

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111621\
 Data File : VL038038.D
 Acq On : 16 Nov 2021 13:51
 Operator : SY/AP
 Sample : M3277-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 17 06:40:45 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111621AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 16 09:59:16 2021
 QLast Update : Tue Nov 16 09:59:16 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	806996	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2490359	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2192505	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1686545	10.65	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.50%

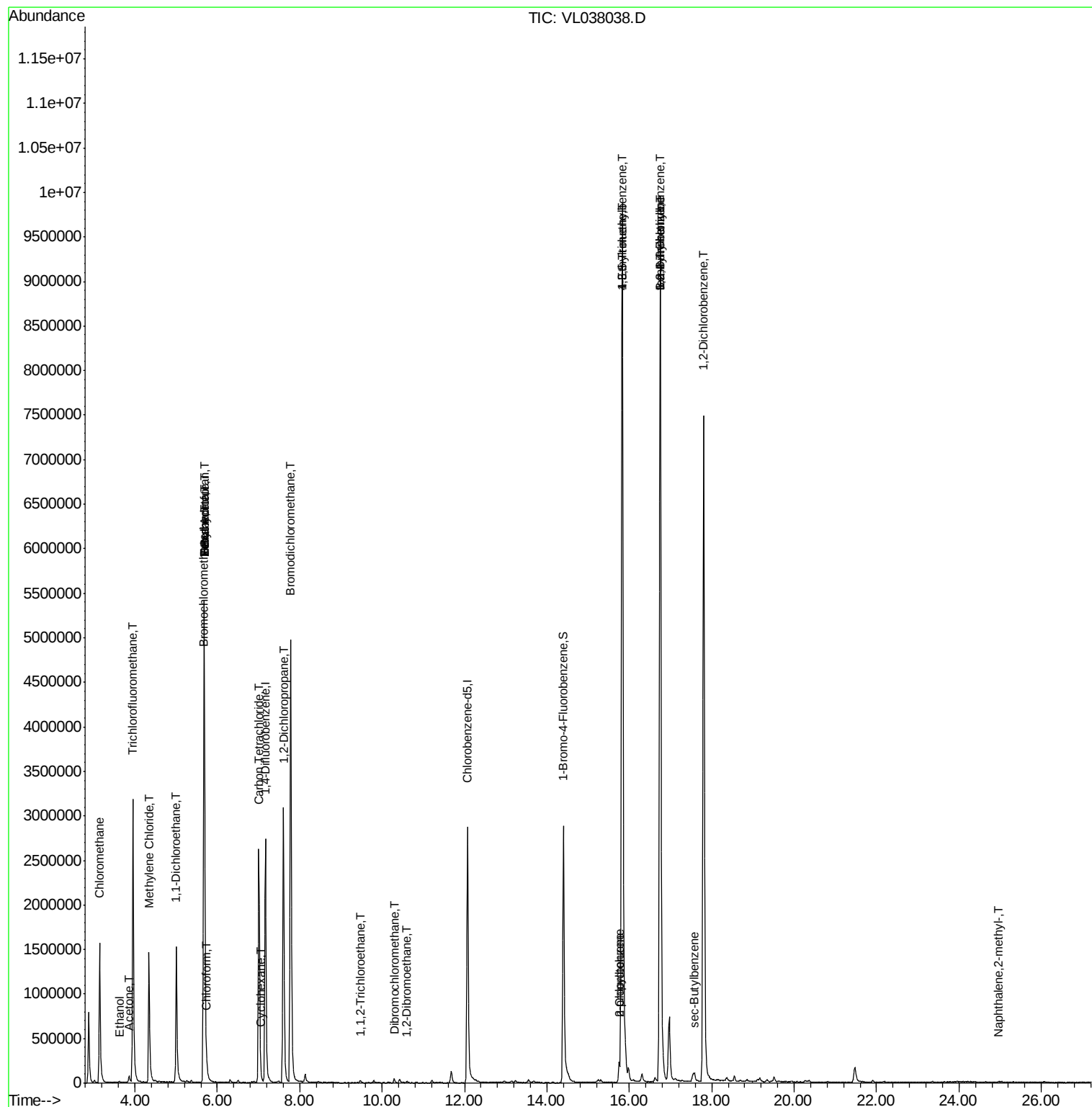
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
4) Chloromethane	3.14	50	1876634	25.139	ppbv	100
11) Trichlorofluoromethane	3.95	101	2688349	16.574	ppbv	99
13) Ethanol	3.61	45	5046	0.719	ppbv #	100
15) Acetone	3.86	43	101615	1.071	ppbv	95
20) Methylene Chloride	4.34	84	598906	10.761	ppbv	98
24) 1,1-Dichloroethane	5.01	63	1566113	12.777	ppbv	99
25) Ethyl Acetate	5.68	43	1763216	7.900	ppbv #	76
26) Hexane	5.68	57	2573323	22.950	ppbv #	45
29) Chloroform	5.75	83	31180	0.185	ppbv	93
30) Cyclohexane	7.07	84	3801	0.030	ppbv #	1
34) 2-Butanone	5.68	43	1686303	20.529	ppbv #	53
35) Carbon Tetrachloride	7.01	117	1872236	10.877	ppbv	99
39) 1,2-Dichloropropane	7.60	63	1377552	15.043	ppbv	98
41) Tetrahydrofuran	5.68	42	910023	15.440	ppbv #	51
42) Bromodichloromethane	7.78	83	4118527	23.793	ppbv	98
47) 1,1,2-Trichloroethane	9.47	97	8415	0.090	ppbv	87
48) Dibromochloromethane	10.28	129	10524	0.070	ppbv #	9
54) 1,2-Dibromoethane	10.59	107	5698	0.044	ppbv	96
64) n-propylbenzene	15.76	120	59970	0.633	ppbv #	1
65) tert-Butylbenzene	16.75	119	1100711	3.378	ppbv #	71
66) Benzyl Chloride	16.75	91	1101370	48.397	ppbv #	62
67) sec-Butylbenzene	17.58	105	57396	0.127	ppbv #	65
71) 2-Chlorotoluene	15.75	91	13799	0.052	ppbv #	41
72) 4-Ethyltoluene	15.83	105	10431044	34.060	ppbv #	94
73) 1,3,5-Trimethylbenzene	15.83	105	10431044	37.237	ppbv #	80
74) 1,2,4-Trimethylbenzene	16.75	105	9052414	32.096	ppbv #	75
77) 1,2-Dichlorobenzene	17.81	146	4690342	31.423	ppbv	100
80) Naphthalene,2-methyl-	24.95	142	2100	0.072	ppbv #	84

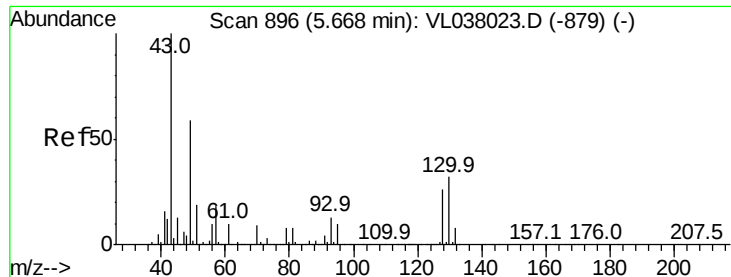
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Instrument :
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ClientSampleId :

Quant Time: Nov 17 06:40:45 2021
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL111621AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 16 09:59:16 2021
QLast Update : Tue Nov 16 09:59:16 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 13:51

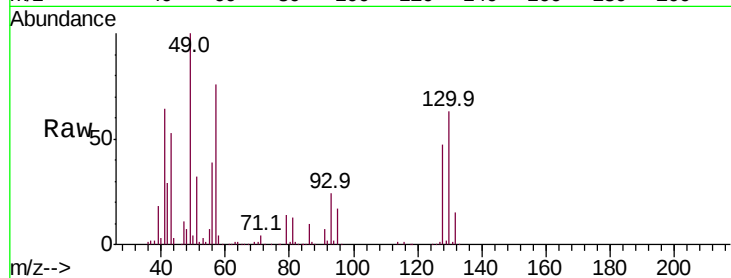
Tot Ion: 49 Resp: 806996

Ion Ratio Lower Upper

49 100

128 50.6 23.4 70.2

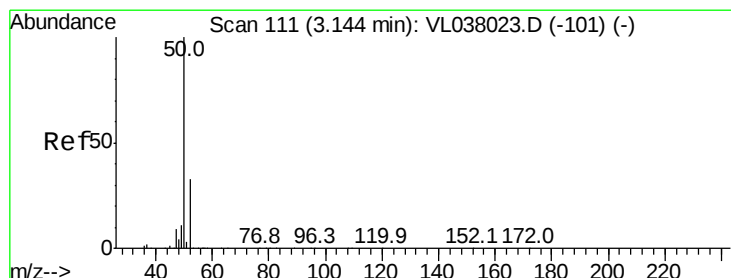
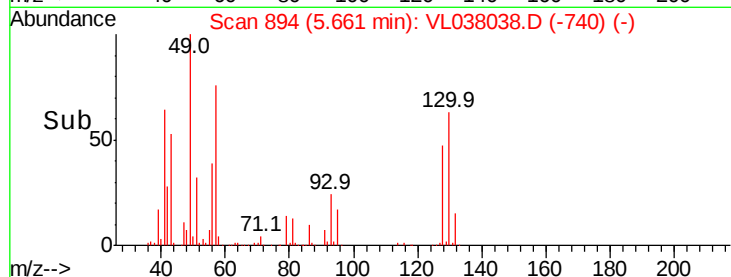
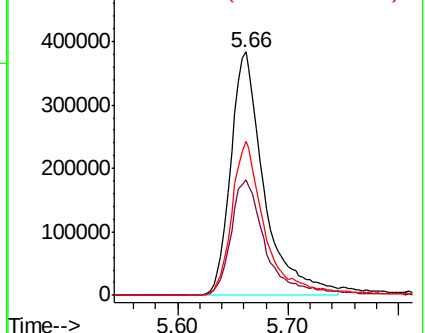
130 64.6 29.1 87.3



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#4

Chloromethane

Concen: 25.139 ppbv

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL038038.D

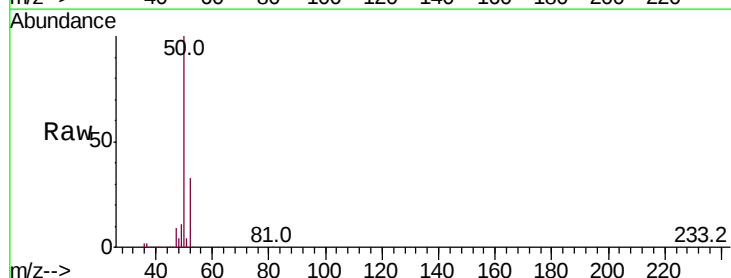
Acq: 16 Nov 2021 13:51

Tgt Ion: 50 Resp: 1876634

Ion Ratio Lower Upper

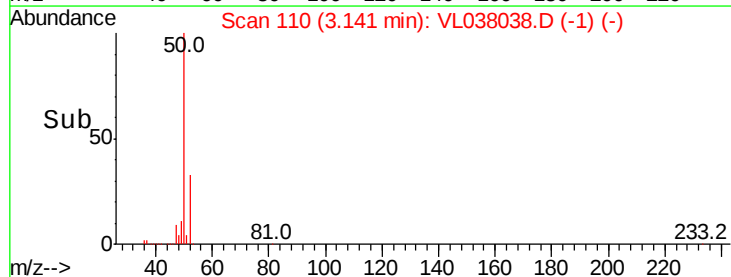
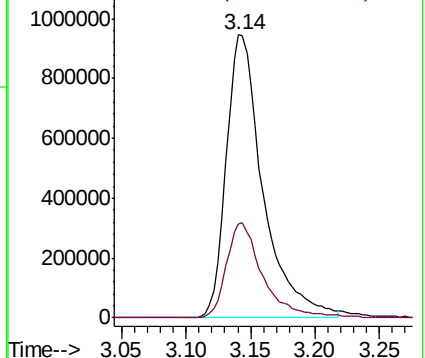
50 100

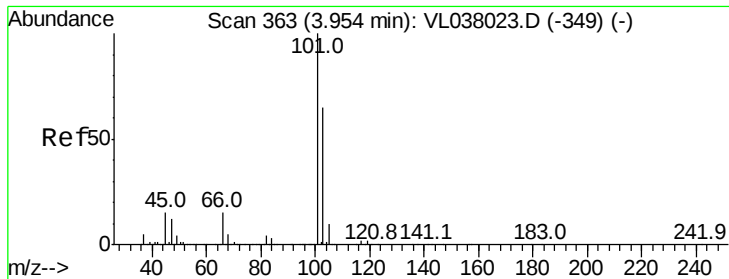
52 33.3 26.4 39.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

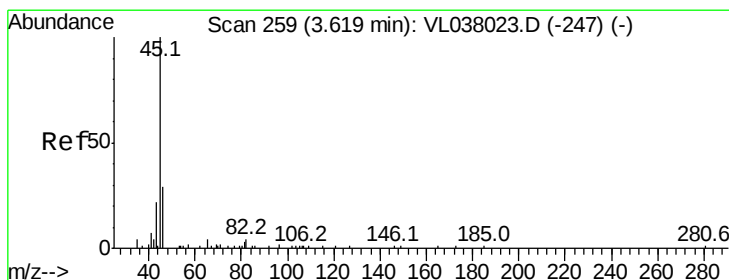
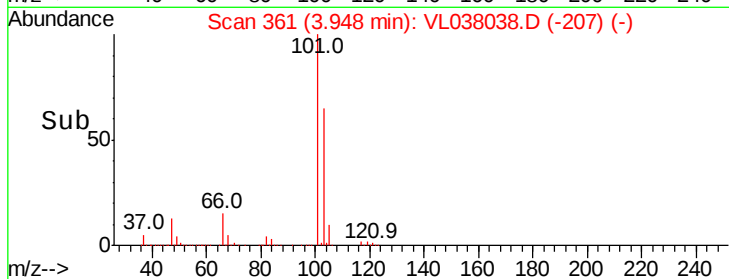
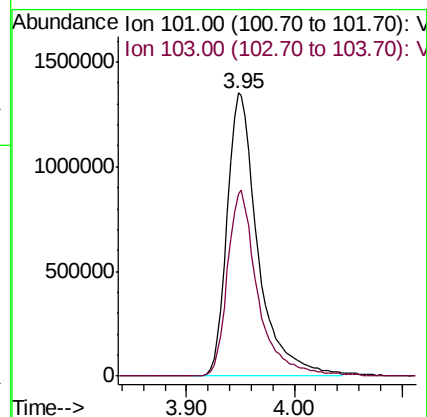
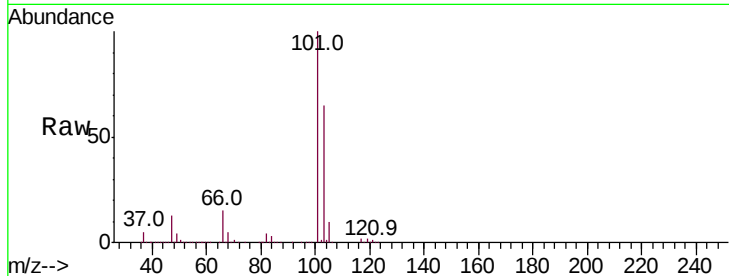
Ion 52.10 (51.80 to 52.80): VL0





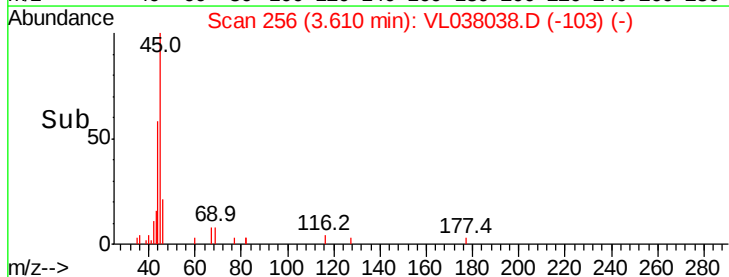
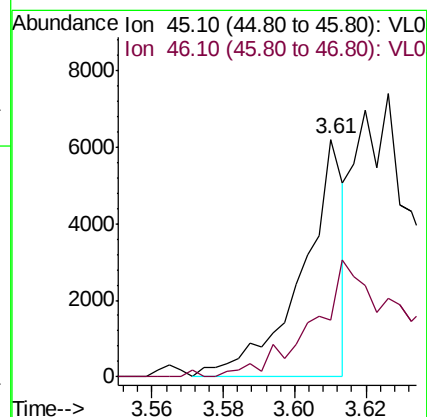
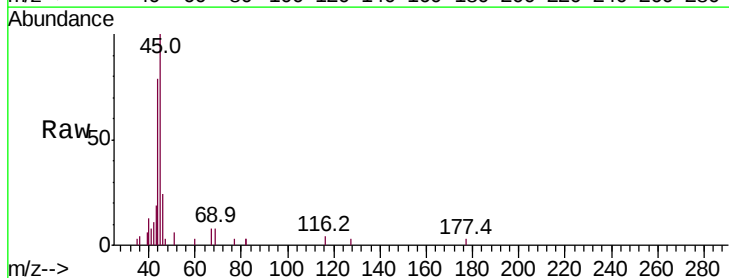
#11
 Trichlorofluoromethane
 Concen: 16.574 ppbv
 RT: 3.95
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 13:51

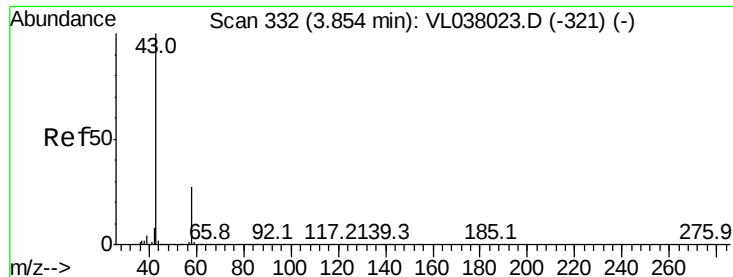
Tot Ion: 101 Resp: 2688349
 Ion Ratio Lower Upper
 101 100
 103 64.5 52.3 78.5



#13
 Ethanol
 Concen: 0.719 ppbv
 RT: 3.61 min Scan# 256
 Delta R.T. -0.01 min
 Lab File: VL038038.D
 Acq: 16 Nov 2021 13:51

Tgt Ion: 45 Resp: 5046
 Ion Ratio Lower Upper
 45 100
 46 133.0 0.0 0.0#





#15

Acetone

Concen: 1.071 ppbv

RT: 3.86 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

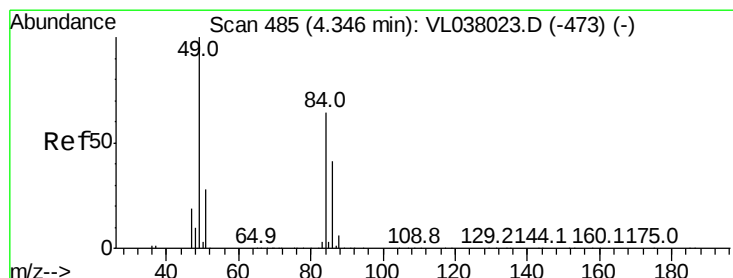
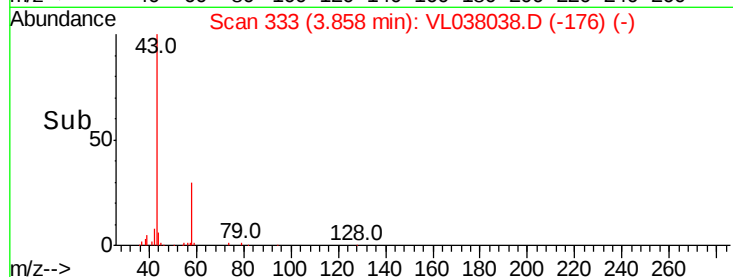
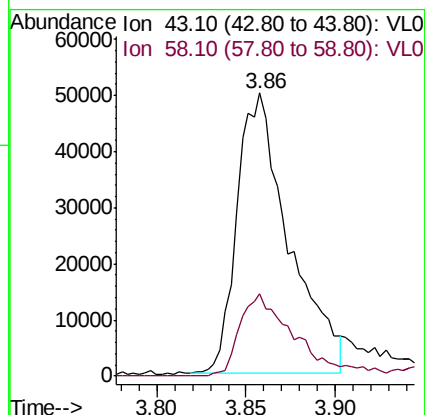
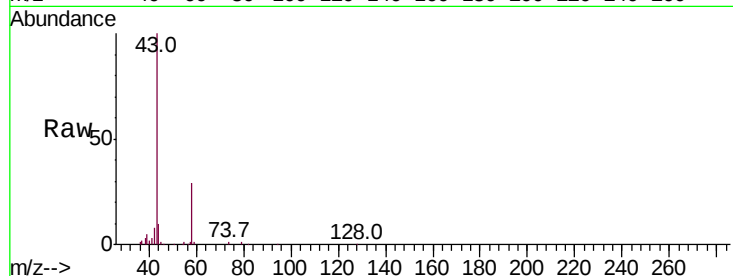
Acq: 16 Nov 2021 13:51

Tot Ion: 43 Resp: 101615

Ion Ratio Lower Upper

43 100

58 31.3 23.0 34.4



#20

Methylene Chloride

Concen: 10.761 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.01 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

Tgt Ion: 84 Resp: 598906

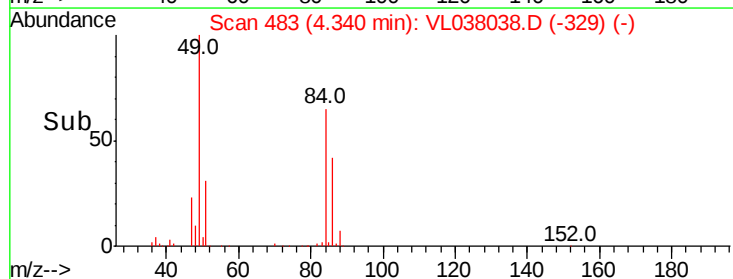
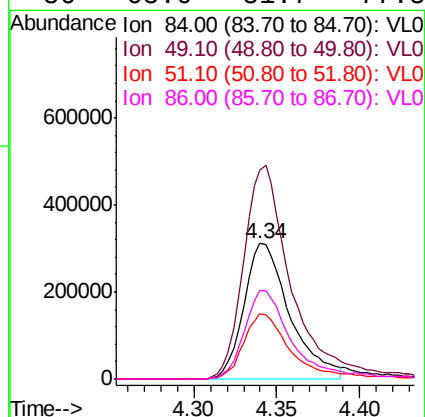
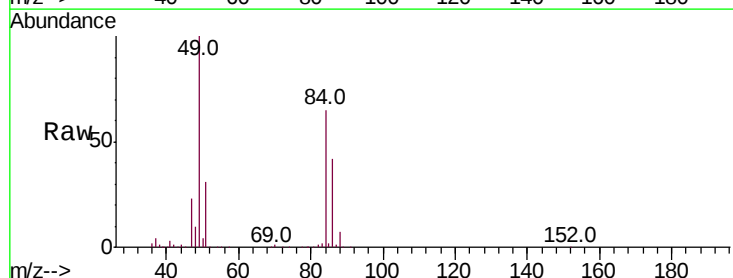
Ion Ratio Lower Upper

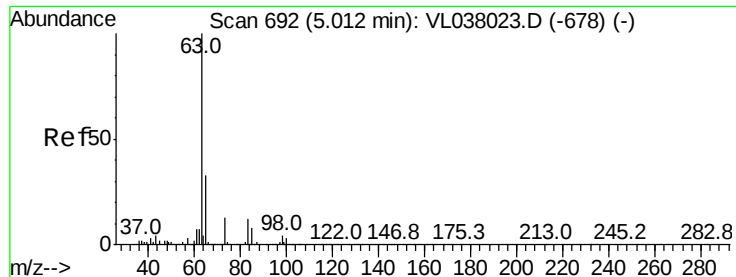
84 100

49 154.0 125.1 187.7

51 47.7 35.3 52.9

86 65.0 51.7 77.5





#24

1,1-Dichloroethane

Concen: 12.777 ppbv

RT: 5.01 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 16 Nov 2021 13:51

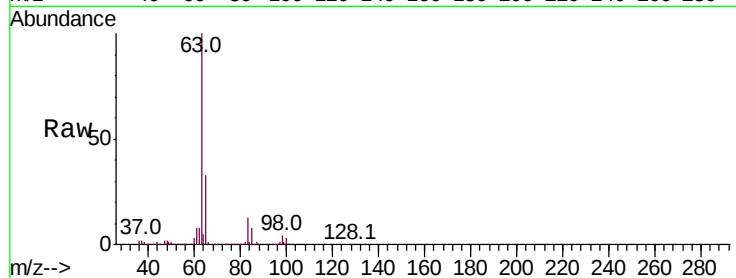
Tot Ion: 63 Resp: 1566113

Ion Ratio Lower Upper

63 100

98 4.3 2.3 6.9

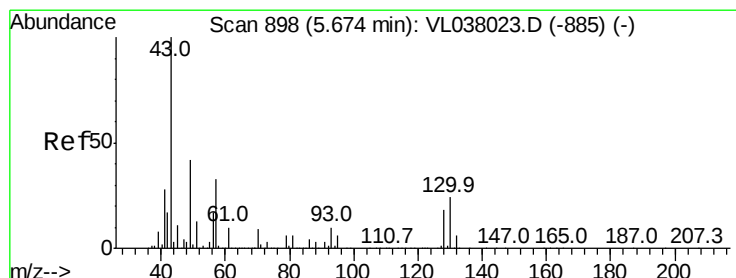
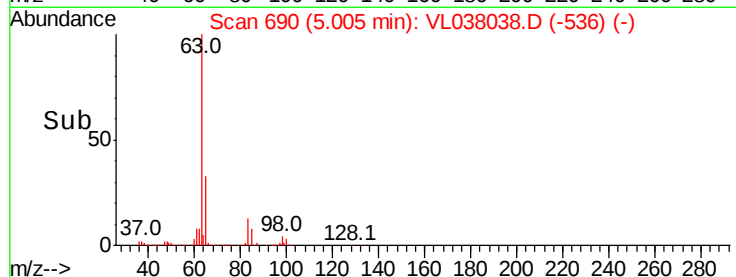
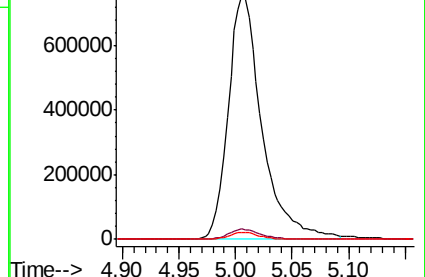
100 2.6 1.5 4.4



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

Ion 100.00 (99.70 to 100.70): VL0



#25

Ethyl Acetate

Concen: 7.900 ppbv

RT: 5.68 min Scan# 900

Delta R.T. 0.01 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

Tgt Ion: 43 Resp: 1763216

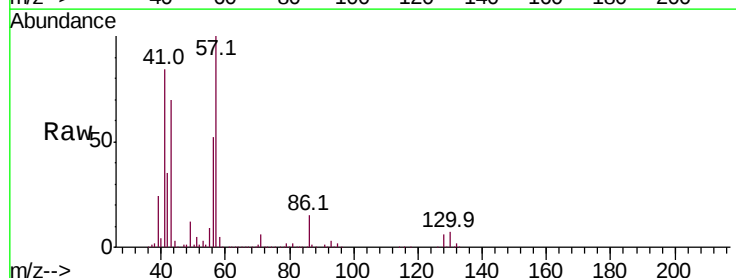
Ion Ratio Lower Upper

43 100

45 0.1 8.0 12.0#

61 0.1 8.3 12.5#

70 1.5 5.7 8.5#

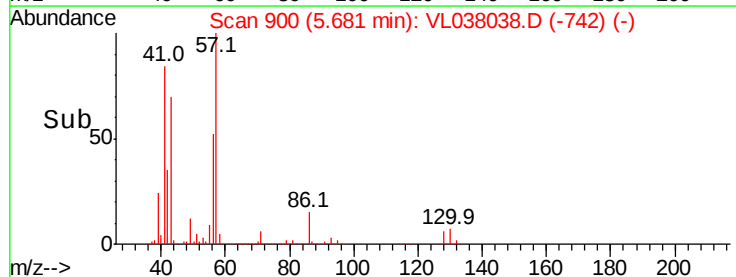
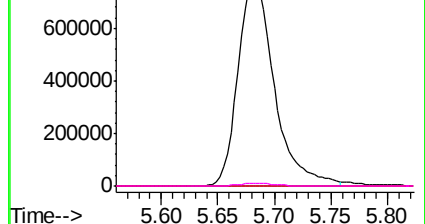


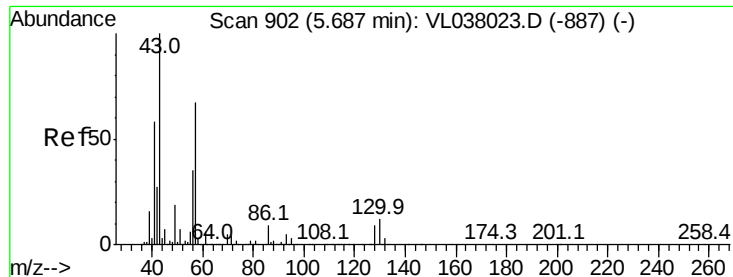
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

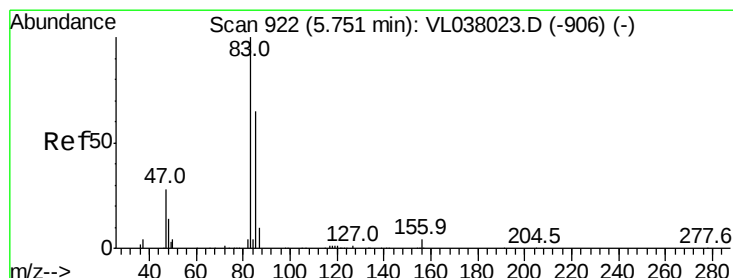
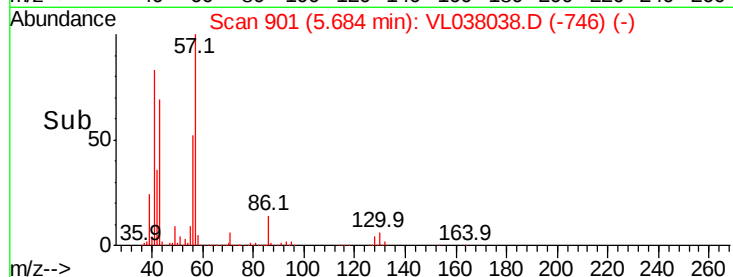
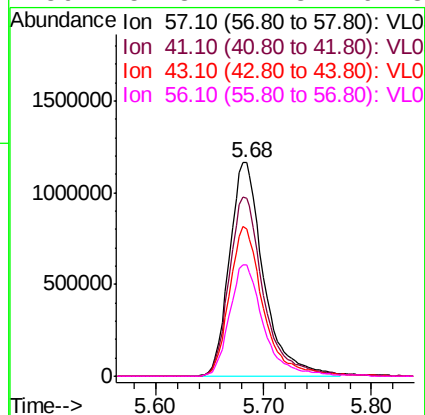
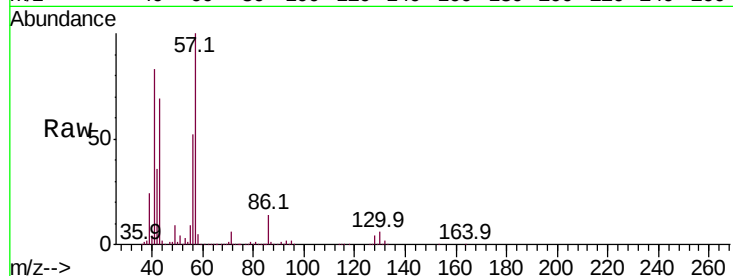




#26
Hexane
Concen: 22.950 ppbv
RT: 5.68
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 13:51

Tot Ion: 57 Resp: 2573323

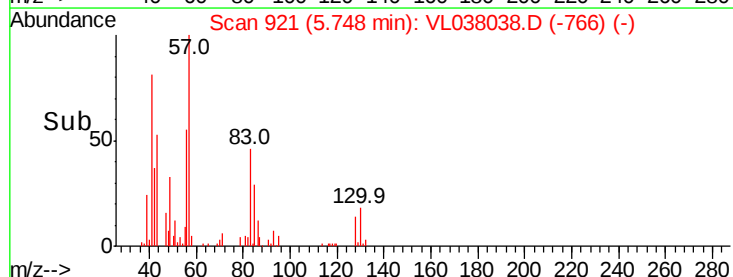
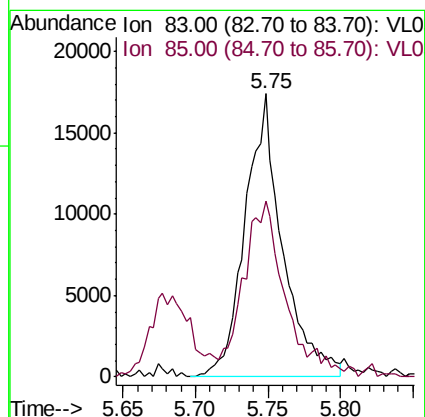
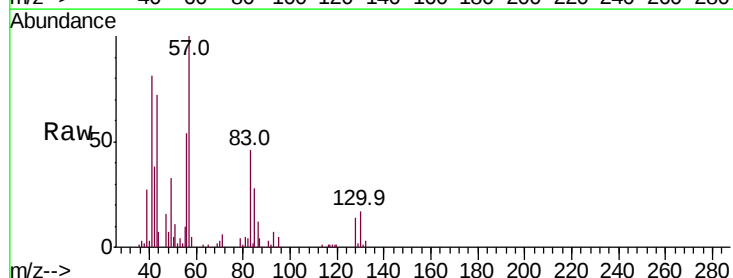
Ion	Ratio	Lower	Upper
57	100		
41	84.7	70.8	106.2
43	69.6	169.4	254.0#
56	52.3	41.8	62.8

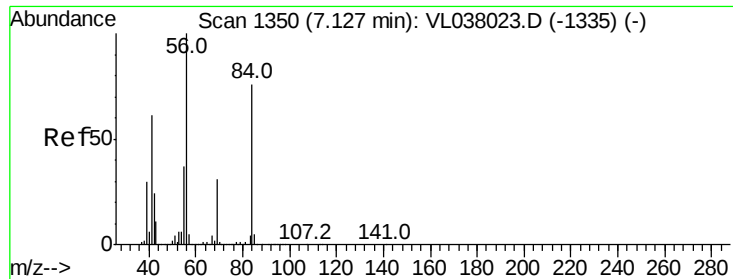


#29
Chloroform
Concen: 0.185 ppbv
RT: 5.75 min Scan# 921
Delta R.T. -0.00 min
Lab File: VL038038.D
Acq: 16 Nov 2021 13:51

Tgt Ion: 83 Resp: 31180

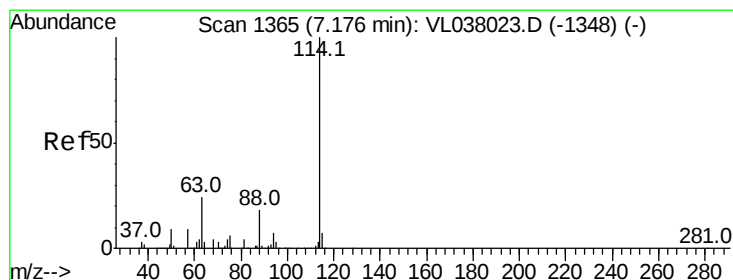
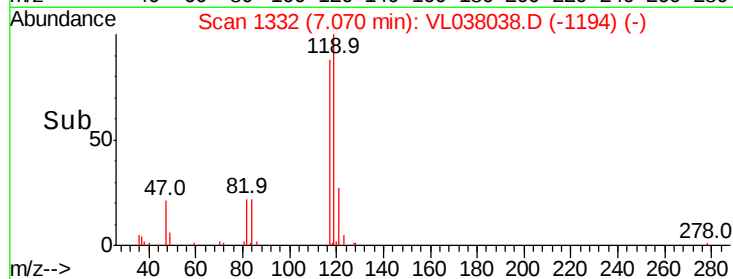
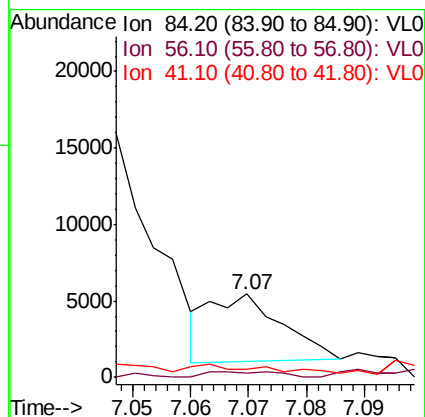
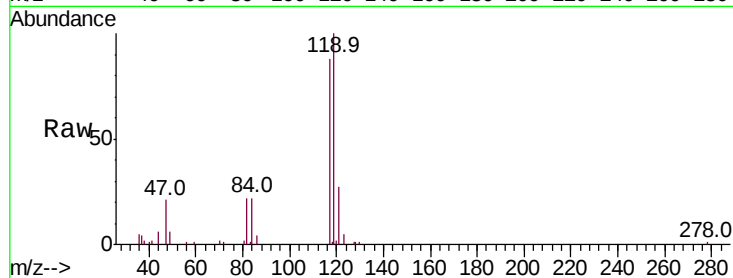
Ion	Ratio	Lower	Upper
83	100		
85	59.3	52.1	78.1





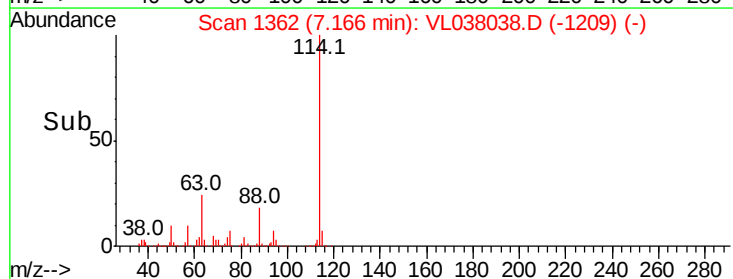
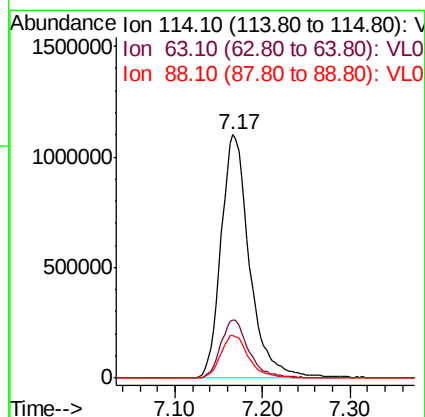
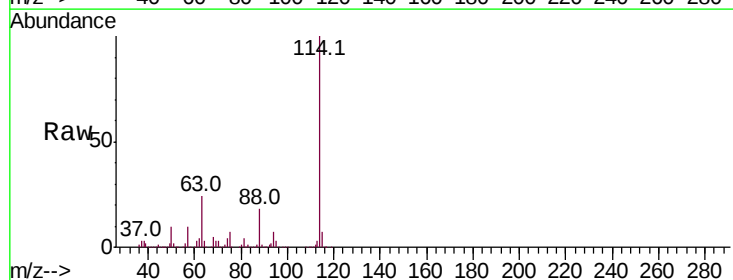
#30
Cvclohexane
Concen: 0.030 ppbv
RT: 7.07
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Nov 2021 13:51

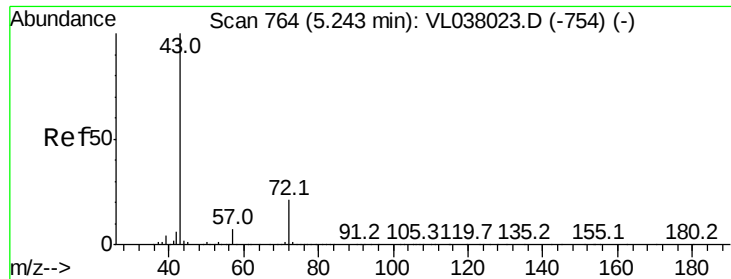
Tot Ion: 84 Resp: 3801
Ion Ratio Lower Upper
84 100
56 1532.4 109.5 164.3#
41 0.0 65.1 97.7#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.01 min
Lab File: VL038038.D
Acq: 16 Nov 2021 13:51

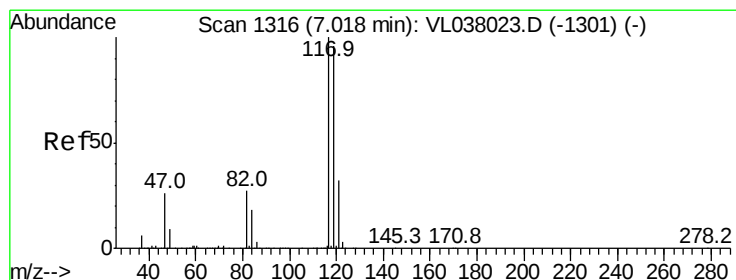
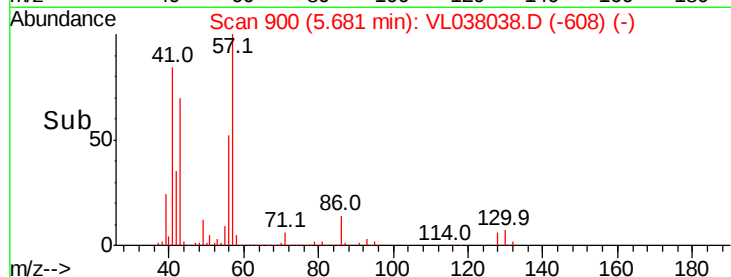
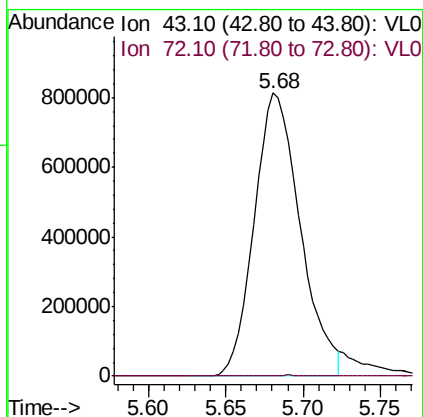
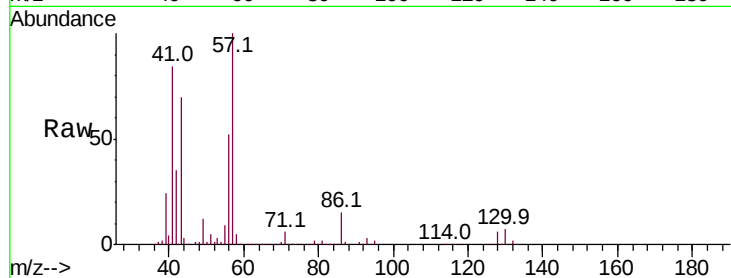
Tgt Ion: 114 Resp: 2490359
Ion Ratio Lower Upper
114 100
63 24.1 19.8 29.6
88 17.8 14.6 21.8





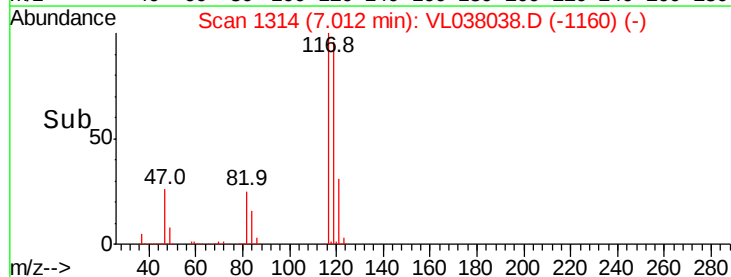
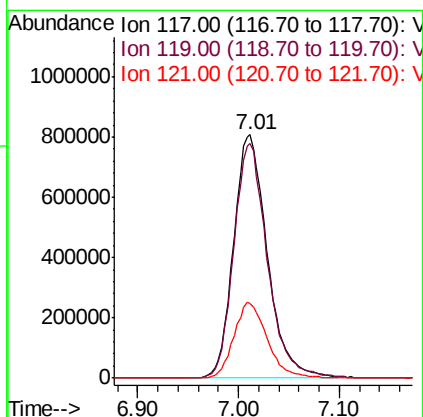
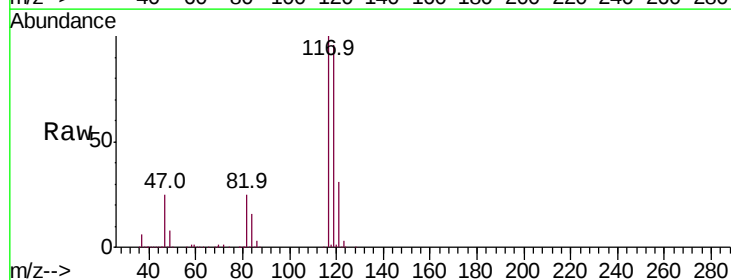
#34
2-Butanone
Concen: 20.529 ppbv
RT: 5.68
Instrument: MSVOA_L
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 13:51

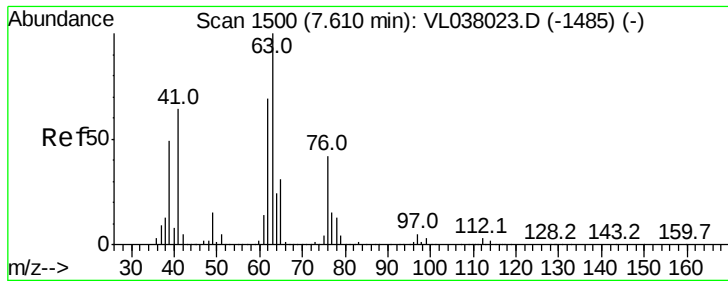
Tot Ion: 43 Resp: 1686303
Ion Ratio Lower Upper
43 100
72 0.0 18.2 27.2#



#35
Carbon Tetrachloride
Concen: 10.877 ppbv
RT: 7.01 min Scan# 1314
Delta R.T. -0.01 min
Lab File: VL038038.D
Acq: 16 Nov 2021 13:51

Tgt Ion: 117 Resp: 1872236
Ion Ratio Lower Upper
117 100
119 96.3 76.5 114.7
121 30.8 25.3 37.9





#39

1,2-Dichloropropane

Concen: 15.043 ppbv

RT: 7.60 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 13:51

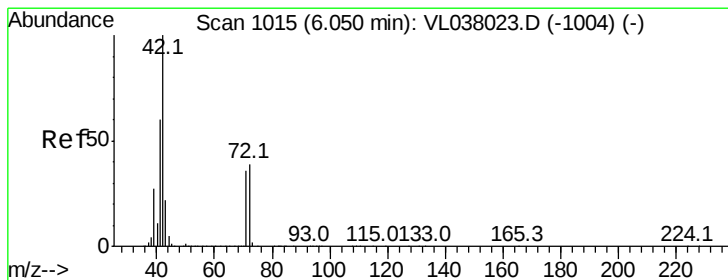
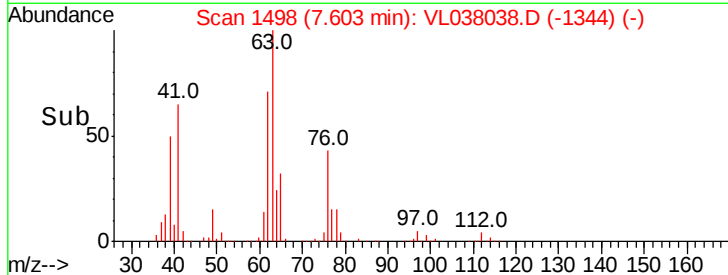
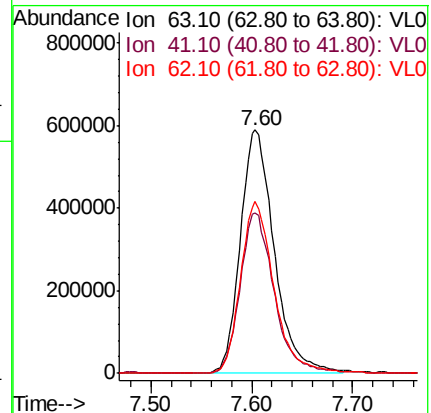
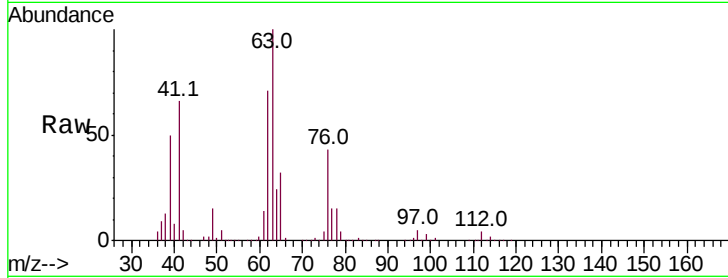
Tot Ion: 63 Resp: 1377552

Ion Ratio Lower Upper

63 100

41 65.7 51.1 76.7

62 70.8 55.2 82.8



#41

Tetrahydrofuran

Concen: 15.440 ppbv

RT: 5.68 min Scan# 901

Delta R.T. -0.37 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

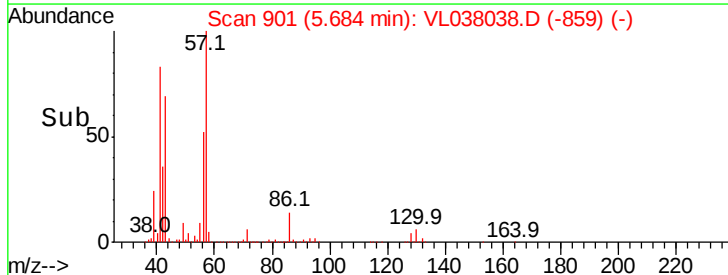
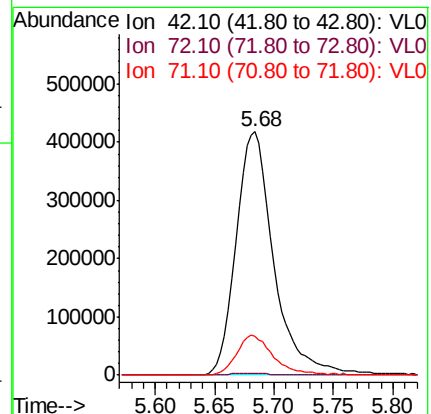
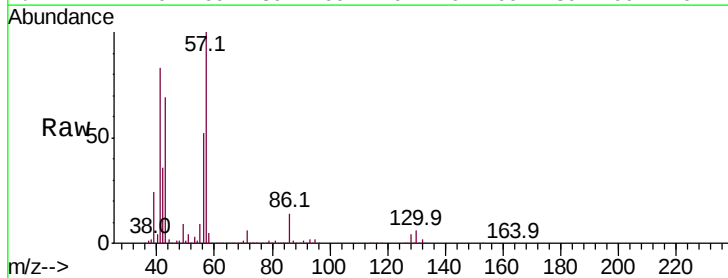
Tgt Ion: 42 Resp: 910023

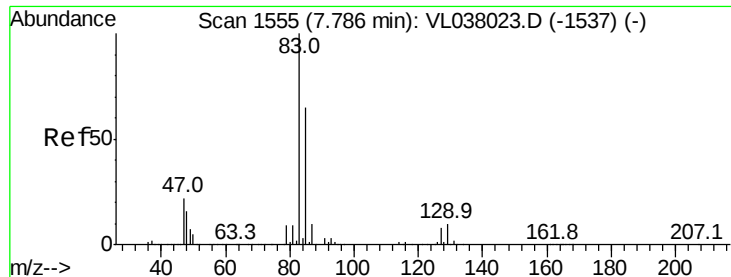
Ion Ratio Lower Upper

42 100

72 0.8 31.3 46.9#

71 16.4 29.7 44.5#





#42

Bromodichloromethane

Concen: 23.793 ppbv

RT: 7.78 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 13:51

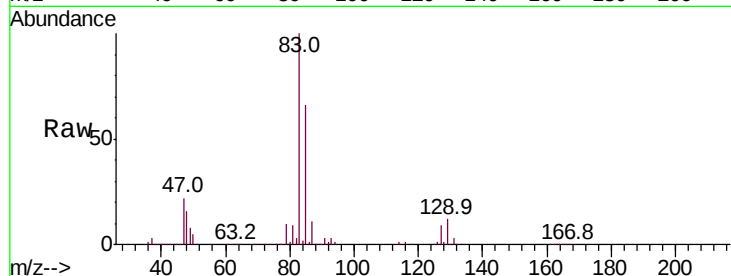
Tot Ion: 83 Resp: 4118527

Ion Ratio Lower Upper

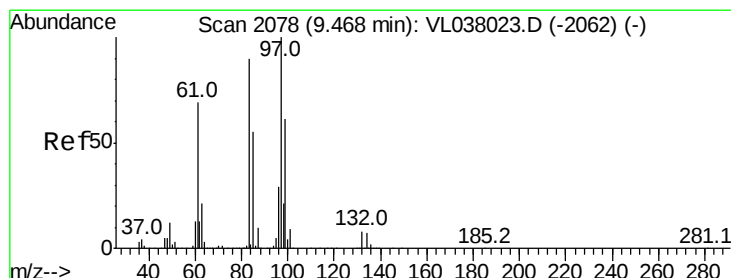
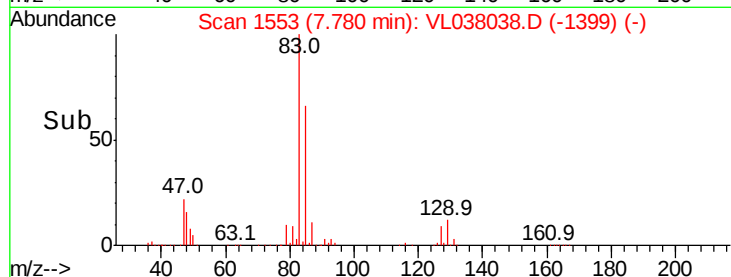
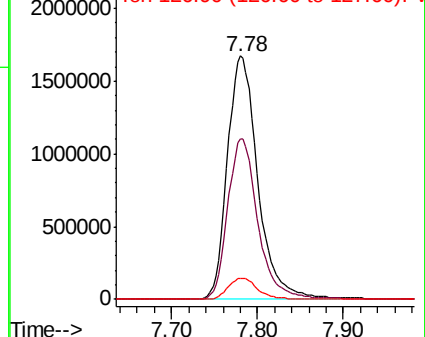
83 100

85 65.8 51.6 77.4

127 8.6 6.6 10.0



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



#47

1,1,2-Trichloroethane

Concen: 0.090 ppbv

RT: 9.47 min Scan# 2078

Delta R.T. 0.00 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

Tgt Ion: 97 Resp: 8415

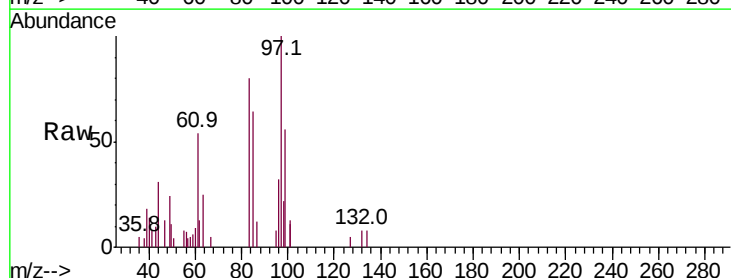
Ion Ratio Lower Upper

97 100

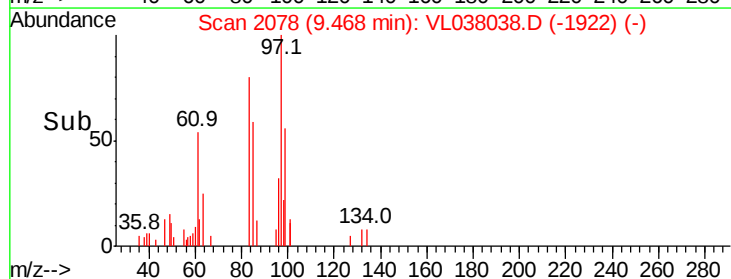
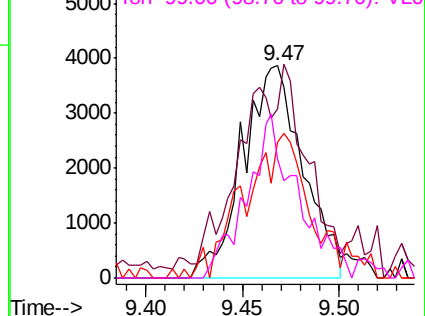
83 72.8 72.2 108.4

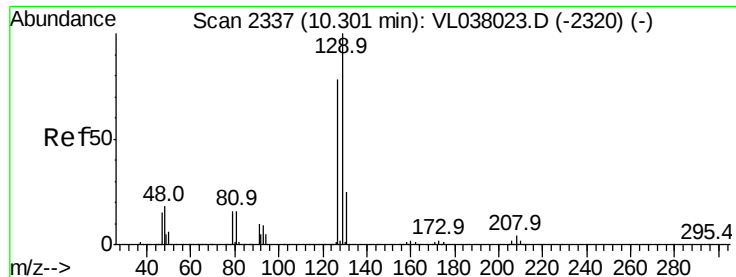
85 63.8 43.8 65.8

99 56.4 49.0 73.4



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 99.00 (98.70 to 99.70): VL0





#48

Dibromochloromethane

Concen: 0.070 ppbv

RT: 10.28

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

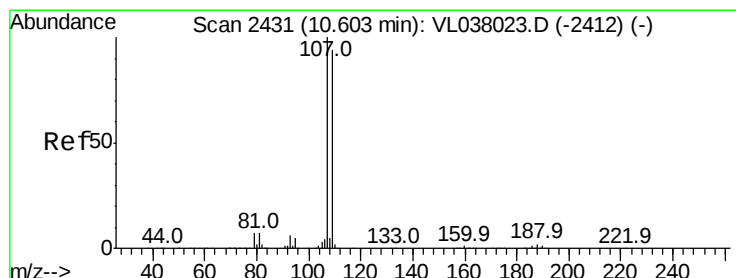
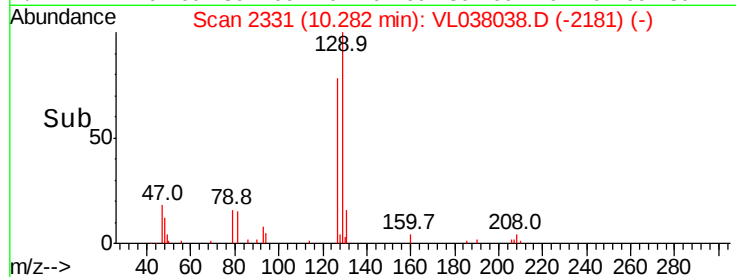
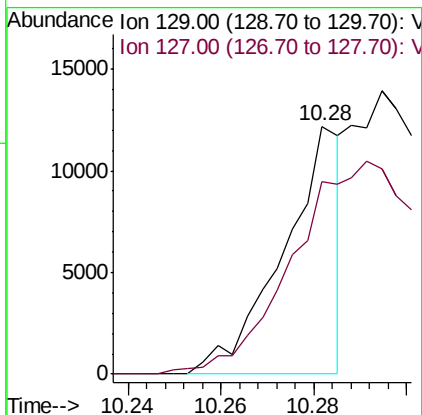
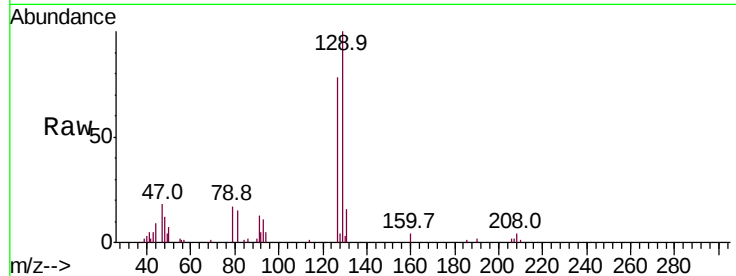
Acq: 16 Nov 2021 13:51

Tot Ion:129 Resp: 10524

Ion Ratio Lower Upper

129 100

127 0.0 40.1 120.3#



#54

1,2-Dibromoethane

Concen: 0.044 ppbv

RT: 10.59 min Scan# 2427

Delta R.T. -0.01 min

Lab File: VL038038.D

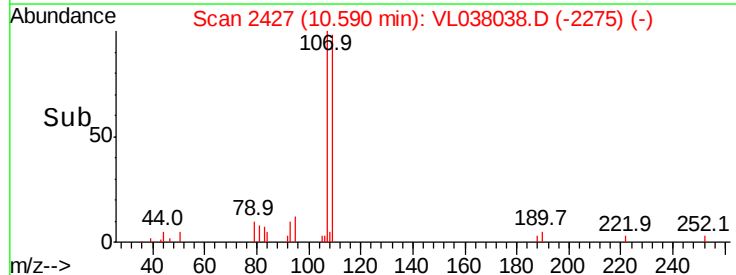
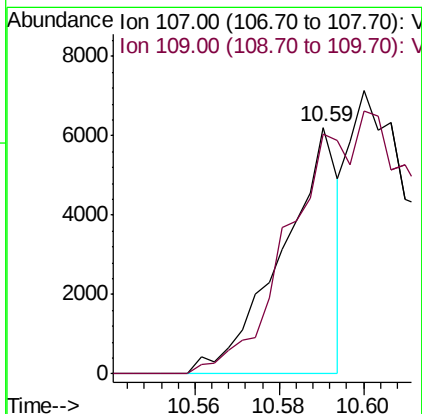
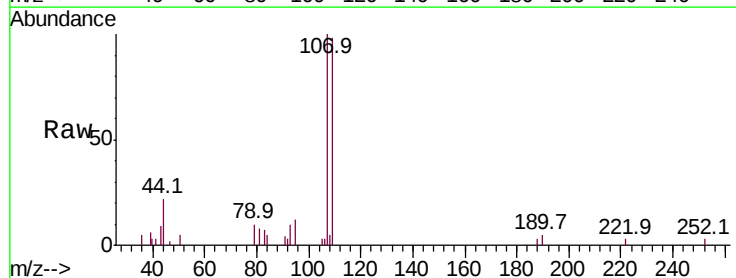
Acq: 16 Nov 2021 13:51

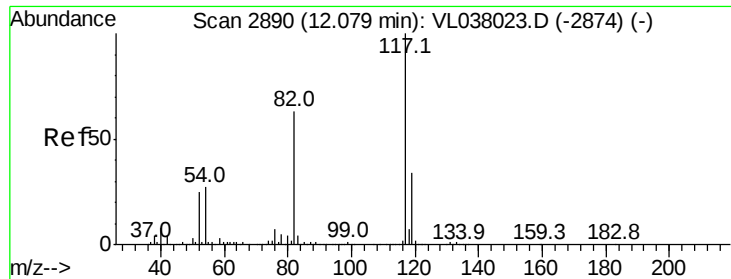
Tgt Ion:107 Resp: 5698

Ion Ratio Lower Upper

107 100

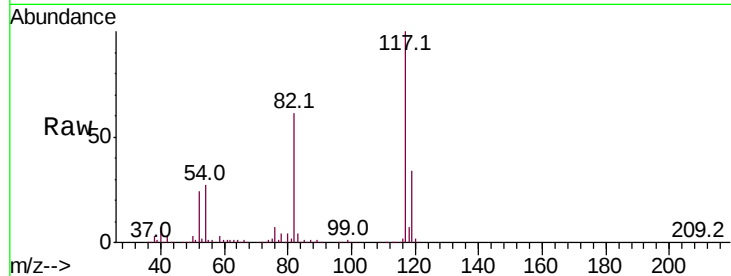
109 97.5 75.0 112.6



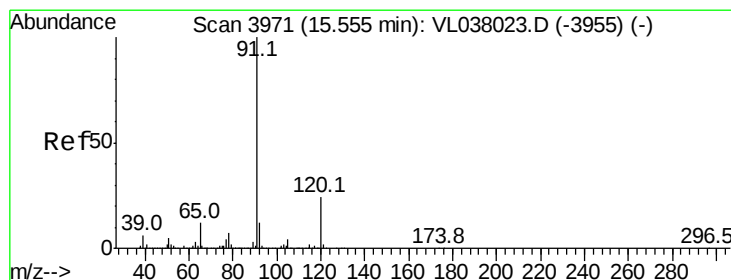
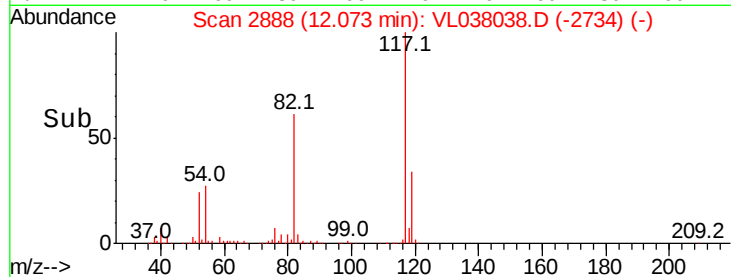
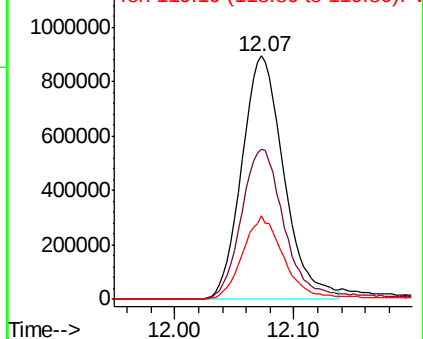


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 13:51

Tot Ion:117 Resp: 2192505
Ion Ratio Lower Upper
117 100
82 66.5 50.0 75.0
119 34.9 44.6 67.0#

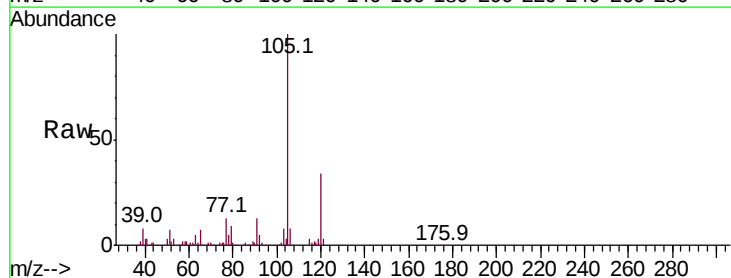


Abundance Ion 117.10 (116.80 to 117.80): V
1200000
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

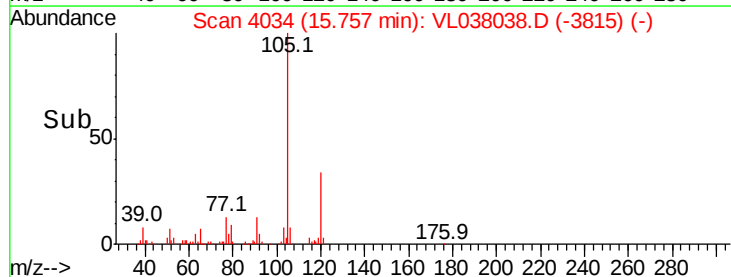
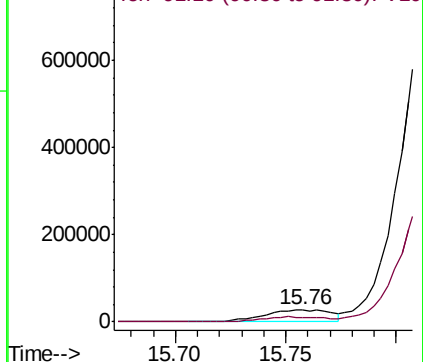


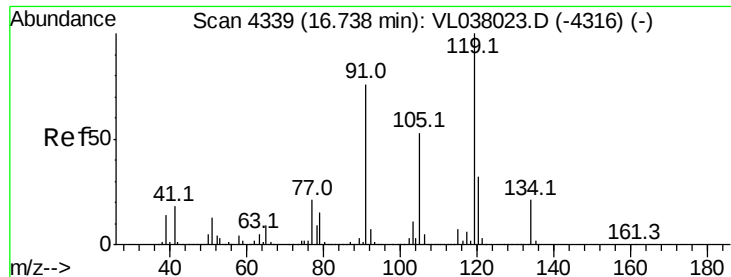
#64
n-propylbenzene
Concen: 0.633 ppbv
RT: 15.76 min Scan# 4034
Delta R.T. 0.20 min
Lab File: VL038038.D
Acq: 16 Nov 2021 13:51

Tgt Ion:120 Resp: 59970
Ion Ratio Lower Upper
120 100
91 0.0 366.7 550.1#



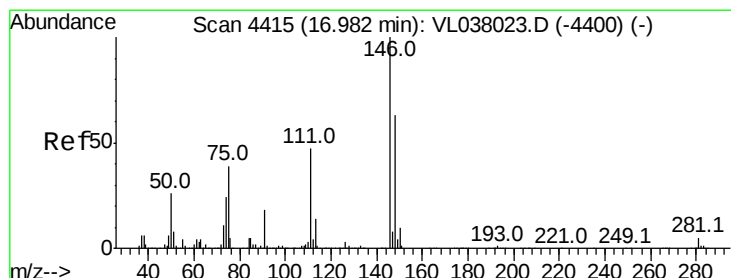
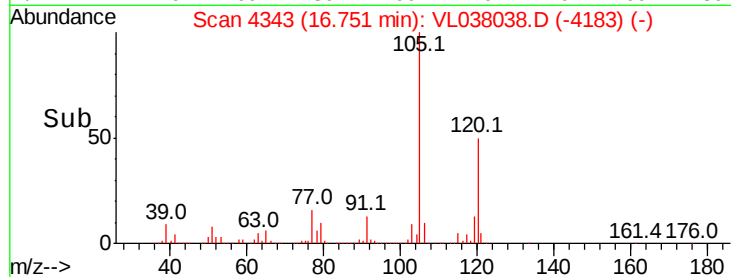
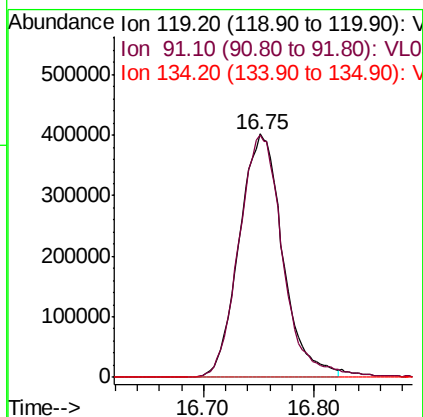
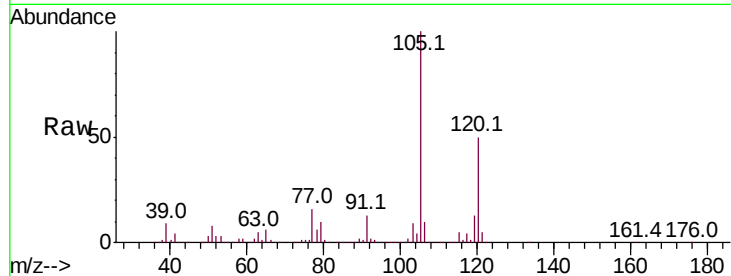
Abundance Ion 120.20 (119.90 to 120.90): V
Ion 91.10 (90.80 to 91.80): VL0





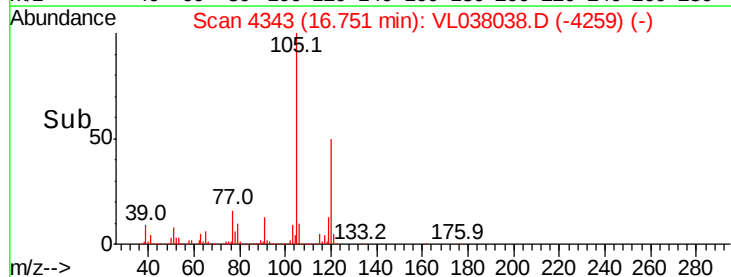
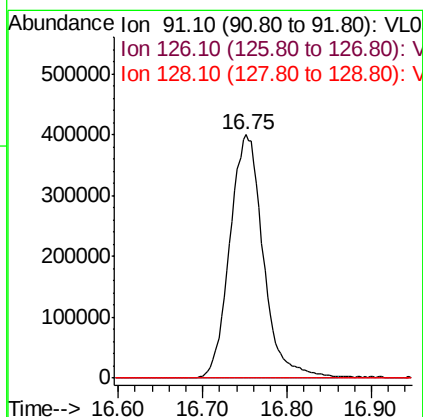
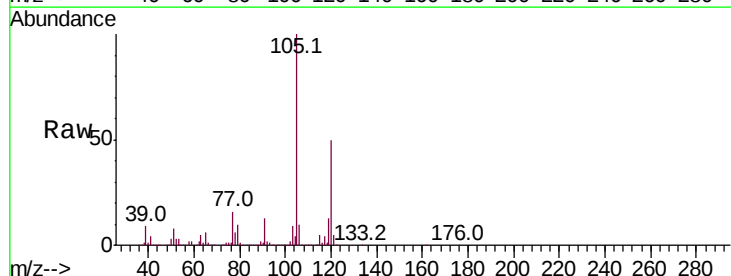
#65
 tert-Butylbenzene
 Concen: 3.378 ppbv
 RT: 16.75 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 13:51

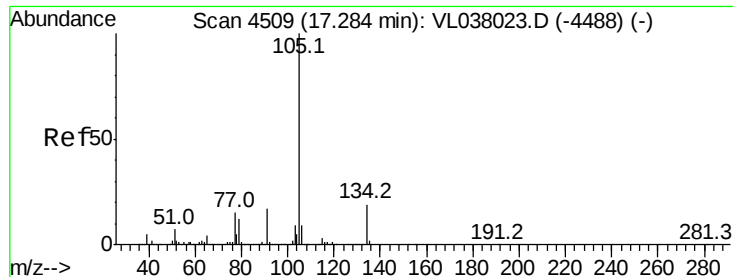
Tot Ion: 119 Resp: 1100711
 Ion Ratio Lower Upper
 119 100
 91 100.8 62.6 94.0#
 134 0.0 16.1 24.1#



#66
 Benzyl Chloride
 Concen: 48.397 ppbv
 RT: 16.75 min Scan# 4343
 Delta R.T. -0.23 min
 Lab File: VL038038.D
 Acq: 16 Nov 2021 13:51

Tgt Ion: 91 Resp: 1101370
 Ion Ratio Lower Upper
 91 100
 126 0.0 16.4 24.6#
 128 0.0 5.6 8.4#





#67

sec-Butylbenzene

Concen: 0.127 ppbv

RT: 17.58

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

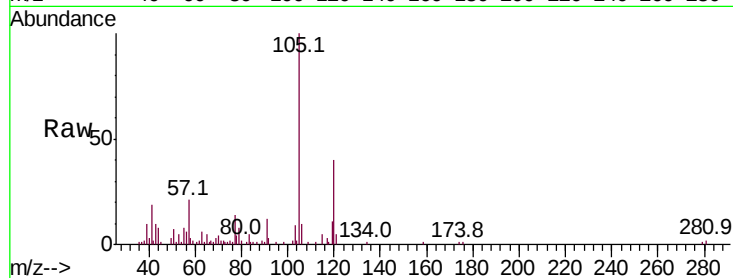
Acq: 16 Nov 2021 13:51

Tot Ion: 105 Resp: 57396

Ion Ratio Lower Upper

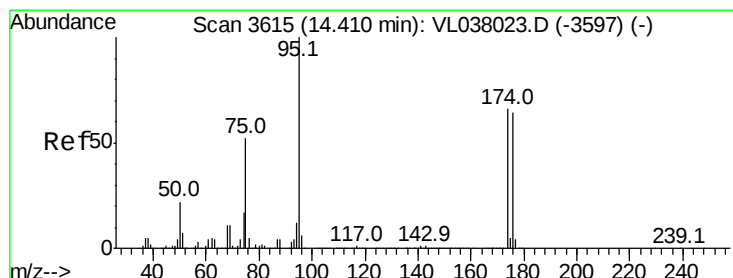
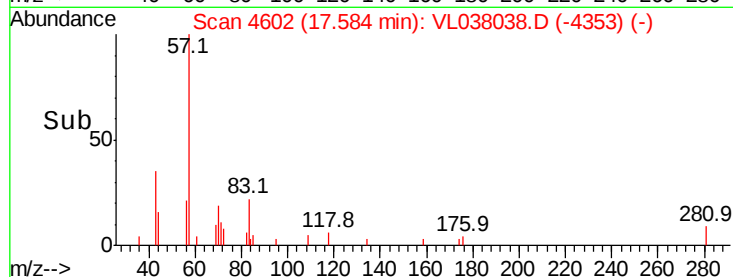
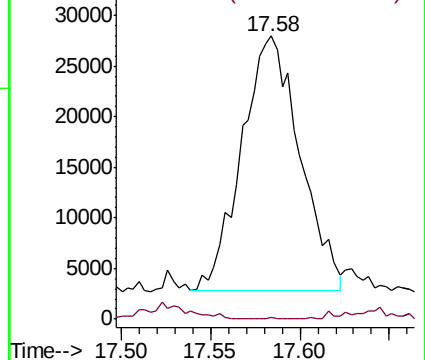
105 100

134 3.1 15.3 22.9#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.647 ppbv

RT: 14.40 min Scan# 3612

Delta R.T. -0.01 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

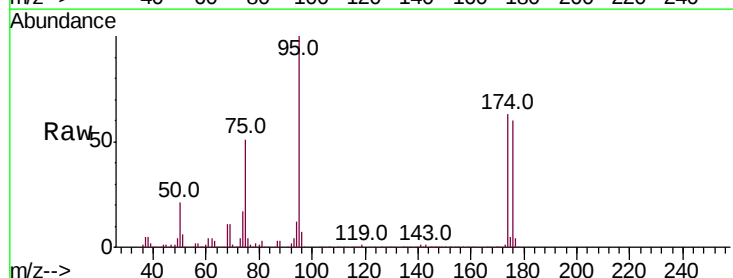
Tgt Ion: 95 Resp: 1686545

Ion Ratio Lower Upper

95 100

174 66.7 55.0 82.6

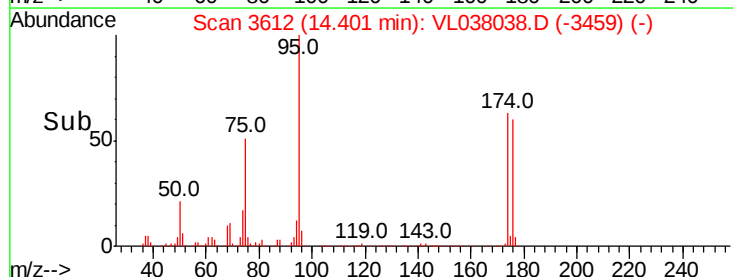
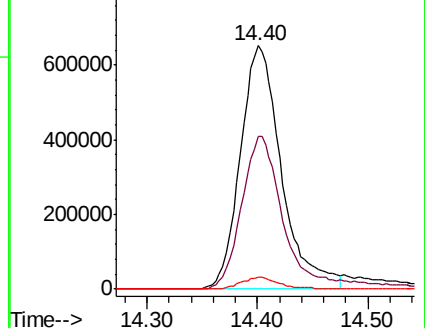
175 4.6 4.2 6.2

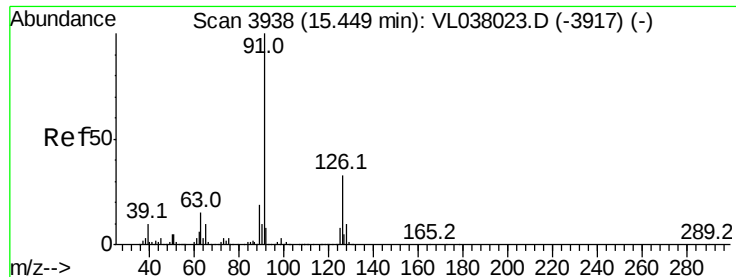


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#71

2-Chlorotoluene

Concen: 0.052 ppbv

RT: 15.75

Delta R.T. MSVOA_L

Lab File:

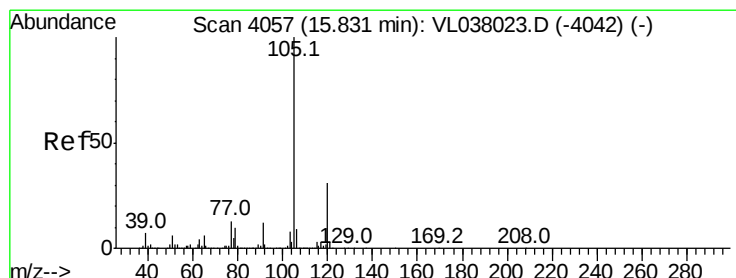
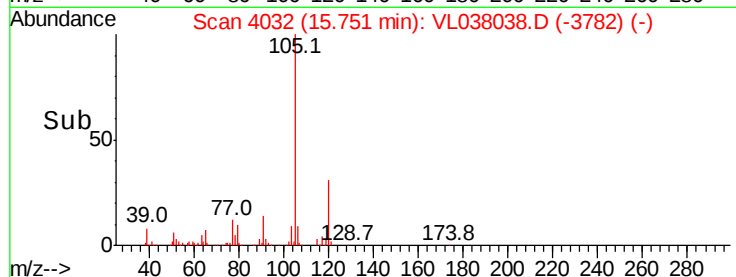
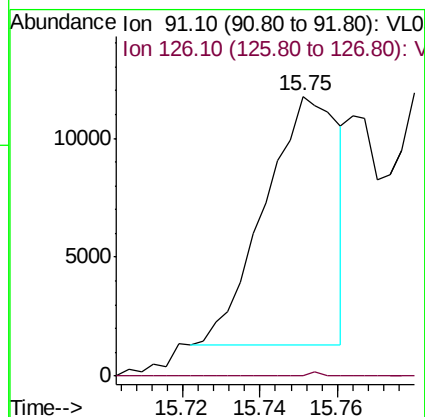
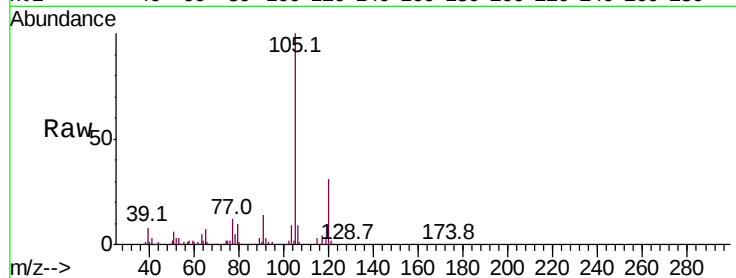
Acq: 16 Nov 2021 13:51

Tot Ion: 91 Resp: 13799

Ion Ratio Lower Upper

91 100

126 0.0 13.6 54.2#



#72

4-Ethyltoluene

Concen: 34.060 ppbv

RT: 15.83 min Scan# 4057

Delta R.T. 0.00 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

Tgt Ion: 105 Resp: 10431044

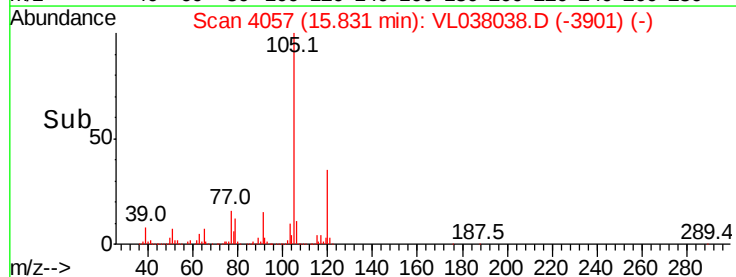
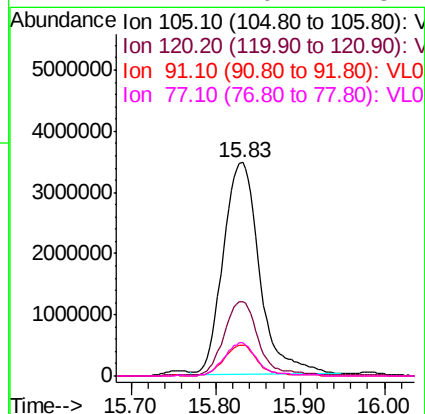
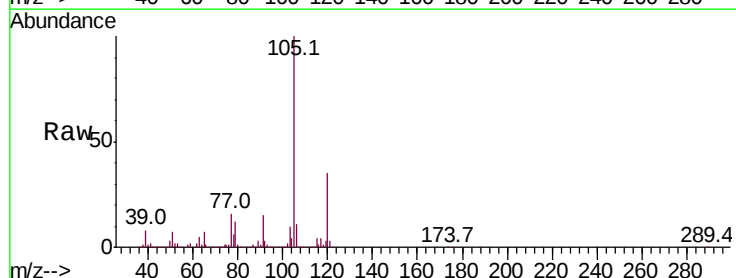
Ion Ratio Lower Upper

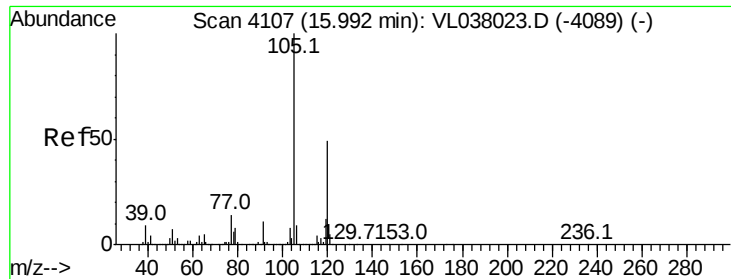
105 100

120 34.3 24.7 37.1

91 14.0 9.3 13.9#

77 14.7 10.2 15.4





#73

1,3,5-Trimethylbenzene

Concen: 37.237 ppbv

RT: 15.83

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

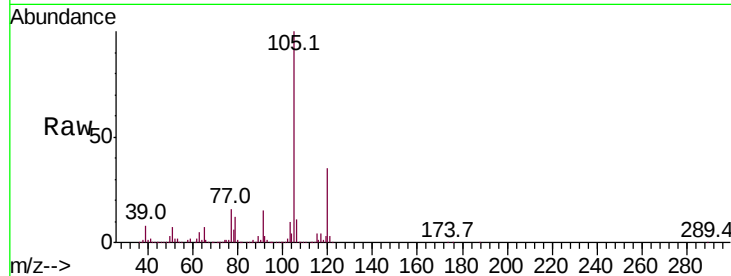
Acq: 16 Nov 2021 13:51

Tot Ion:105 Resp:10431044

Ion Ratio Lower Upper

105 100

120 34.7 38.8 58.2#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

15.83

4000000

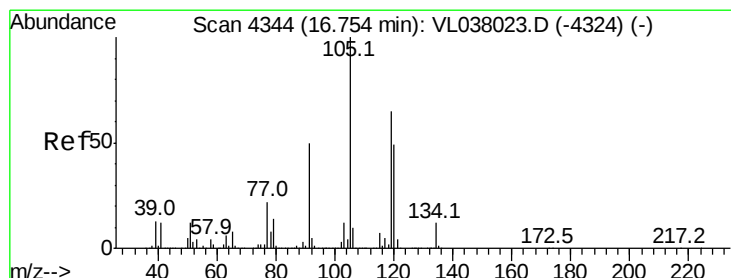
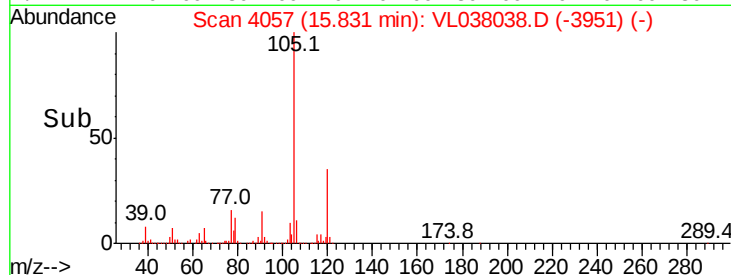
3000000

2000000

1000000

0

Time--> 15.70 15.80 15.90 16.00



#74

1,2,4-Trimethylbenzene

Concen: 32.096 ppbv

RT: 16.75 min Scan# 4344

Delta R.T. 0.00 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

Tgt Ion:105 Resp: 9052414

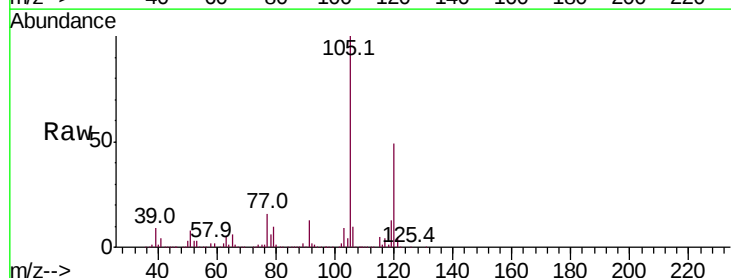
Ion Ratio Lower Upper

105 100

120 49.3 39.5 59.3

91 12.8 40.9 61.3#

77 15.6 17.2 25.8#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

4000000

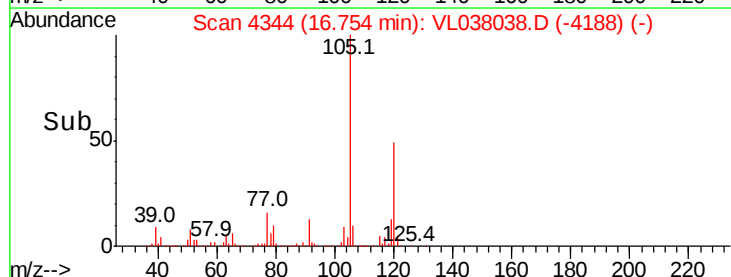
3000000

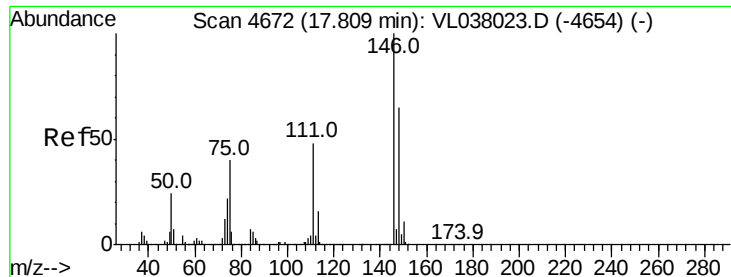
2000000

1000000

0

Time--> 16.60 16.70 16.80 16.90





#77

1,2-Dichlorobenzene

Concen: 31.423 ppbv

RT: 17.81

Delta R.T. MSVOA_L

Lab File:

Acq: 16 Nov 2021 13:51

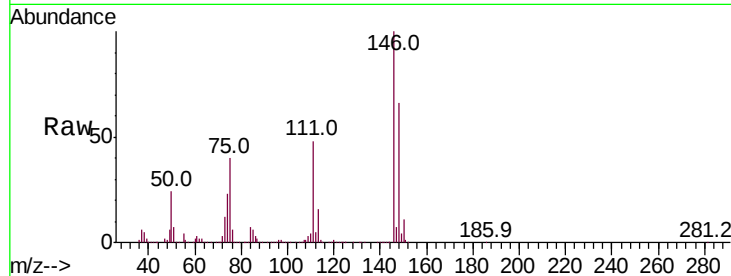
Tot Ion:146 Resp: 4690342

Ion Ratio Lower Upper

146 100

111 49.0 24.3 73.0

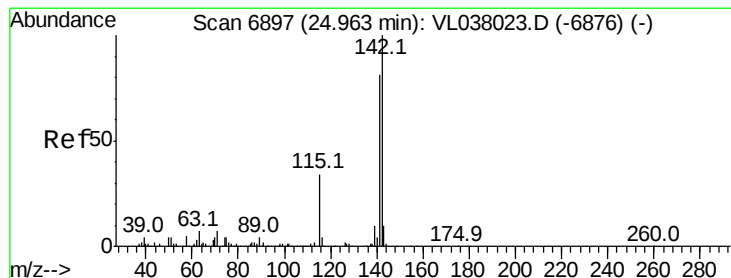
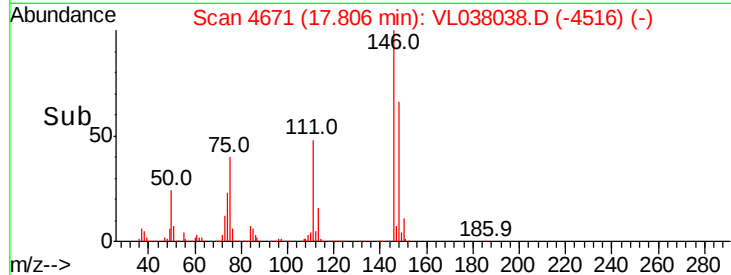
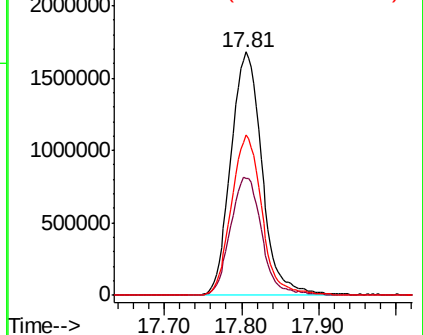
148 64.9 32.5 97.4



Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.10 (110.80 to 111.80): V

Ion 148.00 (147.70 to 148.70): V



#80

Naphthalene, 2-methyl-

Concen: 0.072 ppbv

RT: 24.95 min Scan# 6894

Delta R.T. -0.01 min

Lab File: VL038038.D

Acq: 16 Nov 2021 13:51

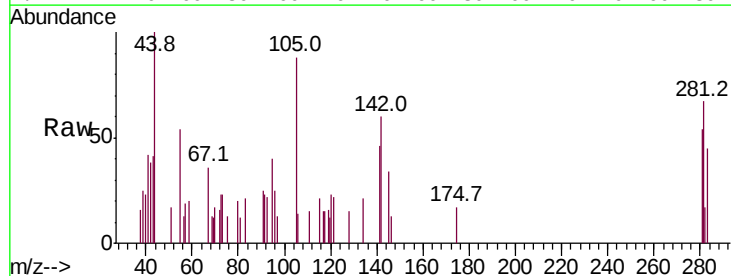
Tgt Ion:142 Resp: 2100

Ion Ratio Lower Upper

142 100

141 73.9 76.2 114.4#

115 36.2 29.2 43.8



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

