

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL061322\
 Data File : VL039265.D
 Acq On : 14 Jun 2022 00:00
 Operator : SY/AP
 Sample : N3306-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA L
 ClientSampleId :
 A-1

Quant Time: Jun 14 01:33:58 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

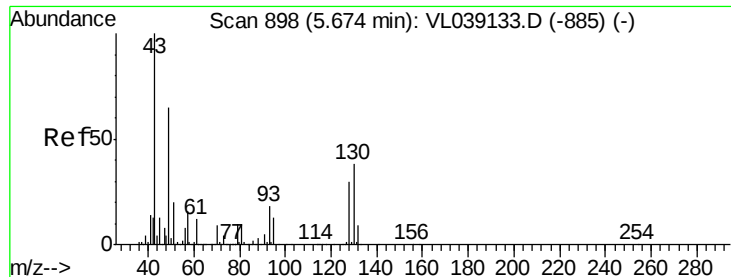
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1181414	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2595809	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2136753	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	1946034	11.02	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	110.20%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.06	85	57295	0.276 ppbv	99
3) Chlorodifluoromethane	3.00	51	100808	0.671 ppbv #	82
4) Chloromethane	3.15	50	40324	0.522 ppbv	89
9) Propene	3.03	41	242750	3.704 ppbv #	69
10) Heptane	8.12	43	5922	0.039 ppbv #	1
11) Trichlorofluoromethane	3.95	101	34707	0.185 ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.49	101	4178	0.034 ppbv #	1
13) Ethanol	3.61	45	544851	152.424 ppbv #	100
15) Acetone	3.85	43	2293546	18.637 ppbv	92
16) 1,3-Butadiene	3.32	39	13540	0.205 ppbv #	41
17) tert-Butyl alcohol	4.29	59	6835	0.072 ppbv #	70
19) Isopropyl Alcohol	3.97	45	1857534	32.181 ppbv	99
20) Methylene Chloride	4.35	84	309781	5.973 ppbv	96
21) Allyl Chloride	4.35	41	3887	0.047 ppbv #	1
23) Vinyl Acetate	5.09	43	9008	0.088 ppbv #	34
25) Ethyl Acetate	5.69	43	326382	1.177 ppbv #	94
26) Hexane	5.69	57	250705	2.057 ppbv #	59
30) Cyclohexane	7.13	84	5182	0.051 ppbv #	1
34) 2-Butanone	5.25	43	84953	0.602 ppbv	93
36) Benzene	6.89	78	60893	0.289 ppbv #	81
39) 1,2-Dichloropropane	7.18	63	758945	9.054 ppbv #	25
44) 2,2,4-Trimethylpentane	7.87	57	72951	0.198 ppbv #	60
52) Tetrachloroethene	11.24	164	16686	0.203 ppbv	97
53) Toluene	9.81	91	201379	0.830 ppbv	97
58) Ethyl Benzene	12.71	91	36483	0.124 ppbv	100
59) m/p-Xylene	13.01	91	10923	0.042 ppbv #	33
60) o-Xylene	13.69	91	26583	0.109 ppbv #	53
61) Styrene	13.52	104	4571	0.035 ppbv #	1
66) Benzyl Chloride	16.77	91	1518	0.035 ppbv #	1
71) 2-Chlorotoluene	15.55	91	12041	0.044 ppbv #	48
72) 4-Ethyltoluene	15.84	105	8972	0.031 ppbv #	13
74) 1,2,4-Trimethylbenzene	16.76	105	66115	0.230 ppbv #	58

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument: MSVOA_1

Delta R.T. A-1

Lab File: ClientSampleId :

Acq: 14 Jun 2022 00:00

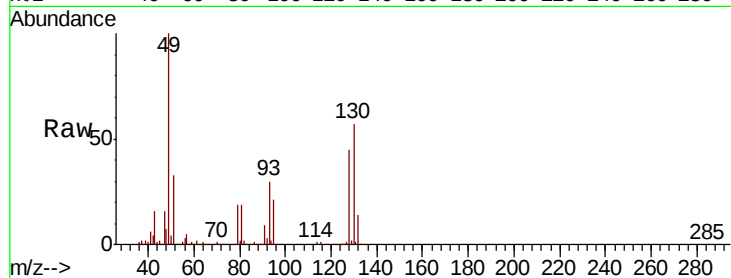
Tot Ion: 49 Resp: 1181414

Ion Ratio Lower Upper

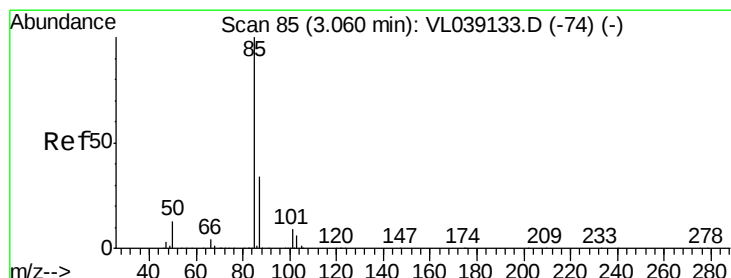
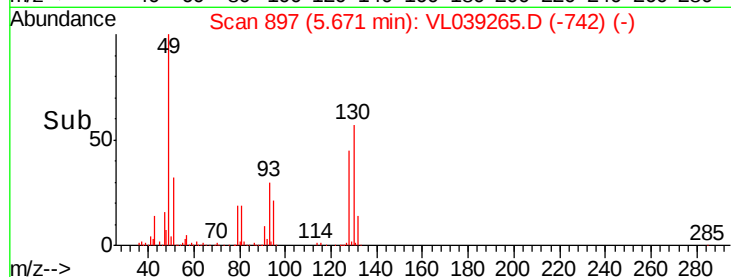
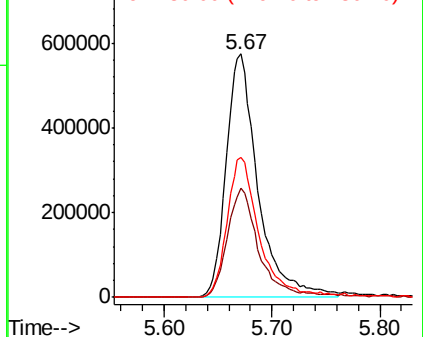
49 100

128 45.6 24.7 74.1

130 59.4 31.4 94.0



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.276 ppbv

RT: 3.06 min Scan# 84

Delta R.T. -0.00 min

Lab File: VL039265.D

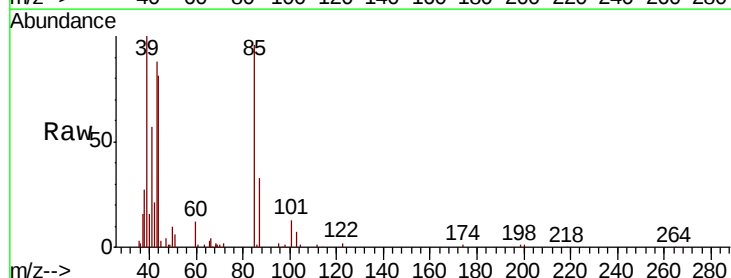
Acq: 14 Jun 2022 00:00

Tgt Ion: 85 Resp: 57295

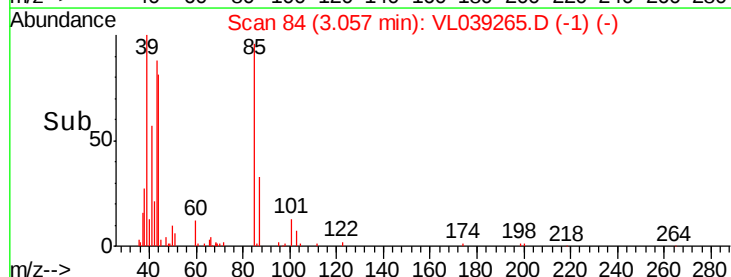
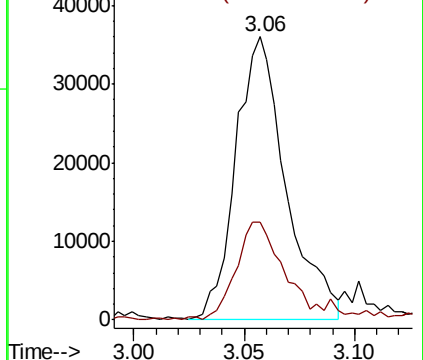
Ion Ratio Lower Upper

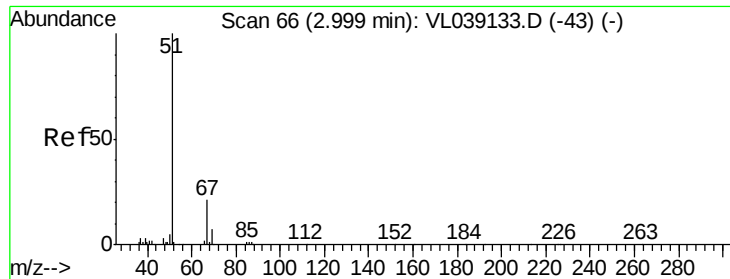
85 100

87 33.3 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: 0.671 ppbv

RT: 3.00 Instrument:

Delta R.T. MSVOA.L

Lab File: ClientSampleId:

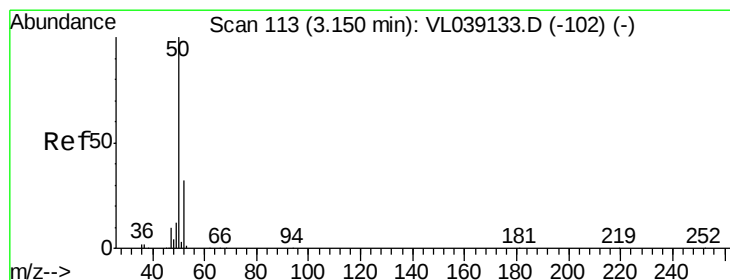
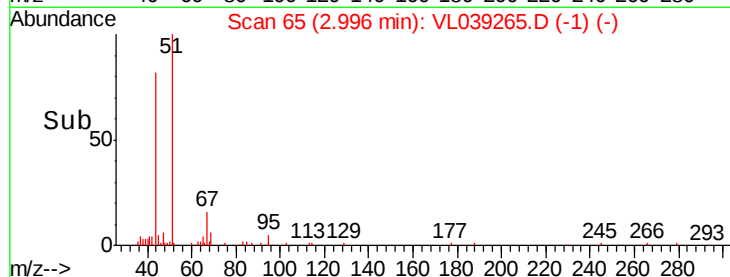
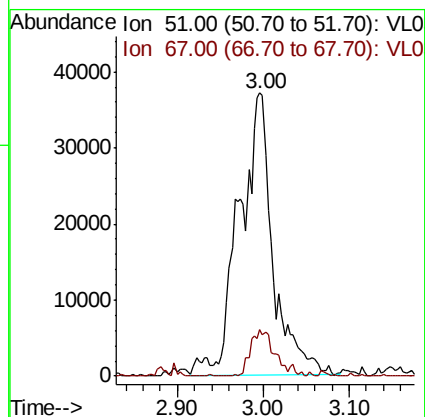
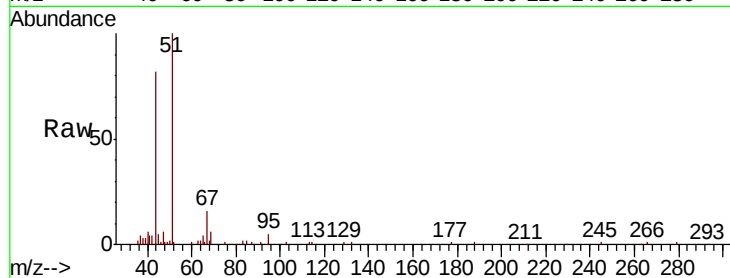
Acq: 14 Jun 2022 00:00

Tot Ion: 51 Resp: 100808

Ion Ratio Lower Upper

51 100

67 12.0 16.2 24.4#



#4

Chloromethane

Concen: 0.522 ppbv

RT: 3.15 min Scan# 113

Delta R.T. 0.00 min

Lab File: VL039265.D

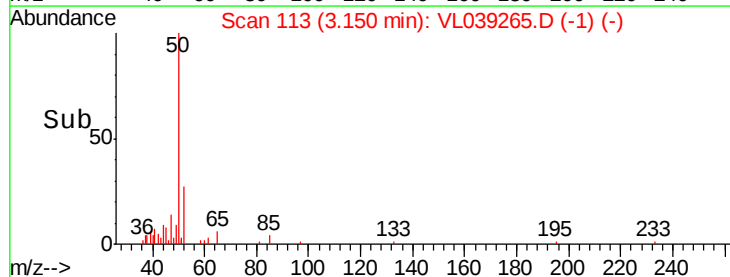
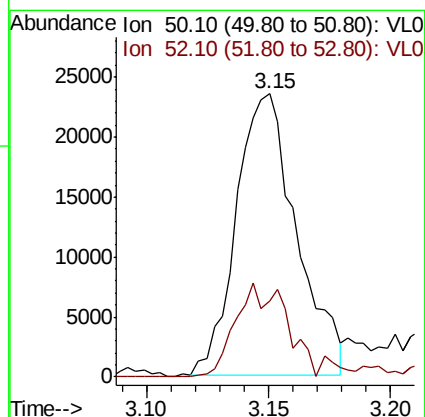
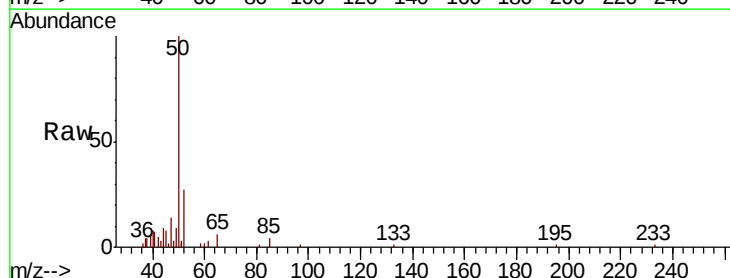
Acq: 14 Jun 2022 00:00

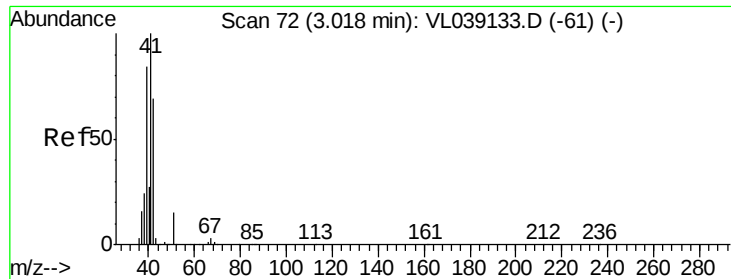
Tgt Ion: 50 Resp: 40324

Ion Ratio Lower Upper

50 100

52 26.2 25.9 38.9





#9

Propene

Concen: 3.704 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

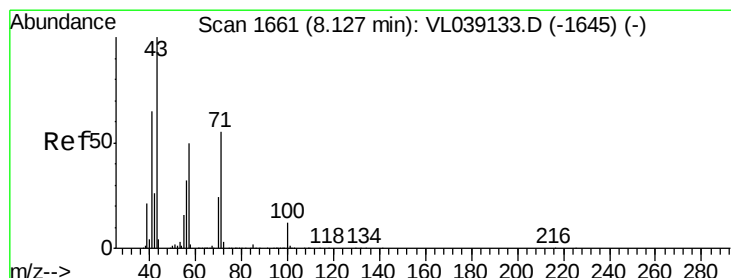
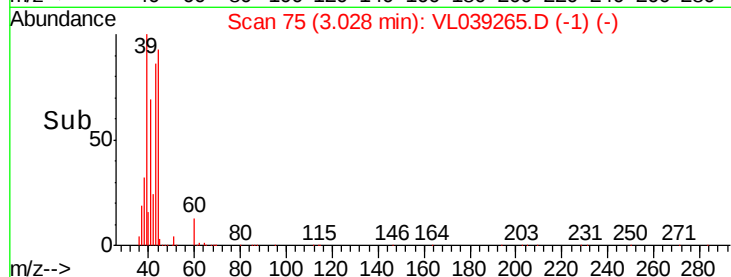
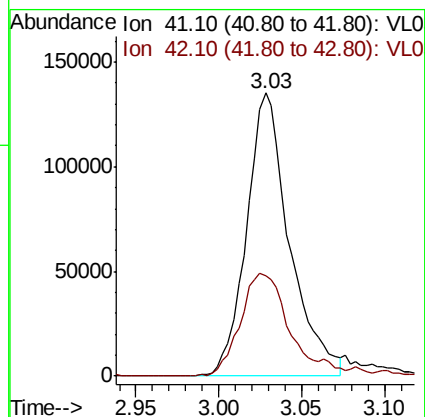
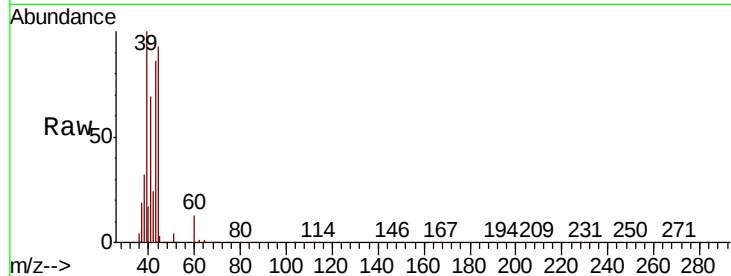
Acq: 14 Jun 2022 00:00

Tot Ion: 41 Resp: 242750

Ion Ratio Lower Upper

41 100

42 44.3 55.4 83.2#



#10

Heptane

Concen: 0.039 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.01 min

Lab File: VL039265.D

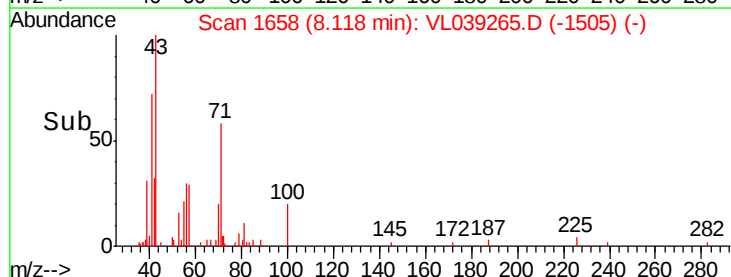
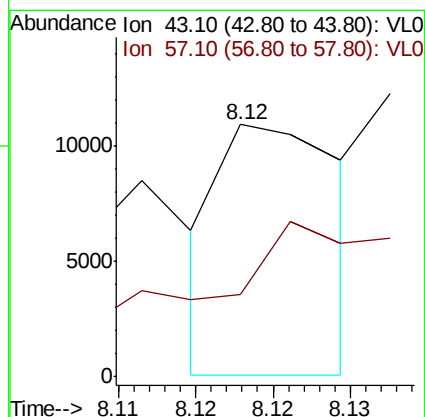
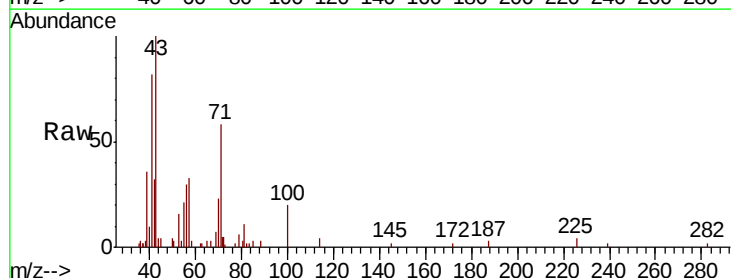
Acq: 14 Jun 2022 00:00

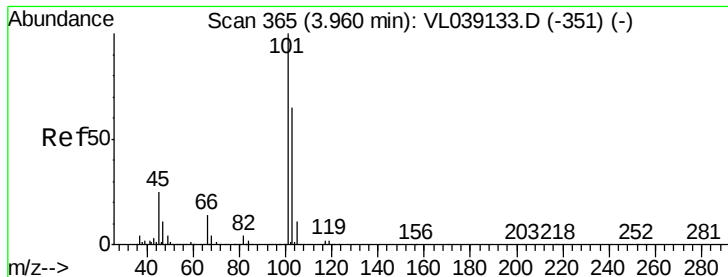
Tgt Ion: 43 Resp: 5922

Ion Ratio Lower Upper

43 100

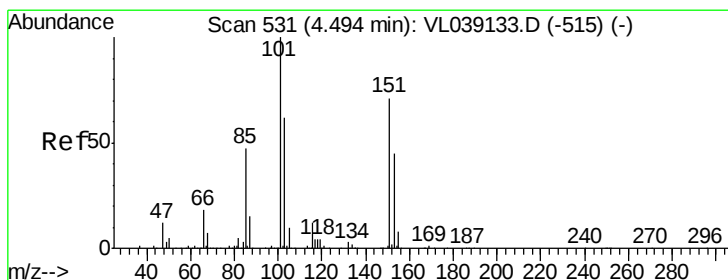
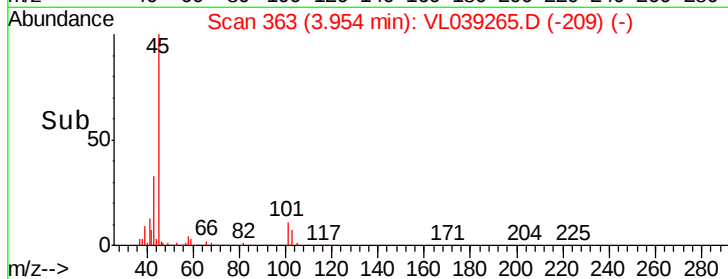
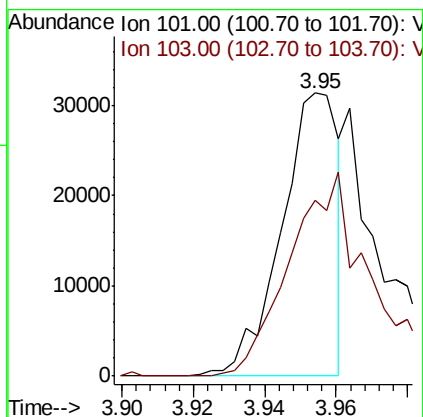
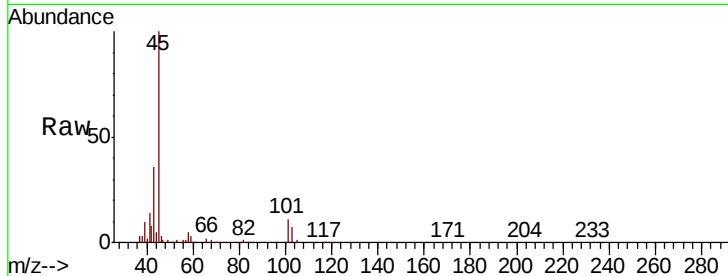
57 233.4 41.4 62.2#





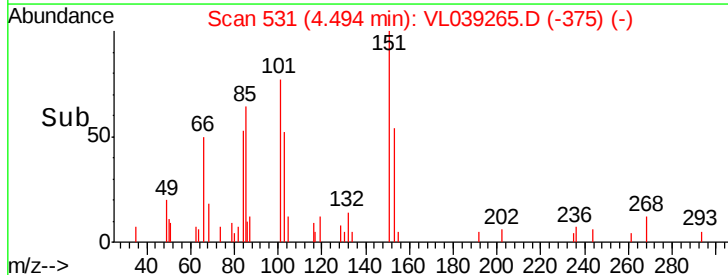
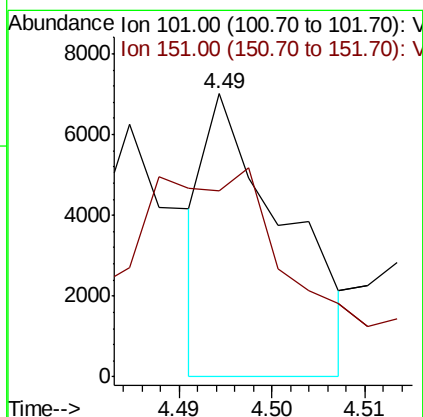
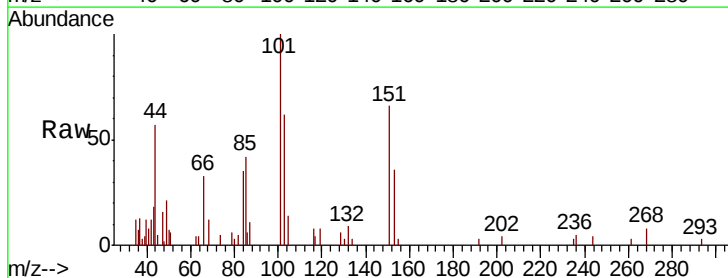
#11
 Trichlorofluoromethane
 Concen: 0.185 ppbv
 RT: 3.95
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 14 Jun 2022 00:00

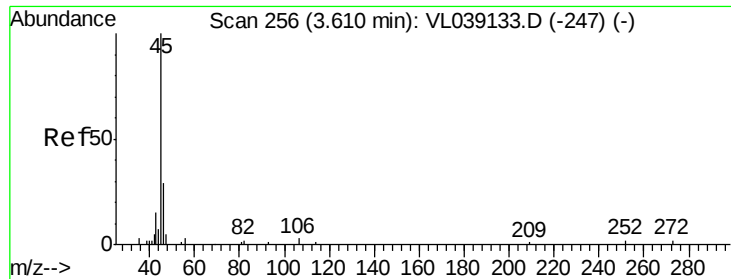
Tot Ion:101 Resp: 34707
 Ion Ratio Lower Upper
 101 100
 103 62.2 51.7 77.5



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.034 ppbv
 RT: 4.49 min Scan# 531
 Delta R.T.: 0.00 min
 Lab File: VL039265.D
 Acq: 14 Jun 2022 00:00

Tgt Ion:101 Resp: 4178
 Ion Ratio Lower Upper
 101 100
 151 202.2 59.4 89.0#





#13

Ethanol

Concen: 152.424 ppbv

RT: 3.61

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

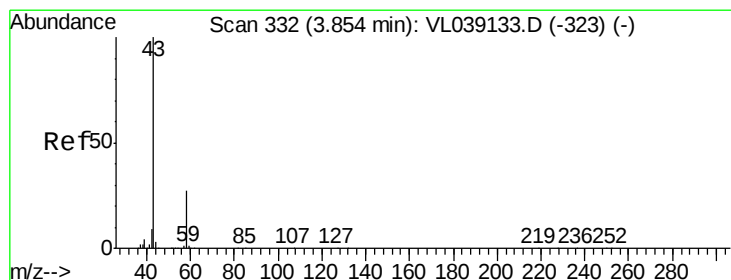
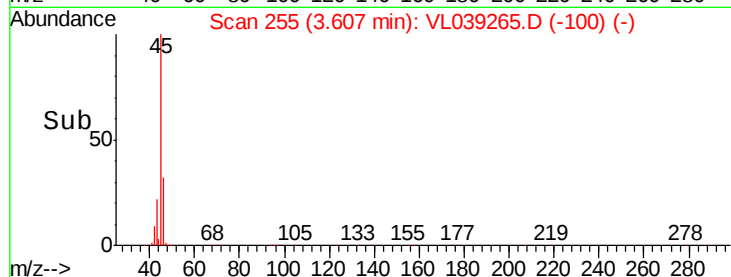
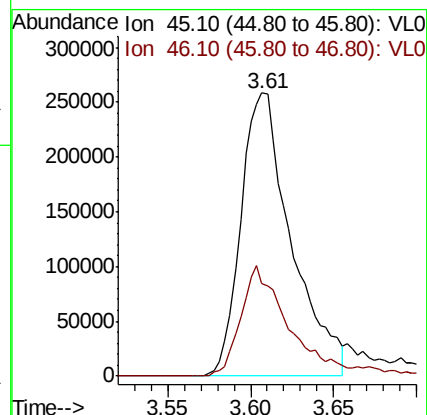
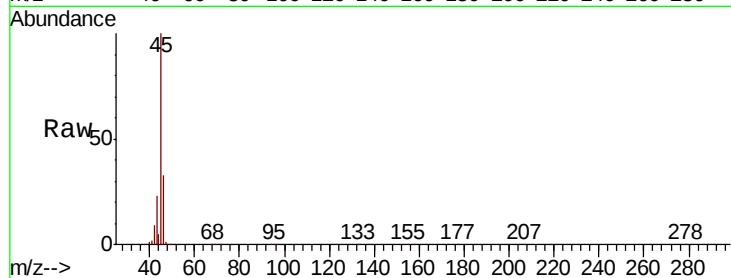
Acq: 14 Jun 2022 00:00

Tot Ion: 45 Resp: 544851

Ion Ratio Lower Upper

45 100

46 40.2 0.0 0.0#



#15

Acetone

Concen: 18.637 ppbv

RT: 3.85 min Scan# 331

Delta R.T. -0.00 min

Lab File: VL039265.D

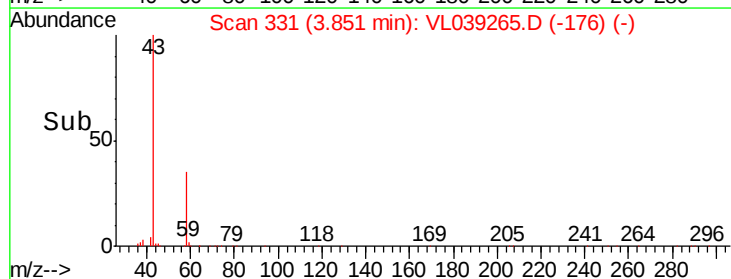
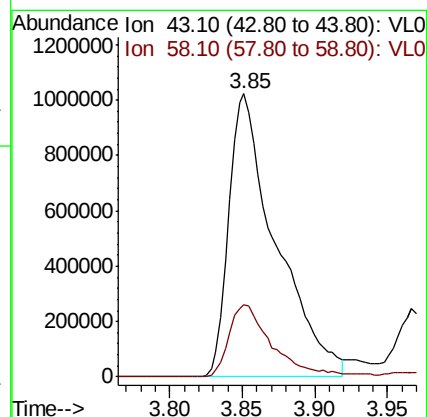
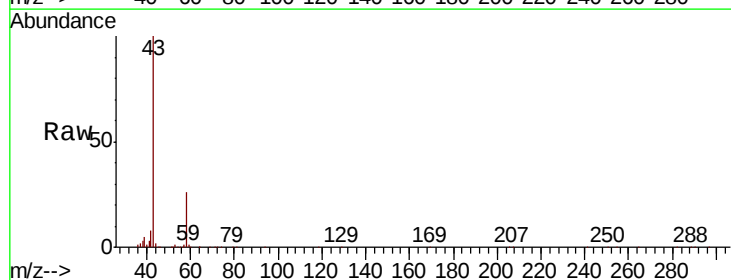
Acq: 14 Jun 2022 00:00

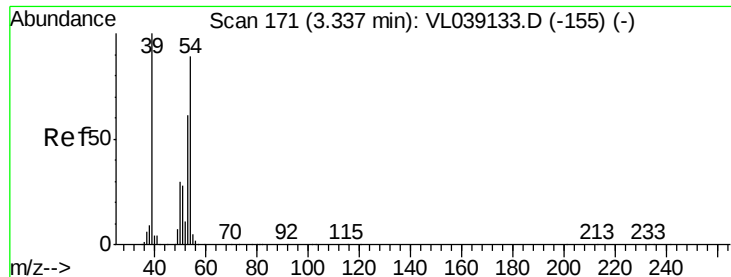
Tgt Ion: 43 Resp: 2293546

Ion Ratio Lower Upper

43 100

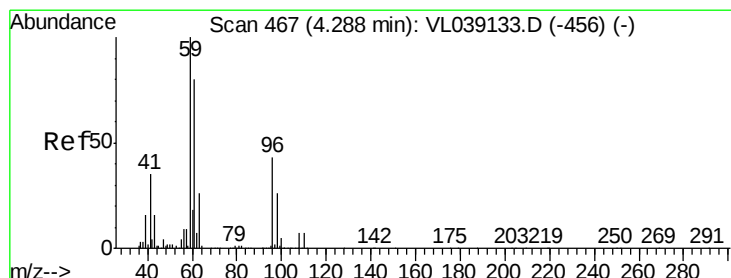
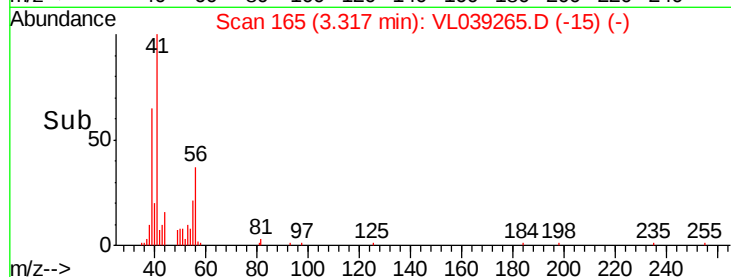
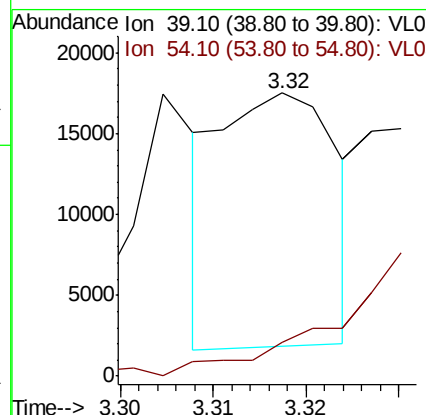
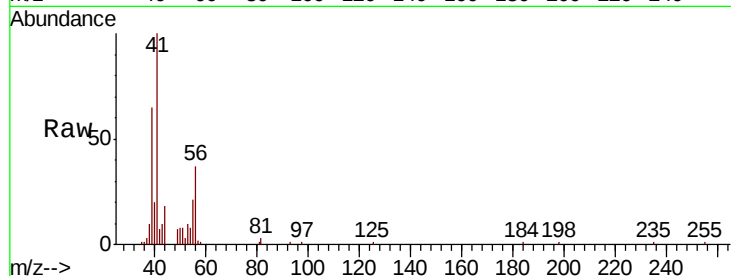
58 23.9 22.5 33.7





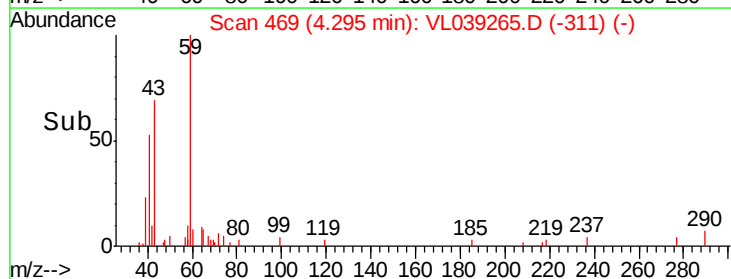
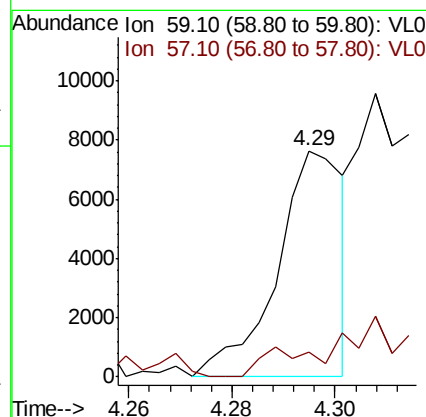
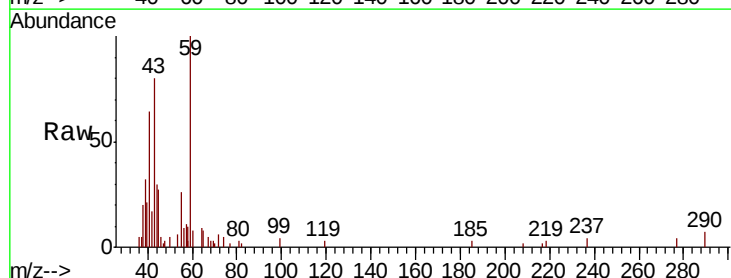
#16
 1,3-Butadiene
 Concen: 0.205 ppbv
 RT: 3.32
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 14 Jun 2022 00:00

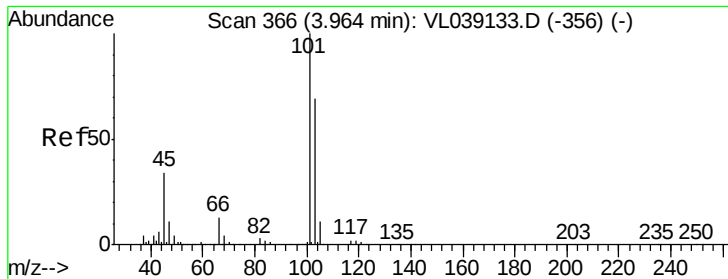
Tot Ion: 39 Resp: 13540
 Ion Ratio Lower Upper
 39 100
 54 134.8 65.8 98.6#



#17
 tert-Butyl alcohol
 Concen: 0.072 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.01 min
 Lab File: VL039265.D
 Acq: 14 Jun 2022 00:00

Tgt Ion: 59 Resp: 6835
 Ion Ratio Lower Upper
 59 100
 57 0.0 9.1 13.7#





#19

Isopropyl Alcohol

Concen: 32.181 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

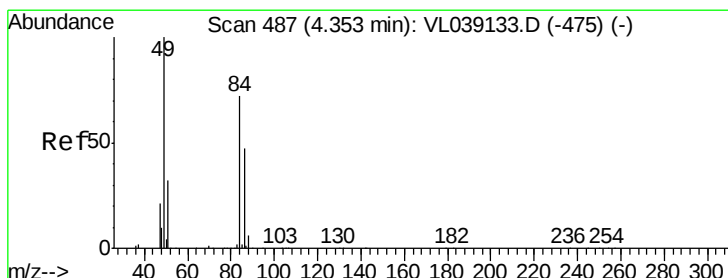
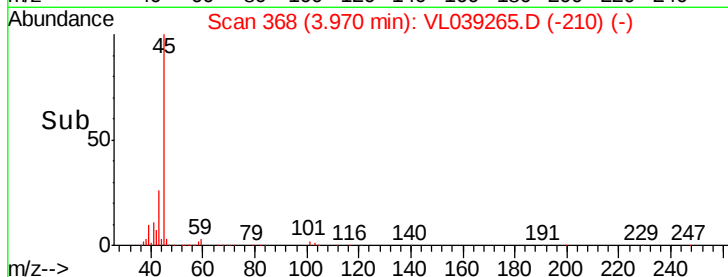
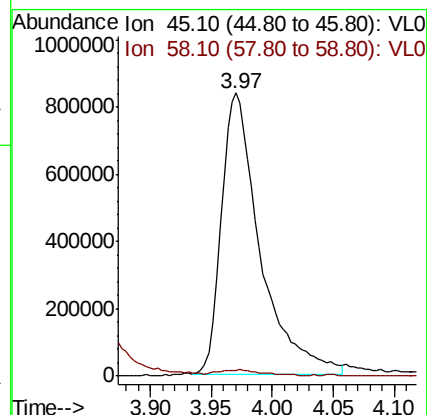
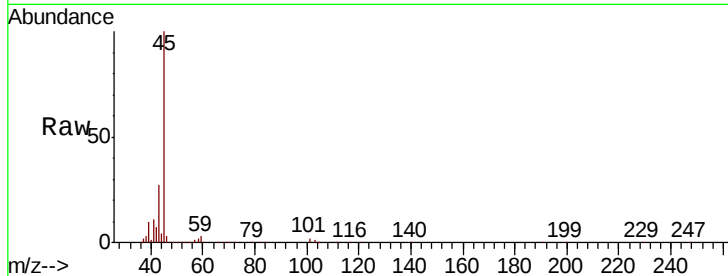
Acq: 14 Jun 2022 00:00

Tot Ion: 45 Resp: 1857534

Ion Ratio Lower Upper

45 100

58 2.8 1.8 2.8



#20

Methylene Chloride

Concen: 5.973 ppbv

RT: 4.35 min Scan# 486

Delta R.T. -0.00 min

Lab File: VL039265.D

Acq: 14 Jun 2022 00:00

Tgt Ion: 84 Resp: 309781

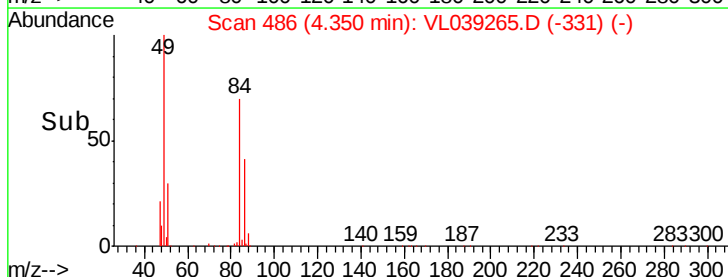
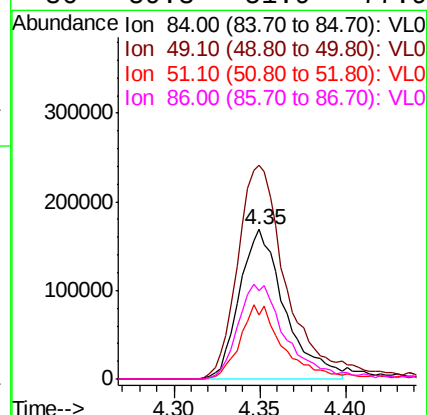
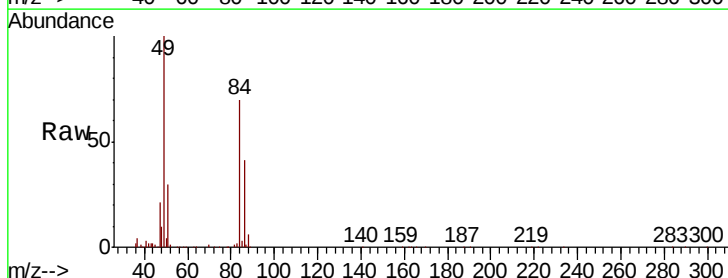
Ion Ratio Lower Upper

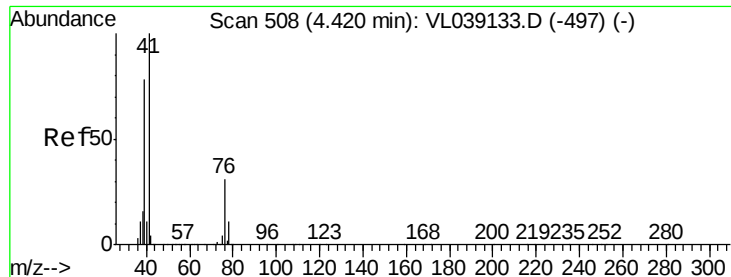
84 100

49 143.2 111.1 166.7

51 42.7 35.3 52.9

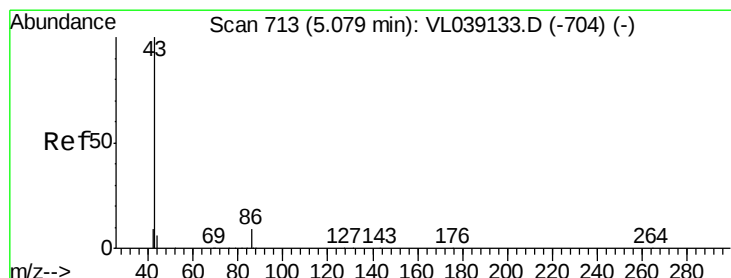
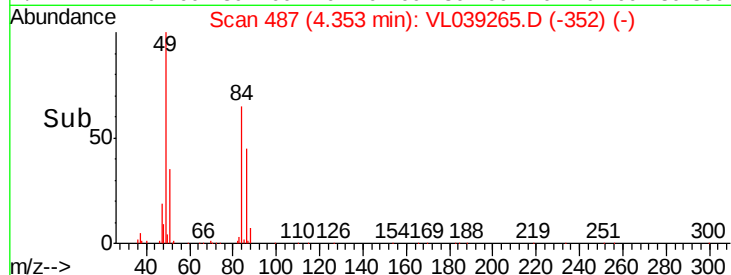
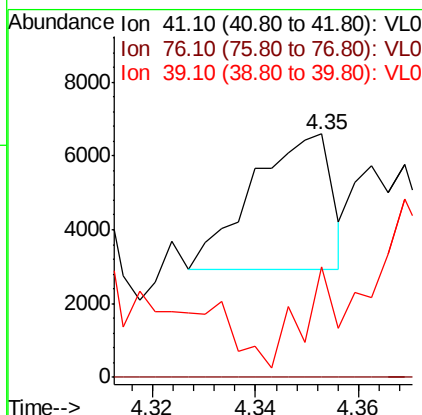
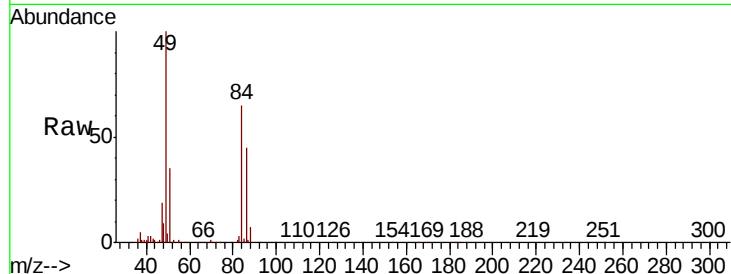
86 59.3 51.9 77.9





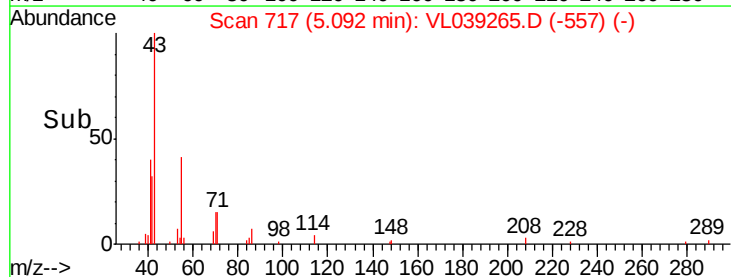
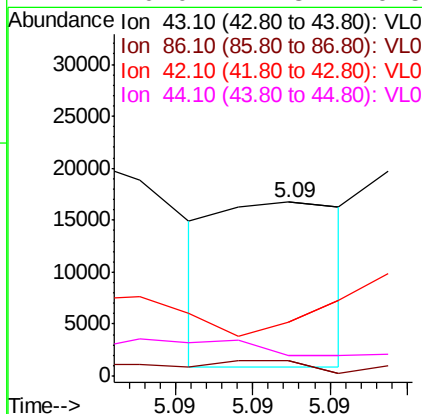
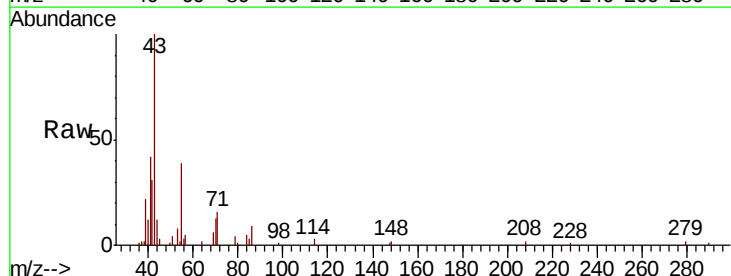
#21
Allvl Chloride
Concen: 0.047 ppbv
RT: 4.35
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Jun 2022 00:00

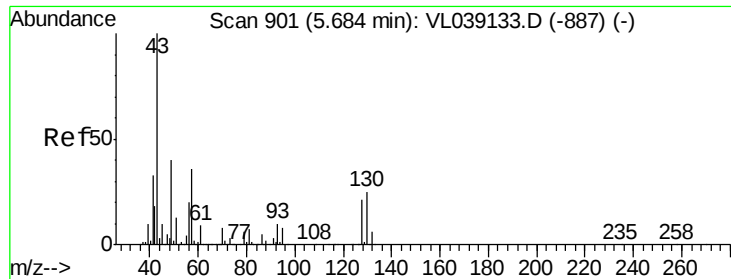
Tot Ion	Ratio	Lower	Upper
41	100		
76	0.0	24.2	36.2#
39	271.9	62.2	93.2#



#23
Vinyl Acetate
Concen: 0.088 ppbv
RT: 5.09 min Scan# 717
Delta R.T. 0.01 min
Lab File: VL039265.D
Acq: 14 Jun 2022 00:00

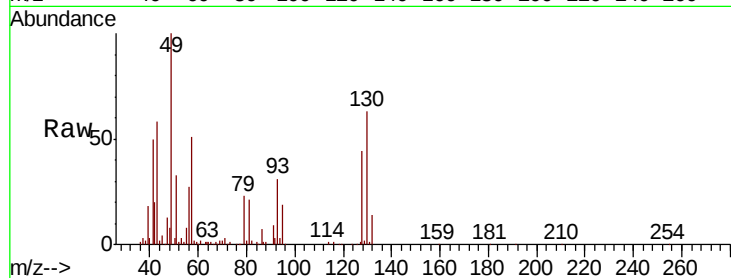
Tgt Ion	Ratio	Lower	Upper
43	100		
86	61.7	6.0	9.0#
42	0.0	8.2	12.4#
44	0.0	4.3	6.5#





#25
Ethyl Acetate
Concen: 1.177 ppbv
RT: 5.69
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 14 Jun 2022 00:00

Tot Ion:	43	Resp:	326382
Ion	Ratio	Lower	Upper
43	100		
45	10.6	8.2	12.2
61	5.8	8.4	12.6#
70	5.8	5.6	8.4



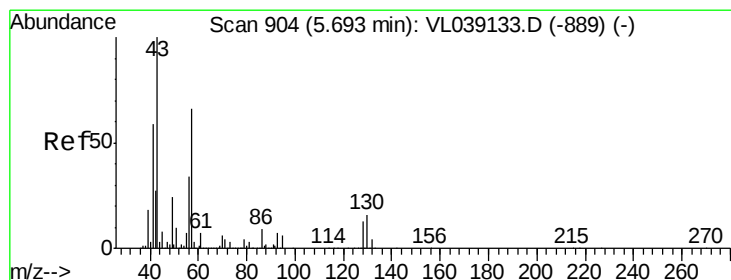
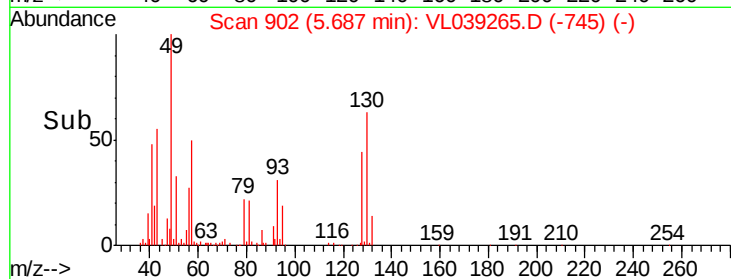
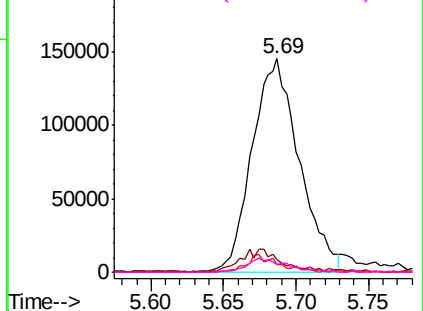
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

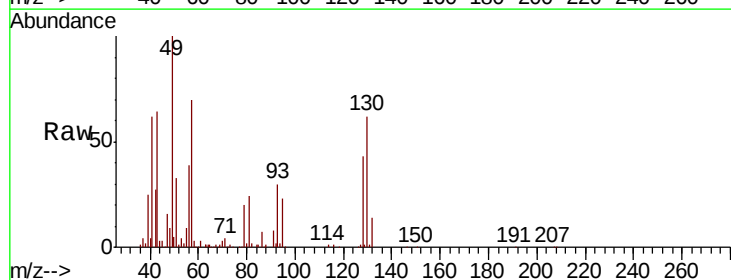
Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26
Hexane
Concen: 2.057 ppbv
RT: 5.69 min Scan# 903
Delta R.T.: -0.00 min
Lab File: VL039265.D
Acq: 14 Jun 2022 00:00

Tgt Ion:	57	Resp:	250705
Ion	Ratio	Lower	Upper
57	100		
41	108.5	72.4	108.6
43	138.8	187.0	280.6#
56	59.7	41.8	62.6



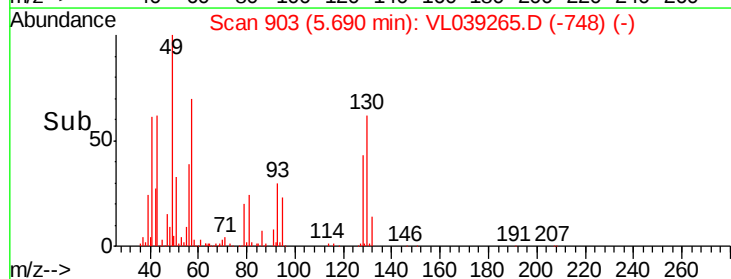
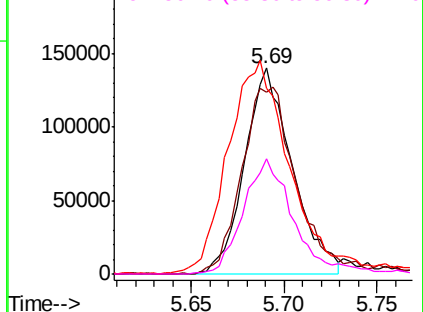
Abundance

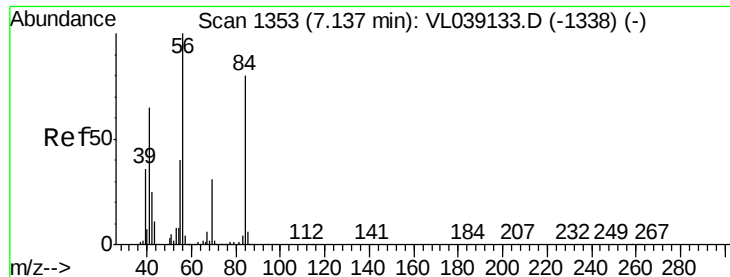
Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

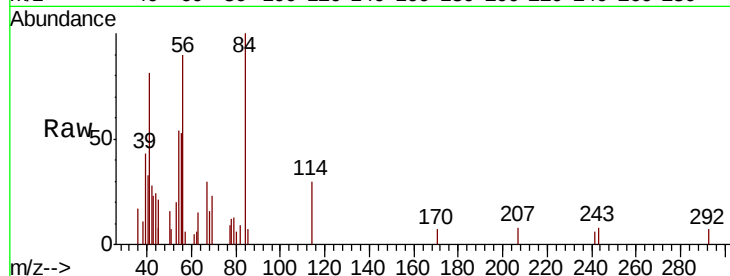
Ion 56.10 (55.80 to 56.80): VL0





#30
Cvclohexane
Concen: 0.051 ppbv
RT: 7.13
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Jun 2022 00:00

Tot Ion	84	Resp	5182
Ion Ratio	Lower	Upper	
84	100		
56	0.0	110.6	165.8#
41	0.0	68.9	103.3#

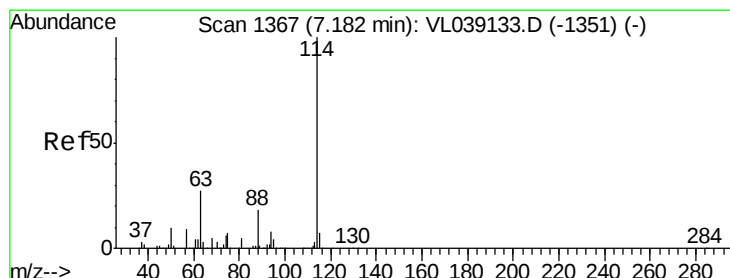
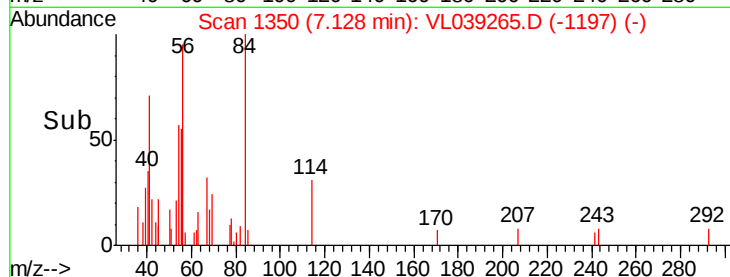
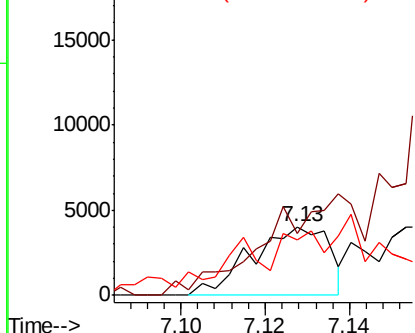


Abundance

Ion 84.20 (83.90 to 84.90): VL0

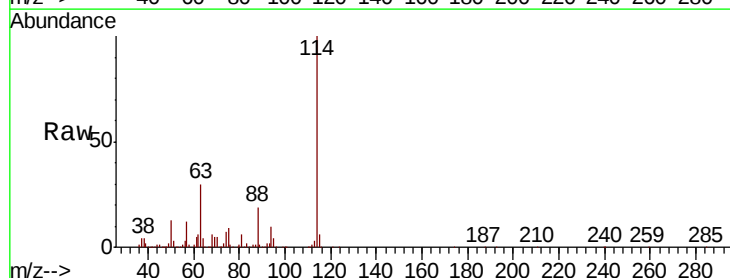
Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T. -0.01 min
Lab File: VL039265.D
Acq: 14 Jun 2022 00:00

Tgt Ion	114	Resp	2595809
Ion Ratio	Lower	Upper	
114	100		
63	30.0	21.7	32.5
88	19.2	14.8	22.2

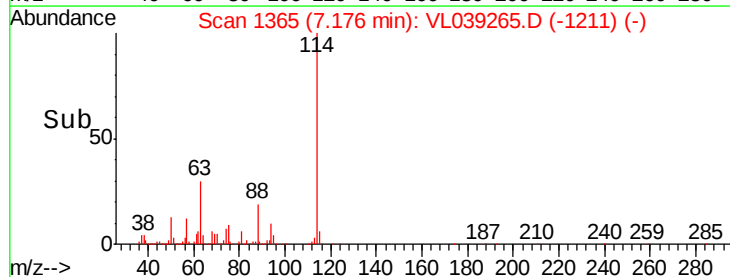
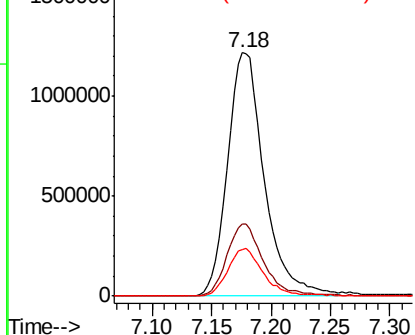


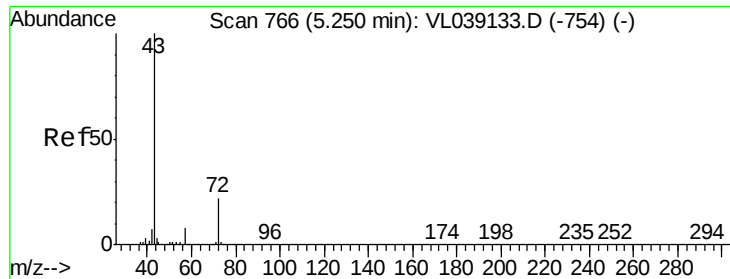
Abundance

Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

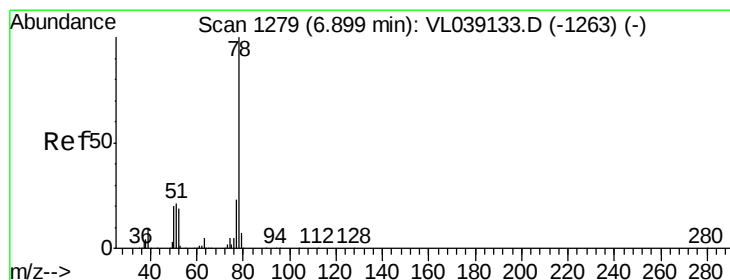
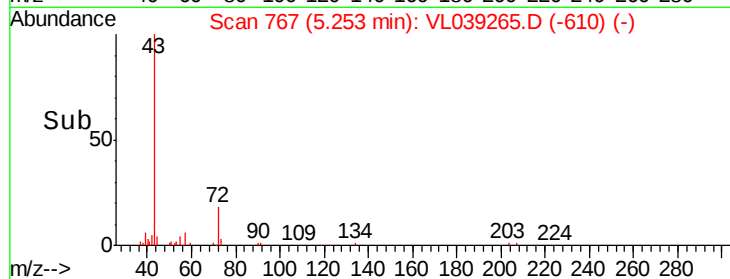
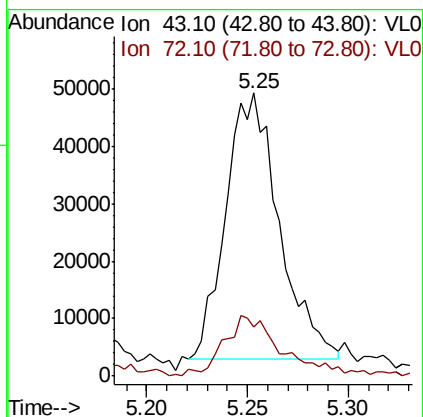
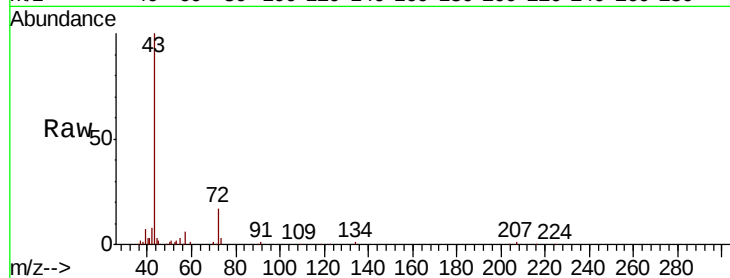
Ion 88.10 (87.80 to 88.80): VL0





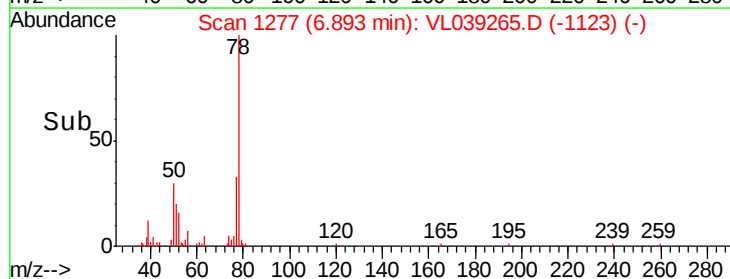
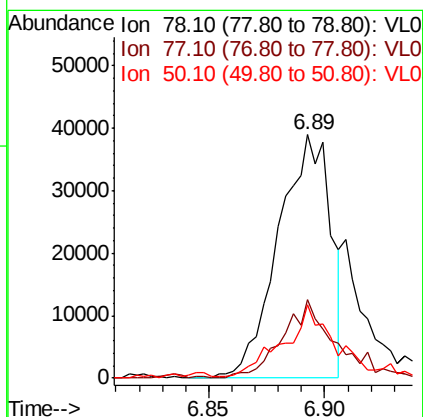
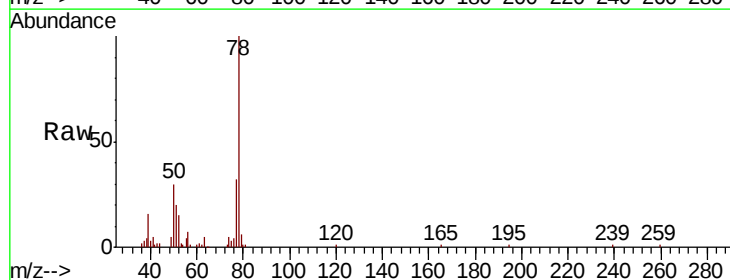
#34
 2-Butanone
 Concen: 0.602 ppbv
 RT: 5.25 Instrument : MSVOA_1
 Delta R.T. :
 Lab File: ClientSampleId :
 Acq: 14 Jun 2022 00:00

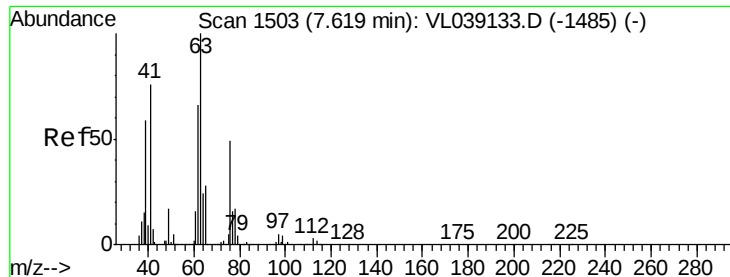
Tot Ion: 43 Resp: 84953
 Ion Ratio Lower Upper
 43 100
 72 25.9 18.2 27.2



#36
 Benzene
 Concen: 0.289 ppbv
 RT: 6.89 min Scan# 1277
 Delta R.T. -0.01 min
 Lab File: VL039265.D
 Acq: 14 Jun 2022 00:00

Tgt Ion: 78 Resp: 60893
 Ion Ratio Lower Upper
 78 100
 77 32.4 18.6 27.8#
 50 29.0 15.8 23.8#





#39

1,2-Dichloropropane

Concen: 9.054 ppbv

RT: 7.18 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Jun 2022 00:00

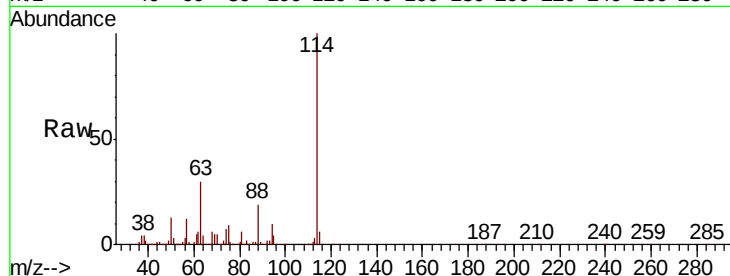
Tot Ion: 63 Resp: 758945

Ion Ratio Lower Upper

63 100

41 0.0 60.8 91.2#

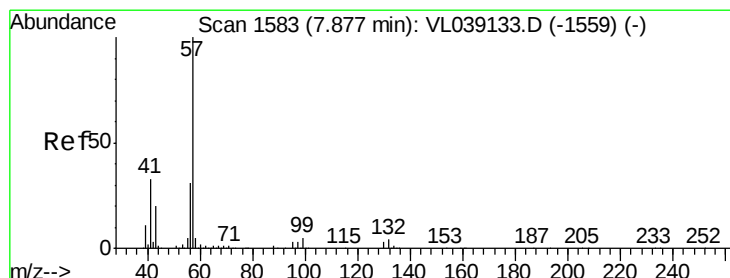
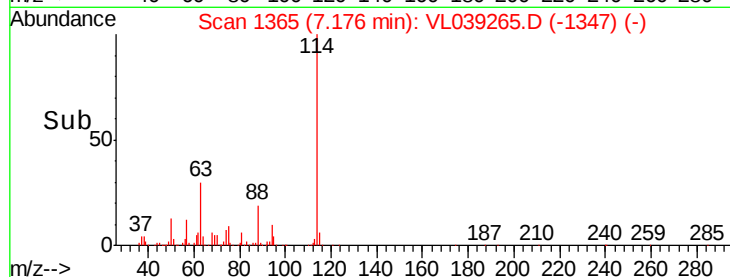
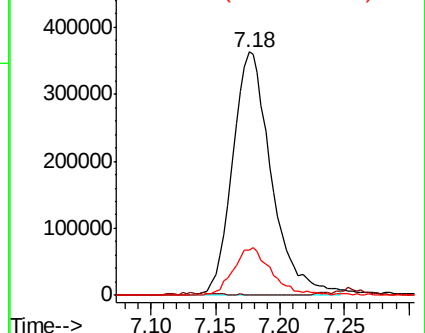
62 18.5 52.9 79.3#



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



#44

2,2,4-Trimethylpentane

Concen: 0.198 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. -0.01 min

Lab File: VL039265.D

Acq: 14 Jun 2022 00:00

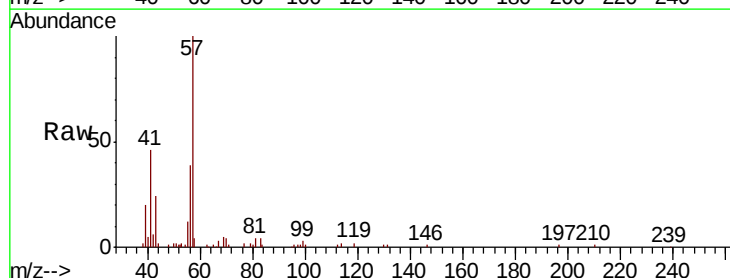
Tgt Ion: 57 Resp: 72951

Ion Ratio Lower Upper

57 100

41 62.0 26.2 39.4#

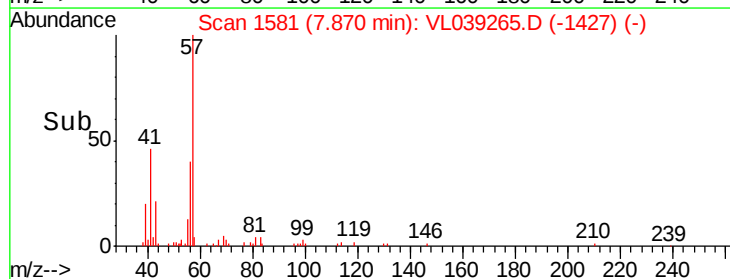
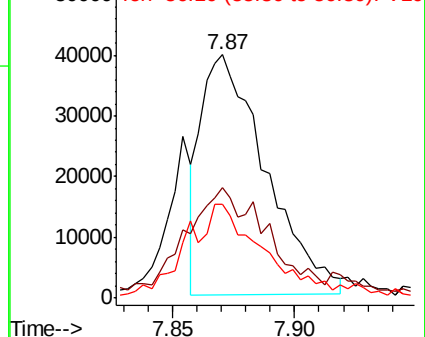
56 46.4 24.7 37.1#

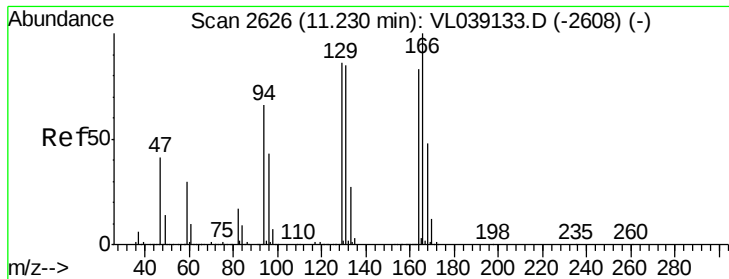


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#52

Tetrachloroethene

Concen: 0.203 ppbv

RT: 11.24 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 14 Jun 2022 00:00

Tot Ion:164 Resp: 16686

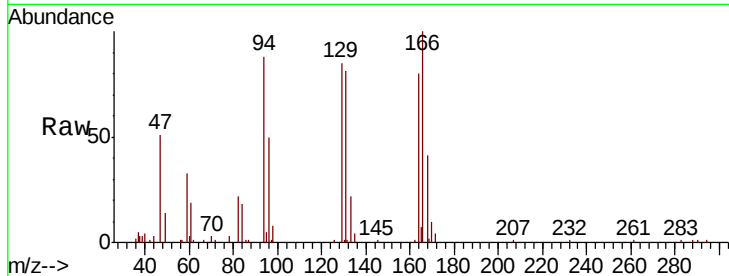
Ion Ratio Lower Upper

164 100

166 124.4 96.3 144.5

129 98.0 82.5 123.7

131 101.7 82.1 123.1

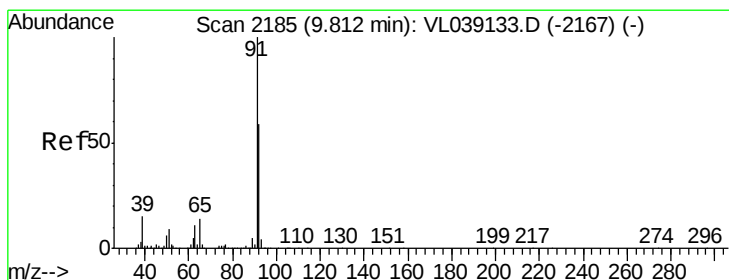
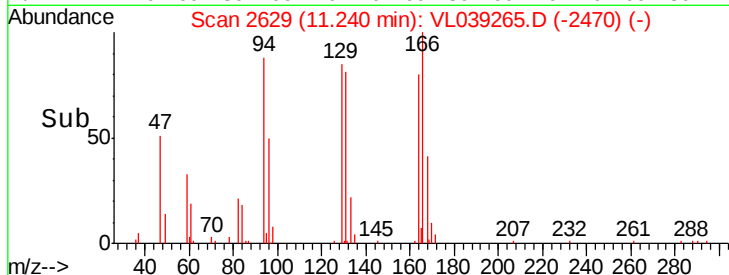
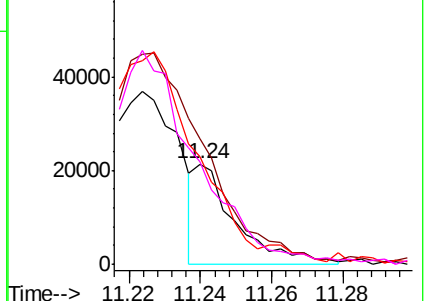


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.830 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL039265.D

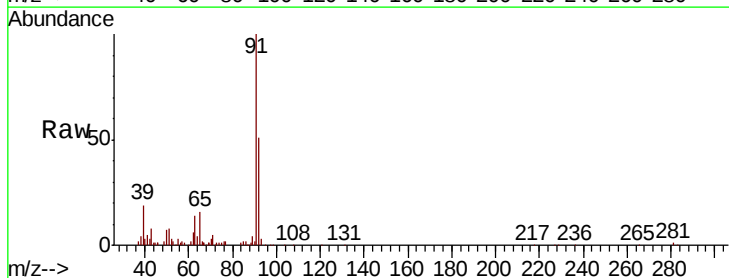
Acq: 14 Jun 2022 00:00

Tgt Ion: 91 Resp: 201379

Ion Ratio Lower Upper

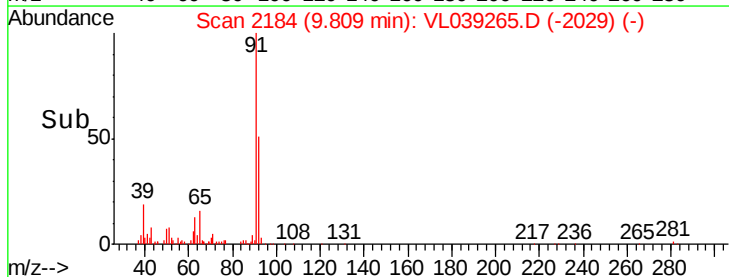
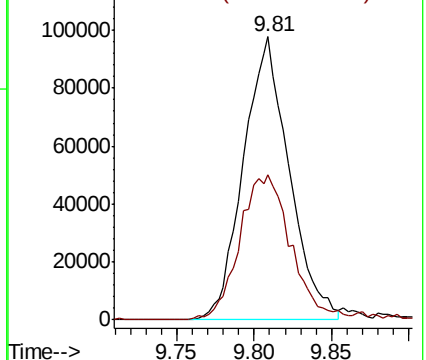
91 100

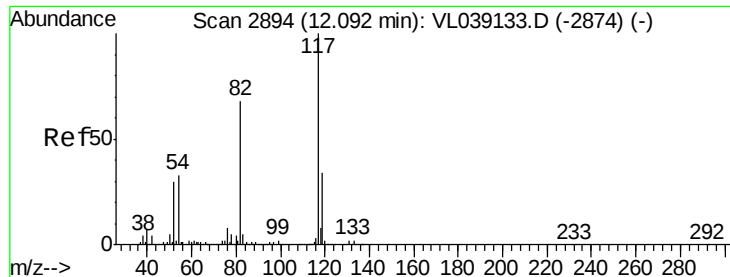
92 58.1 48.1 72.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

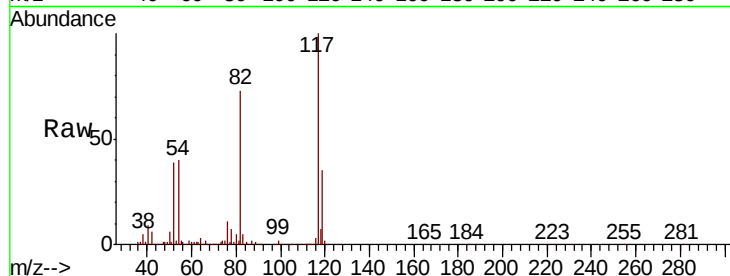
Ion 92.10 (91.80 to 92.80): VL0



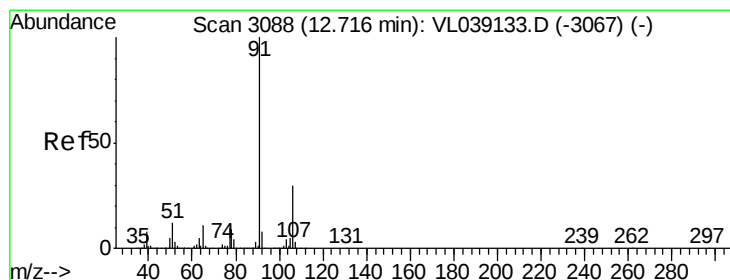
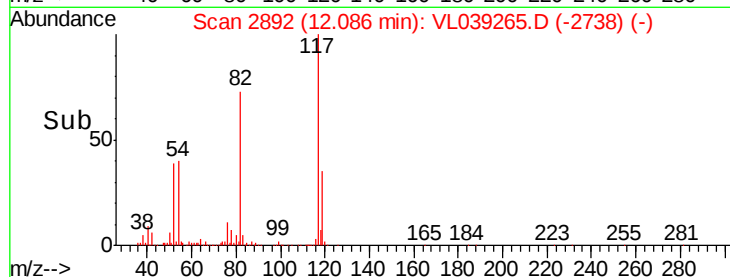
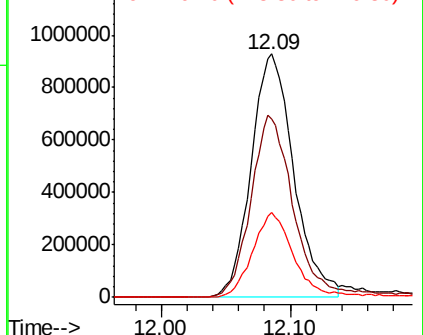


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 14 Jun 2022 00:00

Tot Ion:117 Resp: 2136753
Ion Ratio Lower Upper
117 100
82 77.1 55.1 82.7
119 34.8 24.7 37.1

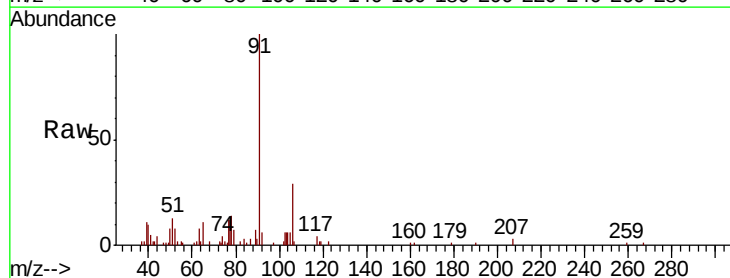


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

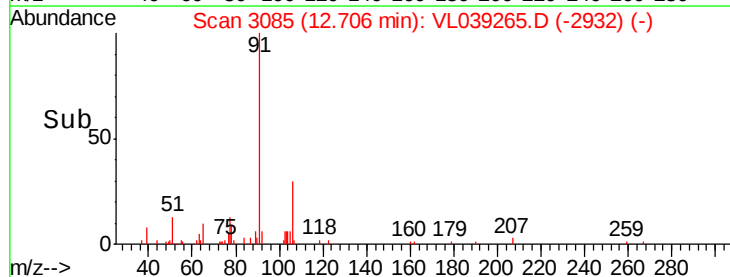
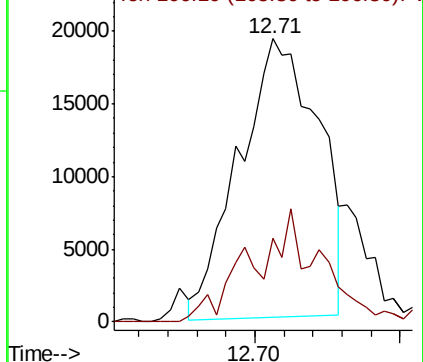


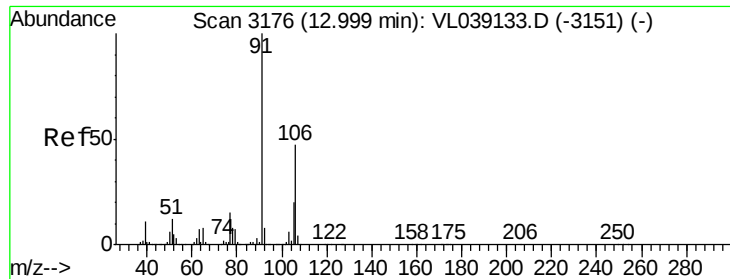
#58
Ethyl Benzene
Concen: 0.124 ppbv
RT: 12.71 min Scan# 3085
Delta R.T. -0.01 min
Lab File: VL039265.D
Acq: 14 Jun 2022 00:00

Tgt Ion: 91 Resp: 36483
Ion Ratio Lower Upper
91 100
106 30.3 24.2 36.4



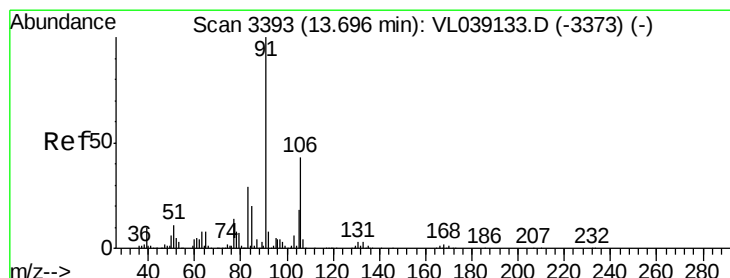
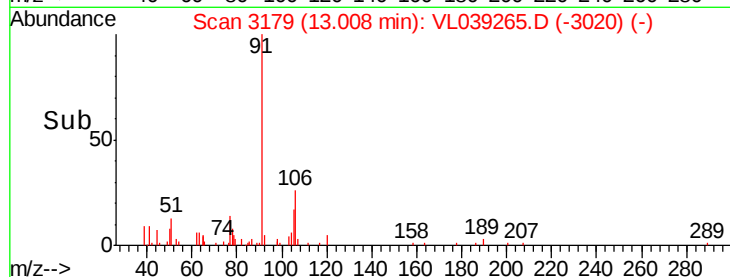
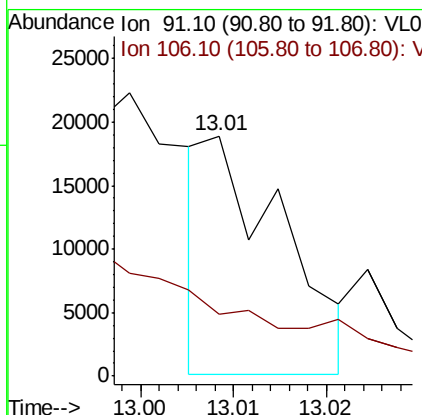
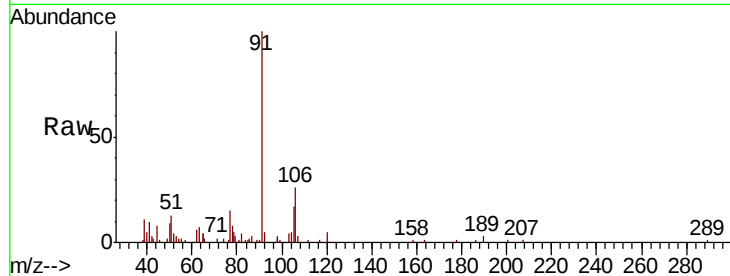
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





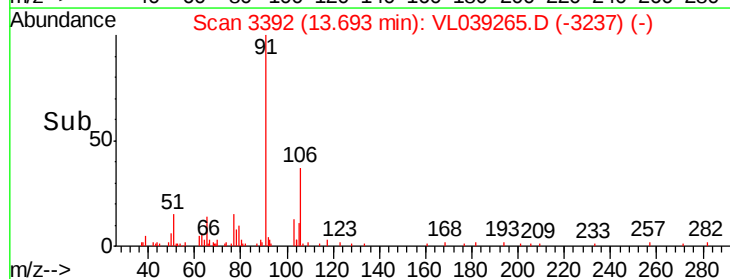
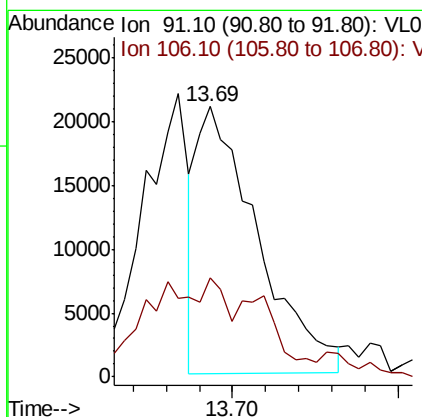
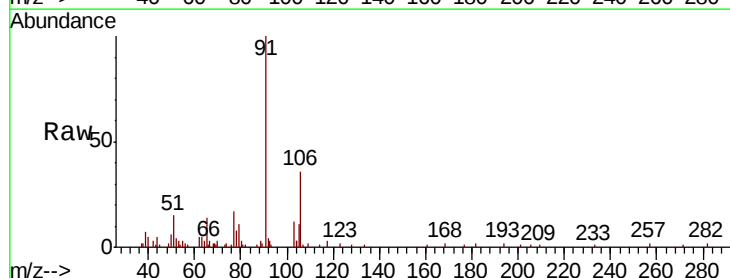
#59
m/p-Xylene
Concen: 0.042 ppbv
RT: 13.01 min
Delta R.T. MSVOA.L
Lab File: ClientSampled :
Acq: 14 Jun 2022 00:00

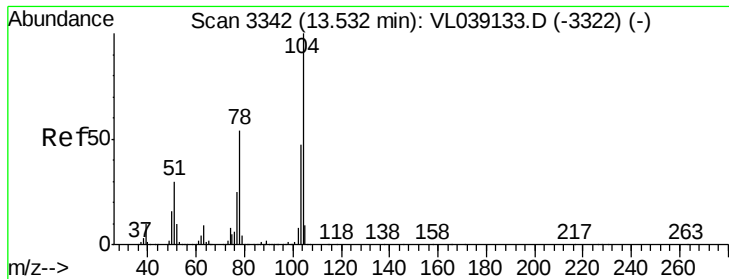
Tot Ion: 91 Resp: 10923
Ion Ratio Lower Upper
91 100
106 0.0 34.3 51.5#



#60
o-Xylene
Concen: 0.109 ppbv
RT: 13.69 min Scan# 3392
Delta R.T. -0.00 min
Lab File: VL039265.D
Acq: 14 Jun 2022 00:00

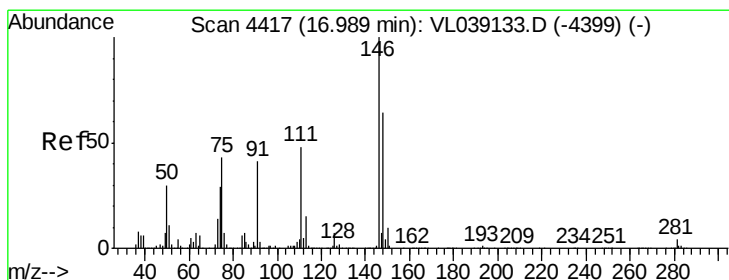
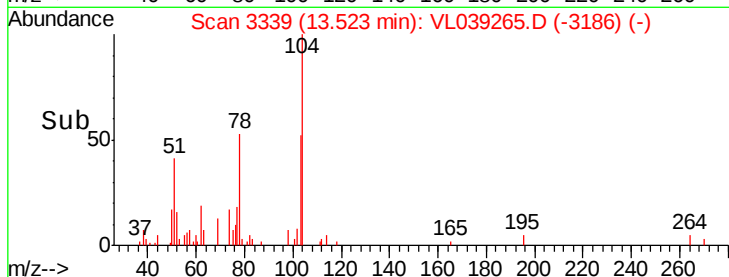
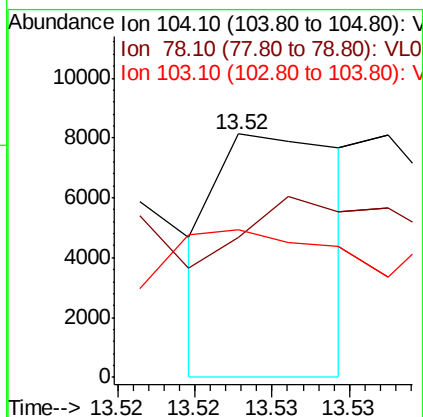
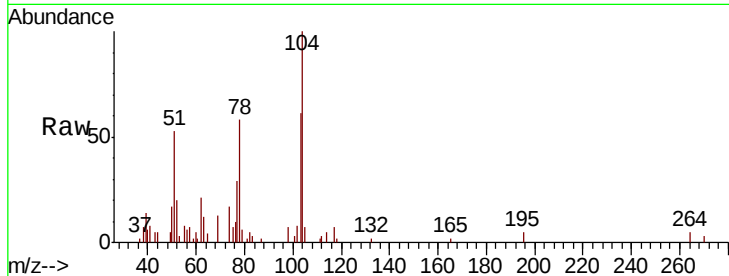
Tgt Ion: 91 Resp: 26583
Ion Ratio Lower Upper
91 100
106 75.2 22.3 66.9#





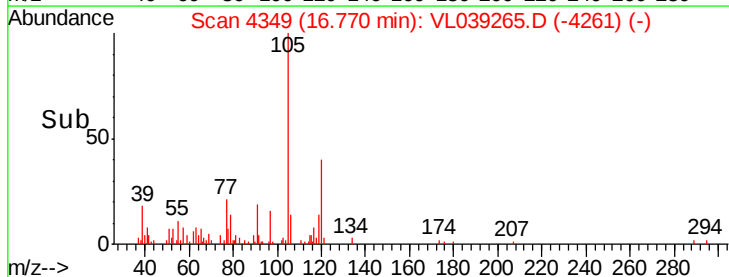
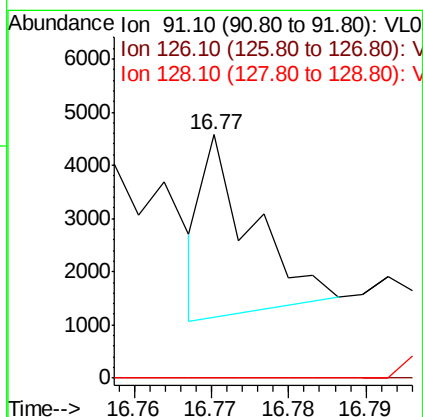
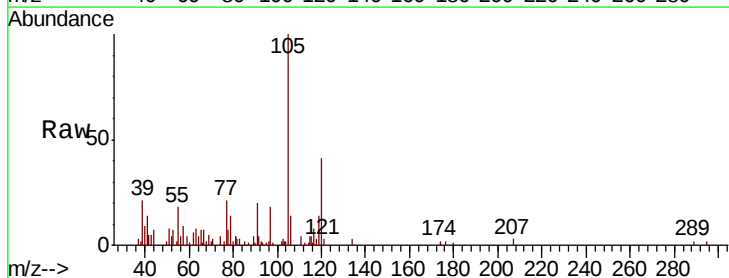
#61
Stvrene
Concen: 0.035 ppbv
RT: 13.52 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 14 Jun 2022 00:00

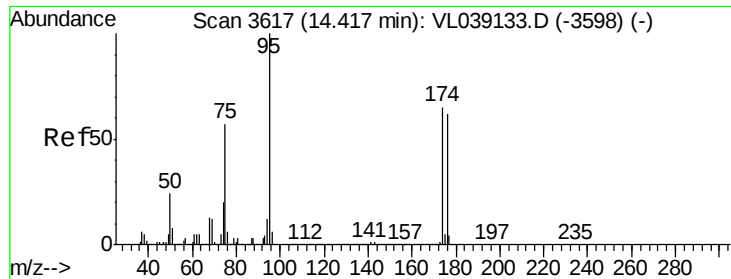
Tot Ion: 104 Resp: 4571
Ion Ratio Lower Upper
104 100
78 343.0 45.7 68.5#
103 275.4 39.6 59.4#



#66
Benzyl Chloride
Concen: 0.035 ppbv
RT: 16.77 min Scan# 4349
Delta R.T. -0.22 min
Lab File: VL039265.D
Acq: 14 Jun 2022 00:00

Tgt Ion: 91 Resp: 1518
Ion Ratio Lower Upper
91 100
126 82.1 13.4 20.0#
128 7.4 4.1 6.1#





#68

1-Bromo-4-Fluorobenzene

Concen: 11.016 ppbv

RT: 14.41 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 14 Jun 2022 00:00

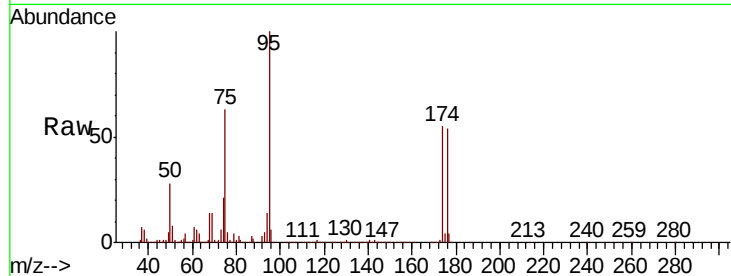
Tot Ion: 95 Resp: 1946034

Ion Ratio Lower Upper

95 100

174 61.3 53.8 80.8

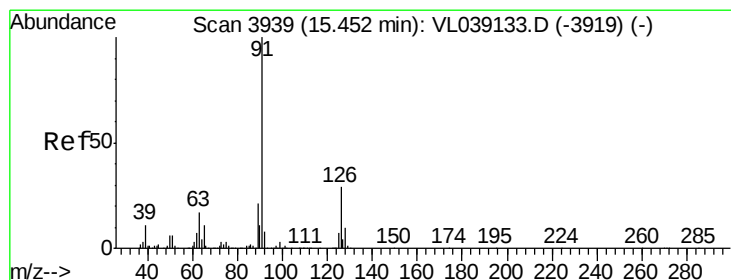
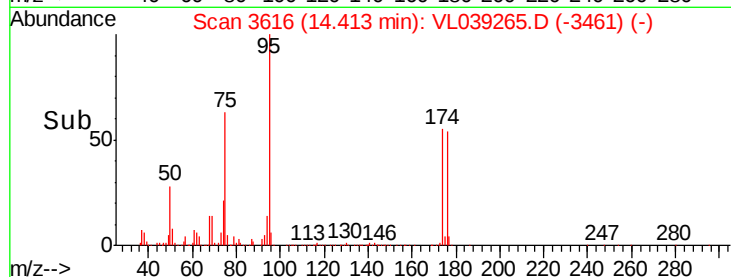
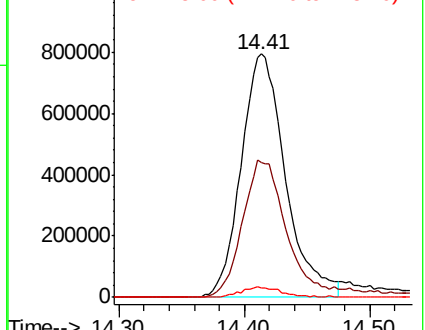
175 4.4 4.1 6.1



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



#71

2-Chlorotoluene

Concen: 0.044 ppbv

RT: 15.55 min Scan# 3970

Delta R.T. 0.10 min

Lab File: VL039265.D

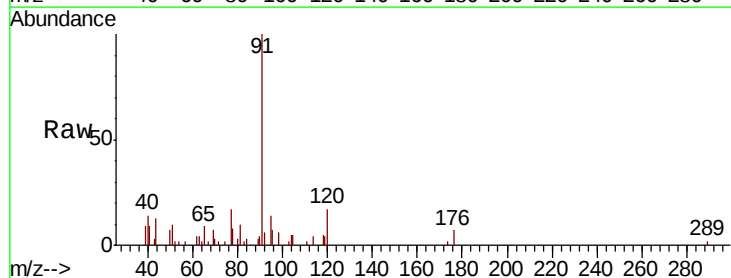
Acq: 14 Jun 2022 00:00

Tgt Ion: 91 Resp: 12041

Ion Ratio Lower Upper

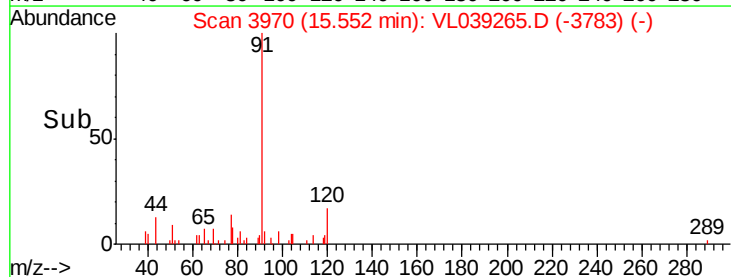
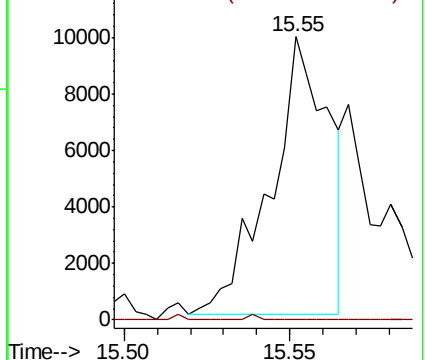
91 100

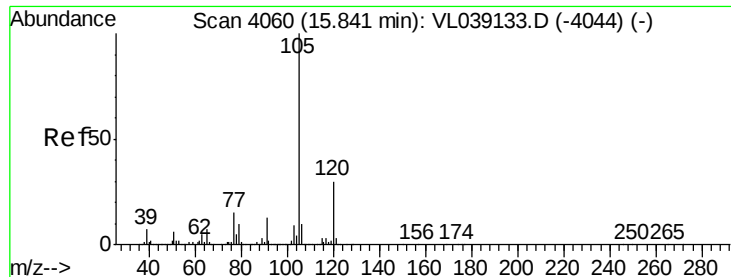
126 2.1 12.2 48.6#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 126.10 (125.80 to 126.80): V





#72

4-Ethyltoluene

Concen: 0.031 ppbv

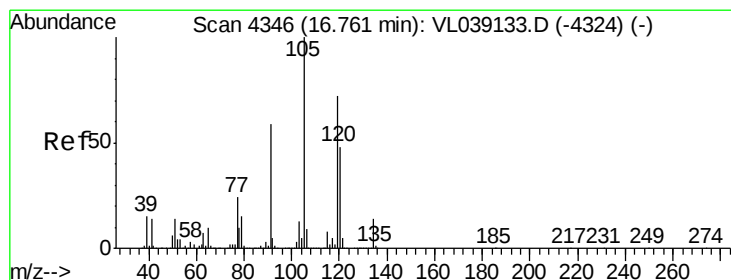
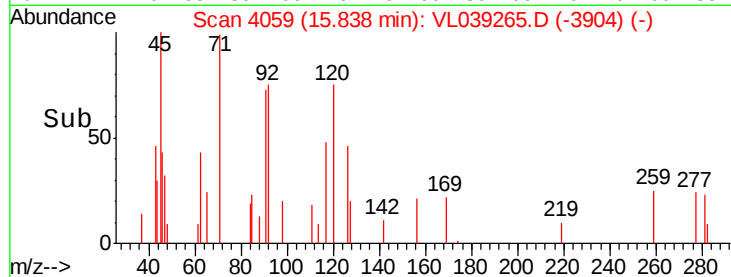
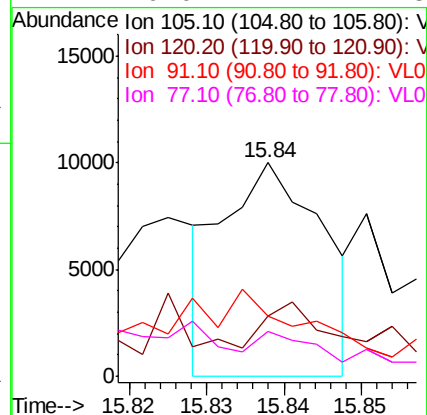
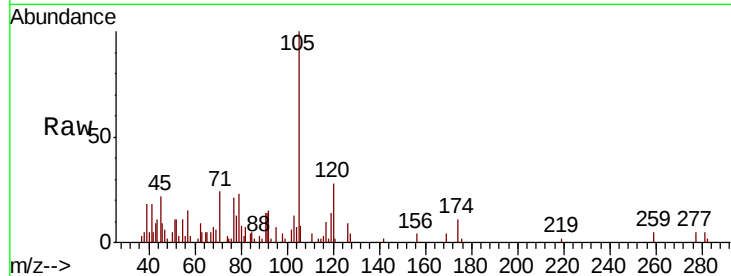
RT: 15.84 Instrument: MSVOA_1

Delta R.T. A-1

Lab File: ClientSampleId:

Acq: 14 Jun 2022 00:00

Tot Ion:	105	Resp:	8972
Ion	Ratio	Lower	Upper
105	100		
120	0.0	23.9	35.9#
91	99.8	10.6	16.0#
77	0.0	11.7	17.5#



#74

1,2,4-Trimethylbenzene

Concen: 0.230 ppbv

RT: 16.76 min Scan# 4346

Delta R.T. 0.00 min

Lab File: VL039265.D

Acq: 14 Jun 2022 00:00

Tgt Ion:	105	Resp:	66115
Ion	Ratio	Lower	Upper
105	100		
120	33.7	38.1	57.1#
91	8.5	47.4	71.0#
77	14.4	19.5	29.3#

