

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL120721\
 Data File : VL038149.D
 Acq On : 7 Dec 2021 14:11
 Operator : SY/AP
 Sample : M4859-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AA-1DL

Quant Time: Dec 07 14:50:34 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111821AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Nov 18 13:16:09 2021
 QLast Update : Thu Nov 18 13:16:09 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	871700	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	2317535	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	1973618	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	1589192	11.16	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	111.60%

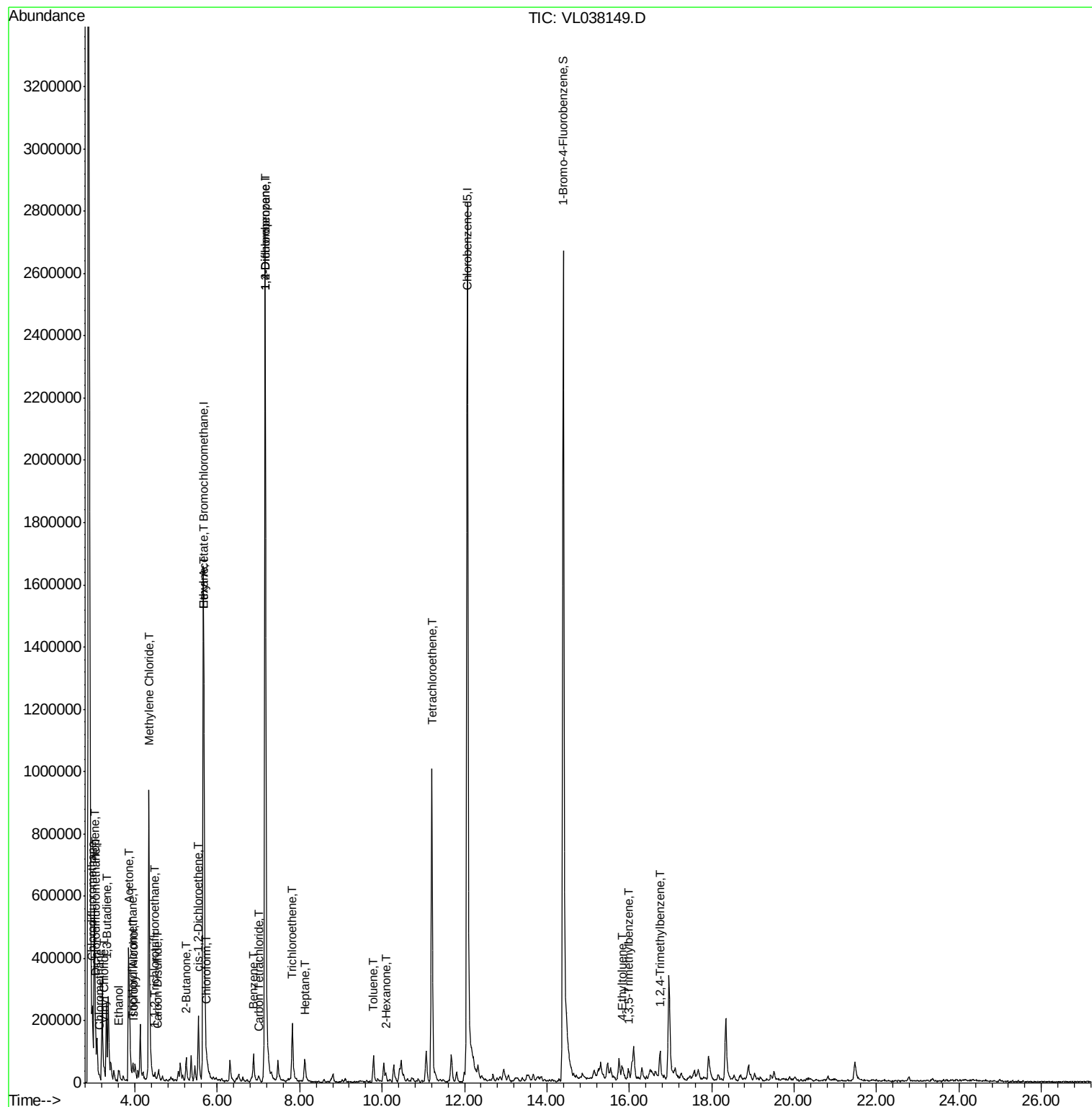
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	38596	0.268	ppbv	94
3) Chlorodifluoromethane	2.97	51	156759	0.856	ppbv #	70
4) Chloromethane	3.14	50	8493	0.136	ppbv #	76
5) Vinyl Chloride	3.26	62	21524	0.352	ppbv	93
9) Propene	3.02	41	276130	4.096	ppbv	95
10) Heptane	8.11	43	12397	0.074	ppbv #	82
11) Trichlorofluoromethane	3.95	101	29946	0.219	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	4.48	101	4763	0.049	ppbv #	45
13) Ethanol	3.61	45	42730	6.559	ppbv	84
15) Acetone	3.84	43	572930	7.581	ppbv	99
16) 1,3-Butadiene	3.31	39	82871	1.405	ppbv #	31
19) Isopropyl Alcohol	3.96	45	2726	0.050	ppbv #	95
20) Methylene Chloride	4.34	84	379336	8.961	ppbv	99
25) Ethyl Acetate	5.68	43	190017	0.756	ppbv #	82
26) Hexane	5.68	57	243781	2.014	ppbv #	46
27) Carbon Disulfide	4.55	76	6817	0.063	ppbv #	66
29) Chloroform	5.74	83	7623	0.043	ppbv	97
31) cis-1,2-Dichloroethene	5.54	61	130109	1.130	ppbv	91
34) 2-Butanone	5.24	43	96439	1.032	ppbv	98
35) Carbon Tetrachloride	7.01	117	7687	0.047	ppbv #	70
36) Benzene	6.88	78	72401	0.313	ppbv #	92
38) Trichloroethene	7.83	130	57346	0.658	ppbv	90
39) 1,2-Dichloropropane	7.16	63	596217	6.723	ppbv #	26
51) 2-Hexanone	10.10	43	4676	0.070	ppbv #	27
52) Tetrachloroethene	11.20	164	244205	2.855	ppbv	96
53) Toluene	9.79	91	64780	0.244	ppbv	98
72) 4-Ethyltoluene	15.82	105	15587	0.053	ppbv #	45
73) 1,3,5-Trimethylbenzene	15.99	105	23151	0.086	ppbv	95
74) 1,2,4-Trimethylbenzene	16.74	105	68641	0.247	ppbv #	73

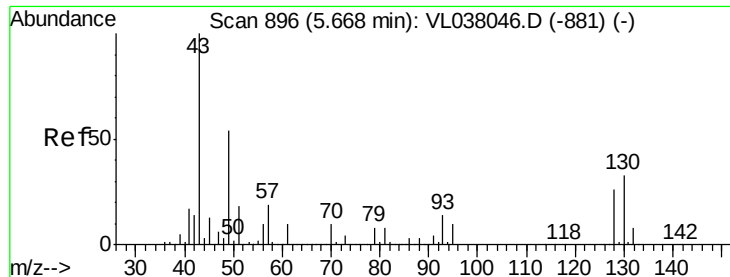
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data File : VL038149.D
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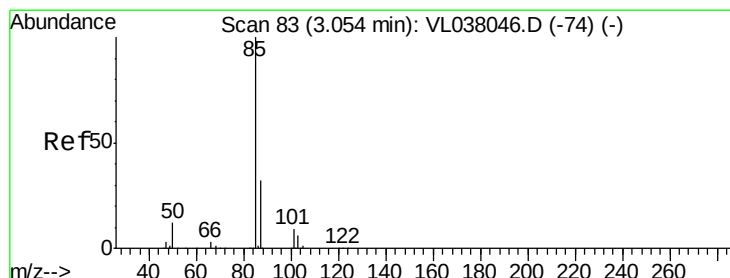
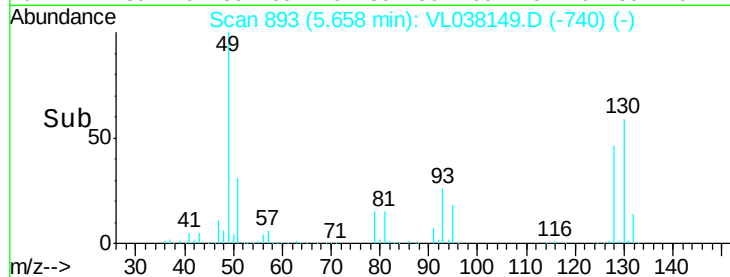
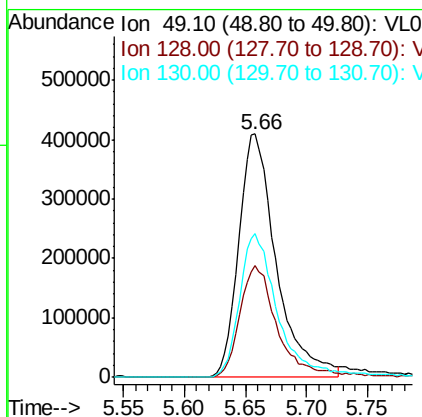
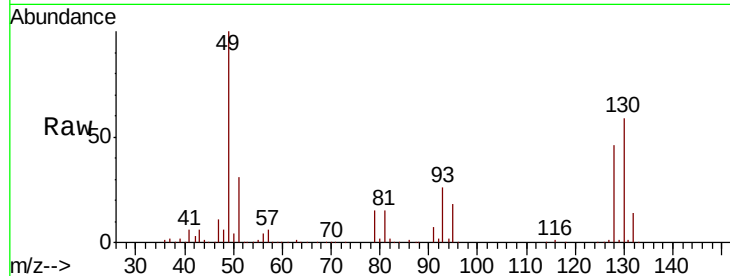
Quant Time: Dec 07 14:50:34 2021
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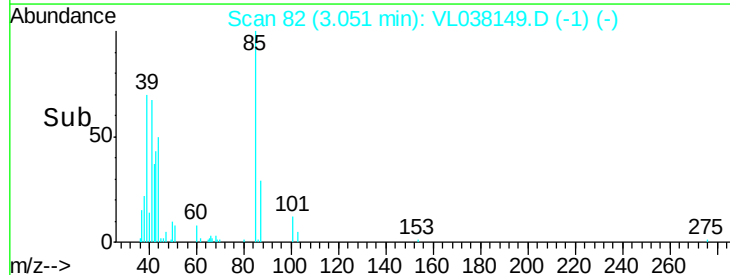
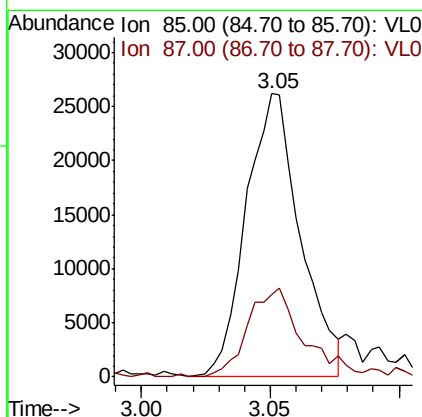
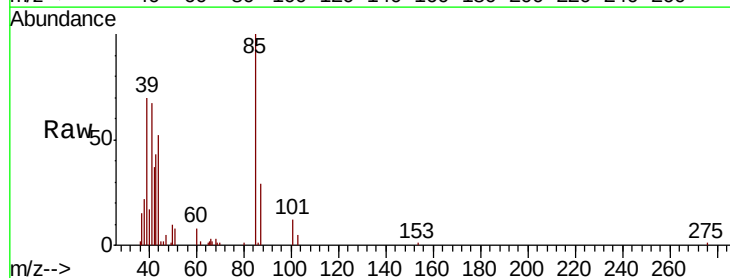
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.66
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 7 Dec 2021 14:11

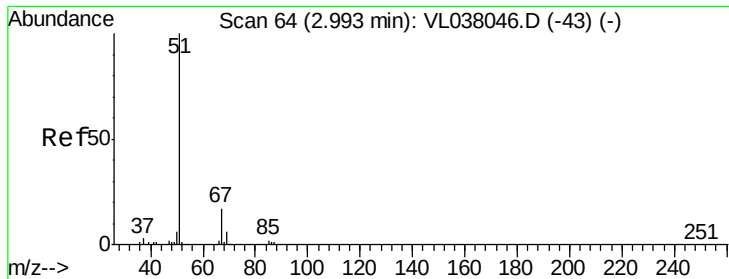
Tot Ion: 49 Resp: 871700
 Ion Ratio Lower Upper
 49 100
 128 47.6 26.5 79.5
 130 60.8 32.5 97.4



#2
 Dichlorodifluoromethane
 Concen: 0.268 ppbv
 RT: 3.05 min Scan# 82
 Delta R.T. -0.00 min
 Lab File: VL038149.D
 Acq: 7 Dec 2021 14:11

Tgt Ion: 85 Resp: 38596
 Ion Ratio Lower Upper
 85 100
 87 29.1 25.8 38.6





#3

Chlorodifluoromethane

Concen: 0.856 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

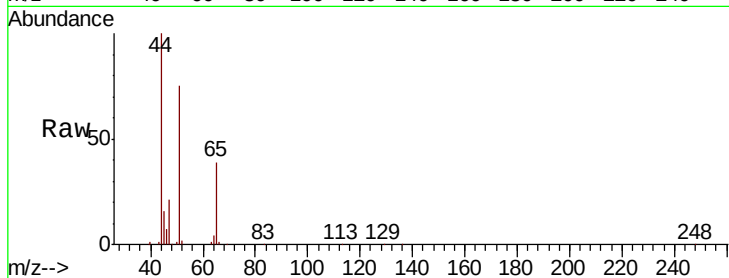
Acq: 7 Dec 2021 14:11

Tot Ion: 51 Resp: 156759

Ion Ratio Lower Upper

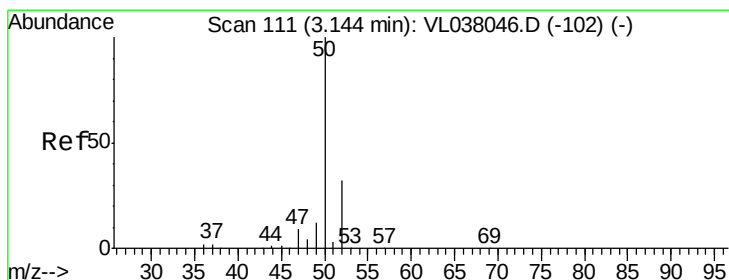
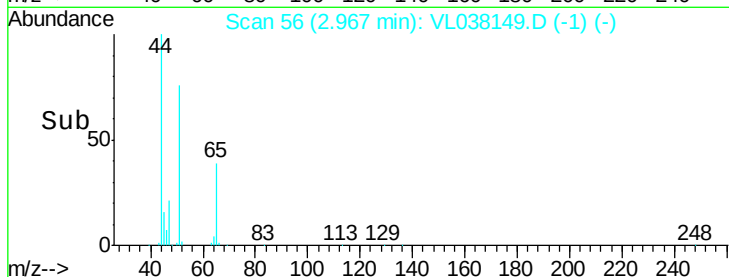
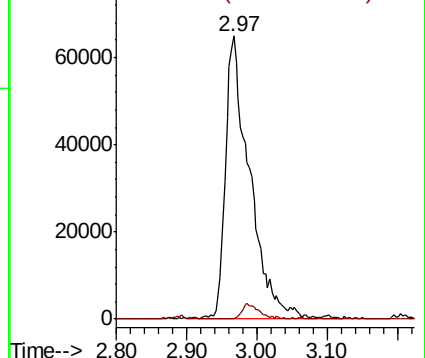
51 100

67 4.0 13.8 20.8#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.136 ppbv

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL038149.D

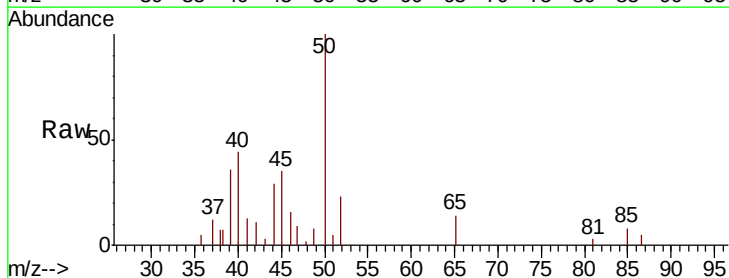
Acq: 7 Dec 2021 14:11

Tgt Ion: 50 Resp: 8493

Ion Ratio Lower Upper

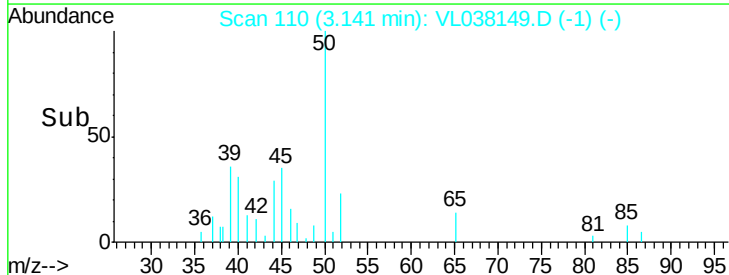
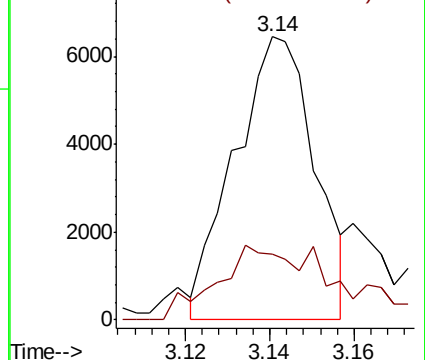
50 100

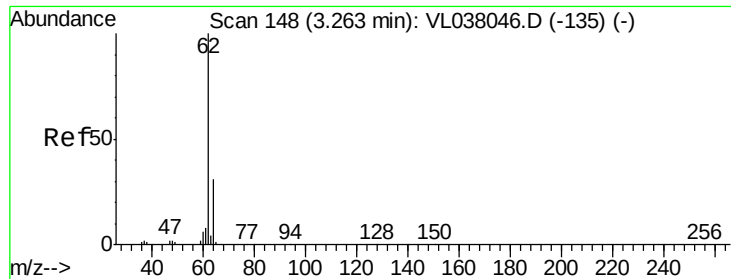
52 18.2 25.4 38.0#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.352 ppbv

RT: 3.26 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: AA-1DL

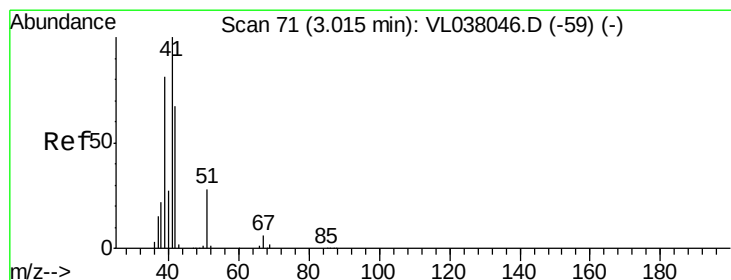
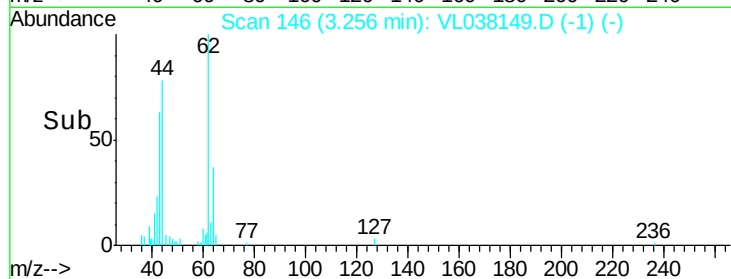
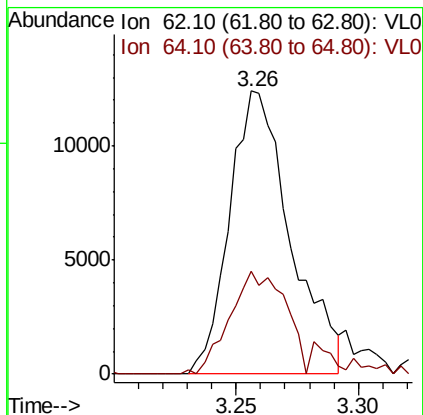
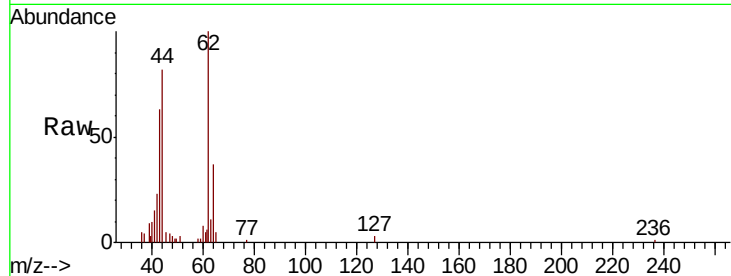
Acq: 7 Dec 2021 14:11

Tot Ion: 62 Resp: 21524

Ion Ratio Lower Upper

62 100

64 35.2 25.1 37.7



#9

Propene

Concen: 4.096 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.00 min

Lab File: VL038149.D

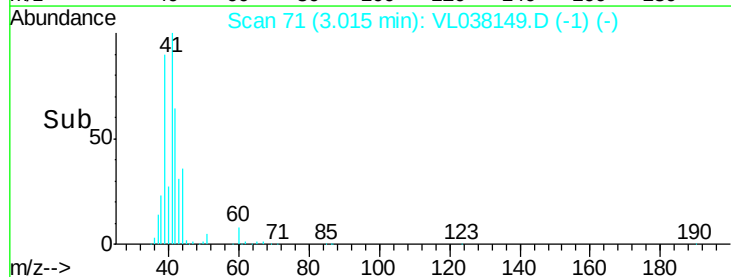
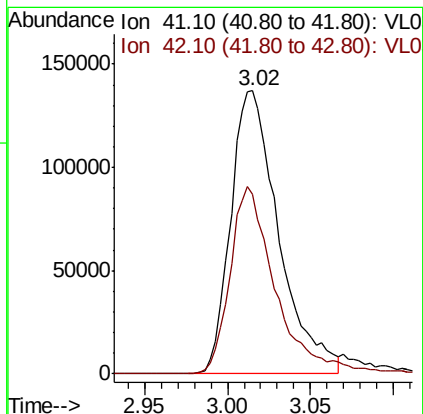
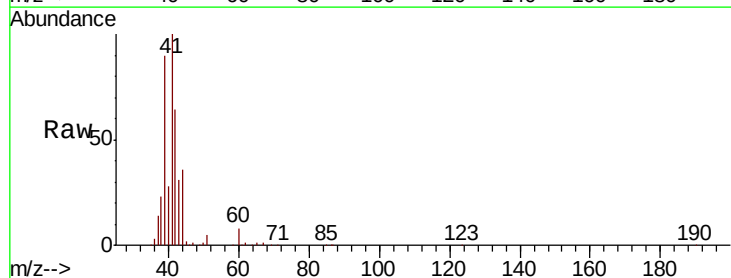
Acq: 7 Dec 2021 14:11

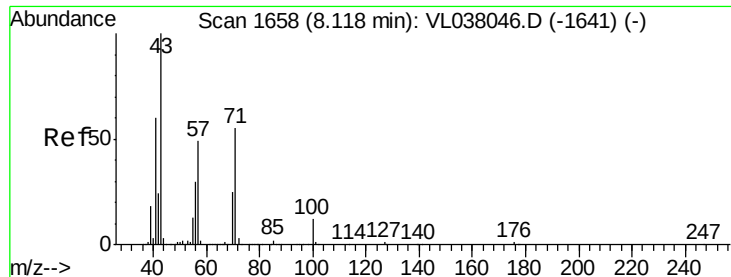
Tgt Ion: 41 Resp: 276130

Ion Ratio Lower Upper

41 100

42 63.3 53.8 80.8





#10

Heptane

Concen: 0.074 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

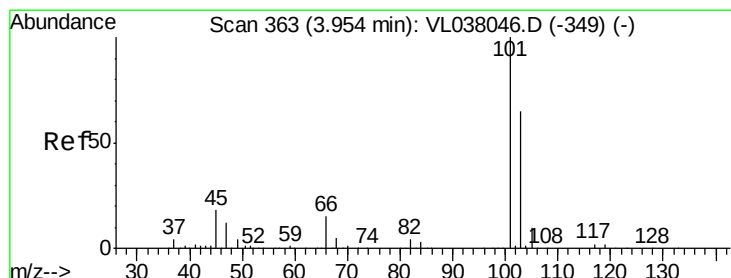
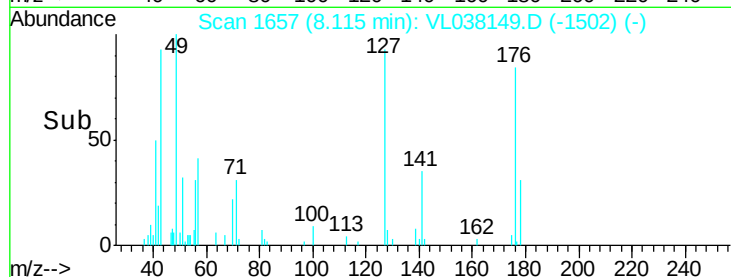
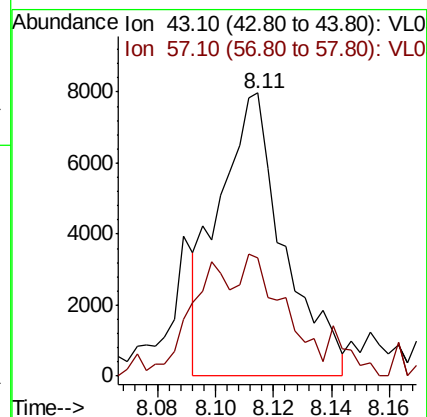
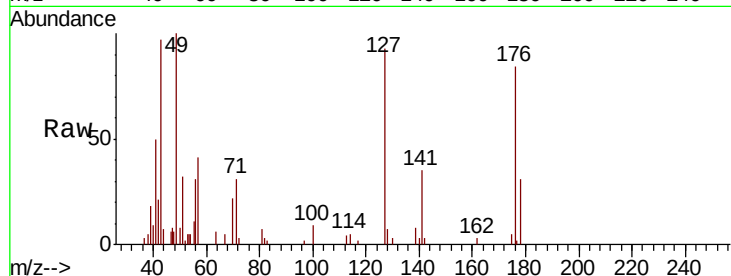
Acq: 7 Dec 2021 14:11

Tot Ion: 43 Resp: 12397

Ion Ratio Lower Upper

43 100

57 62.7 40.4 60.6#



#11

Trichlorofluoromethane

Concen: 0.219 ppbv

RT: 3.95 min Scan# 362

Delta R.T. -0.00 min

Lab File: VL038149.D

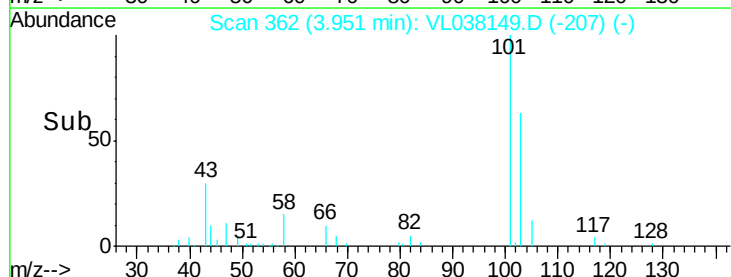
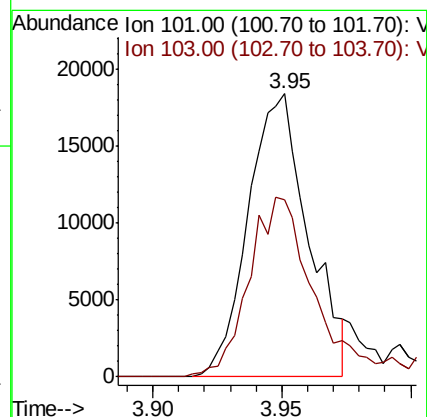
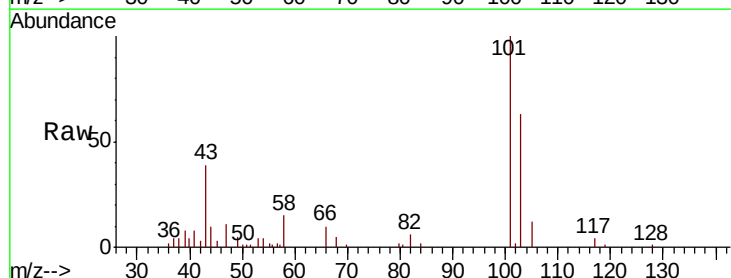
Acq: 7 Dec 2021 14:11

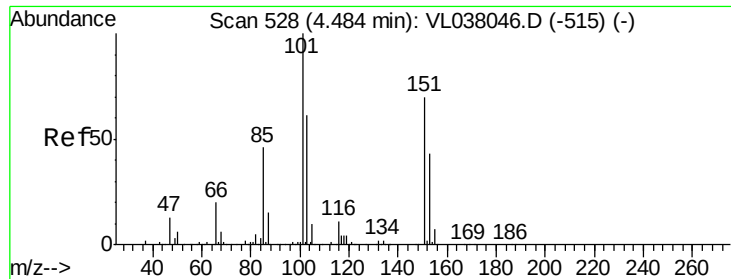
Tgt Ion: 101 Resp: 29946

Ion Ratio Lower Upper

101 100

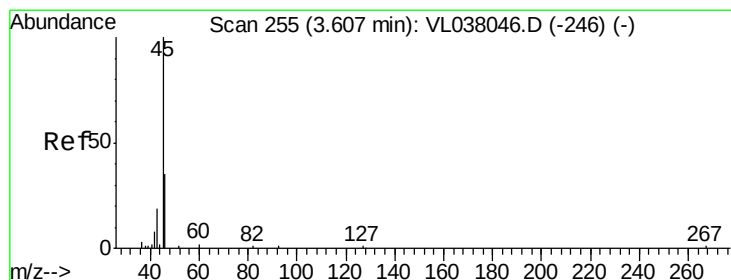
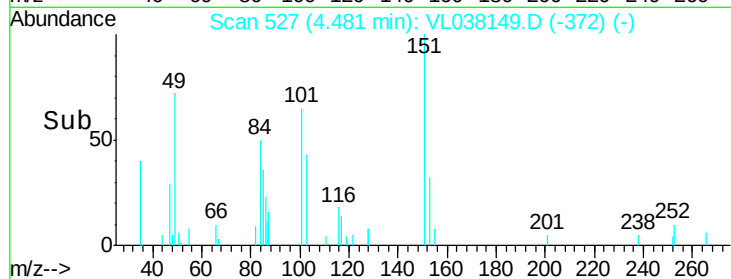
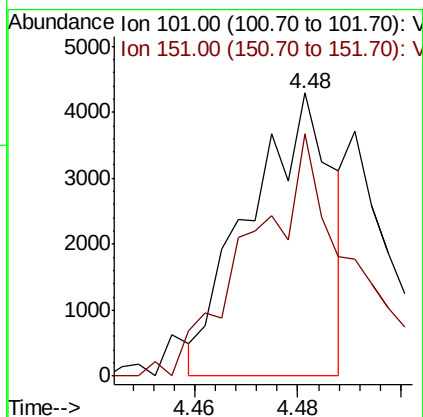
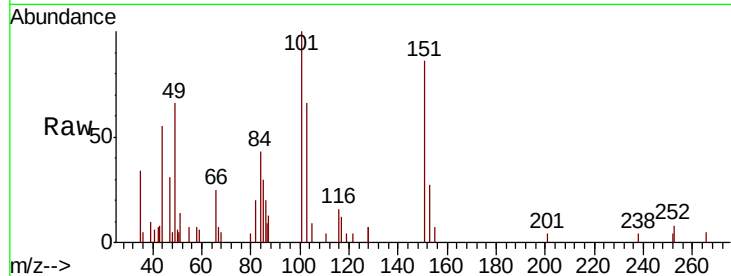
103 61.7 51.8 77.6





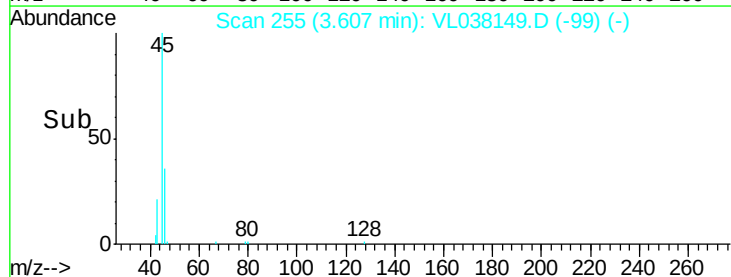
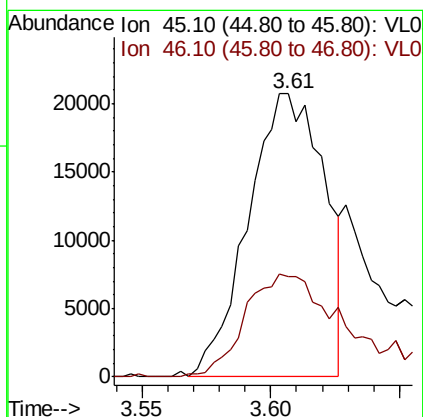
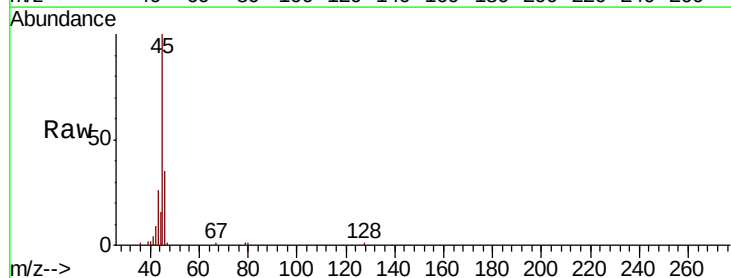
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.049 ppbv
 RT: 4.48
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 7 Dec 2021 14:11

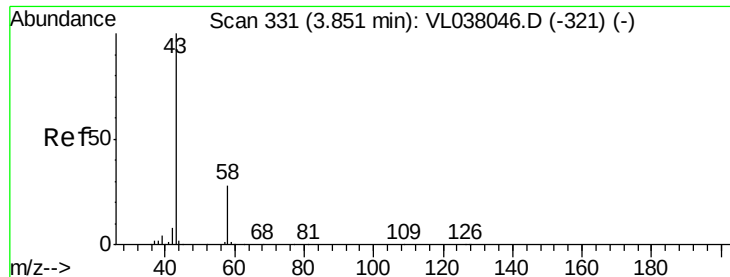
Tot Ion:101 Resp: 4763
 Ion Ratio Lower Upper
 101 100
 151 120.1 59.0 88.4#



#13
 Ethanol
 Concen: 6.559 ppbv
 RT: 3.61 min Scan# 255
 Delta R.T. 0.00 min
 Lab File: VL038149.D
 Acq: 7 Dec 2021 14:11

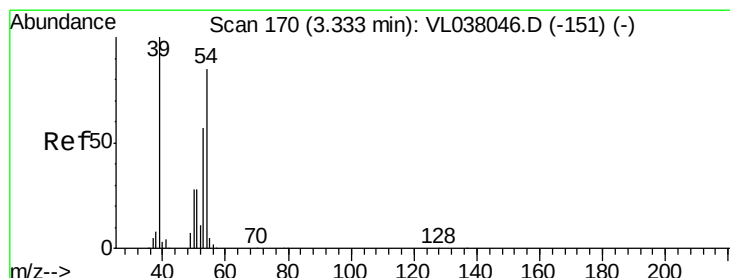
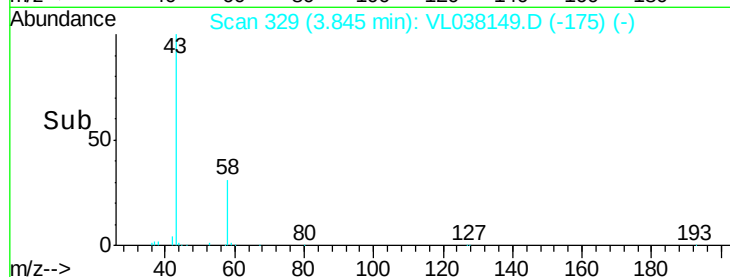
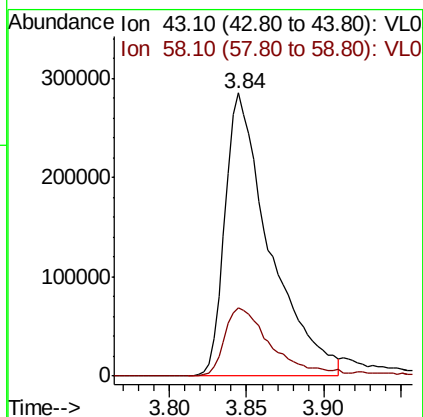
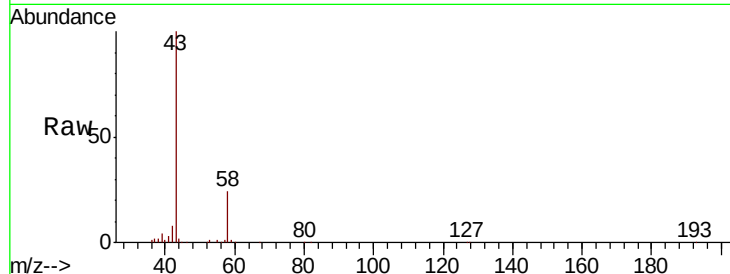
Tgt Ion: 45 Resp: 42730
 Ion Ratio Lower Upper
 45 100
 46 54.4 17.6 70.2





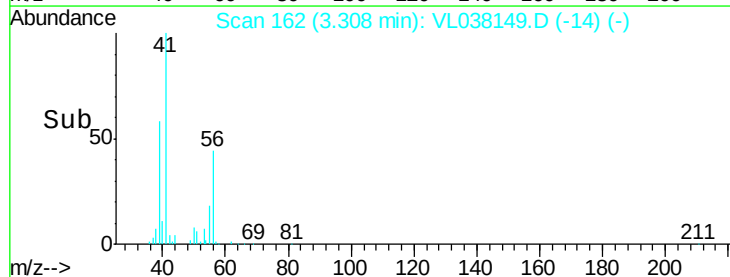
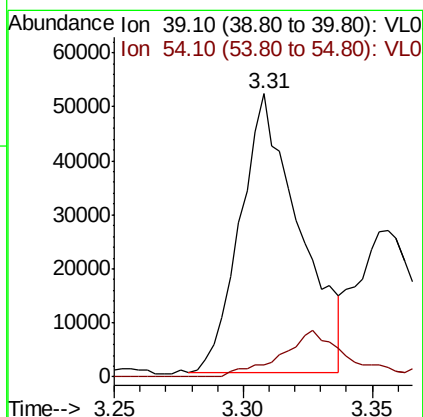
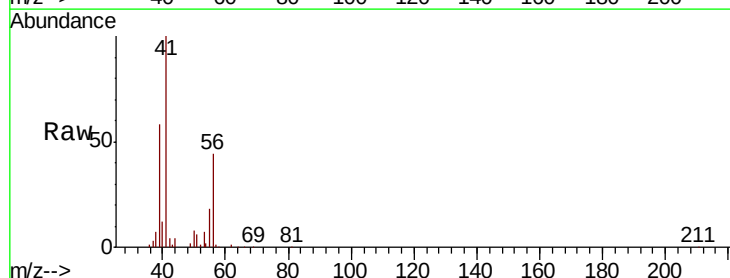
#15
Acetone
Concen: 7.581 ppbv
RT: 3.84
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 7 Dec 2021 14:11

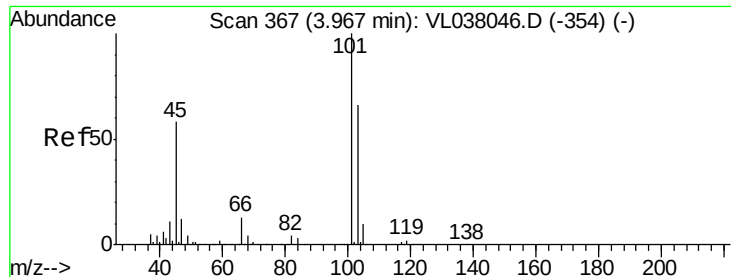
Tot Ion: 43 Resp: 572930
Ion Ratio Lower Upper
43 100
58 27.3 22.4 33.6



#16
1,3-Butadiene
Concen: 1.405 ppbv
RT: 3.31 min Scan# 162
Delta R.T. -0.03 min
Lab File: VL038149.D
Acq: 7 Dec 2021 14:11

Tgt Ion: 39 Resp: 82871
Ion Ratio Lower Upper
39 100
54 19.1 64.4 96.6#





#19

Isopropyl Alcohol

Concen: 0.050 ppbv

RT: 3.96 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

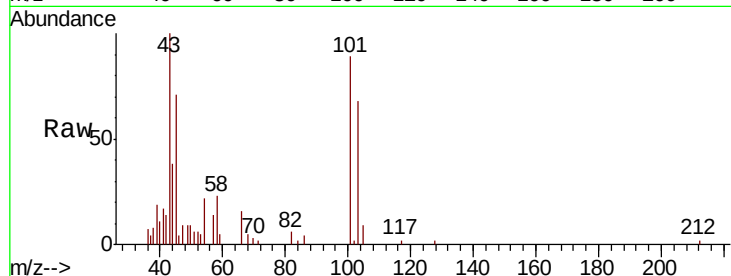
Acq: 7 Dec 2021 14:11

Tot Ion: 45 Resp: 2726

Ion Ratio Lower Upper

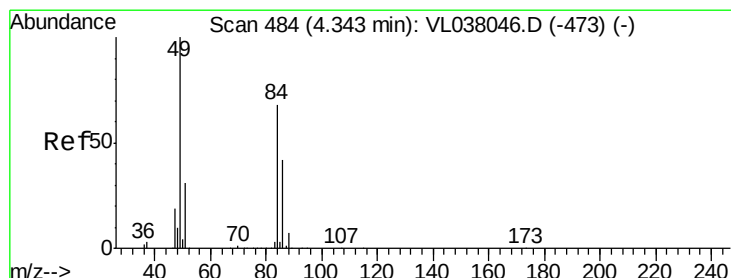
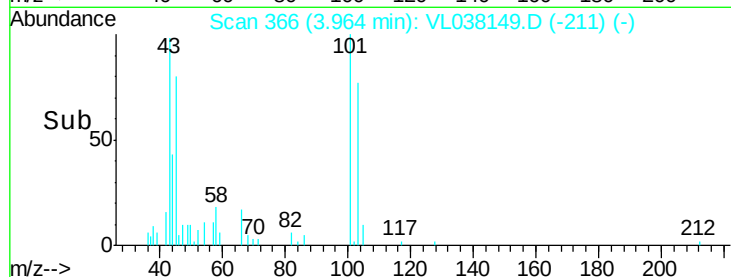
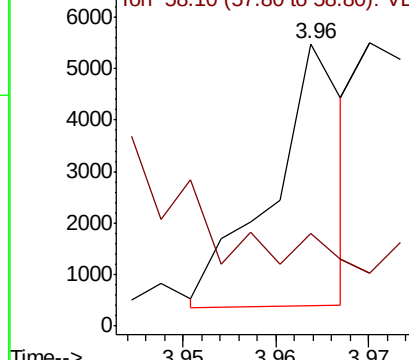
45 100

58 0.0 1.4 2.0#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 8.961 ppbv

RT: 4.34 min Scan# 483

Delta R.T. -0.00 min

Lab File: VL038149.D

Acq: 7 Dec 2021 14:11

Tgt Ion: 84 Resp: 379336

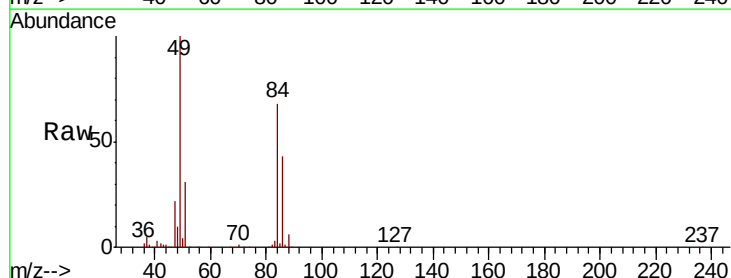
Ion Ratio Lower Upper

84 100

49 147.7 118.2 177.2

51 45.5 36.8 55.2

86 63.1 49.0 73.6

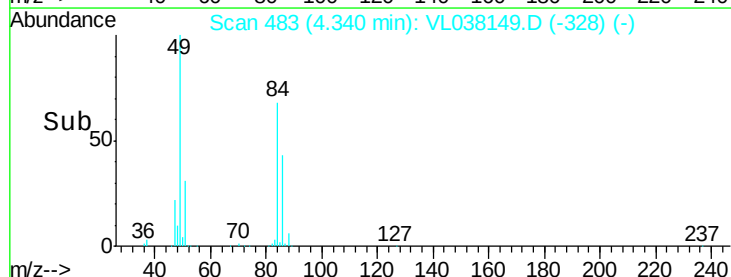
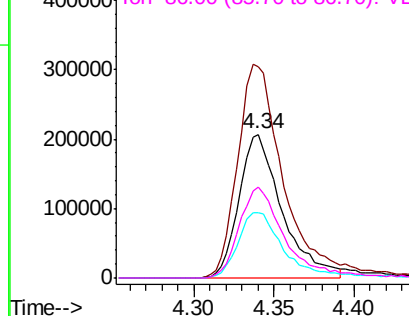


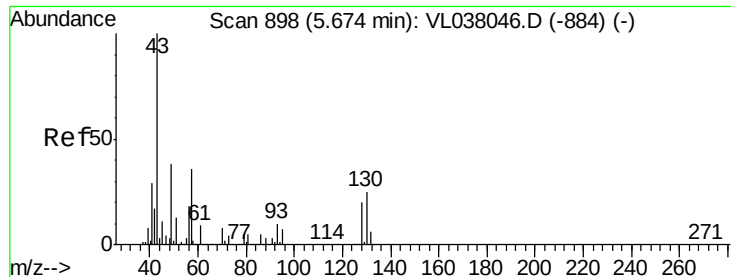
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

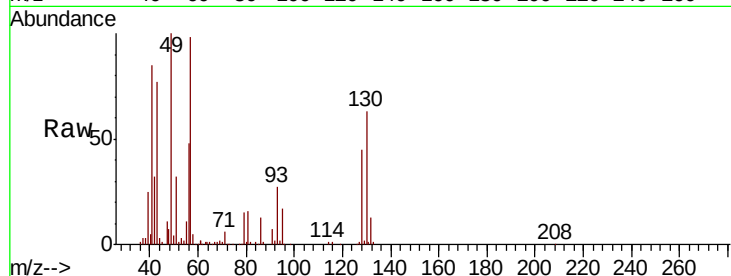
Ion 86.00 (85.70 to 86.70): VL0



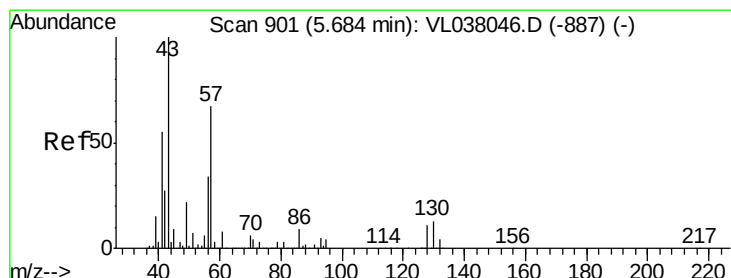
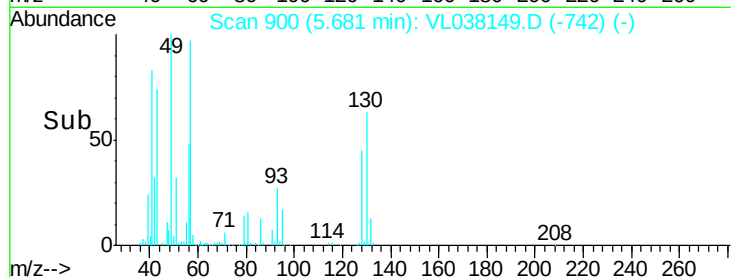
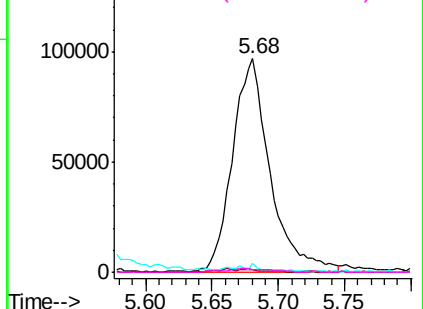


#25
Ethyl Acetate
Concen: 0.756 ppbv
RT: 5.68
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 7 Dec 2021 14:11

Tot Ion:	43	Resp:	190017
Ion	Ratio	Lower	Upper
43	100		
45	1.8	7.9	11.9#
61	3.3	7.8	11.6#
70	2.5	5.8	8.8#

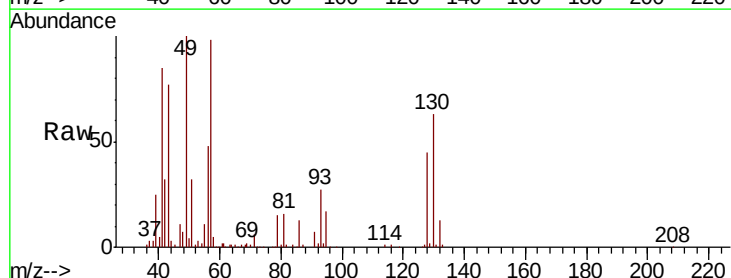


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

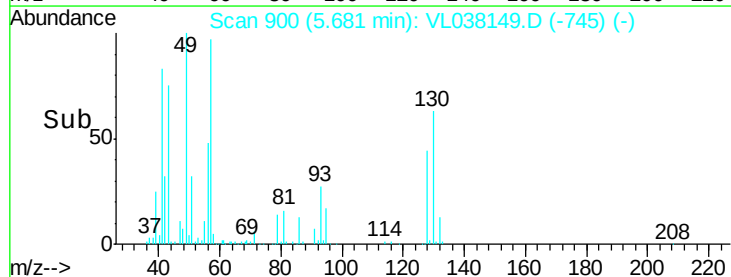
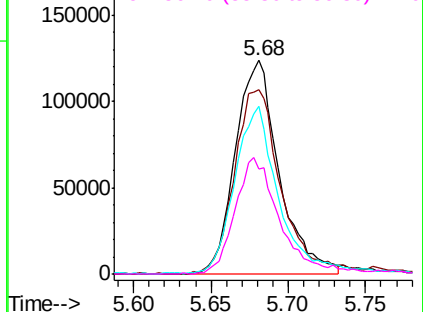


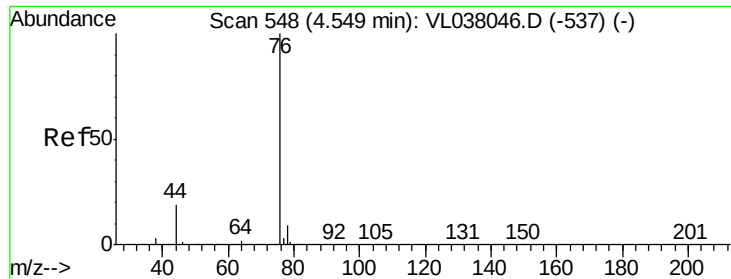
#26
Hexane
Concen: 2.014 ppbv
RT: 5.68 min Scan# 900
Delta R.T.: -0.00 min
Lab File: VL038149.D
Acq: 7 Dec 2021 14:11

Tgt Ion:	57	Resp:	243781
Ion	Ratio	Lower	Upper
57	100		
41	95.4	71.4	107.2
43	80.5	174.6	261.8#
56	56.9	43.2	64.8



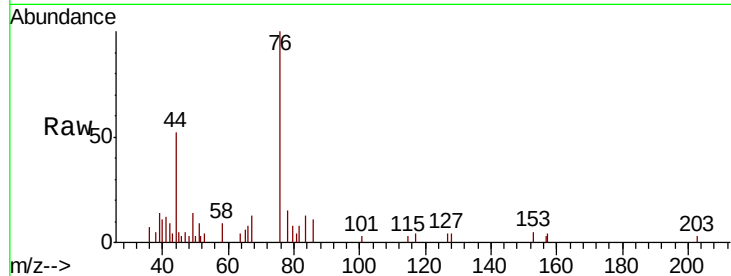
Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0



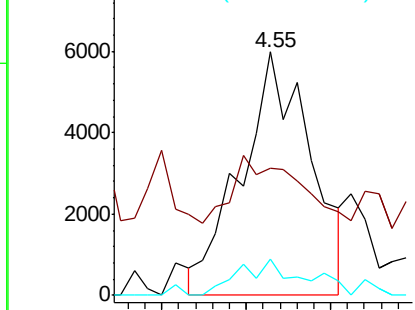


#27
Carbon Disulfide
Concen: 0.063 ppbv
RT: 4.55
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 7 Dec 2021 14:11

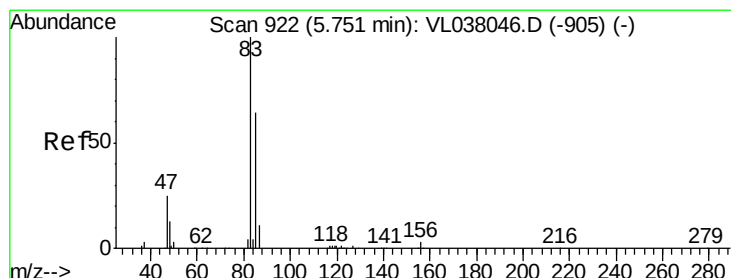
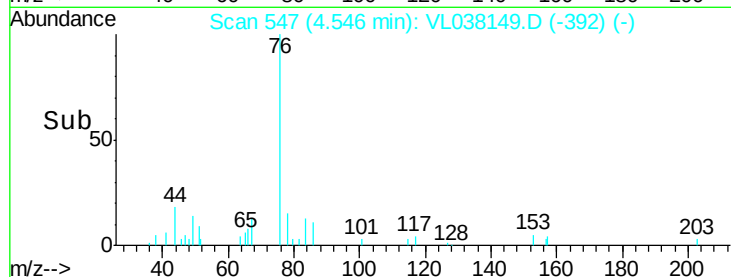
Tot Ion	Ratio	Lower	Upper
76	100		
44	0.0	14.9	22.3#
78	16.4	7.6	11.4#



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0

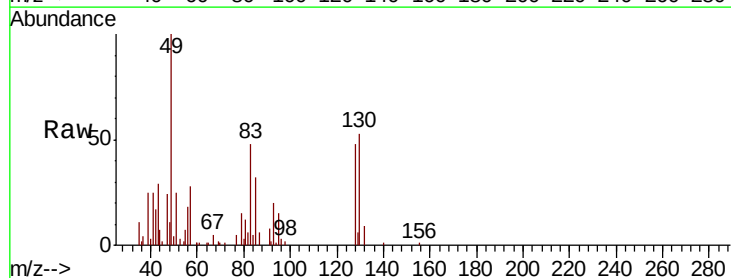


Time-->

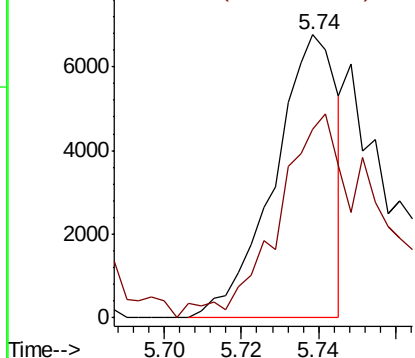


#29
Chloroform
Concen: 0.043 ppbv
RT: 5.74 min Scan# 918
Delta R.T. -0.01 min
Lab File: VL038149.D
Acq: 7 Dec 2021 14:11

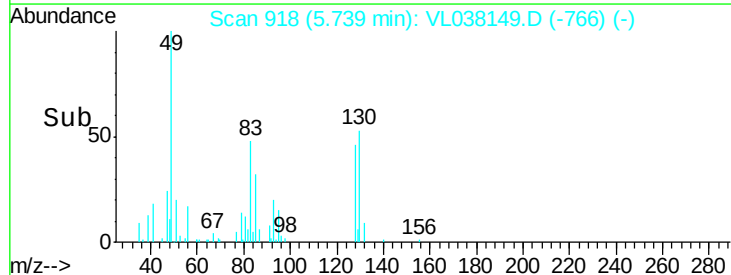
Tgt Ion	Ratio	Lower	Upper
83	100		
85	61.4	51.0	76.6

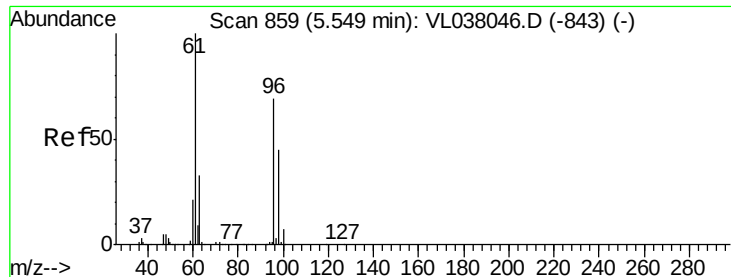


Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0



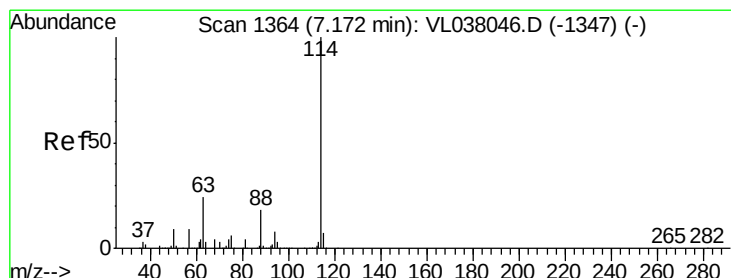
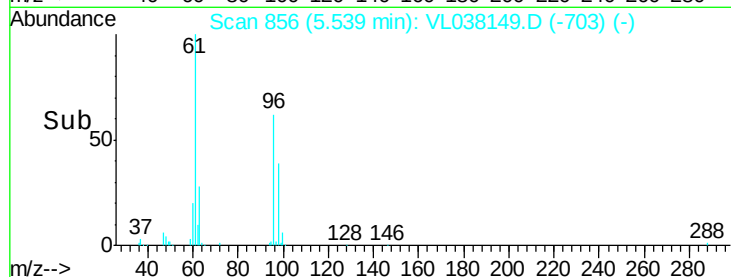
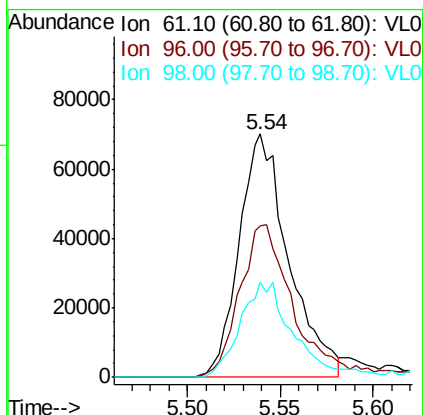
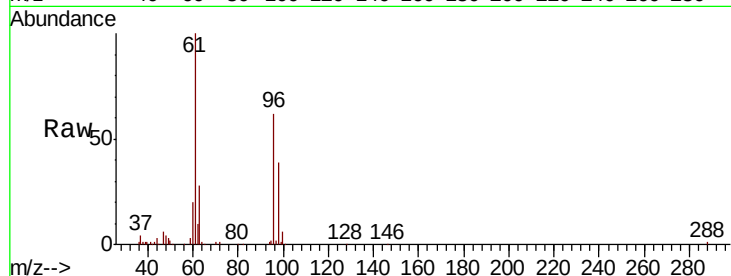
Time-->





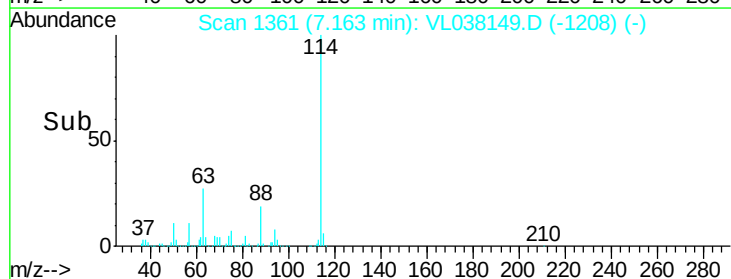
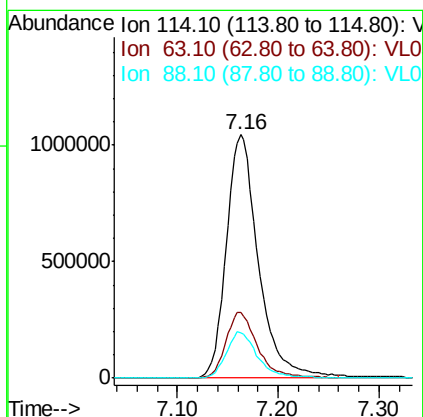
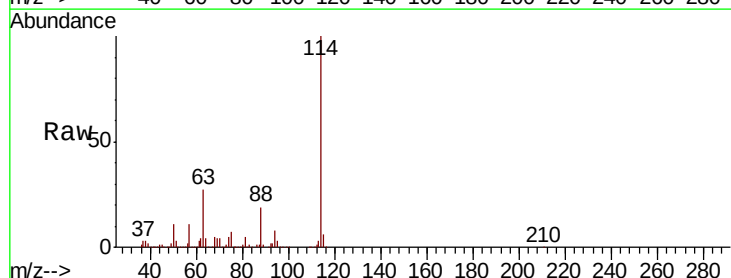
#31
 cis-1,2-Dichloroethene
 Concen: 1.130 ppbv
 RT: 5.54
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 7 Dec 2021 14:11

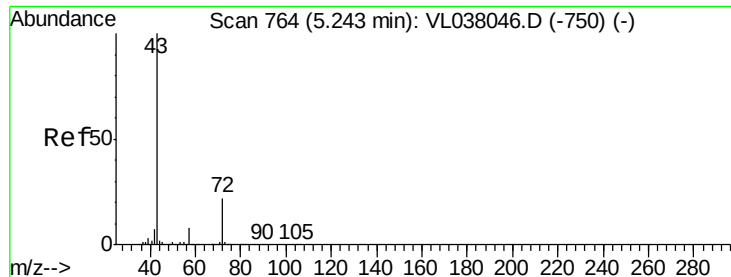
Tot Ion	Ratio	Lower	Upper
61	100		
96	62.2	55.4	83.2
98	39.2	35.7	53.5



#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1361
 Delta R.T. -0.01 min
 Lab File: VL038149.D
 Acq: 7 Dec 2021 14:11

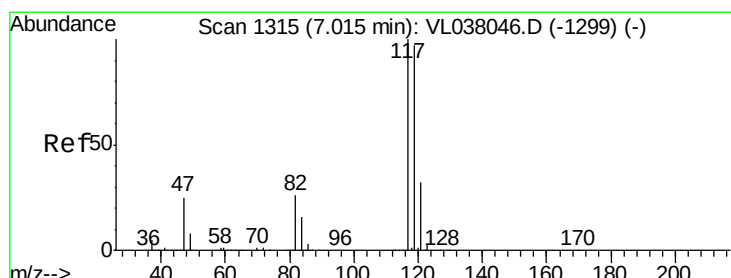
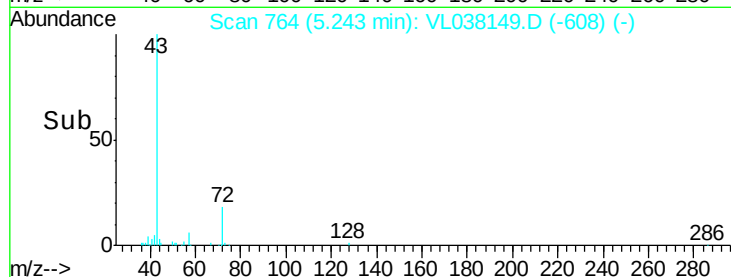
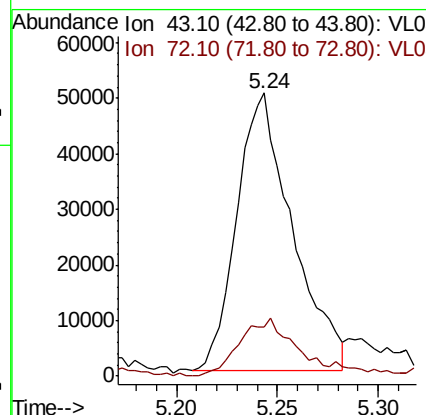
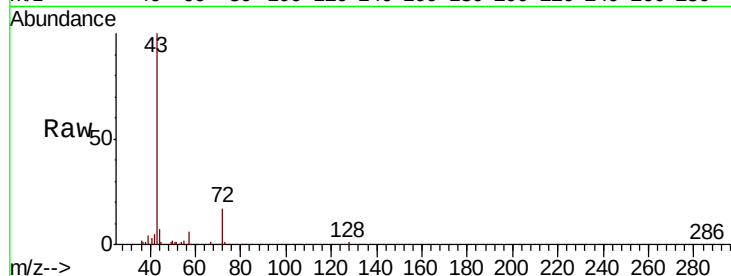
Tgt Ion	Ratio	Lower	Upper
114	100		
63	27.0	19.7	29.5
88	18.7	14.4	21.6





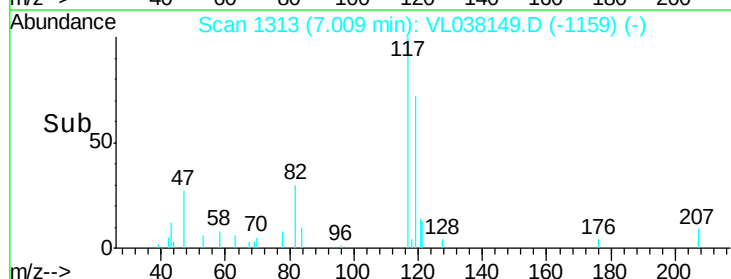
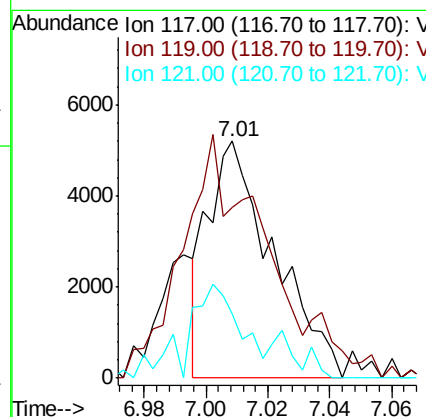
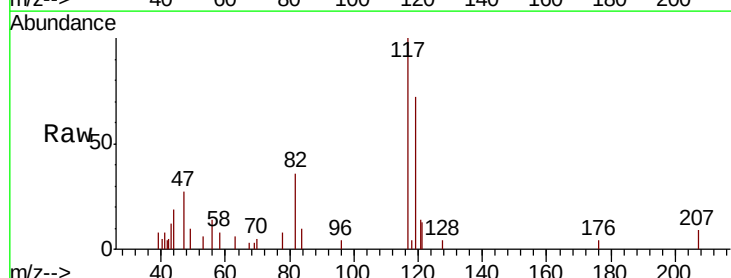
#34
2-Butanone
Concen: 1.032 ppbv
RT: 5.24
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 7 Dec 2021 14:11

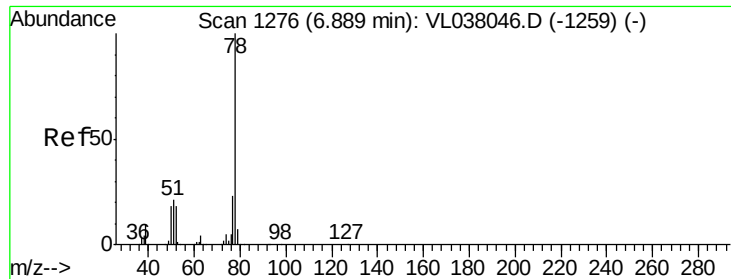
Tot Ion: 43 Resp: 96439
Ion Ratio Lower Upper
43 100
72 24.4 18.8 28.2



#35
Carbon Tetrachloride
Concen: 0.047 ppbv
RT: 7.01 min Scan# 1313
Delta R.T. -0.01 min
Lab File: VL038149.D
Acq: 7 Dec 2021 14:11

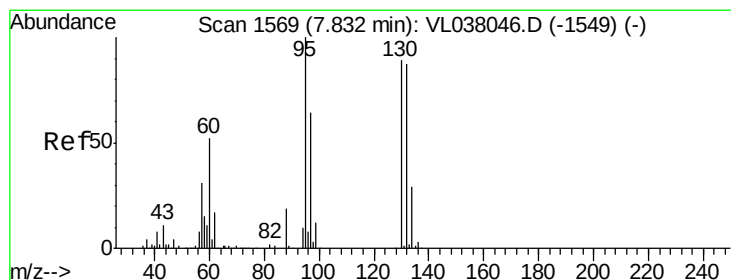
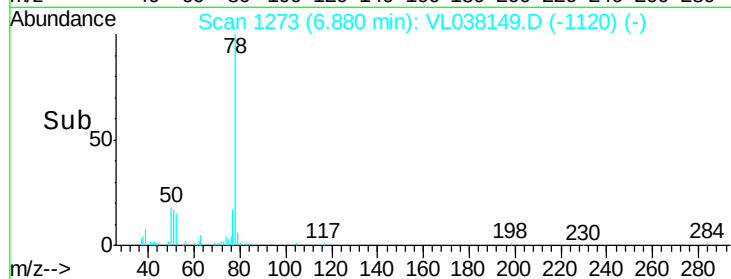
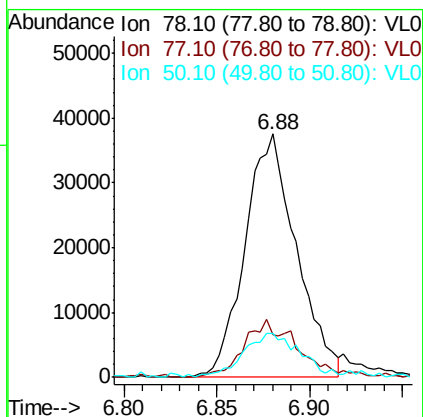
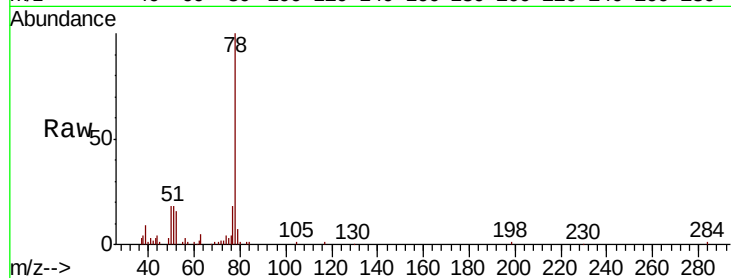
Tgt Ion: 117 Resp: 7687
Ion Ratio Lower Upper
117 100
119 60.6 77.7 116.5#
121 27.1 25.6 38.4





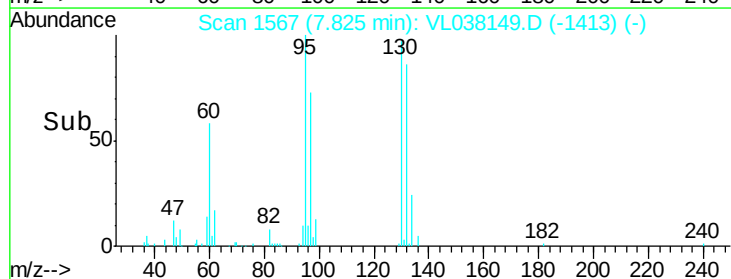
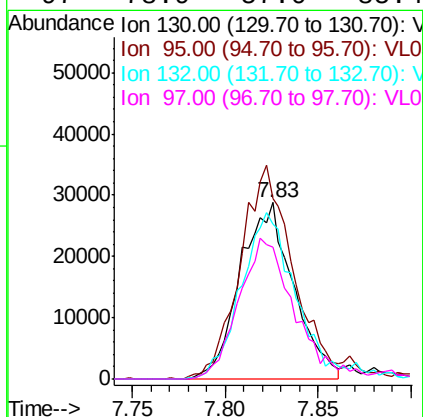
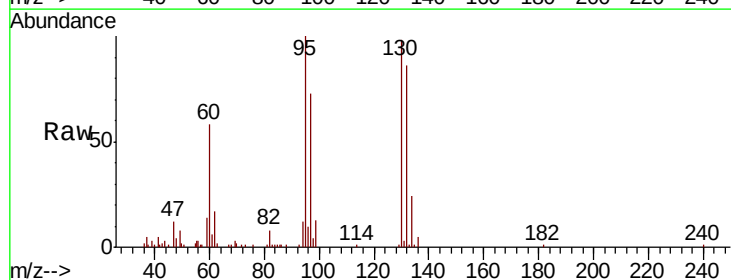
#36
Benzene
Concen: 0.313 ppbv
RT: 6.88
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 7 Dec 2021 14:11

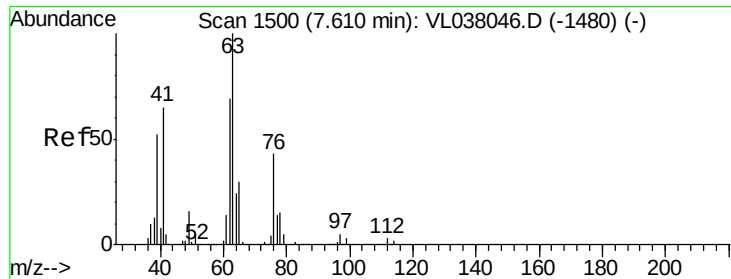
Tot Ion: 78 Resp: 72401
Ion Ratio Lower Upper
78 100
77 17.6 18.2 27.4#
50 16.9 14.7 22.1



#38
Trichloroethene
Concen: 0.658 ppbv
RT: 7.83 min Scan# 1567
Delta R.T. -0.01 min
Lab File: VL038149.D
Acq: 7 Dec 2021 14:11

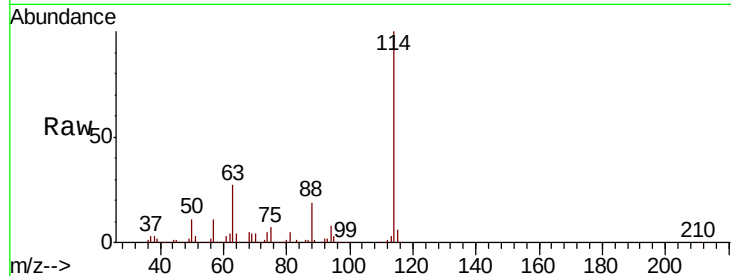
Tgt Ion:130 Resp: 57346
Ion Ratio Lower Upper
130 100
95 101.4 89.4 134.2
132 87.2 78.2 117.2
97 78.9 57.0 85.4



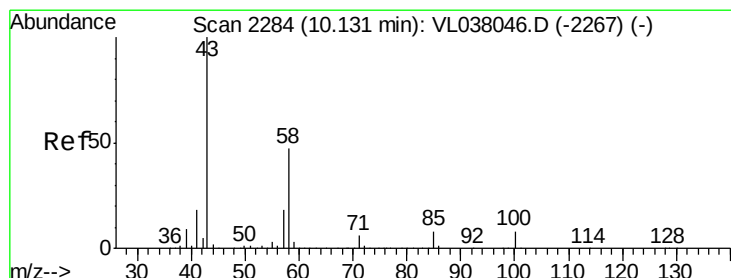
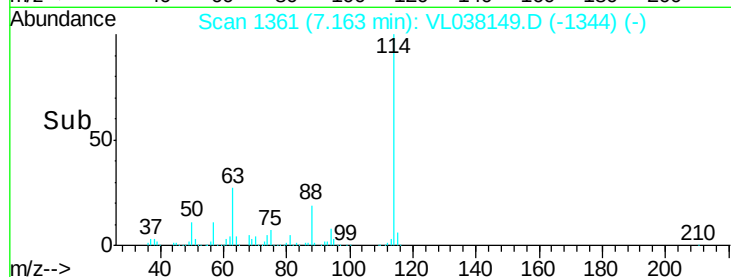
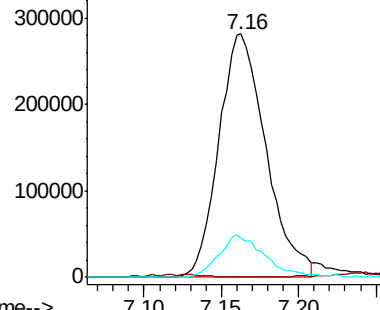


#39
 1,2-Dichloropropane
 Concen: 6.723 ppbv
 RT: 7.16
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 7 Dec 2021 14:11

Tot Ion	63	Resp	596217
Ion	Ratio	Lower	Upper
63	100		
41	0.1	52.3	78.5#
62	15.9	55.1	82.7#

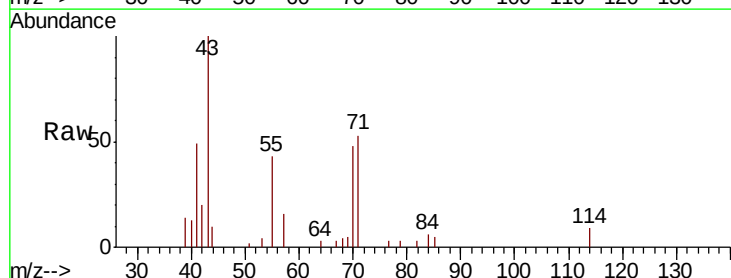


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

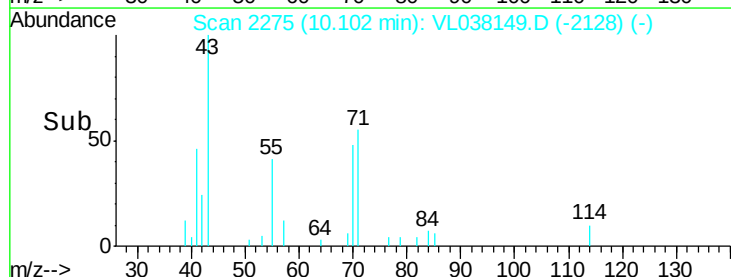
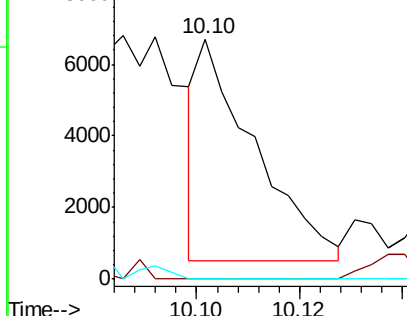


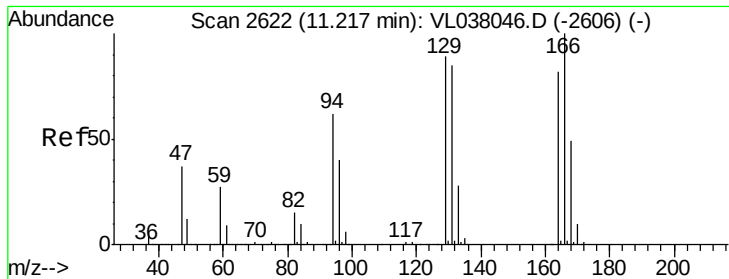
#51
 2-Hexanone
 Concen: 0.070 ppbv
 RT: 10.10 min Scan# 2275
 Delta R.T. -0.03 min
 Lab File: VL038149.D
 Acq: 7 Dec 2021 14:11

Tgt Ion	43	Resp	4676
Ion	Ratio	Lower	Upper
43	100		
58	0.0	41.1	61.7#
98	0.0	0.1	0.1#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 58.10 (57.80 to 58.80): VL0
 Ion 98.20 (97.90 to 98.90): VL0





#52

Tetrachloroethene

Concen: 2.855 ppbv

RT: 11.20

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 7 Dec 2021 14:11

Tot Ion:164 Resp: 244205

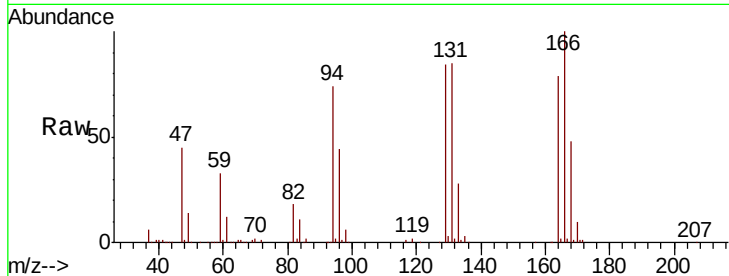
Ion Ratio Lower Upper

164 100

166 126.6 97.2 145.8

129 106.1 86.9 130.3

131 107.6 82.8 124.2

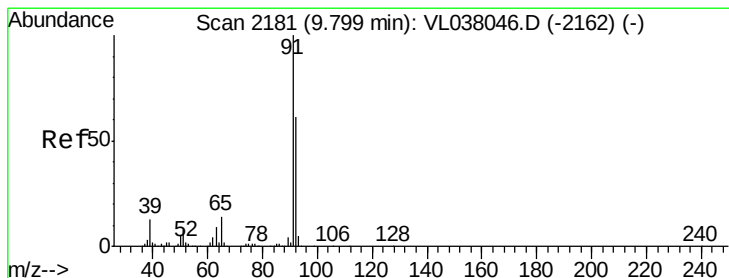
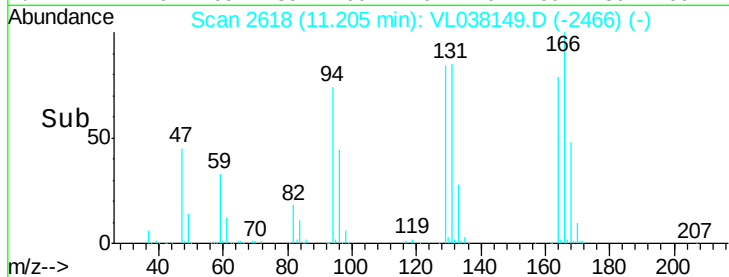
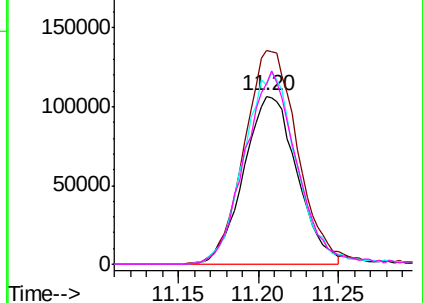


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.244 ppbv

RT: 9.79 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL038149.D

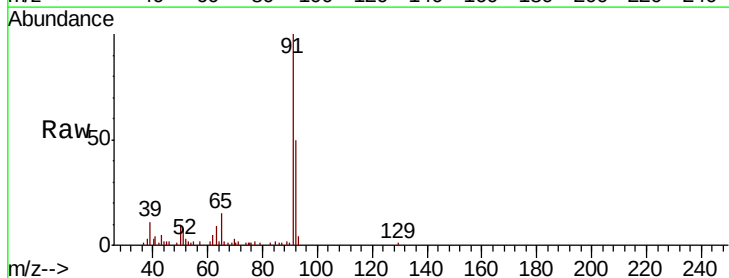
Acq: 7 Dec 2021 14:11

Tgt Ion: 91 Resp: 64780

Ion Ratio Lower Upper

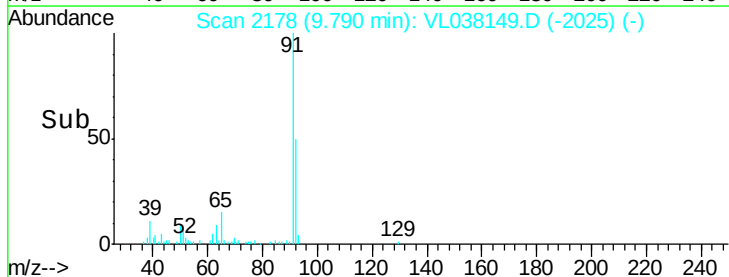
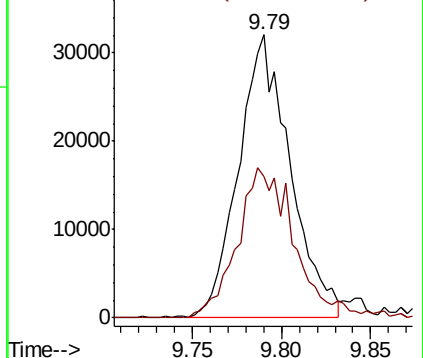
91 100

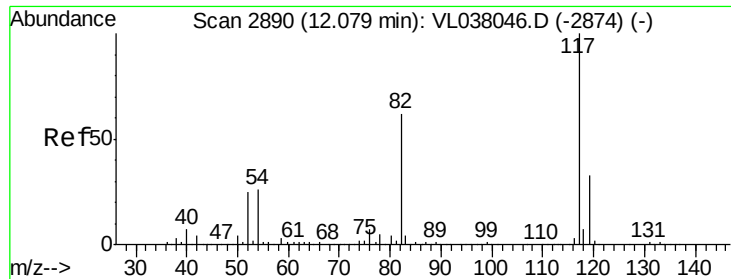
92 60.5 49.7 74.5



Abundance Ion 91.10 (90.80 to 91.80): VL0

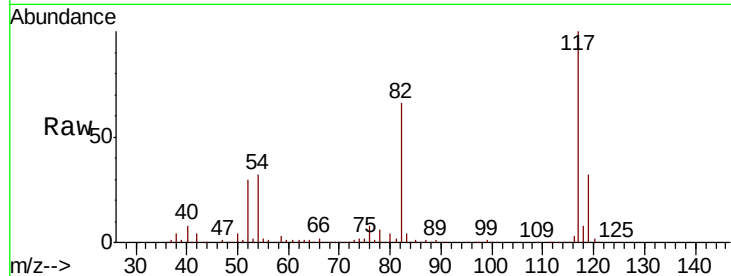
Ion 92.10 (91.80 to 92.80): VL0



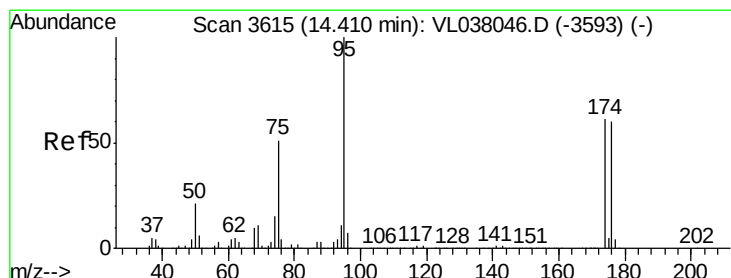
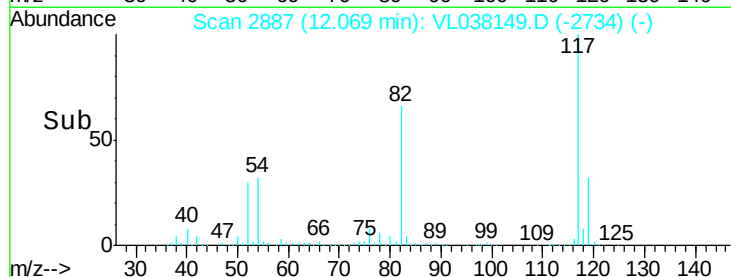
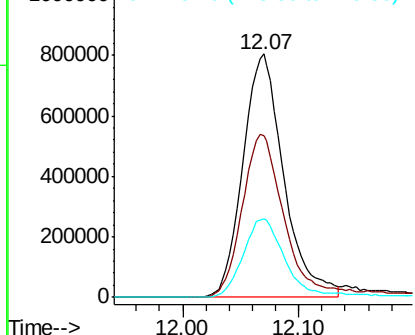


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.07 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 7 Dec 2021 14:11

Tot Ion: 117 Resp: 1973618
Ion Ratio Lower Upper
117 100
82 72.3 52.8 79.2
119 34.9 26.8 40.2

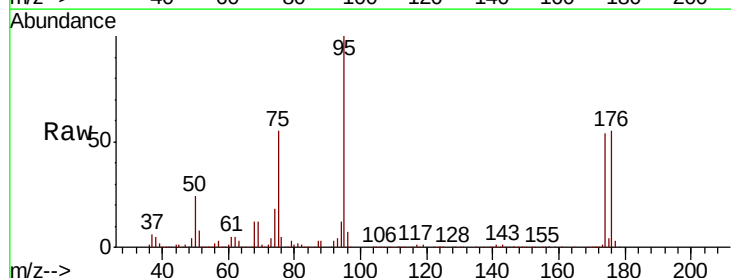


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

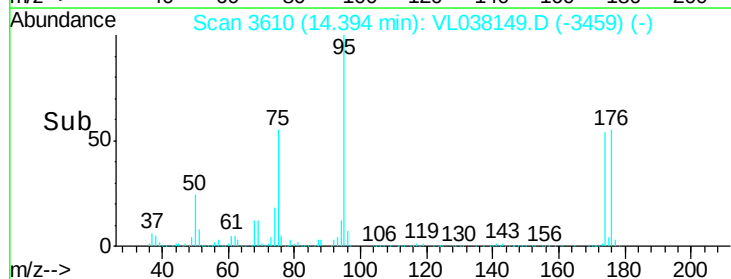
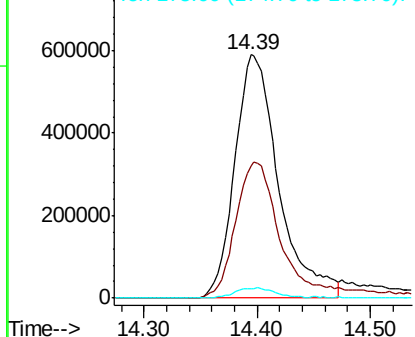


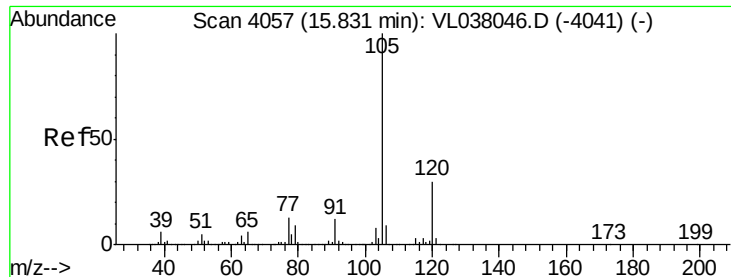
#68
1-Bromo-4-Fluorobenzene
Concen: 11.163 ppbv
RT: 14.39 min Scan# 3610
Delta R.T.: -0.02 min
Lab File: VL038149.D
Acq: 7 Dec 2021 14:11

Tgt Ion: 95 Resp: 1589192
Ion Ratio Lower Upper
95 100
174 61.9 53.1 79.7
175 4.3 4.0 6.0



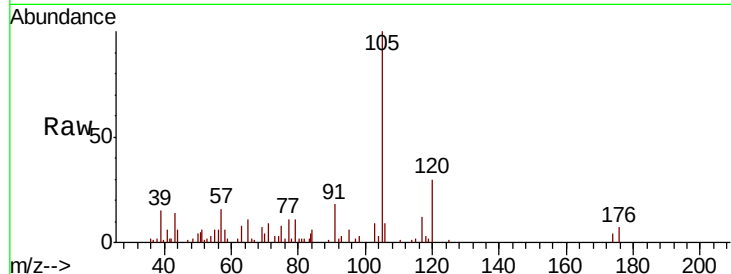
Abundance Ion 95.10 (94.80 to 95.80): VL0
Ion 174.00 (173.70 to 174.70): V
Ion 175.00 (174.70 to 175.70): V



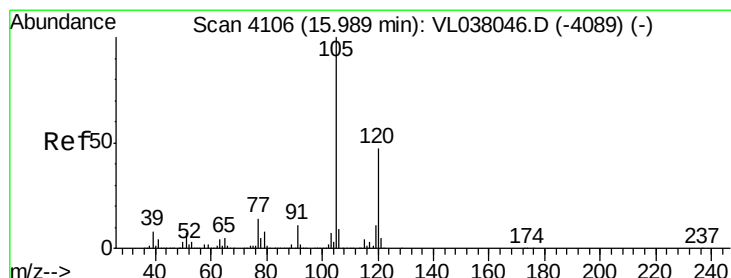
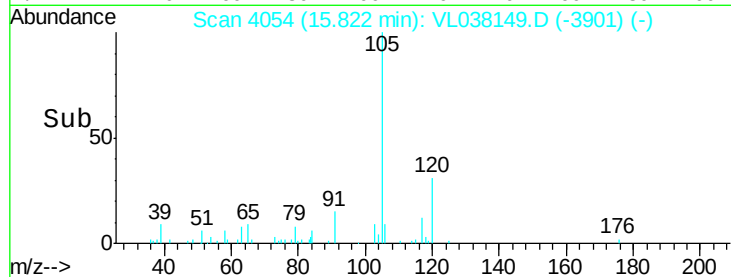
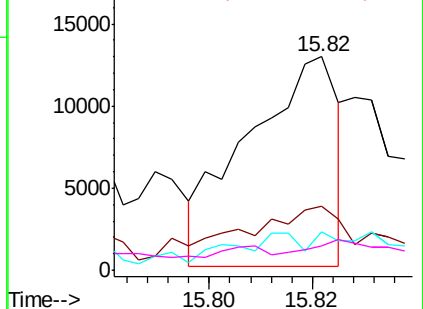


#72
 4-Ethyltoluene
 Concen: 0.053 ppbv
 RT: 15.82 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 7 Dec 2021 14:11

Tot Ion:	105	Resp:	15587
Ion	Ratio	Lower	Upper
105	100		
120	61.6	25.1	37.7#
91	43.5	9.7	14.5#
77	0.0	10.6	16.0#

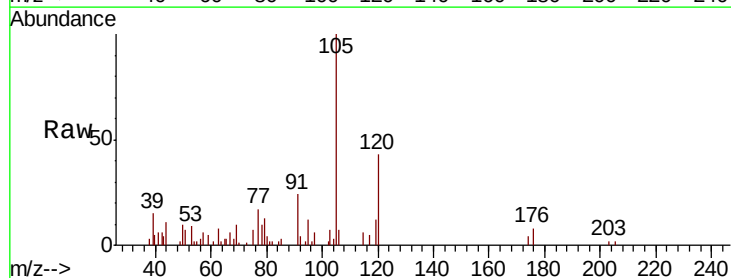


Abundance Ion 105.10 (104.80 to 105.80): V
 Ion 120.20 (119.90 to 120.90): V
 Ion 91.10 (90.80 to 91.80): VL0
 Ion 77.10 (76.80 to 77.80): VL0

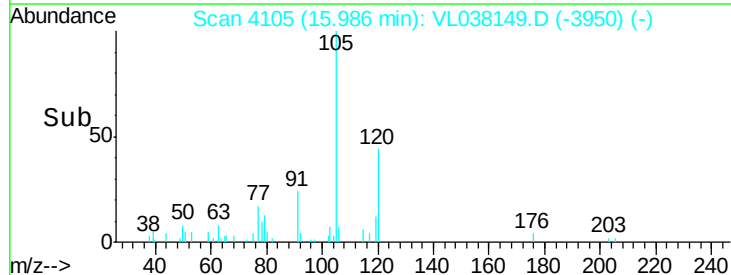
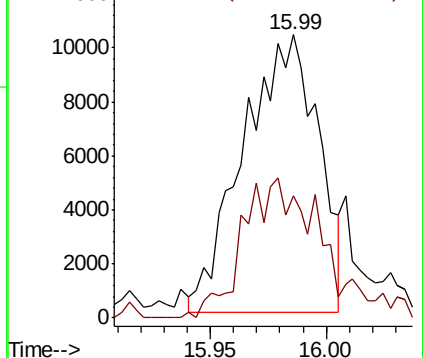


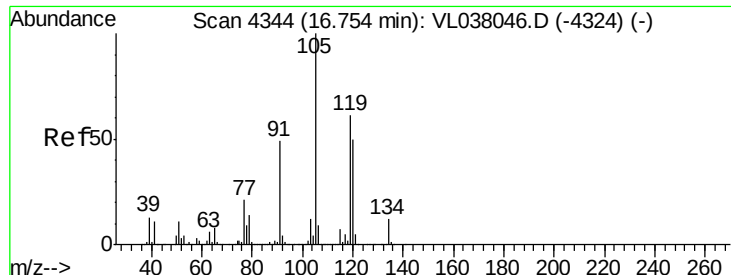
#73
 1,3,5-Trimethylbenzene
 Concen: 0.086 ppbv
 RT: 15.99 min Scan# 4105
 Delta R.T. -0.00 min
 Lab File: VL038149.D
 Acq: 7 Dec 2021 14:11

Tgt Ion:	105	Resp:	23151
Ion	Ratio	Lower	Upper
105	100		
120	44.2	37.8	56.6



Abundance Ion 105.10 (104.80 to 105.80): V
 Ion 120.20 (119.90 to 120.90): V





#74

1,2,4-Trimethylbenzene

Concen: 0.247 ppbv

RT: 16.74

Delta R.T: MSVOA_L

Lab File: ClientSampleId :

Acq: 7 Dec 2021 14:11

Tot Ion:105 Resp: 68641

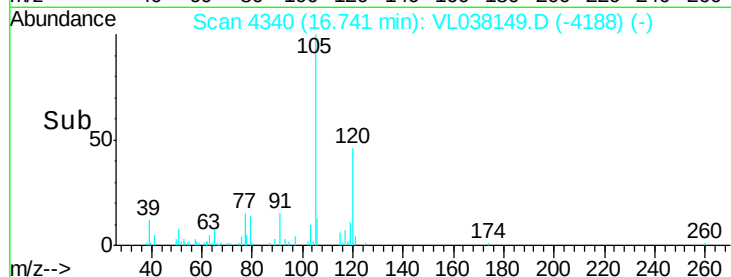
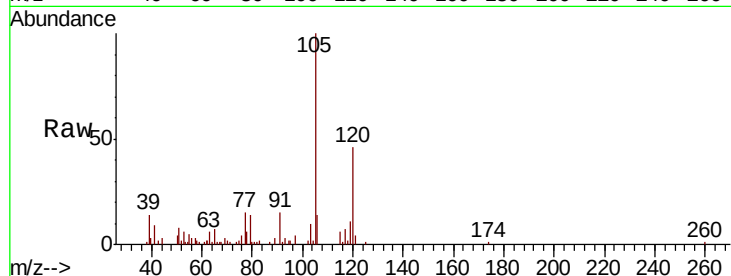
Ion Ratio Lower Upper

105 100

120 45.9 40.1 60.1

91 13.4 39.8 59.8#

77 13.5 16.6 25.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

