

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111621\
 Data File : VL038034.D
 Acq On : 16 Nov 2021 11:10
 Operator : SY/AP
 Sample : M4526-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 17 06:40:16 2021
 Quant Method : Z:\VOASRV\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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	764664	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	2465624	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	2228673	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1657123	10.29	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.90%

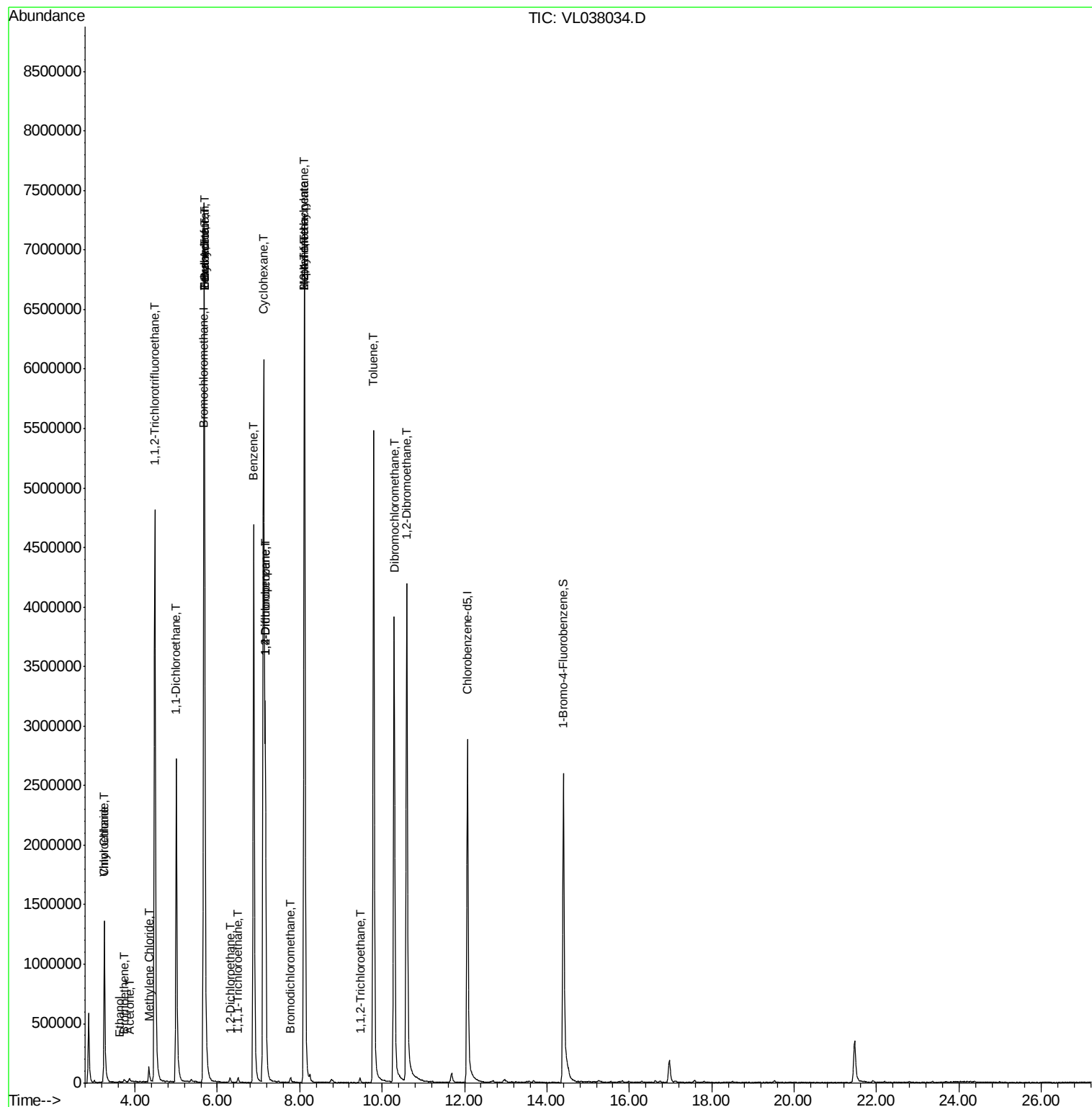
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
5) Vinyl Chloride	3.26	62	1541081	22.698	ppbv	96
7) Chloroethane	3.26	64	489620	20.504	ppbv #	46
10) Heptane	8.11	43	4103043	22.235	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.48	101	2131655	17.893	ppbv	99
13) Ethanol	3.62	45	3464	0.521	ppbv #	100
14) Bromoethene	3.74	108	11709	0.235	ppbv #	88
15) Acetone	3.87	43	32735	0.364	ppbv #	79
20) Methylene Chloride	4.34	84	49775	0.944	ppbv	95
24) 1,1-Dichloroethane	5.01	63	2866682	24.682	ppbv	100
25) Ethyl Acetate	5.68	43	2583969	12.218	ppbv #	76
26) Hexane	5.68	57	3700819	34.832	ppbv #	45
30) Cyclohexane	7.12	84	2614408	21.850	ppbv	96
32) 1,1,1-Trichloroethane	6.50	97	15797	0.078	ppbv #	28
34) 2-Butanone	5.68	43	2448689	30.110	ppbv #	53
36) Benzene	6.88	78	4692990	20.009	ppbv	100
37) 1,2-Dichloroethane	6.29	62	4330	0.040	ppbv #	81
39) 1,2-Dichloropropane	7.16	63	555599	6.128	ppbv #	43
41) Tetrahydrofuran	5.68	42	1336703	22.906	ppbv #	51
42) Bromodichloromethane	7.78	83	23130	0.135	ppbv	98
43) Methyl Methacrylate	8.12	69	36227	0.433	ppbv #	1
44) 2,2,4-Trimethylpentane	8.11	57	2053428	5.096	ppbv #	44
47) 1,1,2-Trichloroethane	9.46	97	9638	0.105	ppbv	95
48) Dibromochloromethane	10.29	129	2869959	19.168	ppbv	98
53) Toluene	9.79	91	5272256	19.223	ppbv	98
54) 1,2-Dibromoethane	10.60	107	4261619	33.031	ppbv	99

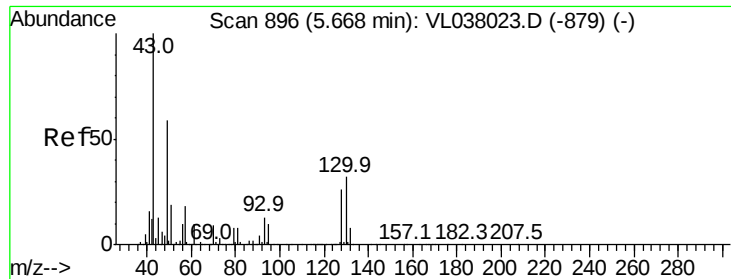
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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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 11:10

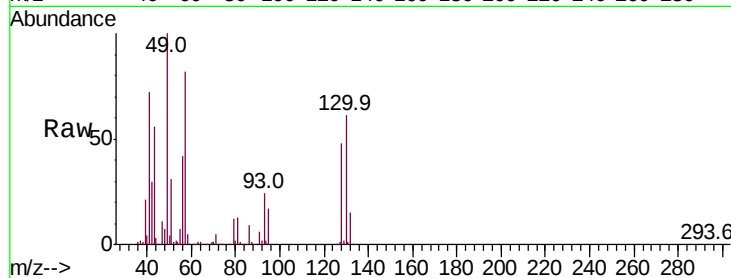
Tot Ion: 49 Resp: 764664

Ion Ratio Lower Upper

49 100

128 51.4 23.4 70.2

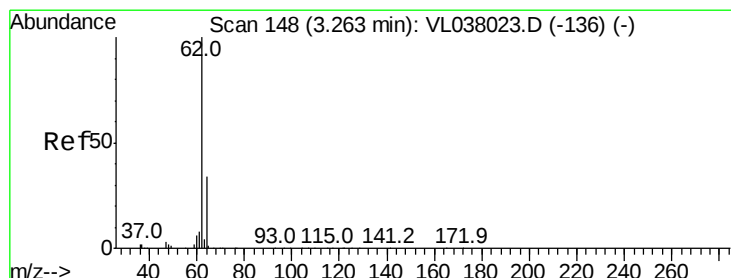
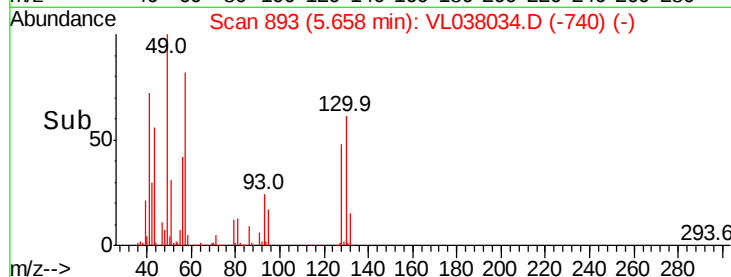
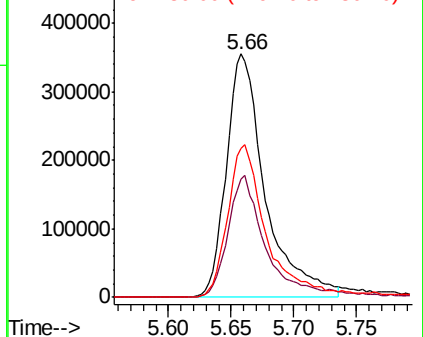
130 65.4 29.1 87.3



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



#5

Vinyl Chloride

Concen: 22.698 ppbv

RT: 3.26 min Scan# 146

Delta R.T. -0.01 min

Lab File: VL038034.D

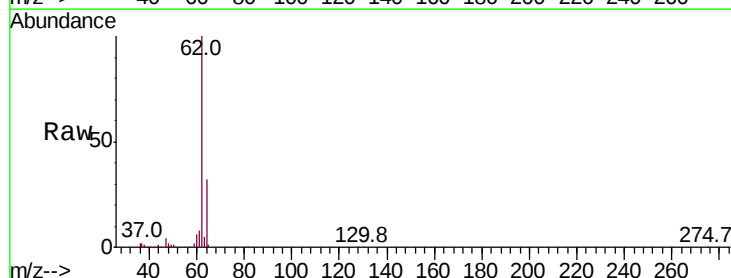
Acq: 16 Nov 2021 11:10

Tgt Ion: 62 Resp: 1541081

Ion Ratio Lower Upper

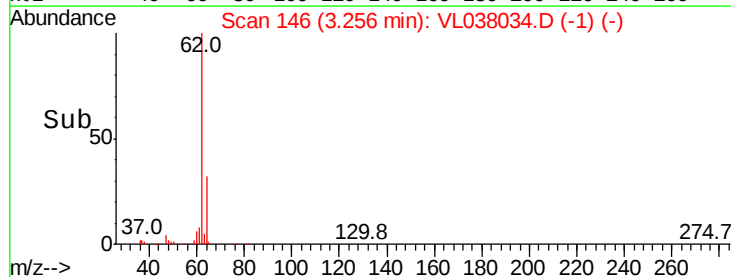
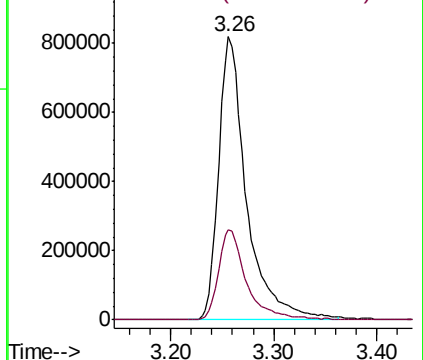
62 100

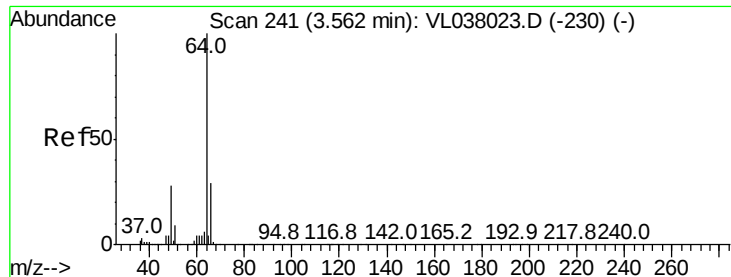
64 31.7 27.4 41.0



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0





#7

Chloroethane

Concen: 20.504 ppbv

RT: 3.26 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

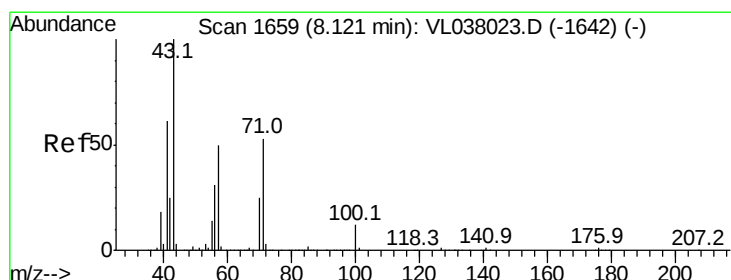
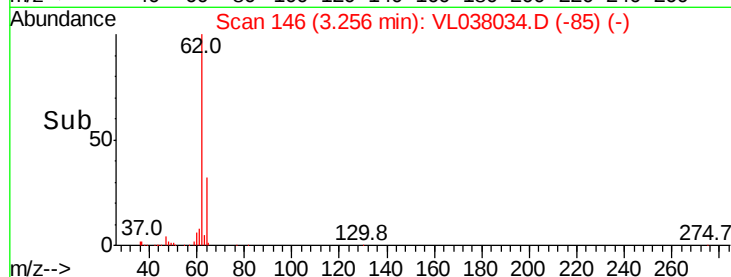
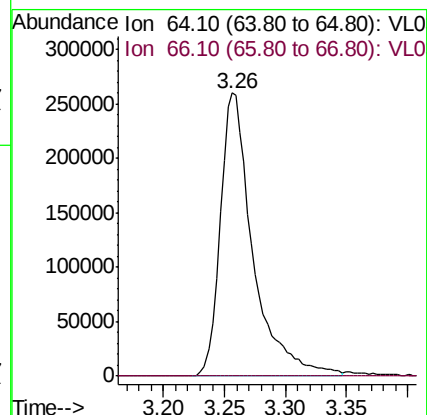
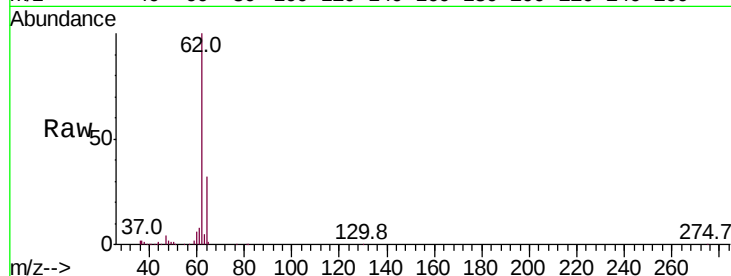
Acq: 16 Nov 2021 11:10

Tot Ion: 64 Resp: 489620

Ion Ratio Lower Upper

64 100

66 0.0 23.1 34.7#



#10

Heptane

Concen: 22.235 ppbv

RT: 8.11 min Scan# 1657

Delta R.T. -0.01 min

Lab File: VL038034.D

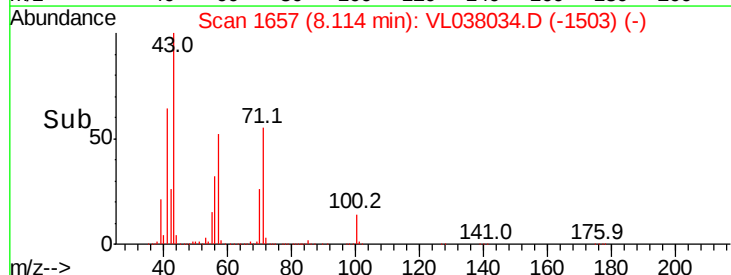
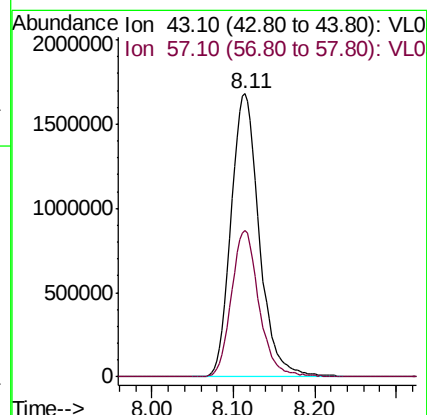
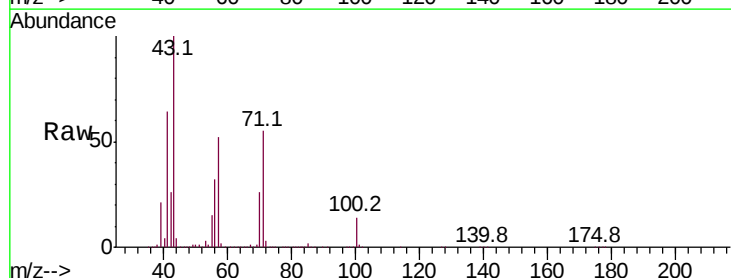
Acq: 16 Nov 2021 11:10

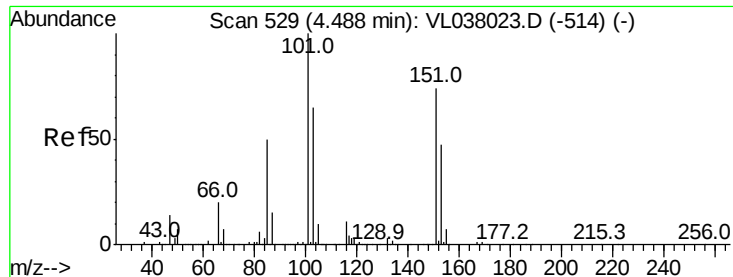
Tgt Ion: 43 Resp: 4103043

Ion Ratio Lower Upper

43 100

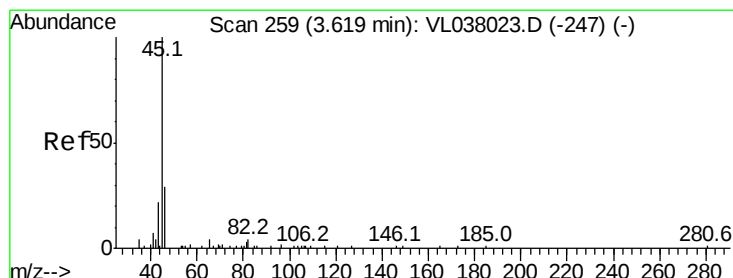
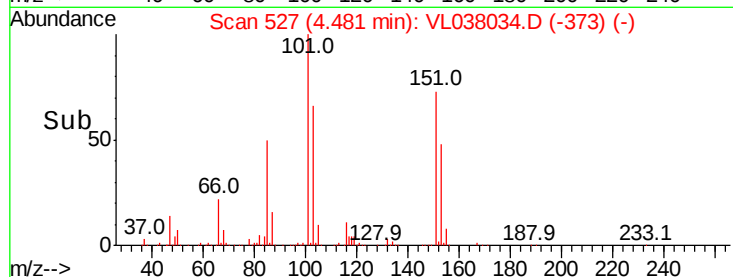
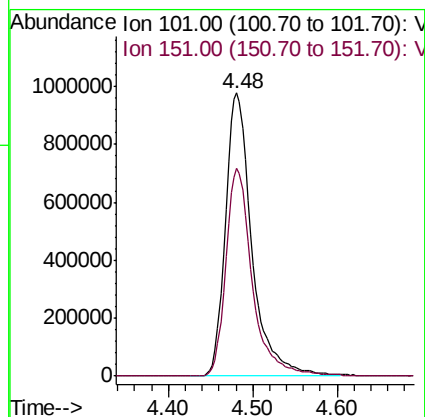
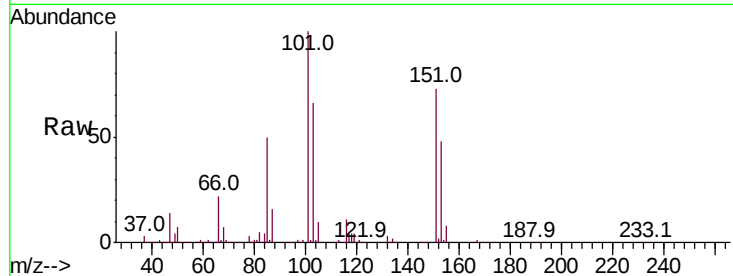
57 50.8 40.2 60.2





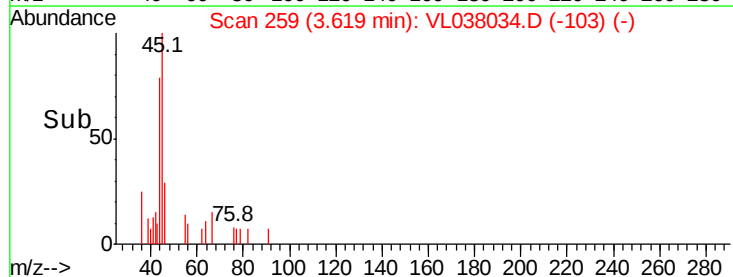
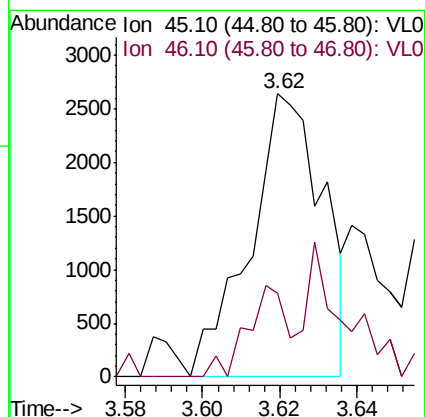
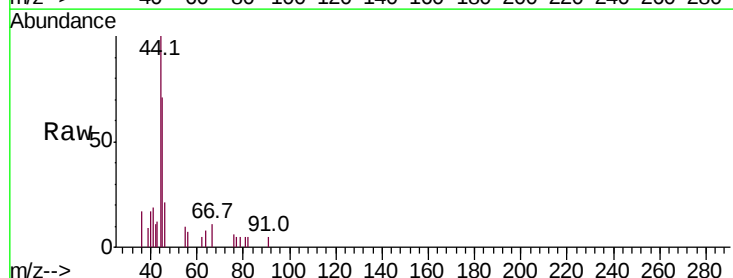
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 17.893 ppbv
 RT: 4.48
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 11:10

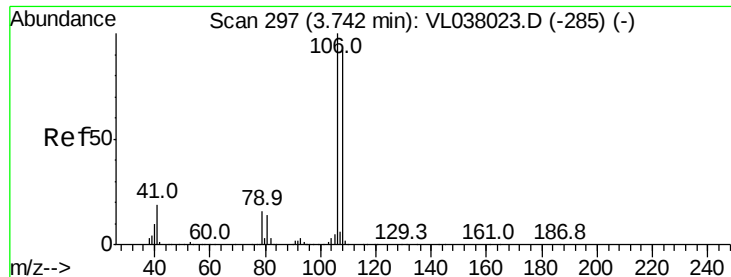
Tot Ion:101 Resp: 2131655
 Ion Ratio Lower Upper
 101 100
 151 73.5 57.8 86.8



#13
 Ethanol
 Concen: 0.521 ppbv
 RT: 3.62 min Scan# 259
 Delta R.T. 0.00 min
 Lab File: VL038034.D
 Acq: 16 Nov 2021 11:10

Tgt Ion: 45 Resp: 3464
 Ion Ratio Lower Upper
 45 100
 46 0.0 0.0 0.0





#14

Bromoethene

Concen: 0.235 ppbv

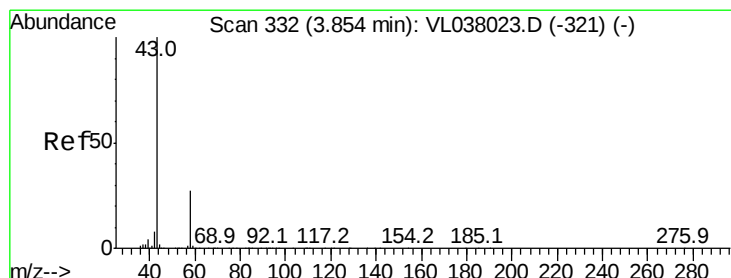
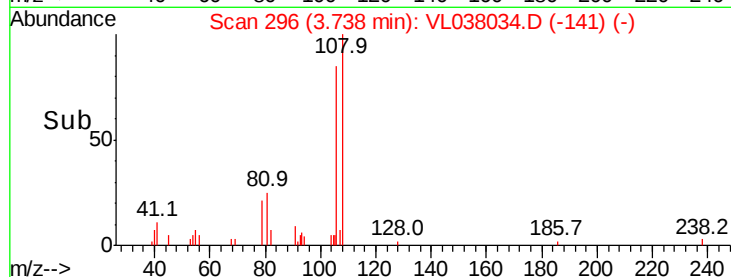
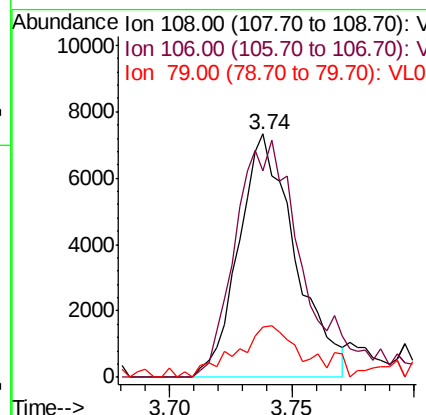
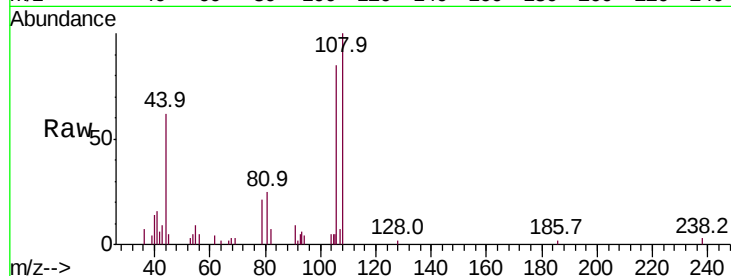
RT: 3.74 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 11:10

Tot Ion	108	Resp	11709
Ion Ratio	100	Lower	Upper
106	124.2	90.4	135.6
79	28.3	14.5	21.7#



#15

Acetone

Concen: 0.364 ppbv

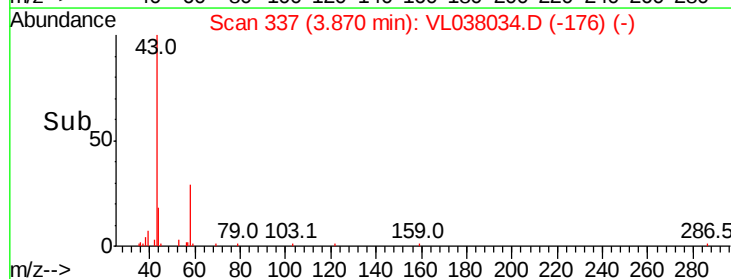
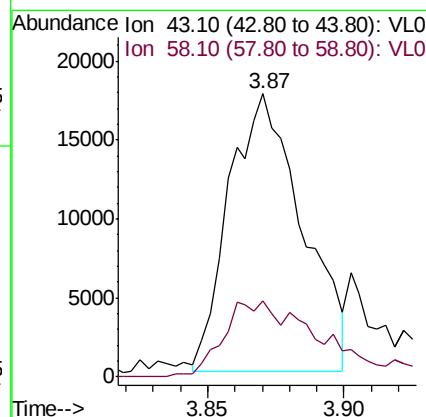
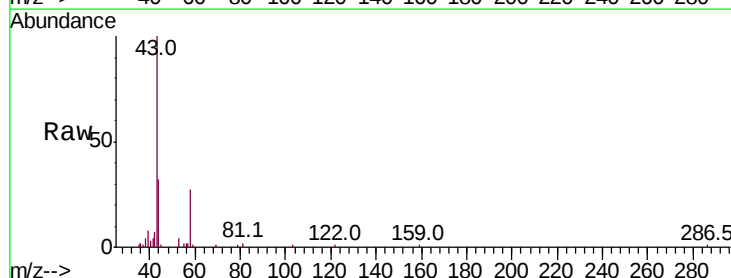
RT: 3.87 min Scan# 337

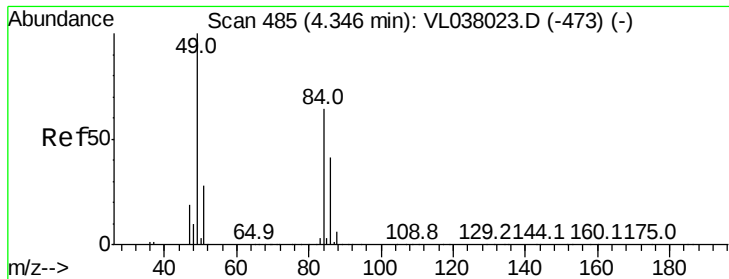
Delta R.T. 0.02 min

Lab File: VL038034.D

Acq: 16 Nov 2021 11:10

Tgt Ion	43	Resp	32735
Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td>	100	Lower	Upper
58	39.8	23.0	34.4#





#20

Methylene Chloride

Concen: 0.944 ppbv

RT: 4.34

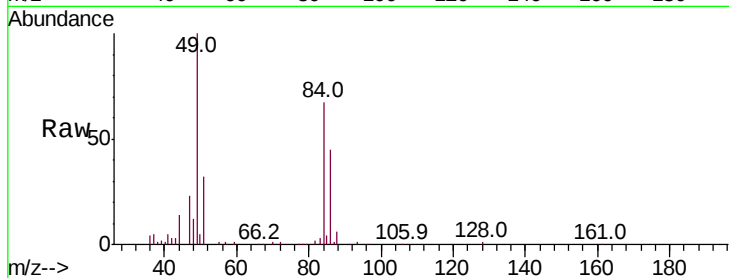
Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 16 Nov 2021 11:10

Tot Ion:	84	Resp:	49775
Ion	Ratio	Lower	Upper
84	100		
49	148.6	125.1	187.7
51	47.0	35.3	52.9
86	66.5	51.7	77.5



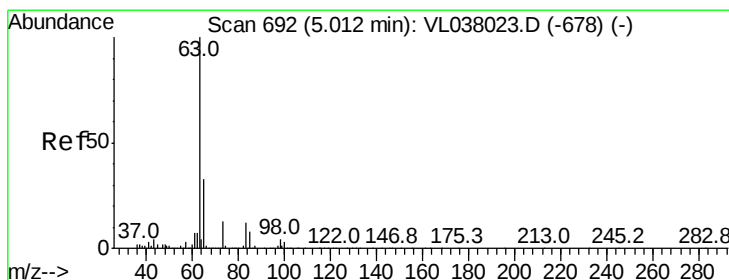
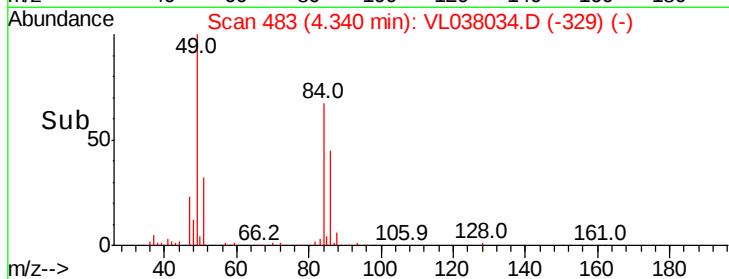
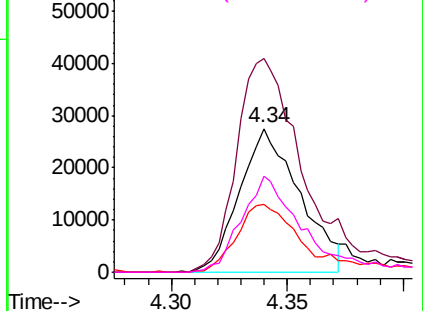
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#24

1,1-Dichloroethane

Concen: 24.682 ppbv

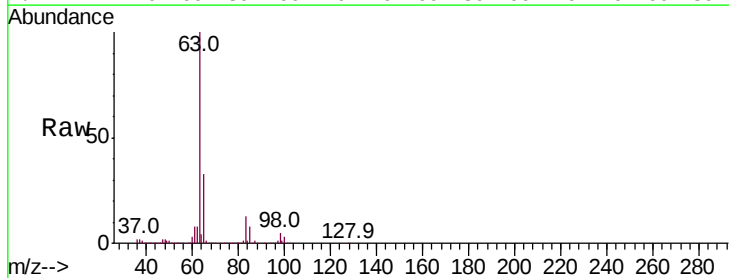
RT: 5.01 min Scan# 690

Delta R.T. -0.01 min

Lab File: VL038034.D

Acq: 16 Nov 2021 11:10

Tgt Ion:	63	Resp:	2866682
Ion	Ratio	Lower	Upper
63	100		
98	4.5	2.3	6.9
100	2.8	1.5	4.4

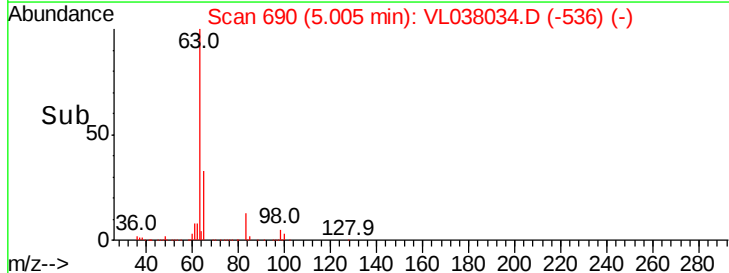
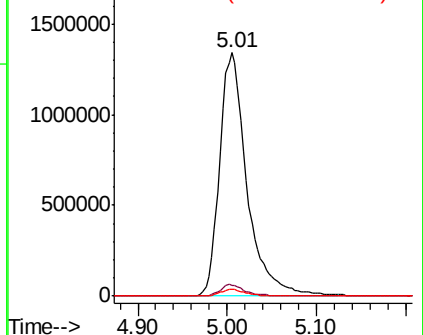


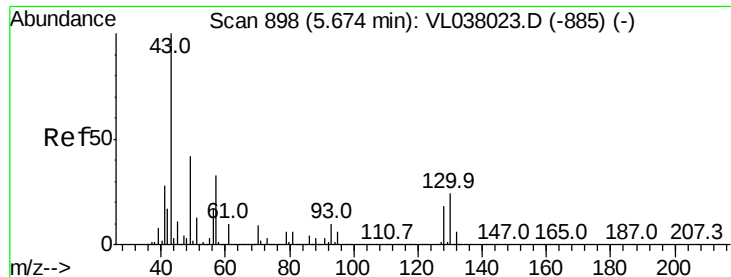
Abundance

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: 12.218 ppbv

RT: 5.68 Instrument :

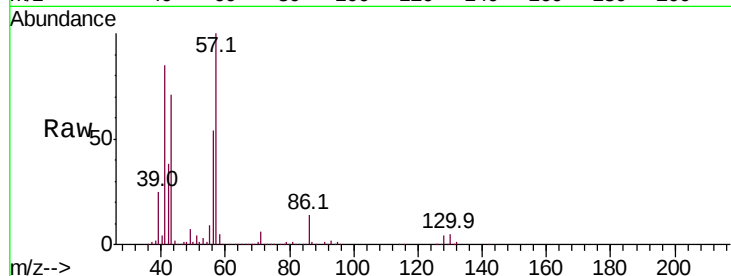
Delta R.T. MSVOA_1

Lab File: ClientSampleId :

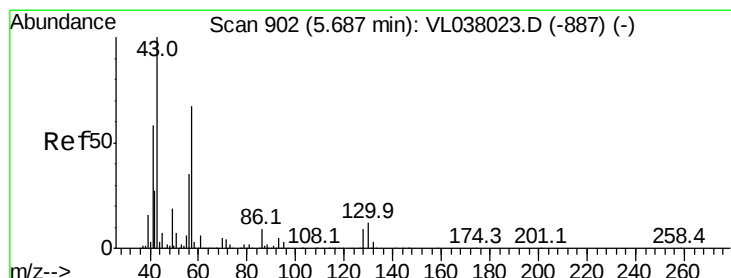
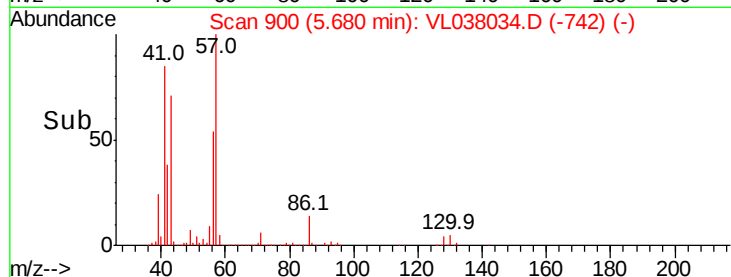
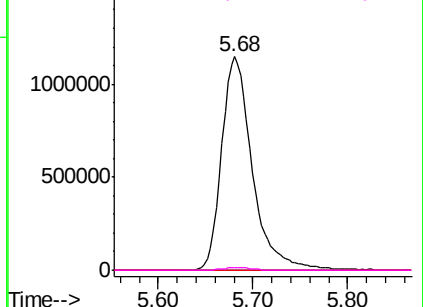
Acq: 16 Nov 2021 11:10

Tot Ion: 43 Resp: 2583969

Ion	Ratio	Lower	Upper
43	100		
45	0.1	8.0	12.0#
61	0.1	8.3	12.5#
70	1.4	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: 34.832 ppbv

RT: 5.68 min Scan# 901

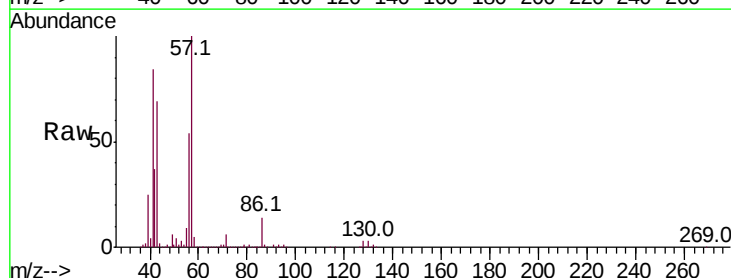
Delta R.T. -0.00 min

Lab File: VL038034.D

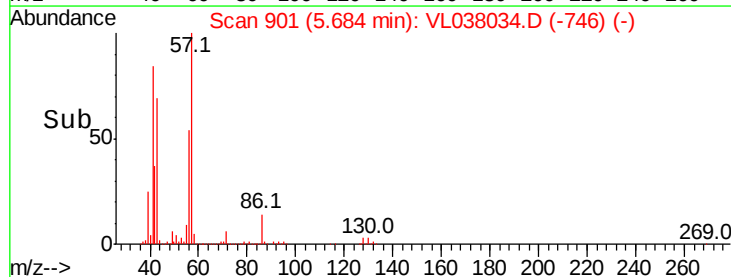
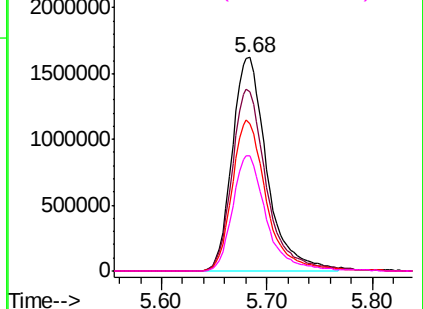
Acq: 16 Nov 2021 11:10

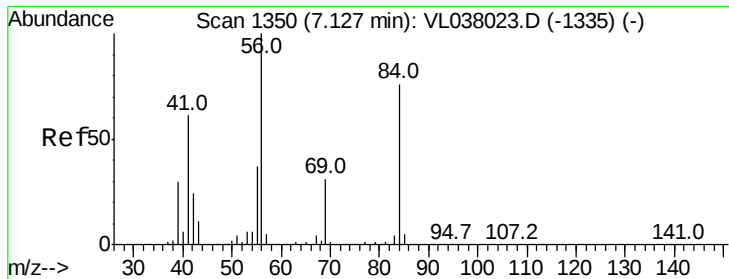
Tgt Ion: 57 Resp: 3700819

Ion	Ratio	Lower	Upper
57	100		
41	85.0	70.8	106.2
43	70.5	169.4	254.0#
56	53.0	41.8	62.8



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

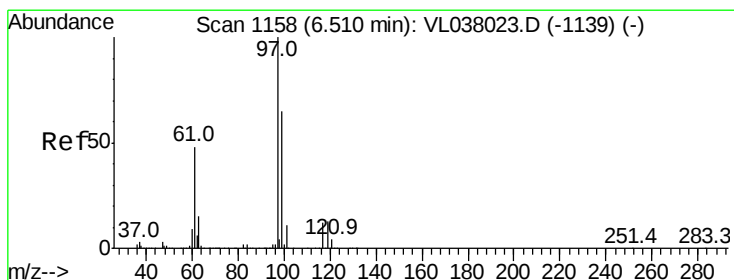
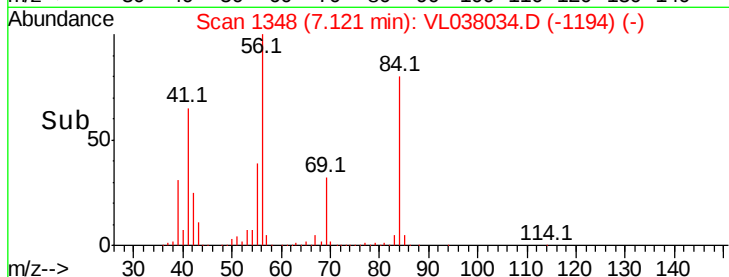
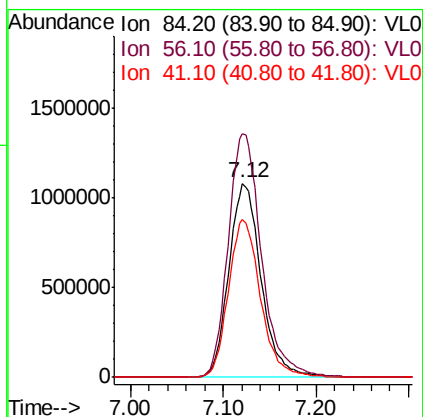
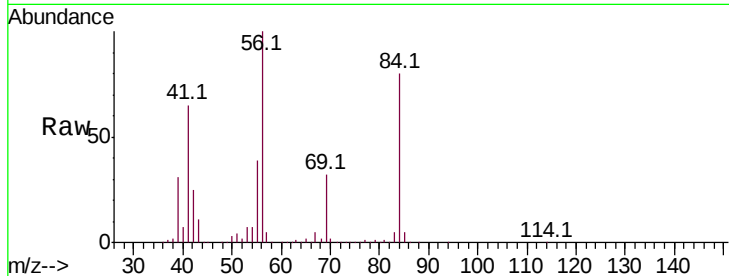




#30
Cvclohexane
Concen: 21.850 ppbv
RT: 7.12
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 11:10

Tot Ion: 84 Resp: 2614408

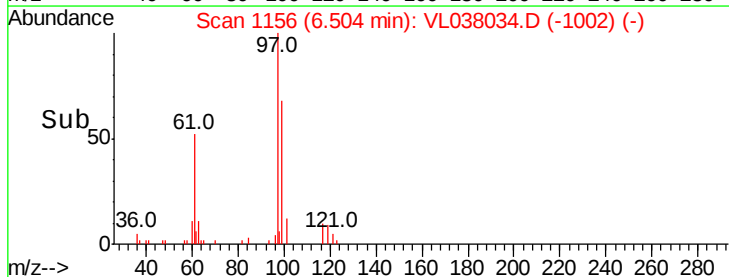
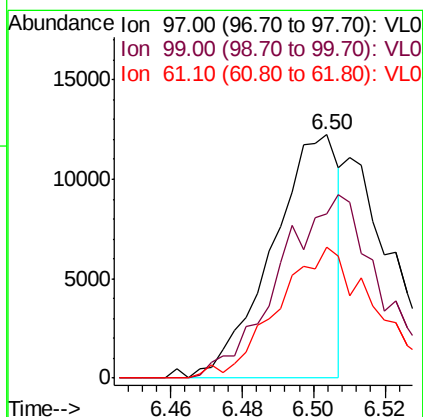
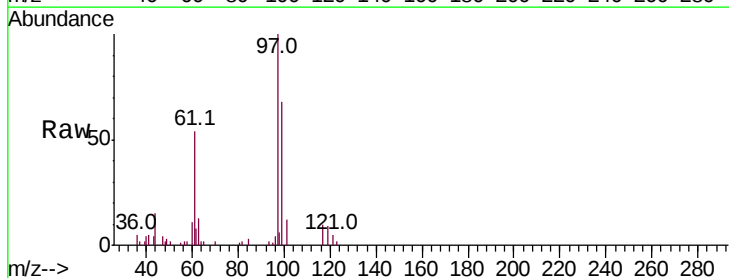
Ion	Ratio	Lower	Upper
84	100		
56	130.3	109.5	164.3
41	81.2	65.1	97.7

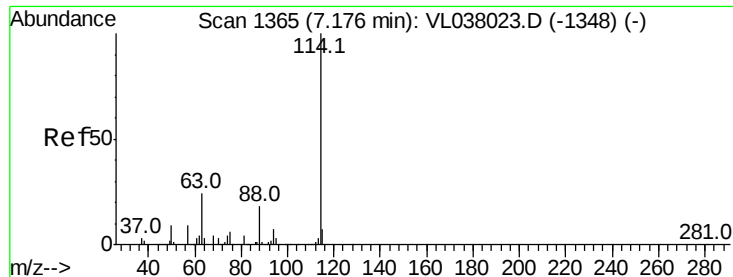


#32
1,1,1-Trichloroethane
Concen: 0.078 ppbv
RT: 6.50 min Scan# 1156
Delta R.T. -0.01 min
Lab File: VL038034.D
Acq: 16 Nov 2021 11:10

Tgt Ion: 97 Resp: 15797

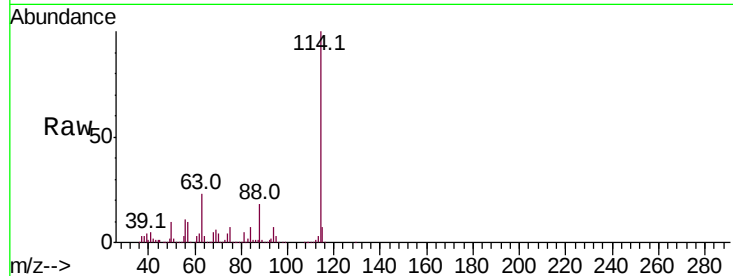
Ion	Ratio	Lower	Upper
97	100		
99	0.0	51.9	77.9#
61	85.2	37.7	56.5#



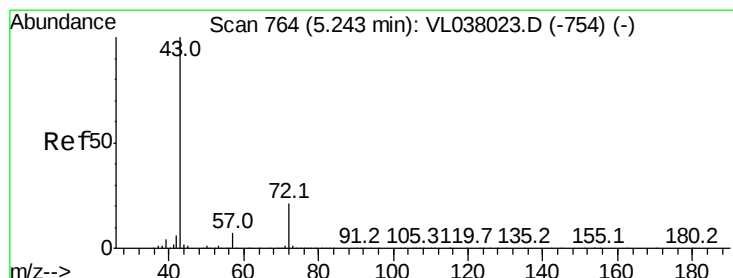
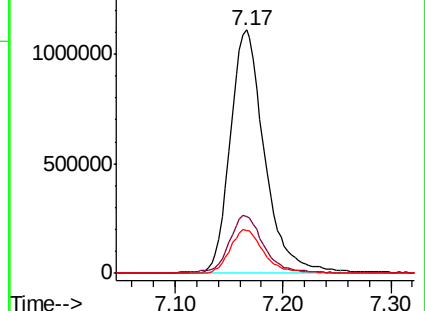
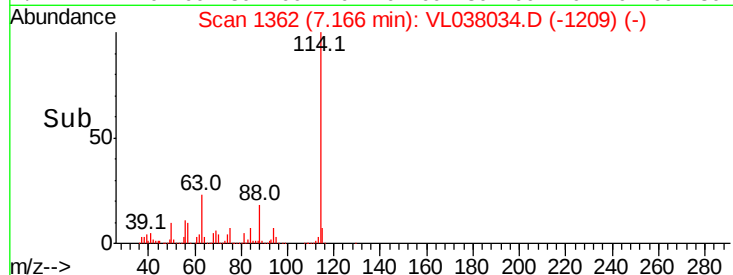


#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 11:10

Tot Ion:114 Resp: 2465624
 Ion Ratio Lower Upper
 114 100
 63 24.7 19.8 29.6
 88 17.9 14.6 21.8

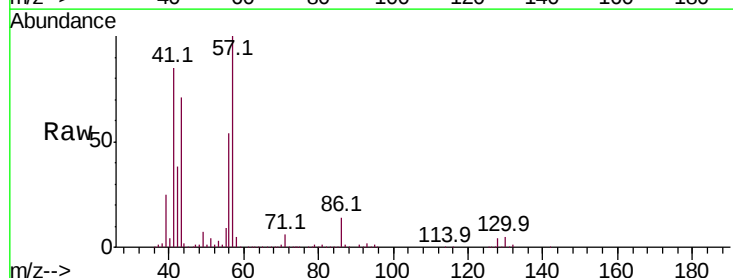


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

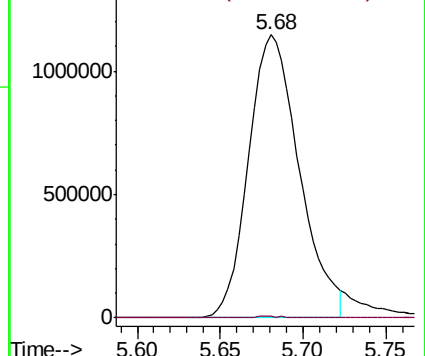
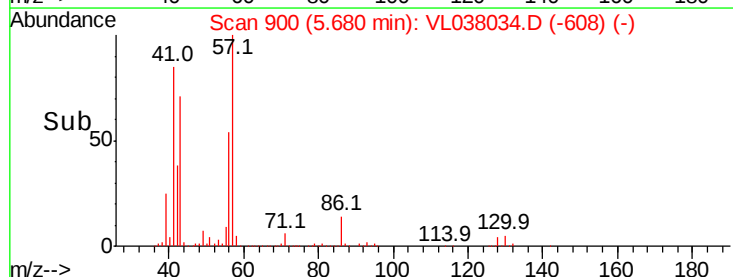


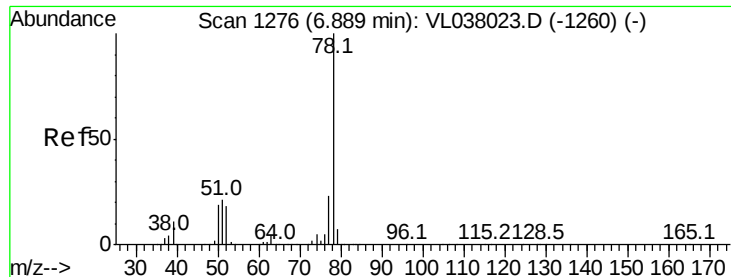
#34
 2-Butanone
 Concen: 30.110 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T.: 0.44 min
 Lab File: VL038034.D
 Acq: 16 Nov 2021 11:10

Tgt Ion: 43 Resp: 2448689
 Ion Ratio Lower Upper
 43 100
 72 0.0 18.2 27.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0

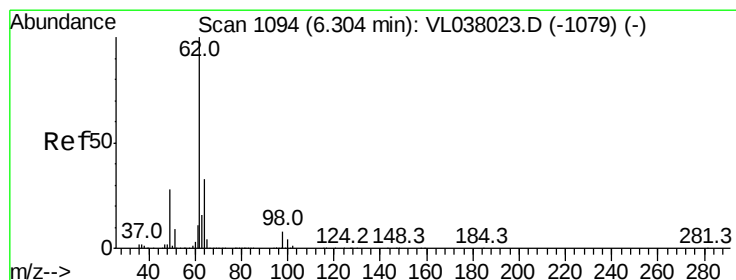
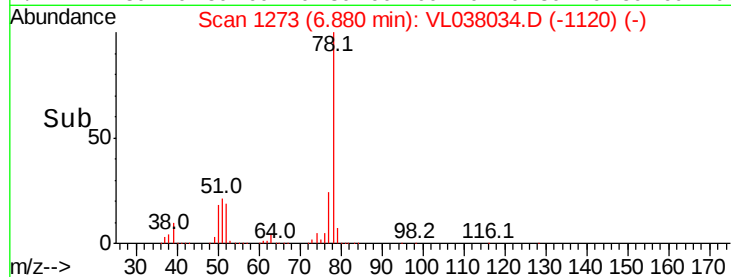
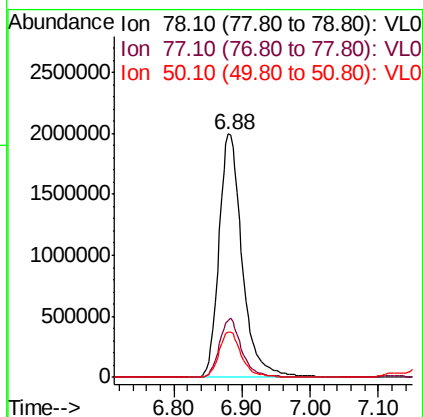
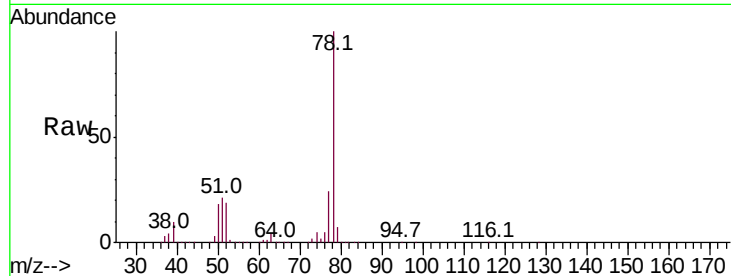




#36
Benzene
Concen: 20.009 ppbv
RT: 6.88
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 11:10

Tot Ion: 78 Resp: 4692990

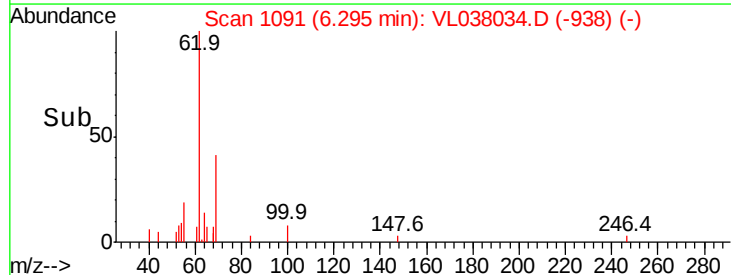
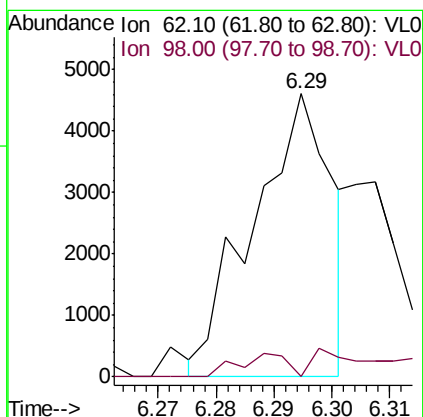
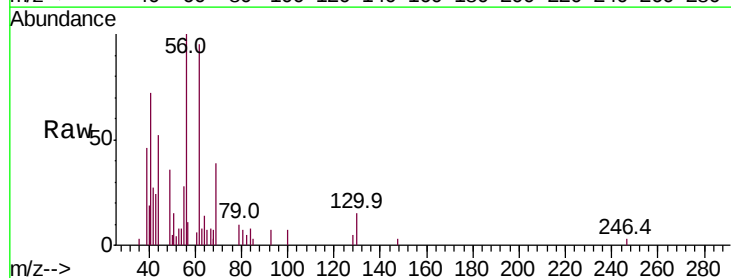
Ion	Ratio	Lower	Upper
78	100		
77	23.5	18.8	28.2
50	18.4	14.9	22.3

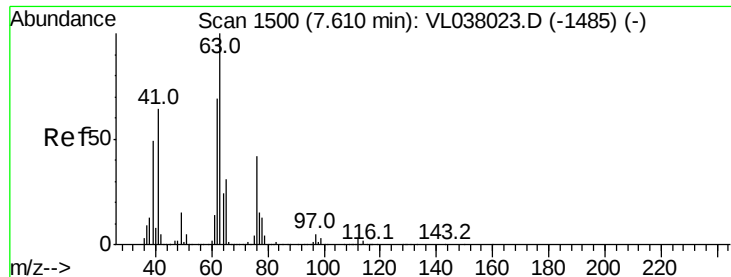


#37
1,2-Dichloroethane
Concen: 0.040 ppbv
RT: 6.29 min Scan# 1091
Delta R.T. -0.01 min
Lab File: VL038034.D
Acq: 16 Nov 2021 11:10

Tgt Ion: 62 Resp: 4330

Ion	Ratio	Lower	Upper
62	100		
98	14.2	6.0	9.0#





#39

1,2-Dichloropropane

Concen: 6.128 ppbv

RT: 7.16 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 16 Nov 2021 11:10

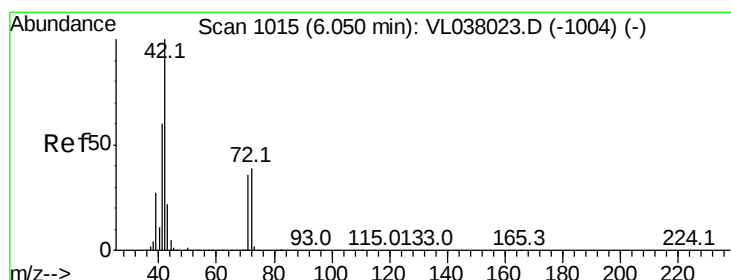
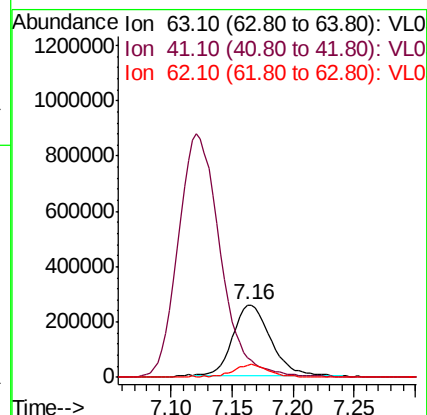
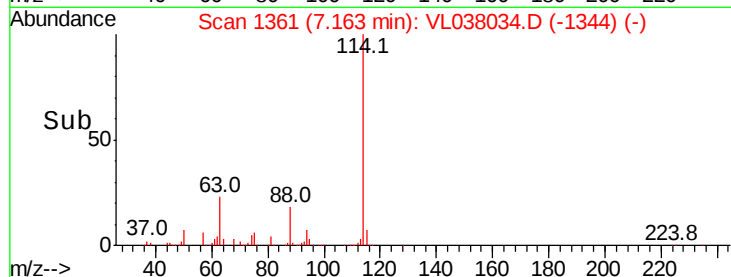
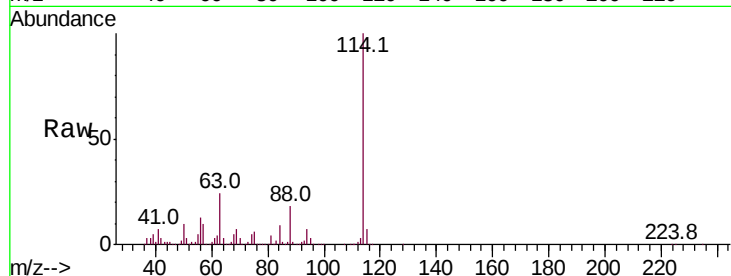
Tot Ion: 63 Resp: 555599

Ion Ratio Lower Upper

63 100

41 26.6 51.1 76.7#

62 16.1 55.2 82.8#



#41

Tetrahydrofuran

Concen: 22.906 ppbv

RT: 5.68 min Scan# 900

Delta R.T. -0.37 min

Lab File: VL038034.D

Acq: 16 Nov 2021 11:10

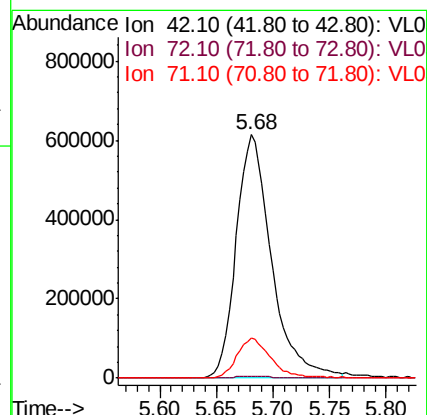
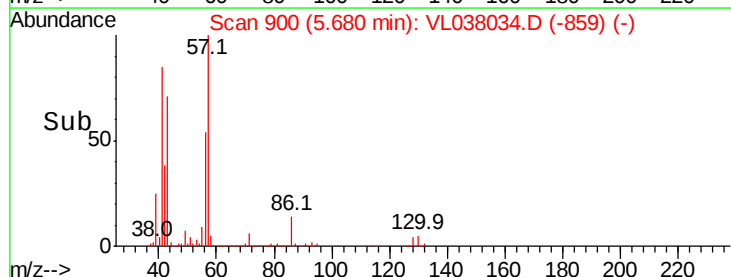
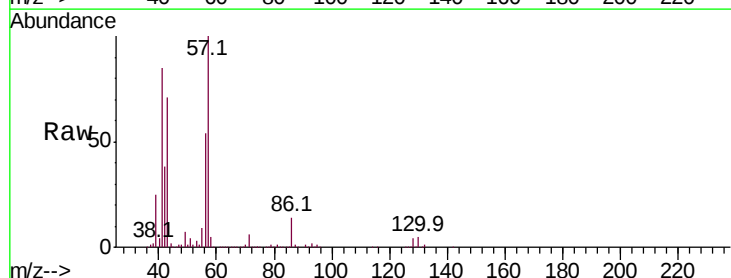
Tgt Ion: 42 Resp: 1336703

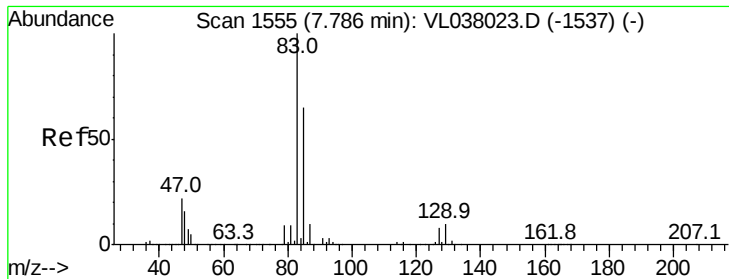
Ion Ratio Lower Upper

42 100

72 0.9 31.3 46.9#

71 16.3 29.7 44.5#





#42

Bromodichloromethane

Concen: 0.135 ppbv

RT: 7.78 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 11:10

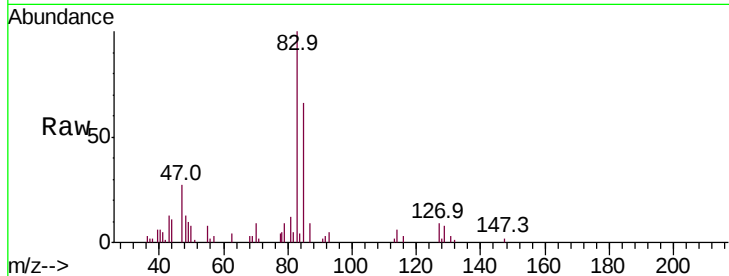
Tot Ion: 83 Resp: 23130

Ion Ratio Lower Upper

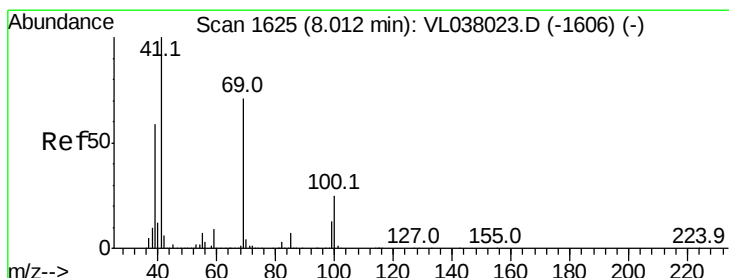
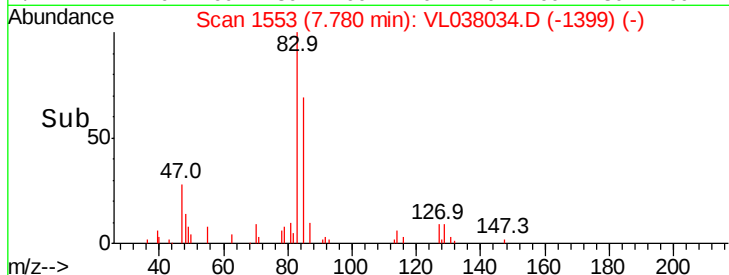
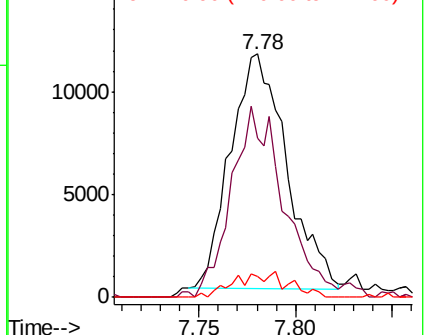
83 100

85 66.1 51.6 77.4

127 8.9 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): VL0



#43

Methyl Methacrylate

Concen: 0.433 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. 0.11 min

Lab File: VL038034.D

Acq: 16 Nov 2021 11:10

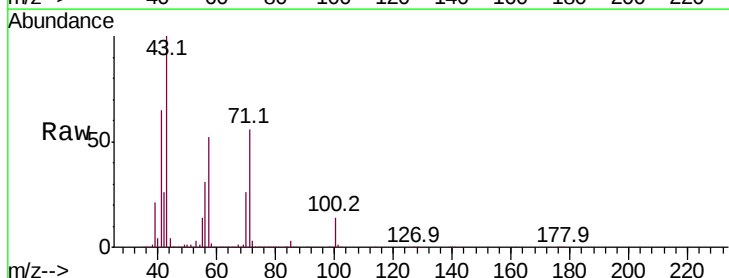
Tgt Ion: 69 Resp: 36227

Ion Ratio Lower Upper

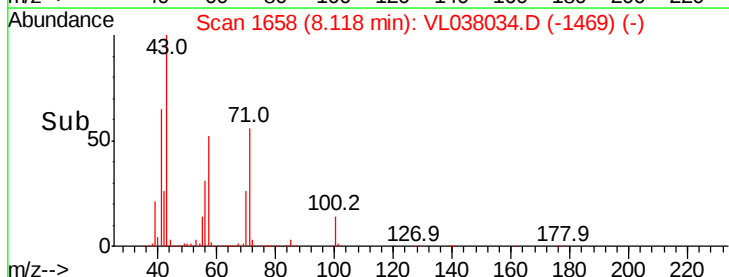
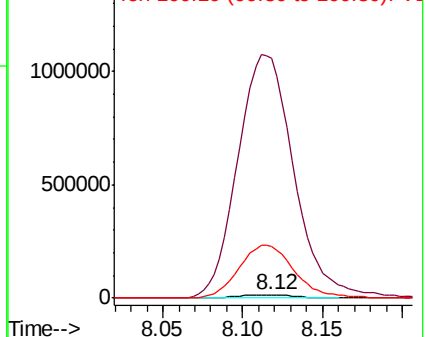
69 100

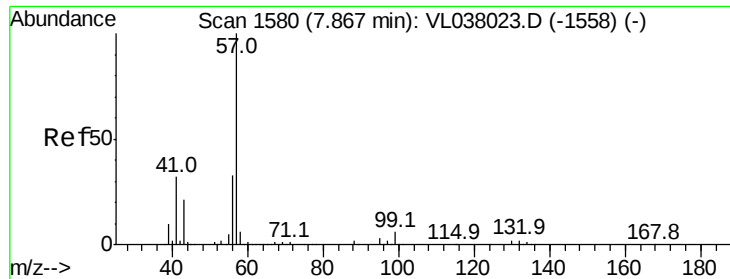
41 7250.1 116.6 174.8#

100 1546.4 27.0 40.6#



Abundance Ion 69.10 (68.80 to 69.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 100.10 (99.80 to 100.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 5.096 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 16 Nov 2021 11:10

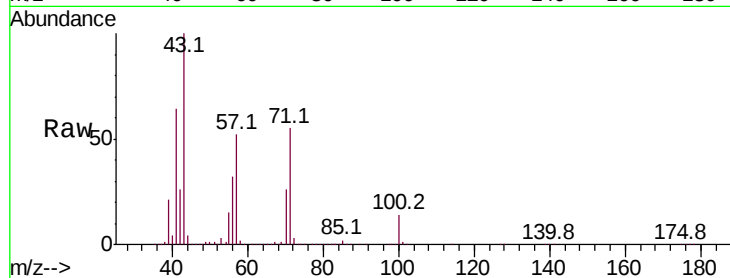
Tot Ion: 57 Resp: 2053428

Ion Ratio Lower Upper

57 100

41 0.0 26.2 39.2#

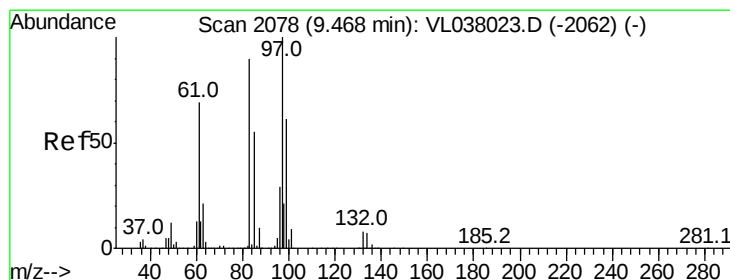
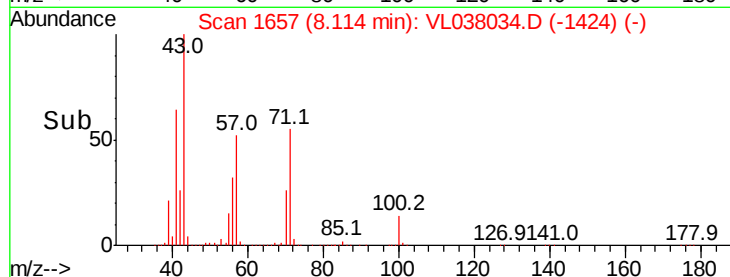
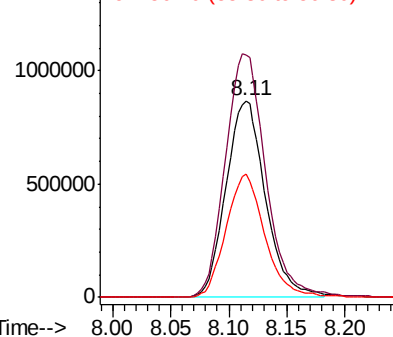
56 62.2 25.5 38.3#



Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#47

1,1,2-Trichloroethane

Concen: 0.105 ppbv

RT: 9.46 min Scan# 2076

Delta R.T. -0.01 min

Lab File: VL038034.D

Acq: 16 Nov 2021 11:10

Tgt Ion: 97 Resp: 9638

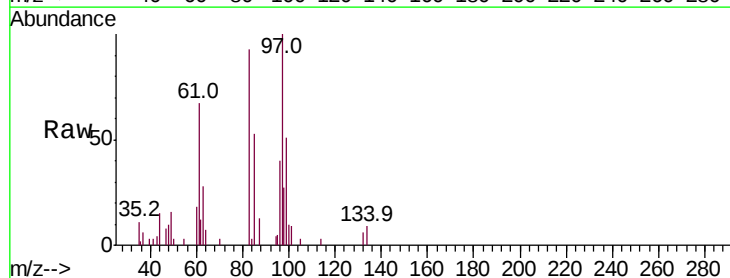
Ion Ratio Lower Upper

97 100

83 90.4 72.2 108.4

85 51.3 43.8 65.8

99 50.5 49.0 73.4

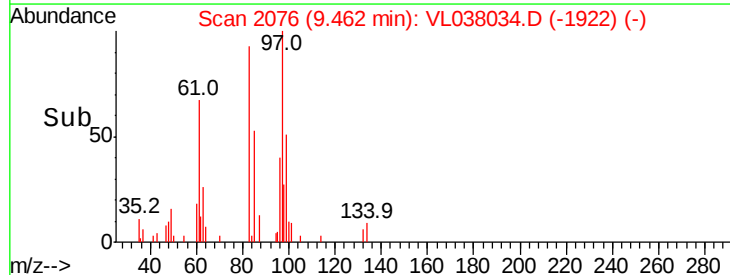
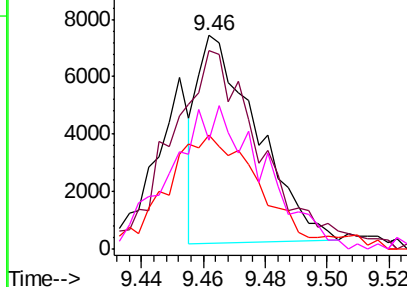


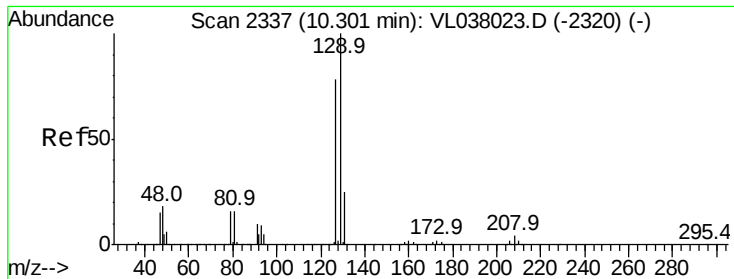
Abundance Ion 97.00 (96.70 to 97.70): VL0

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: 19.168 ppbv

RT: 10.29

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

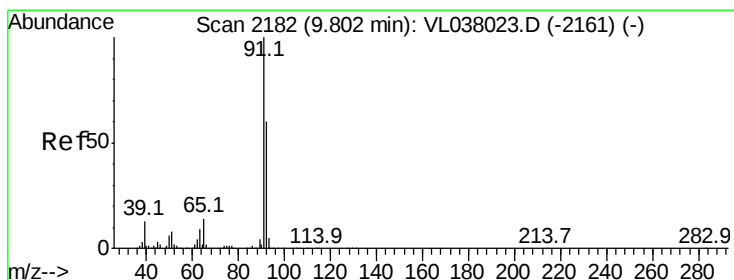
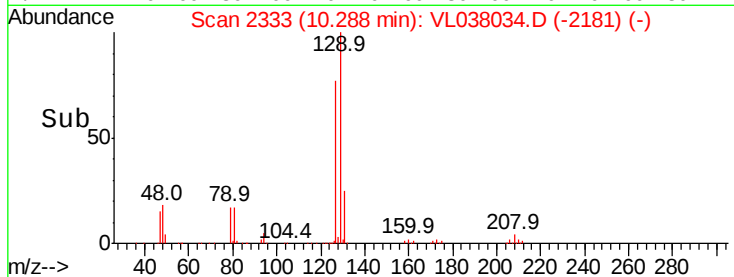
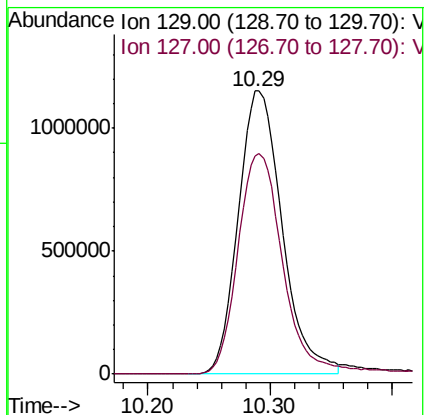
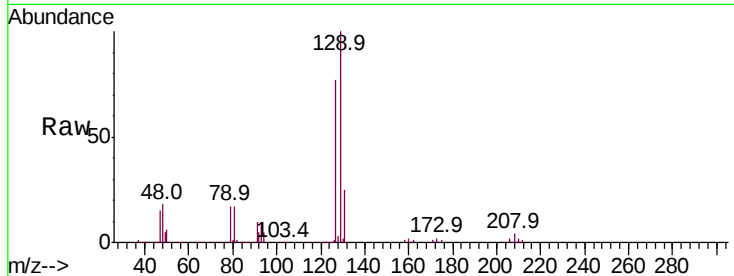
Acq: 16 Nov 2021 11:10

Tot Ion:129 Resp: 2869959

Ion Ratio Lower Upper

129 100

127 82.1 40.1 120.3



#53

Toluene

Concen: 19.223 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.01 min

Lab File: VL038034.D

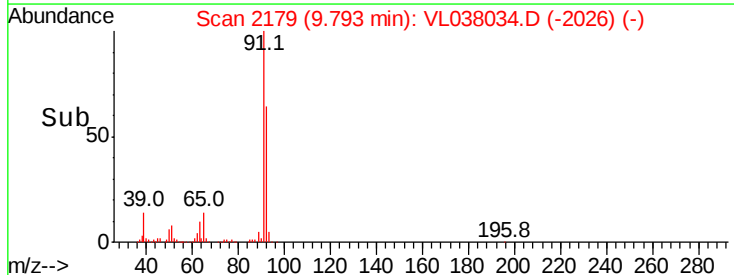
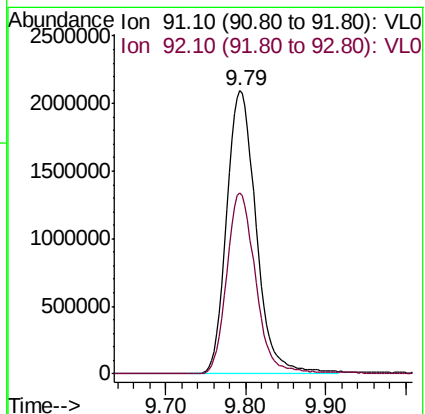
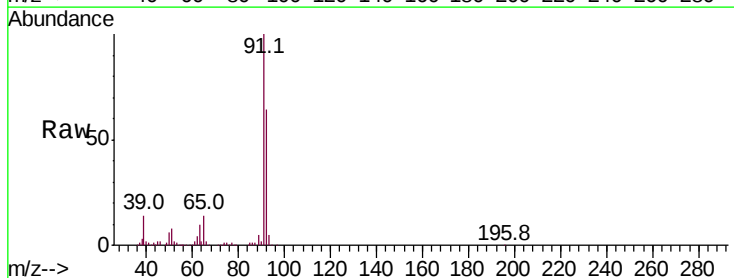
Acq: 16 Nov 2021 11:10

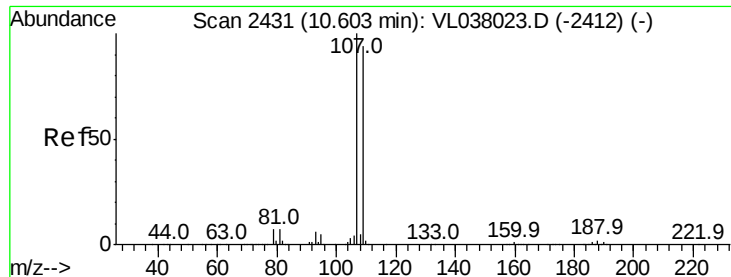
Tgt Ion: 91 Resp: 5272256

Ion Ratio Lower Upper

91 100

92 63.7 49.5 74.3





#54

1,2-Dibromoethane

Concen: 33.031 ppbv

RT: 10.60

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

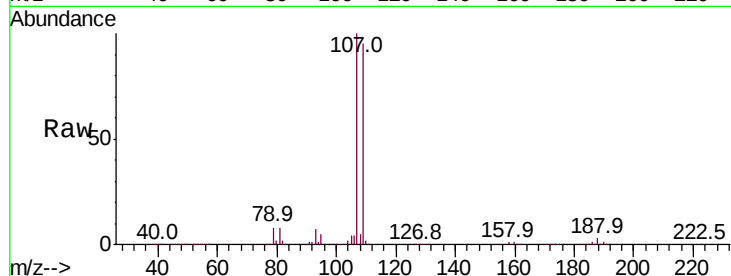
Acq: 16 Nov 2021 11:10

Tot Ion:107 Resp: 4261619

Ion Ratio Lower Upper

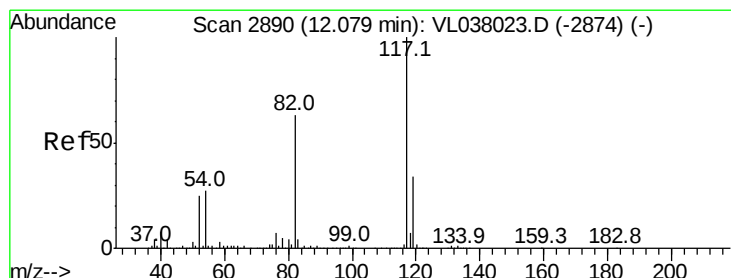
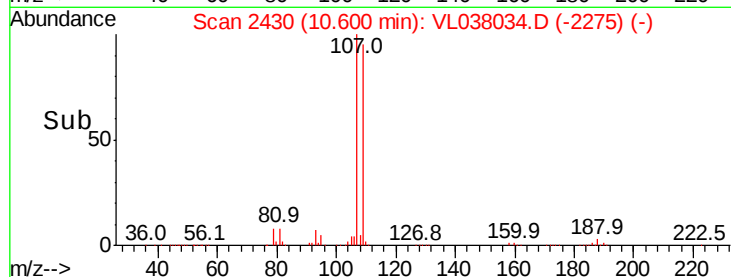
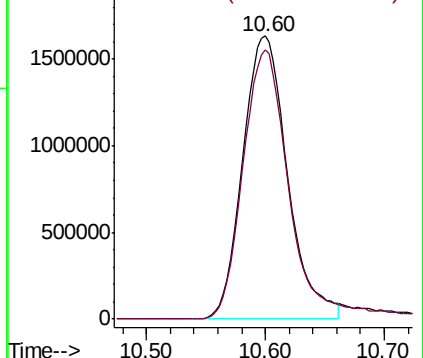
107 100

109 95.0 75.0 112.6



Abundance Ion 107.00 (106.70 to 107.70): V

Ion 109.00 (108.70 to 109.70): V



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. -0.01 min

Lab File: VL038034.D

Acq: 16 Nov 2021 11:10

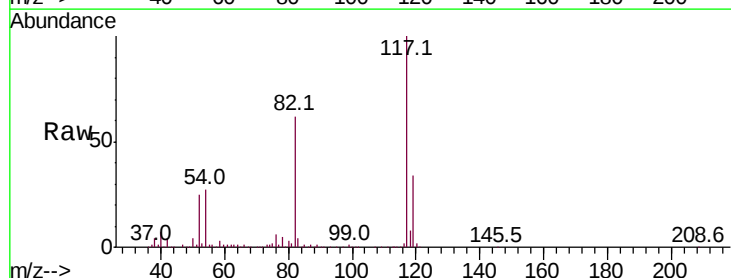
Tgt Ion:117 Resp: 2228673

Ion Ratio Lower Upper

117 100

82 65.8 50.0 75.0

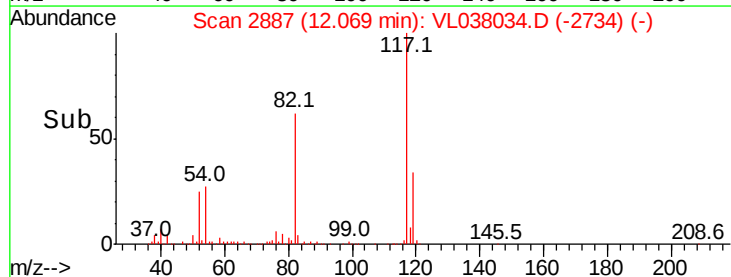
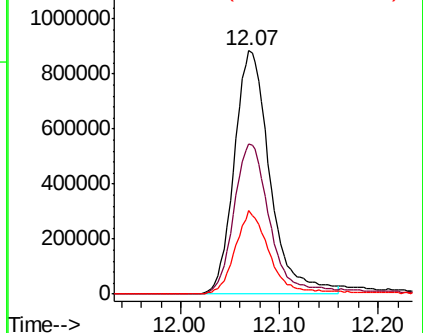
119 34.3 44.6 67.0#

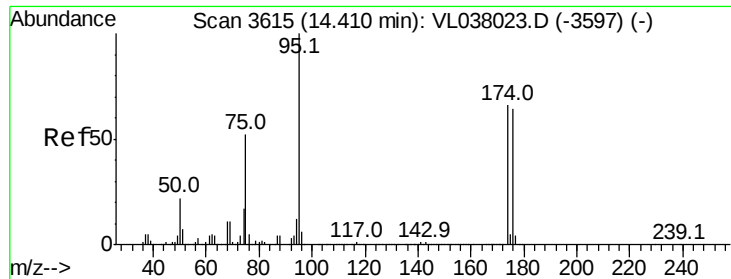


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.291 ppbv

RT: 14.40

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Nov 2021 11:10

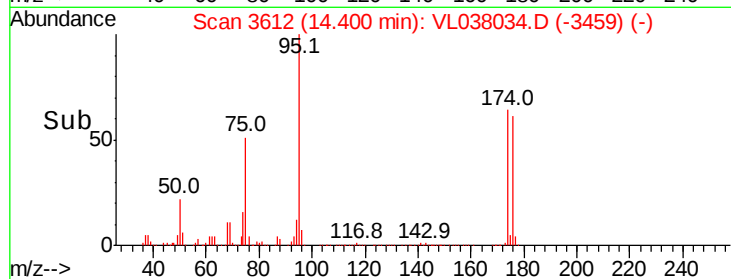
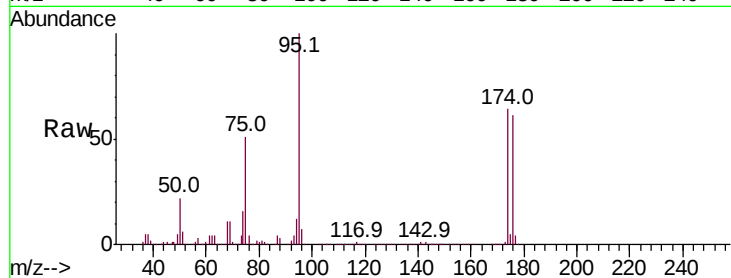
Tot Ion: 95 Resp: 1657123

Ion Ratio Lower Upper

95 100

174 67.8 55.0 82.6

175 4.8 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

