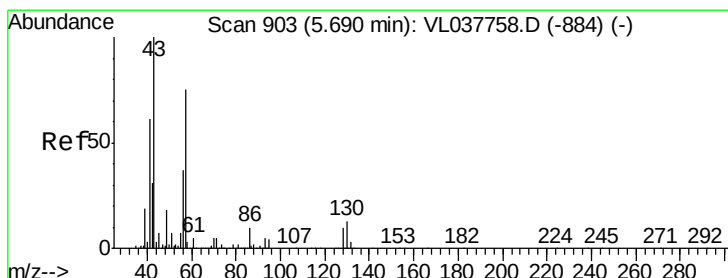
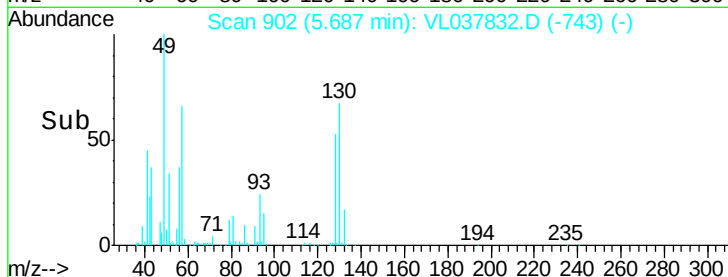
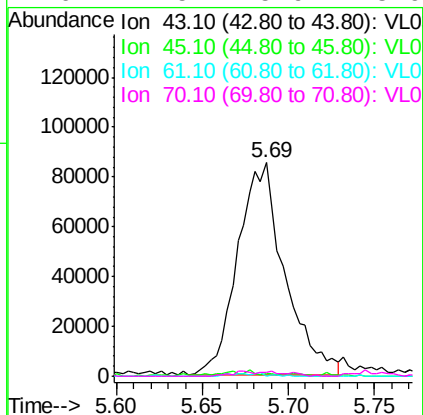
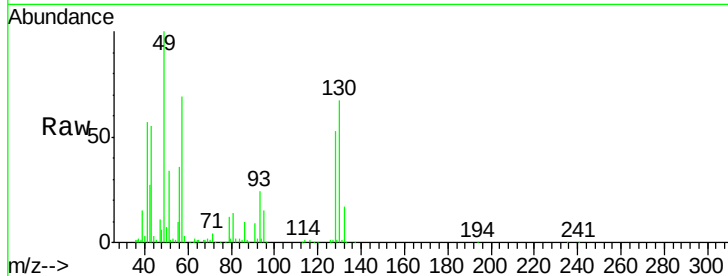
Tgt Ion:	43	Resp:	42987
Ion	Ratio	Lower	Upper
43	100		
86	8.8	5.0	7.4#
42	19.5	7.4	11.0#
44	2.8	3.8	5.6#





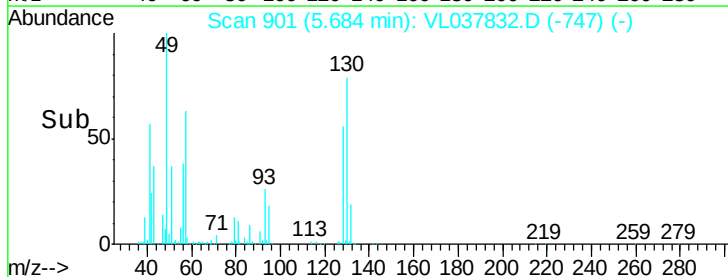
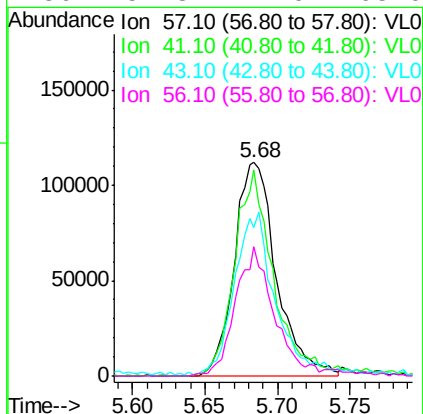
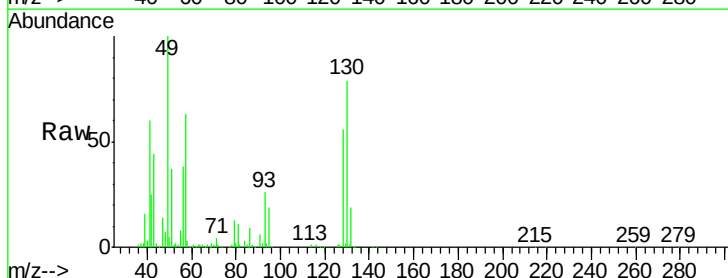
#25
Ethyl Acetate
Concen: 0.528 ppbv
RT: 5.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Oct 2021 16:37

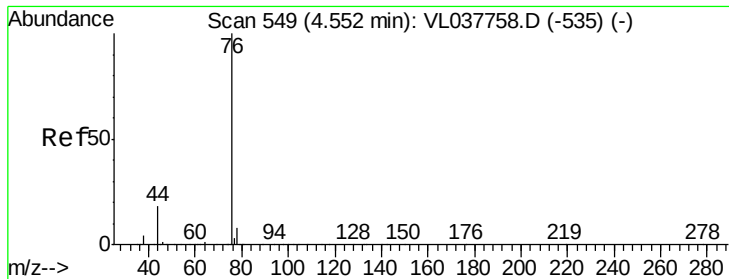
Tgt Ion:	43	Resp:	160892
Ion	Ratio	Lower	Upper
43	100		
45	3.8	8.1	12.1#
61	1.1	7.5	11.3#
70	2.5	5.9	8.9#



#26
Hexane
Concen: 1.501 ppbv
RT: 5.68 min Scan# 901
Delta R.T. -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

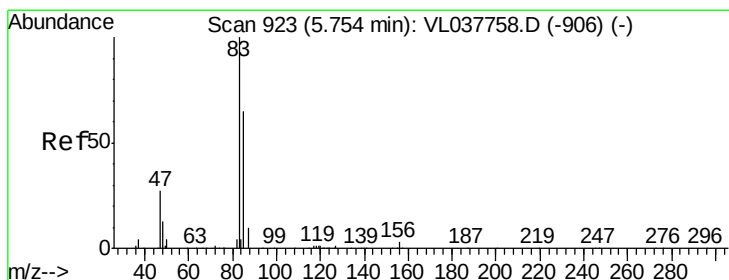
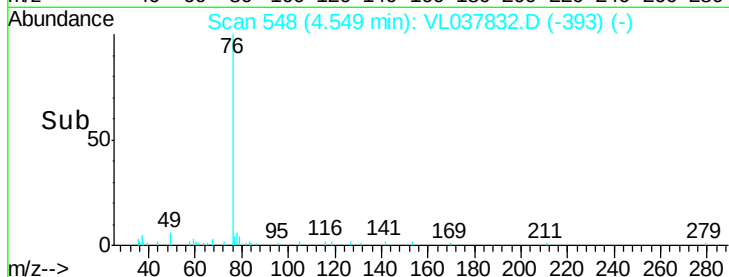
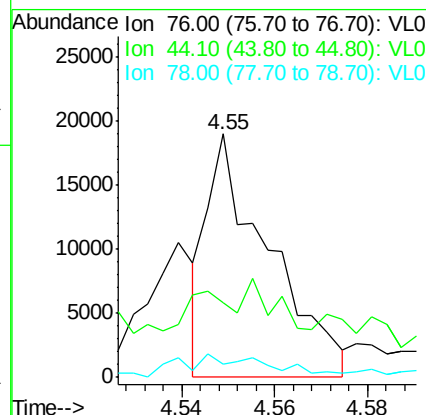
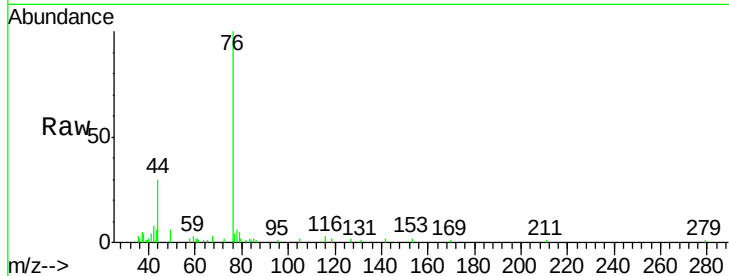
Tgt Ion:	57	Resp:	225125
Ion	Ratio	Lower	Upper
57	100		
41	93.2	69.6	104.4
43	74.2	171.4	257.0#
56	57.8	42.0	63.0





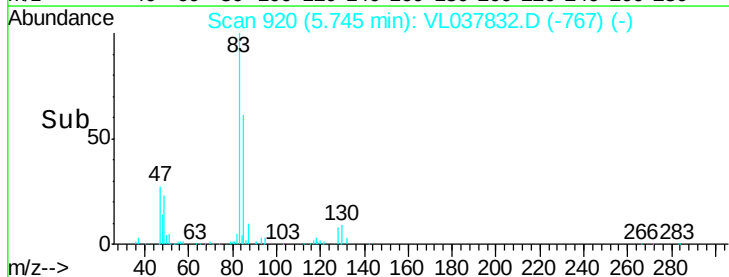
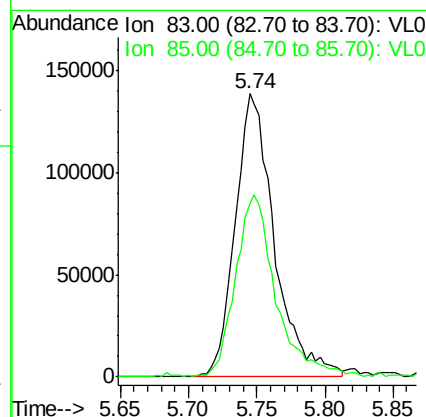
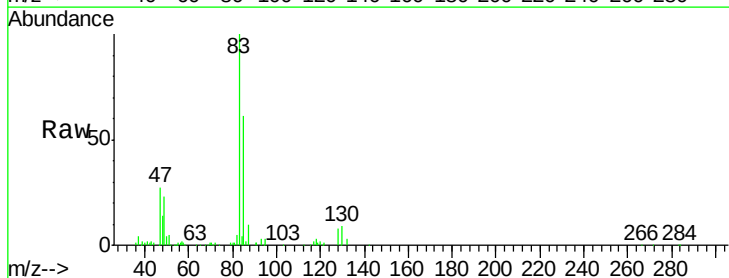
#27
Carbon Disulfide
Concen: 0.132 ppbv
RT: 4.55
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Oct 2021 16:37

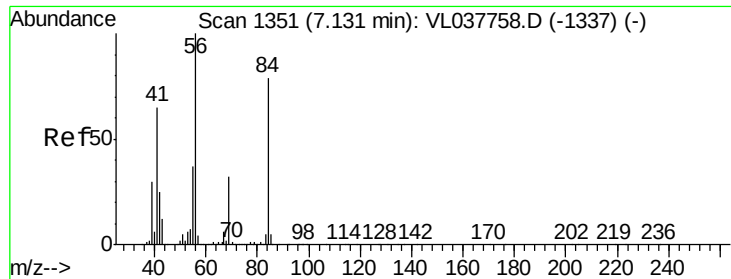
Tgt Ion	Ratio	Lower	Upper
76	100		
44	85.4	14.3	21.5#
78	13.1	7.8	11.6#



#29
Chloroform
Concen: 1.290 ppbv
RT: 5.74 min Scan# 920
Delta R.T. -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

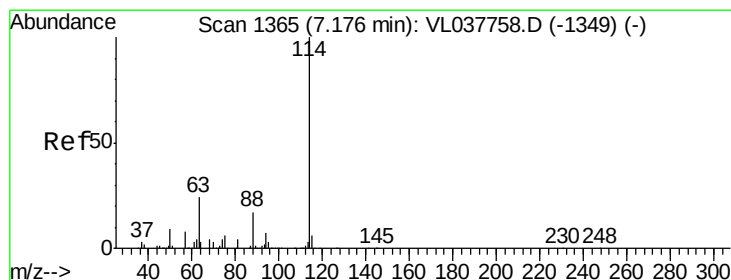
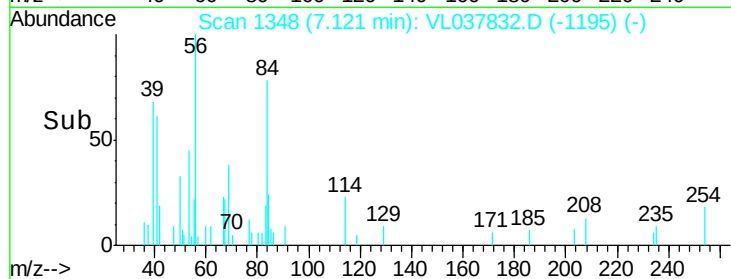
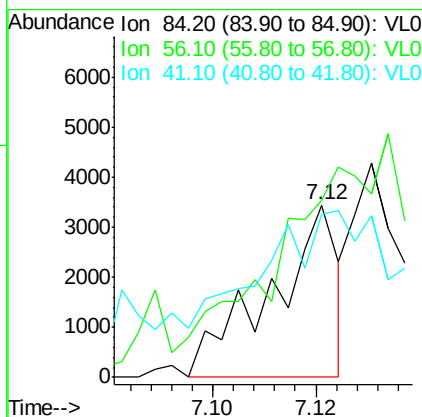
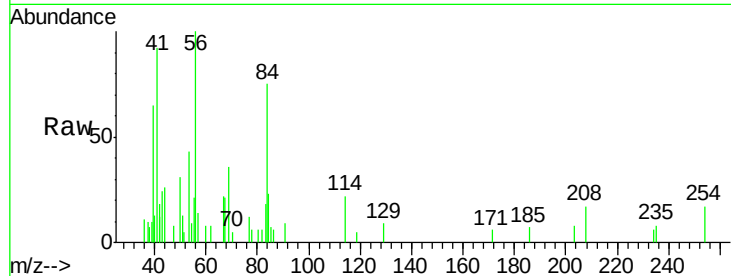
Tgt Ion	Ratio	Lower	Upper
83	100		
85	61.2	51.8	77.8





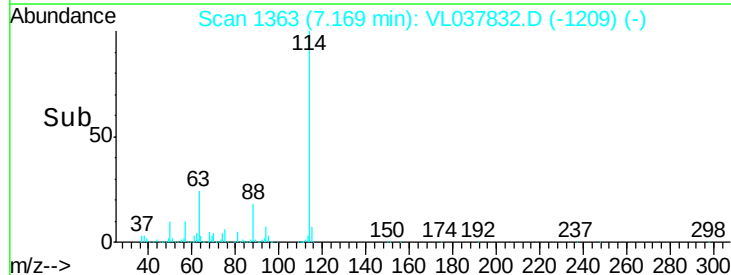
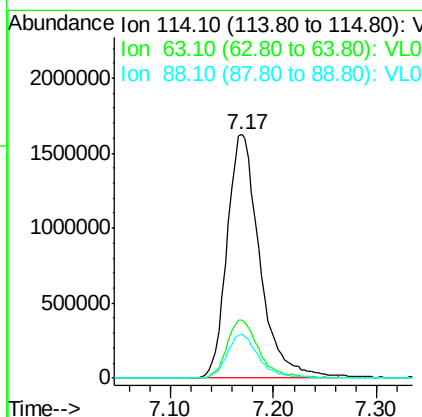
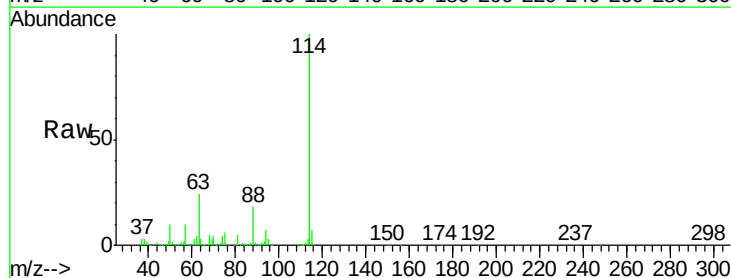
#30
Cyclohexane
Concen: 0.024 ppbv
RT: 7.12 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 12 Oct 2021 16:37

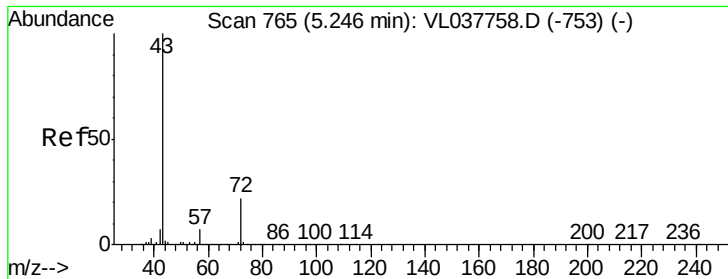
Tgt Ion: 84 Resp: 3093
Ion Ratio Lower Upper
84 100
56 0.0 113.0 169.4#
41 280.6 69.1 103.7#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.17 min Scan# 1363
Delta R.T. -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

Tgt Ion: 114 Resp: 3579777
Ion Ratio Lower Upper
114 100
63 23.9 19.4 29.2
88 17.8 14.4 21.6





#34

2-Butanone

Concen: 1.854 ppbv

RT: 5.24 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

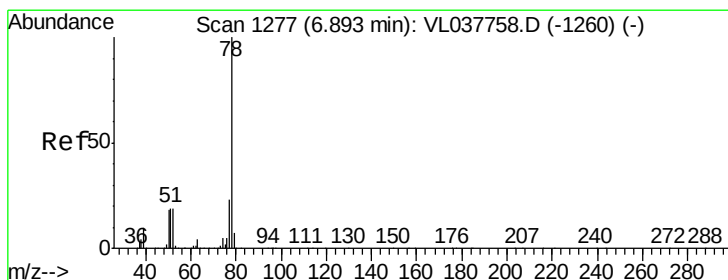
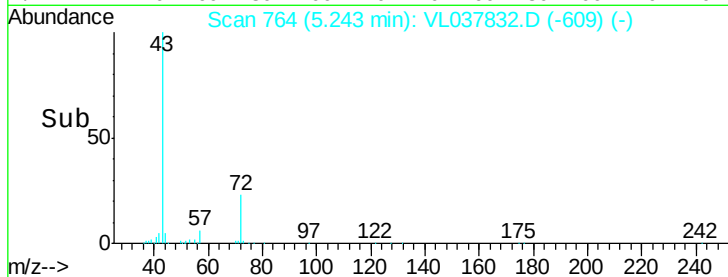
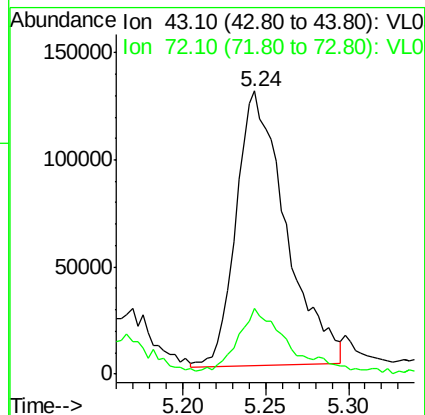
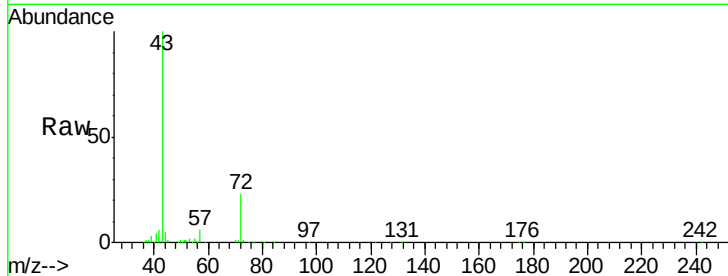
Acq: 12 Oct 2021 16:37 C0P47DUP

Tgt Ion: 43 Resp: 268003

Ion Ratio Lower Upper

43 100

72 23.3 18.2 27.2



#36

Benzene

Concen: 0.125 ppbv

RT: 6.89 min Scan# 1275

Delta R.T. -0.01 min

Lab File: VL037832.D

Acq: 12 Oct 2021 16:37

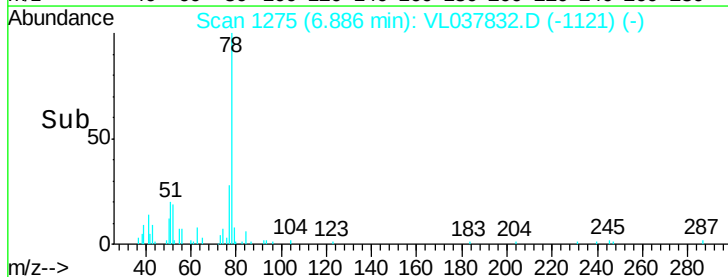
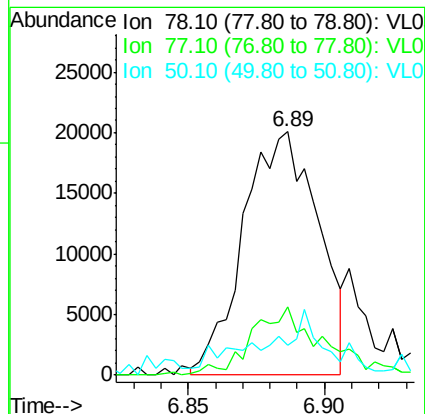
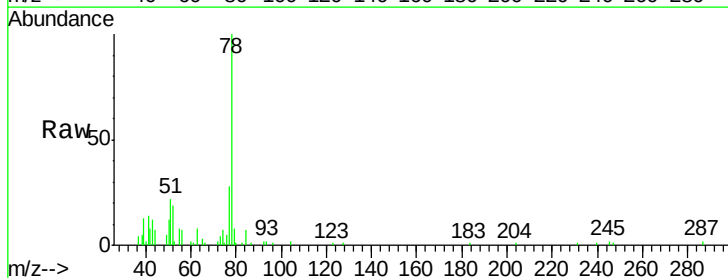
Tgt Ion: 78 Resp: 38261

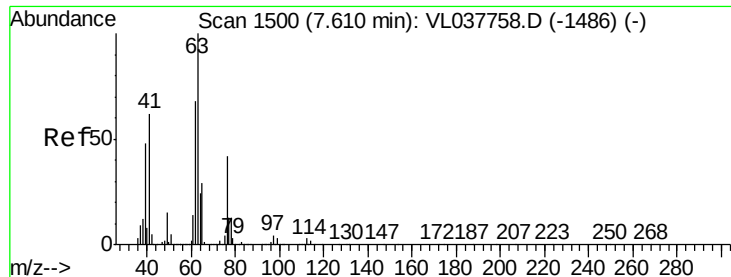
Ion Ratio Lower Upper

78 100

77 27.9 18.8 28.2

50 6.8 14.7 22.1#





#39

1,2-Dichloropropane

Concen: 7.108 ppbv

RT: 7.17 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 12 Oct 2021 16:37

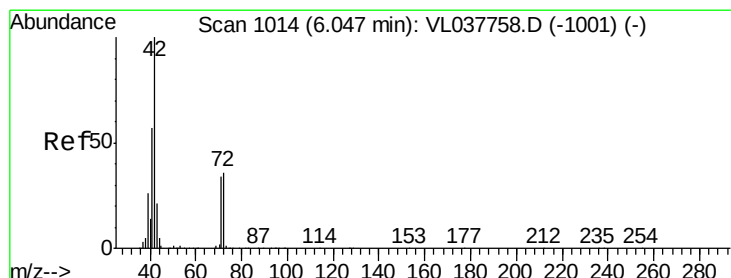
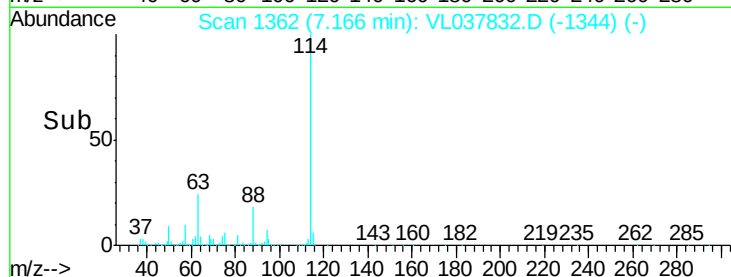
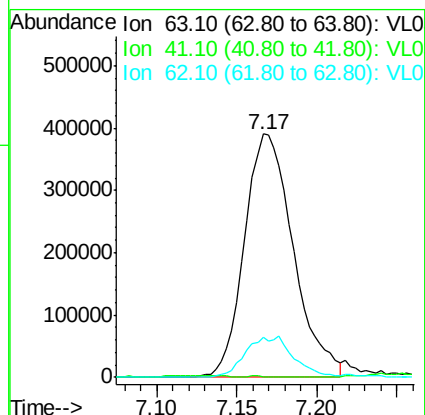
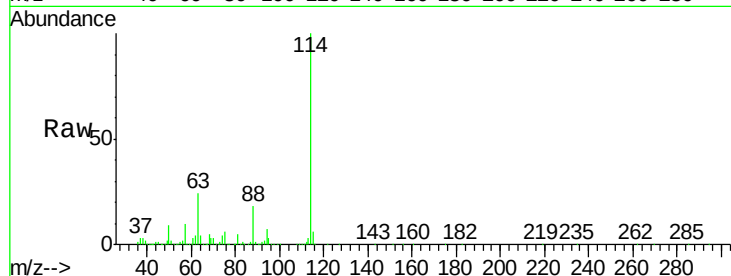
Tgt Ion: 63 Resp: 817498

Ion Ratio Lower Upper

63 100

41 0.0 49.8 74.6#

62 16.6 54.6 82.0#



#41

Tetrahydrofuran

Concen: 0.020 ppbv

RT: 6.30 min Scan# 1092

Delta R.T. 0.25 min

Lab File: VL037832.D

Acq: 12 Oct 2021 16:37

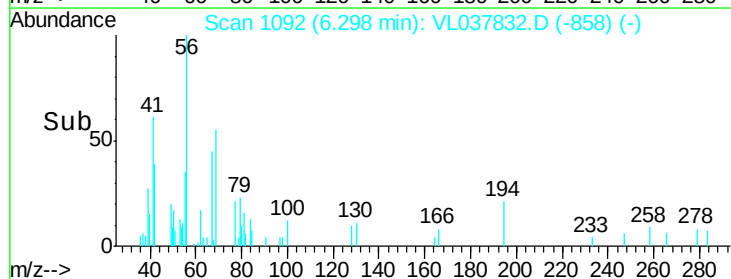
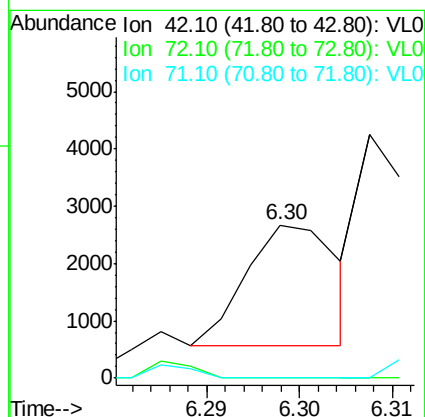
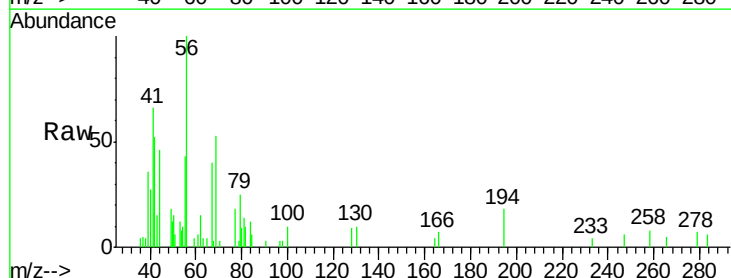
Tgt Ion: 42 Resp: 1445

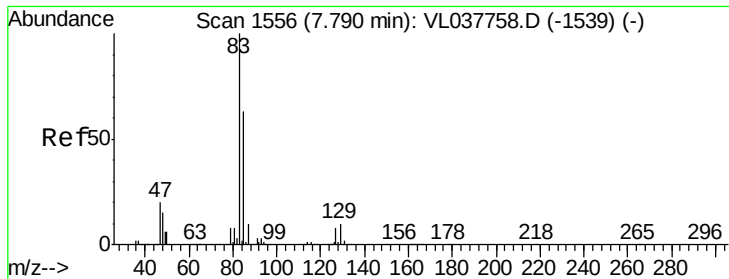
Ion Ratio Lower Upper

42 100

72 7.0 31.9 47.9#

71 0.0 30.3 45.5#





#42

Bromodichloromethane

Concen: 0.045 ppbv

RT: 7.78 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 12 Oct 2021 16:37

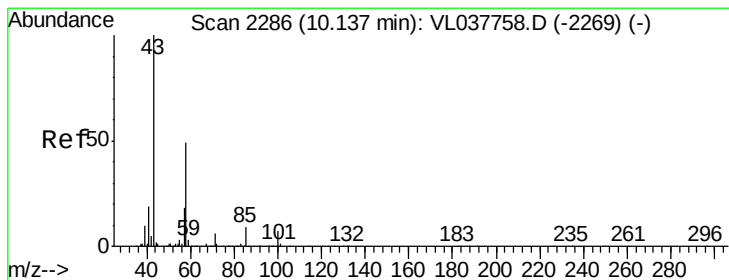
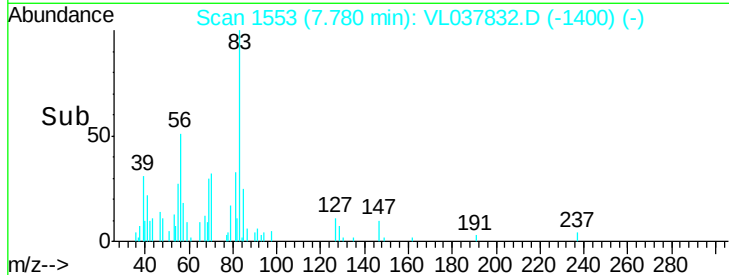
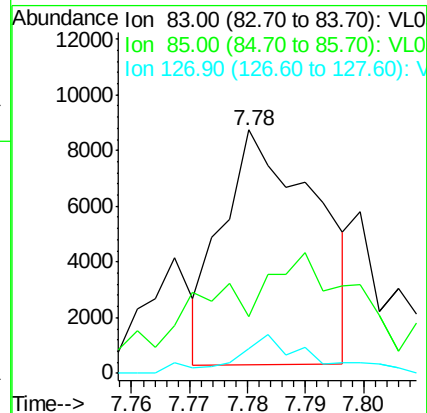
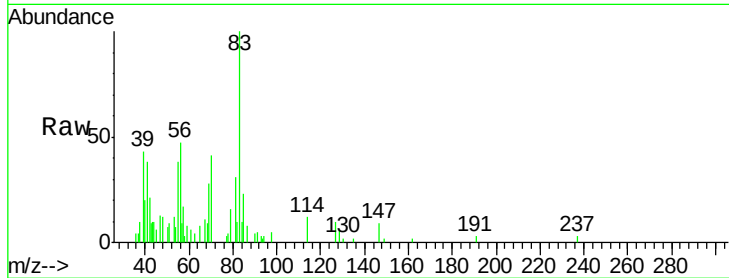
Tgt Ion: 83 Resp: 9430

Ion Ratio Lower Upper

83 100

85 0.0 50.6 75.8#

127 11.3 6.2 9.4#



#51

2-Hexanone

Concen: 0.140 ppbv

RT: 10.14 min Scan# 2287

Delta R.T. 0.00 min

Lab File: VL037832.D

Acq: 12 Oct 2021 16:37

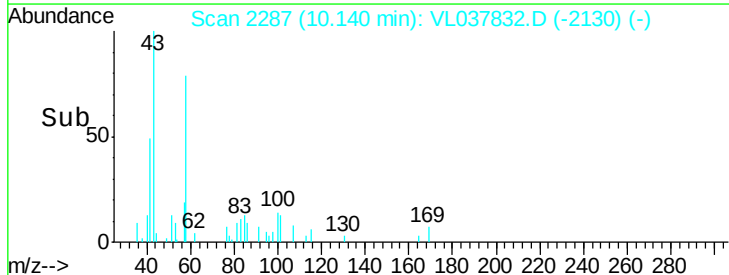
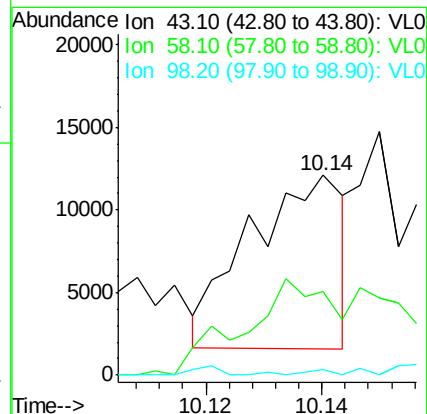
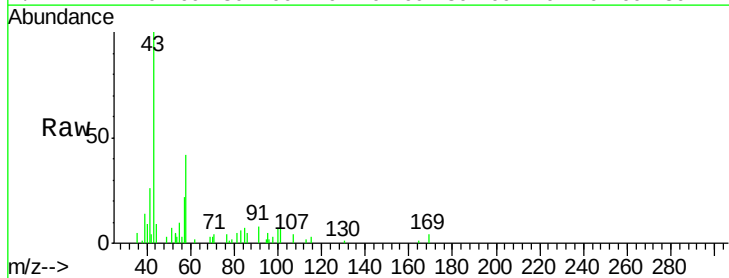
Tgt Ion: 43 Resp: 11788

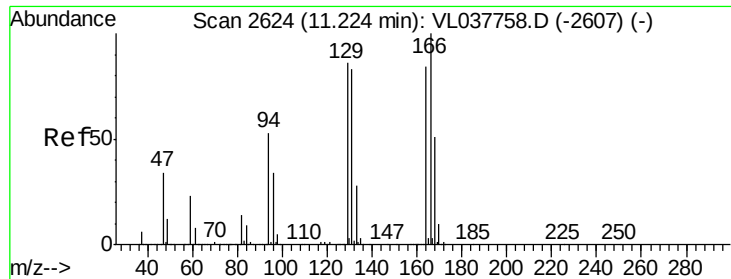
Ion Ratio Lower Upper

43 100

58 122.5 39.4 59.0#

98 0.0 0.3 0.5#





#52

Tetrachloroethene

Concen: 19.848 ppbv

RT: 11.22

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 12 Oct 2021 16:37

Tgt Ion:164 Resp: 2361070

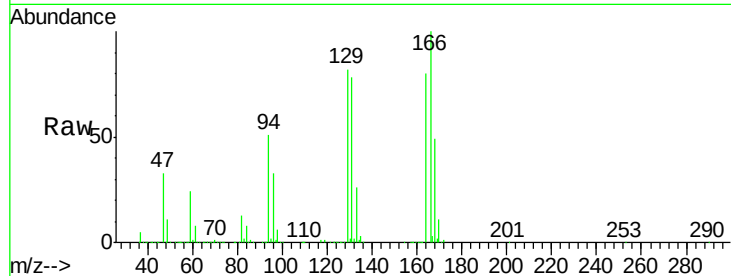
Ion Ratio Lower Upper

164 100

166 125.5 95.4 143.2

129 103.4 82.2 123.4

131 98.4 79.4 119.2

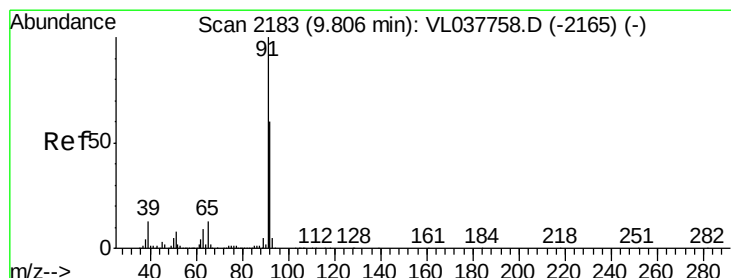
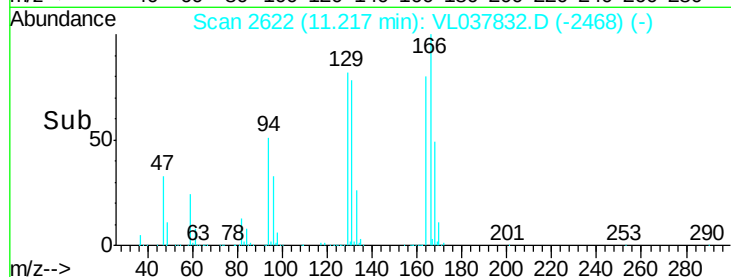
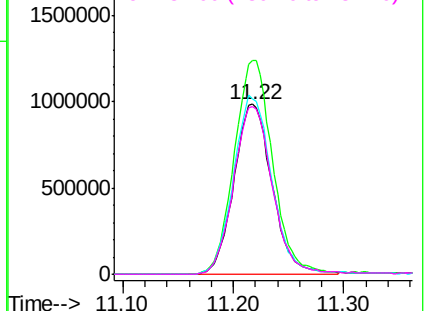


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.066 ppbv

RT: 9.80 min Scan# 2181

Delta R.T. -0.01 min

Lab File: VL037832.D

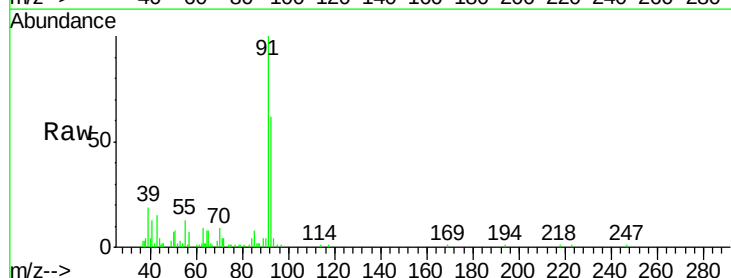
Acq: 12 Oct 2021 16:37

Tgt Ion: 91 Resp: 22481

Ion Ratio Lower Upper

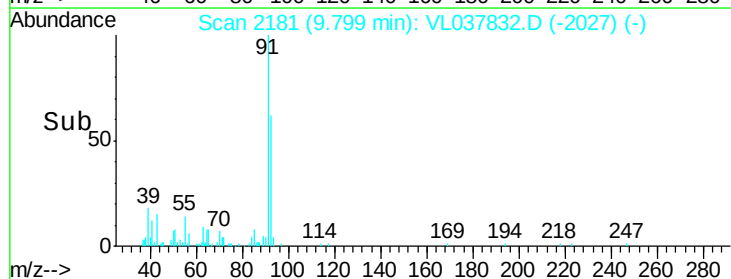
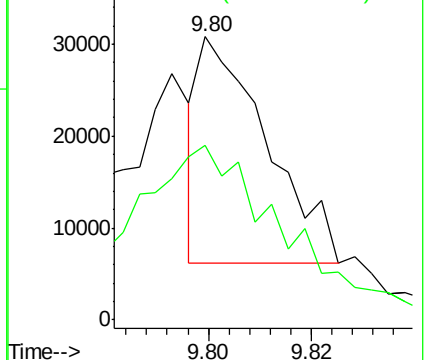
91 100

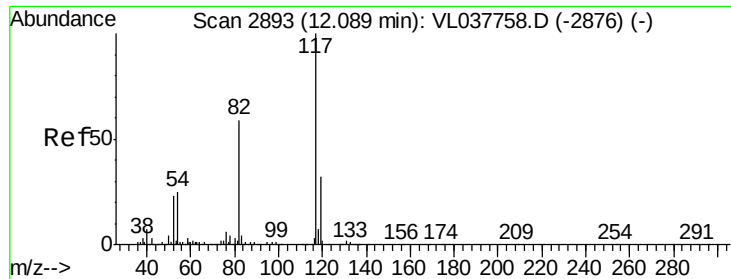
92 183.9 48.4 72.6#



Abundance Ion 91.10 (90.80 to 91.80): VL0

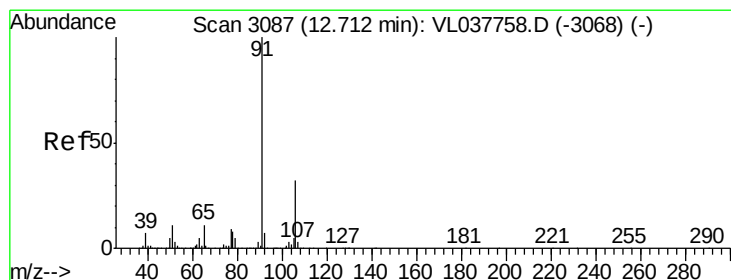
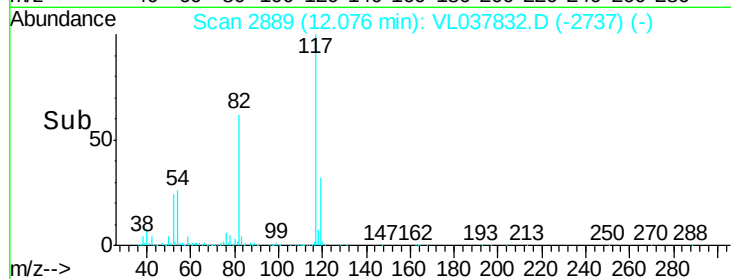
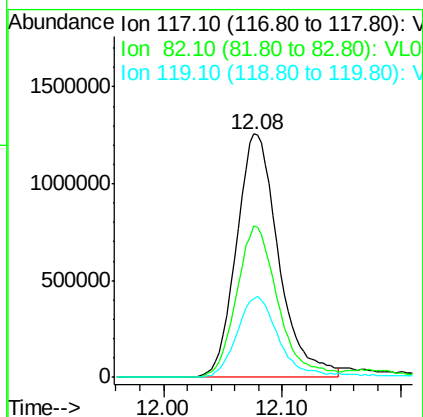
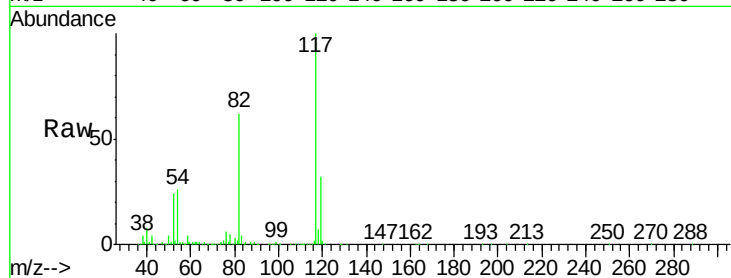
Ion 92.10 (91.80 to 92.80): VL0





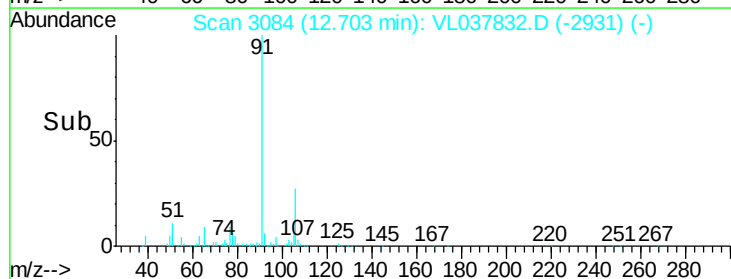
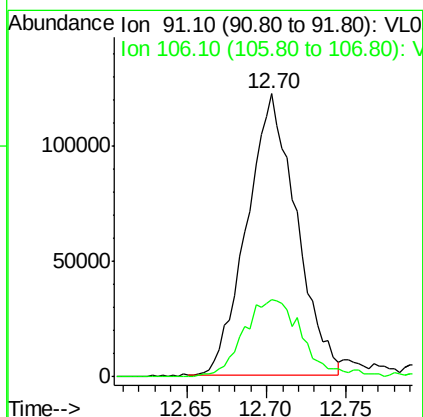
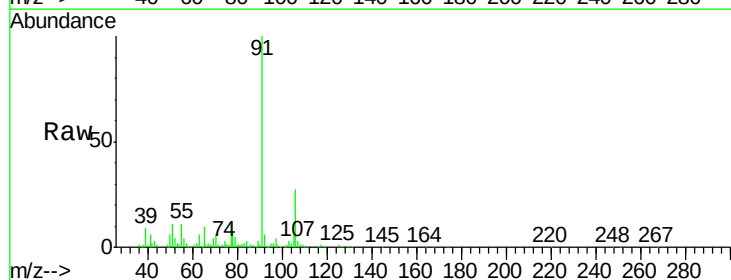
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 12 Oct 2021 16:37

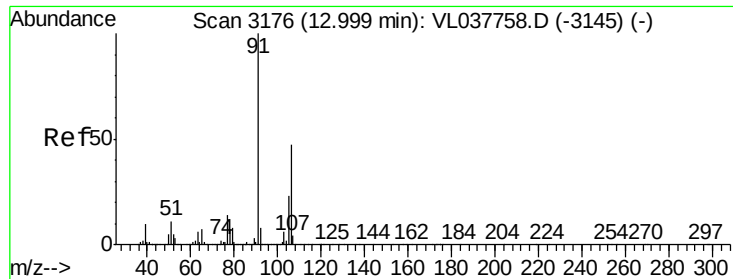
Tgt Ion: 117 Resp: 3077755
Ion Ratio Lower Upper
117 100
82 61.3 52.2 78.2
119 34.5 26.0 39.0



#58
Ethyl Benzene
Concen: 0.630 ppbv
RT: 12.70 min Scan# 3084
Delta R.T.: -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

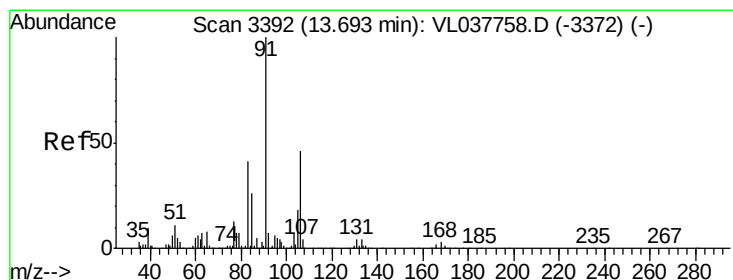
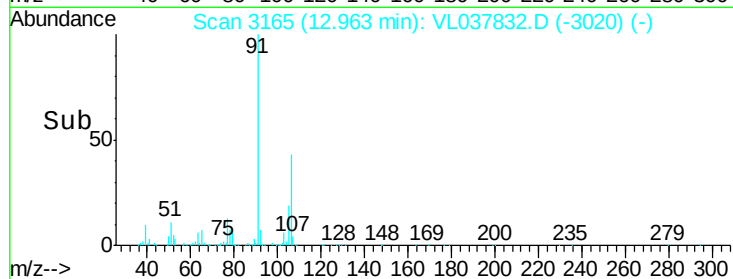
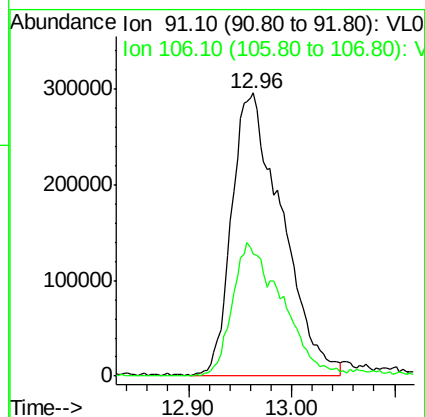
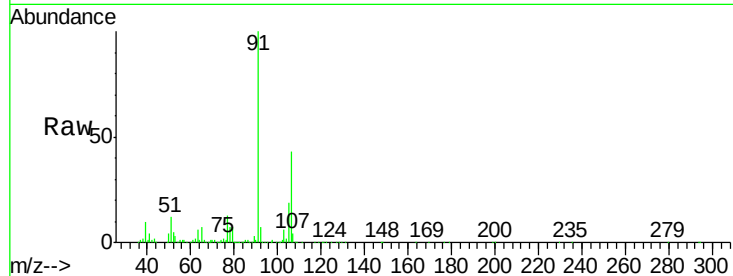
Tgt Ion: 91 Resp: 260426
Ion Ratio Lower Upper
91 100
106 27.6 25.3 37.9





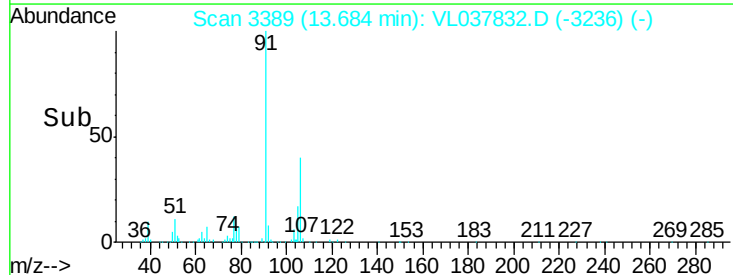
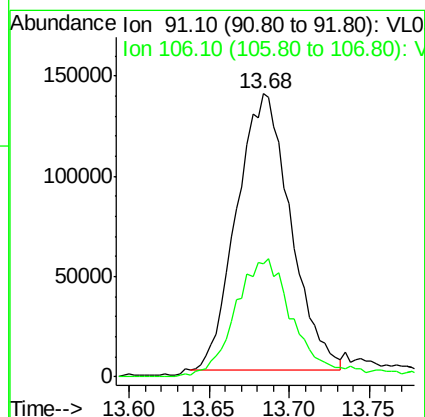
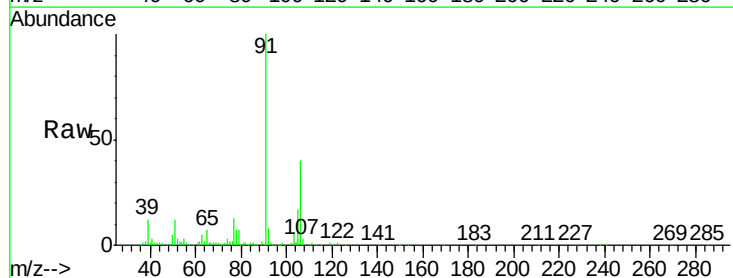
#59
m/p-Xylene
Concen: 2.804 ppbv
RT: 12.96
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Oct 2021 16:37

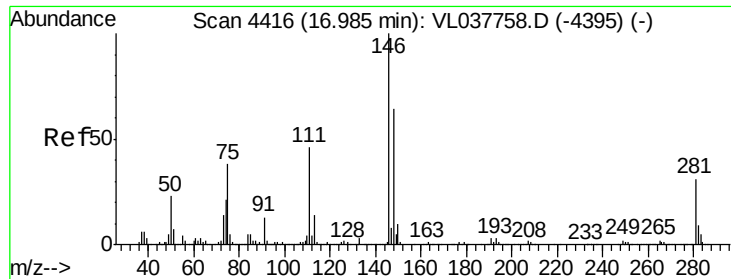
Tgt Ion: 91 Resp: 994678
Ion Ratio Lower Upper
91 100
106 48.7 36.7 55.1



#60
o-Xylene
Concen: 0.936 ppbv
RT: 13.68 min Scan# 3389
Delta R.T. -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

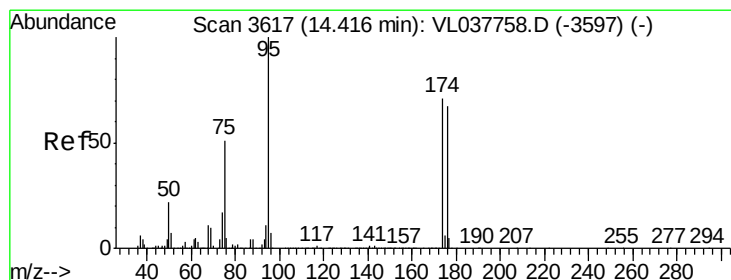
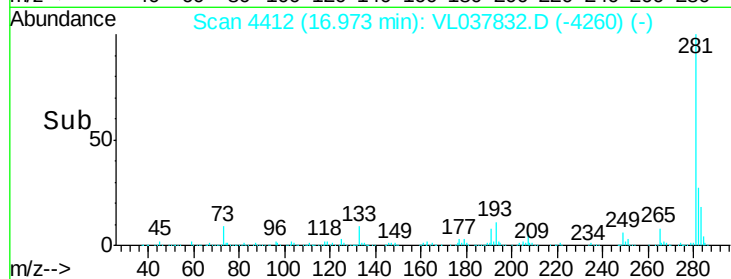
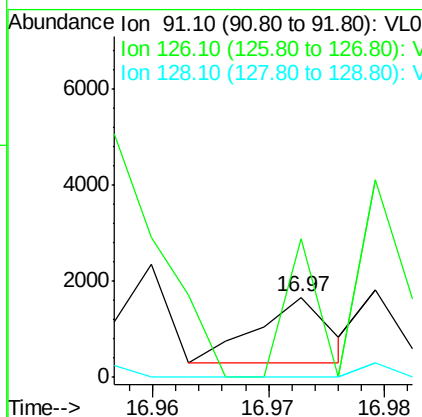
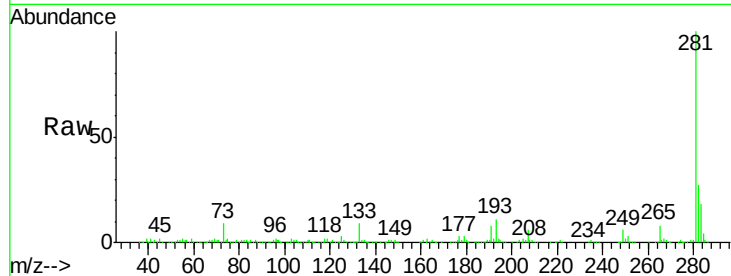
Tgt Ion: 91 Resp: 318352
Ion Ratio Lower Upper
91 100
106 49.9 23.5 70.5





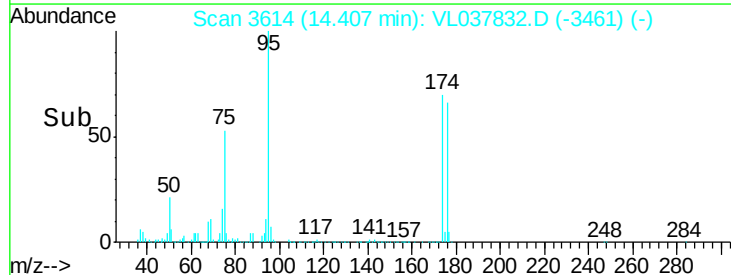
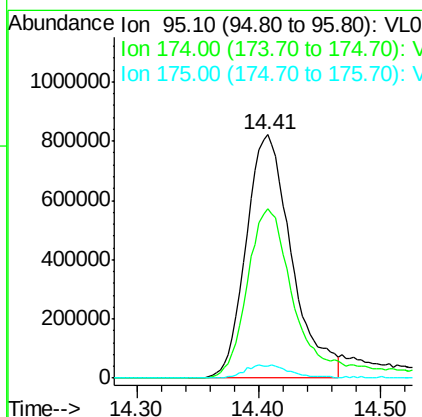
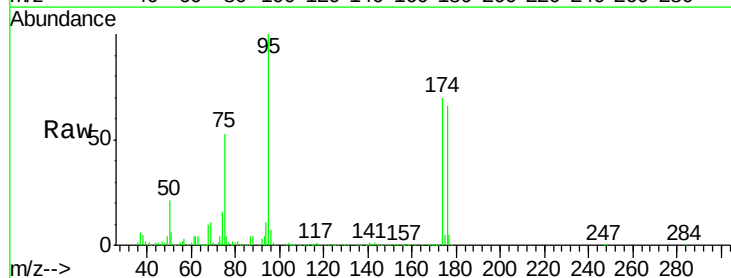
#66
Benzyl Chloride
Concen: 0.029 ppbv
RT: 16.97 min
Delta R.T.: MSVOA_L
Lab File: ClientSampled :
Acq: 12 Oct 2021 16:37

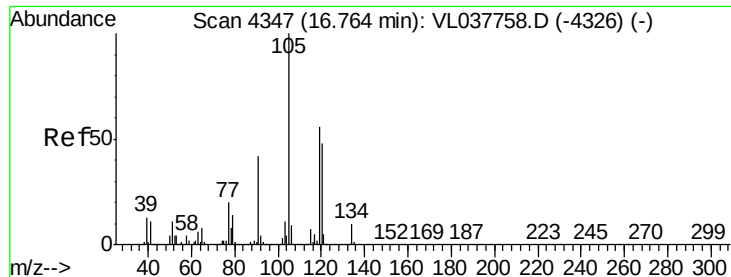
Tgt Ion: 91 Resp: 593
Ion Ratio Lower Upper
91 100
126 0.0 0.0 0.0
128 0.0 5.3 7.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.828 ppbv
RT: 14.41 min Scan# 3614
Delta R.T.: -0.01 min
Lab File: VL037832.D
Acq: 12 Oct 2021 16:37

Tgt Ion: 95 Resp: 2115192
Ion Ratio Lower Upper
95 100
174 78.2 57.8 86.6
175 5.7 4.7 7.1





#74

1,2,4-Trimethylbenzene

Concen: 0.118 ppbv

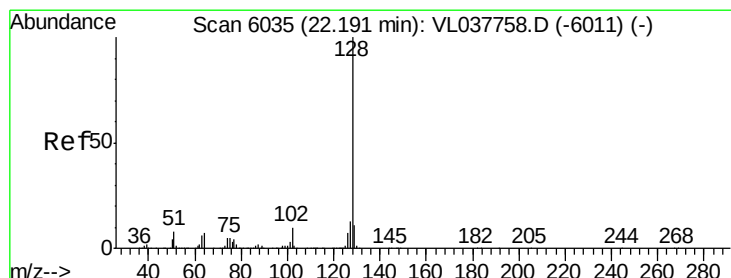
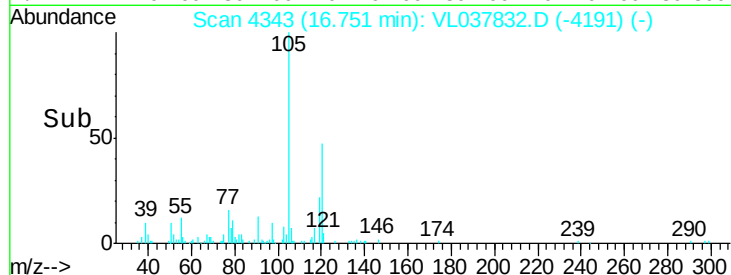
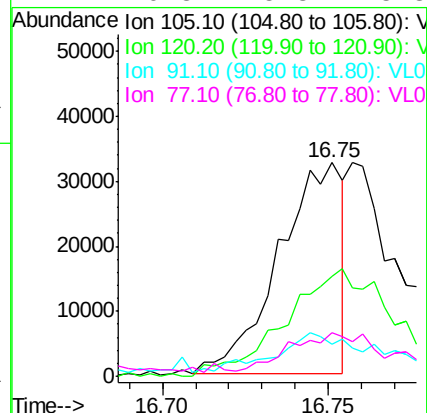
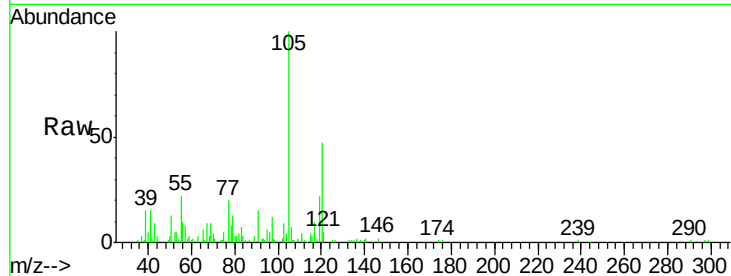
RT: 16.75

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 12 Oct 2021 16:37

Tgt Ion:	105	Resp:	43624
Ion Ratio	Lower	Upper	
105	100		
120	47.3	38.4	57.6
91	13.3	34.2	51.2#
77	16.3	15.8	23.8



#79

Naphthalene

Concen: 0.115 ppbv

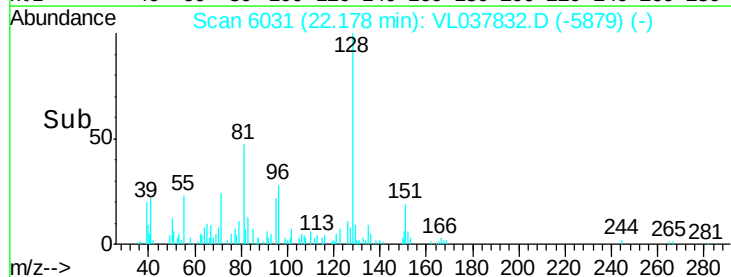
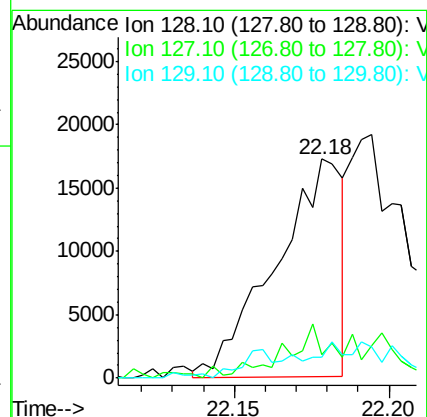
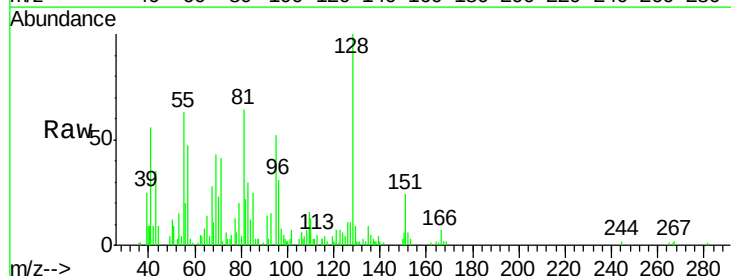
RT: 22.18 min Scan# 6031

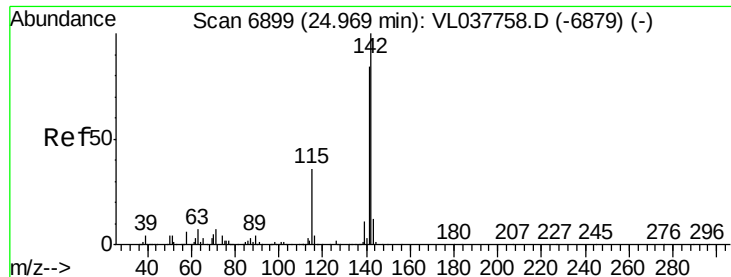
Delta R.T. -0.01 min

Lab File: VL037832.D

Acq: 12 Oct 2021 16:37

Tgt Ion:	128	Resp:	25889
Ion Ratio	Lower	Upper	
128	100		
127	9.1	10.1	15.1#
129	8.3	9.1	13.7#





#80

Naphthalene, 2-methyl-

Concen: 0.078 ppbv

RT: 24.97 Instrument:

Delta R.T MSVOA_L

Lab File: ClientSampleId:

Acq: 12 Oct 2021 10:37

Tgt Ion: 142 Resp: 4729

Ion Ratio Lower Upper

142 100

141 109.9 68.6 102.8#

115 65.4 29.0 43.6#

