

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060122\
 Data File : VL039148.D
 Acq On : 1 Jun 2022 15:08
 Operator : SY/AP
 Sample : N3106-06
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA2

Quant Time: Jun 02 00:37:49 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

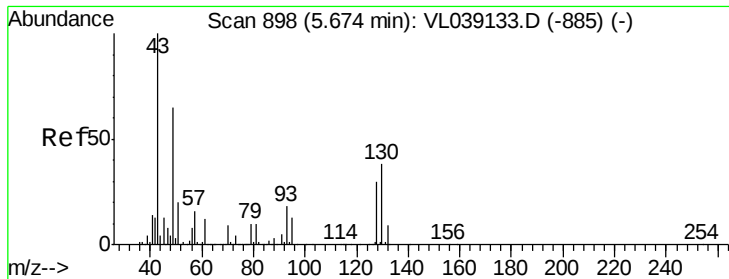
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1180837	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2840024	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2368208	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	2002893	10.23	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.30%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.97	51	1902959	12.666	ppbv #	57
4) Chloromethane	3.15	50	43320	0.561	ppbv	92
9) Propene	3.21	41	4888771	74.622	ppbv	95
10) Heptane	8.12	43	5434	0.036	ppbv #	1
11) Trichlorofluoromethane	3.96	101	44072	0.235	ppbv	86
13) Ethanol	3.61	45	2962024	829.044	ppbv #	100
15) Acetone	3.85	43	2333978	18.975	ppbv	98
16) 1,3-Butadiene	3.36	39	2509531	37.952	ppbv #	10
17) tert-Butyl alcohol	3.97	59	218629	2.291	ppbv	100
19) Isopropyl Alcohol	3.97	45	5845028	101.313	ppbv #	97
20) Methylene Chloride	4.35	84	710255	13.702	ppbv	94
21) Allyl Chloride	4.35	41	22369	0.270	ppbv #	35
23) Vinyl Acetate	5.07	43	43463	0.427	ppbv #	36
25) Ethyl Acetate	5.69	43	484909	1.749	ppbv #	82
26) Hexane	5.69	57	582850	4.784	ppbv #	44
29) Chloroform	5.76	83	13271	0.065	ppbv	97
30) Cyclohexane	7.13	84	3515	0.034	ppbv #	1
34) 2-Butanone	5.25	43	183846	1.192	ppbv	99
36) Benzene	6.90	78	21179	0.092	ppbv #	83
37) 1,2-Dichloroethane	6.31	62	53431	0.352	ppbv	99
39) 1,2-Dichloropropane	7.18	63	755703	8.240	ppbv #	25
41) Tetrahydrofuran	6.06	42	59271	0.639	ppbv	93
44) 2,2,4-Trimethylpentane	7.87	57	14768	0.037	ppbv #	1
53) Toluene	9.81	91	79556	0.300	ppbv #	7
58) Ethyl Benzene	12.71	91	25538	0.078	ppbv #	77
59) m/p-Xylene	13.00	91	19870	0.069	ppbv #	33
60) o-Xylene	13.68	91	22342	0.083	ppbv #	41
72) 4-Ethyltoluene	15.83	105	13881	0.044	ppbv #	49
73) 1,3,5-Trimethylbenzene	15.99	105	27956	0.098	ppbv	97
74) 1,2,4-Trimethylbenzene	16.76	105	95247	0.299	ppbv #	66
75) 1,3-Dichlorobenzene	17.13	146	963852	5.348	ppbv	100
76) 1,4-Dichlorobenzene	17.13	146	963852	5.360	ppbv	98

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 1 Jun 2022 15:08

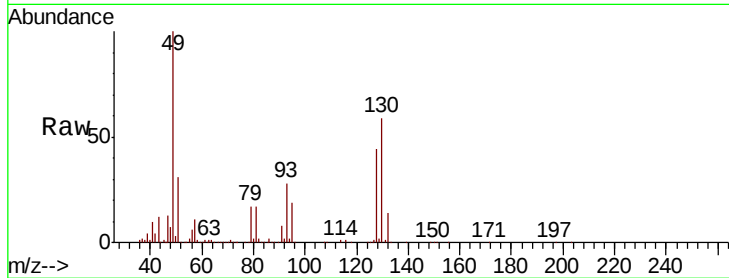
Tot Ion: 49 Resp: 1180837

Ion Ratio Lower Upper

49 100

128 48.8 24.7 74.1

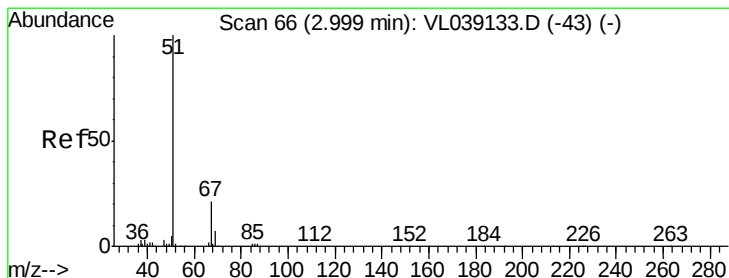
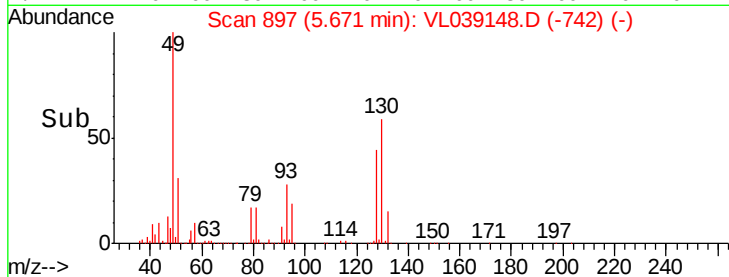
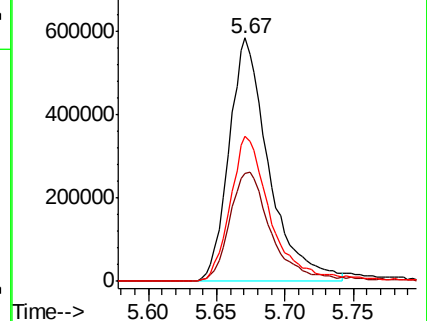
130 62.2 31.4 94.0



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



#3

Chlorodifluoromethane

Concen: 12.666 ppbv

RT: 2.97 min Scan# 58

Delta R.T. -0.03 min

Lab File: VL039148.D

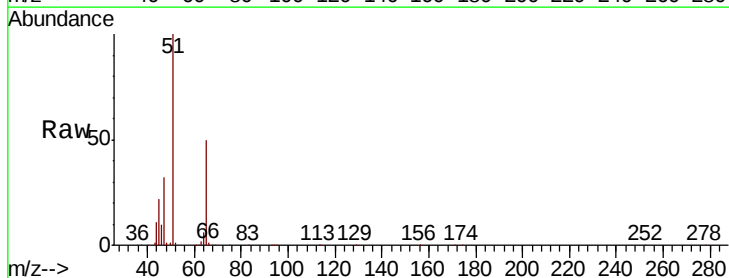
Acq: 1 Jun 2022 15:08

Tgt Ion: 51 Resp: 1902959

Ion Ratio Lower Upper

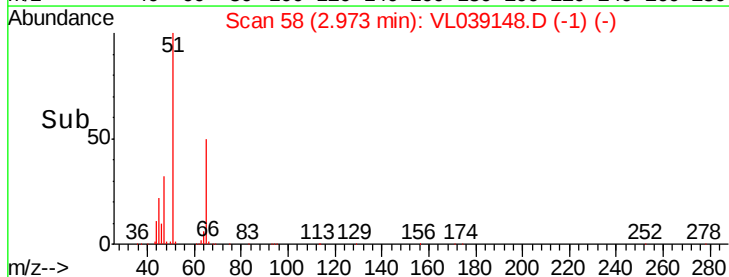
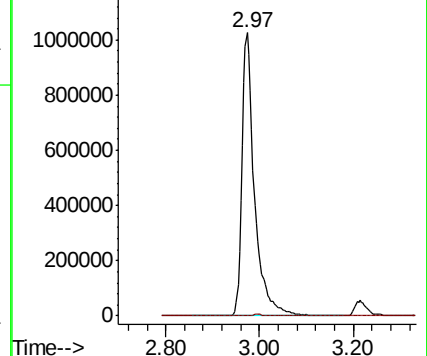
51 100

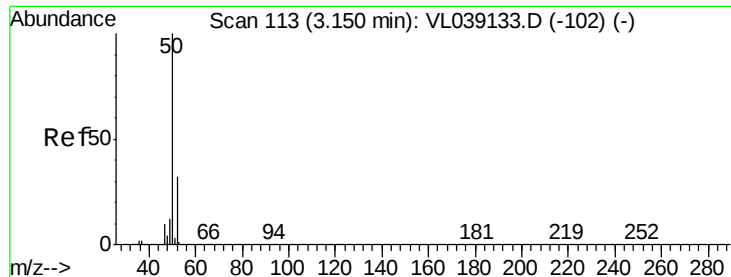
67 0.6 16.2 24.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.561 ppbv

RT: 3.15 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

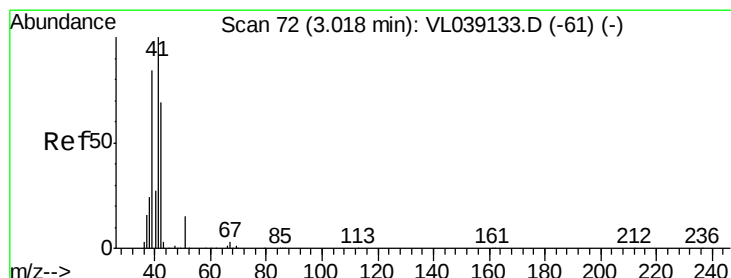
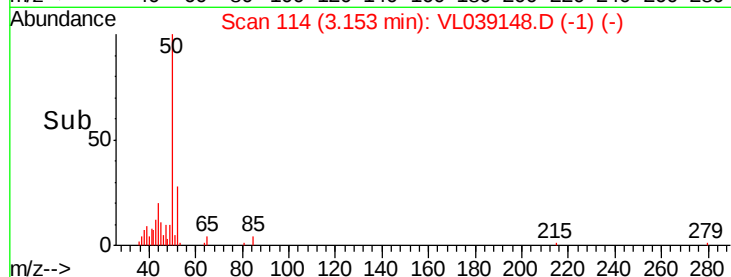
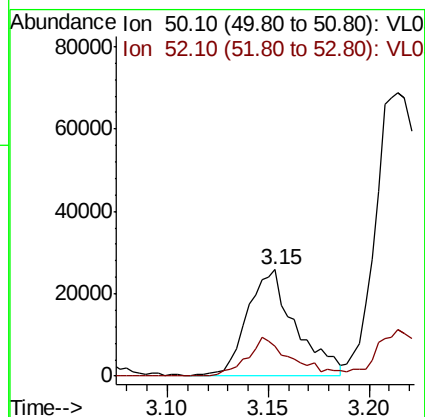
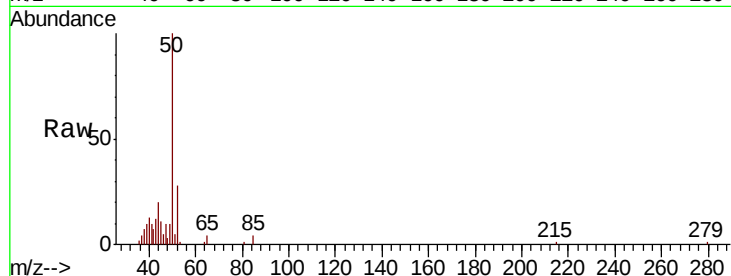
Acq: 1 Jun 2022 15:08

Tot Ion: 50 Resp: 43320

Ion Ratio Lower Upper

50 100

52 27.7 25.9 38.9



#9

Propene

Concen: 74.622 ppbv

RT: 3.21 min Scan# 133

Delta R.T. 0.20 min

Lab File: VL039148.D

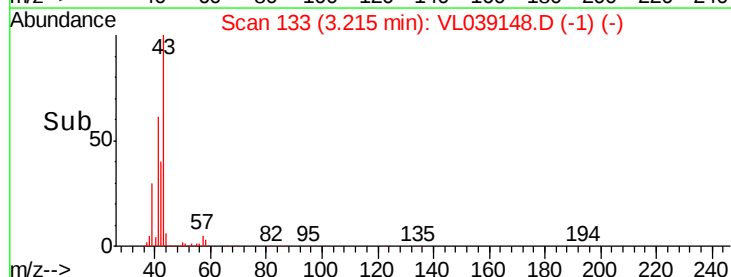
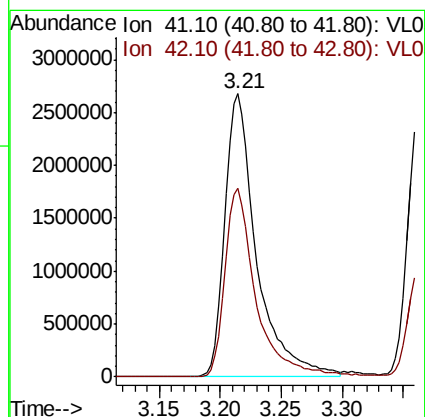
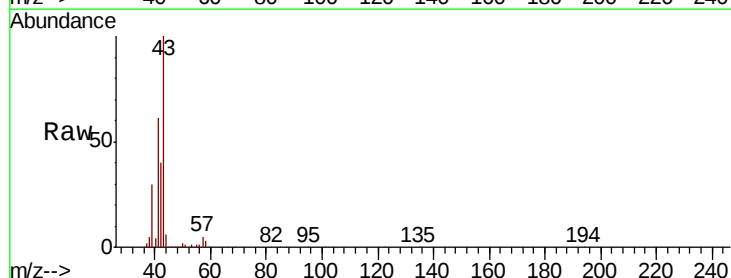
Acq: 1 Jun 2022 15:08

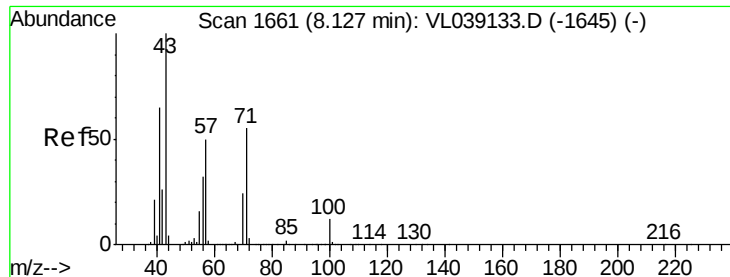
Tgt Ion: 41 Resp: 4888771

Ion Ratio Lower Upper

41 100

42 65.5 55.4 83.2





#10

Heptane

Concen: 0.036 ppbv

RT: 8.12 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

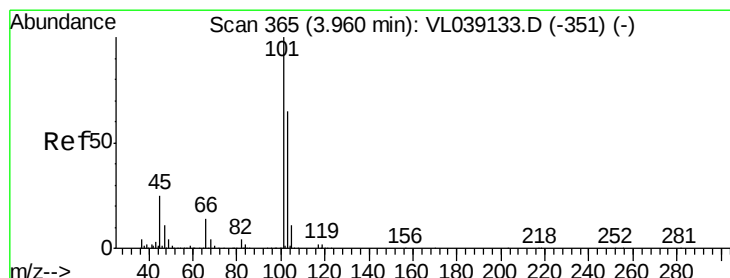
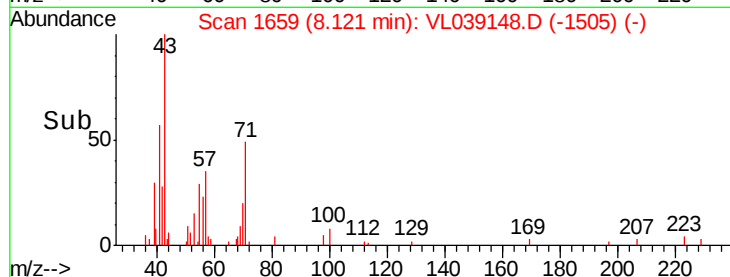
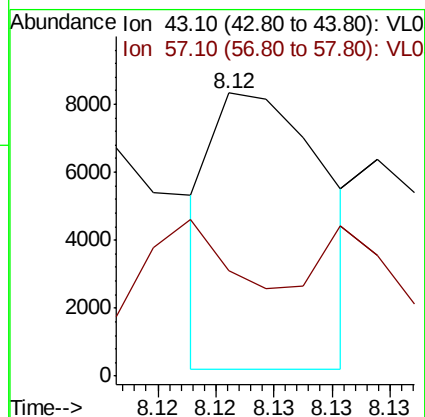
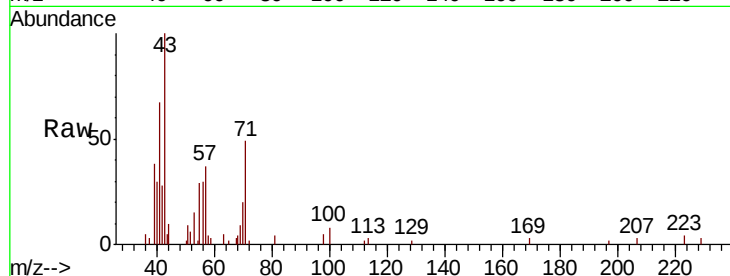
Acq: 1 Jun 2022 15:08

Tot Ion: 43 Resp: 5434

Ion Ratio Lower Upper

43 100

57 169.7 41.4 62.2#



#11

Trichlorofluoromethane

Concen: 0.235 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.00 min

Lab File: VL039148.D

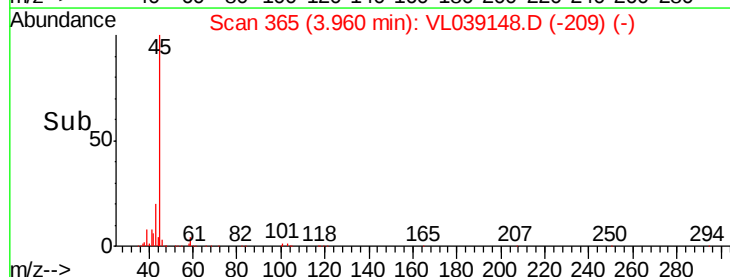
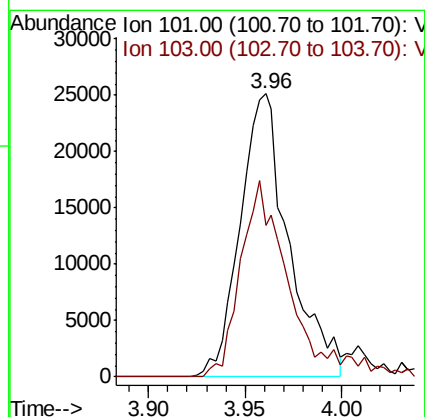
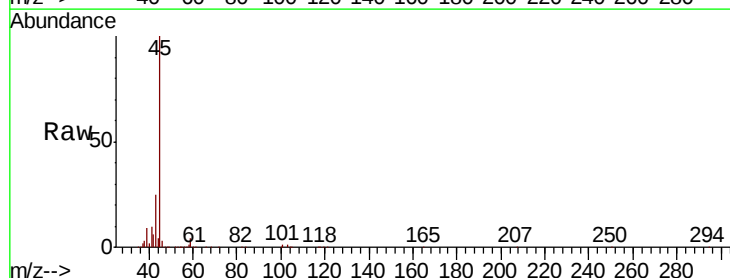
Acq: 1 Jun 2022 15:08

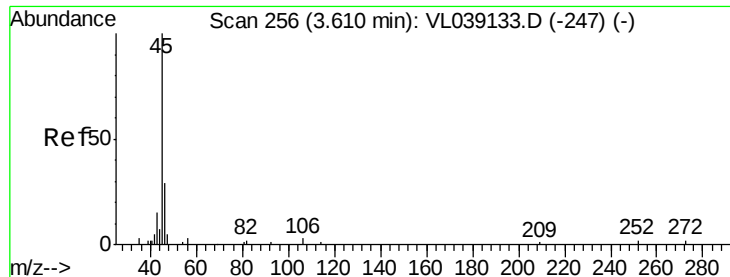
Tgt Ion:101 Resp: 44072

Ion Ratio Lower Upper

101 100

103 53.5 51.7 77.5





#13

Ethanol

Concen: 829.044 ppbv

RT: 3.61 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

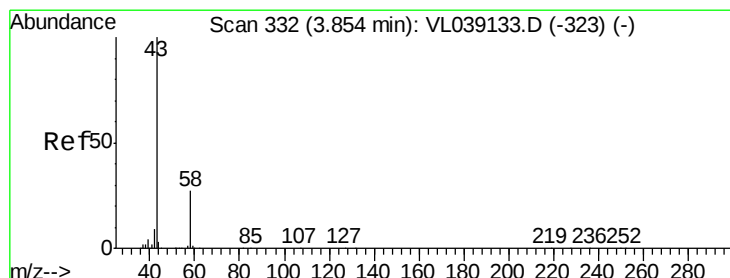
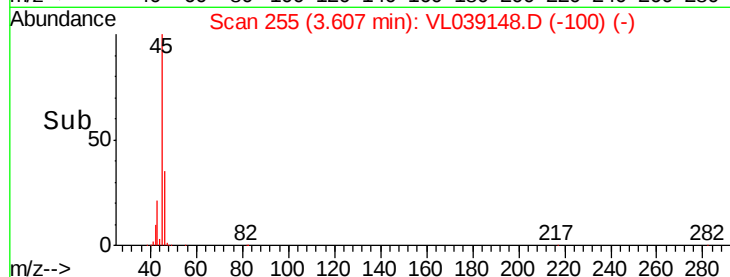
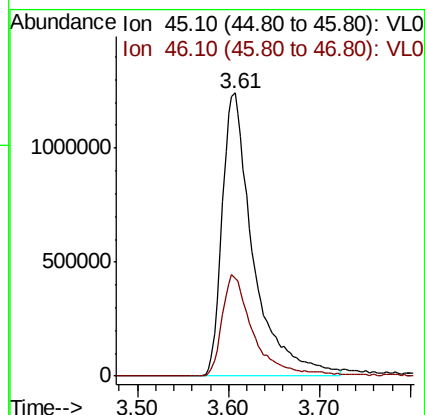
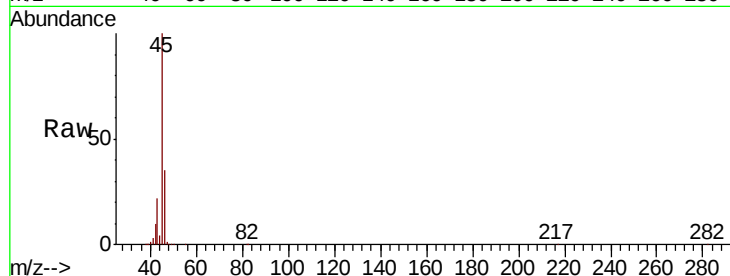
Acq: 1 Jun 2022 15:08

Tot Ion: 45 Resp: 2962024

Ion Ratio Lower Upper

45 100

46 36.4 0.0 0.0#



#15

Acetone

Concen: 18.975 ppbv

RT: 3.85 min Scan# 331

Delta R.T. -0.00 min

Lab File: VL039148.D

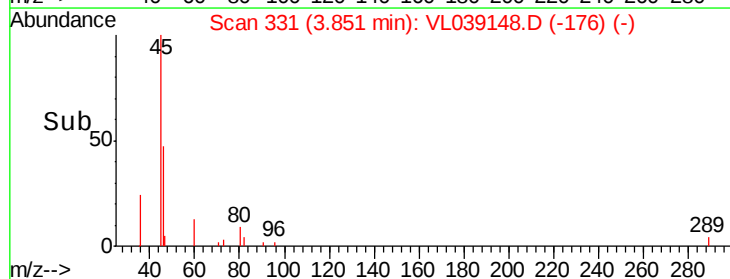
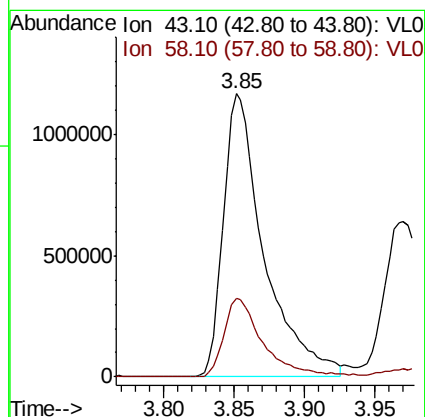
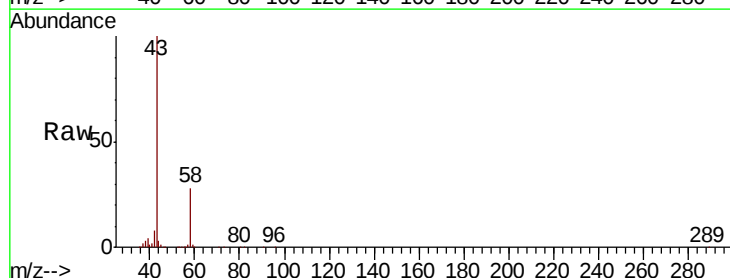
Acq: 1 Jun 2022 15:08

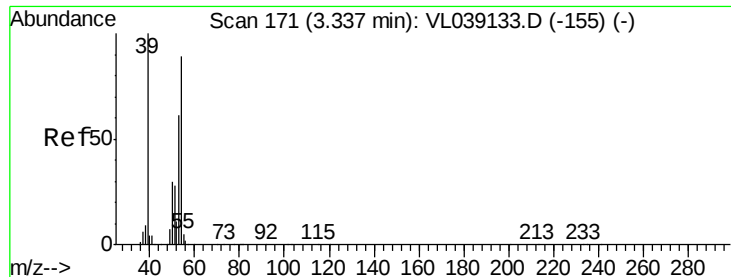
Tgt Ion: 43 Resp: 2333978

Ion Ratio Lower Upper

43 100

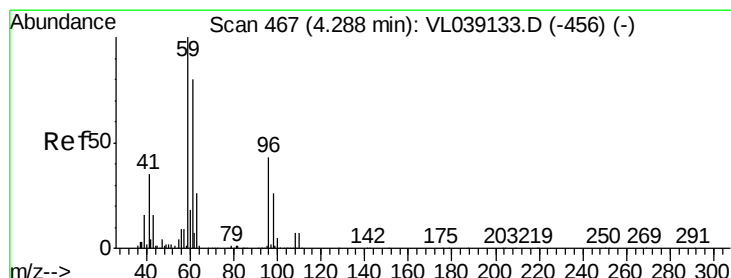
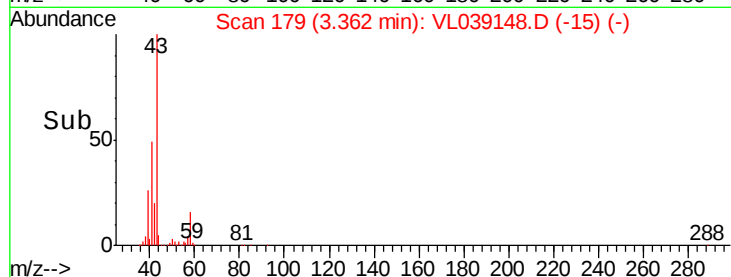
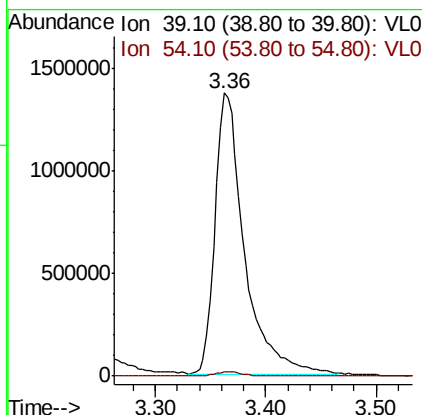
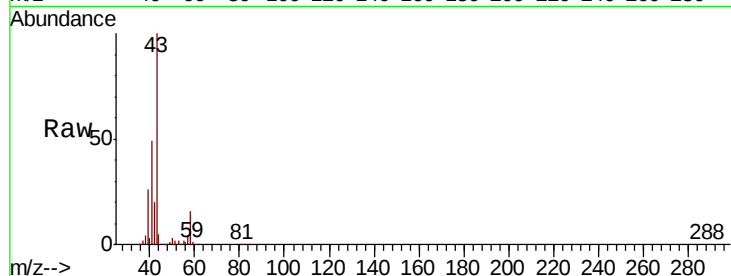
58 27.2 22.5 33.7





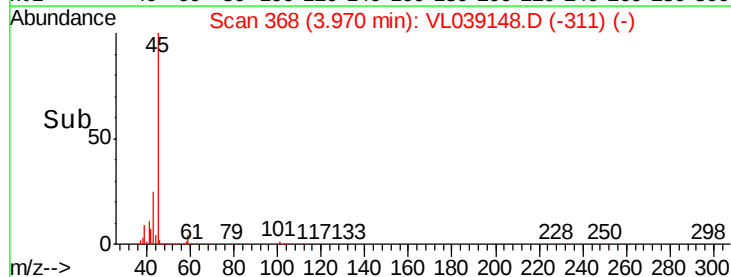
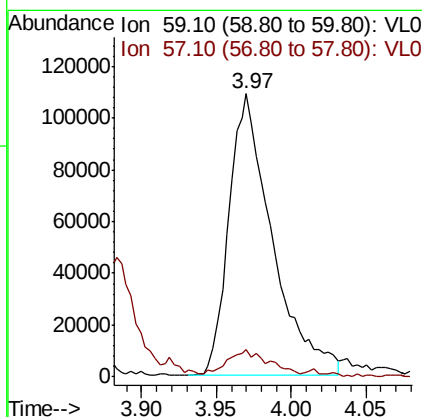
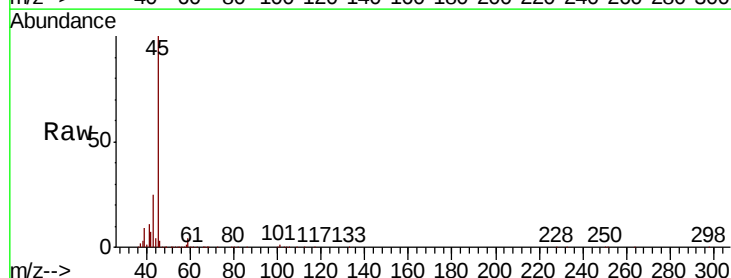
#16
 1,3-Butadiene
 Concen: 37.952 ppbv
 RT: 3.36
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 15:08

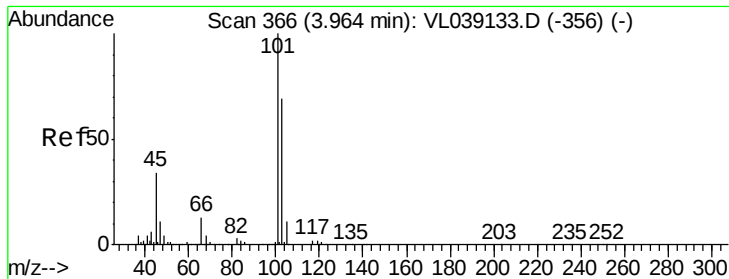
Tot Ion: 39 Resp: 2509531
 Ion Ratio Lower Upper
 39 100
 54 1.8 65.8 98.6#



#17
 tert-Butyl alcohol
 Concen: 2.291 ppbv
 RT: 3.97 min Scan# 368
 Delta R.T. -0.32 min
 Lab File: VL039148.D
 Acq: 1 Jun 2022 15:08

Tgt Ion: 59 Resp: 218629
 Ion Ratio Lower Upper
 59 100
 57 11.6 9.1 13.7





#19

Isopropyl Alcohol

Concen: 101.313 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

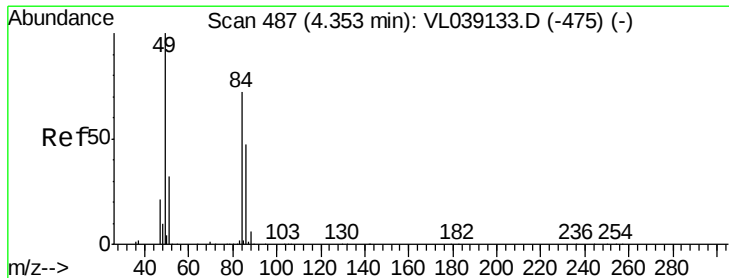
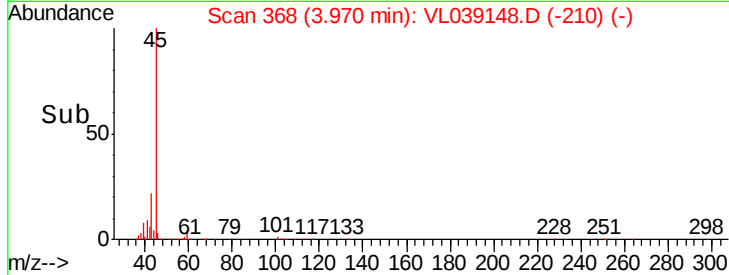
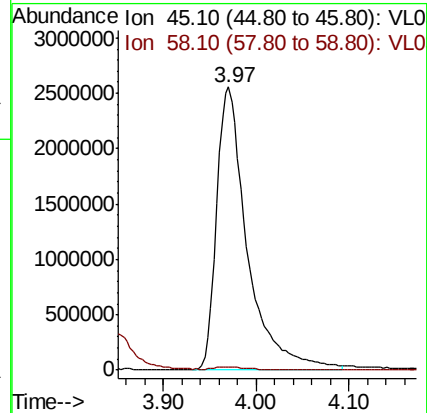
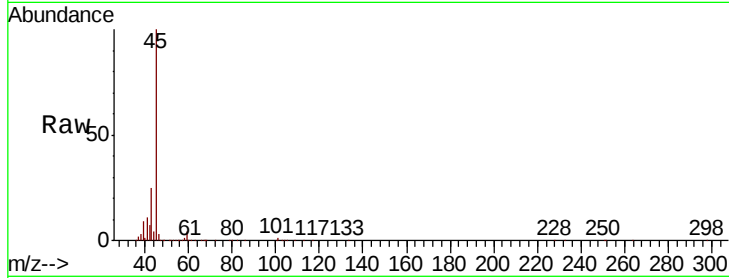
Acq: 1 Jun 2022 15:08

Tot Ion: 45 Resp: 5845028

Ion Ratio Lower Upper

45 100

58 1.4 1.8 2.8#



#20

Methylene Chloride

Concen: 13.702 ppbv

RT: 4.35 min Scan# 486

Delta R.T. -0.00 min

Lab File: VL039148.D

Acq: 1 Jun 2022 15:08

Tgt Ion: 84 Resp: 710255

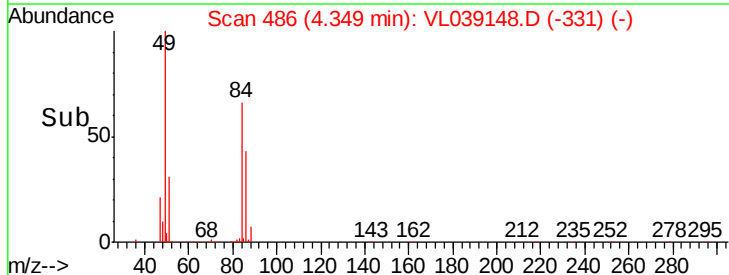
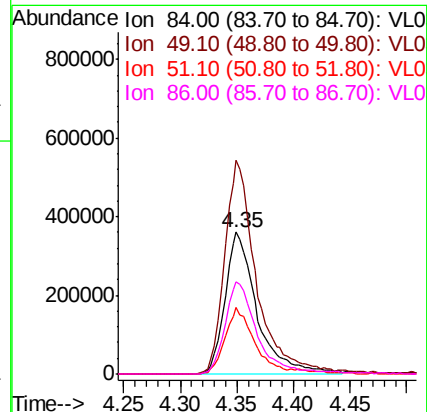
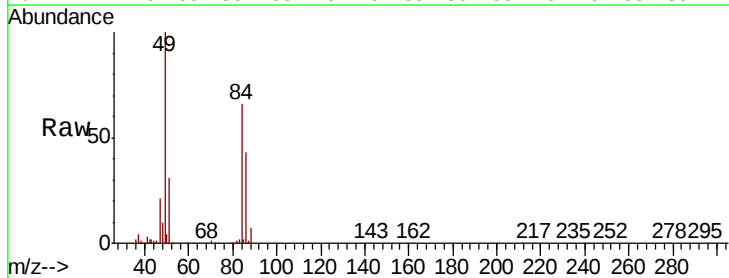
Ion Ratio Lower Upper

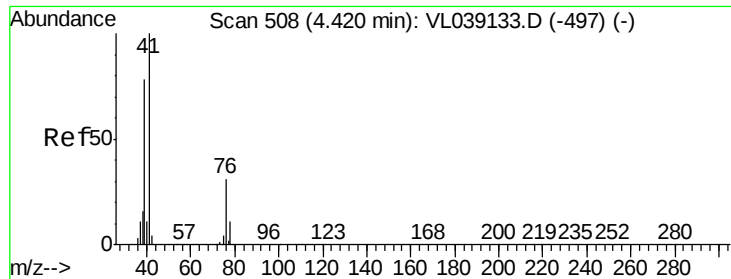
84 100

49 150.8 111.1 166.7

51 46.6 35.3 52.9

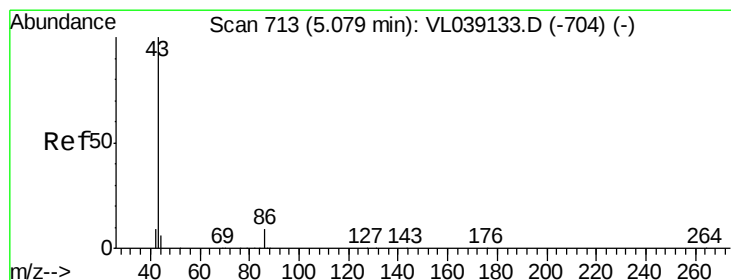
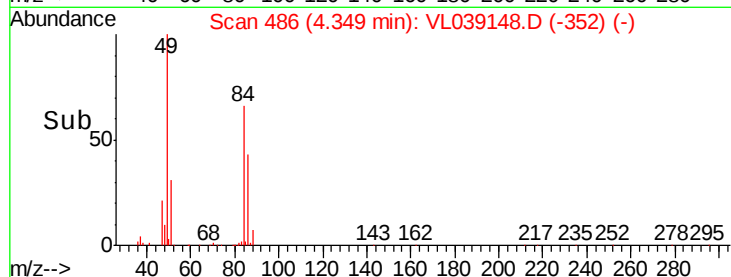
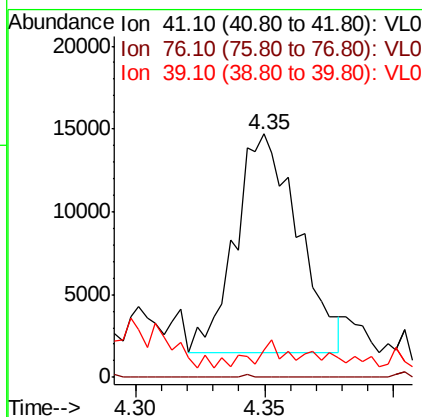
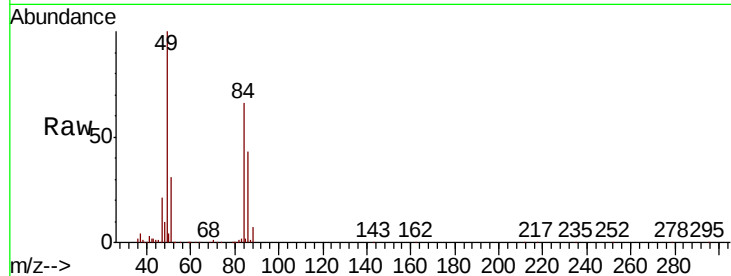
86 65.1 51.9 77.9





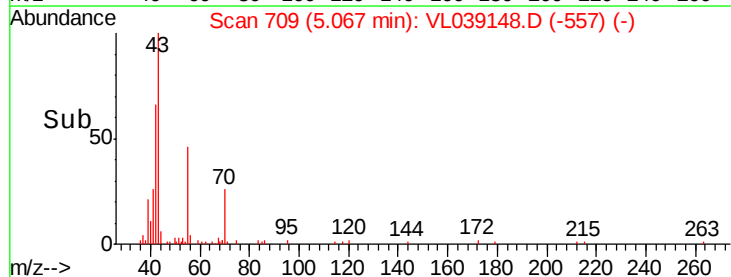
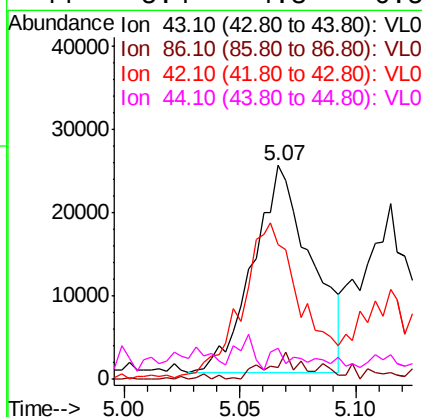
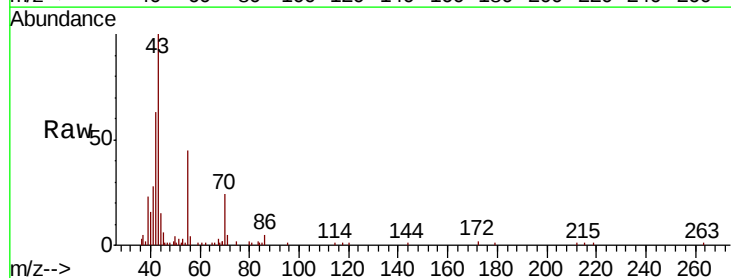
#21
 Allvl Chloride
 Concen: 0.270 ppbv
 RT: 4.35
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 15:08

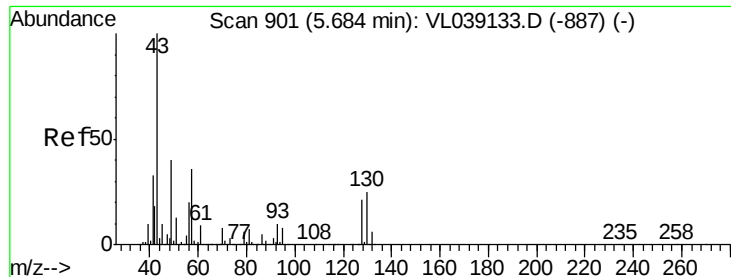
Tot Ion	Ratio	Lower	Upper
41	100		
76	0.5	24.2	36.2#
39	137.8	62.2	93.2#



#23
 Vinyl Acetate
 Concen: 0.427 ppbv
 RT: 5.07 min Scan# 709
 Delta R.T. -0.01 min
 Lab File: VL039148.D
 Acq: 1 Jun 2022 15:08

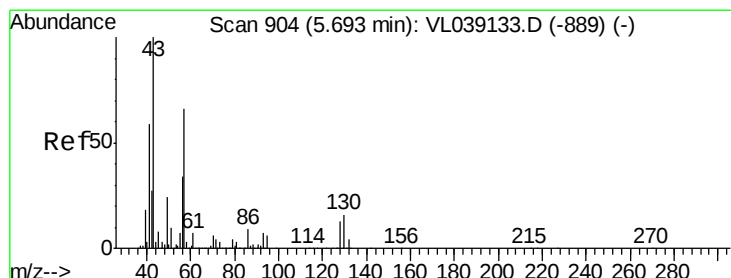
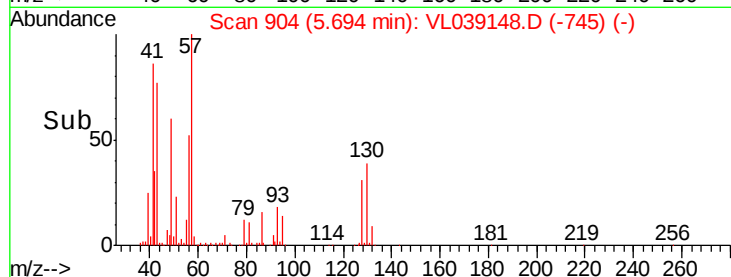
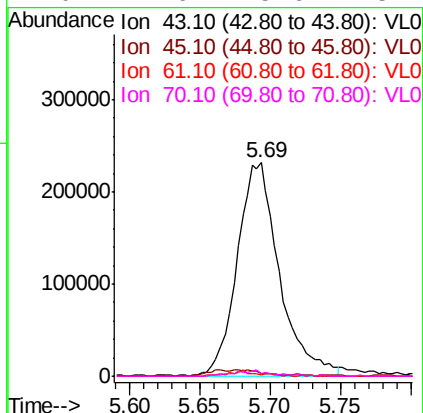
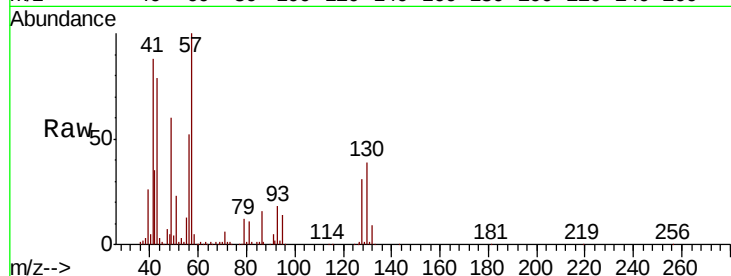
Tgt Ion	Ratio	Lower	Upper
43	100		
86	5.3	6.0	9.0#
42	62.4	8.2	12.4#
44	5.4	4.3	6.5





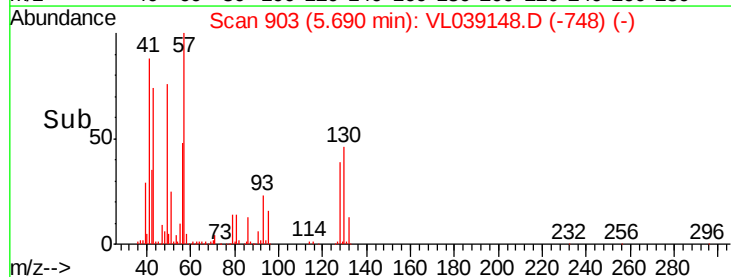
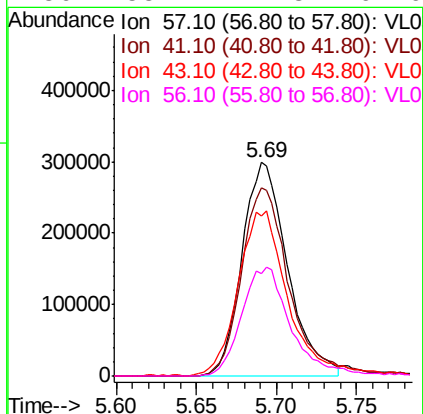
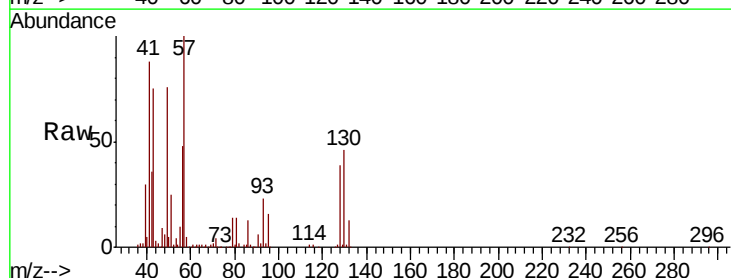
#25
Ethyl Acetate
Concen: 1.749 ppbv
RT: 5.69
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 1 Jun 2022 15:08

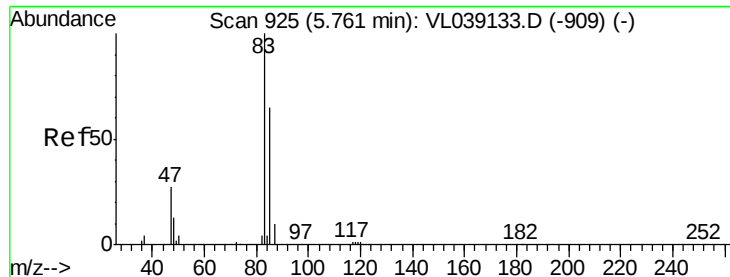
Tot Ion:	43	Resp:	484909
Ion	Ratio	Lower	Upper
43	100		
45	4.1	8.2	12.2#
61	2.1	8.4	12.6#
70	2.6	5.6	8.4#



#26
Hexane
Concen: 4.784 ppbv
RT: 5.69 min Scan# 903
Delta R.T. -0.00 min
Lab File: VL039148.D
Acq: 1 Jun 2022 15:08

Tgt Ion:	57	Resp:	582850
Ion	Ratio	Lower	Upper
57	100		
41	94.8	72.4	108.6
43	86.6	187.0	280.6#
56	55.7	41.8	62.6





#29

Chloroform

Concen: 0.065 ppbv

RT: 5.76 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

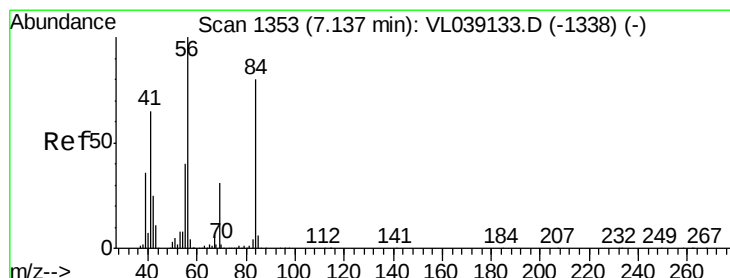
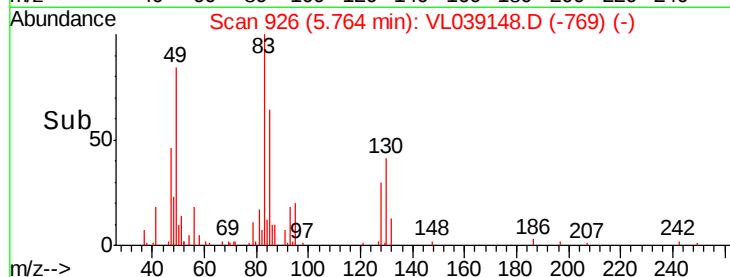
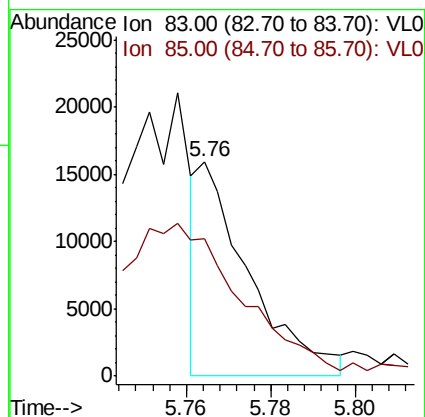
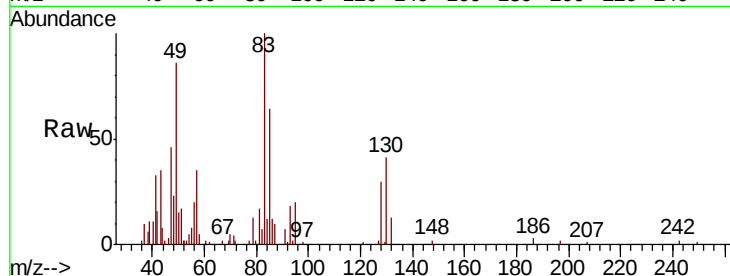
Acq: 1 Jun 2022 15:08

Tot Ion: 83 Resp: 13271

Ion Ratio Lower Upper

83 100

85 68.0 52.4 78.6



#30

Cyclohexane

Concen: 0.034 ppbv

RT: 7.13 min Scan# 1352

Delta R.T. -0.00 min

Lab File: VL039148.D

Acq: 1 Jun 2022 15:08

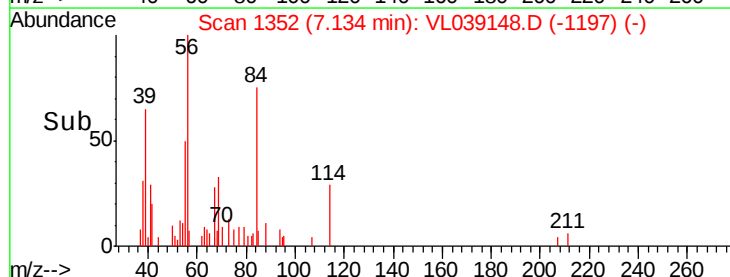
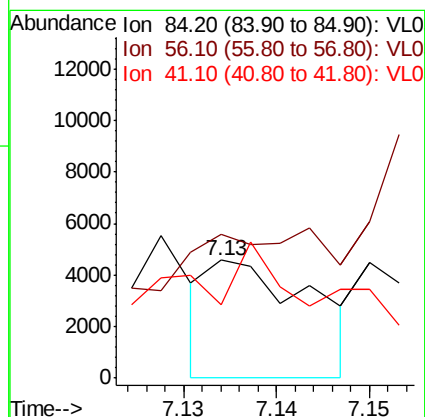
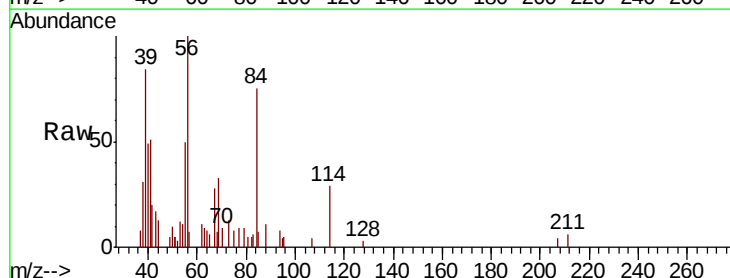
Tgt Ion: 84 Resp: 3515

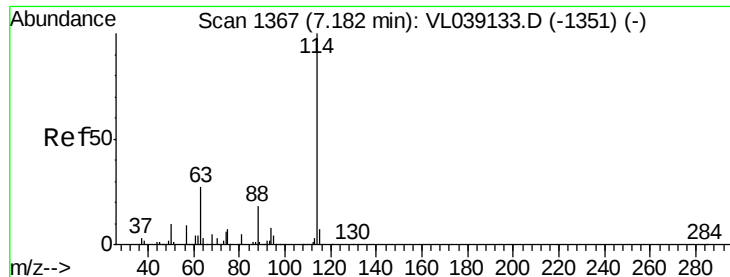
Ion Ratio Lower Upper

84 100

56 0.0 110.6 165.8#

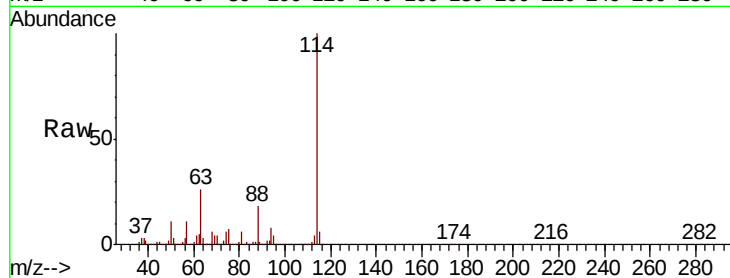
41 368.6 68.9 103.3#



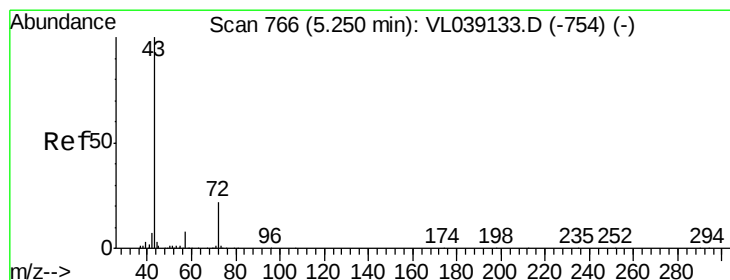
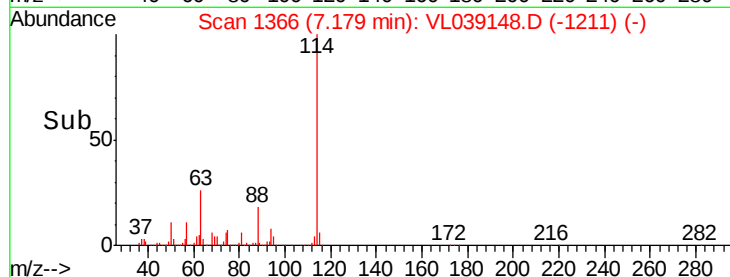
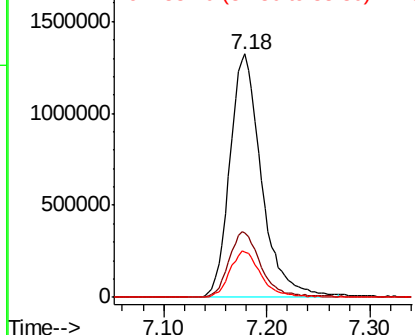


#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.18
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 15:08

Tot Ion:114 Resp: 2840024
 Ion Ratio Lower Upper
 114 100
 63 27.4 21.7 32.5
 88 18.8 14.8 22.2

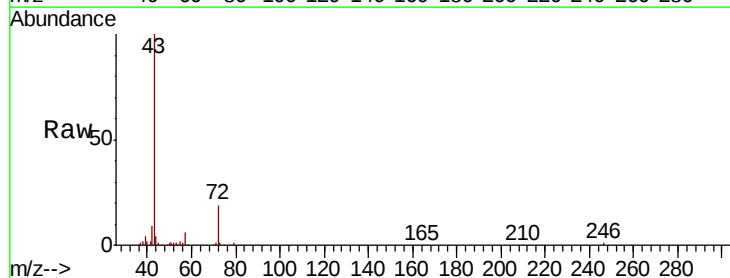


Abundance Ion 114.10 (113.80 to 114.80): V
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

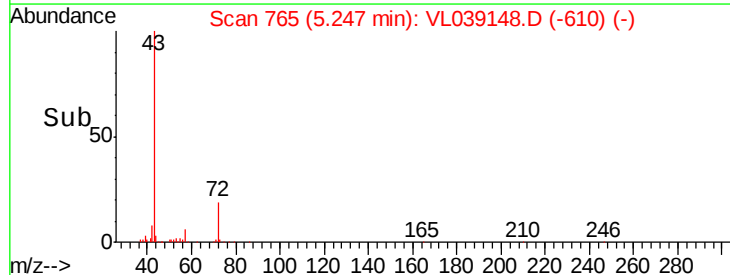
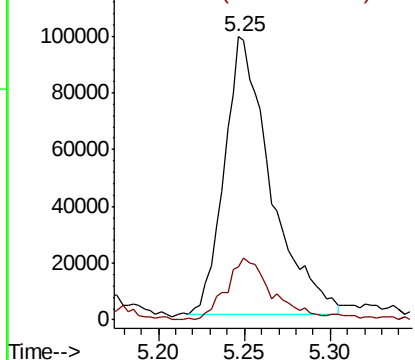


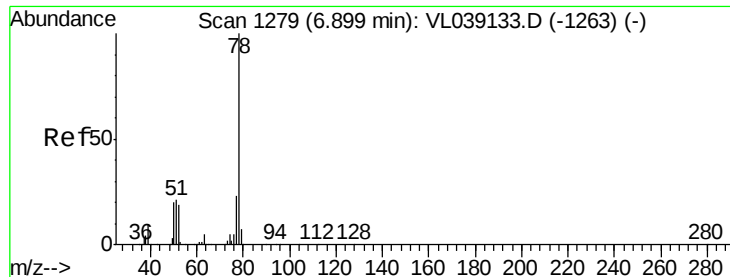
#34
 2-Butanone
 Concen: 1.192 ppbv
 RT: 5.25 min Scan# 765
 Delta R.T. -0.00 min
 Lab File: VL039148.D
 Acq: 1 Jun 2022 15:08

Tgt Ion: 43 Resp: 183846
 Ion Ratio Lower Upper
 43 100
 72 23.3 18.2 27.2



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.092 ppbv

RT: 6.90 Instrument:

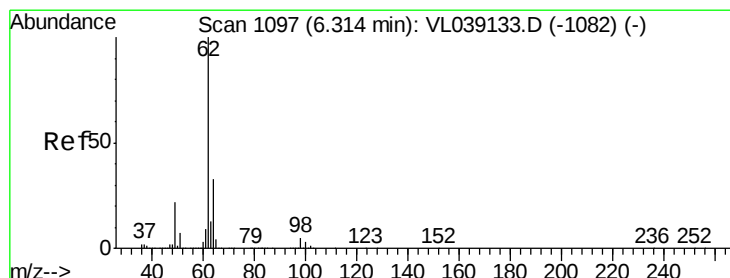
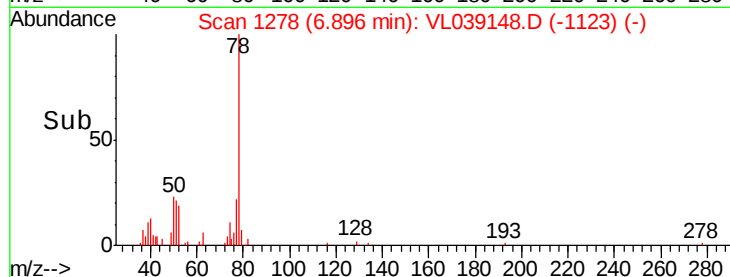
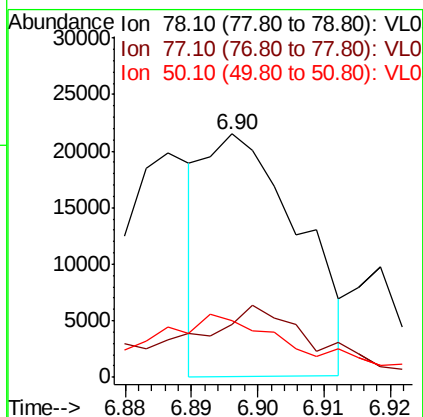
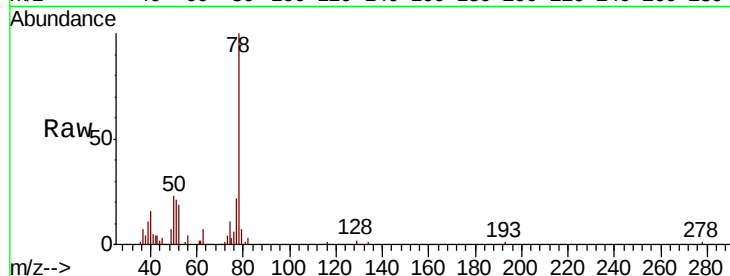
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 1 Jun 2022 15:08

Tot Ion: 78 Resp: 21179

Ion	Ratio	Lower	Upper
78	100		
77	10.6	18.6	27.8#
50	16.7	15.8	23.8



#37

1,2-Dichloroethane

Concen: 0.352 ppbv

RT: 6.31 min Scan# 1095

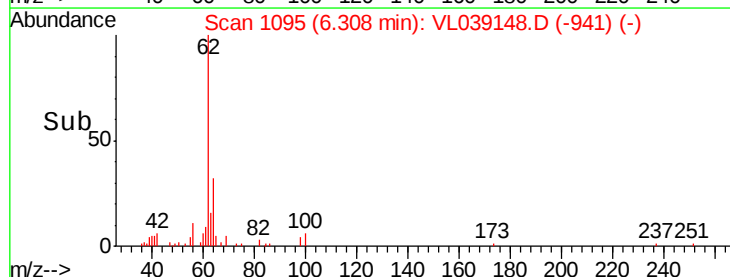
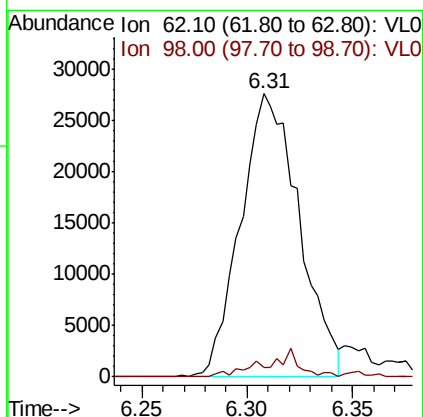
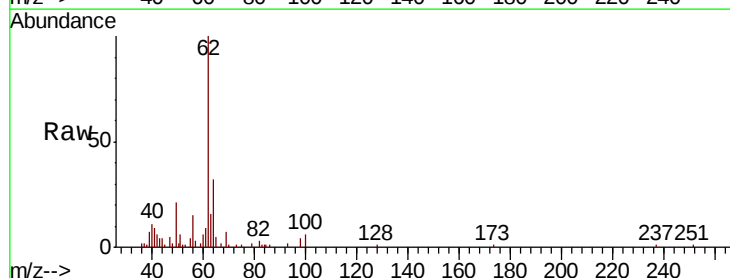
Delta R.T. -0.01 min

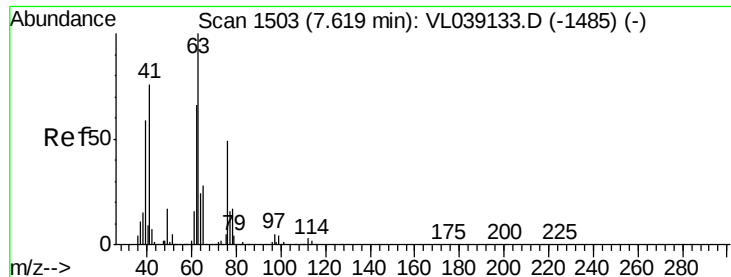
Lab File: VL039148.D

Acq: 1 Jun 2022 15:08

Tgt Ion: 62 Resp: 53431

Ion	Ratio	Lower	Upper
62	100		
98	5.8	4.3	6.5





#39

1,2-Dichloropropane

Concen: 8.240 ppbv

RT: 7.18 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 1 Jun 2022 15:08

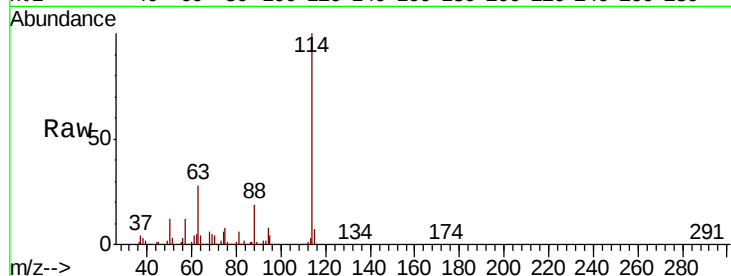
Tot Ion: 63 Resp: 755703

Ion Ratio Lower Upper

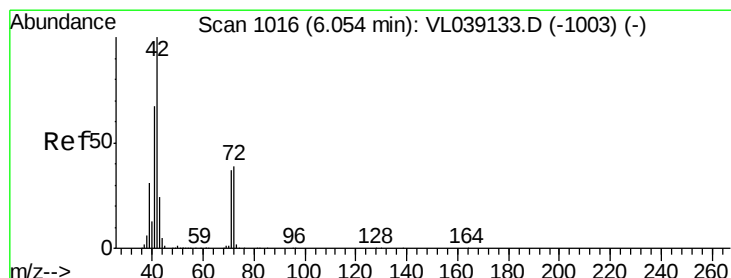
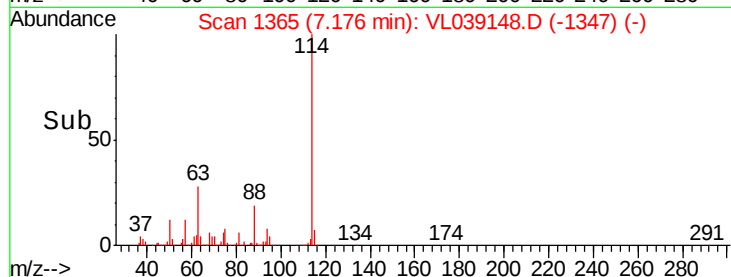
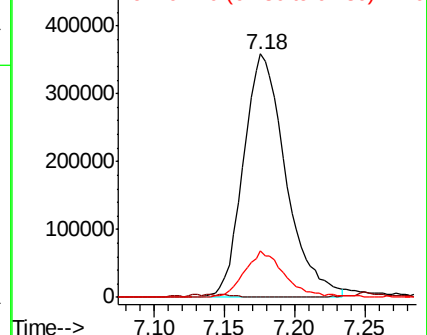
63 100

41 0.0 60.8 91.2#

62 19.1 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



#41

Tetrahydrofuran

Concen: 0.639 ppbv

RT: 6.06 min Scan# 1017

Delta R.T. 0.00 min

Lab File: VL039148.D

Acq: 1 Jun 2022 15:08

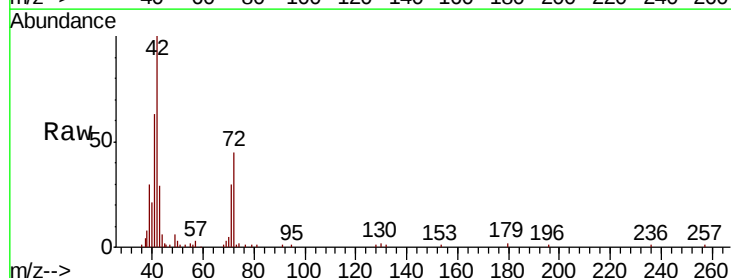
Tgt Ion: 42 Resp: 59271

Ion Ratio Lower Upper

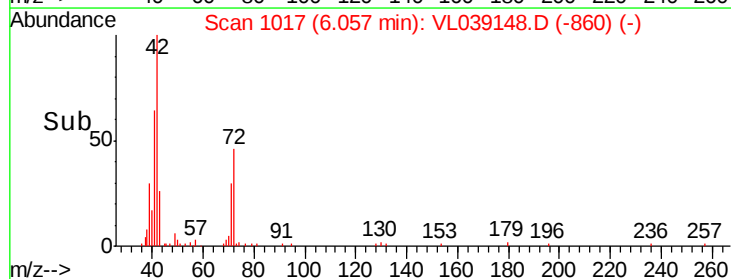
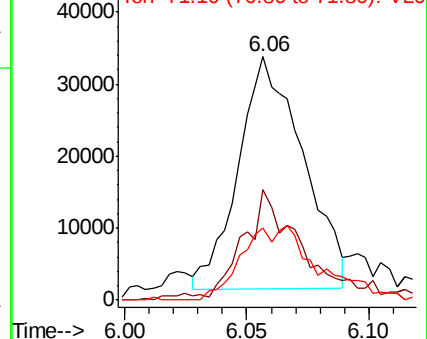
42 100

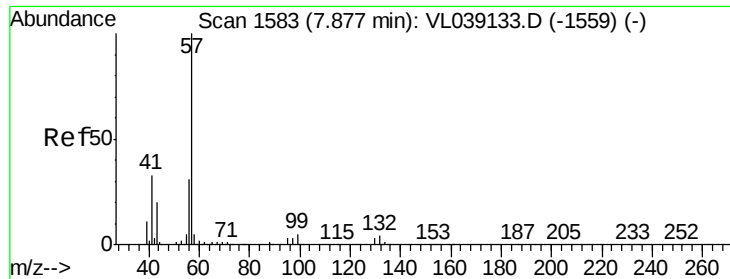
72 46.8 32.0 48.0

71 41.2 31.1 46.7



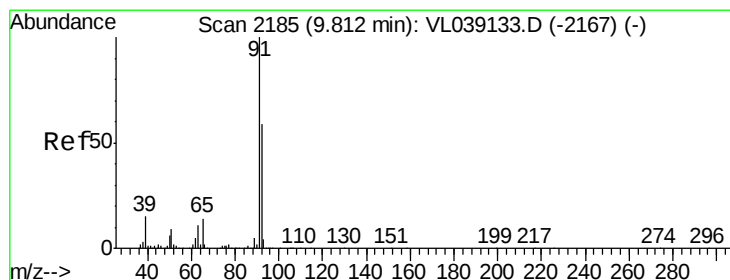
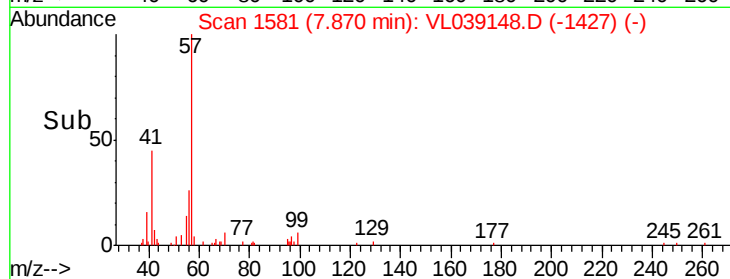
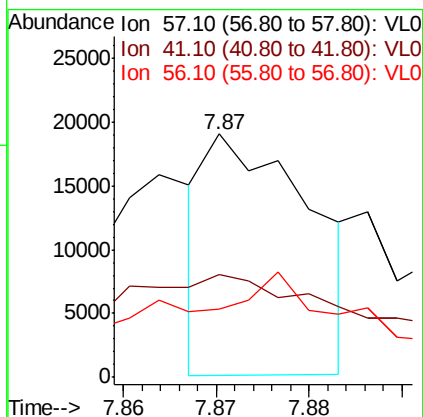
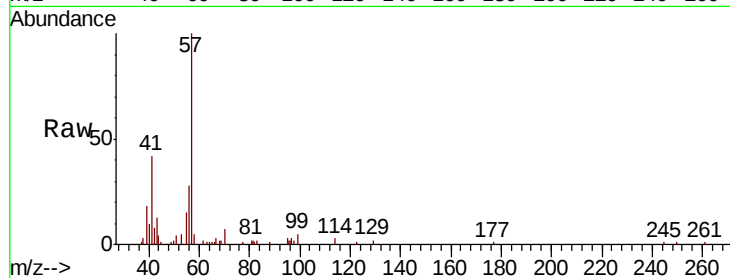
Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0





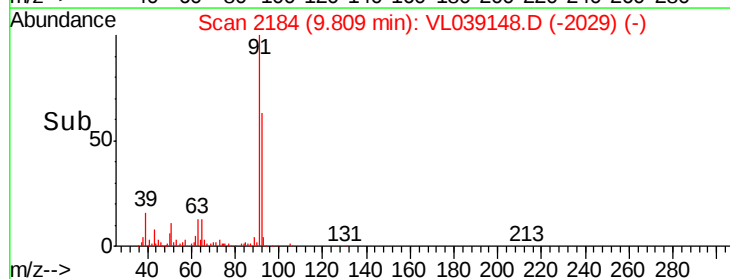
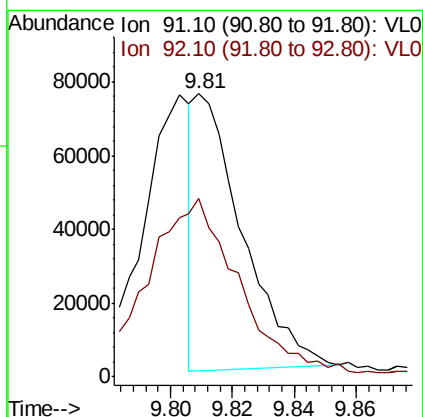
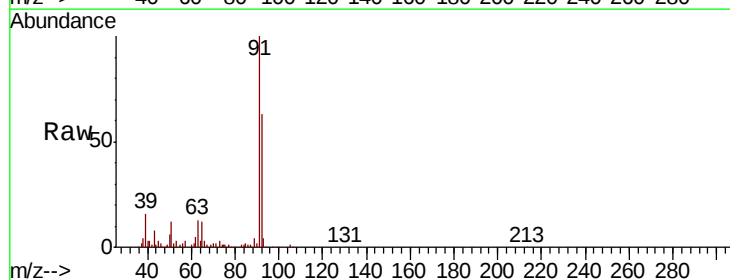
#44
 2,2,4-Trimethylpentane
 Concen: 0.037 ppbv
 RT: 7.87
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 15:08

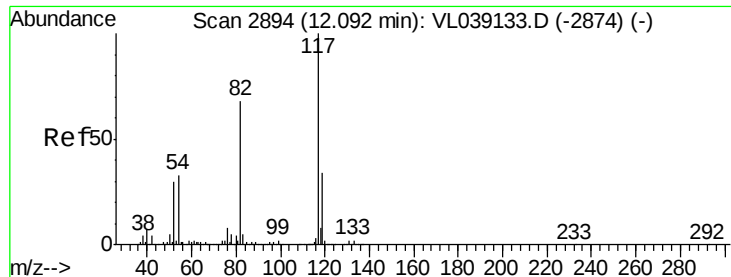
Tot Ion: 57 Resp: 14768
 Ion Ratio Lower Upper
 57 100
 41 139.4 26.2 39.4#
 56 122.9 24.7 37.1#



#53
 Toluene
 Concen: 0.300 ppbv
 RT: 9.81 min Scan# 2184
 Delta R.T. -0.00 min
 Lab File: VL039148.D
 Acq: 1 Jun 2022 15:08

Tgt Ion: 91 Resp: 79556
 Ion Ratio Lower Upper
 91 100
 92 130.4 48.1 72.1#

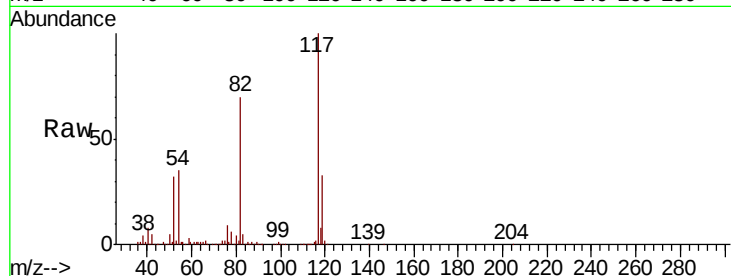




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 1 Jun 2022 15:08

Tot Ion:117 Resp: 2368208

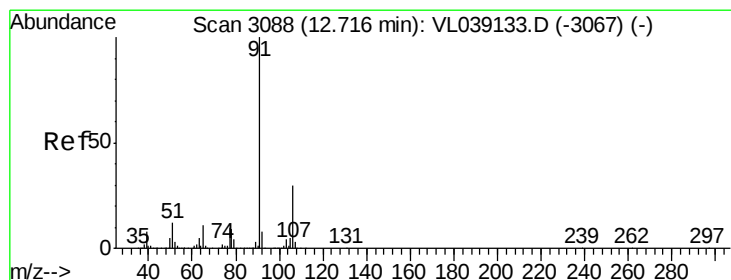
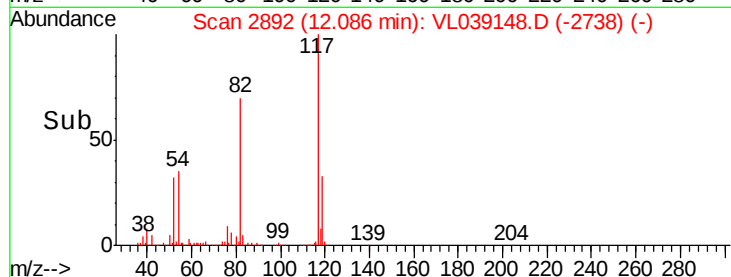
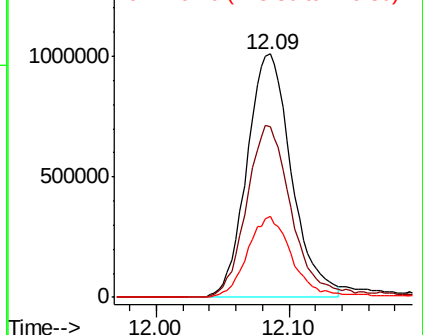
Ion	Ratio	Lower	Upper
117	100		
82	74.7	55.1	82.7
119	35.1	24.7	37.1



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

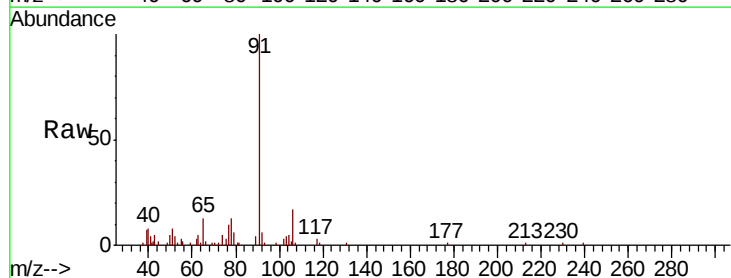
Ion 119.10 (118.80 to 119.80): V



#58
Ethyl Benzene
Concen: 0.078 ppbv
RT: 12.71 min Scan# 3087
Delta R.T.: -0.00 min
Lab File: VL039148.D
Acq: 1 Jun 2022 15:08

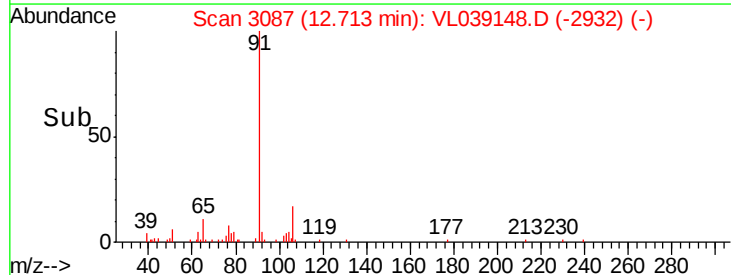
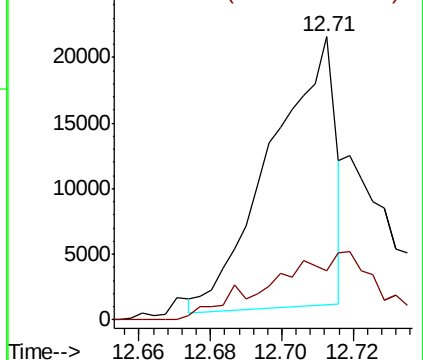
Tgt Ion: 91 Resp: 25538

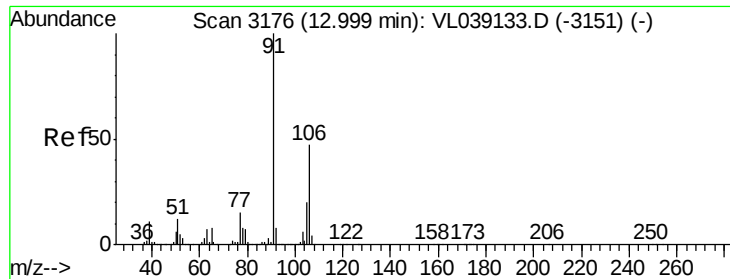
Ion	Ratio	Lower	Upper
91	100		
106	17.7	24.2	36.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

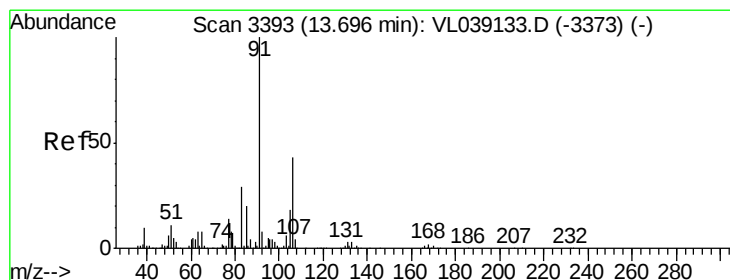
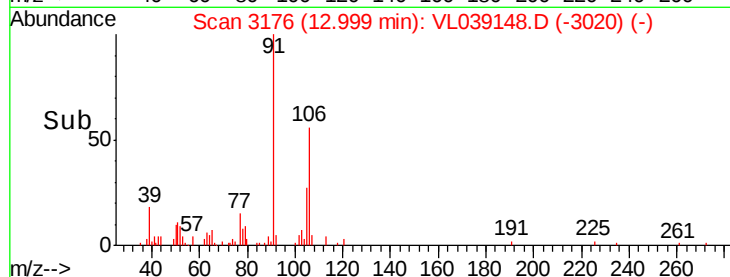
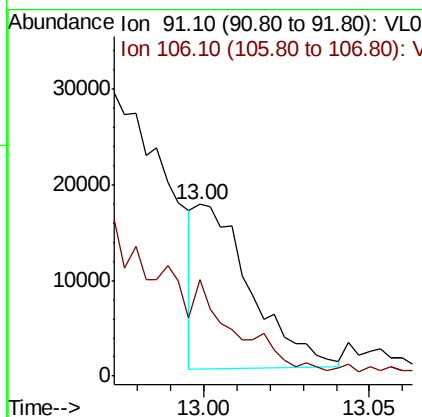
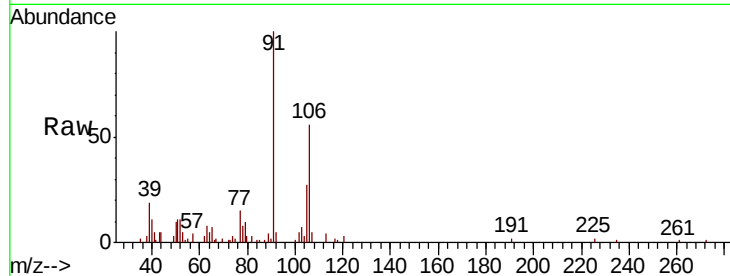
Ion 106.10 (105.80 to 106.80): V





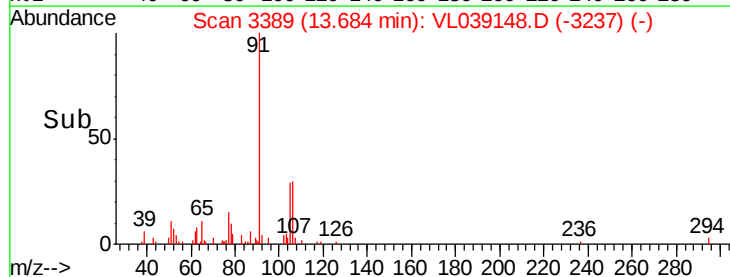
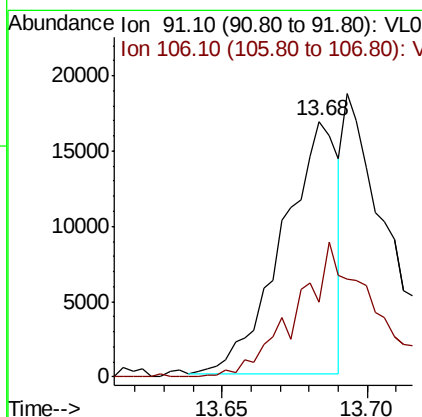
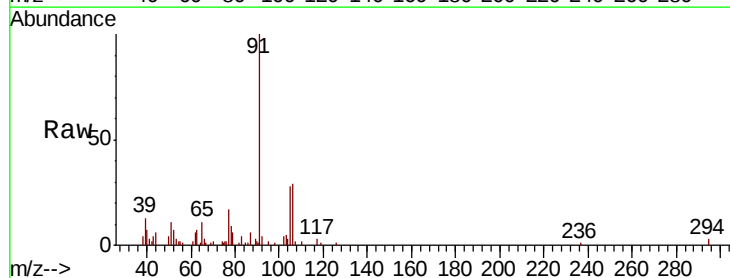
#59
m/p-Xylene
Concen: 0.069 ppbv
RT: 13.00
Delta R.T. MSVOA_L
Lab File: ClientSampled :
Acq: 1 Jun 2022 15:08

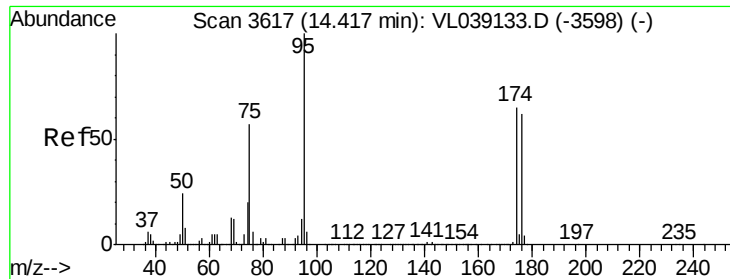
Tot Ion: 91 Resp: 19870
Ion Ratio Lower Upper
91 100
106 0.0 34.3 51.5#



#60
o-Xylene
Concen: 0.083 ppbv
RT: 13.68 min Scan# 3389
Delta R.T. -0.01 min
Lab File: VL039148.D
Acq: 1 Jun 2022 15:08

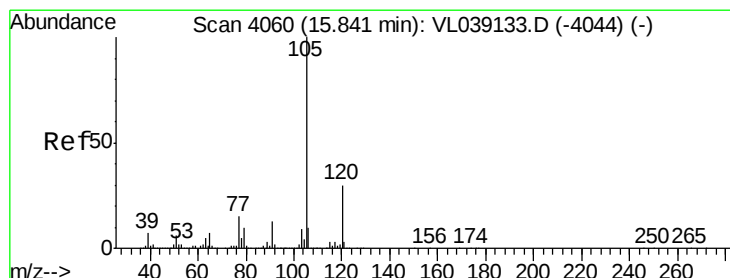
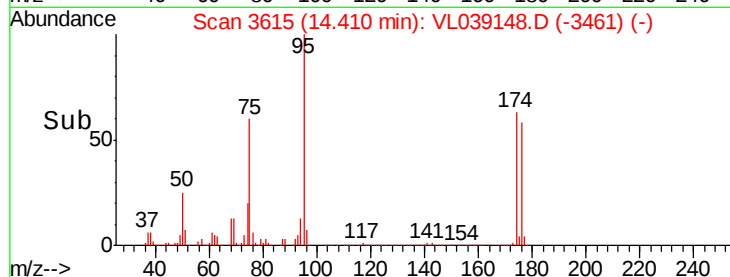
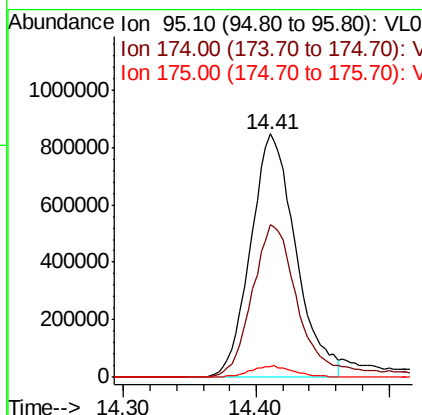
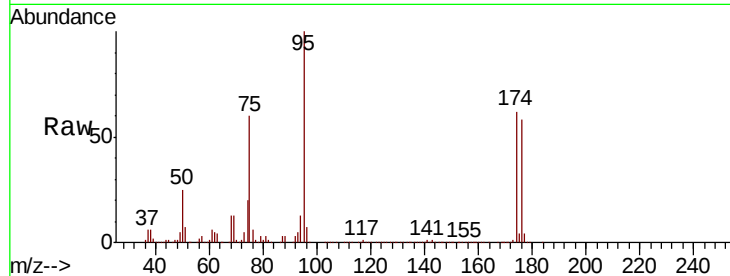
Tgt Ion: 91 Resp: 22342
Ion Ratio Lower Upper
91 100
106 82.9 22.3 66.9#





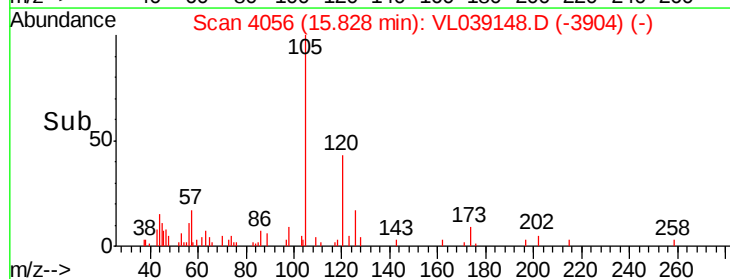
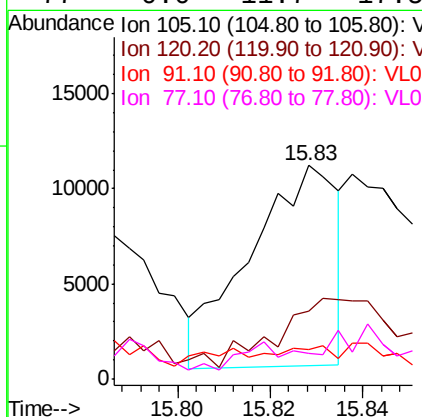
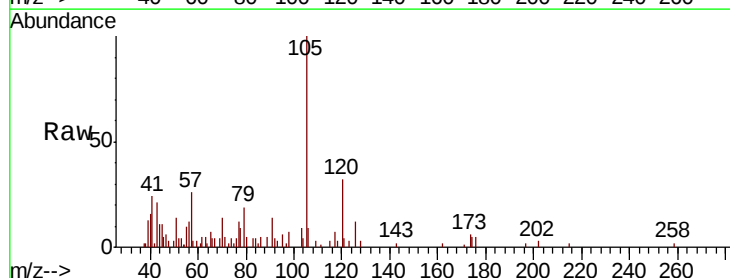
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.230 ppbv
 RT: 14.41 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 1 Jun 2022 15:08

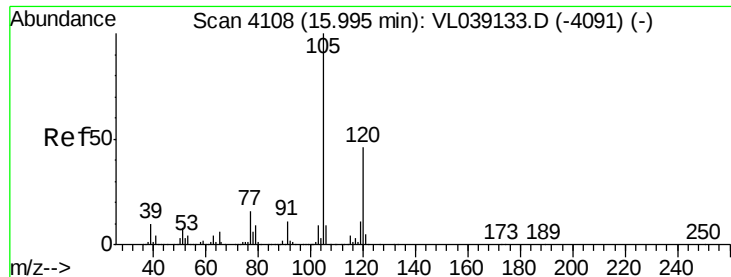
Tot Ion: 95 Resp: 2002893
 Ion Ratio Lower Upper
 95 100
 174 68.1 53.8 80.8
 175 4.8 4.1 6.1



#72
 4-Ethyltoluene
 Concen: 0.044 ppbv
 RT: 15.83 min Scan# 4056
 Delta R.T. -0.01 min
 Lab File: VL039148.D
 Acq: 1 Jun 2022 15:08

Tgt Ion: 105 Resp: 13881
 Ion Ratio Lower Upper
 105 100
 120 66.0 23.9 35.9#
 91 0.0 10.6 16.0#
 77 0.0 11.7 17.5#





#73

1,3,5-Trimethylbenzene

Concen: 0.098 ppbv

RT: 15.99 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

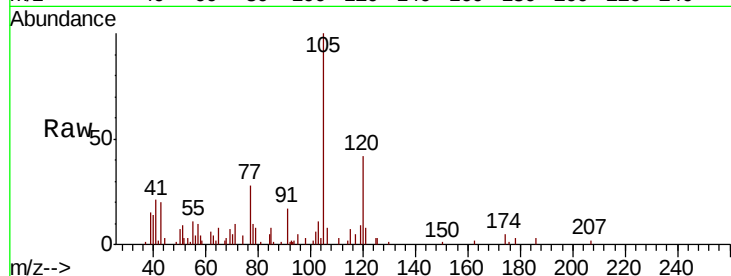
Acq: 1 Jun 2022 15:08

Tot Ion:105 Resp: 27956

Ion Ratio Lower Upper

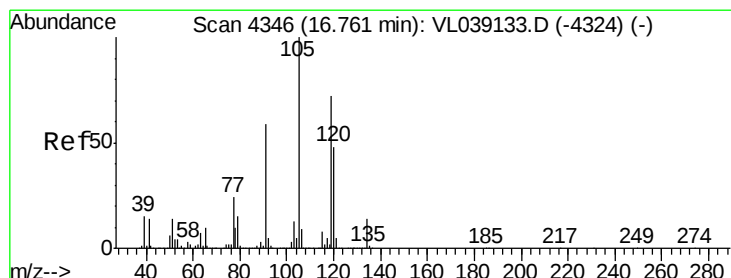
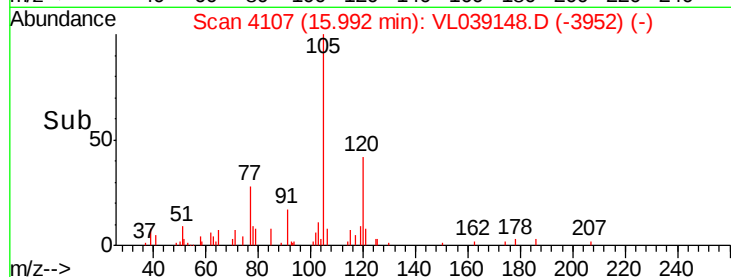
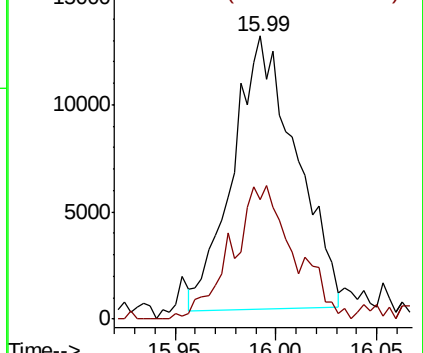
105 100

120 44.0 36.7 55.1



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.299 ppbv

RT: 16.76 min Scan# 4345

Delta R.T. -0.00 min

Lab File: VL039148.D

Acq: 1 Jun 2022 15:08

Tgt Ion:105 Resp: 95247

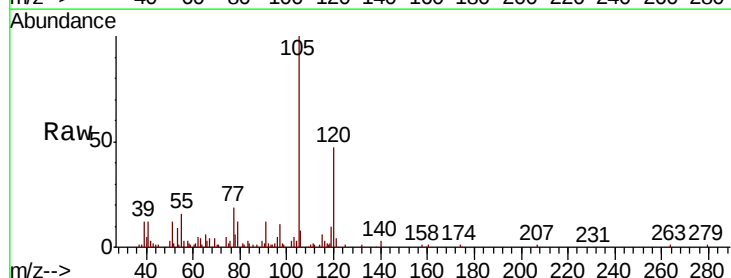
Ion Ratio Lower Upper

105 100

120 51.3 38.1 57.1

91 10.5 47.4 71.0#

77 18.0 19.5 29.3#

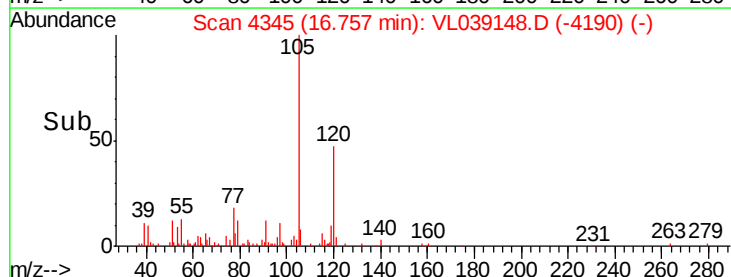
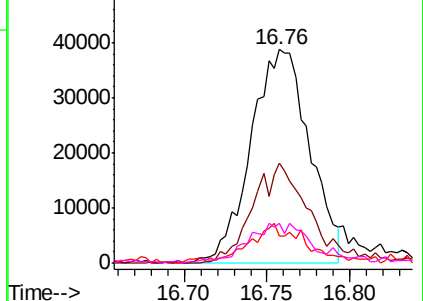


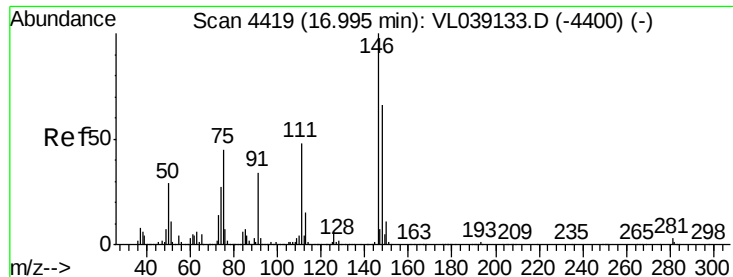
Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0





#75

1,3-Dichlorobenzene

Concen: 5.348 ppbv

RT: 17.13

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 1 Jun 2022 15:08

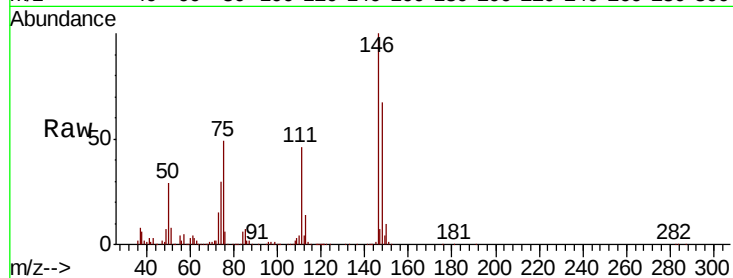
Tot Ion:146 Resp: 963852

Ion Ratio Lower Upper

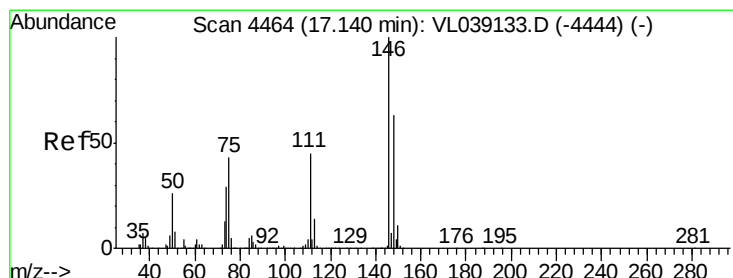
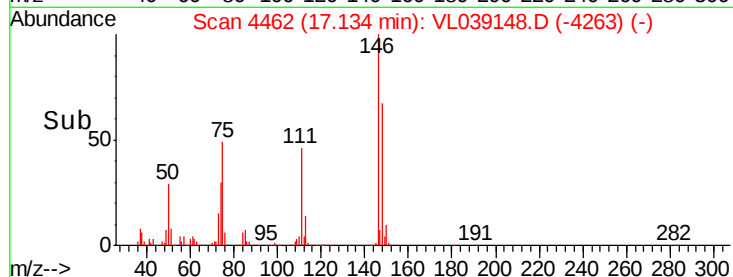
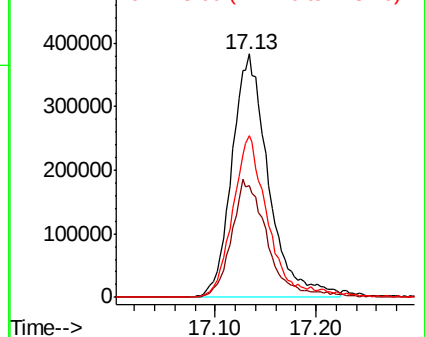
146 100

111 47.7 23.8 71.4

148 64.9 32.4 97.0



Abundance Ion 146.00 (145.70 to 146.70): V
Ion 111.10 (110.80 to 111.80): V
Ion 148.00 (147.70 to 148.70): V



#76

1,4-Dichlorobenzene

Concen: 5.360 ppbv

RT: 17.13 min Scan# 4462

Delta R.T. -0.01 min

Lab File: VL039148.D

Acq: 1 Jun 2022 15:08

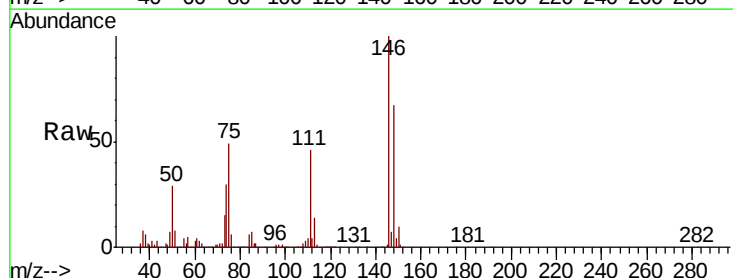
Tgt Ion:146 Resp: 963852

Ion Ratio Lower Upper

146 100

111 47.7 23.6 71.0

148 64.9 33.7 101.0



Abundance Ion 146.00 (145.70 to 146.70): V
Ion 111.10 (110.80 to 111.80): V
Ion 148.00 (147.70 to 148.70): V

