

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL020322\
 Data File : VL038333.D
 Acq On : 3 Feb 2022 14:18
 Operator : SY/AP
 Sample : N1379-03
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Quant Time: Feb 04 08:40:51 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	5.66	49	827870	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.16	114	2143247	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.07	117	1869378	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.39	95	1478639	10.42	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.20%

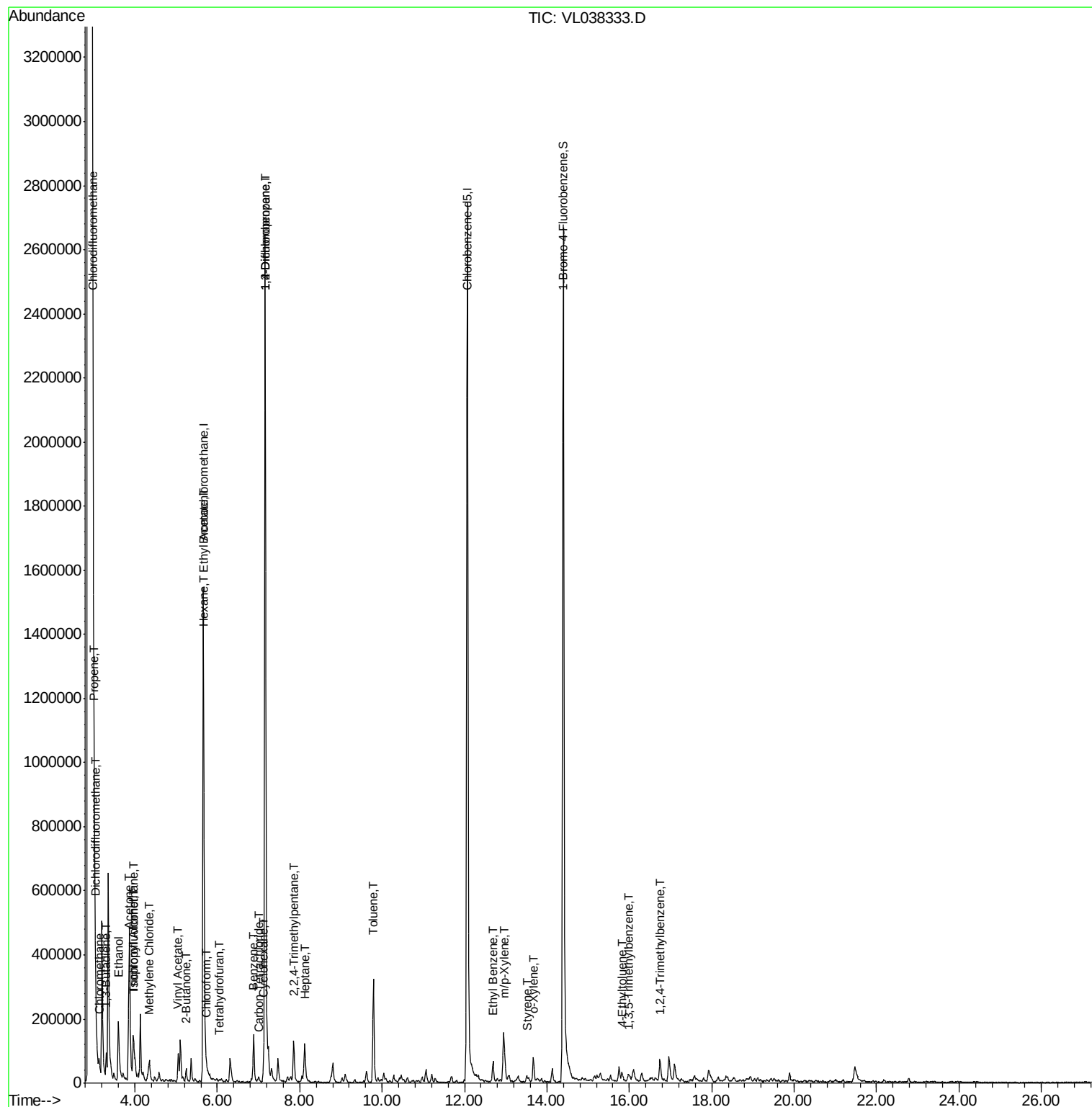
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.05	85	82236	0.467	ppbv	88
3) Chlorodifluoromethane	2.98	51	97036	0.589	ppbv #	79
4) Chloromethane	3.13	50	12773	0.225	ppbv	90
9) Propene	3.02	41	103772	1.934	ppbv	87
10) Heptane	8.11	43	34315	0.249	ppbv	92
11) Trichlorofluoromethane	3.95	101	30192	0.220	ppbv	85
13) Ethanol	3.59	45	240484	41.755	ppbv	93
15) Acetone	3.85	43	226270	3.100	ppbv #	81
16) 1,3-Butadiene	3.31	39	20034	0.383	ppbv #	58
19) Isopropyl Alcohol	3.96	45	180534	3.954	ppbv	99
20) Methylene Chloride	4.34	84	22279	0.525	ppbv	88
23) Vinyl Acetate	5.05	43	34218	0.322	ppbv #	1
25) Ethyl Acetate	5.67	43	87459	0.428	ppbv #	96
26) Hexane	5.68	57	60279	0.634	ppbv #	74
29) Chloroform	5.74	83	4733	0.031	ppbv #	80
30) Cyclohexane	7.12	84	7496	0.091	ppbv #	1
34) 2-Butanone	5.24	43	49861	0.711	ppbv #	90
35) Carbon Tetrachloride	7.01	117	6588	0.044	ppbv #	69
36) Benzene	6.88	78	68591	0.362	ppbv	95
39) 1,2-Dichloropropane	7.16	63	559597	7.281	ppbv #	26
41) Tetrahydrofuran	6.05	42	1637	0.035	ppbv #	38
44) 2,2,4-Trimethylpentane	7.86	57	113145	0.339	ppbv #	85
53) Toluene	9.79	91	236052	1.125	ppbv	98
58) Ethyl Benzene	12.69	91	55116	0.201	ppbv	97
59) m/p-Xylene	12.97	91	45461	0.194	ppbv #	32
60) o-Xylene	13.67	91	34689	0.159	ppbv #	32
61) Styrene	13.51	104	7210	0.071	ppbv #	73
72) 4-Ethyltoluene	15.82	105	14989	0.066	ppbv #	82
73) 1,3,5-Trimethylbenzene	15.98	105	8619	0.042	ppbv #	84
74) 1,2,4-Trimethylbenzene	16.74	105	46694	0.216	ppbv #	74

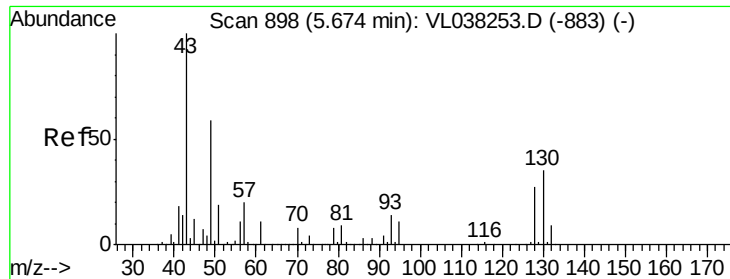
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 3 Feb 2022 14:18

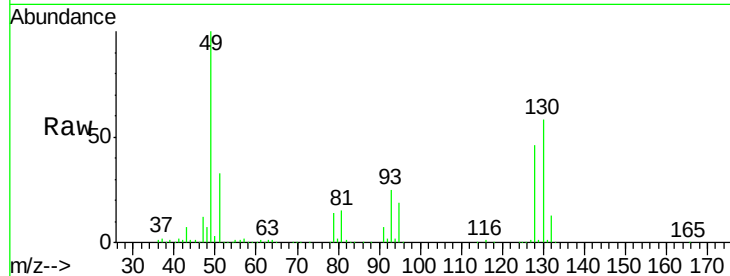
Tgt Ion: 49 Resp: 827870

Ion Ratio Lower Upper

49 100

128 47.6 24.5 73.5

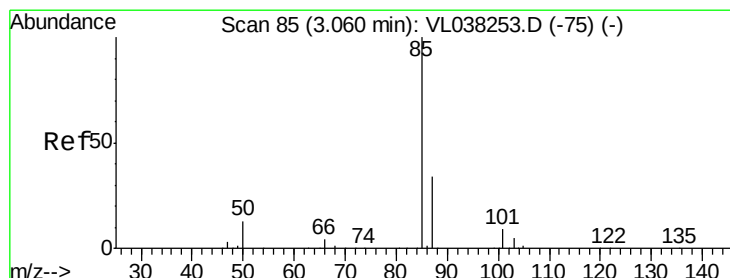
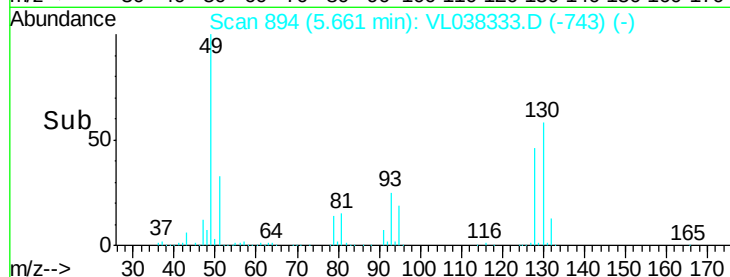
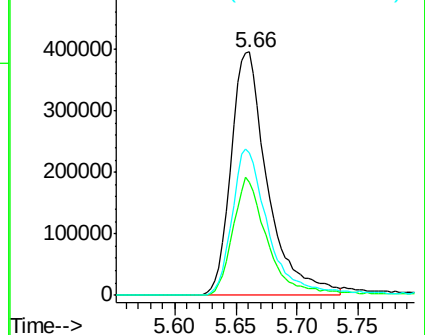
130 60.7 30.1 90.5



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.467 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.01 min

Lab File: VL038333.D

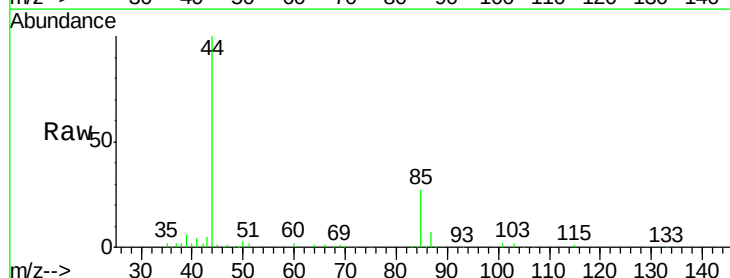
Acq: 3 Feb 2022 14:18

Tgt Ion: 85 Resp: 82236

Ion Ratio Lower Upper

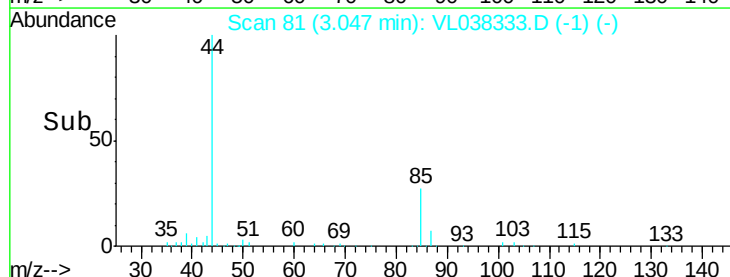
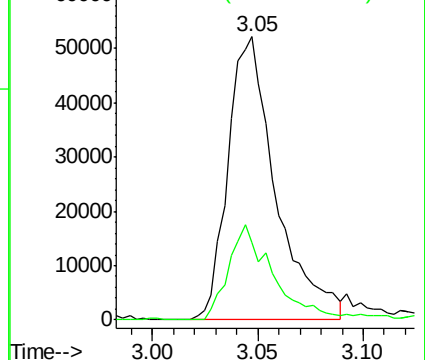
85 100

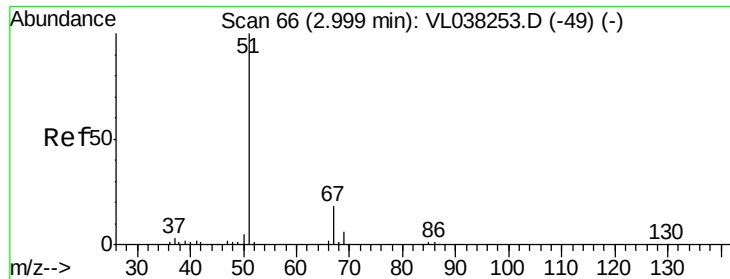
87 27.1 27.0 40.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.589 ppbv

RT: 2.98 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

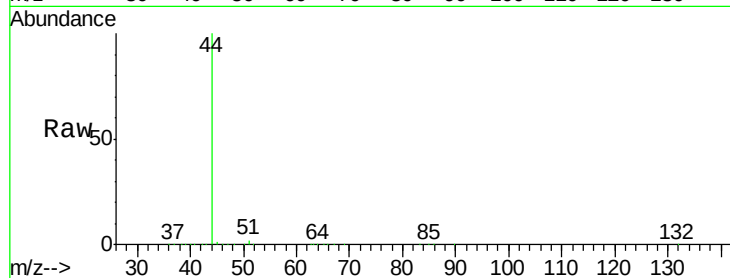
Acq: 3 Feb 2022 14:18

Tgt Ion: 51 Resp: 97036

Ion Ratio Lower Upper

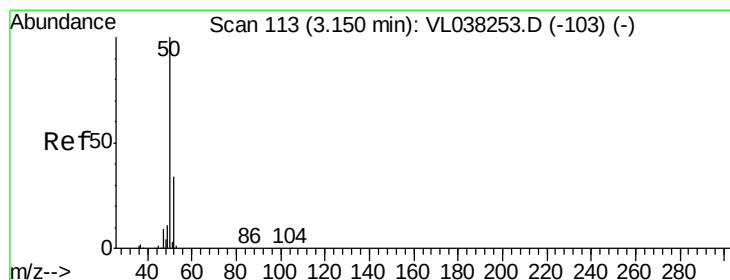
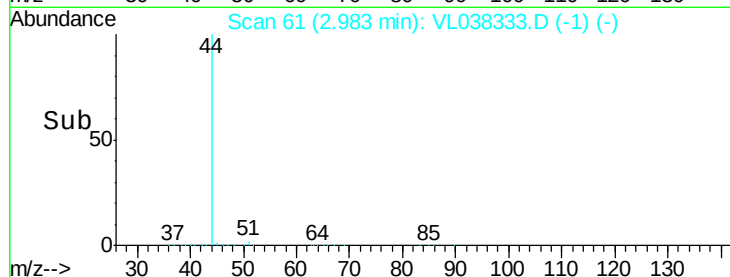
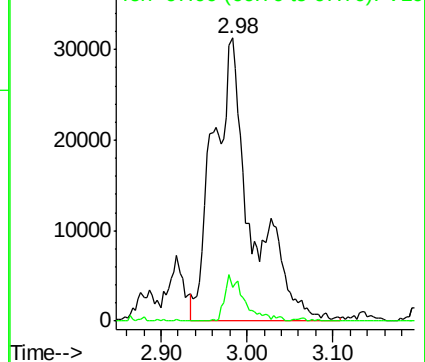
51 100

67 8.7 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: 0.225 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.02 min

Lab File: VL038333.D

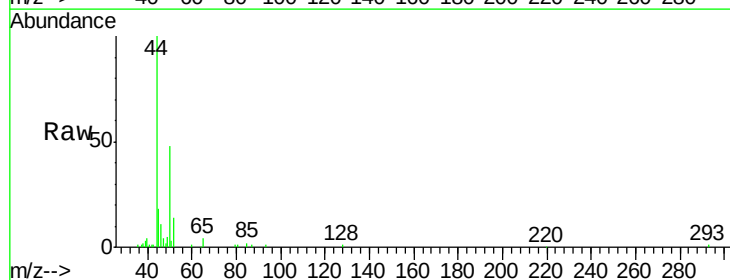
Acq: 3 Feb 2022 14:18

Tgt Ion: 50 Resp: 12773

Ion Ratio Lower Upper

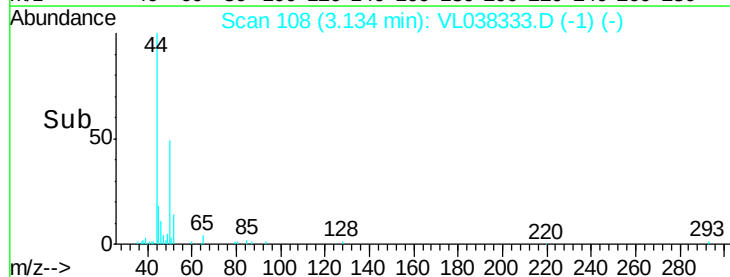
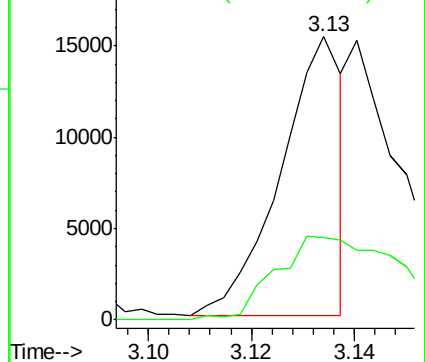
50 100

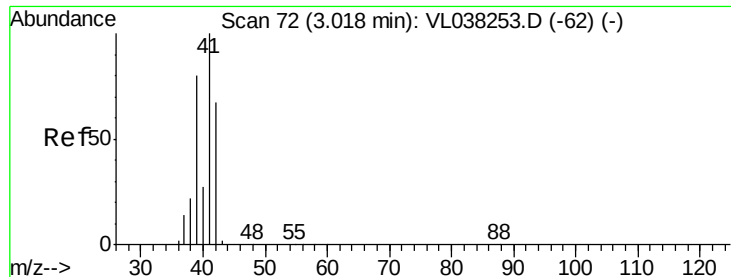
52 27.9 27.1 40.7



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.934 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

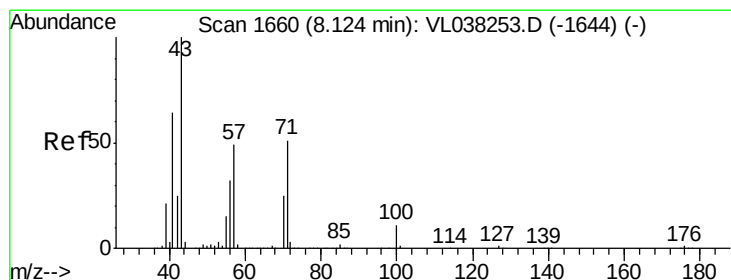
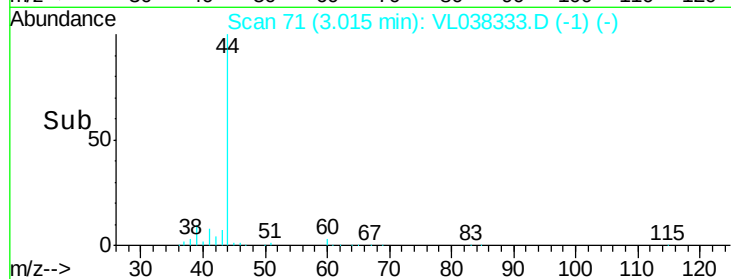
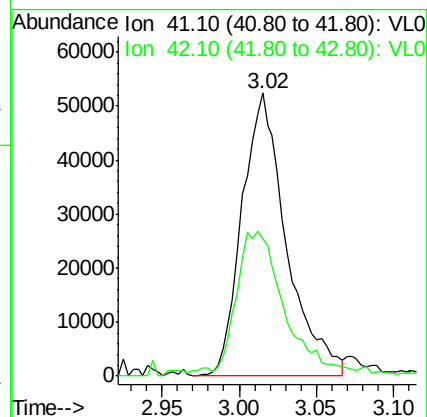
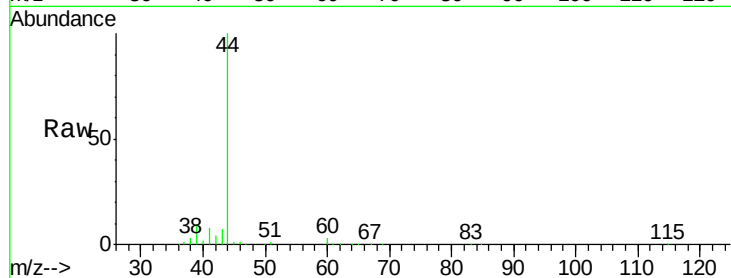
Acq: 3 Feb 2022 14:18

Tgt Ion: 41 Resp: 103772

Ion Ratio Lower Upper

41 100

42 58.4 54.9 82.3



#10

Heptane

Concen: 0.249 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.01 min

Lab File: VL038333.D

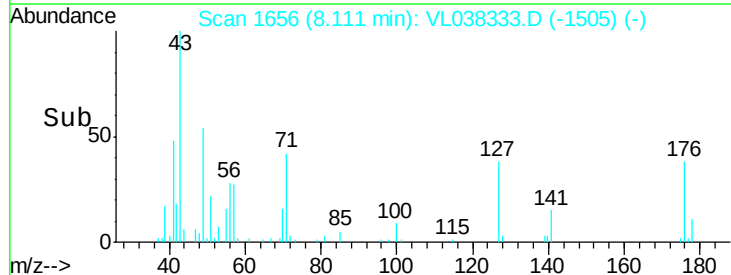
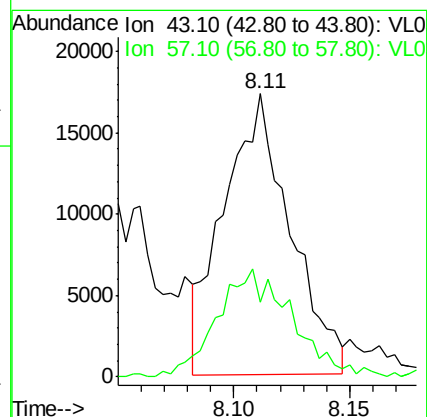
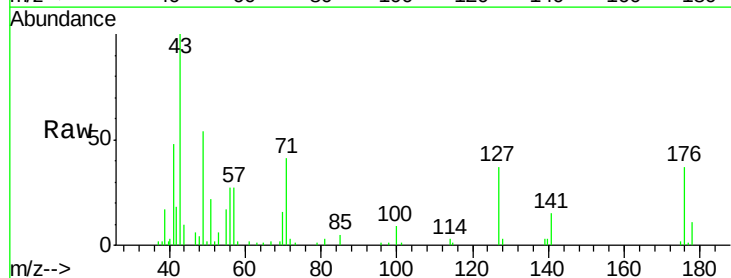
Acq: 3 Feb 2022 14:18

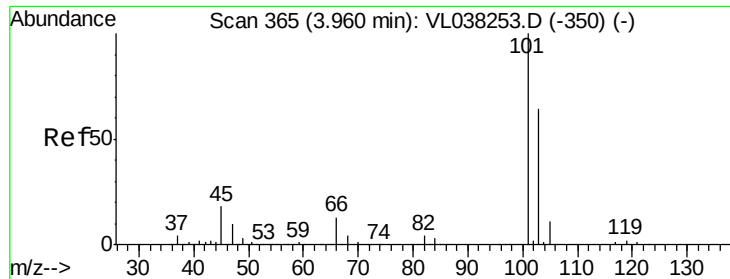
Tgt Ion: 43 Resp: 34315

Ion Ratio Lower Upper

43 100

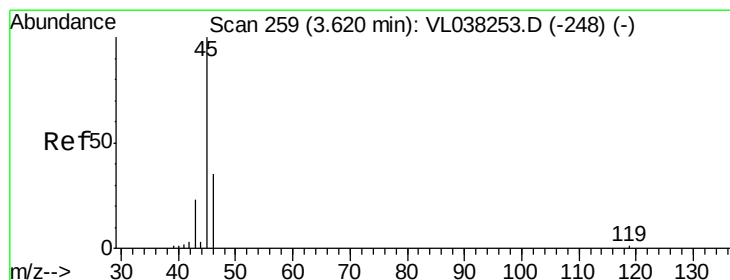
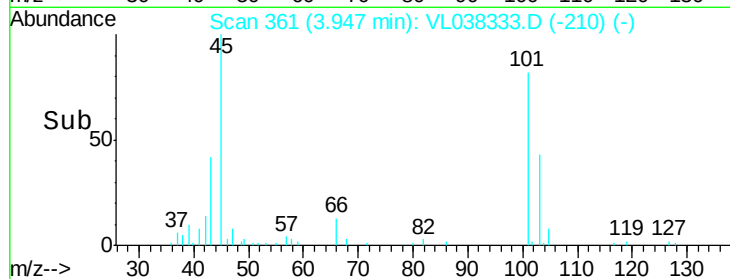
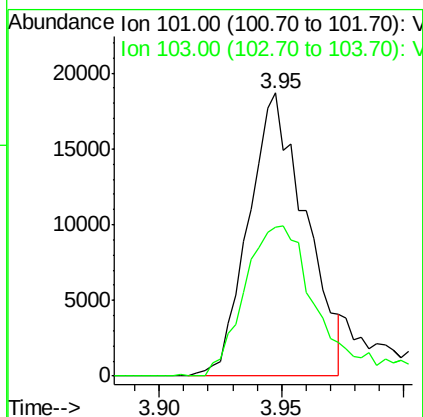
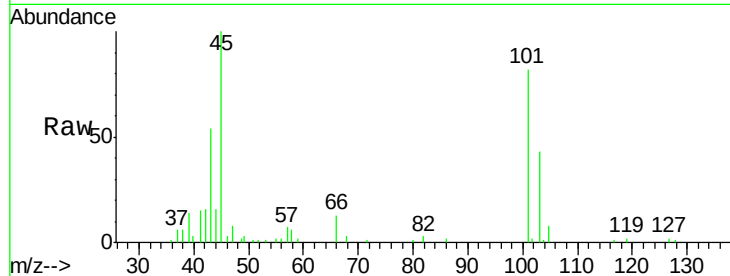
57 43.8 39.5 59.3





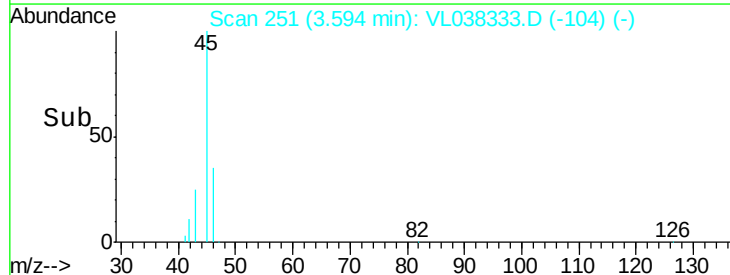
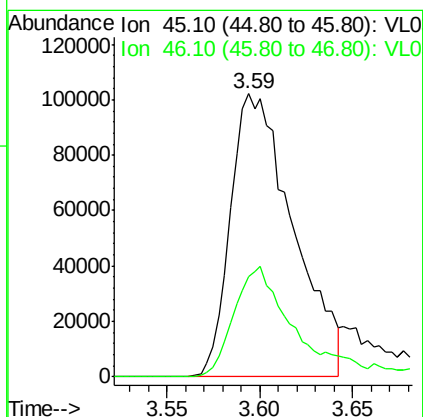
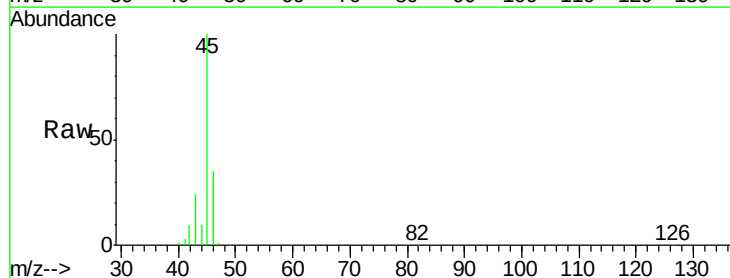
#11
 Trichlorofluoromethane
 Concen: 0.220 ppbv
 RT: 3.95
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Feb 2022 14:18

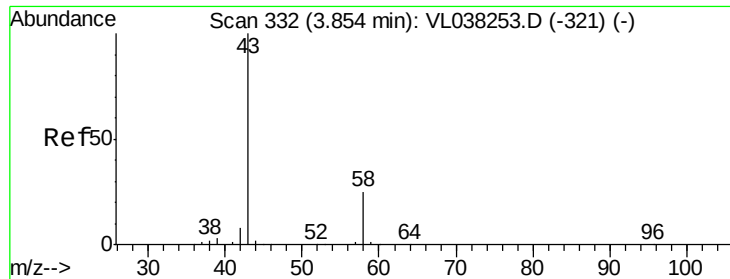
Tgt Ion: 101 Resp: 30192
 Ion Ratio Lower Upper
 101 100
 103 52.6 51.2 76.8



#13
 Ethanol
 Concen: 41.755 ppbv
 RT: 3.59 min Scan# 251
 Delta R.T. -0.03 min
 Lab File: VL038333.D
 Acq: 3 Feb 2022 14:18

Tgt Ion: 45 Resp: 240484
 Ion Ratio Lower Upper
 45 100
 46 42.5 15.4 61.6





#15

Acetone

Concen: 3.100 ppbv

RT: 3.85

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

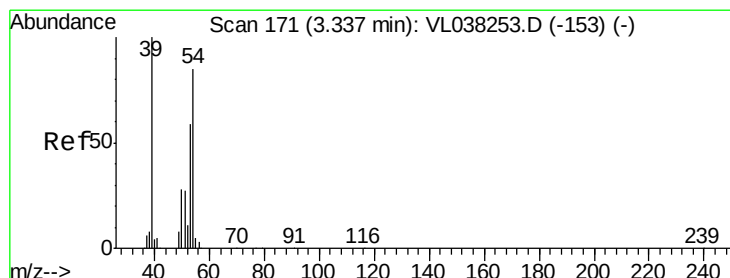
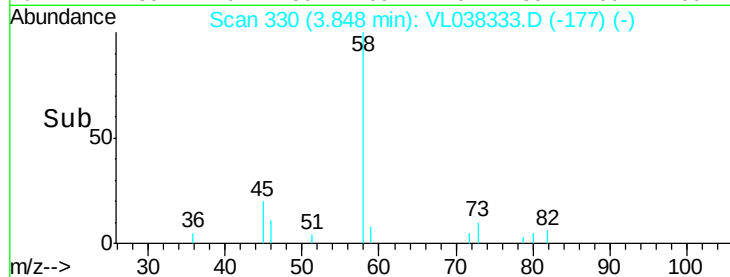
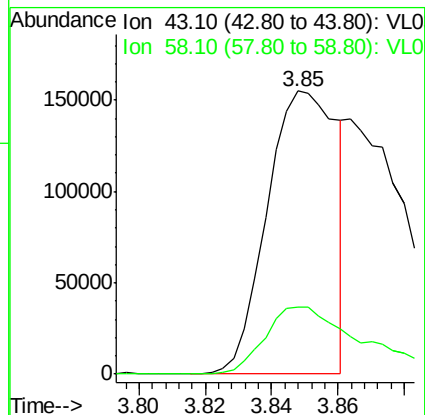
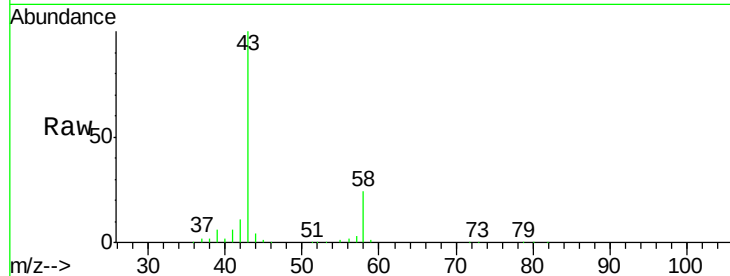
Acq: 3 Feb 2022 14:18

Tgt Ion: 43 Resp: 226270

Ion Ratio Lower Upper

43 100

58 36.6 21.5 32.3#



#16

1,3-Butadiene

Concen: 0.383 ppbv

RT: 3.31 min Scan# 162

Delta R.T. -0.03 min

Lab File: VL038333.D

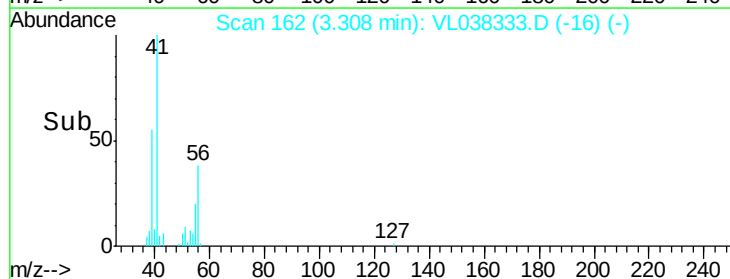
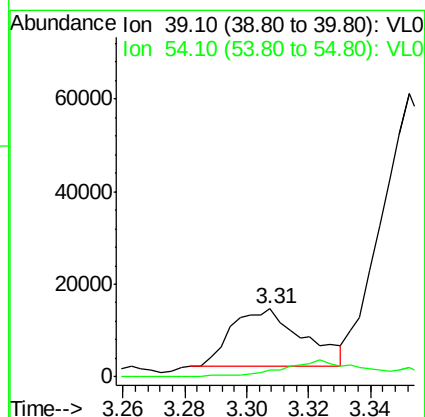
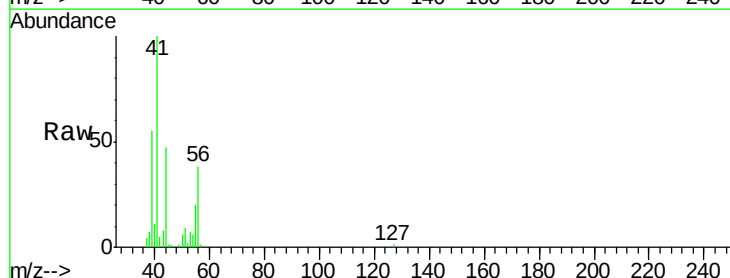
Acq: 3 Feb 2022 14:18

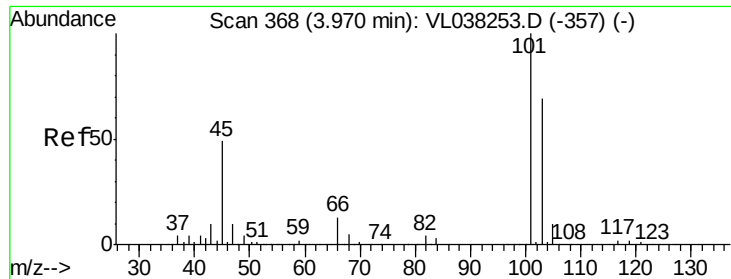
Tgt Ion: 39 Resp: 20034

Ion Ratio Lower Upper

39 100

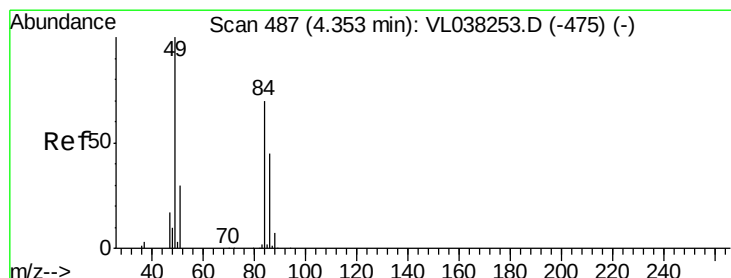
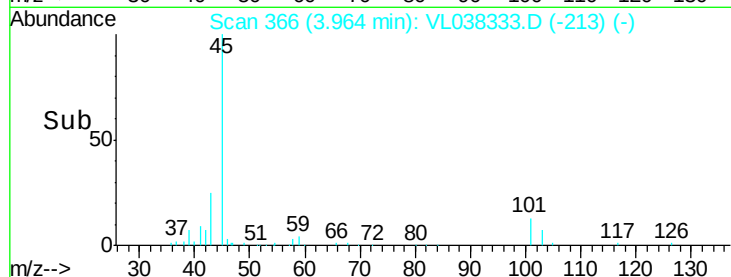
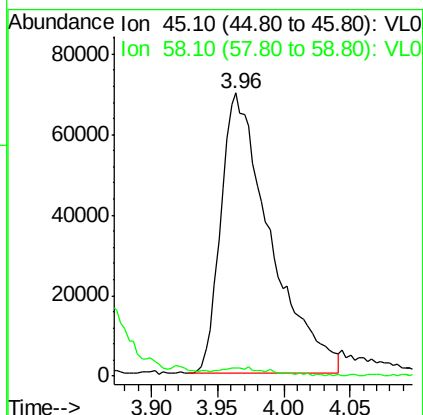
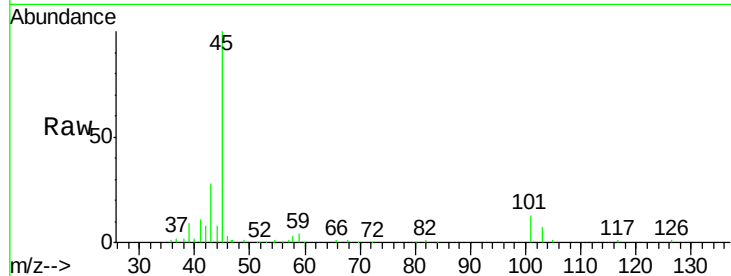
54 42.0 62.6 94.0#





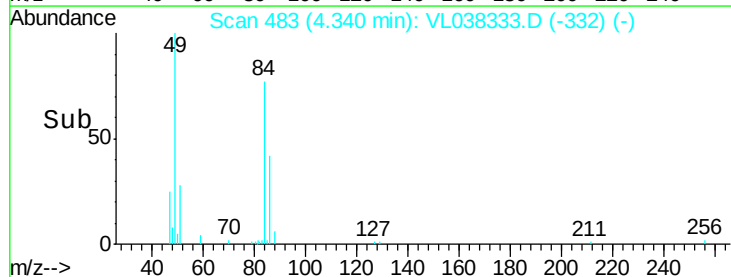
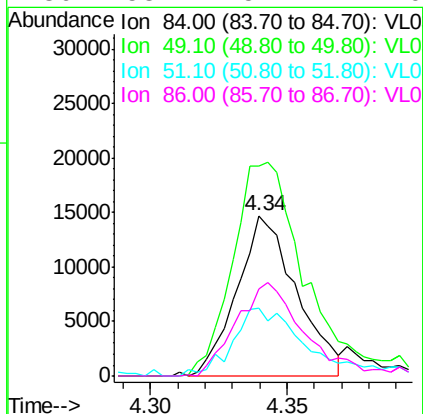
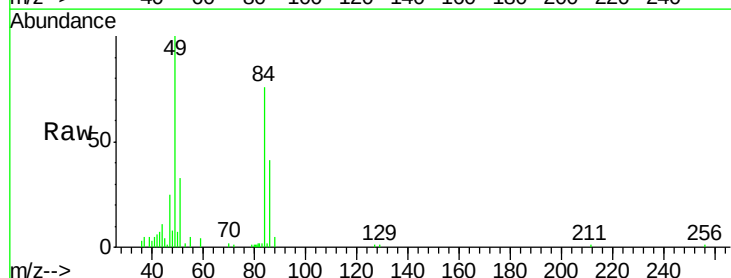
#19
Isopropyl Alcohol
Concen: 3.954 ppbv
RT: 3.96
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 3 Feb 2022 14:18

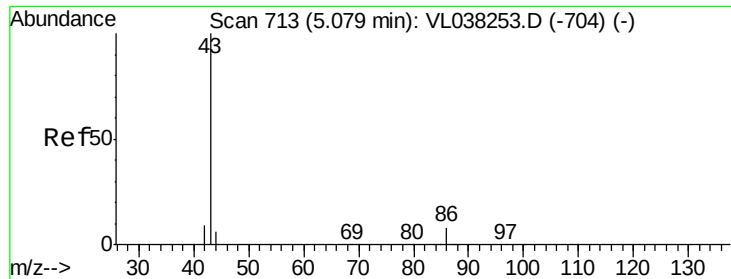
Tgt Ion: 45 Resp: 180534
Ion Ratio Lower Upper
45 100
58 2.7 2.3 3.5



#20
Methylene Chloride
Concen: 0.525 ppbv
RT: 4.34 min Scan# 483
Delta R.T. -0.01 min
Lab File: VL038333.D
Acq: 3 Feb 2022 14:18

Tgt Ion: 84 Resp: 22279
Ion Ratio Lower Upper
84 100
49 129.7 115.0 172.6
51 38.4 35.0 52.6
86 53.1 51.4 77.0





#23

Vinyl Acetate

Concen: 0.322 ppbv

RT: 5.05 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: OA1

Acq: 3 Feb 2022 14:18

Tgt Ion: 43 Resp: 34218

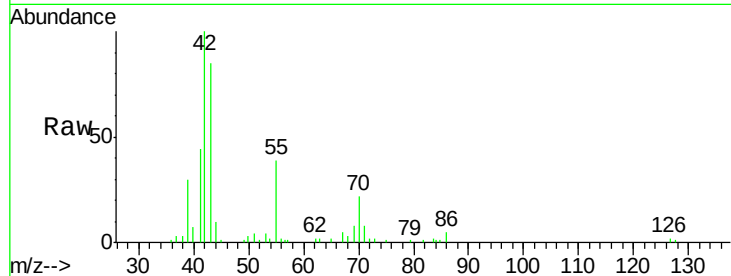
Ion Ratio Lower Upper

43 100

86 5.7 5.7 8.5

42 117.8 7.7 11.5#

44 2.6 4.2 6.4#

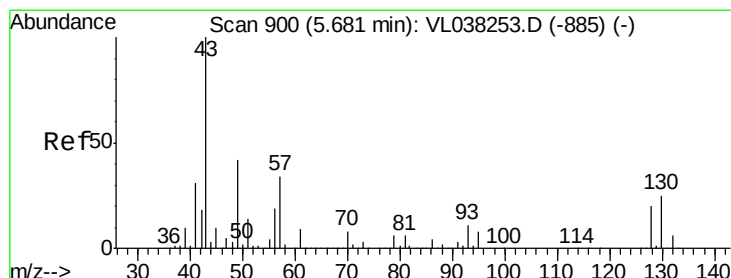
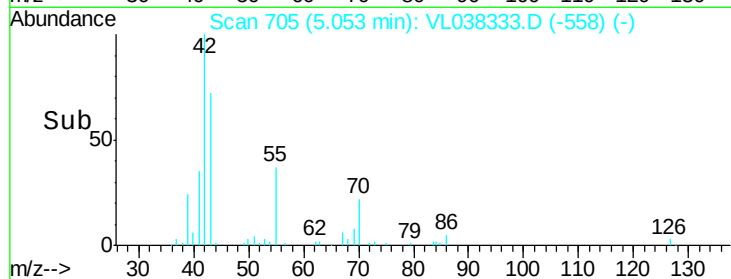
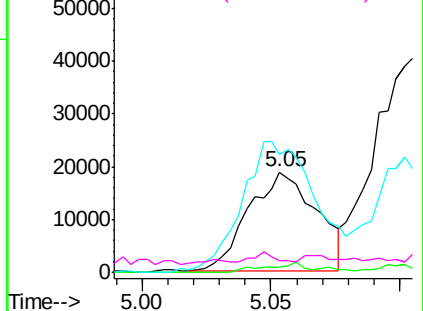


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.428 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL038333.D

Acq: 3 Feb 2022 14:18

Tgt Ion: 43 Resp: 87459

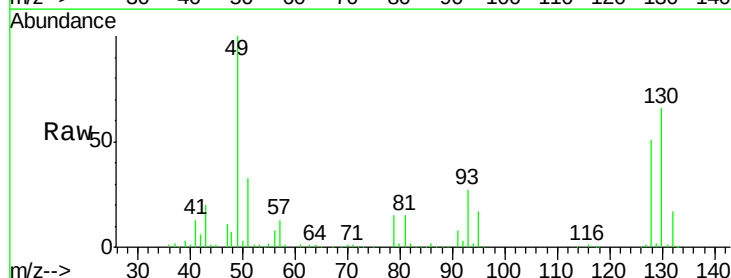
Ion Ratio Lower Upper

43 100

45 9.4 7.9 11.9

61 7.3 7.8 11.8#

70 5.6 5.4 8.0

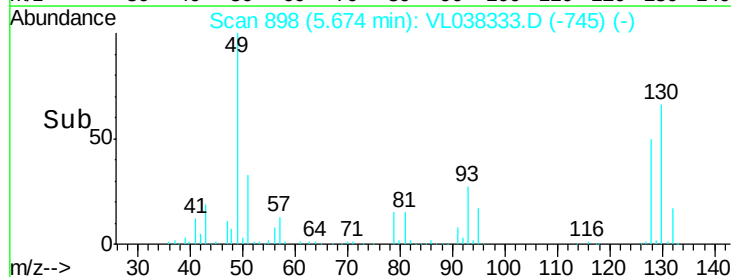
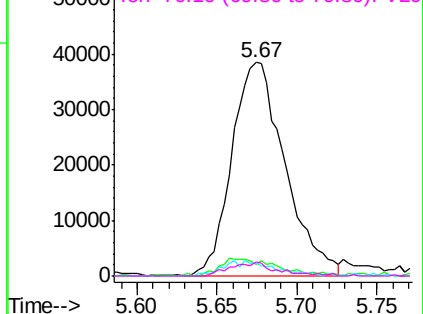


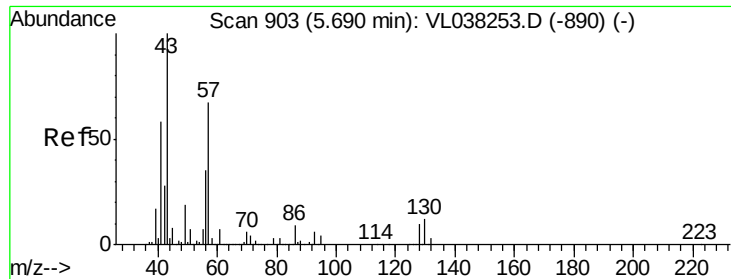
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

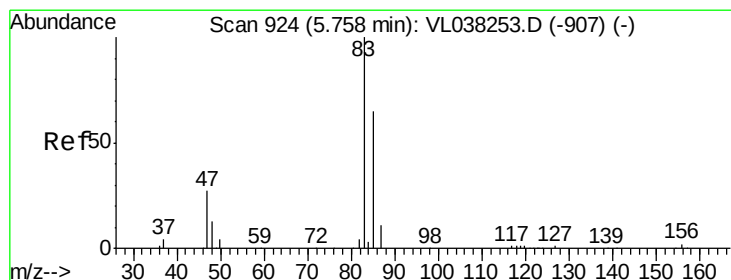
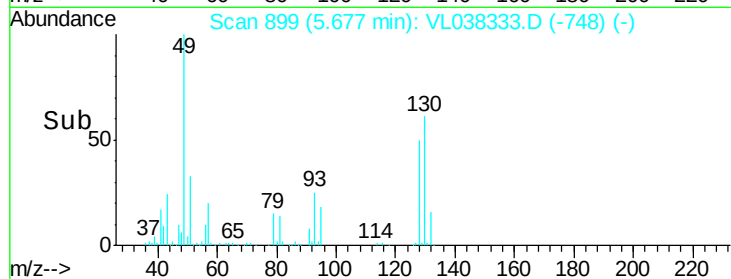
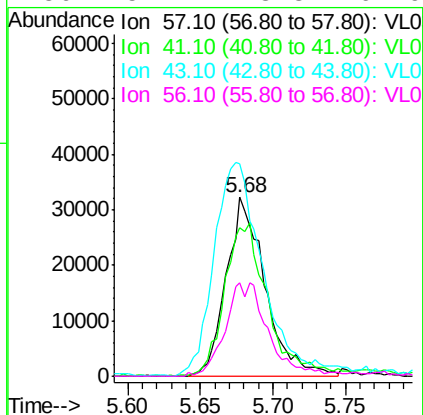
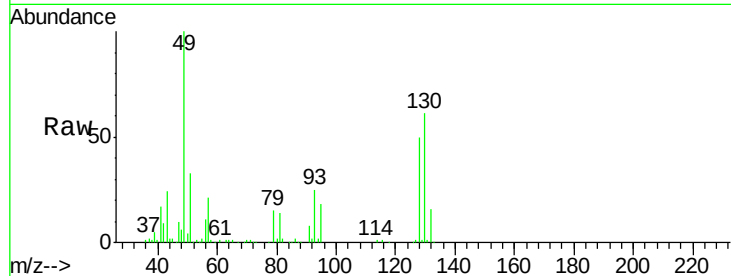
Ion 70.10 (69.80 to 70.80): VL0





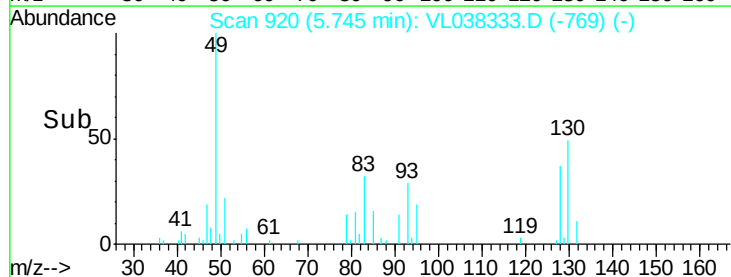
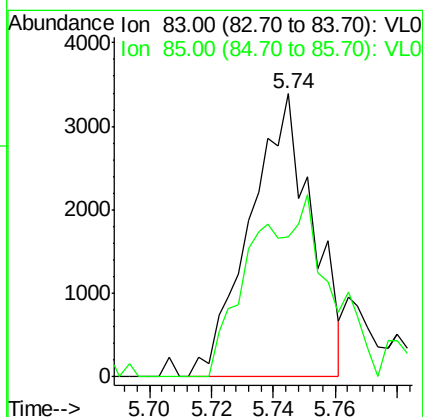
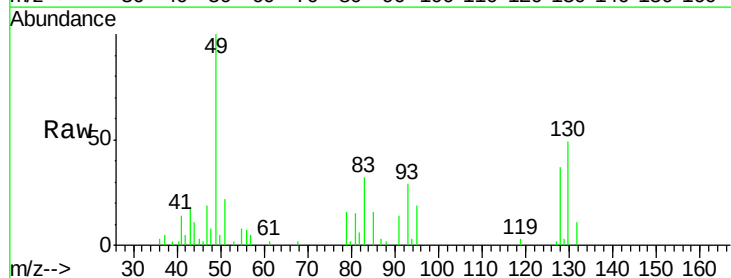
#26
Hexane
Concen: 0.634 ppbv
RT: 5.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 3 Feb 2022 14:18

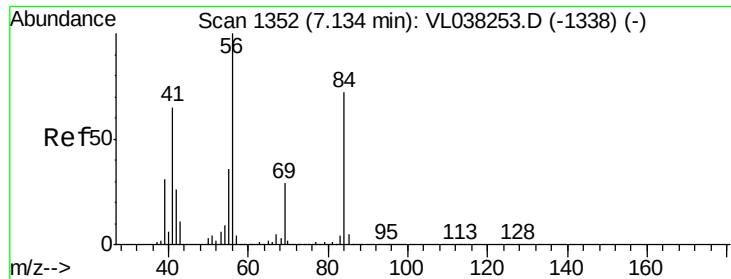
Tgt Ion:	57	Resp:	60279
Ion	Ratio	Lower	Upper
57	100		
41	94.8	72.8	109.2
43	156.4	177.0	265.6#
56	57.4	43.3	64.9



#29
Chloroform
Concen: 0.031 ppbv
RT: 5.74 min Scan# 920
Delta R.T. -0.01 min
Lab File: VL038333.D
Acq: 3 Feb 2022 14:18

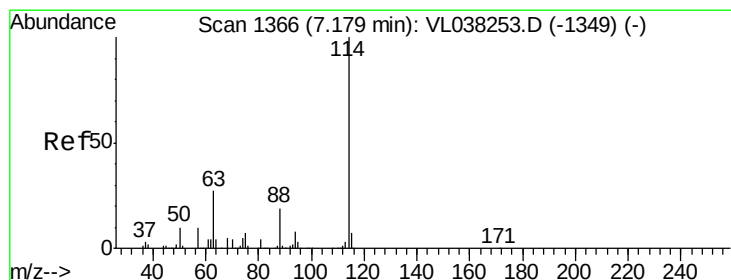
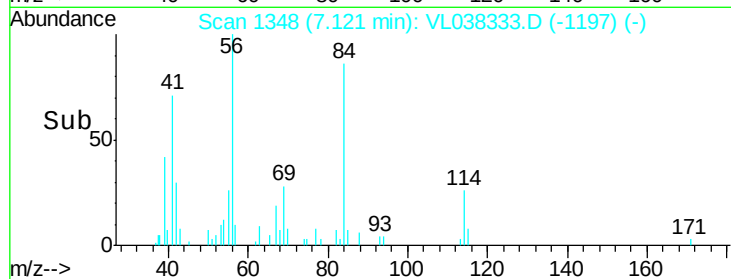
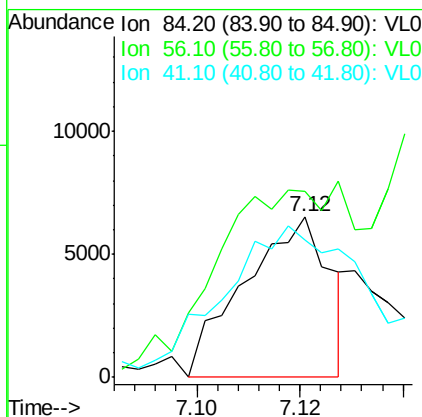
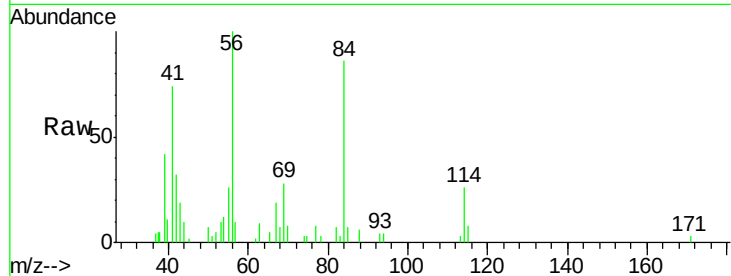
Tgt Ion:	83	Resp:	4733
Ion	Ratio	Lower	Upper
83	100		
85	49.4	51.9	77.9#





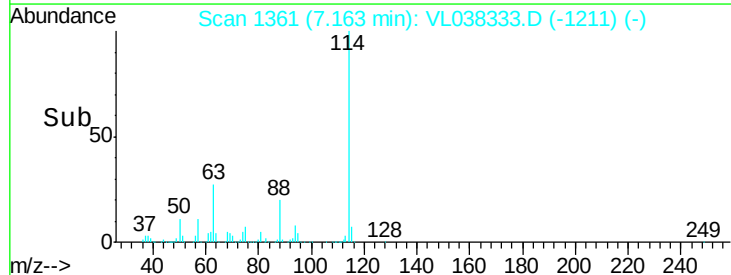
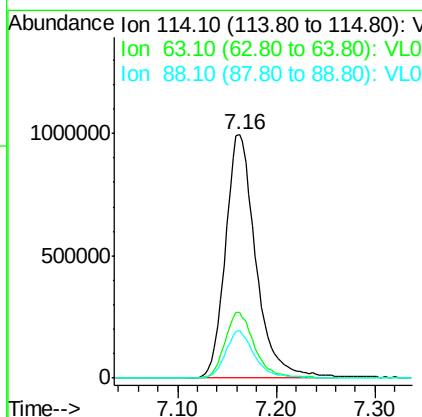
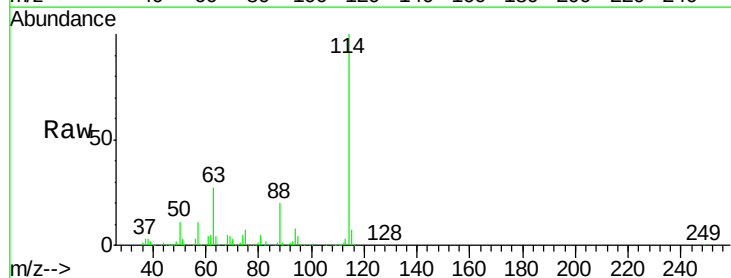
#30
Cyclohexane
Concen: 0.091 ppbv
RT: 7.12 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 3 Feb 2022 14:18

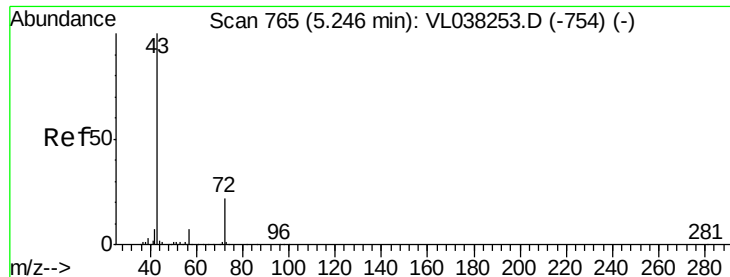
Tgt Ion: 84 Resp: 7496
Ion Ratio Lower Upper
84 100
56 0.0 112.7 169.1#
41 187.1 71.1 106.7#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.16 min Scan# 1361
Delta R.T. -0.02 min
Lab File: VL038333.D
Acq: 3 Feb 2022 14:18

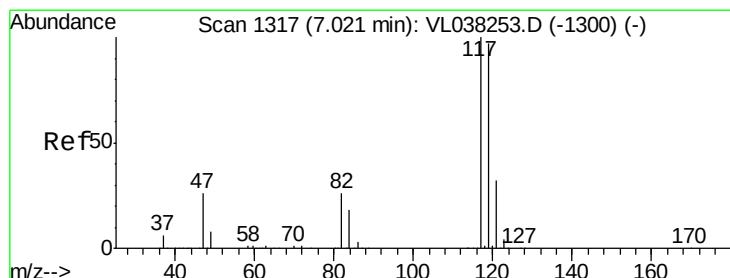
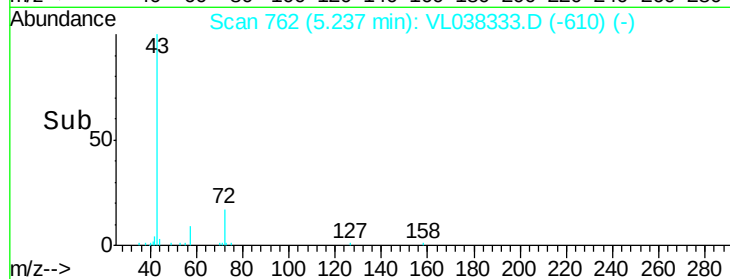
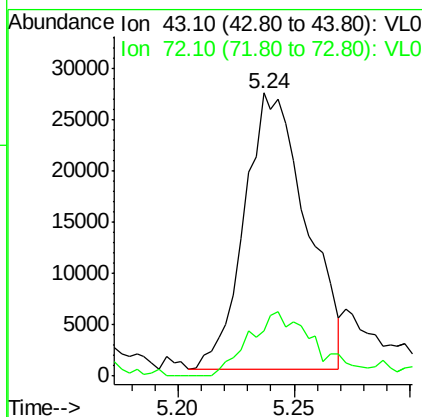
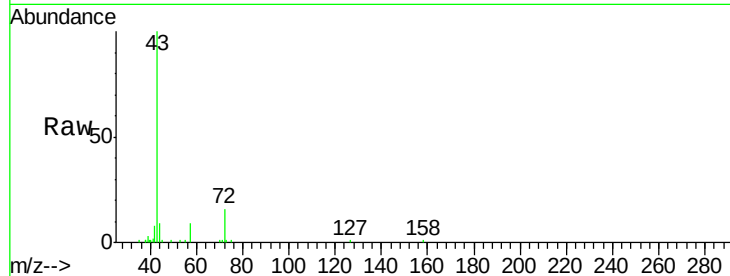
Tgt Ion: 114 Resp: 2143247
Ion Ratio Lower Upper
114 100
63 26.8 22.0 33.0
88 18.7 15.0 22.6





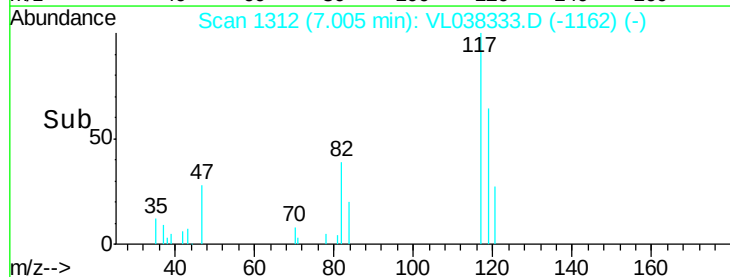
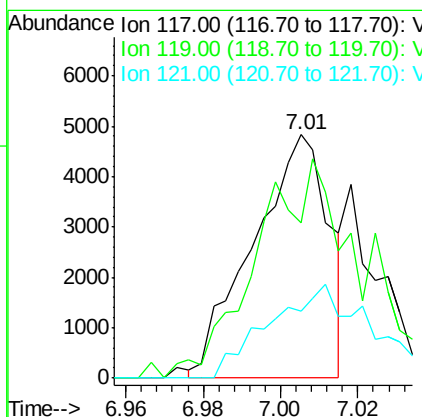
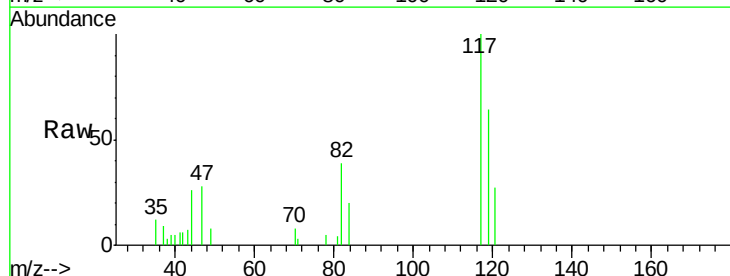
#34
 2-Butanone
 Concen: 0.711 ppbv
 RT: 5.24
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Feb 2022 14:18

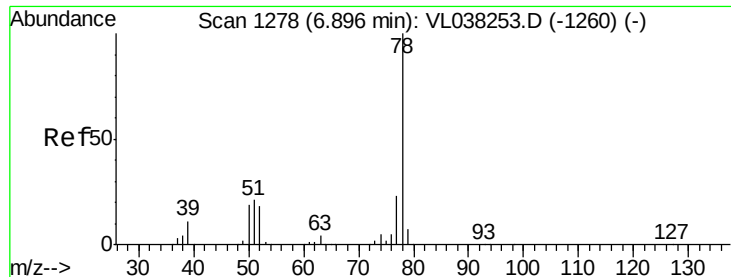
Tgt Ion: 43 Resp: 49861
 Ion Ratio Lower Upper
 43 100
 72 27.4 18.1 27.1#



#35
 Carbon Tetrachloride
 Concen: 0.044 ppbv
 RT: 7.01 min Scan# 1312
 Delta R.T. -0.02 min
 Lab File: VL038333.D
 Acq: 3 Feb 2022 14:18

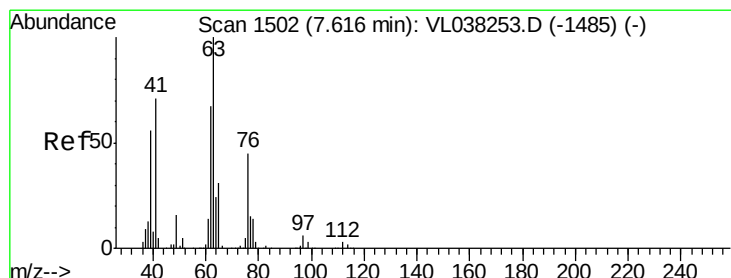
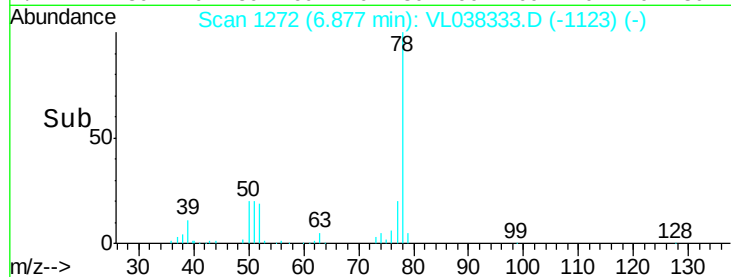
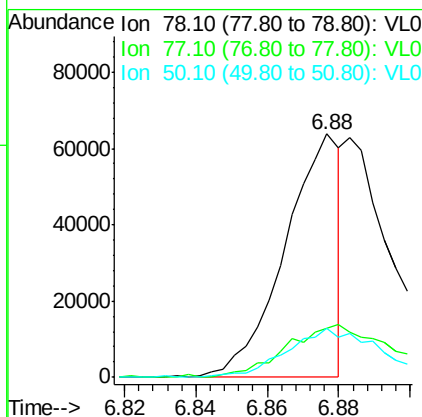
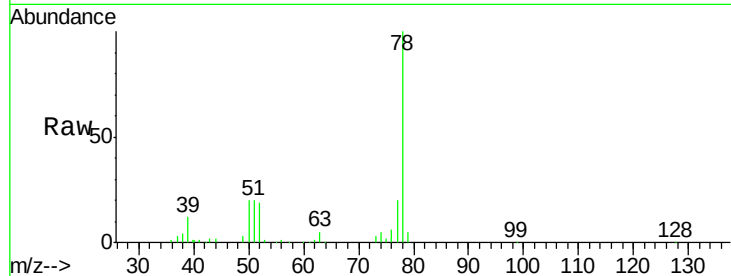
Tgt Ion: 117 Resp: 6588
 Ion Ratio Lower Upper
 117 100
 119 58.3 77.9 116.9#
 121 28.5 25.4 38.2





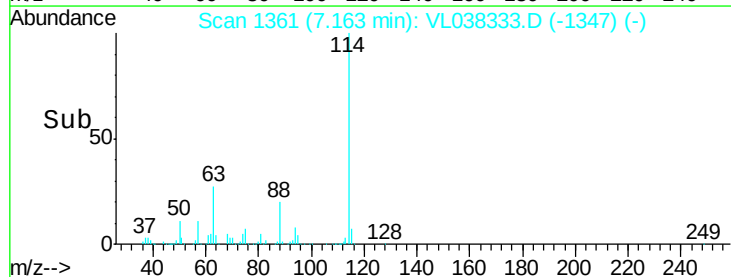
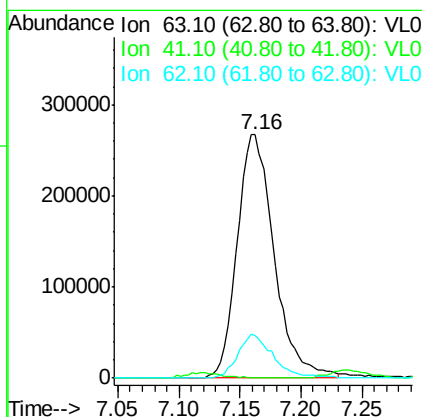
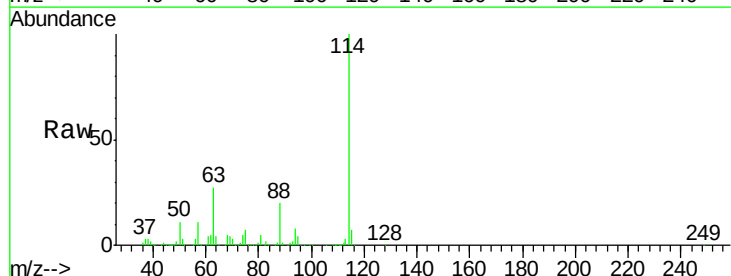
#36
Benzene
Concen: 0.362 ppbv
RT: 6.88
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 3 Feb 2022 14:18

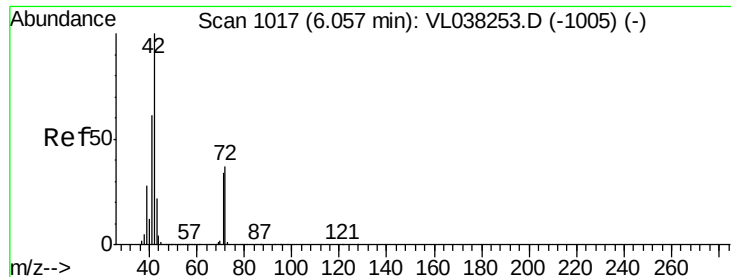
Tgt Ion: 78 Resp: 68591
Ion Ratio Lower Upper
78 100
77 19.3 18.2 27.2
50 19.6 15.1 22.7



#39
1,2-Dichloropropane
Concen: 7.281 ppbv
RT: 7.16 min Scan# 1361
Delta R.T. -0.45 min
Lab File: VL038333.D
Acq: 3 Feb 2022 14:18

Tgt Ion: 63 Resp: 559597
Ion Ratio Lower Upper
63 100
41 0.0 56.6 85.0#
62 17.3 53.9 80.9#





#41

Tetrahydrofuran

Concen: 0.035 ppbv

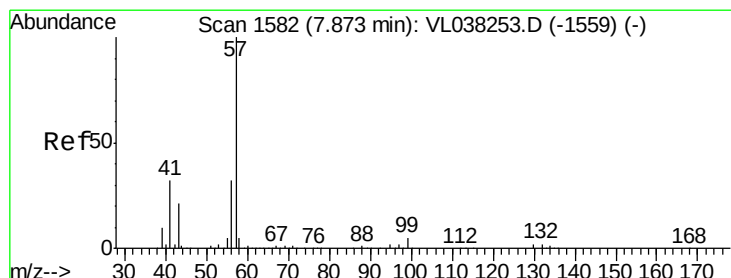
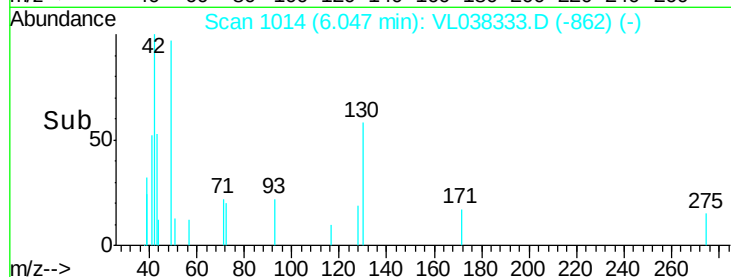
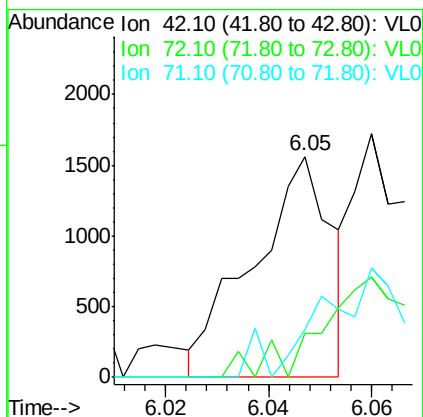
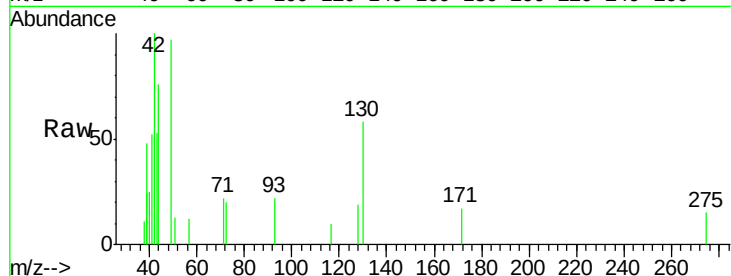
RT: 6.05 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: OA1

Acq: 3 Feb 2022 14:18

Tgt Ion:	42	Resp:	1637
Ion	Ratio	Lower	Upper
42	100		
72	0.0	29.7	44.5#
71	0.0	29.4	44.2#



#44

2,2,4-Trimethylpentane

Concen: 0.339 ppbv

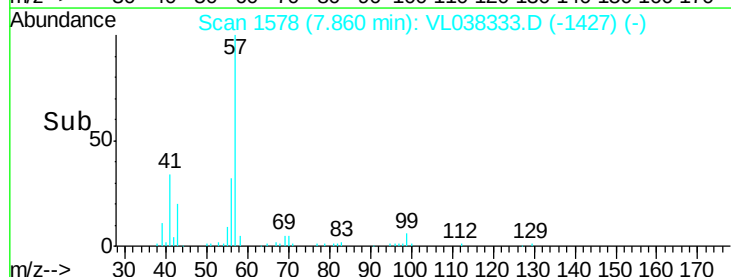
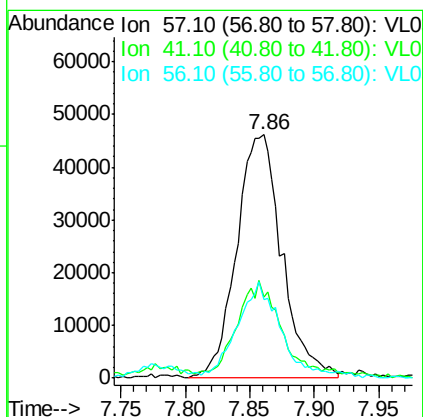
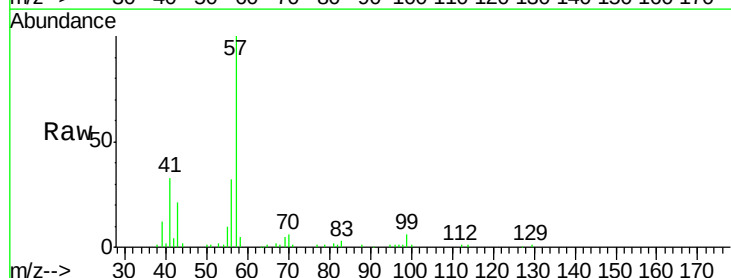
RT: 7.86 min Scan# 1578

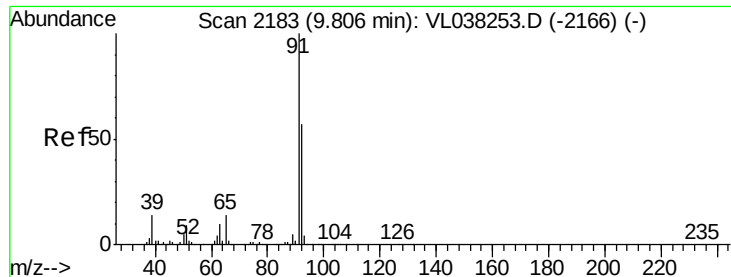
Delta R.T. -0.01 min

Lab File: VL038333.D

Acq: 3 Feb 2022 14:18

Tgt Ion:	57	Resp:	113145
Ion	Ratio	Lower	Upper
57	100		
41	41.7	26.3	39.5#
56	39.1	25.2	37.8#





#53

Toluene

Concen: 1.125 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

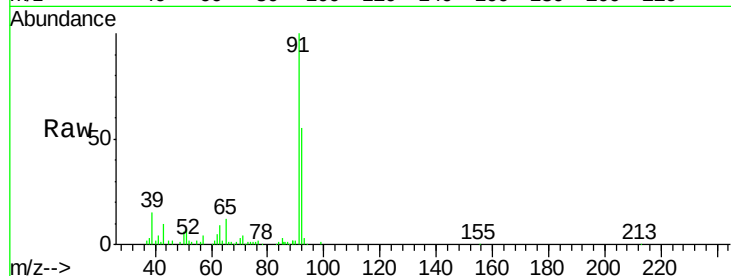
Acq: 3 Feb 2022 14:18

Tgt Ion: 91 Resp: 236052

Ion Ratio Lower Upper

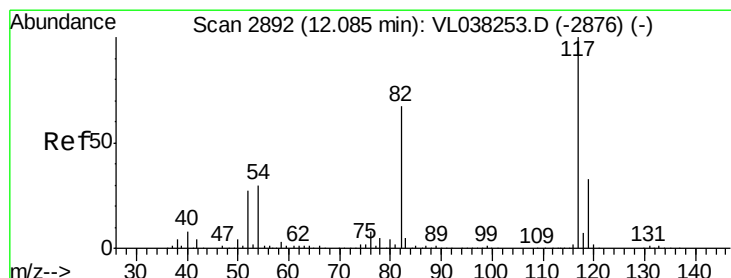
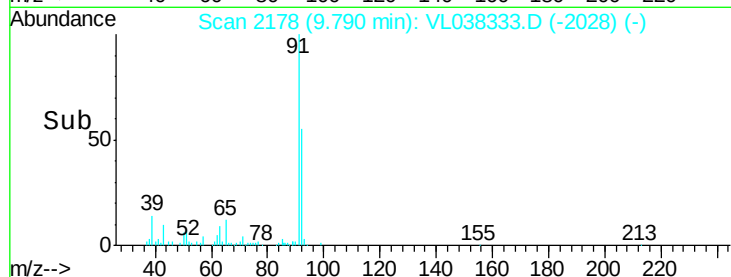
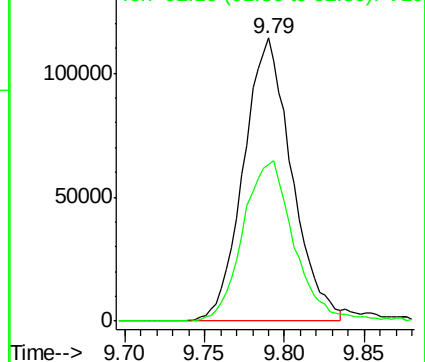
91 100

92 60.6 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2886

Delta R.T. -0.02 min

Lab File: VL038333.D

Acq: 3 Feb 2022 14:18

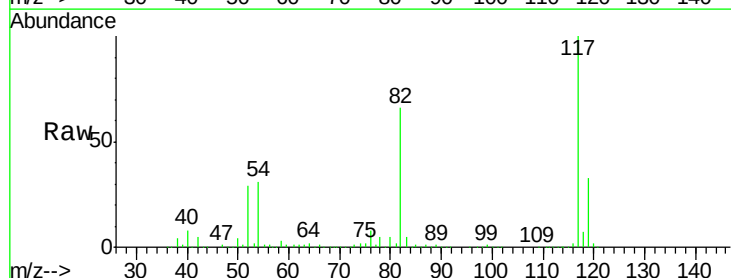
Tgt Ion: 117 Resp: 1869378

Ion Ratio Lower Upper

117 100

82 68.8 54.4 81.6

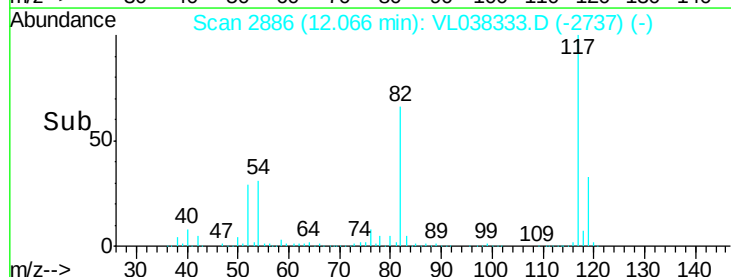
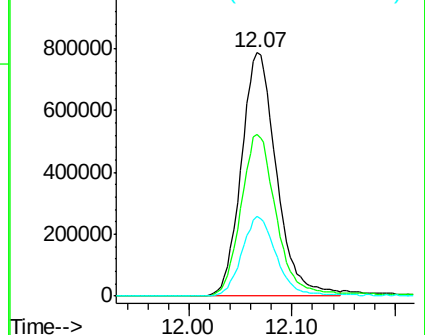
119 32.6 45.9 68.9#

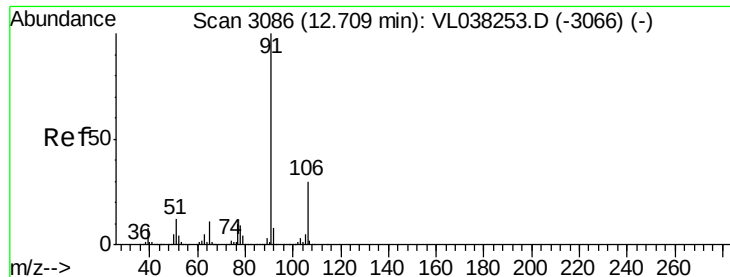


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.201 ppbv

RT: 12.69

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

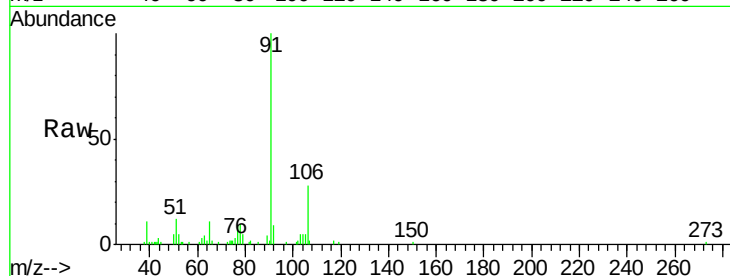
Acq: 3 Feb 2022 14:18

Tgt Ion: 91 Resp: 55116

Ion Ratio Lower Upper

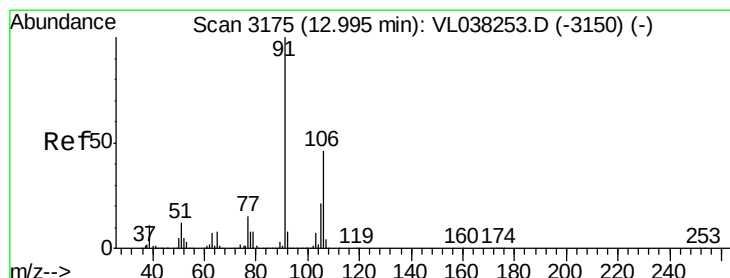
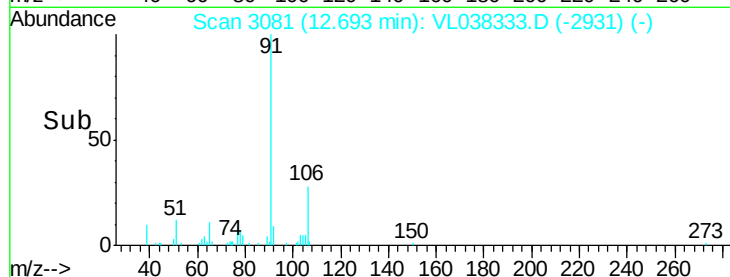
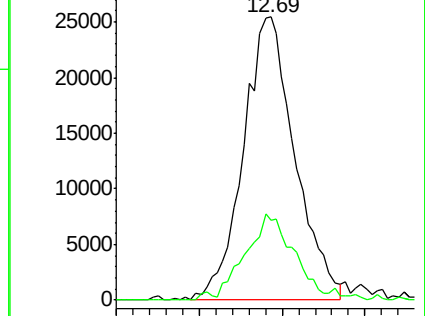
91 100

106 28.3 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: 0.194 ppbv

RT: 12.97 min Scan# 3168

Delta R.T. -0.02 min

Lab File: VL038333.D

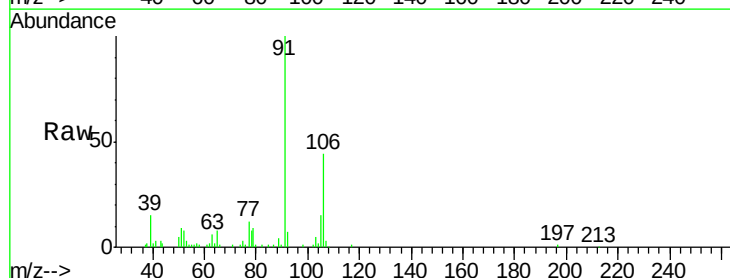
Acq: 3 Feb 2022 14:18

Tgt Ion: 91 Resp: 45461

Ion Ratio Lower Upper

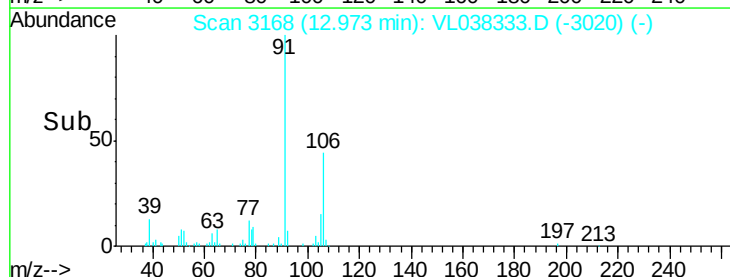
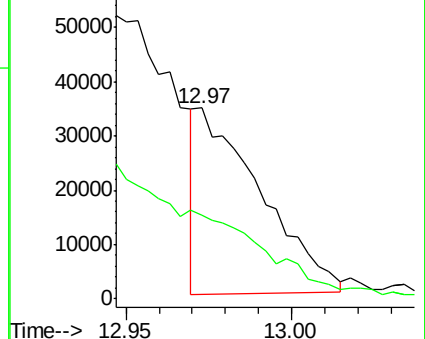
91 100

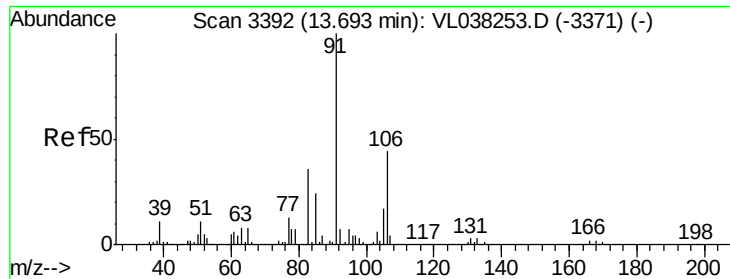
106 0.0 34.8 52.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

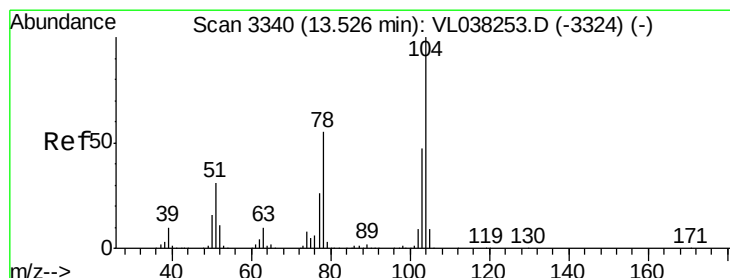
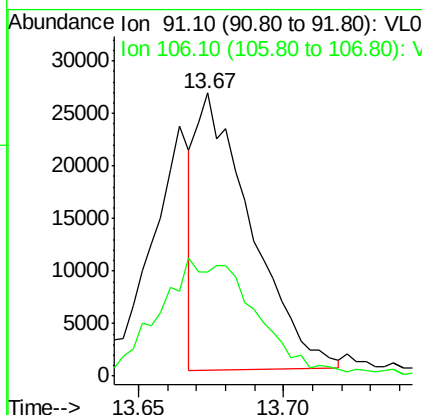
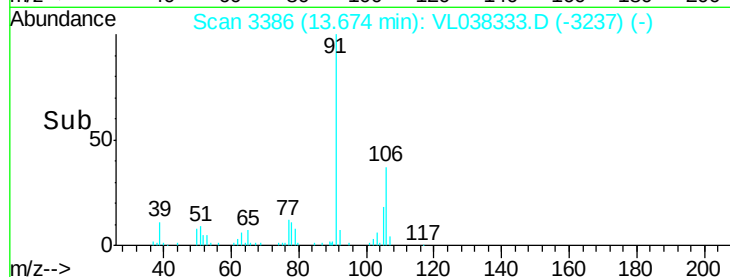
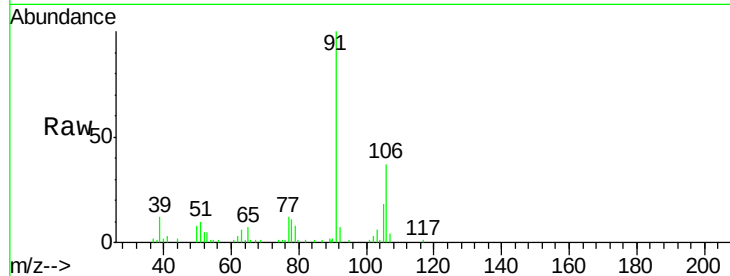
Ion 106.10 (105.80 to 106.80): V





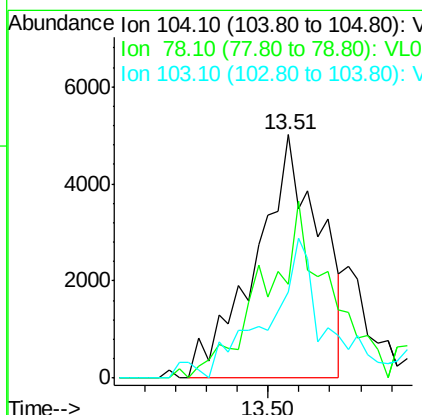
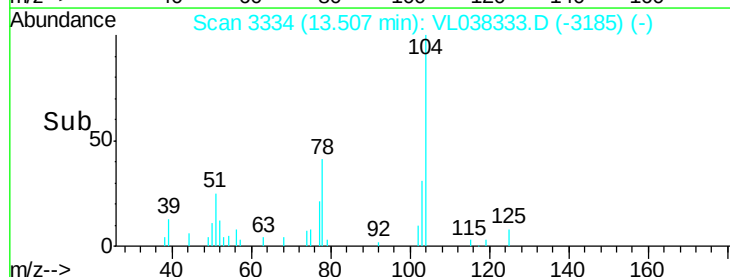
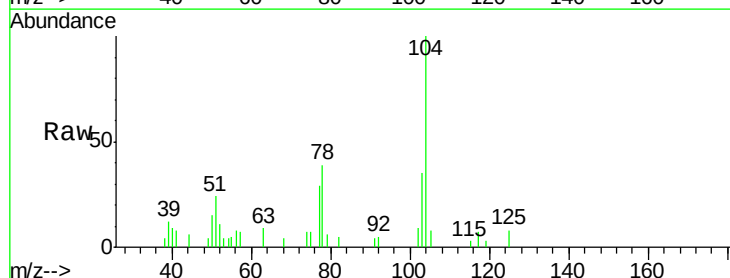
#60
o-Xylene
Concen: 0.159 ppbv
RT: 13.67
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 3 Feb 2022 14:18

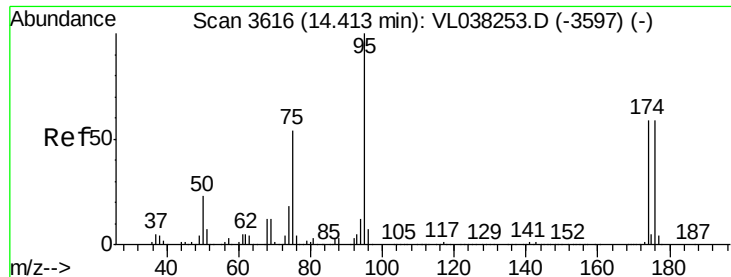
Tgt Ion: 91 Resp: 34689
Ion Ratio Lower Upper
91 100
106 0.0 22.2 66.6#



#61
Styrene
Concen: 0.071 ppbv
RT: 13.51 min Scan# 3334
Delta R.T. -0.02 min
Lab File: VL038333.D
Acq: 3 Feb 2022 14:18

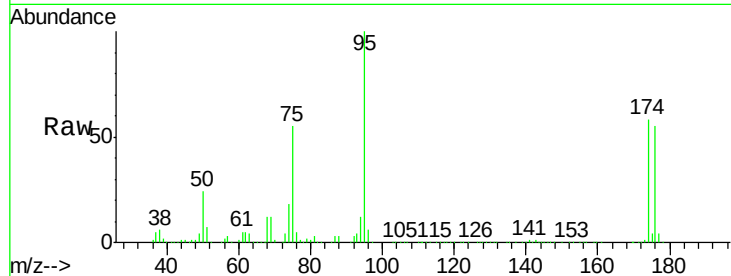
Tgt Ion: 104 Resp: 7210
Ion Ratio Lower Upper
104 100
78 81.6 44.2 66.4#
103 58.5 38.2 57.4#



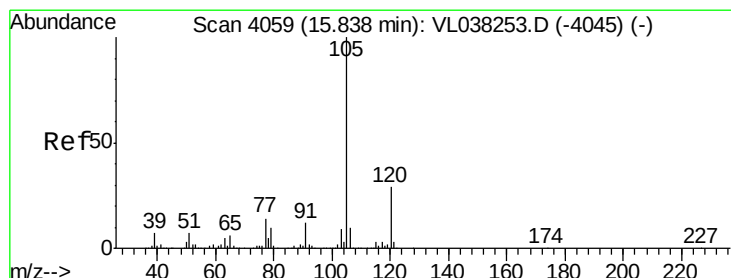
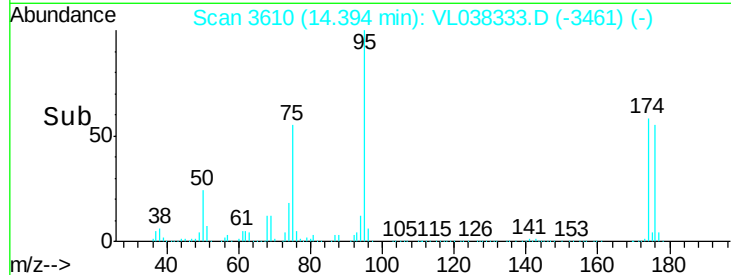
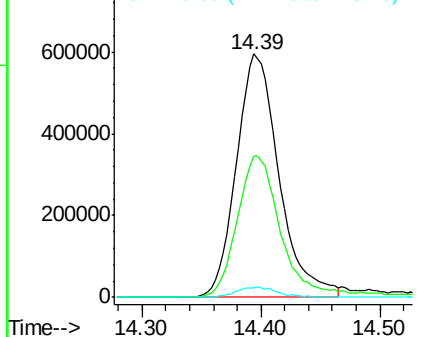


#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.421 ppbv
 RT: 14.39
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Feb 2022 14:18

Tgt Ion: 95 Resp: 1478639
 Ion Ratio Lower Upper
 95 100
 174 61.9 48.3 72.5
 175 4.4 3.5 5.3

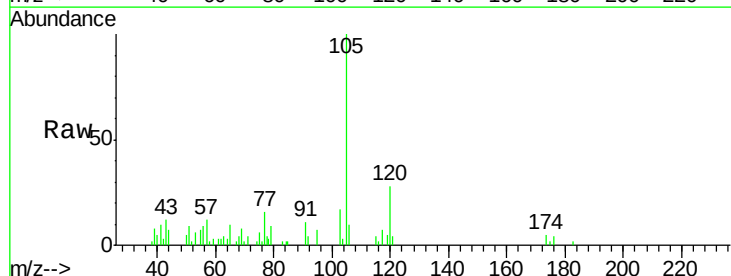


Abundance Ion 95.10 (94.80 to 95.80): VL0
 Ion 174.00 (173.70 to 174.70): V
 Ion 175.00 (174.70 to 175.70): V

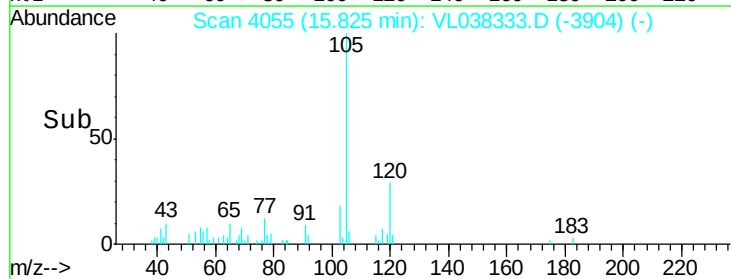
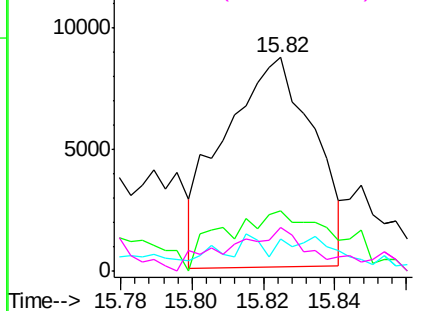


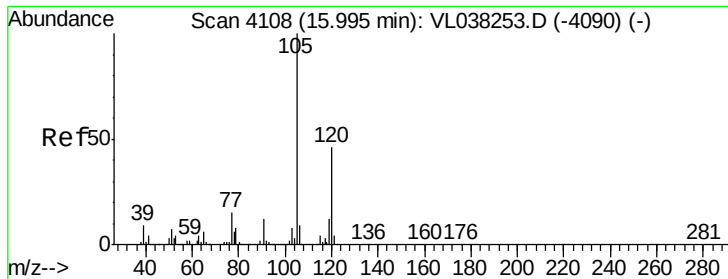
#72
 4-Ethyltoluene
 Concen: 0.066 ppbv
 RT: 15.82 min Scan# 4055
 Delta R.T. -0.01 min
 Lab File: VL038333.D
 Acq: 3 Feb 2022 14:18

Tgt Ion: 105 Resp: 14989
 Ion Ratio Lower Upper
 105 100
 120 38.2 23.8 35.8#
 91 21.3 10.2 15.4#
 77 23.1 11.7 17.5#



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





#73

1,3,5-Trimethylbenzene

Concen: 0.042 ppbv

RT: 15.98

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

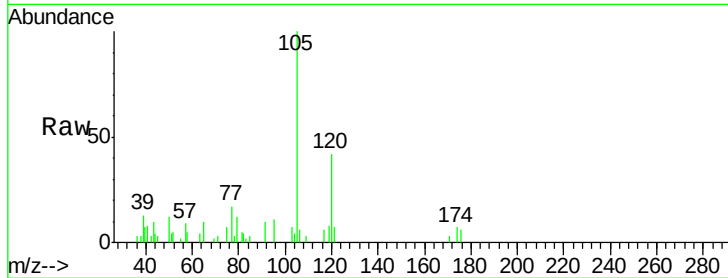
Acq: 3 Feb 2022 14:18

Tgt Ion:105 Resp: 8619

Ion Ratio Lower Upper

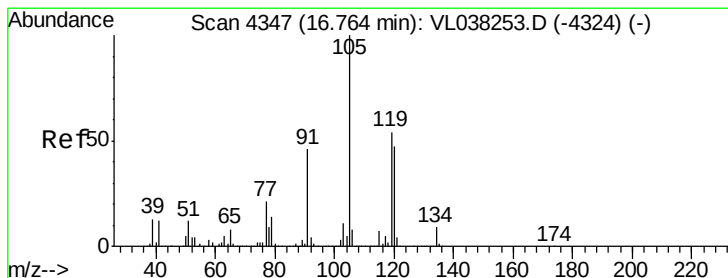
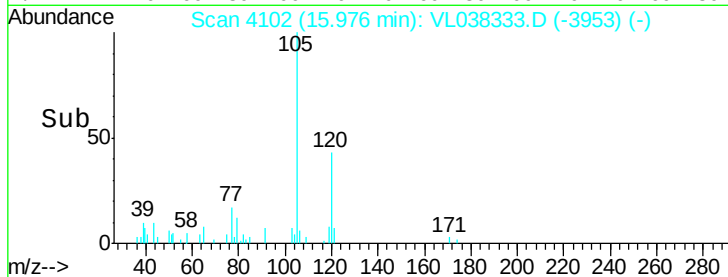
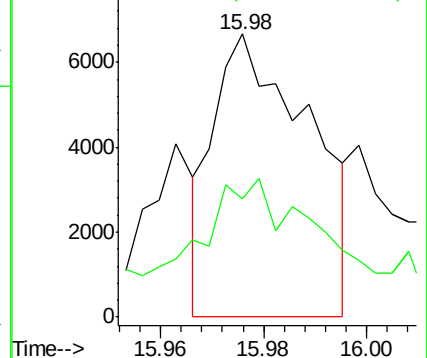
105 100

120 35.5 36.6 55.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.216 ppbv

RT: 16.74 min Scan# 4340

Delta R.T. -0.02 min

Lab File: VL038333.D

Acq: 3 Feb 2022 14:18

Tgt Ion:105 Resp: 46694

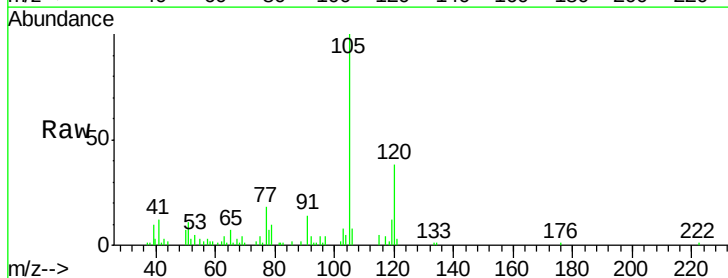
Ion Ratio Lower Upper

105 100

120 37.1 37.2 55.8#

91 14.6 36.6 55.0#

77 17.9 16.9 25.3



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

