

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040522\
 Data File : VL038827.D
 Acq On : 6 Apr 2022 10:26
 Operator : SY/AP
 Sample : N2159-01DUP
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 07 03:10:40 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL040522AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Apr 06 06:12:53 2022
 QLast Update : Wed Apr 06 06:12:53 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1403678	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.19	114	3629471	10.00	ppbv	0.01
55) Chlorobenzene-d5	12.10	117	3139291	10.00	ppbv	0.02

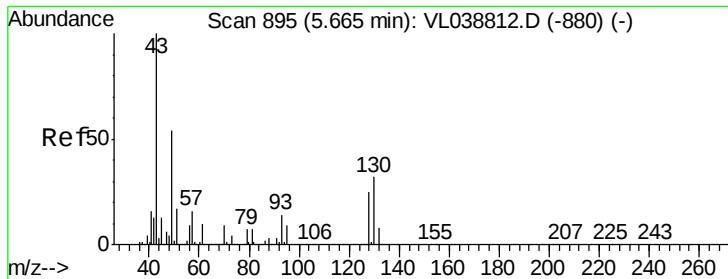
System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2456606	10.32	ppbv	0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.20%

Target Compounds

					Ovalue
2) Dichlorodifluoromethane	3.06	85	47121	0.237 ppbv	100
3) Chlorodifluoromethane	2.98	51	195248	1.140 ppbv #	73
4) Chloromethane	3.16	50	47464	0.535 ppbv	100
9) Propene	3.03	41	59145	0.653 ppbv #	74
10) Heptane	8.13	43	46874	0.205 ppbv	98
11) Trichlorofluoromethane	3.96	101	33107	0.207 ppbv	91
13) Ethanol	3.61	45	7131128	1294.681 ppbv #	100
15) Acetone	3.86	43	526454	3.767 ppbv	100
16) 1,3-Butadiene	3.33	39	3700	0.046 ppbv #	9
17) tert-Butyl alcohol	4.30	59	10671	0.085 ppbv #	72
19) Isopropyl Alcohol	3.98	45	391705	5.484 ppbv #	100
20) Methylene Chloride	4.36	84	136130	2.686 ppbv	85
23) Vinyl Acetate	5.08	43	12025	0.088 ppbv #	1
25) Ethyl Acetate	5.70	43	345305	0.974 ppbv #	79
26) Hexane	5.70	57	440053	2.726 ppbv #	43
27) Carbon Disulfide	4.56	76	89682	0.606 ppbv #	83
29) Chloroform	5.76	83	165032	0.731 ppbv	94
30) Cyclohexane	7.14	84	16865	0.119 ppbv #	20
34) 2-Butanone	5.26	43	43131	0.301 ppbv	92
35) Carbon Tetrachloride	7.03	117	6716	0.031 ppbv #	43
36) Benzene	6.89	78	28617	0.087 ppbv	94
38) Trichloroethene	7.84	130	197643	1.459 ppbv	94
39) 1,2-Dichloropropane	7.18	63	900183	7.128 ppbv #	26
41) Tetrahydrofuran	6.32	42	5973	0.044 ppbv #	39
44) 2,2,4-Trimethylpentane	7.88	57	113876	0.204 ppbv #	83
52) Tetrachloroethene	11.24	164	5141	0.045 ppbv	91
53) Toluene	9.82	91	702790	1.844 ppbv	98
58) Ethyl Benzene	12.72	91	45570	0.097 ppbv	93
59) m/p-Xylene	13.00	91	31828	0.081 ppbv #	30
60) o-Xylene	13.70	91	73379	0.199 ppbv	100
69) p-Isopropyltoluene	17.66	119	25976	0.046 ppbv #	23
74) 1,2,4-Trimethylbenzene	16.78	105	19985	0.048 ppbv #	63

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 6 Apr 2022 10:20

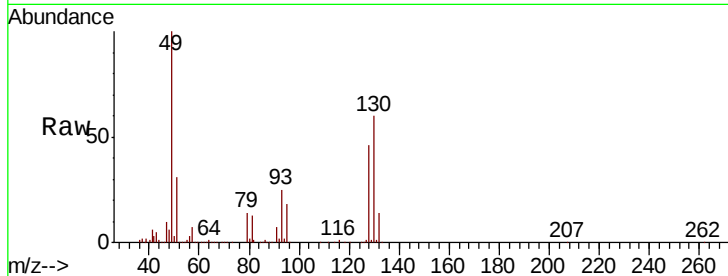
Tot Ion: 49 Resp: 1403678

Ion Ratio Lower Upper

49 100

128 46.4 24.1 72.3

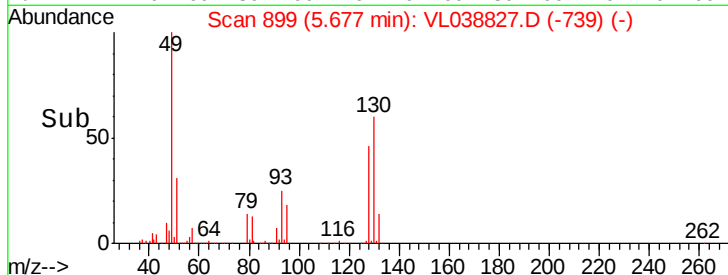
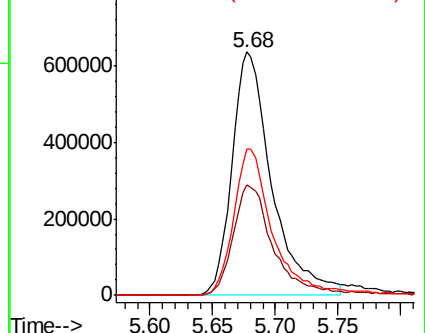
130 60.3 30.9 92.8



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: 0.237 ppbv

RT: 3.06 min Scan# 85

Delta R.T. 0.01 min

Lab File: VL038827.D

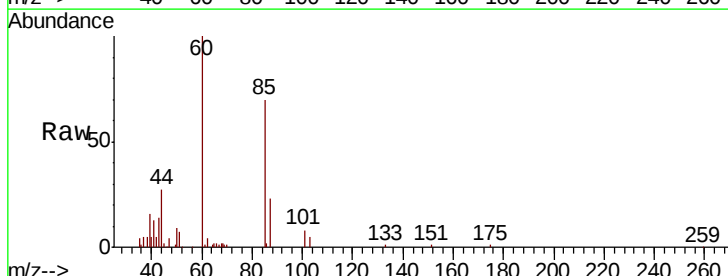
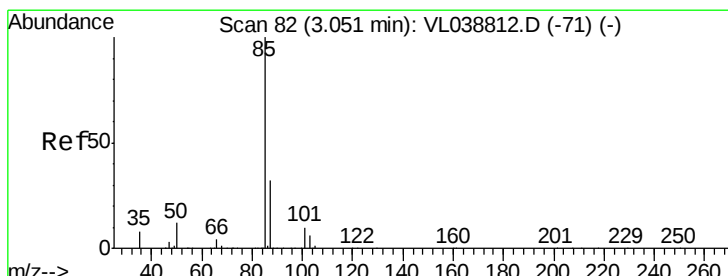
Acq: 6 Apr 2022 10:26

Tgt Ion: 85 Resp: 47121

Ion Ratio Lower Upper

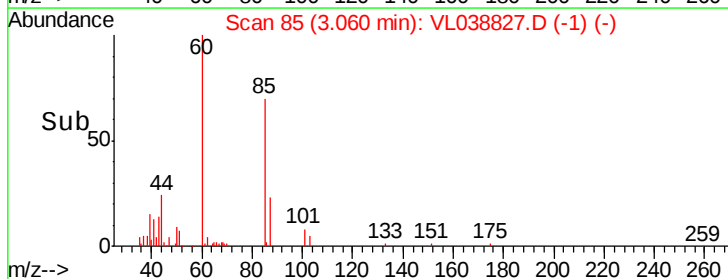
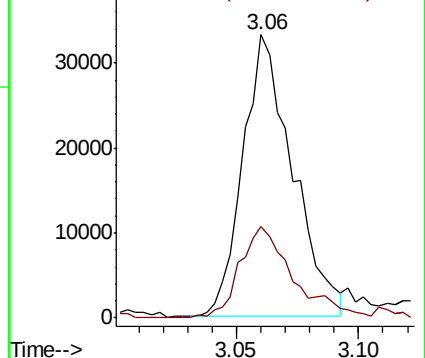
85 100

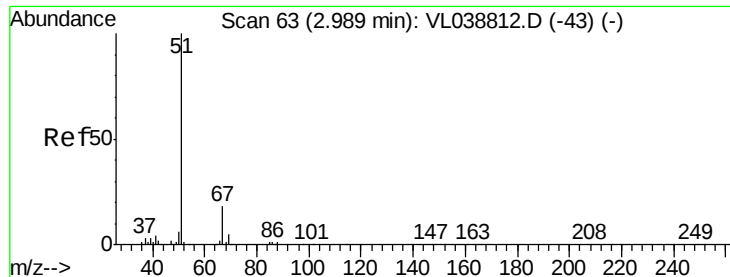
87 32.3 25.9 38.9



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.140 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

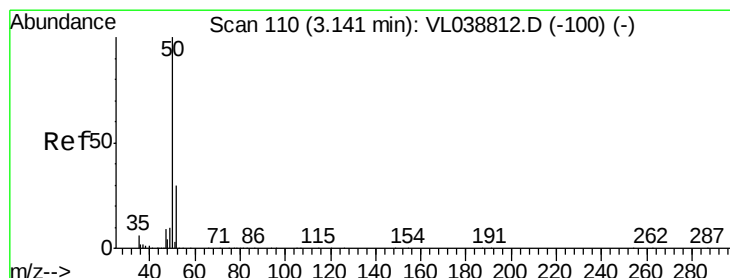
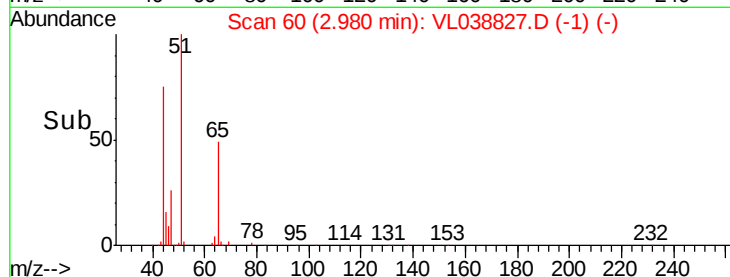
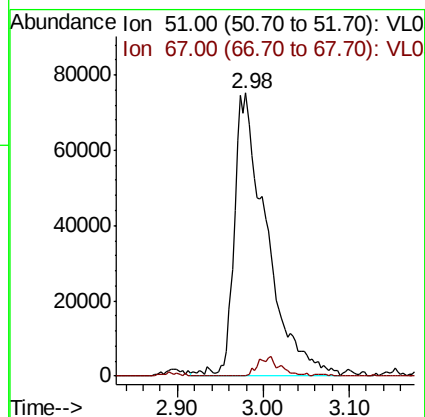
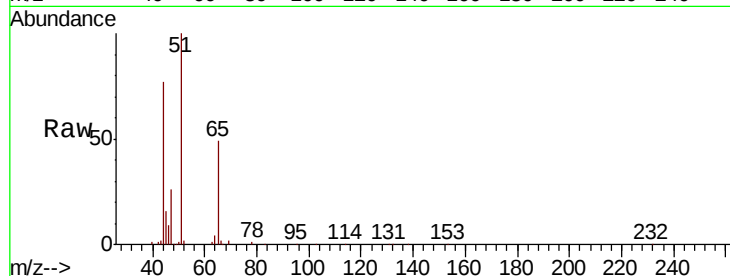
Acq: 6 Apr 2022 10:26

Tot Ion: 51 Resp: 195248

Ion Ratio Lower Upper

51 100

67 5.2 13.4 20.0#



#4

Chloromethane

Concen: 0.535 ppbv

RT: 3.16 min Scan# 115

Delta R.T. 0.02 min

Lab File: VL038827.D

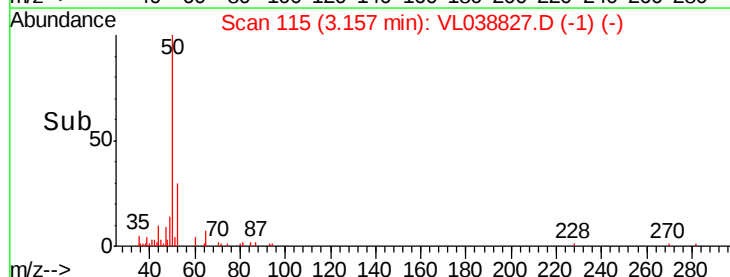
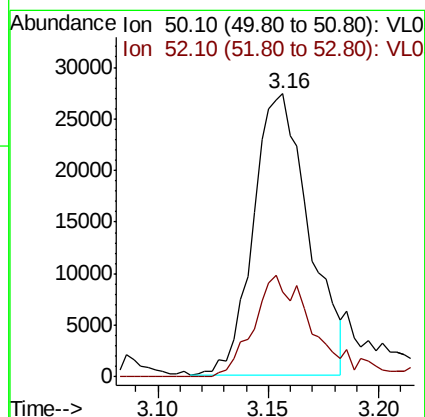
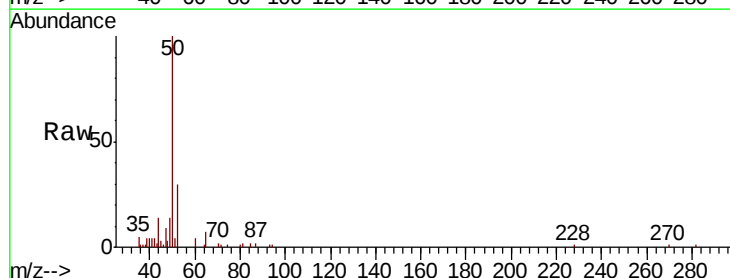
Acq: 6 Apr 2022 10:26

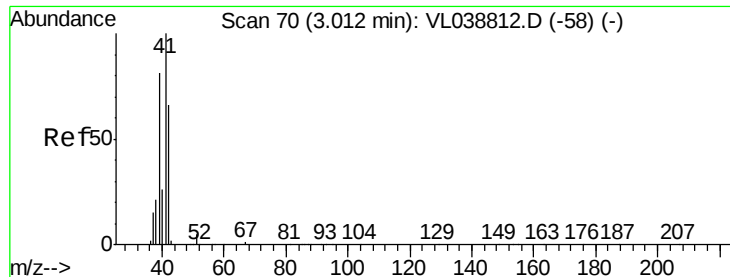
Tgt Ion: 50 Resp: 47464

Ion Ratio Lower Upper

50 100

52 30.2 24.3 36.5





#9

Propene

Concen: 0.653 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

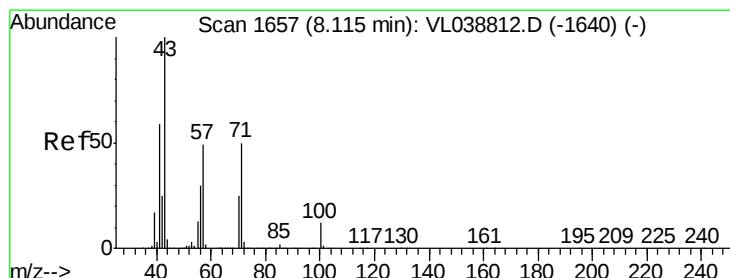
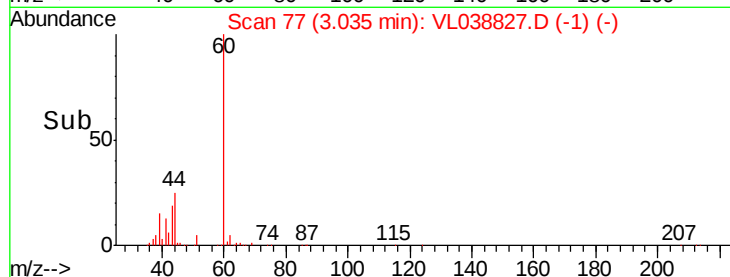
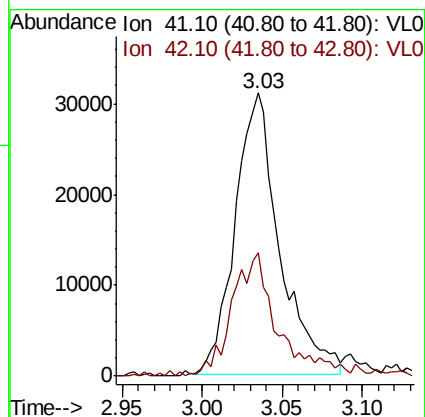
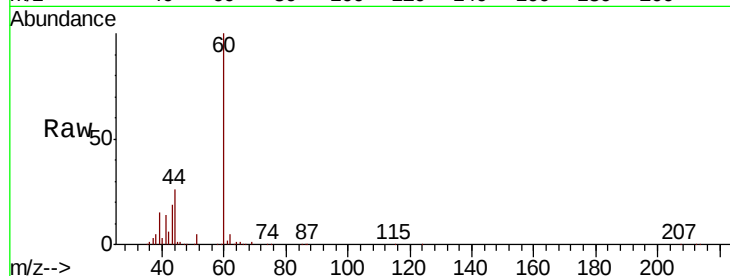
Acq: 6 Apr 2022 10:26

Tot Ion: 41 Resp: 59145

Ion Ratio Lower Upper

41 100

42 46.8 54.2 81.4#



#10

Heptane

Concen: 0.205 ppbv

RT: 8.13 min Scan# 1662

Delta R.T. 0.02 min

Lab File: VL038827.D

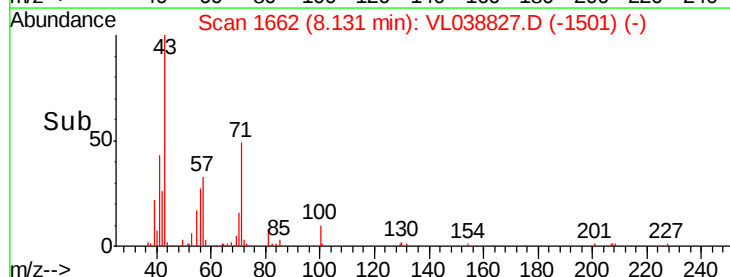
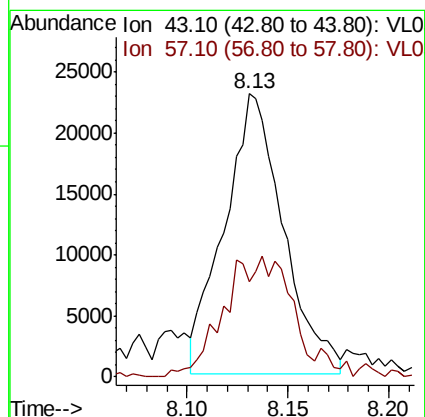
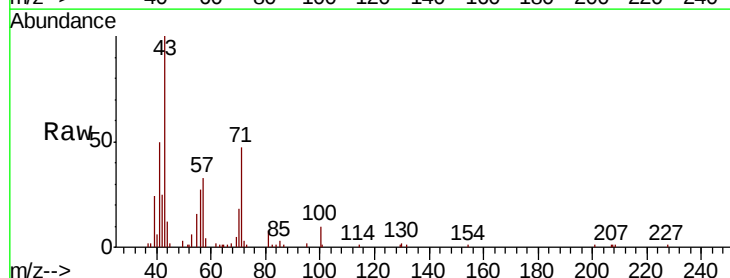
Acq: 6 Apr 2022 10:26

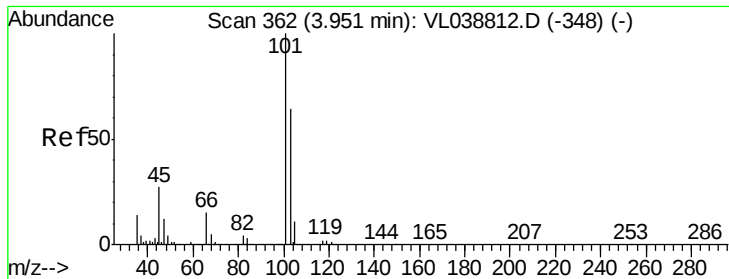
Tgt Ion: 43 Resp: 46874

Ion Ratio Lower Upper

43 100

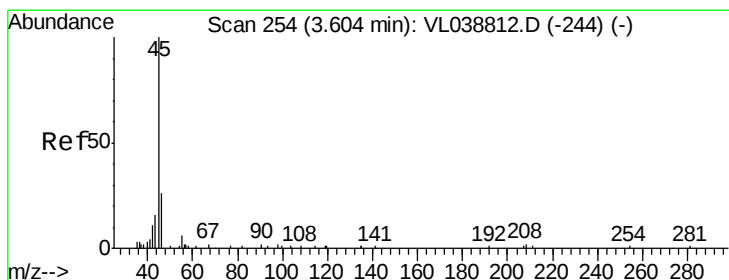
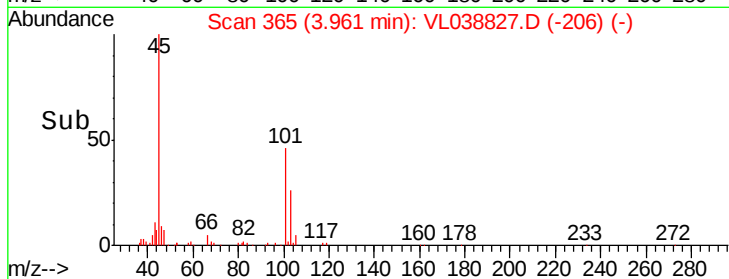
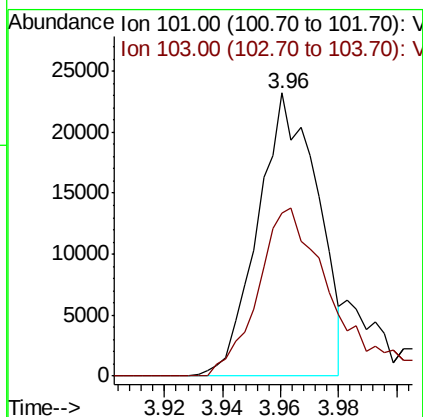
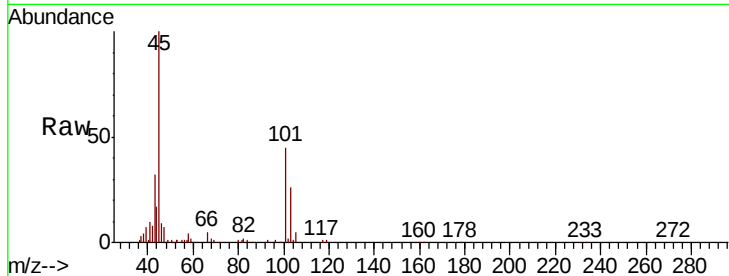
57 50.7 39.3 58.9





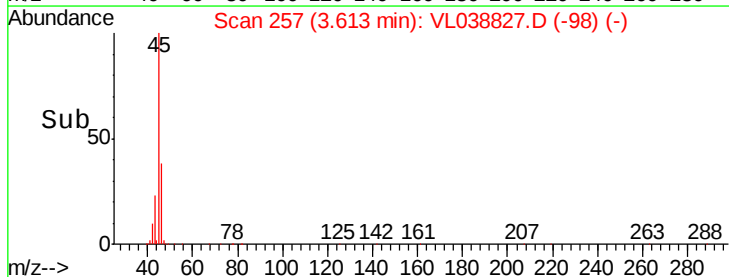
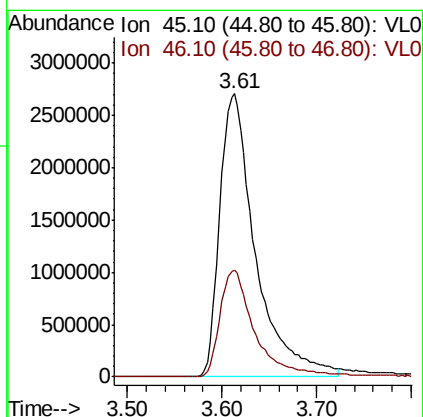
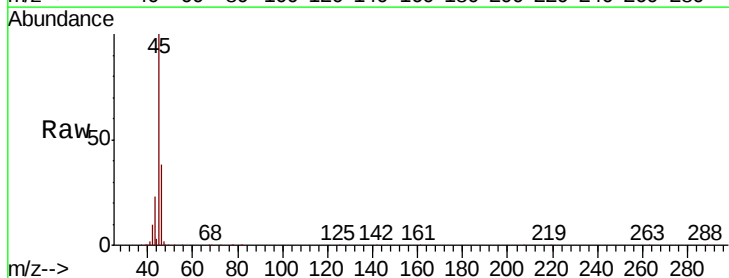
#11
 Trichlorofluoromethane
 Concen: 0.207 ppbv
 RT: 3.96
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 6 Apr 2022 10:26

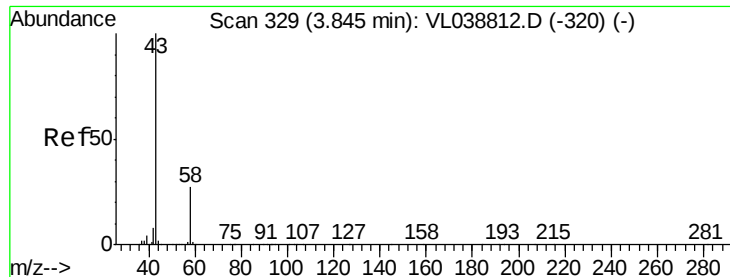
Tot Ion: 101 Resp: 33107
 Ion Ratio Lower Upper
 101 100
 103 57.5 51.4 77.0



#13
 Ethanol
 Concen: 1294.681 ppbv
 RT: 3.61 min Scan# 257
 Delta R.T. 0.01 min
 Lab File: VL038827.D
 Acq: 6 Apr 2022 10:26

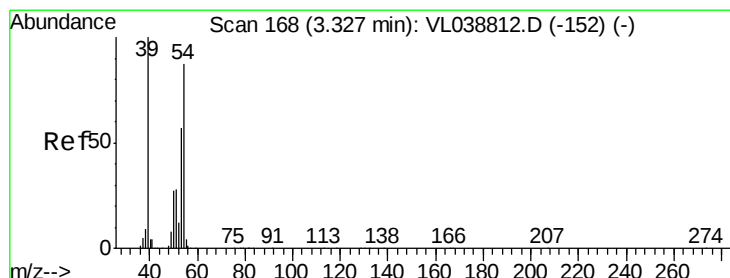
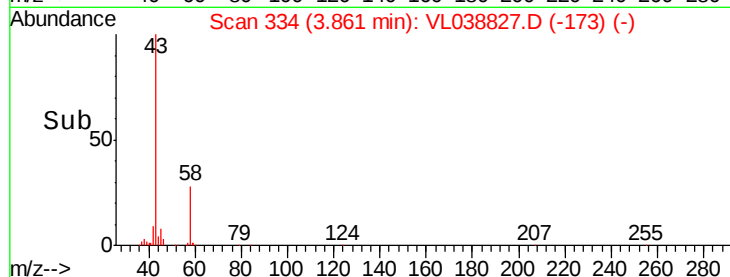
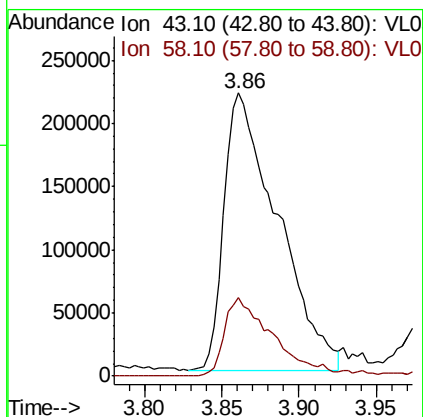
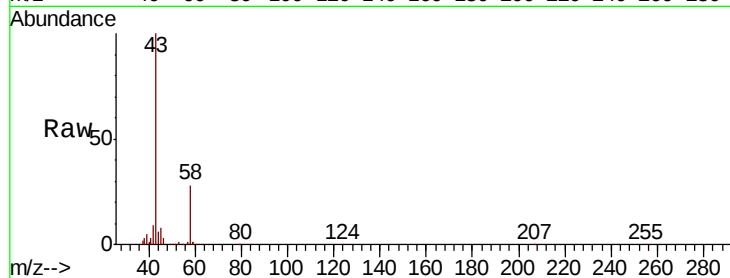
Tgt Ion: 45 Resp: 7131128
 Ion Ratio Lower Upper
 45 100
 46 37.6 0.0 0.0#





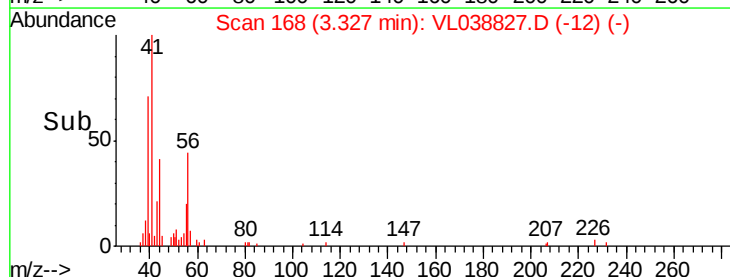
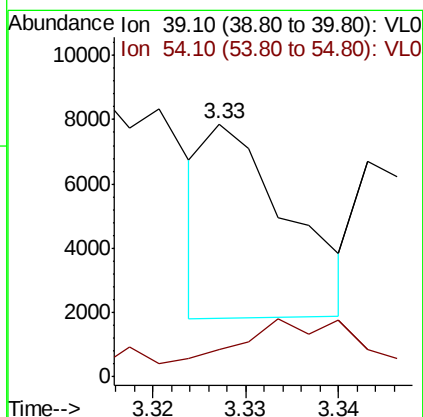
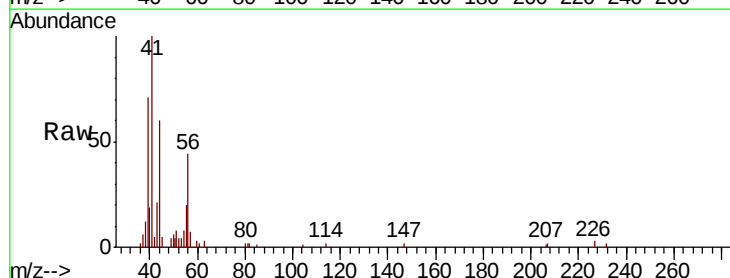
#15
Acetone
Concen: 3.767 ppbv
RT: 3.86
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 6 Apr 2022 10:26

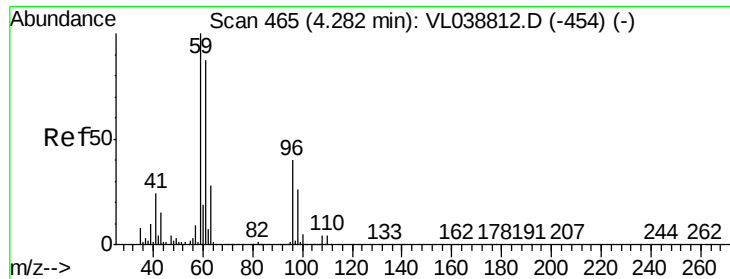
Tot Ion: 43 Resp: 526454
Ion Ratio Lower Upper
43 100
58 28.0 22.5 33.7



#16
1,3-Butadiene
Concen: 0.046 ppbv
RT: 3.33 min Scan# 168
Delta R.T. 0.00 min
Lab File: VL038827.D
Acq: 6 Apr 2022 10:26

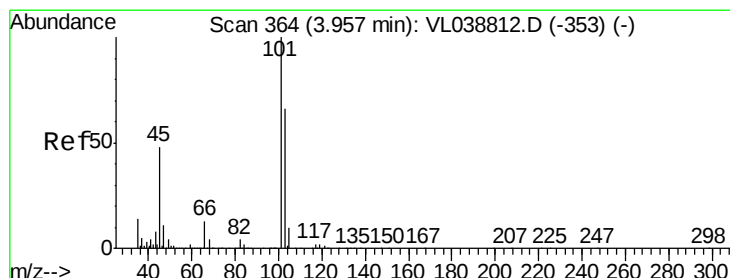
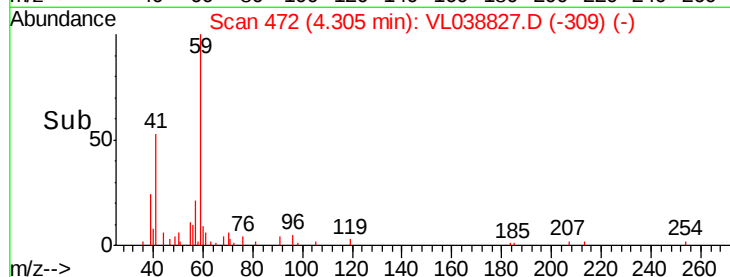
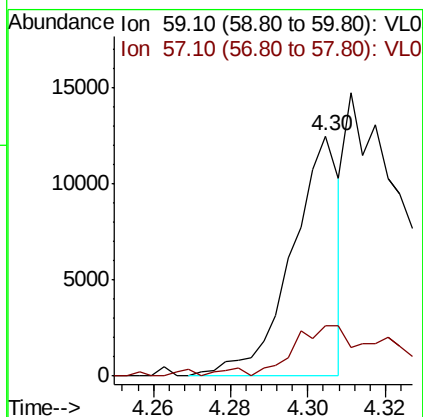
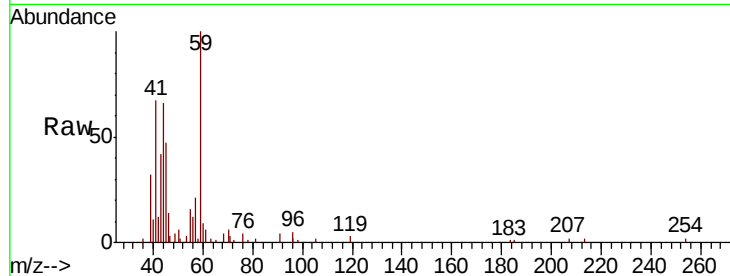
Tgt Ion: 39 Resp: 3700
Ion Ratio Lower Upper
39 100
54 0.0 64.8 97.2#





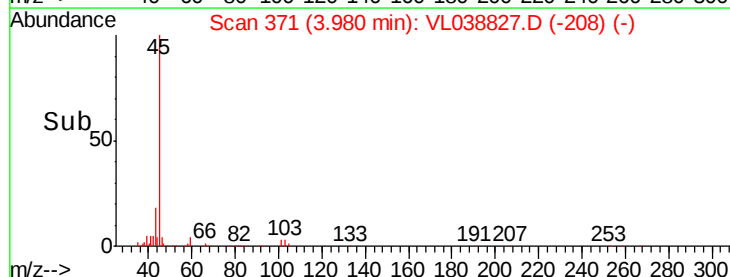
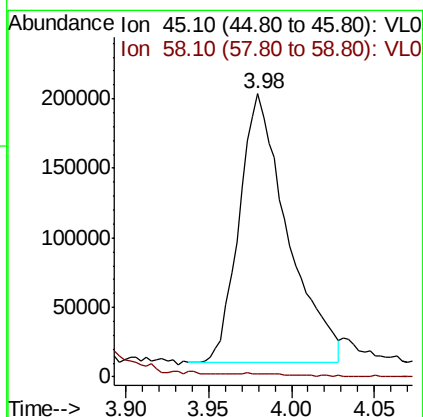
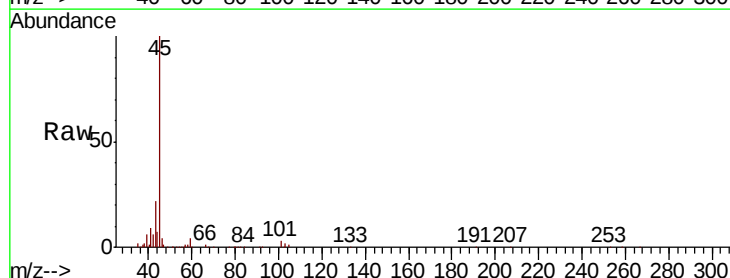
#17
 tert-Butyl alcohol
 Concen: 0.085 ppbv
 RT: 4.30
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 6 Apr 2022 10:26

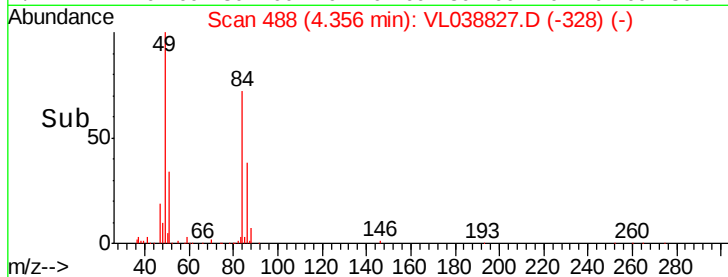
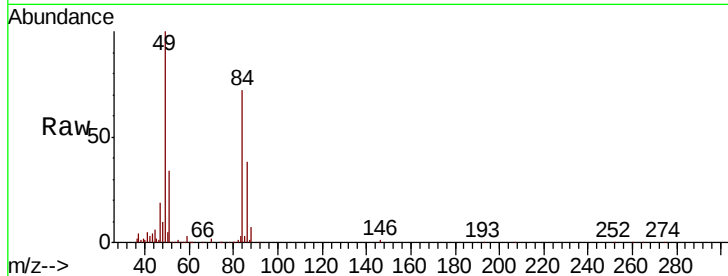
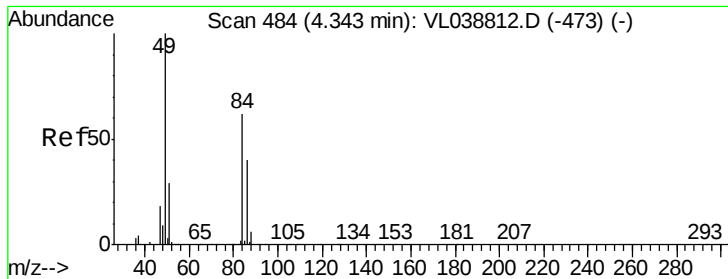
Tot Ion: 59 Resp: 10671
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.5 12.7#



#19
 Isopropyl Alcohol
 Concen: 5.484 ppbv
 RT: 3.98 min Scan# 371
 Delta R.T. 0.02 min
 Lab File: VL038827.D
 Acq: 6 Apr 2022 10:26

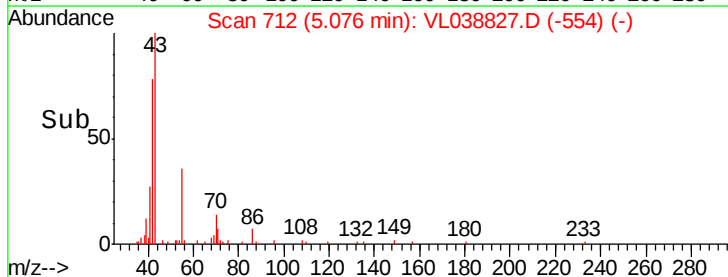
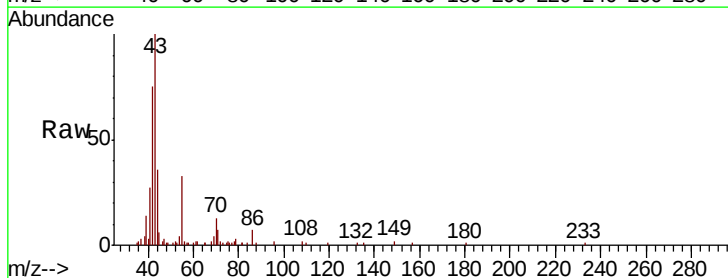
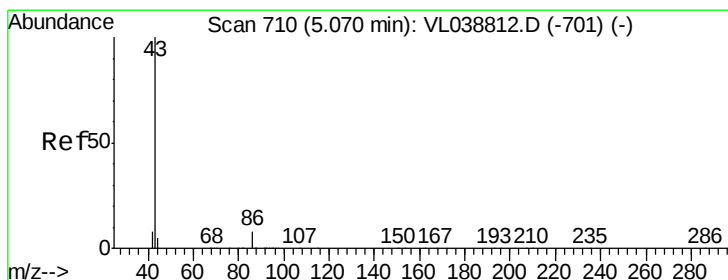
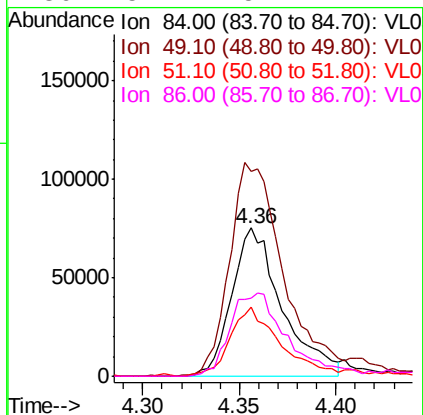
Tgt Ion: 45 Resp: 391705
 Ion Ratio Lower Upper
 45 100
 58 1.2 0.0 0.0#





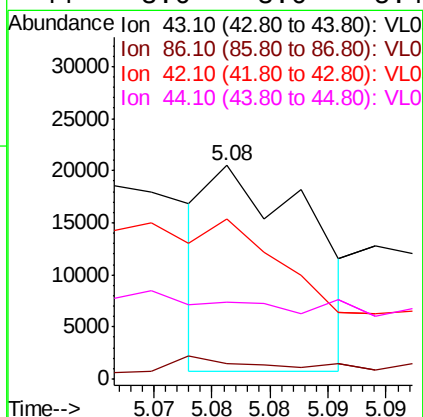
#20
Methvlene Chloride
Concen: 2.686 ppbv
RT: 4.36
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 6 Apr 2022 10:20

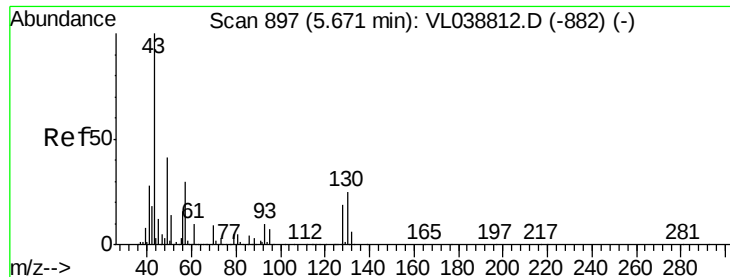
Tot Ion:	84	Resp:	136130
Ion	Ratio	Lower	Upper
84	100		
49	137.5	129.4	194.0
51	45.1	37.4	56.2
86	52.4	51.4	77.2



#23
Vinyl Acetate
Concen: 0.088 ppbv
RT: 5.08 min Scan# 712
Delta R.T. 0.01 min
Lab File: VL038827.D
Acq: 6 Apr 2022 10:26

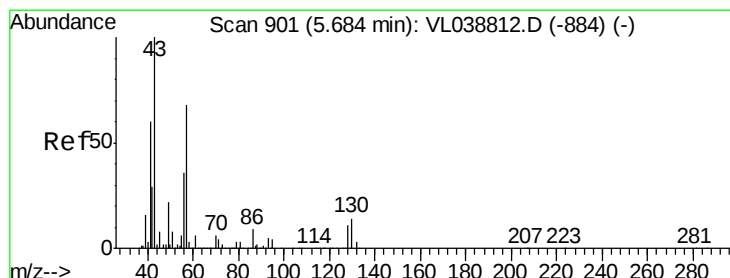
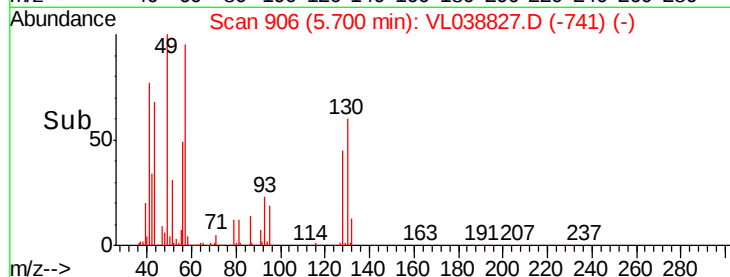
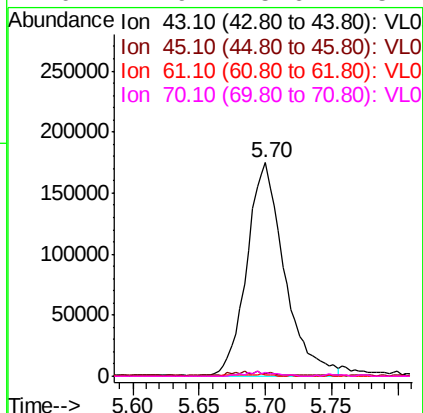
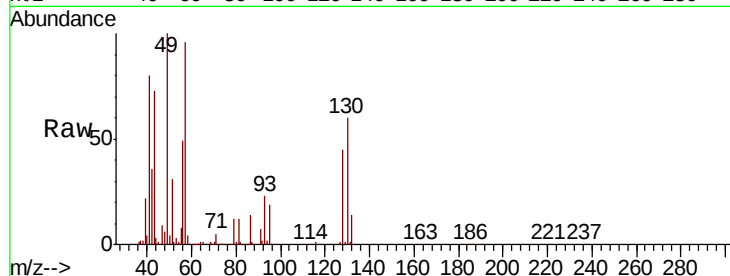
Tgt Ion:	43	Resp:	12025
Ion	Ratio	Lower	Upper
43	100		
86	0.0	5.8	8.6#
42	100.3	7.8	11.6#
44	3.6	3.6	5.4





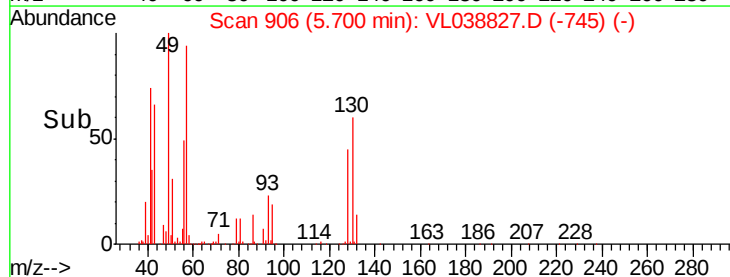
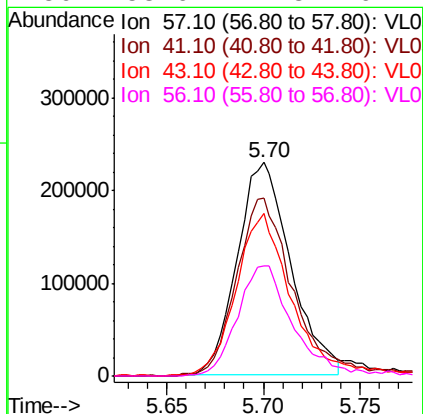
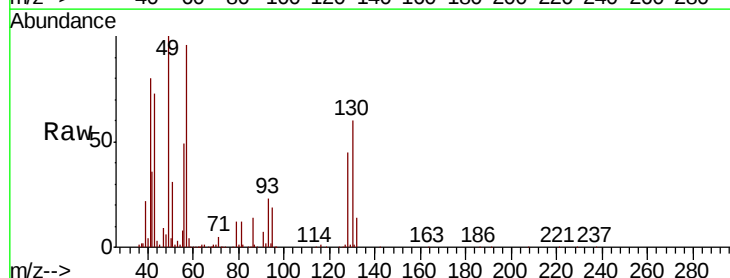
#25
Ethyl Acetate
Concen: 0.974 ppbv
RT: 5.70 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 6 Apr 2022 10:20

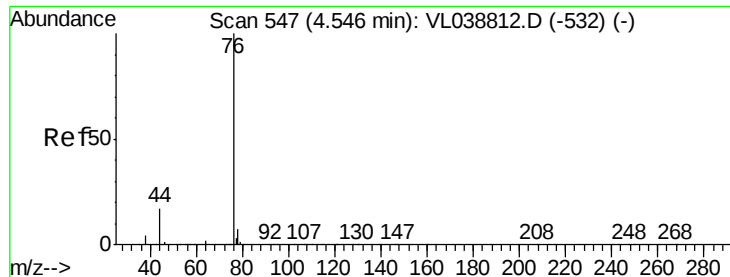
Tot Ion:	43	Resp:	345305
Ion	Ratio	Lower	Upper
43	100		
45	2.2	8.4	12.6#
61	1.2	7.9	11.9#
70	1.9	5.6	8.4#



#26
Hexane
Concen: 2.726 ppbv
RT: 5.70 min Scan# 906
Delta R.T.: 0.02 min
Lab File: VL038827.D
Acq: 6 Apr 2022 10:26

Tgt Ion:	57	Resp:	440053
Ion	Ratio	Lower	Upper
57	100		
41	90.9	72.0	108.0
43	81.3	186.6	280.0#
56	53.6	42.8	64.2





#27

Carbon Disulfide

Concen: 0.606 ppbv

RT: 4.56 Instrument:

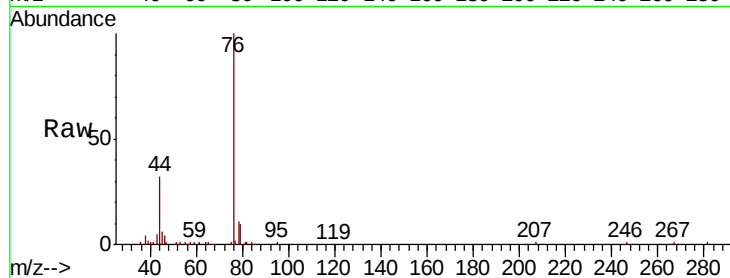
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

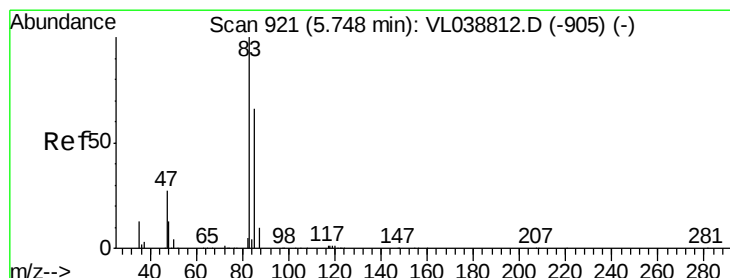
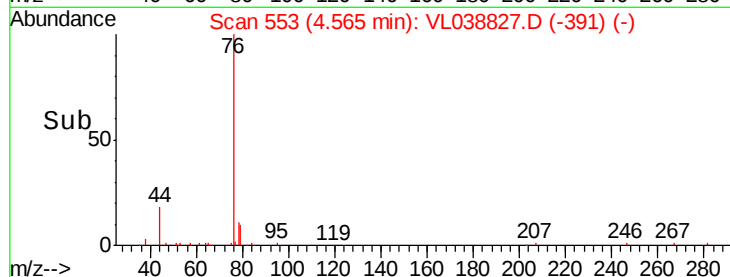
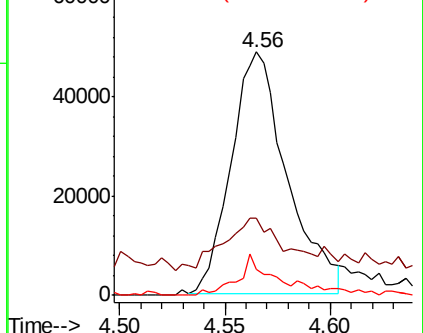
Acq: 6 Apr 2022 10:26

Tot Ion: 76 Resp: 89682

Ion	Ratio	Lower	Upper
76	100		
44	28.5	15.7	23.5#
78	13.9	7.8	11.8#



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



#29

Chloroform

Concen: 0.731 ppbv

RT: 5.76 min Scan# 925

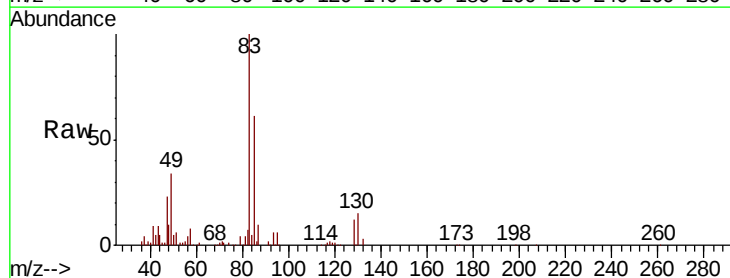
Delta R.T. 0.01 min

Lab File: VL038827.D

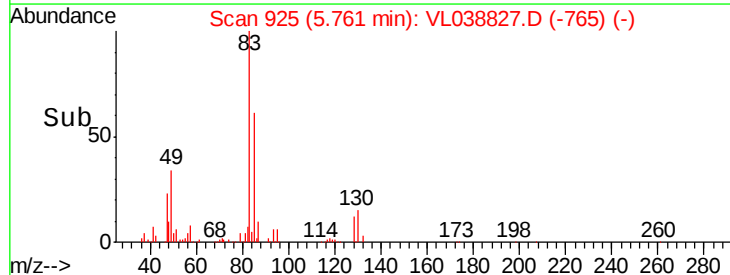
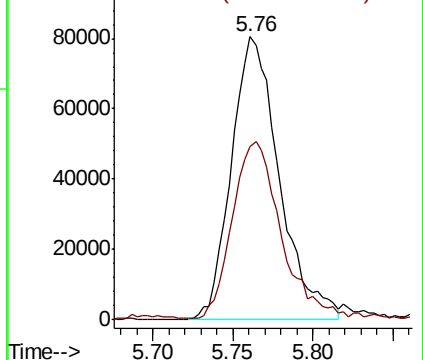
Acq: 6 Apr 2022 10:26

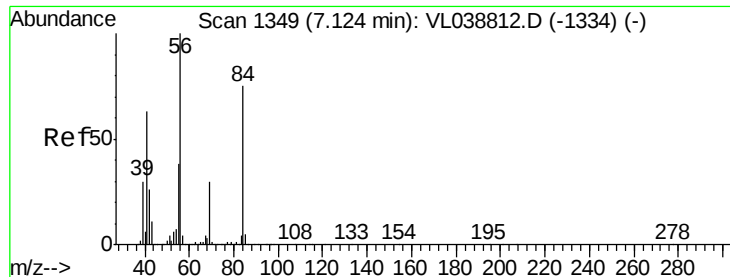
Tgt Ion: 83 Resp: 165032

Ion	Ratio	Lower	Upper
83	100		
85	60.9	52.5	78.7



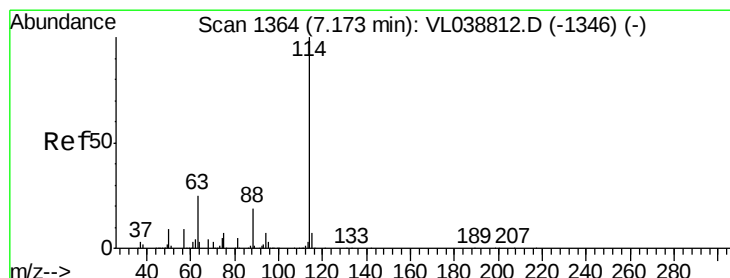
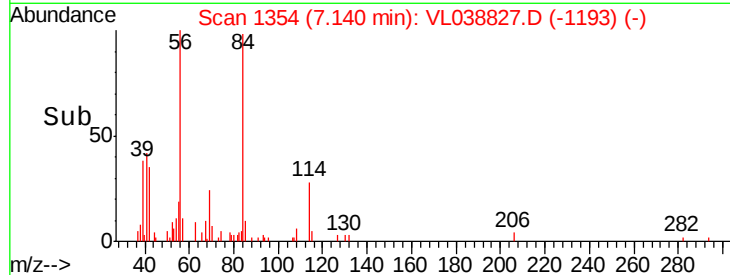
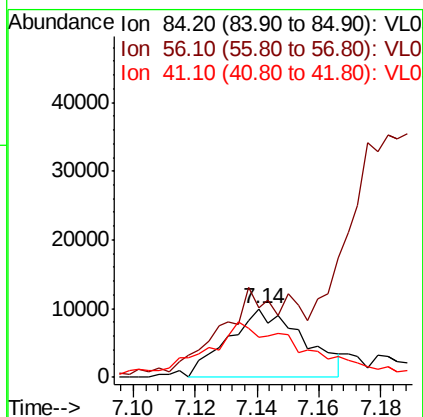
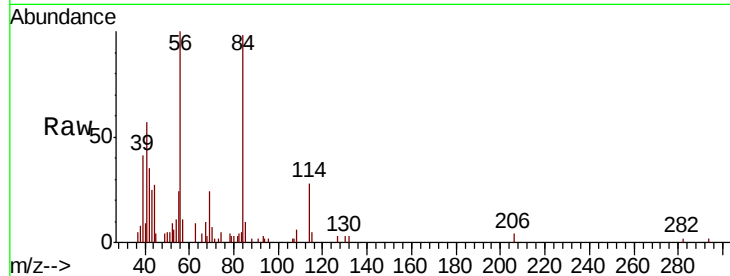
Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





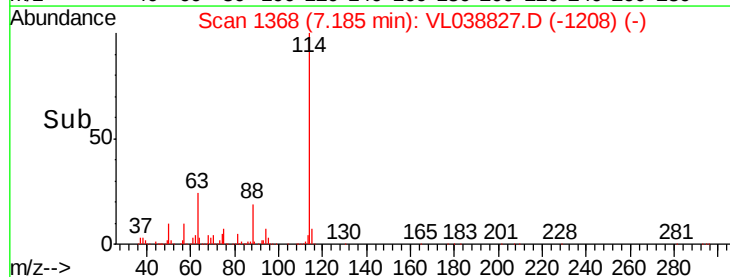
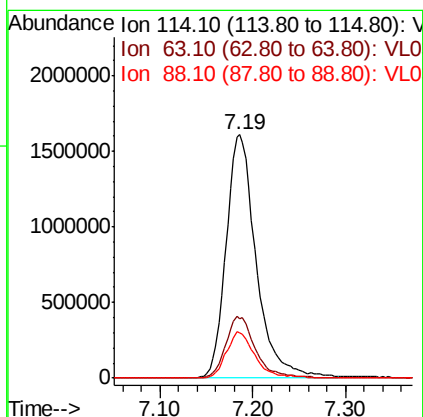
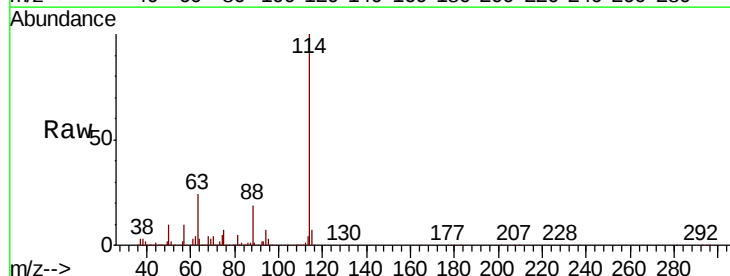
#30
Cvclohexane
Concen: 0.119 ppbv
RT: 7.14
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 6 Apr 2022 10:26

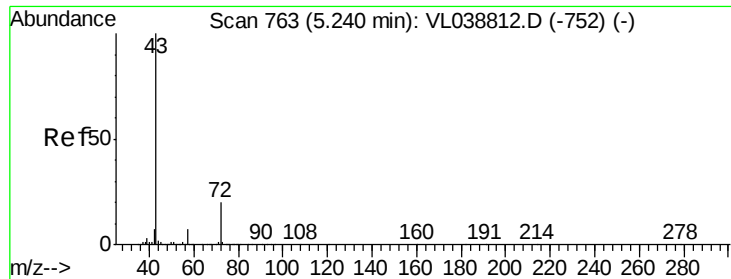
Tot Ion	84	Resp	16865
Ion Ratio	Lower	Upper	
84	100		
56	0.0	114.4	171.6#
41	104.6	69.0	103.4#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.19 min Scan# 1368
Delta R.T.: 0.01 min
Lab File: VL038827.D
Acq: 6 Apr 2022 10:26

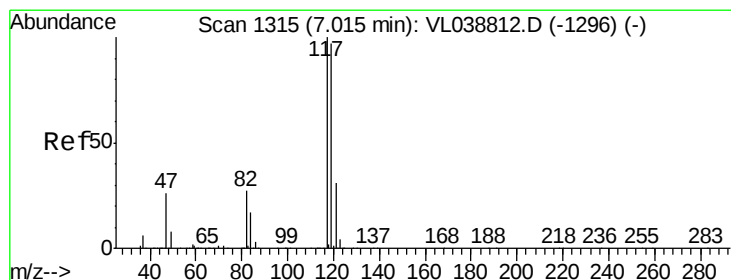
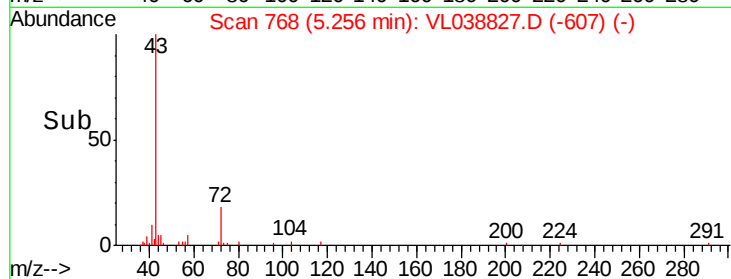
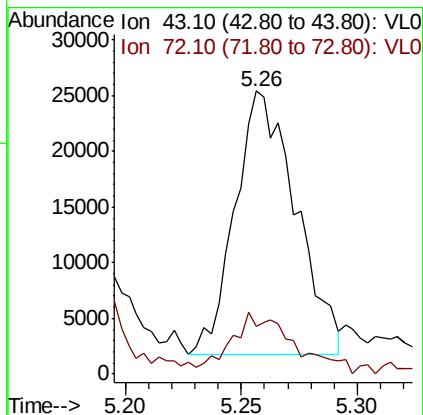
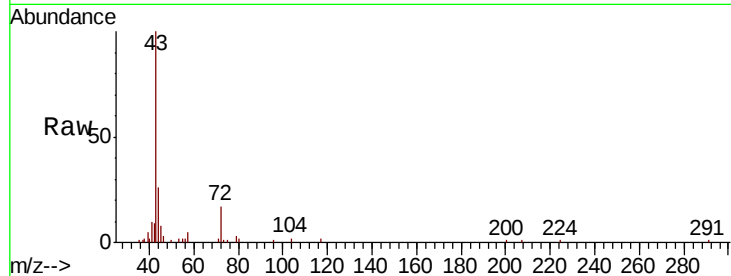
Tgt Ion	114	Resp	3629471
Ion Ratio	Lower	Upper	
114	100		
63	25.2	19.8	29.8
88	18.4	14.2	21.4





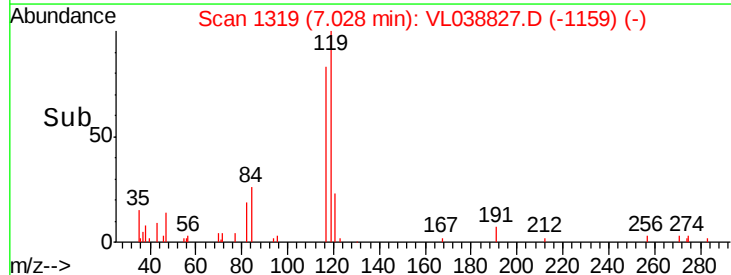
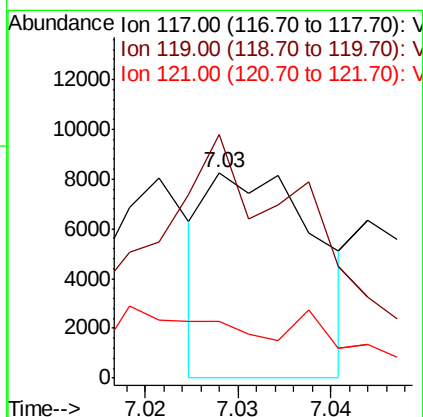
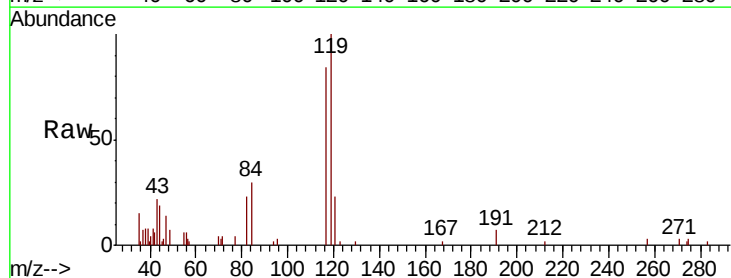
#34
2-Butanone
Concen: 0.301 ppbv
RT: 5.26 Instrument :
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 6 Apr 2022 10:26

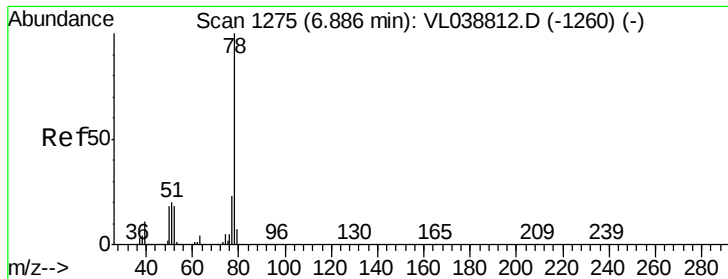
Tot Ion: 43 Resp: 43131
Ion Ratio Lower Upper
43 100
72 24.9 16.9 25.3



#35
Carbon Tetrachloride
Concen: 0.031 ppbv
RT: 7.03 min Scan# 1319
Delta R.T. 0.01 min
Lab File: VL038827.D
Acq: 6 Apr 2022 10:26

Tgt Ion: 117 Resp: 6716
Ion Ratio Lower Upper
117 100
119 168.0 77.7 116.5#
121 34.7 24.5 36.7





#36

Benzene

Concen: 0.087 ppbv

RT: 6.89 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 6 Apr 2022 10:26

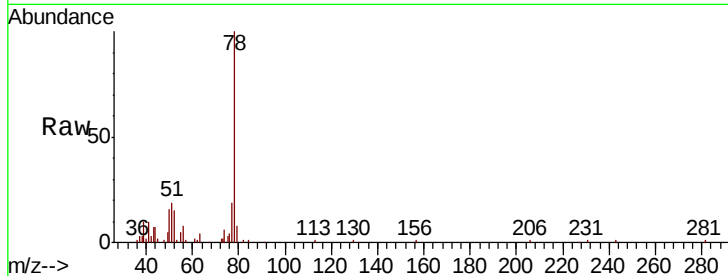
Tot Ion: 78 Resp: 28617

Ion Ratio Lower Upper

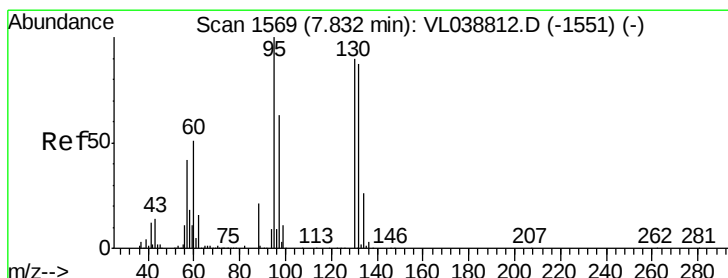
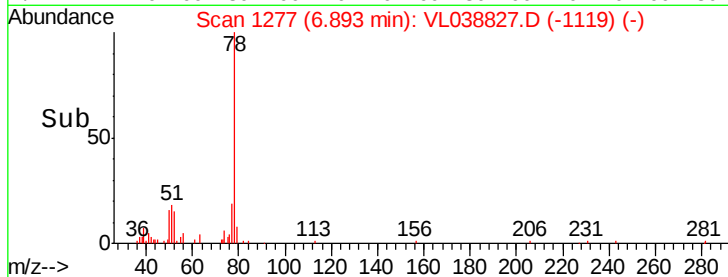
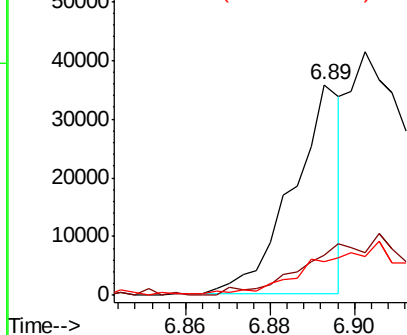
78 100

77 19.3 18.2 27.2

50 15.4 14.0 21.0



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



#38

Trichloroethene

Concen: 1.459 ppbv

RT: 7.84 min Scan# 1573

Delta R.T. 0.01 min

Lab File: VL038827.D

Acq: 6 Apr 2022 10:26

Tgt Ion:130 Resp: 197643

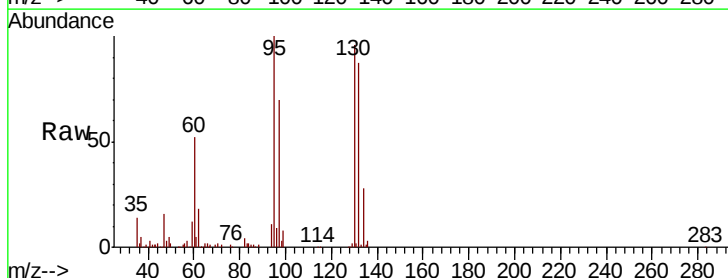
Ion Ratio Lower Upper

130 100

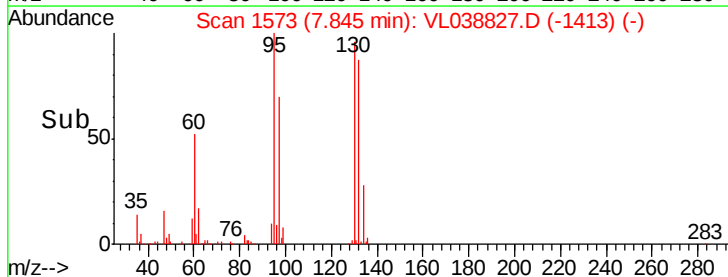
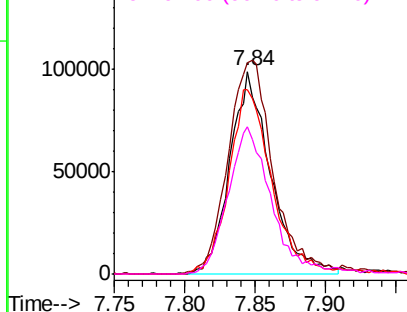
95 103.3 89.4 134.0

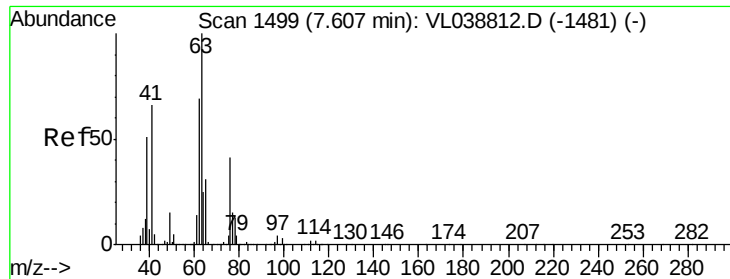
132 90.6 77.7 116.5

97 72.6 56.0 84.0



Abundance Ion 130.00 (129.70 to 130.70): V
Ion 95.00 (94.70 to 95.70): VL0
Ion 132.00 (131.70 to 132.70): V
Ion 97.00 (96.70 to 97.70): VL0





#39

1,2-Dichloropropane

Concen: 7.128 ppbv

RT: 7.18 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 6 Apr 2022 10:26

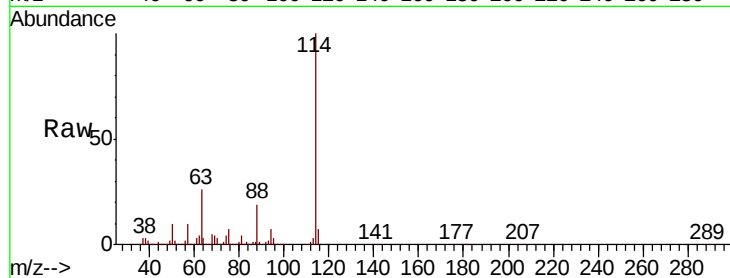
Tot Ion: 63 Resp: 900183

Ion Ratio Lower Upper

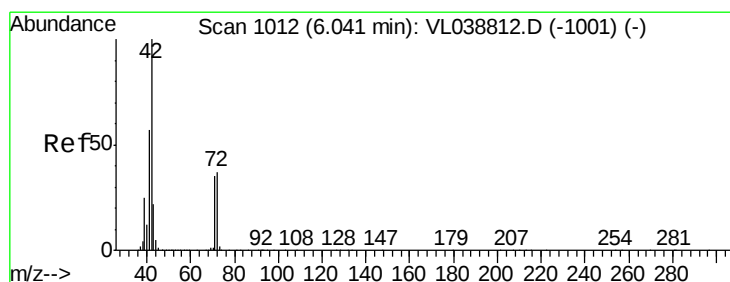
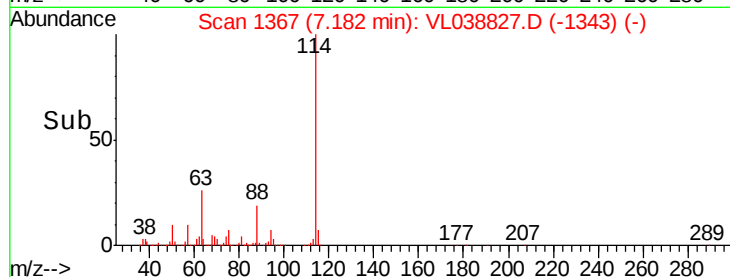
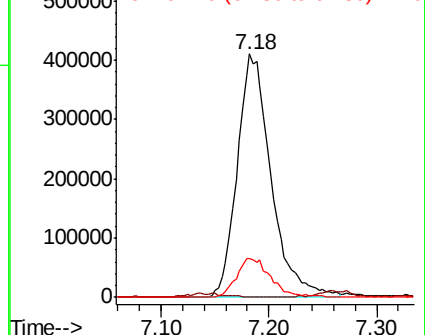
63 100

41 0.0 53.0 79.6#

62 16.2 55.0 82.4#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.044 ppbv

RT: 6.32 min Scan# 1099

Delta R.T. 0.28 min

Lab File: VL038827.D

Acq: 6 Apr 2022 10:26

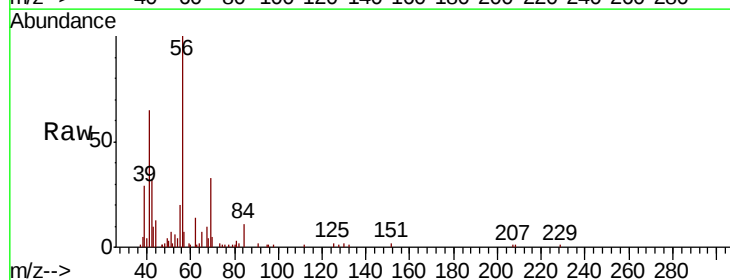
Tgt Ion: 42 Resp: 5973

Ion Ratio Lower Upper

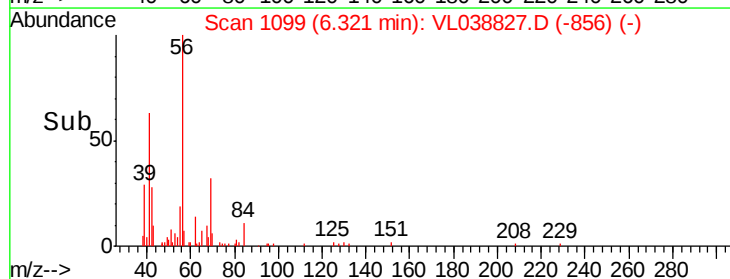
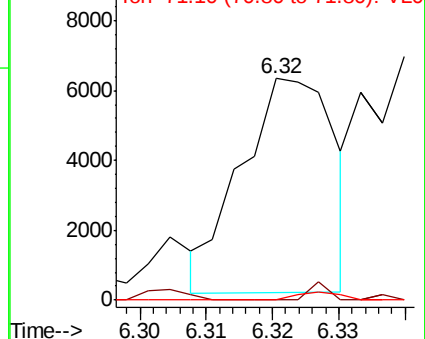
42 100

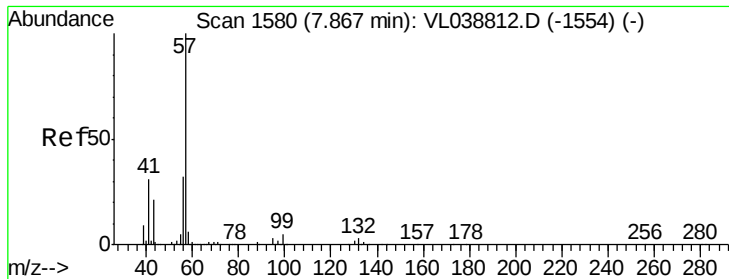
72 2.9 31.4 47.0#

71 0.0 30.2 45.4#



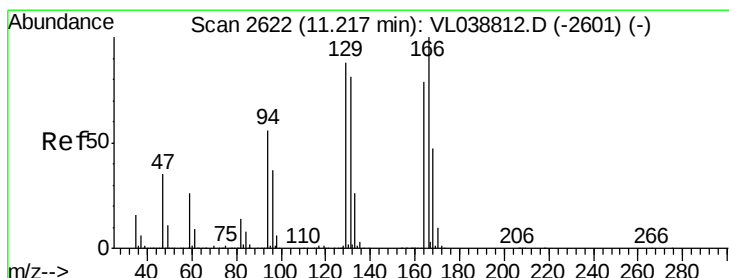
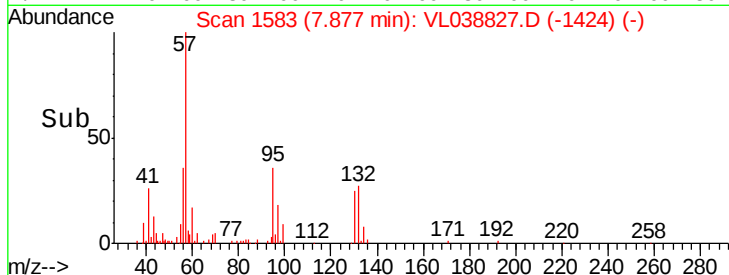
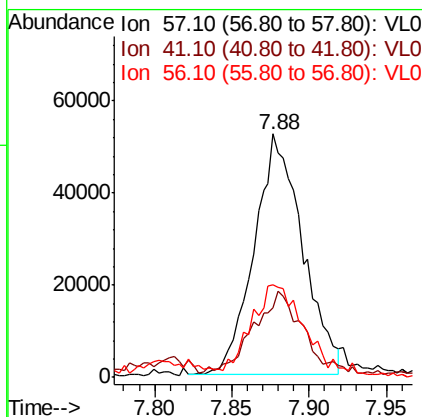
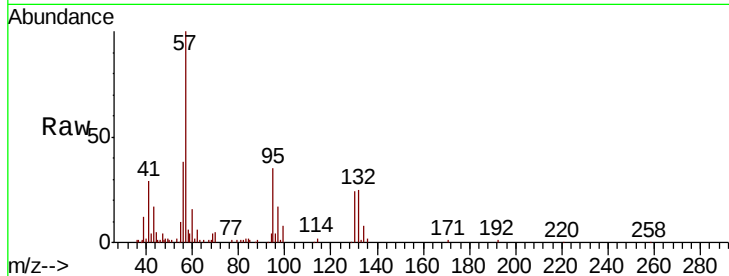
Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0





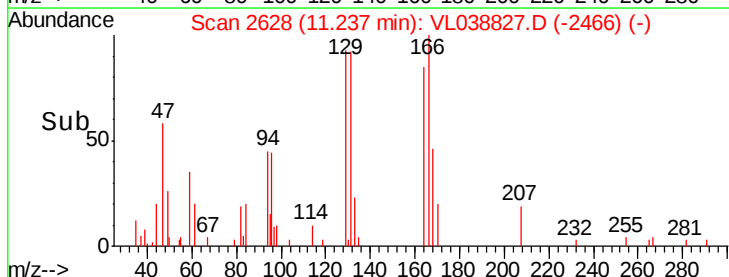
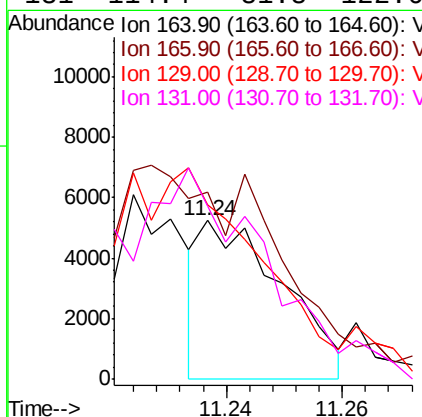
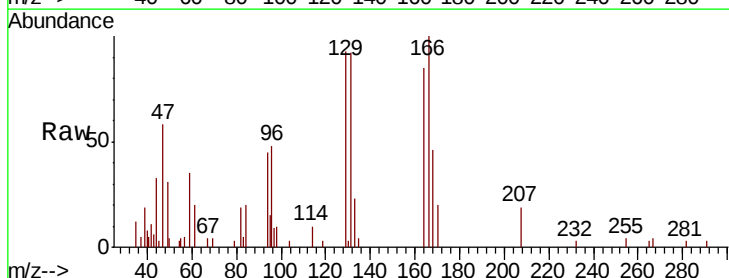
#44
 2,2,4-Trimethylpentane
 Concen: 0.204 ppbv
 RT: 7.88 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 6 Apr 2022 10:26

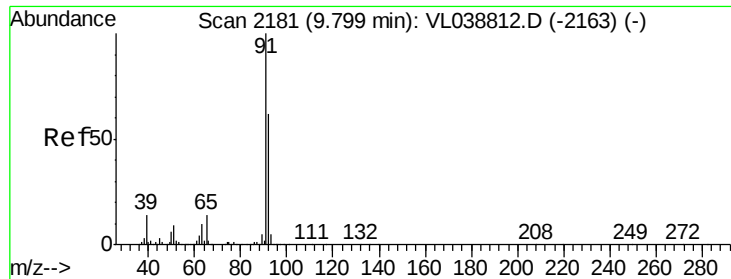
Tot Ion: 57 Resp: 113876
 Ion Ratio Lower Upper
 57 100
 41 37.2 25.0 37.4
 56 43.8 25.3 37.9#



#52
 Tetrachloroethene
 Concen: 0.045 ppbv
 RT: 11.24 min Scan# 2628
 Delta R.T. 0.02 min
 Lab File: VL038827.D
 Acq: 6 Apr 2022 10:26

Tgt Ion:164 Resp: 5141
 Ion Ratio Lower Upper
 164 100
 166 110.6 101.0 151.6
 129 112.6 88.7 133.1
 131 114.4 81.8 122.6





#53

Toluene

Concen: 1.844 ppbv

RT: 9.82 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

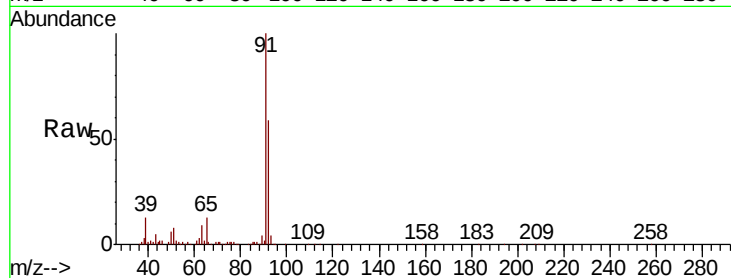
Acq: 6 Apr 2022 10:26

Tot Ion: 91 Resp: 702790

Ion Ratio Lower Upper

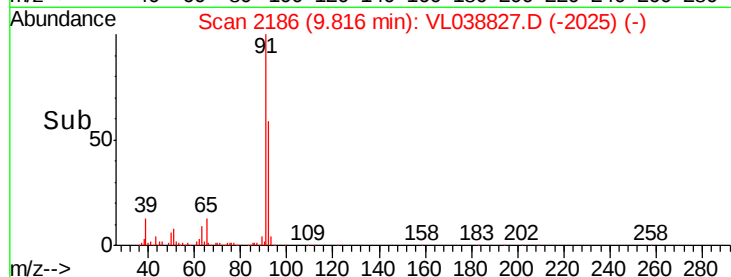
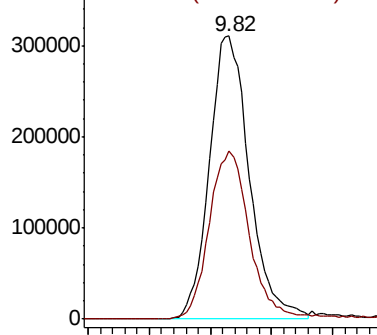
91 100

92 60.1 49.2 73.8



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: 12.10 min Scan# 2895

Delta R.T. 0.02 min

Lab File: VL038827.D

Acq: 6 Apr 2022 10:26

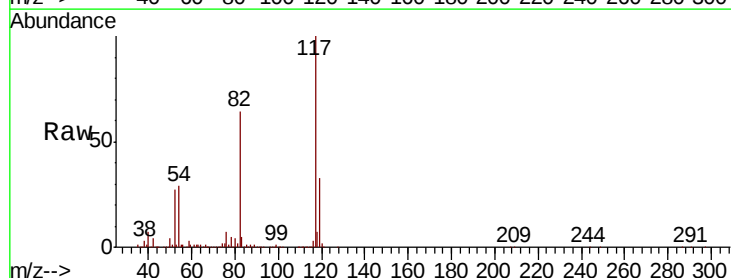
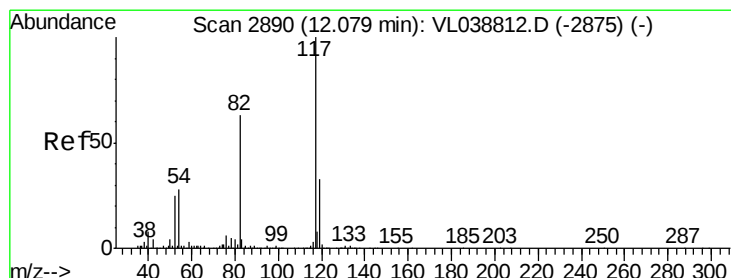
Tgt Ion: 117 Resp: 3139291

Ion Ratio Lower Upper

117 100

82 68.3 53.0 79.6

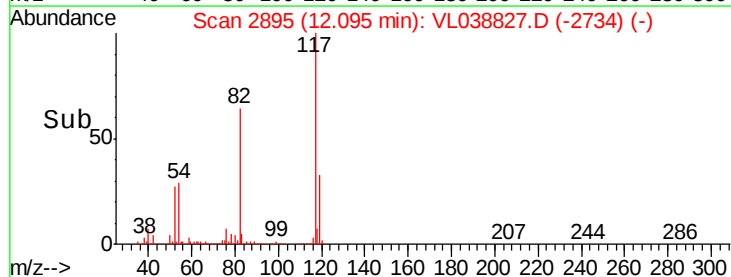
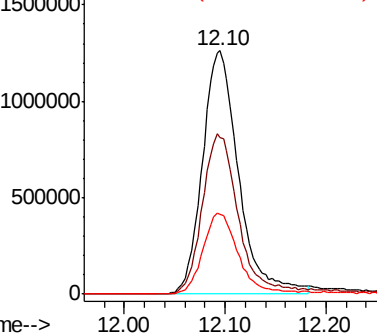
119 33.9 24.9 37.3

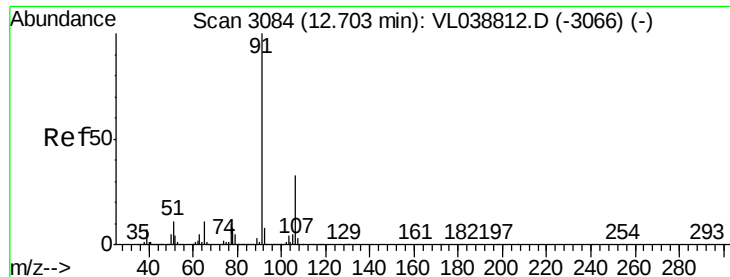


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.097 ppbv

RT: 12.72

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

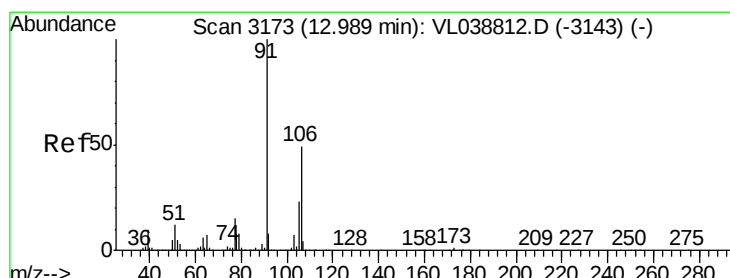
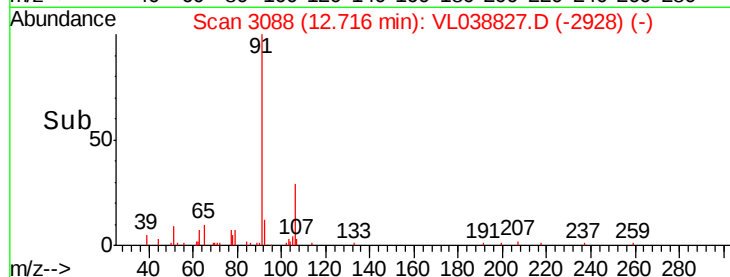
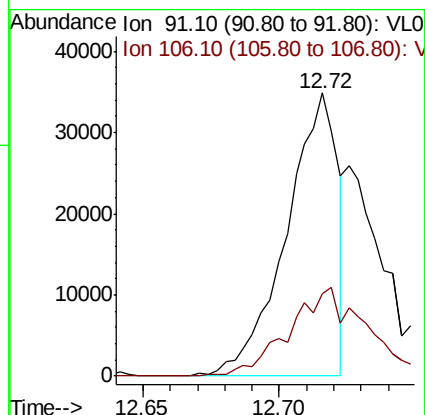
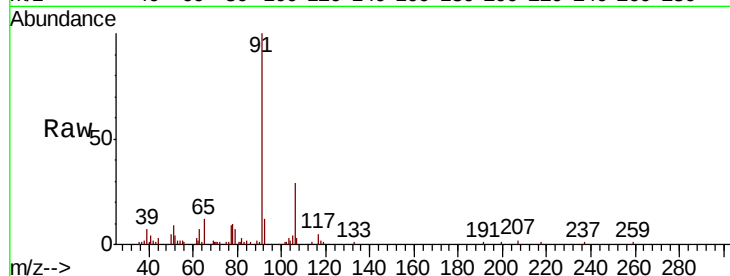
Acq: 6 Apr 2022 10:20

Tot Ion: 91 Resp: 45570

Ion Ratio Lower Upper

91 100

106 29.2 26.7 40.1



#59

m/p-Xylene

Concen: 0.081 ppbv

RT: 13.00 min Scan# 3177

Delta R.T. 0.01 min

Lab File: VL038827.D

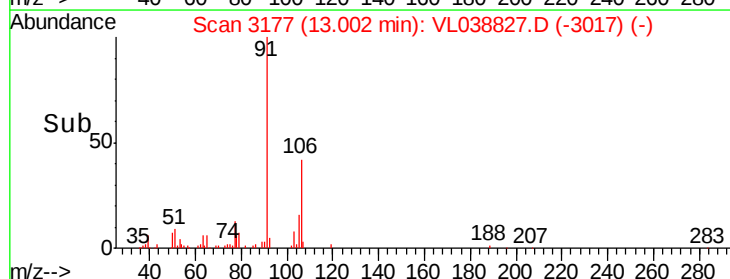
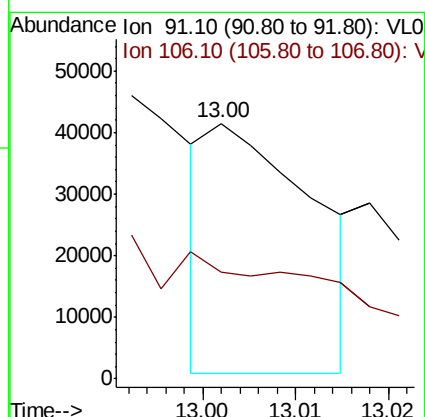
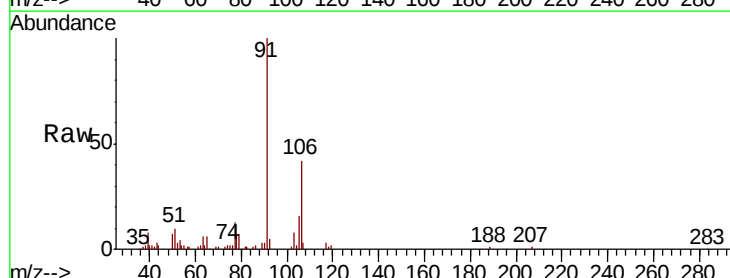
Acq: 6 Apr 2022 10:26

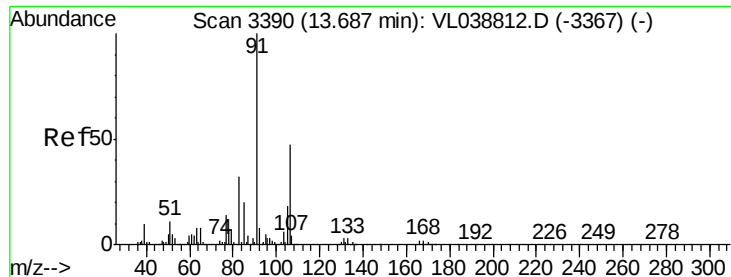
Tgt Ion: 91 Resp: 31828

Ion Ratio Lower Upper

91 100

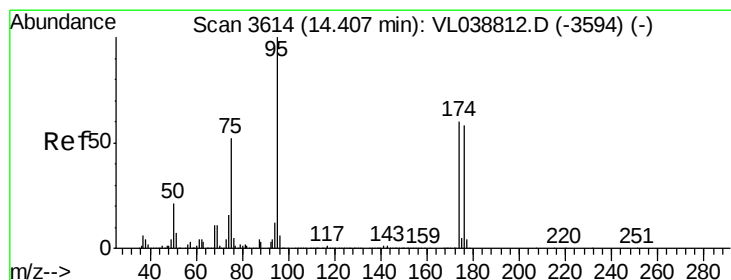
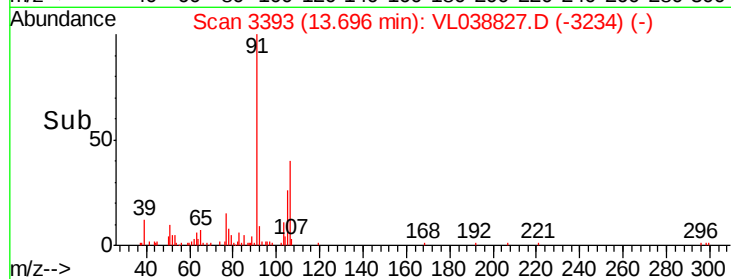
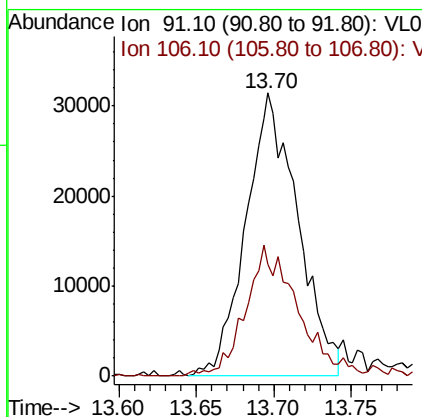
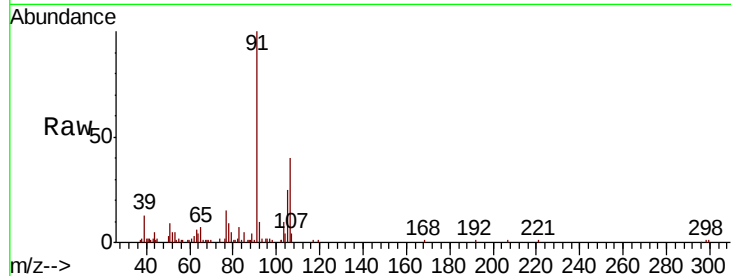
106 0.0 37.1 55.7#





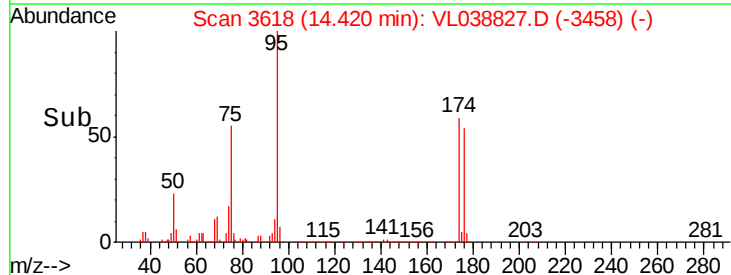
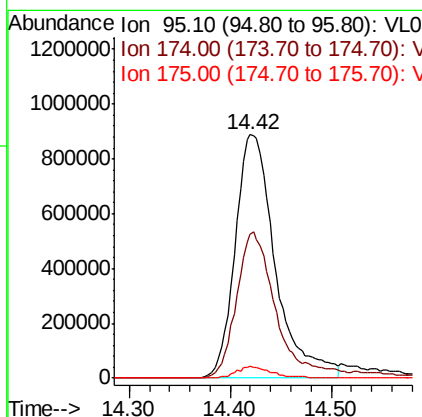
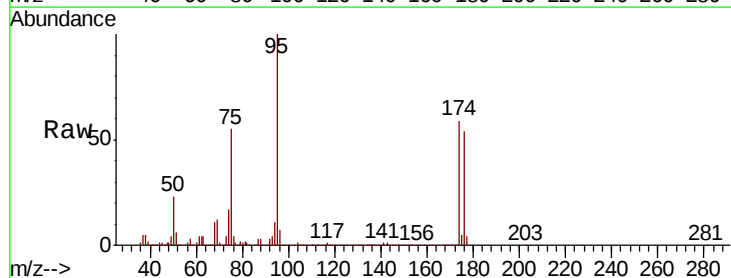
#60
o-Xylene
Concen: 0.199 ppbv
RT: 13.70 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 6 Apr 2022 10:26

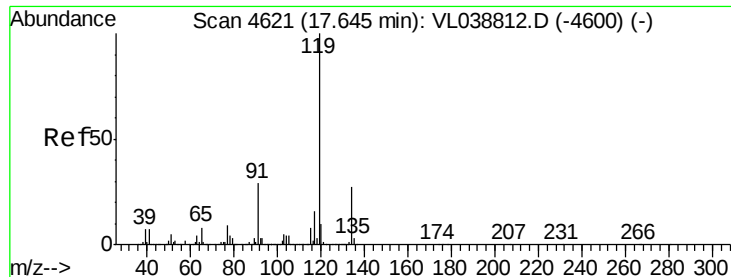
Tot Ion: 91 Resp: 73379
Ion Ratio Lower Upper
91 100
106 47.6 23.8 71.4



#68
1-Bromo-4-Fluorobenzene
Concen: 10.316 ppbv
RT: 14.42 min Scan# 3618
Delta R.T. 0.01 min
Lab File: VL038827.D
Acq: 6 Apr 2022 10:26

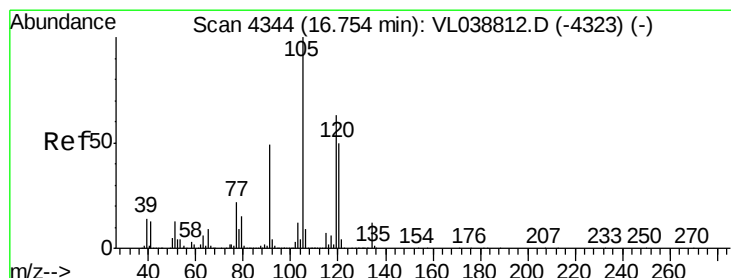
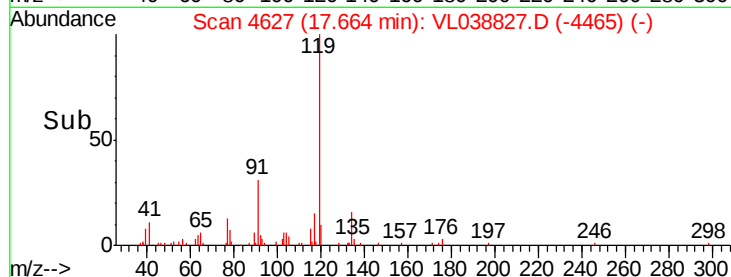
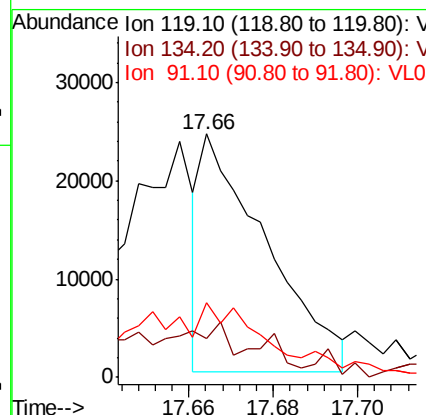
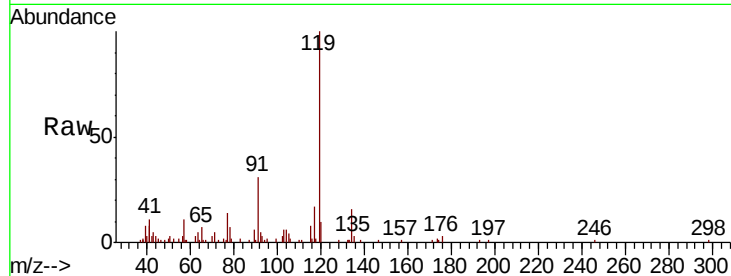
Tgt Ion: 95 Resp: 2456606
Ion Ratio Lower Upper
95 100
174 63.0 52.0 78.0
175 4.3 4.0 6.0





#69
 p-Isopropyltoluene
 Concen: 0.046 ppbv
 RT: 17.66 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 6 Apr 2022 10:26

Tot Ion	Ratio	Lower	Upper
119	100		
134	55.2	20.8	31.2#
91	78.2	22.6	34.0#



#74
 1,2,4-Trimethylbenzene
 Concen: 0.048 ppbv
 RT: 16.78 min Scan# 4352
 Delta R.T. 0.03 min
 Lab File: VL038827.D
 Acq: 6 Apr 2022 10:26

Tgt Ion	Ratio	Lower	Upper
105	100		
120	32.8	39.8	59.8#
91	8.9	39.4	59.0#
77	13.4	17.3	25.9#

