

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111621\
 Data File : VL038033.D
 Acq On : 16 Nov 2021 10:29
 Operator : SY/AP
 Sample : M4526-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 17 06:40:08 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	796891	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	2594971	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.07	117	2305740	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	1549134	9.30	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	93.00%

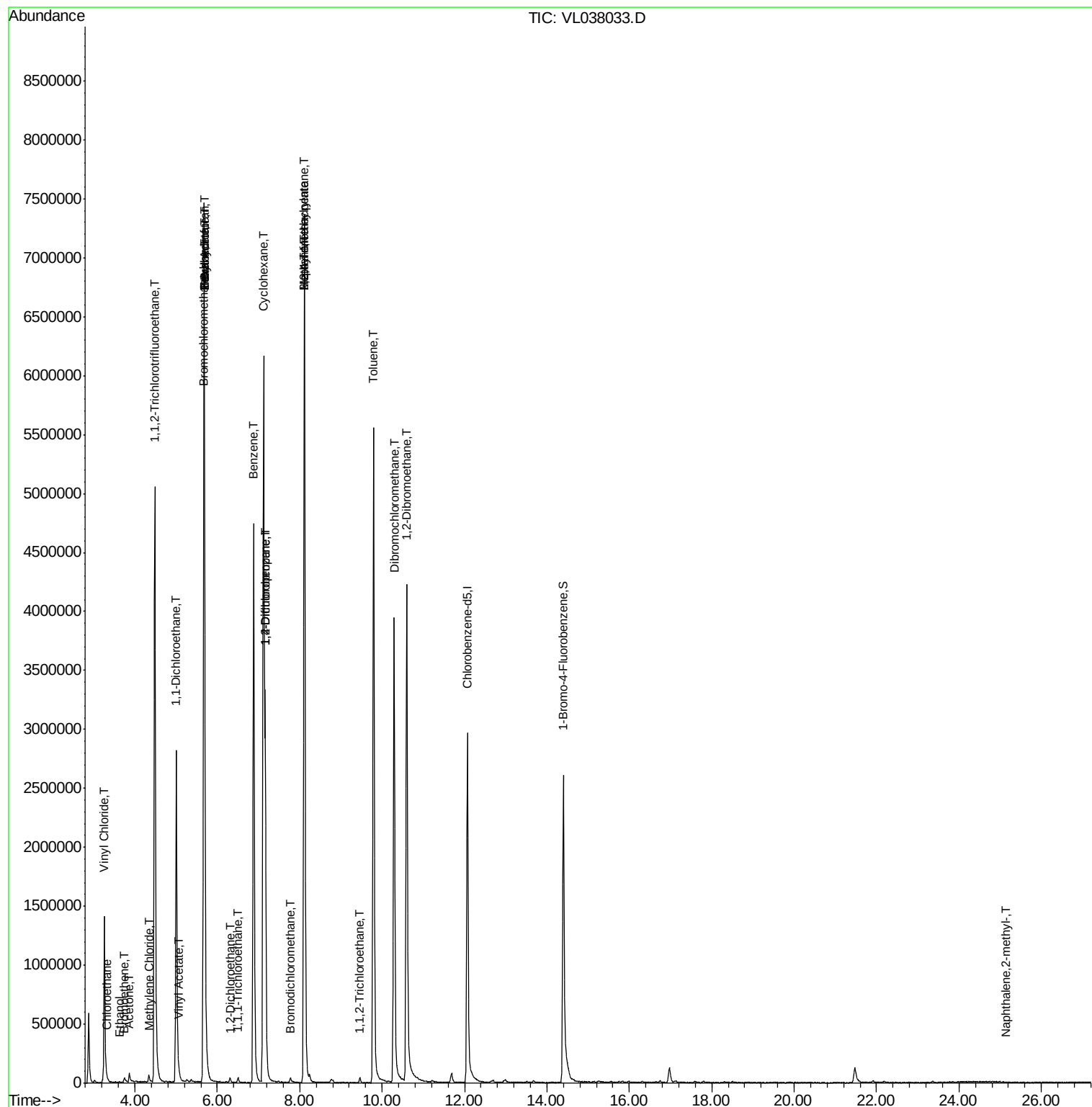
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
5) Vinyl Chloride	3.26	62	1602866	22.653	ppbv	98
7) Chloroethane	3.33	64	6148	0.247	ppbv #	53
10) Heptane	8.11	43	4134050	21.497	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.48	101	2263832	18.234	ppbv	98
13) Ethanol	3.61	45	924	0.133	ppbv #	100
14) Bromoethene	3.74	108	6435	0.124	ppbv #	1
15) Acetone	3.86	43	93687	1.000	ppbv	90
20) Methylene Chloride	4.34	84	20185	0.367	ppbv	88
23) Vinyl Acetate	5.07	43	13771	0.089	ppbv #	94
24) 1,1-Dichloroethane	5.00	63	2976923	24.595	ppbv	100
25) Ethyl Acetate	5.68	43	2607756	11.832	ppbv #	76
26) Hexane	5.68	57	3722706	33.621	ppbv #	45
30) Cyclohexane	7.12	84	2639826	21.171	ppbv	96
32) 1,1,1-Trichloroethane	6.50	97	25269	0.119	ppbv	89
34) 2-Butanone	5.68	43	2456706	28.703	ppbv #	53
36) Benzene	6.88	78	4705482	19.062	ppbv	99
37) 1,2-Dichloroethane	6.30	62	4483	0.039	ppbv #	91
39) 1,2-Dichloropropane	7.17	63	303815	3.184	ppbv #	38
41) Tetrahydrofuran	5.68	42	1346178	21.919	ppbv #	51
42) Bromodichloromethane	7.78	83	26775	0.148	ppbv #	95
43) Methyl Methacrylate	8.11	69	22939	0.261	ppbv #	1
44) 2,2,4-Trimethylpentane	8.11	57	2096015	4.943	ppbv #	1
47) 1,1,2-Trichloroethane	9.45	97	5856	0.060	ppbv	89
48) Dibromochloromethane	10.29	129	2948539	18.712	ppbv	99
53) Toluene	9.79	91	5249084	18.185	ppbv	97
54) 1,2-Dibromoethane	10.60	107	4450767	32.778	ppbv	99
80) Naphthalene,2-methyl-	25.14	142	1300	0.042	ppbv	96

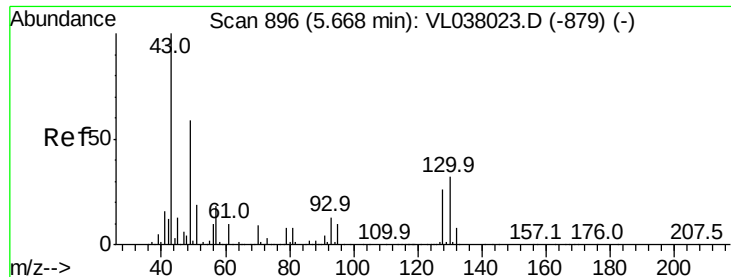
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Nov 16 09:59:16 2021
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Nov 2021 10:29

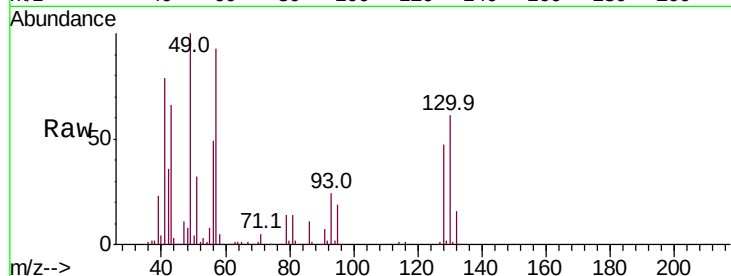
Tot Ion: 49 Resp: 796891

Ion Ratio Lower Upper

49 100

128 49.7 23.4 70.2

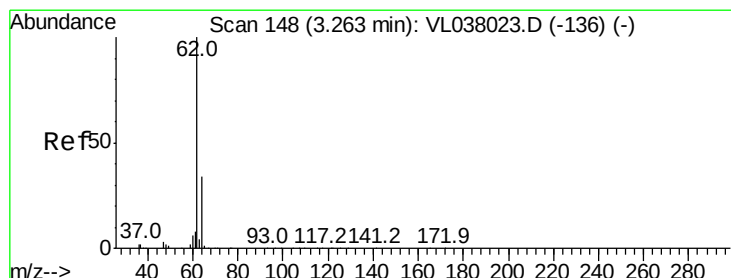
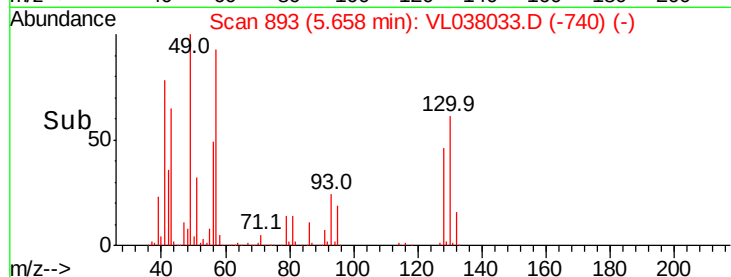
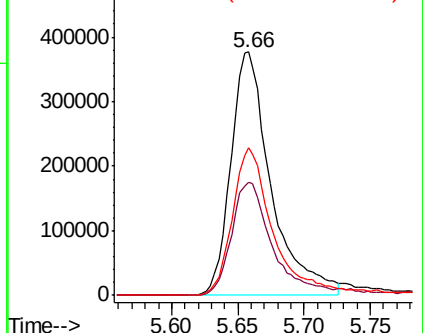
130 64.5 29.1 87.3



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: 22.653 ppbv

RT: 3.26 min Scan# 146

Delta R.T. -0.01 min

Lab File: VL038033.D

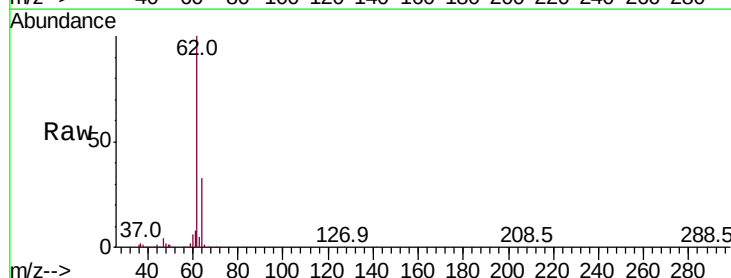
Acq: 16 Nov 2021 10:29

Tgt Ion: 62 Resp: 1602866

Ion Ratio Lower Upper

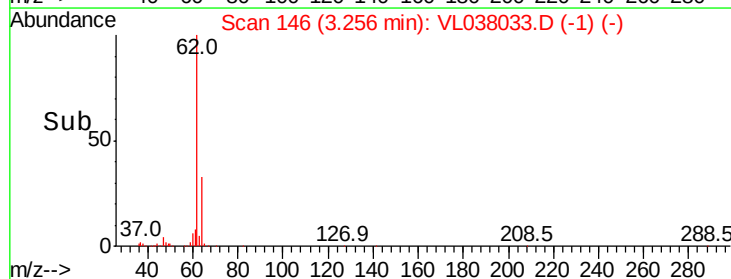
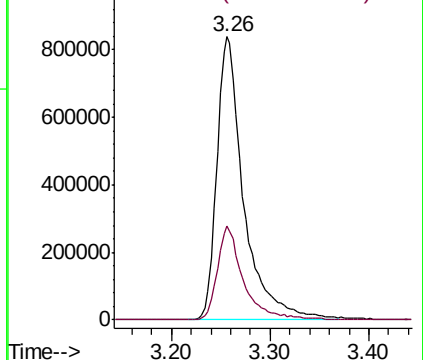
62 100

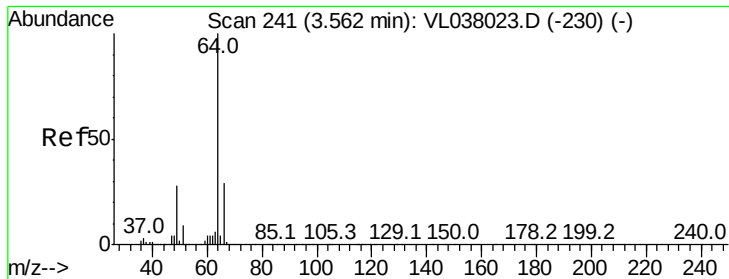
64 33.0 27.4 41.0



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0





#7

Chloroethane

Concen: 0.247 ppbv

RT: 3.33 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

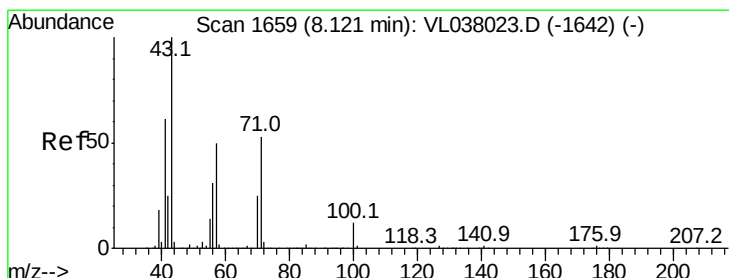
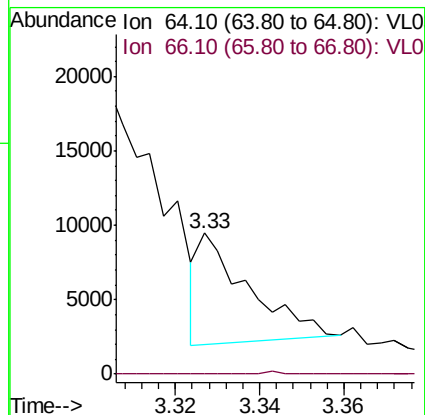
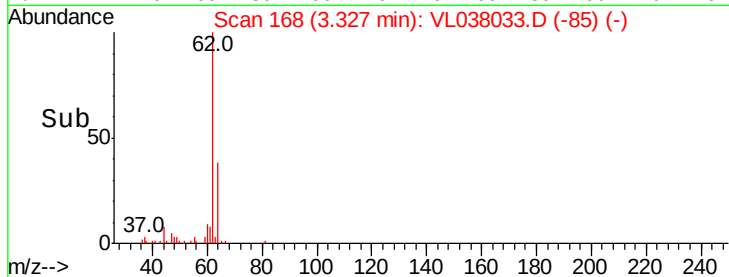
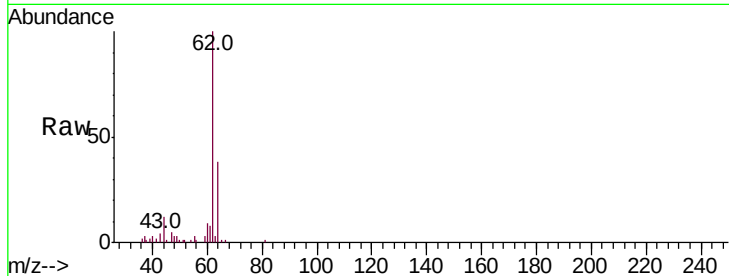
Acq: 16 Nov 2021 10:29

Tot Ion: 64 Resp: 6148

Ion Ratio Lower Upper

64 100

66 3.8 23.1 34.7#



#10

Heptane

Concen: 21.497 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.01 min

Lab File: VL038033.D

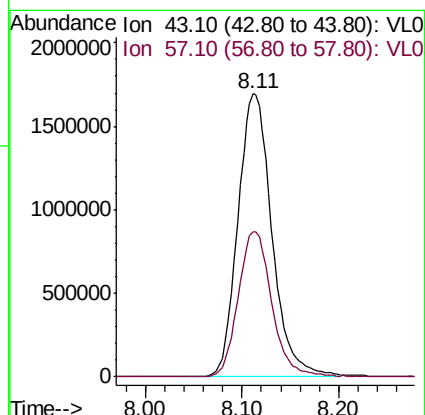
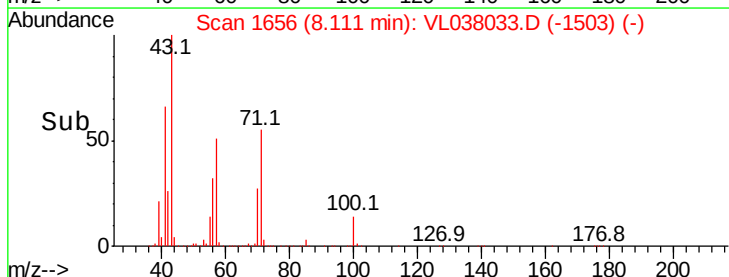
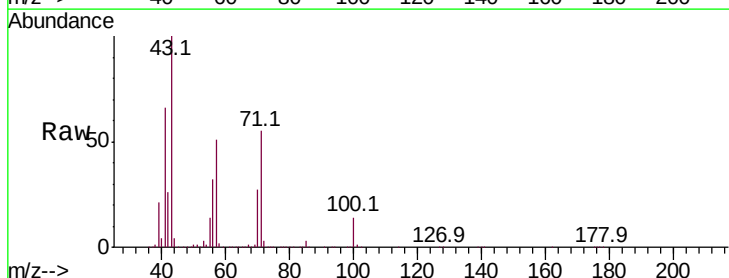
Acq: 16 Nov 2021 10:29

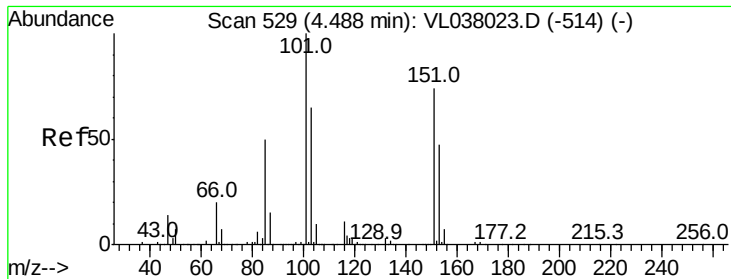
Tgt Ion: 43 Resp: 4134050

Ion Ratio Lower Upper

43 100

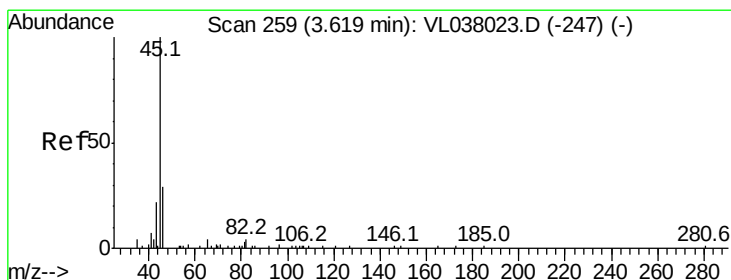
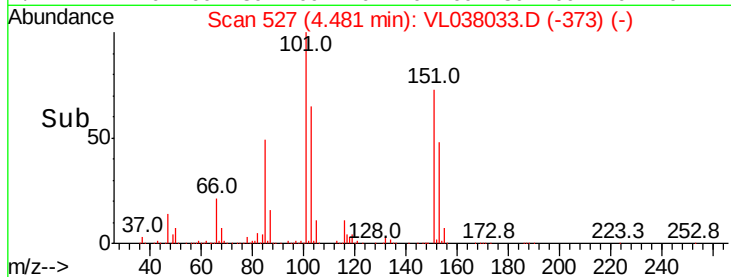
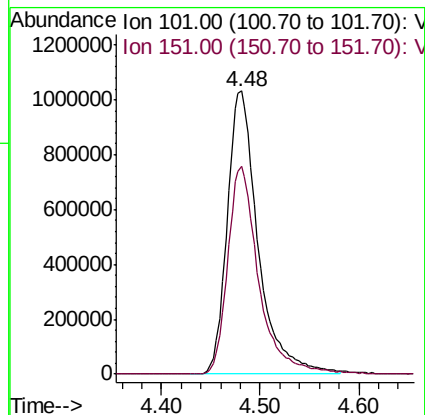
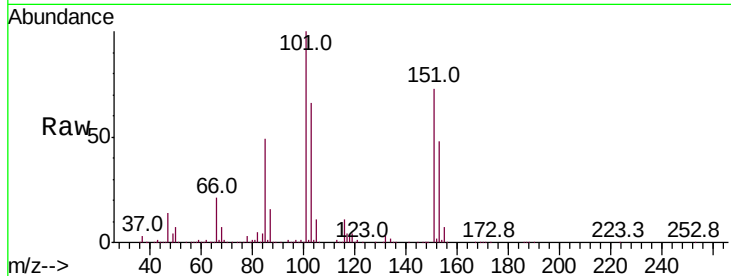
57 51.0 40.2 60.2





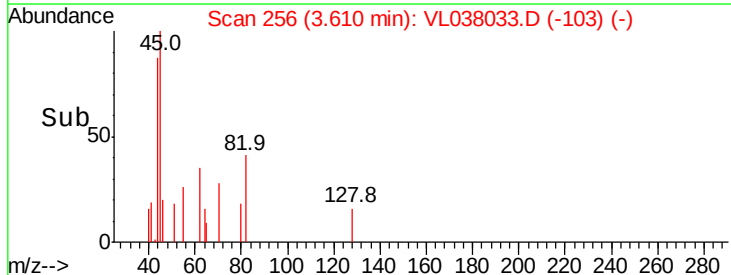
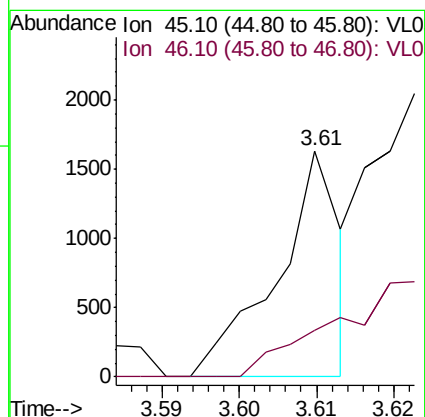
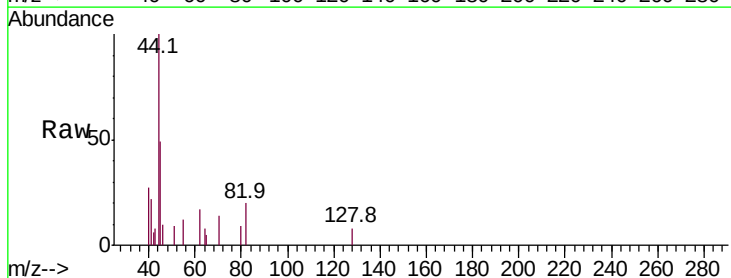
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 18.234 ppbv
 RT: 4.48
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 10:29

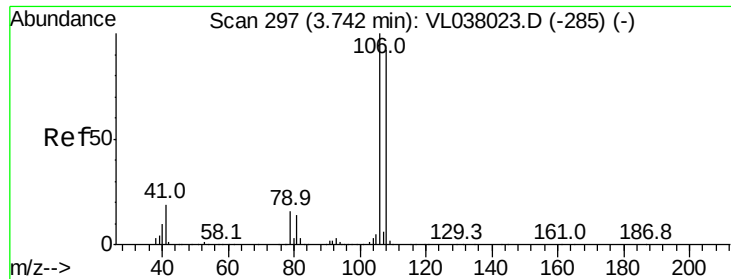
Tot Ion:101 Resp: 2263832
 Ion Ratio Lower Upper
 101 100
 151 74.0 57.8 86.8



#13
 Ethanol
 Concen: 0.133 ppbv
 RT: 3.61 min Scan# 256
 Delta R.T. -0.01 min
 Lab File: VL038033.D
 Acq: 16 Nov 2021 10:29

Tgt Ion: 45 Resp: 924
 Ion Ratio Lower Upper
 45 100
 46 0.0 0.0 0.0





#14

Bromoethene

Concen: 0.124 ppbv

RT: 3.74 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 10:29

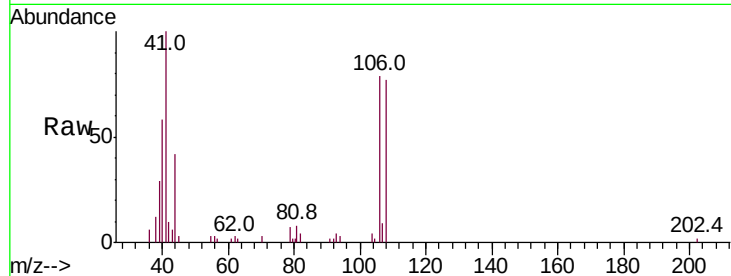
Tot Ion: 108 Resp: 6435

Ion Ratio Lower Upper

108 100

106 228.1 90.4 135.6#

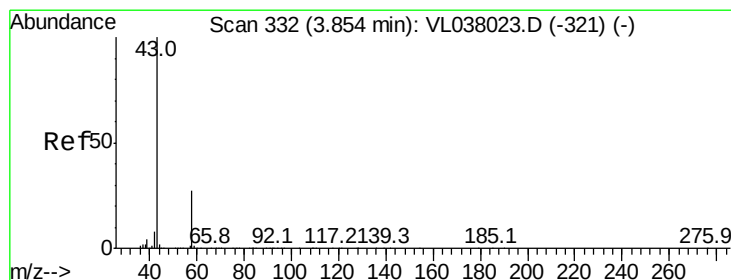
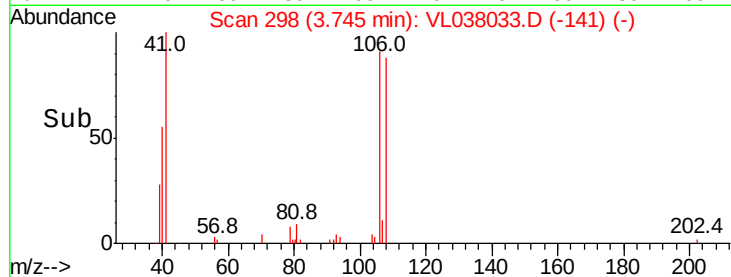
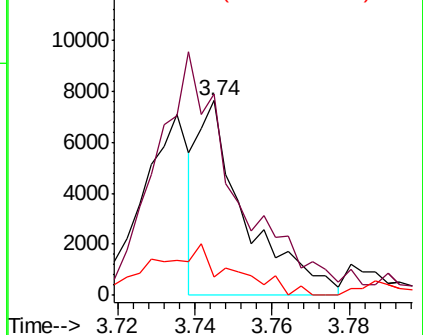
79 44.1 14.5 21.7#



Abundance Ion 108.00 (107.70 to 108.70): V

Ion 106.00 (105.70 to 106.70): V

Ion 79.00 (78.70 to 79.70): VL0



#15

Acetone

Concen: 1.000 ppbv

RT: 3.86 min Scan# 334

Delta R.T. 0.01 min

Lab File: VL038033.D

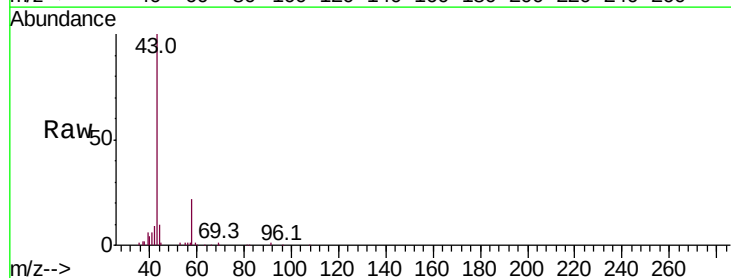
Acq: 16 Nov 2021 10:29

Tgt Ion: 43 Resp: 93687

Ion Ratio Lower Upper

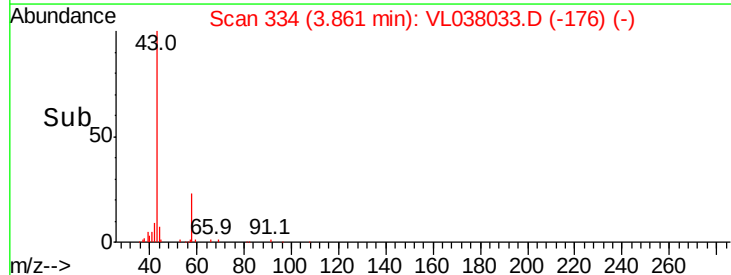
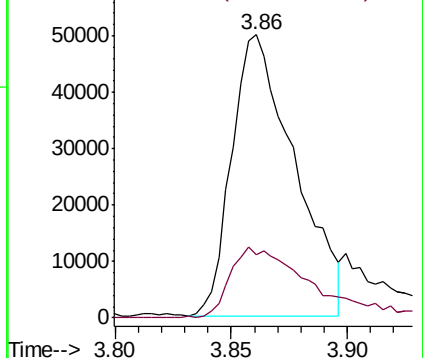
43 100

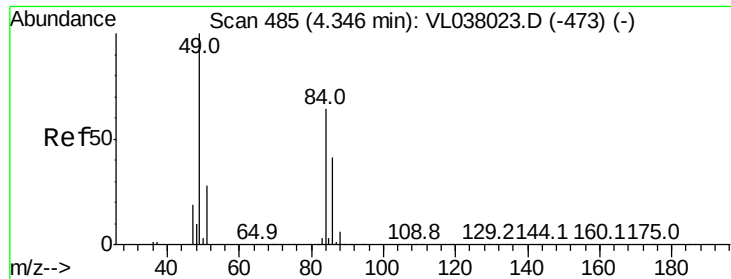
58 34.1 23.0 34.4



Abundance Ion 43.10 (42.80 to 43.80): VL0

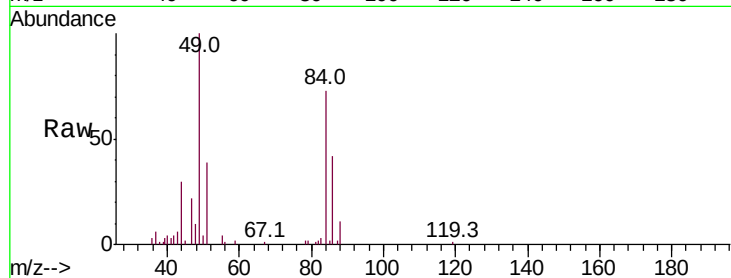
Ion 58.10 (57.80 to 58.80): VL0





#20
Methvlene Chloride
Concen: 0.367 ppbv
RT: 4.34
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 16 Nov 2021 10:29

Tot Ion:	84	Resp:	20185
Ion	Ratio	Lower	Upper
84	100		
49	139.9	125.1	187.7
51	51.6	35.3	52.9
86	57.9	51.7	77.5



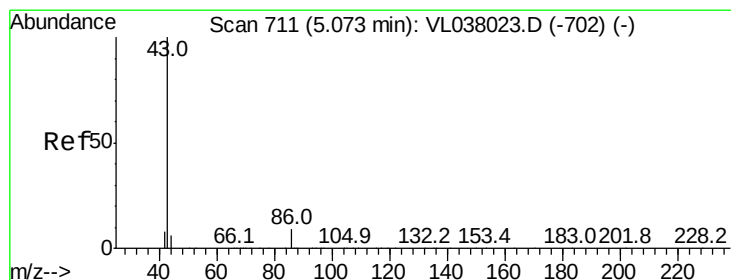
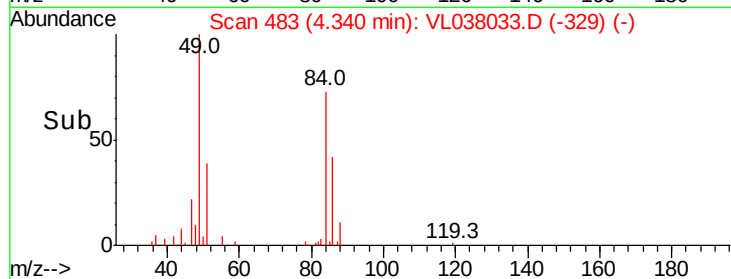
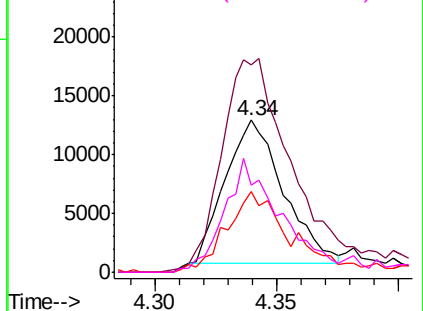
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

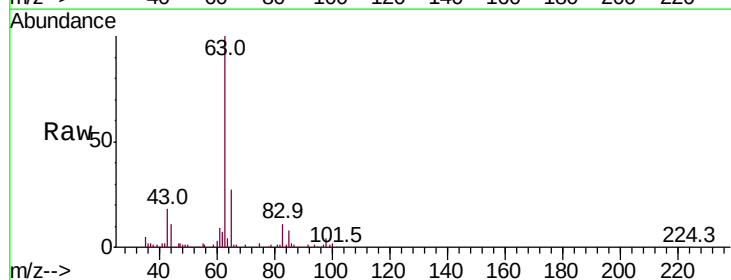
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#23
Vinyl Acetate
Concen: 0.089 ppbv
RT: 5.07 min Scan# 710
Delta R.T. -0.00 min
Lab File: VL038033.D
Acq: 16 Nov 2021 10:29

Tgt Ion:	43	Resp:	13771
Ion	Ratio	Lower	Upper
43	100		
86	8.4	5.9	8.9
42	6.7	7.4	11.2#
44	8.4	4.1	6.1#



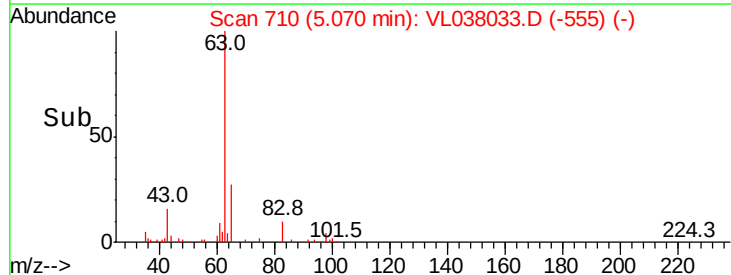
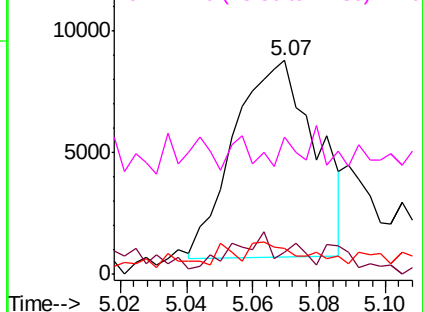
Abundance

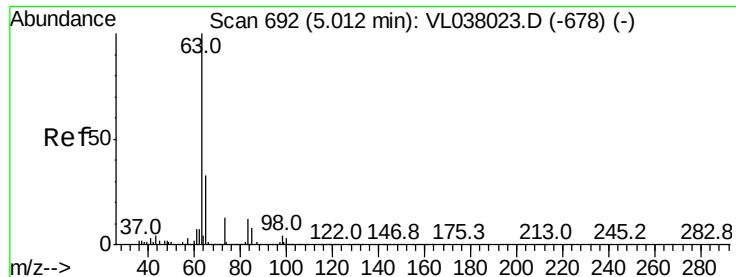
Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0

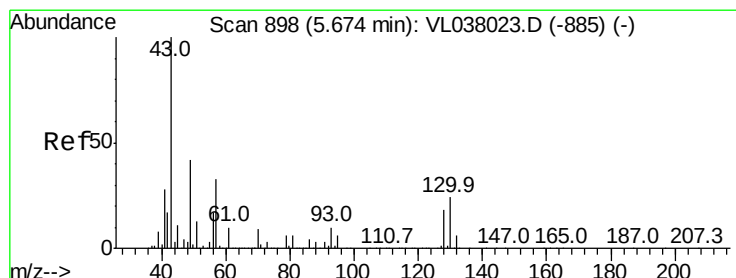
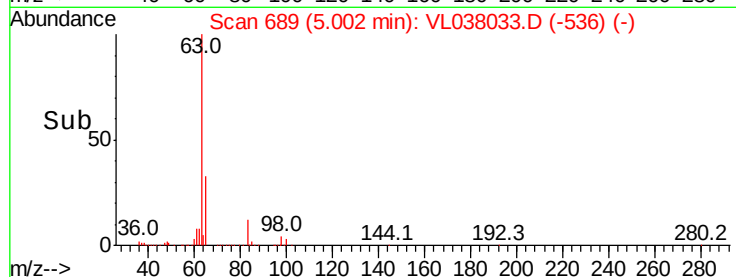
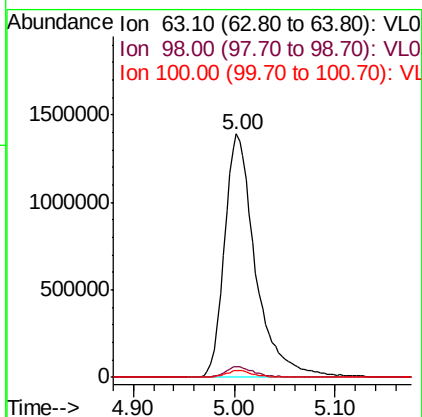
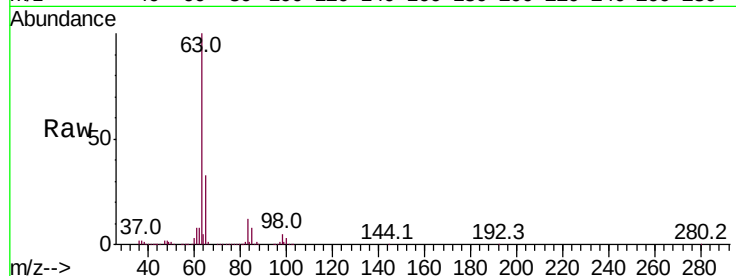




#24
 1,1-Dichloroethane
 Concen: 24.595 ppbv
 RT: 5.00
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 10:29

Tot Ion: 63 Resp: 2976923

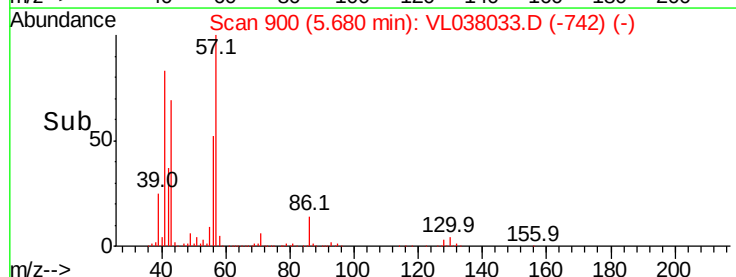
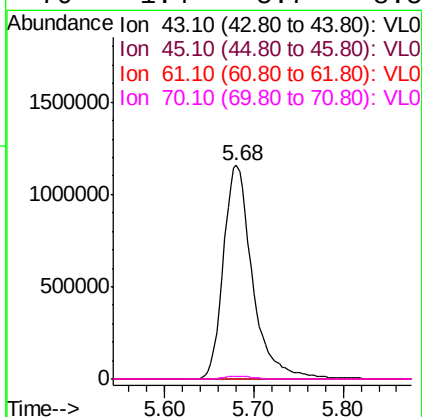
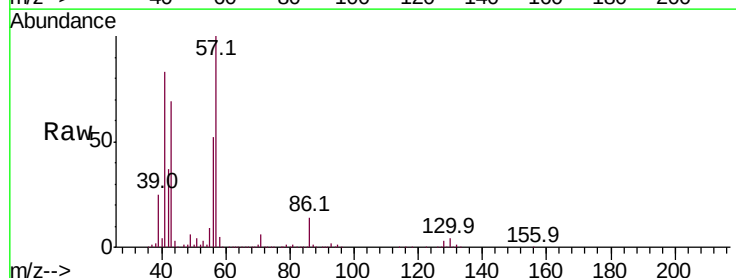
Ion	Ratio	Lower	Upper
63	100		
98	4.5	2.3	6.9
100	2.9	1.5	4.4

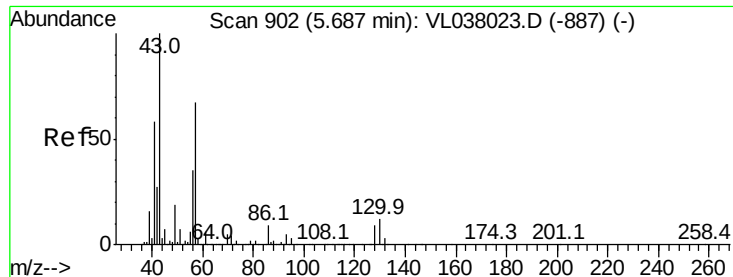


#25
 Ethyl Acetate
 Concen: 11.832 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T.: 0.01 min
 Lab File: VL038033.D
 Acq: 16 Nov 2021 10:29

Tgt Ion: 43 Resp: 2607756

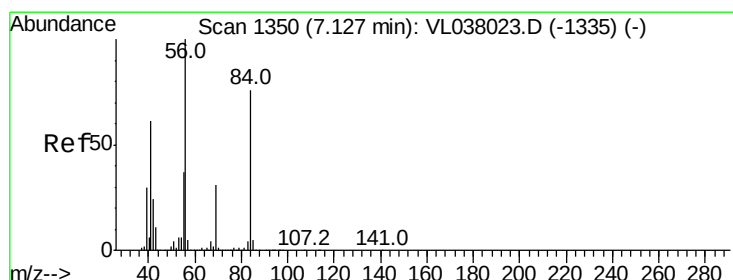
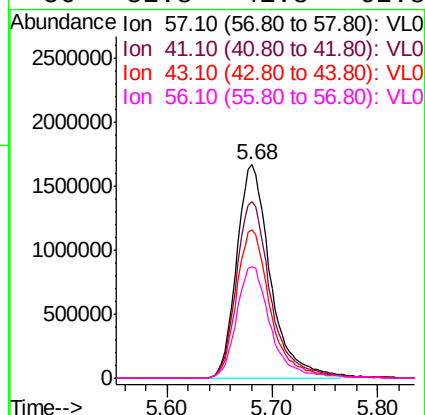
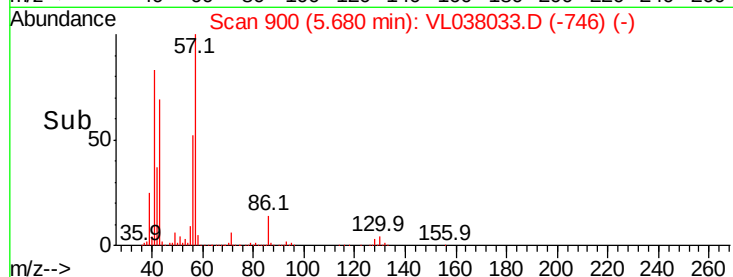
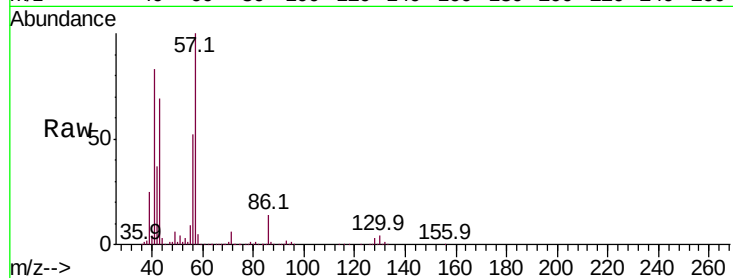
Ion	Ratio	Lower	Upper
43	100		
45	0.1	8.0	12.0#
61	0.1	8.3	12.5#
70	1.4	5.7	8.5#





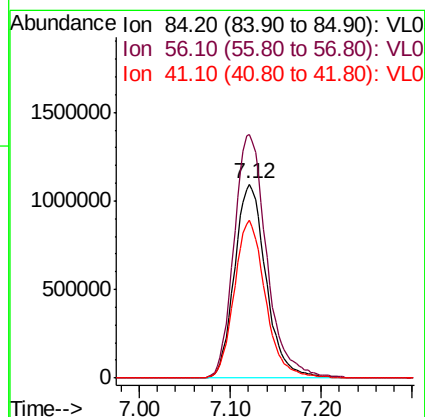
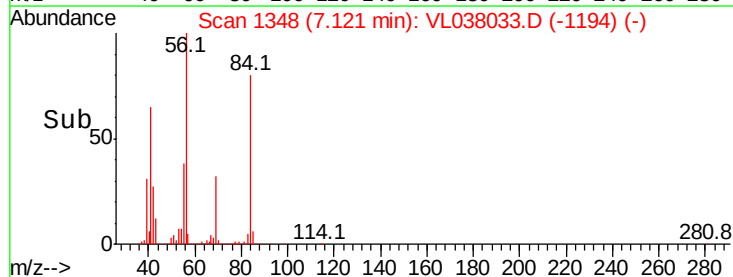
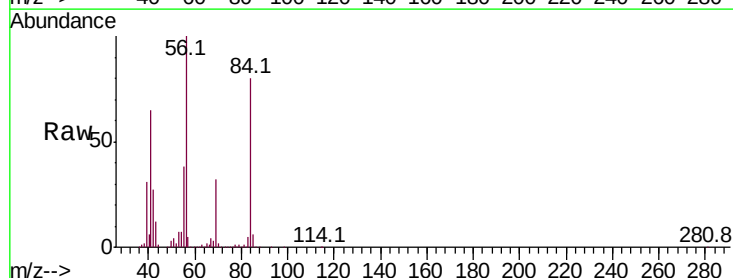
#26
Hexane
Concen: 33.621 ppbv
RT: 5.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Nov 2021 10:29

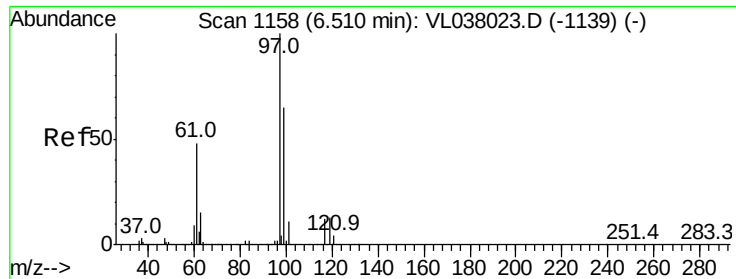
Tot Ion:	57	Resp:	3722706
Ion	Ratio	Lower	Upper
57	100		
41	84.7	70.8	106.2
43	70.4	169.4	254.0#
56	52.8	41.8	62.8



#30
Cyclohexane
Concen: 21.171 ppbv
RT: 7.12 min Scan# 1348
Delta R.T. -0.01 min
Lab File: VL038033.D
Acq: 16 Nov 2021 10:29

Tgt Ion:	84	Resp:	2639826
Ion	Ratio	Lower	Upper
84	100		
56	130.6	109.5	164.3
41	80.7	65.1	97.7





#32

1,1,1-Trichloroethane

Concen: 0.119 ppbv

RT: 6.50 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

Acq: 16 Nov 2021 10:29

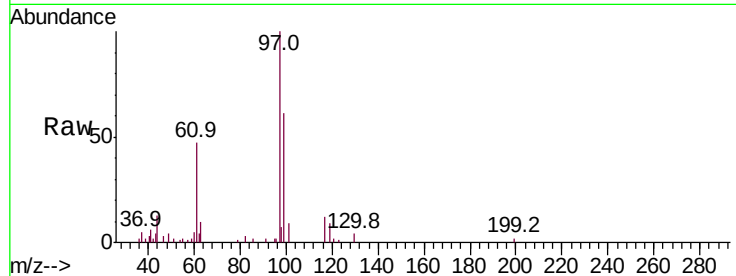
Tot Ion: 97 Resp: 25269

Ion Ratio Lower Upper

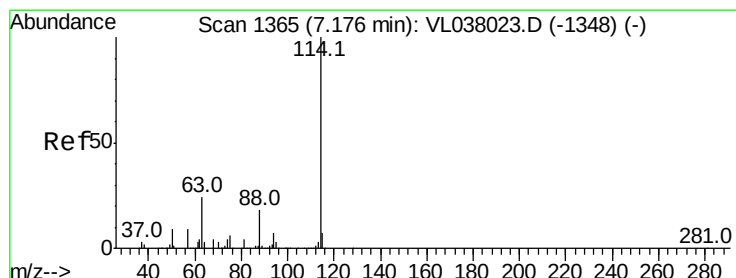
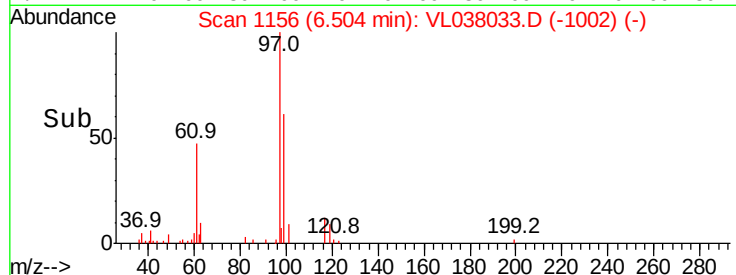
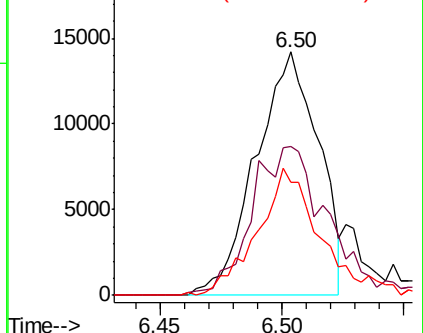
97 100

99 75.1 51.9 77.9

61 52.8 37.7 56.5



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 min Scan# 1361

Delta R.T. -0.01 min

Lab File: VL038033.D

Acq: 16 Nov 2021 10:29

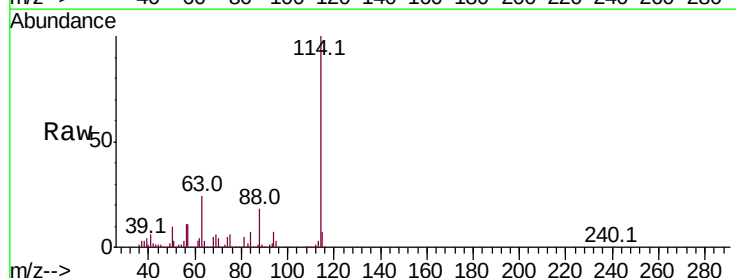
Tgt Ion: 114 Resp: 2594971

Ion Ratio Lower Upper

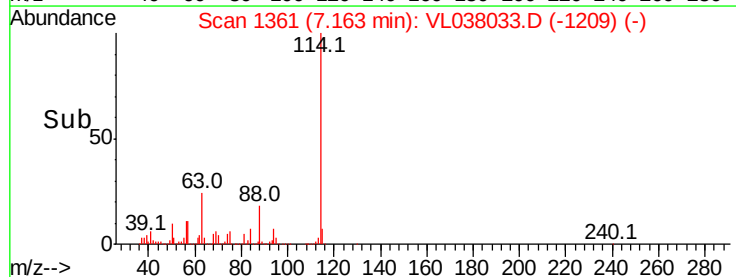
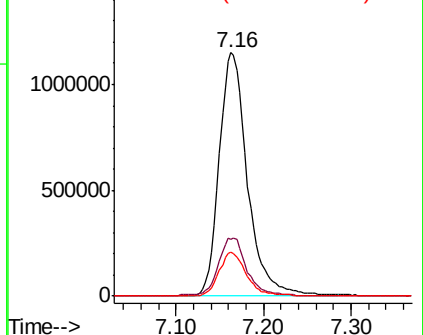
114 100

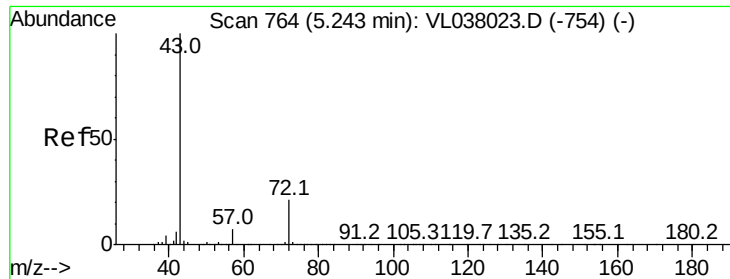
63 24.8 19.8 29.6

88 17.7 14.6 21.8



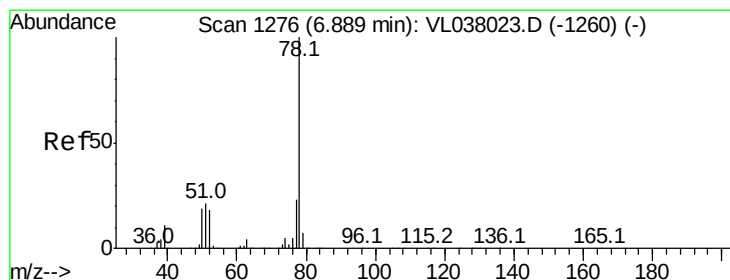
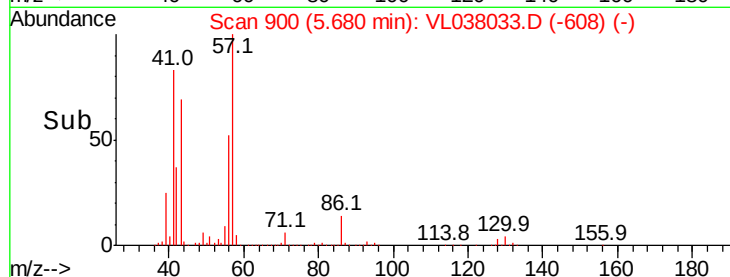
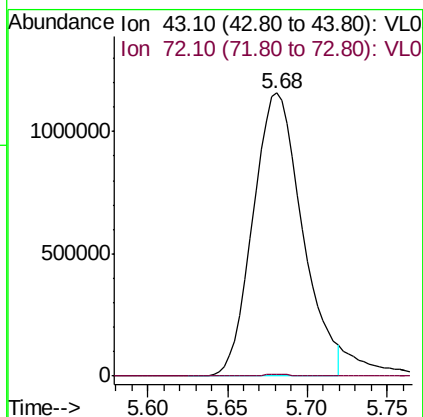
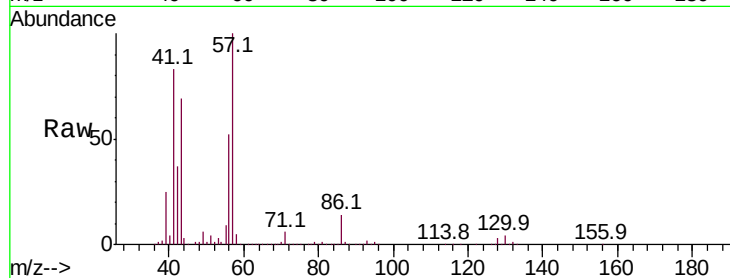
Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





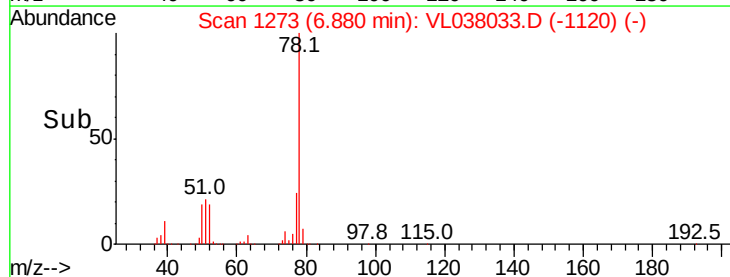
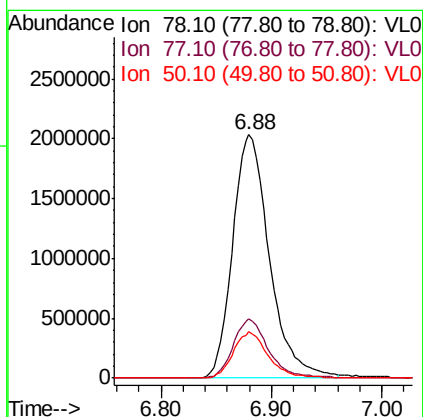
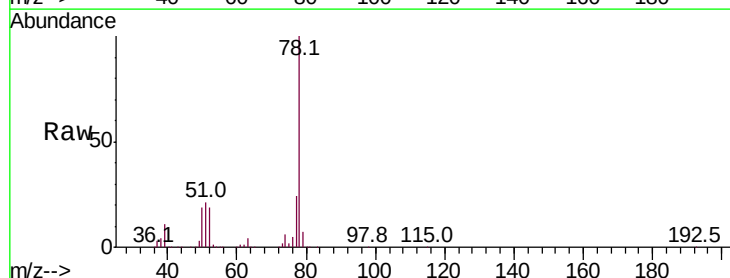
#34
 2-Butanone
 Concen: 28.703 ppbv
 RT: 5.68
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 10:29

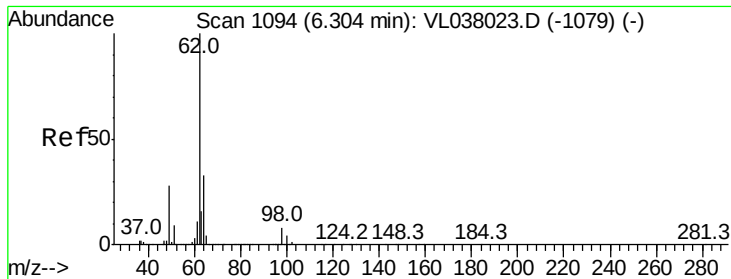
Tot Ion: 43 Resp: 2456706
 Ion Ratio Lower Upper
 43 100
 72 0.0 18.2 27.2#



#36
 Benzene
 Concen: 19.062 ppbv
 RT: 6.88 min Scan# 1273
 Delta R.T. -0.01 min
 Lab File: VL038033.D
 Acq: 16 Nov 2021 10:29

Tgt Ion: 78 Resp: 4705482
 Ion Ratio Lower Upper
 78 100
 77 24.1 18.8 28.2
 50 18.8 14.9 22.3





#37

1,2-Dichloroethane

Concen: 0.039 ppbv

RT: 6.30 Instrument: MSVOA_1

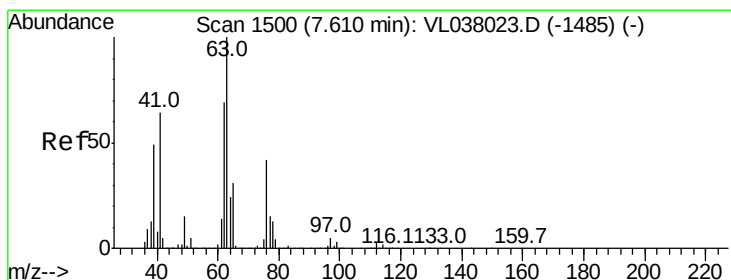
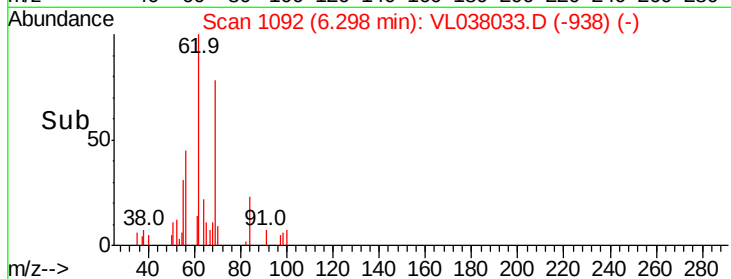
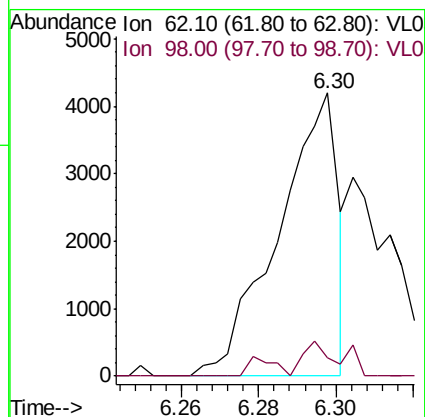
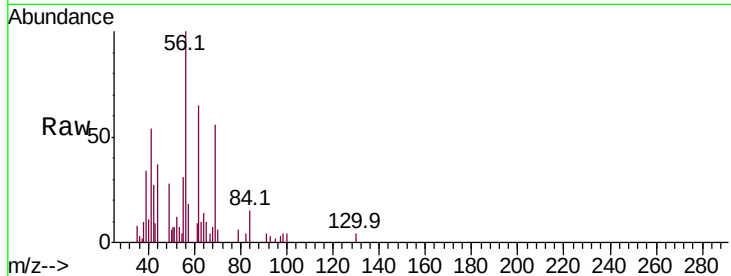
Delta R.T. ClientSampleId:

Lab File:

Acq: 16 Nov 2021 10:29

Tot Ion: 62 Resp: 4483

Ion	Ratio	Lower	Upper
62	100		
98	10.6	6.0	9.0#



#39

1,2-Dichloropropane

Concen: 3.184 ppbv

RT: 7.17 min Scan# 1362

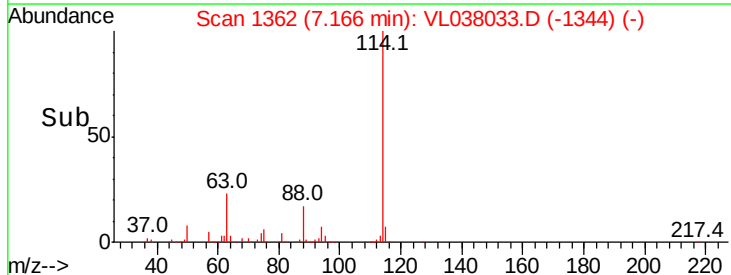
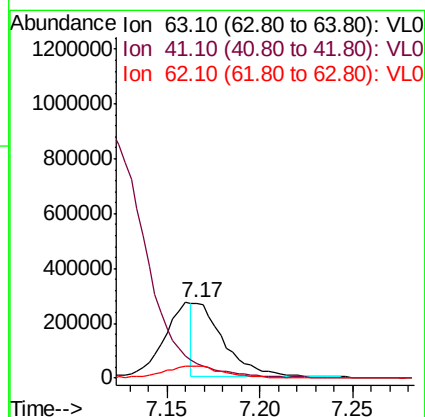
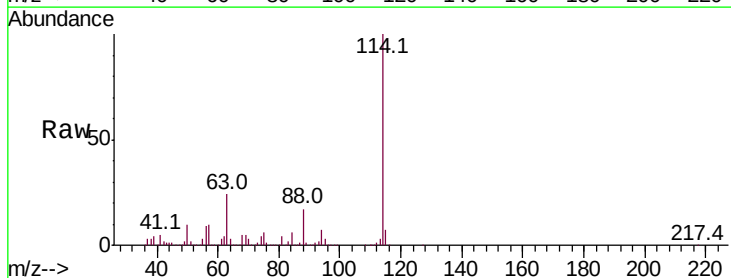
Delta R.T. -0.44 min

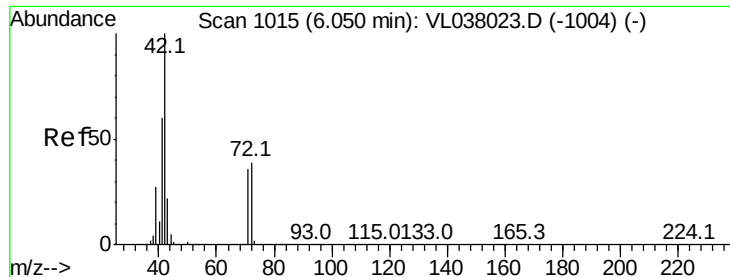
Lab File: VL038033.D

Acq: 16 Nov 2021 10:29

Tgt Ion: 63 Resp: 303815

Ion	Ratio	Lower	Upper
63	100		
41	19.2	51.1	76.7#
62	15.4	55.2	82.8#





#41

Tetrahydrofuran

Concen: 21.919 ppbv

RT: 5.68

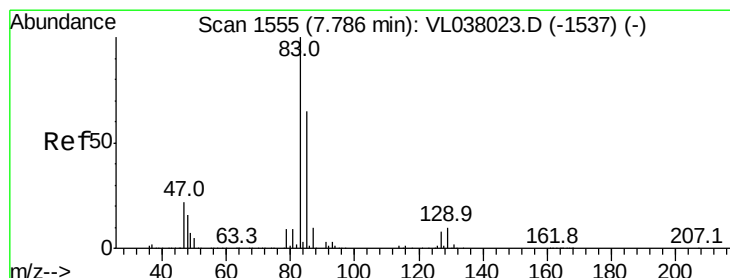
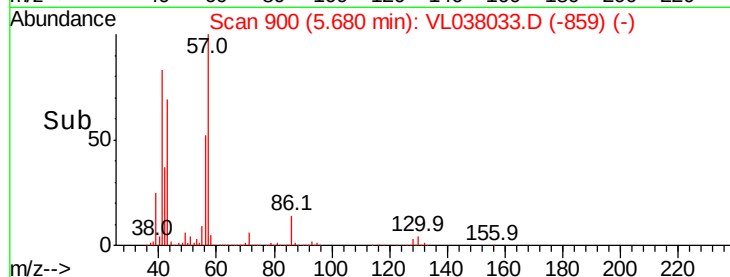
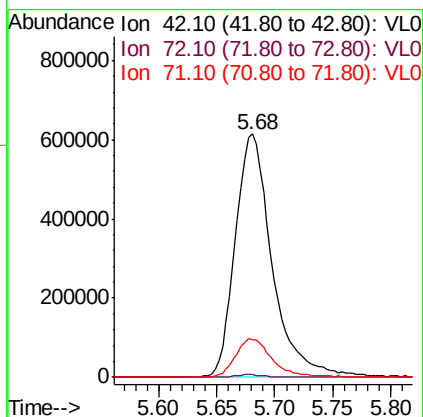
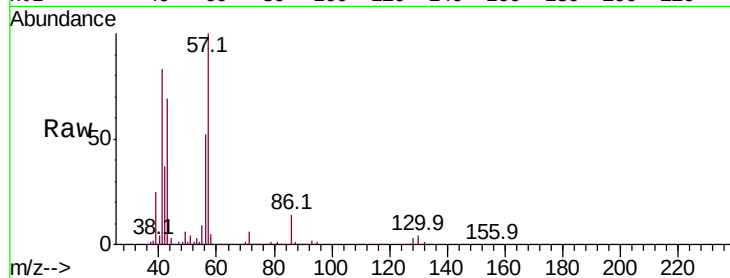
Delta R.T. MSVOA_L

Lab File:

Acq: 16 Nov 2021 10:29

Tot Ion: 42 Resp: 1346178

Ion	Ratio	Lower	Upper
42	100		
72	1.0	31.3	46.9#
71	16.2	29.7	44.5#



#42

Bromodichloromethane

Concen: 0.148 ppbv

RT: 7.78 min Scan# 1553

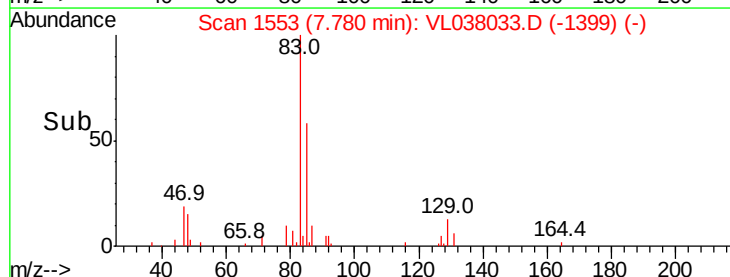
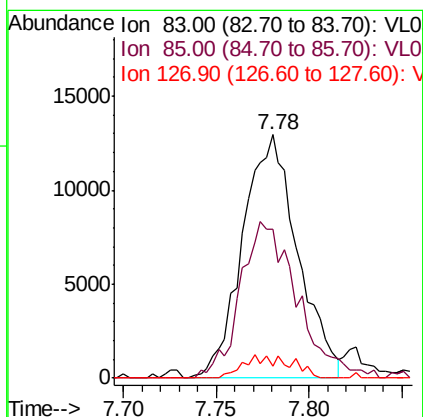
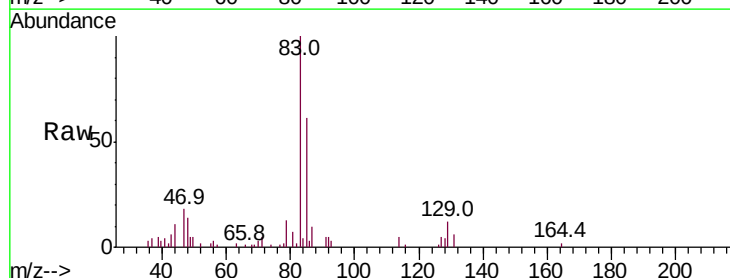
Delta R.T. -0.01 min

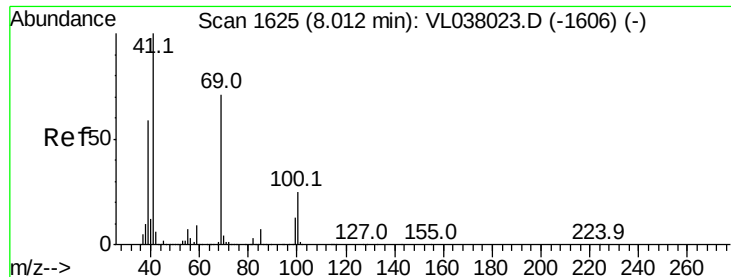
Lab File: VL038033.D

Acq: 16 Nov 2021 10:29

Tgt Ion: 83 Resp: 26775

Ion	Ratio	Lower	Upper
83	100		
85	61.3	51.6	77.4
127	5.0	6.6	10.0#





#43

Methyl Methacrylate

Concen: 0.261 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 10:29

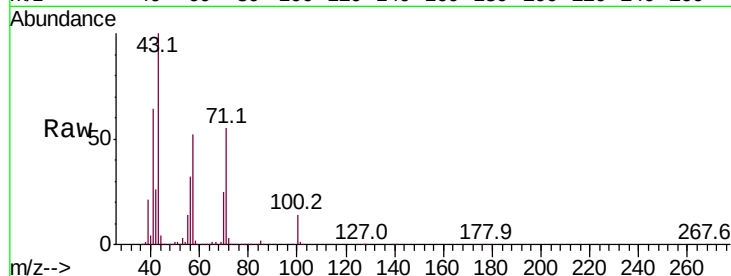
Tot Ion: 69 Resp: 22939

Ion Ratio Lower Upper

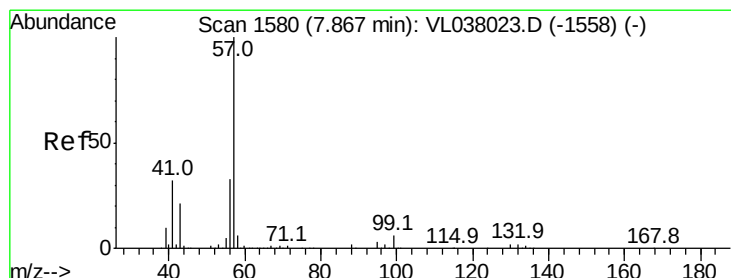
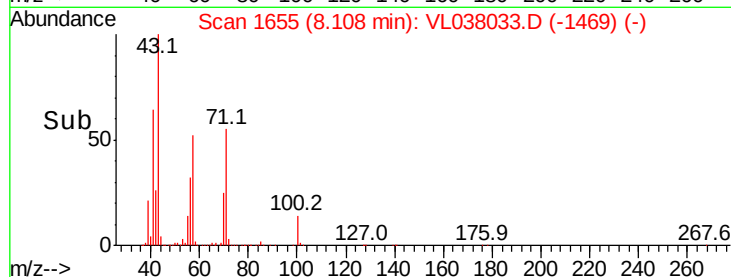
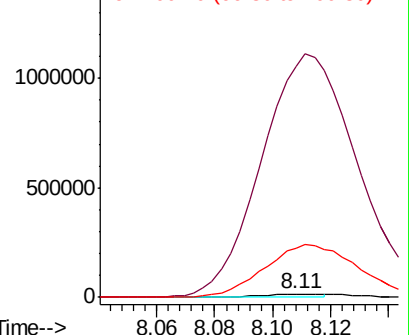
69 100

41 11561.2 116.6 174.8#

100 2456.1 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: 4.943 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. 0.24 min

Lab File: VL038033.D

Acq: 16 Nov 2021 10:29

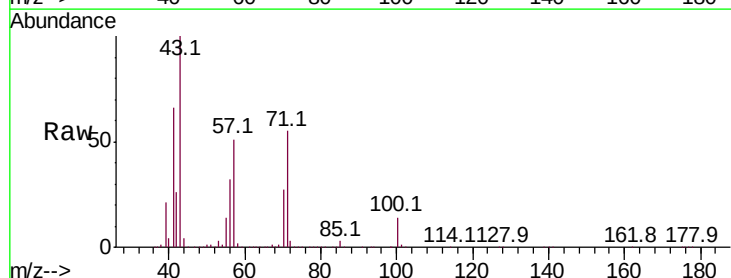
Tgt Ion: 57 Resp: 2096015

Ion Ratio Lower Upper

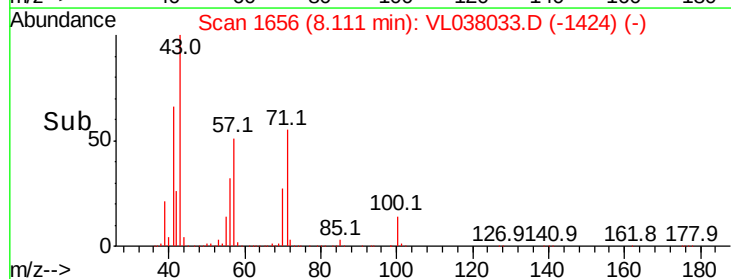
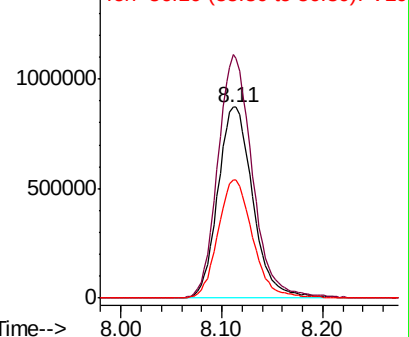
57 100

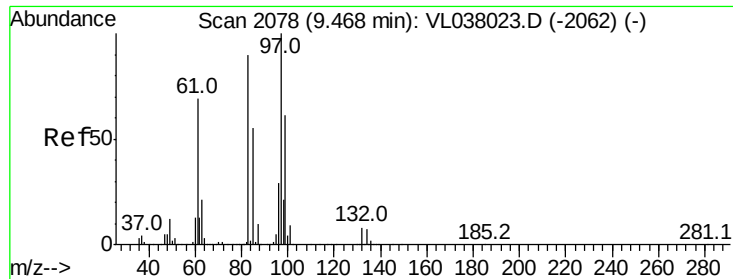
41 126.5 26.2 39.2#

56 0.0 25.5 38.3#



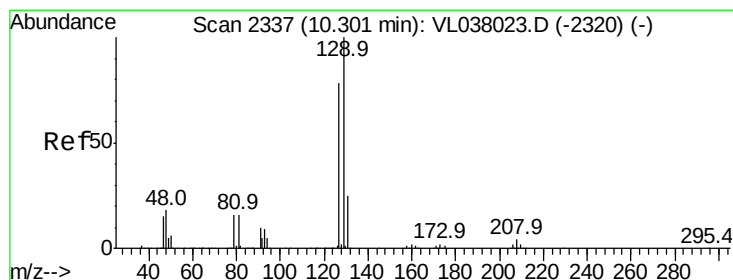
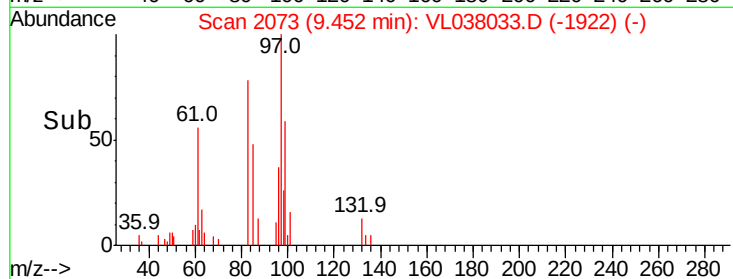
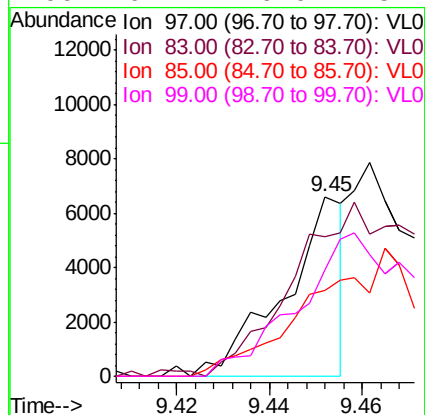
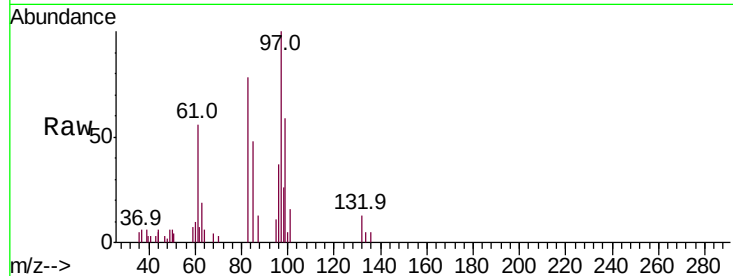
Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 56.10 (55.80 to 56.80): VL0





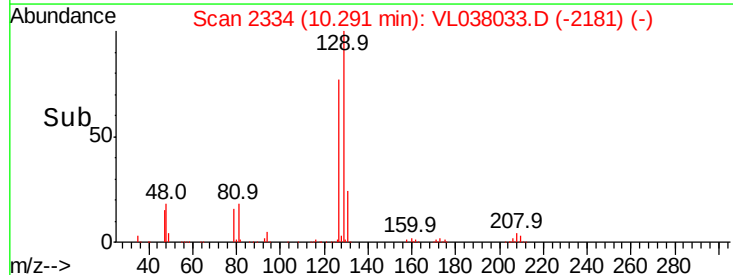
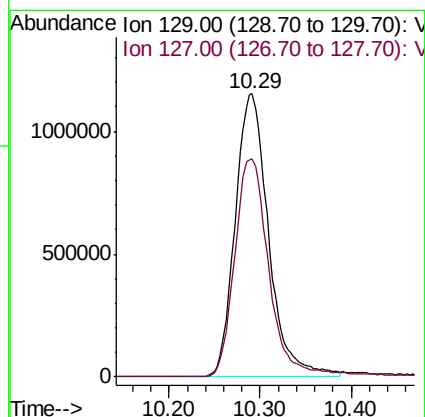
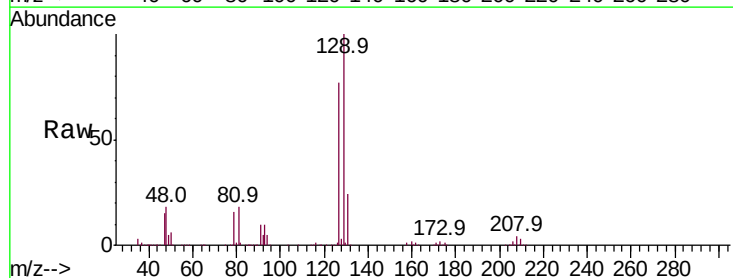
#47
 1,1,2-Trichloroethane
 Concen: 0.060 ppbv
 RT: 9.45 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 10:29

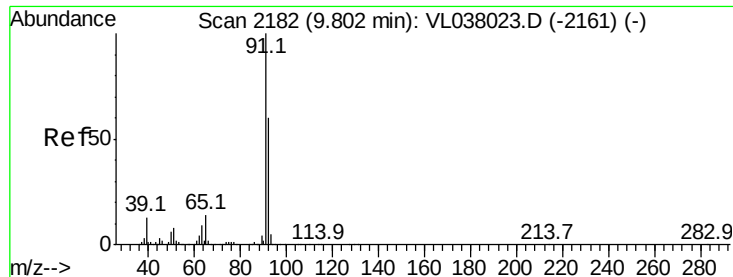
Tot Ion:	97	Resp:	5856
Ion	Ratio	Lower	Upper
97	100		
83	75.0	72.2	108.4
85	47.9	43.8	65.8
99	64.4	49.0	73.4



#48
 Dibromochloromethane
 Concen: 18.712 ppbv
 RT: 10.29 min Scan# 2334
 Delta R.T.: -0.01 min
 Lab File: VL038033.D
 Acq: 16 Nov 2021 10:29

Tgt Ion:	129	Resp:	2948539
Ion	Ratio	Lower	Upper
129	100		
127	80.8	40.1	120.3





#53

Toluene

Concen: 18.185 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

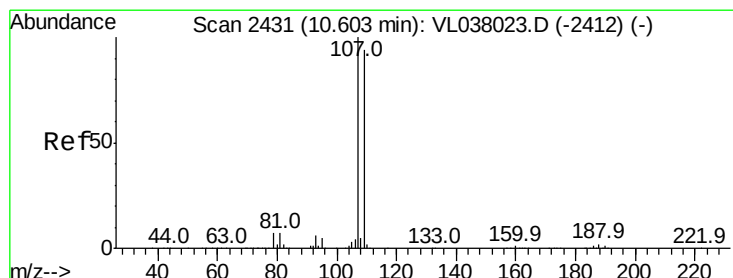
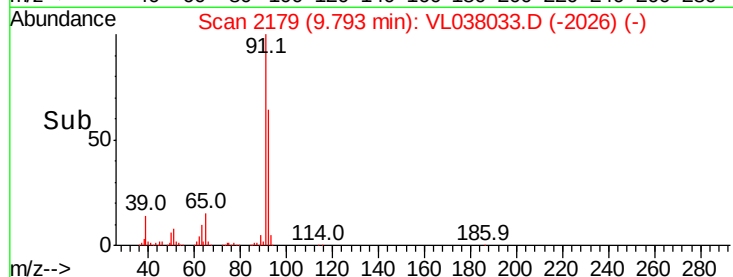
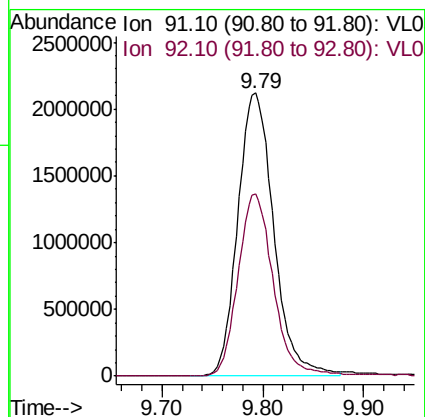
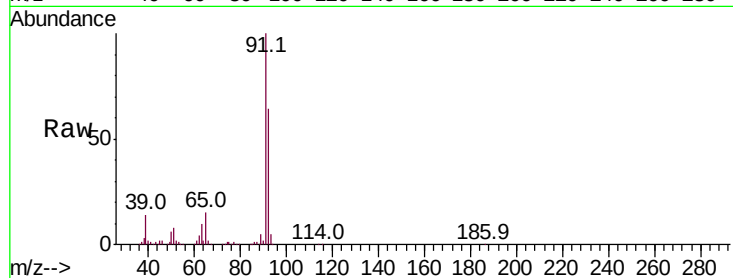
Acq: 16 Nov 2021 10:29

Tot Ion: 91 Resp: 5249084

Ion Ratio Lower Upper

91 100

92 64.6 49.5 74.3



#54

1,2-Dibromoethane

Concen: 32.778 ppbv

RT: 10.60 min Scan# 2429

Delta R.T. -0.01 min

Lab File: VL038033.D

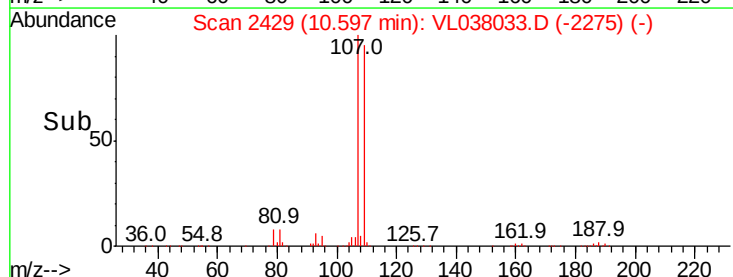
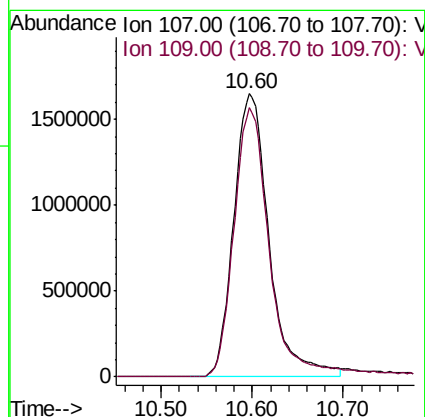
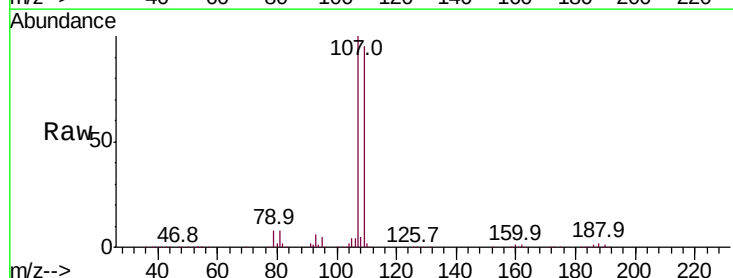
Acq: 16 Nov 2021 10:29

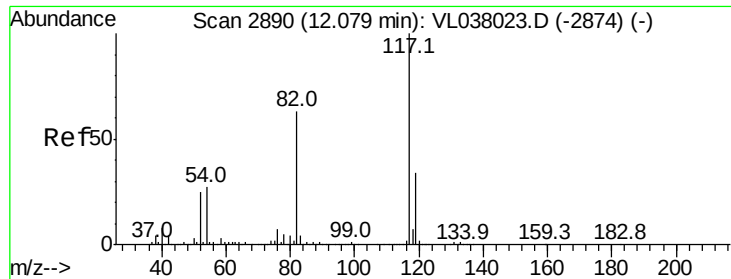
Tgt Ion: 107 Resp: 4450767

Ion Ratio Lower Upper

107 100

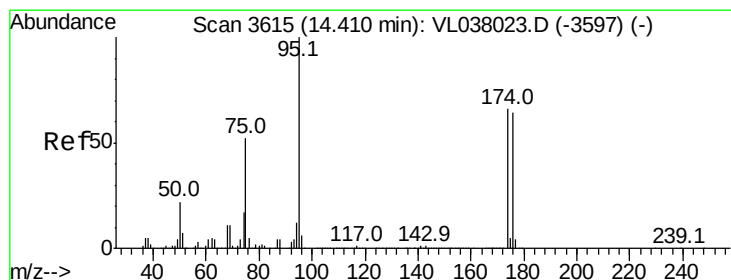
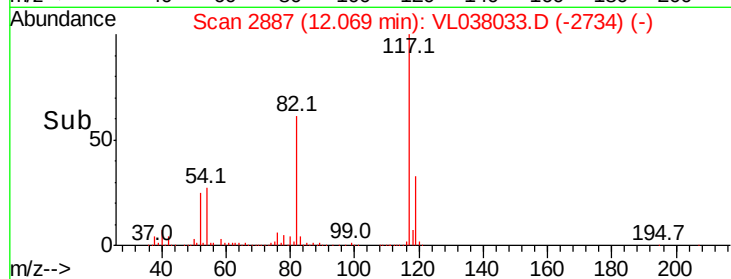
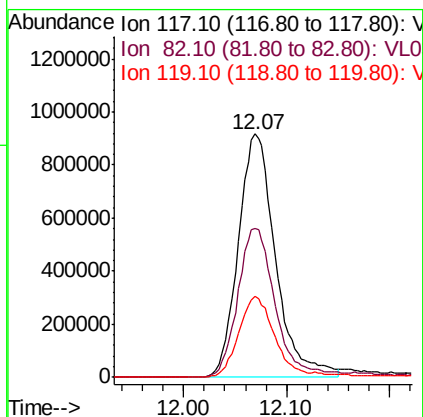
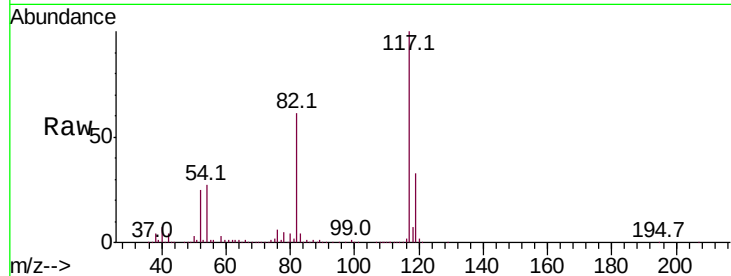
109 95.1 75.0 112.6





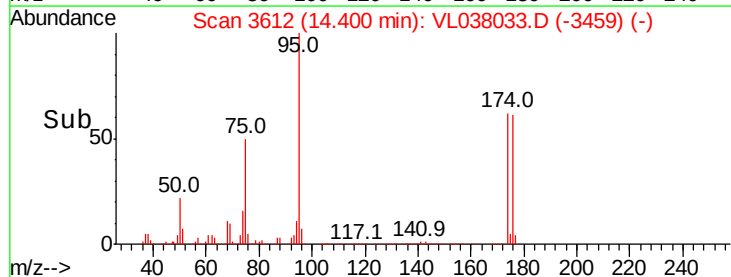
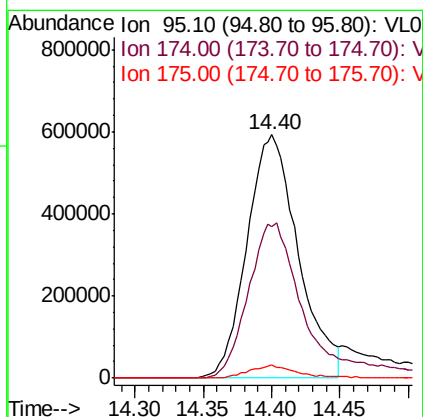
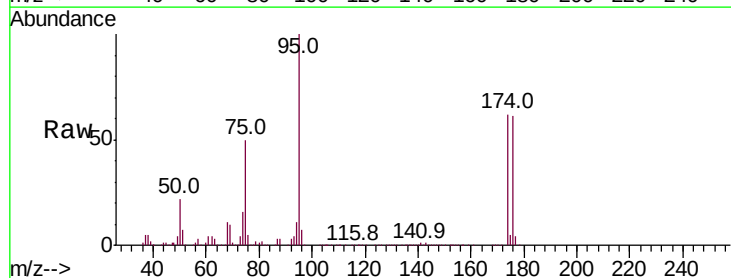
#55
 Chlorobenzene-d5
 Concen: 10.000 ppbv
 RT: 12.07 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Nov 2021 10:29

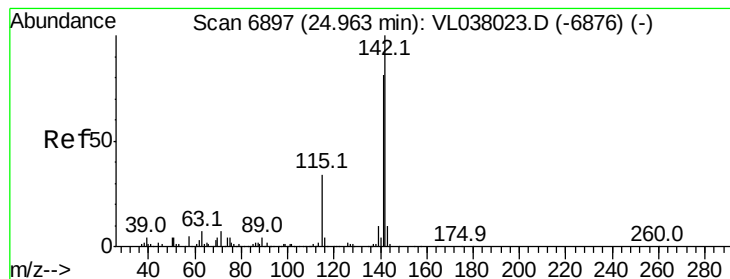
Tot Ion: 117 Resp: 2305740
 Ion Ratio Lower Upper
 117 100
 82 64.7 50.0 75.0
 119 34.5 44.6 67.0#



#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.299 ppbv
 RT: 14.40 min Scan# 3612
 Delta R.T. -0.01 min
 Lab File: VL038033.D
 Acq: 16 Nov 2021 10:29

Tgt Ion: 95 Resp: 1549134
 Ion Ratio Lower Upper
 95 100
 174 75.0 55.0 82.6
 175 5.1 4.2 6.2





#80

Naphthalene, 2-methyl-

Concen: 0.042 ppbv

RT: 25.14 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 10:29

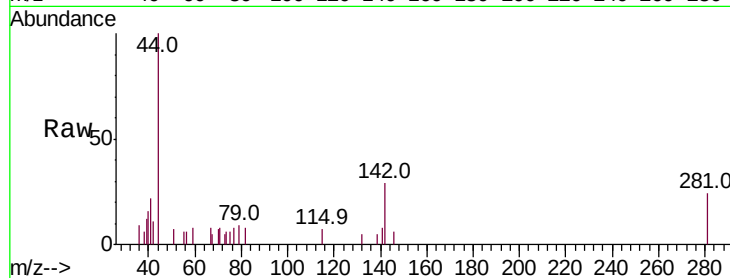
Tot Ion: 142 Resp: 1300

Ion Ratio Lower Upper

142 100

141 91.4 76.2 114.4

115 33.3 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

