

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL060622\
 Data File : VL039184.D
 Acq On : 6 Jun 2022 13:34
 Operator : SY/AP
 Sample : N3110-01 4X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-4

Quant Time: Jun 06 14:07:28 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL053122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jun 01 01:22:18 2022
 QLast Update : Wed Jun 01 01:22:18 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1240998	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3487514	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.08	117	3122993	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	2444398	9.47	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.70%

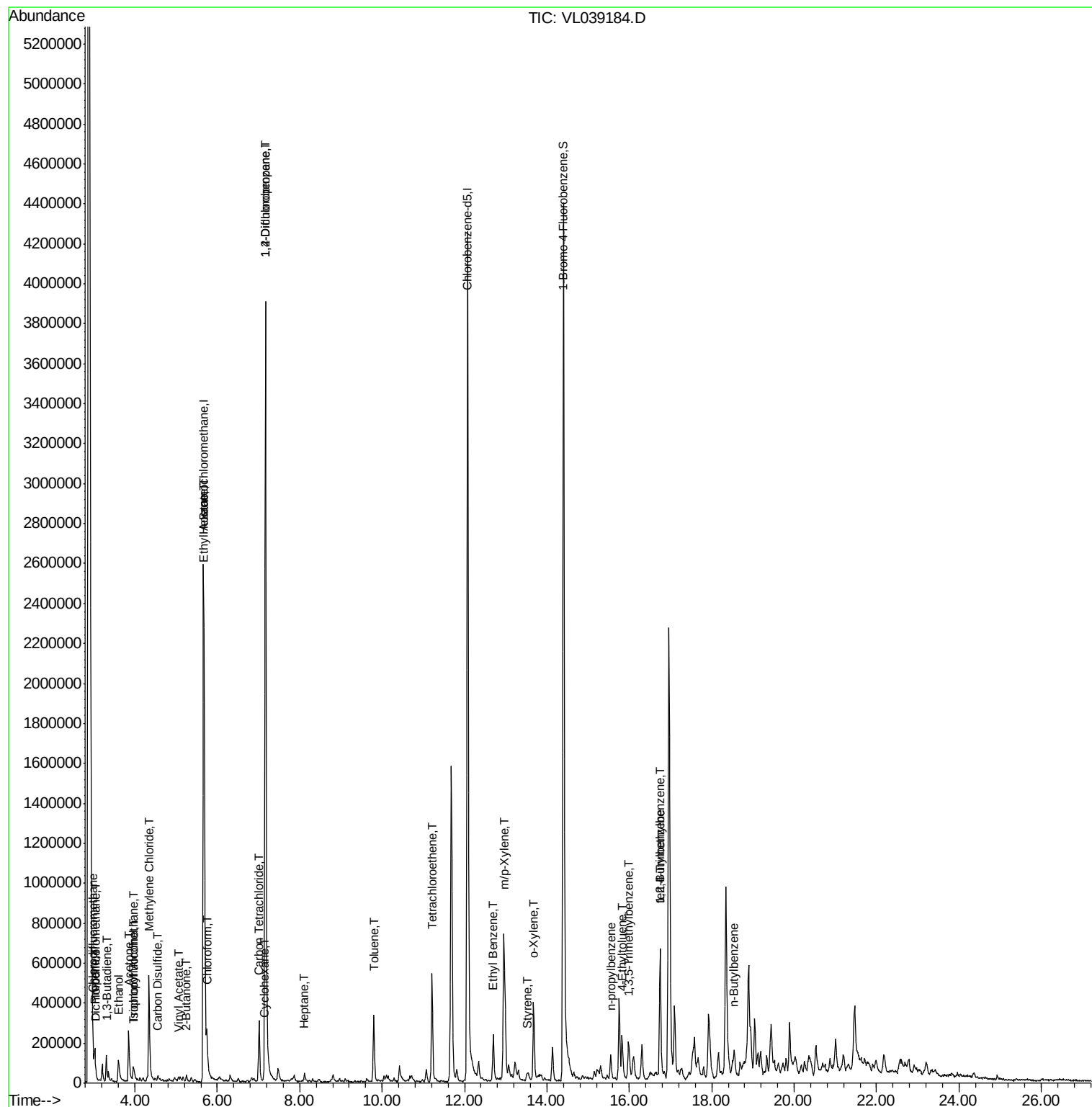
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.05	85	18260	0.08	ppbv	97
3) Chlorodifluoromethane	2.99	51	21256	0.13	ppbv #	81
9) Propene	3.02	41	4677	0.07	ppbv #	1
10) Heptane	8.11	43	6589	0.04	ppbv #	26
11) Trichlorofluoromethane	3.95	101	13623	0.07	ppbv	100
13) Ethanol	3.60	45	150105	39.98	ppbv #	100
15) Acetone	3.85	43	319191	2.47	ppbv	96
16) 1,3-Butadiene	3.33	39	4962	0.07	ppbv #	8
19) Isopropyl Alcohol	3.97	45	39529	0.65	ppbv #	79
20) Methylene Chloride	4.34	84	214501	3.94	ppbv	94
23) Vinyl Acetate	5.07	43	4566	0.04	ppbv #	43
25) Ethyl Acetate	5.68	43	372575	1.28	ppbv #	78
26) Hexane	5.68	57	510625	3.99	ppbv #	41
27) Carbon Disulfide	4.55	76	28508	0.21	ppbv #	83
29) Chloroform	5.75	83	117759	0.55	ppbv	84
30) Cyclohexane	7.12	84	3641	0.03	ppbv #	1
34) 2-Butanone	5.25	43	32119	0.17	ppbv #	65
35) Carbon Tetrachloride	7.01	117	198607	0.78	ppbv	98
39) 1,2-Dichloropropane	7.17	63	826950	7.34	ppbv #	23
52) Tetrachloroethene	11.21	164	139171	1.26	ppbv	99
53) Toluene	9.80	91	286502	0.88	ppbv	99
58) Ethyl Benzene	12.70	91	130082	0.30	ppbv	100
59) m/p-Xylene	12.96	91	865866	2.29	ppbv	92
60) o-Xylene	13.68	91	318503	0.89	ppbv	99
61) Styrene	13.51	104	9410	0.05	ppbv #	33
64) n-propylbenzene	15.55	120	8604	0.07	ppbv #	1
65) tert-Butylbenzene	16.74	119	47408	0.10	ppbv #	52
70) n-Butylbenzene	18.53	91	25376	0.04	ppbv #	58
72) 4-Ethyltoluene	15.82	105	43405	0.10	ppbv #	55
73) 1,3,5-Trimethylbenzene	15.98	105	137185	0.36	ppbv	93
74) 1,2,4-Trimethylbenzene	16.75	105	526220	1.25	ppbv #	65

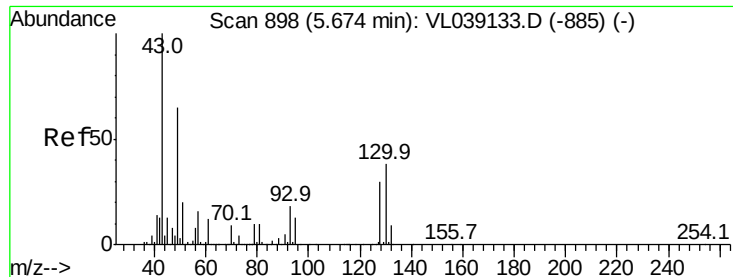
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL060622\
Data File : VL039184.D
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ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
SG-4

Quant Time: Jun 06 14:07:28 2022
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL053122AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jun 01 01:22:18 2022
QLast Update : Wed Jun 01 01:22:18 2022
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.66 Instrument: MSVOA_1

Delta R.T. ClientSampleId :

Lab File: SG-4

Acq: 6 Jun 2022 13:34

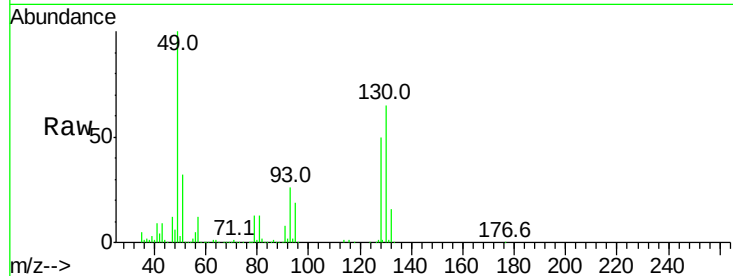
Tgt Ion: 49 Resp: 1240998

Ion Ratio Lower Upper

49 100

128 54.2 24.7 74.1

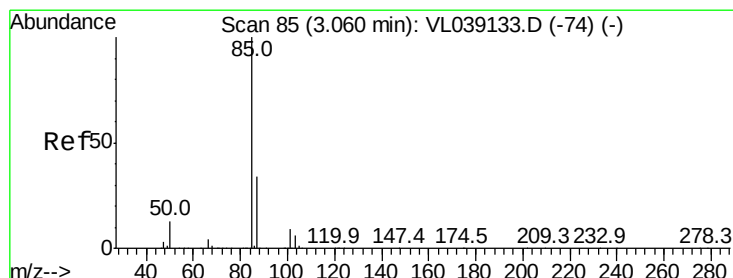
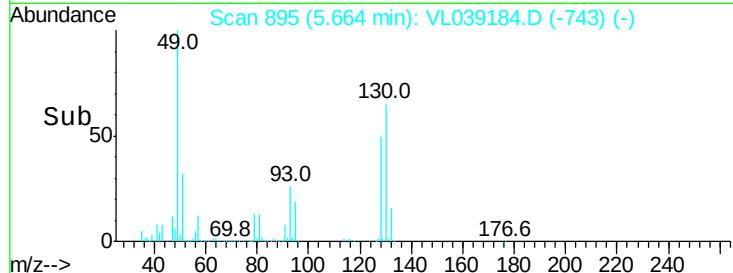
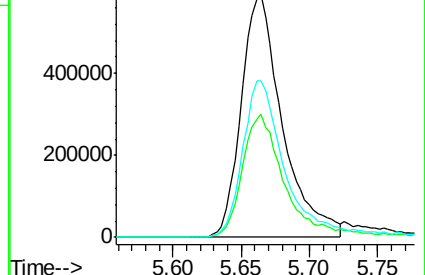
130 68.3 31.4 94.0



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: 0.08 ppbv

RT: 3.05 min Scan# 82

Delta R.T. -0.01 min

Lab File: VL039184.D

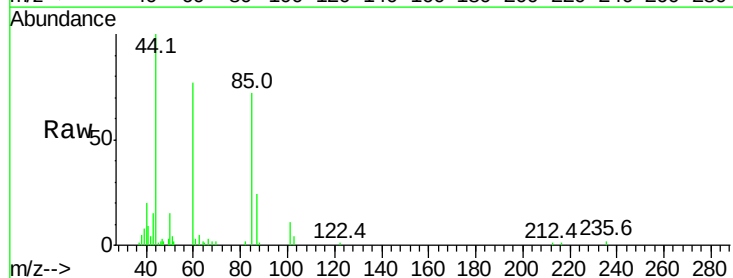
Acq: 6 Jun 2022 13:34

Tgt Ion: 85 Resp: 18260

Ion Ratio Lower Upper

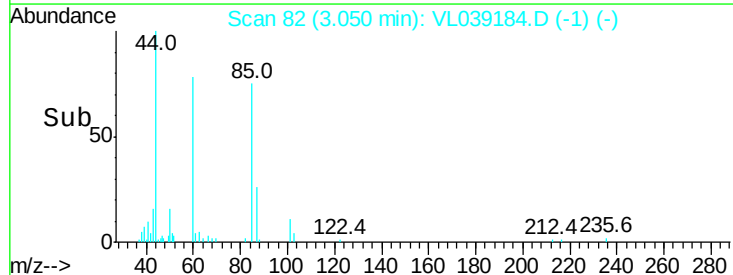
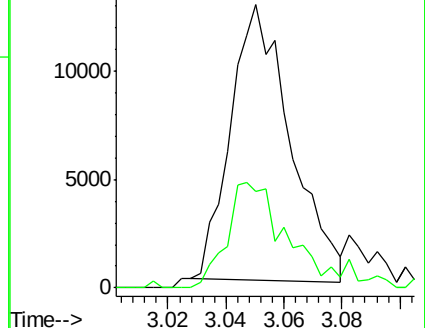
85 100

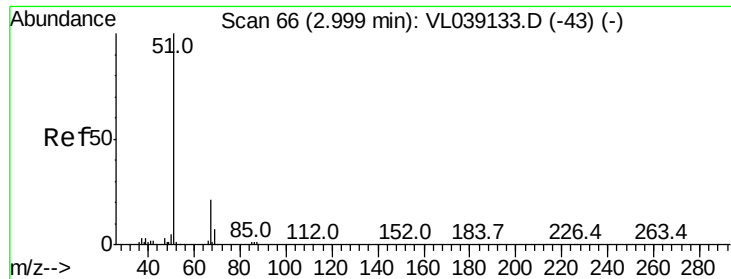
87 35.3 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.13 ppbv

RT: 2.99 Instrument:

Delta R.T. MSVOA.L

Lab File: ClientSampleId:

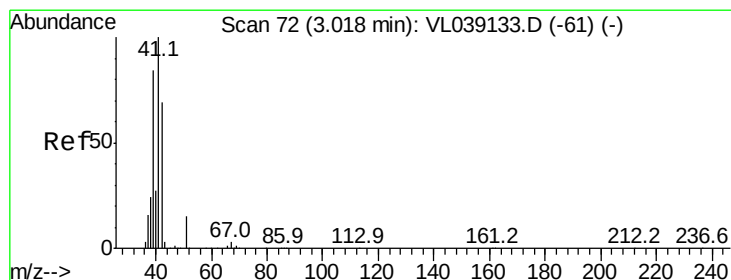
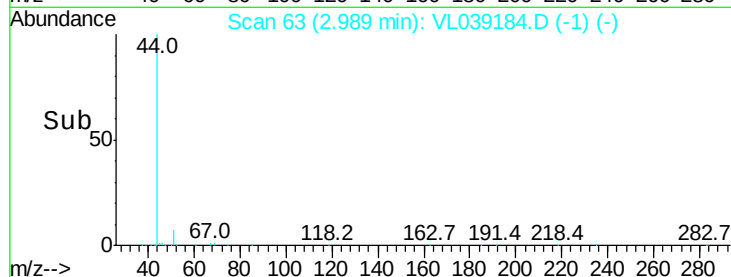
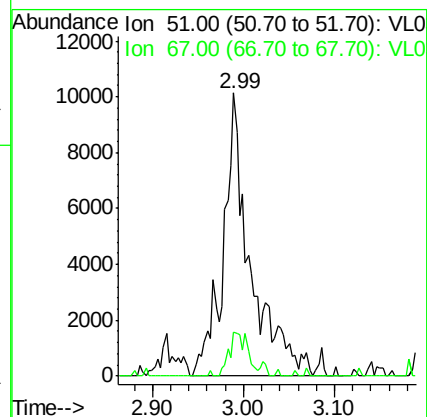
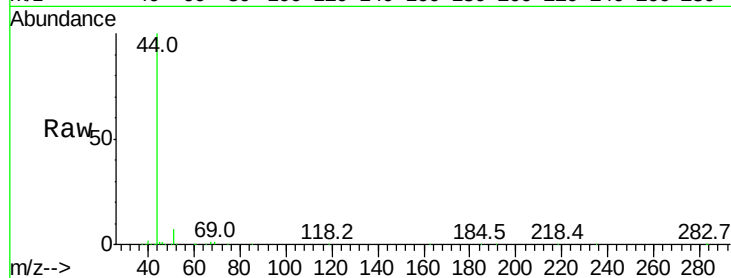
Acq: 6 Jun 2022 13:34

Tgt Ion: 51 Resp: 21256

Ion Ratio Lower Upper

51 100

67 11.7 16.2 24.4#



#9

Propene

Concen: 0.07 ppbv

RT: 3.02 min Scan# 72

Delta R.T. -0.00 min

Lab File: VL039184.D

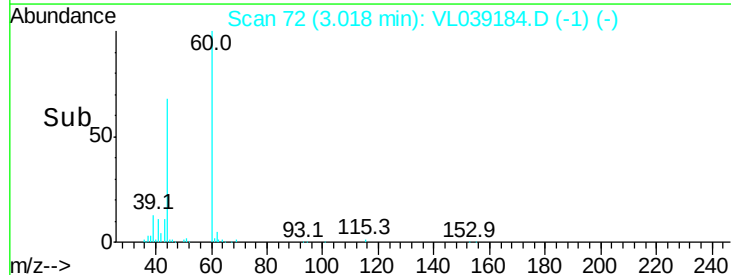
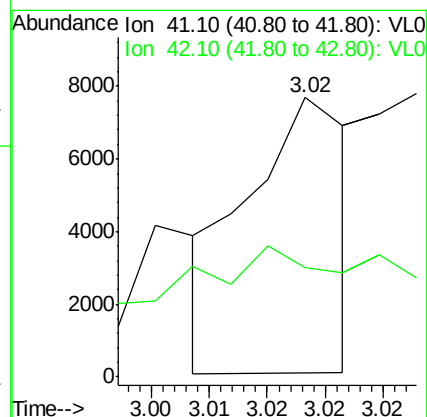
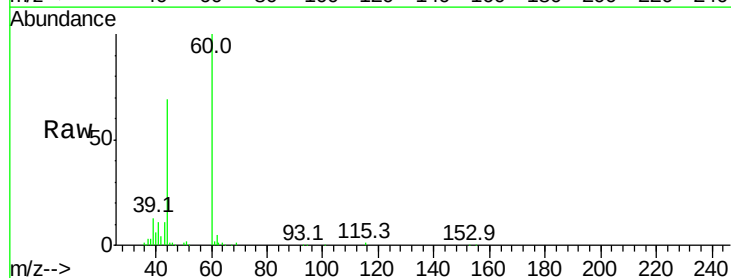
Acq: 6 Jun 2022 13:34

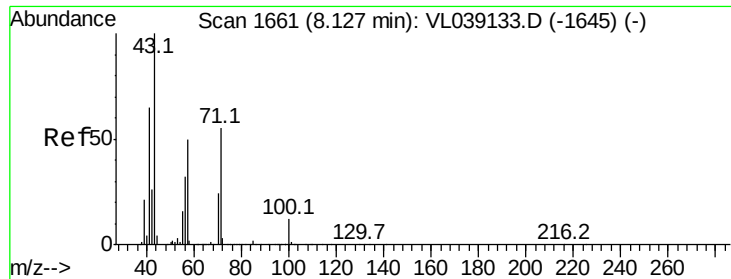
Tgt Ion: 41 Resp: 4677

Ion Ratio Lower Upper

41 100

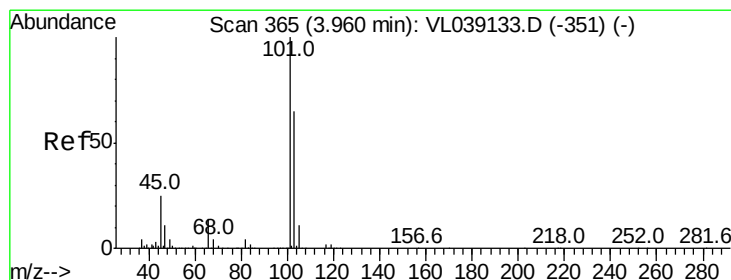
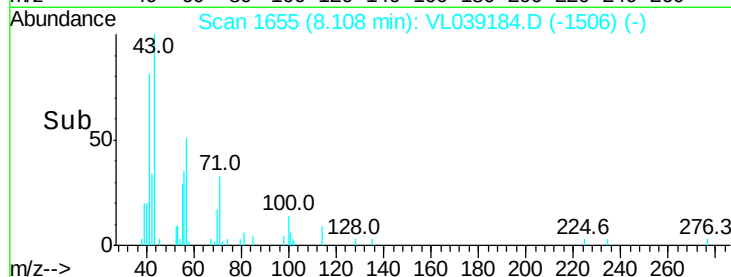
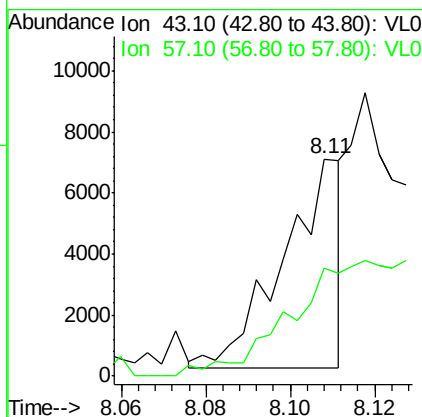
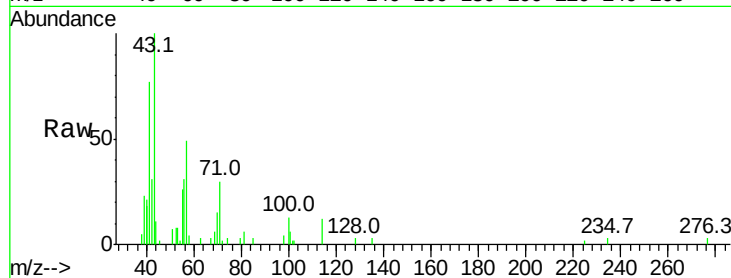
42 173.8 55.4 83.2#





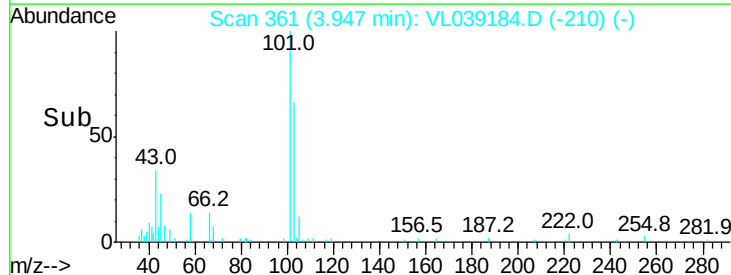
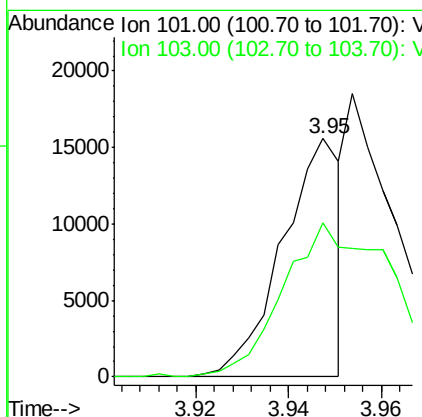
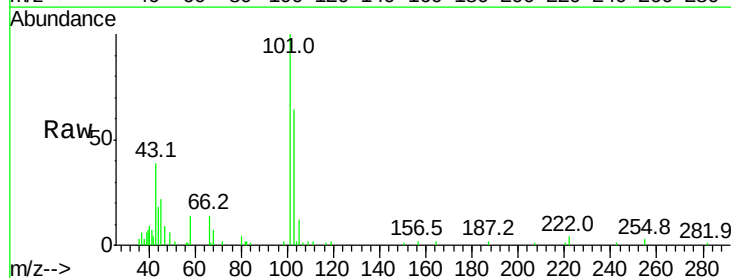
#10
 Heptane
 Concen: 0.04 ppbv
 RT: 8.11
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 6 Jun 2022 13:34

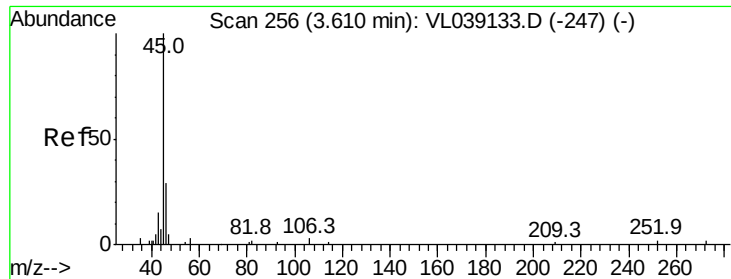
Tgt Ion: 43 Resp: 6589
 Ion Ratio Lower Upper
 43 100
 57 0.0 41.4 62.2#



#11
 Trichlorofluoromethane
 Concen: 0.07 ppbv
 RT: 3.95 min Scan# 361
 Delta R.T. -0.01 min
 Lab File: VL039184.D
 Acq: 6 Jun 2022 13:34

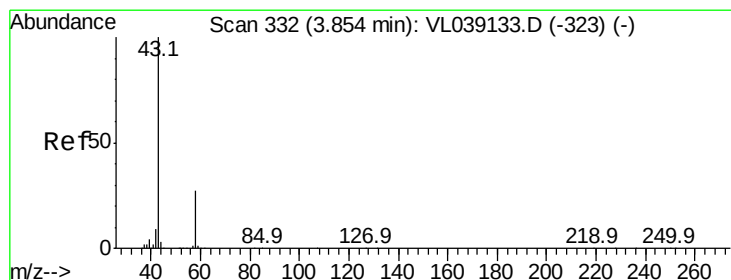
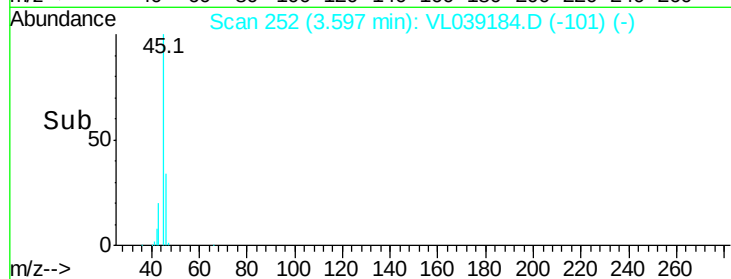
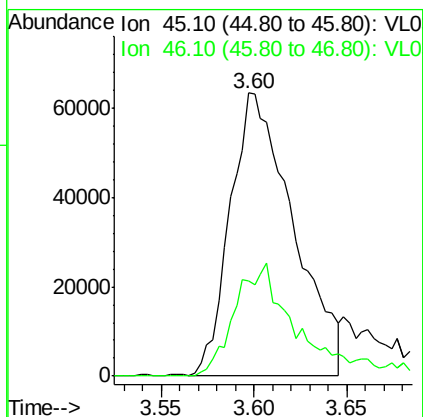
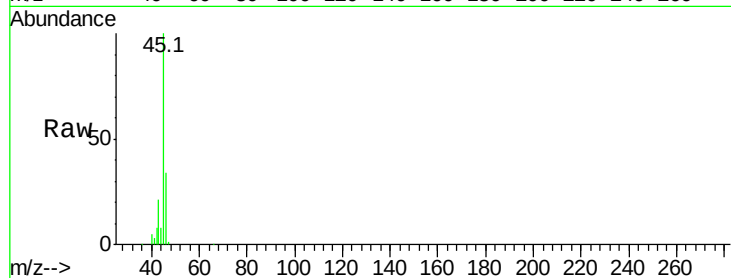
Tgt Ion: 101 Resp: 13623
 Ion Ratio Lower Upper
 101 100
 103 64.5 51.7 77.5





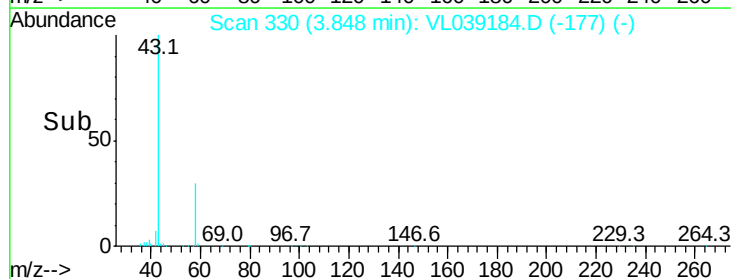
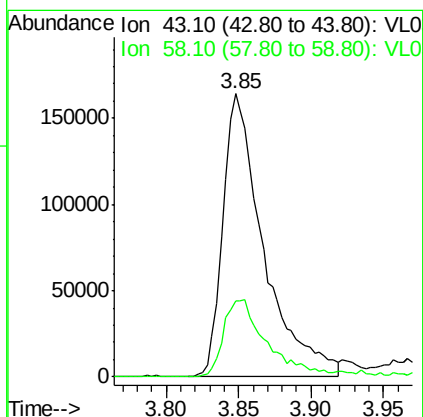
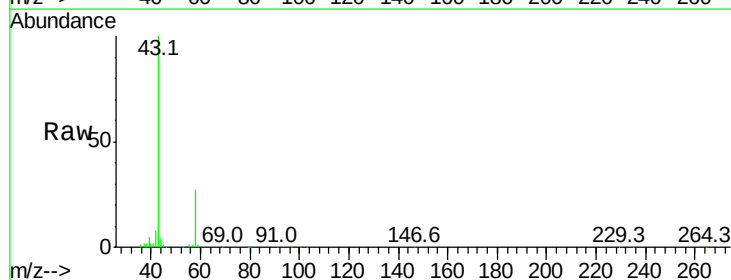
#13
Ethanol
Concen: 39.98 ppbv
RT: 3.60
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 6 Jun 2022 13:34

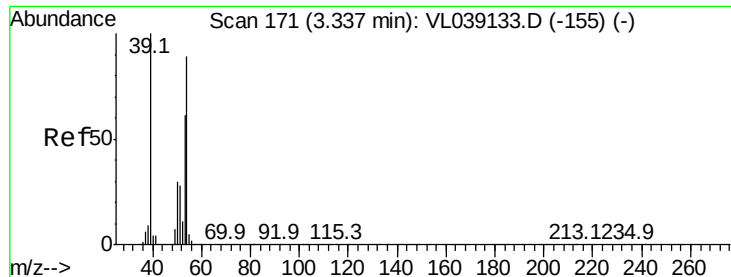
Tgt Ion: 45 Resp: 150105
Ion Ratio Lower Upper
45 100
46 42.3 0.0 0.0#



#15
Acetone
Concen: 2.47 ppbv
RT: 3.85 min Scan# 330
Delta R.T. -0.01 min
Lab File: VL039184.D
Acq: 6 Jun 2022 13:34

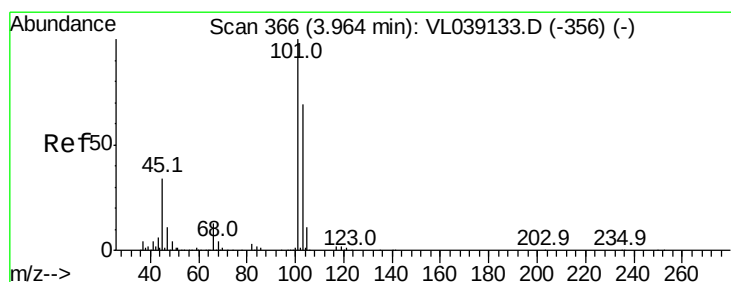
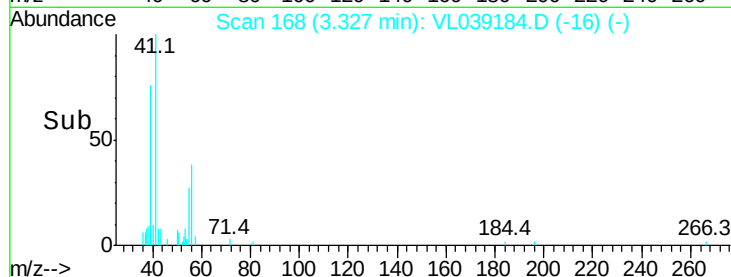
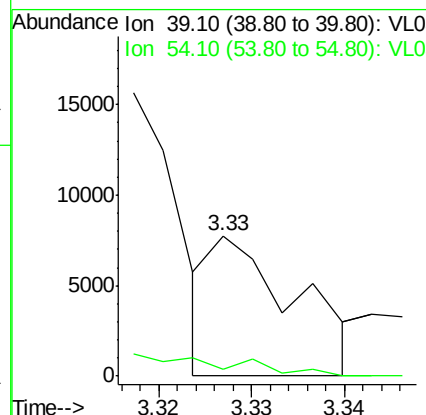
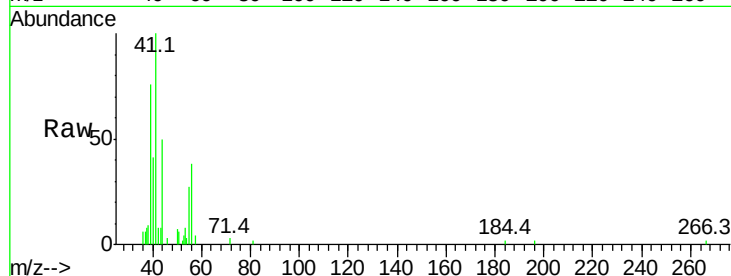
Tgt Ion: 43 Resp: 319191
Ion Ratio Lower Upper
43 100
58 30.1 22.5 33.7





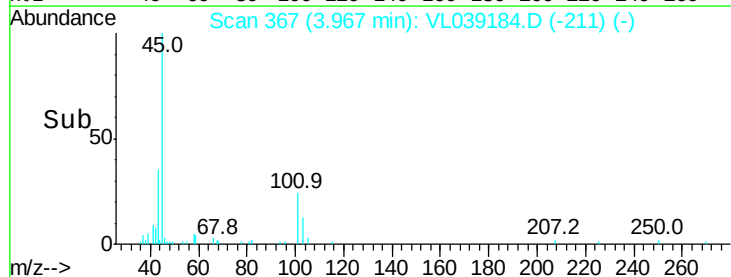
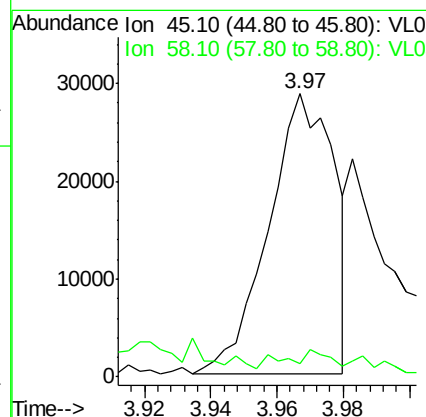
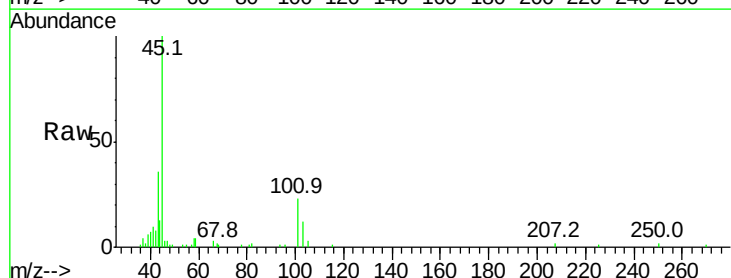
#16
 1,3-Butadiene
 Concen: 0.07 ppbv
 RT: 3.33
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SG-4
 Acq: 6 Jun 2022 13:34

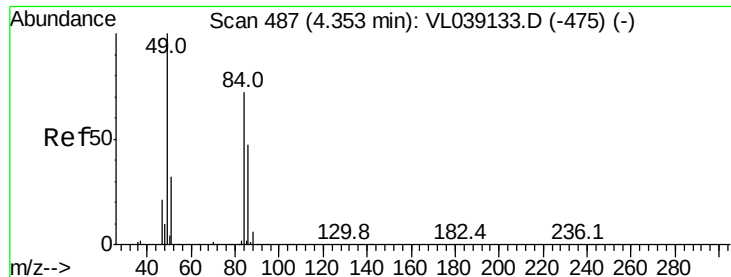
Tgt Ion: 39 Resp: 4962
 Ion Ratio Lower Upper
 39 100
 54 0.0 65.8 98.6#



#19
 Isopropyl Alcohol
 Concen: 0.65 ppbv
 RT: 3.97 min Scan# 367
 Delta R.T. 0.00 min
 Lab File: VL039184.D
 Acq: 6 Jun 2022 13:34

Tgt Ion: 45 Resp: 39529
 Ion Ratio Lower Upper
 45 100
 58 9.7 1.8 2.8#





#20

Methylene Chloride

Concen: 3.94 ppbv

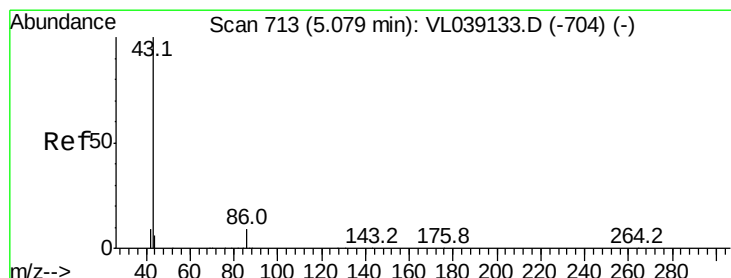
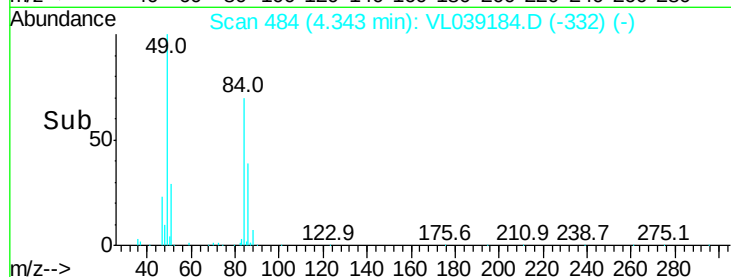
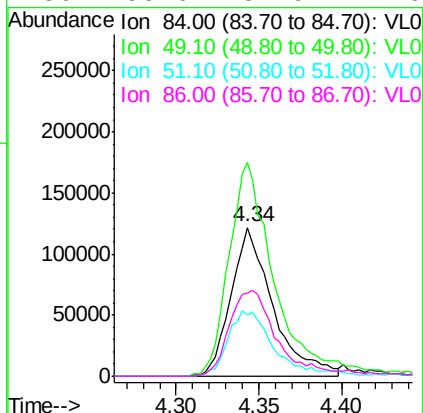
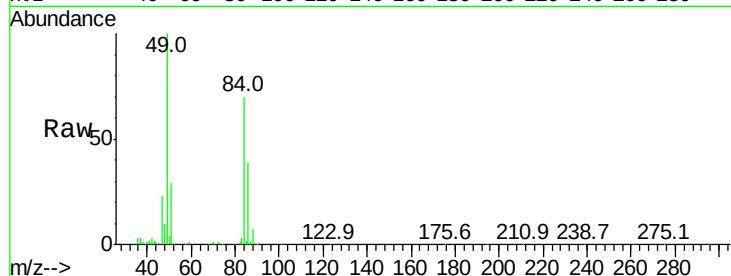
RT: 4.34

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 6 Jun 2022 13:34

Tgt Ion:	84	Resp:	214501
Ion	Ratio	Lower	Upper
84	100		
49	142.9	111.1	166.7
51	41.3	35.3	52.9
86	55.6	51.9	77.9



#23

Vinyl Acetate

Concen: 0.04 ppbv

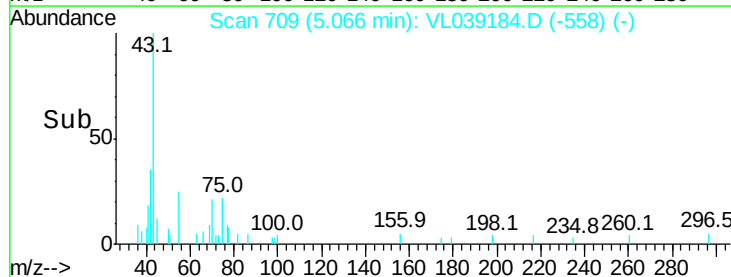
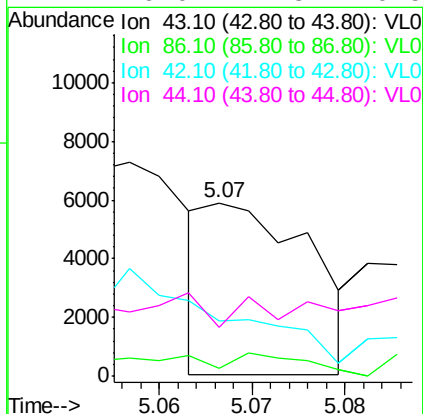
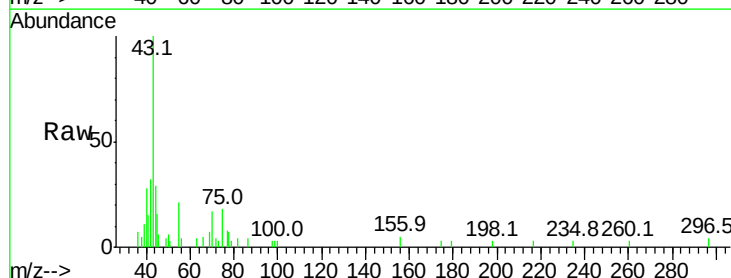
RT: 5.07 min Scan# 709

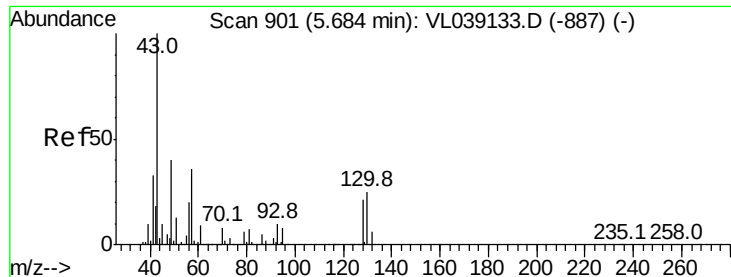
Delta R.T. -0.01 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

Tgt Ion:	43	Resp:	4566
Ion	Ratio	Lower	Upper
43	100		
86	0.9	6.0	9.0#
42	49.8	8.2	12.4#
44	0.0	4.3	6.5#





#25

Ethyl Acetate

Concen: 1.28 ppbv

RT: 5.68 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SG-4

Acq: 6 Jun 2022 13:34

Tgt Ion: 43 Resp: 372575

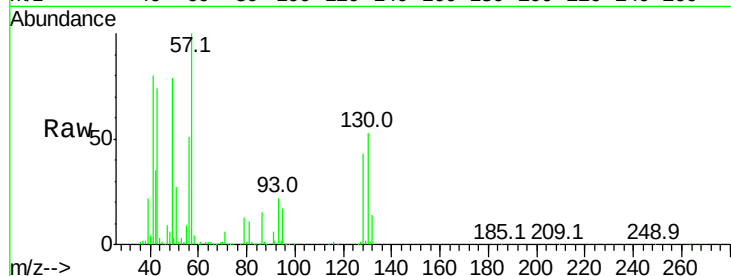
Ion Ratio Lower Upper

43 100

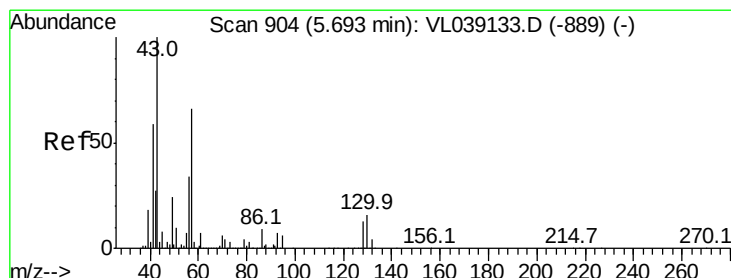
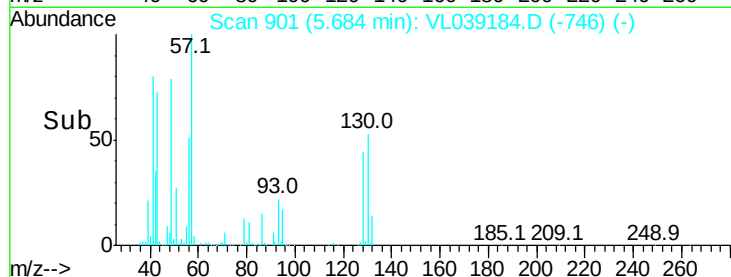
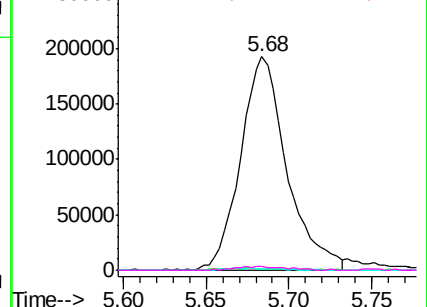
45 1.7 8.2 12.2#

61 1.1 8.4 12.6#

70 2.0 5.6 8.4#



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: 3.99 ppbv

RT: 5.68 min Scan# 900

Delta R.T. -0.01 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

Tgt Ion: 57 Resp: 510625

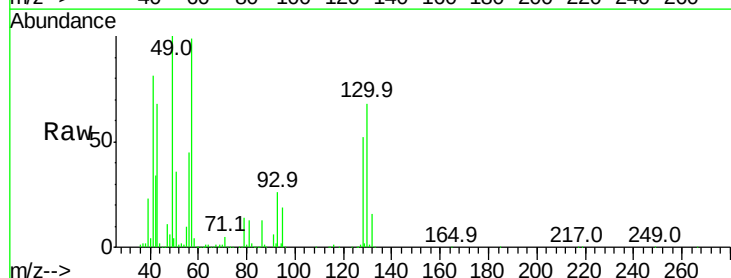
Ion Ratio Lower Upper

57 100

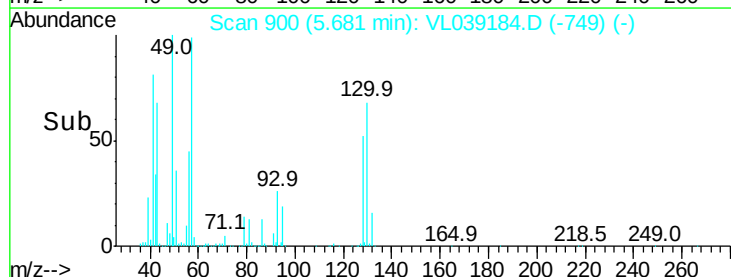
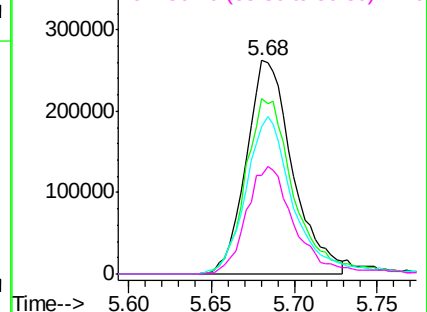
41 87.4 72.4 108.6

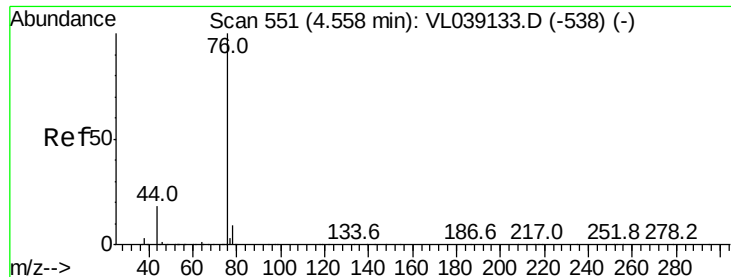
43 77.0 187.0 280.6#

56 53.6 41.8 62.6



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





#27

Carbon Disulfide

Concen: 0.21 ppbv

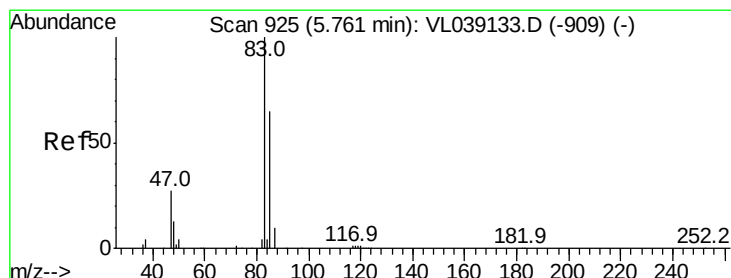
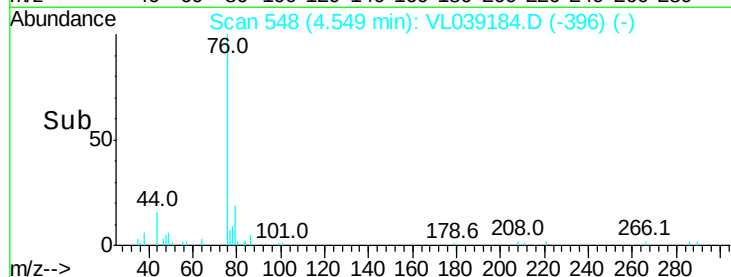
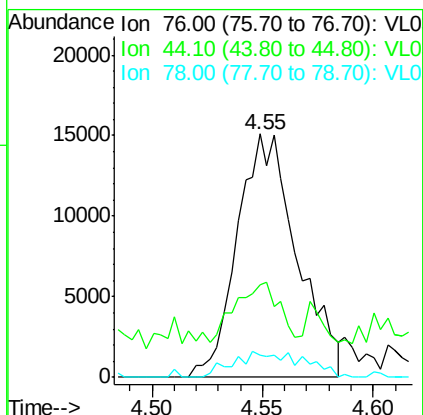
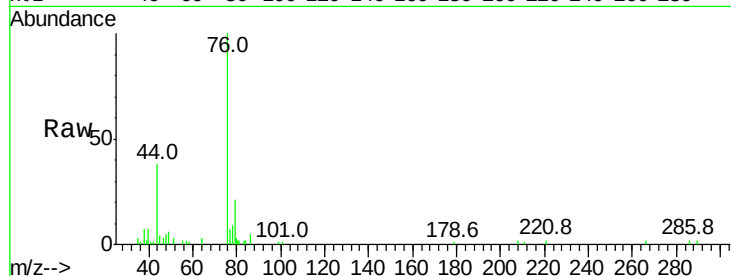
RT: 4.55

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 6 Jun 2022 13:34

Tgt Ion	Ratio	Lower	Upper
76	100		
44	27.7	14.4	21.6#
78	12.7	7.7	11.5#



#29

Chloroform

Concen: 0.55 ppbv

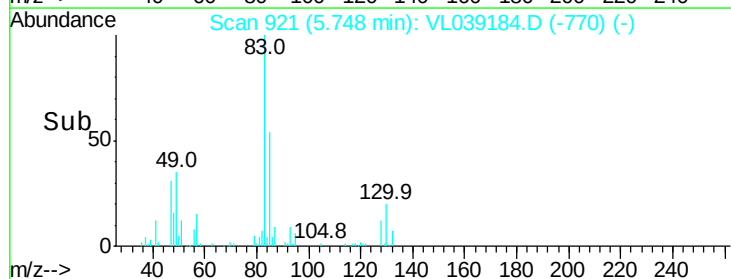
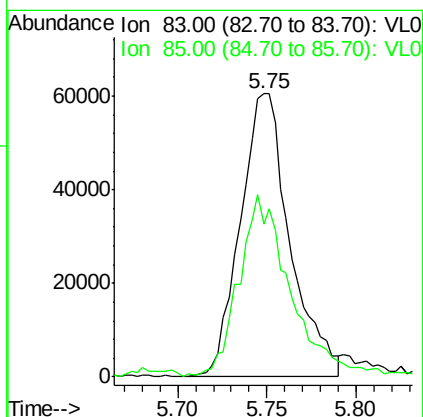
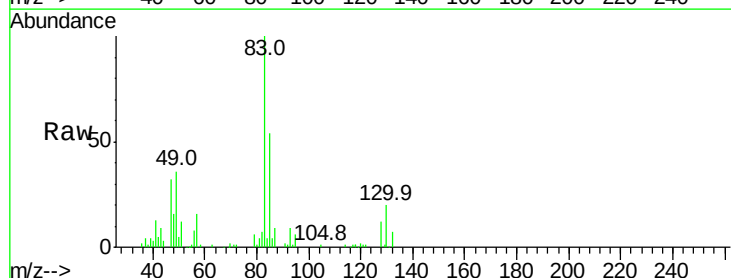
RT: 5.75 min Scan# 921

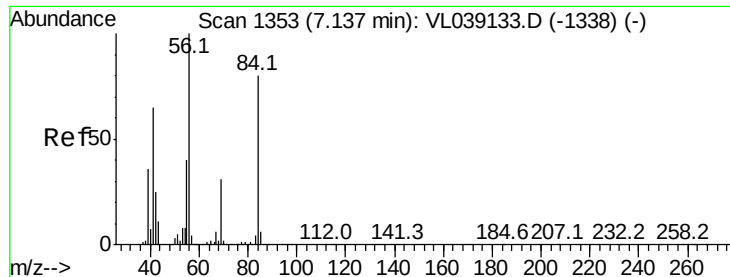
Delta R.T. -0.01 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

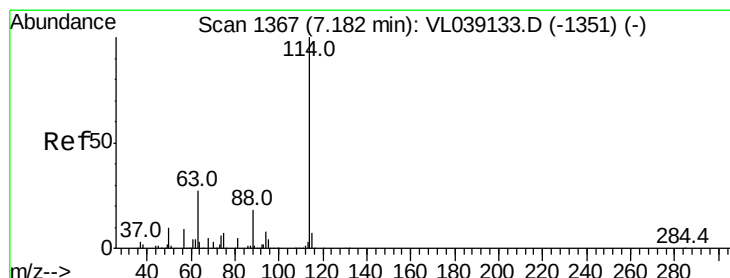
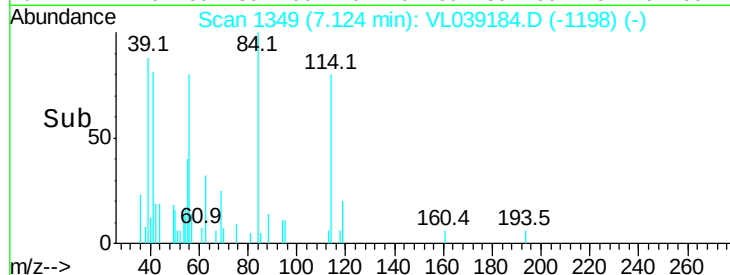
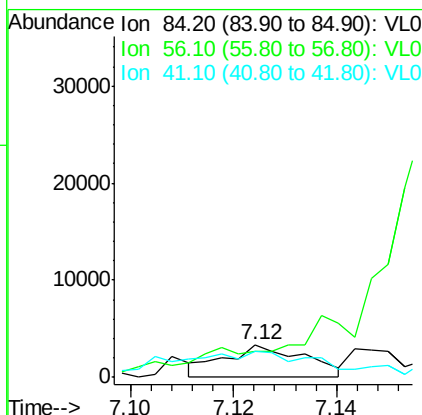
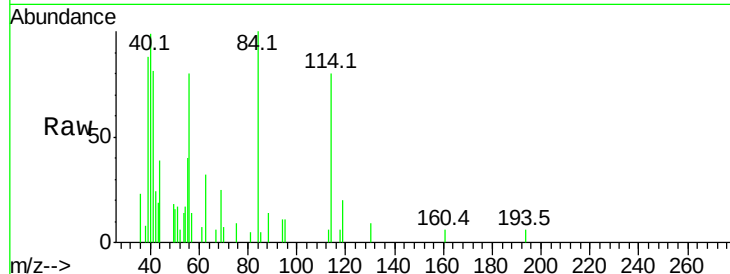
Tgt Ion	Ratio	Lower	Upper
83	100		
85	52.8	52.4	78.6





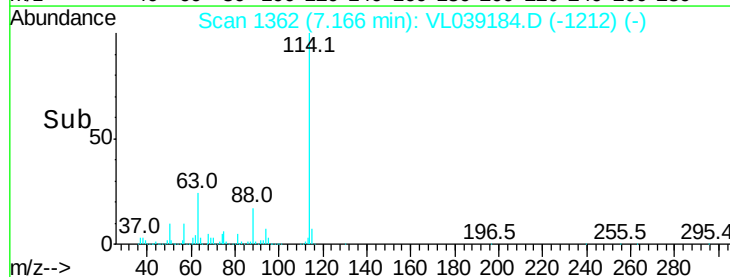
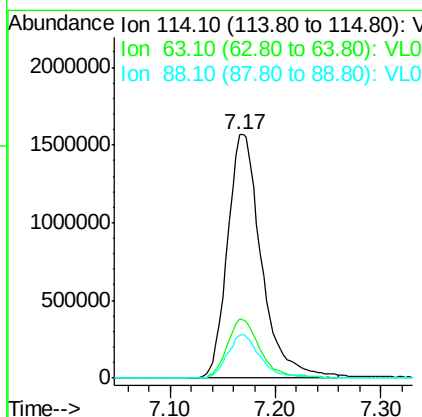
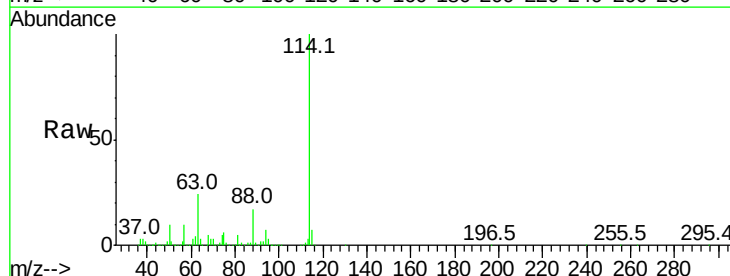
#30
Cyclohexane
Concen: 0.03 ppbv
RT: 7.12
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 6 Jun 2022 13:34

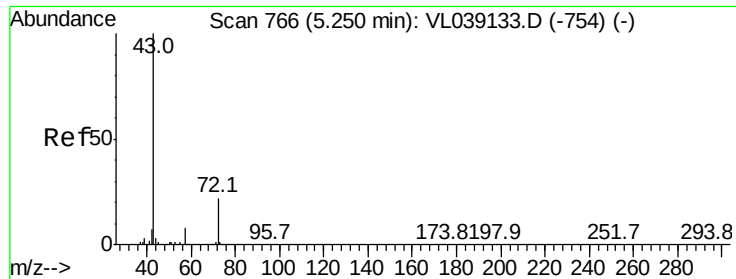
Tgt Ion: 84 Resp: 3641
Ion Ratio Lower Upper
84 100
56 0.0 110.6 165.8#
41 203.4 68.9 103.3#



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.02 min
Lab File: VL039184.D
Acq: 6 Jun 2022 13:34

Tgt Ion: 114 Resp: 3487514
Ion Ratio Lower Upper
114 100
63 24.3 21.7 32.5
88 17.8 14.8 22.2





#34

2-Butanone

Concen: 0.17 ppbv

RT: 5.25

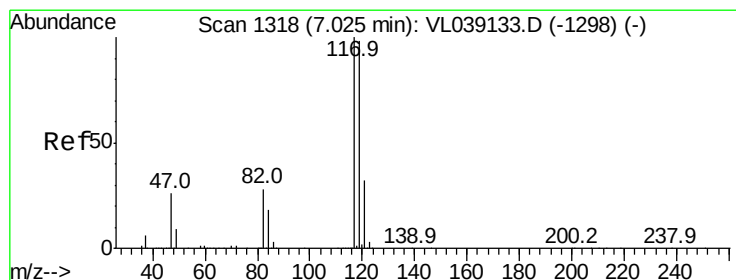
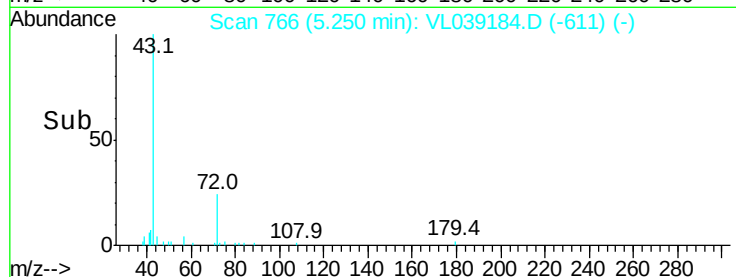
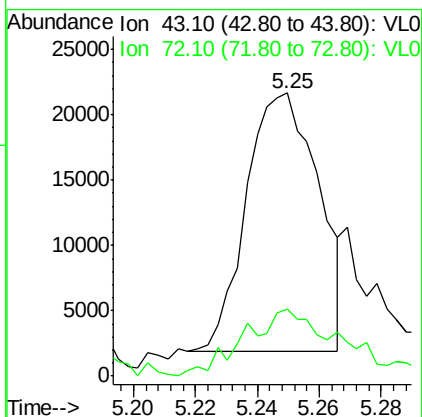
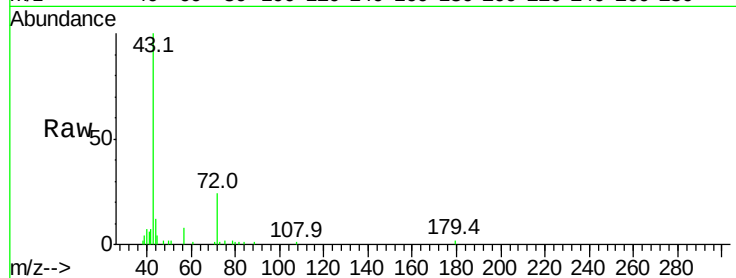
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 6 Jun 2022 13:34

Tgt Ion: 43 Resp: 32119

Ion	Ratio	Lower	Upper
43	100		
72	39.5	18.2	27.2#



#35

Carbon Tetrachloride

Concen: 0.78 ppbv

RT: 7.01 min Scan# 1315

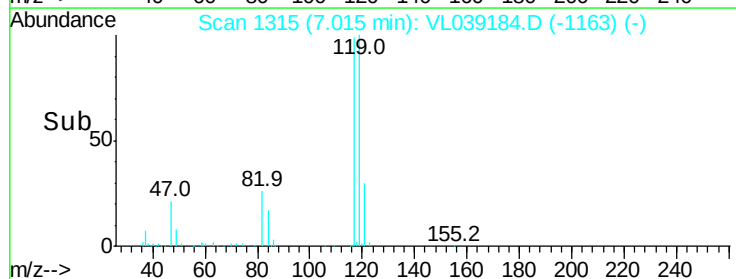
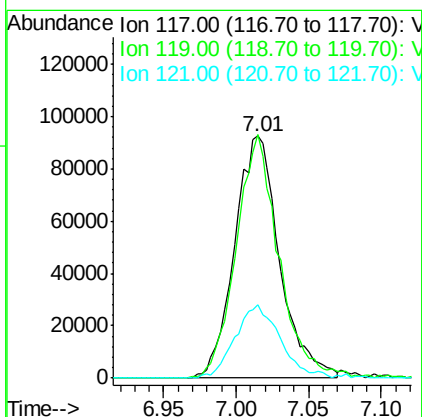
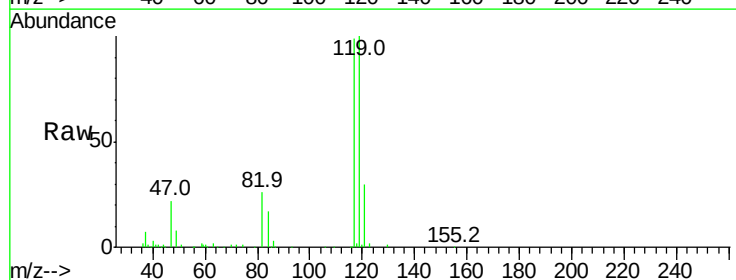
Delta R.T. -0.01 min

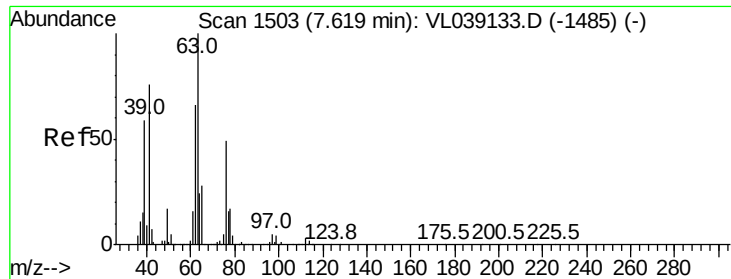
Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

Tgt Ion: 117 Resp: 198607

Ion	Ratio	Lower	Upper
117	100		
119	100.6	78.6	118.0
121	30.5	25.4	38.0





#39

1,2-Dichloropropane

Concen: 7.34 ppbv

RT: 7.17 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 6 Jun 2022 13:34 SG-4

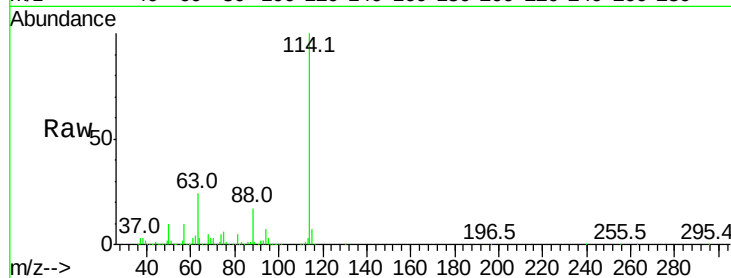
Tgt Ion: 63 Resp: 826950

Ion Ratio Lower Upper

63 100

41 0.0 60.8 91.2#

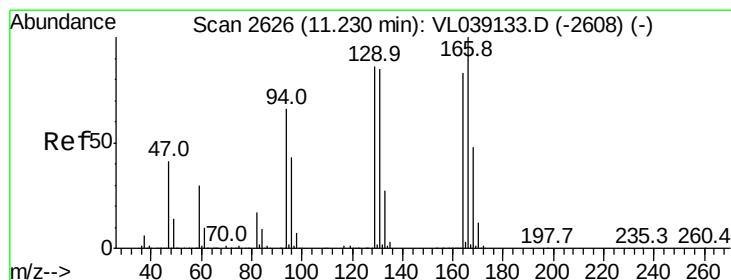
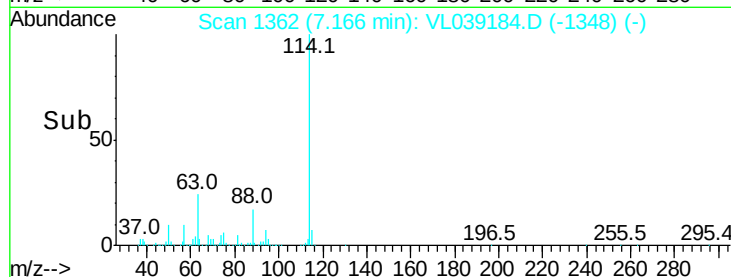
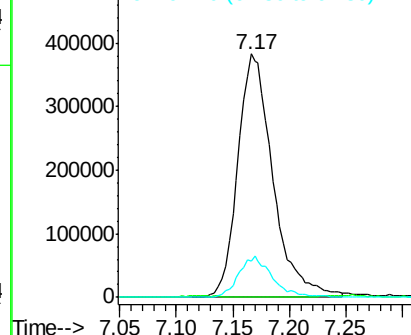
62 15.2 52.9 79.3#



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



#52

Tetrachloroethene

Concen: 1.26 ppbv

RT: 11.21 min Scan# 2620

Delta R.T. -0.02 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

Tgt Ion: 164 Resp: 139171

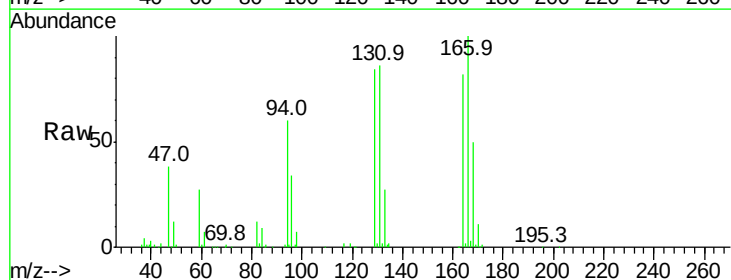
Ion Ratio Lower Upper

164 100

166 120.9 96.3 144.5

129 101.3 82.5 123.7

131 104.7 82.1 123.1

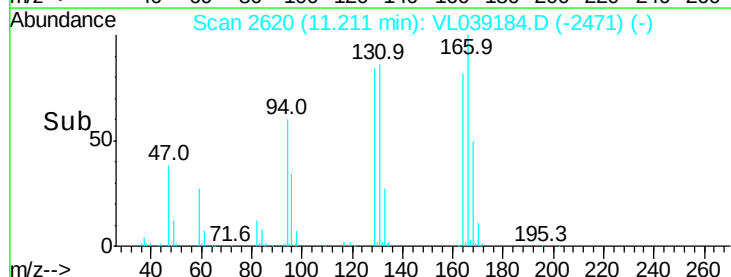
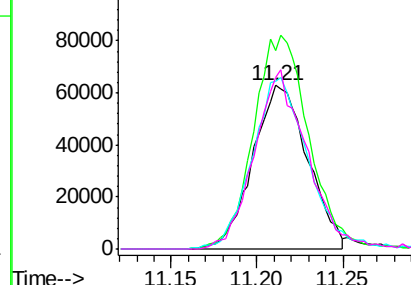


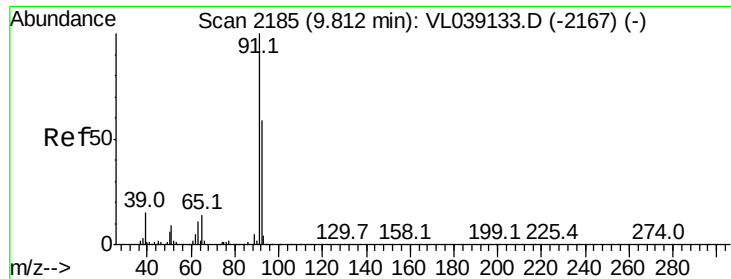
Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V





#53

Toluene

Concen: 0.88 ppbv

RT: 9.80 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SG-4

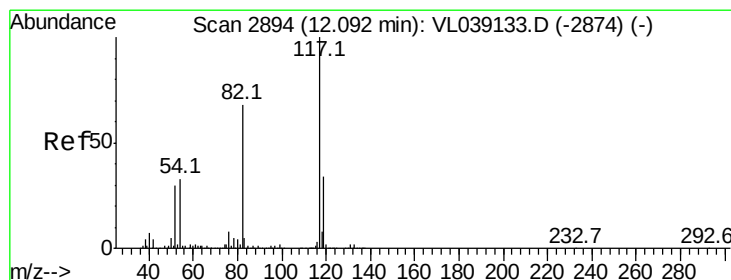
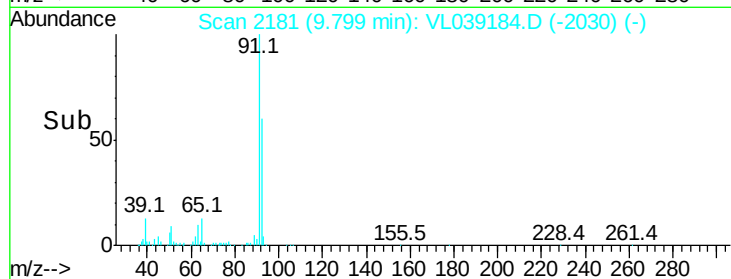
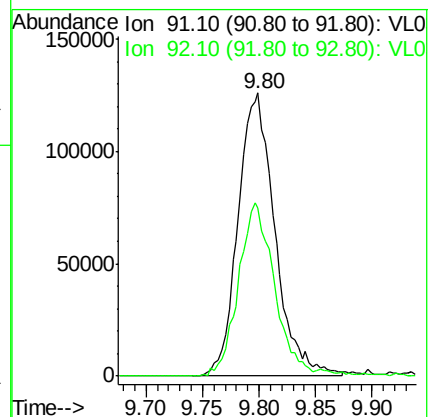
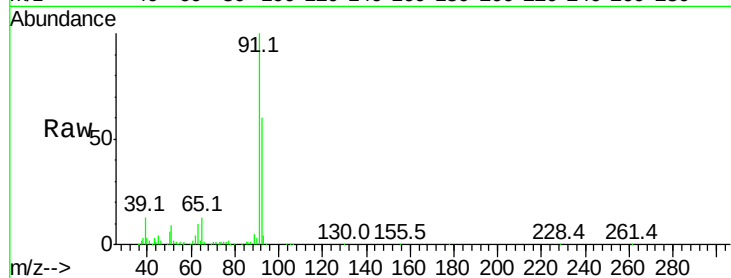
Acq: 6 Jun 2022 13:34

Tgt Ion: 91 Resp: 286502

Ion Ratio Lower Upper

91 100

92 60.8 48.1 72.1



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. -0.02 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

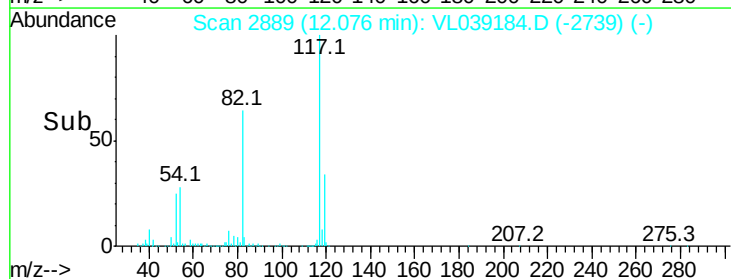
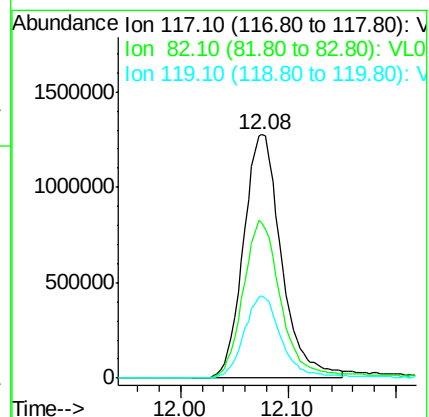
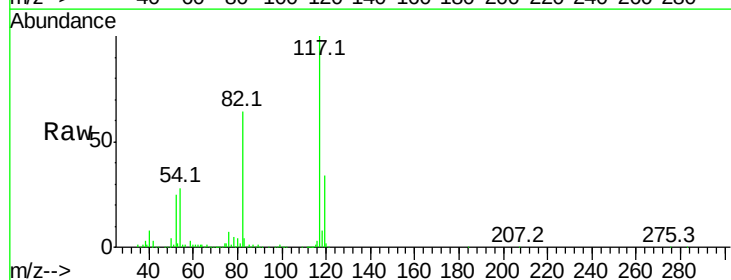
Tgt Ion: 117 Resp: 3122993

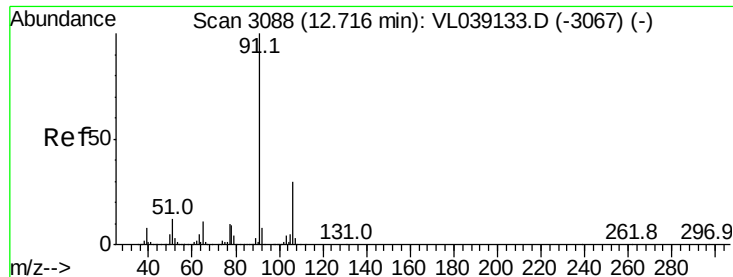
Ion Ratio Lower Upper

117 100

82 66.5 55.1 82.7

119 34.2 24.7 37.1





#58

Ethyl Benzene

Concen: 0.30 ppbv

RT: 12.70

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

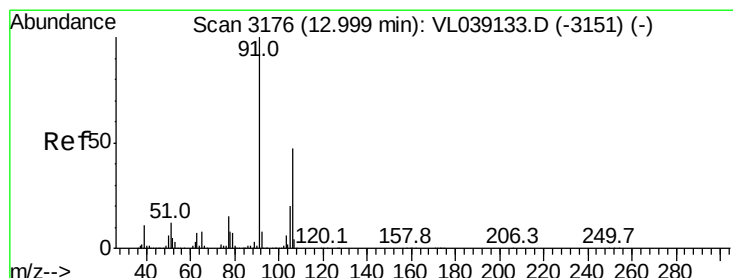
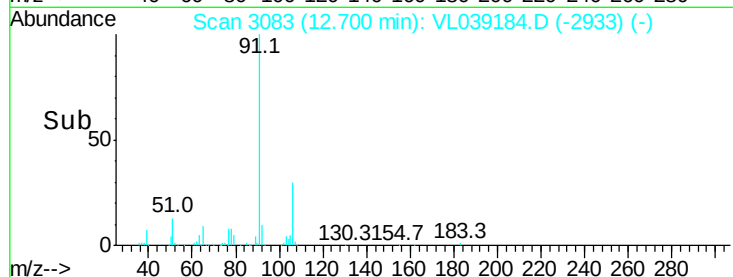
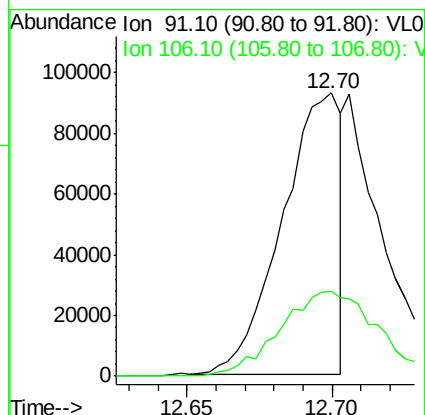
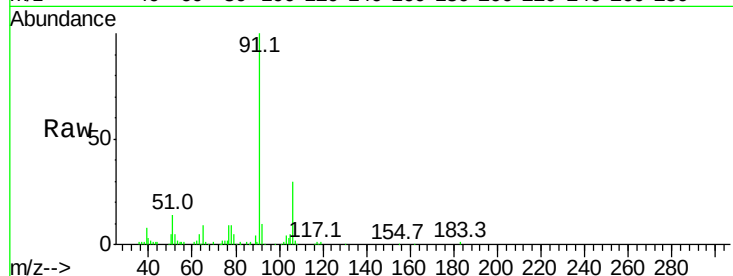
Acq: 6 Jun 2022 13:34

Tgt Ion: 91 Resp: 130082

Ion Ratio Lower Upper

91 100

106 30.0 24.2 36.4



#59

m/p-Xylene

Concen: 2.29 ppbv

RT: 12.96 min Scan# 3163

Delta R.T. -0.04 min

Lab File: VL039184.D

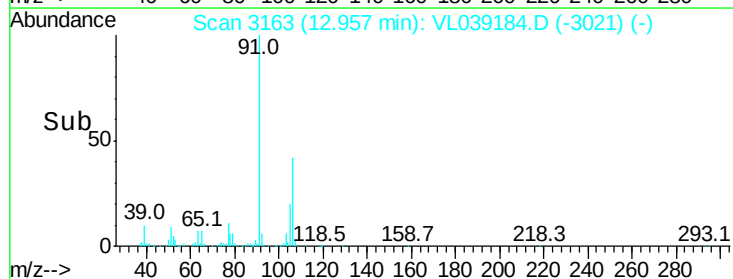
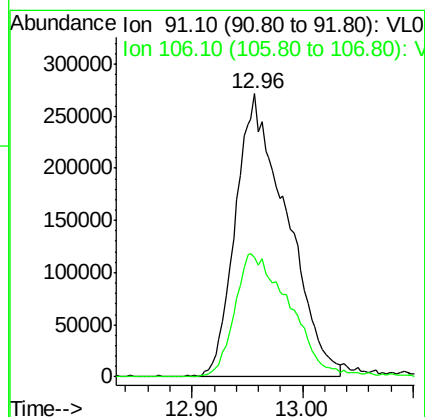
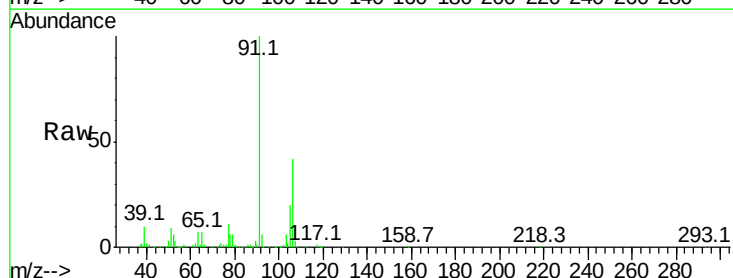
Acq: 6 Jun 2022 13:34

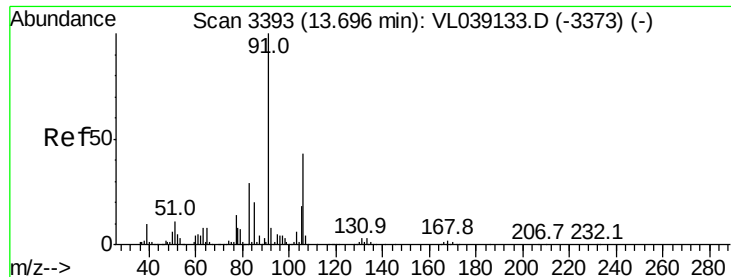
Tgt Ion: 91 Resp: 865866

Ion Ratio Lower Upper

91 100

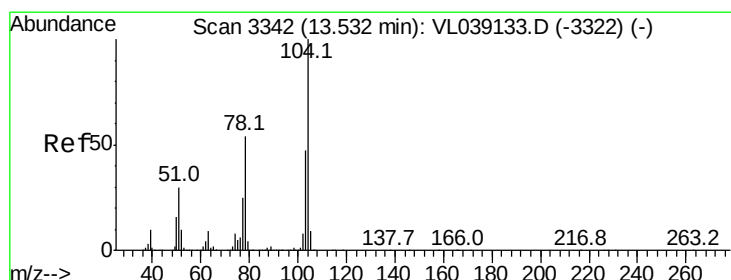
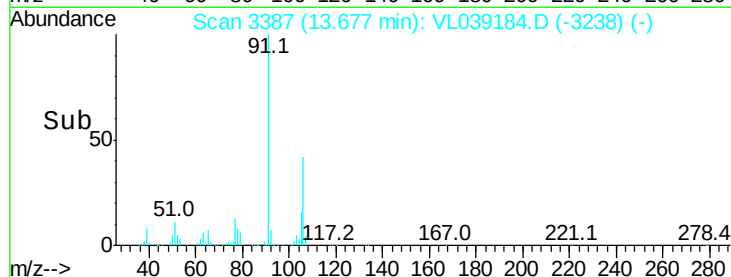
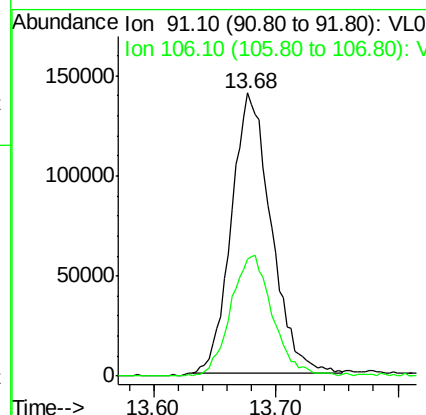
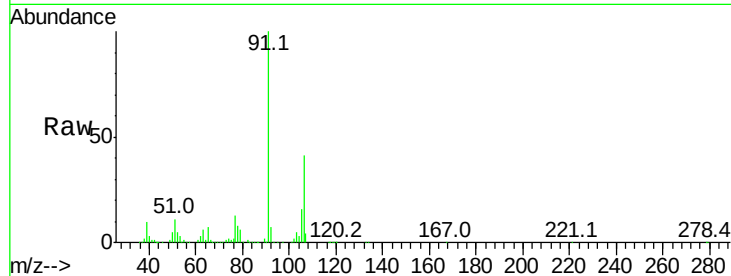
106 47.9 34.3 51.5





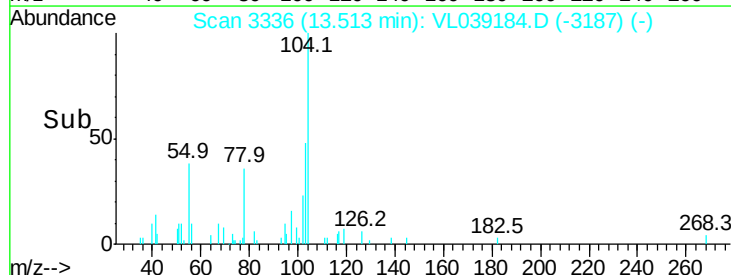
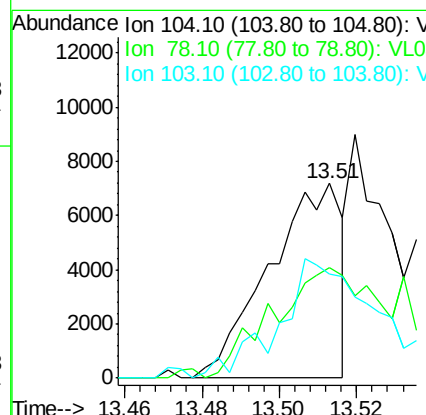
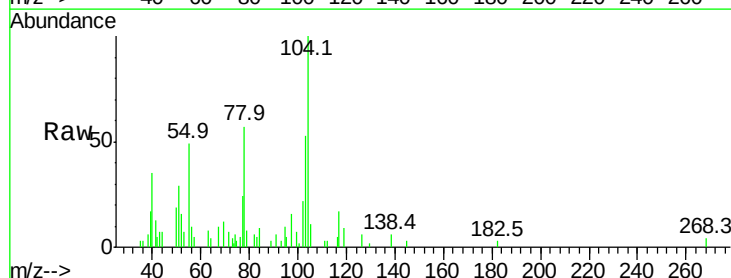
#60
o-Xylene
Concen: 0.89 ppbv
RT: 13.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 6 Jun 2022 13:34

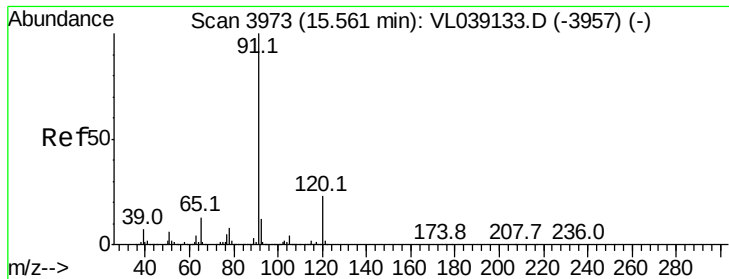
Tgt Ion: 91 Resp: 318503
Ion Ratio Lower Upper
91 100
106 45.0 22.3 66.9



#61
Styrene
Concen: 0.05 ppbv
RT: 13.51 min Scan# 3336
Delta R.T. -0.02 min
Lab File: VL039184.D
Acq: 6 Jun 2022 13:34

Tgt Ion: 104 Resp: 9410
Ion Ratio Lower Upper
104 100
78 109.9 45.7 68.5#
103 92.4 39.6 59.4#





#64

n-propylbenzene

Concen: 0.07 ppbv

RT: 15.55

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

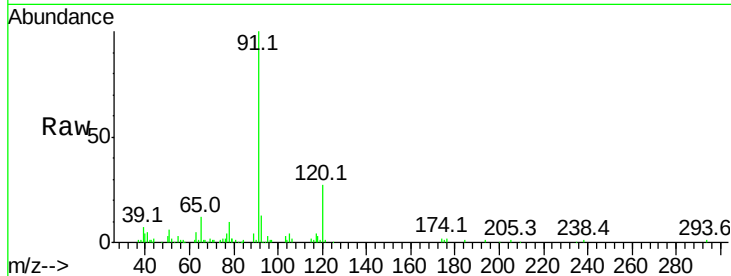
Acq: 6 Jun 2022 13:34

Tgt Ion:120 Resp: 8604

Ion Ratio Lower Upper

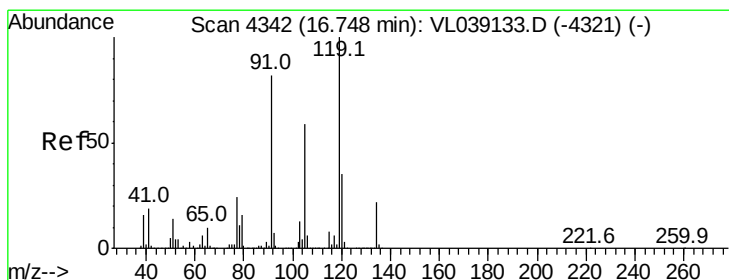
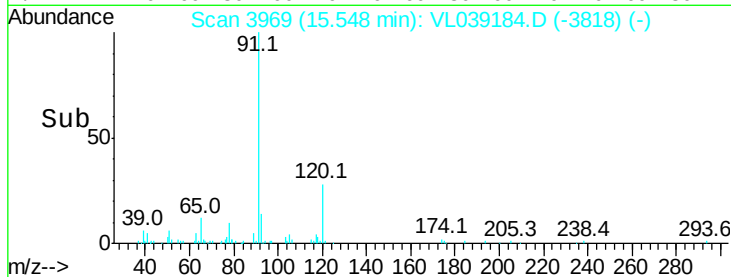
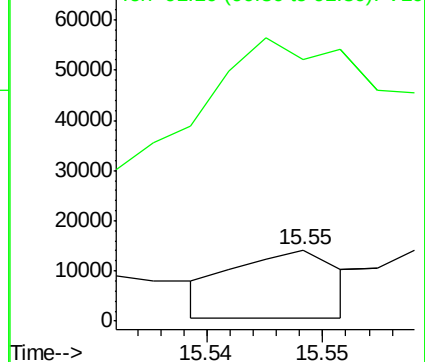
120 100

91 1494.5 388.4 582.6#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#65

tert-Butylbenzene

Concen: 0.10 ppbv

RT: 16.74 min Scan# 4341

Delta R.T. -0.00 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

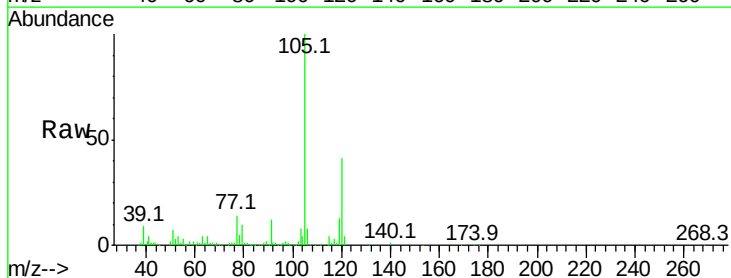
Tgt Ion:119 Resp: 47408

Ion Ratio Lower Upper

119 100

91 128.2 67.1 100.7#

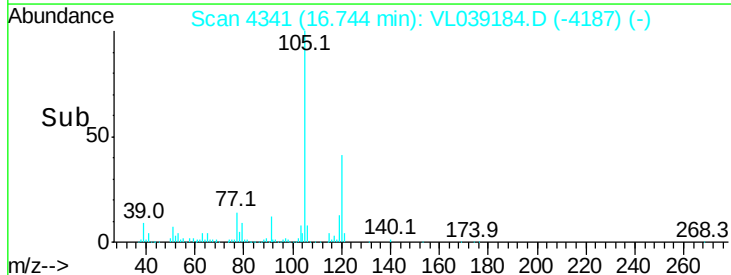
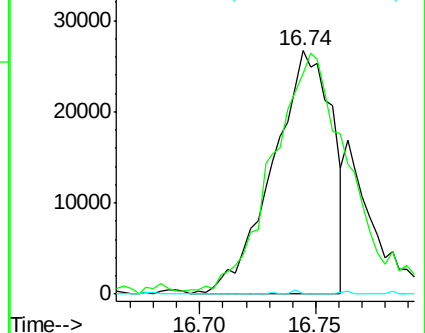
134 0.0 15.8 23.8#

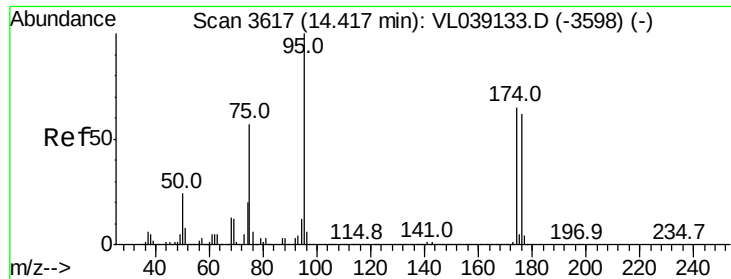


Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

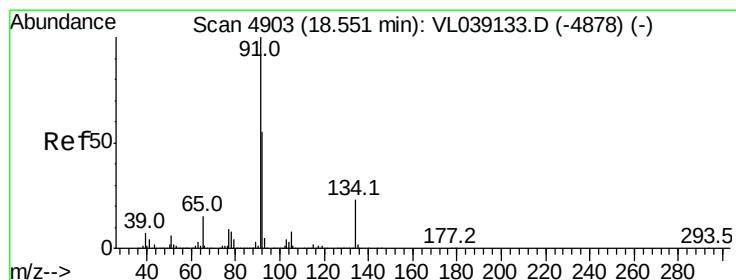
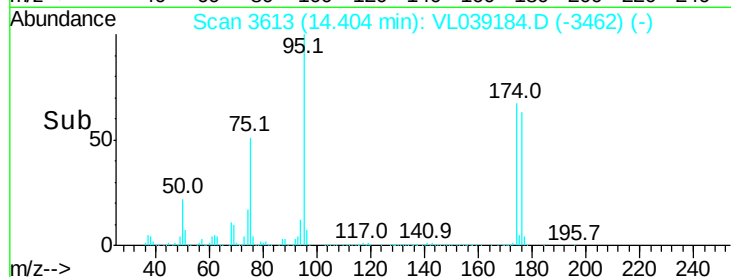
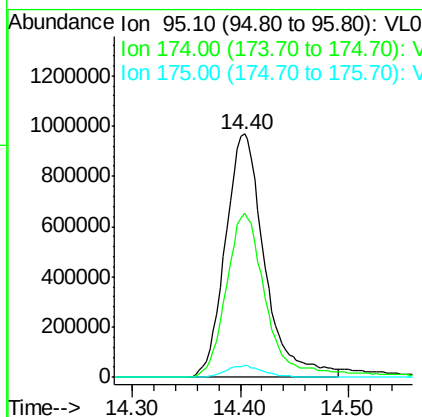
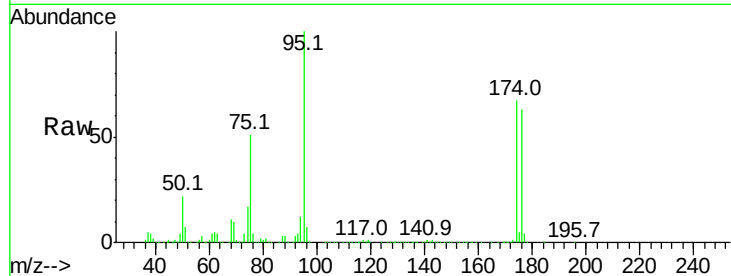
Ion 134.20 (133.90 to 134.90): V





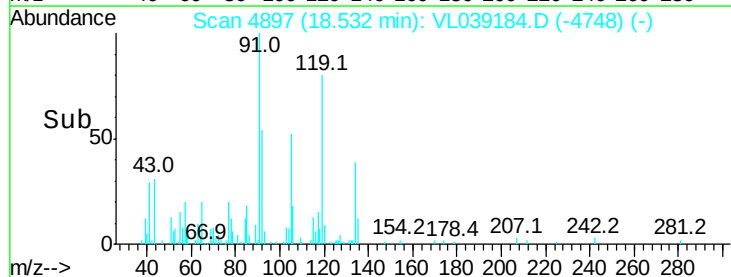
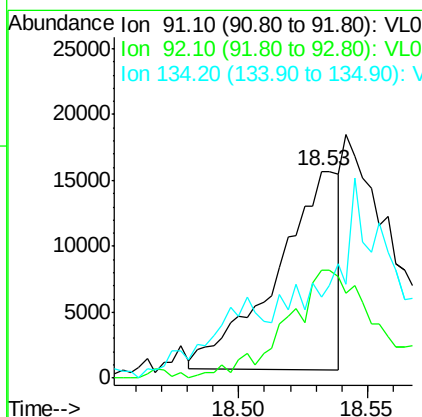
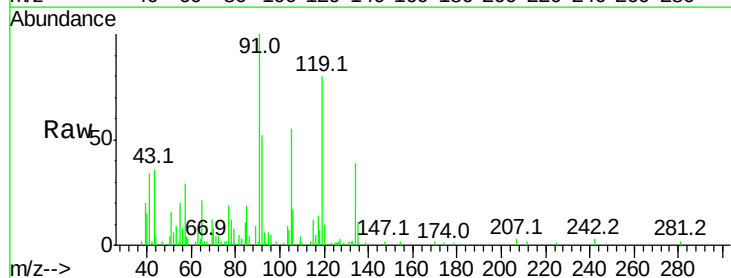
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.47 ppbv
 RT: 14.40 min
 Delta R.T.: MSVOA_1
 Lab File: ClientSampleId : SG-4
 Acq: 6 Jun 2022 13:34

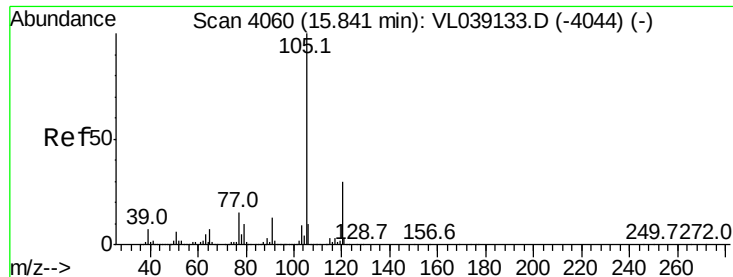
Tgt Ion: 95 Resp: 2444398
 Ion Ratio Lower Upper
 95 100
 174 70.9 53.8 80.8
 175 4.8 4.1 6.1



#70
 n-Butylbenzene
 Concen: 0.04 ppbv
 RT: 18.53 min Scan# 4897
 Delta R.T.: -0.02 min
 Lab File: VL039184.D
 Acq: 6 Jun 2022 13:34

Tgt Ion: 91 Resp: 25376
 Ion Ratio Lower Upper
 91 100
 92 84.0 43.6 65.4#
 134 0.0 17.7 26.5#





#72

4-Ethyltoluene

Concen: 0.10 ppbv

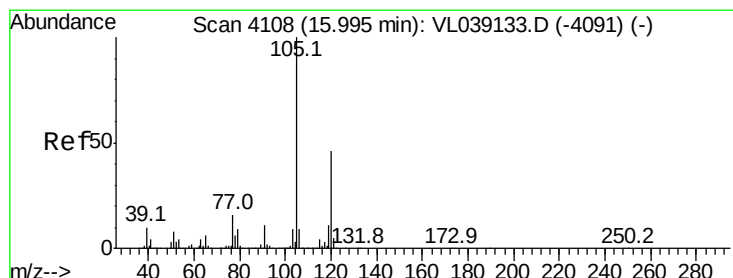
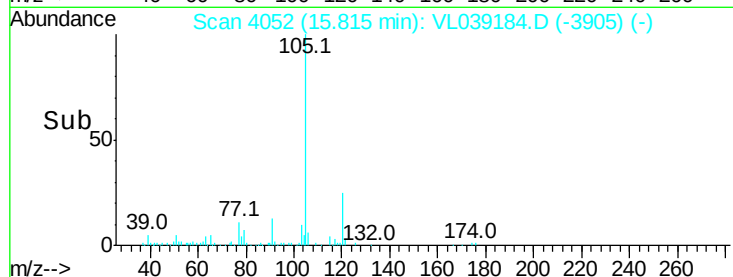
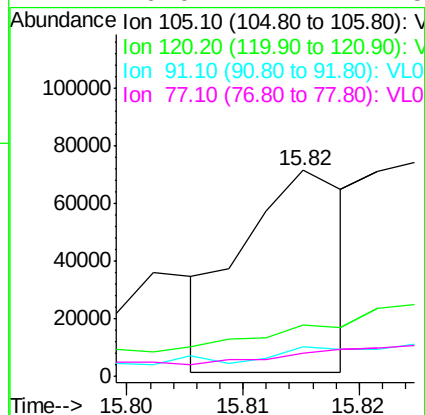
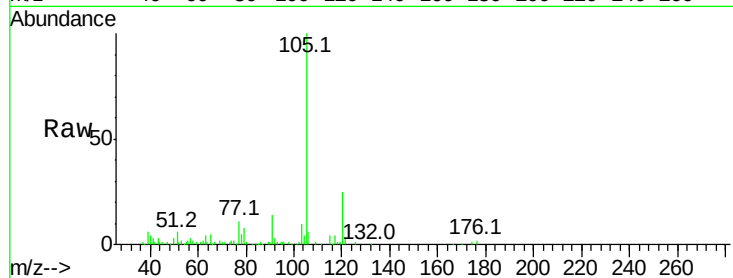
RT: 15.82

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 6 Jun 2022 13:34

Tgt Ion:	105	Resp:	43405
Ion Ratio	Lower	Upper	
105	100		
120	0.0	23.9	35.9#
91	0.0	10.6	16.0#
77	0.0	11.7	17.5#



#73

1,3,5-Trimethylbenzene

Concen: 0.36 ppbv

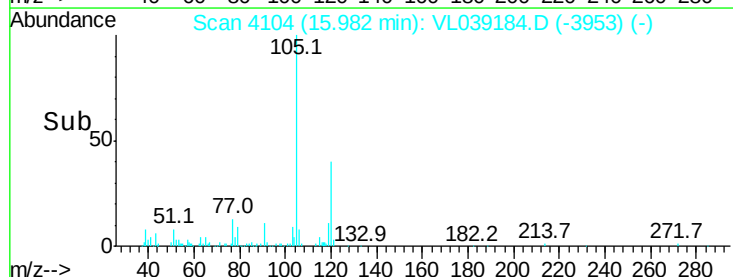
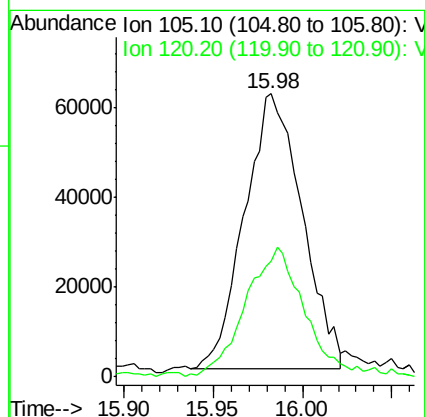
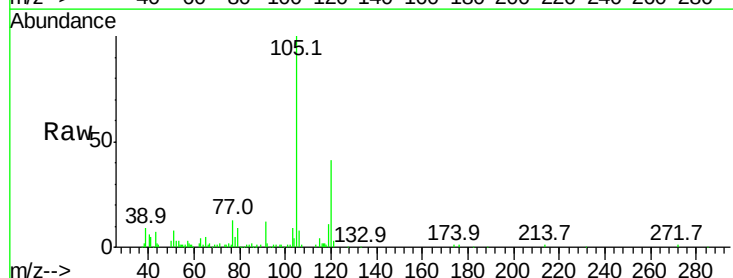
RT: 15.98 min Scan# 4104

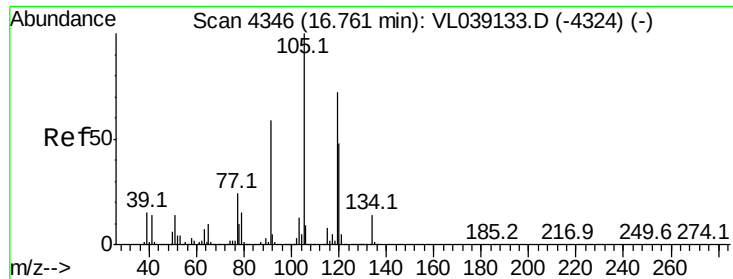
Delta R.T. -0.01 min

Lab File: VL039184.D

Acq: 6 Jun 2022 13:34

Tgt Ion:	105	Resp:	137185
Ion Ratio	Lower	Upper	
105	100		
120	41.1	36.7	55.1





#74
 1,2,4-Trimethylbenzene
 Concen: 1.25 ppbv
 RT: 16.75
 Delta R.T: MSVOA_L
 Lab File: ClientSampleId :
 Acq: 6 Jun 2022 15:34

Tgt Ion:	105	Resp:	526220
Ion Ratio	Lower	Upper	
105	100		
120	42.2	38.1	57.1
91	12.0	47.4	71.0#
77	14.1	19.5	29.3#

