

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL030122\
 Data File : VL038452.D
 Acq On : 1 Mar 2022 15:49
 Operator : SY/AP
 Sample : N1702-01 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SVP-1

Quant Time: Mar 02 03:04:47 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL022222AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Feb 22 19:45:51 2022
 QLast Update : Tue Feb 22 19:45:51 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	856410	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.17	114	2130664	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.08	117	1916124	10.00	ppbv	0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	1529376	9.65	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.50%

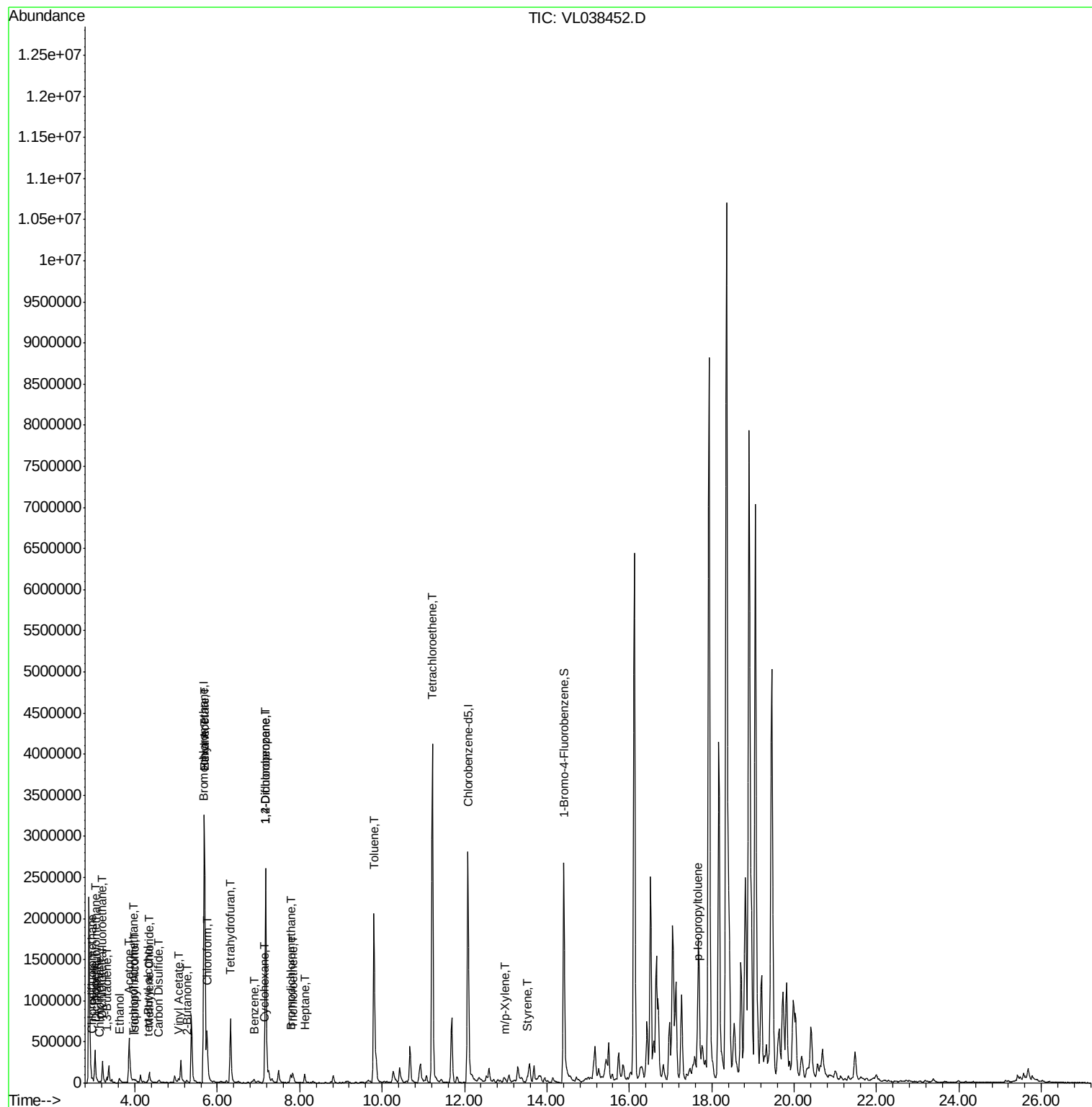
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.05	85	11608	0.09	ppbv #	80
3) Chlorodifluoromethane	2.97	51	39138	0.26	ppbv #	66
4) Chloromethane	3.14	50	3378	0.06	ppbv #	42
8) Dichlorotetrafluoroethane	3.20	85	13542	0.11	ppbv	98
9) Propene	3.03	41	128294	2.57	ppbv #	80
10) Heptane	8.12	43	43222	0.36	ppbv	97
11) Trichlorofluoromethane	3.96	101	15911	0.12	ppbv	97
13) Ethanol	3.62	45	65574	13.16	ppbv	100
15) Acetone	3.85	43	792925	10.89	ppbv	99
16) 1,3-Butadiene	3.32	39	22421	0.46	ppbv #	59
17) tert-Butyl alcohol	4.31	59	15918	0.22	ppbv #	91
19) Isopropyl Alcohol	3.98	45	15870	0.38	ppbv #	93
20) Methylene Chloride	4.35	84	45875	1.27	ppbv	91
23) Vinyl Acetate	5.06	43	21826	0.23	ppbv #	9
25) Ethyl Acetate	5.69	43	909438	4.65	ppbv #	77
26) Hexane	5.69	57	1281340	14.46	ppbv #	42
27) Carbon Disulfide	4.56	76	9676	0.10	ppbv #	88
29) Chloroform	5.75	83	407562	2.82	ppbv	97
30) Cyclohexane	7.13	84	14353	0.20	ppbv #	8
34) 2-Butanone	5.26	43	40255	0.60	ppbv #	83
36) Benzene	6.89	78	33140	0.18	ppbv #	82
38) Trichloroethene	7.83	130	20981	0.31	ppbv	91
39) 1,2-Dichloropropane	7.17	63	564970	7.56	ppbv #	25
41) Tetrahydrofuran	6.32	42	110530	2.44	ppbv #	38
42) Bromodichloromethane	7.79	83	57887	0.37	ppbv #	95
52) Tetrachloroethene	11.22	164	1057808	16.99	ppbv	96
53) Toluene	9.80	91	1783048	8.76	ppbv	99
59) m/p-Xylene	13.00	91	10670	0.05	ppbv #	33
61) Styrene	13.53	104	4057	0.04	ppbv #	1
69) p-Isopropyltoluene	17.65	119	13780	0.05	ppbv #	67

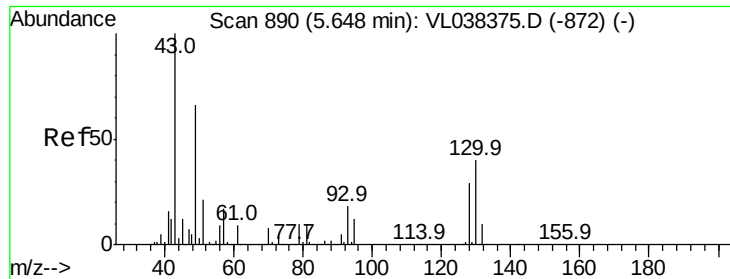
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 1 Mar 2022 15:49 SVP-1

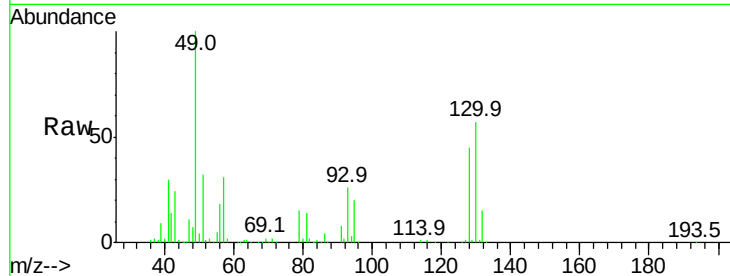
Tgt Ion: 49 Resp: 856410

Ion Ratio Lower Upper

49 100

128 47.8 24.3 72.9

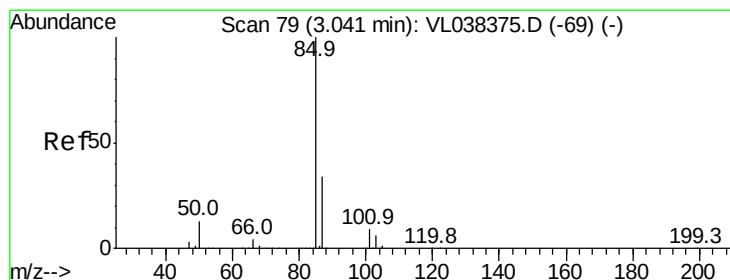
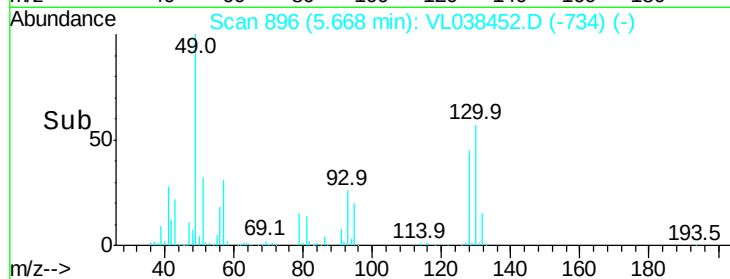
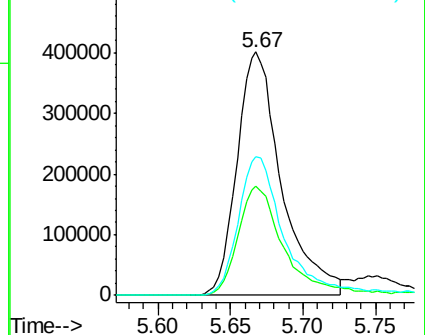
130 60.9 30.1 90.5



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.09 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.01 min

Lab File: VL038452.D

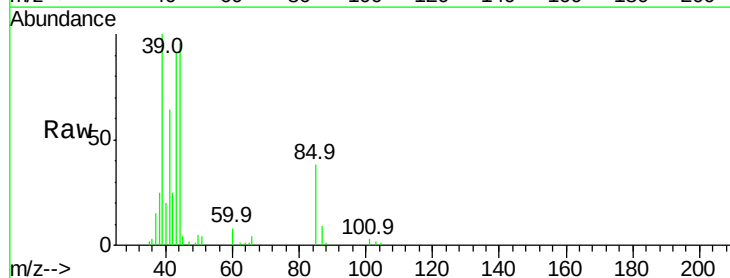
Acq: 1 Mar 2022 15:49

Tgt Ion: 85 Resp: 11608

Ion Ratio Lower Upper

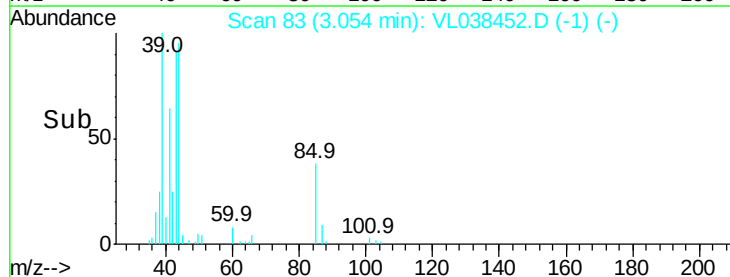
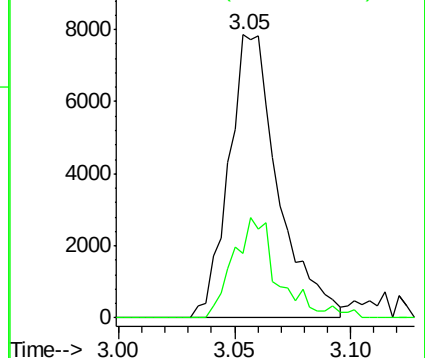
85 100

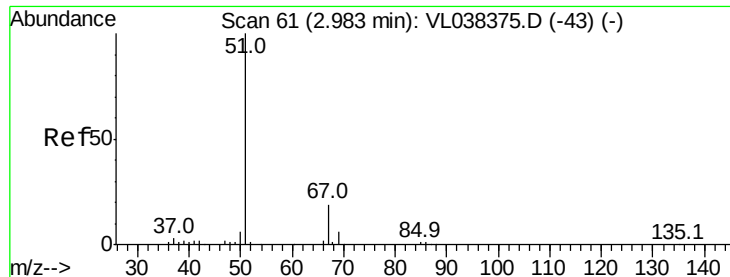
87 23.0 27.4 41.0#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.26 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

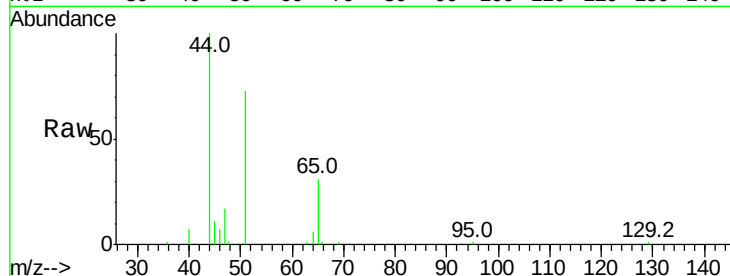
Acq: 1 Mar 2022 15:49 SVP-1

Tgt Ion: 51 Resp: 39138

Ion Ratio Lower Upper

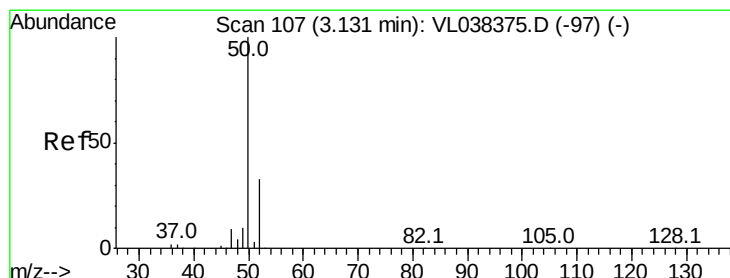
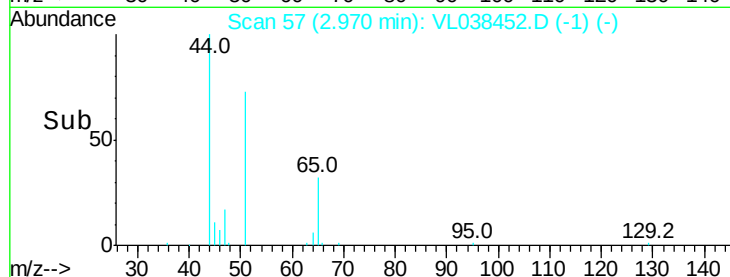
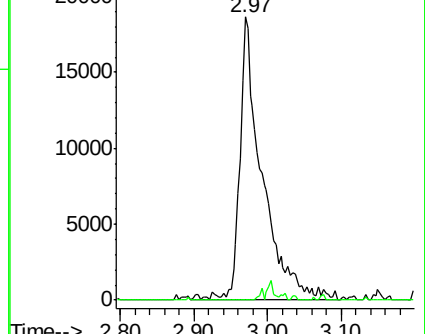
51 100

67 3.3 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.06 ppbv

RT: 3.14 min Scan# 110

Delta R.T. 0.01 min

Lab File: VL038452.D

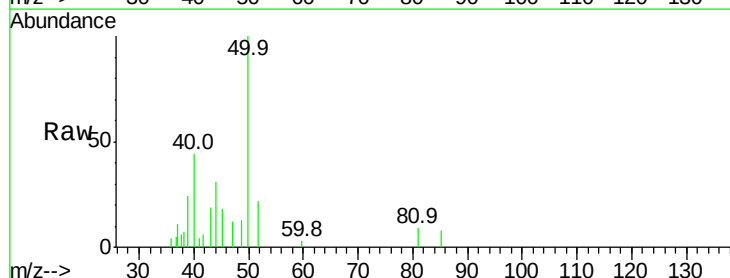
Acq: 1 Mar 2022 15:49

Tgt Ion: 50 Resp: 3378

Ion Ratio Lower Upper

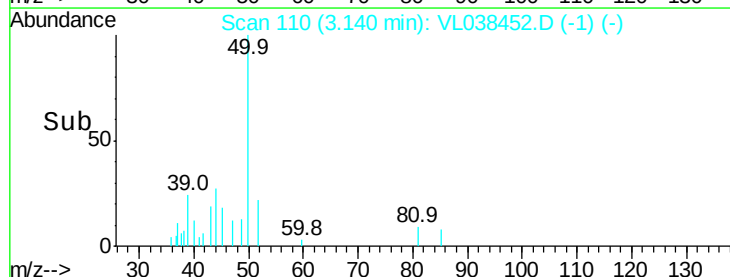
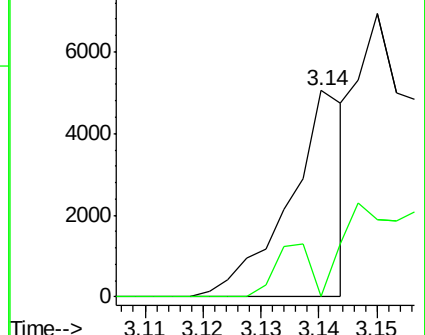
50 100

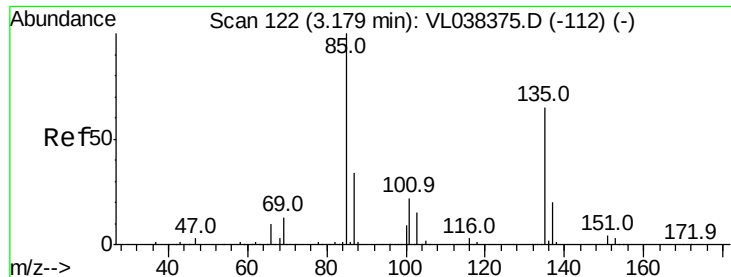
52 0.0 26.5 39.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#8

Dichlorotetrafluoroethane

Concen: 0.11 ppbv

RT: 3.20 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

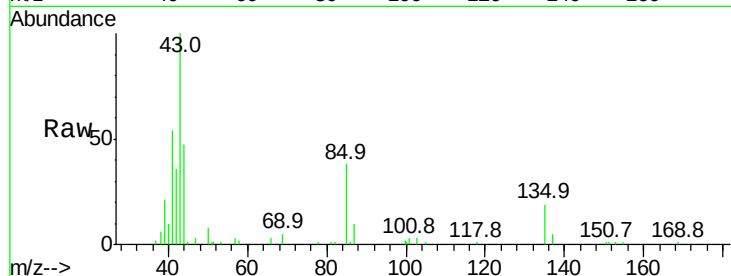
Acq: 1 Mar 2022 15:49 SVP-1

Tgt Ion: 85 Resp: 13542

Ion Ratio Lower Upper

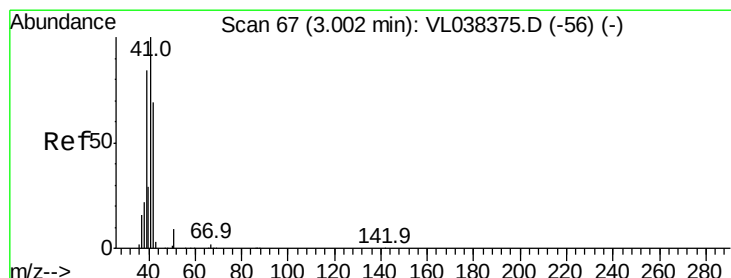
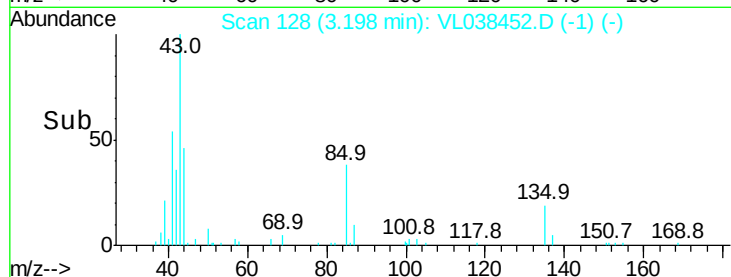
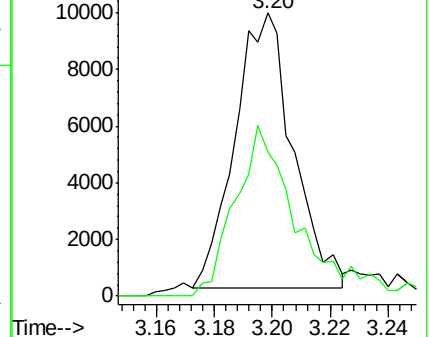
85 100

135 69.3 54.1 81.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): VL0



#9

Propene

Concen: 2.57 ppbv

RT: 3.03 min Scan# 76

Delta R.T. 0.03 min

Lab File: VL038452.D

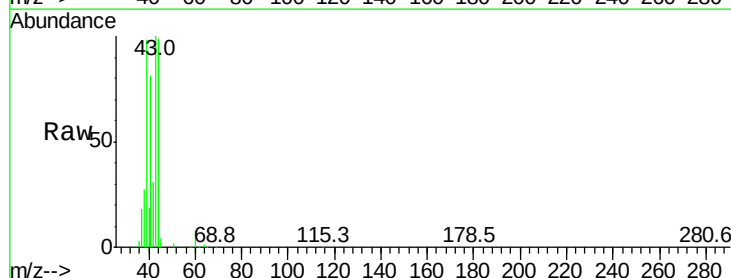
Acq: 1 Mar 2022 15:49

Tgt Ion: 41 Resp: 128294

Ion Ratio Lower Upper

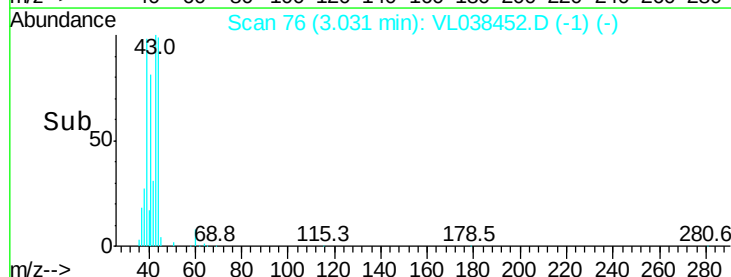
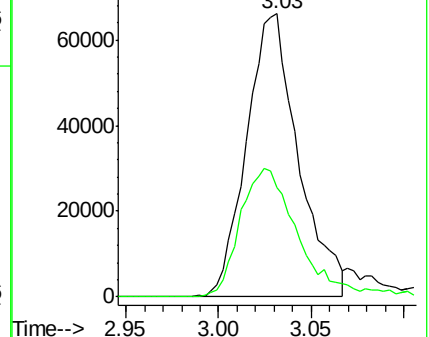
41 100

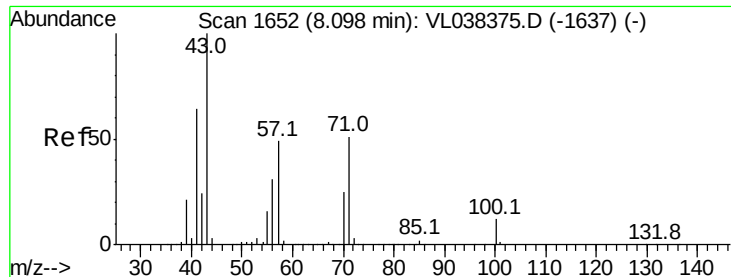
42 51.9 54.6 82.0#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.36 ppbv

RT: 8.12 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SVP-1

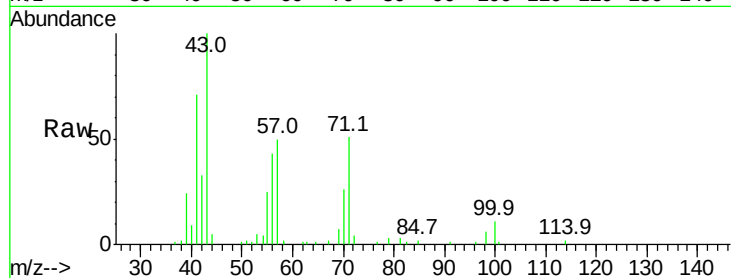
Acq: 1 Mar 2022 15:49

Tgt Ion: 43 Resp: 43222

Ion Ratio Lower Upper

43 100

57 52.2 39.8 59.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.12

25000

20000

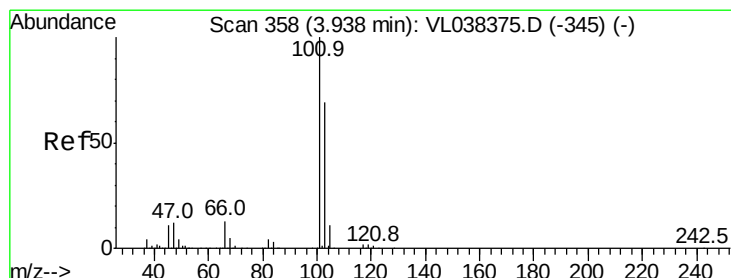
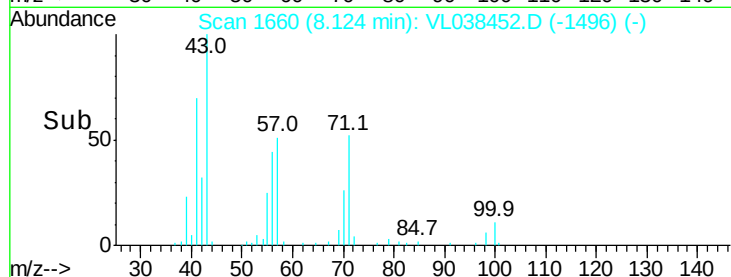
15000

10000

5000

0

Time--> 8.05 8.10 8.15



#11

Trichlorofluoromethane

Concen: 0.12 ppbv

RT: 3.96 min Scan# 364

Delta R.T. 0.02 min

Lab File: VL038452.D

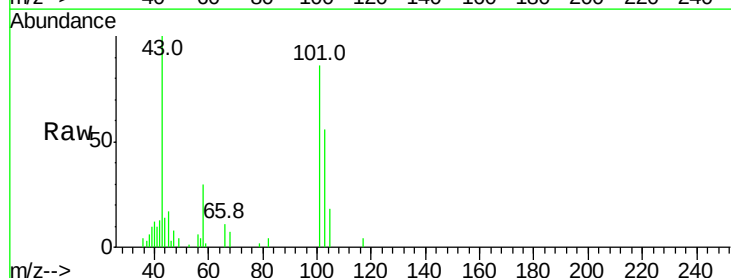
Acq: 1 Mar 2022 15:49

Tgt Ion: 101 Resp: 15911

Ion Ratio Lower Upper

101 100

103 66.6 55.0 82.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

3.96

10000

8000

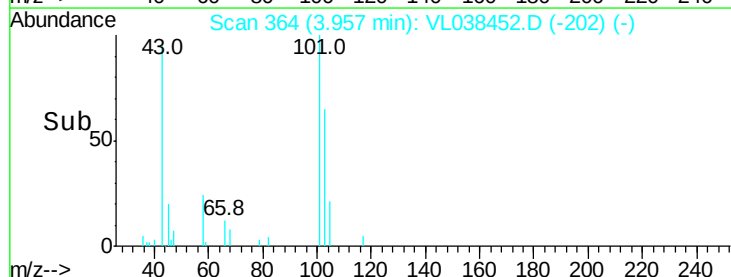
6000

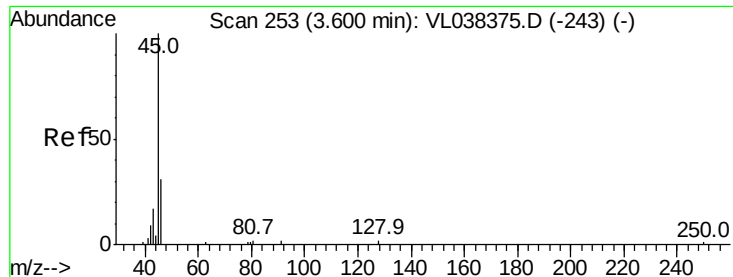
4000

2000

0

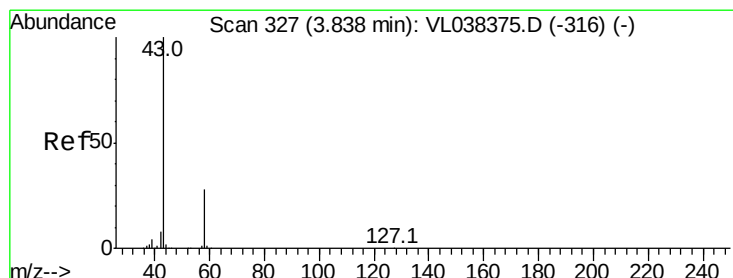
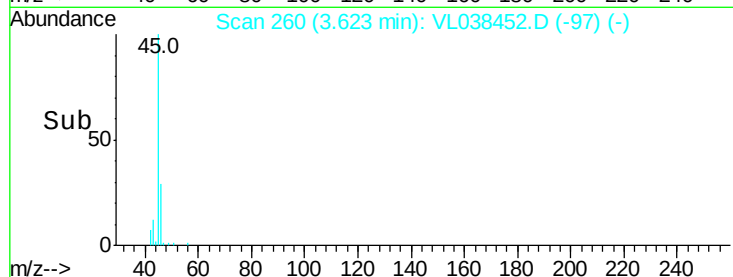
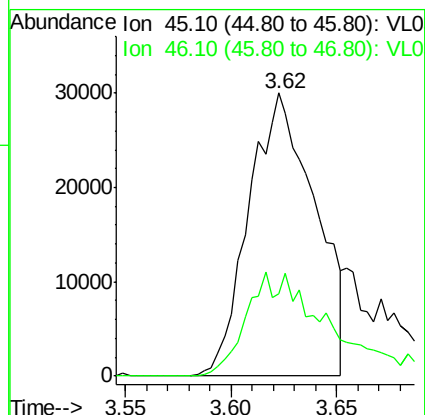
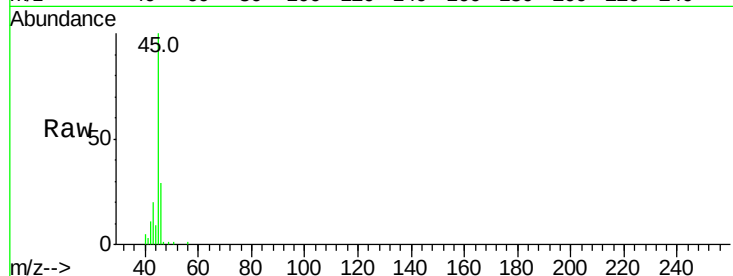
Time--> 3.90 3.95 4.00





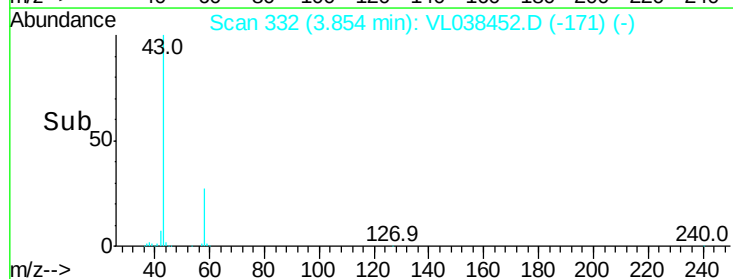
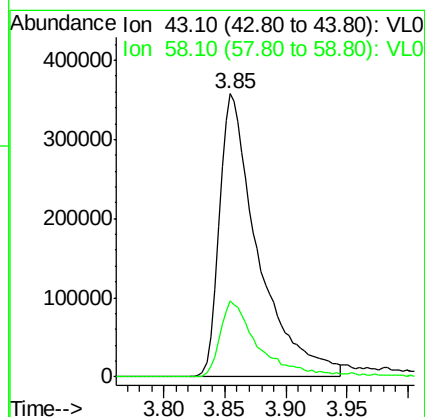
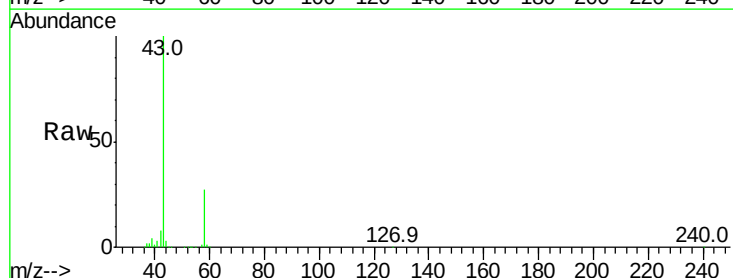
#13
 Ethanol
 Concen: 13.16 ppbv
 RT: 3.62
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SVP-1
 Acq: 1 Mar 2022 15:49

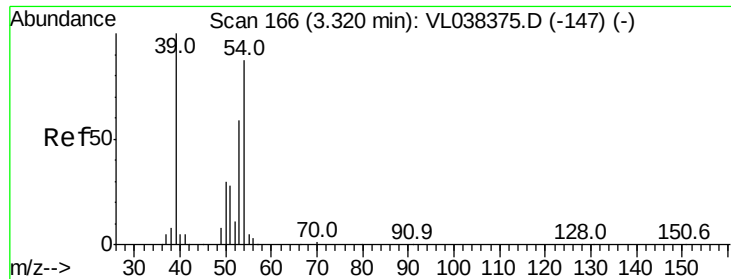
Tgt Ion: 45 Resp: 65574
 Ion Ratio Lower Upper
 45 100
 46 45.8 18.2 72.8



#15
 Acetone
 Concen: 10.89 ppbv
 RT: 3.85 min Scan# 332
 Delta R.T. 0.02 min
 Lab File: VL038452.D
 Acq: 1 Mar 2022 15:49

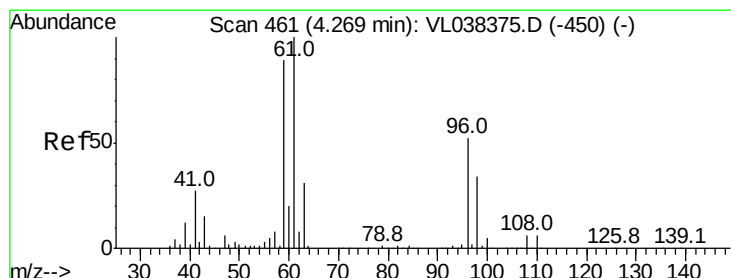
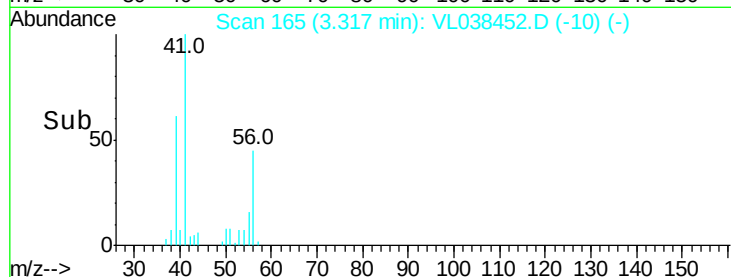
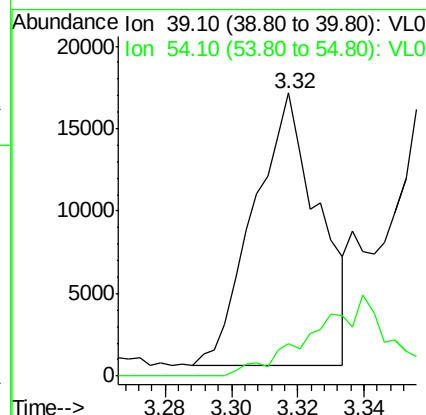
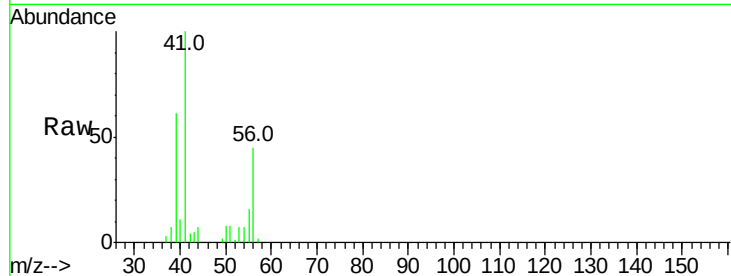
Tgt Ion: 43 Resp: 792925
 Ion Ratio Lower Upper
 43 100
 58 27.5 21.7 32.5





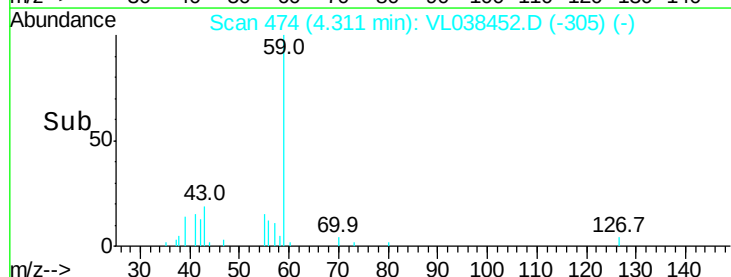
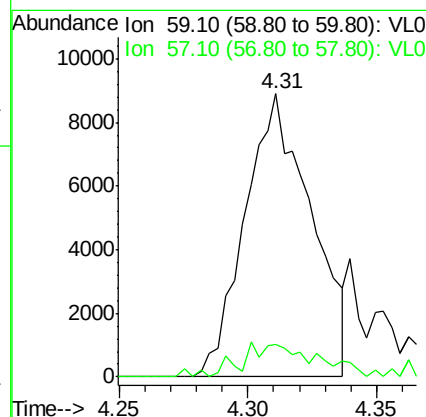
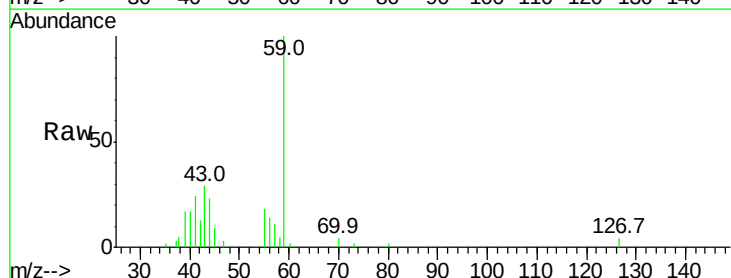
#16
 1,3-Butadiene
 Concen: 0.46 ppbv
 RT: 3.32
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 SVP-1
 Acq: 1 Mar 2022 15:49

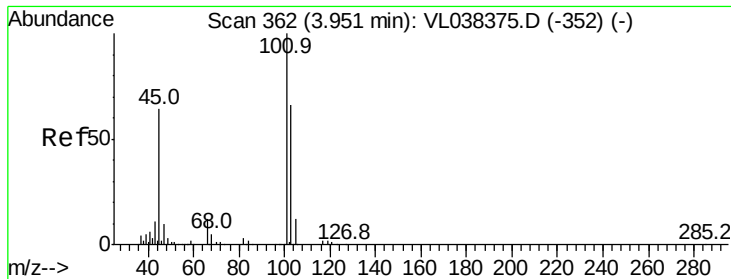
Tgt Ion: 39 Resp: 22421
 Ion Ratio Lower Upper
 39 100
 54 40.7 60.3 90.5#



#17
 tert-Butyl alcohol
 Concen: 0.22 ppbv
 RT: 4.31 min Scan# 474
 Delta R.T. 0.04 min
 Lab File: VL038452.D
 Acq: 1 Mar 2022 15:49

Tgt Ion: 59 Resp: 15918
 Ion Ratio Lower Upper
 59 100
 57 13.9 8.4 12.6#





#19

Isopropyl Alcohol

Concen: 0.38 ppbv

RT: 3.98 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

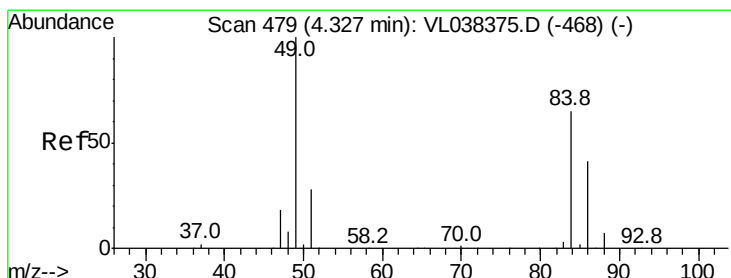
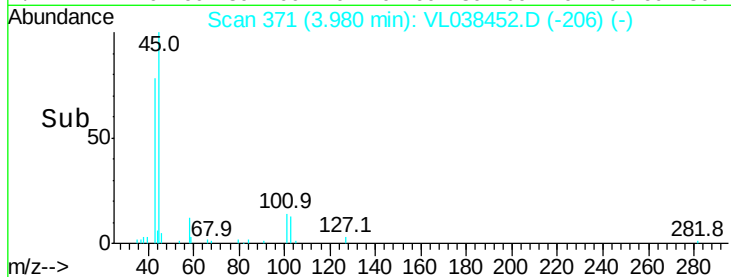
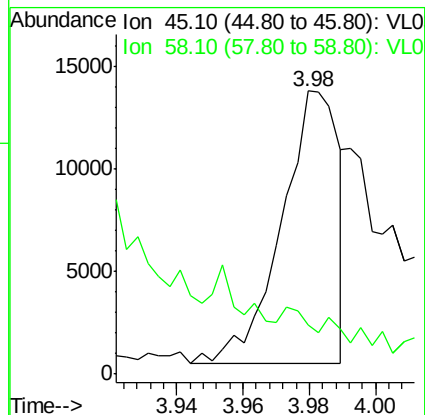
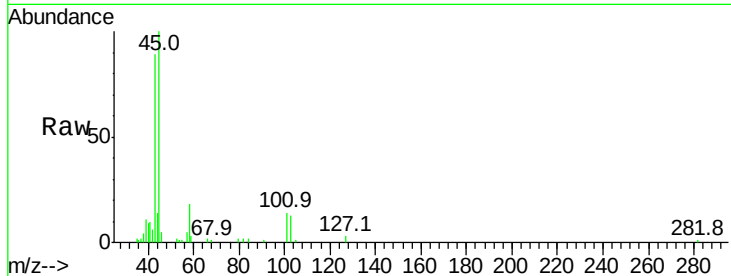
Acq: 1 Mar 2022 15:49 SVP-1

Tgt Ion: 45 Resp: 15870

Ion Ratio Lower Upper

45 100

58 0.0 1.8 2.8#



#20

Methylene Chloride

Concen: 1.27 ppbv

RT: 4.35 min Scan# 487

Delta R.T. 0.03 min

Lab File: VL038452.D

Acq: 1 Mar 2022 15:49

Tgt Ion: 84 Resp: 45875

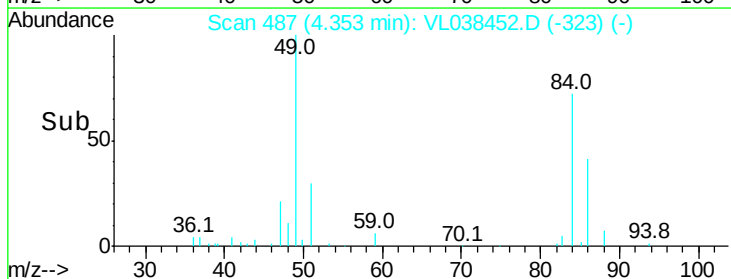
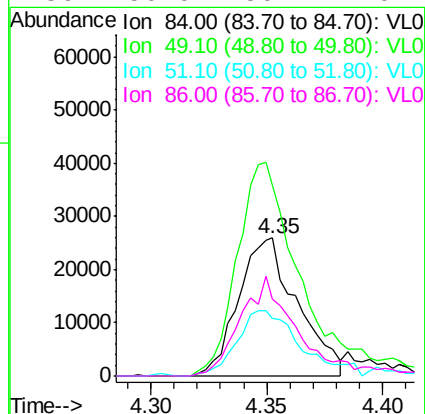
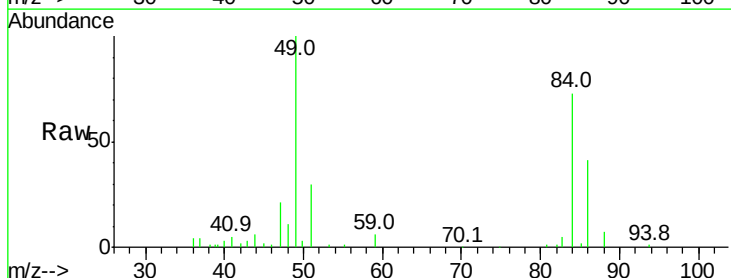
Ion Ratio Lower Upper

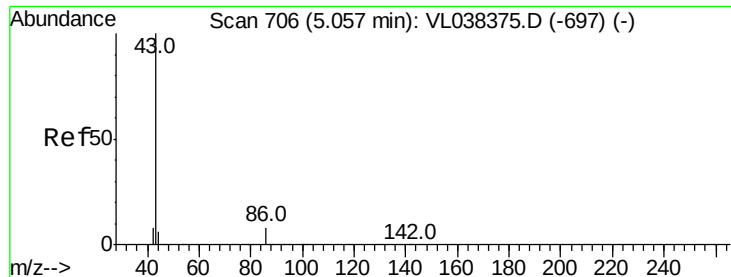
84 100

49 137.8 122.4 183.6

51 41.9 33.3 49.9

86 56.0 50.7 76.1





#23

Vinyl Acetate

Concen: 0.23 ppbv

RT: 5.06

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 1 Mar 2022 15:49

Tgt Ion: 43 Resp: 21826

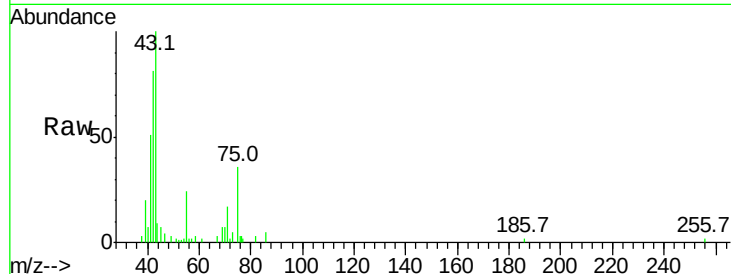
Ion Ratio Lower Upper

43 100

86 5.6 5.8 8.6#

42 82.6 7.4 11.0#

44 0.0 4.2 6.2#

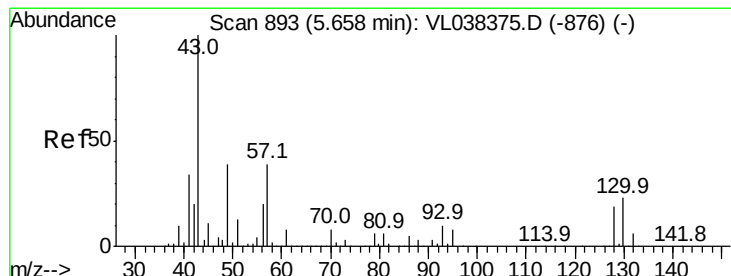
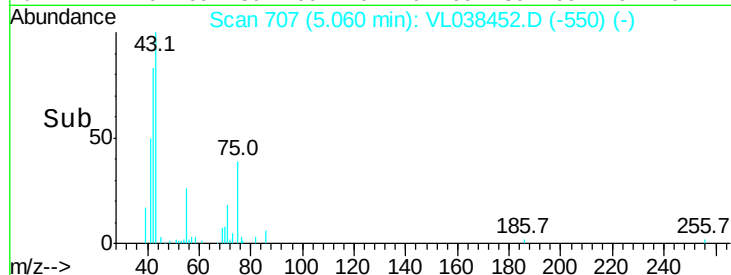
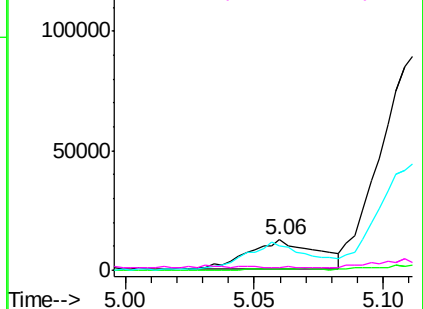


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 4.65 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.03 min

Lab File: VL038452.D

Acq: 1 Mar 2022 15:49

Tgt Ion: 43 Resp: 909438

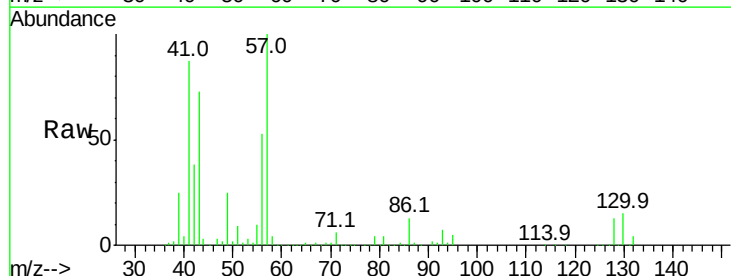
Ion Ratio Lower Upper

43 100

45 0.4 7.8 11.6#

61 0.3 7.5 11.3#

70 1.5 5.4 8.0#

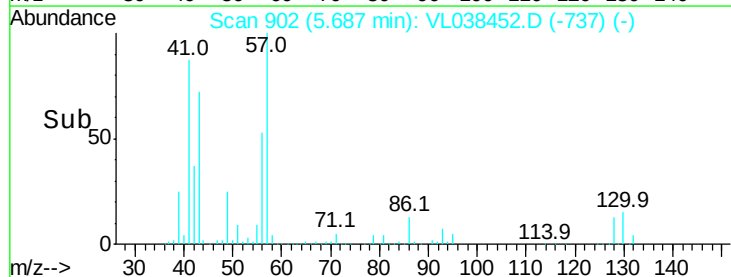
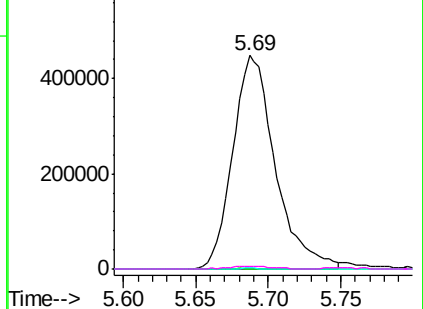


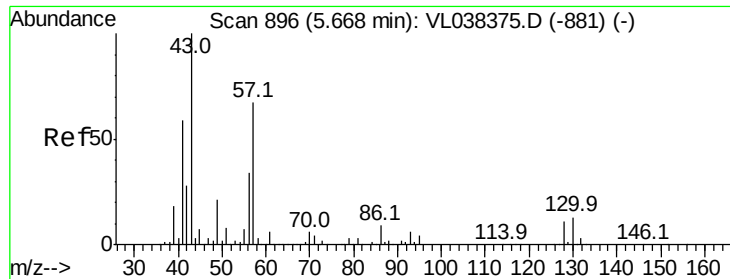
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0





#26

Hexane

Concen: 14.46 ppbv

RT: 5.69

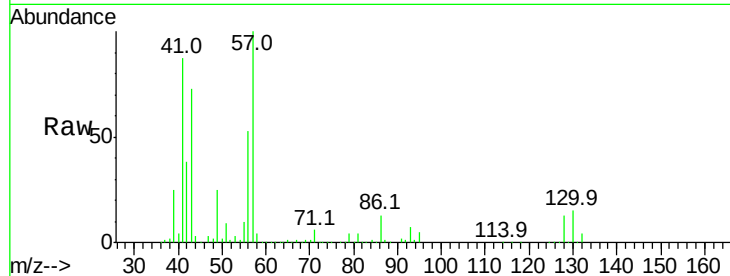
Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 1 Mar 2022 15:49

Tgt Ion: 57 Resp: 1281340

Ion	Ratio	Lower	Upper
57	100		
41	89.6	73.1	109.7
43	73.0	181.0	271.4#
56	53.8	43.4	65.0

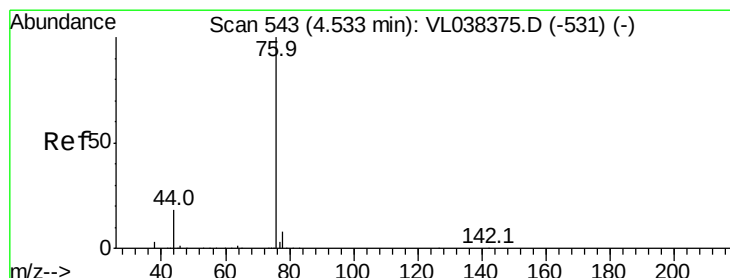
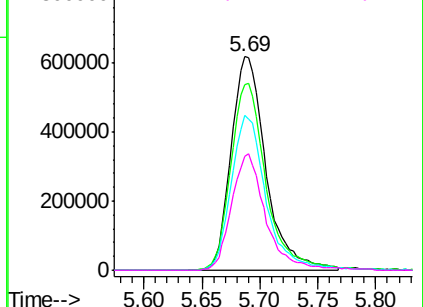
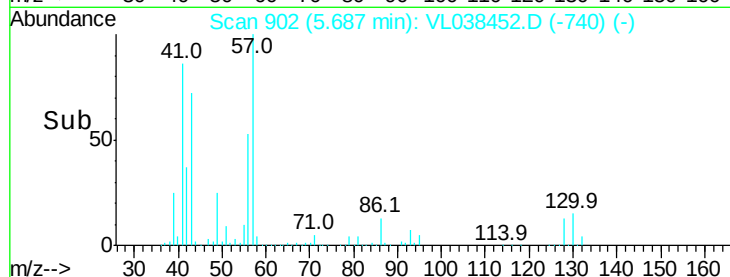


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#27

Carbon Disulfide

Concen: 0.10 ppbv

RT: 4.56 min Scan# 550

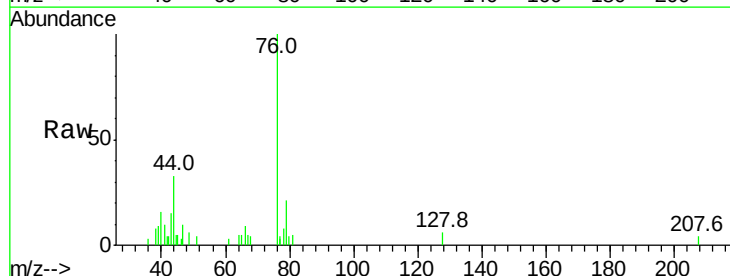
Delta R.T. 0.02 min

Lab File: VL038452.D

Acq: 1 Mar 2022 15:49

Tgt Ion: 76 Resp: 9676

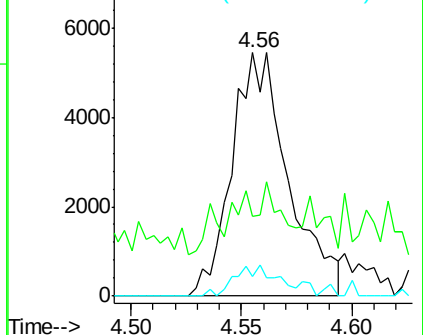
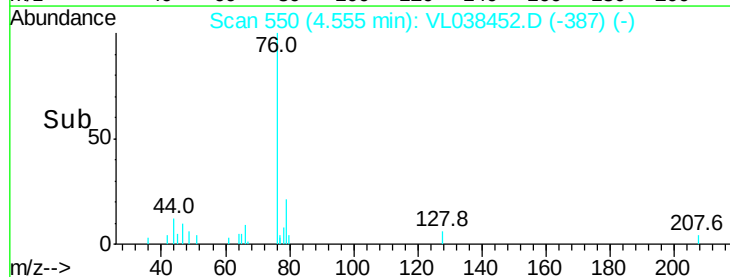
Ion	Ratio	Lower	Upper
76	100		
44	24.0	14.2	21.2#
78	12.2	7.8	11.6#

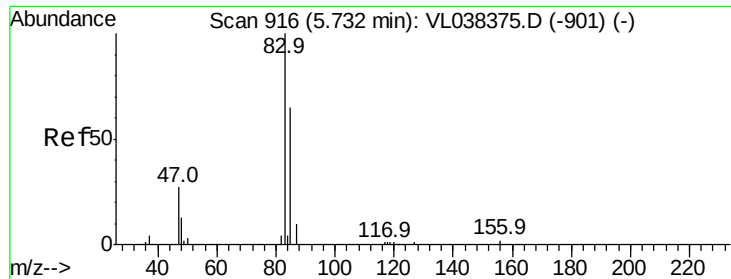


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

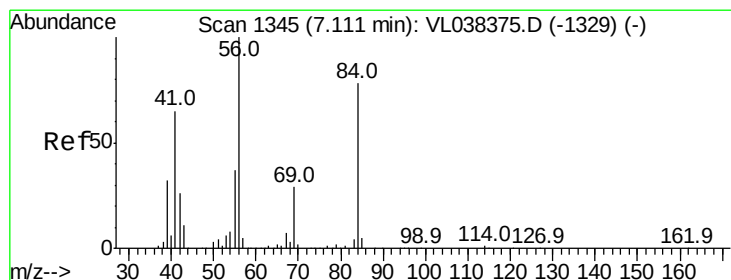
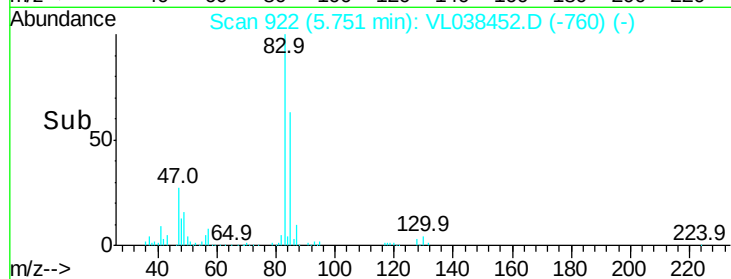
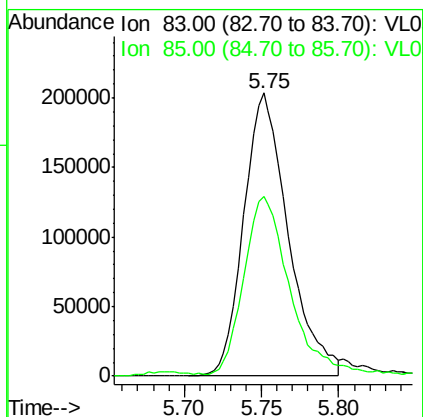
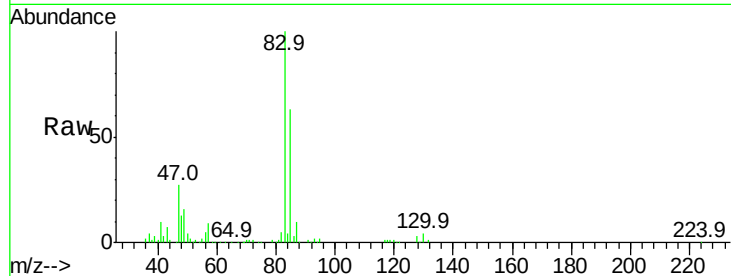
Ion 78.00 (77.70 to 78.70): VL0





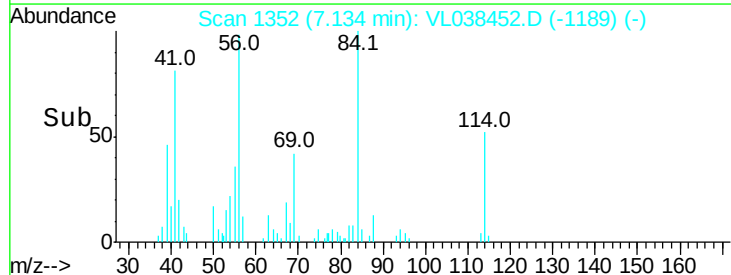
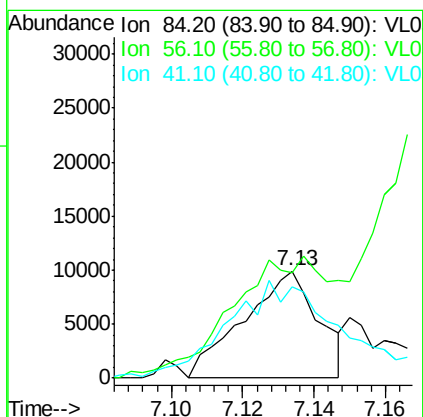
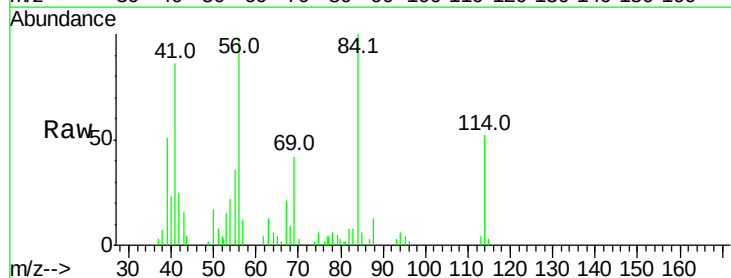
#29
Chloroform
Concen: 2.82 ppbv
RT: 5.75
Delta R.T.: MSVOA_L
Lab File: ClientSampleId :
Acq: 1 Mar 2022 15:49

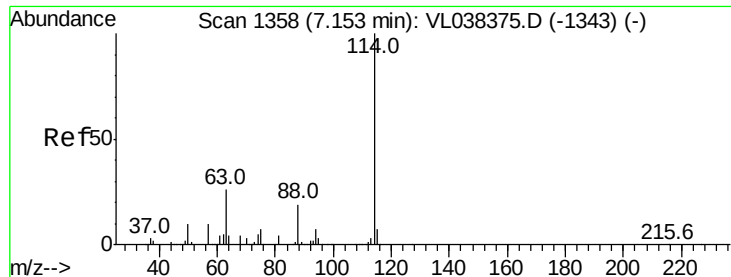
Tgt Ion: 83 Resp: 407562
Ion Ratio Lower Upper
83 100
85 62.1 51.6 77.4



#30
Cyclohexane
Concen: 0.20 ppbv
RT: 7.13 min Scan# 1352
Delta R.T.: 0.02 min
Lab File: VL038452.D
Acq: 1 Mar 2022 15:49

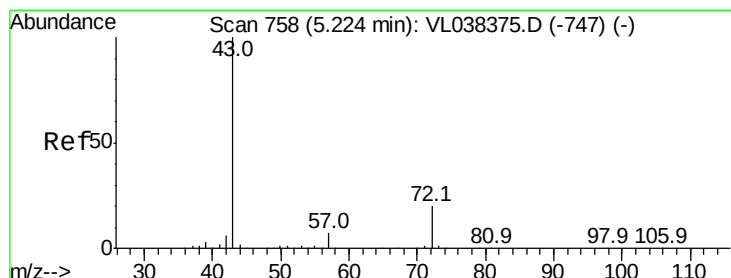
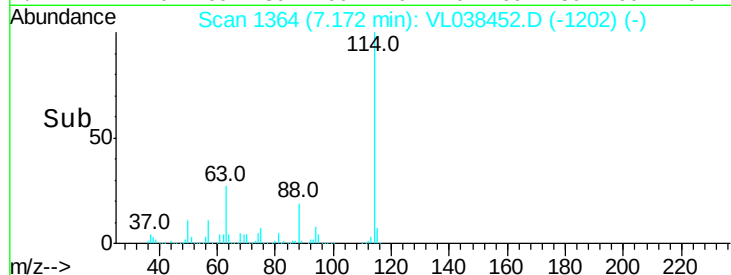
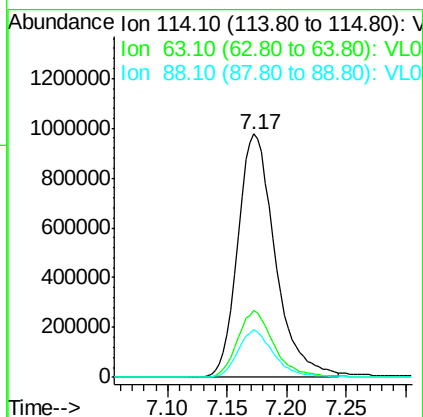
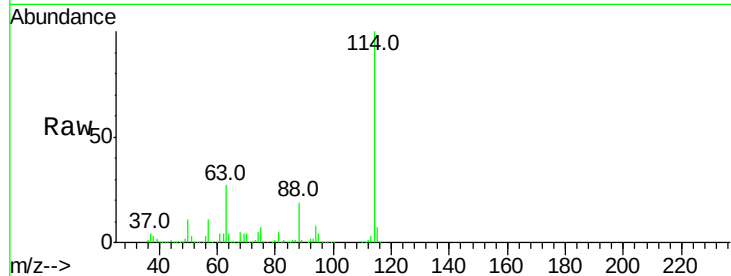
Tgt Ion: 84 Resp: 14353
Ion Ratio Lower Upper
84 100
56 0.0 116.2 174.4#
41 144.2 74.3 111.5#





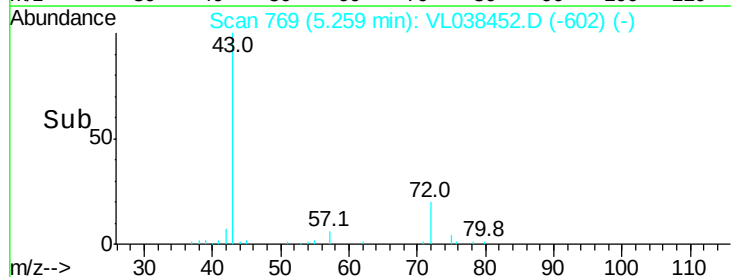
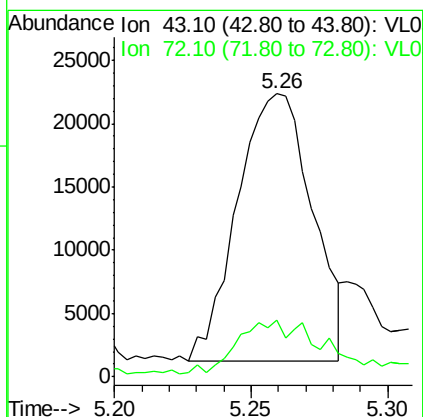
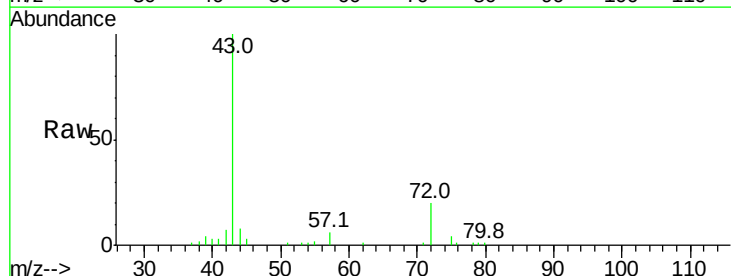
#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.17
 Delta R.T.: MSVOA_L
 Lab File: ClientSampleId :
 SVP-1
 Acq: 1 Mar 2022 15:49

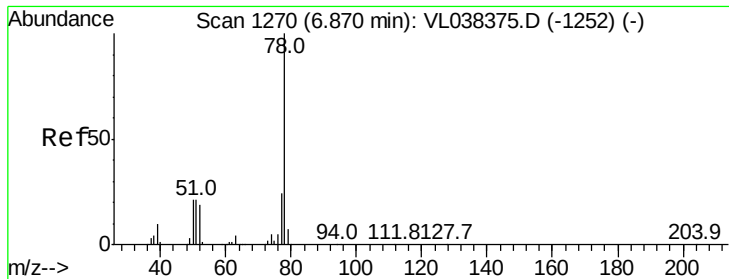
Tgt Ion: 114 Resp: 2130664
 Ion Ratio Lower Upper
 114 100
 63 27.2 22.2 33.2
 88 19.0 15.2 22.8



#34
 2-Butanone
 Concen: 0.60 ppbv
 RT: 5.26 min Scan# 769
 Delta R.T.: 0.04 min
 Lab File: VL038452.D
 Acq: 1 Mar 2022 15:49

Tgt Ion: 43 Resp: 40255
 Ion Ratio Lower Upper
 43 100
 72 29.8 17.4 26.2#





#36

Benzene

Concen: 0.18 ppbv

RT: 6.89 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 1 Mar 2022 15:49 SVP-1

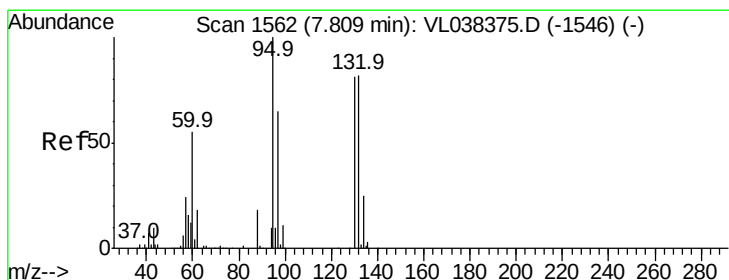
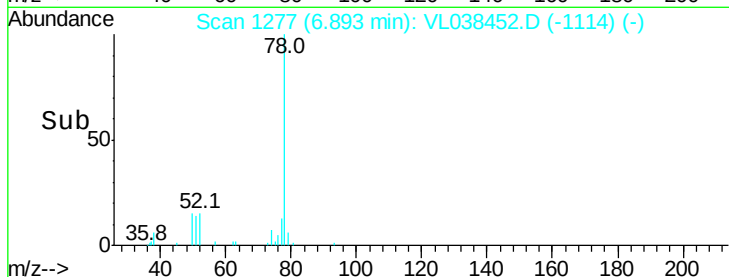
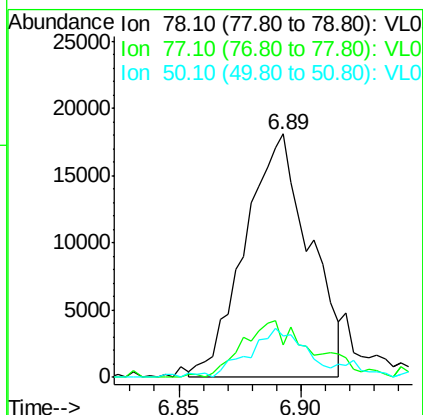
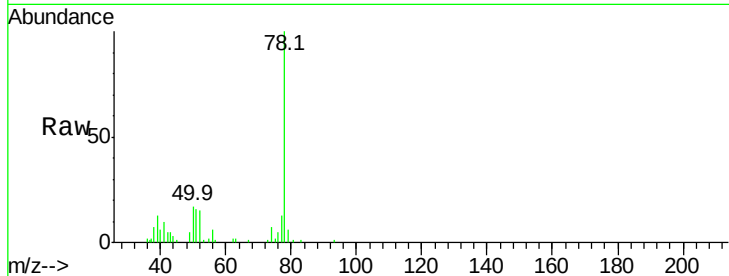
Tgt Ion: 78 Resp: 33140

Ion Ratio Lower Upper

78 100

77 12.2 19.0 28.6#

50 15.5 16.6 24.8#



#38

Trichloroethene

Concen: 0.31 ppbv

RT: 7.83 min Scan# 1570

Delta R.T. 0.03 min

Lab File: VL038452.D

Acq: 1 Mar 2022 15:49

Tgt Ion: 130 Resp: 20981

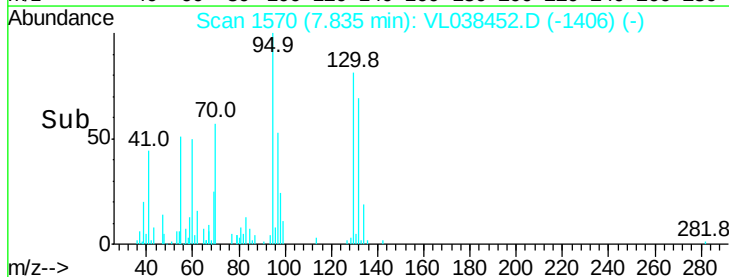
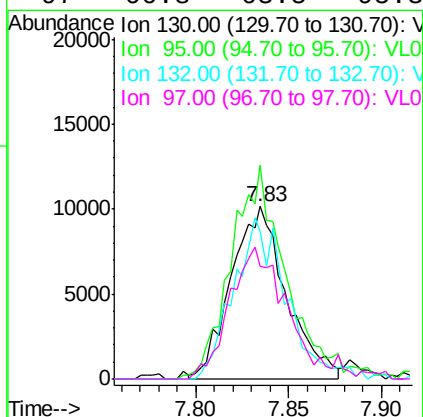
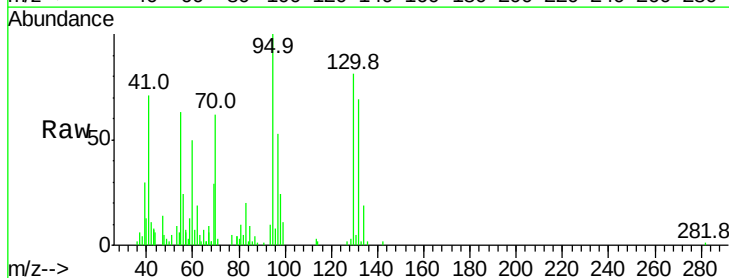
Ion Ratio Lower Upper

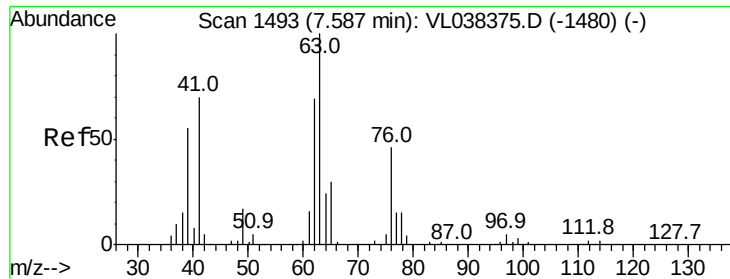
130 100

95 123.9 98.1 147.1

132 86.9 80.3 120.5

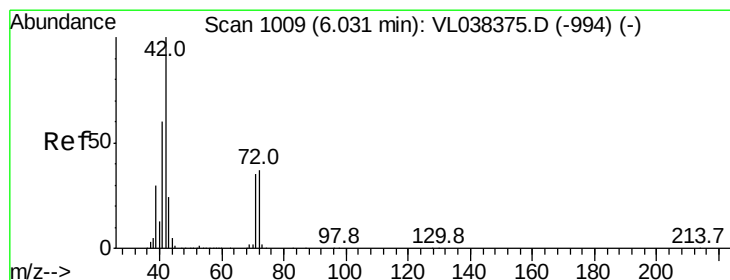
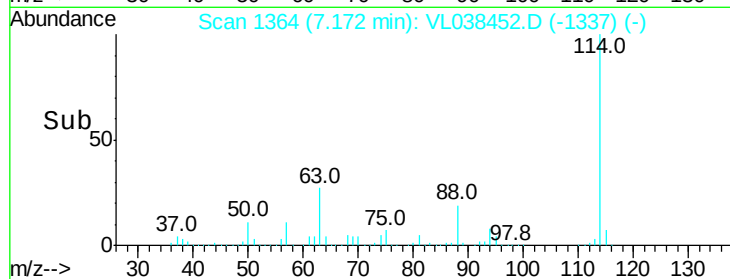
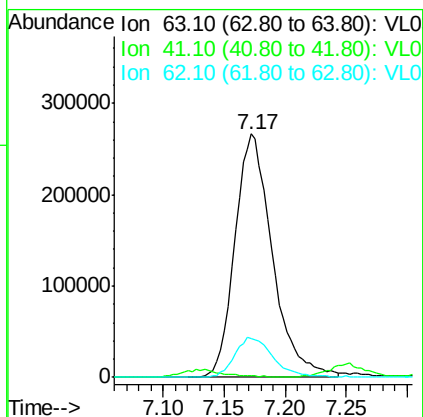
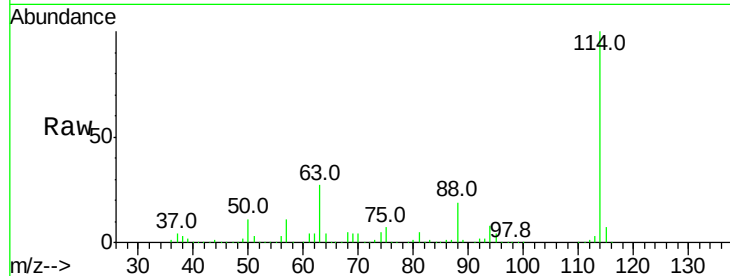
97 66.8 63.5 95.3





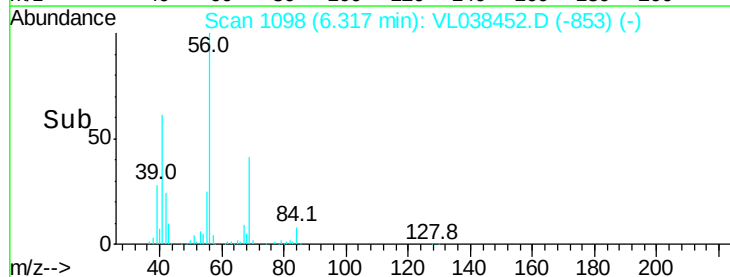
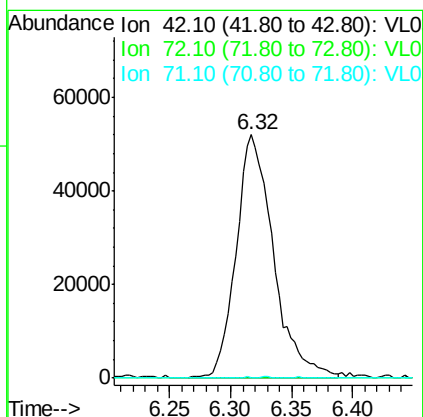
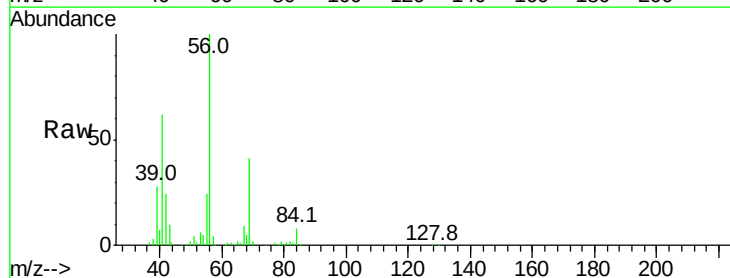
#39
 1,2-Dichloropropane
 Concen: 7.56 ppbv
 RT: 7.17
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SVP-1
 Acq: 1 Mar 2022 15:49

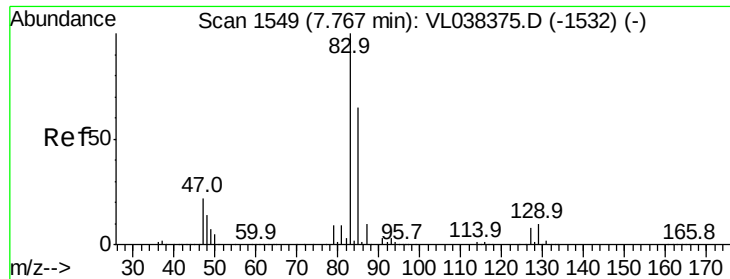
Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	56.1	84.1#
62	16.2	55.5	83.3#



#41
 Tetrahydrofuran
 Concen: 2.44 ppbv
 RT: 6.32 min Scan# 1098
 Delta R.T. 0.29 min
 Lab File: VL038452.D
 Acq: 1 Mar 2022 15:49

Tgt Ion	Ratio	Lower	Upper
42	100		
72	0.2	29.9	44.9#
71	0.0	28.6	42.8#





#42

Bromodichloromethane

Concen: 0.37 ppbv

RT: 7.79 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 1 Mar 2022 15:49

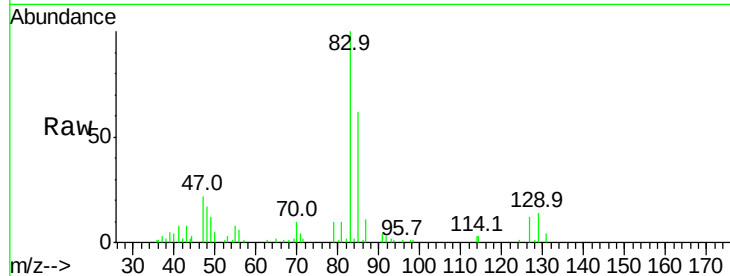
Tgt Ion: 83 Resp: 57887

Ion Ratio Lower Upper

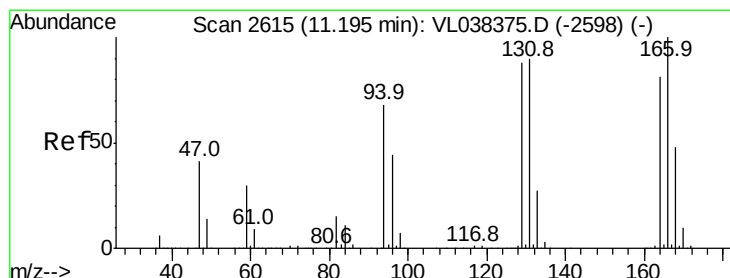
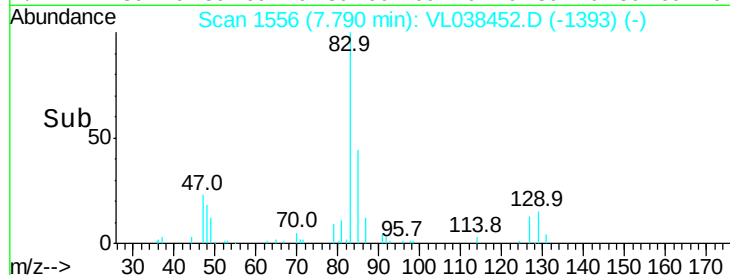
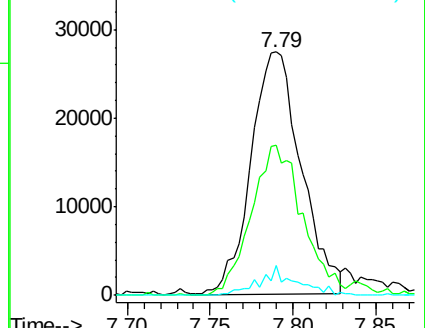
83 100

85 62.1 52.2 78.4

127 12.1 6.2 9.4#



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): V



#52

Tetrachloroethene

Concen: 16.99 ppbv

RT: 11.22 min Scan# 2623

Delta R.T. 0.03 min

Lab File: VL038452.D

Acq: 1 Mar 2022 15:49

Tgt Ion:164 Resp: 1057808

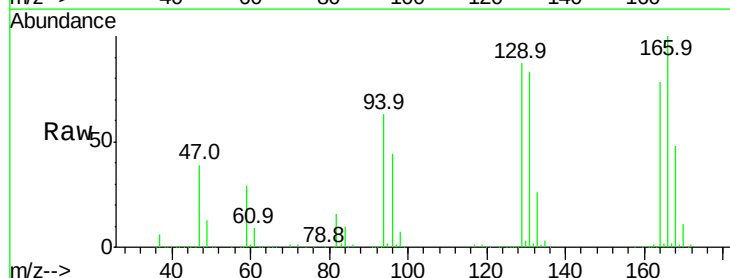
Ion Ratio Lower Upper

164 100

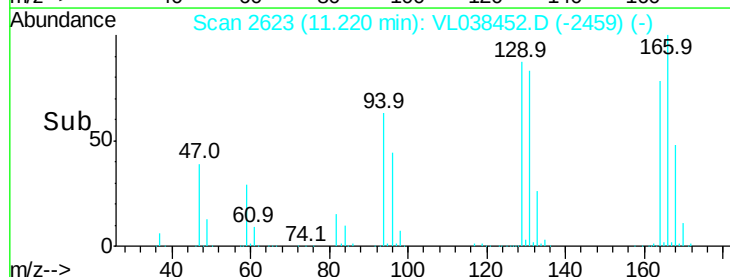
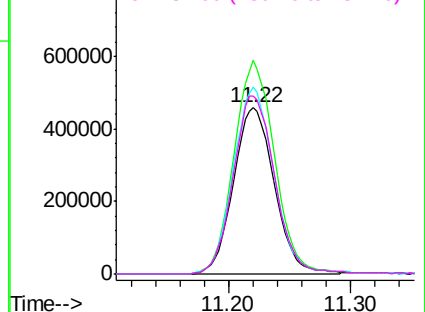
166 128.8 98.6 148.0

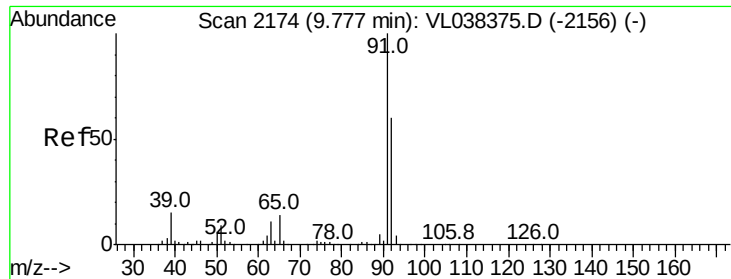
129 112.5 86.9 130.3

131 107.1 88.6 133.0



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: 8.76 ppbv

RT: 9.80

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

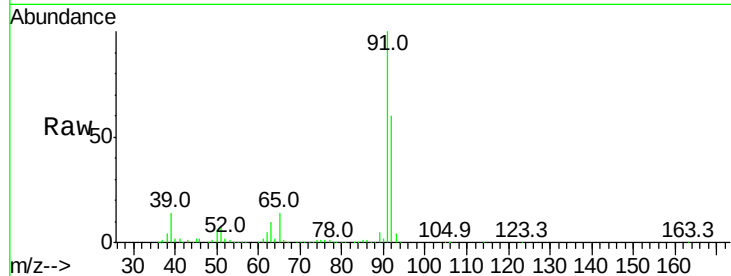
Acq: 1 Mar 2022 15:49

Tgt Ion: 91 Resp: 1783048

Ion Ratio Lower Upper

91 100

92 61.0 48.2 72.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

800000

600000

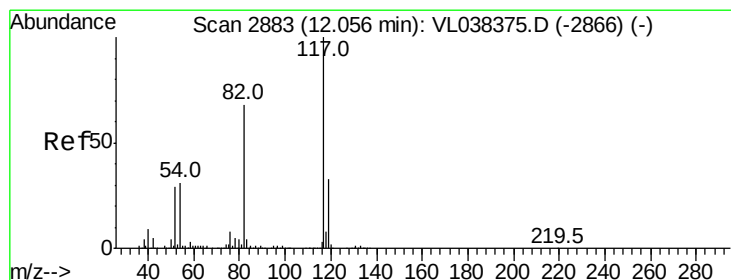
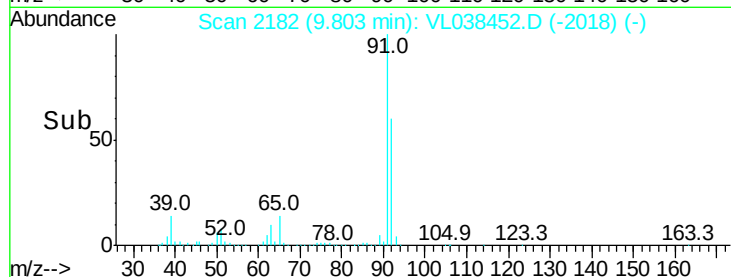
400000

200000

0

9.70 9.75 9.80 9.85 9.90

Time-->



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.08 min Scan# 2890

Delta R.T. 0.02 min

Lab File: VL038452.D

Acq: 1 Mar 2022 15:49

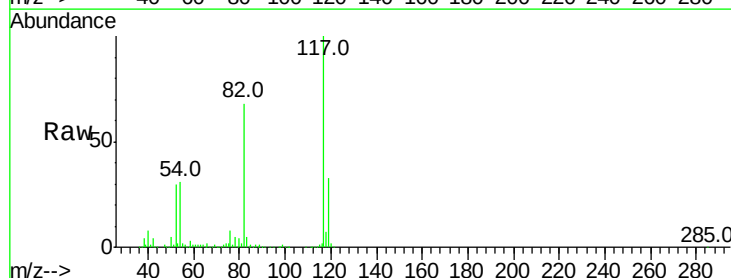
Tgt Ion: 117 Resp: 1916124

Ion Ratio Lower Upper

117 100

82 70.9 54.9 82.3

119 32.8 46.1 69.1#



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

1000000

800000

600000

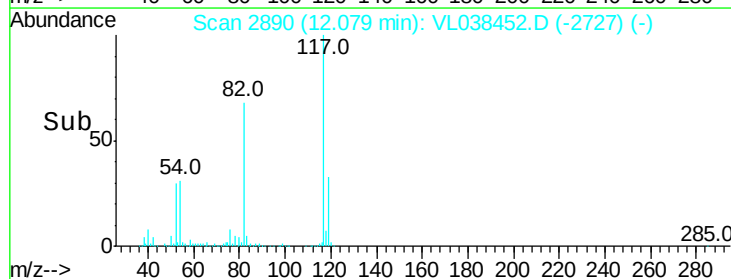
400000

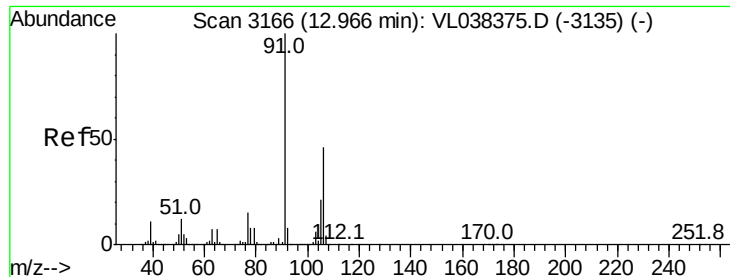
200000

0

12.00 12.10 12.20

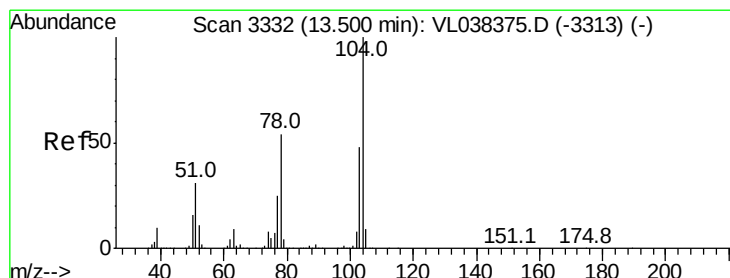
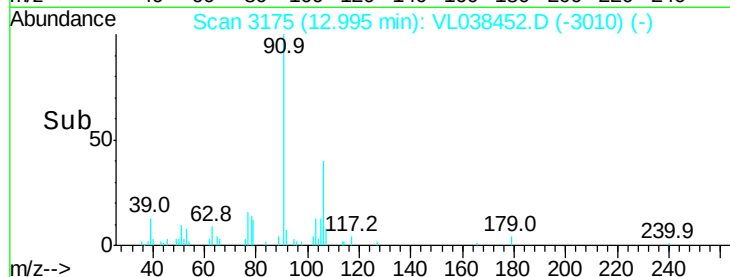
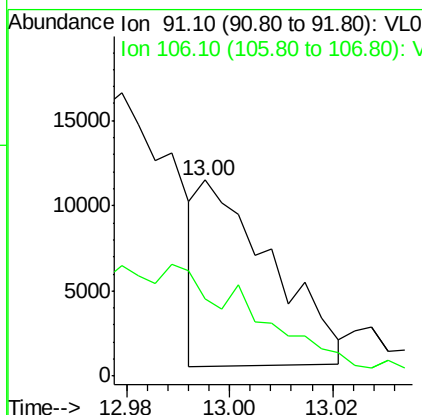
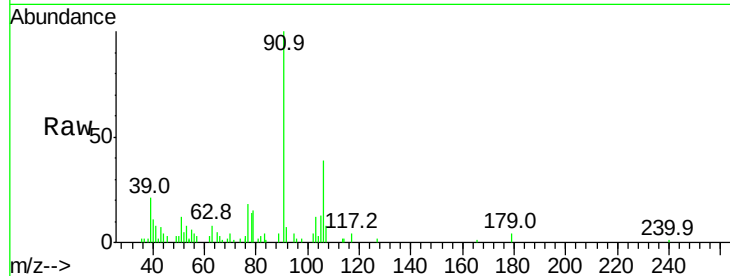
Time-->





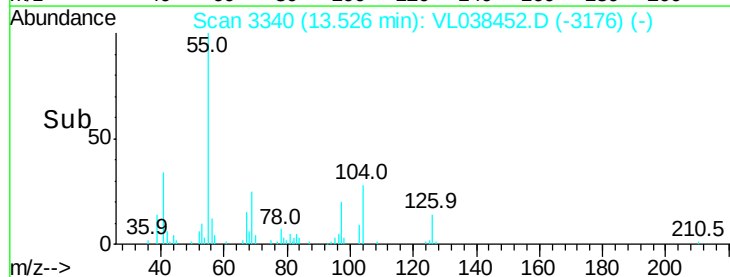
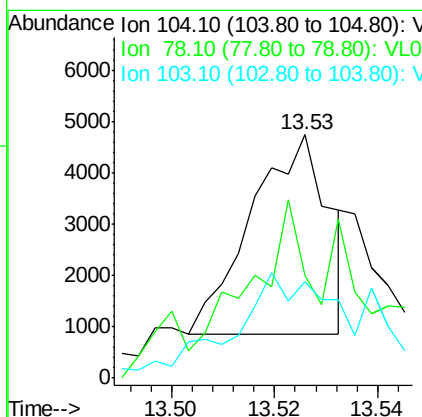
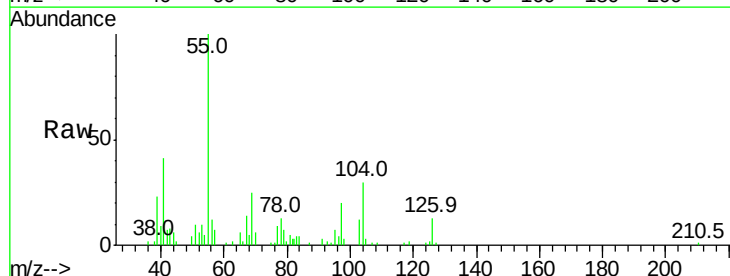
#59
m/p-Xylene
Concen: 0.05 ppbv
RT: 13.00
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 1 Mar 2022 15:49

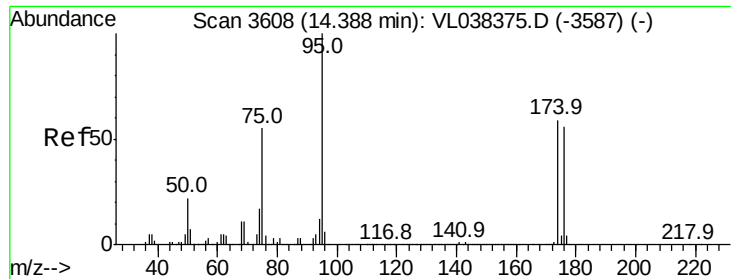
Tgt Ion: 91 Resp: 10670
Ion Ratio Lower Upper
91 100
106 0.0 34.4 51.6#



#61
Styrene
Concen: 0.04 ppbv
RT: 13.53 min Scan# 3340
Delta R.T. 0.03 min
Lab File: VL038452.D
Acq: 1 Mar 2022 15:49

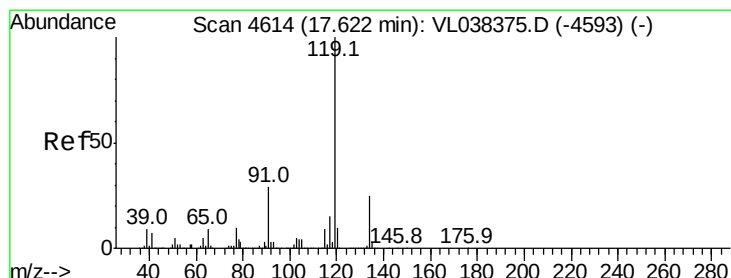
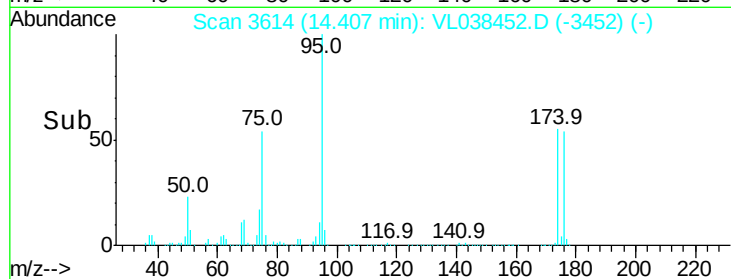
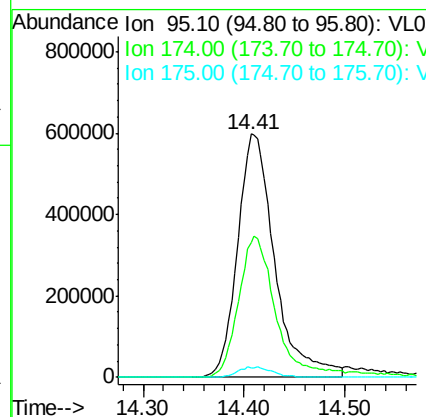
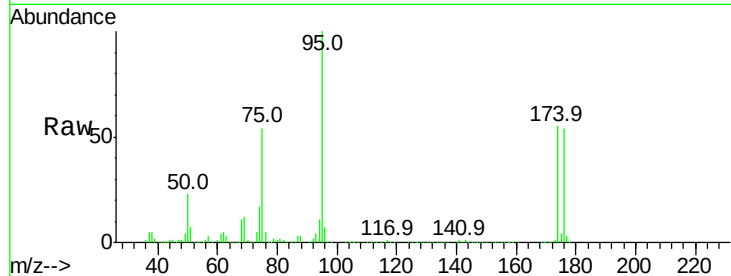
Tgt Ion: 104 Resp: 4057
Ion Ratio Lower Upper
104 100
78 170.8 44.2 66.4#
103 97.9 38.4 57.6#





#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.65 ppbv
 RT: 14.41
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SVP-1
 Acq: 1 Mar 2022 15:49

Tgt Ion: 95 Resp: 1529376
 Ion Ratio Lower Upper
 95 100
 174 61.0 49.0 73.4
 175 4.3 3.6 5.4



#69
 p-Isopropyltoluene
 Concen: 0.05 ppbv
 RT: 17.65 min Scan# 4622
 Delta R.T. 0.03 min
 Lab File: VL038452.D
 Acq: 1 Mar 2022 15:49

Tgt Ion: 119 Resp: 13780
 Ion Ratio Lower Upper
 119 100
 134 26.5 20.4 30.6
 91 61.7 23.8 35.8#

