

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL052322\
 Data File : VL039104.D
 Acq On : 24 May 2022 4:24
 Operator : SY/AP
 Sample : N2957-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 AP-3

Quant Time: May 24 06:04:52 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050522AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu May 05 10:12:15 2022
 QLast Update : Thu May 05 10:12:15 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1105597	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.15	114	2861619	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	2519975	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.38	95	1996796	10.01	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.10%

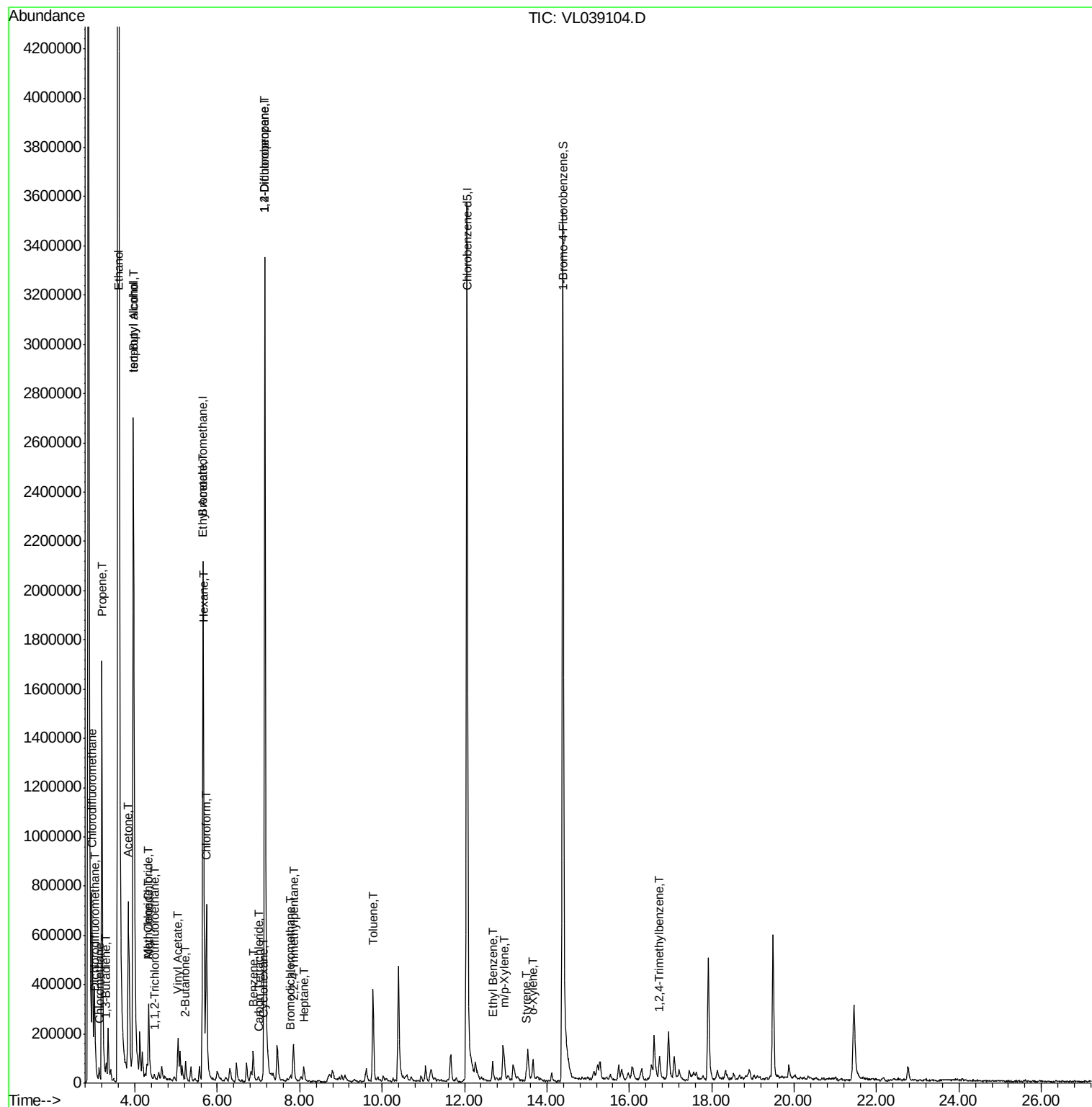
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	48674	0.281	ppbv	96
3) Chlorodifluoromethane	2.96	51	647354	4.719	ppbv #	61
4) Chloromethane	3.13	50	43661	0.636	ppbv	97
9) Propene	3.20	41	533092	8.898	ppbv	95
10) Heptane	8.09	43	16886	0.115	ppbv #	35
12) 1,1,2-Trichlorotrifluoroet	4.47	101	4021	0.039	ppbv #	24
13) Ethanol	3.60	45	11040217	2603.922	ppbv	91
15) Acetone	3.83	43	922794	8.848	ppbv	95
16) 1,3-Butadiene	3.30	39	7549	0.126	ppbv	92
17) tert-Butyl alcohol	3.96	59	119300	1.488	ppbv	95
19) Isopropyl Alcohol	3.96	45	3738040	75.385	ppbv	99
20) Methylene Chloride	4.33	84	115199	2.931	ppbv	95
21) Allyl Chloride	4.33	41	5182	0.073	ppbv #	19
23) Vinyl Acetate	5.05	43	115451	1.399	ppbv #	42
25) Ethyl Acetate	5.66	43	183243	0.734	ppbv #	96
26) Hexane	5.67	57	144221	1.300	ppbv #	63
29) Chloroform	5.73	83	525923	2.931	ppbv	92
30) Cyclohexane	7.11	84	2921	0.031	ppbv #	1
34) 2-Butanone	5.23	43	90179	0.618	ppbv #	90
35) Carbon Tetrachloride	7.00	117	9244	0.049	ppbv #	68
36) Benzene	6.87	78	102971	0.420	ppbv	98
39) 1,2-Dichloropropane	7.16	63	727391	7.634	ppbv #	26
42) Bromodichloromethane	7.77	83	8329	0.040	ppbv #	50
44) 2,2,4-Trimethylpentane	7.85	57	145256	0.338	ppbv	95
53) Toluene	9.78	91	267493	0.975	ppbv	96
58) Ethyl Benzene	12.68	91	58017	0.160	ppbv	95
59) m/p-Xylene	12.96	91	55503	0.179	ppbv #	33
60) o-Xylene	13.66	91	63343	0.217	ppbv	98
61) Styrene	13.50	104	6696	0.043	ppbv #	1
74) 1,2,4-Trimethylbenzene	16.72	105	21134	0.065	ppbv #	60

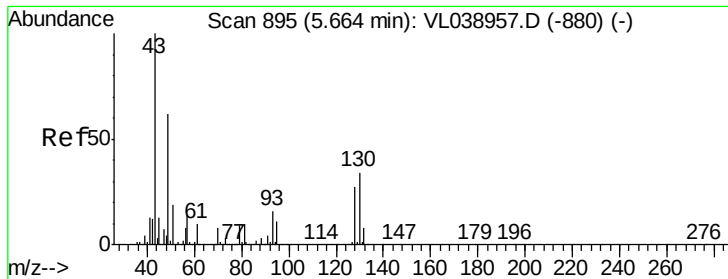
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data File : VL039104.D
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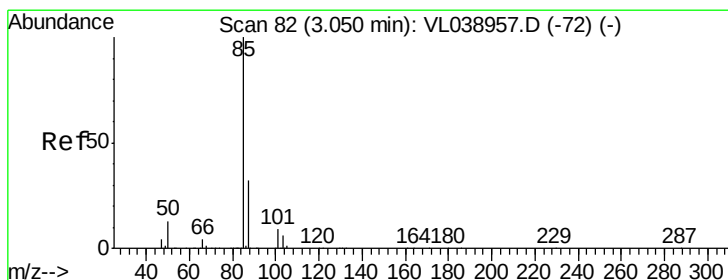
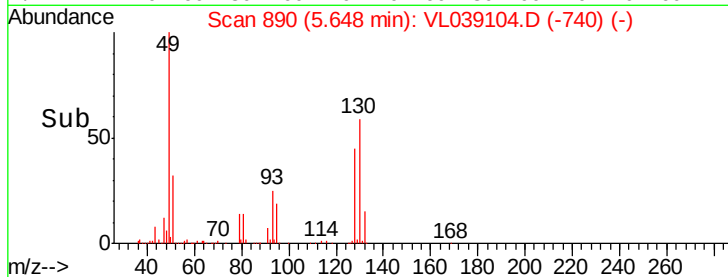
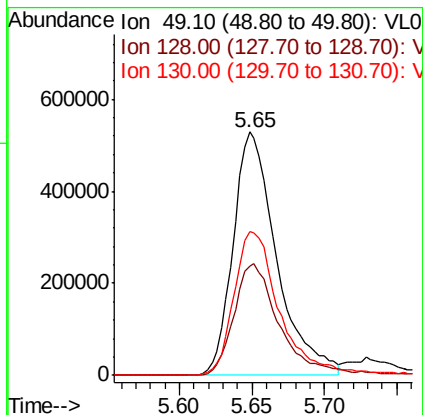
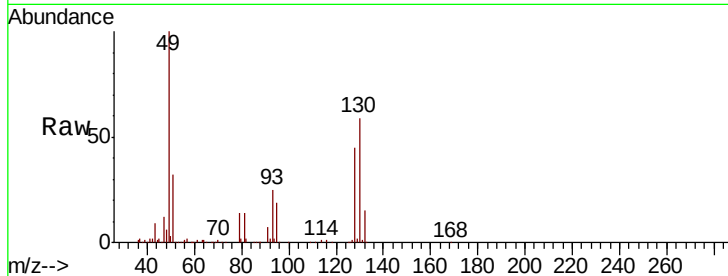
Quant Time: May 24 06:04:52 2022
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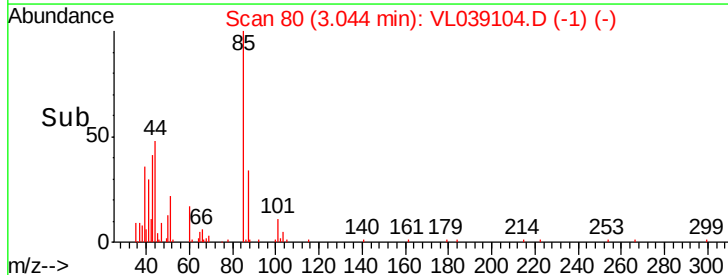
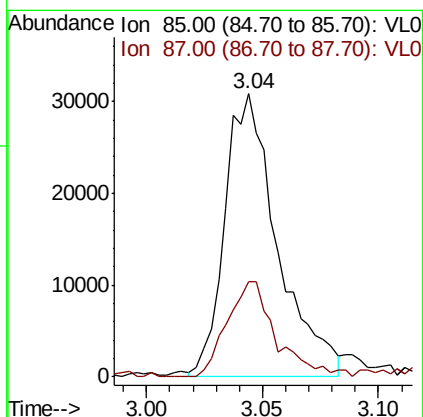
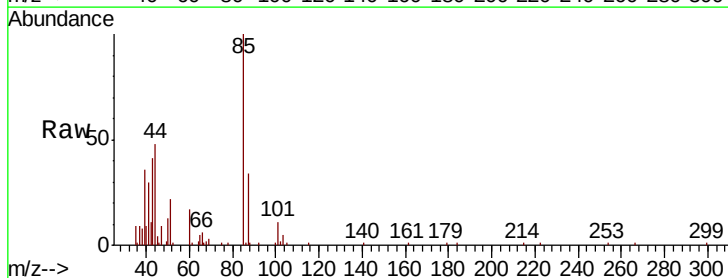
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.65
 Instrument: MSVOA_L
 Delta R.T.:
 Lab File: ClientSampleId :
 AP-3
 Acq: 24 May 2022 4:24

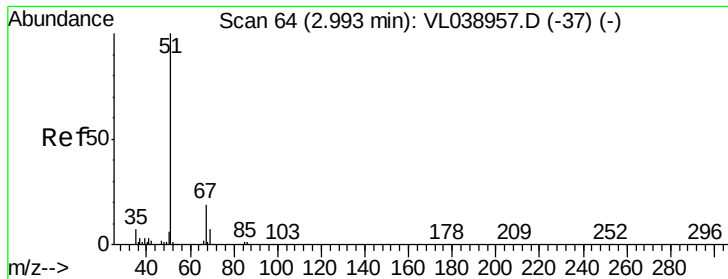
Tot Ion: 49 Resp: 1105597
 Ion Ratio Lower Upper
 49 100
 128 49.0 23.3 69.8
 130 63.4 29.8 89.3



#2
 Dichlorodifluoromethane
 Concen: 0.281 ppbv
 RT: 3.04 min Scan# 80
 Delta R.T. -0.01 min
 Lab File: VL039104.D
 Acq: 24 May 2022 4:24

Tgt Ion: 85 Resp: 48674
 Ion Ratio Lower Upper
 85 100
 87 34.2 25.7 38.5





#3

Chlorodifluoromethane

Concen: 4.719 ppbv

RT: 2.96 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

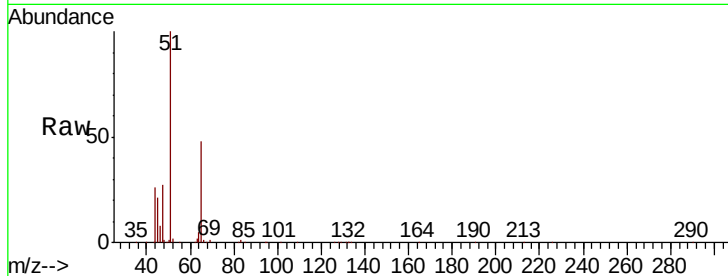
Acq: 24 May 2022 4:24

Tot Ion: 51 Resp: 647354

Ion Ratio Lower Upper

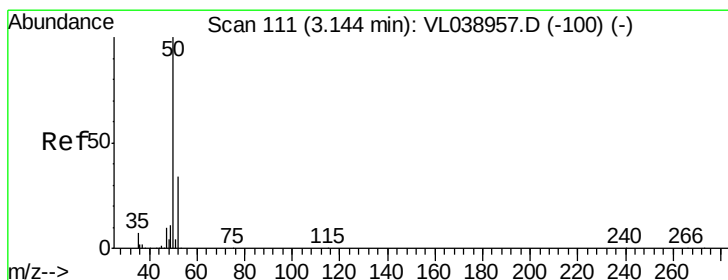
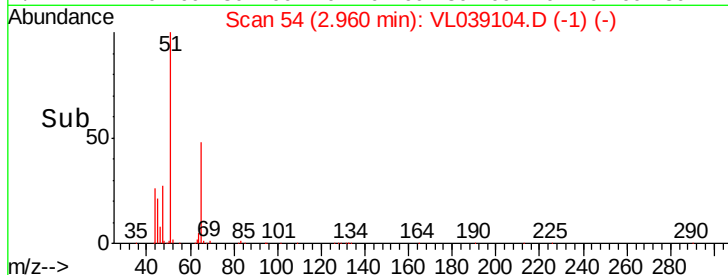
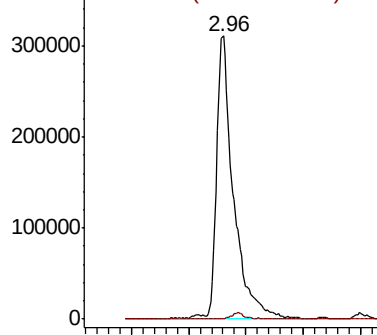
51 100

67 2.0 15.8 23.8#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.636 ppbv

RT: 3.13 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL039104.D

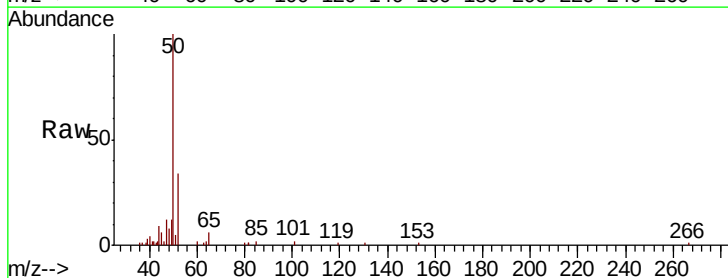
Acq: 24 May 2022 4:24

Tgt Ion: 50 Resp: 43661

Ion Ratio Lower Upper

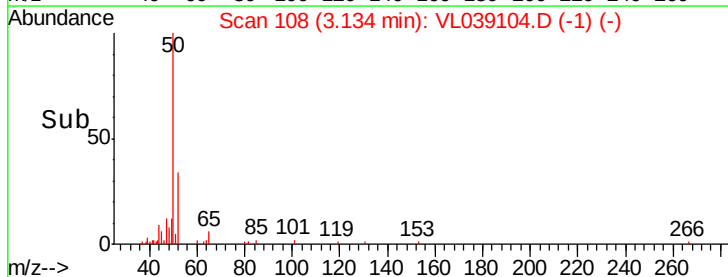
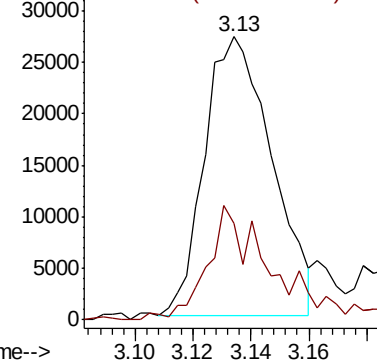
50 100

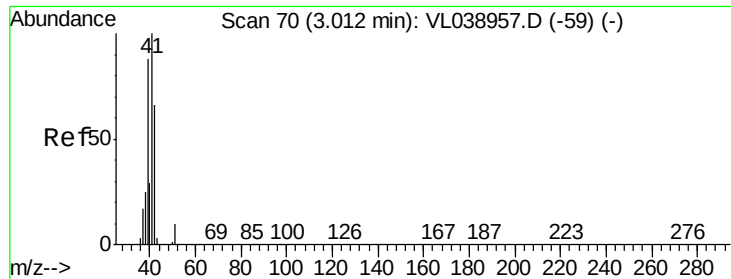
52 32.5 27.3 40.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

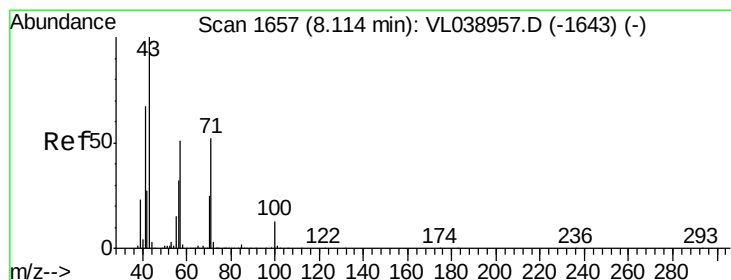
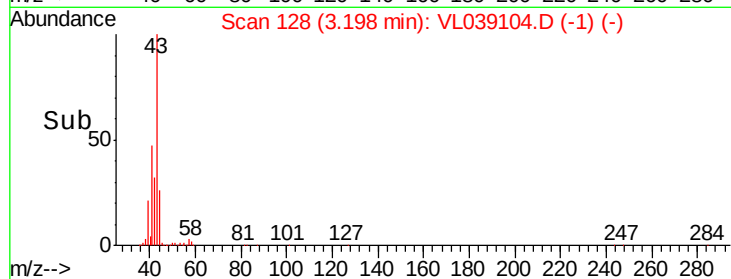
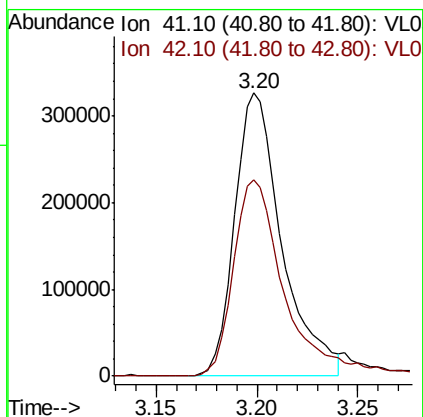
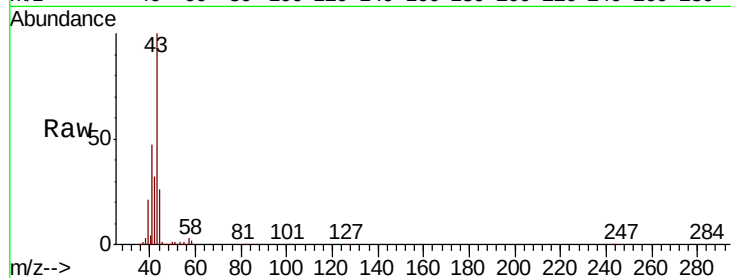
Ion 52.10 (51.80 to 52.80): VL0





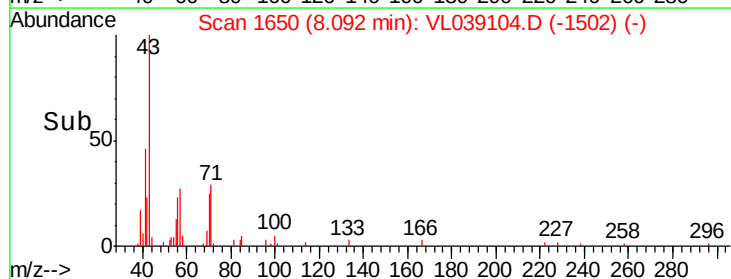
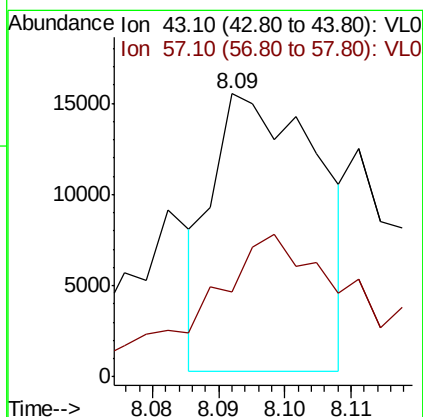
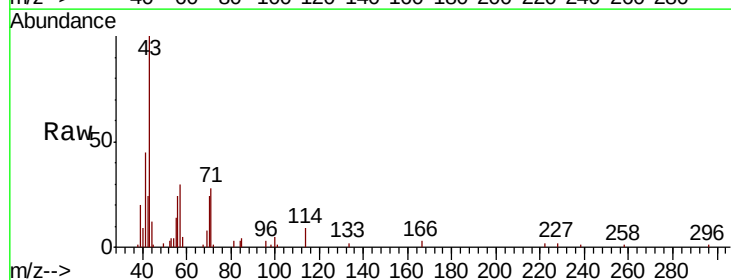
#9
 Propene
 Concen: 8.898 ppbv
 RT: 3.20
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 AP-3
 Acq: 24 May 2022 4:24

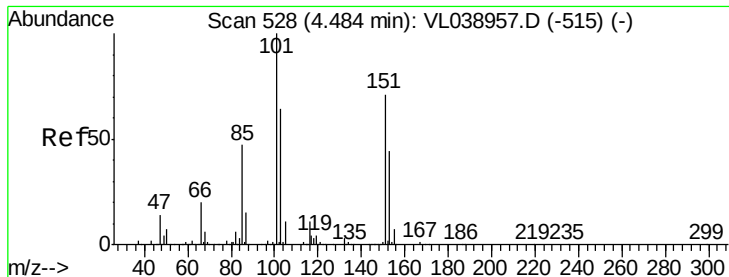
Tot Ion: 41 Resp: 533092
 Ion Ratio Lower Upper
 41 100
 42 76.9 58.3 87.5



#10
 Heptane
 Concen: 0.115 ppbv
 RT: 8.09 min Scan# 1650
 Delta R.T. -0.02 min
 Lab File: VL039104.D
 Acq: 24 May 2022 4:24

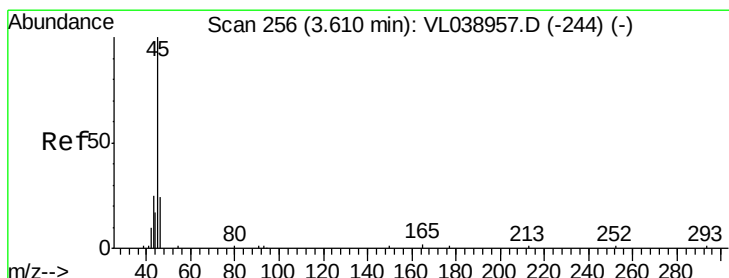
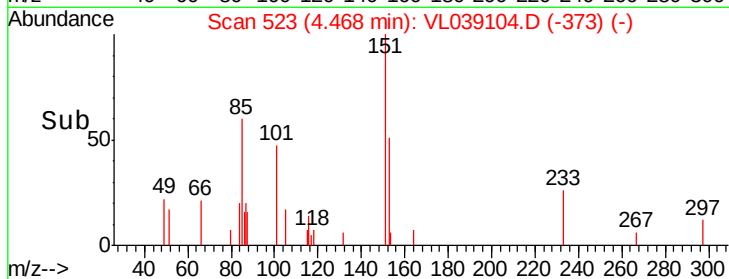
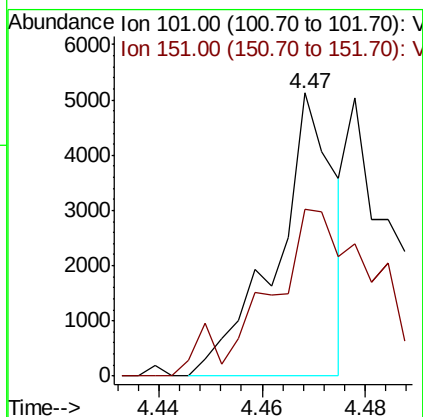
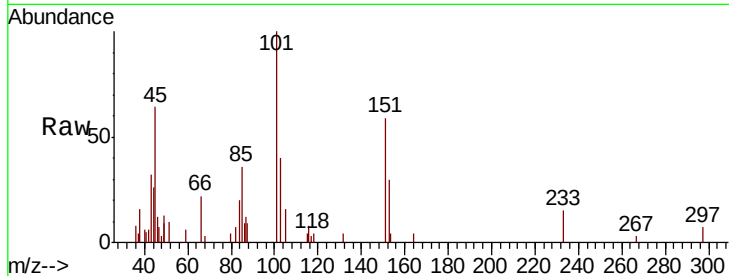
Tgt Ion: 43 Resp: 16886
 Ion Ratio Lower Upper
 43 100
 57 95.4 40.5 60.7#





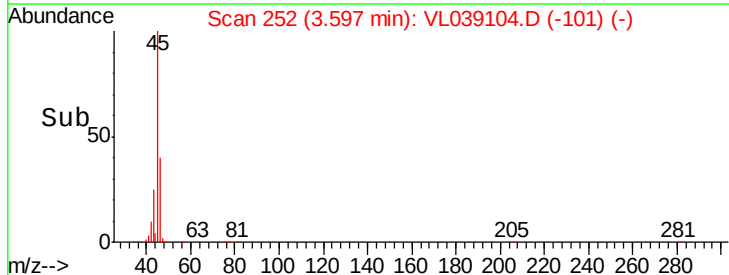
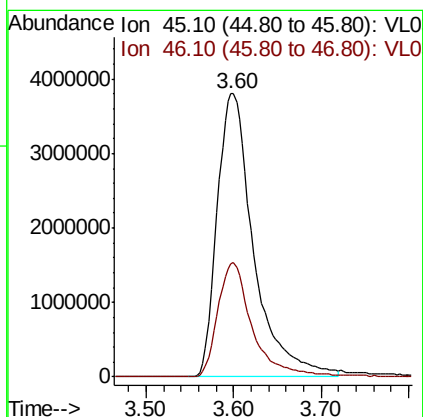
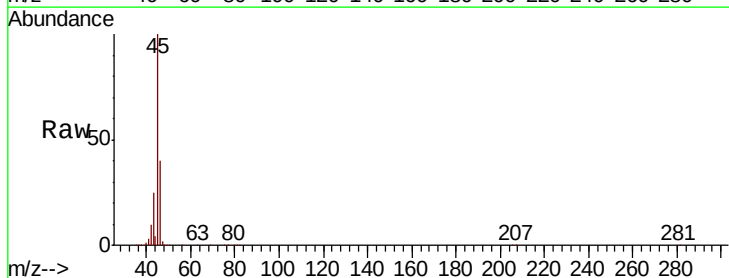
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.039 ppbv
 RT: 4.47
 Delta R.T.: MSVOA_L
 Lab File: ClientSampleId :
 AP-3
 Acq: 24 May 2022 4:24

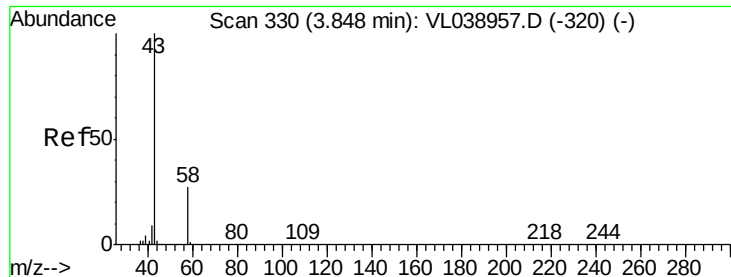
Tot Ion: 101 Resp: 4021
 Ion Ratio Lower Upper
 101 100
 151 131.4 55.4 83.0#



#13
 Ethanol
 Concen: 2603.922 ppbv
 RT: 3.60 min Scan# 252
 Delta R.T.: -0.01 min
 Lab File: VL039104.D
 Acq: 24 May 2022 4:24

Tgt Ion: 45 Resp: 11040217
 Ion Ratio Lower Upper
 45 100
 46 39.1 18.0 72.2





#15

Acetone

Concen: 8.848 ppbv

RT: 3.83

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

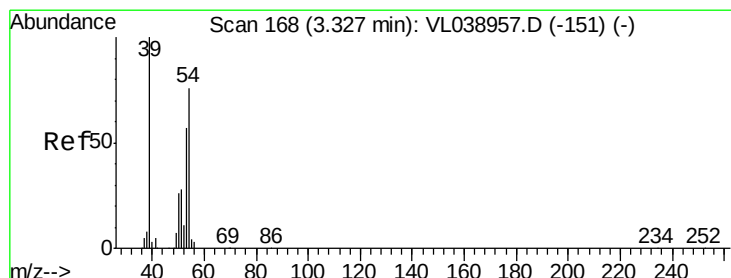
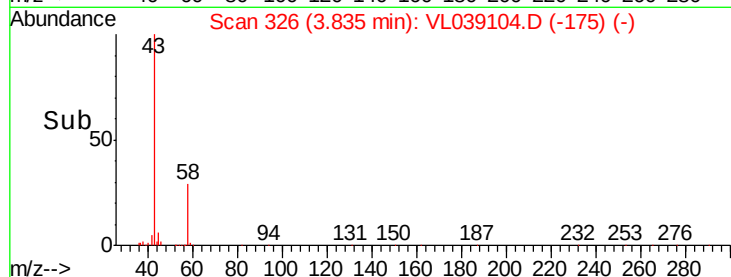
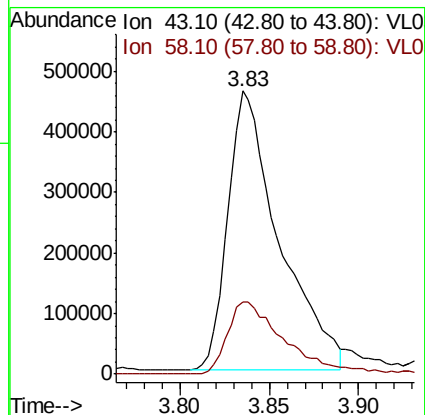
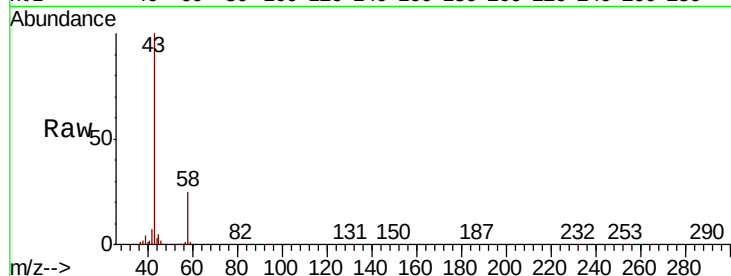
Acq: 24 May 2022 4:24

Tot Ion: 43 Resp: 922794

Ion Ratio Lower Upper

43 100

58 29.3 21.3 31.9



#16

1,3-Butadiene

Concen: 0.126 ppbv

RT: 3.30 min Scan# 161

Delta R.T. -0.02 min

Lab File: VL039104.D

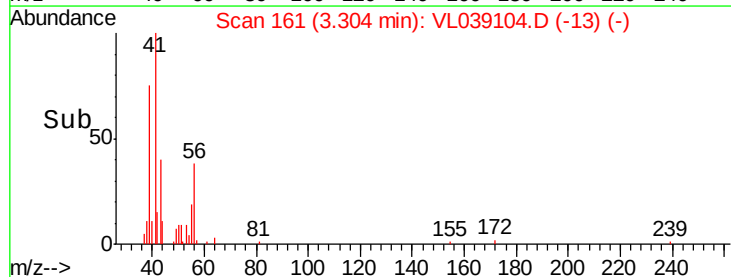
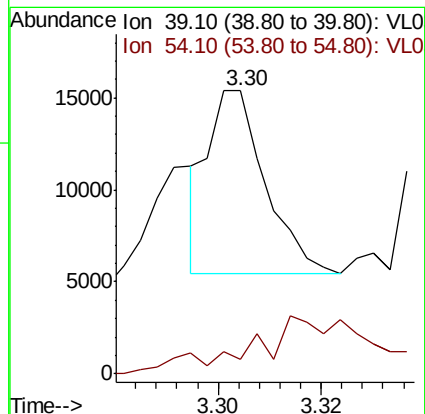
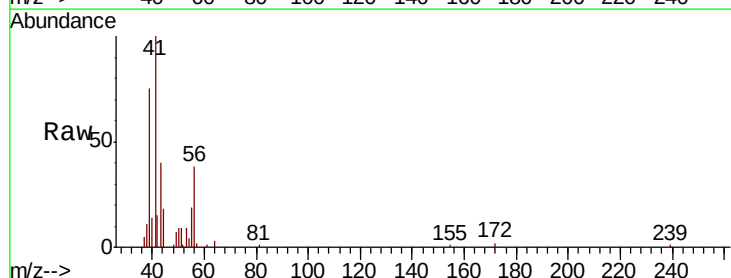
Acq: 24 May 2022 4:24

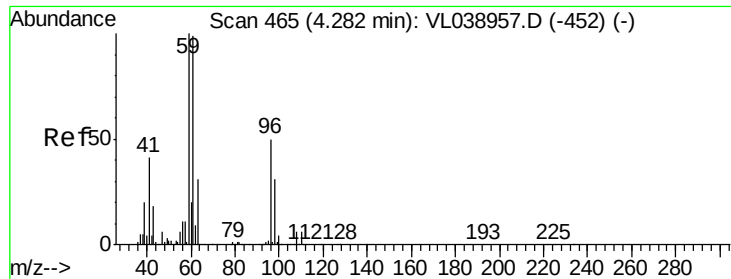
Tgt Ion: 39 Resp: 7549

Ion Ratio Lower Upper

39 100

54 74.4 65.2 97.8





#17

tert-Butyl alcohol

Concen: 1.488 ppbv

RT: 3.96 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

AP-3

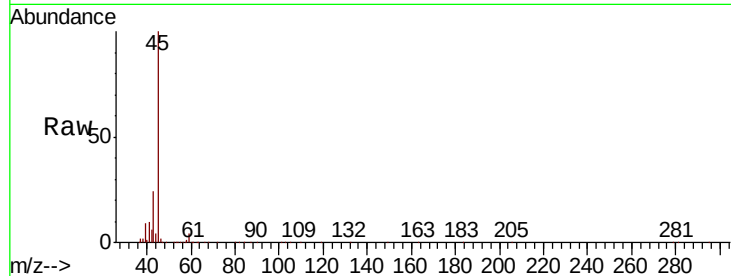
Acq: 24 May 2022 4:24

Tot Ion: 59 Resp: 119300

Ion Ratio Lower Upper

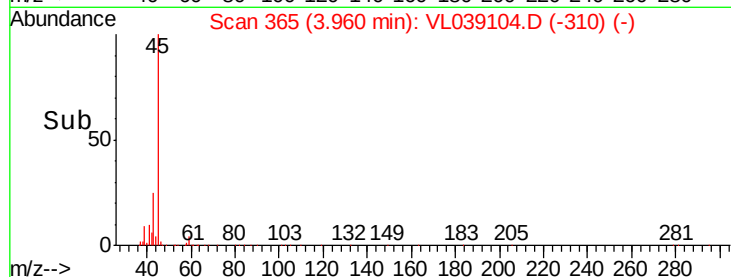
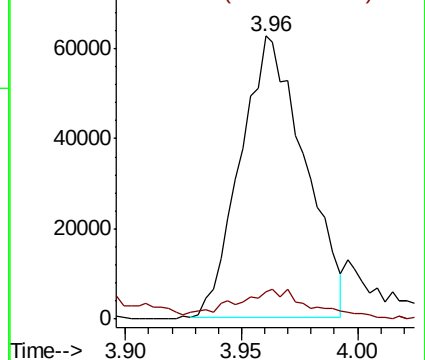
59 100

57 13.3 9.2 13.8



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 75.385 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.00 min

Lab File: VL039104.D

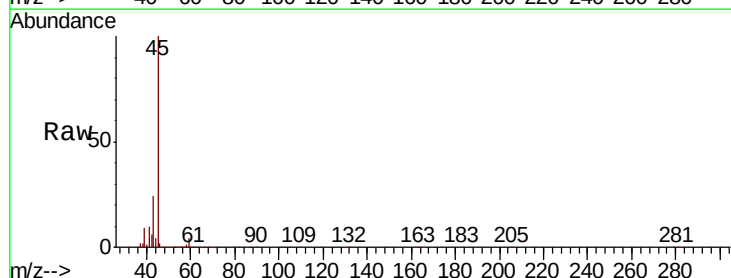
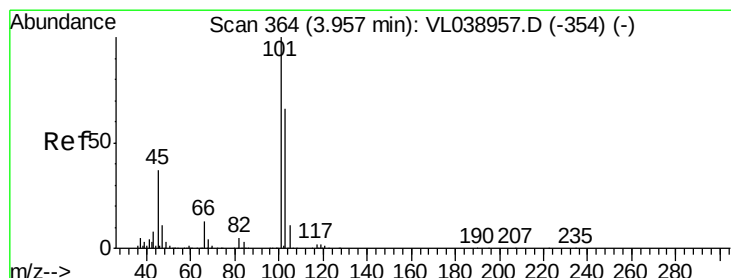
Acq: 24 May 2022 4:24

Tgt Ion: 45 Resp: 3738040

Ion Ratio Lower Upper

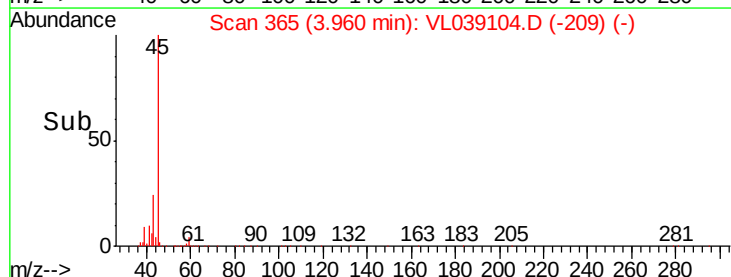
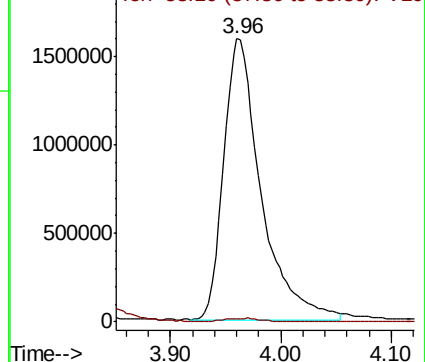
45 100

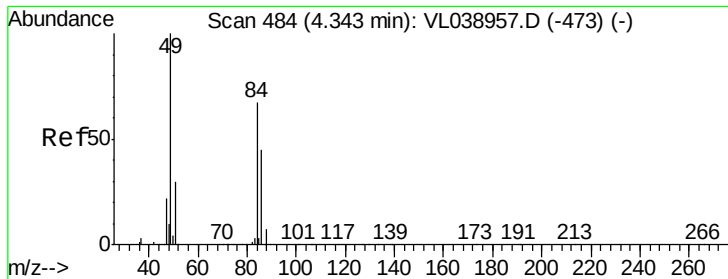
58 1.5 1.4 2.2



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





#20

Methylene Chloride

Concen: 2.931 ppbv

RT: 4.33 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 May 2022 4:24

Tot Ion: 84 Resp: 115199

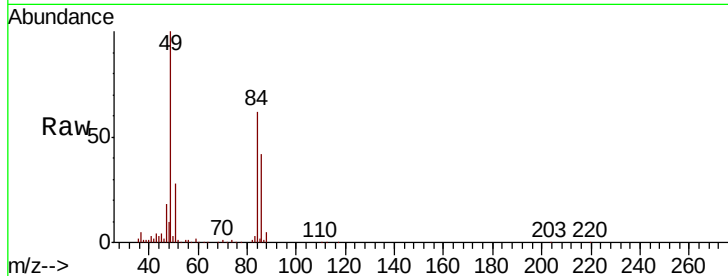
Ion Ratio Lower Upper

84 100

49 160.2 119.9 179.9

51 45.0 35.7 53.5

86 67.2 53.8 80.6

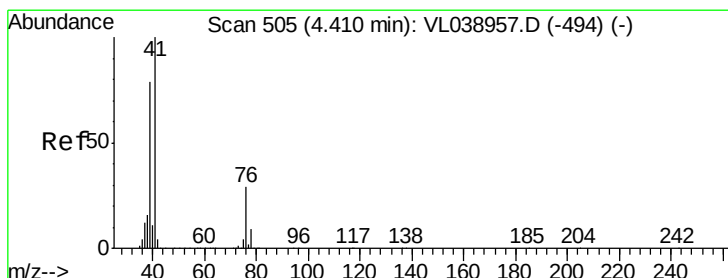
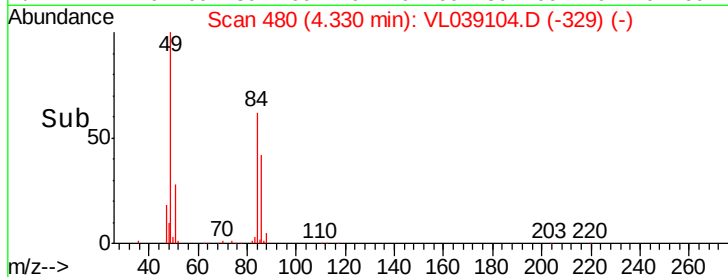
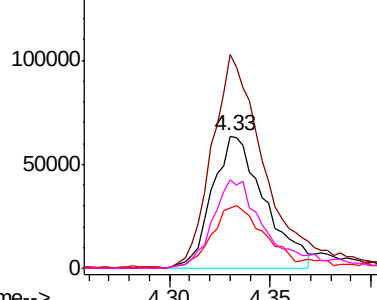


Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#21

Allyl Chloride

Concen: 0.073 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.08 min

Lab File: VL039104.D

Acq: 24 May 2022 4:24

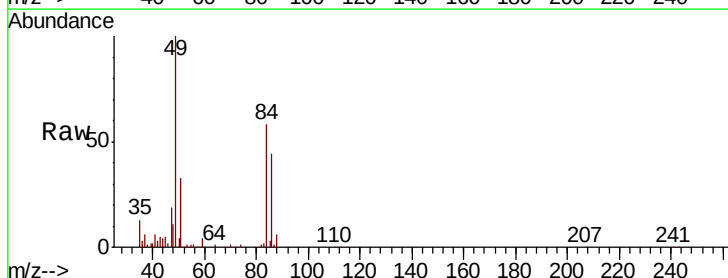
Tgt Ion: 41 Resp: 5182

Ion Ratio Lower Upper

41 100

76 0.0 24.2 36.4#

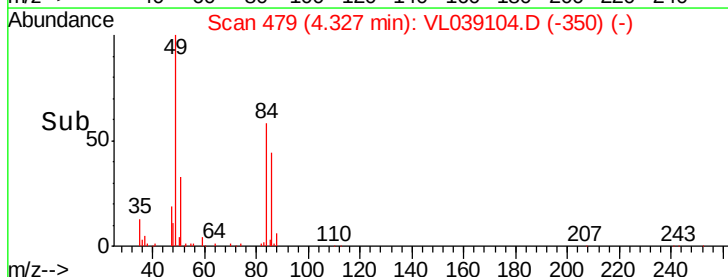
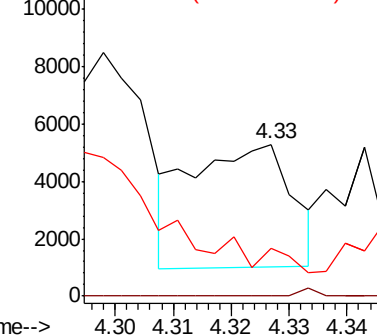
39 0.0 63.8 95.8#

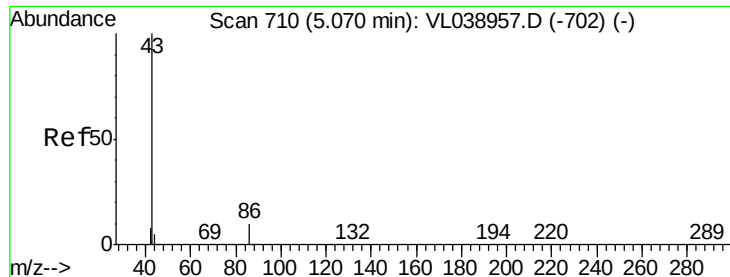


Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 76.10 (75.80 to 76.80): VL0

Ion 39.10 (38.80 to 39.80): VL0





#23

Vinyl Acetate

Concen: 1.399 ppbv

RT: 5.05 Instrument: MSVOA_1

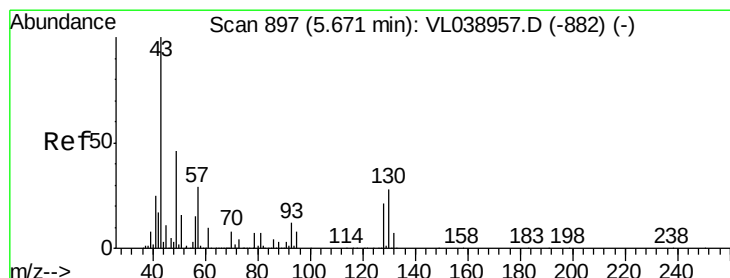
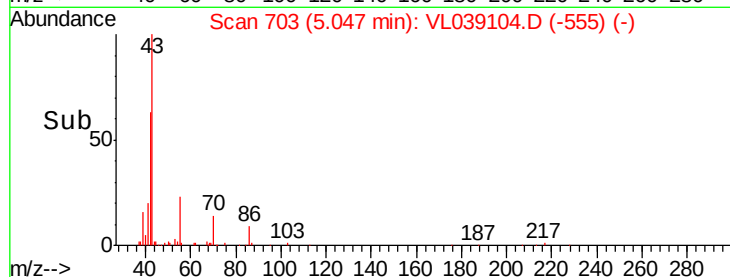
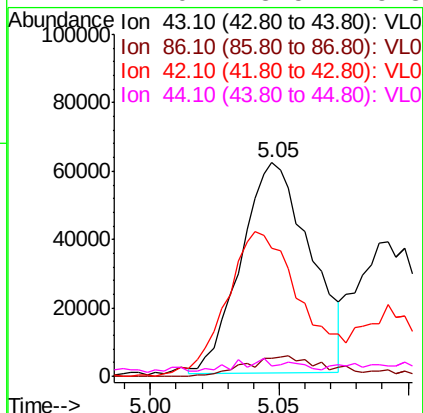
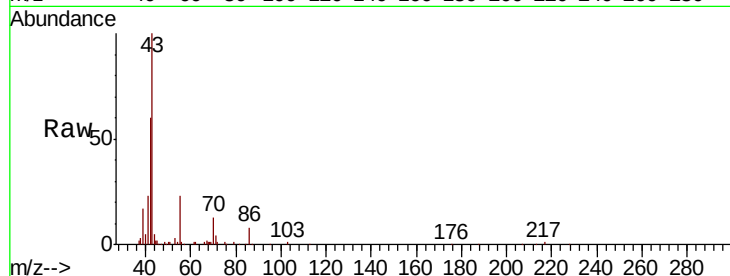
Delta R.T. ClientSampleId:

Lab File: AP-3

Acq: 24 May 2022 4:24

Tot Ion: 43 Resp: 115451

Ion	Ratio	Lower	Upper
43	100		
86	8.6	6.6	9.8
42	58.3	8.1	12.1#
44	4.0	3.5	5.3



#25

Ethyl Acetate

Concen: 0.734 ppbv

RT: 5.66 min Scan# 895

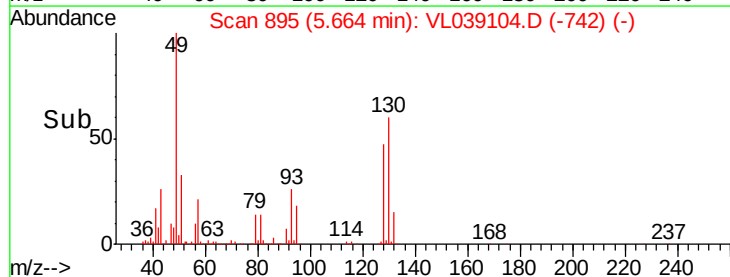
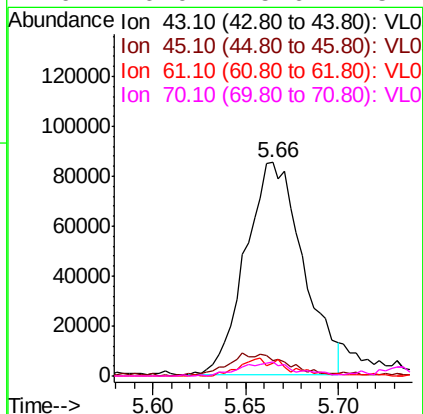
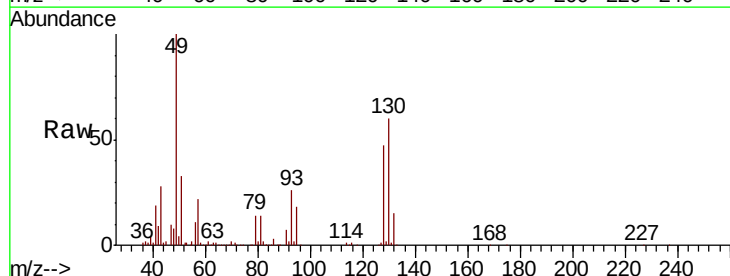
Delta R.T. -0.01 min

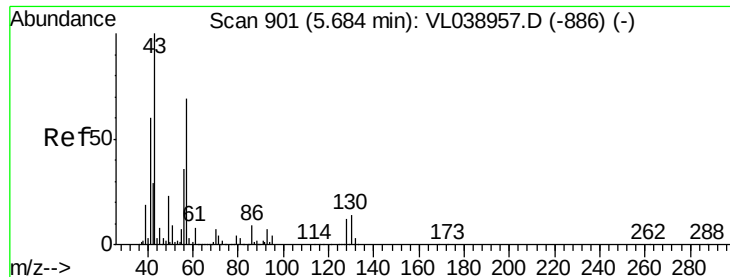
Lab File: VL039104.D

Acq: 24 May 2022 4:24

Tgt Ion: 43 Resp: 183243

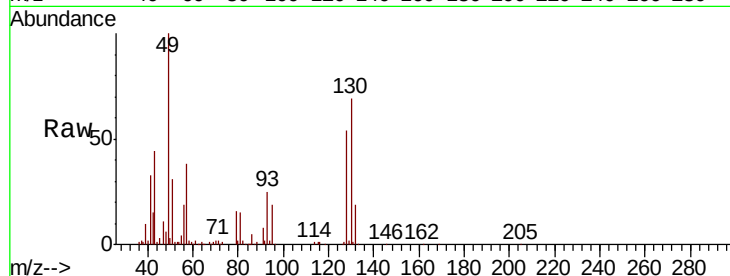
Ion	Ratio	Lower	Upper
43	100		
45	11.0	8.1	12.1
61	7.7	7.8	11.6#
70	6.0	5.6	8.4



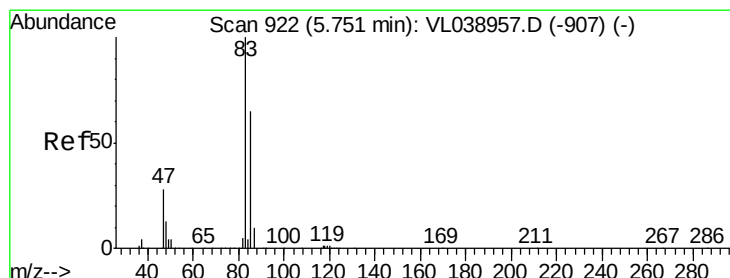
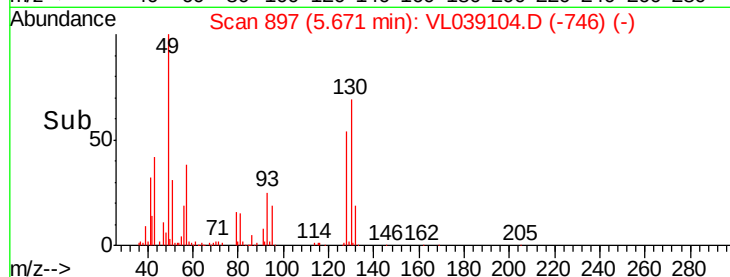
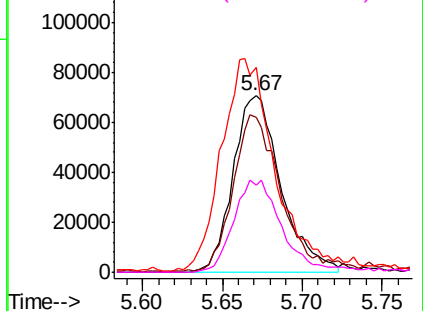


#26
Hexane
Concen: 1.300 ppbv
RT: 5.67
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 24 May 2022 4:24

Tot Ion:	57	Resp:	144221
Ion	Ratio	Lower	Upper
57	100		
41	95.0	75.2	112.8
43	138.5	190.8	286.2#
56	54.4	43.0	64.6

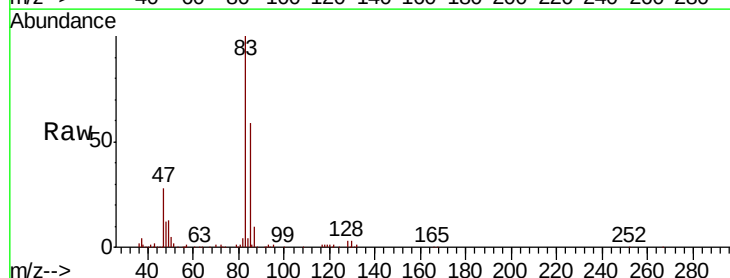


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

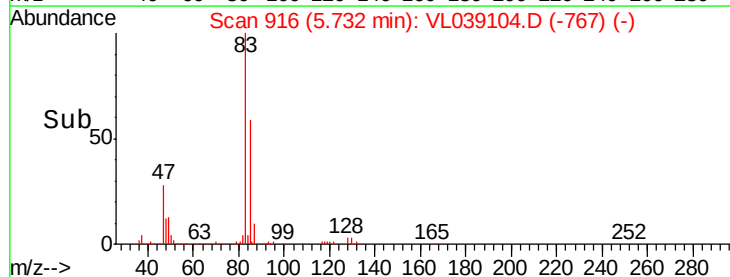
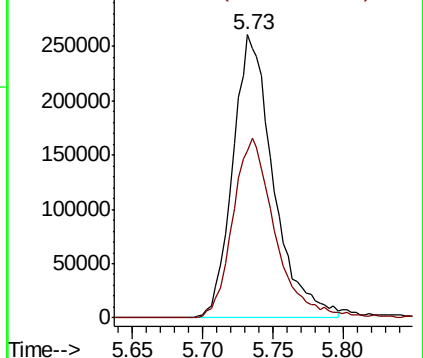


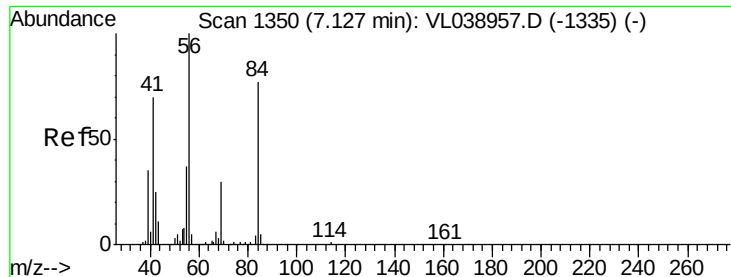
#29
Chloroform
Concen: 2.931 ppbv
RT: 5.73 min Scan# 916
Delta R.T. -0.02 min
Lab File: VL039104.D
Acq: 24 May 2022 4:24

Tgt Ion:	83	Resp:	525923
Ion	Ratio	Lower	Upper
83	100		
85	58.8	51.8	77.6



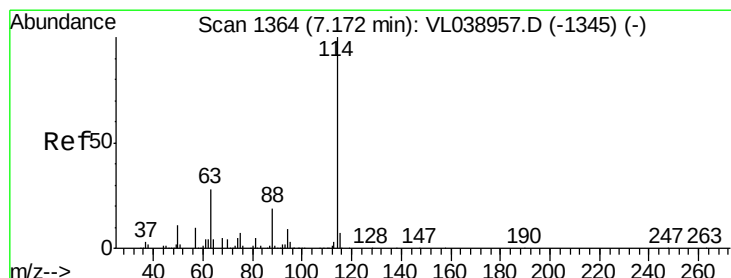
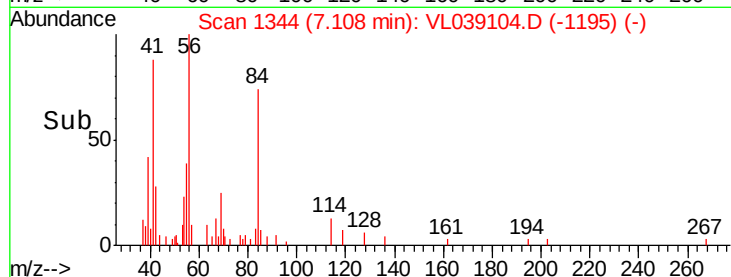
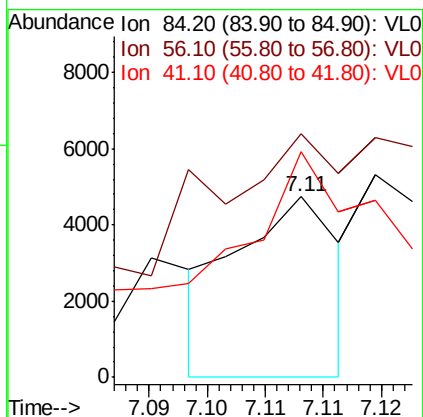
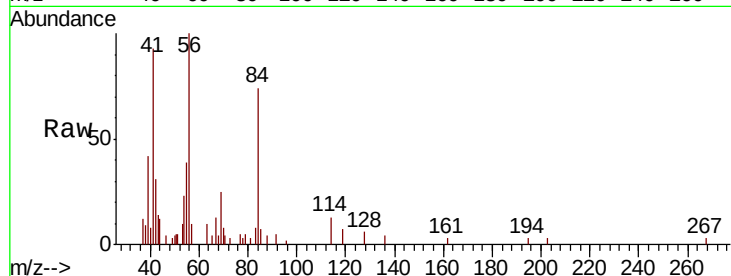
Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





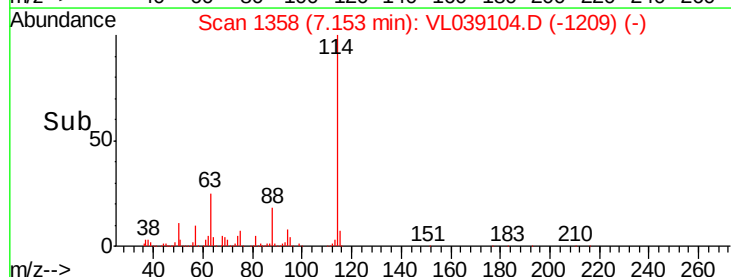
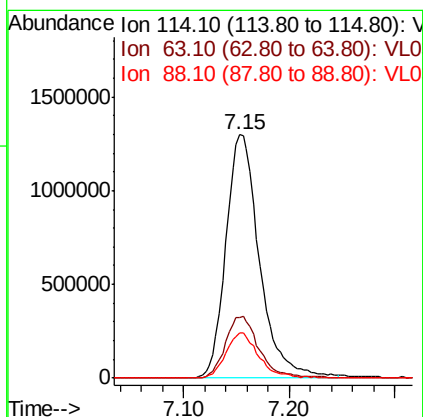
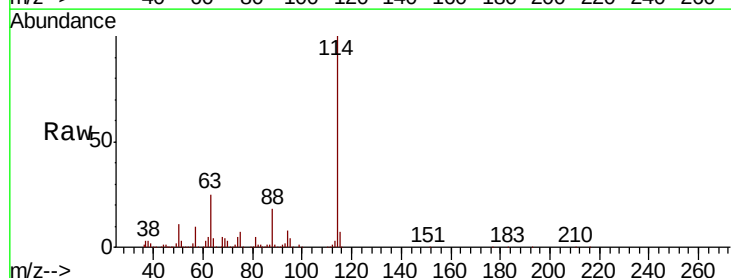
#30
Cyclohexane
Concen: 0.031 ppbv
RT: 7.11 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
AP-3
Acq: 24 May 2022 4:24

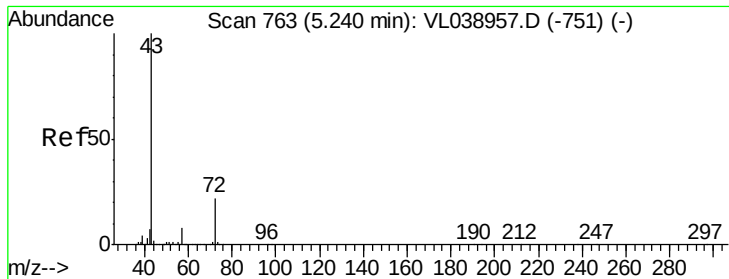
Tot Ion: 84 Resp: 2921
Ion Ratio Lower Upper
84 100
56 0.0 115.3 172.9#
41 349.0 72.0 108.0#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.15 min Scan# 1358
Delta R.T.: -0.02 min
Lab File: VL039104.D
Acq: 24 May 2022 4:24

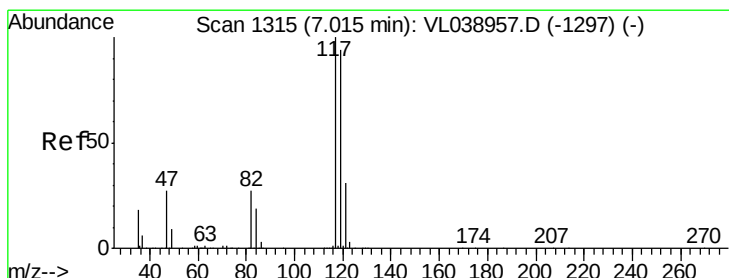
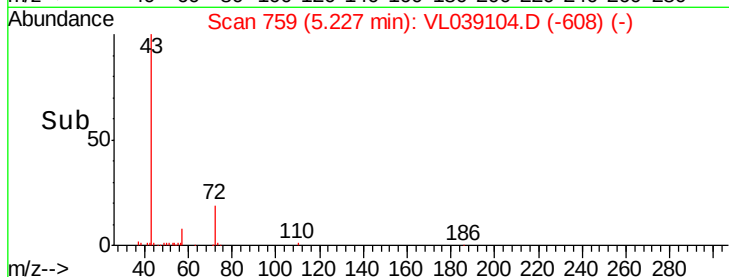
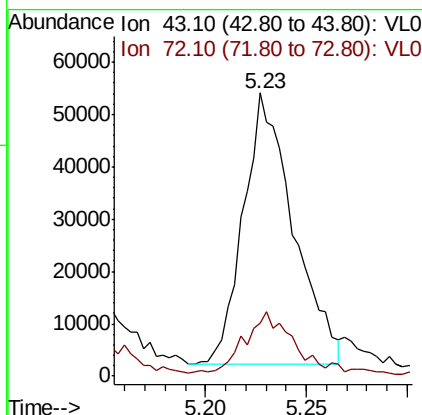
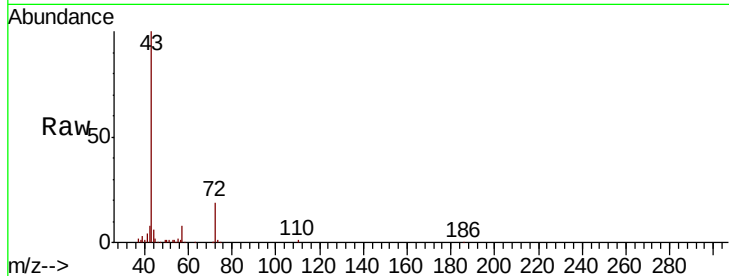
Tgt Ion: 114 Resp: 2861619
Ion Ratio Lower Upper
114 100
63 25.6 22.6 33.8
88 18.5 15.4 23.0





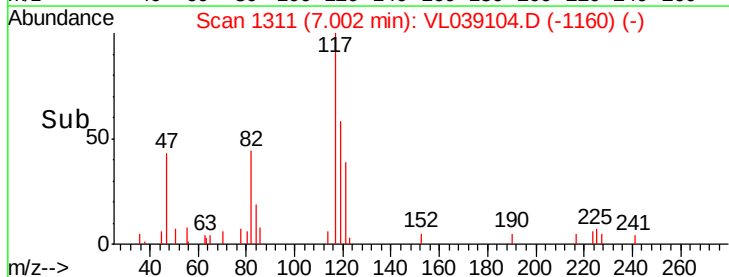
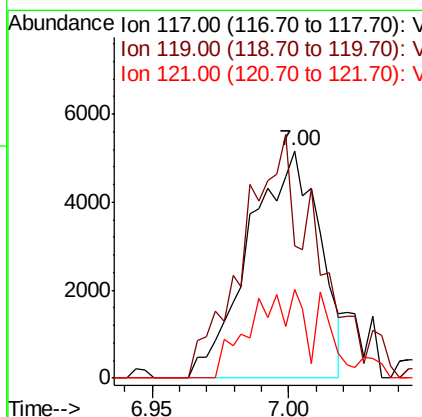
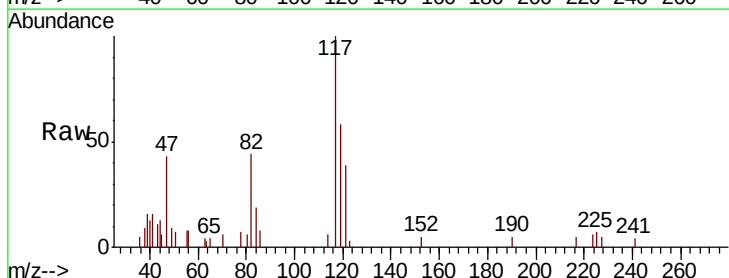
#34
 2-Butanone
 Concen: 0.618 ppbv
 RT: 5.23
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 AP-3
 Acq: 24 May 2022 4:24

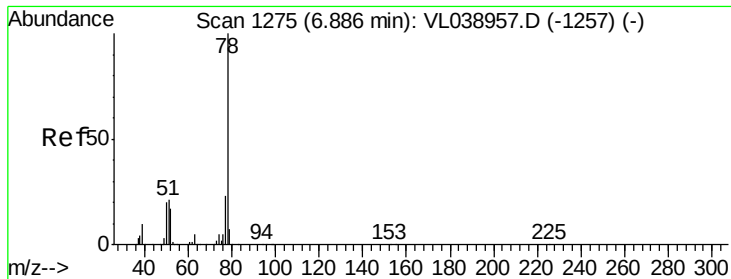
Tot Ion: 43 Resp: 90179
 Ion Ratio Lower Upper
 43 100
 72 26.9 17.8 26.6#



#35
 Carbon Tetrachloride
 Concen: 0.049 ppbv
 RT: 7.00 min Scan# 1311
 Delta R.T. -0.01 min
 Lab File: VL039104.D
 Acq: 24 May 2022 4:24

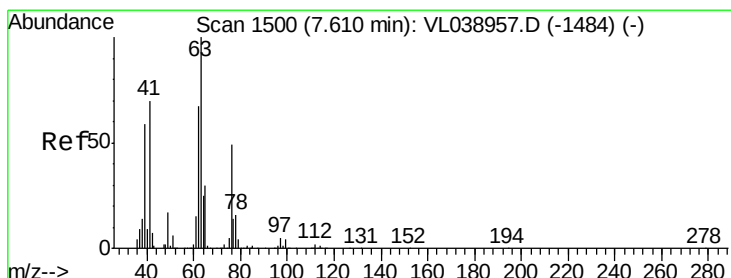
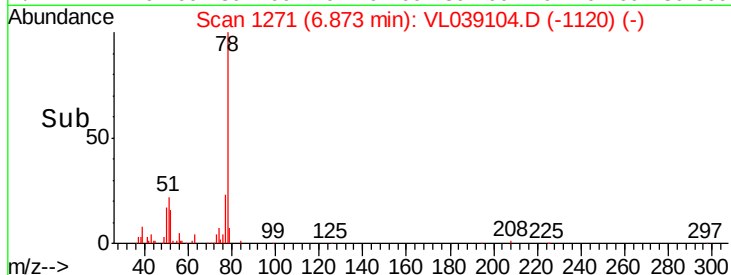
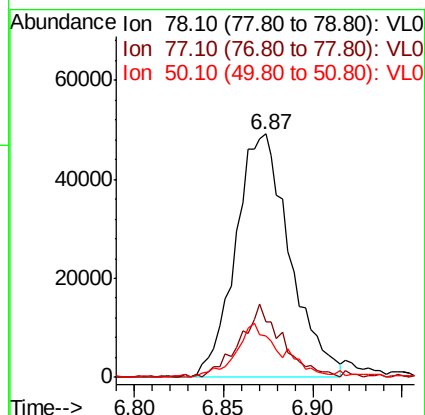
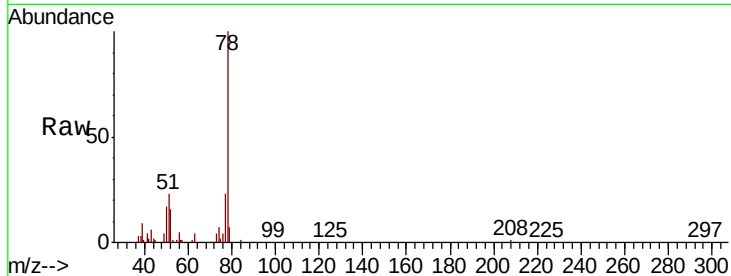
Tgt Ion: 117 Resp: 9244
 Ion Ratio Lower Upper
 117 100
 119 58.0 75.2 112.8#
 121 38.8 24.6 37.0#





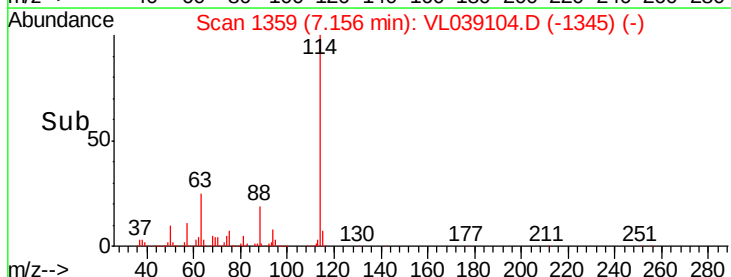
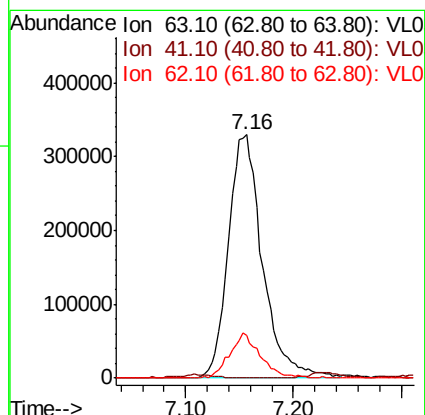
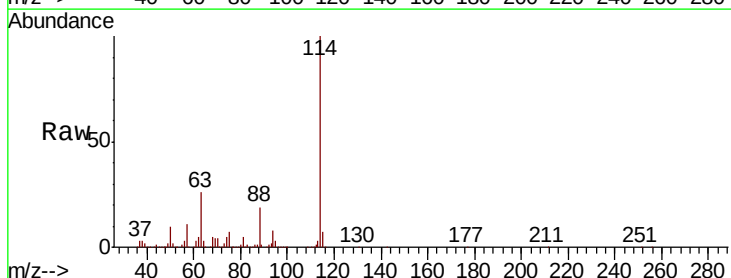
#36
Benzene
Concen: 0.420 ppbv
RT: 6.87
Delta R.T.: MSVOA_L
Lab File: ClientSampleId :
Acq: 24 May 2022 4:24

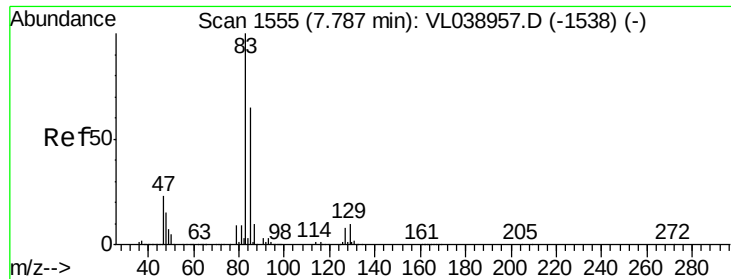
Tot Ion	78	Resp	102971
Ion Ratio	Lower	Upper	
78	100		
77	23.2	18.6	28.0
50	17.3	15.6	23.4



#39
1,2-Dichloropropane
Concen: 7.634 ppbv
RT: 7.16 min Scan# 1359
Delta R.T.: -0.45 min
Lab File: VL039104.D
Acq: 24 May 2022 4:24

Tgt Ion	63	Resp	727391
Ion Ratio	Lower	Upper	
63	100		
41	0.0	55.9	83.9#
62	17.7	53.8	80.6#





#42

Bromodichloromethane

Concen: 0.040 ppbv

RT: 7.77 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 24 May 2022 4:24

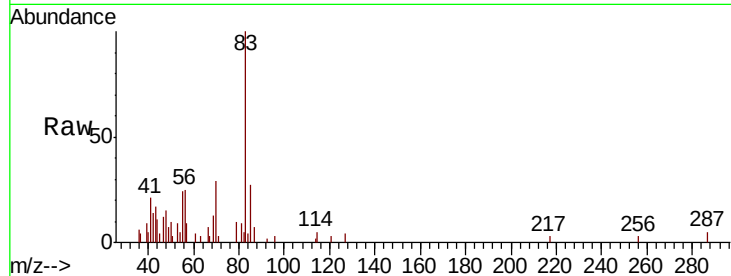
Tot Ion: 83 Resp: 8329

Ion Ratio Lower Upper

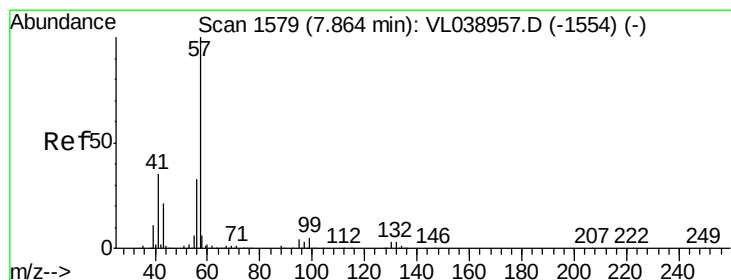
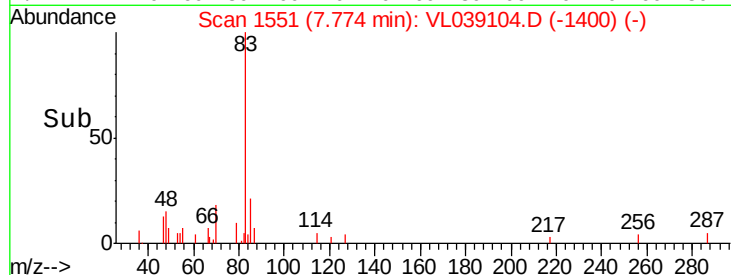
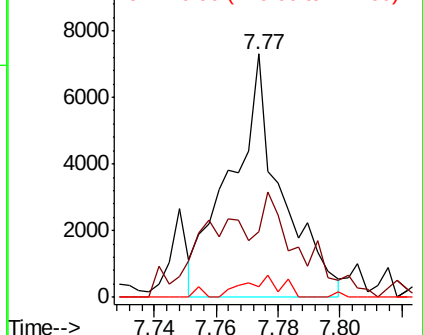
83 100

85 21.8 52.0 78.0#

127 4.7 6.0 9.0#



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0
Ion 126.90 (126.60 to 127.60): V



#44

2,2,4-Trimethylpentane

Concen: 0.338 ppbv

RT: 7.85 min Scan# 1576

Delta R.T. -0.01 min

Lab File: VL039104.D

Acq: 24 May 2022 4:24

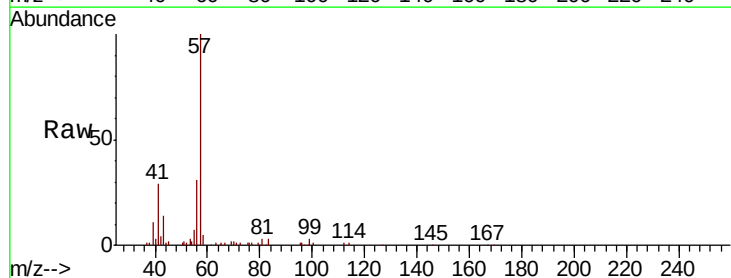
Tgt Ion: 57 Resp: 145256

Ion Ratio Lower Upper

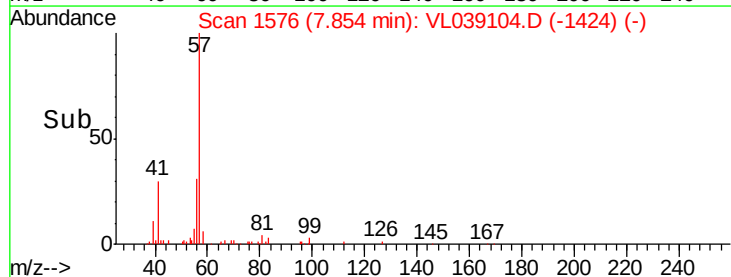
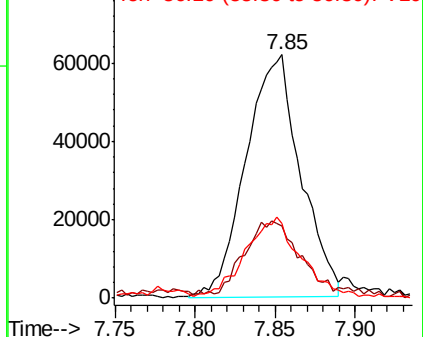
57 100

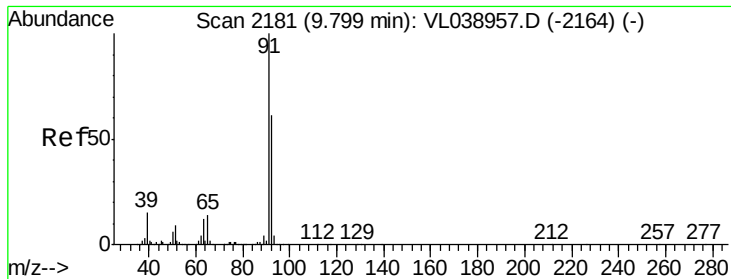
41 34.7 26.3 39.5

56 34.7 24.6 37.0



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





#53

Toluene

Concen: 0.975 ppbv

RT: 9.78 Instrument: MSVOA_1

Delta R.T. AP-3

Lab File: ClientSampleId:

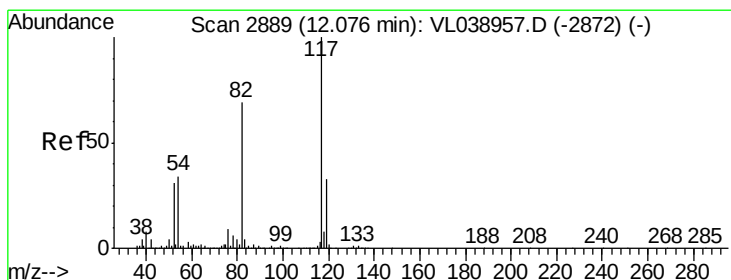
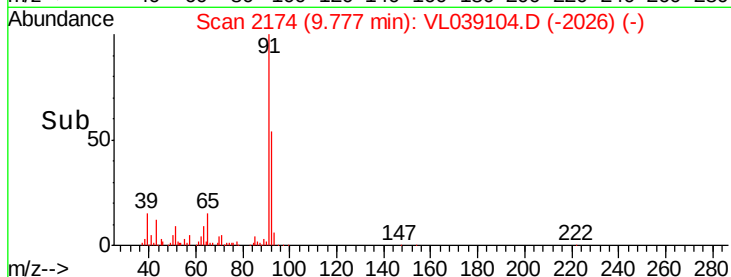
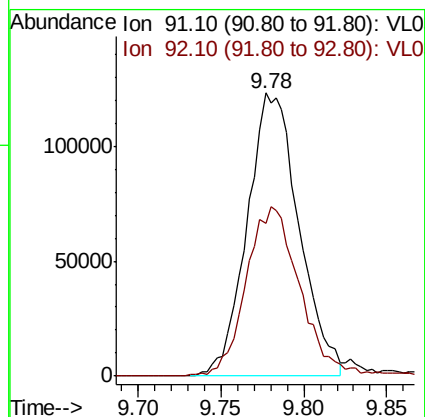
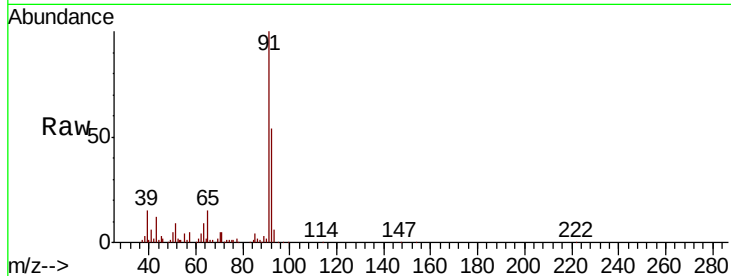
Acq: 24 May 2022 4:24

Tot Ion: 91 Resp: 267493

Ion Ratio Lower Upper

91 100

92 63.0 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2883

Delta R.T. -0.02 min

Lab File: VL039104.D

Acq: 24 May 2022 4:24

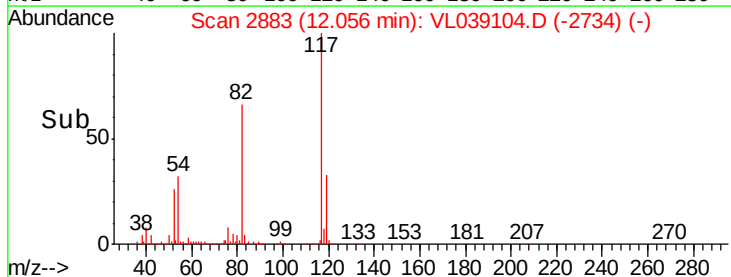
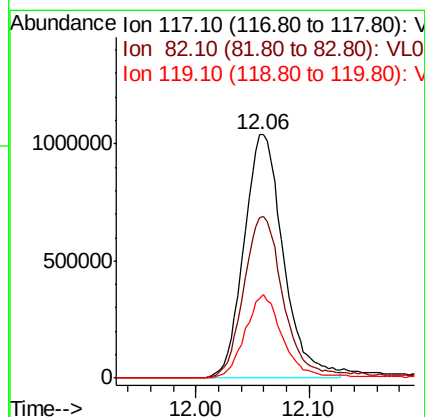
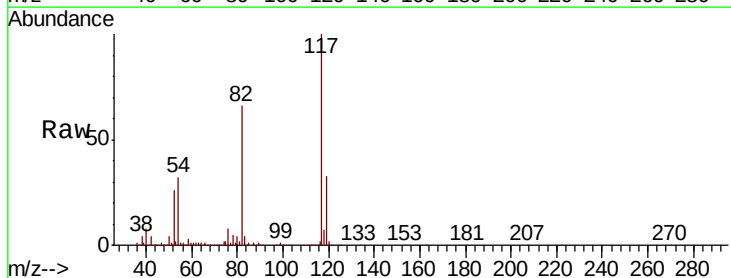
Tgt Ion: 117 Resp: 2519975

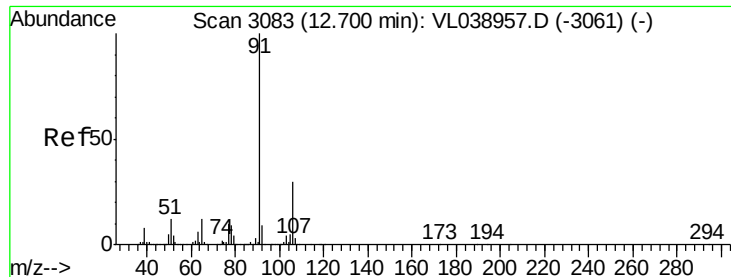
Ion Ratio Lower Upper

117 100

82 70.5 57.0 85.6

119 34.0 27.2 40.8





#58

Ethyl Benzene

Concen: 0.160 ppbv

RT: 12.68

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

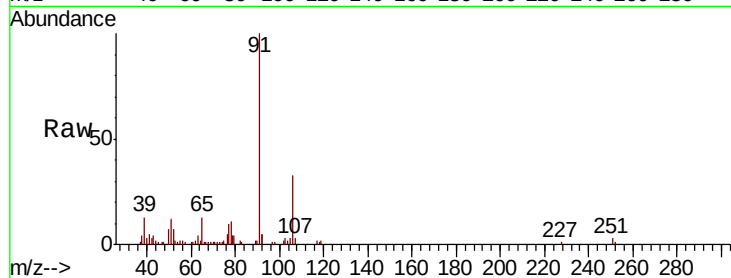
Acq: 24 May 2022 4:24

Tot Ion: 91 Resp: 58017

Ion Ratio Lower Upper

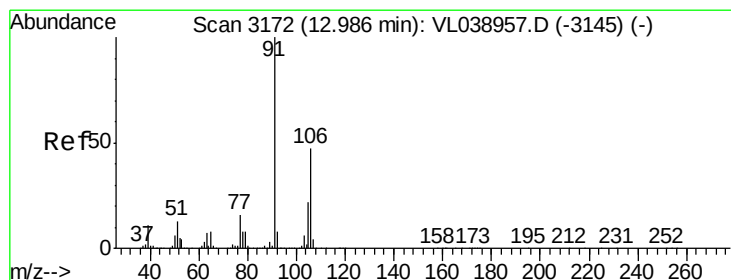
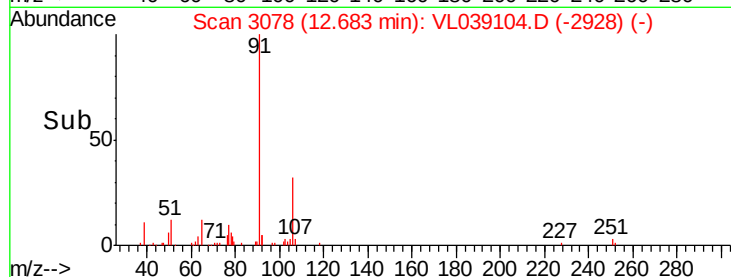
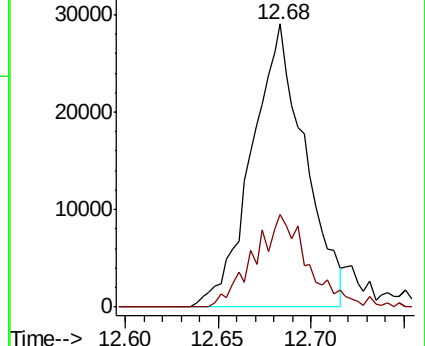
91 100

106 32.9 24.2 36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.179 ppbv

RT: 12.96 min Scan# 3165

Delta R.T. -0.02 min

Lab File: VL039104.D

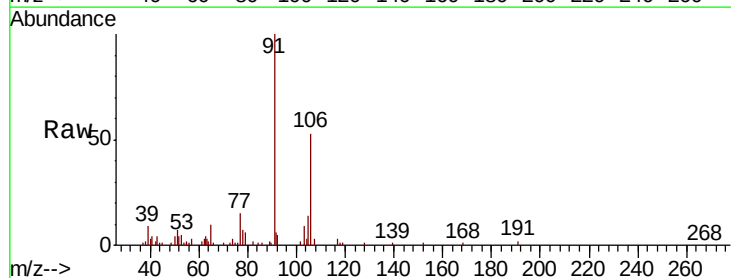
Acq: 24 May 2022 4:24

Tgt Ion: 91 Resp: 55503

Ion Ratio Lower Upper

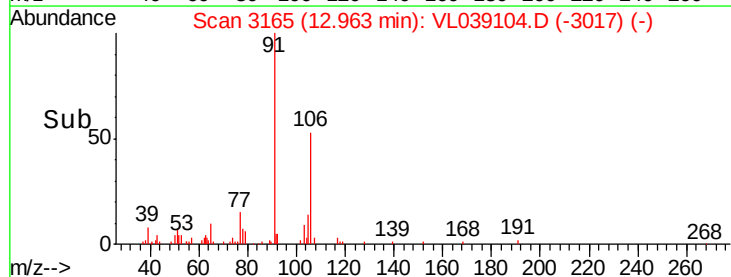
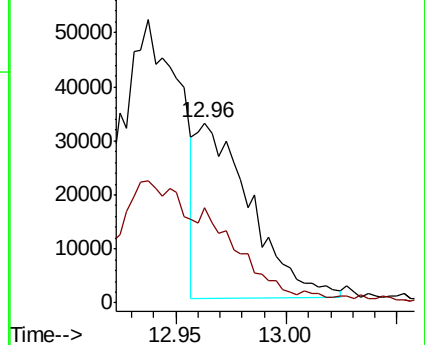
91 100

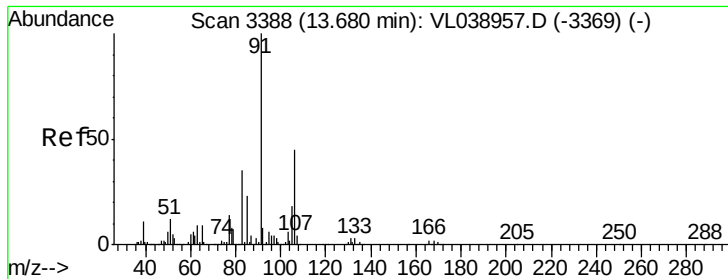
106 0.0 34.6 52.0#



Abundance Ion 91.10 (90.80 to 91.80): VL0

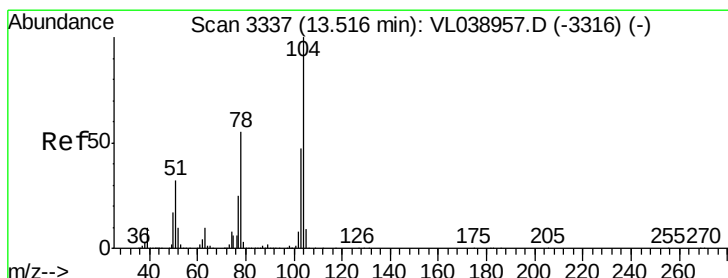
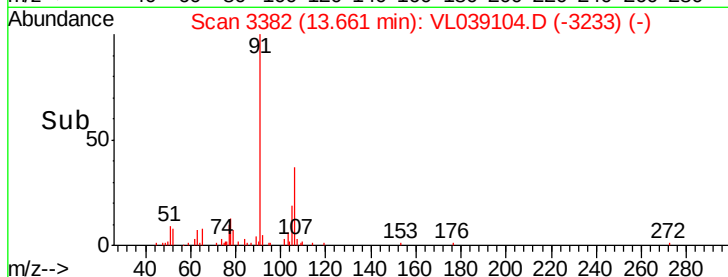
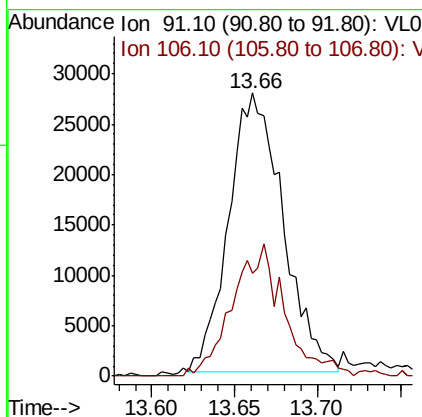
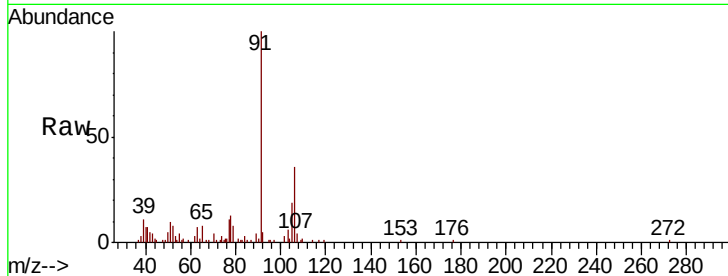
Ion 106.10 (105.80 to 106.80): V





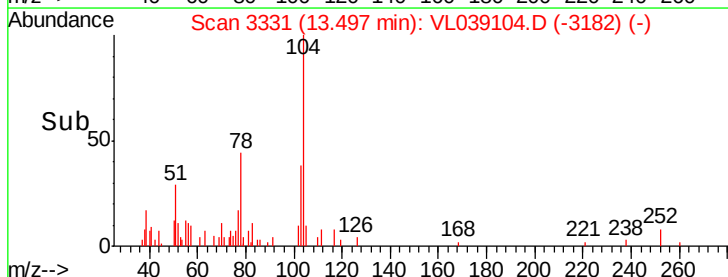
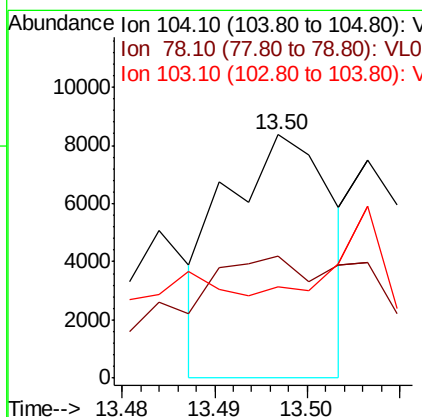
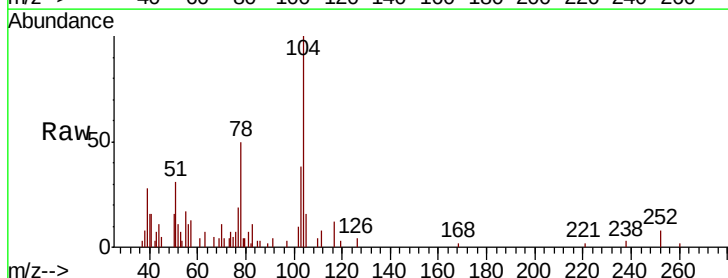
#60
o-Xylene
Concen: 0.217 ppbv
RT: 13.66
Delta R.T. MSVOA_L
Lab File: ClientSampled :
Acq: 24 May 2022 4:24

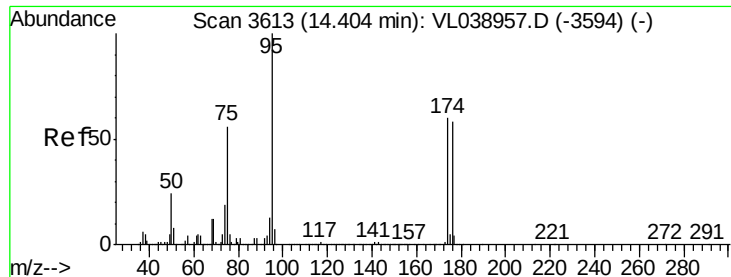
Tot Ion: 91 Resp: 63343
Ion Ratio Lower Upper
91 100
106 45.4 22.2 66.6



#61
Styrene
Concen: 0.043 ppbv
RT: 13.50 min Scan# 3331
Delta R.T. -0.02 min
Lab File: VL039104.D
Acq: 24 May 2022 4:24

Tgt Ion: 104 Resp: 6696
Ion Ratio Lower Upper
104 100
78 159.1 46.4 69.6#
103 0.0 39.3 58.9#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.006 ppbv

RT: 14.38

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 24 May 2022 4:24

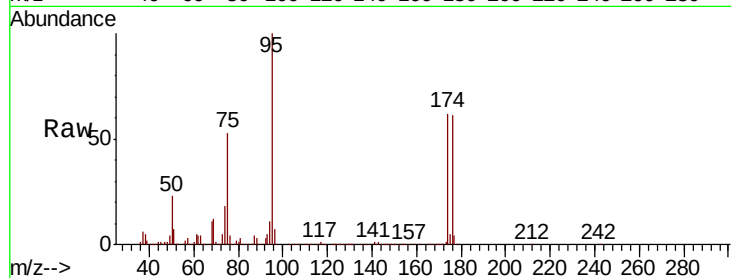
Tot Ion: 95 Resp: 1996796

Ion Ratio Lower Upper

95 100

174 65.8 50.8 76.2

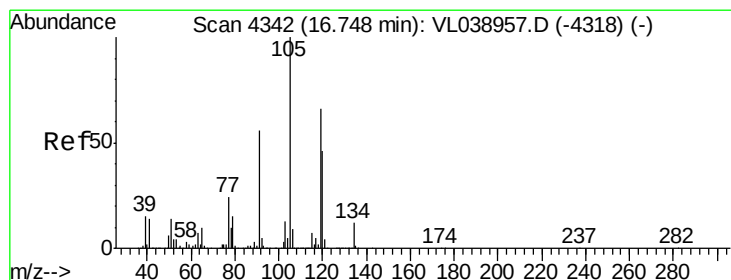
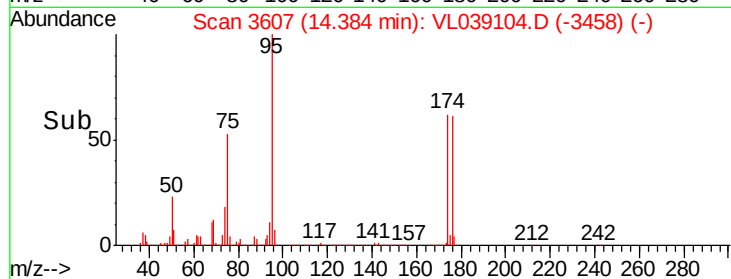
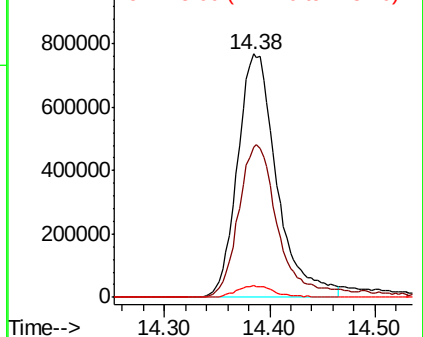
175 4.8 3.8 5.6



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



#74

1,2,4-Trimethylbenzene

Concen: 0.065 ppbv

RT: 16.72 min Scan# 4334

Delta R.T. -0.03 min

Lab File: VL039104.D

Acq: 24 May 2022 4:24

Tgt Ion:105 Resp: 21134

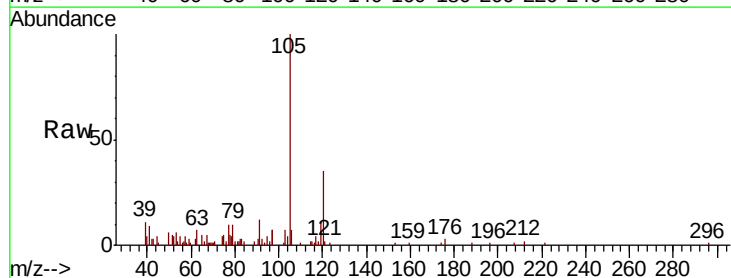
Ion Ratio Lower Upper

105 100

120 32.8 36.9 55.3#

91 9.8 45.0 67.4#

77 12.9 19.2 28.8#



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

