

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL122121\
 Data File : VL038227.D
 Acq On : 22 Dec 2021 00:16
 Operator : SY/AP
 Sample : M5118-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 22 08:29:36 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL122121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Dec 21 17:47:08 2021
 QLast Update : Tue Dec 21 17:47:08 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	640835	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.19	114	1787377	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.10	117	1525458	10.00	ppbv	0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	1244915	10.59	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.90%

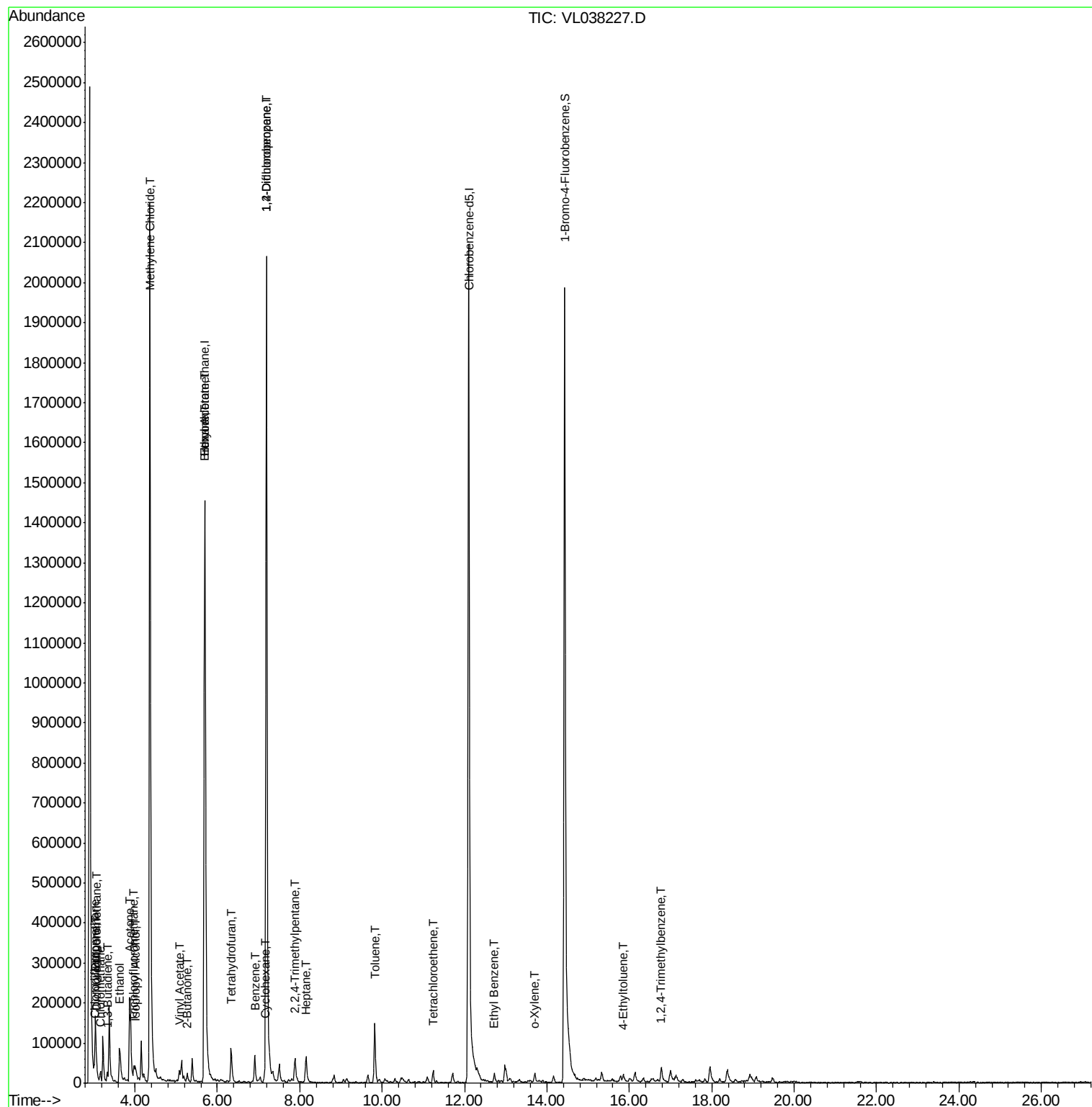
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.07	85	26368	0.218 ppbv	99
3) Chlorodifluoromethane	3.01	51	48927	0.363 ppbv	92
4) Chloromethane	3.16	50	17127	0.367 ppbv	92
9) Propene	3.04	41	52489	1.123 ppbv #	80
10) Heptane	8.14	43	14031	0.118 ppbv	98
11) Trichlorofluoromethane	3.97	101	23643	0.213 ppbv	96
13) Ethanol	3.63	45	126895	16.008 ppbv #	100
15) Acetone	3.87	43	304358	4.732 ppbv	93
16) 1,3-Butadiene	3.34	39	3897	0.089 ppbv	95
19) Isopropyl Alcohol	4.01	45	46837	1.168 ppbv #	35
20) Methylene Chloride	4.37	84	987116	27.185 ppbv	96
23) Vinyl Acetate	5.09	43	10125	0.116 ppbv #	82
25) Ethyl Acetate	5.70	43	295624	1.697 ppbv #	78
26) Hexane	5.70	57	406479	4.649 ppbv #	45
30) Cyclohexane	7.15	84	2855	0.037 ppbv #	1
34) 2-Butanone	5.27	43	17676	0.329 ppbv #	65
36) Benzene	6.91	78	56405	0.338 ppbv	97
39) 1,2-Dichloropropane	7.19	63	456564	7.115 ppbv #	25
41) Tetrahydrofuran	6.33	42	3674	0.093 ppbv #	38
44) 2,2,4-Trimethylpentane	7.88	57	48645	0.172 ppbv #	67
52) Tetrachloroethene	11.24	164	5177	0.084 ppbv #	57
53) Toluene	9.82	91	112361	0.584 ppbv	100
58) Ethyl Benzene	12.73	91	11671	0.049 ppbv	93
60) o-Xylene	13.71	91	6909	0.037 ppbv #	1
72) 4-Ethyltoluene	15.85	105	11683	0.054 ppbv #	88
74) 1,2,4-Trimethylbenzene	16.78	105	15313	0.075 ppbv #	77

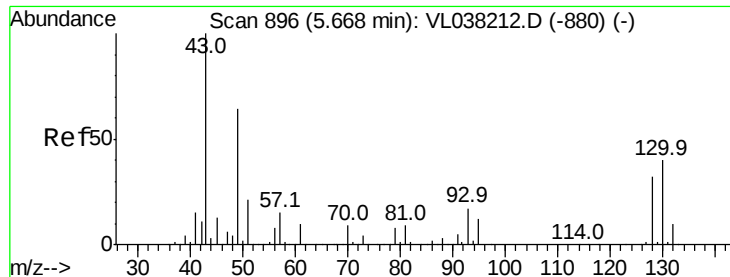
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 22 Dec 2021 00:16

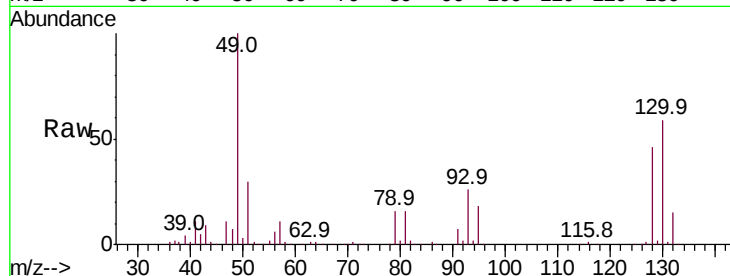
Tot Ion: 49 Resp: 640835

Ion Ratio Lower Upper

49 100

128 48.2 26.9 80.6

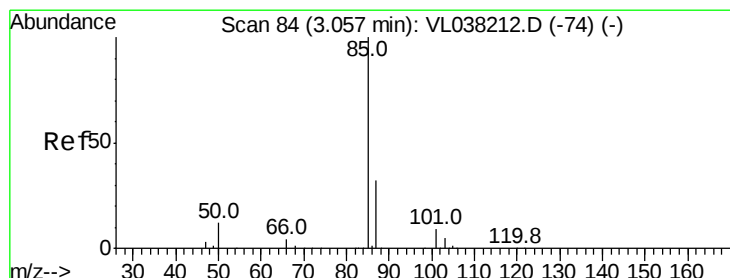
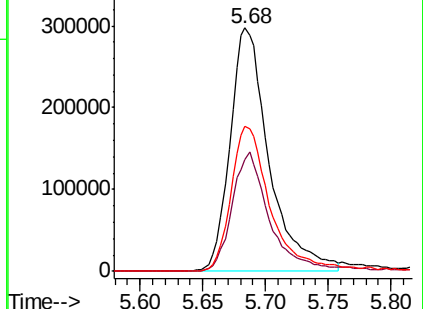
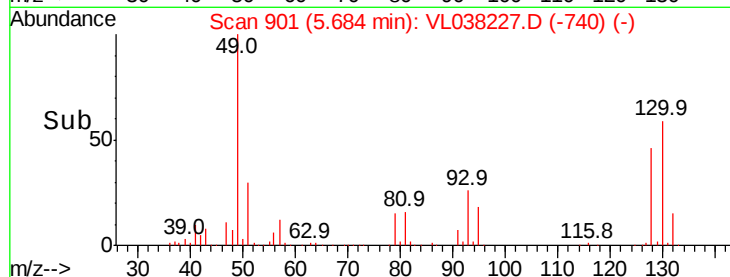
130 62.7 32.3 96.9



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



#2

Dichlorodifluoromethane

Concen: 0.218 ppbv

RT: 3.07 min Scan# 89

Delta R.T. 0.02 min

Lab File: VL038227.D

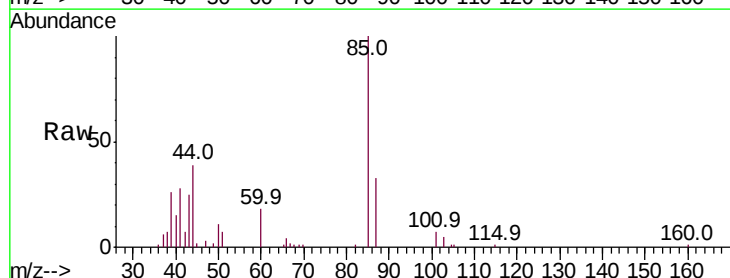
Acq: 22 Dec 2021 00:16

Tgt Ion: 85 Resp: 26368

Ion Ratio Lower Upper

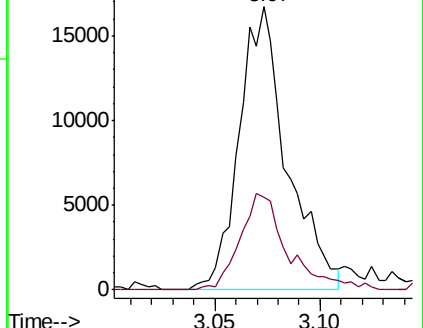
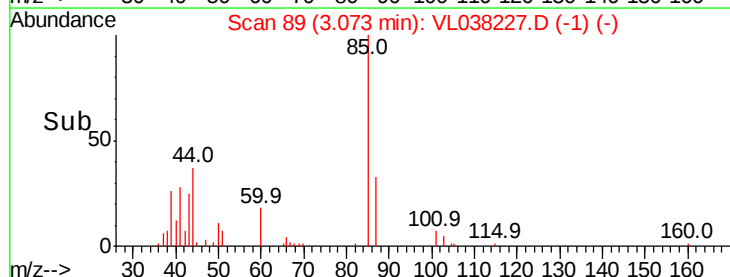
85 100

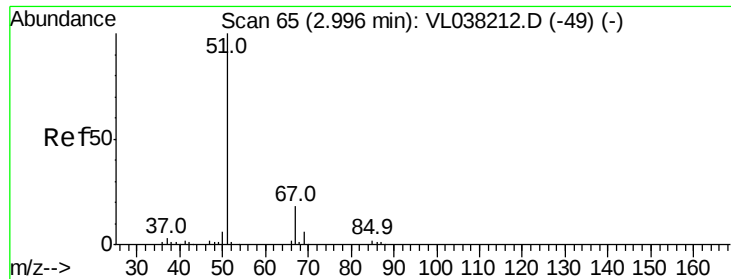
87 32.6 25.4 38.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

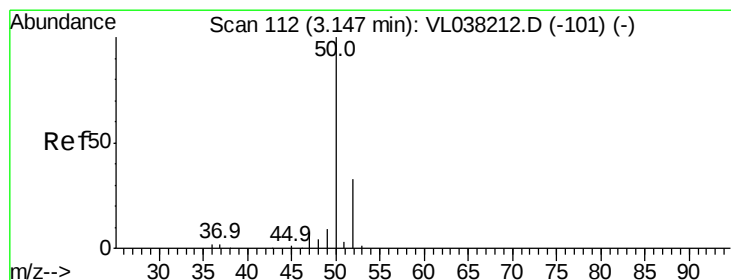
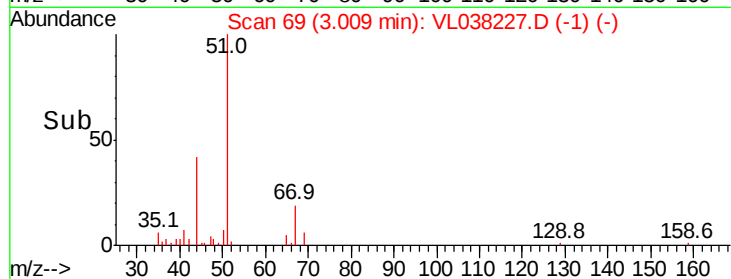
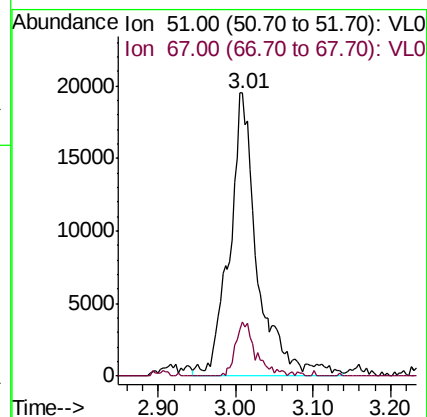
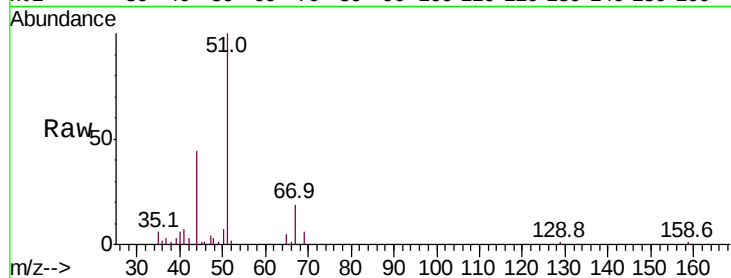
Ion 87.00 (86.70 to 87.70): VL0





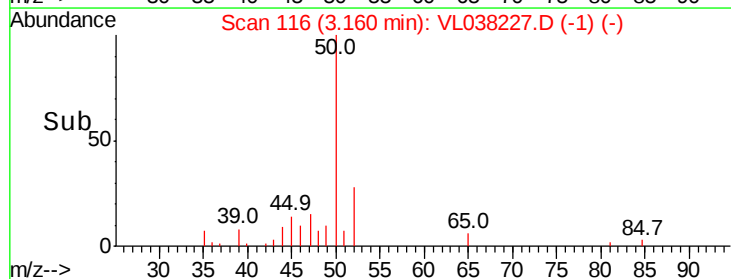
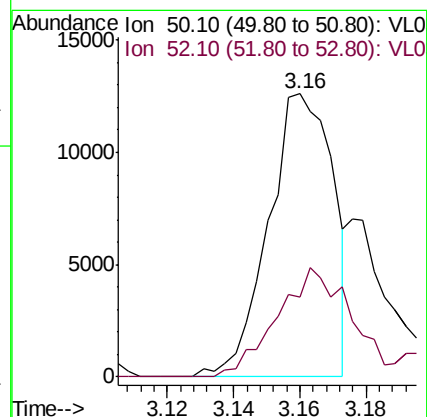
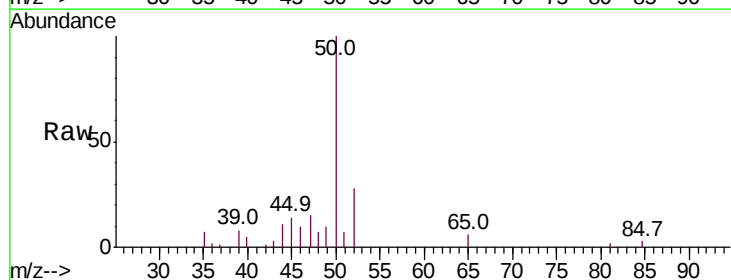
#3
 Chlorodifluoromethane
 Concen: 0.363 ppbv
 RT: 3.01 min
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 22 Dec 2021 00:16

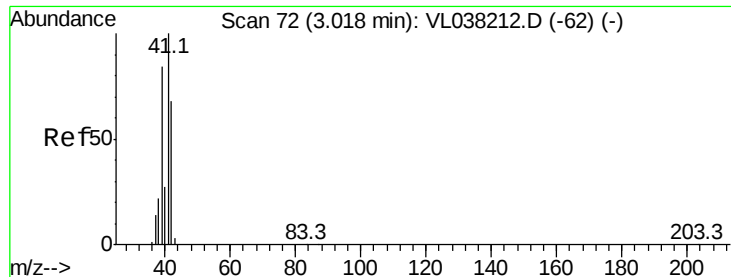
Tot Ion: 51 Resp: 48927
 Ion Ratio Lower Upper
 51 100
 67 14.2 14.0 21.0



#4
 Chloromethane
 Concen: 0.367 ppbv
 RT: 3.16 min Scan# 116
 Delta R.T.: 0.01 min
 Lab File: VL038227.D
 Acq: 22 Dec 2021 00:16

Tgt Ion: 50 Resp: 17127
 Ion Ratio Lower Upper
 50 100
 52 28.3 26.2 39.2





#9

Propene

Concen: 1.123 ppbv

RT: 3.04 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

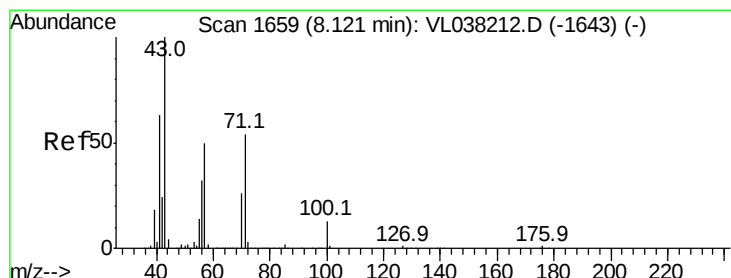
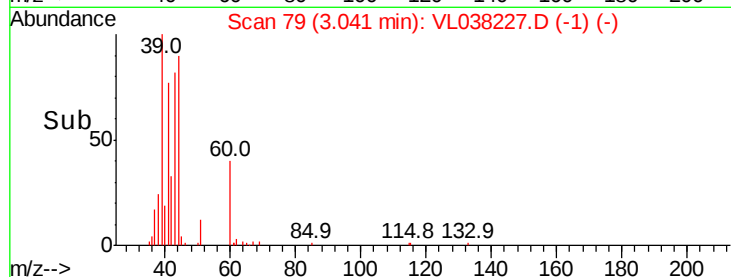
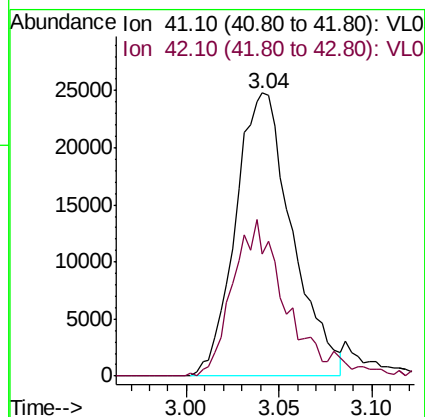
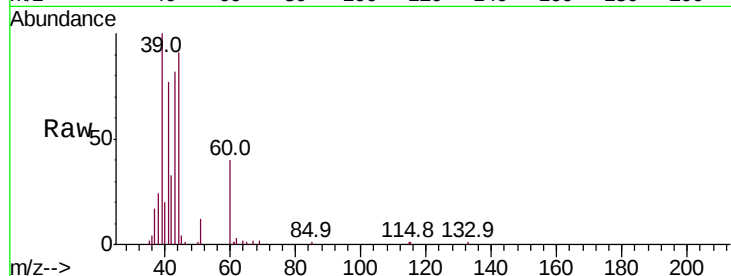
Acq: 22 Dec 2021 00:16

Tot Ion: 41 Resp: 52489

Ion Ratio Lower Upper

41 100

42 53.3 55.5 83.3#



#10

Heptane

Concen: 0.118 ppbv

RT: 8.14 min Scan# 1665

Delta R.T. 0.02 min

Lab File: VL038227.D

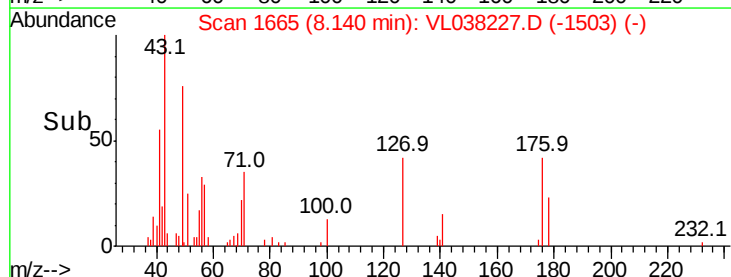
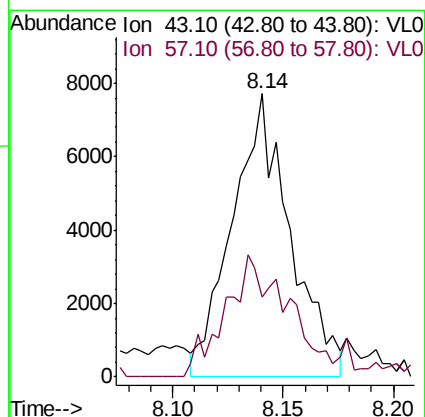
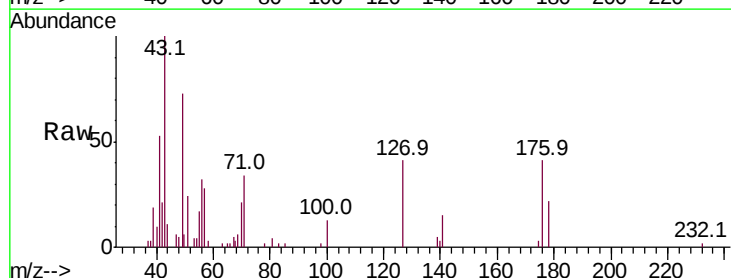
Acq: 22 Dec 2021 00:16

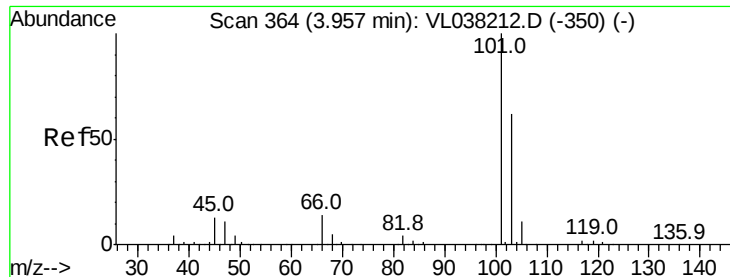
Tgt Ion: 43 Resp: 14031

Ion Ratio Lower Upper

43 100

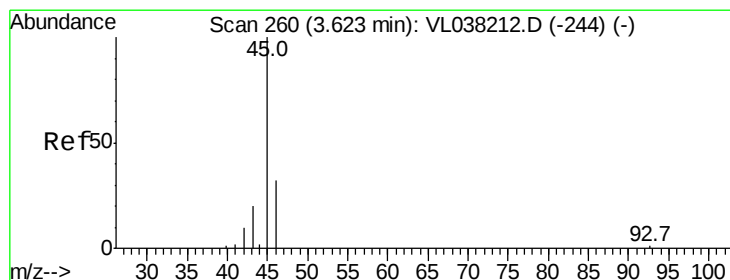
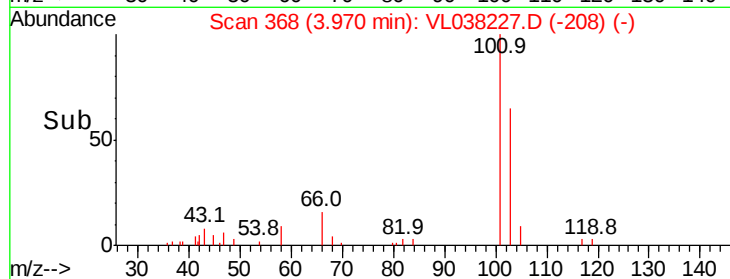
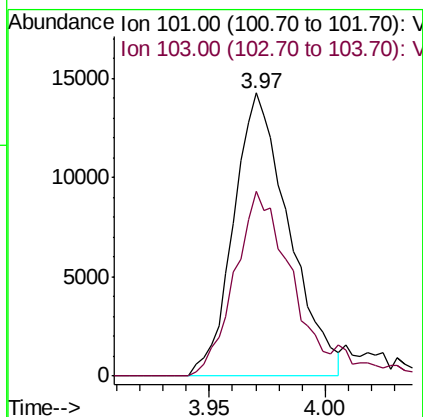
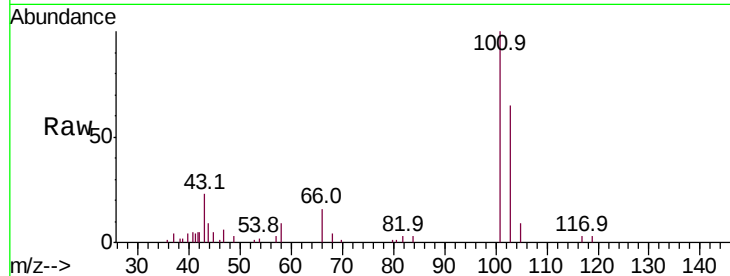
57 48.8 40.3 60.5





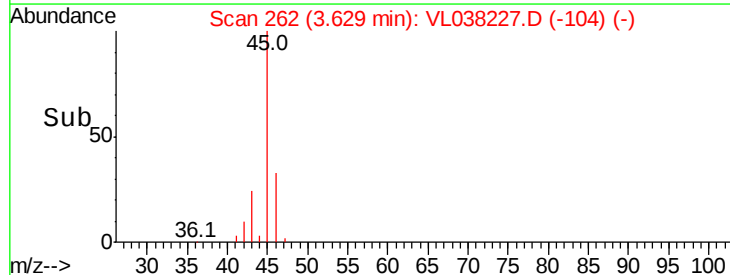
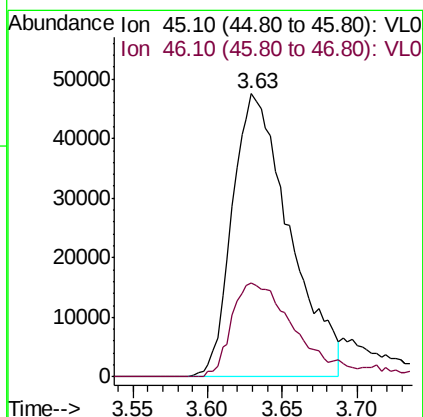
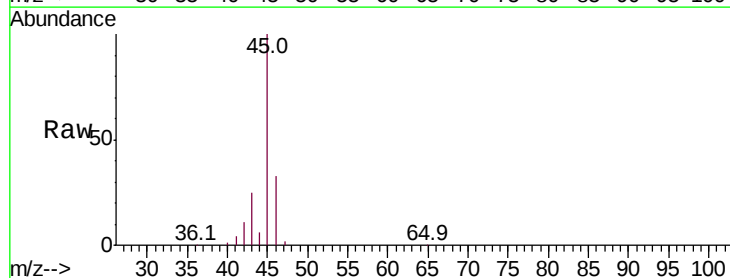
#11
 Trichlorofluoromethane
 Concen: 0.213 ppbv
 RT: 3.97
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 22 Dec 2021 00:16

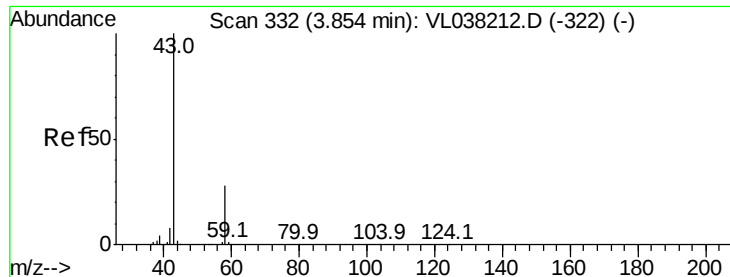
Tot Ion:101 Resp: 23643
 Ion Ratio Lower Upper
 101 100
 103 65.1 49.9 74.9



#13
 Ethanol
 Concen: 16.008 ppbv
 RT: 3.63 min Scan# 262
 Delta R.T. 0.01 min
 Lab File: VL038227.D
 Acq: 22 Dec 2021 00:16

Tgt Ion: 45 Resp: 126895
 Ion Ratio Lower Upper
 45 100
 46 40.7 0.0 0.0#





#15

Acetone

Concen: 4.732 ppbv

RT: 3.87 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

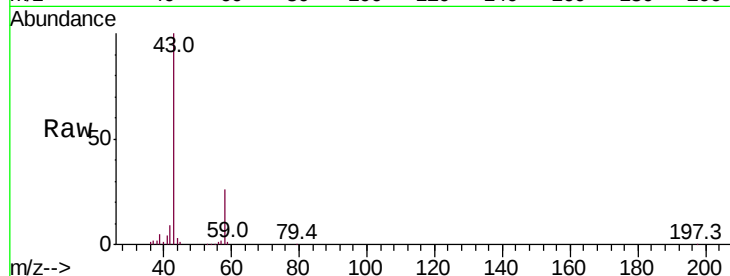
Acq: 22 Dec 2021 00:16

Tot Ion: 43 Resp: 304358

Ion Ratio Lower Upper

43 100

58 25.2 23.3 34.9



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.87

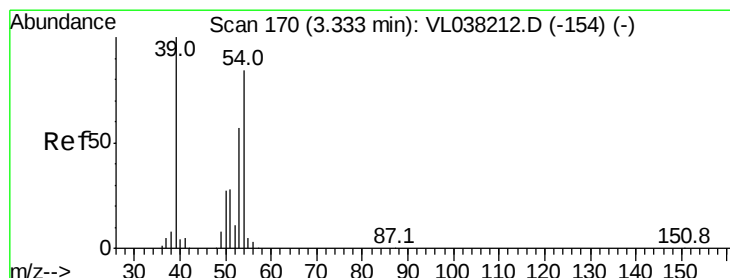
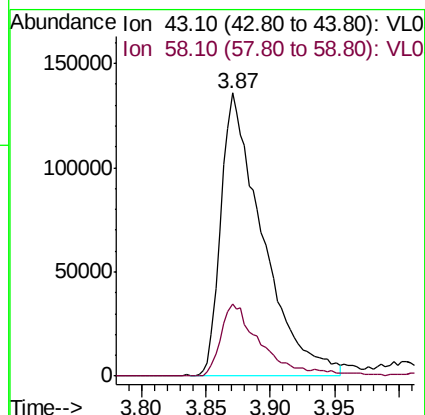
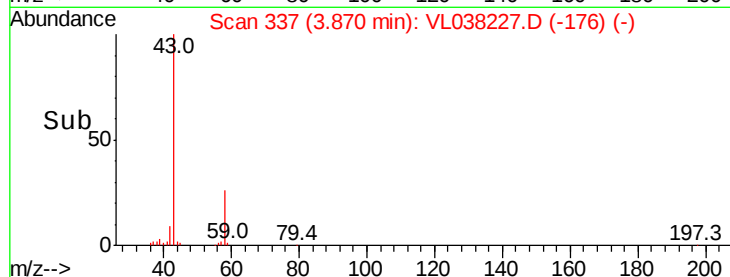
150000

100000

50000

0

Time-->



#16

1,3-Butadiene

Concen: 0.089 ppbv

RT: 3.34 min Scan# 172

Delta R.T. 0.01 min

Lab File: VL038227.D

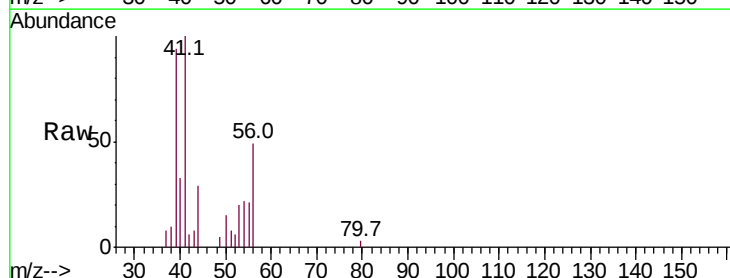
Acq: 22 Dec 2021 00:16

Tgt Ion: 39 Resp: 3897

Ion Ratio Lower Upper

39 100

54 83.2 62.9 94.3



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

8000

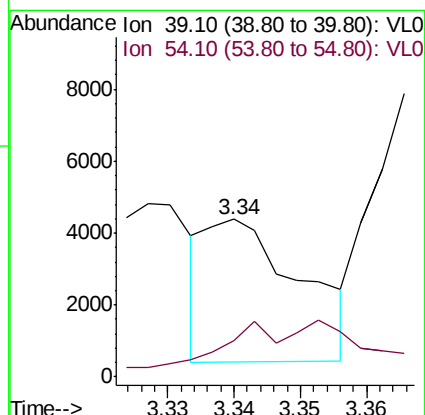
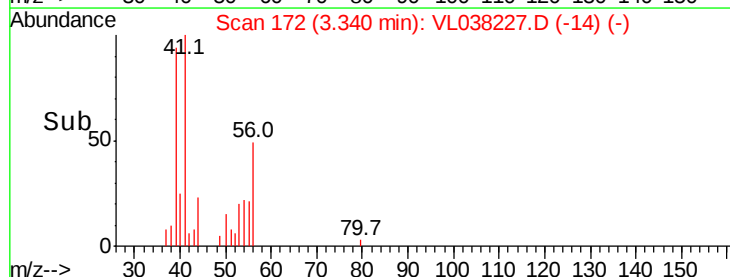
6000

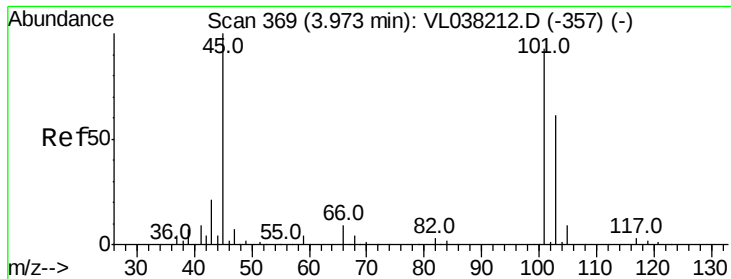
4000

2000

0

Time-->





#19

Isopropyl Alcohol

Concen: 1.168 ppbv

RT: 4.01 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

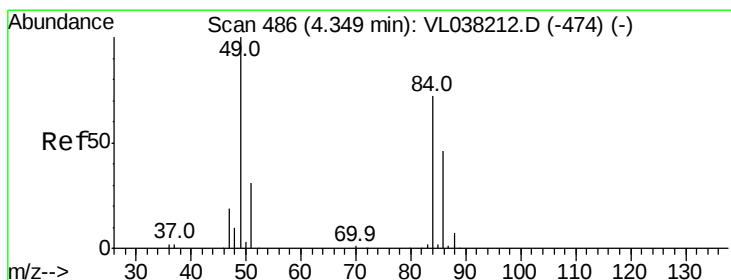
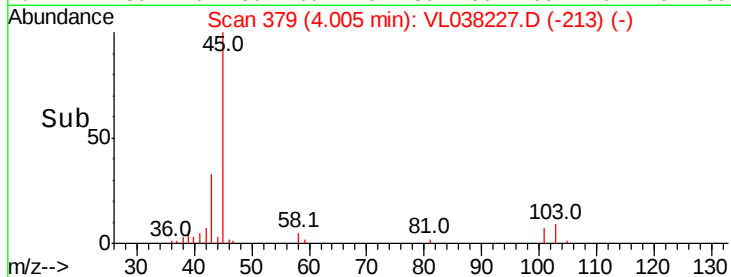
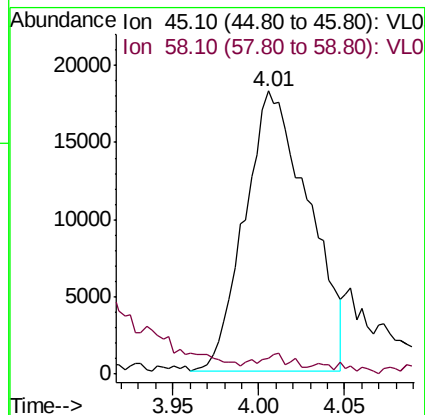
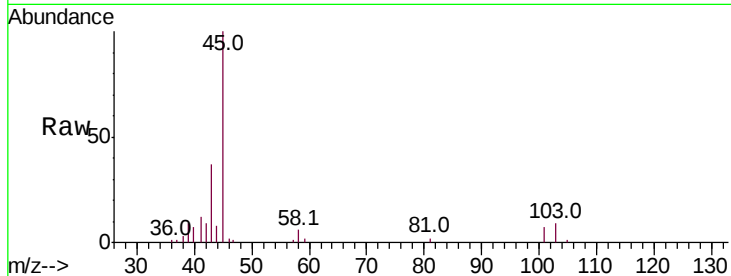
Acq: 22 Dec 2021 00:16

Tot Ion: 45 Resp: 46837

Ion Ratio Lower Upper

45 100

58 0.0 32.4 48.6#



#20

Methylene Chloride

Concen: 27.185 ppbv

RT: 4.37 min Scan# 491

Delta R.T. 0.02 min

Lab File: VL038227.D

Acq: 22 Dec 2021 00:16

Tgt Ion: 84 Resp: 987116

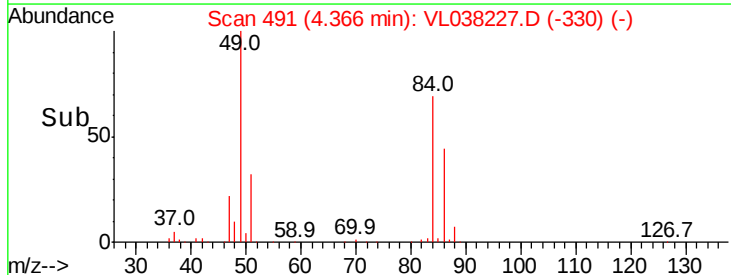
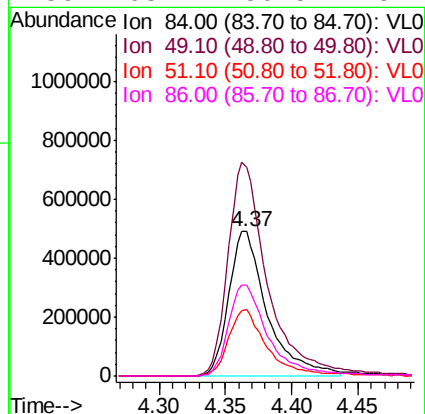
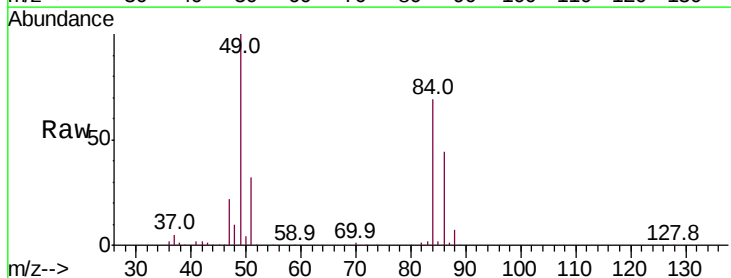
Ion Ratio Lower Upper

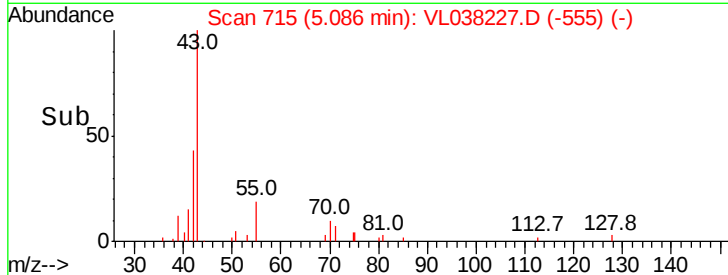
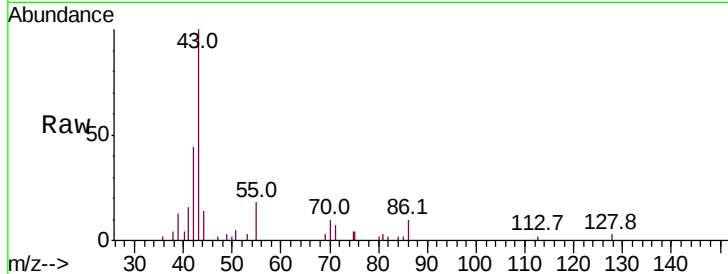
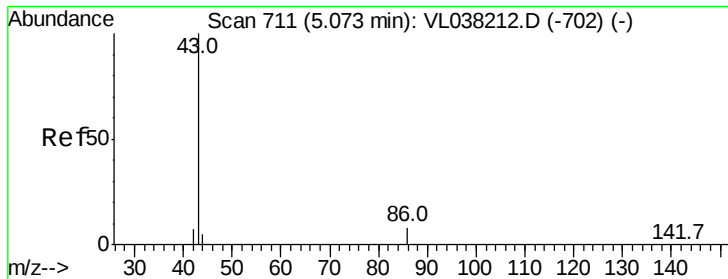
84 100

49 144.2 110.6 166.0

51 45.7 34.2 51.2

86 63.2 50.5 75.7





#23

Vinyl Acetate

Concen: 0.116 ppbv

RT: 5.09 Instrument:

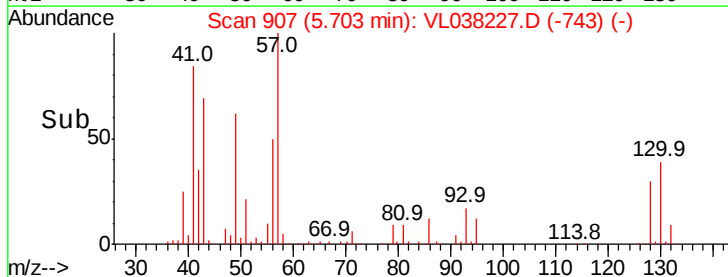
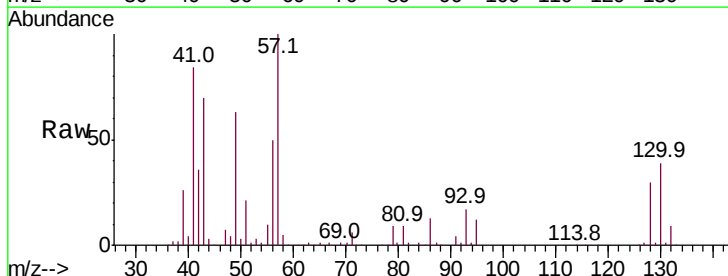
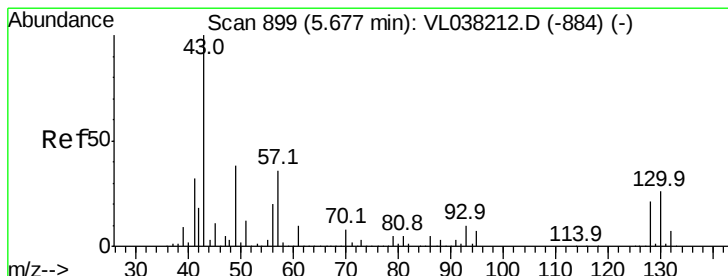
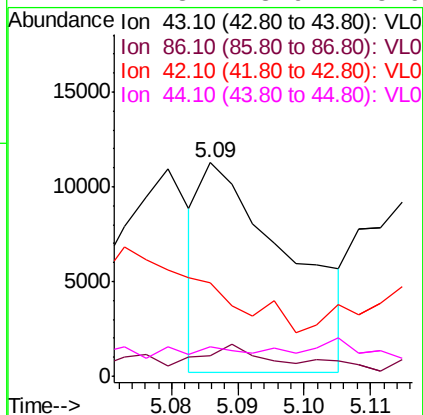
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 22 Dec 2021 00:10

Tot Ion: 43 Resp: 10125

Ion	Ratio	Lower	Upper
43	100		
86	4.8	5.6	8.4#
42	20.5	7.0	10.4#
44	7.3	3.9	5.9#



#25

Ethyl Acetate

Concen: 1.697 ppbv

RT: 5.70 min Scan# 907

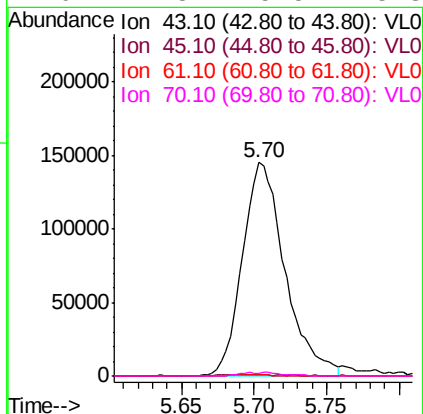
Delta R.T. 0.03 min

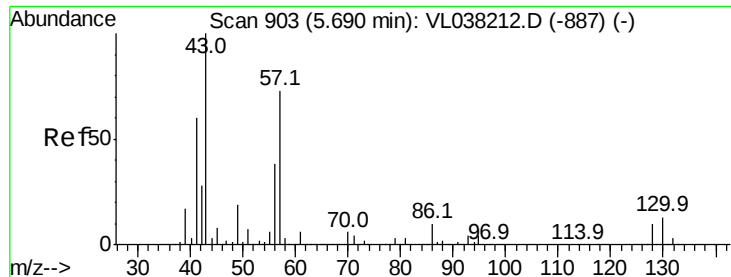
Lab File: VL038227.D

Acq: 22 Dec 2021 00:16

Tgt Ion: 43 Resp: 295624

Ion	Ratio	Lower	Upper
43	100		
45	1.0	7.9	11.9#
61	0.7	8.1	12.1#
70	1.8	5.5	8.3#





#26

Hexane

Concen: 4.649 ppbv

RT: 5.70 Instrument:

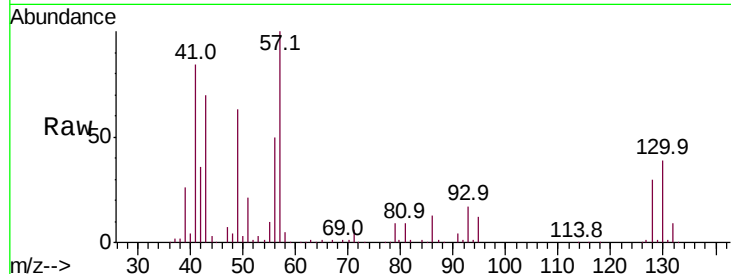
Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 22 Dec 2021 00:16

Tot Ion: 57 Resp: 406479

Ion	Ratio	Lower	Upper
57	100		
41	92.9	69.0	103.6
43	76.3	171.2	256.8#
56	54.8	41.5	62.3

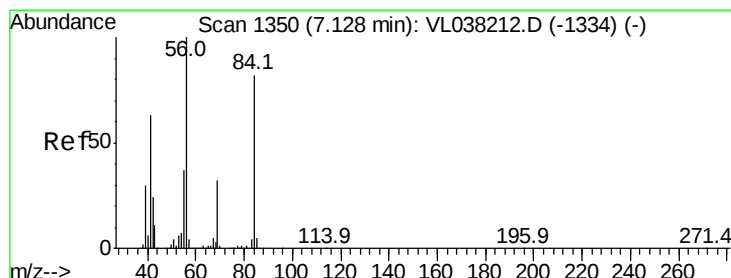
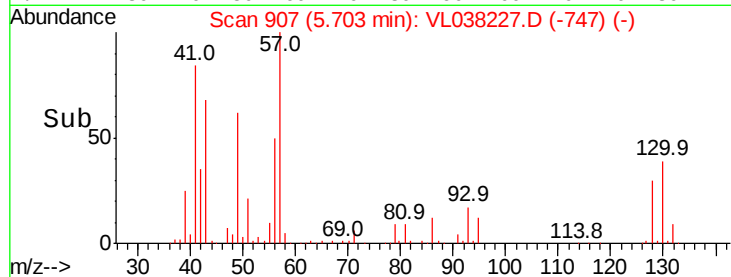
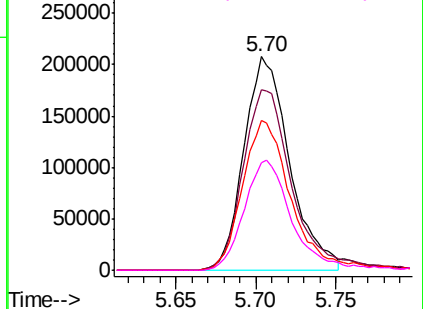


Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 0.037 ppbv

RT: 7.15 min Scan# 1356

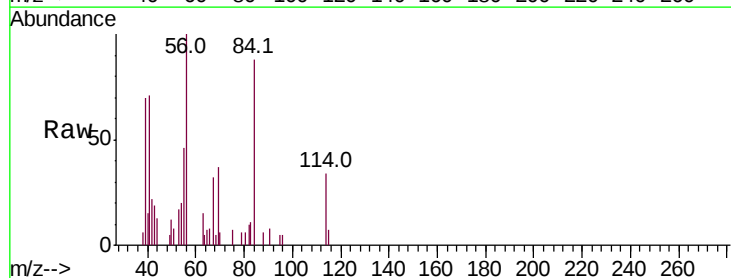
Delta R.T. 0.02 min

Lab File: VL038227.D

Acq: 22 Dec 2021 00:16

Tgt Ion: 84 Resp: 2855

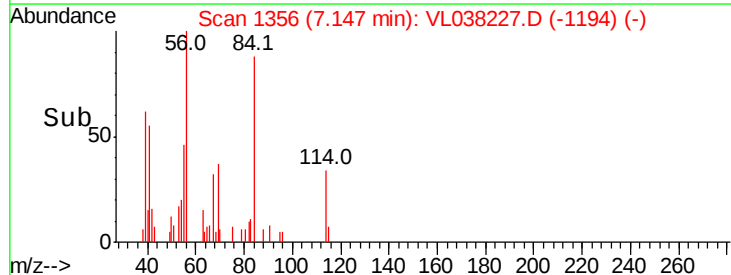
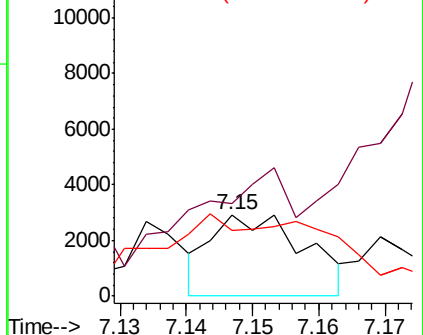
Ion	Ratio	Lower	Upper
84	100		
56	0.0	105.2	157.8#
41	262.7	63.2	94.8#

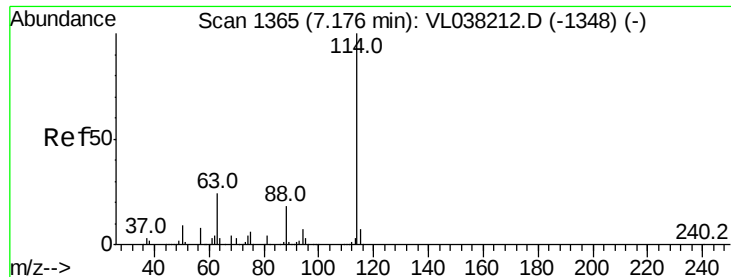


Abundance Ion 84.20 (83.90 to 84.90): VL0

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: 7.19

Instrument: MSVOA_1

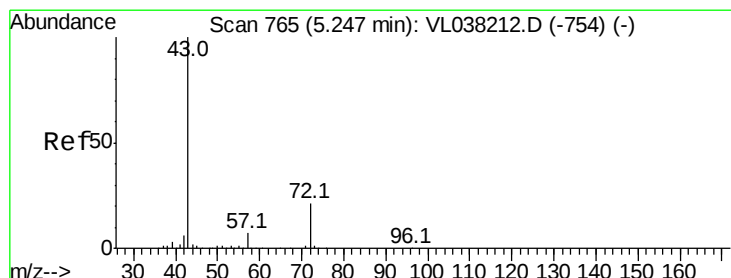
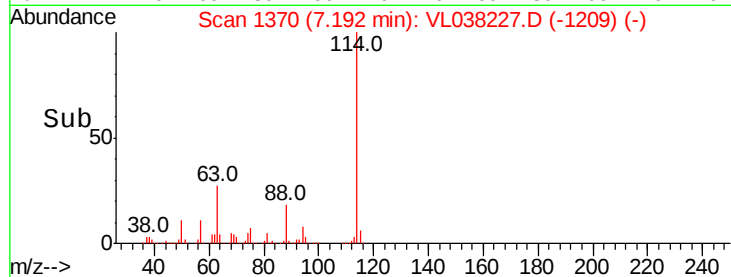
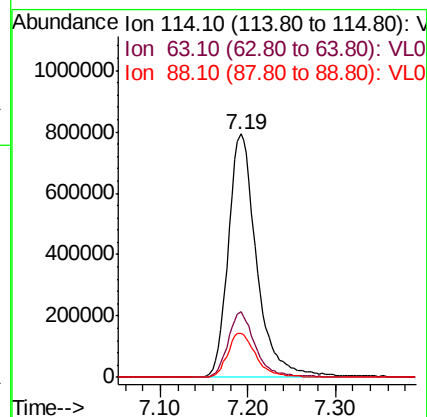
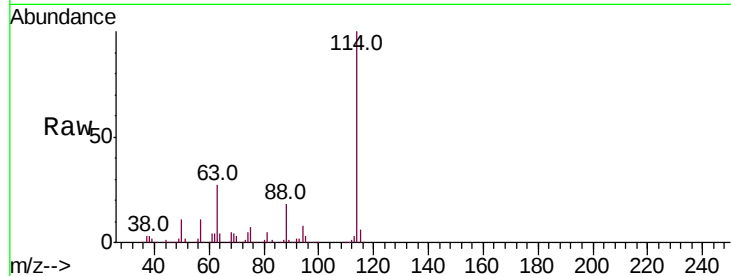
Delta R.T.

Lab File: ClientSampleId:

Acq: 22 Dec 2021 00:16

Tot Ion:114 Resp: 1787377

Ion	Ratio	Lower	Upper
114	100		
63	26.5	19.7	29.5
88	18.5	14.3	21.5



#34

2-Butanone

Concen: 0.329 ppbv

RT: 5.27 min Scan# 773

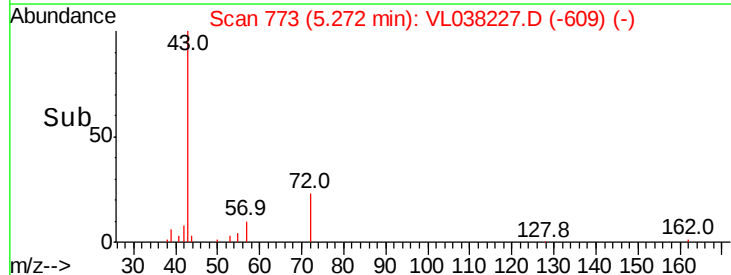
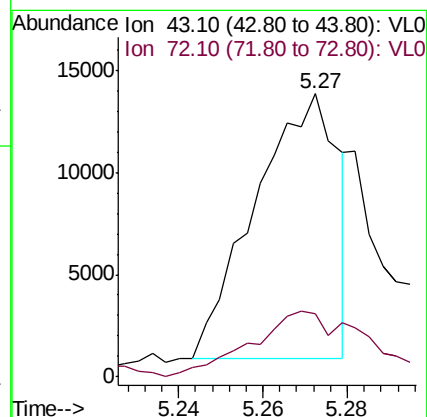
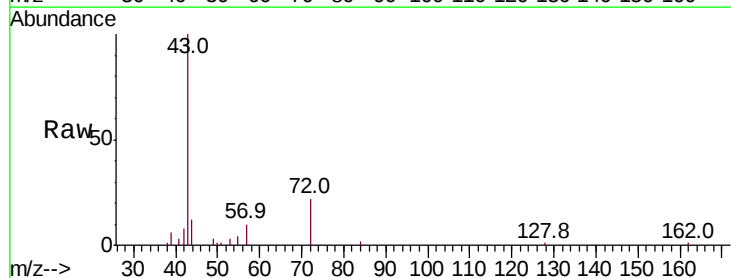
Delta R.T. 0.03 min

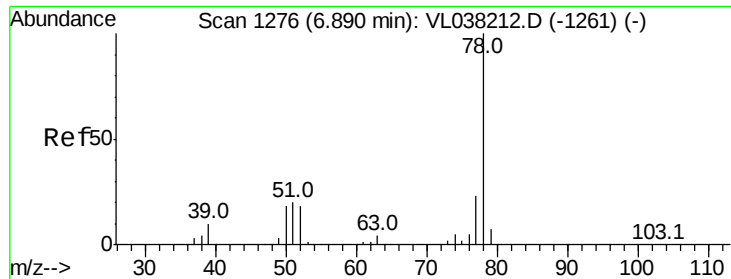
Lab File: VL038227.D

Acq: 22 Dec 2021 00:16

Tgt Ion: 43 Resp: 17676

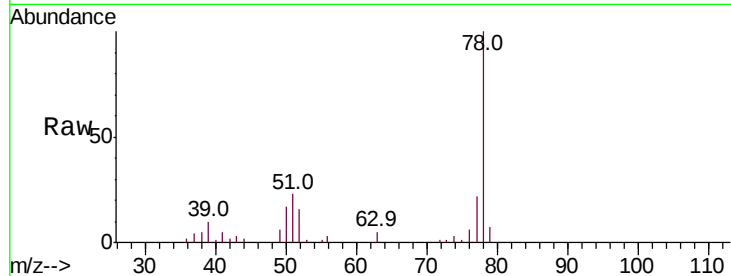
Ion	Ratio	Lower	Upper
43	100		
72	39.6	18.3	27.5#



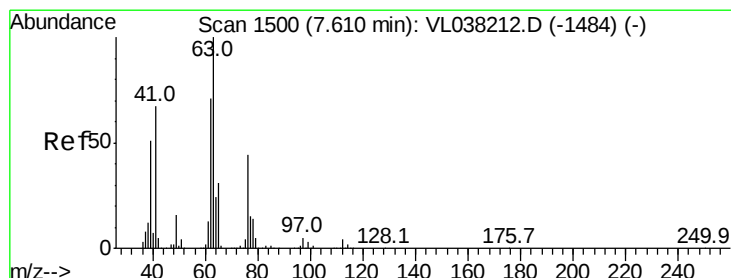
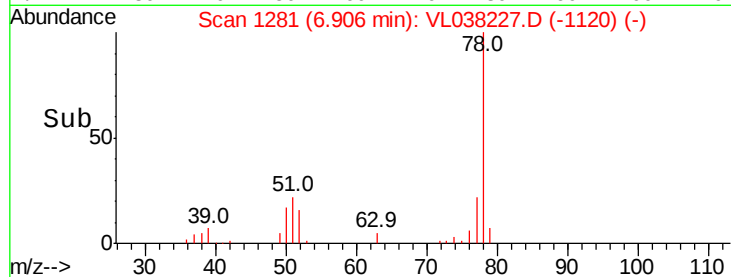
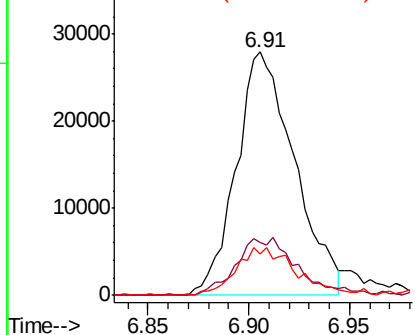


#36
Benzene
Concen: 0.338 ppbv
RT: 6.91 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Dec 2021 00:16

Tot Ion	Ratio	Lower	Upper
78	100		
77	21.9	18.2	27.4
50	16.0	14.3	21.5

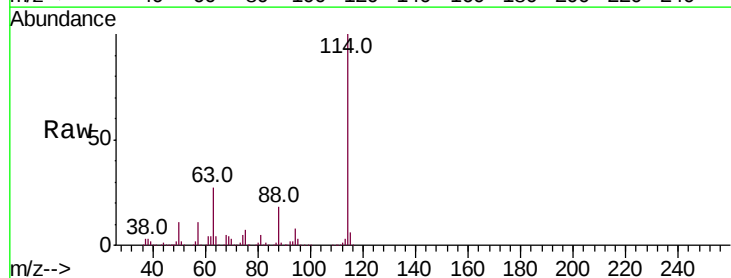


Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0

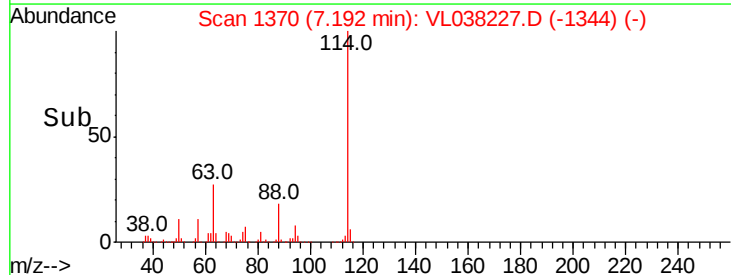
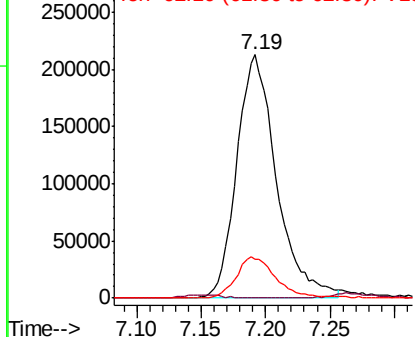


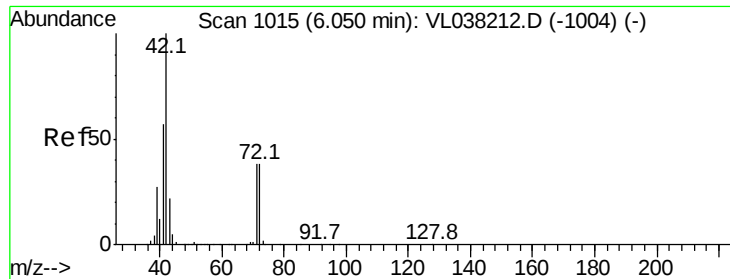
#39
1,2-Dichloropropane
Concen: 7.115 ppbv
RT: 7.19 min Scan# 1370
Delta R.T. -0.42 min
Lab File: VL038227.D
Acq: 22 Dec 2021 00:16

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.0	53.4	80.2#
62	15.7	56.5	84.7#



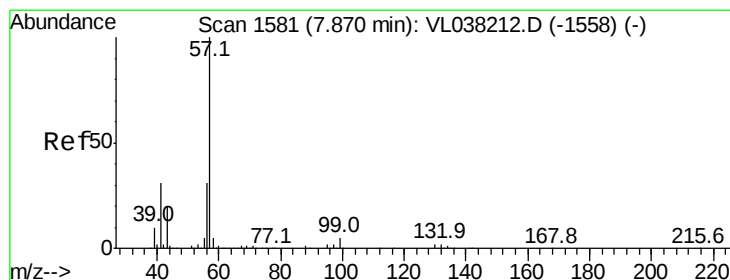
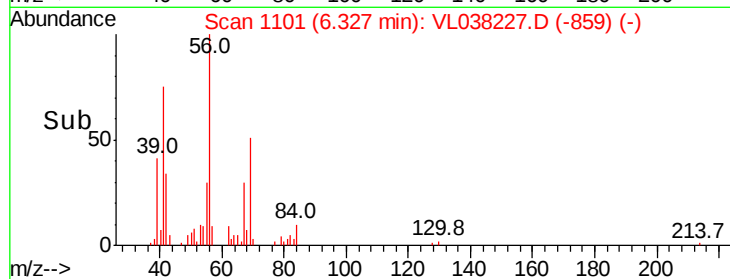
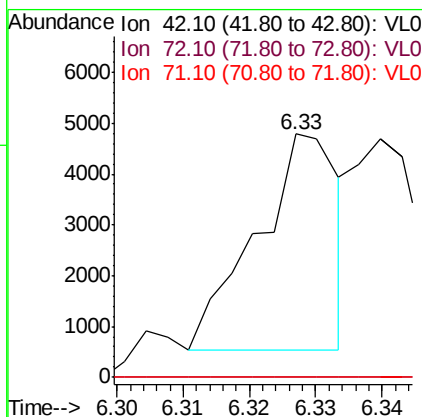
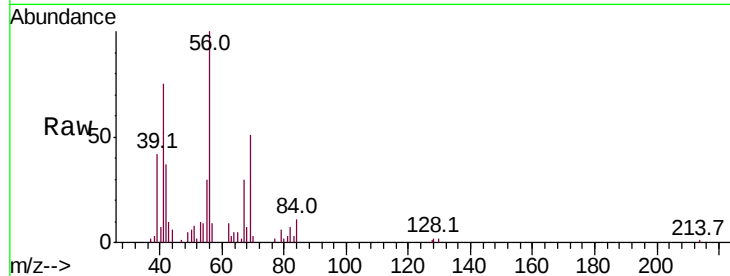
Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





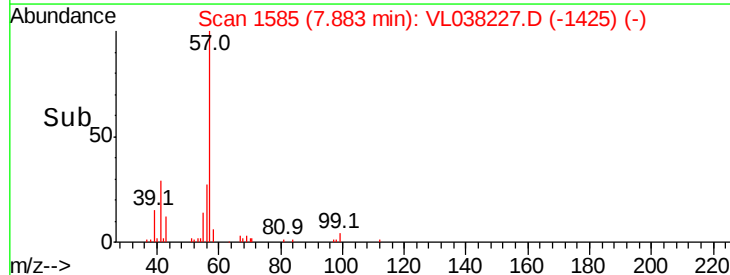
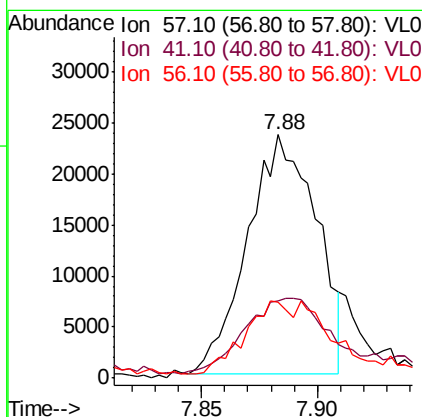
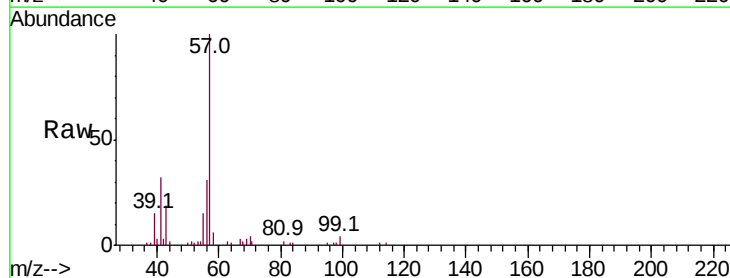
#41
Tetrahydrofuran
Concen: 0.093 ppbv
RT: 6.33
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 22 Dec 2021 00:16

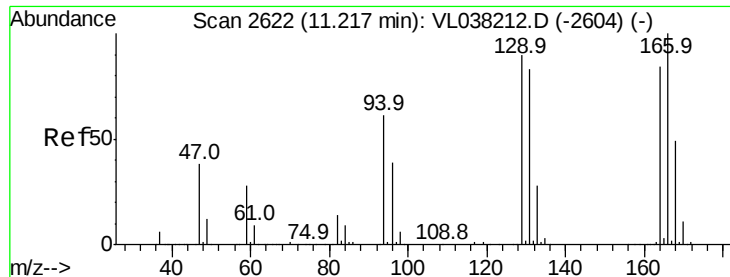
Tot Ion	42	Resp	3674
Ion Ratio	Lower	Upper	
42	100		
72	1.9	31.4	47.0#
71	0.0	30.0	45.0#



#44
2,2,4-Trimethylpentane
Concen: 0.172 ppbv
RT: 7.88 min Scan# 1585
Delta R.T. 0.01 min
Lab File: VL038227.D
Acq: 22 Dec 2021 00:16

Tgt Ion	57	Resp	48645
Ion Ratio	Lower	Upper	
57	100		
41	53.6	24.9	37.3#
56	45.1	24.8	37.2#





#52

Tetrachloroethene

Concen: 0.084 ppbv

RT: 11.24

Delta R.T. MSVOA_L

Lab File:

Acq: 22 Dec 2021 00:16

Tot Ion: 164 Resp: 5177

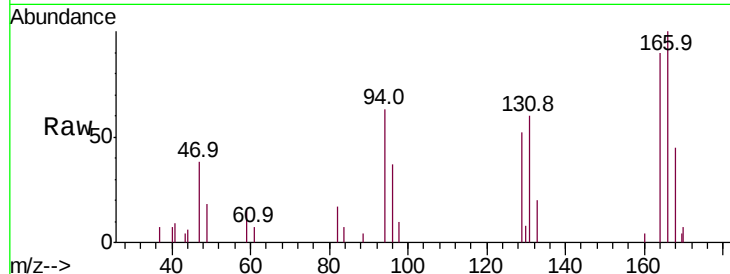
Ion Ratio Lower Upper

164 100

166 94.4 95.6 143.4#

129 44.4 85.8 128.8#

131 52.1 79.3 118.9#



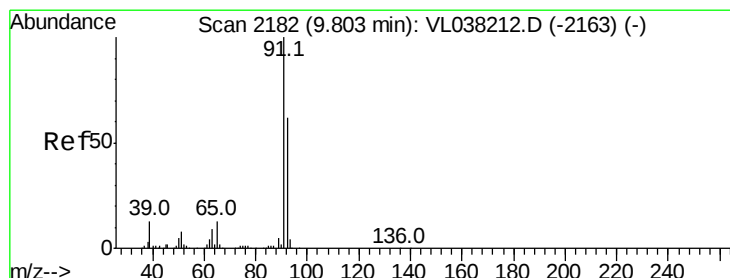
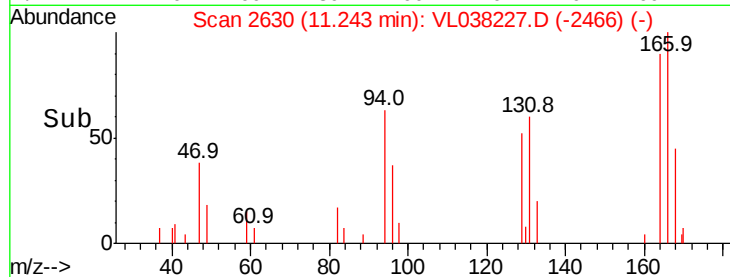
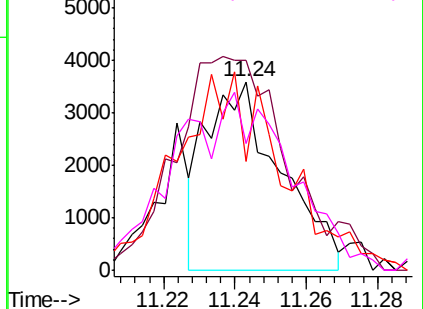
Abundance

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: 0.584 ppbv

RT: 9.82 min Scan# 2188

Delta R.T. 0.02 min

Lab File: VL038227.D

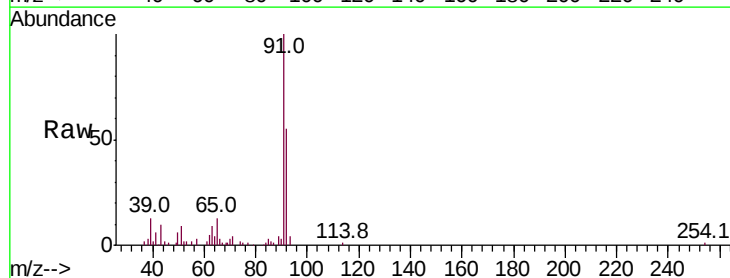
Acq: 22 Dec 2021 00:16

Tgt Ion: 91 Resp: 112361

Ion Ratio Lower Upper

91 100

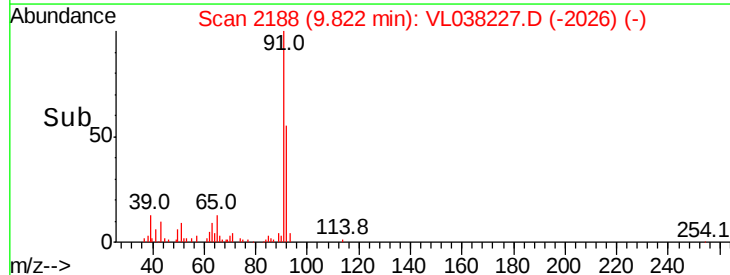
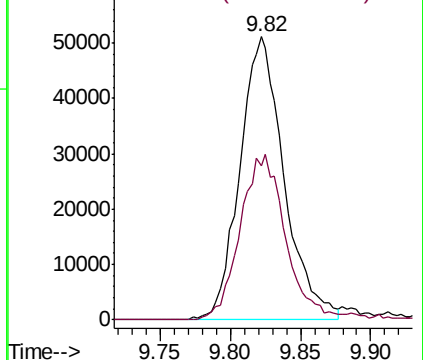
92 61.4 48.9 73.3

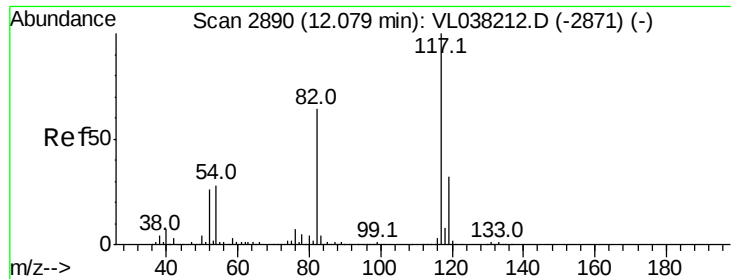


Abundance

Ion 91.10 (90.80 to 91.80): VL0

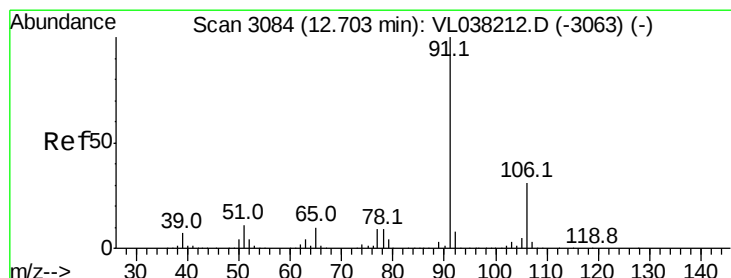
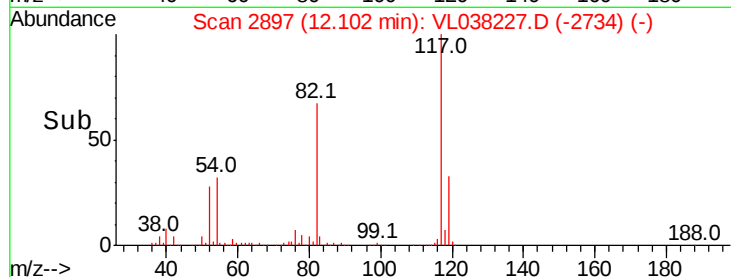
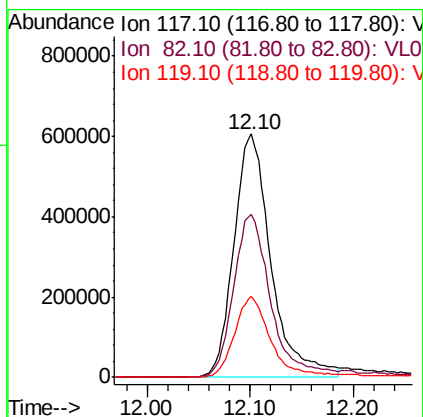
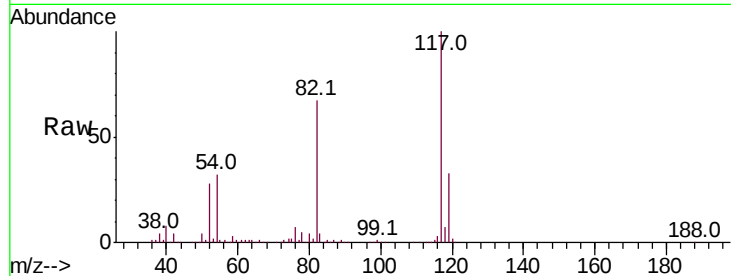
Ion 92.10 (91.80 to 92.80): VL0





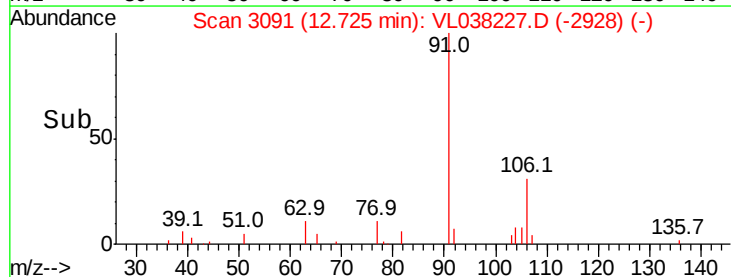
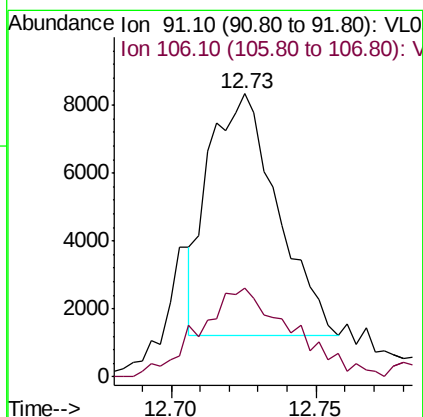
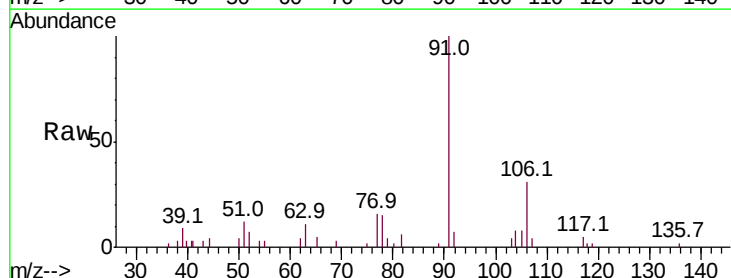
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 22 Dec 2021 00:10

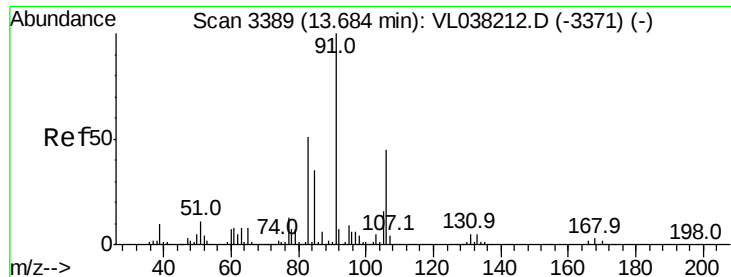
Tot Ion: 117 Resp: 1525458
Ion Ratio Lower Upper
117 100
82 71.3 53.3 79.9
119 34.3 25.5 38.3



#58
Ethyl Benzene
Concen: 0.049 ppbv
RT: 12.73 min Scan# 3091
Delta R.T.: 0.02 min
Lab File: VL038227.D
Acq: 22 Dec 2021 00:16

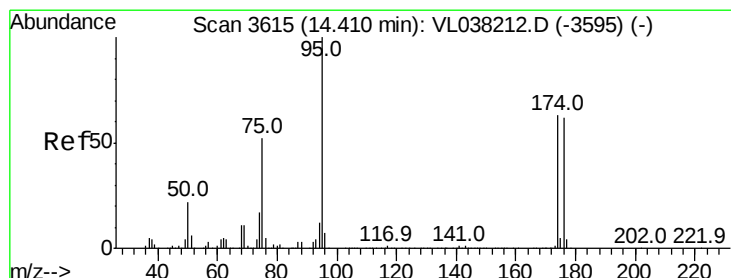
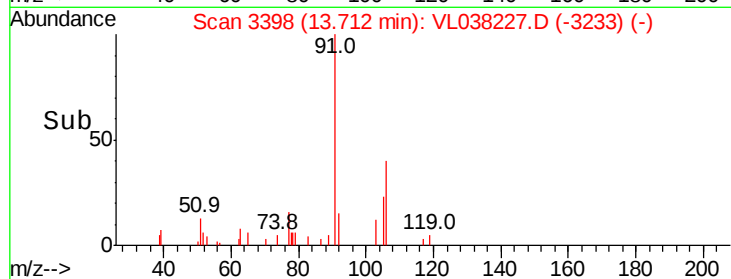
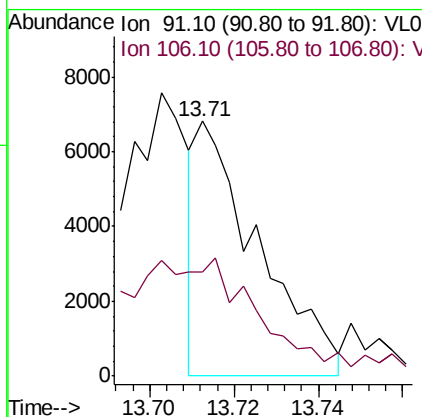
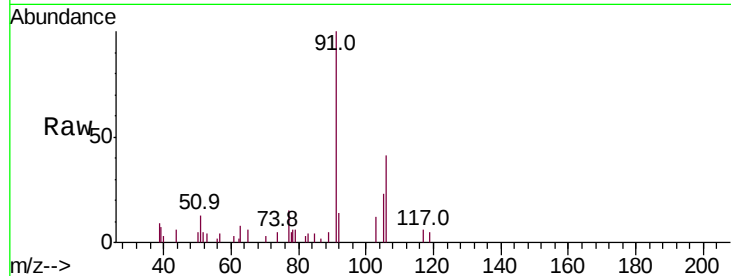
Tgt Ion: 91 Resp: 11671
Ion Ratio Lower Upper
91 100
106 27.3 25.0 37.4





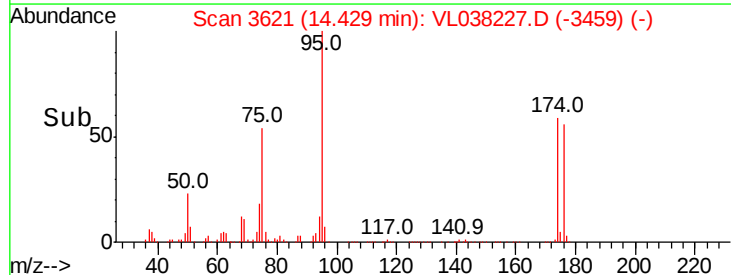
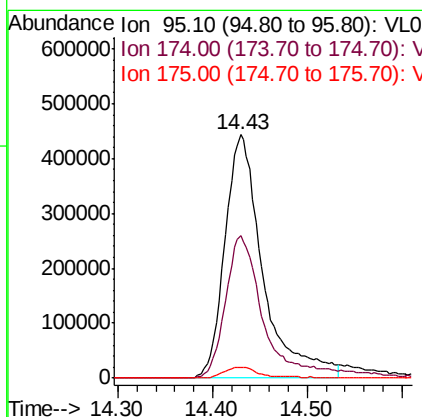
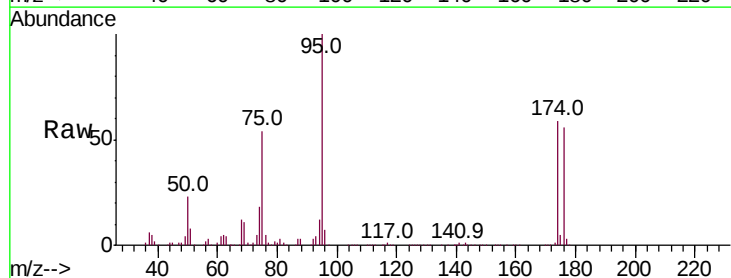
#60
o-Xylene
Concen: 0.037 ppbv
RT: 13.71 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 22 Dec 2021 00:16

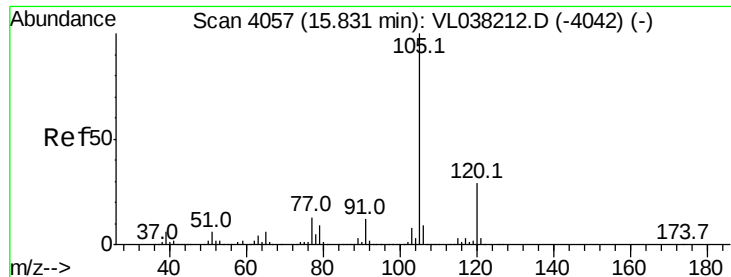
Tot Ion: 91 Resp: 6909
Ion Ratio Lower Upper
91 100
106 113.7 23.5 70.5#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.590 ppbv
RT: 14.43 min Scan# 3621
Delta R.T. 0.02 min
Lab File: VL038227.D
Acq: 22 Dec 2021 00:16

Tgt Ion: 95 Resp: 1244915
Ion Ratio Lower Upper
95 100
174 60.5 54.6 81.8
175 4.5 4.1 6.1





#72

4-Ethyltoluene

Concen: 0.054 ppbv

RT: 15.85

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 22 Dec 2021 00:16

Tot Ion:105 Resp: 11683

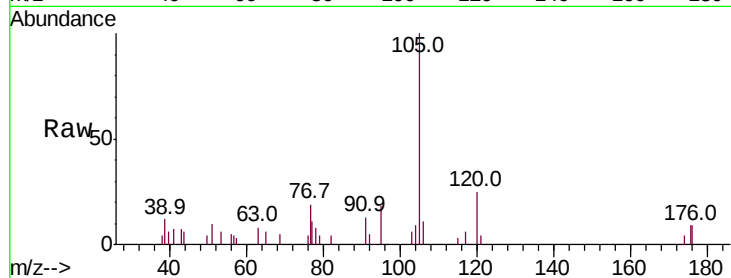
Ion Ratio Lower Upper

105 100

120 38.2 24.3 36.5#

91 15.9 9.8 14.6#

77 16.5 10.6 16.0#

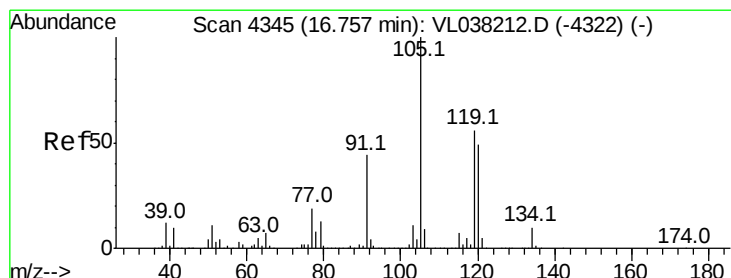
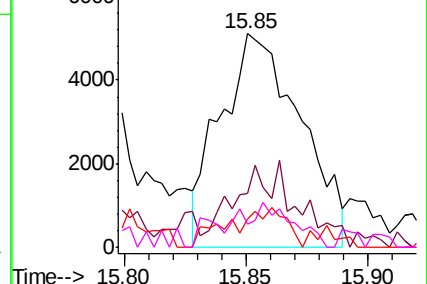
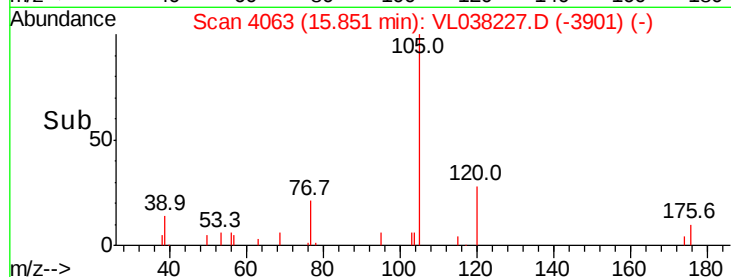


Abundance Ion 105.10 (104.80 to 105.80): V

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



#74

1,2,4-Trimethylbenzene

Concen: 0.075 ppbv

RT: 16.78 min Scan# 4353

Delta R.T. 0.03 min

Lab File: VL038227.D

Acq: 22 Dec 2021 00:16

Tgt Ion:105 Resp: 15313

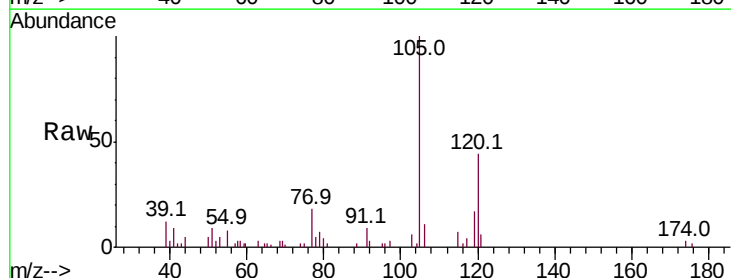
Ion Ratio Lower Upper

105 100

120 45.2 39.4 59.2

91 11.8 35.0 52.4#

77 17.5 15.6 23.4



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

