

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL032122\
 Data File : VL038677.D
 Acq On : 22 Mar 2022 8:56
 Operator : SY/AP
 Sample : N1964-12
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P82

Quant Time: Mar 23 03:40:16 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL032122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 21 17:09:26 2022
 QLast Update : Mon Mar 21 17:09:26 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	795418	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.15	114	2049082	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.06	117	1890822	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.39	95	1378888	9.51	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.10%

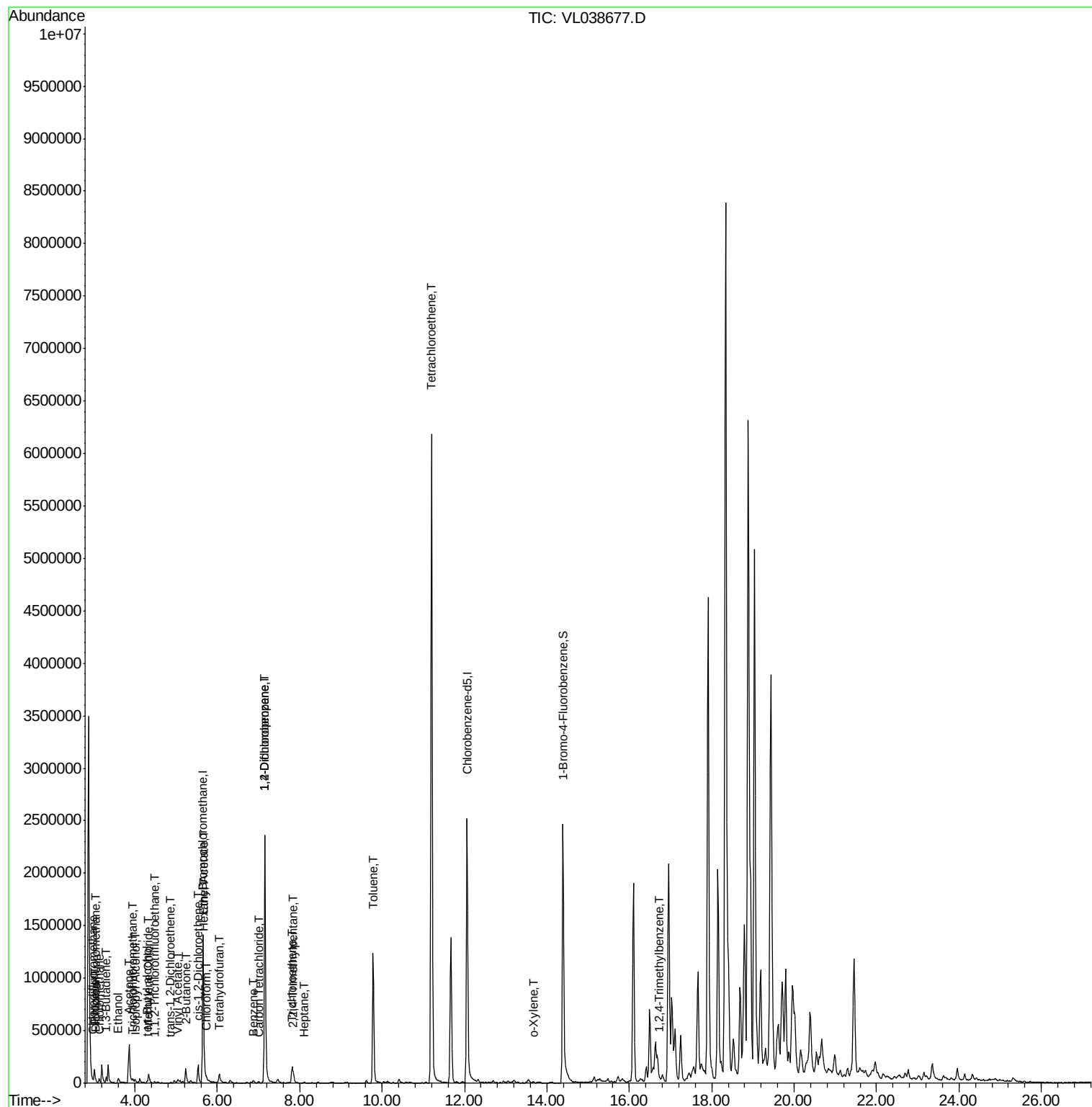
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.05	85	19110	0.18	ppbv	98
3) Chlorodifluoromethane	2.98	51	31492	0.37	ppbv #	87
4) Chloromethane	3.13	50	38774	0.84	ppbv	94
9) Propene	3.02	41	37626	0.93	ppbv #	79
10) Heptane	8.10	43	2165	0.02	ppbv #	26
11) Trichlorofluoromethane	3.94	101	22476	0.24	ppbv	94
12) 1,1,2-Trichlorotrifluoroet	4.47	101	2456	0.03	ppbv #	1
13) Ethanol	3.59	45	56419	12.61	ppbv	87
15) Acetone	3.84	43	205429	2.99	ppbv #	68
16) 1,3-Butadiene	3.30	39	6469	0.17	ppbv #	39
17) tert-Butyl alcohol	4.29	59	6307	0.11	ppbv #	73
19) Isopropyl Alcohol	3.99	45	2354	0.06	ppbv #	91
20) Methylene Chloride	4.33	84	34416	1.19	ppbv	94
22) trans-1,2-Dichloroethene	4.87	96	905	0.03	ppbv #	61
23) Vinyl Acetate	5.04	43	20569	0.31	ppbv #	36
25) Ethyl Acetate	5.67	43	9378	0.05	ppbv #	81
26) Hexane	5.67	57	21912	0.28	ppbv #	35
29) Chloroform	5.73	83	9738	0.08	ppbv	91
31) cis-1,2-Dichloroethene	5.54	61	108337	1.49	ppbv	92
34) 2-Butanone	5.23	43	195838	2.41	ppbv	94
35) Carbon Tetrachloride	6.99	117	2875	0.02	ppbv	90
36) Benzene	6.87	78	21002	0.13	ppbv #	94
38) Trichloroethene	7.81	130	53297	0.80	ppbv	94
39) 1,2-Dichloropropane	7.16	63	485016	7.85	ppbv #	28
41) Tetrahydrofuran	6.04	42	43866	0.73	ppbv #	89
44) 2,2,4-Trimethylpentane	7.85	57	72310	0.27	ppbv #	83
52) Tetrachloroethene	11.20	164	1823363	31.51	ppbv	97
53) Toluene	9.78	91	1085071	6.39	ppbv	98
60) o-Xylene	13.66	91	6876	0.04	ppbv	90
74) 1,2,4-Trimethylbenzene	16.74	105	5619	0.03	ppbv #	71

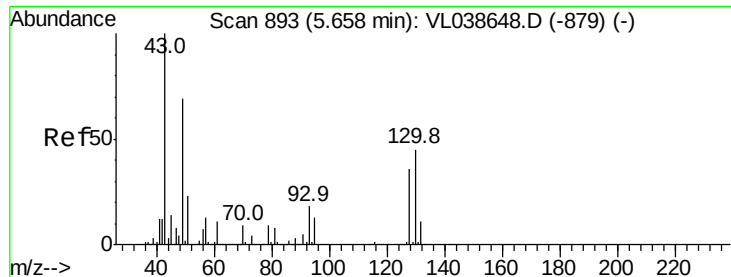
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Mar 21 17:09:26 2022
QLast Update : Mon Mar 21 17:09:26 2022
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.65 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: COP82

Acq: 22 Mar 2022 8:56

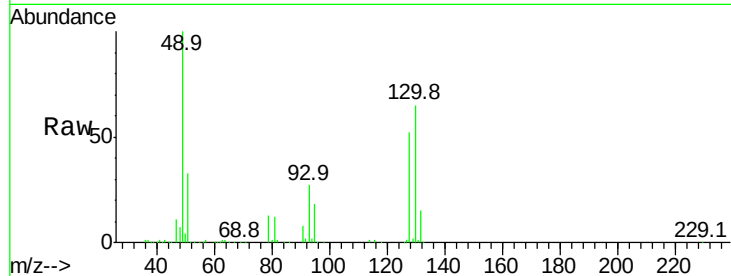
Tgt Ion: 49 Resp: 795418

Ion Ratio Lower Upper

49 100

128 52.7 26.2 78.6

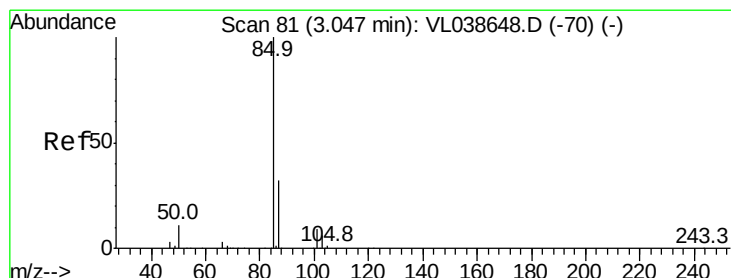
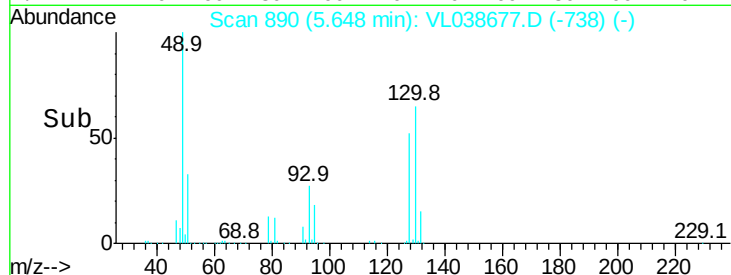
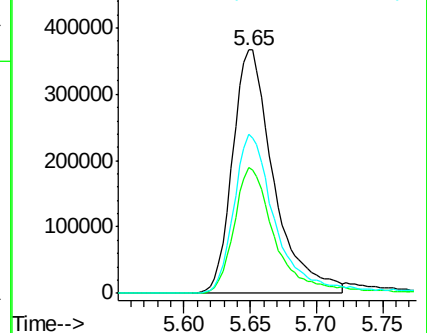
130 68.1 33.7 101.1



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: 0.18 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.00 min

Lab File: VL038677.D

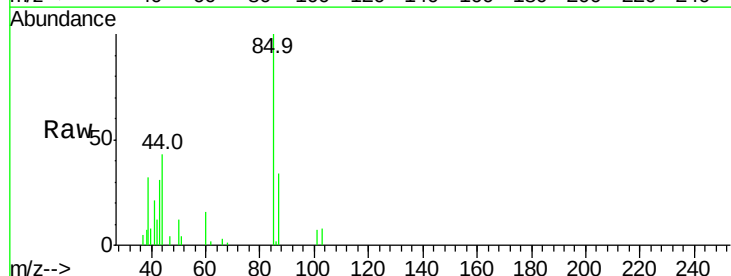
Acq: 22 Mar 2022 8:56

Tgt Ion: 85 Resp: 19110

Ion Ratio Lower Upper

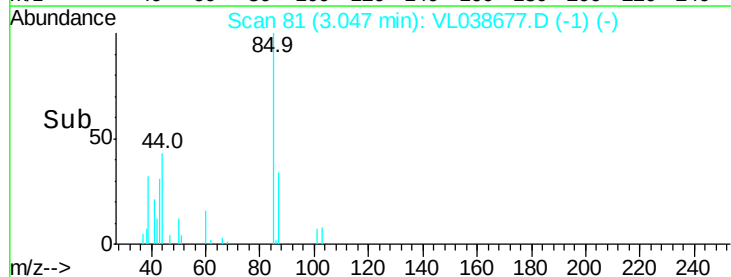
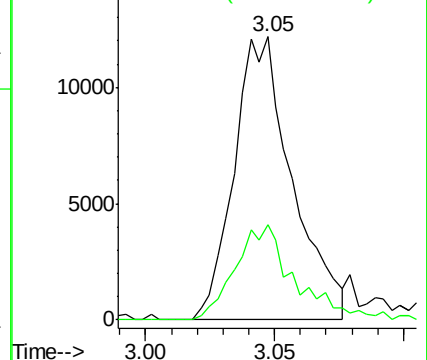
85 100

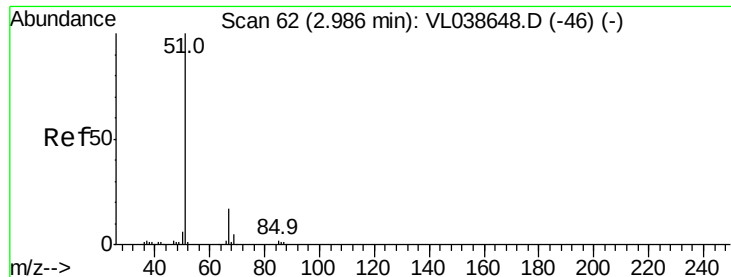
87 33.8 26.0 39.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

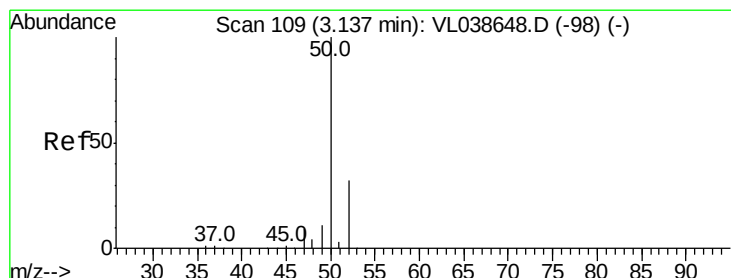
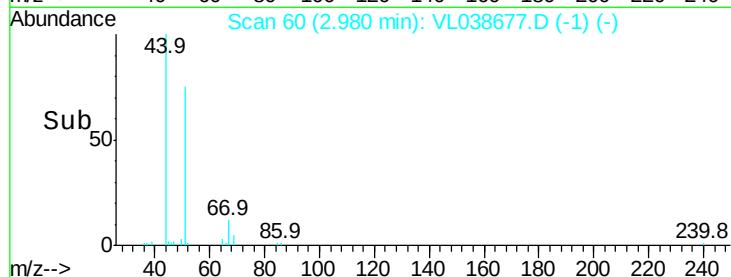
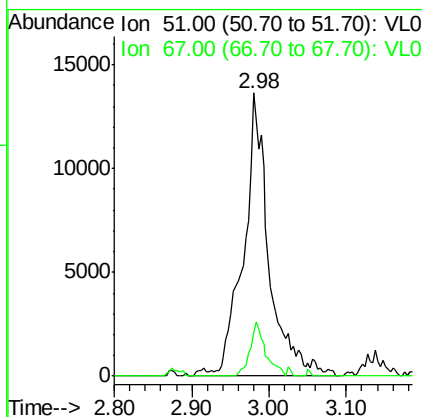
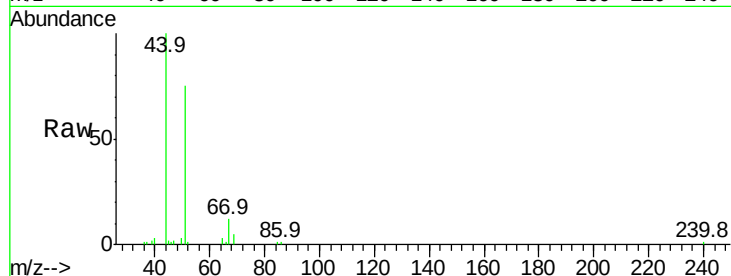
Ion 87.00 (86.70 to 87.70): VL0





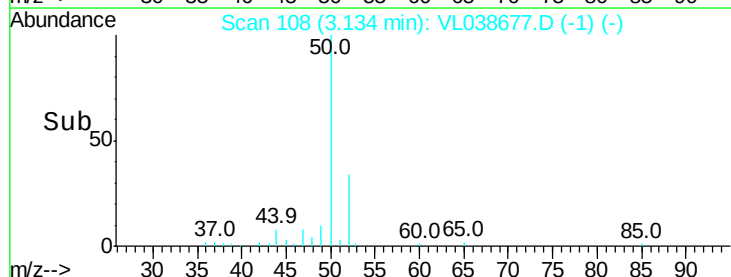
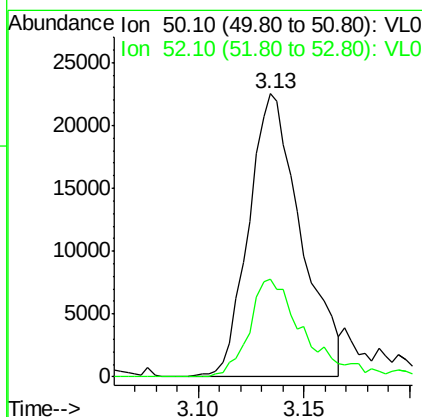
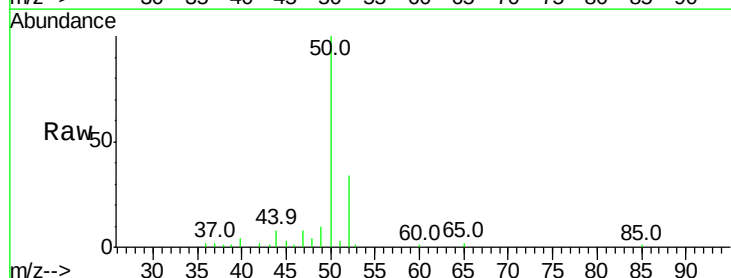
#3
Chlorodifluoromethane
Concen: 0.37 ppbv
RT: 2.98
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Mar 2022 8:58

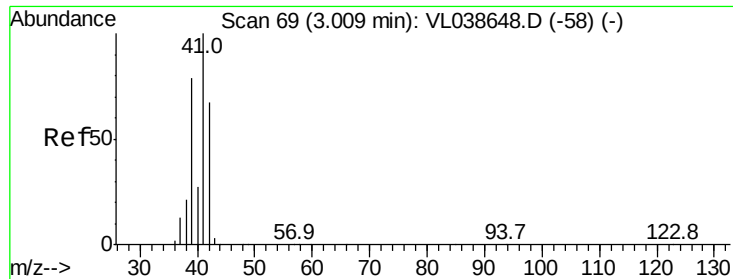
Tgt Ion: 51 Resp: 31492
Ion Ratio Lower Upper
51 100
67 12.1 14.1 21.1#



#4
Chloromethane
Concen: 0.84 ppbv
RT: 3.13 min Scan# 108
Delta R.T. -0.00 min
Lab File: VL038677.D
Acq: 22 Mar 2022 8:56

Tgt Ion: 50 Resp: 38774
Ion Ratio Lower Upper
50 100
52 35.3 25.5 38.3





#9

Propene

Concen: 0.93 ppbv

RT: 3.02 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: C0P82

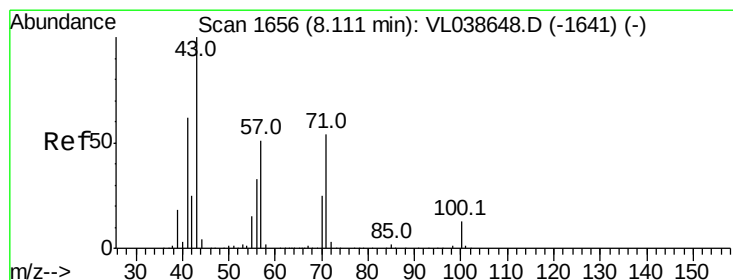
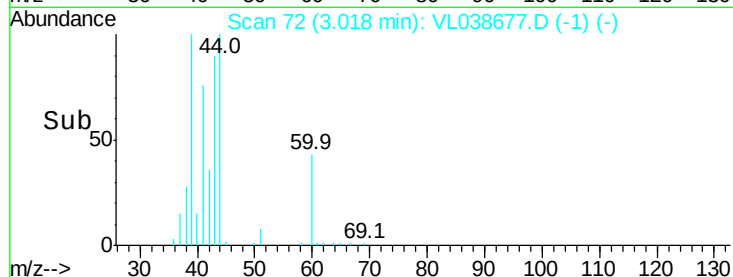
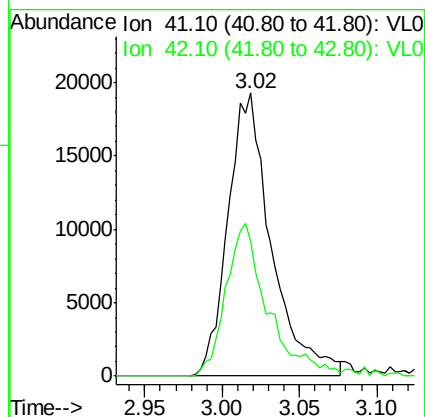
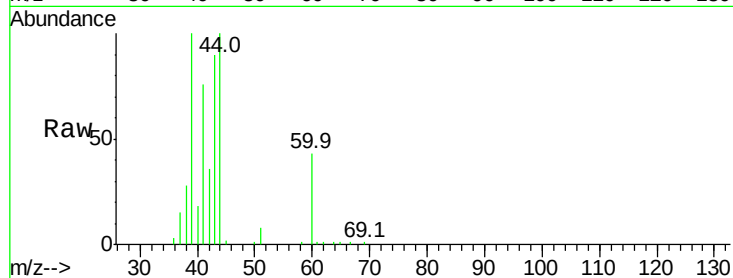
Acq: 22 Mar 2022 8:58

Tgt Ion: 41 Resp: 37626

Ion Ratio Lower Upper

41 100

42 53.3 56.2 84.4#



#10

Heptane

Concen: 0.02 ppbv

RT: 8.10 min Scan# 1654

Delta R.T. -0.01 min

Lab File: VL038677.D

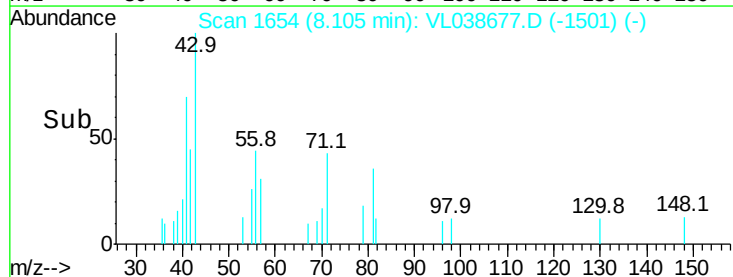
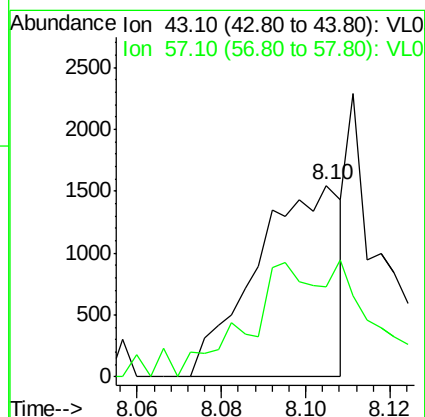
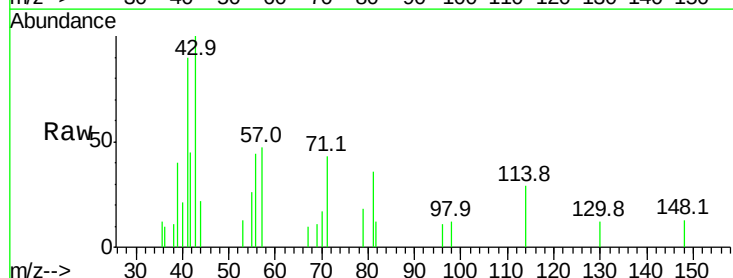
Acq: 22 Mar 2022 8:56

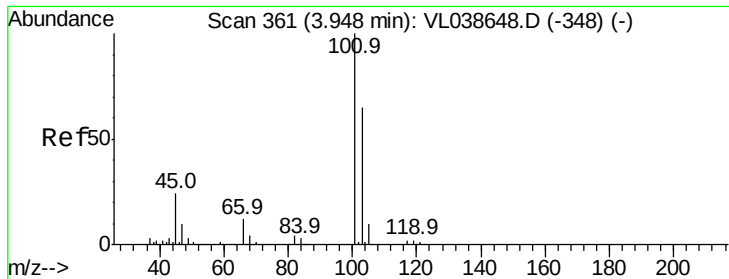
Tgt Ion: 43 Resp: 2165

Ion Ratio Lower Upper

43 100

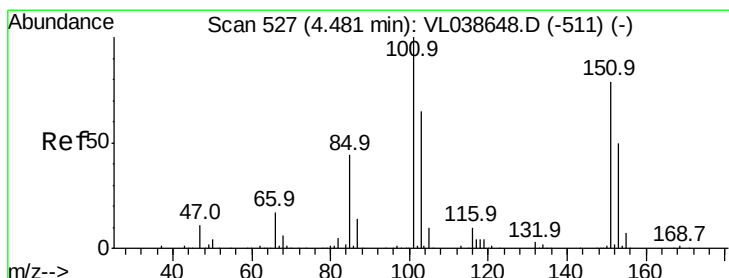
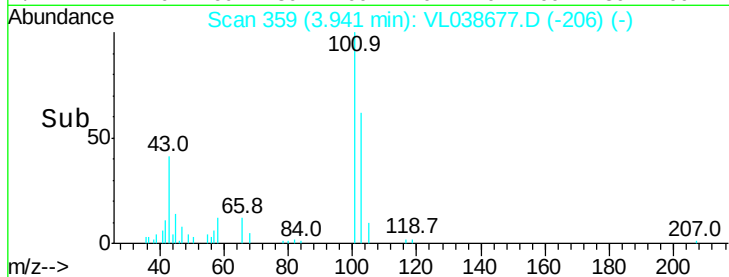
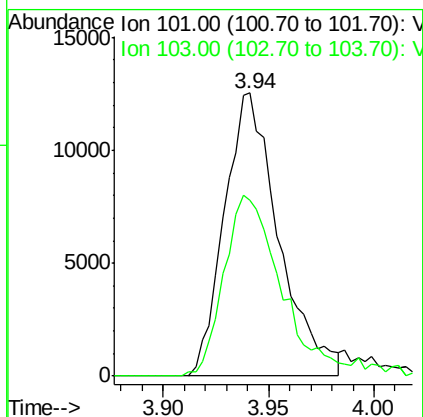
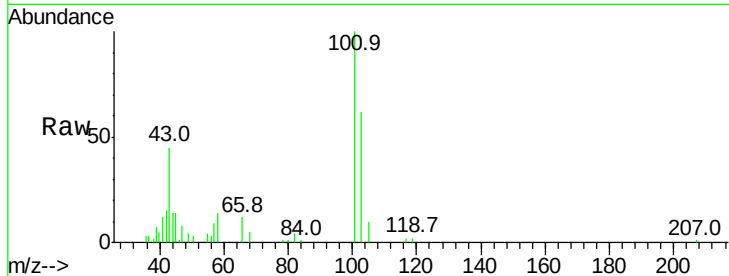
57 0.0 41.4 62.2#





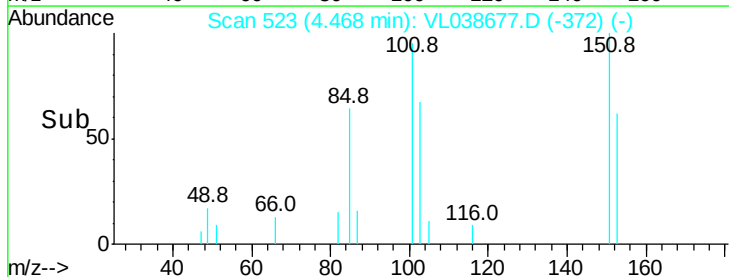
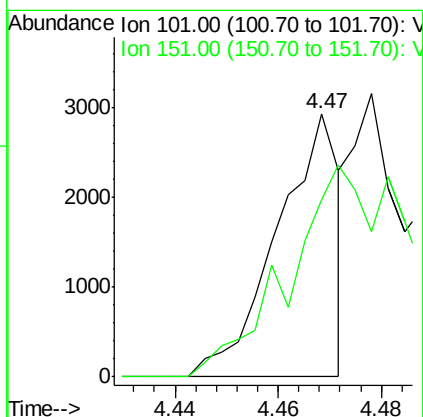
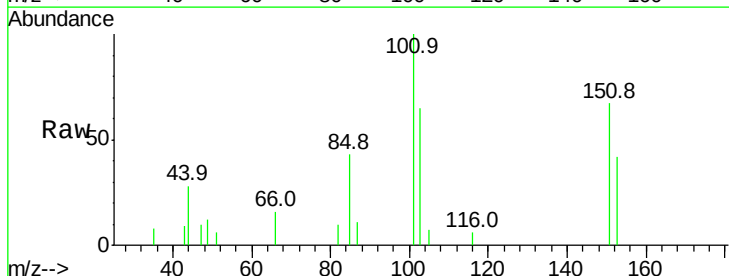
#11
 Trichlorofluoromethane
 Concen: 0.24 ppbv
 RT: 3.94
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 22 Mar 2022 8:58

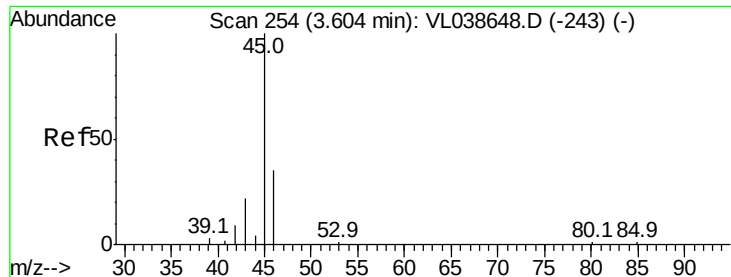
Tgt Ion:101 Resp: 22476
 Ion Ratio Lower Upper
 101 100
 103 60.4 51.9 77.9



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.03 ppbv
 RT: 4.47 min Scan# 523
 Delta R.T. -0.01 min
 Lab File: VL038677.D
 Acq: 22 Mar 2022 8:56

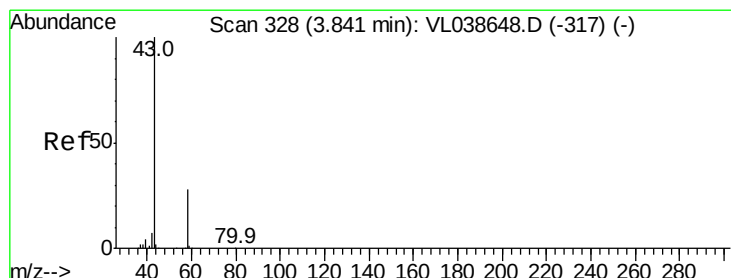
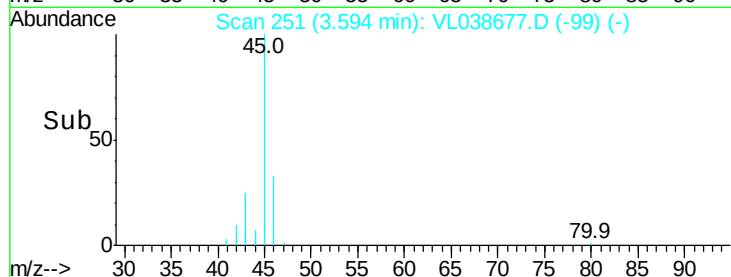
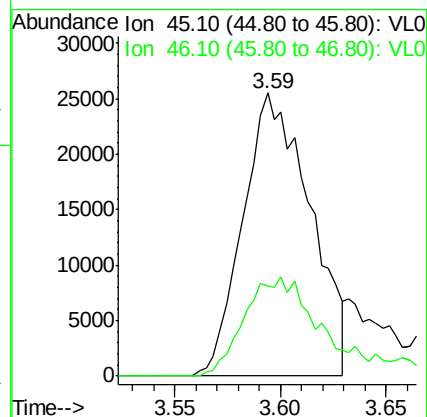
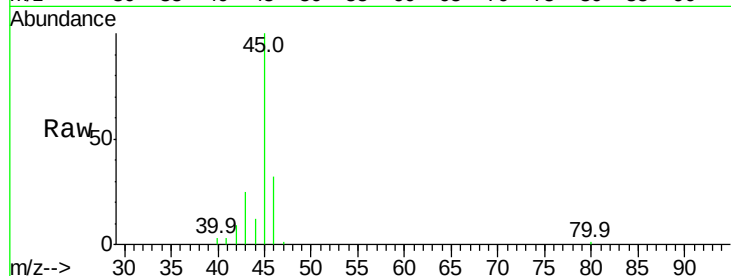
Tgt Ion:101 Resp: 2456
 Ion Ratio Lower Upper
 101 100
 151 175.2 62.9 94.3#





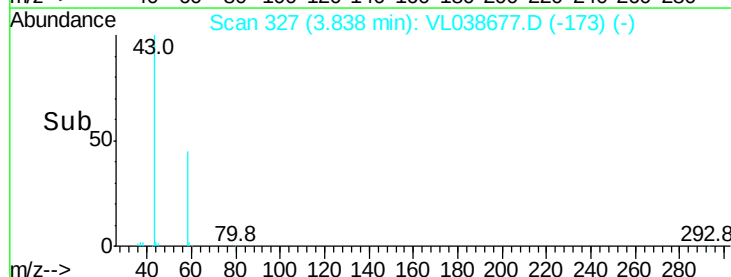
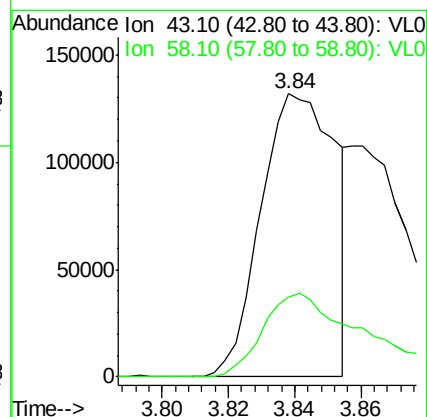
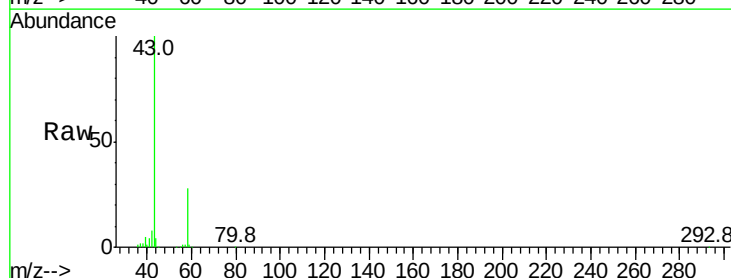
#13
 Ethanol
 Concen: 12.61 ppbv
 RT: 3.59
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 22 Mar 2022 8:56

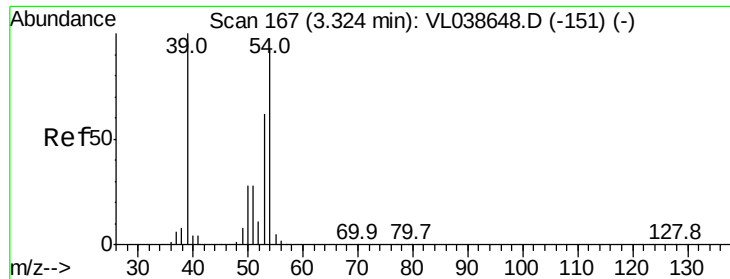
Tgt Ion: 45 Resp: 56419
 Ion Ratio Lower Upper
 45 100
 46 45.3 15.1 60.5



#15
 Acetone
 Concen: 2.99 ppbv
 RT: 3.84 min Scan# 327
 Delta R.T. -0.00 min
 Lab File: VL038677.D
 Acq: 22 Mar 2022 8:56

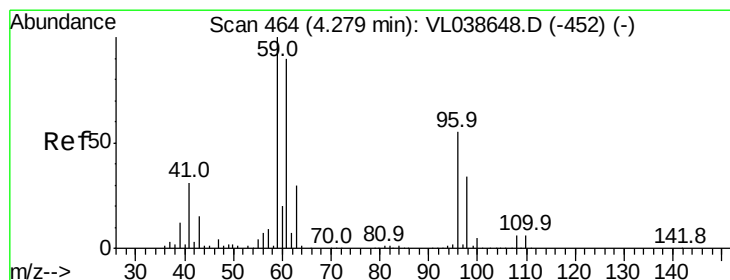
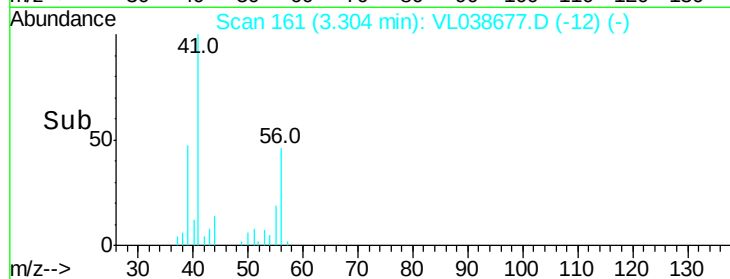
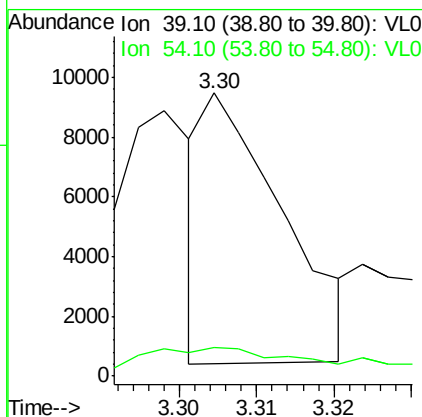
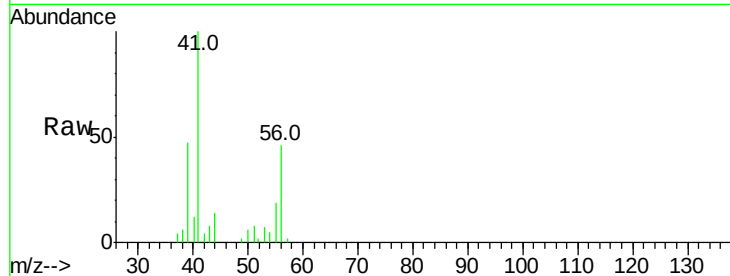
Tgt Ion: 43 Resp: 205429
 Ion Ratio Lower Upper
 43 100
 58 46.1 23.3 34.9#





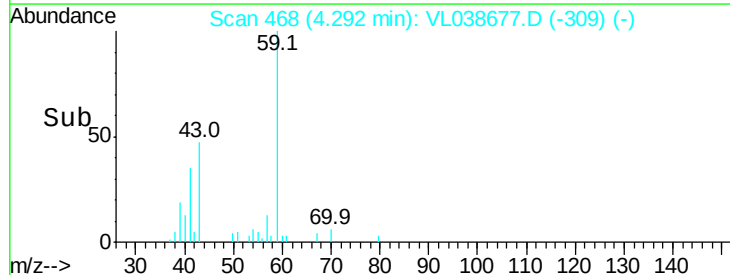
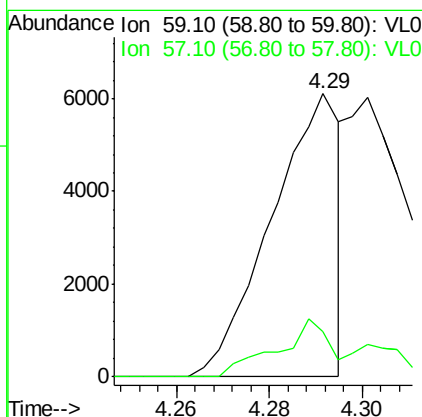
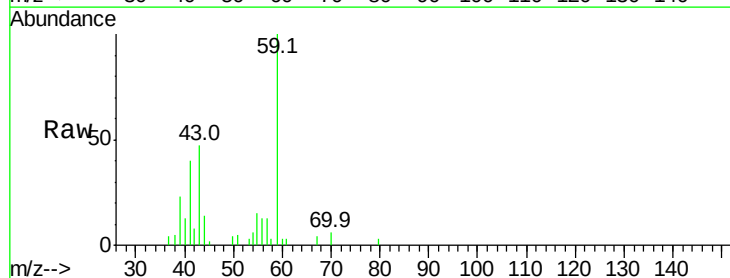
#16
 1,3-Butadiene
 Concen: 0.17 ppbv
 RT: 3.30
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 22 Mar 2022 8:56

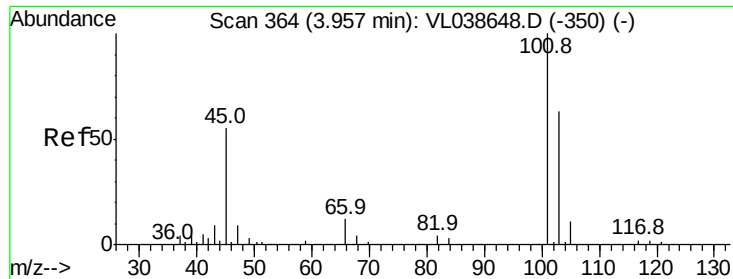
Tgt Ion: 39 Resp: 6469
 Ion Ratio Lower Upper
 39 100
 54 30.5 69.1 103.7#



#17
 tert-Butyl alcohol
 Concen: 0.11 ppbv
 RT: 4.29 min Scan# 468
 Delta R.T. 0.01 min
 Lab File: VL038677.D
 Acq: 22 Mar 2022 8:56

Tgt Ion: 59 Resp: 6307
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.2 12.2#





#19

Isopropyl Alcohol

Concen: 0.06 ppbv

RT: 3.99 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

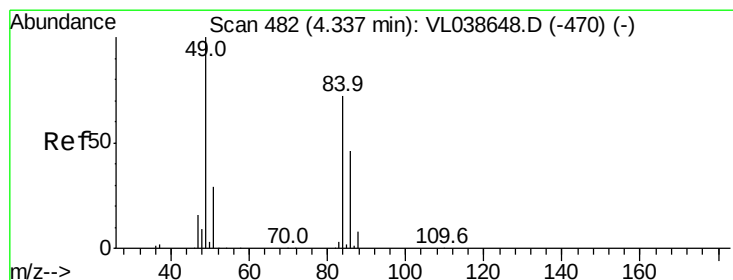
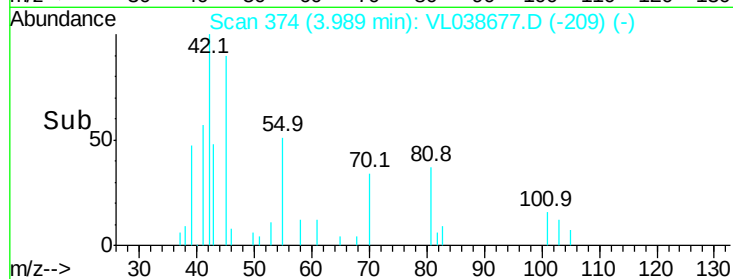
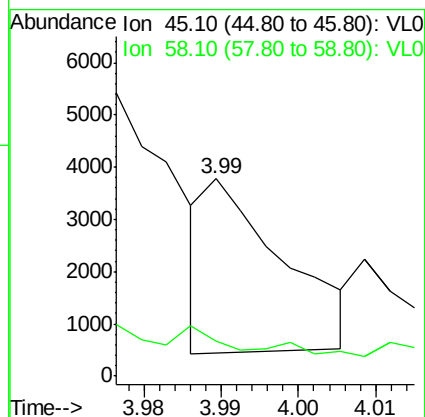
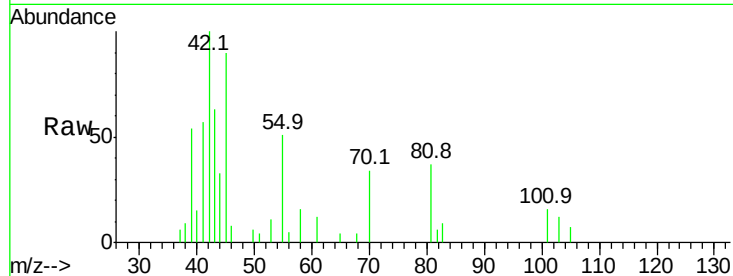
Acq: 22 Mar 2022 8:56

Tgt Ion: 45 Resp: 2354

Ion Ratio Lower Upper

45 100

58 0.0 2.3 3.5#



#20

Methylene Chloride

Concen: 1.19 ppbv

RT: 4.33 min Scan# 480

Delta R.T. -0.01 min

Lab File: VL038677.D

Acq: 22 Mar 2022 8:56

Tgt Ion: 84 Resp: 34416

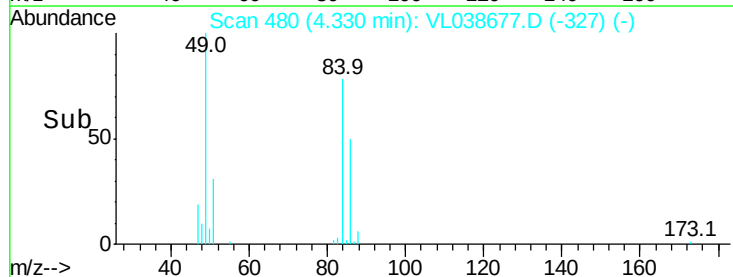
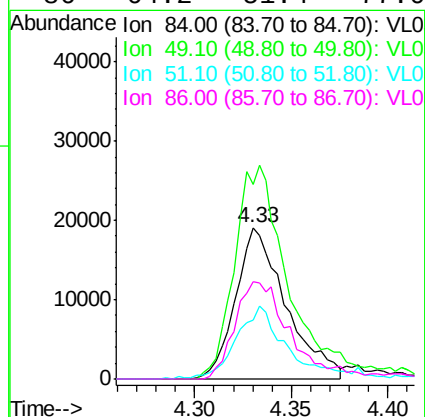
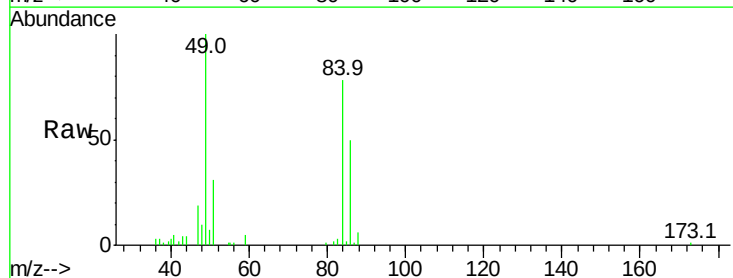
Ion Ratio Lower Upper

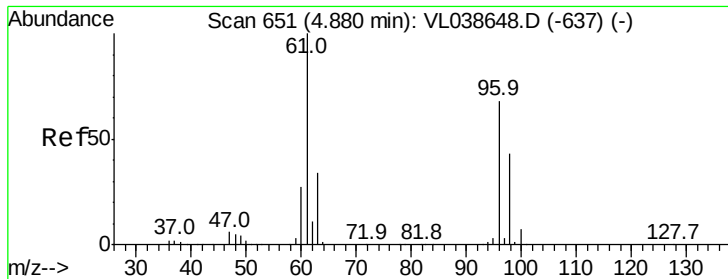
84 100

49 128.5 111.2 166.8

51 38.3 32.8 49.2

86 64.2 51.4 77.0





#22

trans-1,2-Dichloroethene

Concen: 0.03 ppbv

RT: 4.87 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 8:56

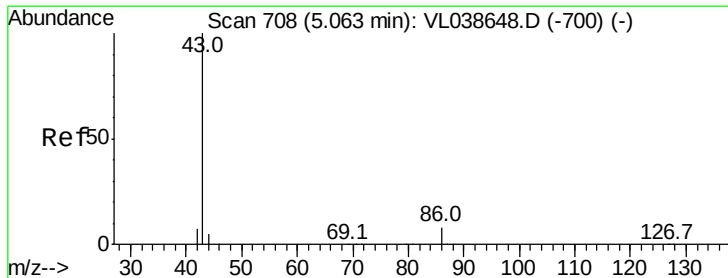
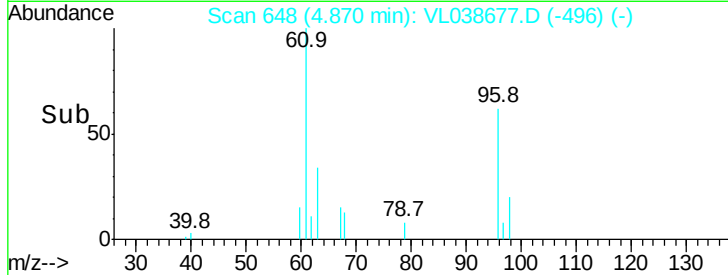
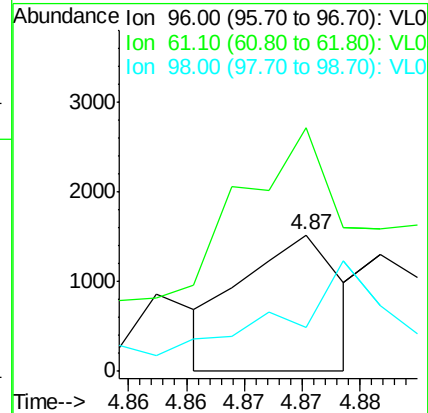
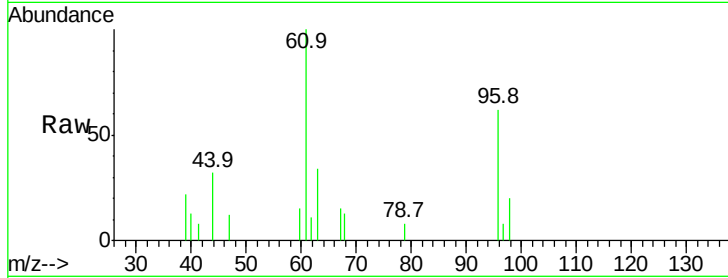
Tgt Ion: 96 Resp: 905

Ion Ratio Lower Upper

96 100

61 184.3 118.3 177.5#

98 15.8 51.3 76.9#



#23

Vinyl Acetate

Concen: 0.31 ppbv

RT: 5.04 min Scan# 702

Delta R.T. -0.02 min

Lab File: VL038677.D

Acq: 22 Mar 2022 8:56

Tgt Ion: 43 Resp: 20569

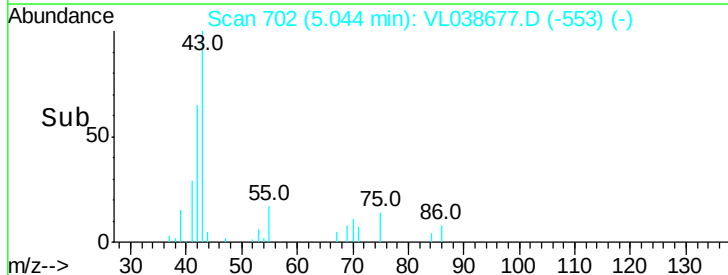
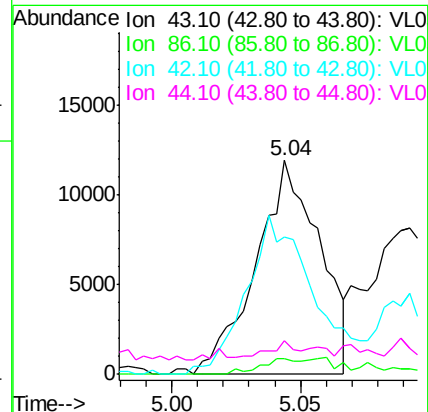
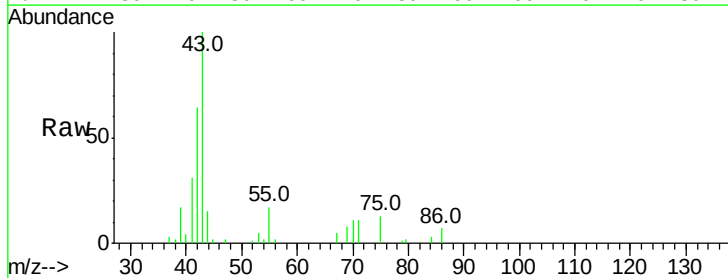
Ion Ratio Lower Upper

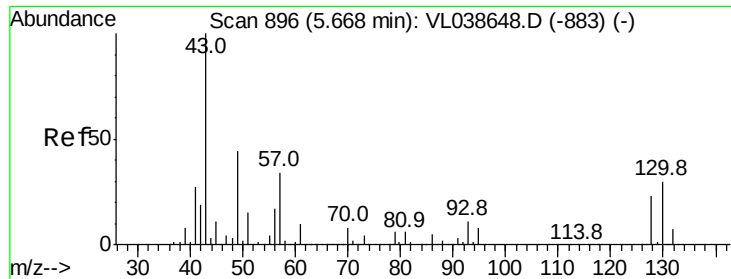
43 100

86 7.4 5.6 8.4

42 60.4 6.8 10.2#

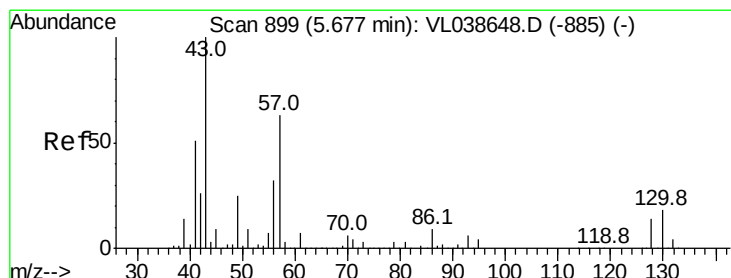
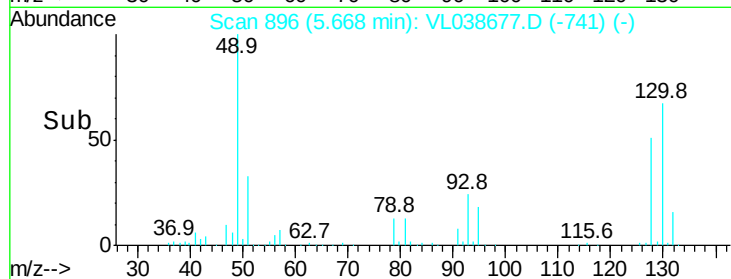
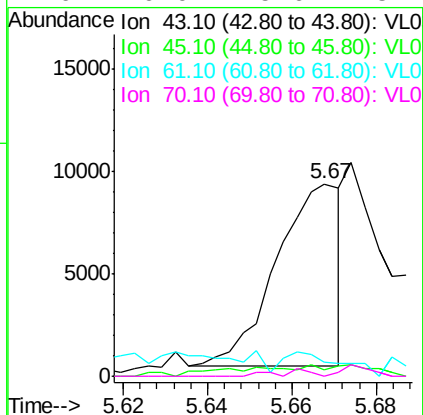
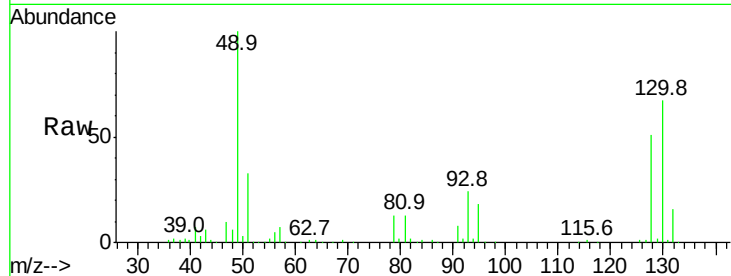
44 10.7 4.2 6.2#





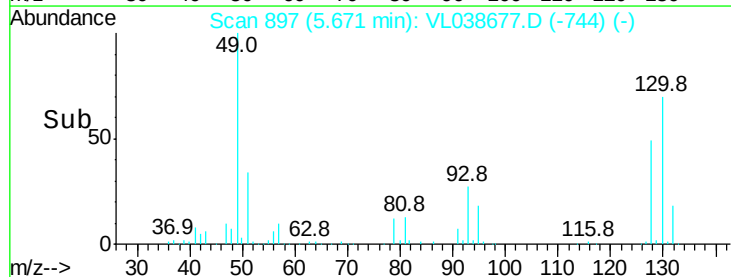
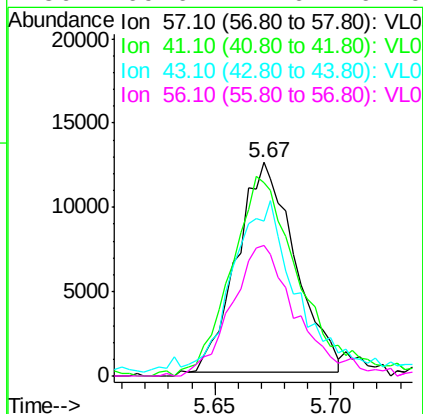
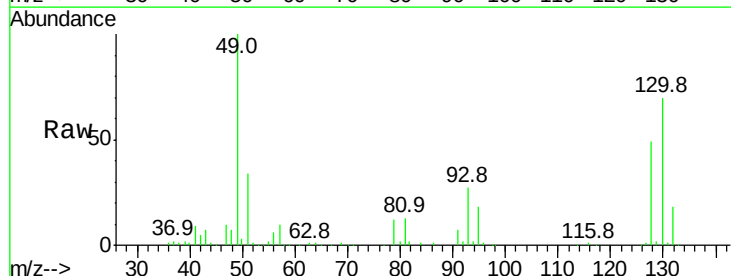
#25
Ethyl Acetate
Concen: 0.05 ppbv
RT: 5.67 min
Delta R.T.: MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Mar 2022 8:56

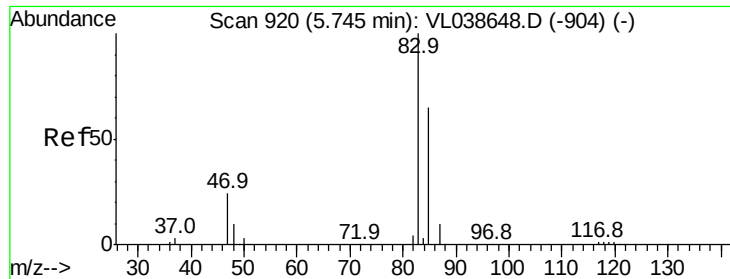
Tgt Ion:	43	Resp:	9378
Ion	Ratio	Lower	Upper
43	100		
45	13.6	8.2	12.4#
61	0.0	8.3	12.5#
70	0.0	5.6	8.4#



#26
Hexane
Concen: 0.28 ppbv
RT: 5.67 min Scan# 897
Delta R.T.: -0.01 min
Lab File: VL038677.D
Acq: 22 Mar 2022 8:56

Tgt Ion:	57	Resp:	21912
Ion	Ratio	Lower	Upper
57	100		
41	114.0	67.0	100.4#
43	88.8	184.2	276.2#
56	69.6	42.6	64.0#





#29

Chloroform

Concen: 0.08 ppbv

RT: 5.73 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

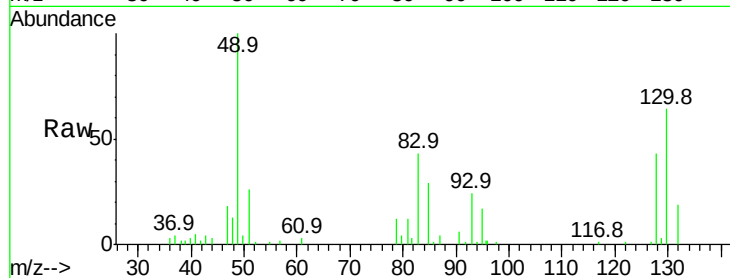
Acq: 22 Mar 2022 8:56

Tgt Ion: 83 Resp: 9738

Ion Ratio Lower Upper

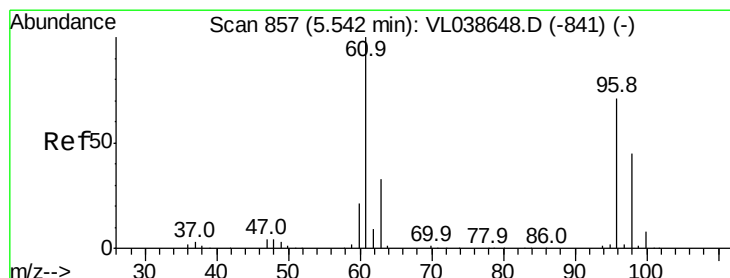
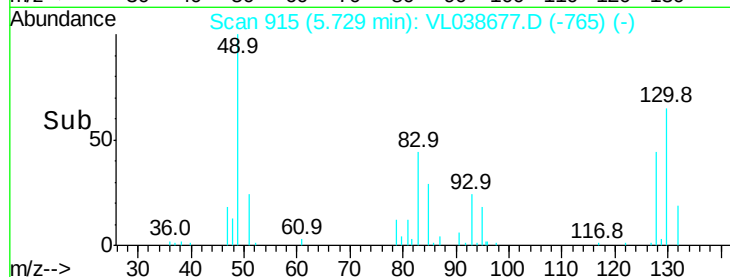
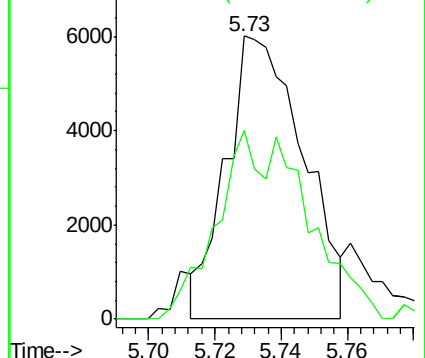
83 100

85 57.4 51.7 77.5



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#31

cis-1,2-Dichloroethene

Concen: 1.49 ppbv

RT: 5.54 min Scan# 855

Delta R.T. -0.01 min

Lab File: VL038677.D

Acq: 22 Mar 2022 8:56

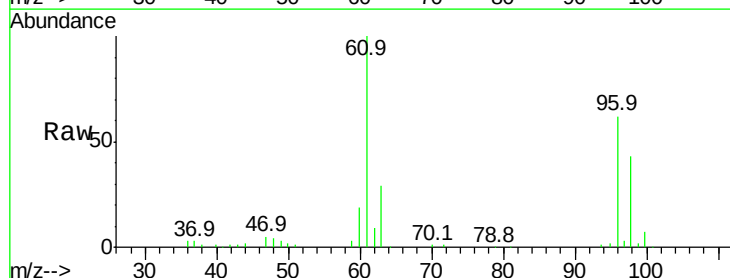
Tgt Ion: 61 Resp: 108337

Ion Ratio Lower Upper

61 100

96 61.7 56.6 84.8

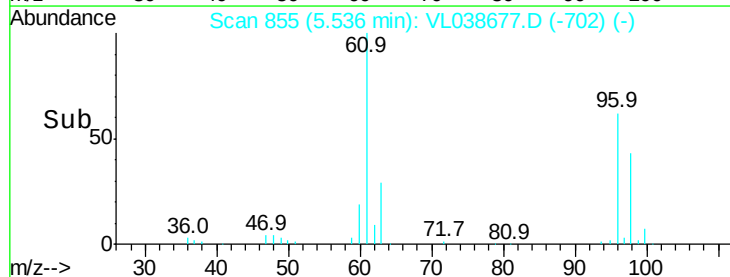
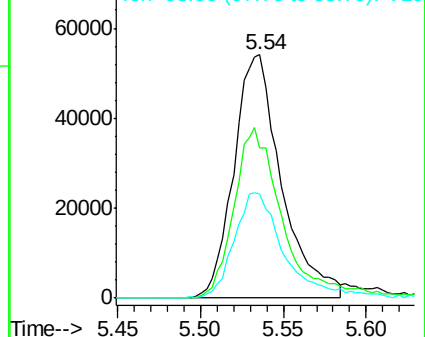
98 42.4 36.3 54.5

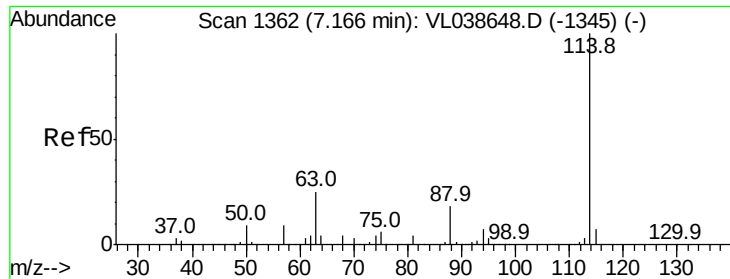


Abundance Ion 61.10 (60.80 to 61.80): VL0

Ion 96.00 (95.70 to 96.70): VL0

Ion 98.00 (97.70 to 98.70): VL0





#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 8:56

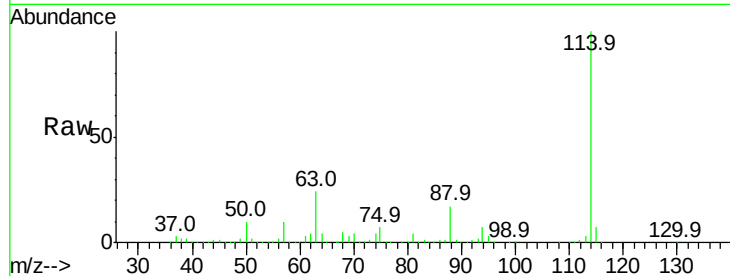
Tgt Ion: 114 Resp: 2049082

Ion Ratio Lower Upper

114 100

63 24.1 19.4 29.0

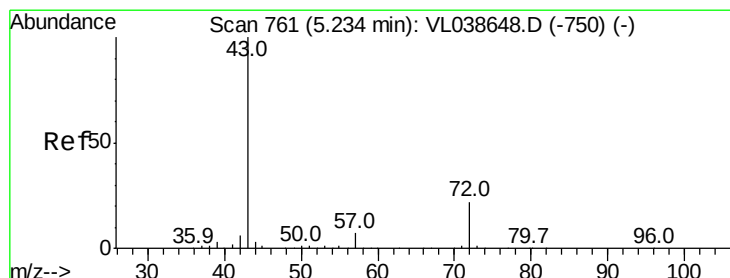
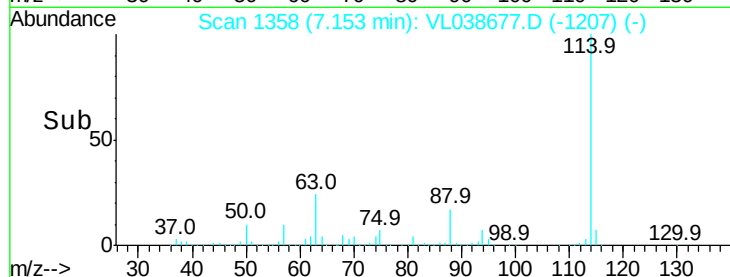
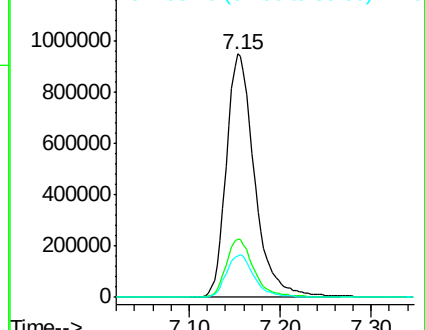
88 17.4 13.9 20.9



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: 2.41 ppbv

RT: 5.23 min Scan# 761

Delta R.T. -0.00 min

Lab File: VL038677.D

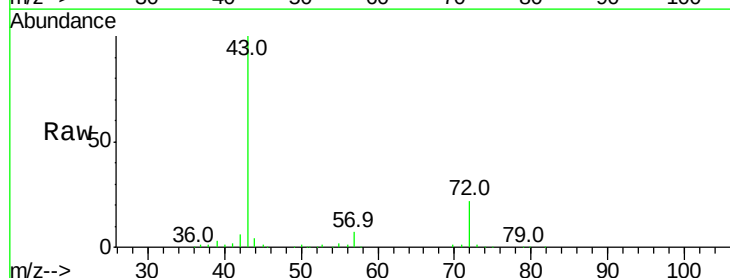
Acq: 22 Mar 2022 8:56

Tgt Ion: 43 Resp: 195838

Ion Ratio Lower Upper

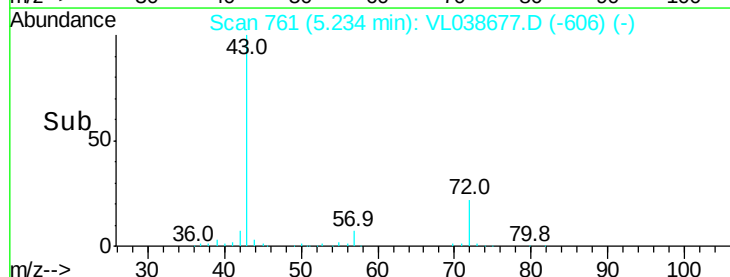
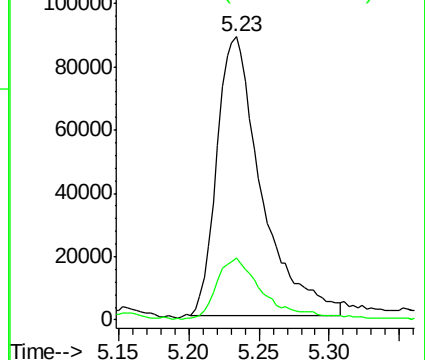
43 100

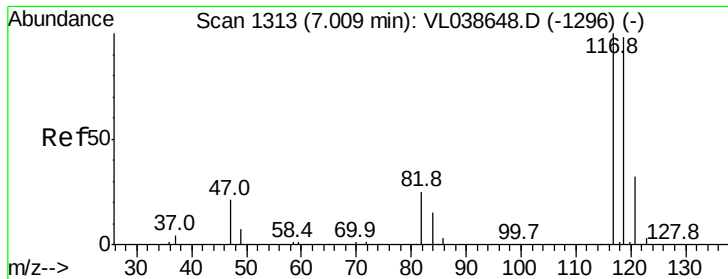
72 25.1 17.8 26.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

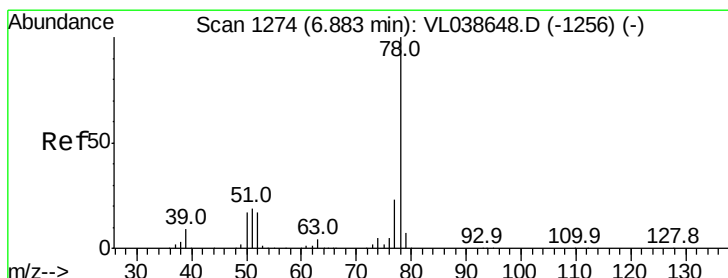
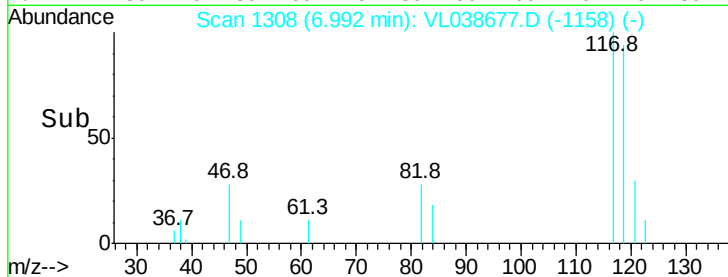
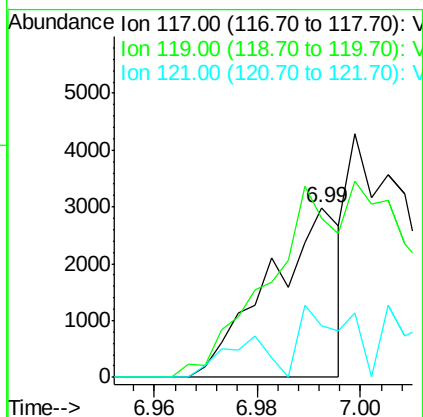
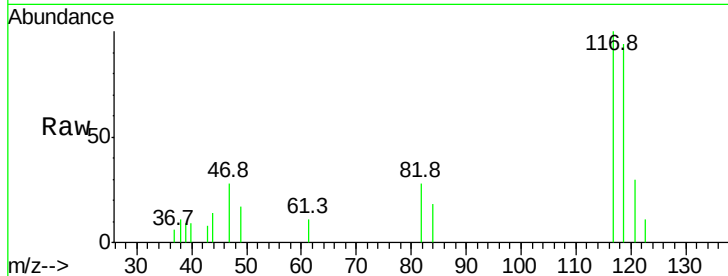
Ion 72.10 (71.80 to 72.80): VL0





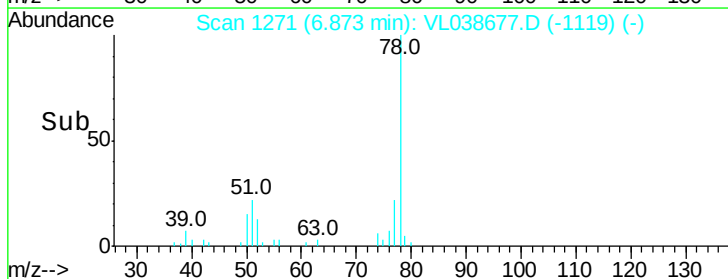
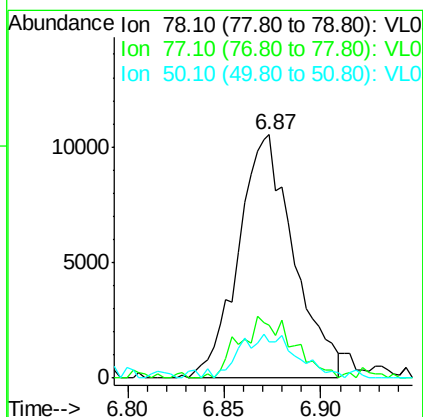
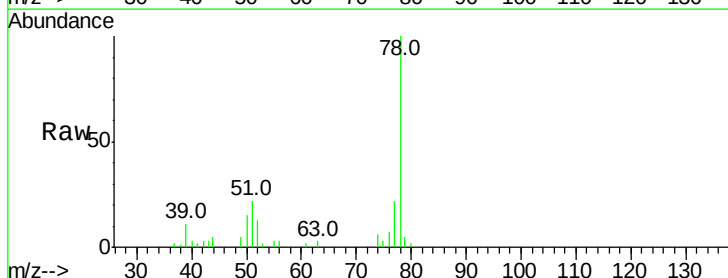
#35
Carbon Tetrachloride
Concen: 0.02 ppbv
RT: 6.99
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Mar 2022 8:50

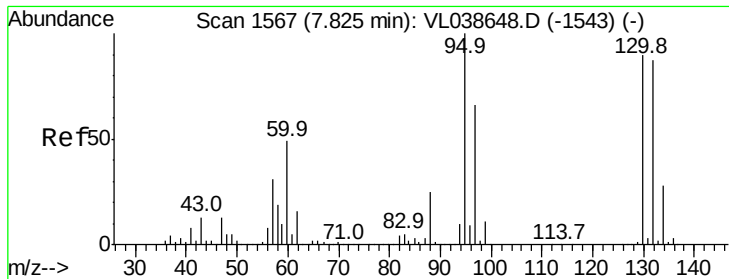
Tgt Ion: 117 Resp: 2875
Ion Ratio Lower Upper
117 100
119 85.9 78.1 117.1
121 30.1 25.8 38.6



#36
Benzene
Concen: 0.13 ppbv
RT: 6.87 min Scan# 1271
Delta R.T. -0.01 min
Lab File: VL038677.D
Acq: 22 Mar 2022 8:56

Tgt Ion: 78 Resp: 21002
Ion Ratio Lower Upper
78 100
77 21.6 18.1 27.1
50 11.9 13.6 20.4#





#38

Trichloroethene

Concen: 0.80 ppbv

RT: 7.81 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Mar 2022 8:56

Tgt Ion: 130 Resp: 53297

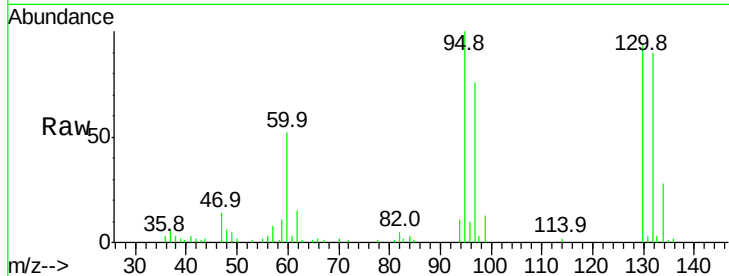
Ion Ratio Lower Upper

130 100

95 104.8 88.9 133.3

132 97.1 77.4 116.0

97 83.3 58.2 87.4

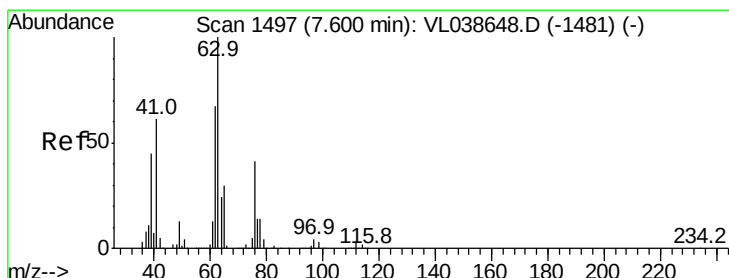
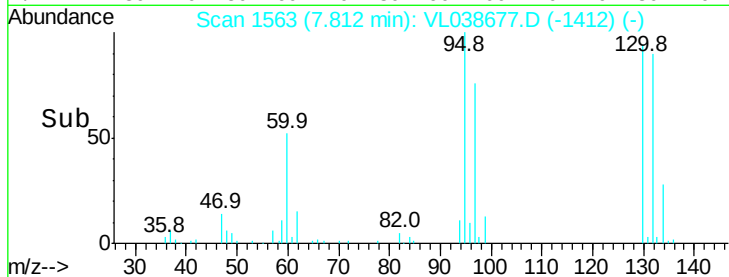
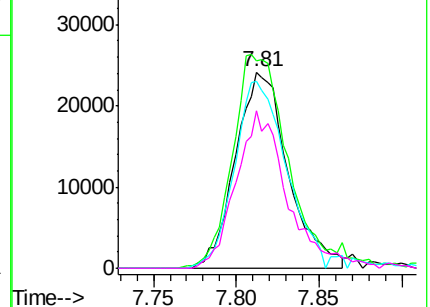


Abundance Ion 130.00 (129.70 to 130.70): V

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: 7.85 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.44 min

Lab File: VL038677.D

Acq: 22 Mar 2022 8:56

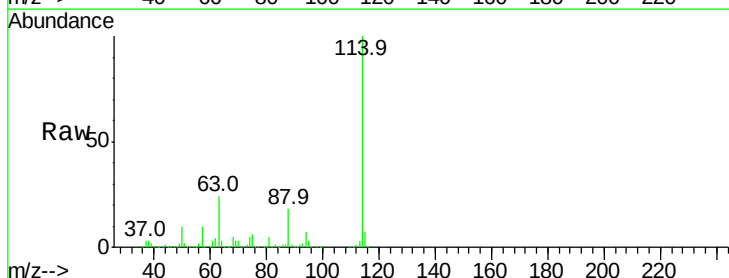
Tgt Ion: 63 Resp: 485016

Ion Ratio Lower Upper

63 100

41 0.0 49.0 73.6#

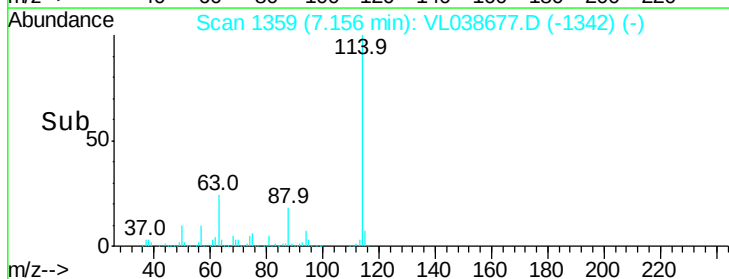
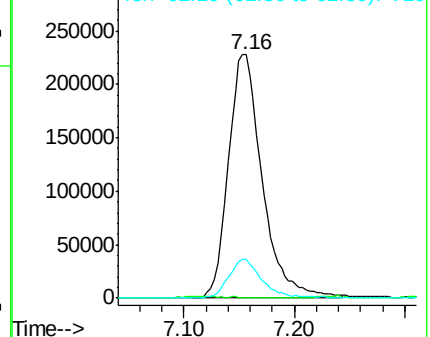
62 16.0 53.9 80.9#

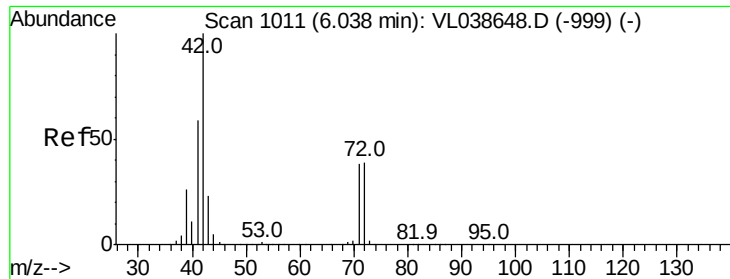


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 0.73 ppbv

RT: 6.04

Delta R.T.

Lab File:

Acq: 22 Mar 2022 8:56

Instrument: MSVOA_1

ClientSampleId:

COP82

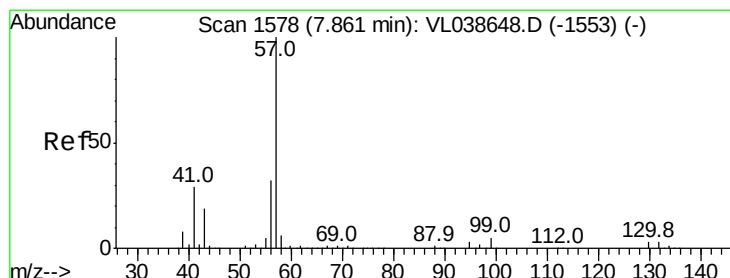
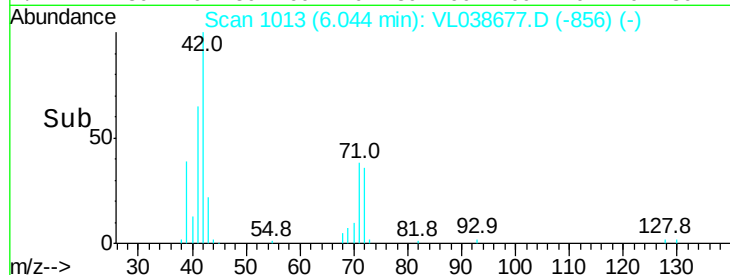
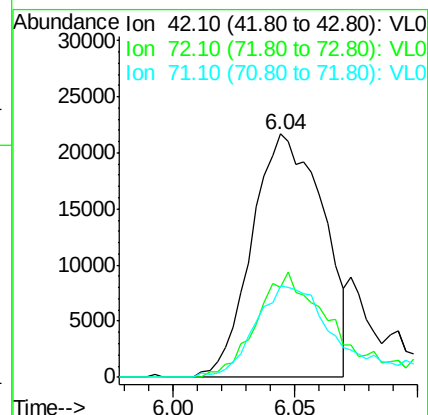
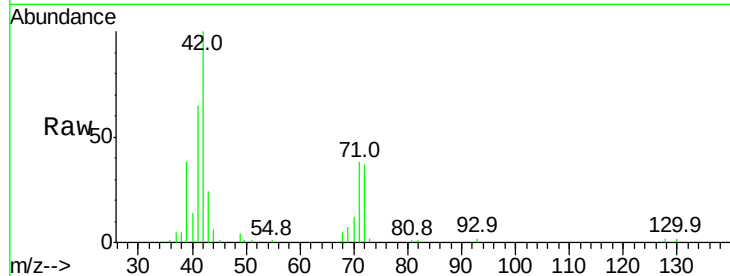
Tgt Ion: 42 Resp: 43866

Ion Ratio Lower Upper

42 100

72 49.4 32.5 48.7#

71 44.0 31.4 47.2



#44

2,2,4-Trimethylpentane

Concen: 0.27 ppbv

RT: 7.85 min Scan# 1575

Delta R.T. -0.01 min

Lab File: VL038677.D

Acq: 22 Mar 2022 8:56

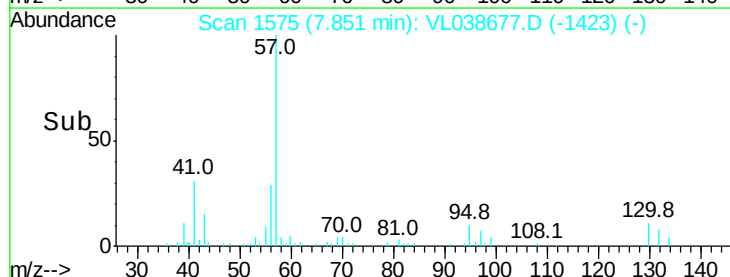
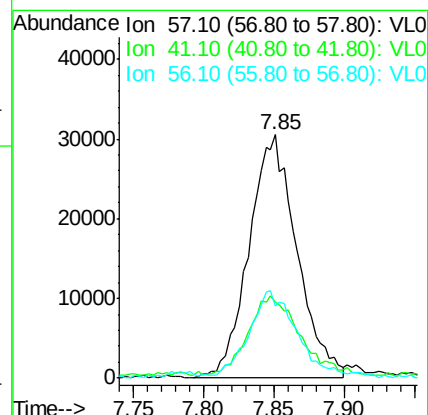
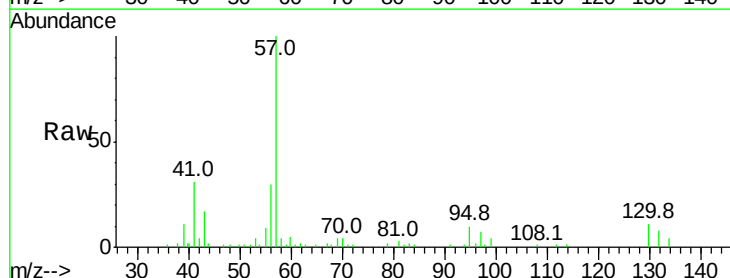
Tgt Ion: 57 Resp: 72310

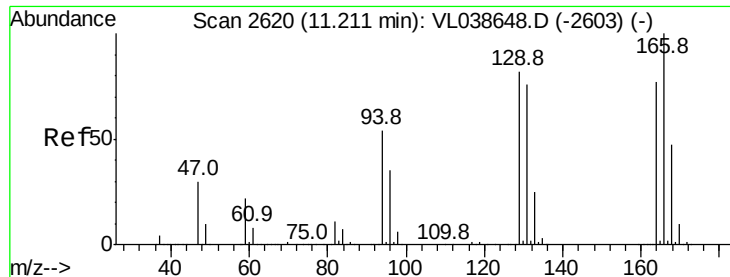
Ion Ratio Lower Upper

57 100

41 39.1 23.0 34.4#

56 39.4 25.3 37.9#





#52

Tetrachloroethene

Concen: 31.51 ppbv

RT: 11.20

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 22 Mar 2022 8:56

Tgt Ion:164 Resp: 1823363

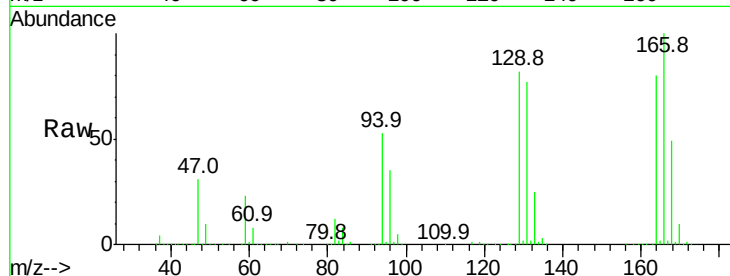
Ion Ratio Lower Upper

164 100

166 125.3 103.3 154.9

129 102.3 85.2 127.8

131 96.7 78.3 117.5

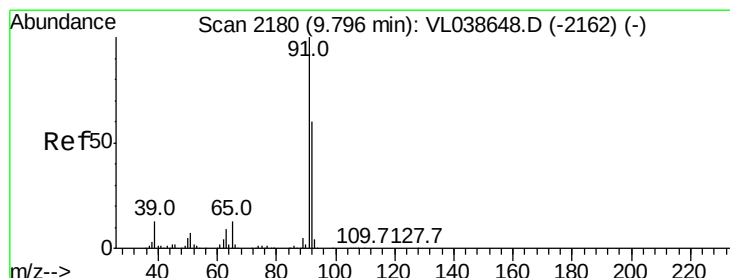
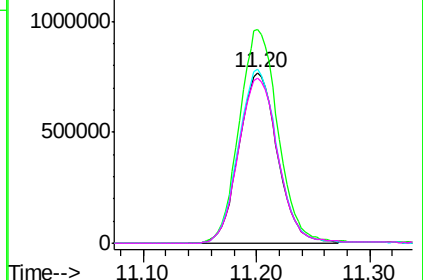
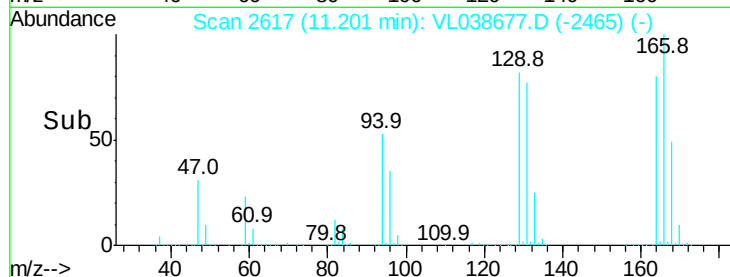


Abundance Ion 163.90 (163.60 to 164.60): V

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: 6.39 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.01 min

Lab File: VL038677.D

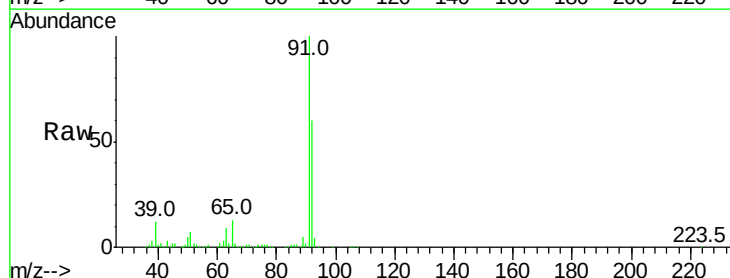
Acq: 22 Mar 2022 8:56

Tgt Ion: 91 Resp: 1085071

Ion Ratio Lower Upper

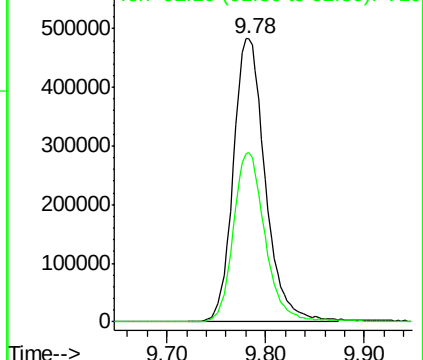
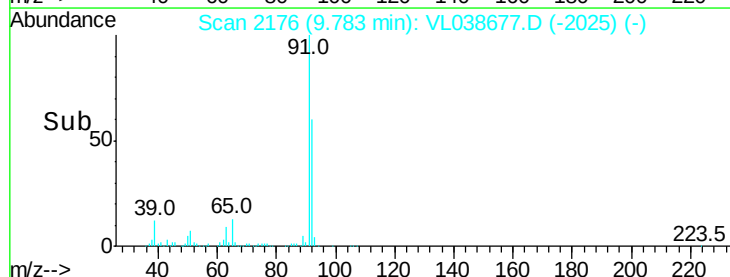
91 100

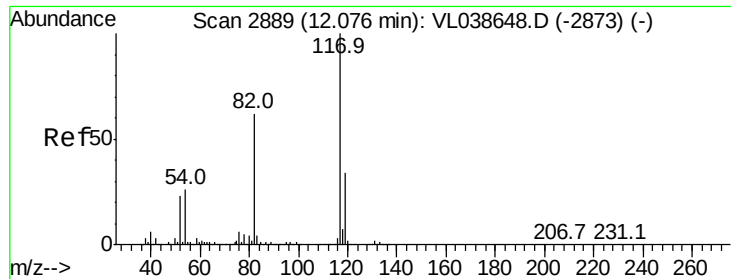
92 59.6 48.7 73.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

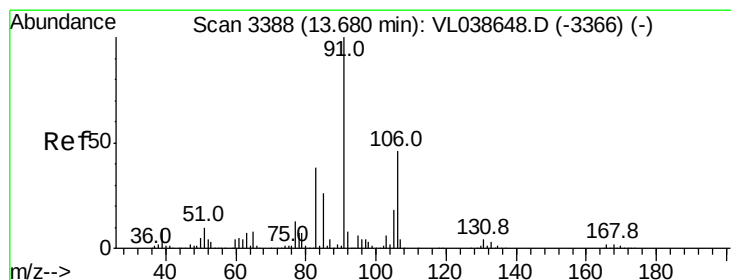
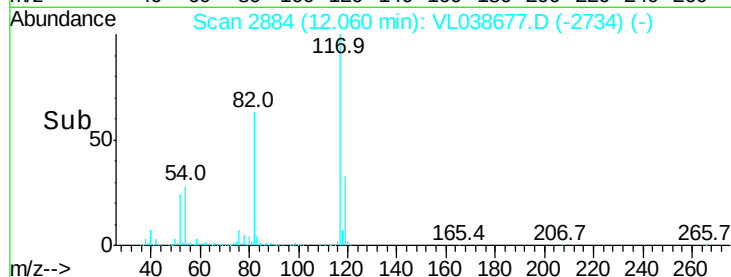
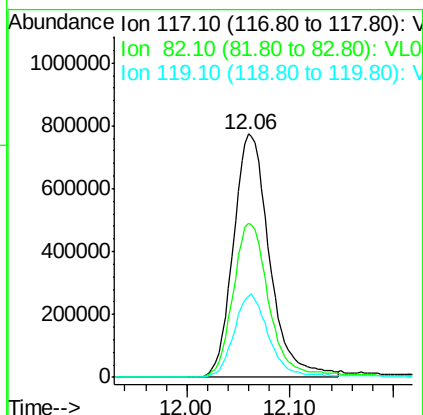
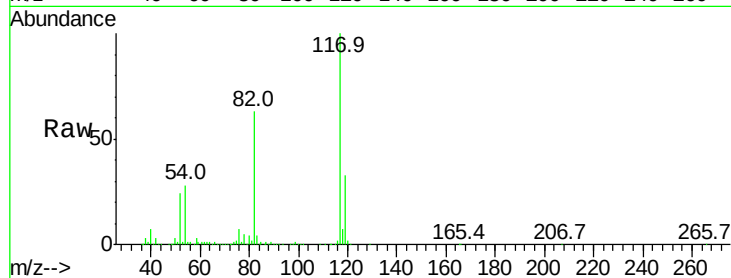




#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 12.06
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
COP82
Acq: 22 Mar 2022 8:50

Tgt Ion: 117 Resp: 1890822

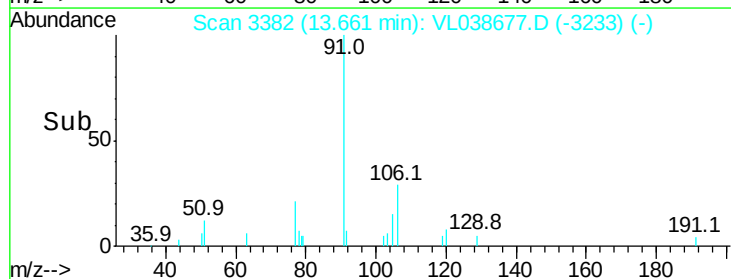
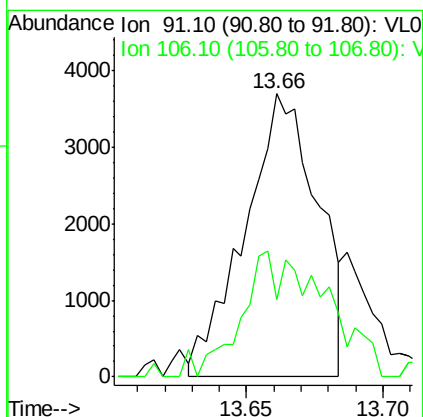
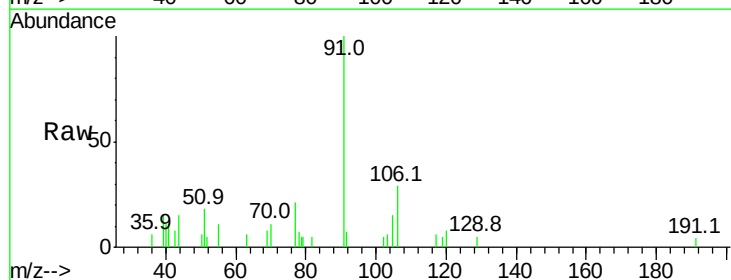
Ion	Ratio	Lower	Upper
117	100		
82	65.8	51.6	77.4
119	34.4	26.9	40.3

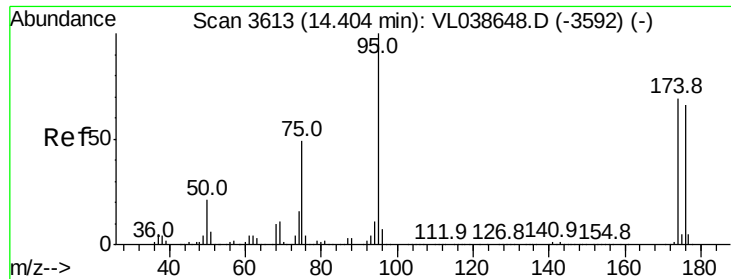


#60
o-Xylene
Concen: 0.04 ppbv
RT: 13.66 min Scan# 3382
Delta R.T.: -0.02 min
Lab File: VL038677.D
Acq: 22 Mar 2022 8:56

Tgt Ion: 91 Resp: 6876

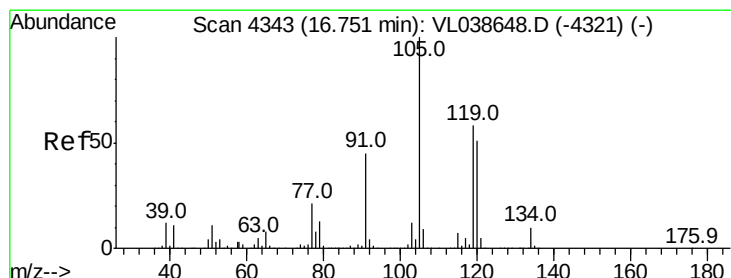
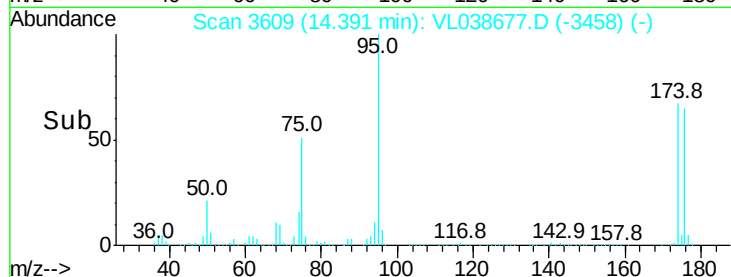
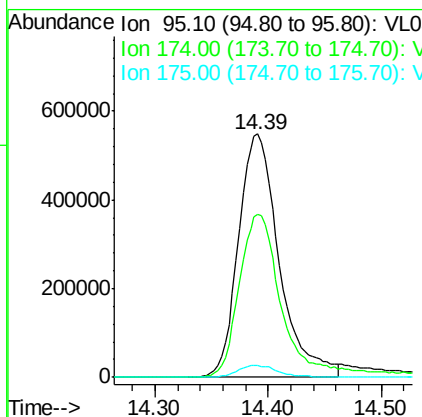
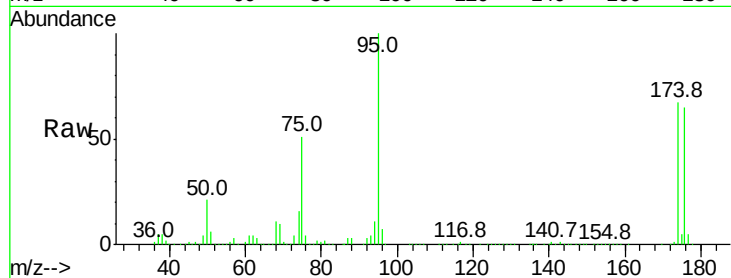
Ion	Ratio	Lower	Upper
91	100		
106	53.7	23.5	70.5





#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.51 ppbv
 RT: 14.39
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0P82
 Acq: 22 Mar 2022 8:56

Tgt Ion: 95 Resp: 1378888
 Ion Ratio Lower Upper
 95 100
 174 72.9 56.1 84.1
 175 5.3 4.2 6.2



#74
 1,2,4-Trimethylbenzene
 Concen: 0.03 ppbv
 RT: 16.74 min Scan# 4339
 Delta R.T. -0.01 min
 Lab File: VL038677.D
 Acq: 22 Mar 2022 8:56

Tgt Ion: 105 Resp: 5619
 Ion Ratio Lower Upper
 105 100
 120 36.7 40.5 60.7#
 91 11.5 35.9 53.9#
 77 21.0 16.6 25.0

