

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL051322\
 Data File : VL039042.D
 Acq On : 13 May 2022 18:17
 Operator : SY/AP
 Sample : N2812-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

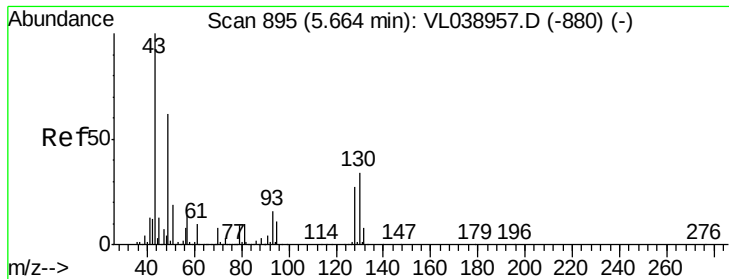
Quant Time: May 14 00:53:34 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050522AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 05 10:12:15 2022
 QLast Update : Thu May 05 10:12:15 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	875640	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.16	114	2056316	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	1713202	10.00	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.39	95	1345679	9.92	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	29526	0.215	ppbv	90
3) Chlorodifluoromethane	2.98	51	73452	0.676	ppbv #	79
4) Chloromethane	3.13	50	42212	0.776	ppbv #	87
9) Propene	3.02	41	75220	1.585	ppbv #	65
10) Heptane	8.10	43	21473	0.184	ppbv #	27
11) Trichlorofluoromethane	3.94	101	26476	0.225	ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.47	101	5057	0.062	ppbv #	75
13) Ethanol	3.61	45	15770221	4696.338	ppbv	95
15) Acetone	3.83	43	1325705	16.050	ppbv	99
16) 1,3-Butadiene	3.30	39	8464	0.178	ppbv #	9
17) tert-Butyl alcohol	4.29	59	63852	1.006	ppbv	97
19) Isopropyl Alcohol	3.97	45	4065978	103.532	ppbv	99
20) Methylene Chloride	4.33	84	216483	6.954	ppbv	99
21) Allyl Chloride	4.18	41	4945	0.088	ppbv #	1
23) Vinyl Acetate	5.05	43	34561	0.529	ppbv #	1
25) Ethyl Acetate	5.67	43	264901	1.340	ppbv #	85
26) Hexane	5.67	57	302658	3.446	ppbv #	46
27) Carbon Disulfide	4.54	76	3426	0.041	ppbv #	63
29) Chloroform	5.74	83	126540	0.890	ppbv	93
30) Cyclohexane	7.11	84	3731	0.051	ppbv #	1
31) cis-1,2-Dichloroethene	5.54	61	3027	0.034	ppbv #	79
34) 2-Butanone	5.23	43	377270	3.596	ppbv	96
36) Benzene	6.87	78	31484	0.179	ppbv #	92
38) Trichloroethene	7.82	130	4387	0.056	ppbv #	58
39) 1,2-Dichloropropane	7.16	63	572879	8.367	ppbv #	26
41) Tetrahydrofuran	6.04	42	62436	0.886	ppbv	88
42) Bromodichloromethane	7.77	83	7702	0.052	ppbv #	59
44) 2,2,4-Trimethylpentane	7.84	57	14534	0.047	ppbv #	43
52) Tetrachloroethene	11.21	164	4937206	78.511	ppbv	95
53) Toluene	9.78	91	106738	0.541	ppbv	93
58) Ethyl Benzene	12.68	91	10200	0.041	ppbv	98
60) o-Xylene	13.67	91	14425	0.073	ppbv #	57
76) 1,4-Dichlorobenzene	17.11	146	10927	0.091	ppbv #	24
80) Naphthalene,2-methyl-	24.94	142	2131	0.039	ppbv	98

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: A-1

Acq: 13 May 2022 18:17

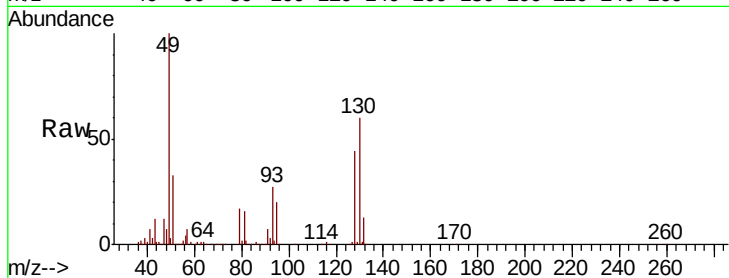
Tot Ion: 49 Resp: 875640

Ion Ratio Lower Upper

49 100

128 46.5 23.3 69.8

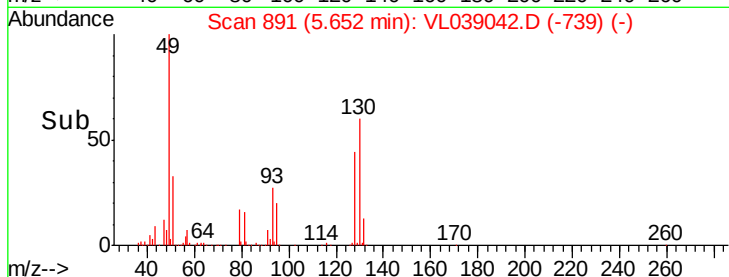
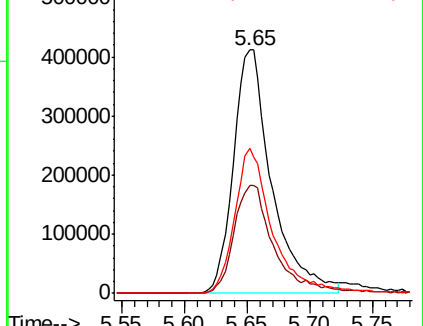
130 59.6 29.8 89.3



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: 0.215 ppbv

RT: 3.04 min Scan# 80

Delta R.T. -0.01 min

Lab File: VL039042.D

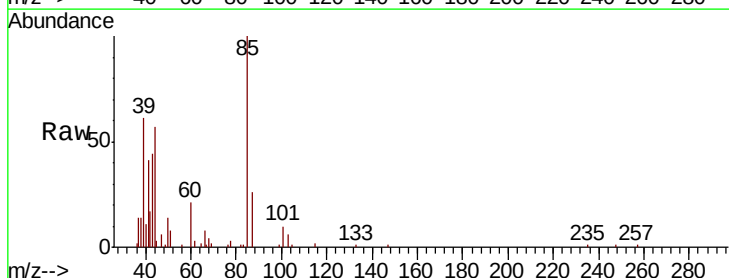
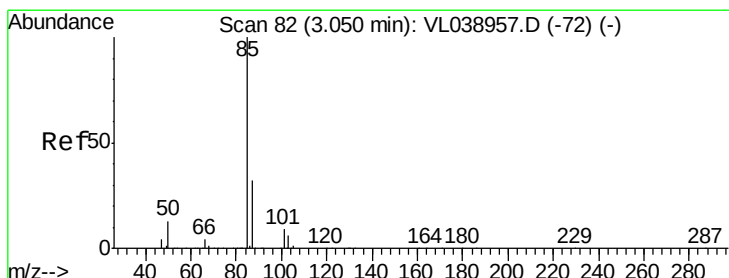
Acq: 13 May 2022 18:17

Tgt Ion: 85 Resp: 29526

Ion Ratio Lower Upper

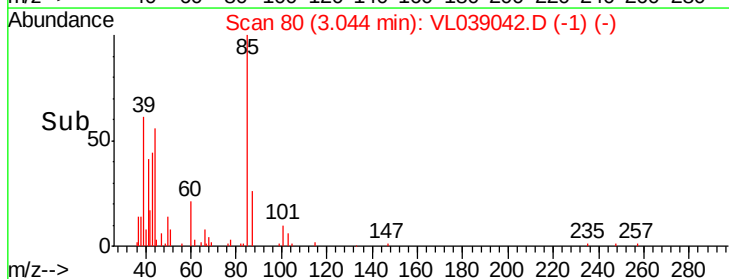
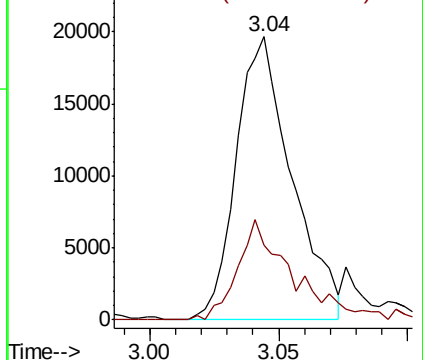
85 100

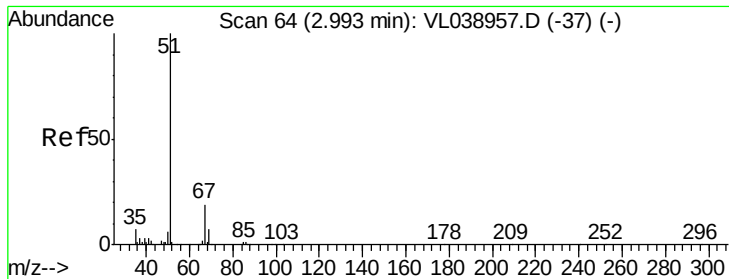
87 26.4 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.676 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

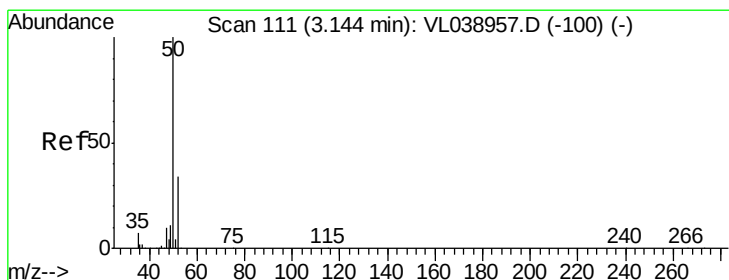
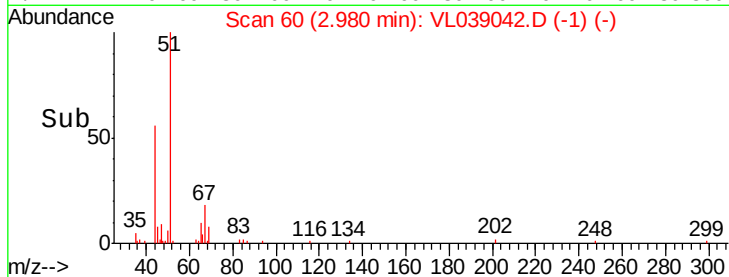
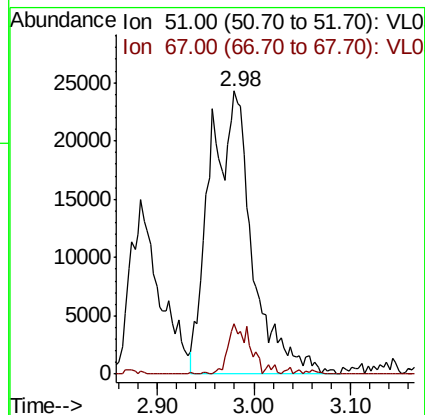
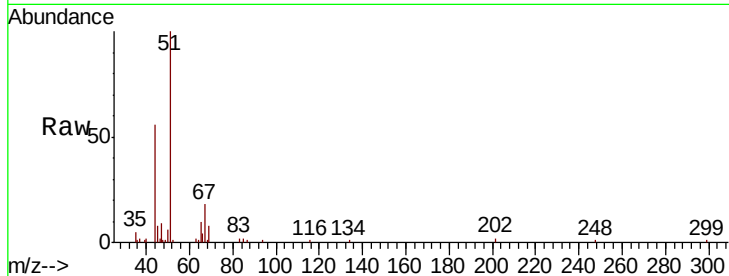
Acq: 13 May 2022 18:17

Tot Ion: 51 Resp: 73452

Ion Ratio Lower Upper

51 100

67 10.1 15.8 23.8#



#4

Chloromethane

Concen: 0.776 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL039042.D

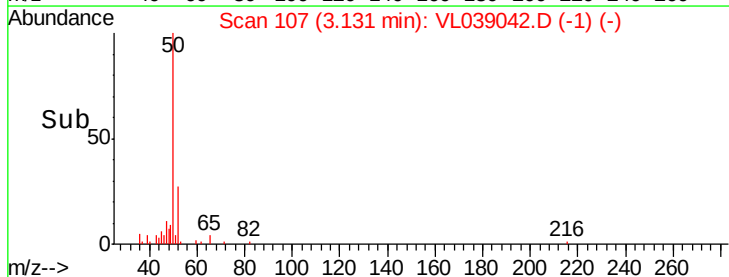
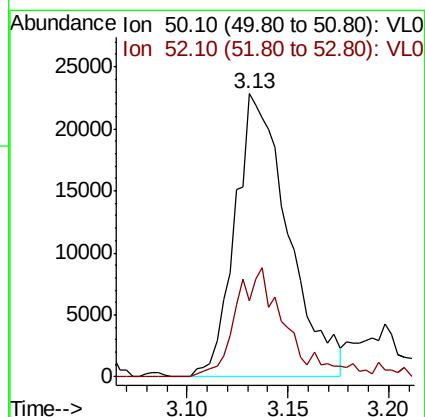
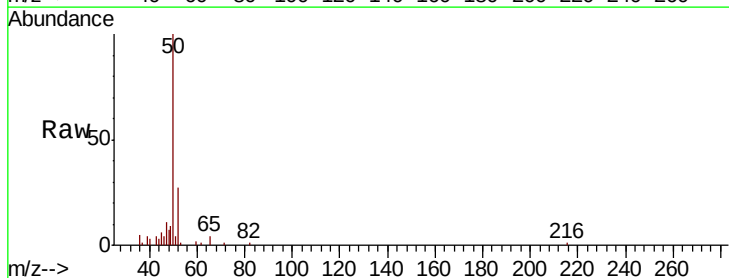
Acq: 13 May 2022 18:17

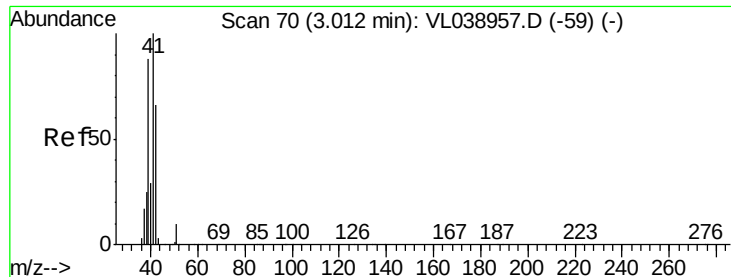
Tgt Ion: 50 Resp: 42212

Ion Ratio Lower Upper

50 100

52 26.8 27.3 40.9#





#9

Propene

Concen: 1.585 ppbv

RT: 3.02 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

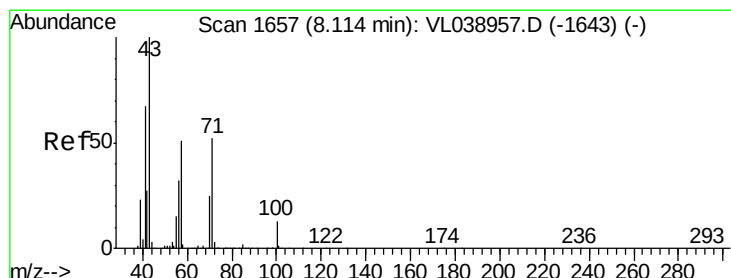
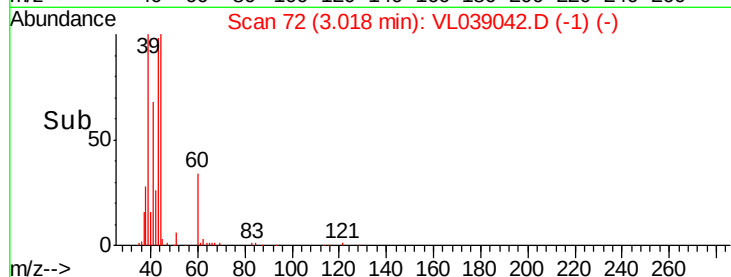
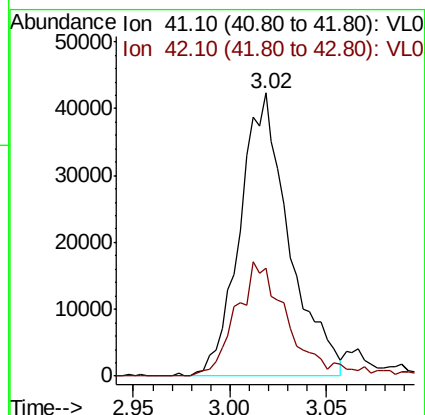
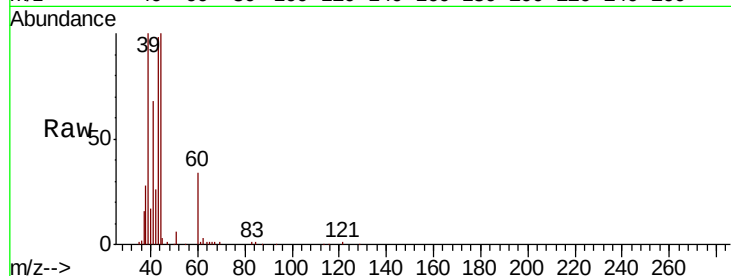
Acq: 13 May 2022 18:17

Tot Ion: 41 Resp: 75220

Ion Ratio Lower Upper

41 100

42 43.9 58.3 87.5#



#10

Heptane

Concen: 0.184 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.01 min

Lab File: VL039042.D

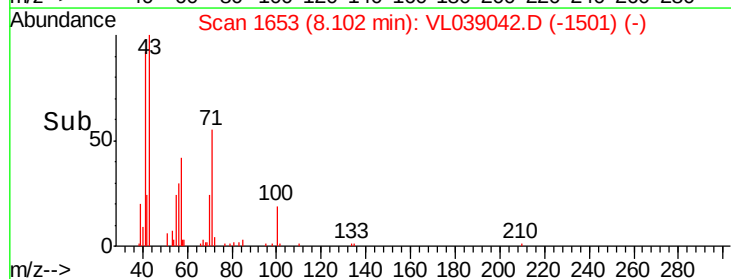
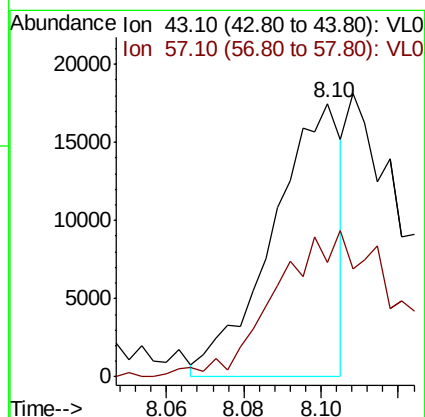
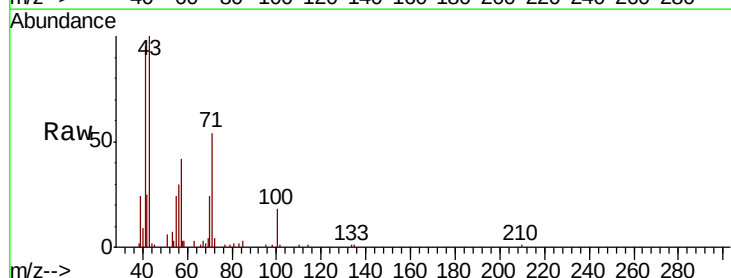
Acq: 13 May 2022 18:17

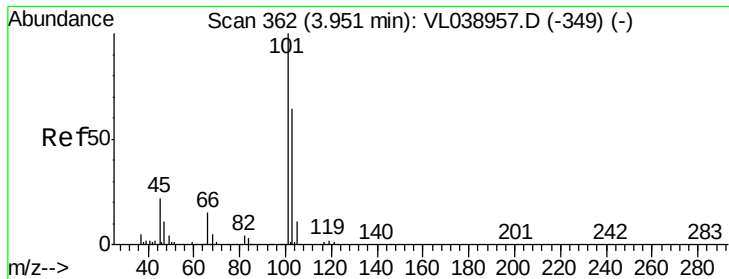
Tgt Ion: 43 Resp: 21473

Ion Ratio Lower Upper

43 100

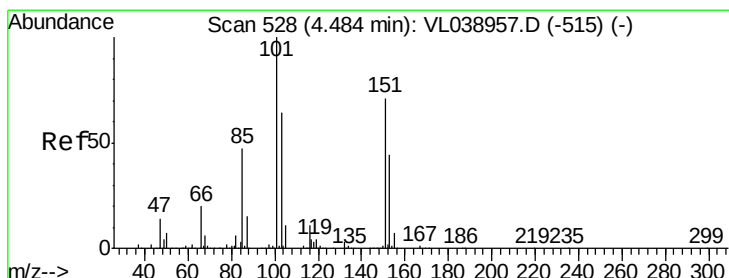
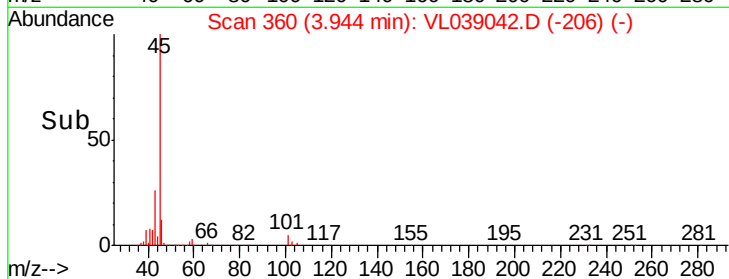
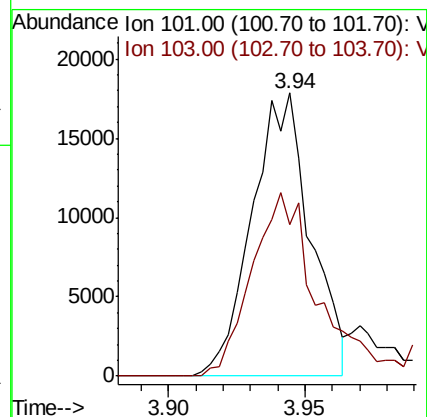
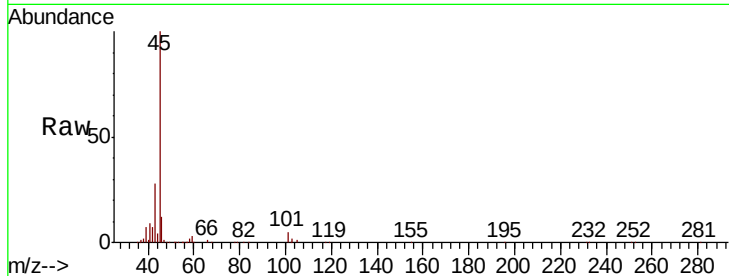
57 0.0 40.5 60.7#





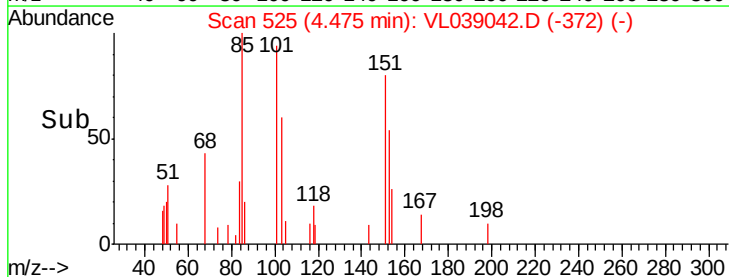
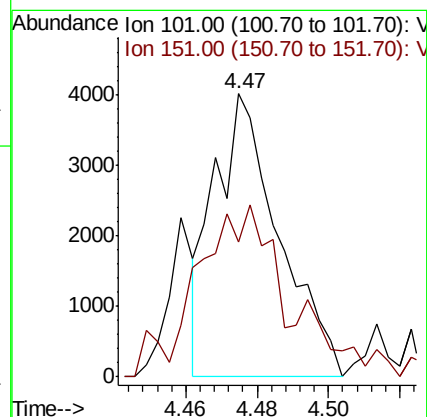
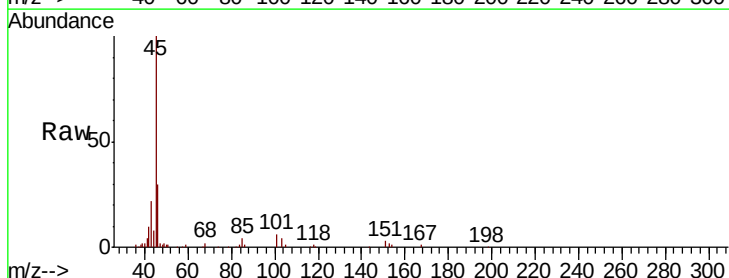
#11
 Trichlorofluoromethane
 Concen: 0.225 ppbv
 RT: 3.94 Instrument : MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 13 May 2022 18:17

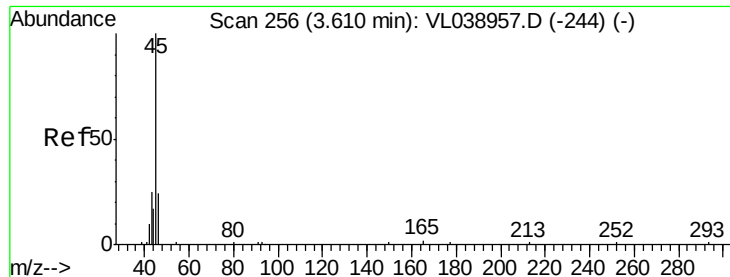
Tot Ion:101 Resp: 26476
 Ion Ratio Lower Upper
 101 100
 103 53.7 51.5 77.3



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.062 ppbv
 RT: 4.47 min Scan# 525
 Delta R.T. -0.01 min
 Lab File: VL039042.D
 Acq: 13 May 2022 18:17

Tgt Ion:101 Resp: 5057
 Ion Ratio Lower Upper
 101 100
 151 89.8 55.4 83.0#





#13

Ethanol

Concen: 4696.338 ppbv

RT: 3.61 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

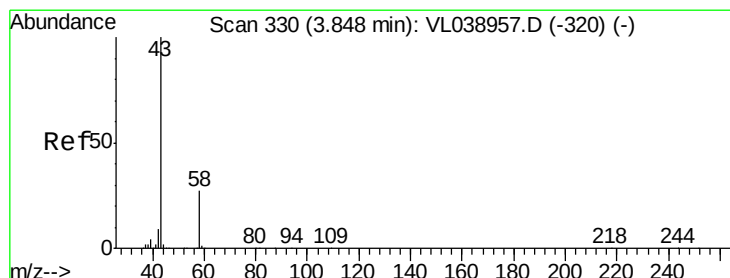
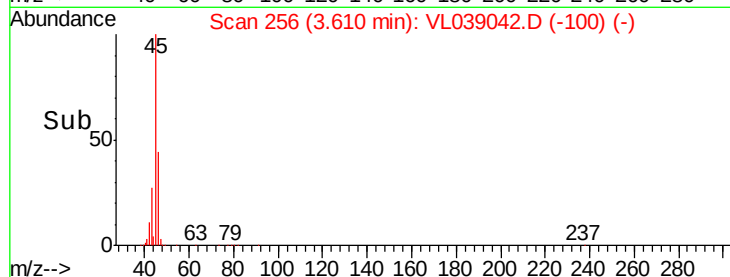
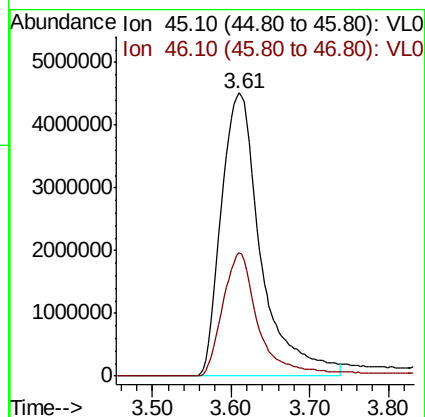
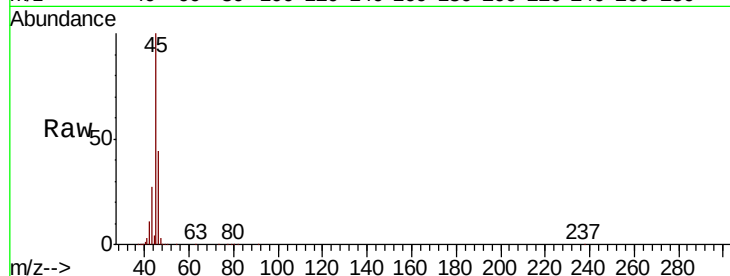
Acq: 13 May 2022 18:17

Tot Ion: 45 Resp:15770221

Ion Ratio Lower Upper

45 100

46 41.6 18.0 72.2



#15

Acetone

Concen: 16.050 ppbv

RT: 3.83 min Scan# 326

Delta R.T. -0.01 min

Lab File: VL039042.D

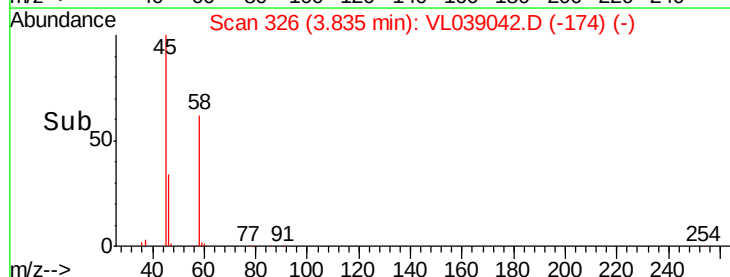
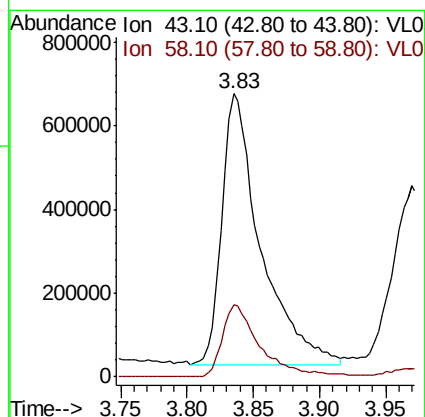
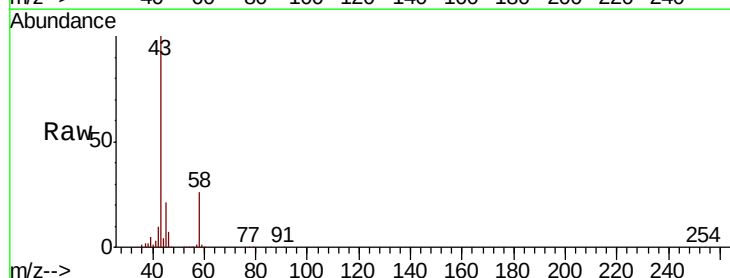
Acq: 13 May 2022 18:17

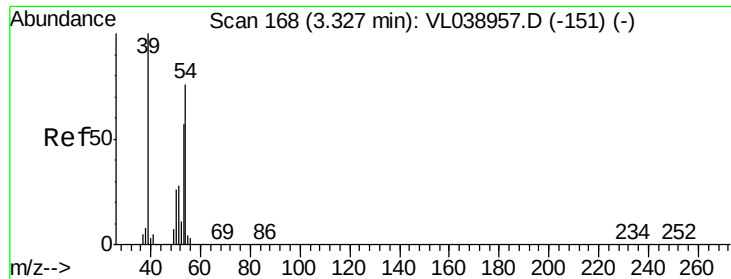
Tgt Ion: 43 Resp: 1325705

Ion Ratio Lower Upper

43 100

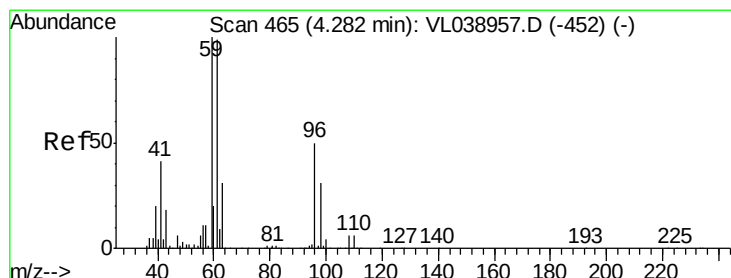
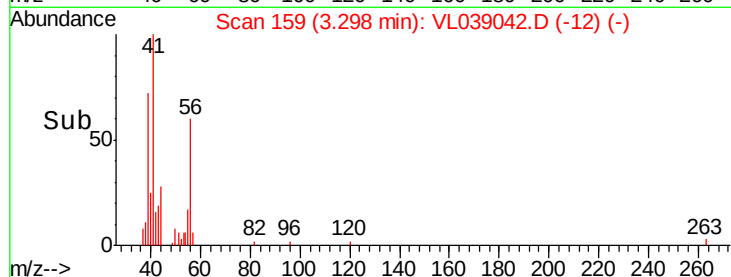
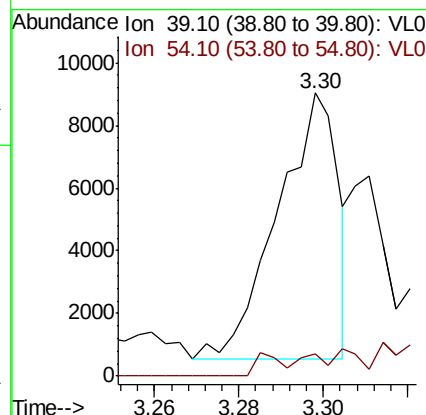
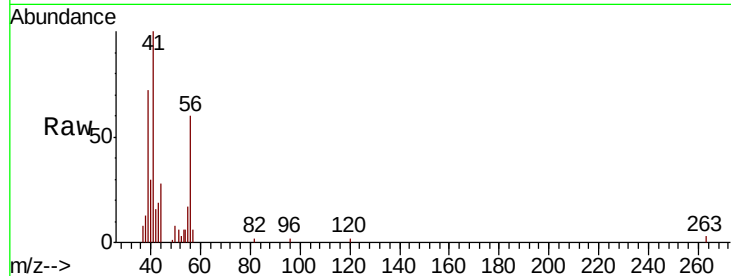
58 26.1 21.3 31.9





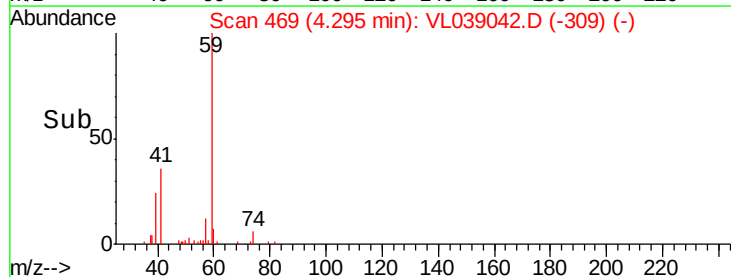
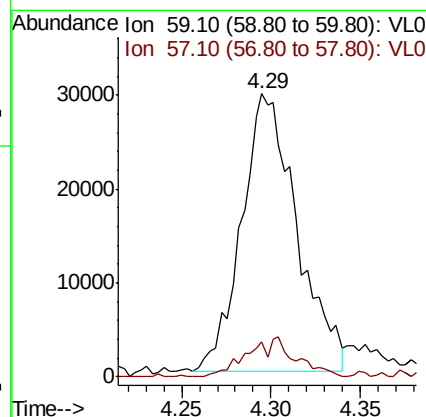
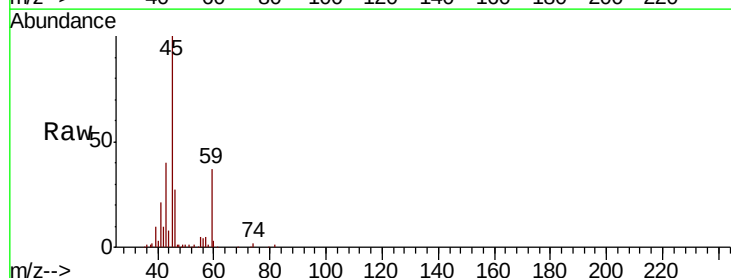
#16
 1,3-Butadiene
 Concen: 0.178 ppbv
 RT: 3.30
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 May 2022 18:17

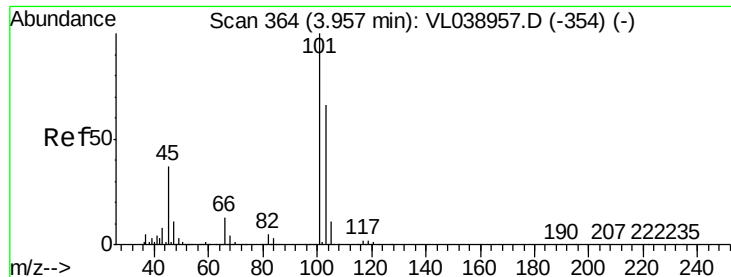
Tot Ion: 39 Resp: 8464
 Ion Ratio Lower Upper
 39 100
 54 0.0 65.2 97.8#



#17
 tert-Butyl alcohol
 Concen: 1.006 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.01 min
 Lab File: VL039042.D
 Acq: 13 May 2022 18:17

Tgt Ion: 59 Resp: 63852
 Ion Ratio Lower Upper
 59 100
 57 12.6 9.2 13.8





#19

Isopropyl Alcohol

Concen: 103.532 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

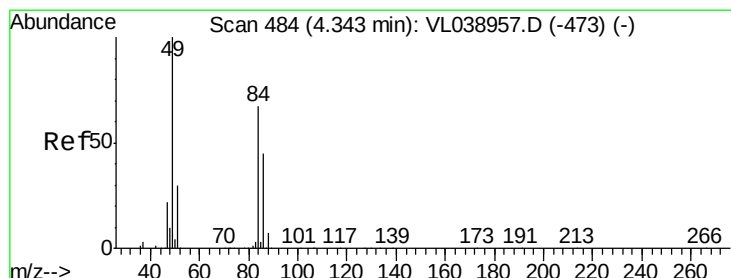
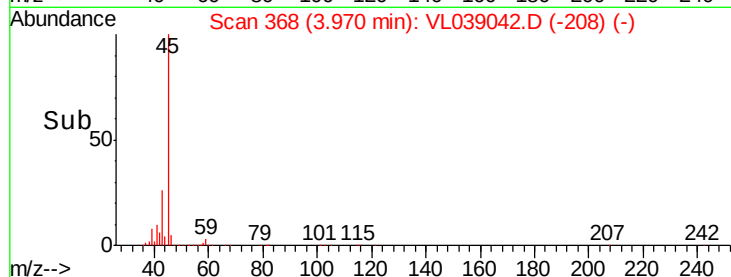
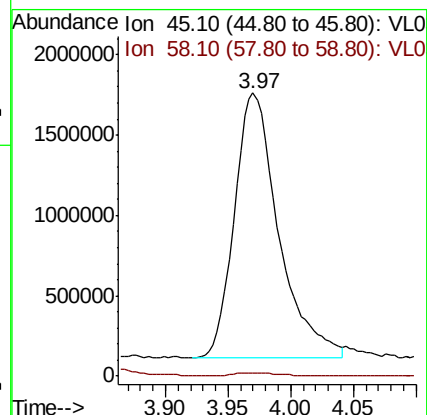
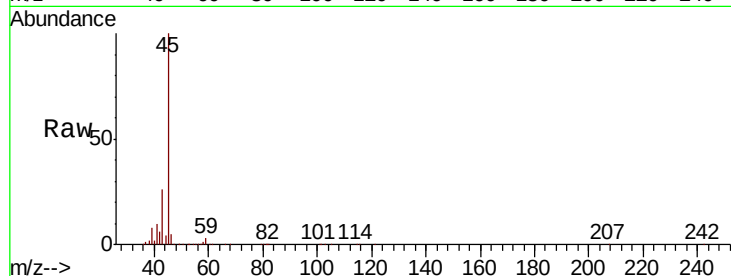
Acq: 13 May 2022 18:17

Tot Ion: 45 Resp: 4065978

Ion Ratio Lower Upper

45 100

58 1.5 1.4 2.2



#20

Methylene Chloride

Concen: 6.954 ppbv

RT: 4.33 min Scan# 480

Delta R.T. -0.01 min

Lab File: VL039042.D

Acq: 13 May 2022 18:17

Tgt Ion: 84 Resp: 216483

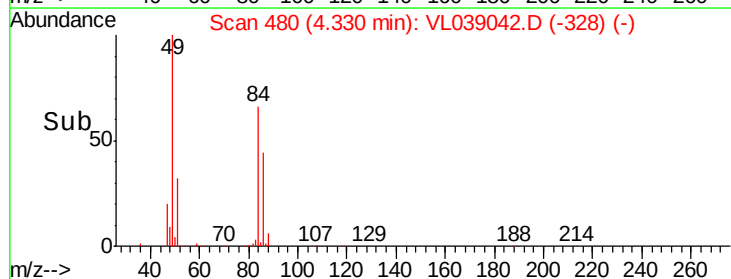
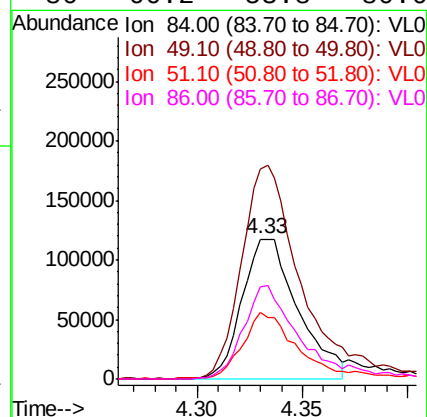
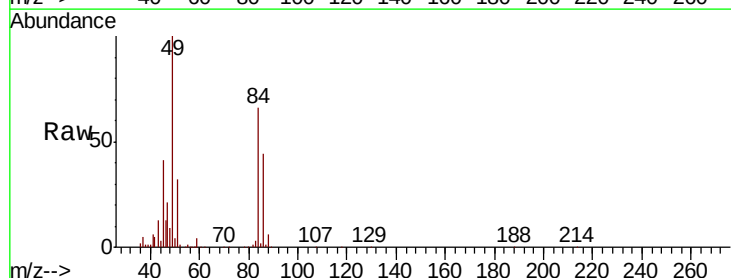
Ion Ratio Lower Upper

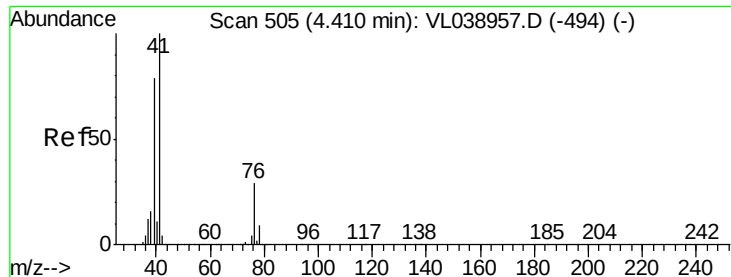
84 100

49 149.9 119.9 179.9

51 47.1 35.7 53.5

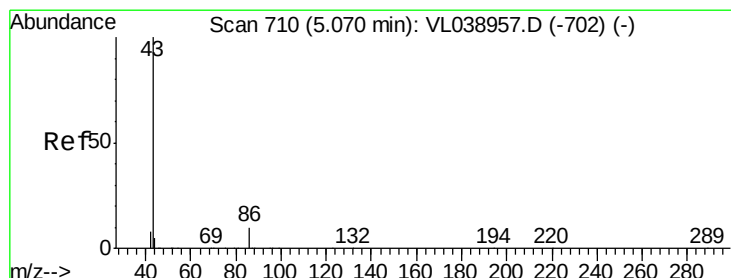
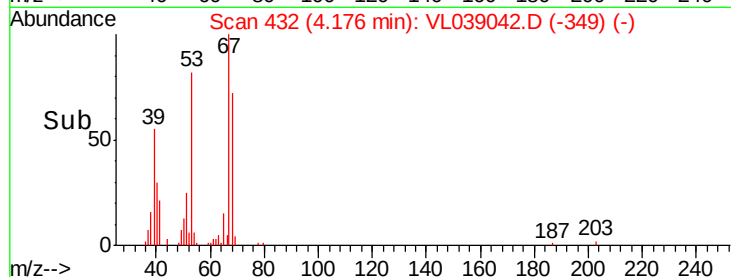
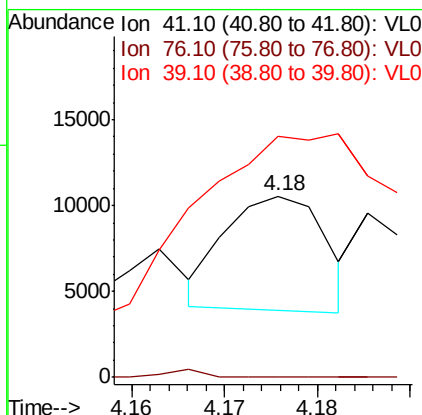
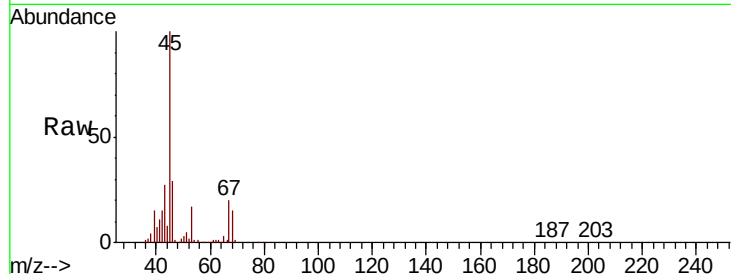
86 66.2 53.8 80.6





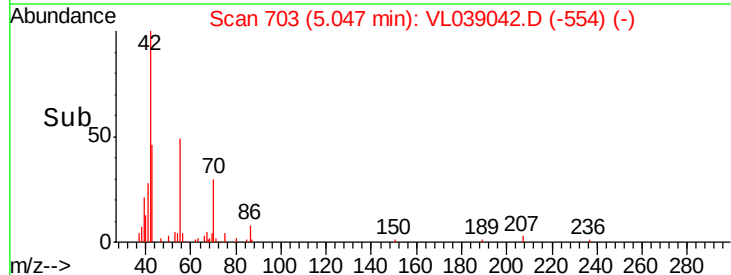
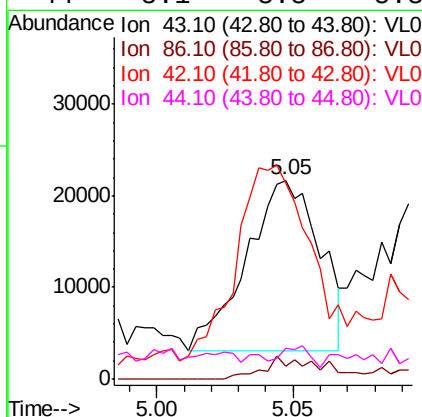
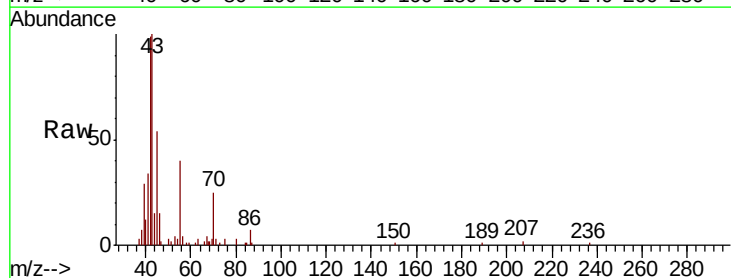
#21
 Allvl Chloride
 Concen: 0.088 ppbv
 RT: 4.18
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 13 May 2022 18:17

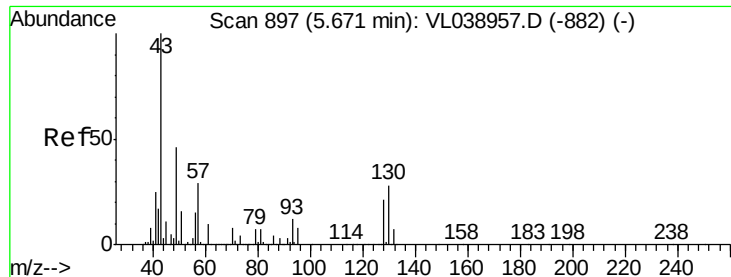
Tot Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.2	36.4#
39	601.9	63.8	95.8#



#23
 Vinyl Acetate
 Concen: 0.529 ppbv
 RT: 5.05 min Scan# 703
 Delta R.T. -0.02 min
 Lab File: VL039042.D
 Acq: 13 May 2022 18:17

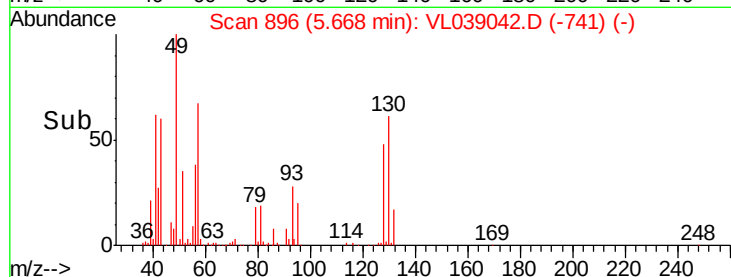
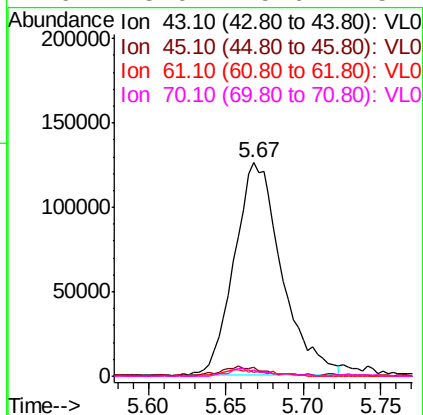
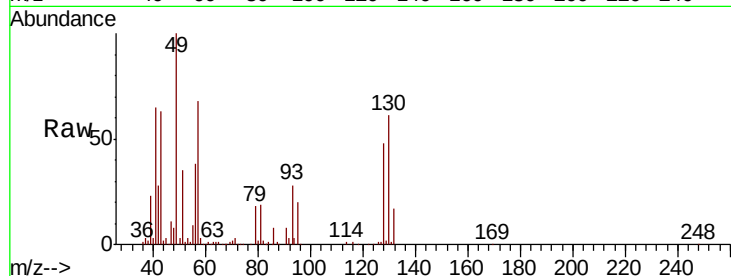
Tgt Ion	Ratio	Lower	Upper
43	100		
86	7.6	6.6	9.8
42	102.1	8.1	12.1#
44	5.1	3.5	5.3





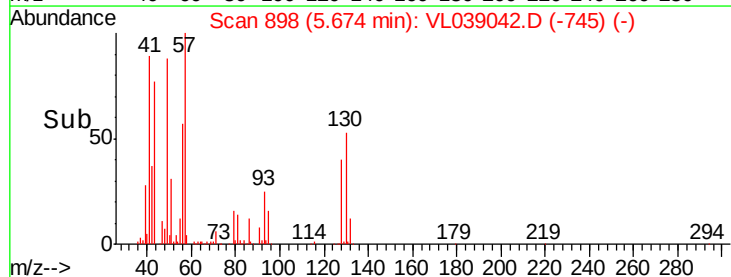
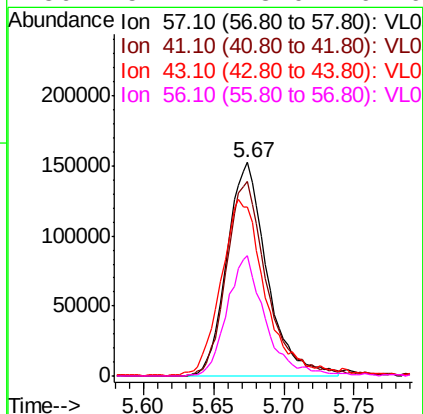
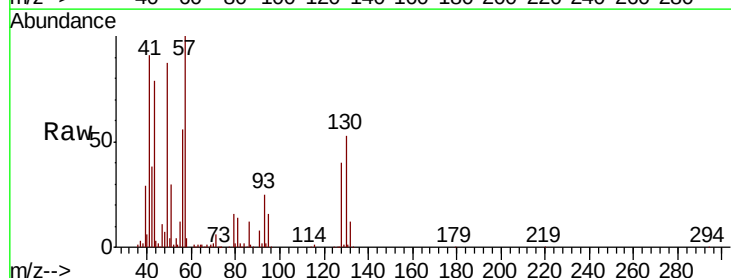
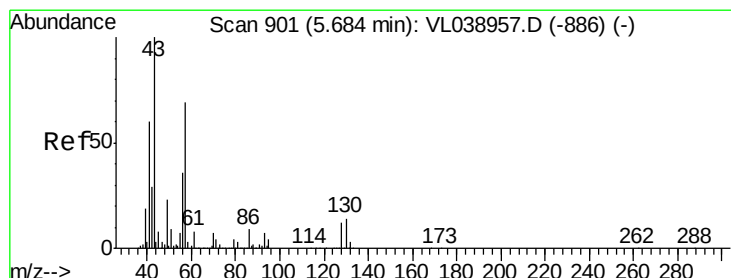
#25
Ethyl Acetate
Concen: 1.340 ppbv
RT: 5.67 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 13 May 2022 18:17

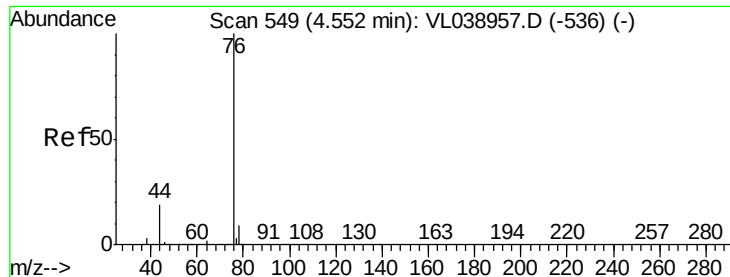
Tot Ion:	43	Resp:	264901
Ion	Ratio	Lower	Upper
43	100		
45	4.7	8.1	12.1#
61	3.3	7.8	11.6#
70	3.0	5.6	8.4#



#26
Hexane
Concen: 3.446 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.01 min
Lab File: VL039042.D
Acq: 13 May 2022 18:17

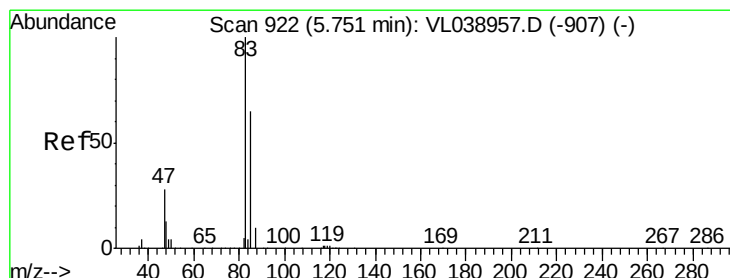
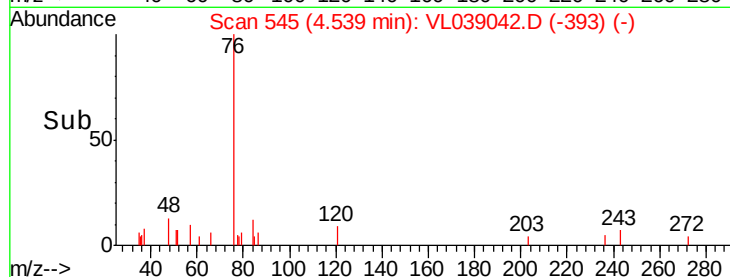
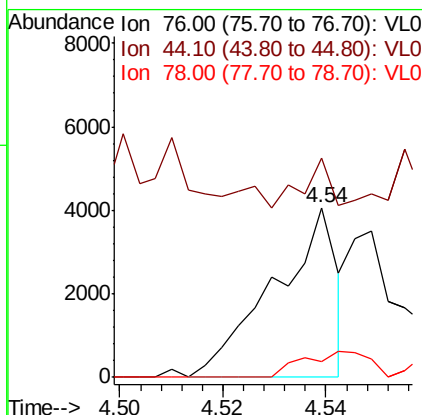
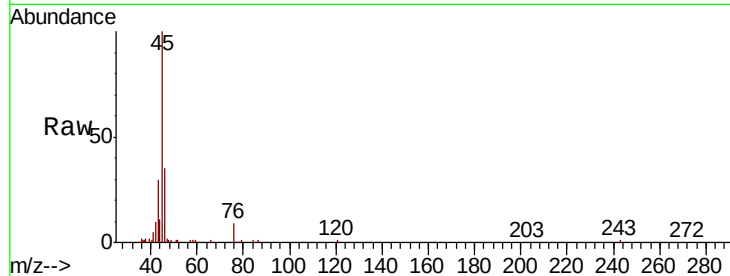
Tgt Ion:	57	Resp:	302658
Ion	Ratio	Lower	Upper
57	100		
41	93.9	75.2	112.8
43	91.1	190.8	286.2#
56	54.2	43.0	64.6





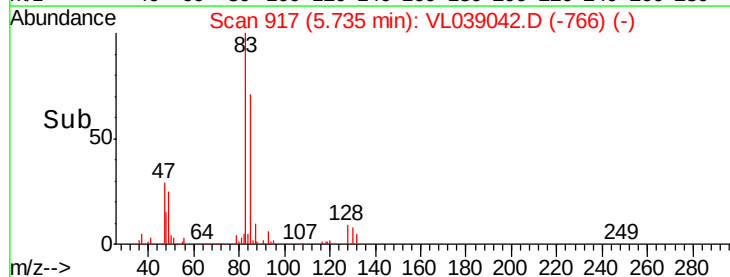
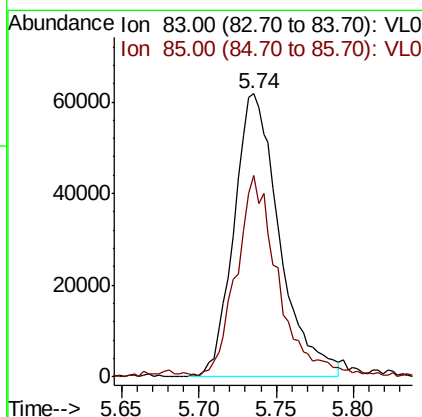
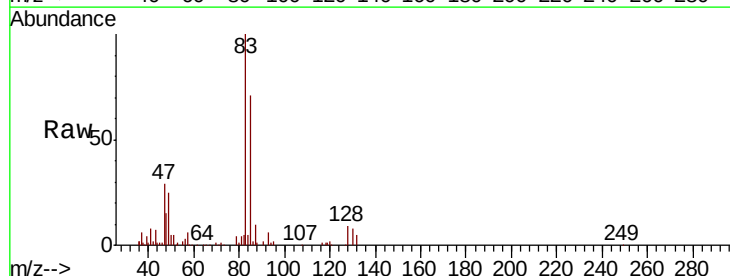
#27
Carbon Disulfide
Concen: 0.041 ppbv
RT: 4.54
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 13 May 2022 18:17

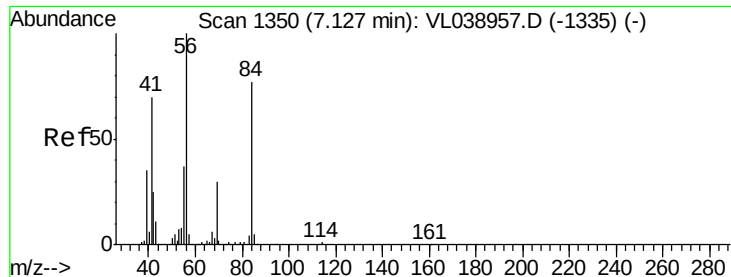
Tot Ion	Ratio	Lower	Upper
76	100		
44	0.0	15.3	22.9#
78	19.8	8.2	12.2#



#29
Chloroform
Concen: 0.890 ppbv
RT: 5.74 min Scan# 917
Delta R.T. -0.02 min
Lab File: VL039042.D
Acq: 13 May 2022 18:17

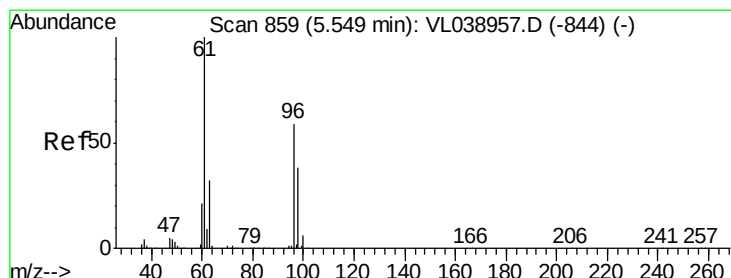
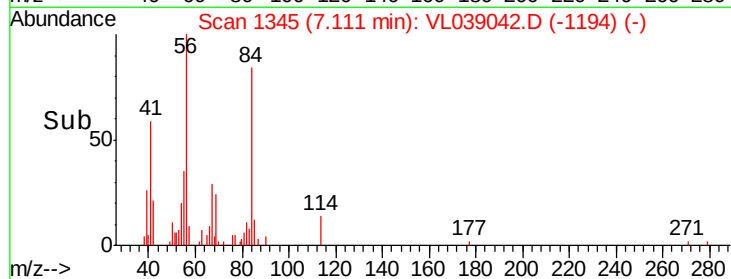
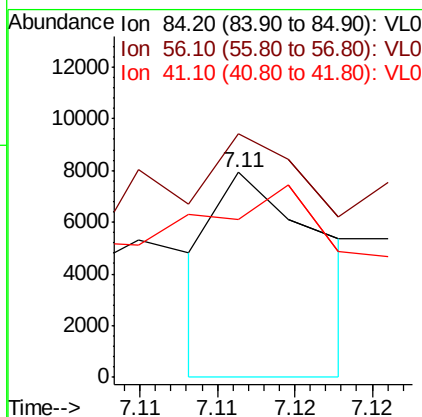
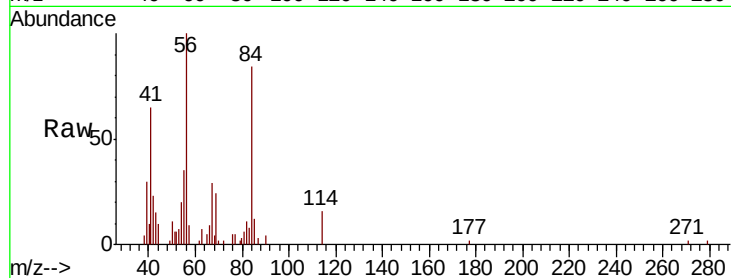
Tgt Ion	Ratio	Lower	Upper
83	100		
85	70.3	51.8	77.6





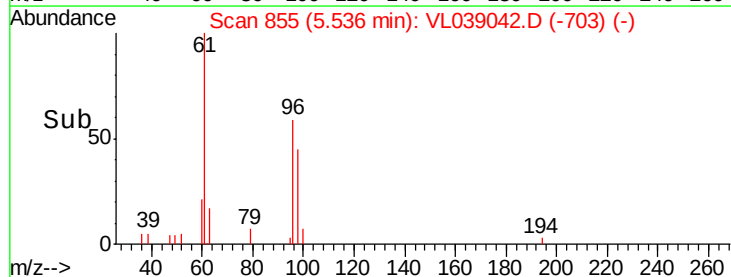
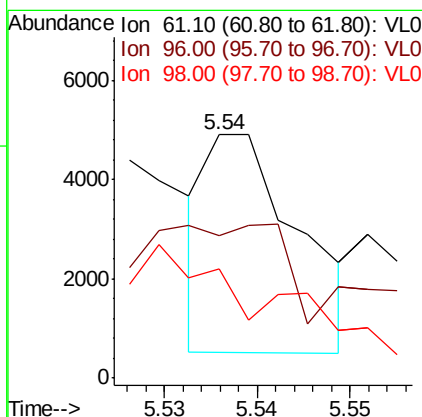
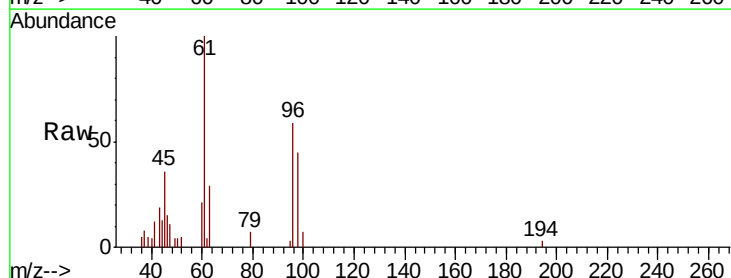
#30
Cvclohexane
Concen: 0.051 ppbv
RT: 7.11
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 13 May 2022 18:17

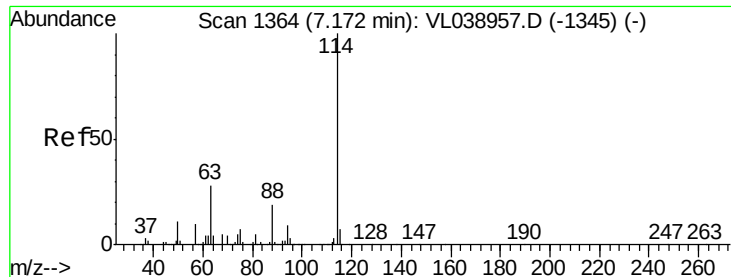
Tot Ion: 84 Resp: 3731
Ion Ratio Lower Upper
84 100
56 0.0 115.3 172.9#
41 412.0 72.0 108.0#



#31
cis-1,2-Dichloroethene
Concen: 0.034 ppbv
RT: 5.54 min Scan# 855
Delta R.T. -0.01 min
Lab File: VL039042.D
Acq: 13 May 2022 18:17

Tgt Ion: 61 Resp: 3027
Ion Ratio Lower Upper
61 100
96 40.7 47.4 71.0#
98 47.5 30.6 45.8#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 13 May 2022 18:17

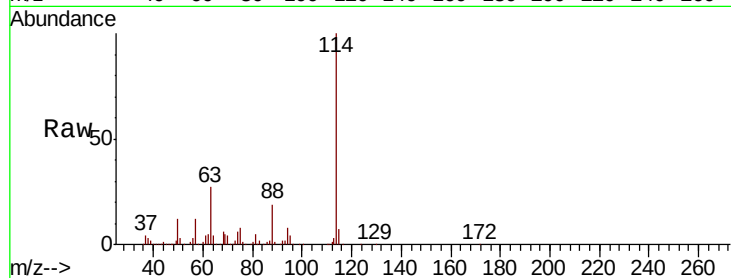
Tot Ion:114 Resp: 2056316

Ion Ratio Lower Upper

114 100

63 28.2 22.6 33.8

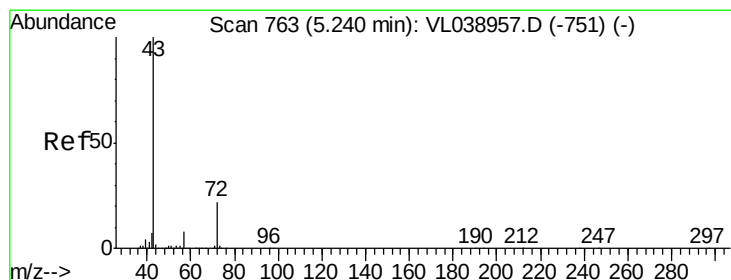
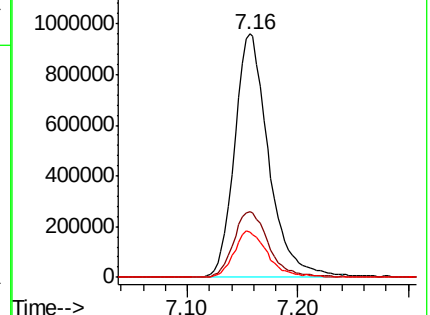
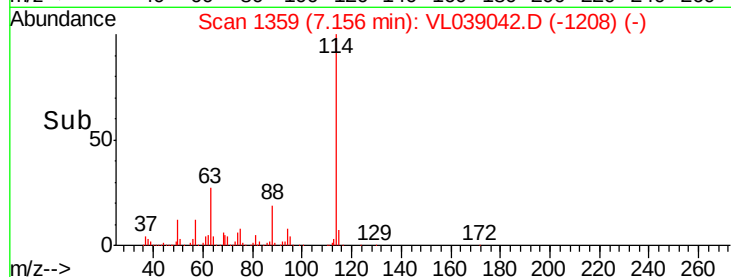
88 18.9 15.4 23.0



Abundance Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 3.596 ppbv

RT: 5.23 min Scan# 760

Delta R.T. -0.01 min

Lab File: VL039042.D

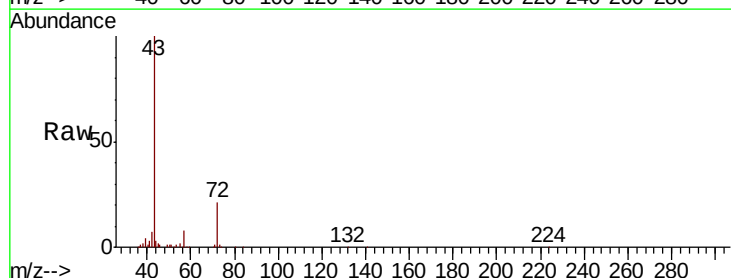
Acq: 13 May 2022 18:17

Tgt Ion: 43 Resp: 377270

Ion Ratio Lower Upper

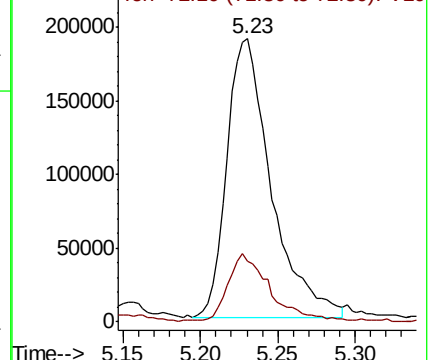
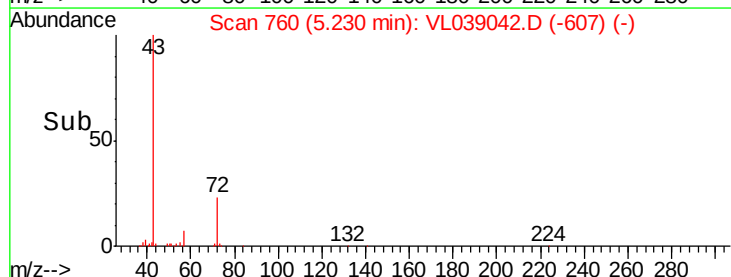
43 100

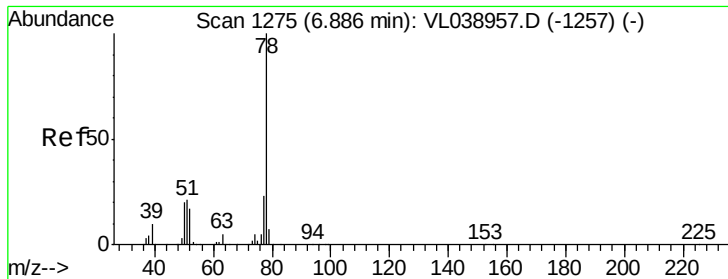
72 24.1 17.8 26.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

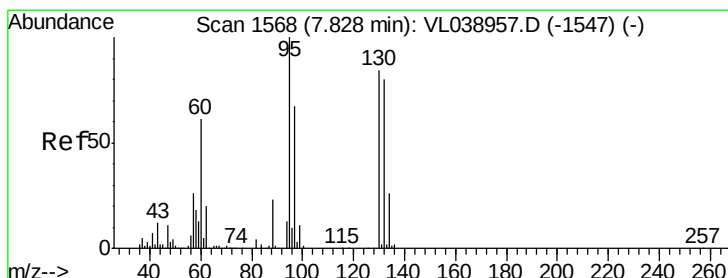
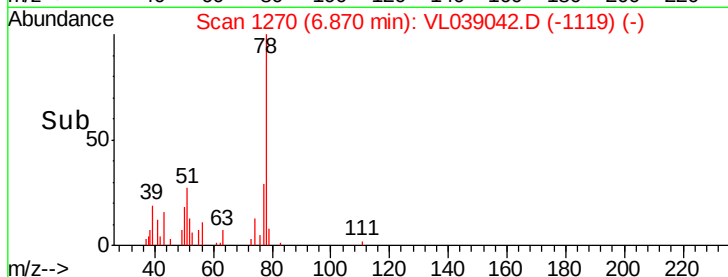
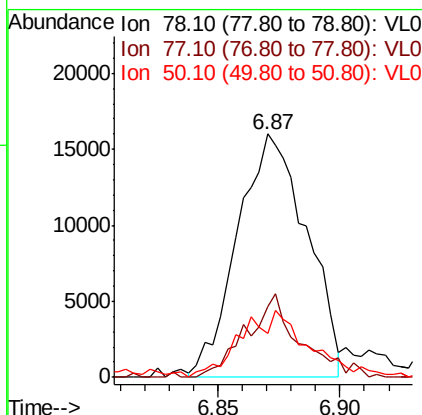
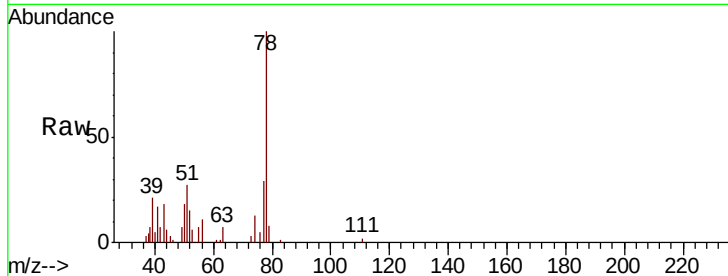
Ion 72.10 (71.80 to 72.80): VL0





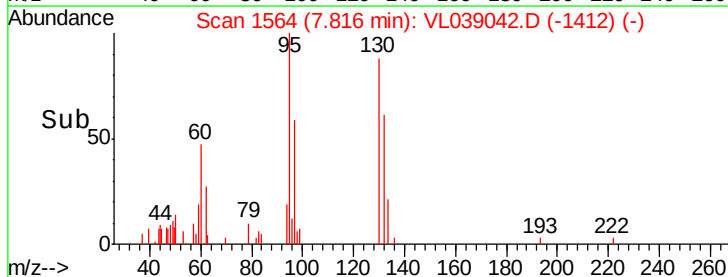
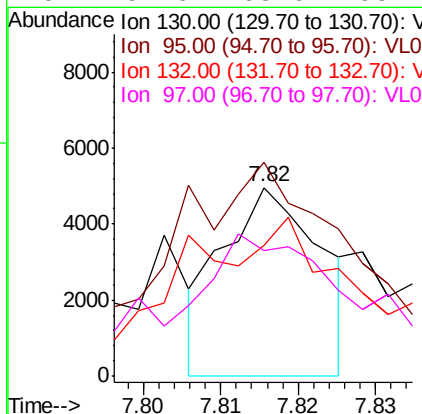
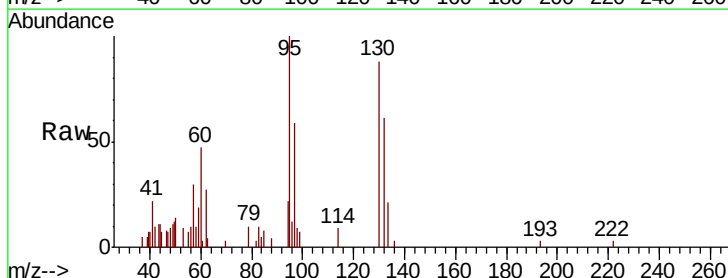
#36
Benzene
Concen: 0.179 ppbv
RT: 6.87
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 13 May 2022 18:17

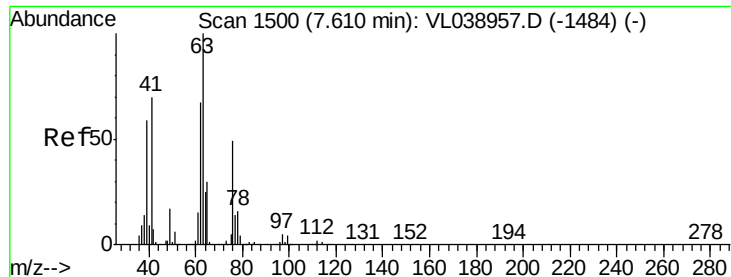
Tot Ion	78	Resp	31484
Ion Ratio	Lower	Upper	
78	100		
77	29.7	18.6	28.0#
50	18.4	15.6	23.4



#38
Trichloroethene
Concen: 0.056 ppbv
RT: 7.82 min Scan# 1564
Delta R.T. -0.01 min
Lab File: VL039042.D
Acq: 13 May 2022 18:17

Tgt Ion	130	Resp	4387
Ion Ratio	Lower	Upper	
130	100		
95	90.2	94.8	142.2#
132	22.0	75.8	113.8#
97	54.6	63.6	95.4#





#39

1,2-Dichloropropane

Concen: 8.367 ppbv

RT: 7.16 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: A-1

Acq: 13 May 2022 18:17

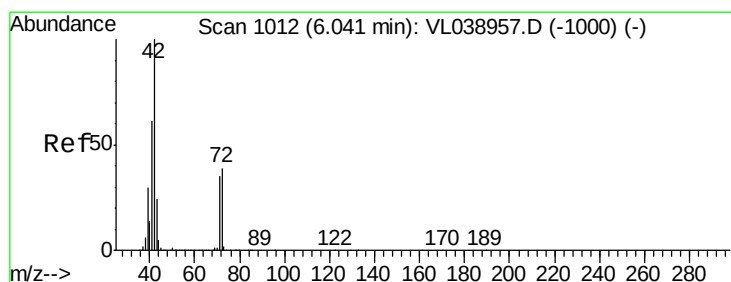
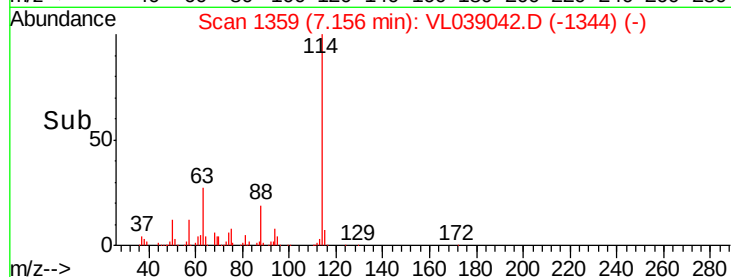
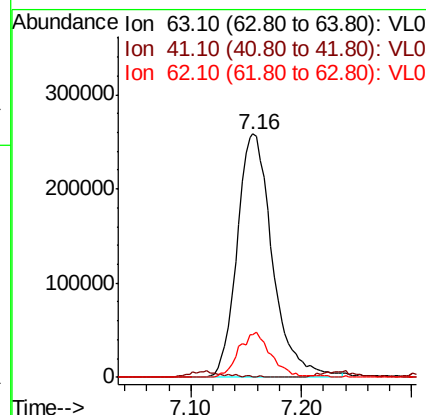
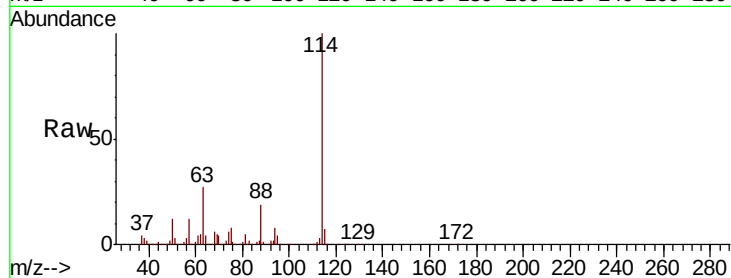
Tot Ion: 63 Resp: 572879

Ion Ratio Lower Upper

63 100

41 0.0 55.9 83.9#

62 17.8 53.8 80.6#



#41

Tetrahydrofuran

Concen: 0.886 ppbv

RT: 6.04 min Scan# 1012

Delta R.T. 0.00 min

Lab File: VL039042.D

Acq: 13 May 2022 18:17

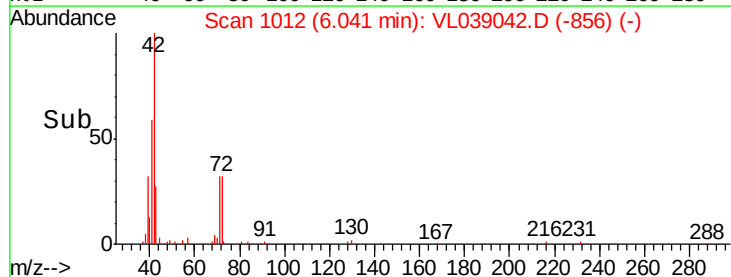
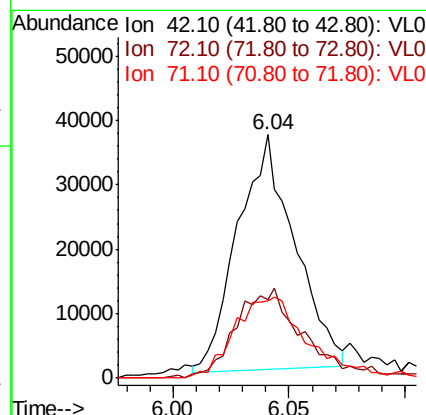
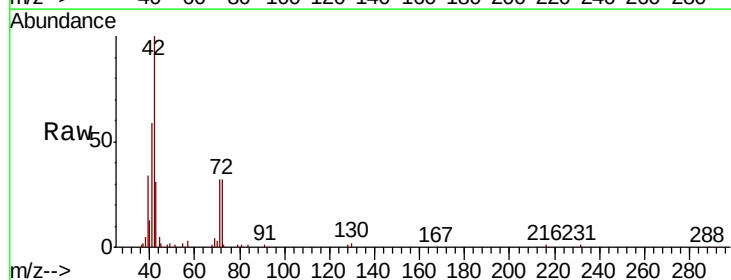
Tgt Ion: 42 Resp: 62436

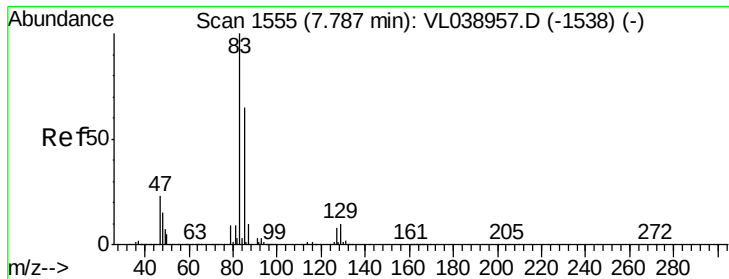
Ion Ratio Lower Upper

42 100

72 47.1 31.8 47.6

71 45.3 30.6 45.8





#42

Bromodichloromethane

Concen: 0.052 ppbv

RT: 7.77 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 13 May 2022 18:17

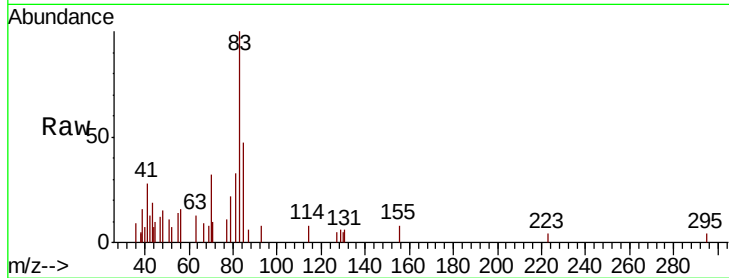
Tot Ion: 83 Resp: 7702

Ion Ratio Lower Upper

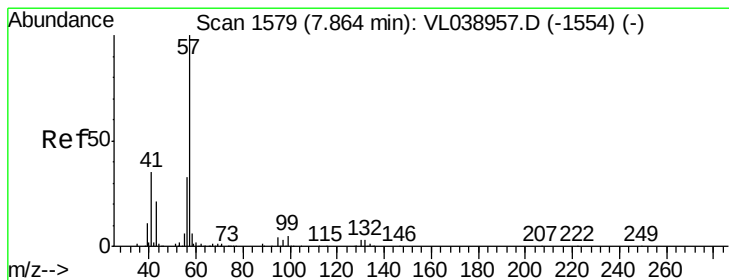
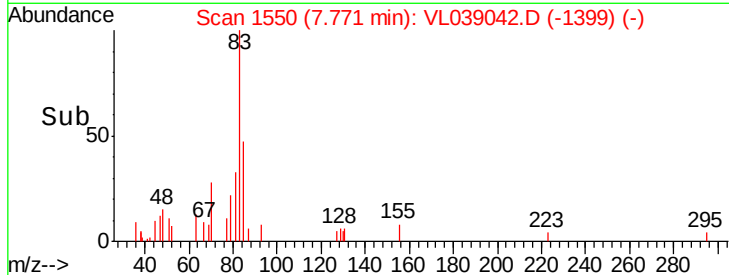
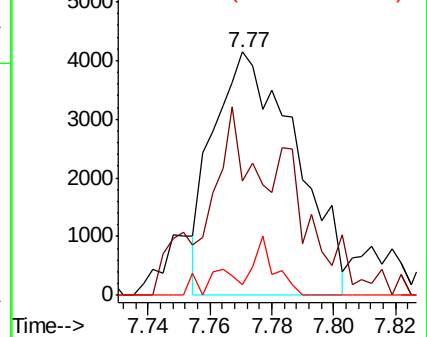
83 100

85 29.2 52.0 78.0#

127 5.1 6.0 9.0#



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 126.90 (126.60 to 127.60): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.047 ppbv

RT: 7.84 min Scan# 1572

Delta R.T. -0.02 min

Lab File: VL039042.D

Acq: 13 May 2022 18:17

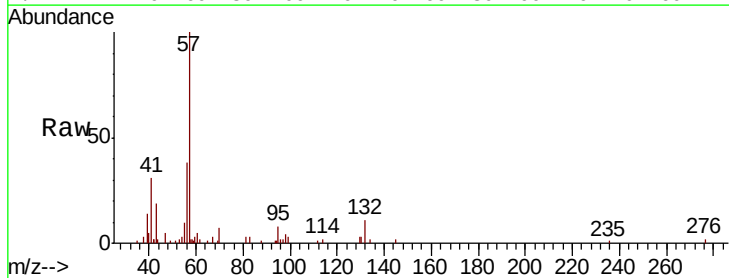
Tgt Ion: 57 Resp: 14534

Ion Ratio Lower Upper

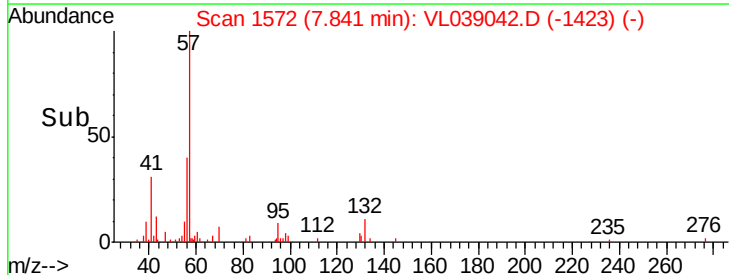
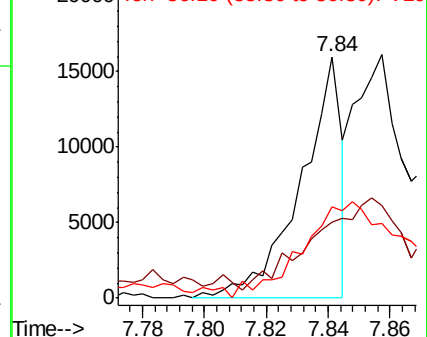
57 100

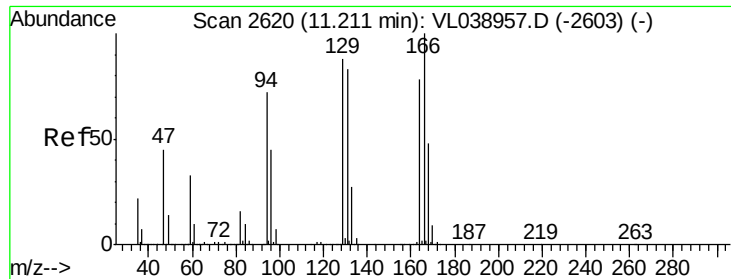
41 0.0 26.3 39.5#

56 0.0 24.6 37.0#



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





#52

Tetrachloroethene

Concen: 78.511 ppbv

RT: 11.21

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 13 May 2022 18:17

Tot Ion:164 Resp: 4937206

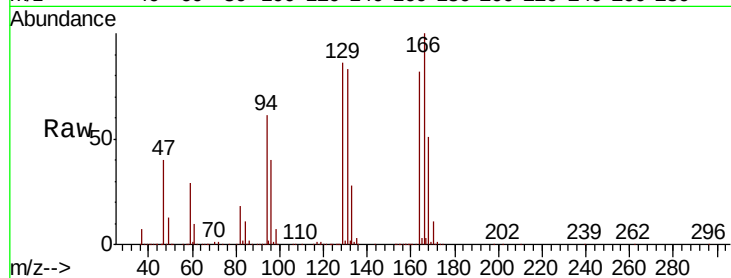
Ion Ratio Lower Upper

164 100

166 122.5 102.5 153.7

129 105.5 90.1 135.1

131 101.1 84.8 127.2

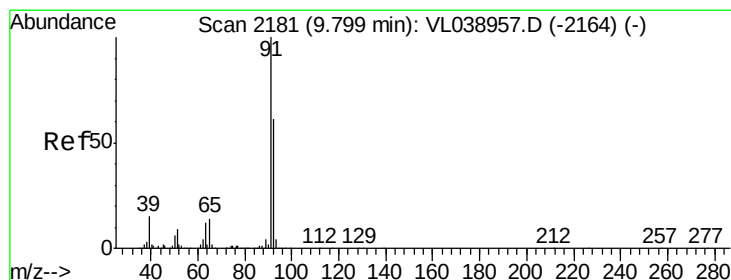
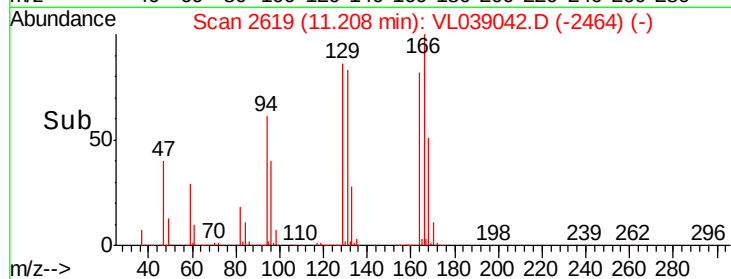
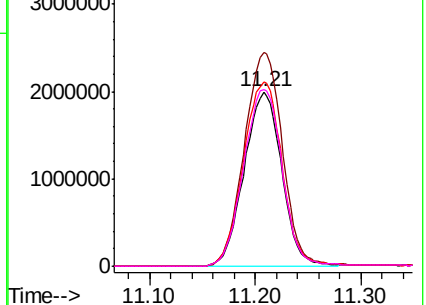


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.541 ppbv

RT: 9.78 min Scan# 2175

Delta R.T. -0.02 min

Lab File: VL039042.D

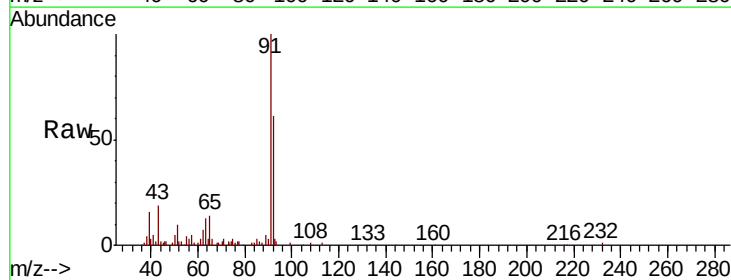
Acq: 13 May 2022 18:17

Tgt Ion: 91 Resp: 106738

Ion Ratio Lower Upper

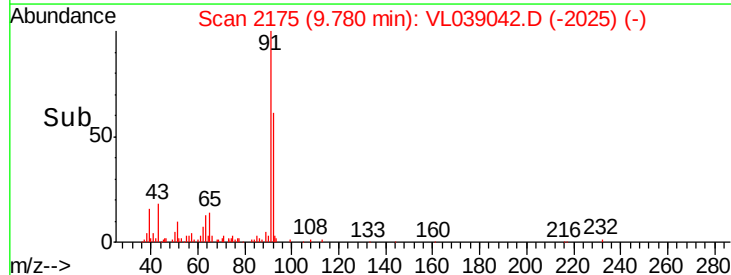
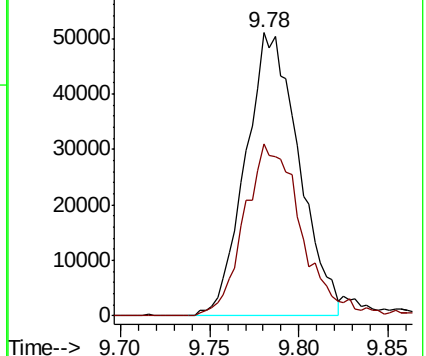
91 100

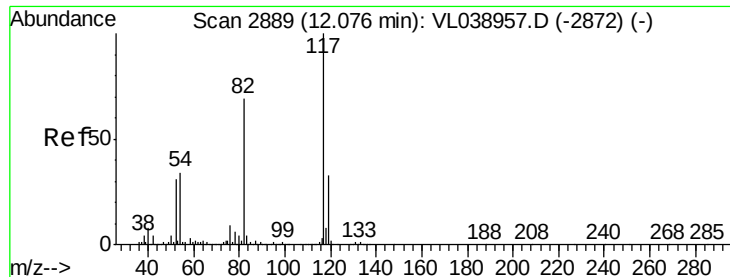
92 65.3 48.2 72.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

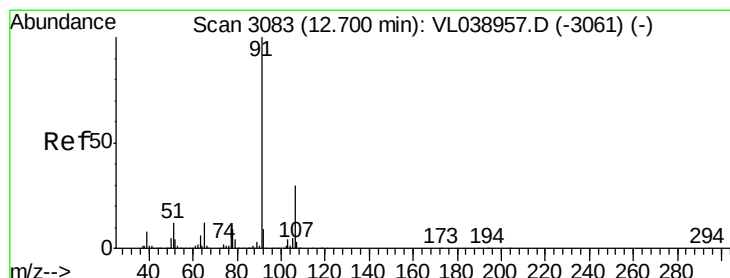
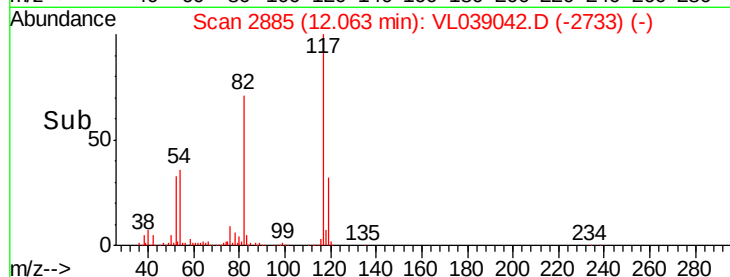
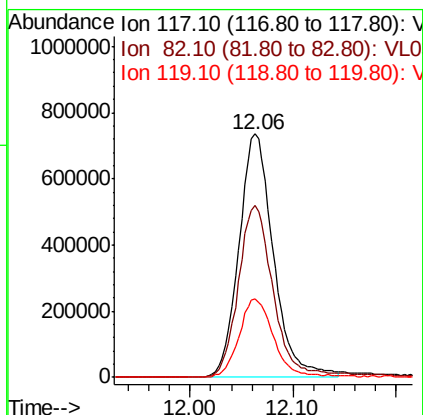
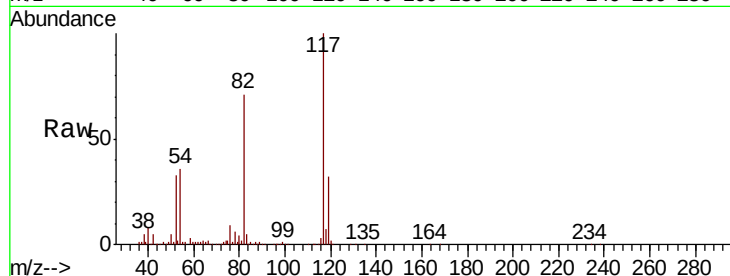




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.06 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 13 May 2022 18:17

Tot Ion:117 Resp: 1713202

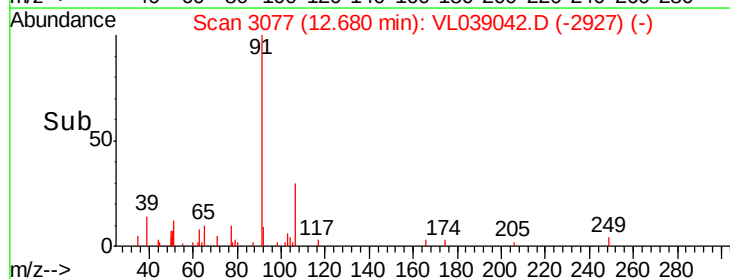
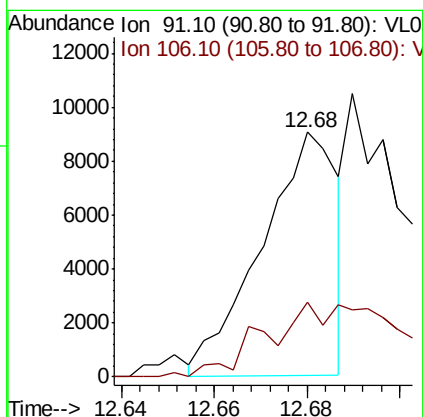
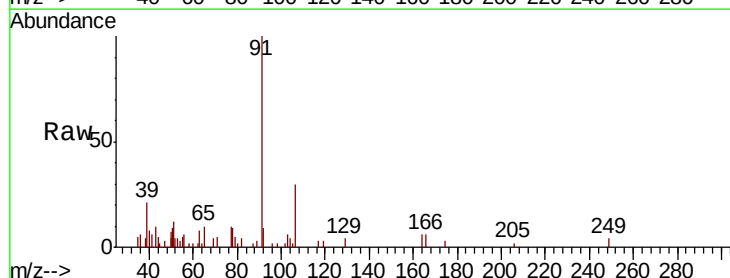
Ion	Ratio	Lower	Upper
117	100		
82	73.5	57.0	85.6
119	33.2	27.2	40.8

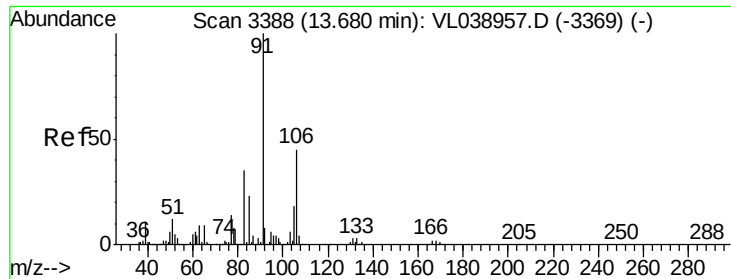


#58
Ethyl Benzene
Concen: 0.041 ppbv
RT: 12.68 min Scan# 3077
Delta R.T.: -0.02 min
Lab File: VL039042.D
Acq: 13 May 2022 18:17

Tgt Ion: 91 Resp: 10200

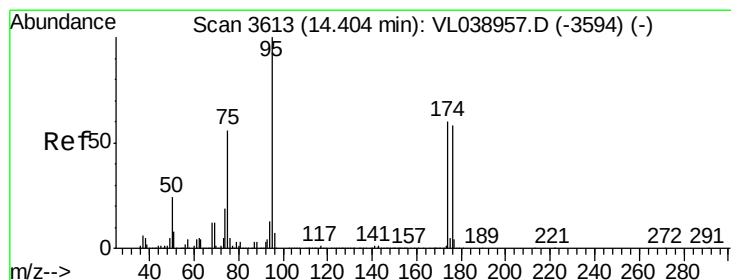
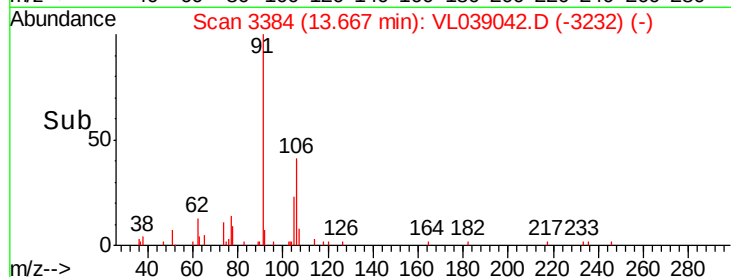
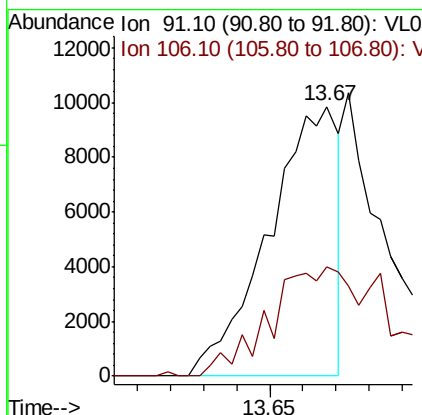
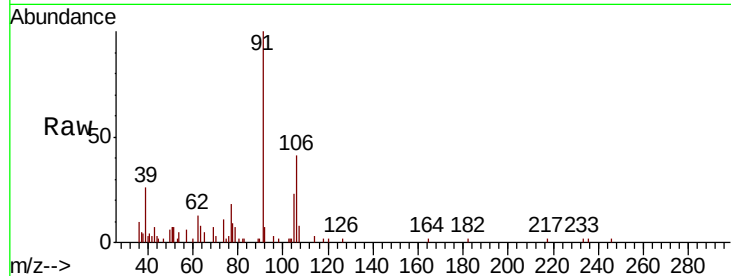
Ion	Ratio	Lower	Upper
91	100		
106	29.3	24.2	36.4





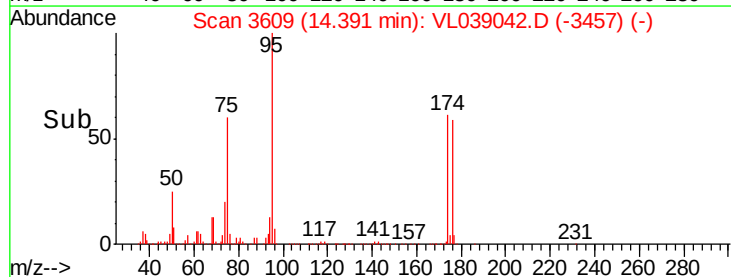
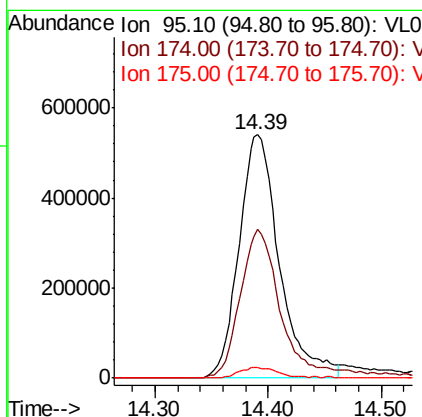
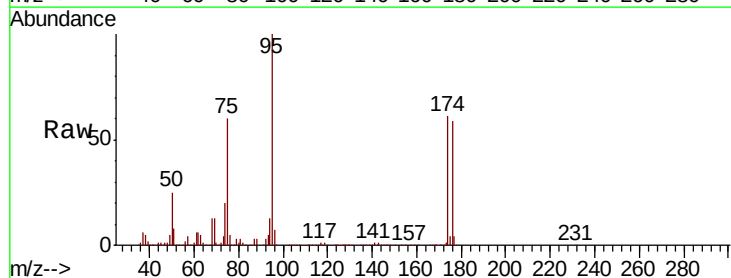
#60
o-Xylene
Concen: 0.073 ppbv
RT: 13.67 min
Delta R.T.: MSVOA_1
Lab File: ClientSampleId :
Acq: 13 May 2022 18:17

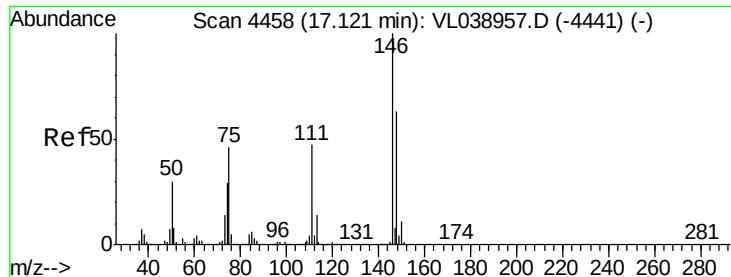
Tot Ion: 91 Resp: 14425
Ion Ratio Lower Upper
91 100
106 72.3 22.2 66.6#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.918 ppbv
RT: 14.39 min Scan# 3609
Delta R.T.: -0.01 min
Lab File: VL039042.D
Acq: 13 May 2022 18:17

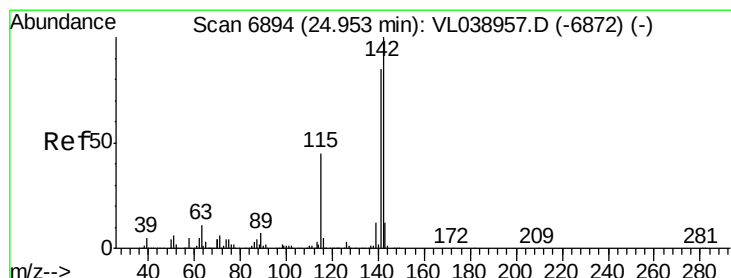
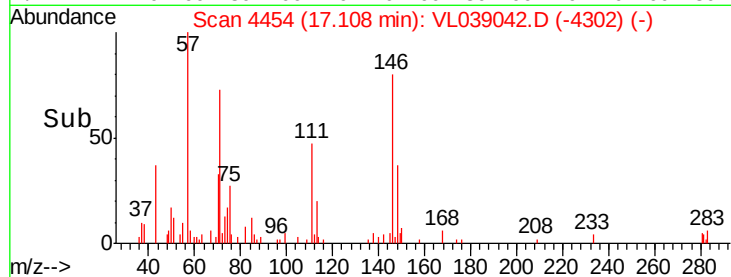
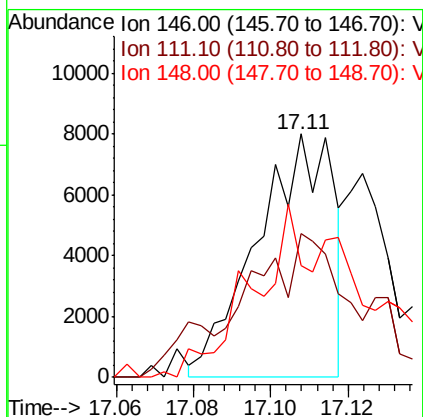
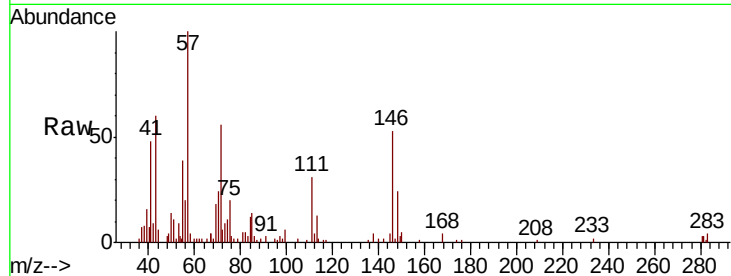
Tgt Ion: 95 Resp: 1345679
Ion Ratio Lower Upper
95 100
174 64.7 50.8 76.2
175 4.6 3.8 5.6





#76
 1,4-Dichlorobenzene
 Concen: 0.091 ppbv
 RT: 17.11 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampled :
 Acq: 13 May 2022 18:17

Tot Ion:146 Resp: 10927
 Ion Ratio Lower Upper
 146 100
 111 110.5 23.6 71.0#
 148 113.0 32.2 96.6#



#80
 Naphthalene, 2-methyl-
 Concen: 0.039 ppbv
 RT: 24.94 min Scan# 6889
 Delta R.T. -0.02 min
 Lab File: VL039042.D
 Acq: 13 May 2022 18:17

Tgt Ion:142 Resp: 2131
 Ion Ratio Lower Upper
 142 100
 141 87.2 70.8 106.2
 115 46.1 35.1 52.7

