

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL021422\
 Data File : VL038348.D
 Acq On : 14 Feb 2022 20:06
 Operator : SY/AP
 Sample : N1442-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Quant Time: Feb 15 00:40:45 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL012422AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Jan 24 14:12:48 2022
 QLast Update : Mon Jan 24 14:12:48 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	796337	10.00	ppbv	-0.03
33) 1,4-Difluorobenzene	7.15	114	2042257	10.00	ppbv	-0.03
55) Chlorobenzene-d5	12.05	117	1772075	10.00	ppbv	-0.03

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.38	95	1402550	10.43	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.30%

Target Compounds

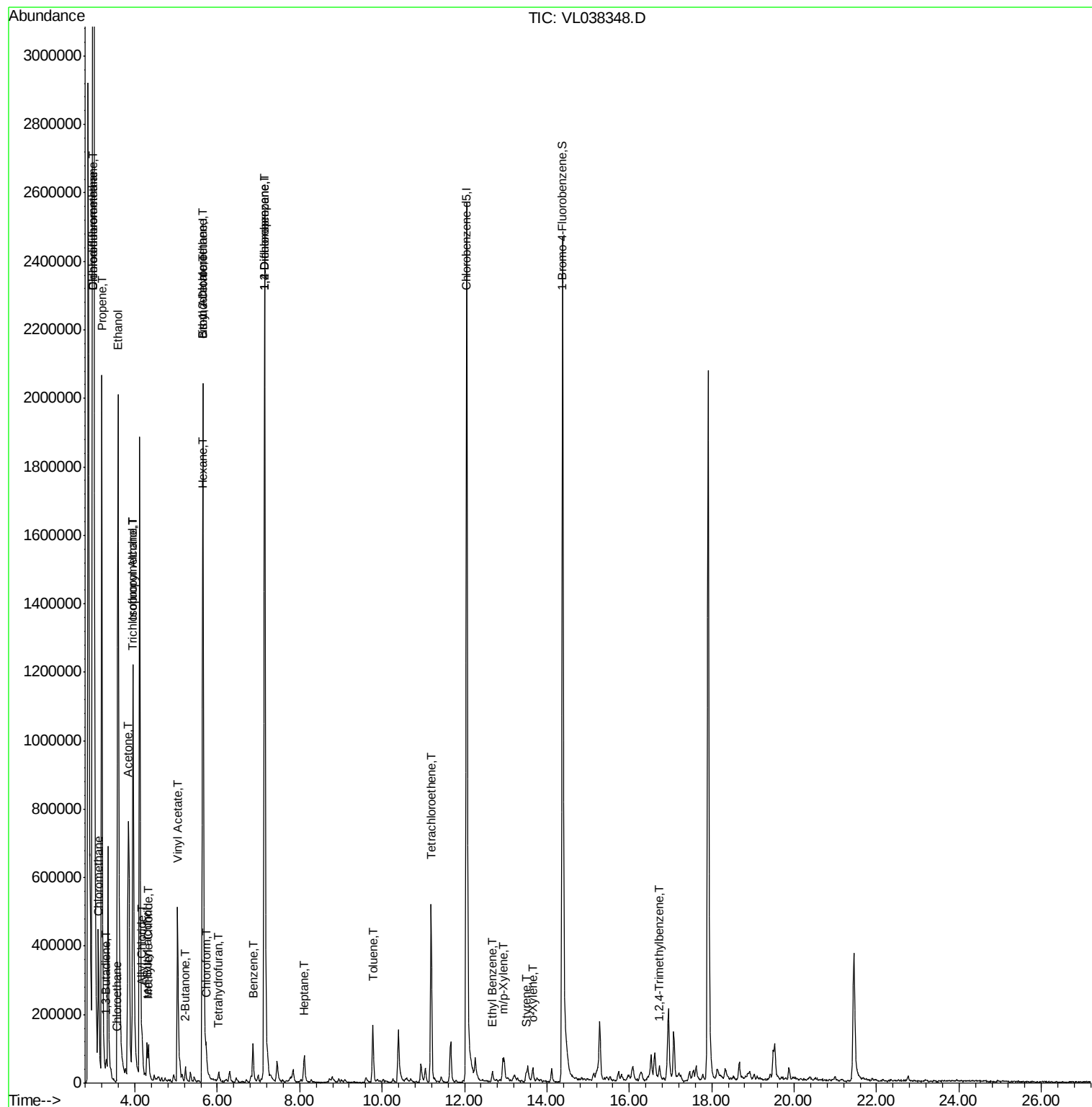
						Qvalue
2) Dichlorodifluoromethane	2.98	85	174913	1.03	ppbv	95
3) Chlorodifluoromethane	2.98	51	10095662	63.68	ppbv	94
4) Chloromethane	3.13	50	27415	0.50	ppbv	100
7) Chloroethane	3.55	64	1633	0.09	ppbv #	87
9) Propene	3.20	41	754604	14.62	ppbv	97
10) Heptane	8.09	43	6279	0.05	ppbv #	28
11) Trichlorofluoromethane	3.93	101	26565	0.20	ppbv	100
13) Ethanol	3.59	45	2868908	517.85	ppbv	98
15) Acetone	3.83	43	1100389	15.68	ppbv	96
16) 1,3-Butadiene	3.29	39	7900	0.16	ppbv #	56
17) tert-Butyl alcohol	4.29	59	16803	0.22	ppbv #	70
19) Isopropyl Alcohol	3.95	45	1682379	38.31	ppbv #	97
20) Methylene Chloride	4.33	84	34878	0.85	ppbv	94
21) Allyl Chloride	4.18	41	12330	0.20	ppbv #	19
23) Vinyl Acetate	5.04	43	36765	0.36	ppbv #	1
25) Ethyl Acetate	5.65	43	847668	4.31	ppbv #	90
26) Hexane	5.66	57	49765	0.54	ppbv #	1
29) Chloroform	5.73	83	37725	0.25	ppbv	85
31) cis-1,2-Dichloroethene	5.65	61	92655	1.16	ppbv #	24
34) 2-Butanone	5.22	43	52764	0.79	ppbv	95
36) Benzene	6.86	78	87948	0.49	ppbv	98
39) 1,2-Dichloropropane	7.15	63	555986	7.59	ppbv #	25
41) Tetrahydrofuran	6.03	42	2611	0.06	ppbv #	1
52) Tetrachloroethene	11.19	164	127318	2.04	ppbv	96
53) Toluene	9.77	91	57977	0.29	ppbv #	21
58) Ethyl Benzene	12.67	91	10682	0.04	ppbv	90
59) m/p-Xylene	12.93	91	72061	0.32	ppbv	94
60) o-Xylene	13.66	91	18437	0.09	ppbv #	32
61) Styrene	13.50	104	6051	0.06	ppbv #	3
74) 1,2,4-Trimethylbenzene	16.72	105	7688	0.04	ppbv #	76

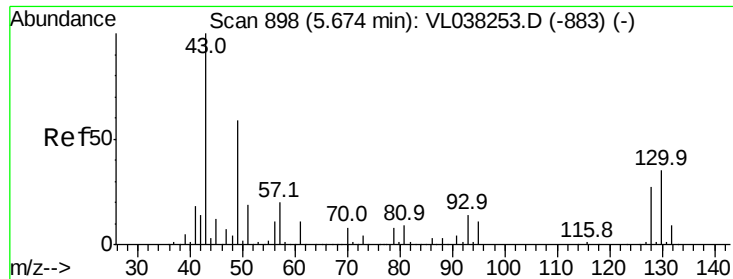
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.65 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 14 Feb 2022 20:00

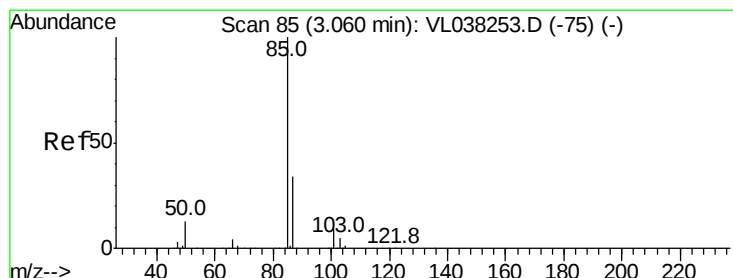
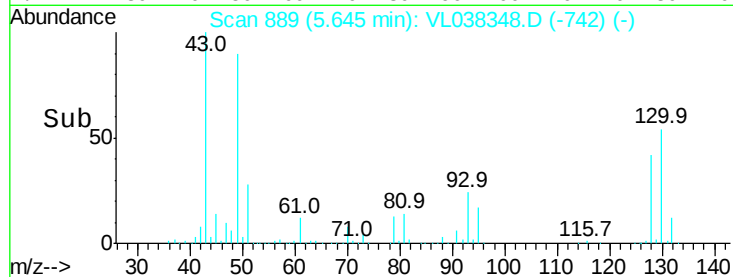
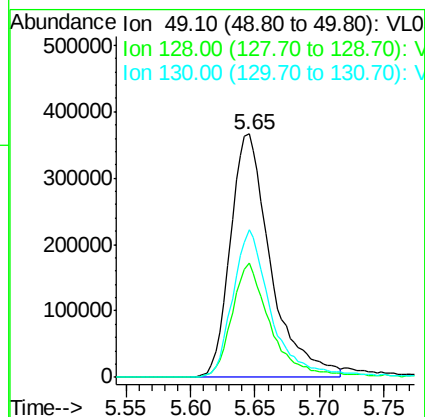
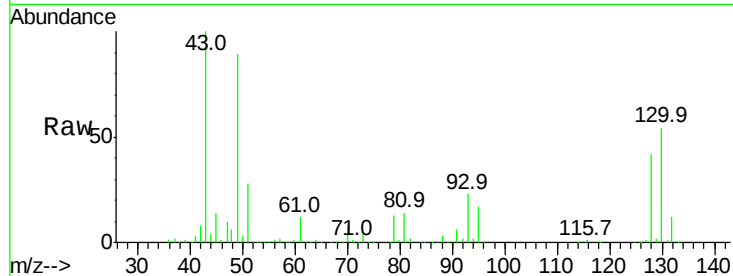
Tgt Ion: 49 Resp: 796337

Ion Ratio Lower Upper

49 100

128 46.5 24.5 73.5

130 58.9 30.1 90.5



#2

Dichlorodifluoromethane

Concen: 1.03 ppbv

RT: 2.98 min Scan# 60

Delta R.T. -0.08 min

Lab File: VL038348.D

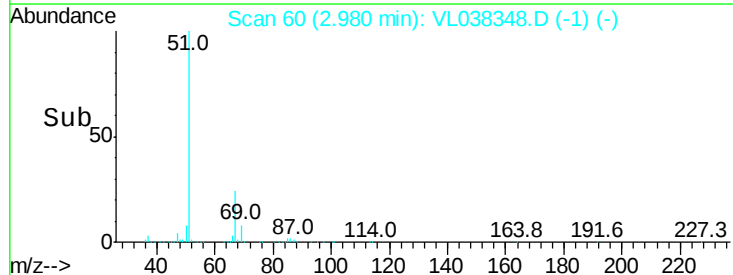
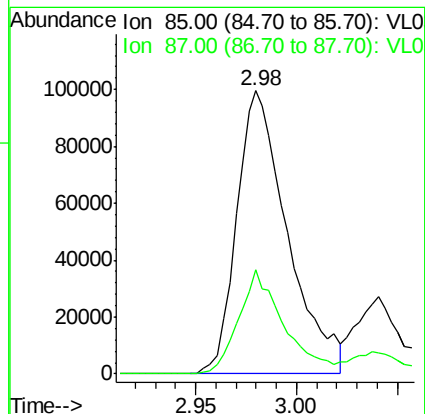
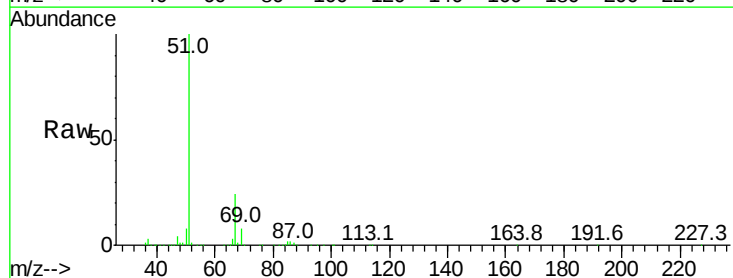
Acq: 14 Feb 2022 20:06

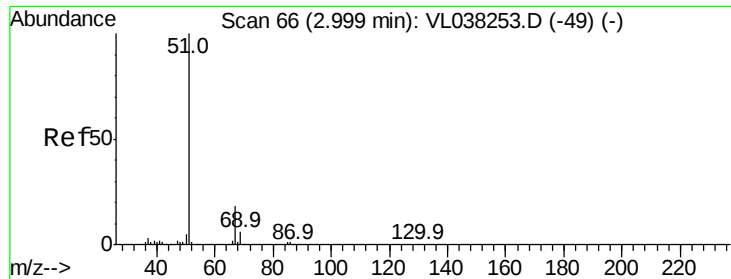
Tgt Ion: 85 Resp: 174913

Ion Ratio Lower Upper

85 100

87 36.8 27.0 40.6





#3

Chlorodifluoromethane

Concen: 63.68 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

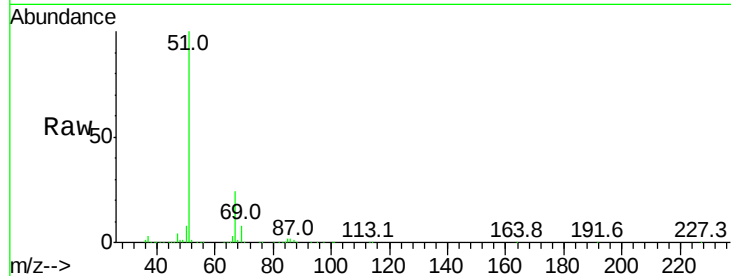
Acq: 14 Feb 2022 20:00

Tgt Ion: 51 Resp:10095662

Ion Ratio Lower Upper

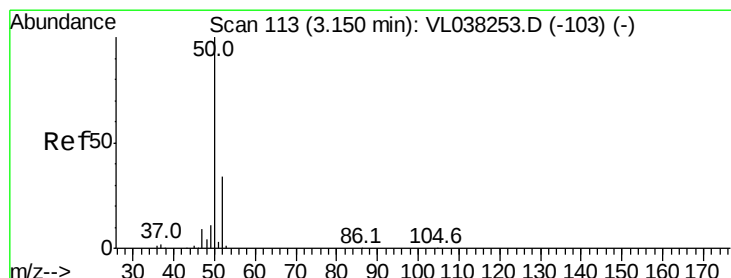
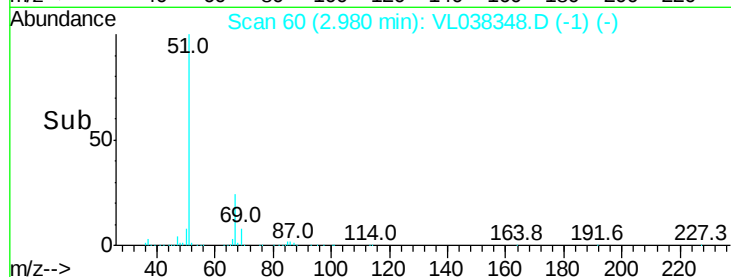
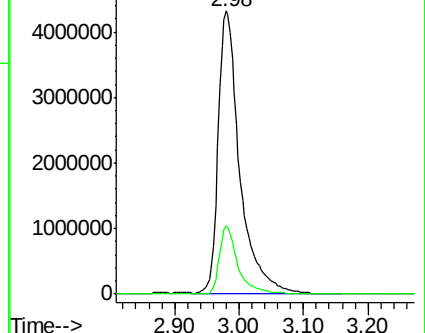
51 100

67 20.9 14.4 21.6



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.50 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.02 min

Lab File: VL038348.D

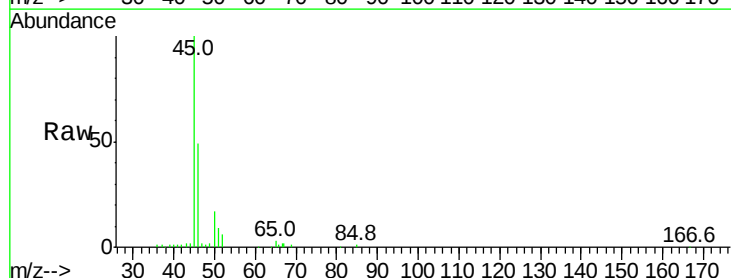
Acq: 14 Feb 2022 20:06

Tgt Ion: 50 Resp: 27415

Ion Ratio Lower Upper

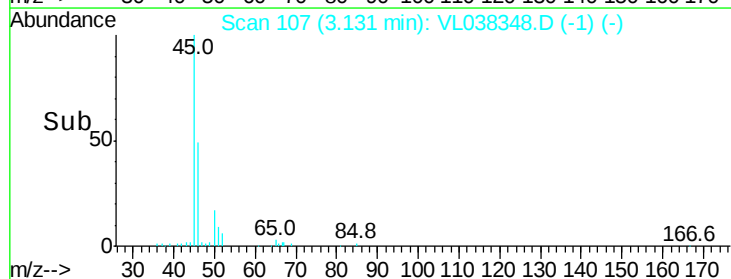
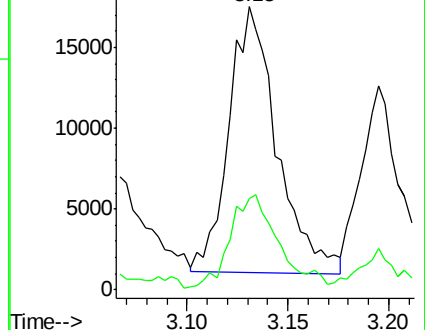
50 100

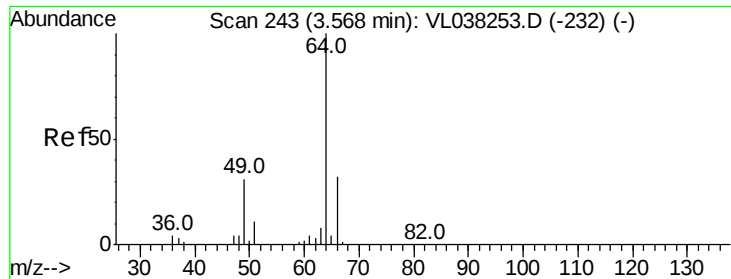
52 33.9 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#7

Chloroethane

Concen: 0.09 ppbv

RT: 3.55 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

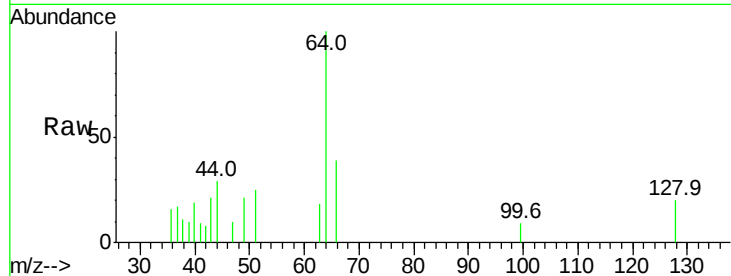
Acq: 14 Feb 2022 20:00

Tgt Ion: 64 Resp: 1633

Ion Ratio Lower Upper

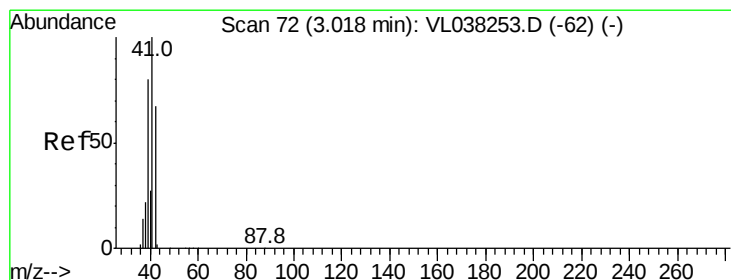
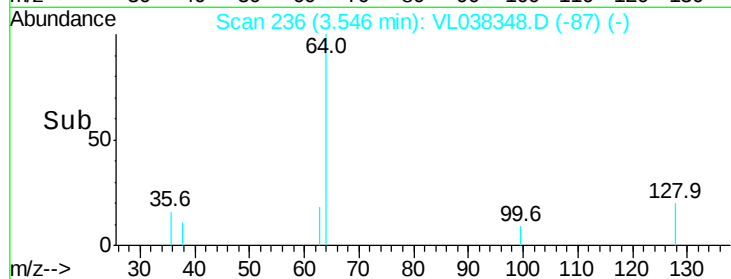
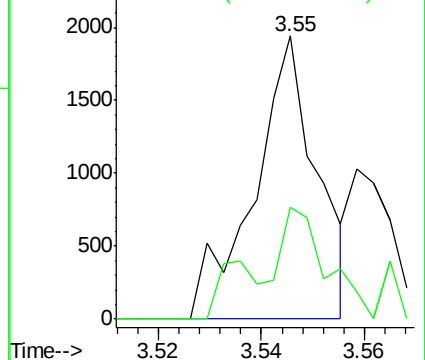
64 100

66 39.5 25.8 38.6#



Abundance Ion 64.10 (63.80 to 64.80): VL0

Ion 66.10 (65.80 to 66.80): VL0



#9

Propene

Concen: 14.62 ppbv

RT: 3.20 min Scan# 127

Delta R.T. 0.18 min

Lab File: VL038348.D

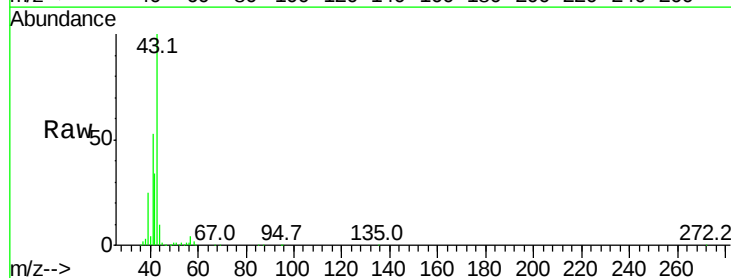
Acq: 14 Feb 2022 20:06

Tgt Ion: 41 Resp: 754604

Ion Ratio Lower Upper

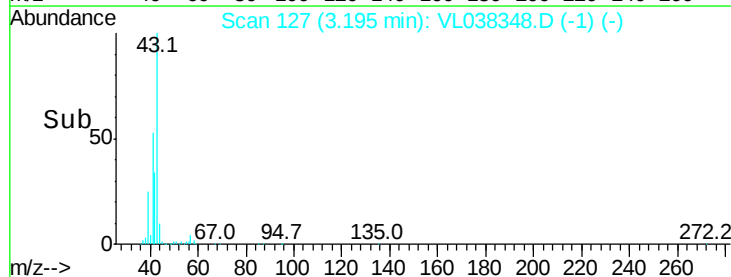
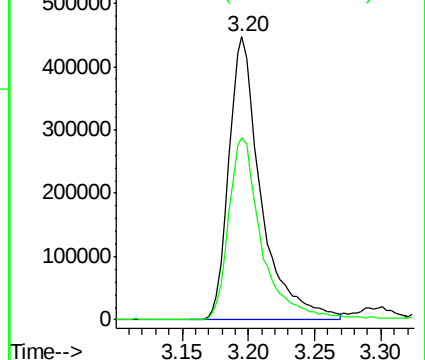
41 100

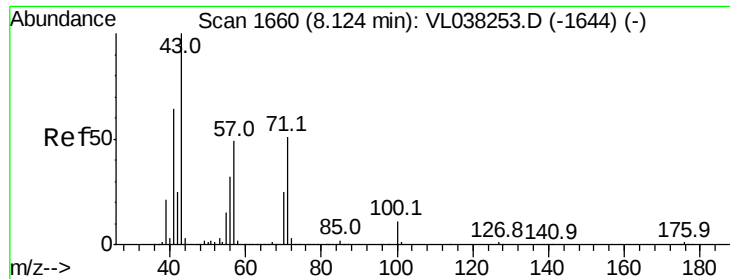
42 66.0 54.9 82.3



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.05 ppbv

RT: 8.09 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

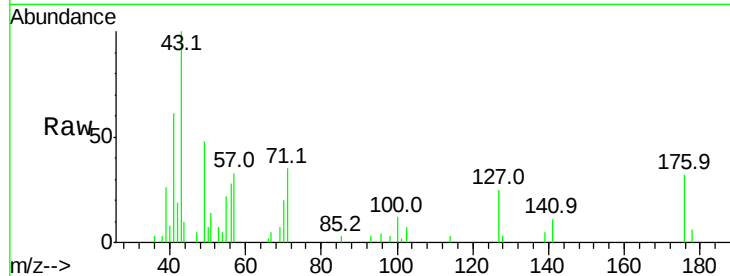
Acq: 14 Feb 2022 20:00

Tgt Ion: 43 Resp: 6279

Ion Ratio Lower Upper

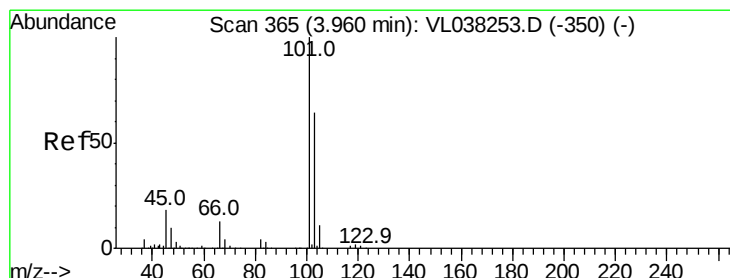
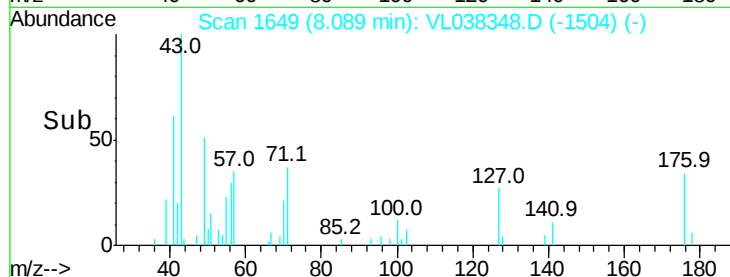
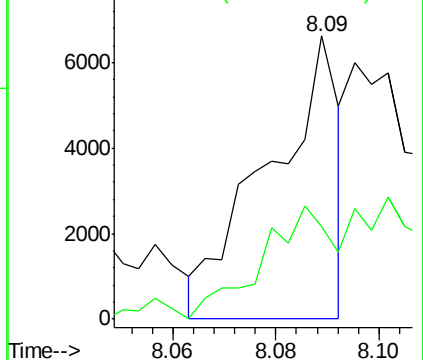
43 100

57 0.0 39.5 59.3#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#11

Trichlorofluoromethane

Concen: 0.20 ppbv

RT: 3.93 min Scan# 357

Delta R.T. -0.03 min

Lab File: VL038348.D

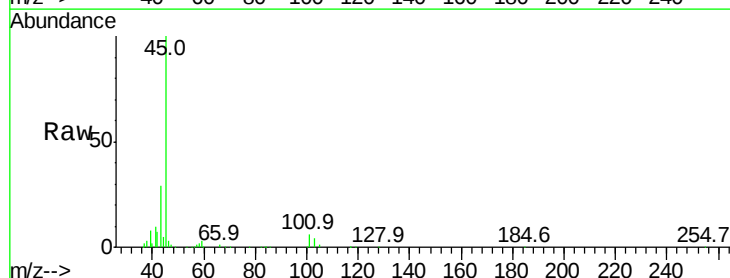
Acq: 14 Feb 2022 20:06

Tgt Ion: 101 Resp: 26565

Ion Ratio Lower Upper

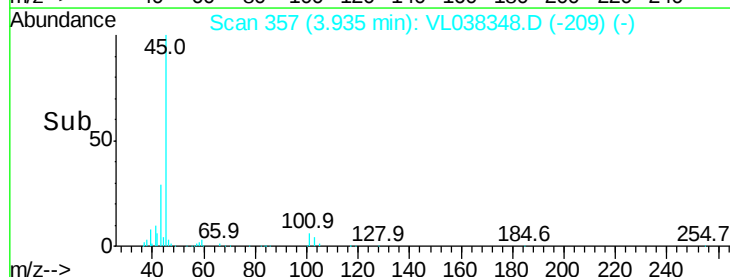
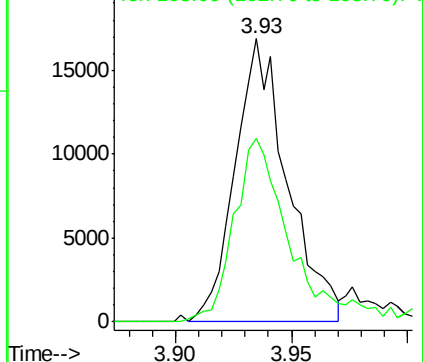
101 100

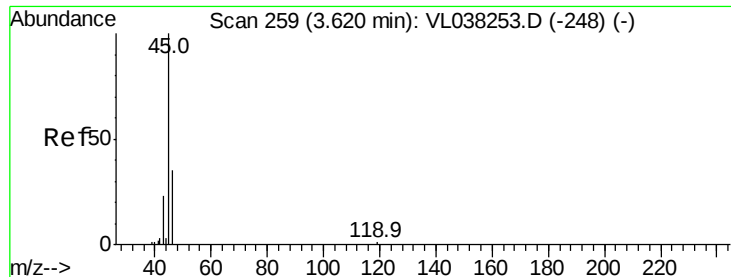
103 64.1 51.2 76.8



Abundance Ion 101.00 (100.70 to 101.70): V

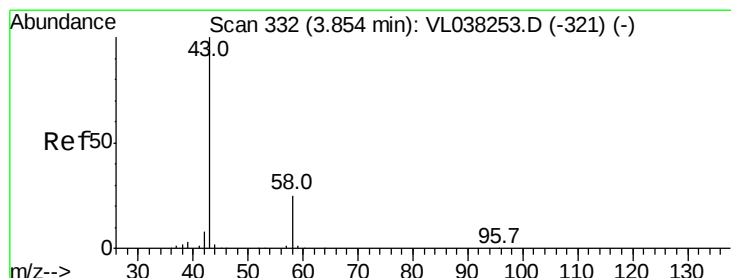
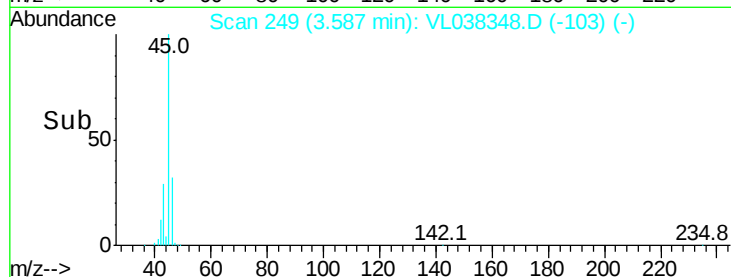
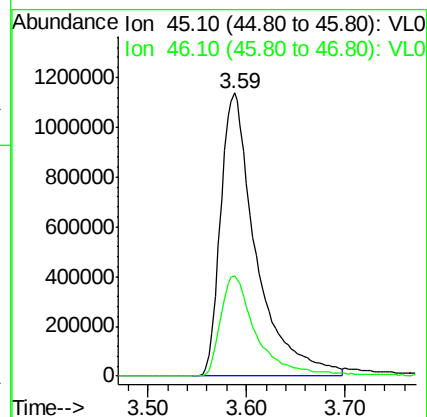
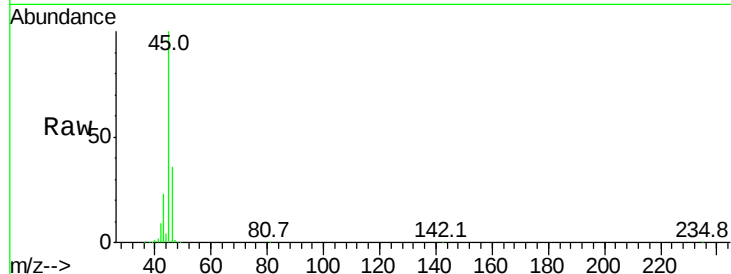
Ion 103.00 (102.70 to 103.70): V





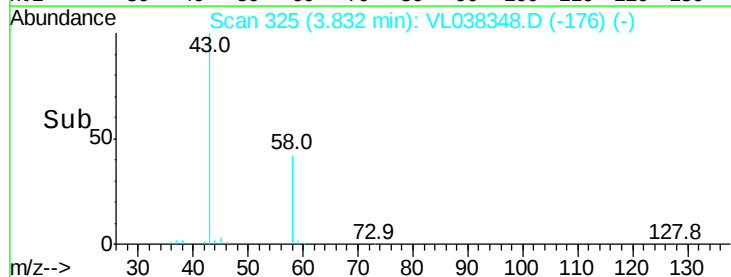
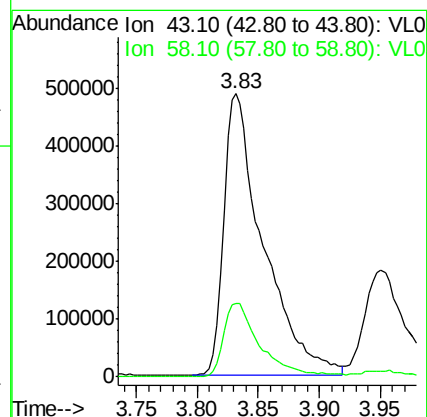
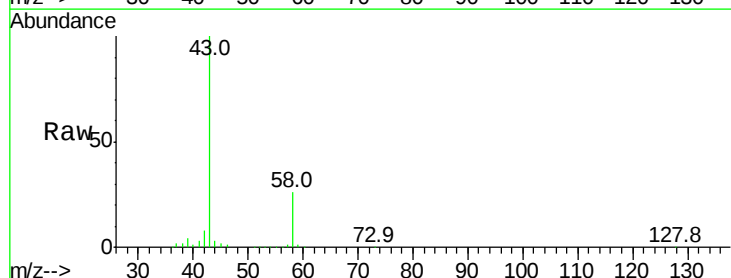
#13
Ethanol
Concen: 517.85 ppbv
RT: 3.59
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Feb 2022 20:00

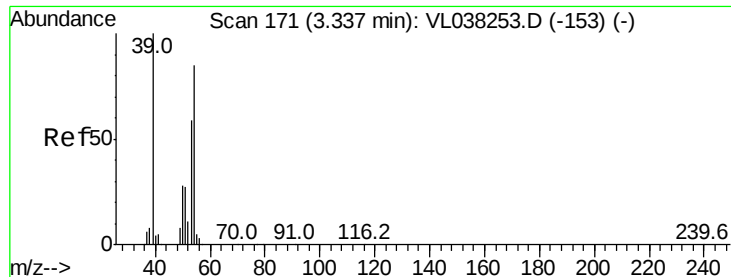
Tgt Ion: 45 Resp: 2868908
Ion Ratio Lower Upper
45 100
46 37.1 15.4 61.6



#15
Acetone
Concen: 15.68 ppbv
RT: 3.83 min Scan# 325
Delta R.T. -0.02 min
Lab File: VL038348.D
Acq: 14 Feb 2022 20:00

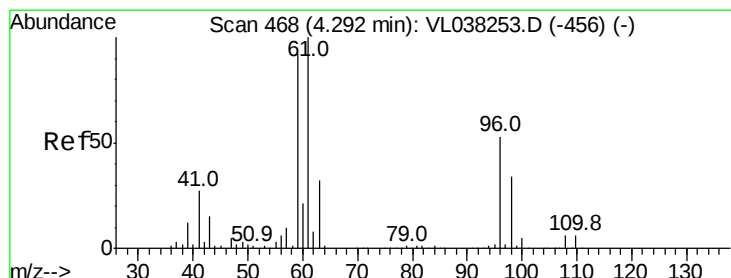
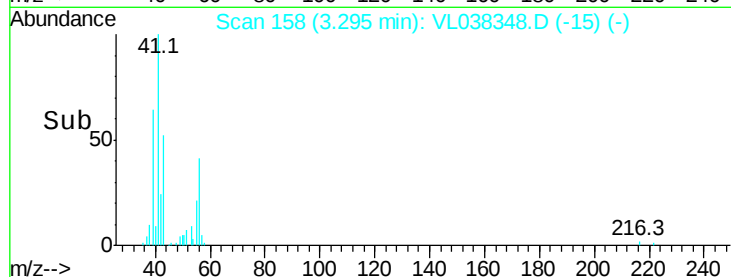
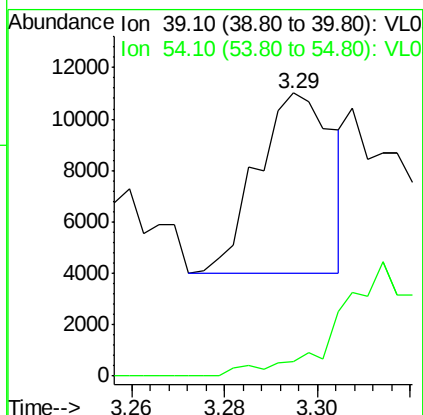
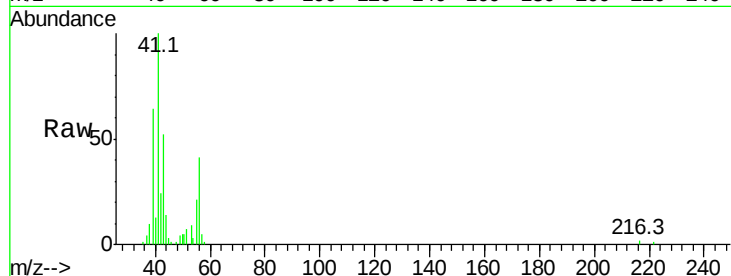
Tgt Ion: 43 Resp: 1100389
Ion Ratio Lower Upper
43 100
58 24.7 21.5 32.3





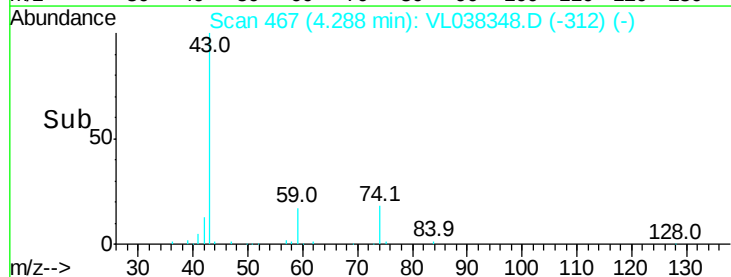
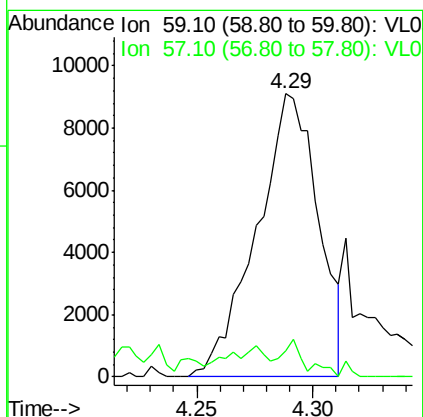
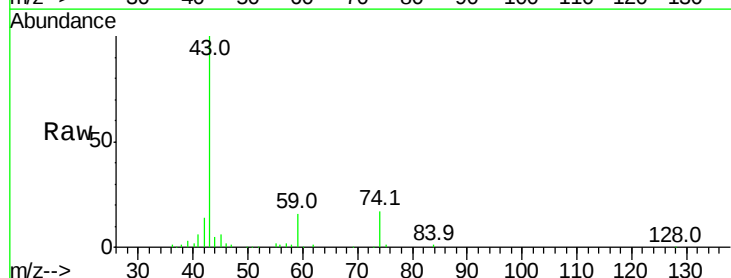
#16
 1,3-Butadiene
 Concen: 0.16 ppbv
 RT: 3.29
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Feb 2022 20:00

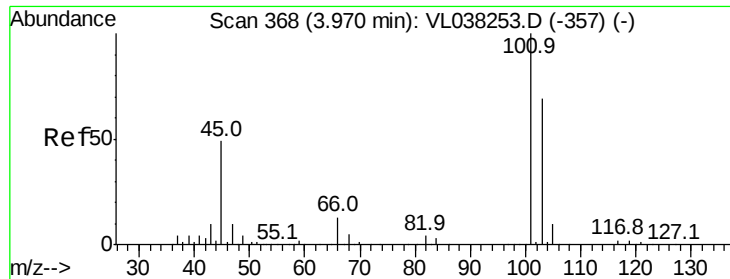
Tgt Ion: 39 Resp: 7900
 Ion Ratio Lower Upper
 39 100
 54 116.8 62.6 94.0#



#17
 tert-Butyl alcohol
 Concen: 0.22 ppbv
 RT: 4.29 min Scan# 467
 Delta R.T. -0.00 min
 Lab File: VL038348.D
 Acq: 14 Feb 2022 20:06

Tgt Ion: 59 Resp: 16803
 Ion Ratio Lower Upper
 59 100
 57 0.0 9.2 13.8#





#19

Isopropyl Alcohol

Concen: 38.31 ppbv

RT: 3.95 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

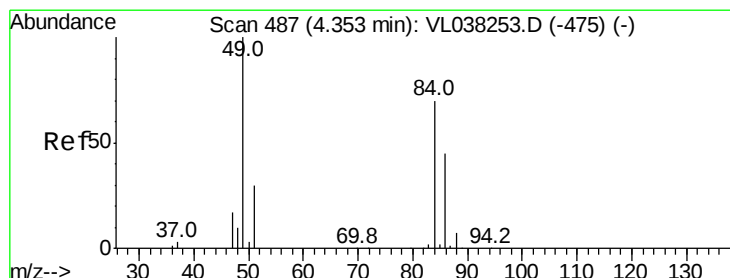
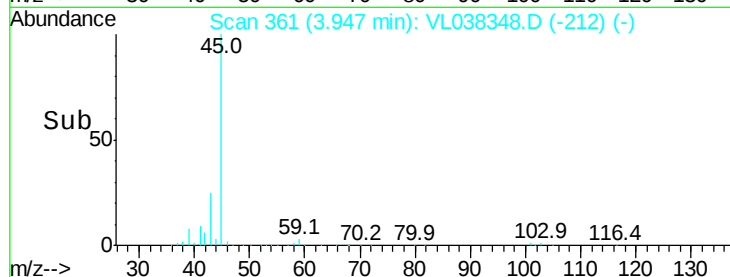
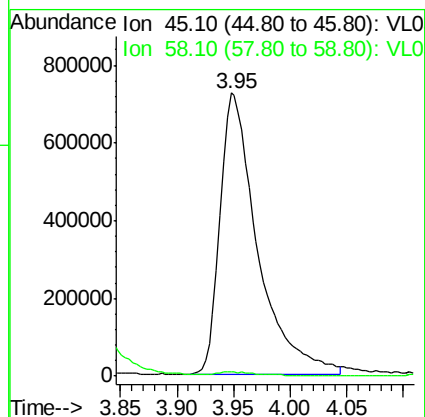
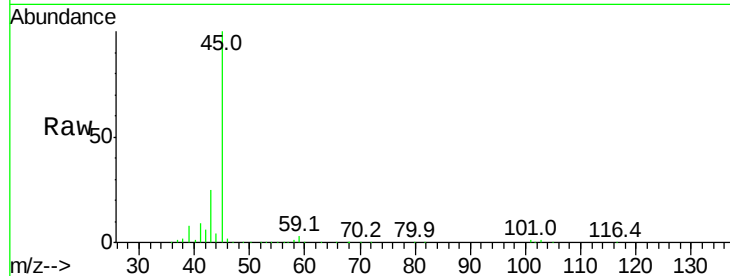
Acq: 14 Feb 2022 20:00

Tgt Ion: 45 Resp: 1682379

Ion Ratio Lower Upper

45 100

58 2.0 2.3 3.5#



#20

Methylene Chloride

Concen: 0.85 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.03 min

Lab File: VL038348.D

Acq: 14 Feb 2022 20:06

Tgt Ion: 84 Resp: 34878

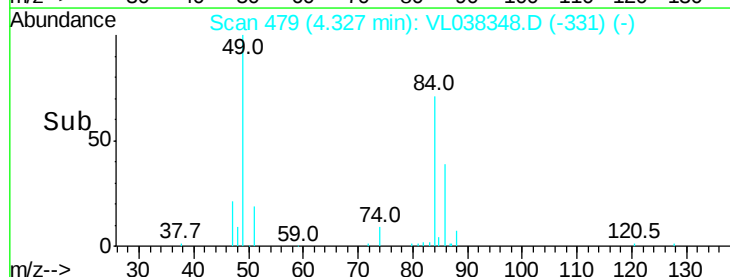
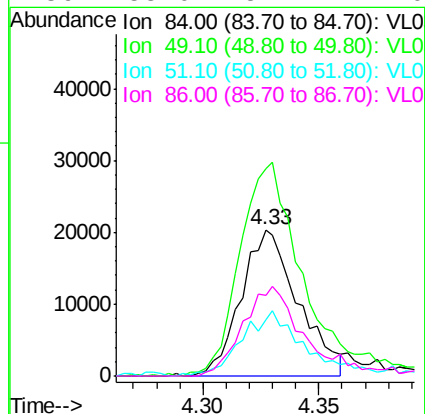
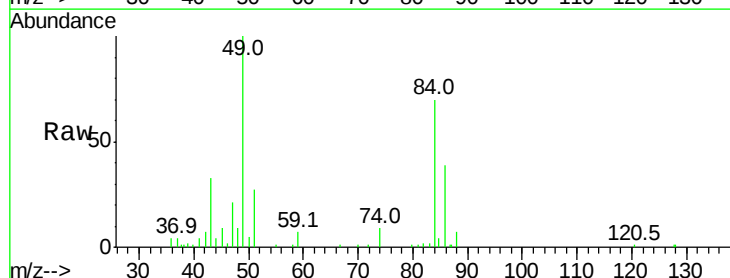
Ion Ratio Lower Upper

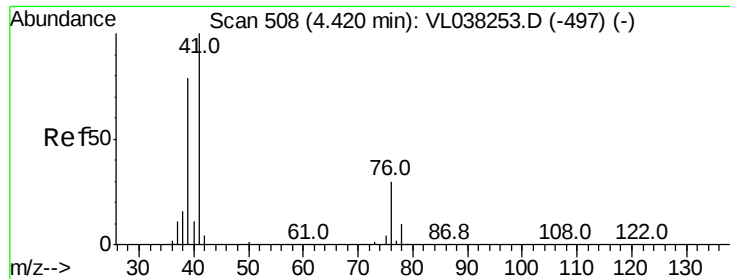
84 100

49 140.2 115.0 172.6

51 37.9 35.0 52.6

86 55.0 51.4 77.0





#21

Allyl Chloride

Concen: 0.20 ppbv

RT: 4.18

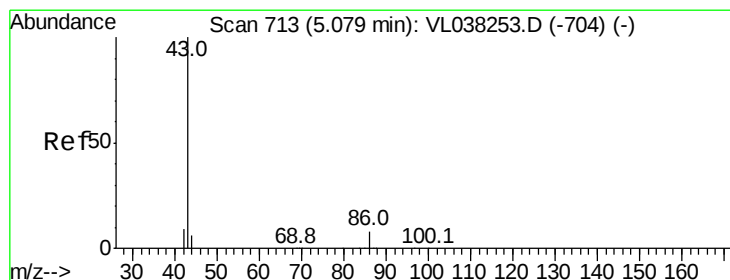
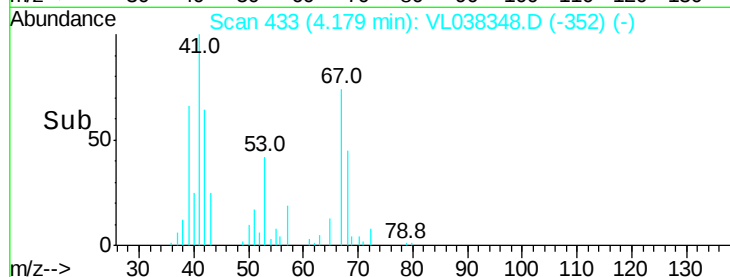
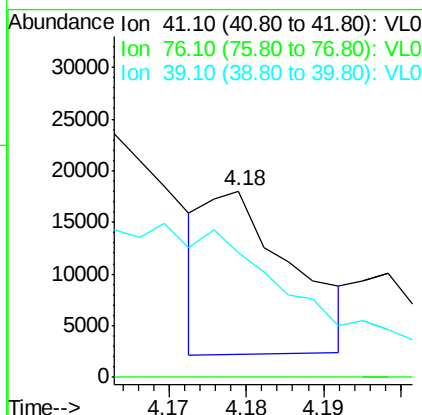
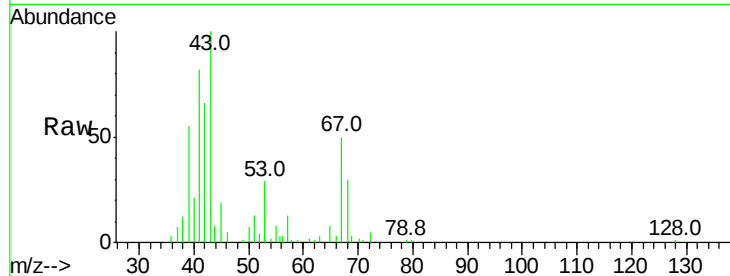
Delta R.T. MSVOA_L

Lab File: ClientSampleId : IA1

Acq: 14 Feb 2022 20:00

Tgt Ion: 41 Resp: 12330

Ion	Ratio	Lower	Upper
41	100		
76	0.0	25.0	37.6#
39	0.0	63.0	94.6#



#23

Vinyl Acetate

Concen: 0.36 ppbv

RT: 5.04 min Scan# 701

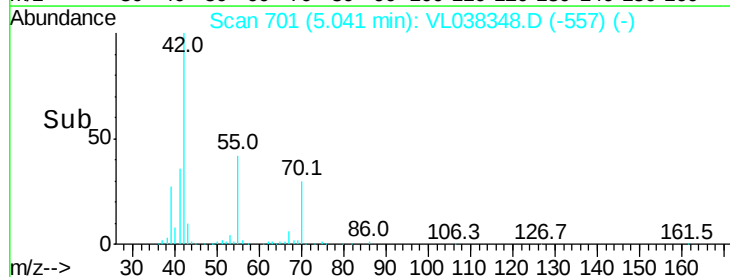
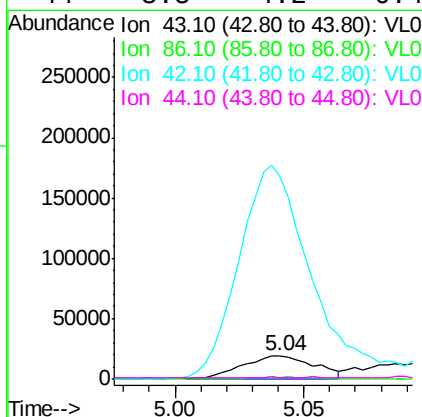
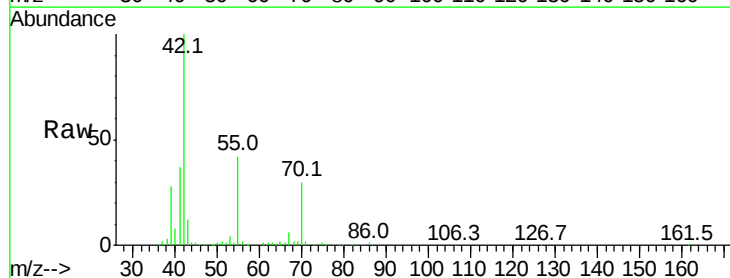
Delta R.T. -0.04 min

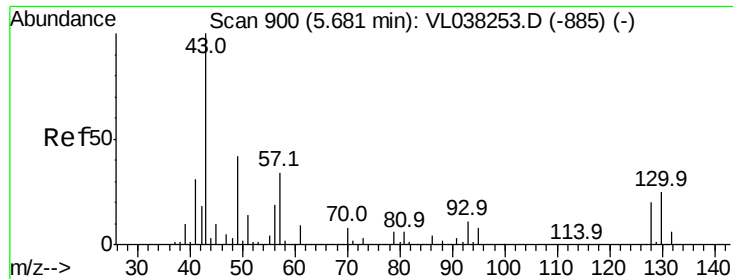
Lab File: VL038348.D

Acq: 14 Feb 2022 20:06

Tgt Ion: 43 Resp: 36765

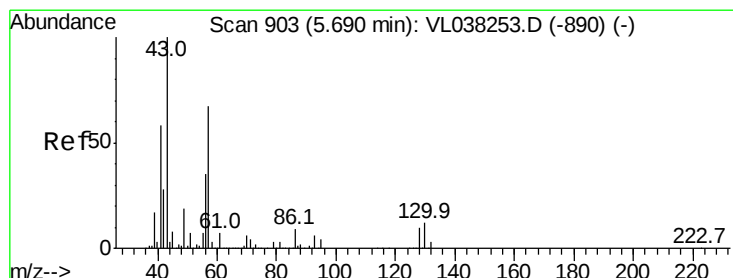
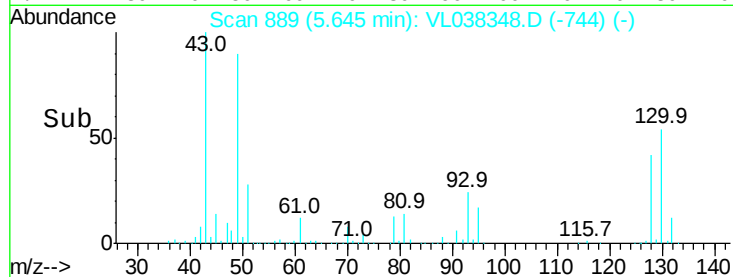
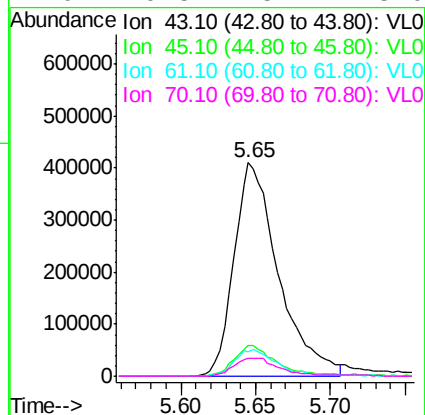
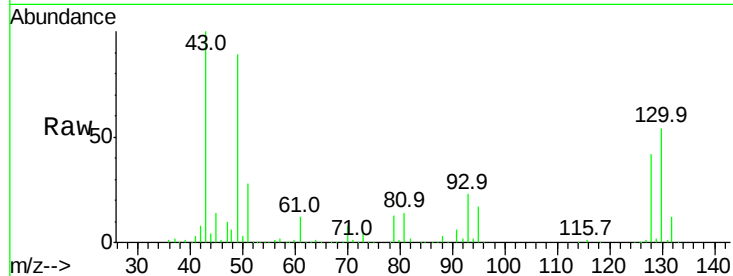
Ion	Ratio	Lower	Upper
43	100		
86	5.7	5.7	8.5
42	873.8	7.7	11.5#
44	3.5	4.2	6.4#





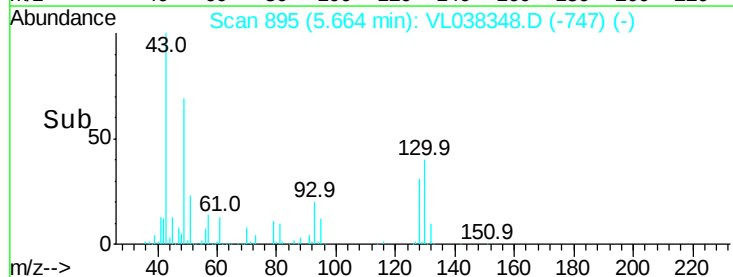
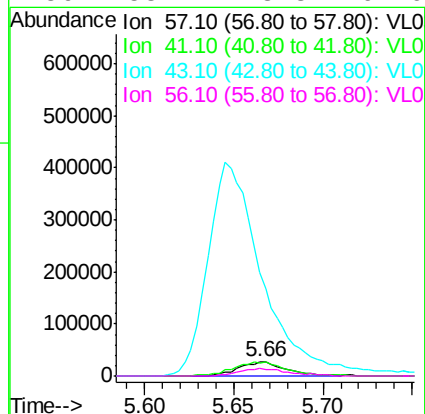
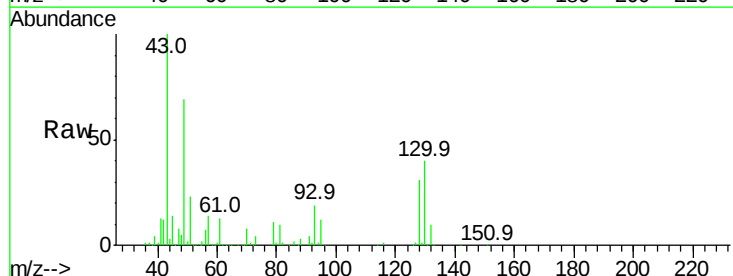
#25
Ethyl Acetate
Concen: 4.31 ppbv
RT: 5.65
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Feb 2022 20:00

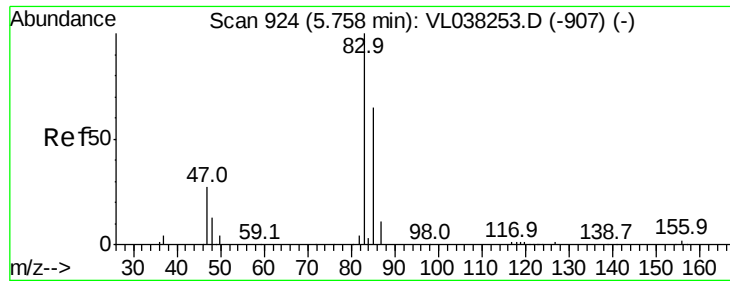
Tgt Ion:	43	Resp:	847668
Ion	Ratio	Lower	Upper
43	100		
45	14.7	7.9	11.9#
61	12.9	7.8	11.8#
70	9.5	5.4	8.0#



#26
Hexane
Concen: 0.54 ppbv
RT: 5.66 min Scan# 895
Delta R.T. -0.03 min
Lab File: VL038348.D
Acq: 14 Feb 2022 20:06

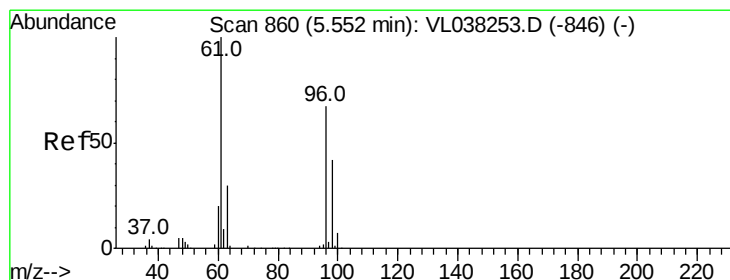
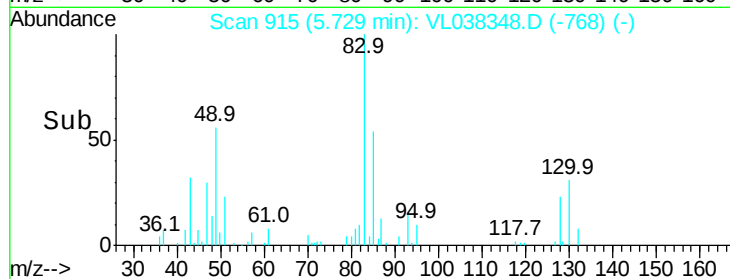
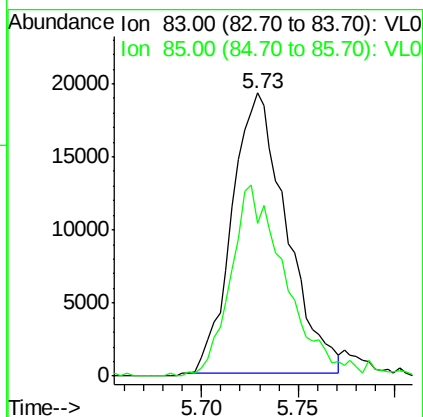
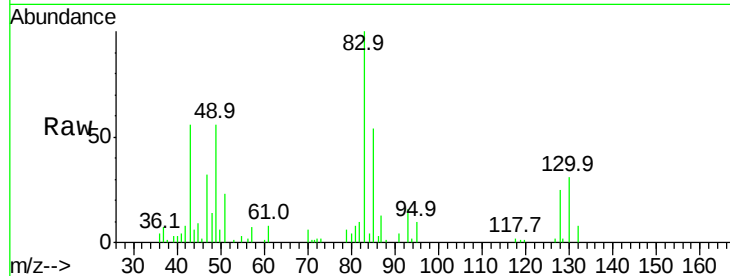
Tgt Ion:	57	Resp:	49765
Ion	Ratio	Lower	Upper
57	100		
41	115.3	72.8	109.2#
43	1802.2	177.0	265.6#
56	58.1	43.3	64.9





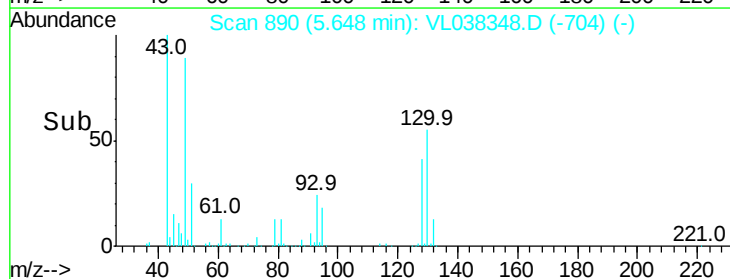
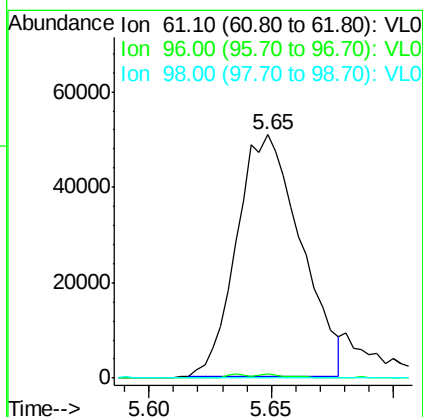
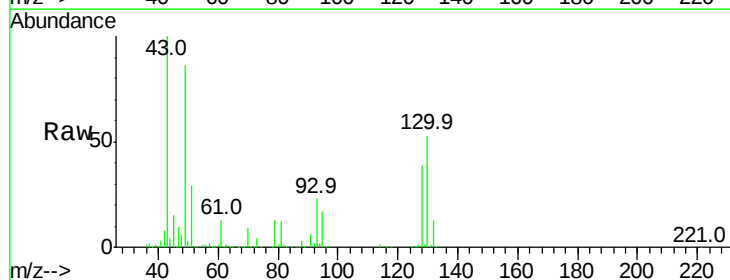
#29
Chloroform
Concen: 0.25 ppbv
RT: 5.73
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Feb 2022 20:00

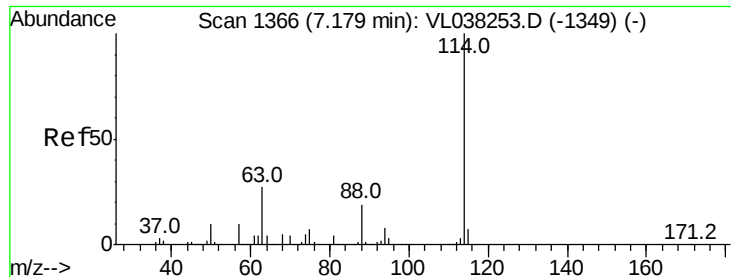
Tgt Ion: 83 Resp: 37725
Ion Ratio Lower Upper
83 100
85 52.9 51.9 77.9



#31
cis-1,2-Dichloroethene
Concen: 1.16 ppbv
RT: 5.65 min Scan# 890
Delta R.T. 0.10 min
Lab File: VL038348.D
Acq: 14 Feb 2022 20:06

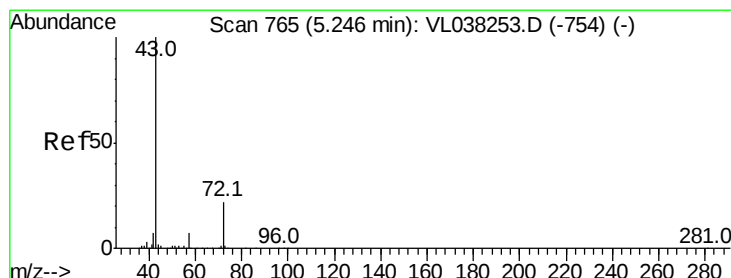
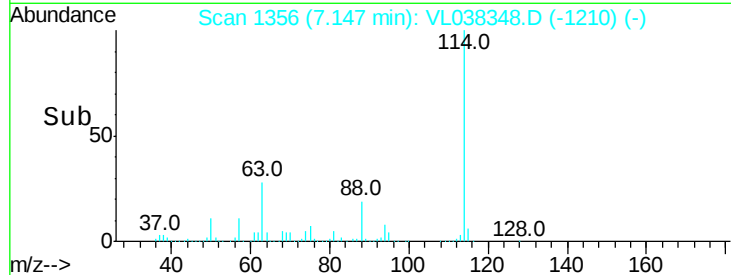
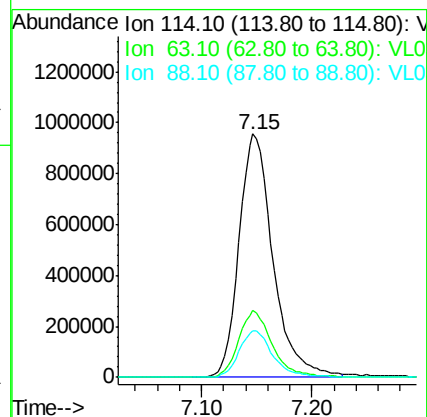
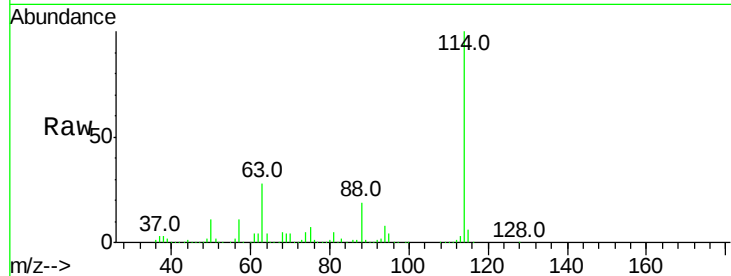
Tgt Ion: 61 Resp: 92655
Ion Ratio Lower Upper
61 100
96 1.6 53.3 79.9#
98 0.0 33.7 50.5#





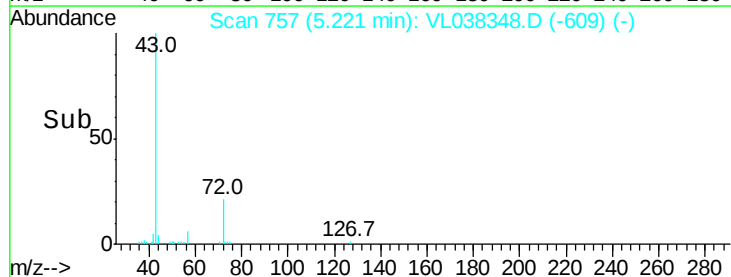
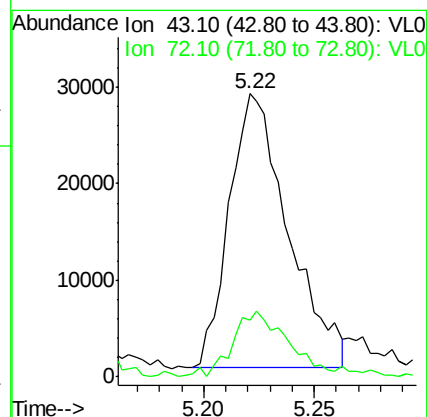
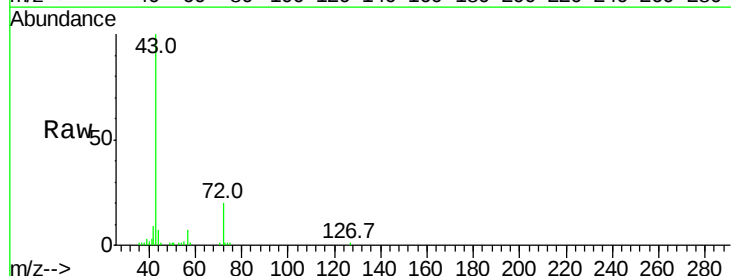
#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.15
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Feb 2022 20:00

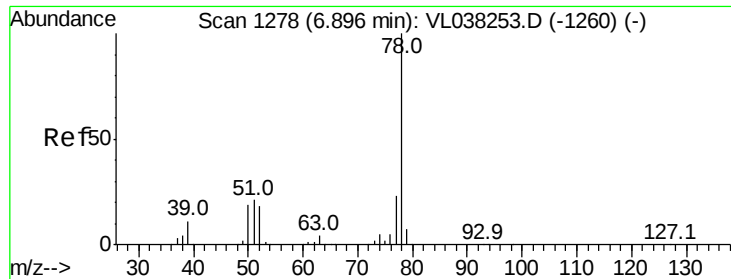
Tgt Ion: 114 Resp: 2042257
 Ion Ratio Lower Upper
 114 100
 63 27.5 22.0 33.0
 88 19.2 15.0 22.6



#34
 2-Butanone
 Concen: 0.79 ppbv
 RT: 5.22 min Scan# 757
 Delta R.T. -0.03 min
 Lab File: VL038348.D
 Acq: 14 Feb 2022 20:06

Tgt Ion: 43 Resp: 52764
 Ion Ratio Lower Upper
 43 100
 72 24.8 18.1 27.1





#36

Benzene

Concen: 0.49 ppbv

RT: 6.86 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: IA1

Acq: 14 Feb 2022 20:00

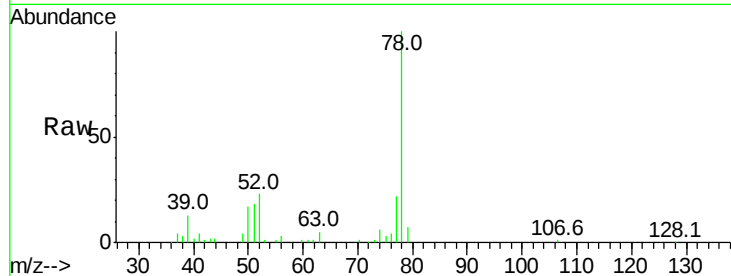
Tgt Ion: 78 Resp: 87948

Ion Ratio Lower Upper

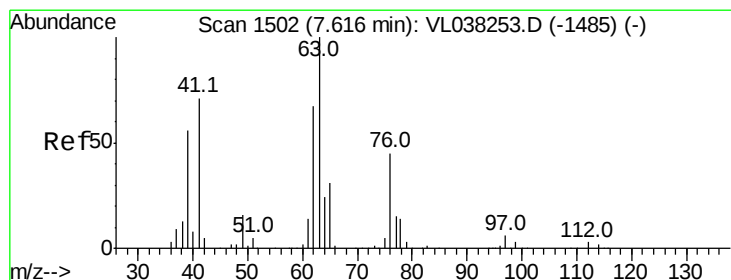
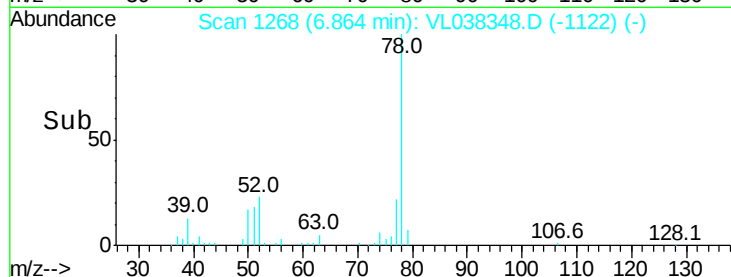
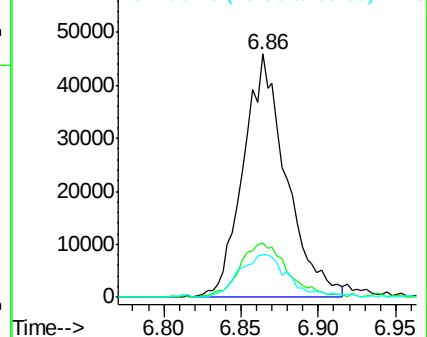
78 100

77 22.5 18.2 27.2

50 17.0 15.1 22.7



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: 7.59 ppbv

RT: 7.15 min Scan# 1356

Delta R.T. -0.47 min

Lab File: VL038348.D

Acq: 14 Feb 2022 20:06

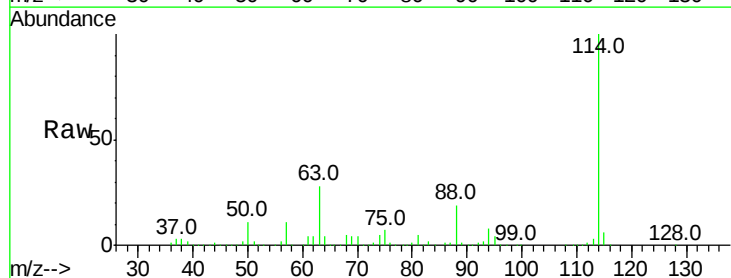
Tgt Ion: 63 Resp: 555986

Ion Ratio Lower Upper

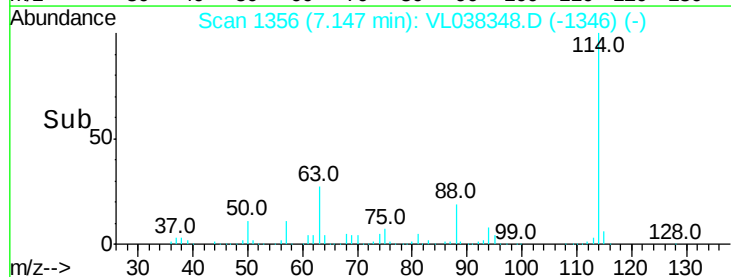
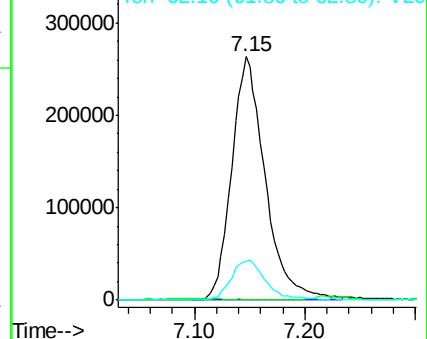
63 100

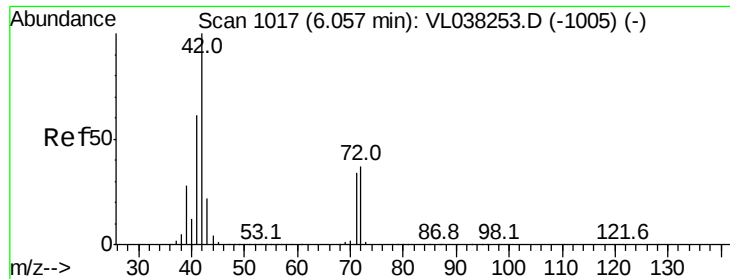
41 0.0 56.6 85.0#

62 15.8 53.9 80.9#



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: 0.06 ppbv

RT: 6.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Feb 2022 20:00

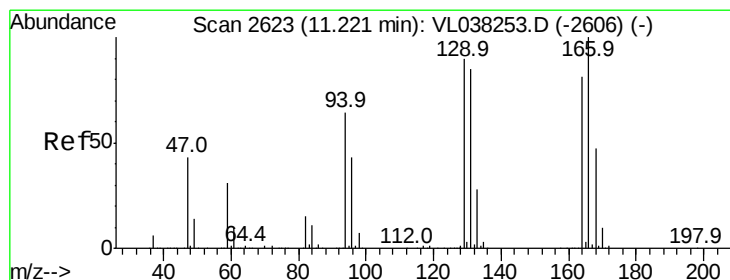
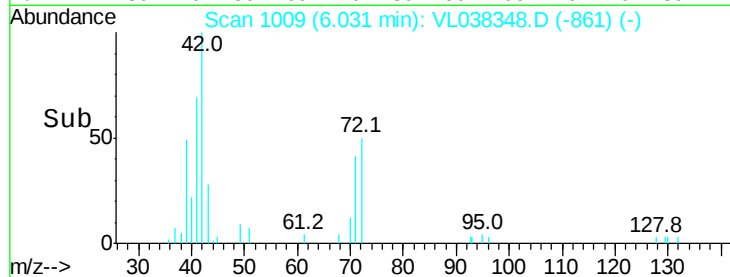
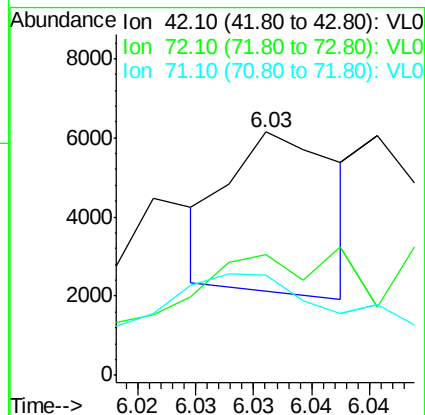
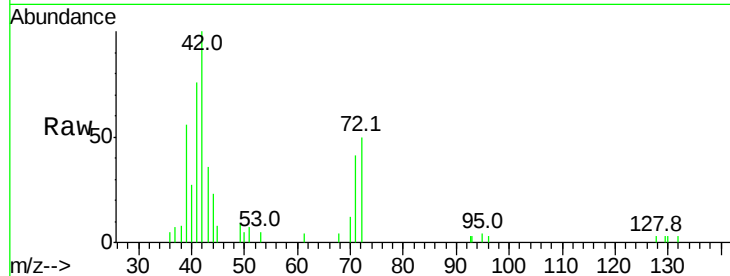
Tgt Ion: 42 Resp: 2611

Ion Ratio Lower Upper

42 100

72 0.0 29.7 44.5#

71 199.2 29.4 44.2#



#52

Tetrachloroethene

Concen: 2.04 ppbv

RT: 11.19 min Scan# 2614

Delta R.T. -0.03 min

Lab File: VL038348.D

Acq: 14 Feb 2022 20:06

Tgt Ion: 164 Resp: 127318

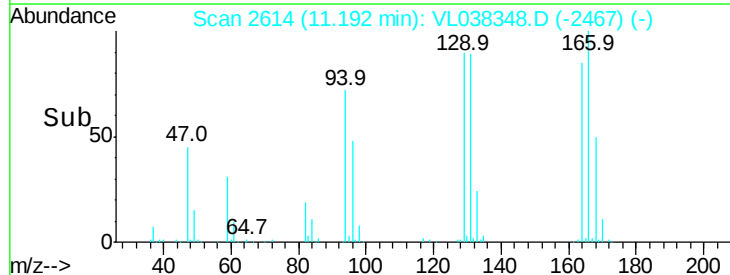
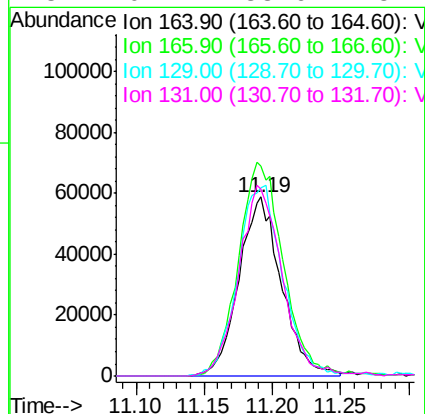
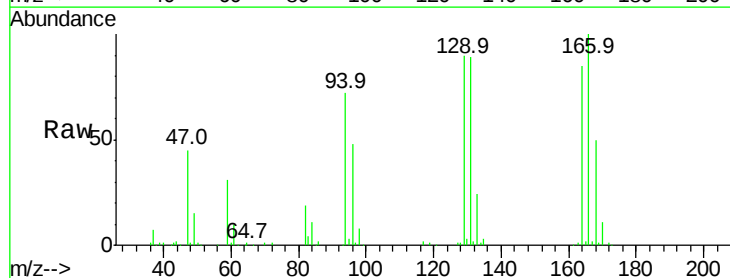
Ion Ratio Lower Upper

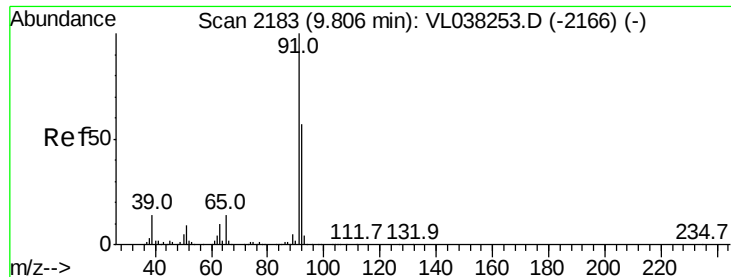
164 100

166 117.3 98.8 148.2

129 104.4 89.2 133.8

131 104.7 83.6 125.4





#53

Toluene

Concen: 0.29 ppbv

RT: 9.77 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId: IA1

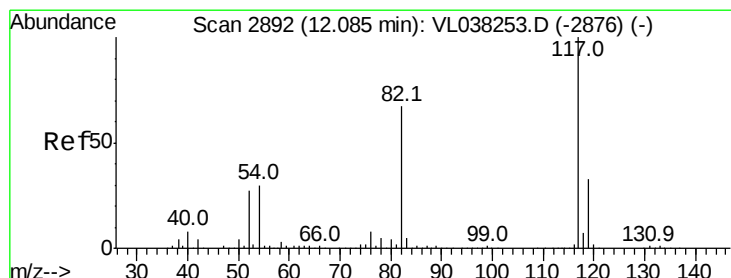
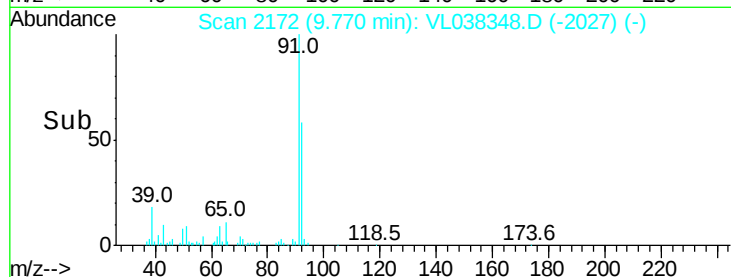
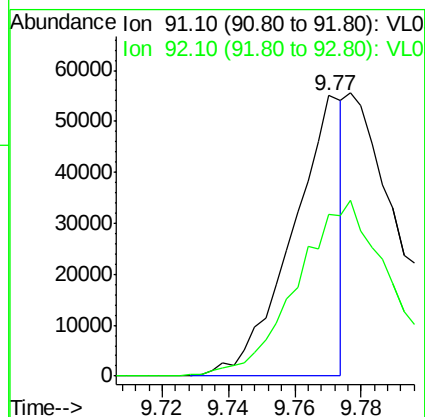
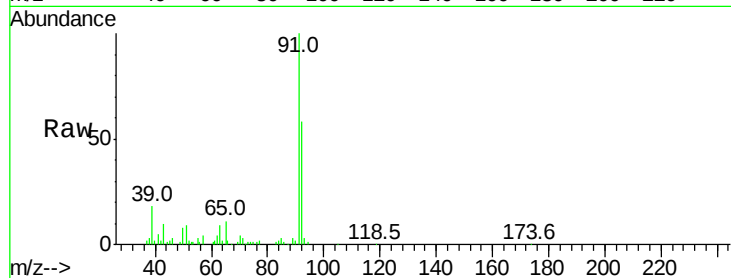
Acq: 14 Feb 2022 20:00

Tgt Ion: 91 Resp: 57977

Ion Ratio Lower Upper

91 100

92 0.0 47.4 71.0#



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.05 min Scan# 2882

Delta R.T. -0.03 min

Lab File: VL038348.D

Acq: 14 Feb 2022 20:06

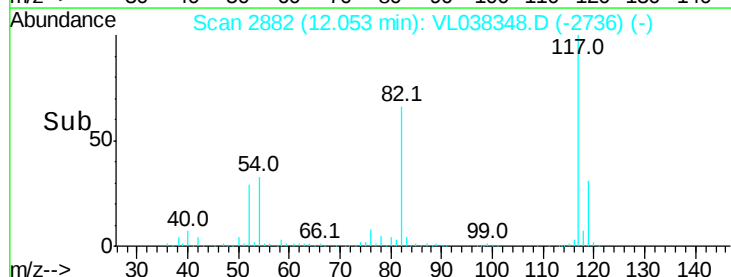
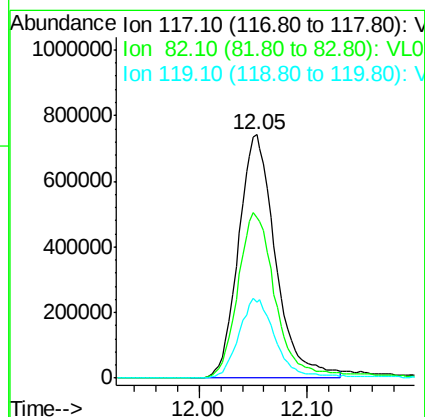
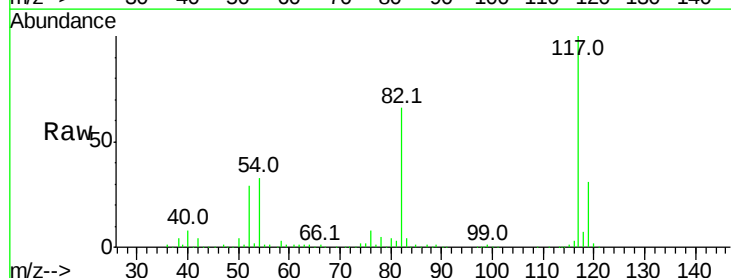
Tgt Ion: 117 Resp: 1772075

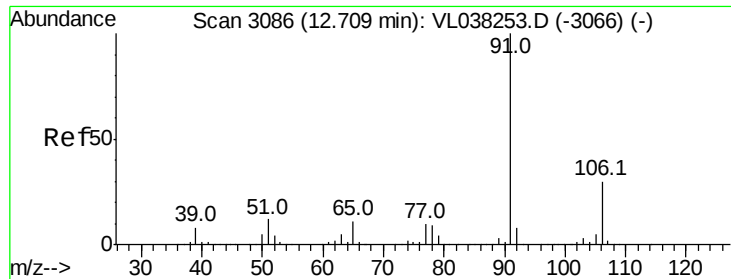
Ion Ratio Lower Upper

117 100

82 71.6 54.4 81.6

119 33.6 45.9 68.9#





#58

Ethyl Benzene

Concen: 0.04 ppbv

RT: 12.67

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

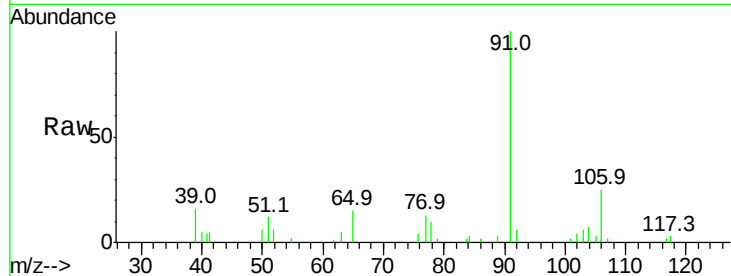
Acq: 14 Feb 2022 20:00

Tgt Ion: 91 Resp: 10682

Ion Ratio Lower Upper

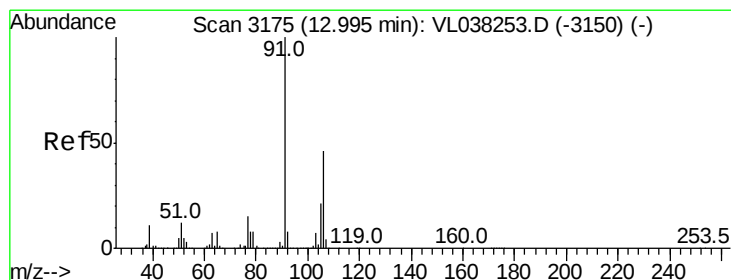
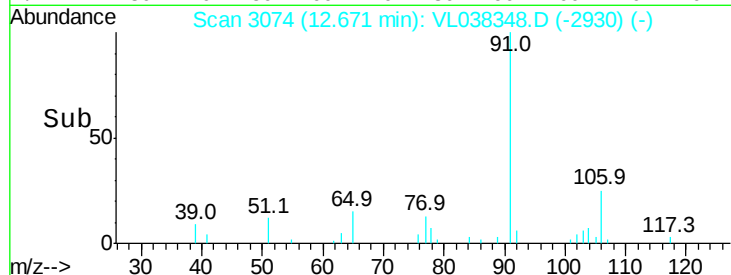
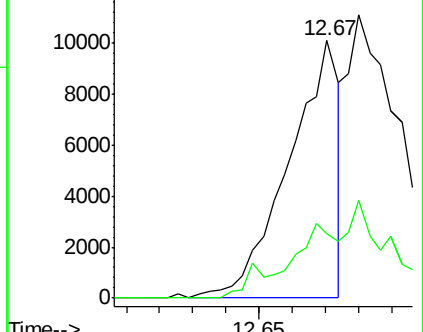
91 100

106 24.9 24.1 36.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.32 ppbv

RT: 12.93 min Scan# 3156

Delta R.T. -0.06 min

Lab File: VL038348.D

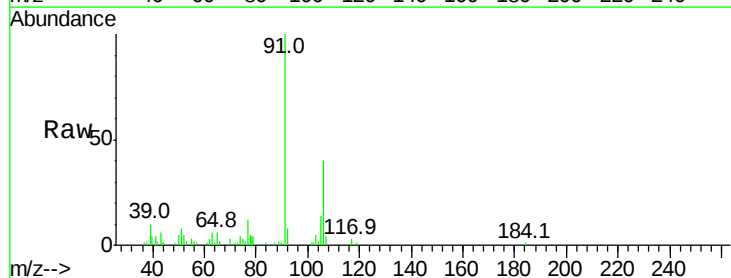
Acq: 14 Feb 2022 20:06

Tgt Ion: 91 Resp: 72061

Ion Ratio Lower Upper

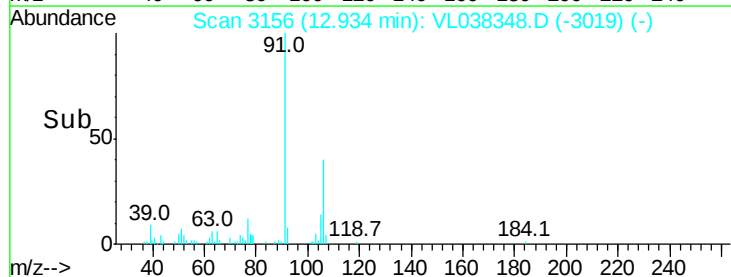
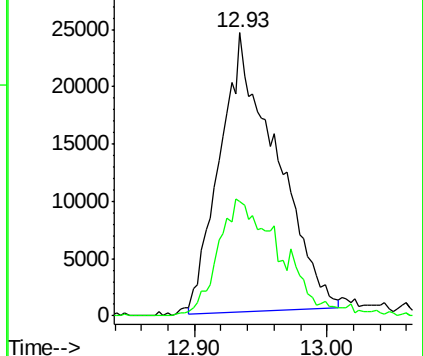
91 100

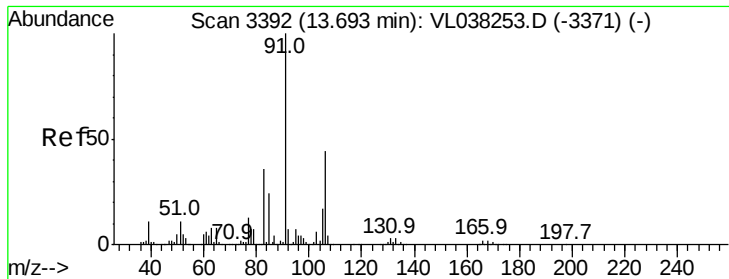
106 47.2 34.8 52.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

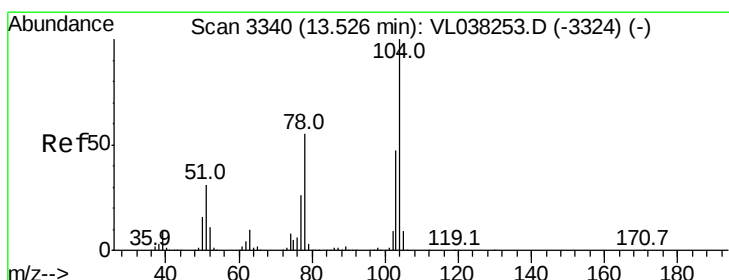
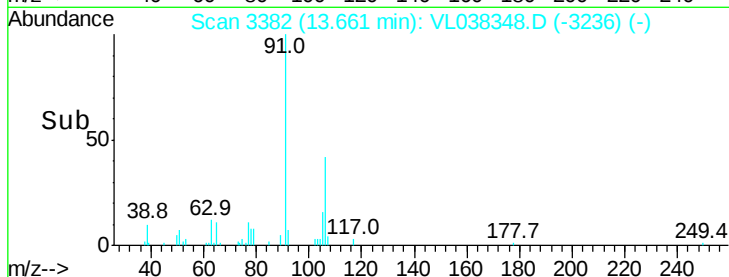
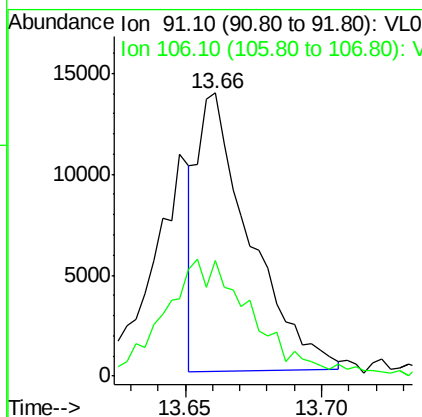
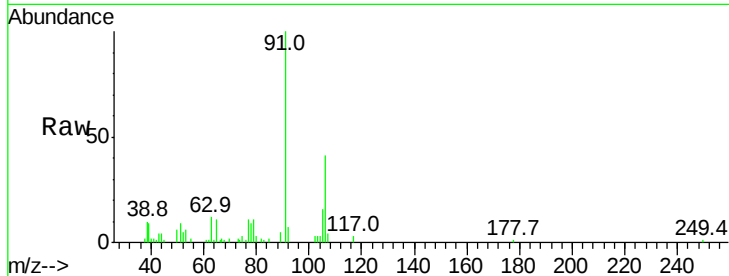
Ion 106.10 (105.80 to 106.80): V





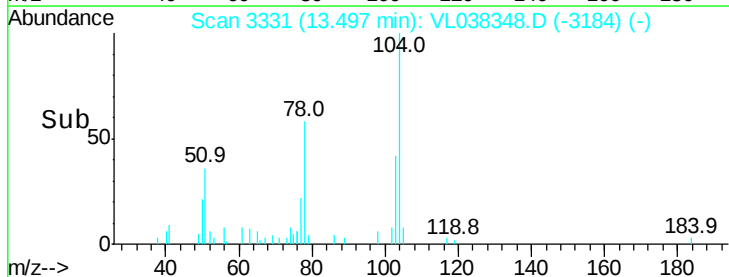
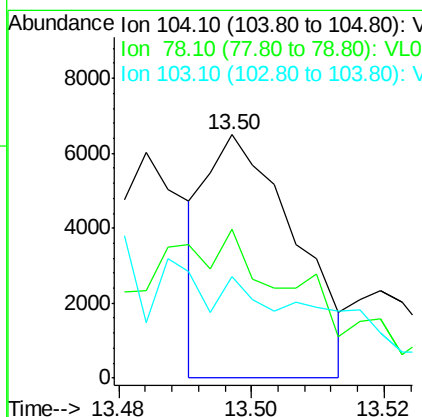
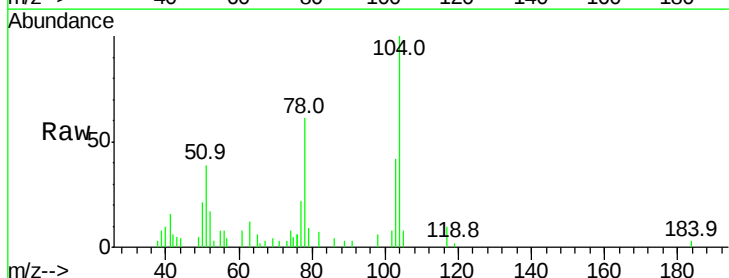
#60
o-Xylene
Concen: 0.09 ppbv
RT: 13.66
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Feb 2022 20:00

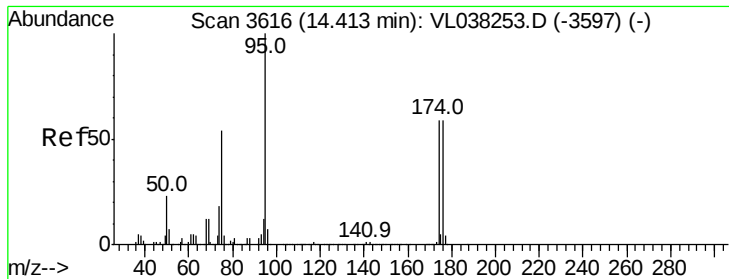
Tgt Ion: 91 Resp: 18437
Ion Ratio Lower Upper
91 100
106 0.0 22.2 66.6#



#61
Styrene
Concen: 0.06 ppbv
RT: 13.50 min Scan# 3331
Delta R.T. -0.03 min
Lab File: VL038348.D
Acq: 14 Feb 2022 20:06

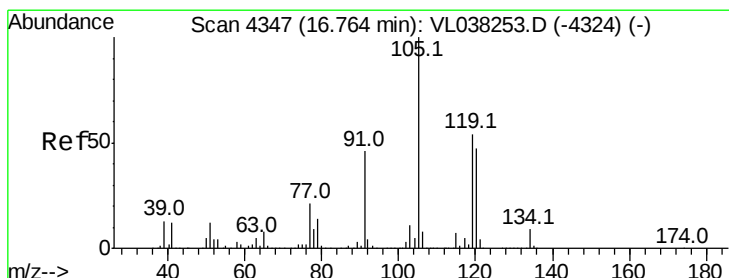
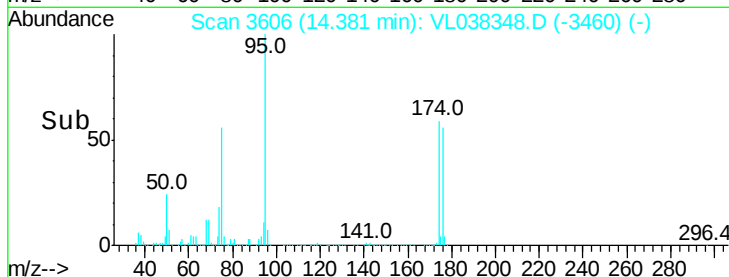
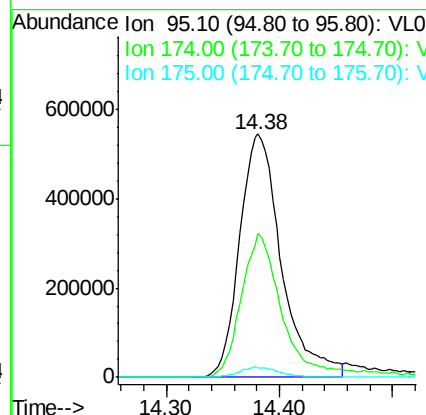
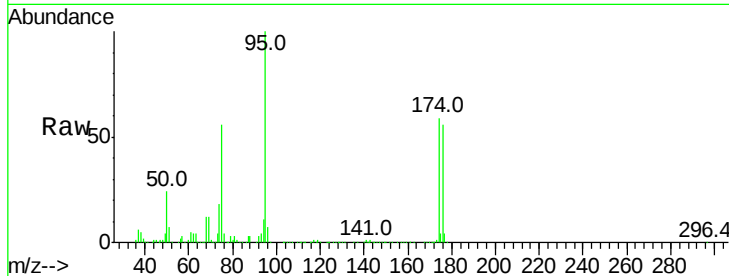
Tgt Ion: 104 Resp: 6051
Ion Ratio Lower Upper
104 100
78 141.3 44.2 66.4#
103 0.0 38.2 57.4#





#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.43 ppbv
 RT: 14.38 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Feb 2022 20:00

Tgt Ion: 95 Resp: 1402550
 Ion Ratio Lower Upper
 95 100
 174 60.4 48.3 72.5
 175 4.6 3.5 5.3



#74
 1,2,4-Trimethylbenzene
 Concen: 0.04 ppbv
 RT: 16.72 min Scan# 4333
 Delta R.T. -0.05 min
 Lab File: VL038348.D
 Acq: 14 Feb 2022 20:06

Tgt Ion: 105 Resp: 7688
 Ion Ratio Lower Upper
 105 100
 120 37.1 37.2 55.8#
 91 21.0 36.6 55.0#
 77 13.0 16.9 25.3#

