

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111621\
 Data File : VL038042.D
 Acq On : 16 Nov 2021 16:39
 Operator : SY/AP
 Sample : M4526-01DL 2.5X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 17 06:41:12 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	5.65	49	864228	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.16	114	2584357	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.07	117	2294310	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1739366	10.49	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.90%

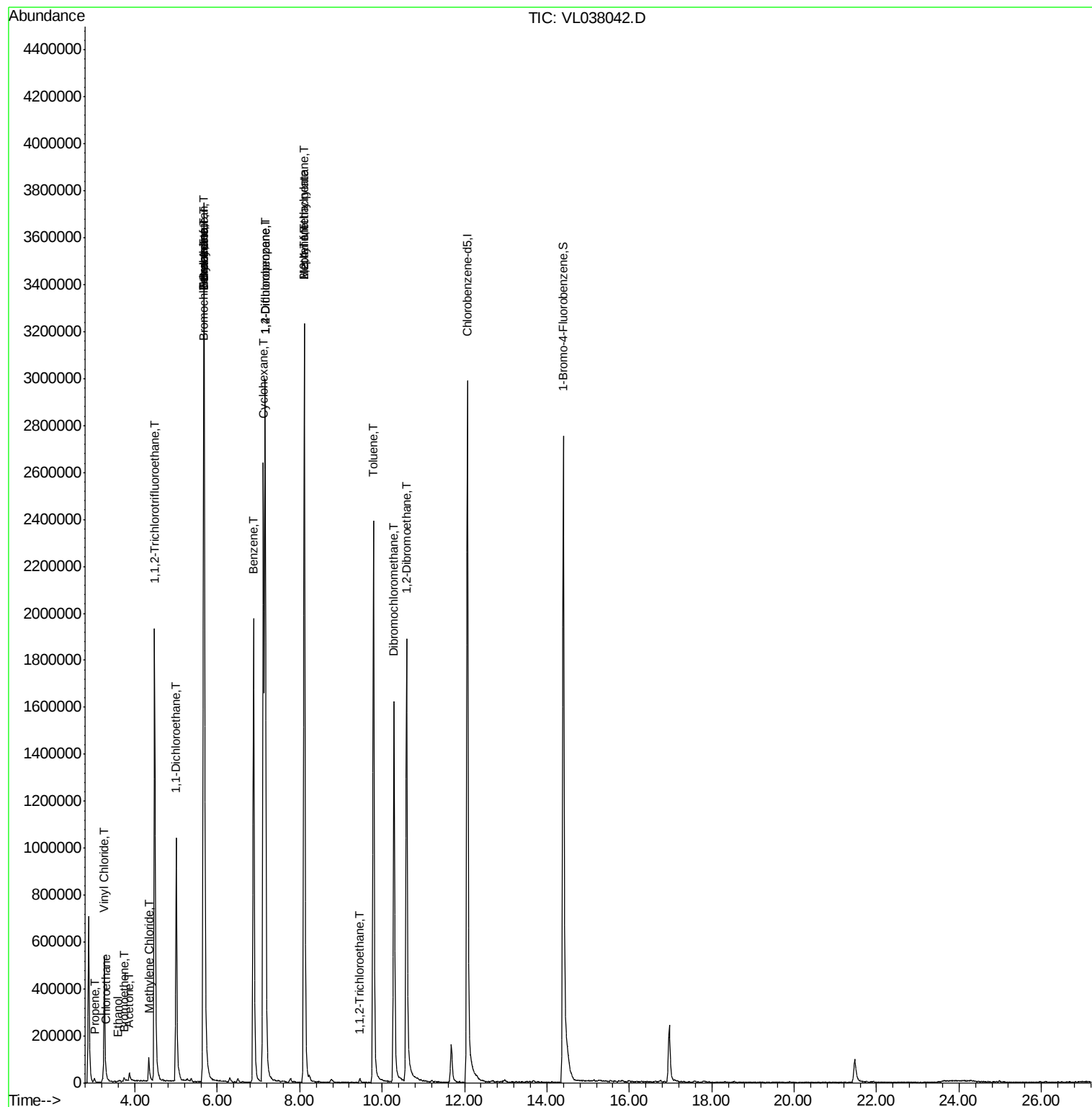
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
5) Vinyl Chloride	3.26	62	596252	7.770	ppbv	95
7) Chloroethane	3.30	64	3573	0.132	ppbv #	46
9) Propene	3.01	41	3071	0.036	ppbv #	15
10) Heptane	8.11	43	1760587	8.442	ppbv	100
12) 1,1,2-Trichlorotrifluoroet	4.48	101	836674	6.214	ppbv	98
13) Ethanol	3.60	45	266	0.035	ppbv #	100
14) Bromoethene	3.74	108	2173	0.039	ppbv #	1
15) Acetone	3.86	43	51450	0.506	ppbv #	89
20) Methylene Chloride	4.34	84	42383	0.711	ppbv	91
24) 1,1-Dichloroethane	5.00	63	1070650	8.156	ppbv	99
25) Ethyl Acetate	5.68	43	1107178	4.632	ppbv #	76
26) Hexane	5.68	57	1622076	13.508	ppbv #	45
30) Cyclohexane	7.12	84	1085383	8.026	ppbv	99
34) 2-Butanone	5.68	43	1066182	12.508	ppbv #	53
36) Benzene	6.88	78	1957894	7.964	ppbv	98
39) 1,2-Dichloropropane	7.16	63	587795	6.185	ppbv #	31
41) Tetrahydrofuran	5.68	42	580851	9.496	ppbv #	51
43) Methyl Methacrylate	8.10	69	10598	0.121	ppbv #	1
44) 2,2,4-Trimethylpentane	8.11	57	867838	2.055	ppbv #	44
47) 1,1,2-Trichloroethane	9.46	97	4761	0.049	ppbv #	65
48) Dibromochloromethane	10.29	129	1179685	7.517	ppbv	100
53) Toluene	9.79	91	2194023	7.632	ppbv	98
54) 1,2-Dibromoethane	10.59	107	1926668	14.247	ppbv	100

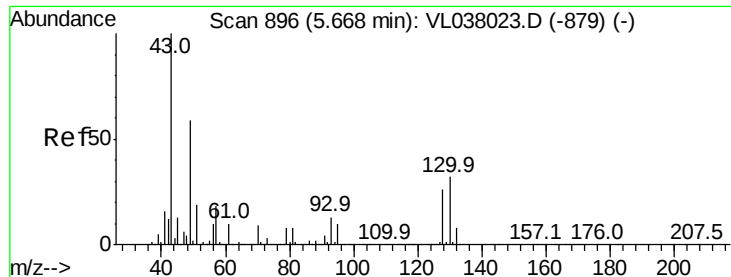
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL111621\
Data File : VL038042.D
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Instrument :
MSVOA_L
ClientSampleId :

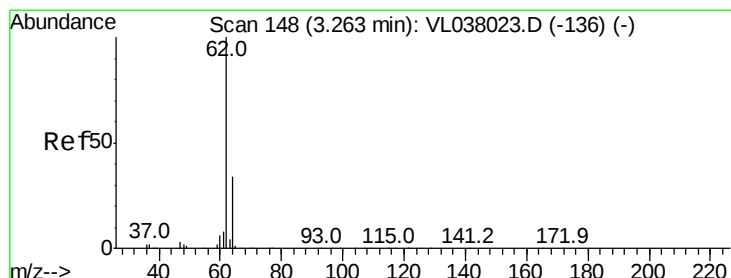
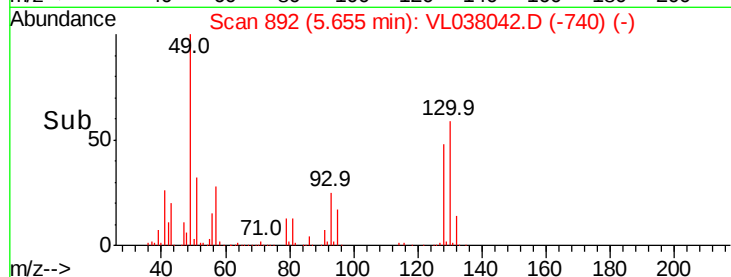
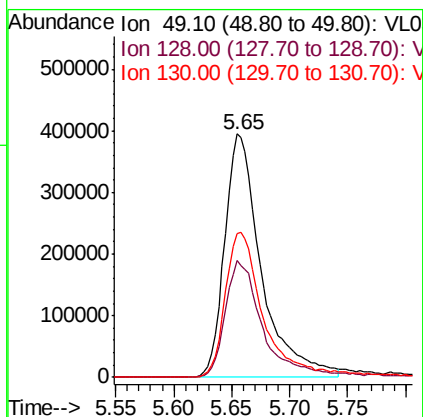
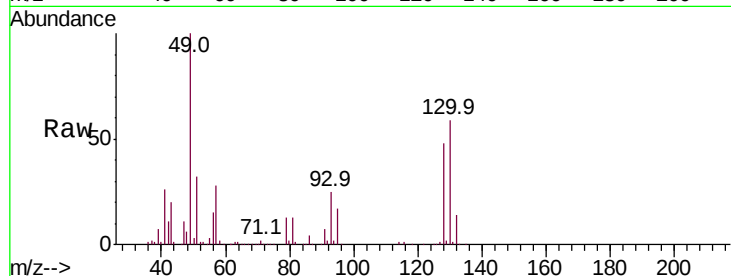
Quant Time: Nov 17 06:41:12 2021
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL111621AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 16 09:59:16 2021
QLast Update : Tue Nov 16 09:59:16 2021
Response via : Initial Calibration





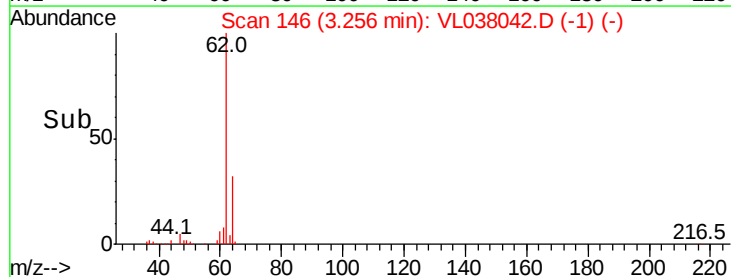
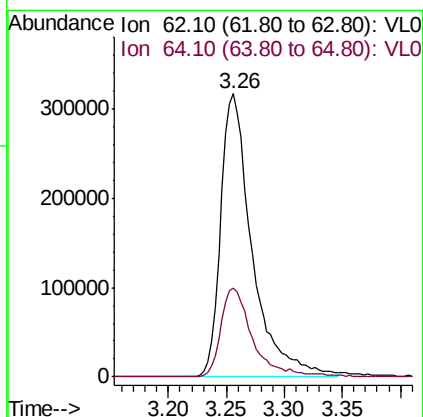
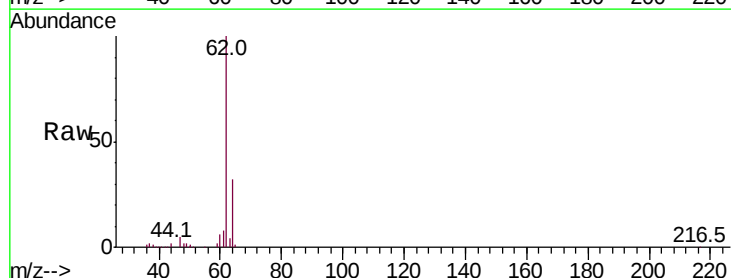
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.65
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 16 Nov 2021 16:39

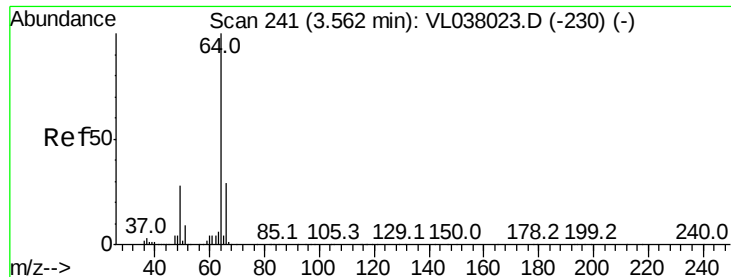
Tot Ion	49	Resp	864228
Ion Ratio	Lower	Upper	
49	100		
128	50.2	23.4	70.2
130	63.9	29.1	87.3



#5
 Vinyl Chloride
 Concen: 7.770 ppbv
 RT: 3.26 min Scan# 146
 Delta R.T. -0.01 min
 Lab File: VL038042.D
 Acq: 16 Nov 2021 16:39

Tgt Ion	62	Resp	596252
Ion Ratio	Lower	Upper	
62	100		
64	31.6	27.4	41.0





#7

Chloroethane

Concen: 0.132 ppbv

RT: 3.30 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

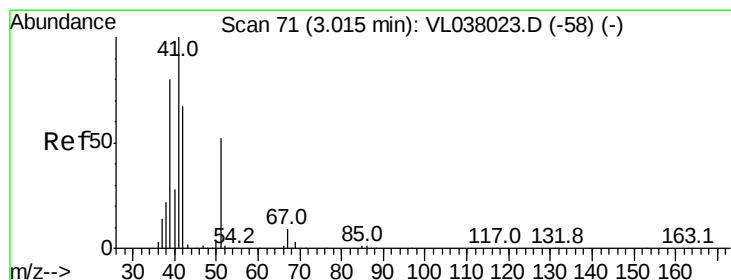
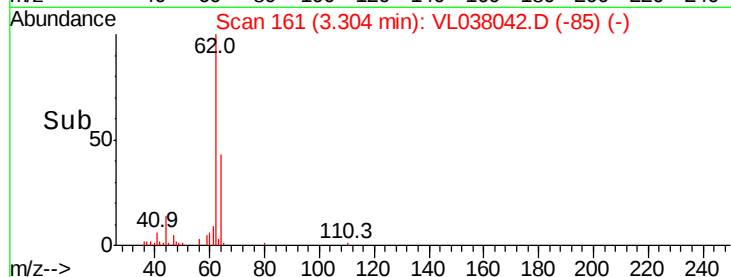
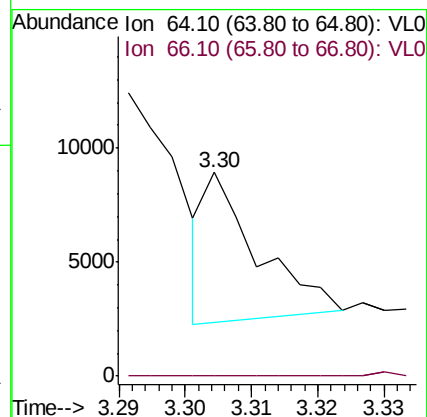
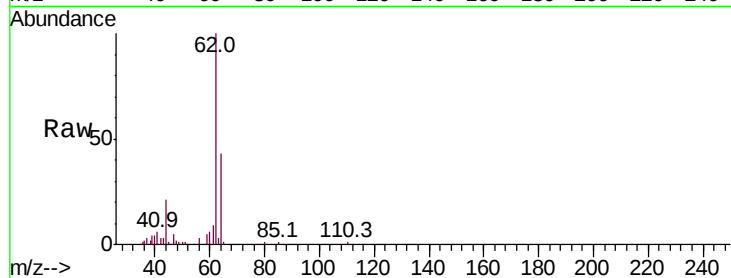
Acq: 16 Nov 2021 16:39

Tot Ion: 64 Resp: 3573

Ion Ratio Lower Upper

64 100

66 0.0 23.1 34.7#



#9

Propene

Concen: 0.036 ppbv

RT: 3.01 min Scan# 70

Delta R.T. -0.00 min

Lab File: VL038042.D

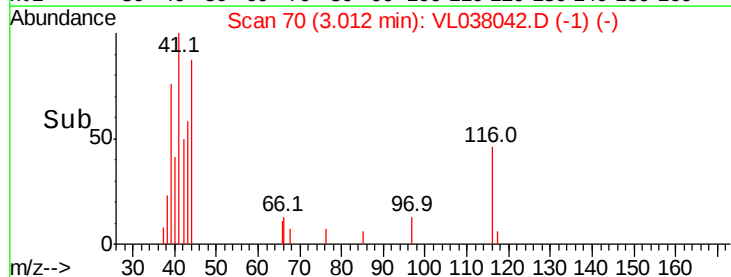
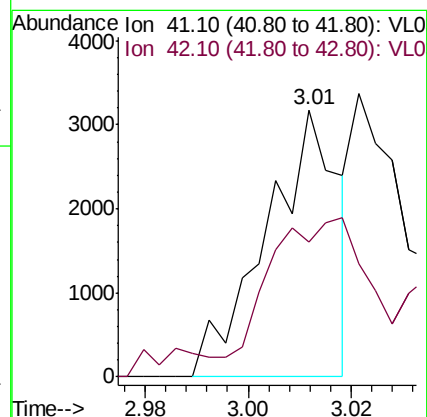
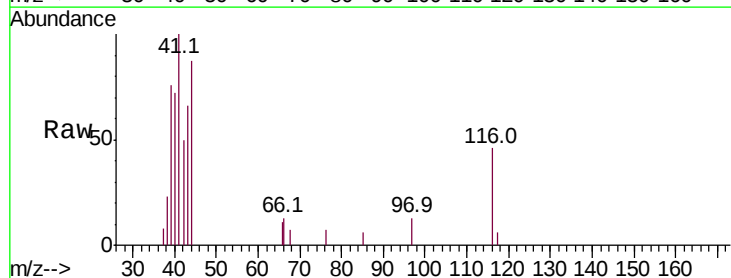
Acq: 16 Nov 2021 16:39

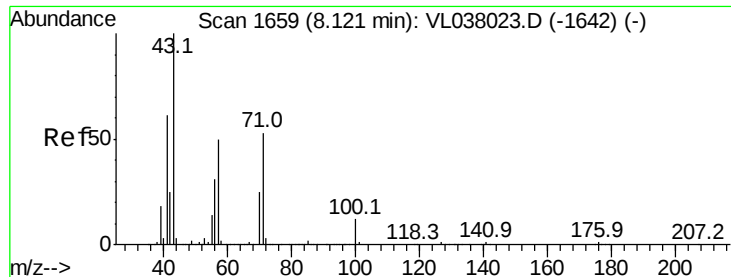
Tgt Ion: 41 Resp: 3071

Ion Ratio Lower Upper

41 100

42 0.0 55.4 83.0#





#10

Heptane

Concen: 8.442 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

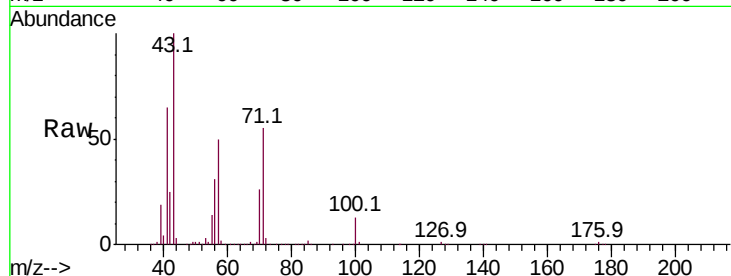
Acq: 16 Nov 2021 16:39

Tot Ion: 43 Resp: 1760587

Ion Ratio Lower Upper

43 100

57 50.1 40.2 60.2



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

8.11

800000

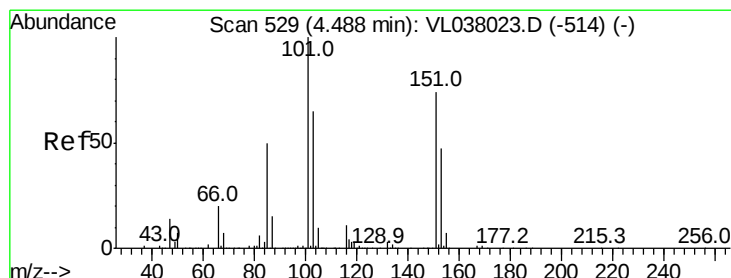
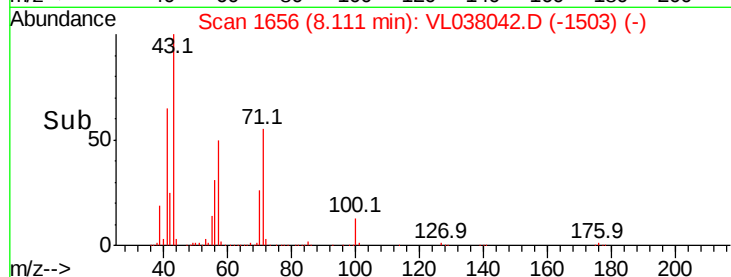
600000

400000

200000

0

Time-->



#12

1,1,2-Trichlorotrifluoroethane

Concen: 6.214 ppbv

RT: 4.48 min Scan# 526

Delta R.T. -0.01 min

Lab File: VL038042.D

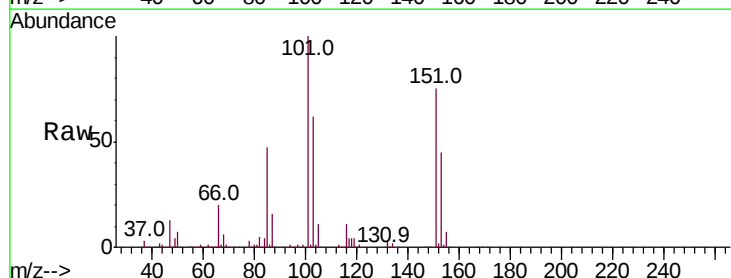
Acq: 16 Nov 2021 16:39

Tgt Ion:101 Resp: 836674

Ion Ratio Lower Upper

101 100

151 73.7 57.8 86.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

4.48

400000

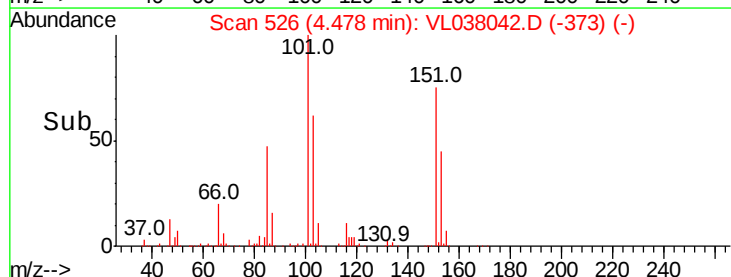
300000

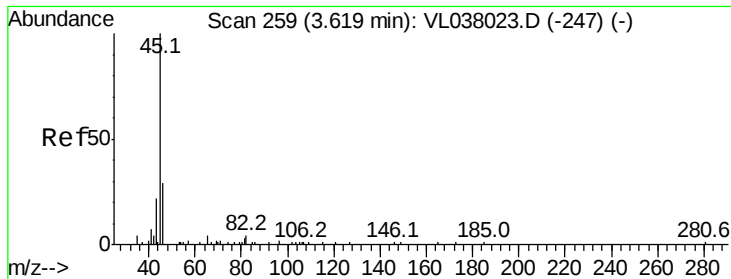
200000

100000

0

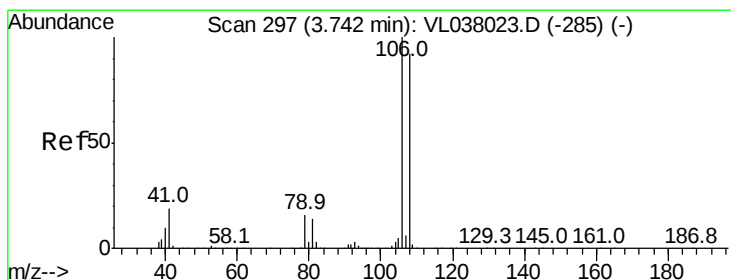
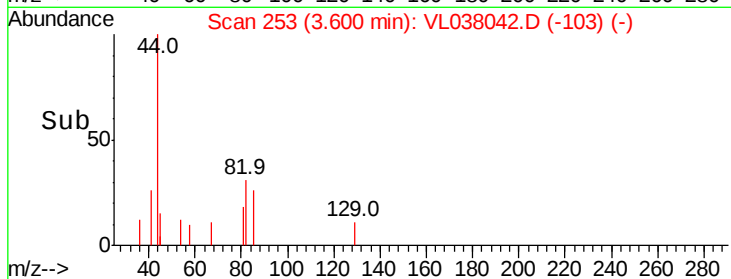
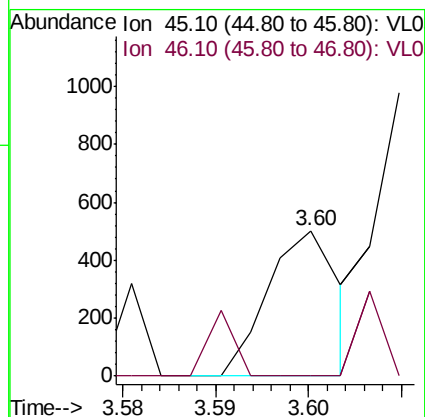
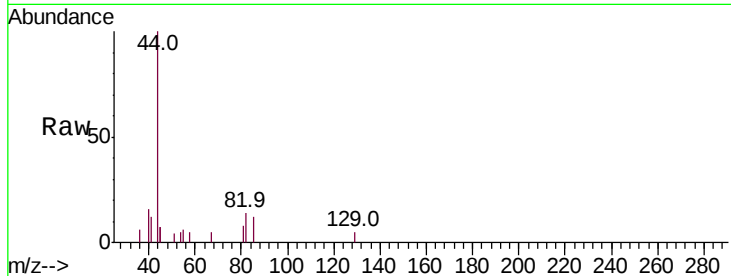
Time-->





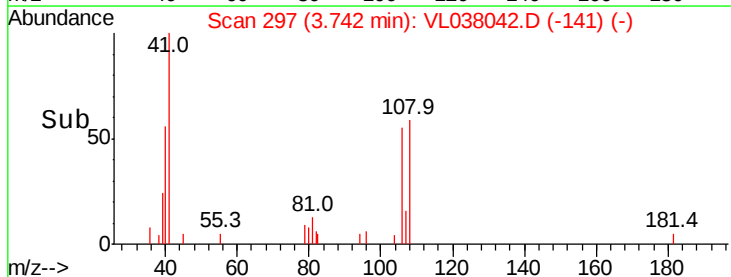
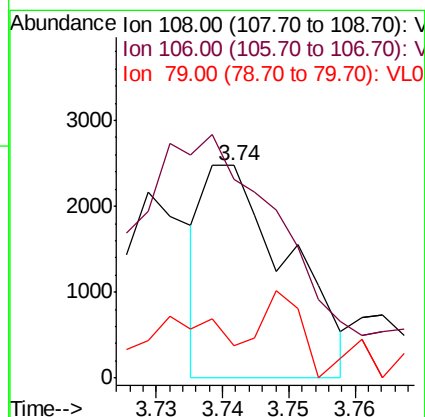
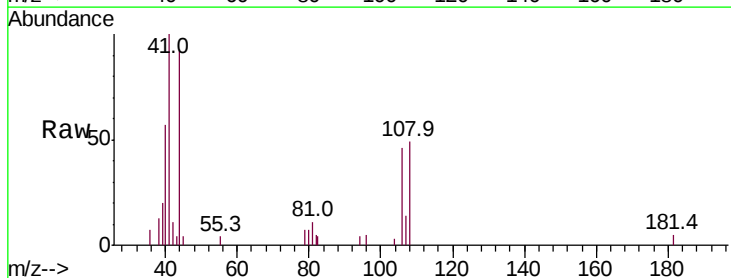
#13
Ethanol
Concen: 0.035 ppbv
RT: 3.60 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Nov 2021 16:39

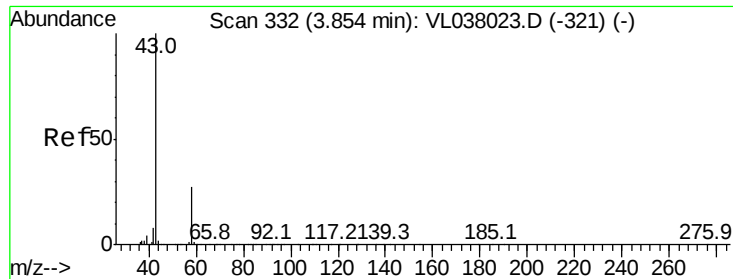
Tot Ion: 45 Resp: 266
Ion Ratio Lower Upper
45 100
46 0.0 0.0 0.0



#14
Bromoethene
Concen: 0.039 ppbv
RT: 3.74 min Scan# 297
Delta R.T. 0.00 min
Lab File: VL038042.D
Acq: 16 Nov 2021 16:39

Tgt Ion:108 Resp: 2173
Ion Ratio Lower Upper
108 100
106 247.2 90.4 135.6#
79 68.5 14.5 21.7#





#15

Acetone

Concen: 0.506 ppbv

RT: 3.86 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

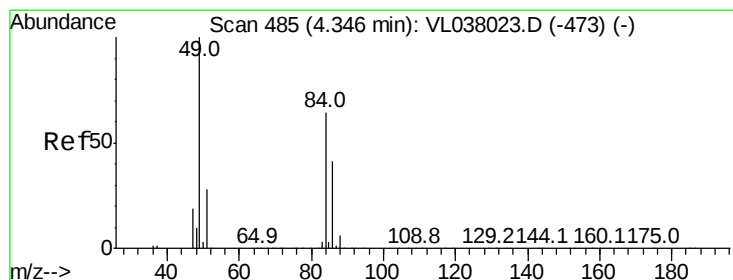
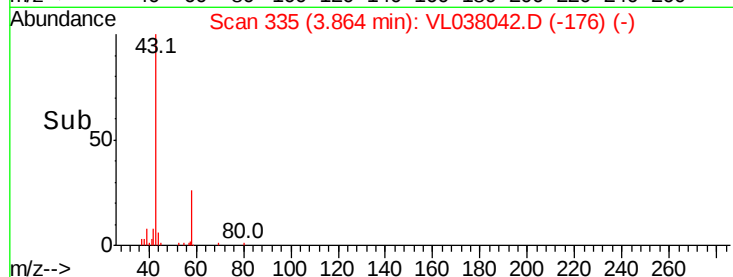
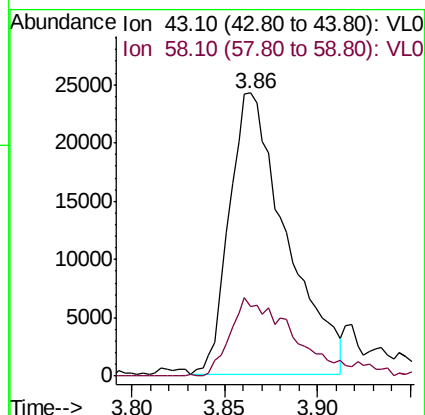
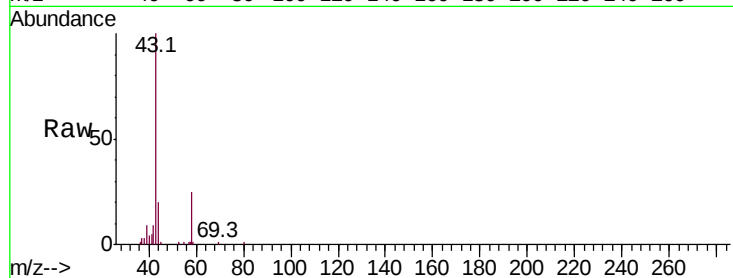
Acq: 16 Nov 2021 16:39

Tot Ion: 43 Resp: 51450

Ion Ratio Lower Upper

43 100

58 34.6 23.0 34.4#



#20

Methylene Chloride

Concen: 0.711 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.01 min

Lab File: VL038042.D

Acq: 16 Nov 2021 16:39

Tgt Ion: 84 Resp: 42383

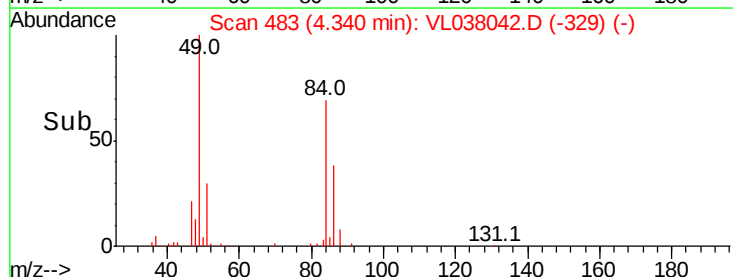
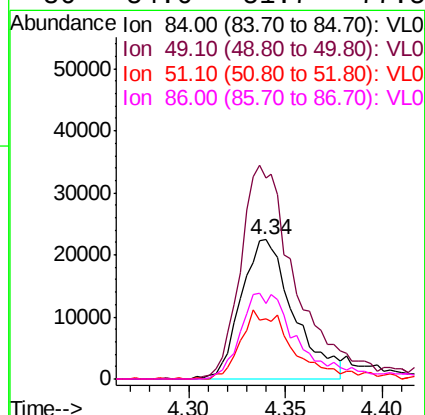
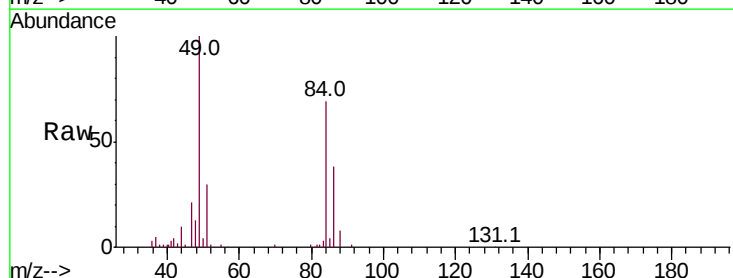
Ion Ratio Lower Upper

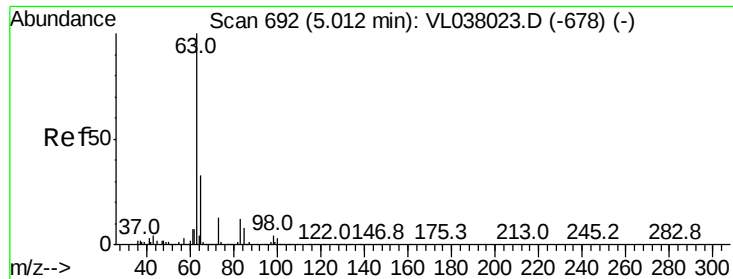
84 100

49 143.9 125.1 187.7

51 43.4 35.3 52.9

86 54.6 51.7 77.5





#24

1,1-Dichloroethane

Concen: 8.156 ppbv

RT: 5.00 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 16:39

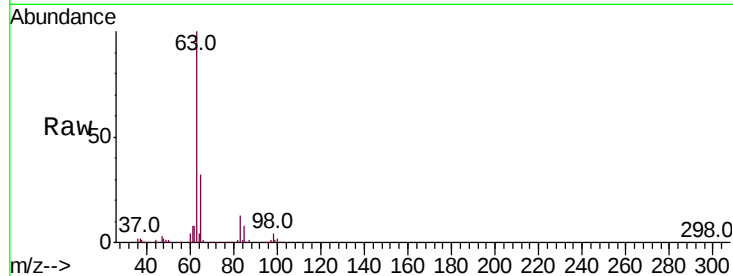
Tot Ion: 63 Resp: 1070650

Ion Ratio Lower Upper

63 100

98 4.5 2.3 6.9

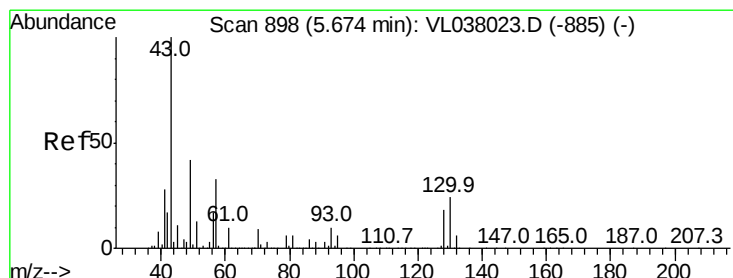
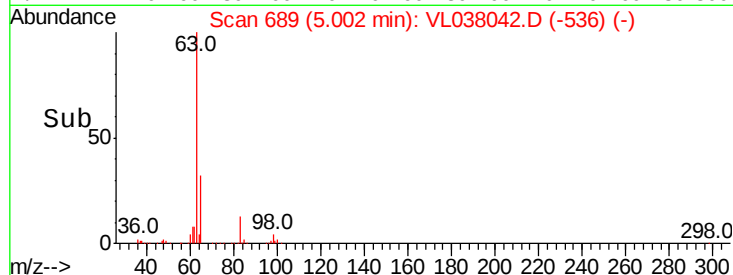
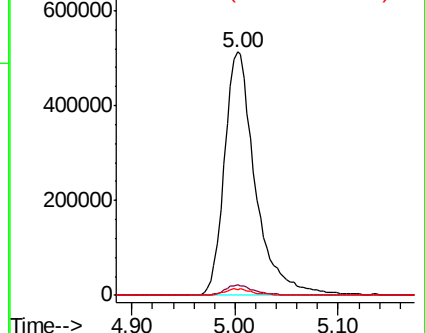
100 2.4 1.5 4.4



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: 4.632 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.00 min

Lab File: VL038042.D

Acq: 16 Nov 2021 16:39

Tgt Ion: 43 Resp: 1107178

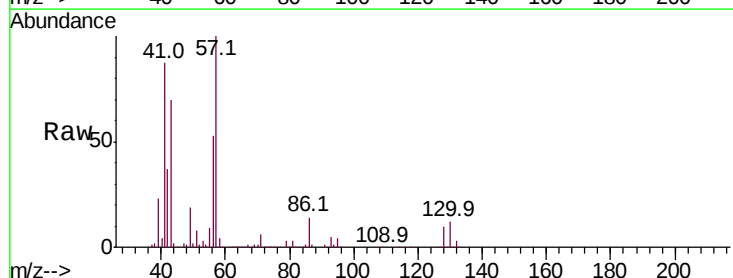
Ion Ratio Lower Upper

43 100

45 0.1 8.0 12.0#

61 0.1 8.3 12.5#

70 1.5 5.7 8.5#

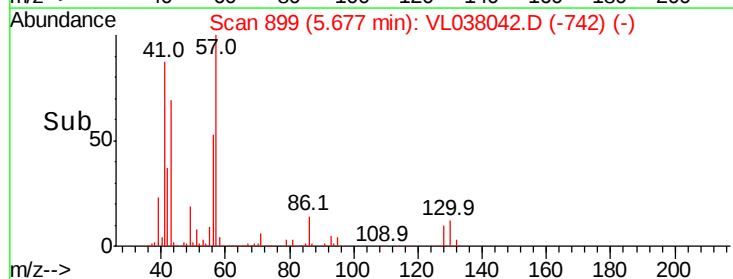
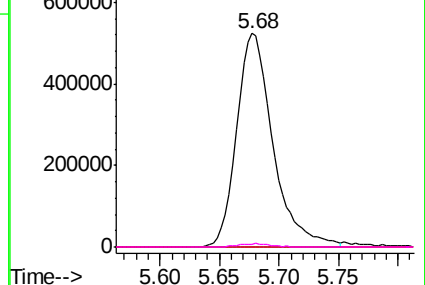


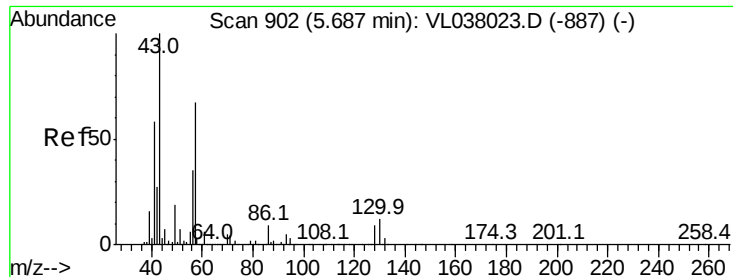
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

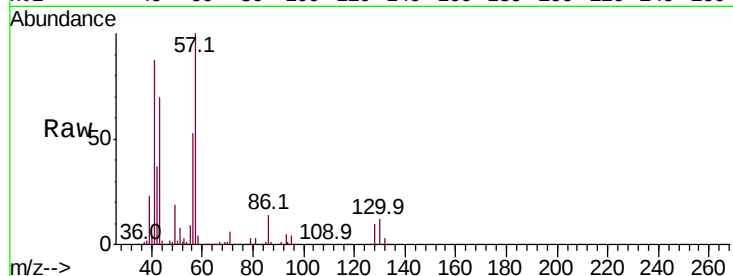
Ion 70.10 (69.80 to 70.80): VL0





#26
Hexane
Concen: 13.508 ppbv
RT: 5.68
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Nov 2021 16:39

Tot Ion:	57	Resp:	1622076
Ion	Ratio	Lower	Upper
57	100		
41	84.5	70.8	106.2
43	69.7	169.4	254.0#
56	51.9	41.8	62.8



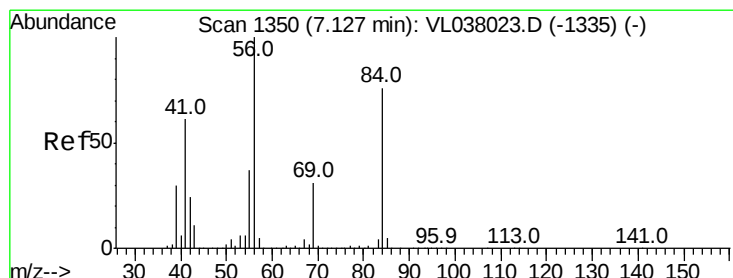
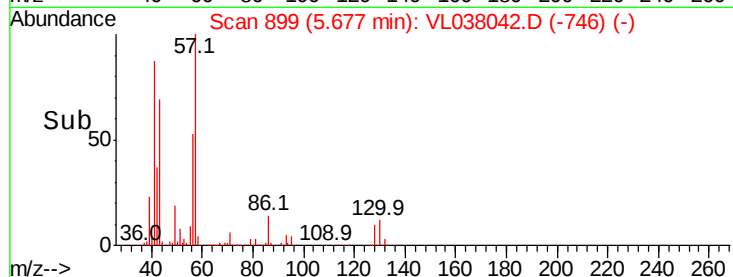
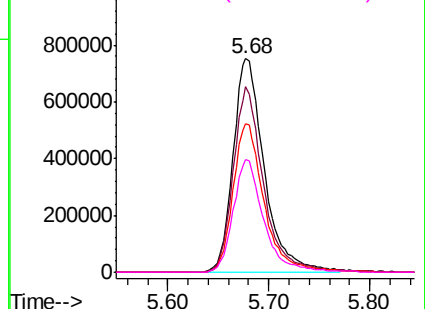
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

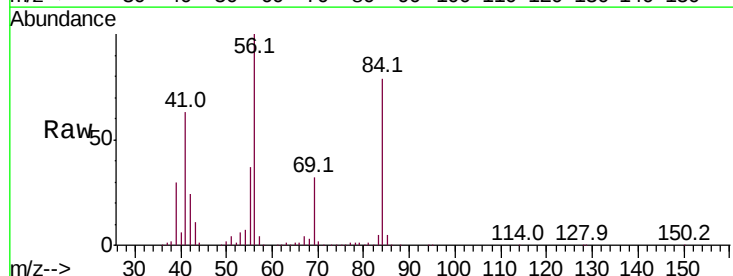
Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#30
Cyclohexane
Concen: 8.026 ppbv
RT: 7.12 min Scan# 1347
Delta R.T. -0.01 min
Lab File: VL038042.D
Acq: 16 Nov 2021 16:39

Tgt Ion:	84	Resp:	1085383
Ion	Ratio	Lower	Upper
84	100		
56	135.2	109.5	164.3
41	80.6	65.1	97.7

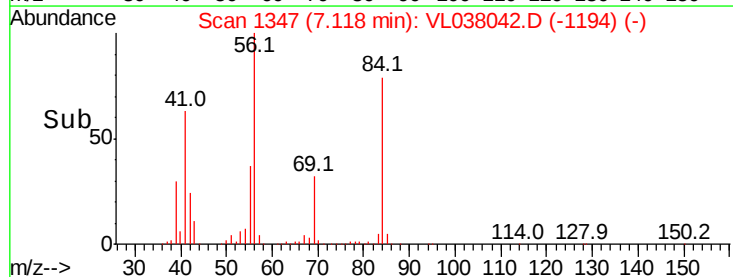
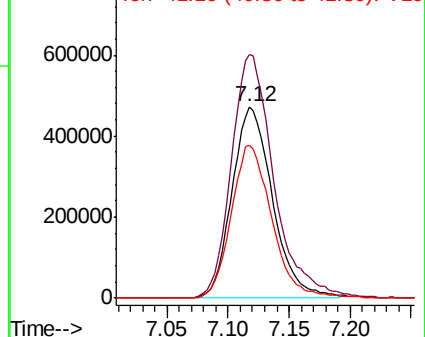


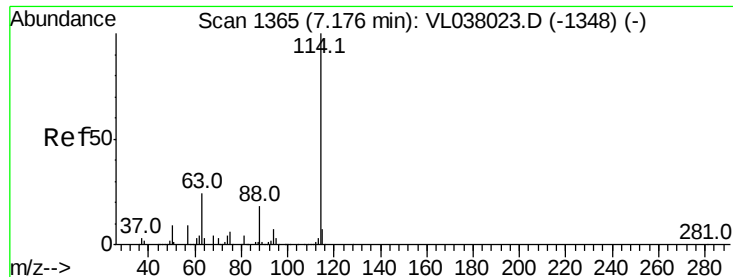
Abundance

Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Nov 2021 16:39

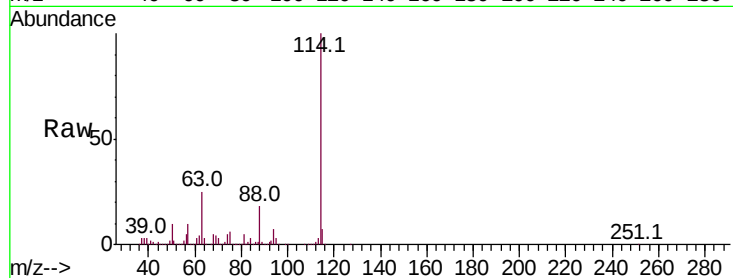
Tot Ion:114 Resp: 2584357

Ion Ratio Lower Upper

114 100

63 24.5 19.8 29.6

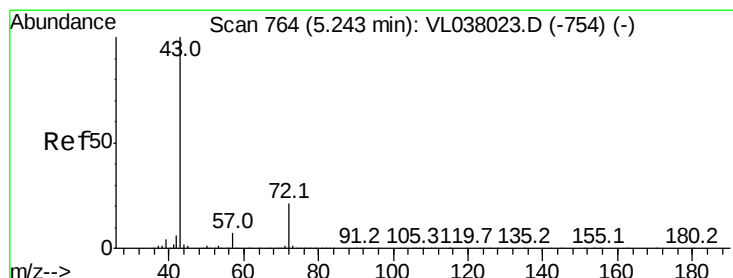
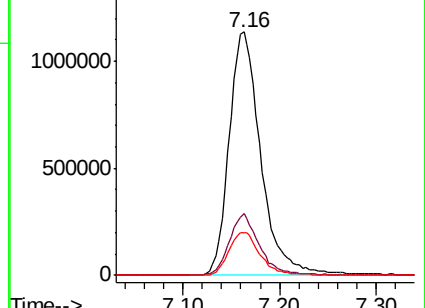
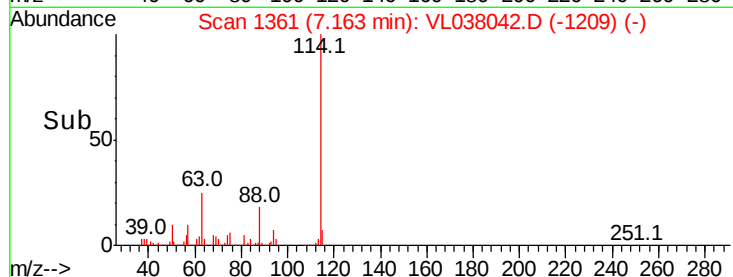
88 17.9 14.6 21.8



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: 12.508 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.43 min

Lab File: VL038042.D

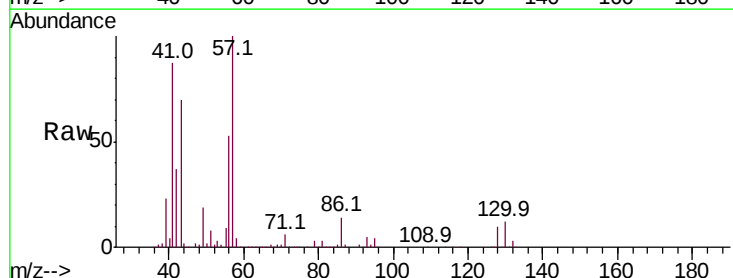
Acq: 16 Nov 2021 16:39

Tgt Ion: 43 Resp: 1066182

Ion Ratio Lower Upper

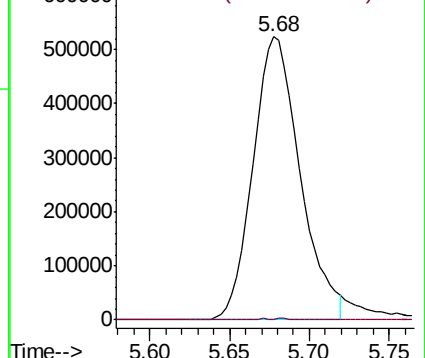
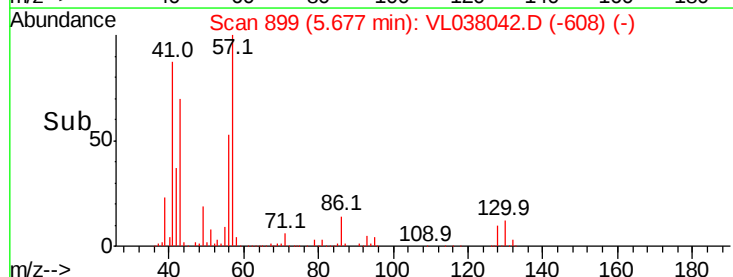
43 100

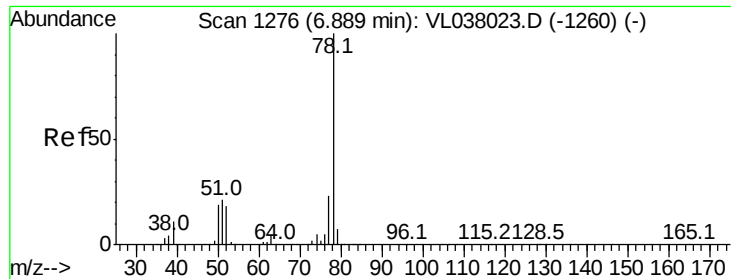
72 0.0 18.2 27.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 7.964 ppbv

RT: 6.88 Instrument:

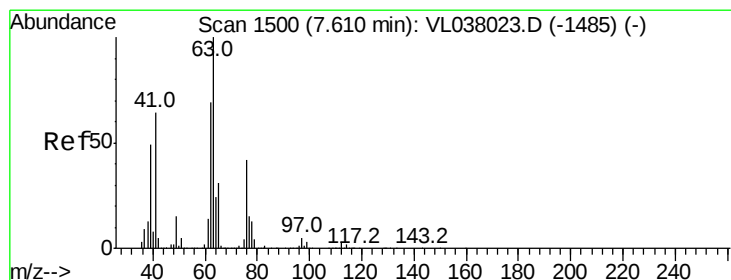
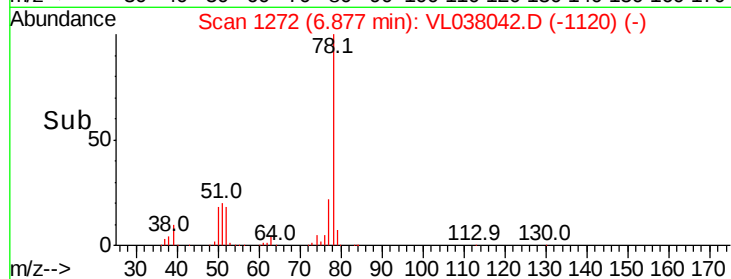
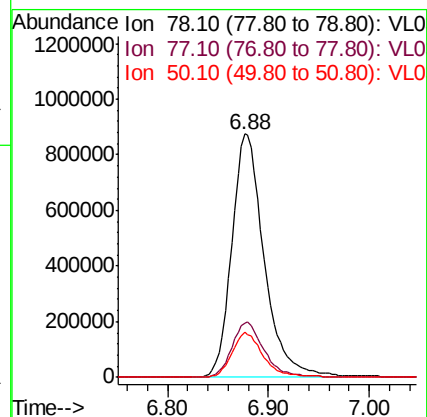
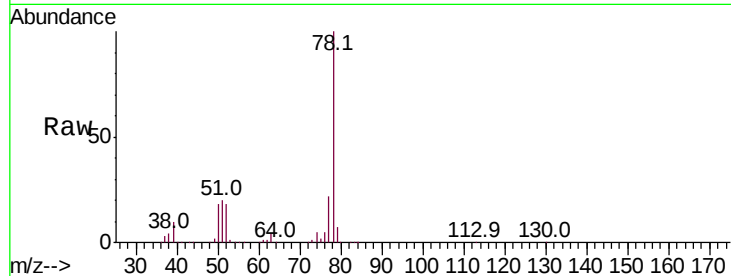
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 16 Nov 2021 16:39

Tot Ion: 78 Resp: 1957894

Ion	Ratio	Lower	Upper
78	100		
77	22.1	18.8	28.2
50	18.3	14.9	22.3



#39

1,2-Dichloropropane

Concen: 6.185 ppbv

RT: 7.16 min Scan# 1361

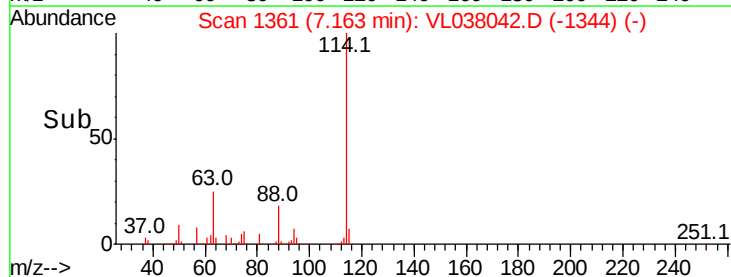
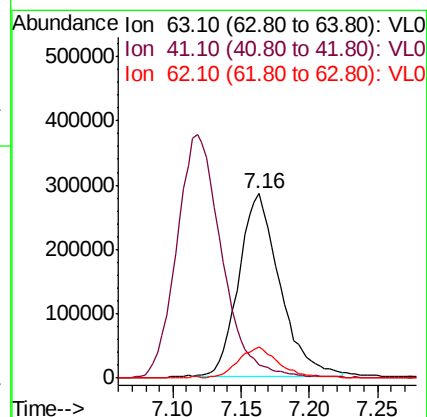
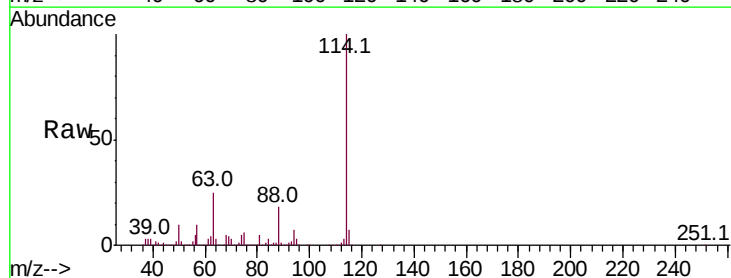
Delta R.T. -0.45 min

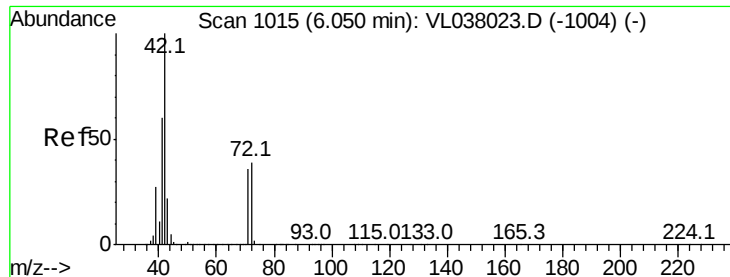
Lab File: VL038042.D

Acq: 16 Nov 2021 16:39

Tgt Ion: 63 Resp: 587795

Ion	Ratio	Lower	Upper
63	100		
41	6.7	51.1	76.7#
62	16.5	55.2	82.8#





#41

Tetrahydrofuran

Concen: 9.496 ppbv

RT: 5.68 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 16 Nov 2021 16:39

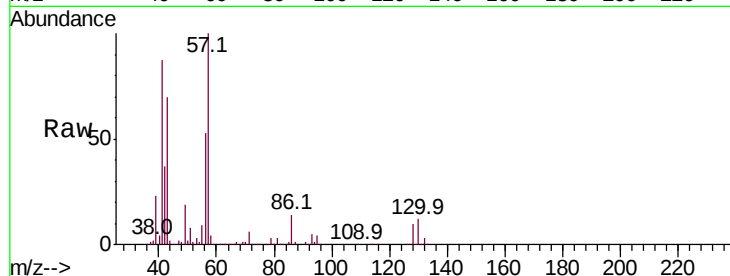
Tot Ion: 42 Resp: 580851

Ion Ratio Lower Upper

42 100

72 0.9 31.3 46.9#

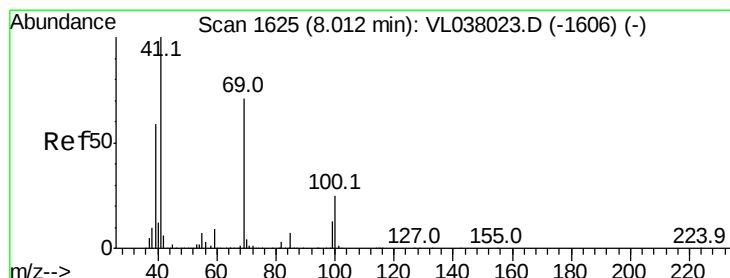
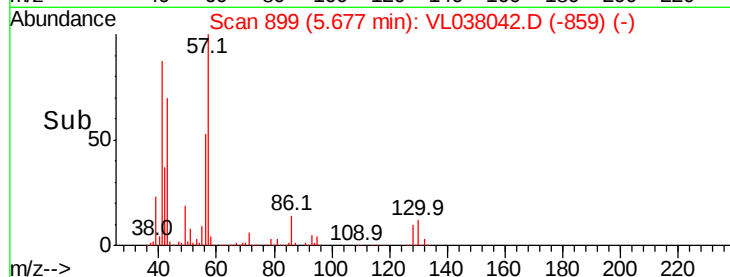
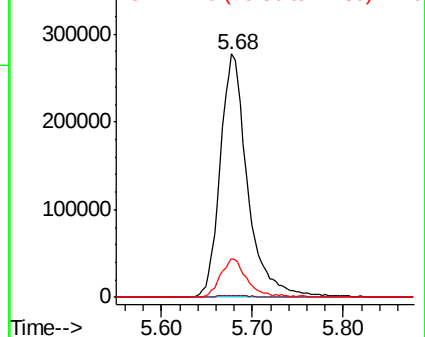
71 15.8 29.7 44.5#



Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0



#43

Methyl Methacrylate

Concen: 0.121 ppbv

RT: 8.10 min Scan# 1654

Delta R.T. 0.09 min

Lab File: VL038042.D

Acq: 16 Nov 2021 16:39

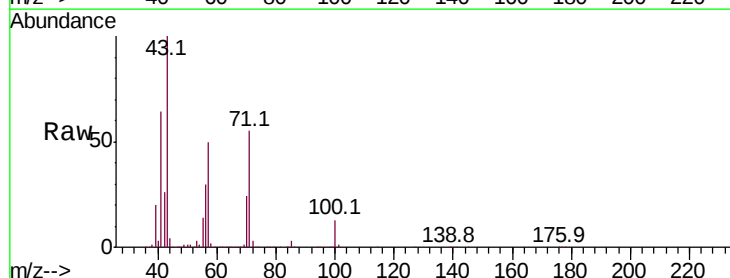
Tgt Ion: 69 Resp: 10598

Ion Ratio Lower Upper

69 100

41 0.0 116.6 174.8#

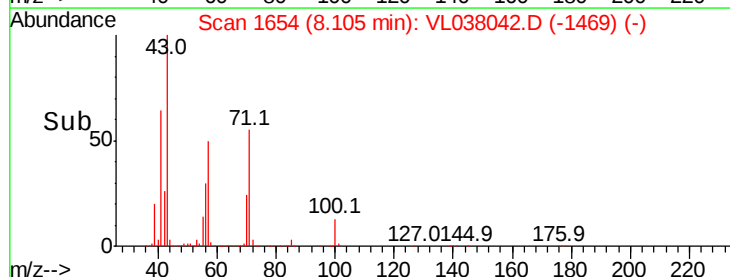
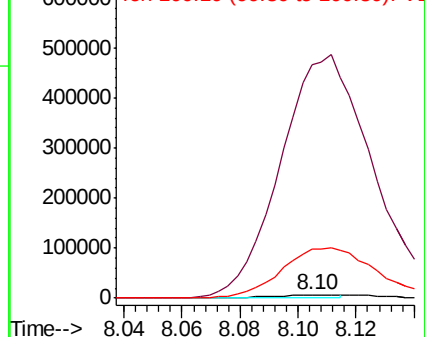
100 0.0 27.0 40.6#

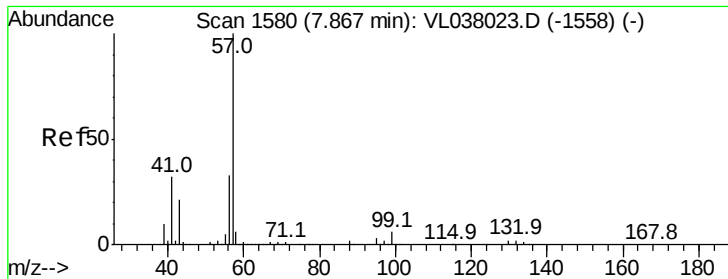


Abundance Ion 69.10 (68.80 to 69.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 100.10 (99.80 to 100.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 2.055 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 16 Nov 2021 16:39

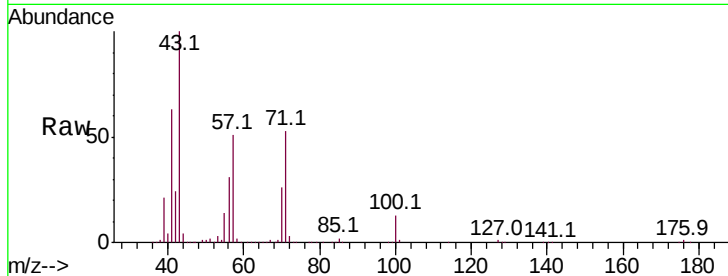
Tot Ion: 57 Resp: 867838

Ion Ratio Lower Upper

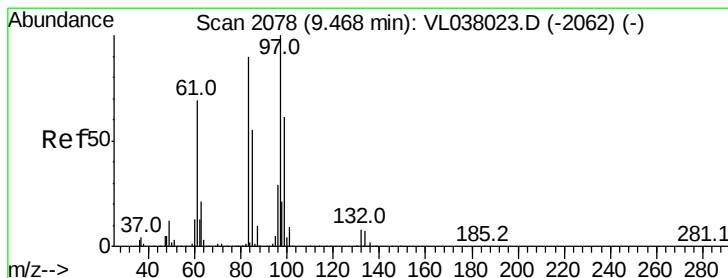
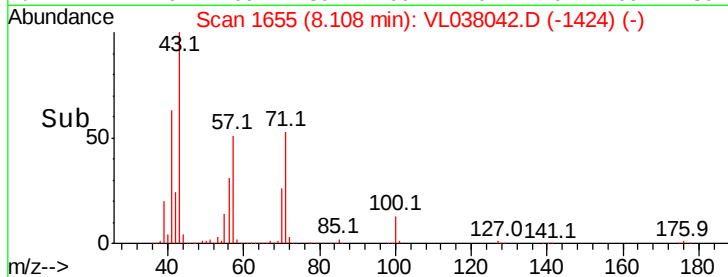
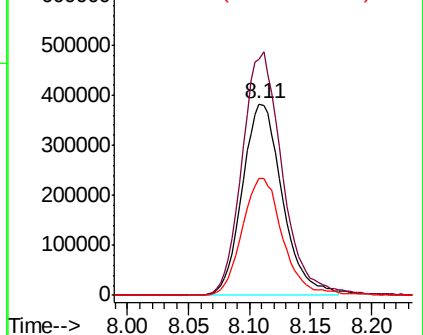
57 100

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: 0.049 ppbv

RT: 9.46 min Scan# 2074

Delta R.T. -0.01 min

Lab File: VL038042.D

Acq: 16 Nov 2021 16:39

Tgt Ion: 97 Resp: 4761

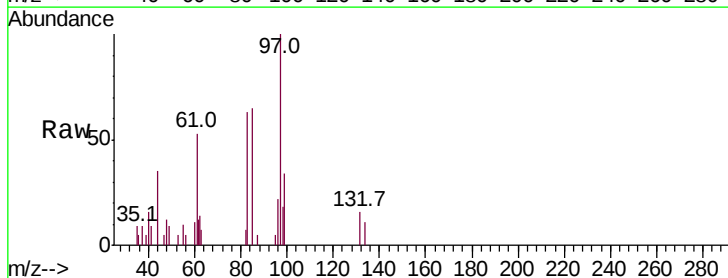
Ion Ratio Lower Upper

97 100

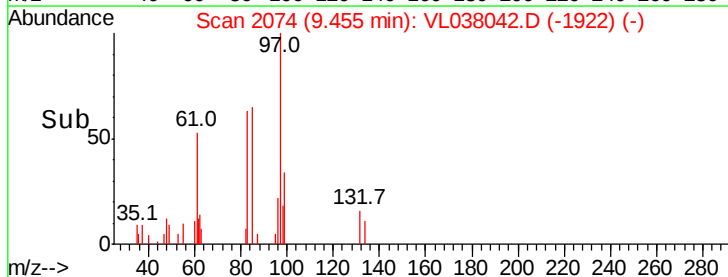
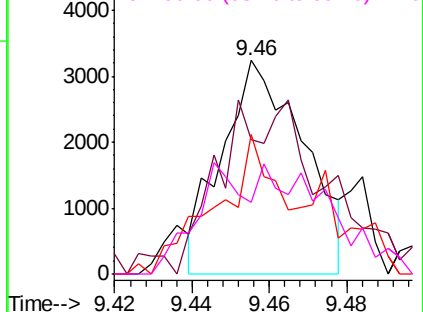
83 54.1 72.2 108.4#

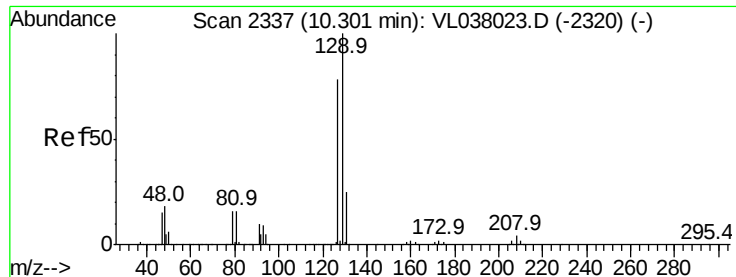
85 59.6 43.8 65.8

99 17.5 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: 7.517 ppbv

RT: 10.29

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

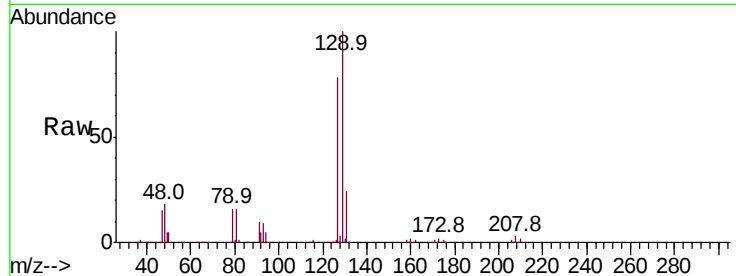
Acq: 16 Nov 2021 16:39

Tot Ion:129 Resp: 1179685

Ion Ratio Lower Upper

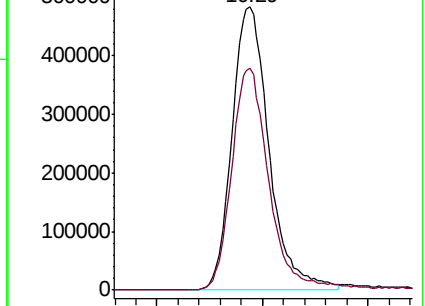
129 100

127 79.8 40.1 120.3

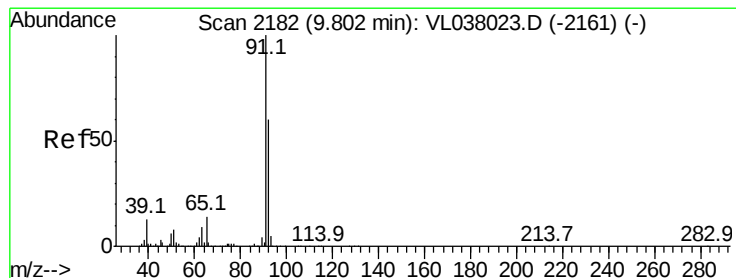
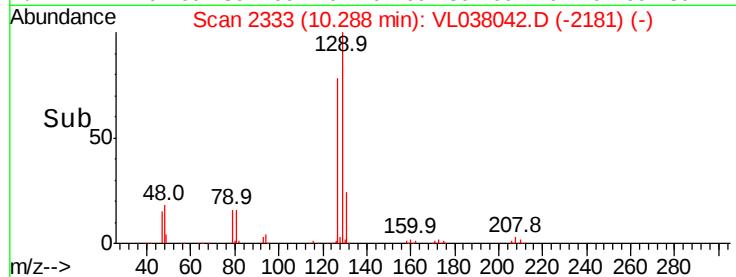


Abundance Ion 129.00 (128.70 to 129.70): V

Ion 127.00 (126.70 to 127.70): V



Time-->



#53

Toluene

Concen: 7.632 ppbv

RT: 9.79 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL038042.D

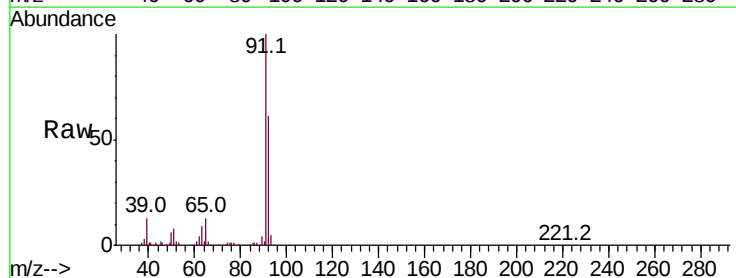
Acq: 16 Nov 2021 16:39

Tgt Ion: 91 Resp: 2194023

Ion Ratio Lower Upper

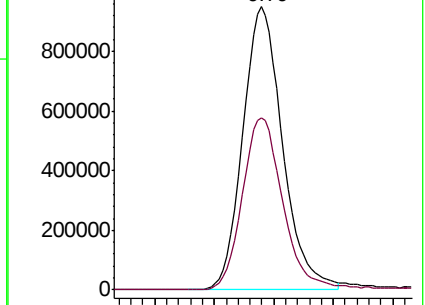
91 100

92 63.7 49.5 74.3

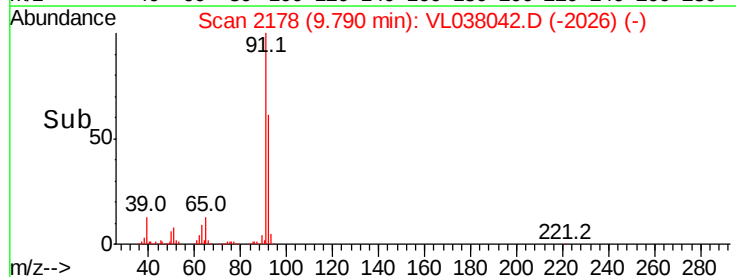


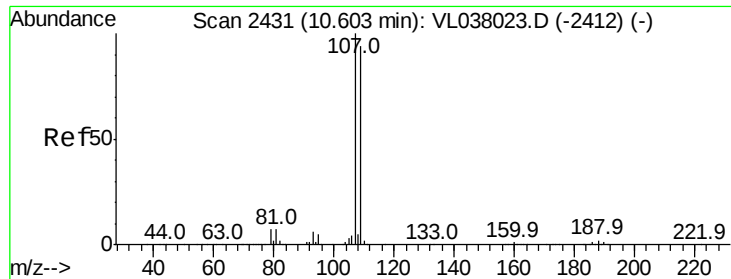
Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



Time-->





#54

1,2-Dibromoethane

Concen: 14.247 ppbv

RT: 10.59

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

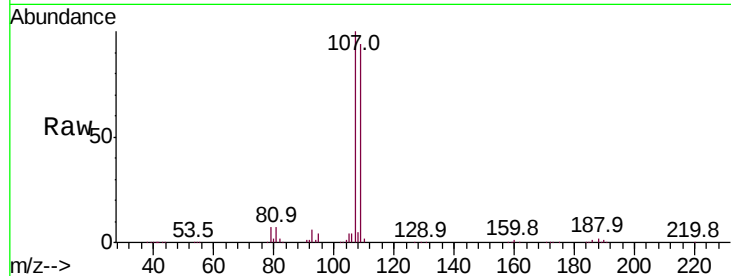
Acq: 16 Nov 2021 16:39

Tot Ion:107 Resp: 1926668

Ion Ratio Lower Upper

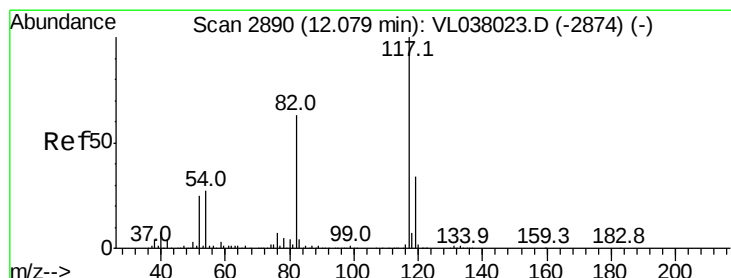
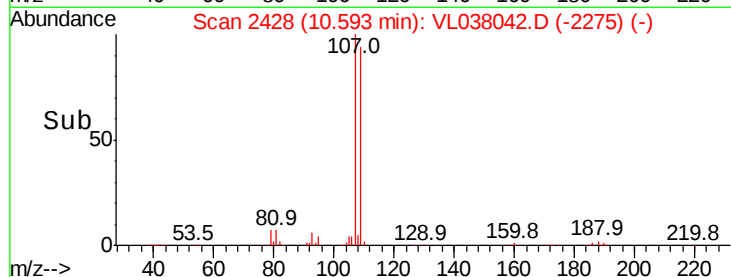
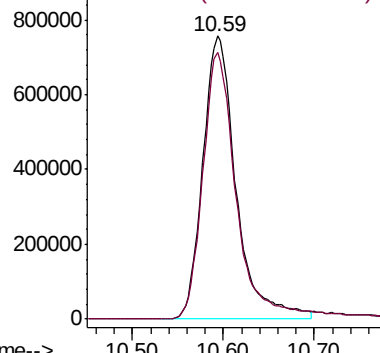
107 100

109 94.1 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# 2886

Delta R.T. -0.01 min

Lab File: VL038042.D

Acq: 16 Nov 2021 16:39

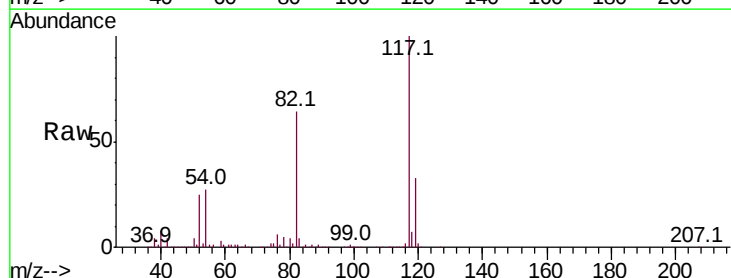
Tgt Ion:117 Resp: 2294310

Ion Ratio Lower Upper

117 100

82 66.2 50.0 75.0

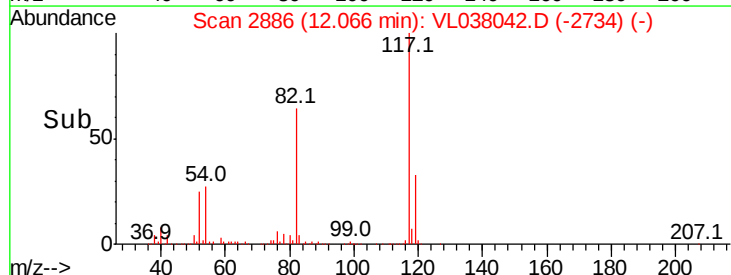
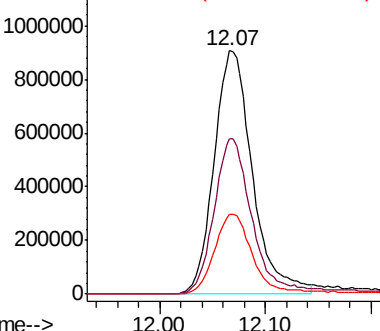
119 33.5 44.6 67.0#

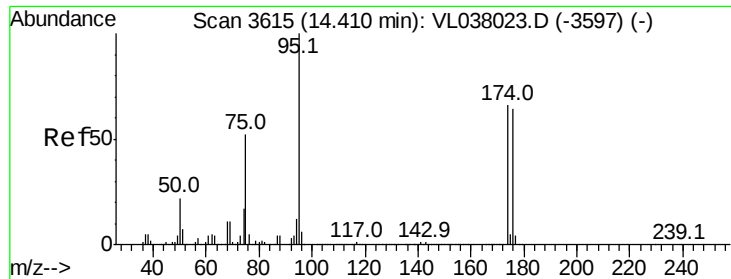


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 10.493 ppbv

RT: 14.40

Delta R.T: MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Nov 2021 10:39

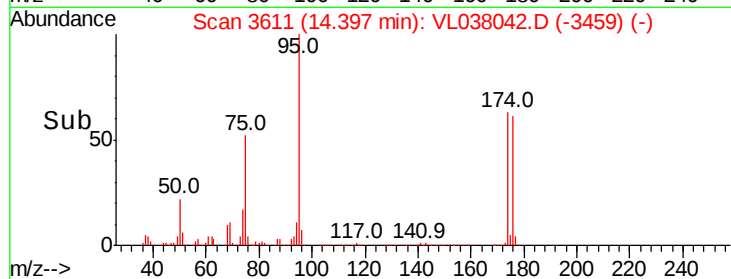
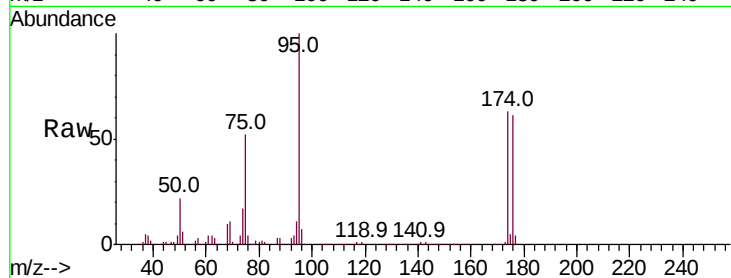
Tot Ion: 95 Resp: 1739366

Ion Ratio Lower Upper

95 100

174 66.1 55.0 82.6

175 5.0 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

