

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121421\
 Data File : VL038177.D
 Acq On : 14 Dec 2021 22:03
 Operator : SY/AP
 Sample : M5075-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 15 04:57:53 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	5.63	49	925497	10.00	ppbv	-0.04
33) 1,4-Difluorobenzene	7.13	114	2376406	10.00	ppbv	-0.04
55) Chlorobenzene-d5	12.03	117	2122479	10.00	ppbv	-0.05

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.36	95	1773537	11.58	ppbv	-0.05
Spiked Amount	10.000	Range	65 - 135	Recovery	=	115.80%

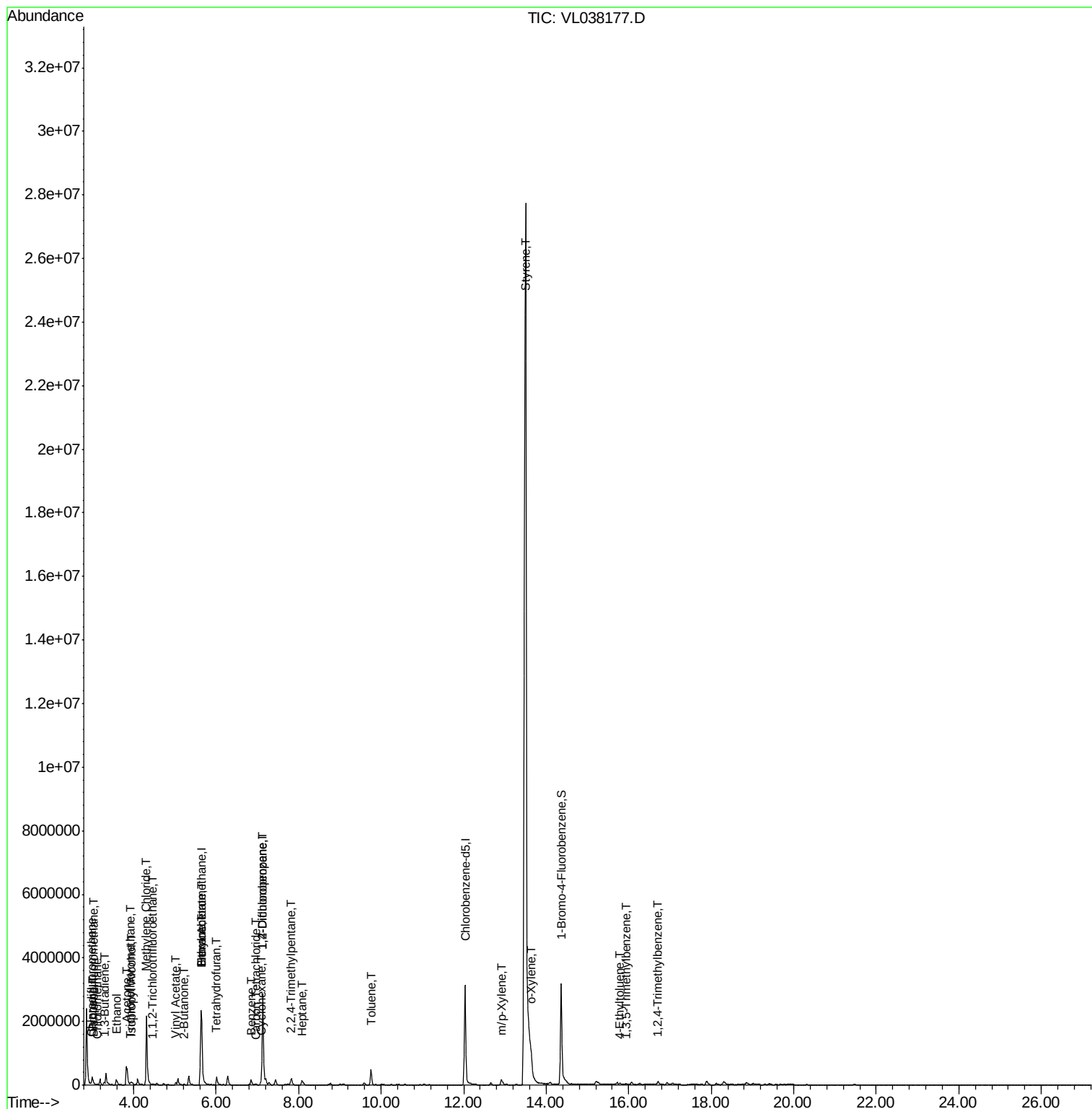
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.03	85	28906	0.189 ppbv	89
3) Chlorodifluoromethane	2.97	51	75211	0.387 ppbv #	86
4) Chloromethane	3.12	50	28591	0.432 ppbv	92
9) Propene	2.99	41	119353	1.667 ppbv	92
10) Heptane	8.07	43	20300	0.115 ppbv #	29
11) Trichlorofluoromethane	3.92	101	29782	0.205 ppbv	91
12) 1,1,2-Trichlorotrifluoroet	4.46	101	5071	0.049 ppbv #	13
13) Ethanol	3.58	45	235113	33.990 ppbv	91
15) Acetone	3.82	43	855111	10.657 ppbv	92
16) 1,3-Butadiene	3.29	39	34043	0.544 ppbv #	47
19) Isopropyl Alcohol	3.95	45	94281	1.626 ppbv #	1
20) Methylene Chloride	4.31	84	936298	20.832 ppbv	99
23) Vinyl Acetate	5.02	43	29884	0.257 ppbv #	1
25) Ethyl Acetate	5.65	43	550566	2.064 ppbv #	78
26) Hexane	5.65	57	757903	5.896 ppbv #	45
30) Cyclohexane	7.09	84	37035	0.317 ppbv #	87
34) 2-Butanone	5.21	43	33955	0.354 ppbv #	88
35) Carbon Tetrachloride	6.98	117	9444	0.057 ppbv #	82
36) Benzene	6.84	78	154199	0.650 ppbv	98
39) 1,2-Dichloropropane	7.13	63	630879	6.938 ppbv #	26
41) Tetrahydrofuran	6.01	42	152295	2.560 ppbv	99
44) 2,2,4-Trimethylpentane	7.83	57	195698	0.493 ppbv #	83
53) Toluene	9.75	91	177857	0.652 ppbv #	19
59) m/p-Xylene	12.92	91	102362	0.347 ppbv #	47
60) o-Xylene	13.64	91	83101	0.303 ppbv	91
61) Styrene	13.50	104	24681380	168.048 ppbv #	85
72) 4-Ethyltoluene	15.79	105	22399	0.071 ppbv #	79
73) 1,3,5-Trimethylbenzene	15.94	105	9438	0.033 ppbv	88
74) 1,2,4-Trimethylbenzene	16.71	105	66773	0.223 ppbv #	70

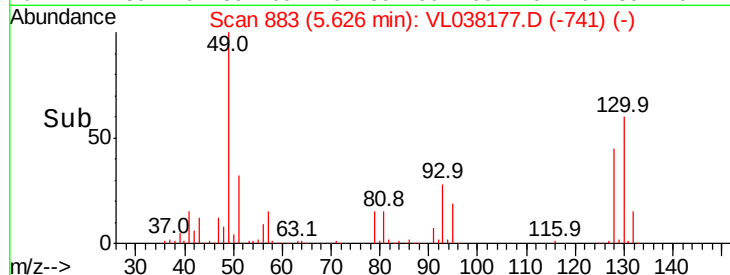
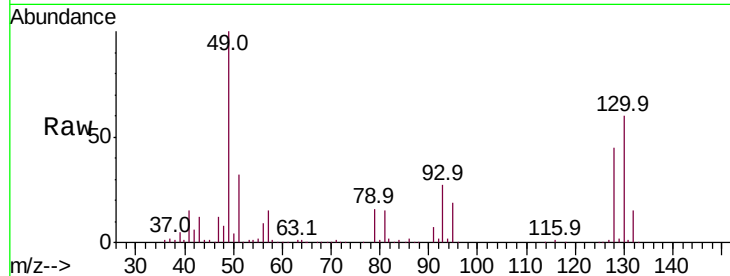
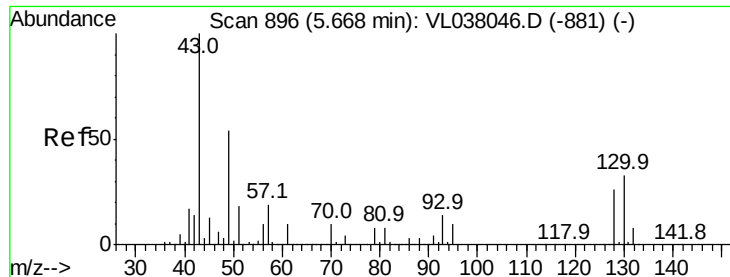
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampleId :

Quant Time: Dec 15 04:57:53 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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.63 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 22:03

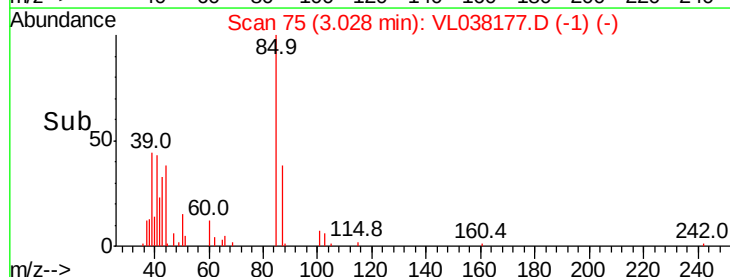
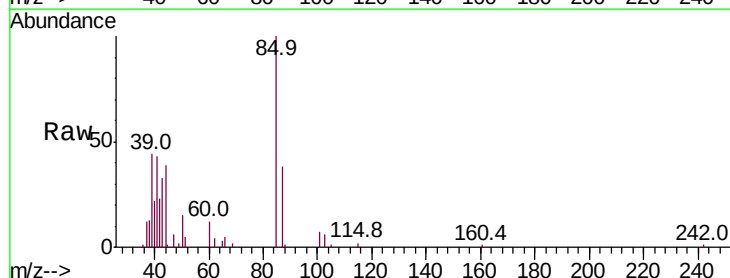
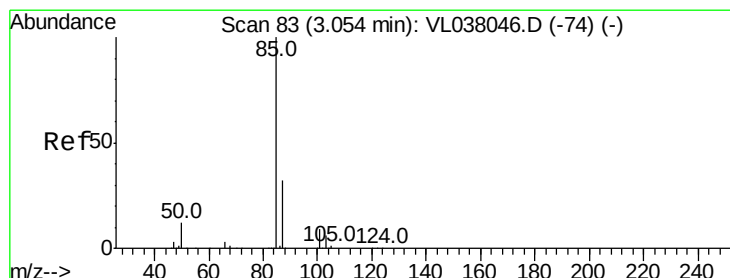
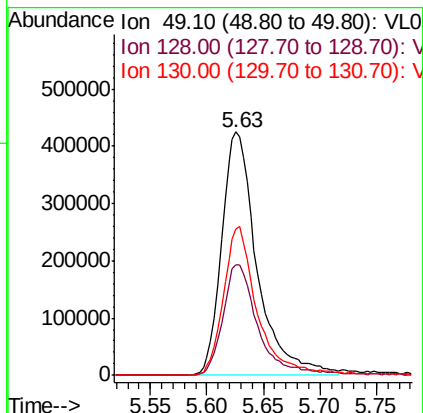
Tot Ion: 49 Resp: 925497

Ion Ratio Lower Upper

49 100

128 46.0 26.5 79.5

130 59.3 32.5 97.4



#2

Dichlorodifluoromethane

Concen: 0.189 ppbv

RT: 3.03 min Scan# 75

Delta R.T. -0.03 min

Lab File: VL038177.D

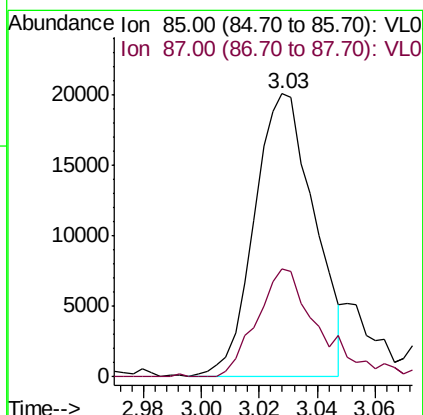
Acq: 14 Dec 2021 22:03

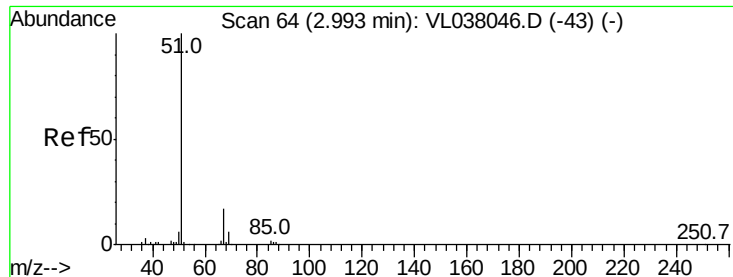
Tgt Ion: 85 Resp: 28906

Ion Ratio Lower Upper

85 100

87 38.1 25.8 38.6





#3

Chlorodifluoromethane

Concen: 0.387 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

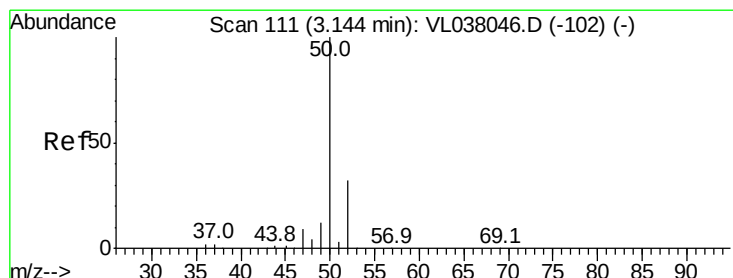
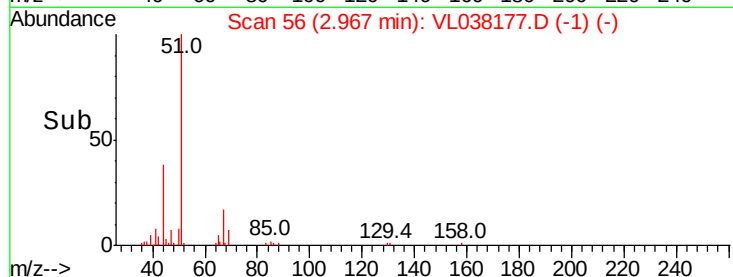
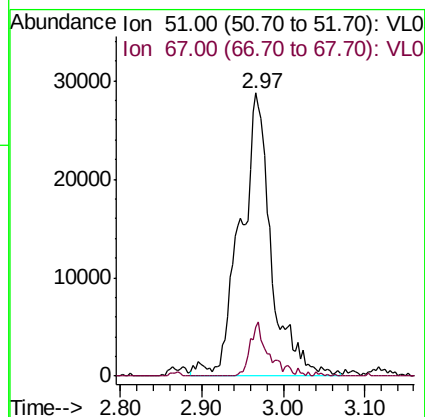
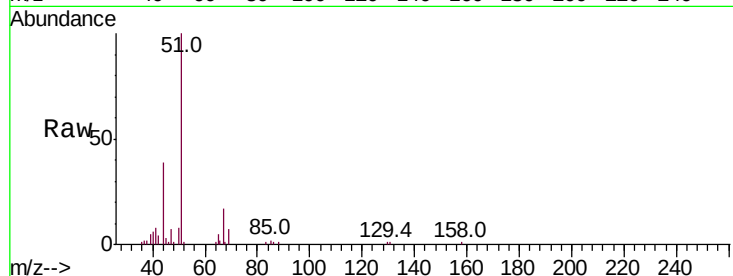
Acq: 14 Dec 2021 22:03

Tot Ion: 51 Resp: 75211

Ion Ratio Lower Upper

51 100

67 11.4 13.8 20.8#



#4

Chloromethane

Concen: 0.432 ppbv

RT: 3.12 min Scan# 104

Delta R.T. -0.02 min

Lab File: VL038177.D

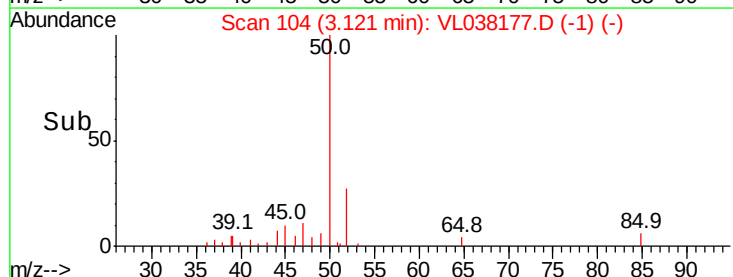
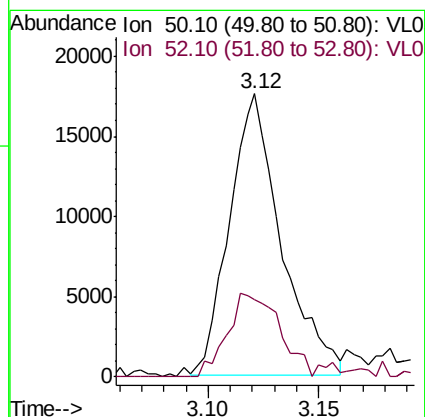
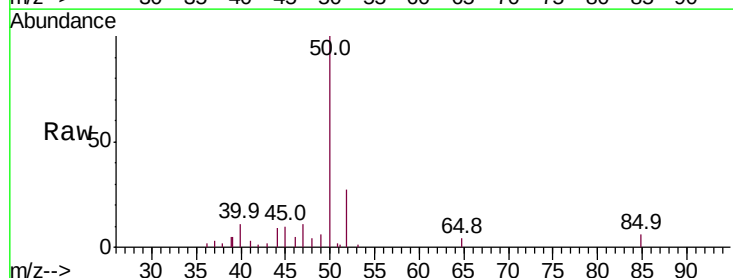
Acq: 14 Dec 2021 22:03

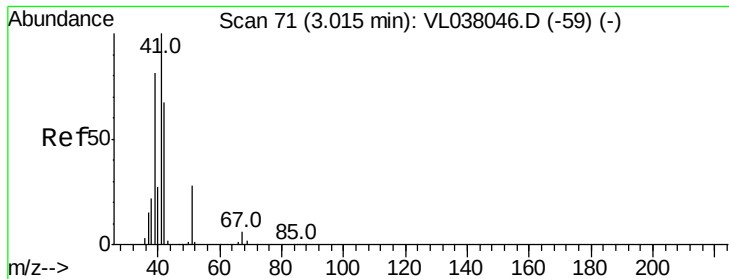
Tgt Ion: 50 Resp: 28591

Ion Ratio Lower Upper

50 100

52 27.3 25.4 38.0





#9

Propene

Concen: 1.667 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

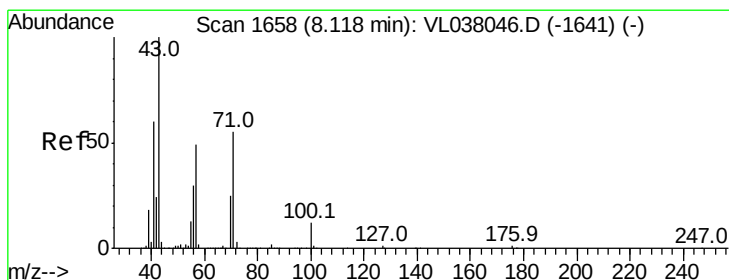
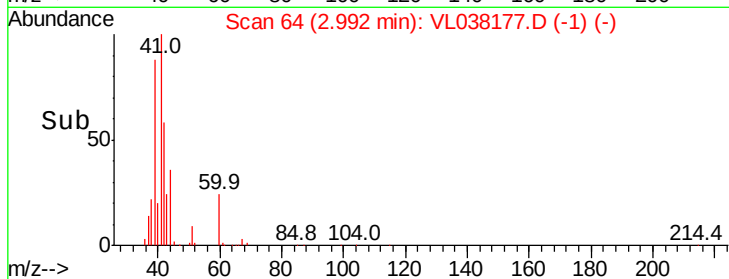
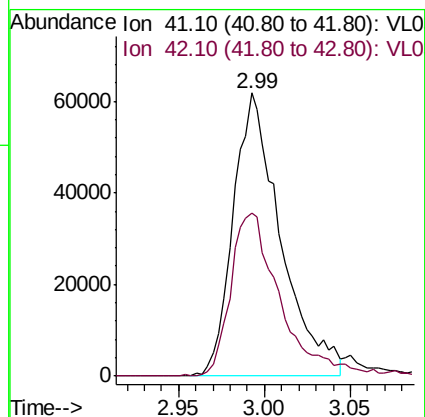
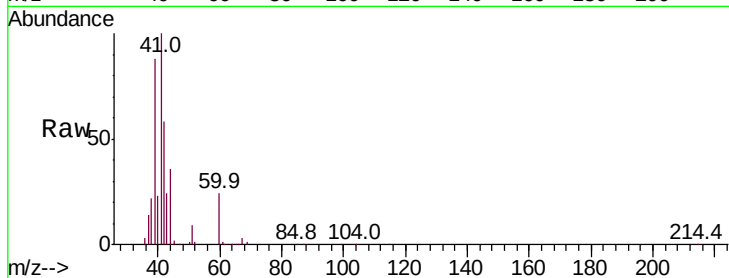
Acq: 14 Dec 2021 22:03

Tot Ion: 41 Resp: 119353

Ion Ratio Lower Upper

41 100

42 61.3 53.8 80.8



#10

Heptane

Concen: 0.115 ppbv

RT: 8.07 min Scan# 1644

Delta R.T. -0.05 min

Lab File: VL038177.D

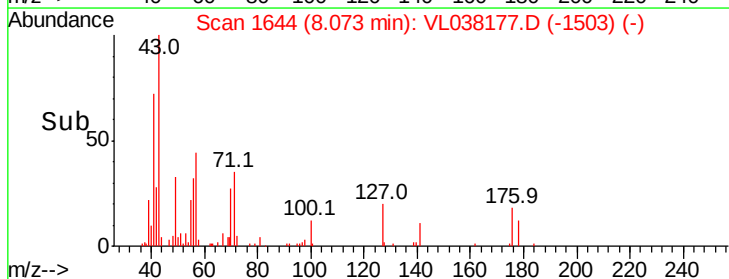
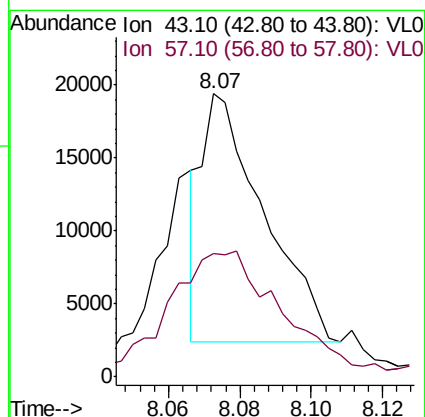
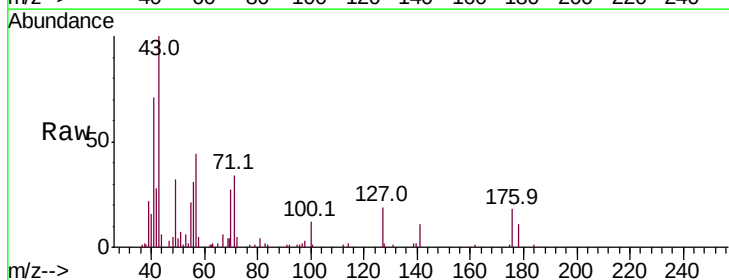
Acq: 14 Dec 2021 22:03

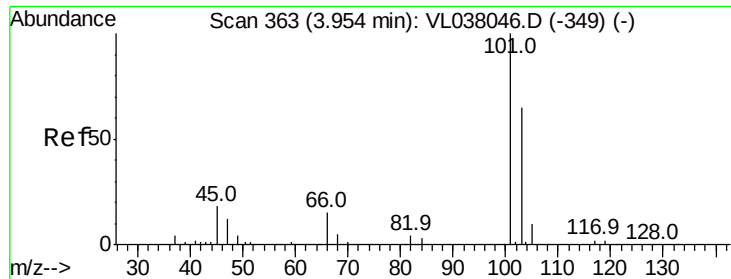
Tgt Ion: 43 Resp: 20300

Ion Ratio Lower Upper

43 100

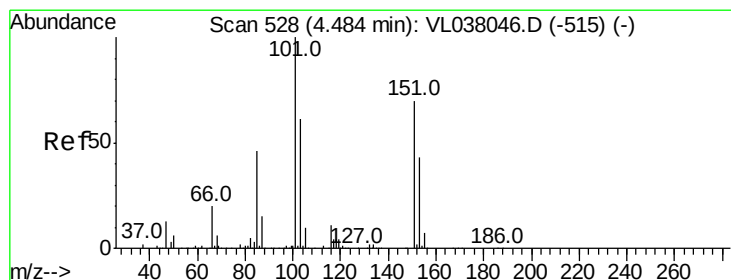
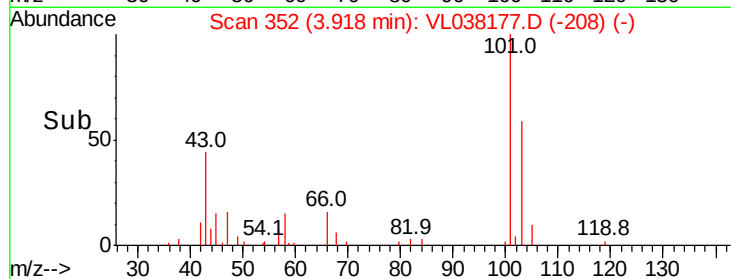
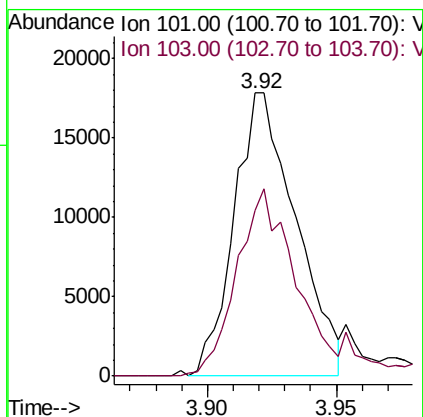
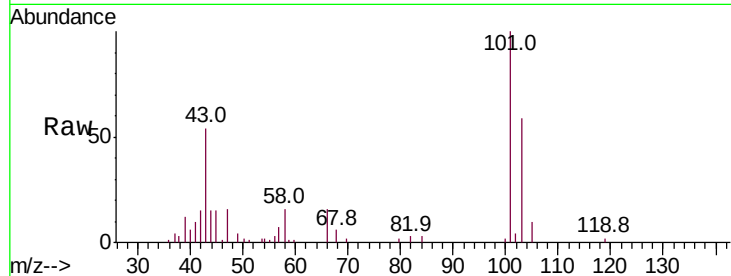
57 99.7 40.4 60.6#





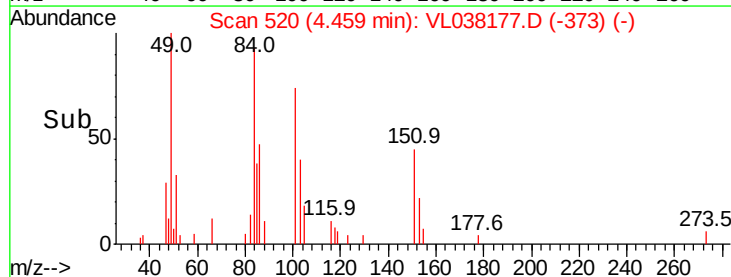
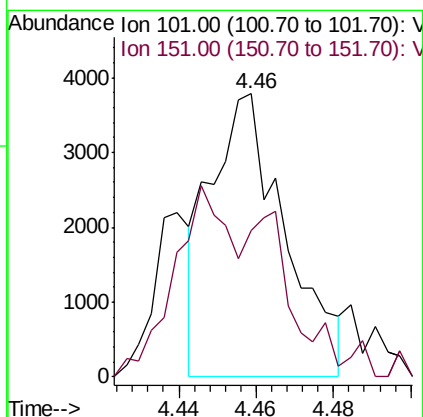
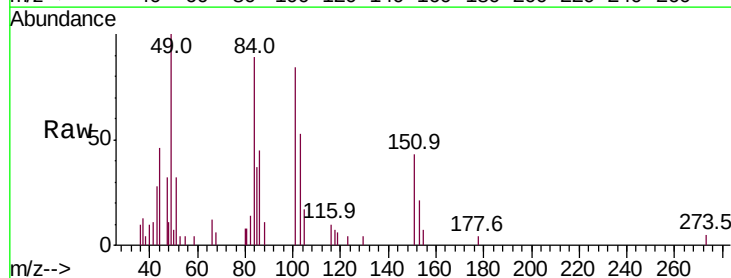
#11
 Trichlorofluoromethane
 Concen: 0.205 ppbv
 RT: 3.92
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 14 Dec 2021 22:03

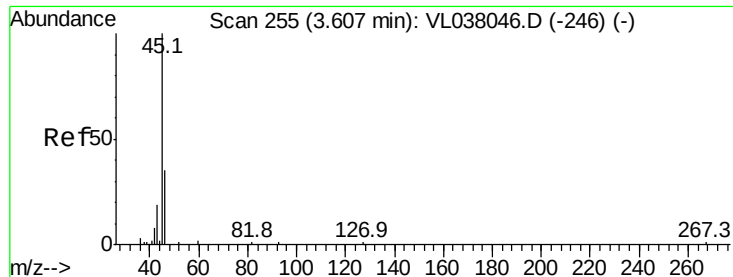
Tot Ion:101 Resp: 29782
 Ion Ratio Lower Upper
 101 100
 103 57.4 51.8 77.6



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.049 ppbv
 RT: 4.46 min Scan# 520
 Delta R.T. -0.03 min
 Lab File: VL038177.D
 Acq: 14 Dec 2021 22:03

Tgt Ion:101 Resp: 5071
 Ion Ratio Lower Upper
 101 100
 151 0.0 59.0 88.4#





#13

Ethanol

Concen: 33.990 ppbv

RT: 3.58 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

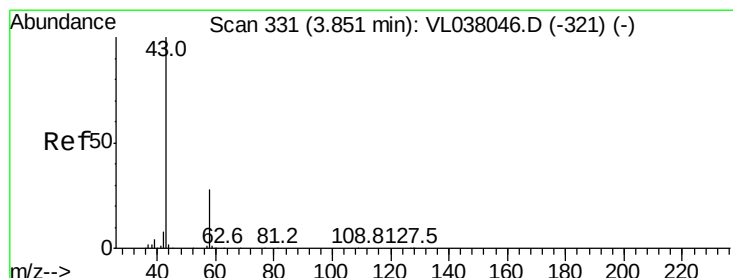
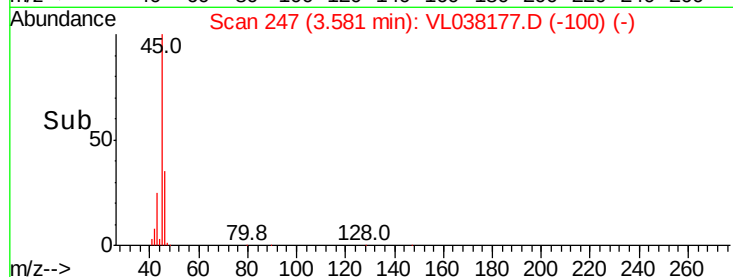
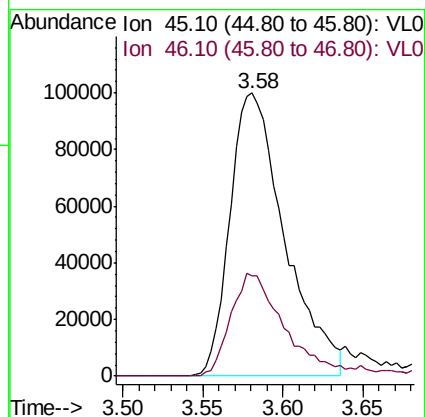
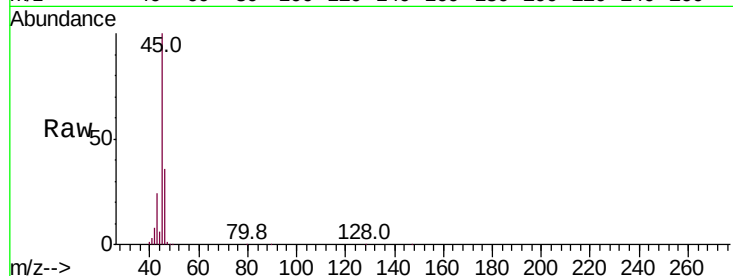
Acq: 14 Dec 2021 22:03

Tot Ion: 45 Resp: 235113

Ion Ratio Lower Upper

45 100

46 38.0 17.6 70.2



#15

Acetone

Concen: 10.657 ppbv

RT: 3.82 min Scan# 321

Delta R.T. -0.03 min

Lab File: VL038177.D

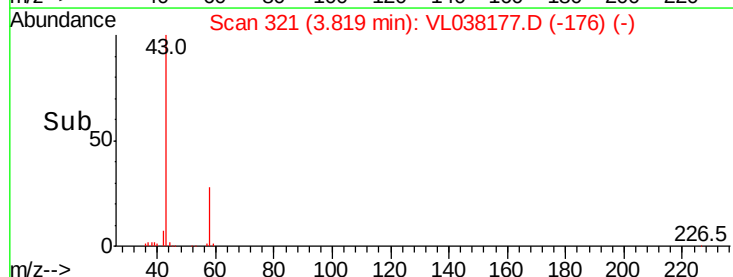
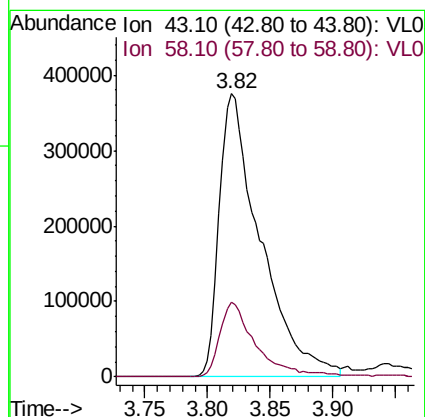
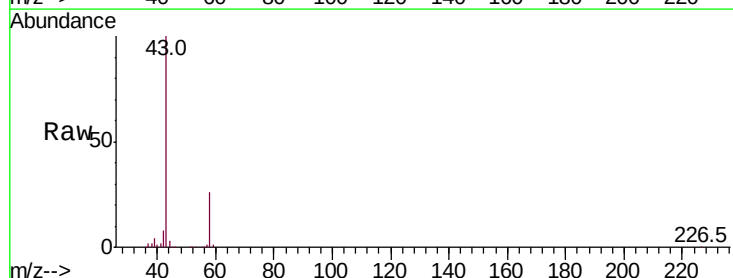
Acq: 14 Dec 2021 22:03

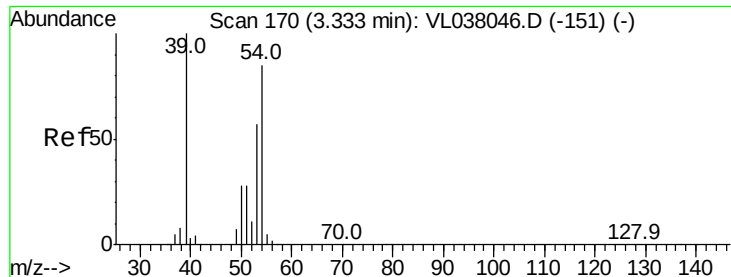
Tgt Ion: 43 Resp: 855111

Ion Ratio Lower Upper

43 100

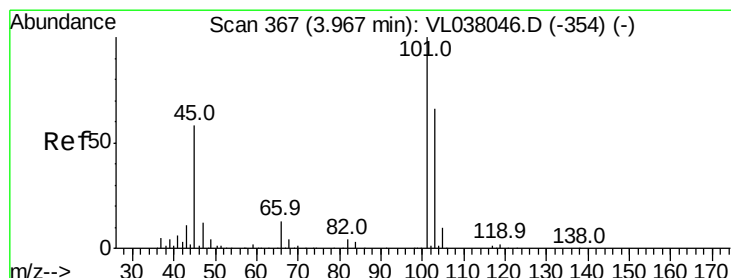
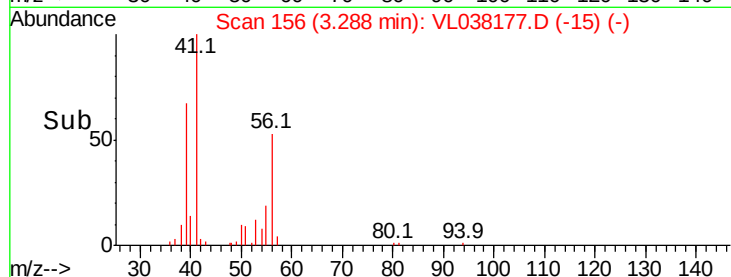
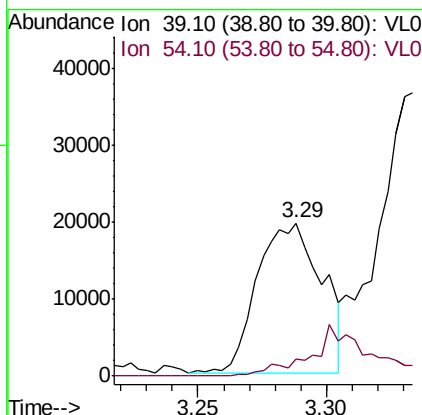
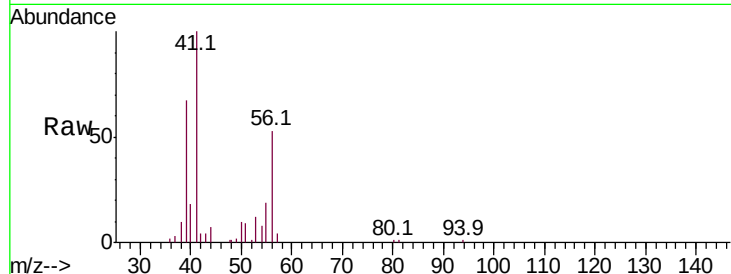
58 23.5 22.4 33.6





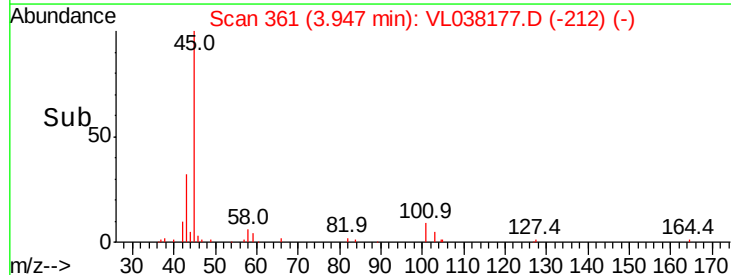
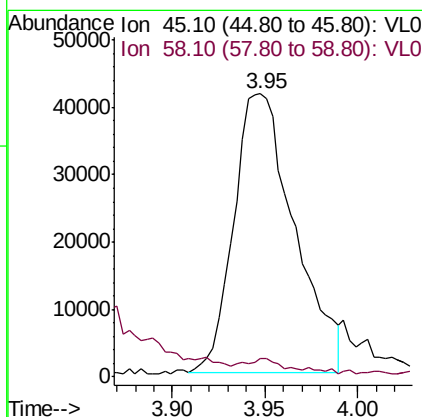
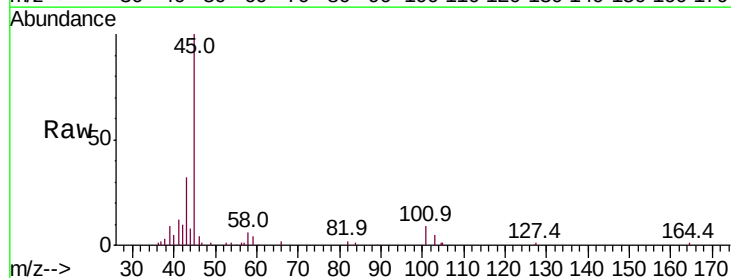
#16
 1,3-Butadiene
 Concen: 0.544 ppbv
 RT: 3.29
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 14 Dec 2021 22:03

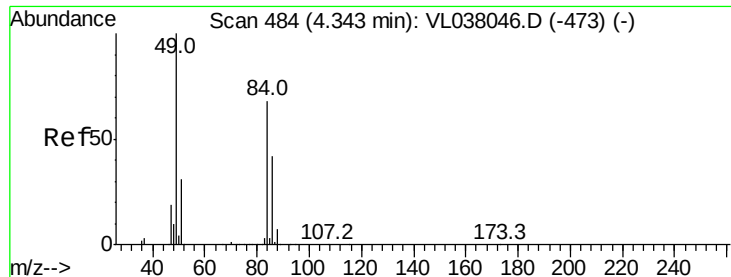
Tot Ion: 39 Resp: 34043
 Ion Ratio Lower Upper
 39 100
 54 33.2 64.4 96.6#



#19
 Isopropyl Alcohol
 Concen: 1.626 ppbv
 RT: 3.95 min Scan# 361
 Delta R.T. -0.02 min
 Lab File: VL038177.D
 Acq: 14 Dec 2021 22:03

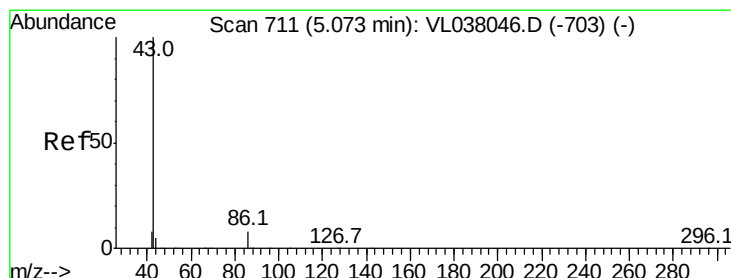
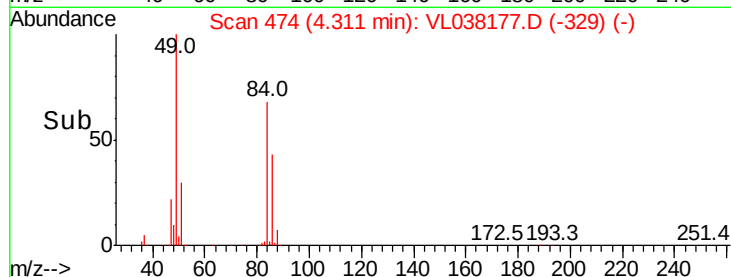
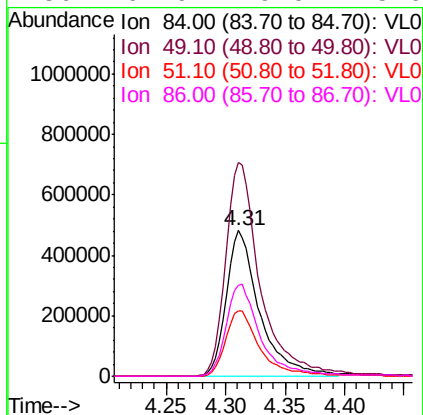
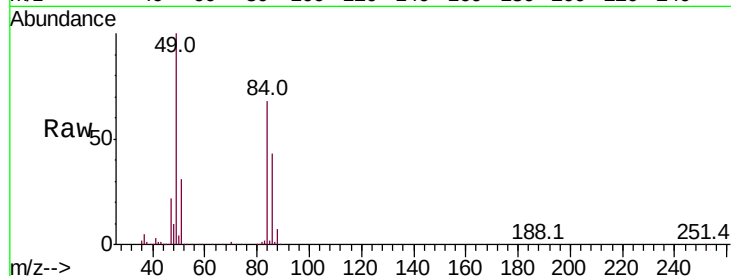
Tgt Ion: 45 Resp: 94281
 Ion Ratio Lower Upper
 45 100
 58 213.4 1.4 2.0#





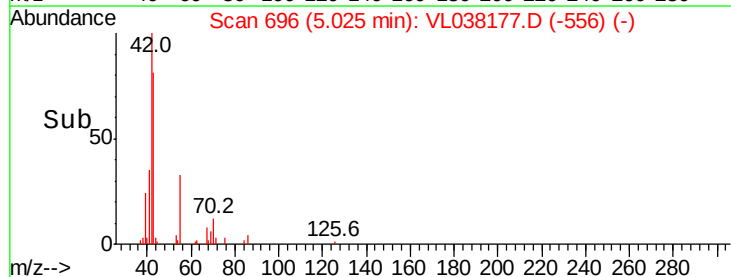
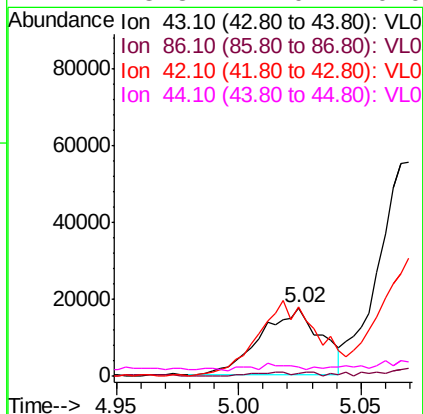
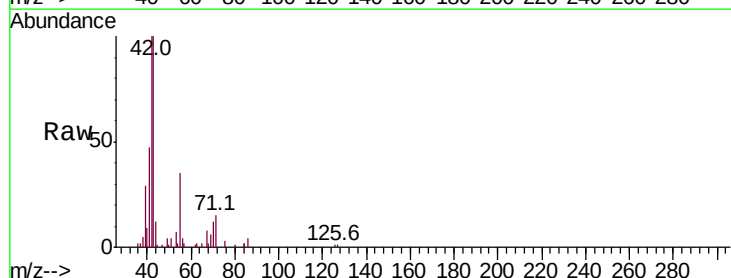
#20
Methylene Chloride
Concen: 20.832 ppbv
RT: 4.31
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 22:03

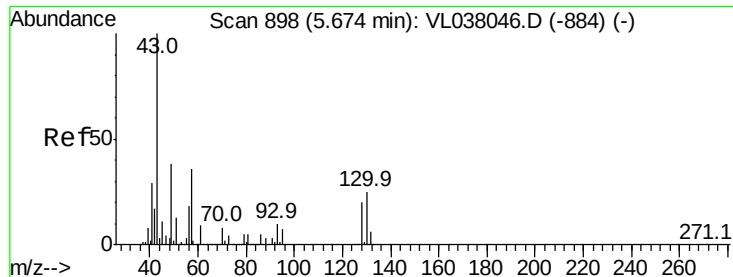
Tot Ion:	84	Resp:	936298
Ion	Ratio	Lower	Upper
84	100		
49	146.9	118.2	177.2
51	44.8	36.8	55.2
86	62.9	49.0	73.6



#23
Vinyl Acetate
Concen: 0.257 ppbv
RT: 5.02 min Scan# 696
Delta R.T. -0.05 min
Lab File: VL038177.D
Acq: 14 Dec 2021 22:03

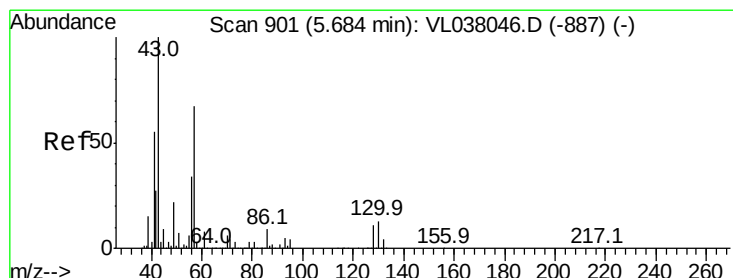
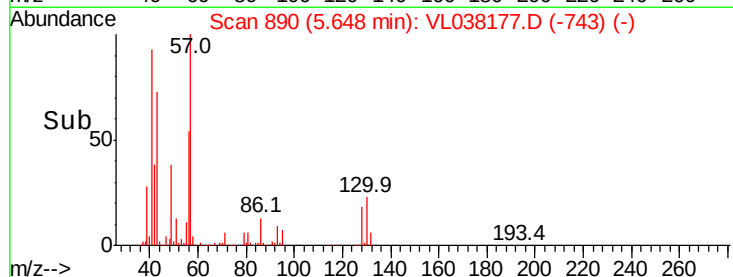
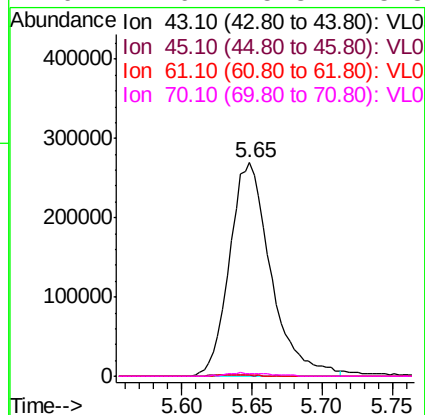
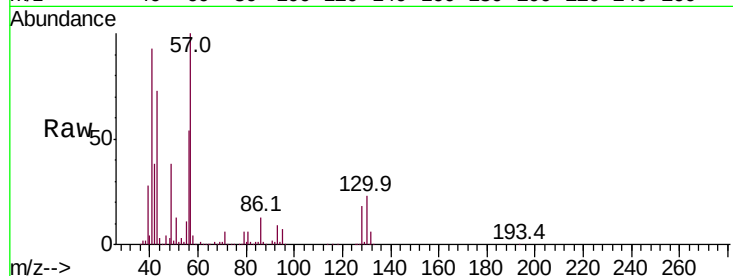
Tgt Ion:	43	Resp:	29884
Ion	Ratio	Lower	Upper
43	100		
86	3.6	5.3	7.9#
42	100.5	7.0	10.6#
44	3.8	4.0	6.0#





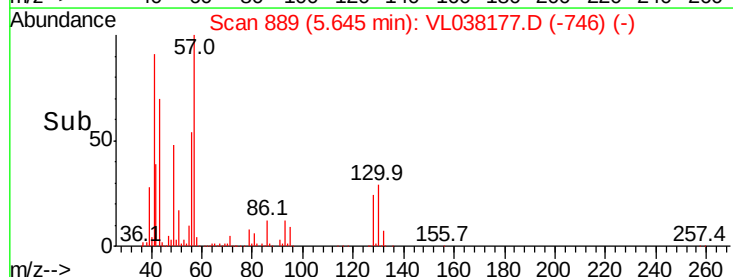
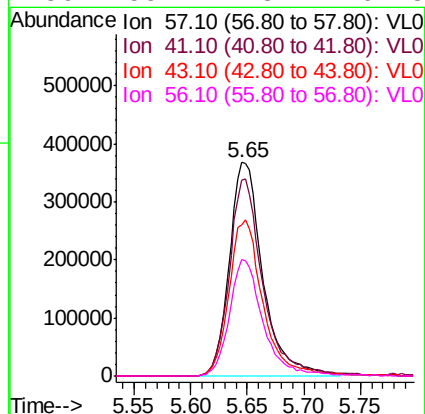
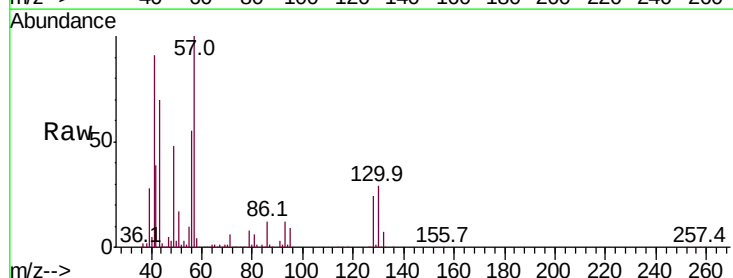
#25
Ethyl Acetate
Concen: 2.064 ppbv
RT: 5.65 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 14 Dec 2021 22:03

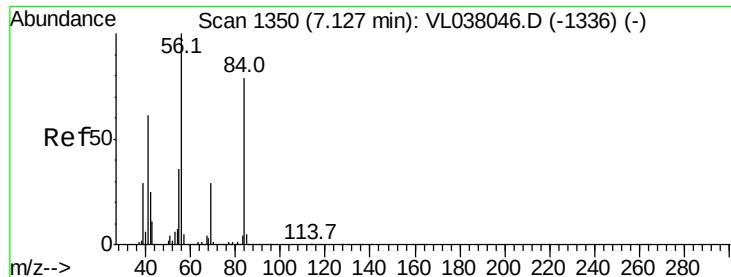
Tot Ion:	43	Resp:	550566
Ion	Ratio	Lower	Upper
43	100		
45	1.0	7.9	11.9#
61	0.7	7.8	11.6#
70	1.6	5.8	8.8#



#26
Hexane
Concen: 5.896 ppbv
RT: 5.65 min Scan# 889
Delta R.T.: -0.04 min
Lab File: VL038177.D
Acq: 14 Dec 2021 22:03

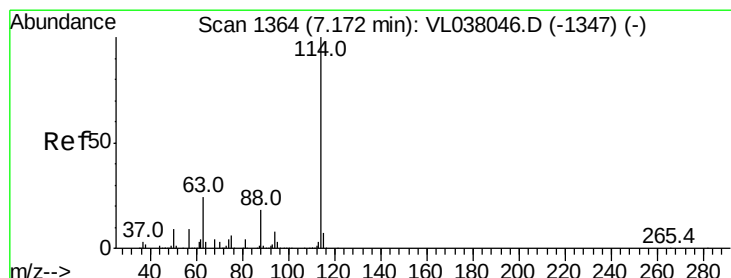
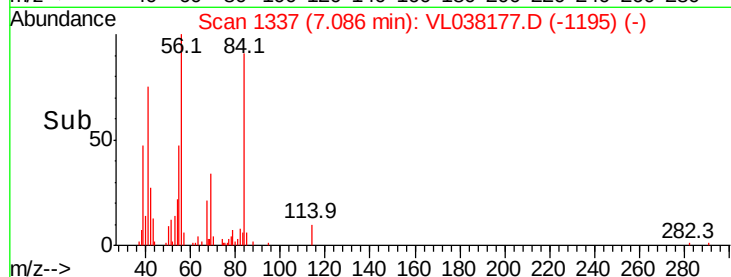
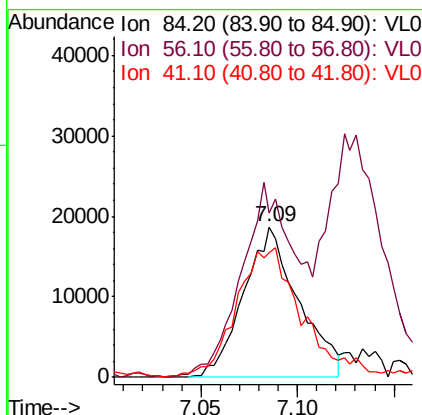
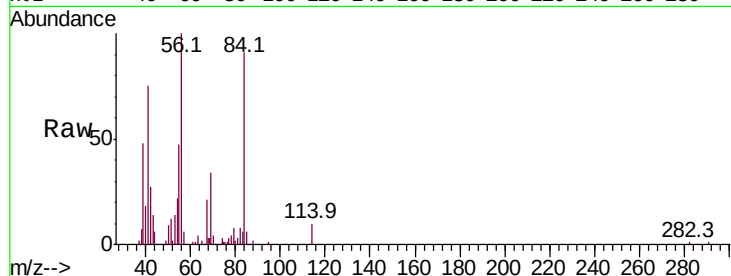
Tgt Ion:	57	Resp:	757903
Ion	Ratio	Lower	Upper
57	100		
41	92.9	71.4	107.2
43	74.9	174.6	261.8#
56	55.1	43.2	64.8





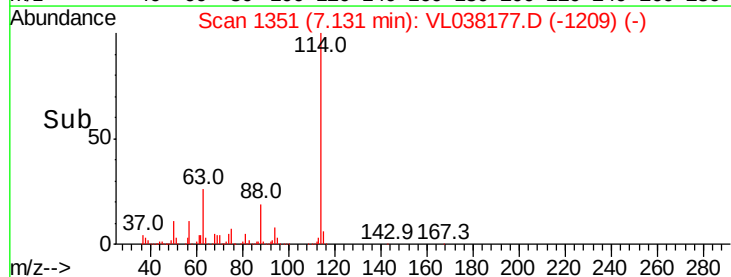
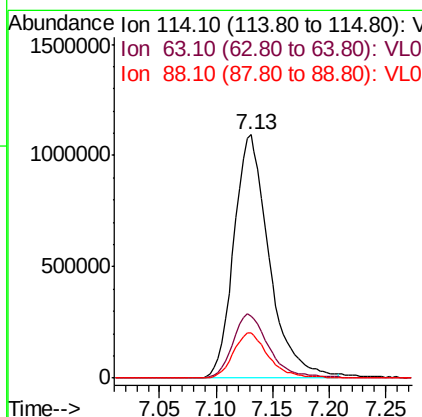
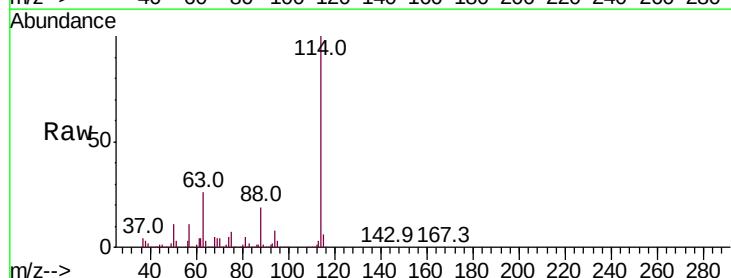
#30
Cvclohexane
Concen: 0.317 ppbv
RT: 7.09
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 22:03

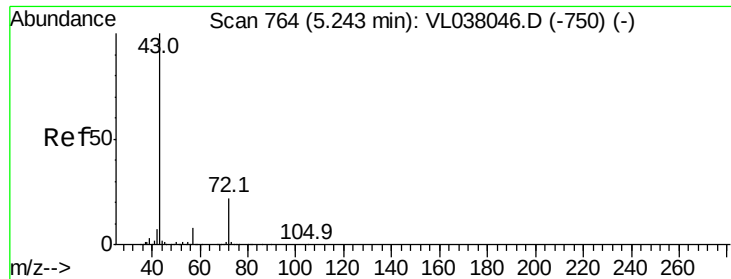
Tot Ion	84	Resp	37035
Ion	Ratio	Lower	Upper
84	100		
56	129.8	108.1	162.1
41	103.9	64.4	96.6



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.13 min Scan# 1351
Delta R.T.: -0.04 min
Lab File: VL038177.D
Acq: 14 Dec 2021 22:03

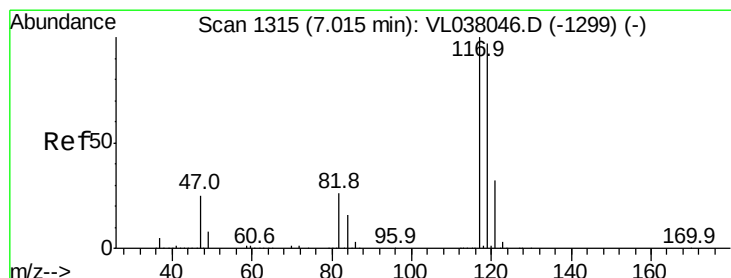
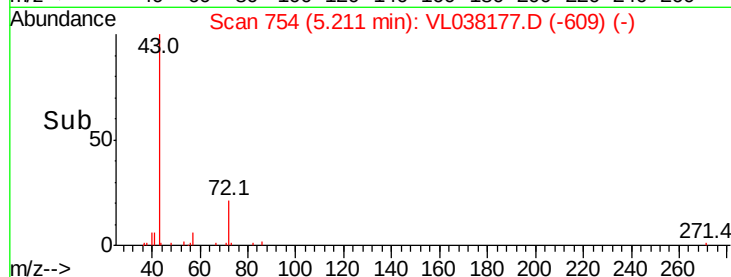
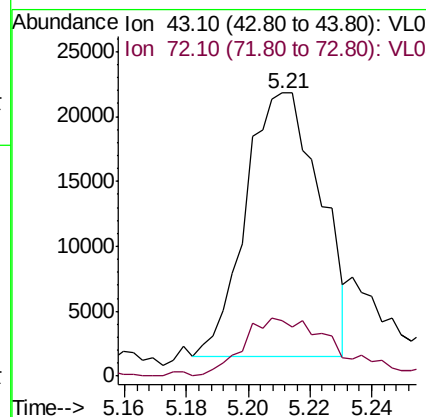
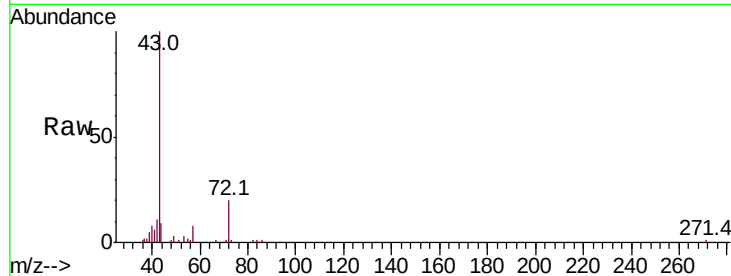
Tgt Ion	114	Resp	2376406
Ion	Ratio	Lower	Upper
114	100		
63	27.3	19.7	29.5
88	18.8	14.4	21.6





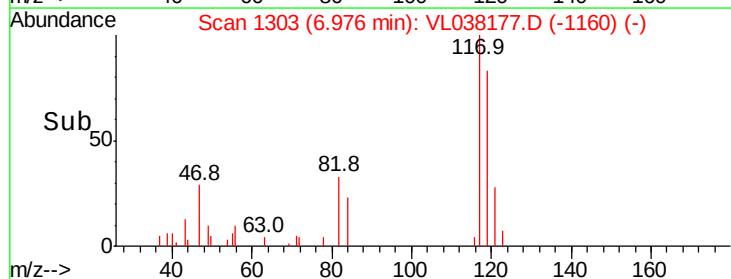
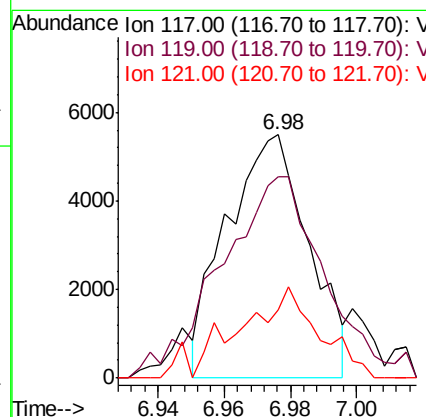
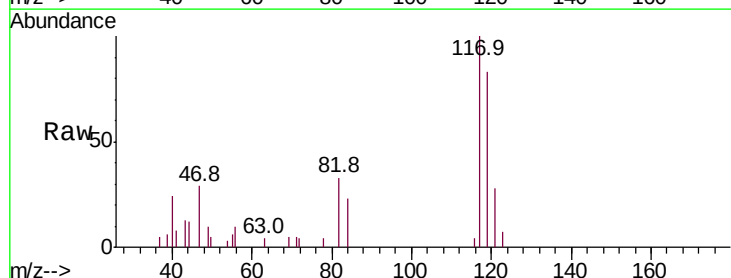
#34
2-Butanone
Concen: 0.354 ppbv
RT: 5.21
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Dec 2021 22:03

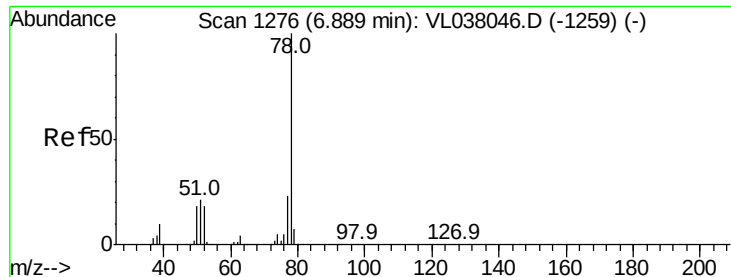
Tot Ion: 43 Resp: 33955
Ion Ratio Lower Upper
43 100
72 29.5 18.8 28.2#



#35
Carbon Tetrachloride
Concen: 0.057 ppbv
RT: 6.98 min Scan# 1303
Delta R.T. -0.04 min
Lab File: VL038177.D
Acq: 14 Dec 2021 22:03

Tgt Ion: 117 Resp: 9444
Ion Ratio Lower Upper
117 100
119 73.8 77.7 116.5#
121 33.1 25.6 38.4





#36

Benzene

Concen: 0.650 ppbv

RT: 6.84 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 22:03

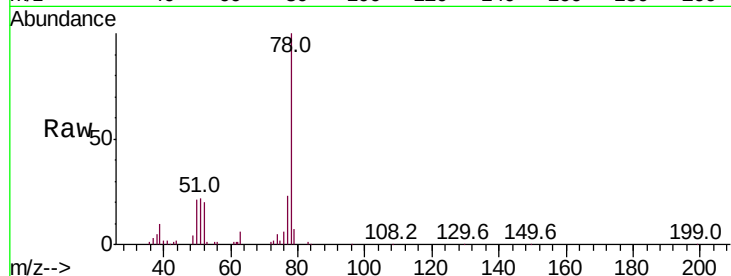
Tot Ion: 78 Resp: 154199

Ion Ratio Lower Upper

78 100

77 22.8 18.2 27.4

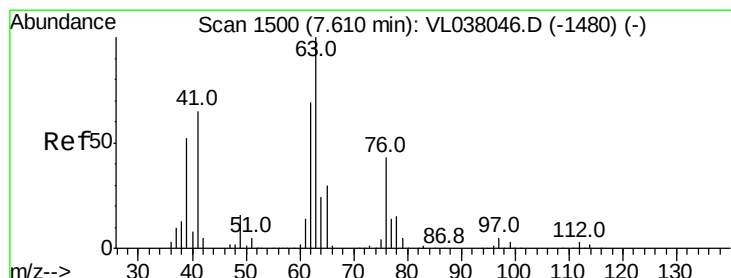
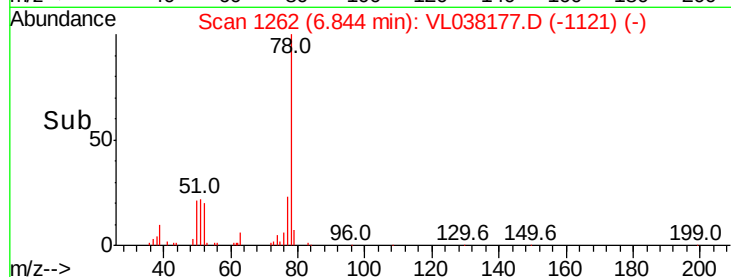
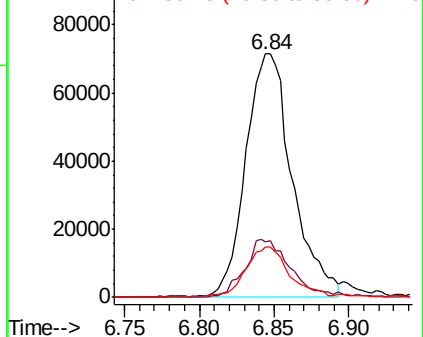
50 20.5 14.7 22.1



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: 6.938 ppbv

RT: 7.13 min Scan# 1350

Delta R.T. -0.48 min

Lab File: VL038177.D

Acq: 14 Dec 2021 22:03

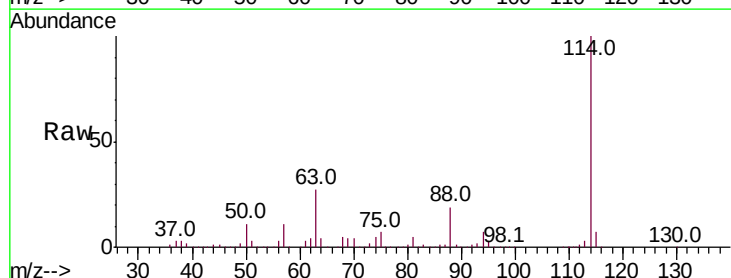
Tgt Ion: 63 Resp: 630879

Ion Ratio Lower Upper

63 100

41 0.0 52.3 78.5#

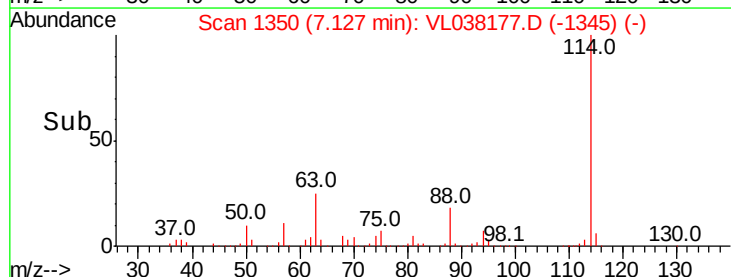
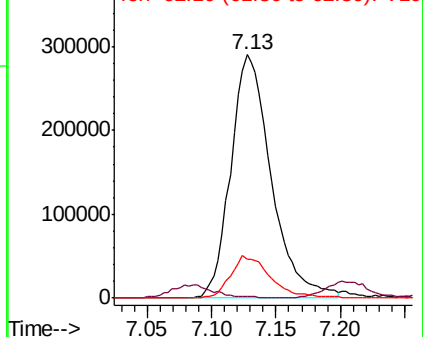
62 16.0 55.1 82.7#

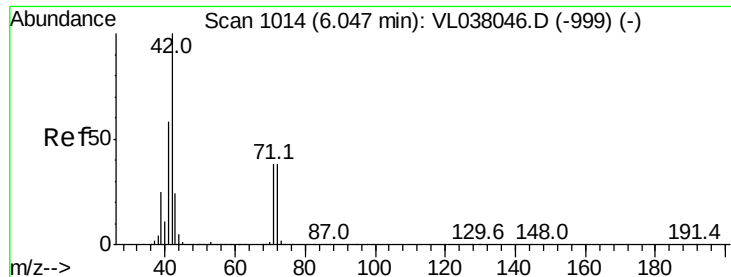


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

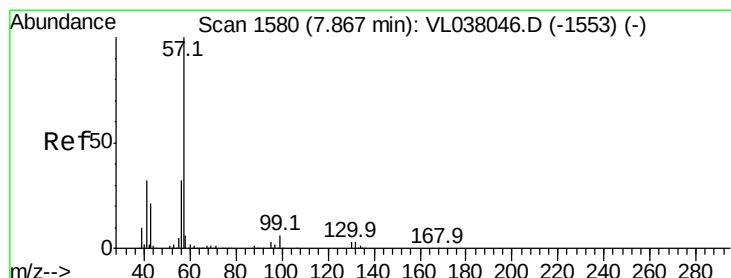
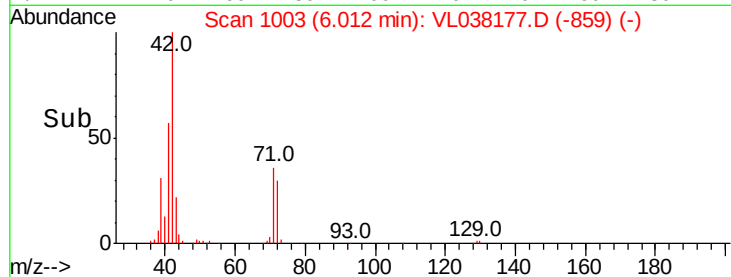
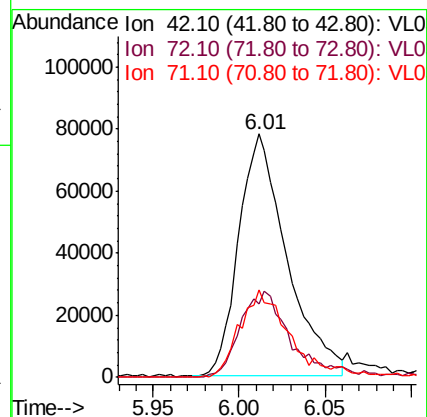
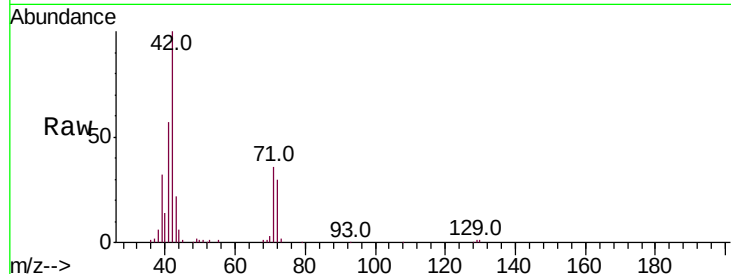
Ion 62.10 (61.80 to 62.80): VL0





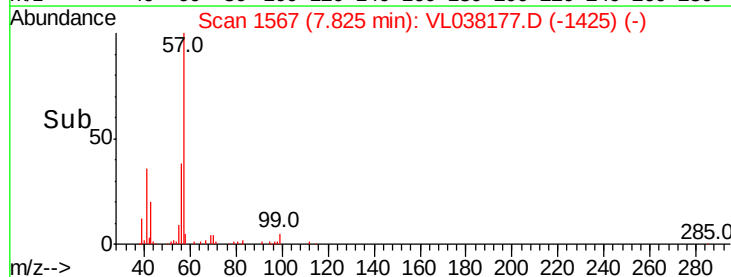
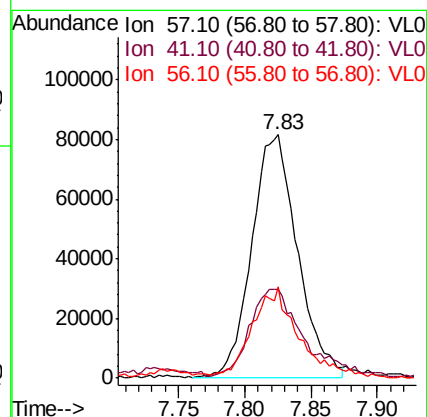
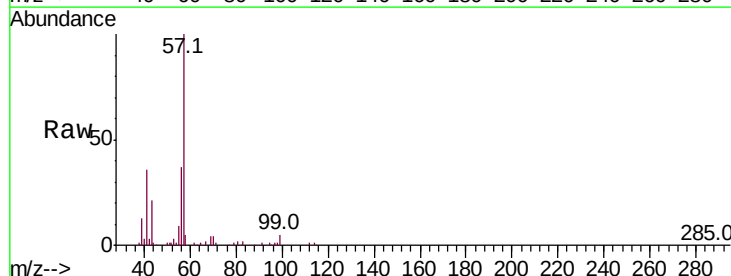
#41
Tetrahydrofuran
Concen: 2.560 ppbv
RT: 6.01
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 14 Dec 2021 22:03

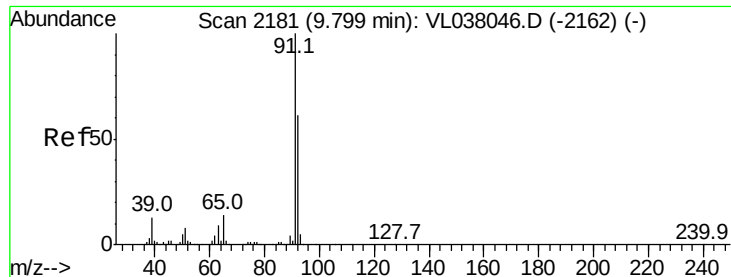
Tot Ion:	42	Resp:	152295
Ion	Ratio	Lower	Upper
42	100		
72	38.5	31.7	47.5
71	38.8	30.6	46.0



#44
2,2,4-Trimethylpentane
Concen: 0.493 ppbv
RT: 7.83 min Scan# 1567
Delta R.T.: -0.04 min
Lab File: VL038177.D
Acq: 14 Dec 2021 22:03

Tgt Ion:	57	Resp:	195698
Ion	Ratio	Lower	Upper
57	100		
41	44.0	25.8	38.6#
56	38.7	25.6	38.4#





#53

Toluene

Concen: 0.652 ppbv

RT: 9.75 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

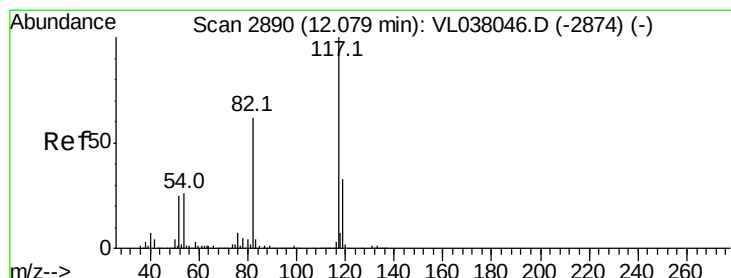
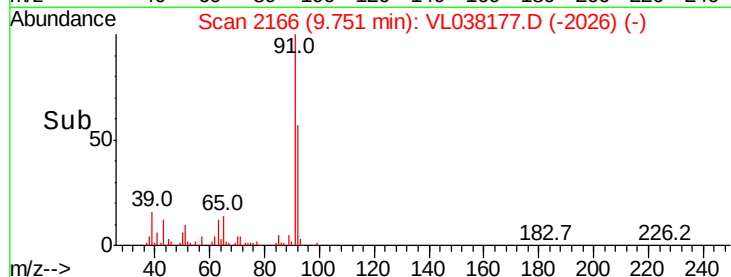
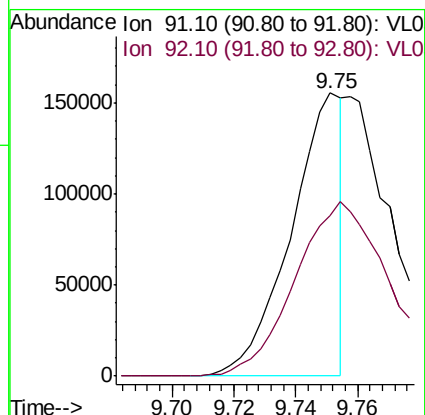
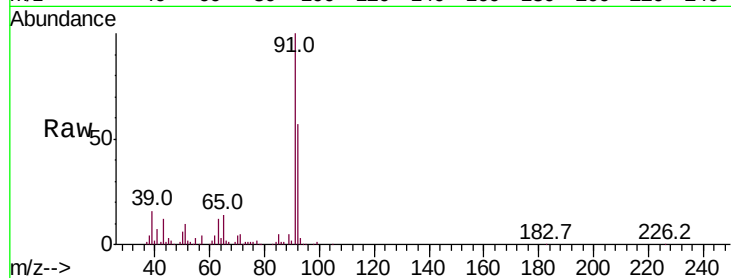
Acq: 14 Dec 2021 22:03

Tot Ion: 91 Resp: 177857

Ion Ratio Lower Upper

91 100

92 0.0 49.7 74.5#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.03 min Scan# 2875

Delta R.T. -0.05 min

Lab File: VL038177.D

Acq: 14 Dec 2021 22:03

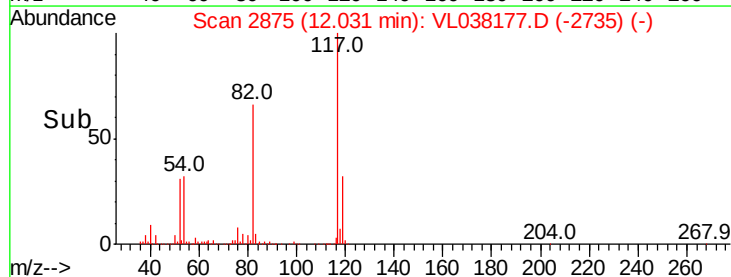
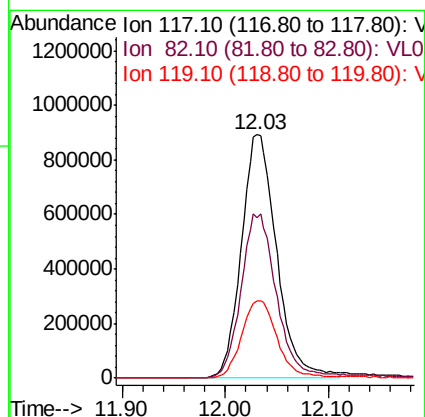
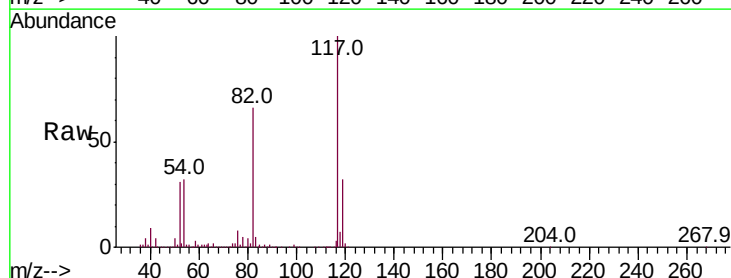
Tgt Ion: 117 Resp: 2122479

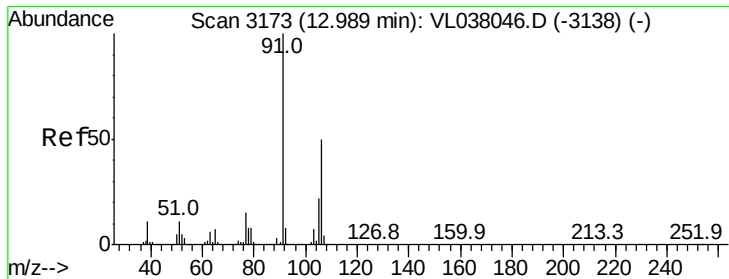
Ion Ratio Lower Upper

117 100

82 70.8 52.8 79.2

119 33.3 26.8 40.2





#59

m/p-Xylene

Concen: 0.347 ppbv

RT: 12.92

Delta R.T. MSVOA_L

Lab File:

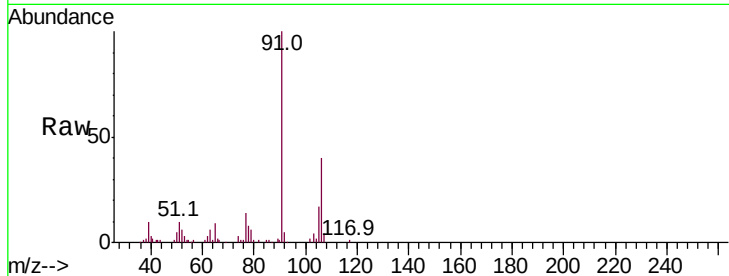
Acq: 14 Dec 2021 22:03

Tot Ion: 91 Resp: 102362

Ion Ratio Lower Upper

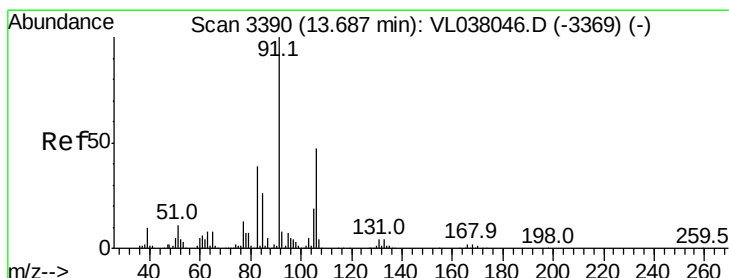
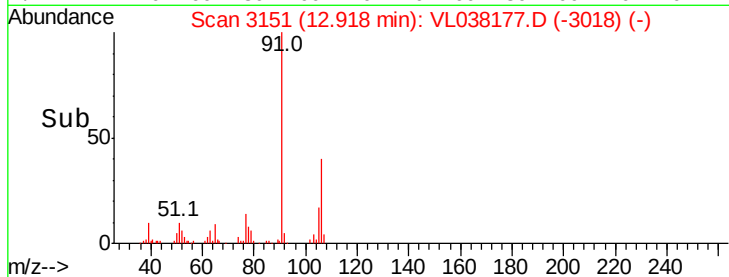
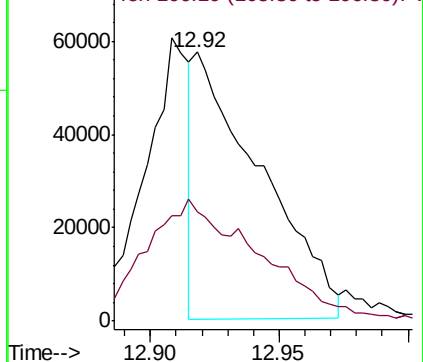
91 100

106 83.0 38.1 57.1#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#60

o-Xylene

Concen: 0.303 ppbv

RT: 13.64 min Scan# 3375

Delta R.T. -0.05 min

Lab File: VL038177.D

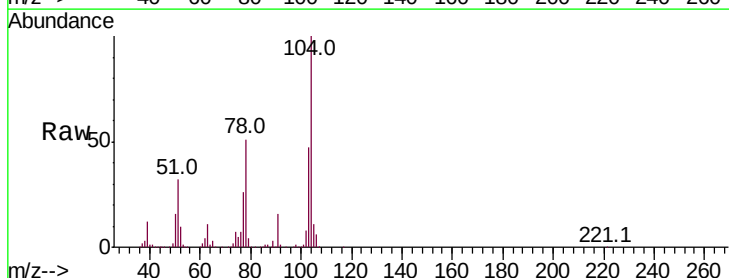
Acq: 14 Dec 2021 22:03

Tgt Ion: 91 Resp: 83101

Ion Ratio Lower Upper

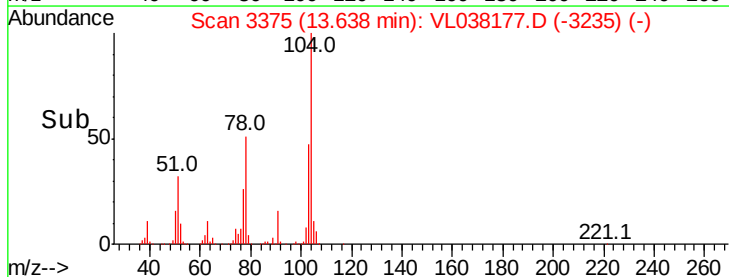
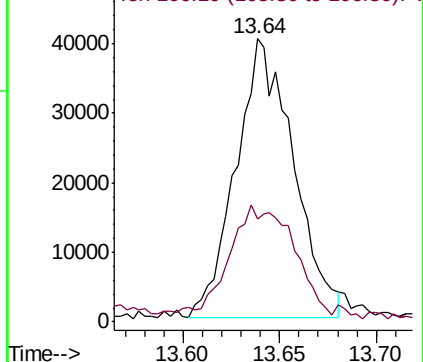
91 100

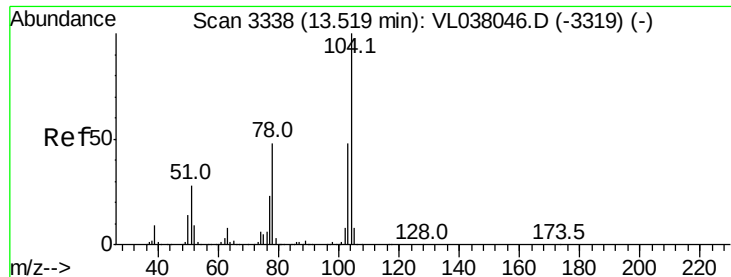
106 54.8 24.2 72.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

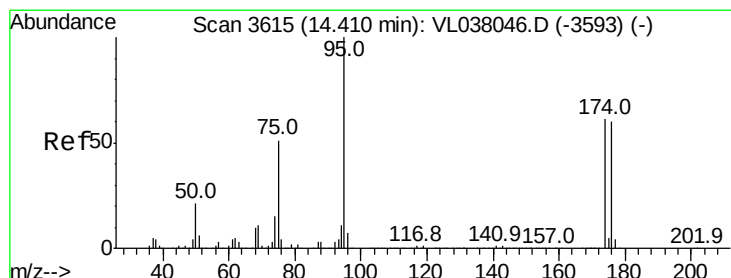
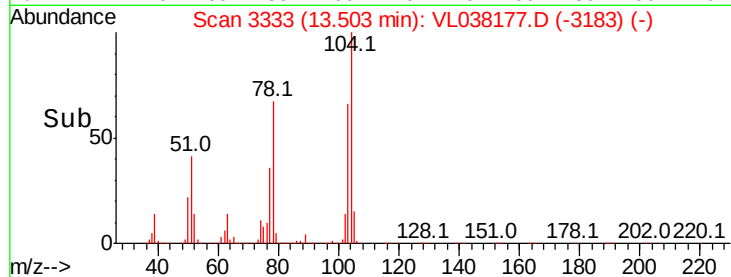
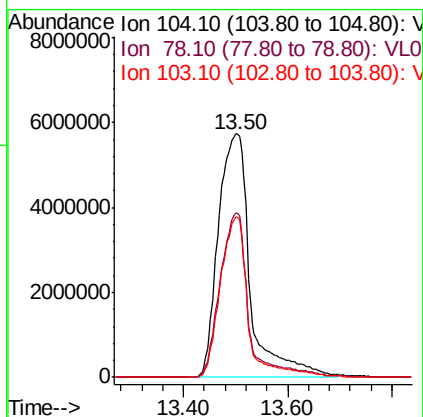
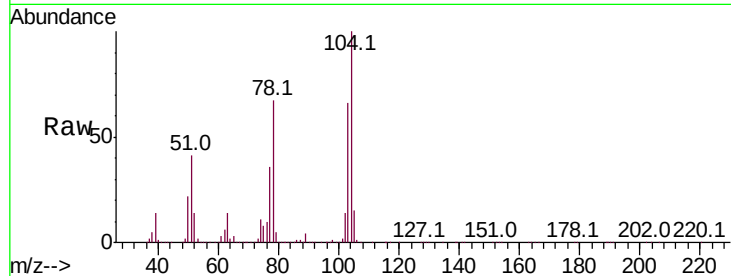
Ion 106.10 (105.80 to 106.80): V





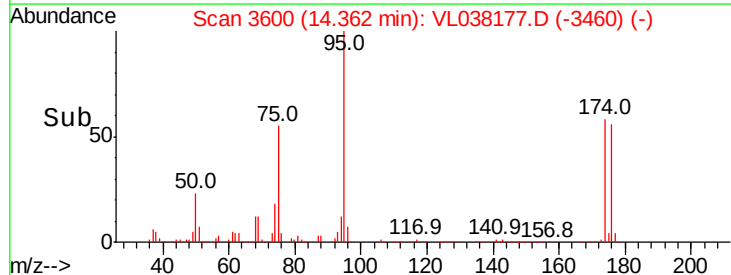
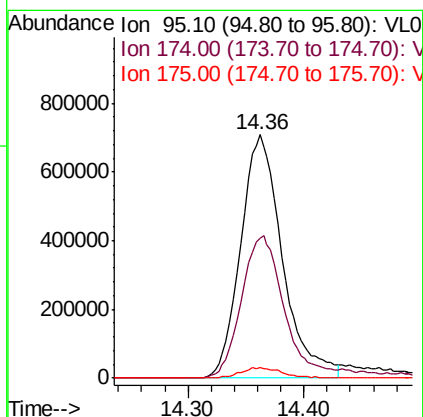
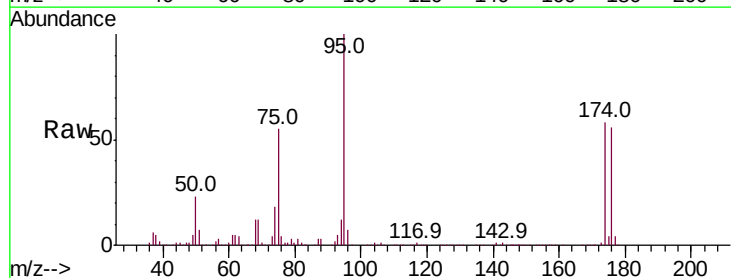
#61
Stvrene
Concen: 168.048 ppbv
RT: 13.50
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Dec 2021 22:03

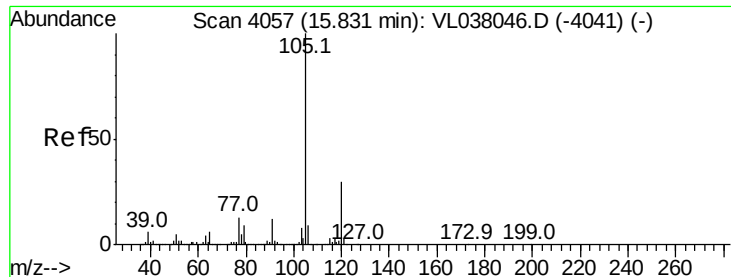
Tot Ion:104 Resp:24681380
Ion Ratio Lower Upper
104 100
78 60.2 39.8 59.6#
103 57.6 38.2 57.2#



#68
1-Bromo-4-Fluorobenzene
Concen: 11.584 ppbv
RT: 14.36 min Scan# 3600
Delta R.T. -0.05 min
Lab File: VL038177.D
Acq: 14 Dec 2021 22:03

Tgt Ion: 95 Resp: 1773537
Ion Ratio Lower Upper
95 100
174 64.4 53.1 79.7
175 4.6 4.0 6.0





#72

4-Ethyltoluene

Concen: 0.071 ppbv

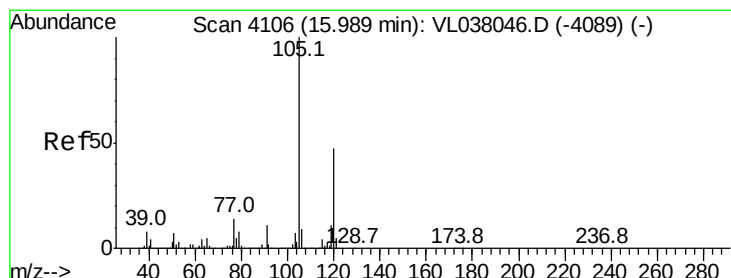
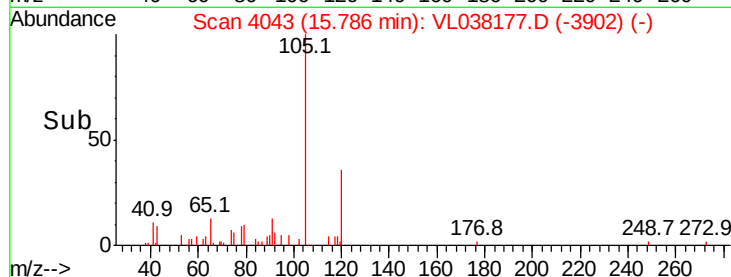
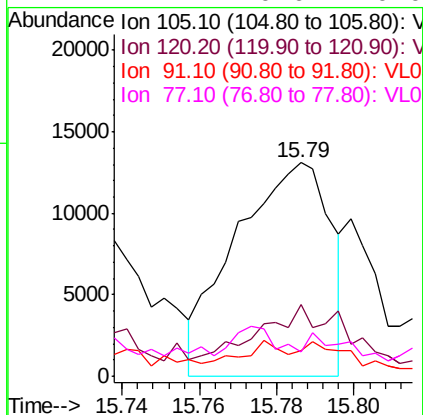
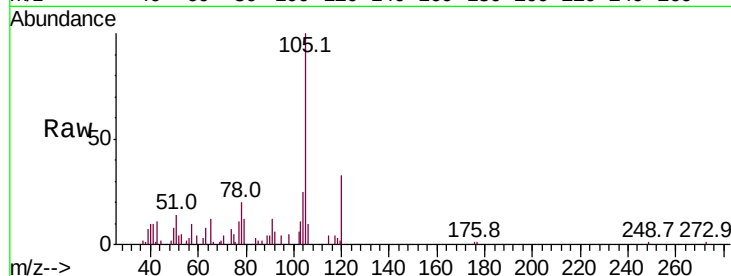
RT: 15.79

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 22:03

Tot Ion:	105	Resp:	22399
Ion	Ratio	Lower	Upper
105	100		
120	42.1	25.1	37.7#
91	21.9	9.7	14.5#
77	22.4	10.6	16.0#



#73

1,3,5-Trimethylbenzene

Concen: 0.033 ppbv

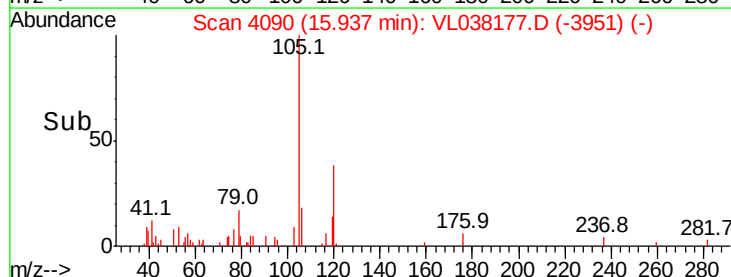
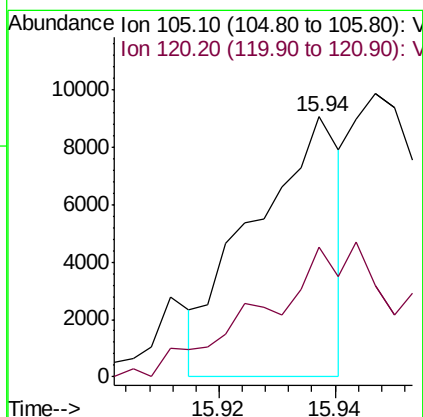
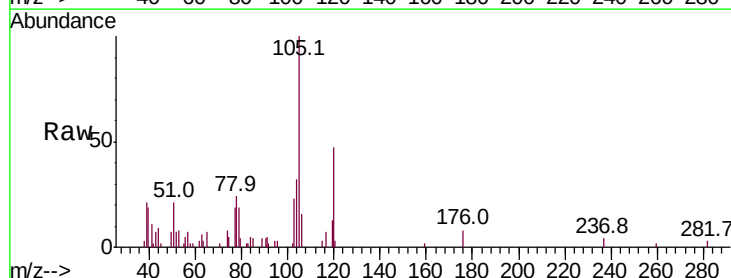
RT: 15.94 min Scan# 4090

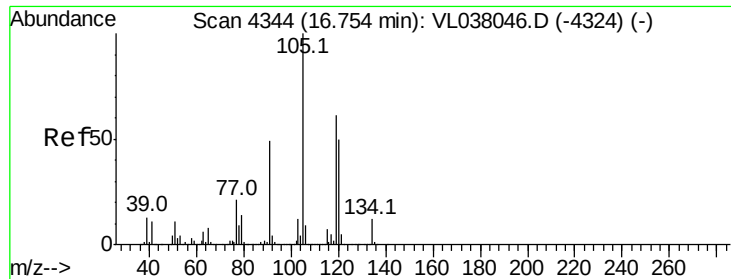
Delta R.T. -0.05 min

Lab File: VL038177.D

Acq: 14 Dec 2021 22:03

Tgt Ion:	105	Resp:	9438
Ion	Ratio	Lower	Upper
105	100		
120	55.2	37.8	56.6





#74

1,2,4-Trimethylbenzene

Concen: 0.223 ppbv

RT: 16.71 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Dec 2021 22:05

Tot Ion:	105	Resp:	66773
Ion Ratio	Lower	Upper	
105	100		
120	41.3	40.1	60.1
91	11.5	39.8	59.8#
77	16.1	16.6	25.0#

