

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL060322\
 Data File : VL039174.D
 Acq On : 4 Jun 2022 11:54
 Operator : SY/AP
 Sample : N3106-04 2X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV4

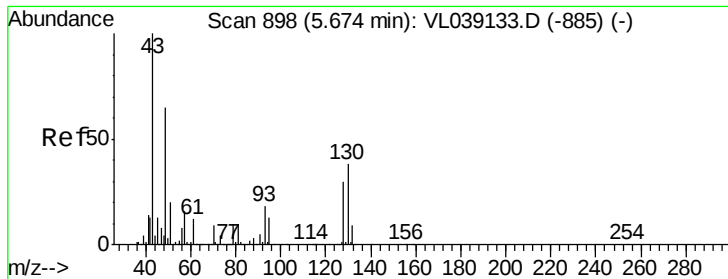
Quant Time: Jun 06 00:42:57 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL053122AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jun 01 01:22:18 2022
 QLast Update : Wed Jun 01 01:22:18 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1243459	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3182318	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2982308	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2442381	9.91	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.10%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.06	85	39146	0.179 ppbv	95
3) Chlorodifluoromethane	2.97	51	42227	0.267 ppbv #	76
4) Chloromethane	3.15	50	5609	0.069 ppbv	98
7) Chloroethane	3.56	64	3462	0.131 ppbv #	82
9) Propene	3.01	41	22224	0.322 ppbv #	15
10) Heptane	8.13	43	218487	1.358 ppbv	98
13) Ethanol	3.60	45	3694	0.982 ppbv #	100
15) Acetone	3.86	43	1043576	8.057 ppbv #	88
16) 1,3-Butadiene	3.31	39	134439	1.931 ppbv #	16
17) tert-Butyl alcohol	4.29	59	3426	0.034 ppbv #	70
19) Isopropyl Alcohol	3.97	45	3043	0.050 ppbv #	93
20) Methylene Chloride	4.36	84	41894	0.767 ppbv	96
23) Vinyl Acetate	5.08	43	1553026	14.491 ppbv	98
25) Ethyl Acetate	5.69	43	1156874	3.963 ppbv #	79
26) Hexane	5.70	57	1569177	12.231 ppbv #	24
28) Methyl tert-Butyl Ether	5.04	73	23133	0.163 ppbv #	52
34) 2-Butanone	5.25	43	596699	3.451 ppbv	96
36) Benzene	6.89	78	8884	0.034 ppbv	96
39) 1,2-Dichloropropane	7.18	63	807769	7.860 ppbv #	24
41) Tetrahydrofuran	5.69	42	796723	7.662 ppbv #	45
43) Methyl Methacrylate	8.07	69	8748	0.087 ppbv #	1
51) 2-Hexanone	10.14	43	542080	2.692 ppbv #	99
52) Tetrachloroethene	11.22	164	3674	0.036 ppbv #	62
53) Toluene	9.81	91	57703	0.194 ppbv	93
60) o-Xylene	13.69	91	18484	0.054 ppbv #	47
63) 1,1,2,2-Tetrachloroethane	13.68	83	11832	0.062 ppbv #	61
73) 1,3,5-Trimethylbenzene	15.99	105	15616	0.043 ppbv	96
74) 1,2,4-Trimethylbenzene	16.77	105	90202	0.225 ppbv #	60
79) Naphthalene	22.20	128	10473	0.034 ppbv #	59
80) Naphthalene,2-methyl-	24.97	142	4254	0.037 ppbv #	81

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: SV4

Acq: 4 Jun 2022 11:54

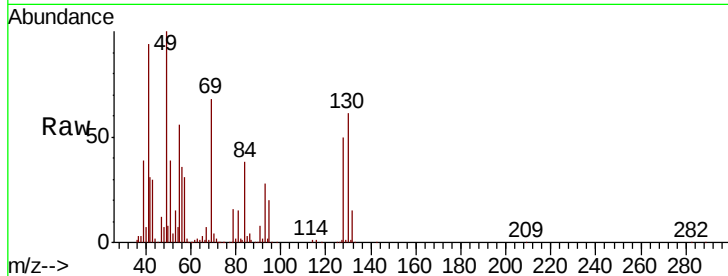
Tot Ion: 49 Resp: 1243459

Ion Ratio Lower Upper

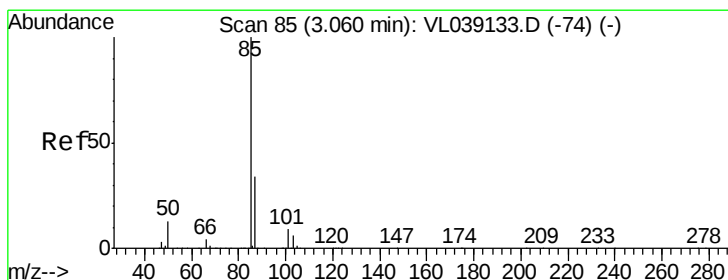
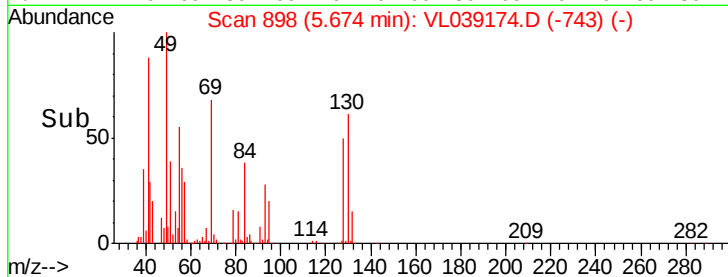
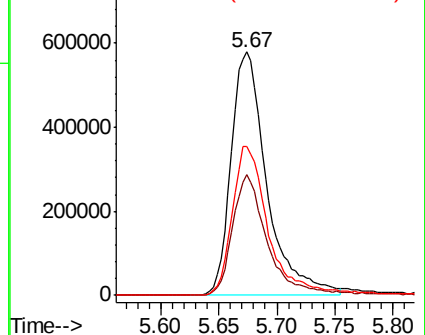
49 100

128 48.9 24.7 74.1

130 63.5 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: 0.179 ppbv

RT: 3.06 min Scan# 85

Delta R.T. -0.00 min

Lab File: VL039174.D

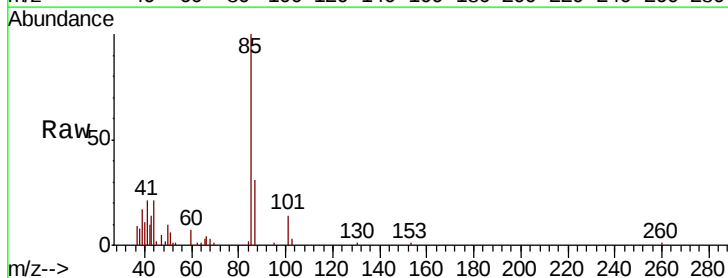
Acq: 4 Jun 2022 11:54

Tgt Ion: 85 Resp: 39146

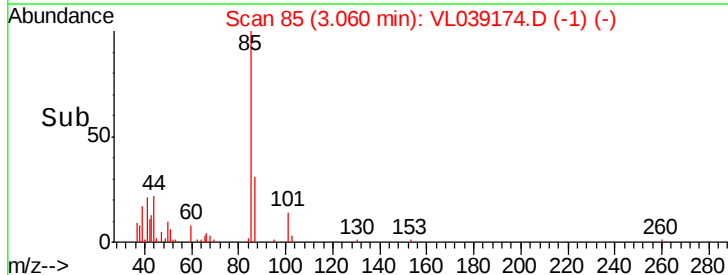
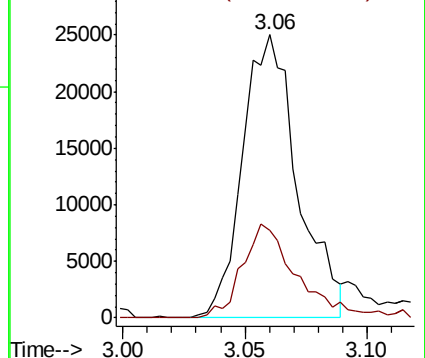
Ion Ratio Lower Upper

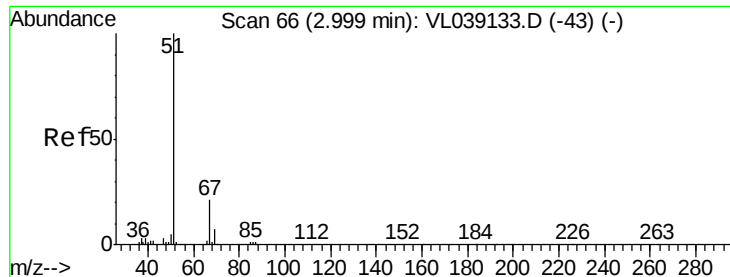
85 100

87 30.9 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: 0.267 ppbv

RT: 2.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

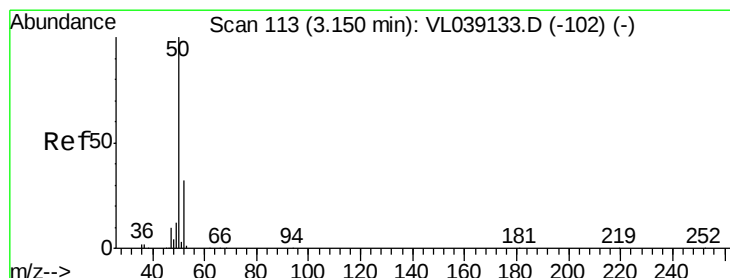
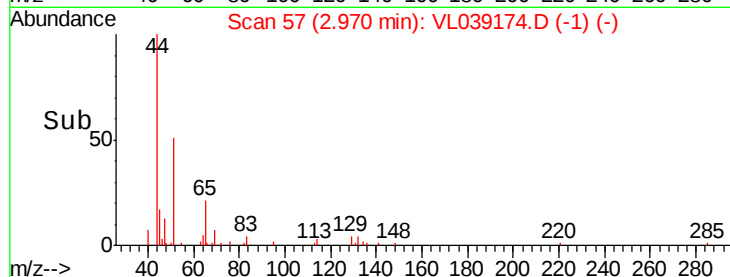
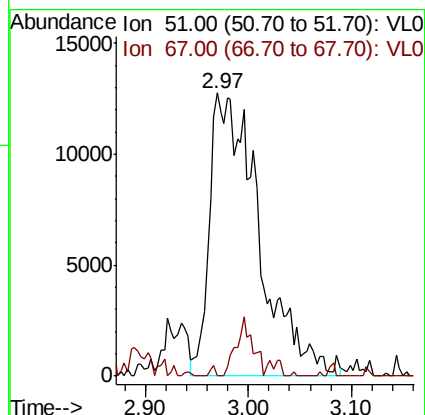
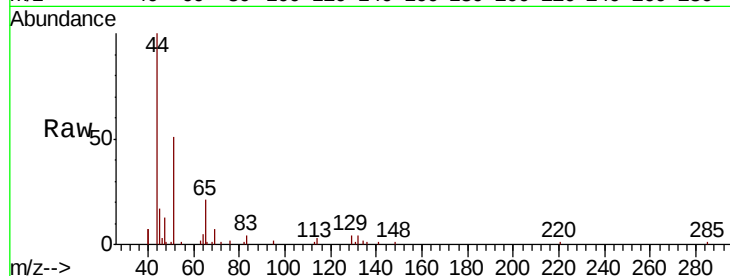
Acq: 4 Jun 2022 11:54 SV4

Tot Ion: 51 Resp: 42227

Ion Ratio Lower Upper

51 100

67 9.0 16.2 24.4#



#4

Chloromethane

Concen: 0.069 ppbv

RT: 3.15 min Scan# 113

Delta R.T. -0.00 min

Lab File: VL039174.D

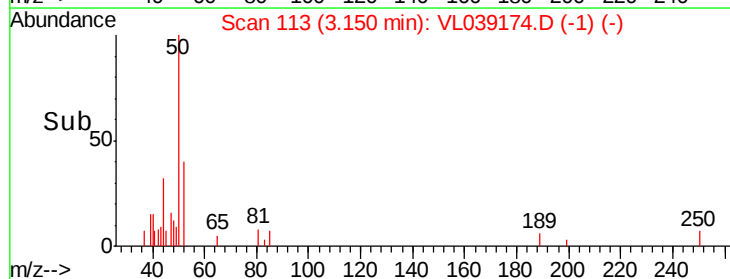
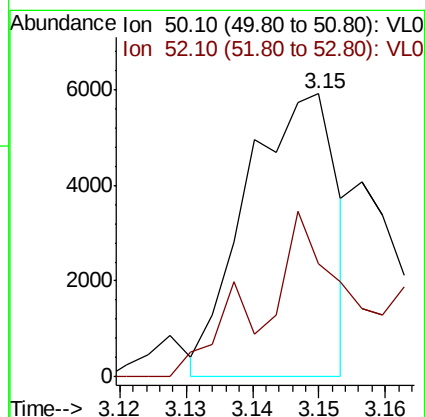
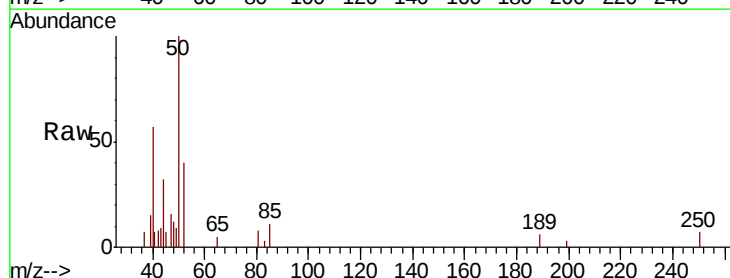
Acq: 4 Jun 2022 11:54

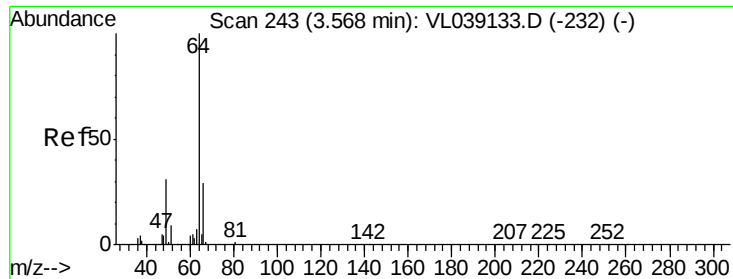
Tgt Ion: 50 Resp: 5609

Ion Ratio Lower Upper

50 100

52 33.3 25.9 38.9





#7

Chloroethane

Concen: 0.131 ppbv

RT: 3.56 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

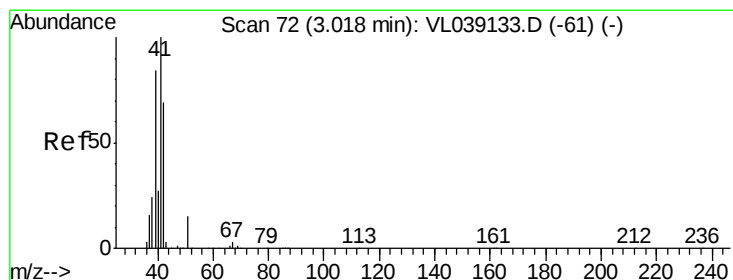
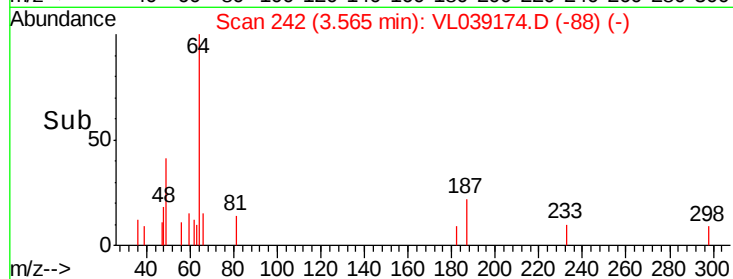
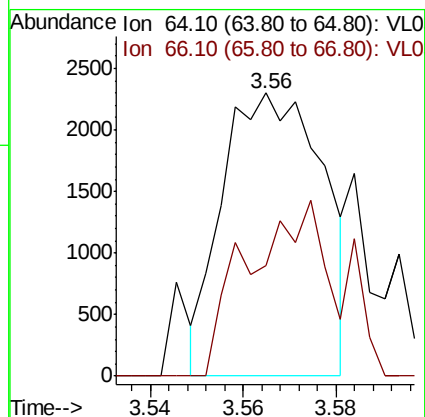
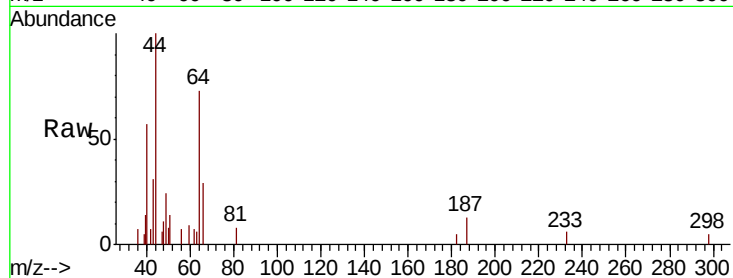
Acq: 4 Jun 2022 11:54 SV4

Tot Ion: 64 Resp: 3462

Ion Ratio Lower Upper

64 100

66 38.9 23.6 35.4#



#9

Propene

Concen: 0.322 ppbv

RT: 3.01 min Scan# 71

Delta R.T. -0.00 min

Lab File: VL039174.D

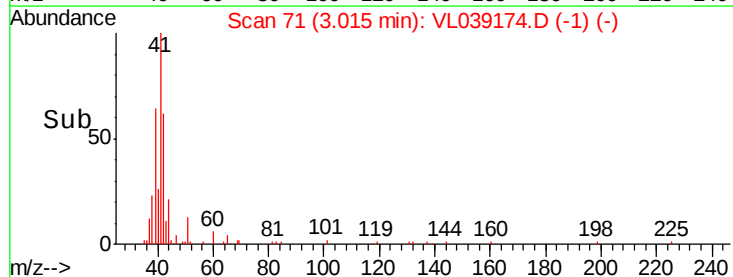
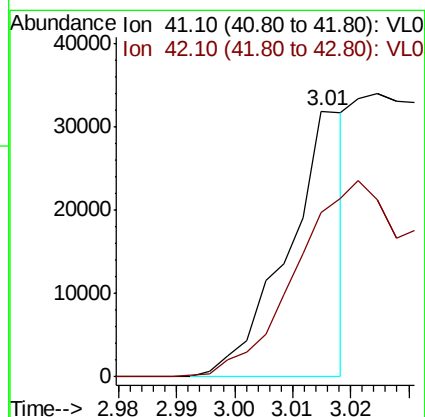
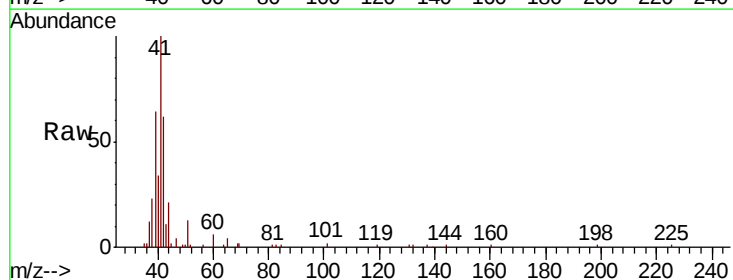
Acq: 4 Jun 2022 11:54

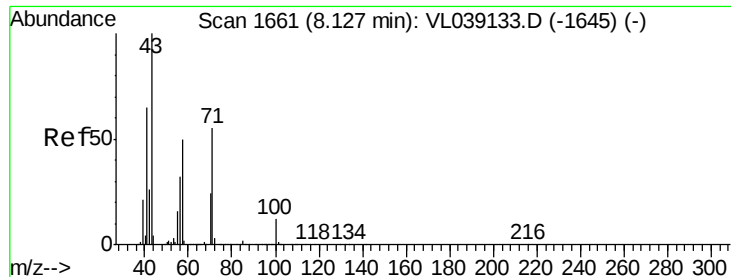
Tgt Ion: 41 Resp: 22224

Ion Ratio Lower Upper

41 100

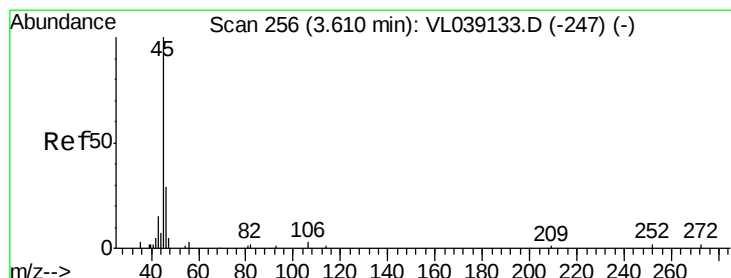
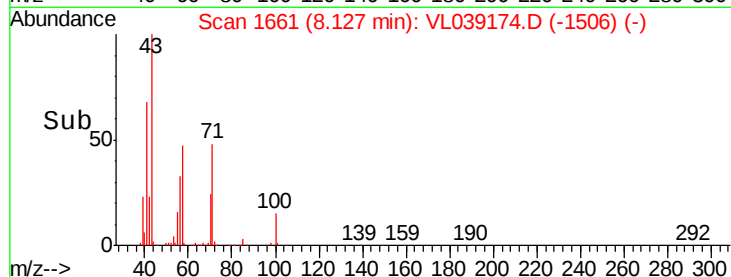
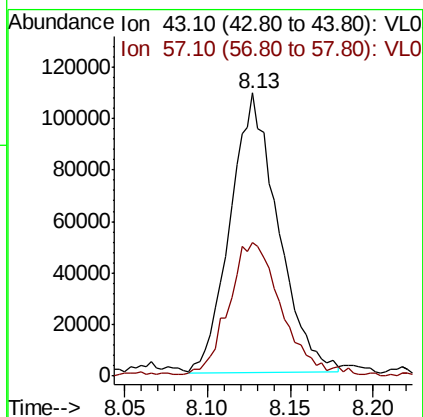
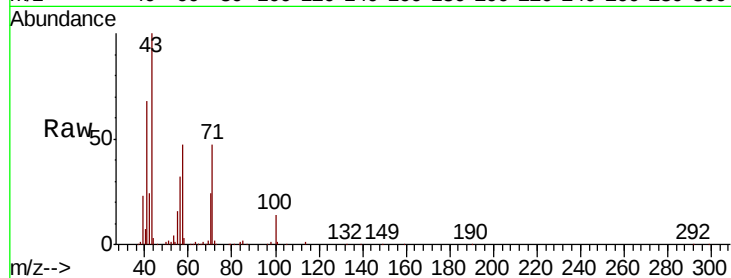
42 0.0 55.4 83.2#





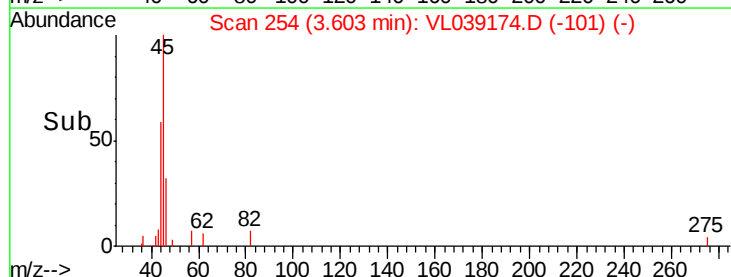
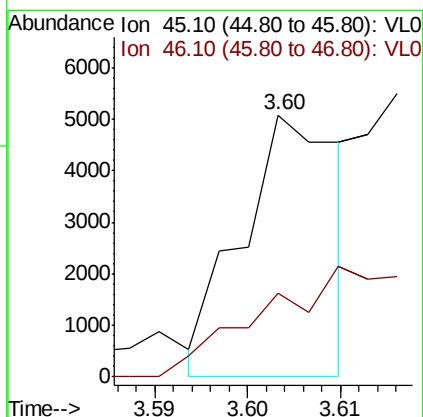
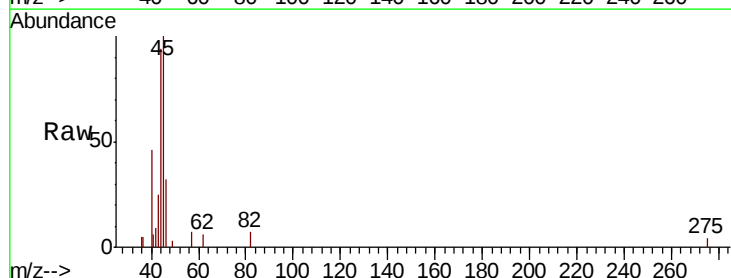
#10
 Heptane
 Concen: 1.358 ppbv
 RT: 8.13
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SV4
 Acq: 4 Jun 2022 11:54

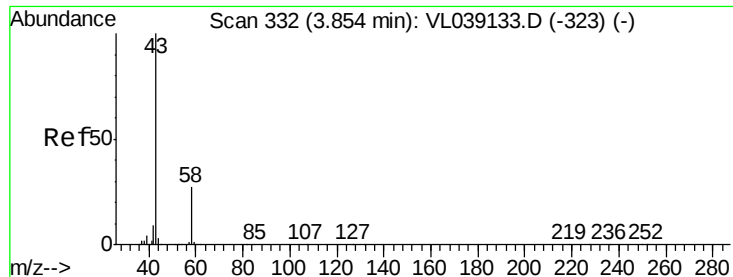
Tot Ion: 43 Resp: 218487
 Ion Ratio Lower Upper
 43 100
 57 53.1 41.4 62.2



#13
 Ethanol
 Concen: 0.982 ppbv
 RT: 3.60 min Scan# 254
 Delta R.T. -0.01 min
 Lab File: VL039174.D
 Acq: 4 Jun 2022 11:54

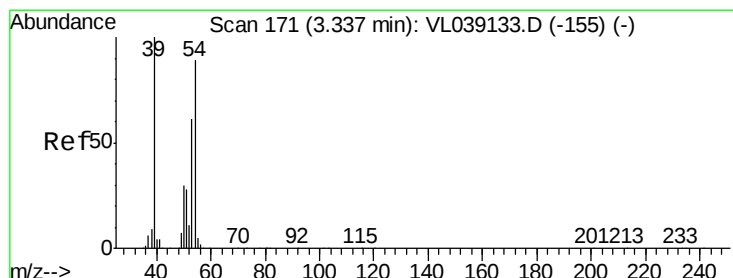
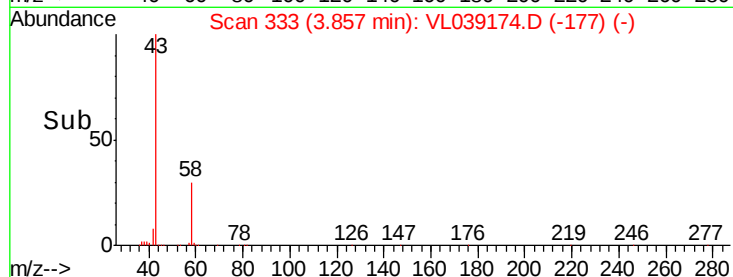
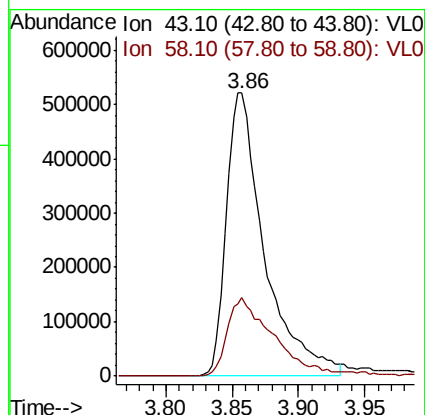
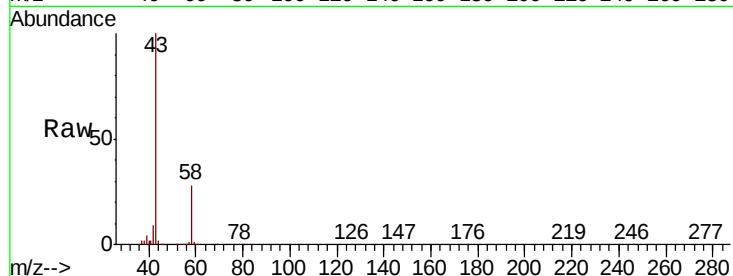
Tgt Ion: 45 Resp: 3694
 Ion Ratio Lower Upper
 45 100
 46 0.0 0.0 0.0





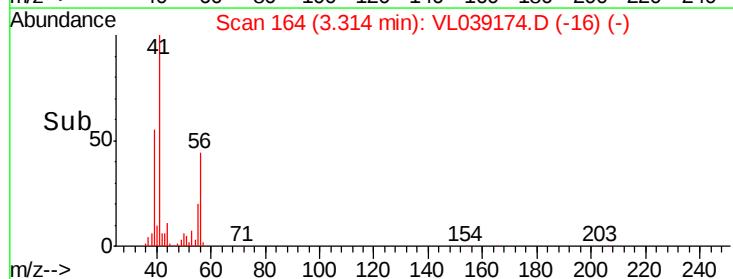
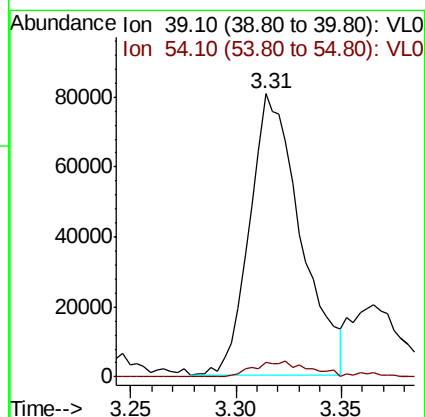
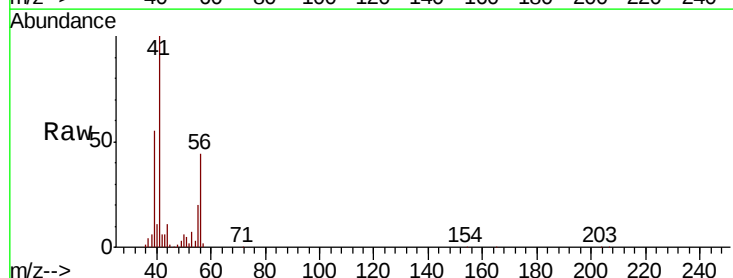
#15
Acetone
Concen: 8.057 ppbv
RT: 3.86
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 4 Jun 2022 11:54

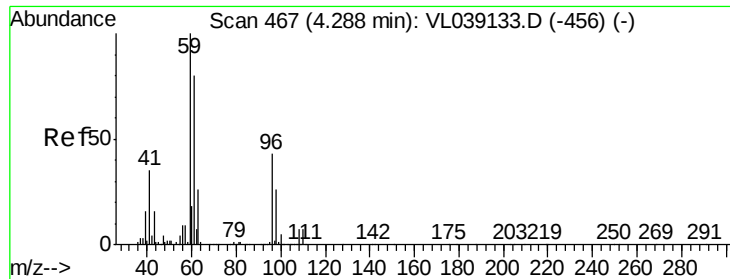
Tot Ion: 43 Resp: 1043576
Ion Ratio Lower Upper
43 100
58 34.6 22.5 33.7#



#16
1,3-Butadiene
Concen: 1.931 ppbv
RT: 3.31 min Scan# 164
Delta R.T. -0.02 min
Lab File: VL039174.D
Acq: 4 Jun 2022 11:54

Tgt Ion: 39 Resp: 134439
Ion Ratio Lower Upper
39 100
54 6.9 65.8 98.6#





#17

tert-Butyl alcohol

Concen: 0.034 ppbv

RT: 4.29 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

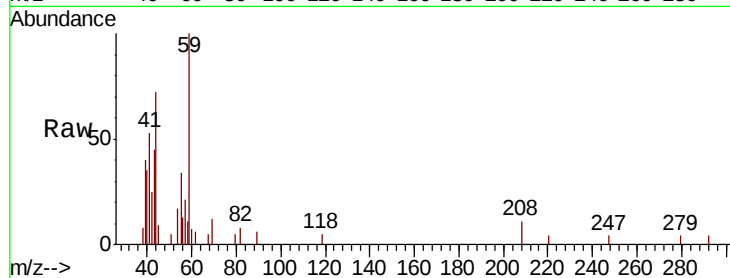
Acq: 4 Jun 2022 11:54 SV4

Tot Ion: 59 Resp: 3426

Ion Ratio Lower Upper

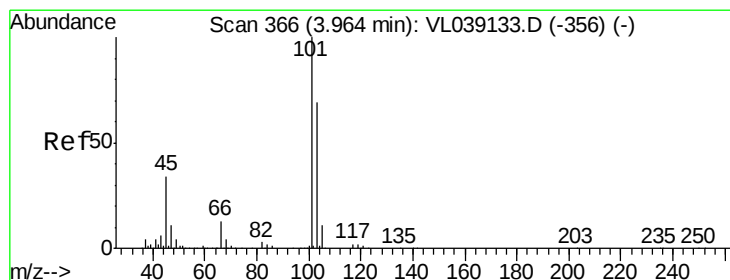
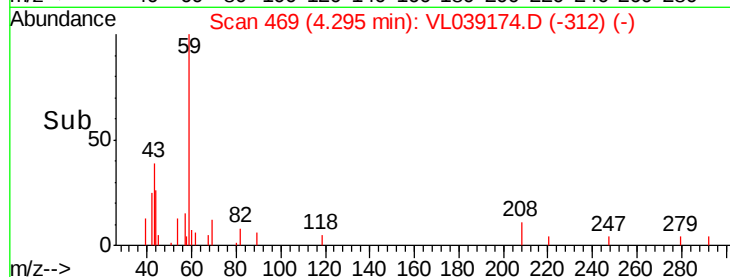
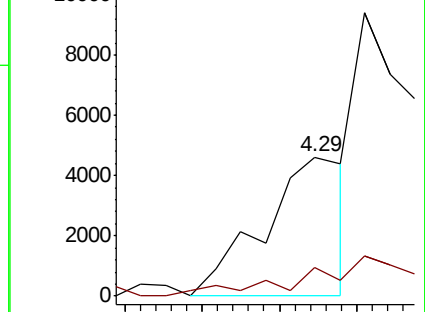
59 100

57 0.0 9.1 13.7#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#19

Isopropyl Alcohol

Concen: 0.050 ppbv

RT: 3.97 min Scan# 368

Delta R.T. 0.01 min

Lab File: VL039174.D

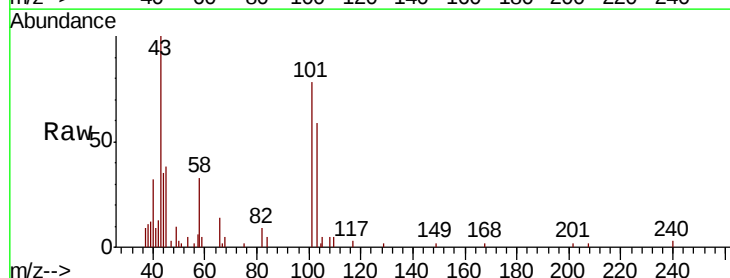
Acq: 4 Jun 2022 11:54

Tgt Ion: 45 Resp: 3043

Ion Ratio Lower Upper

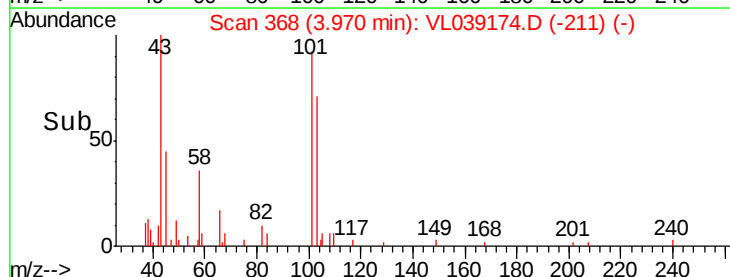
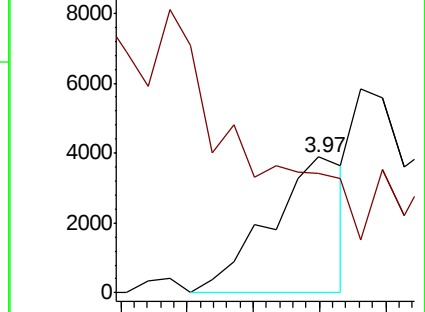
45 100

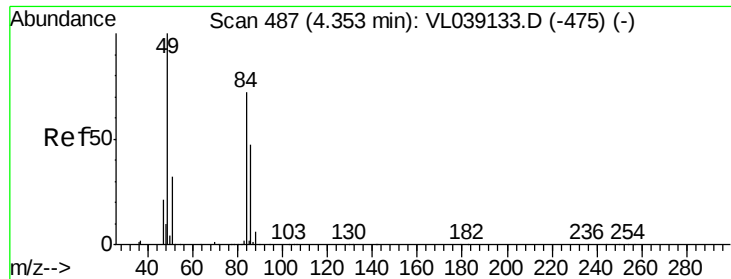
58 0.0 1.8 2.8#



Abundance Ion 45.10 (44.80 to 45.80): VL0

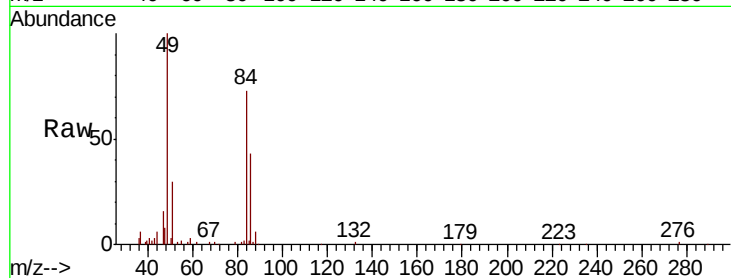
Ion 58.10 (57.80 to 58.80): VL0





#20
Methvlene Chloride
Concen: 0.767 ppbv
RT: 4.36
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
SV4
Acq: 4 Jun 2022 11:54

Tot Ion:	84	Resp:	41894
Ion	Ratio	Lower	Upper
84	100		
49	139.7	111.1	166.7
51	40.3	35.3	52.9
86	57.9	51.9	77.9



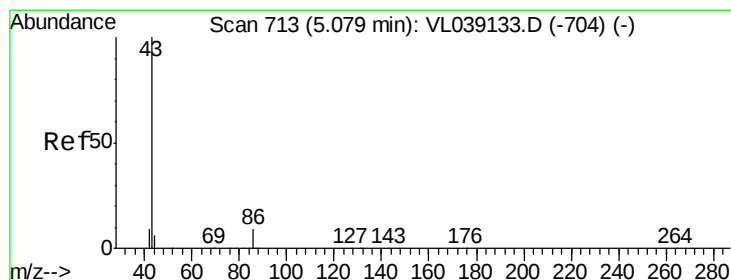
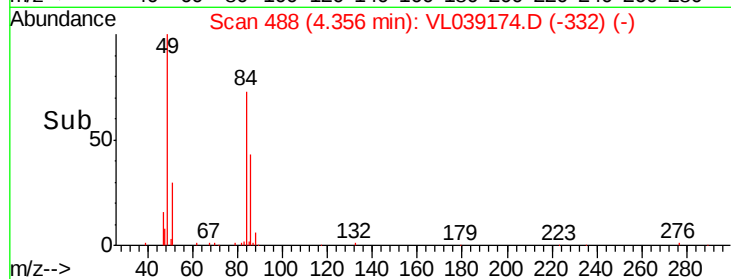
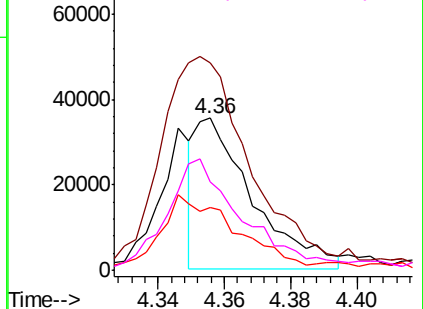
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

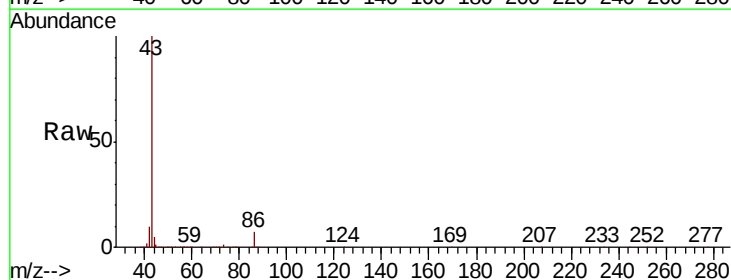
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#23
Vinyl Acetate
Concen: 14.491 ppbv
RT: 5.08 min Scan# 713
Delta R.T. -0.00 min
Lab File: VL039174.D
Acq: 4 Jun 2022 11:54

Tgt Ion:	43	Resp:	1553026
Ion	Ratio	Lower	Upper
43	100		
86	7.5	6.0	9.0
42	9.4	8.2	12.4
44	4.7	4.3	6.5



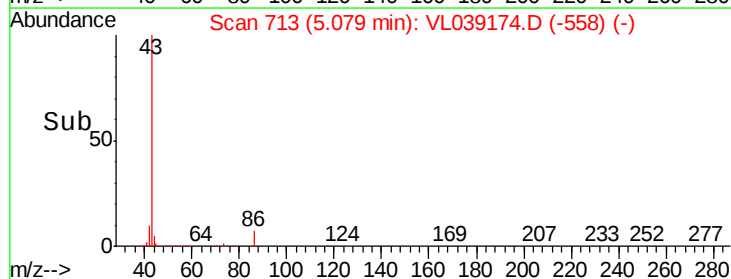
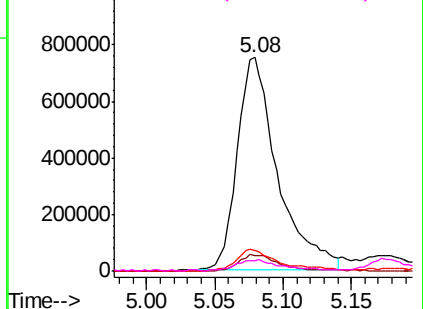
Abundance

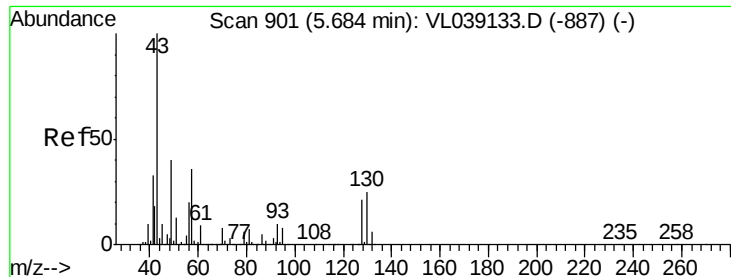
Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

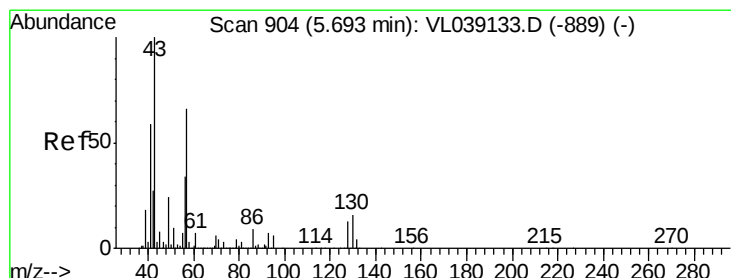
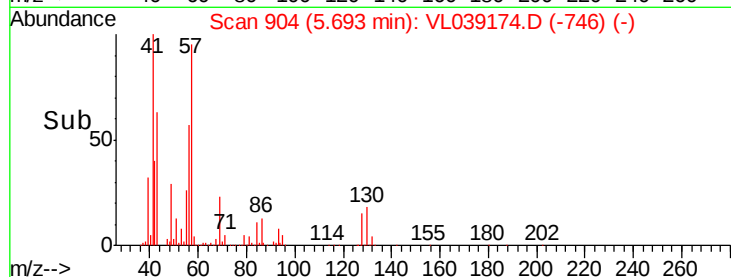
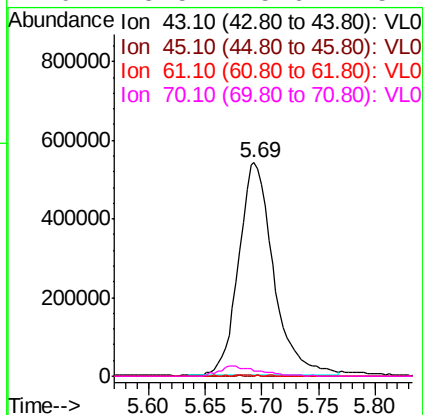
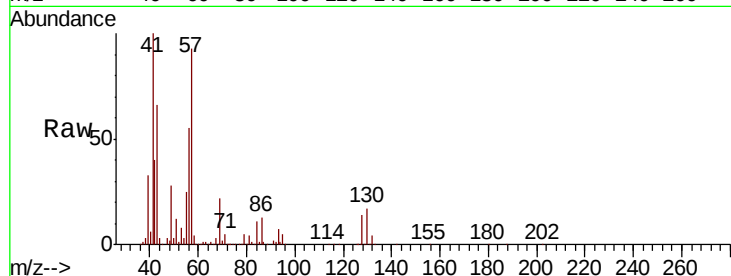
Ion 44.10 (43.80 to 44.80): VL0





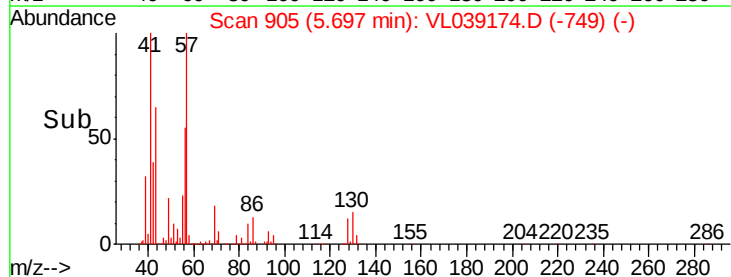
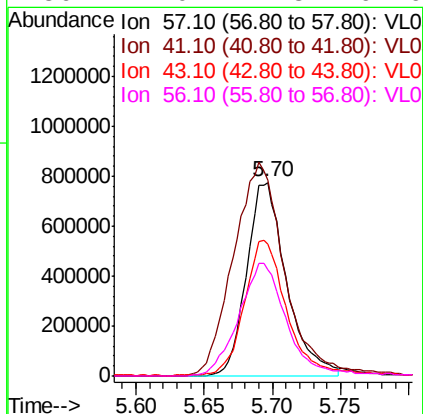
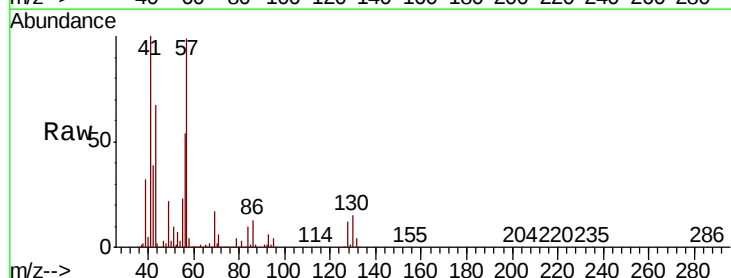
#25
Ethyl Acetate
Concen: 3.963 ppbv
RT: 5.69 min
Delta R.T.: MSVOA_L
Lab File: ClientSampleId : SV4
Acq: 4 Jun 2022 11:54

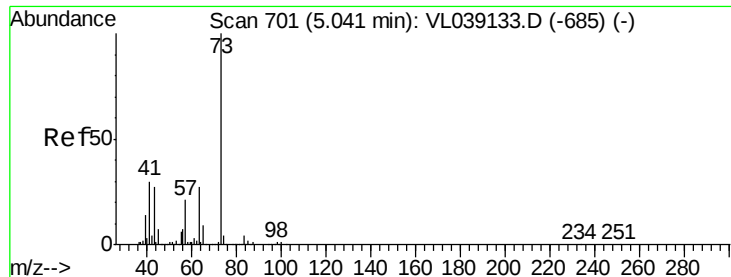
Tot Ion:	43	Resp:	1156874
Ion	Ratio	Lower	Upper
43	100		
45	0.3	8.2	12.2#
61	0.5	8.4	12.6#
70	5.5	5.6	8.4#



#26
Hexane
Concen: 12.231 ppbv
RT: 5.70 min Scan# 905
Delta R.T.: 0.00 min
Lab File: VL039174.D
Acq: 4 Jun 2022 11:54

Tgt Ion:	57	Resp:	1569177
Ion	Ratio	Lower	Upper
57	100		
41	143.8	72.4	108.6#
43	75.8	187.0	280.6#
56	71.0	41.8	62.6#





#28

Methyl tert-Butyl Ether

Concen: 0.163 ppbv

RT: 5.04 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

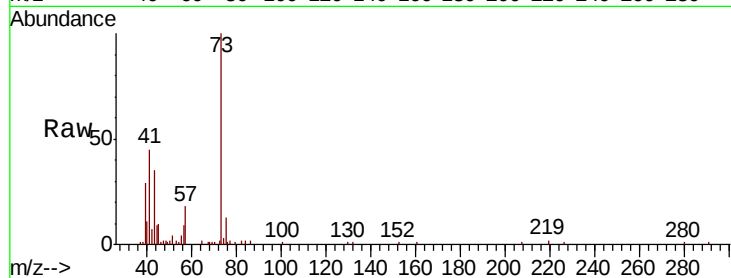
Acq: 4 Jun 2022 11:54 SV4

Tot Ion: 73 Resp: 23133

Ion Ratio Lower Upper

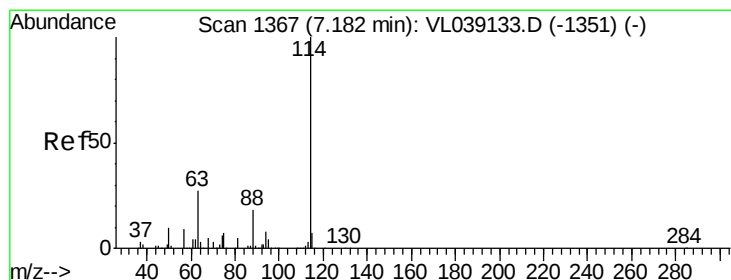
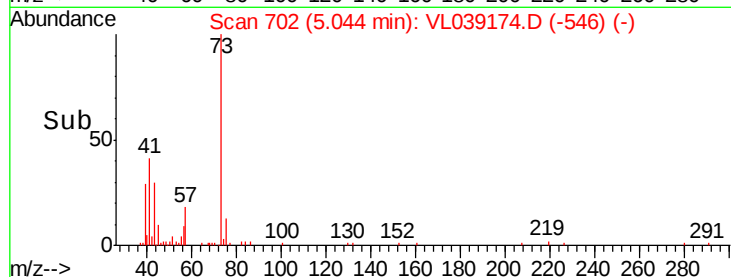
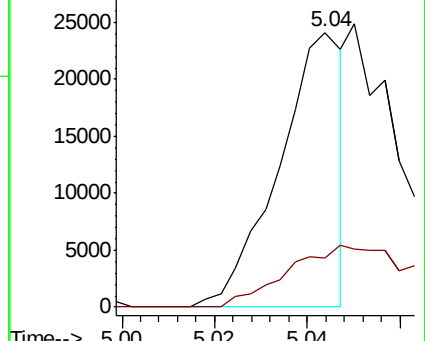
73 100

57 0.0 18.6 27.8#



Abundance Ion 73.10 (72.80 to 73.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. -0.00 min

Lab File: VL039174.D

Acq: 4 Jun 2022 11:54

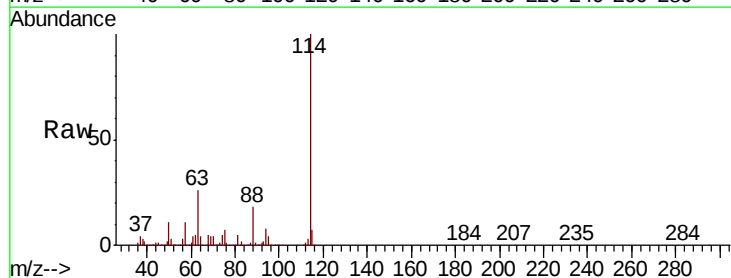
Tgt Ion: 114 Resp: 3182318

Ion Ratio Lower Upper

114 100

63 26.1 21.7 32.5

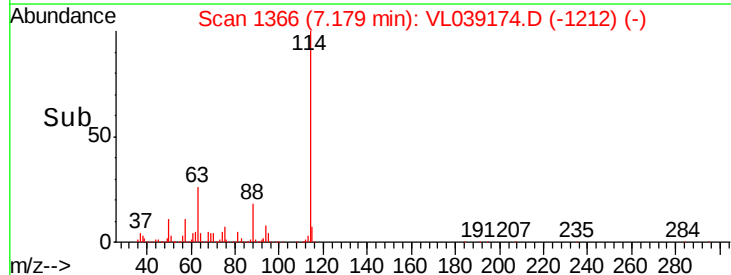
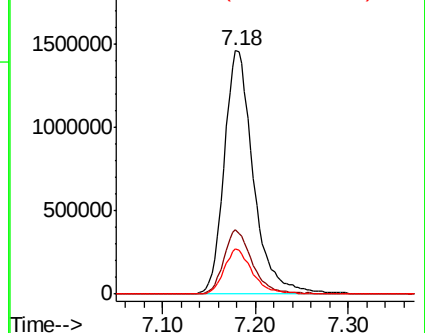
88 18.1 14.8 22.2

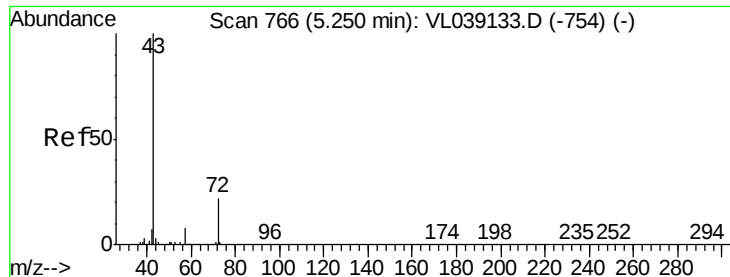


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

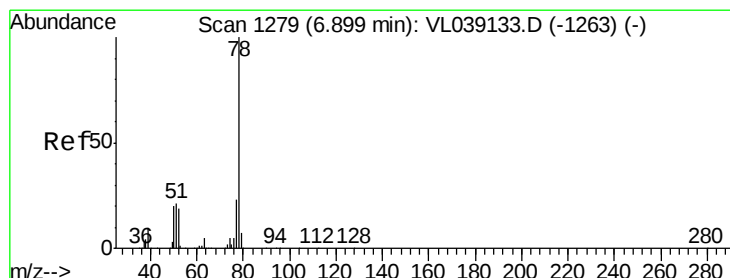
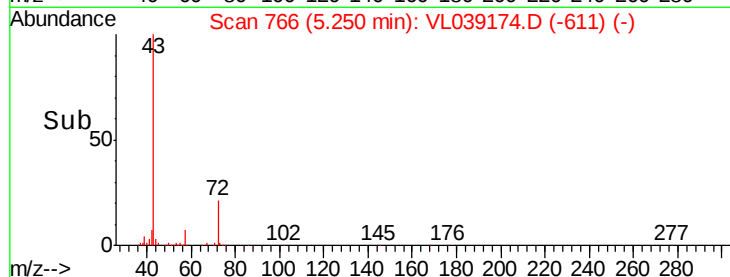
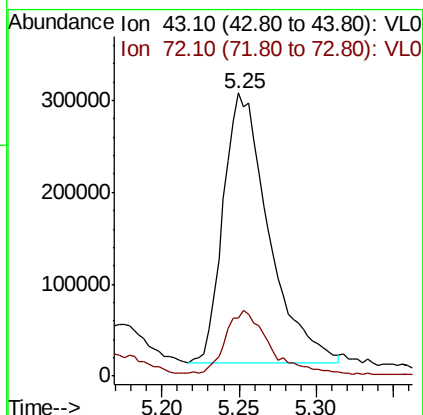
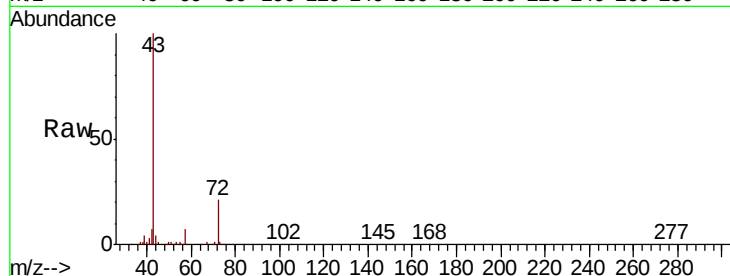
Ion 88.10 (87.80 to 88.80): VL0





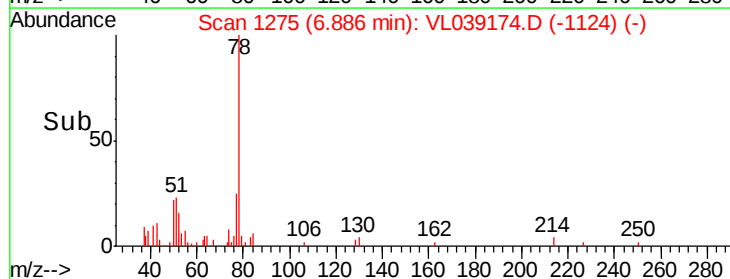
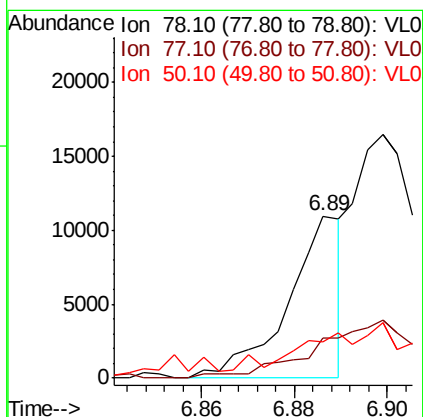
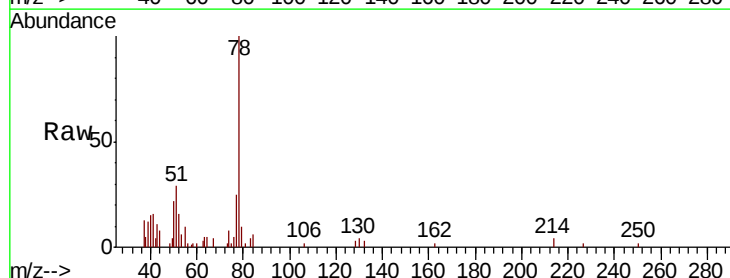
#34
 2-Butanone
 Concen: 3.451 ppbv
 RT: 5.25
 Delta R.T. MSV0A_L
 Lab File: ClientSampleId :
 SV4
 Acq: 4 Jun 2022 11:54

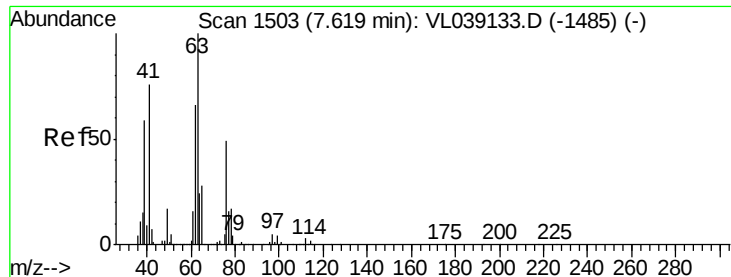
Tot Ion: 43 Resp: 596699
 Ion Ratio Lower Upper
 43 100
 72 24.5 18.2 27.2



#36
 Benzene
 Concen: 0.034 ppbv
 RT: 6.89 min Scan# 1275
 Delta R.T. -0.01 min
 Lab File: VL039174.D
 Acq: 4 Jun 2022 11:54

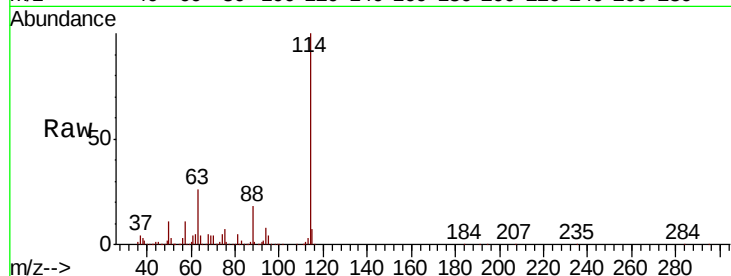
Tgt Ion: 78 Resp: 8884
 Ion Ratio Lower Upper
 78 100
 77 25.2 18.6 27.8
 50 18.3 15.8 23.8



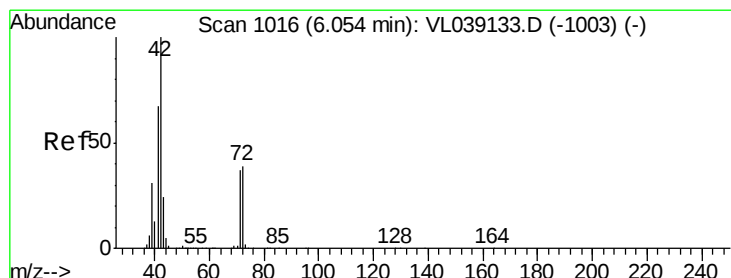
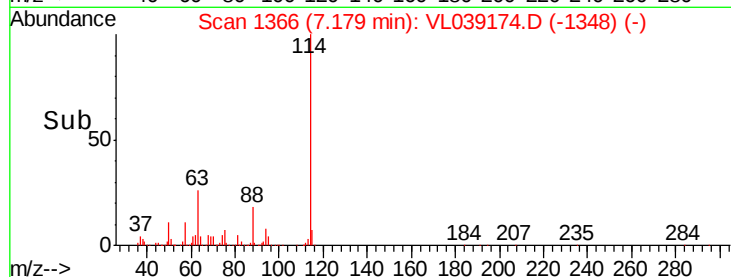
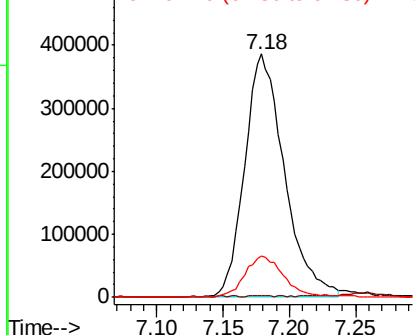


#39
 1,2-Dichloropropane
 Concen: 7.860 ppbv
 RT: 7.18
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 SV4
 Acq: 4 Jun 2022 11:54

Tot Ion	Ratio	Lower	Upper
63	100		
41	0.2	60.8	91.2#
62	17.2	52.9	79.3#

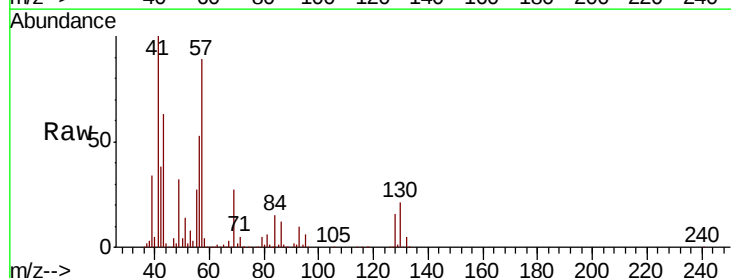


Abundance Ion 63.10 (62.80 to 63.80): VL0
 Ion 41.10 (40.80 to 41.80): VL0
 Ion 62.10 (61.80 to 62.80): VL0

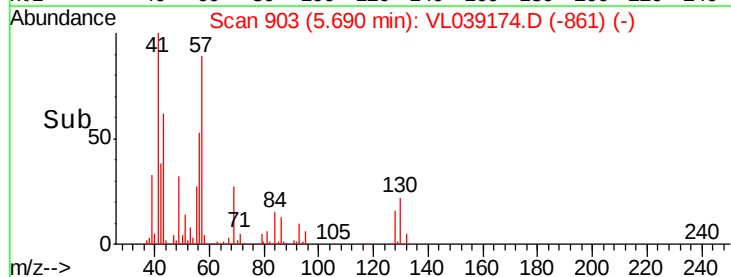
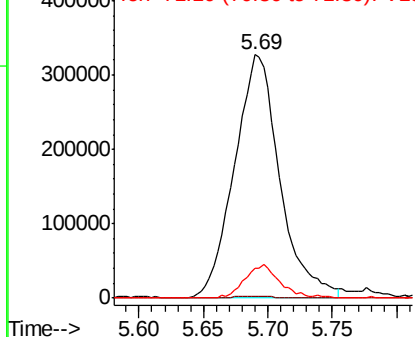


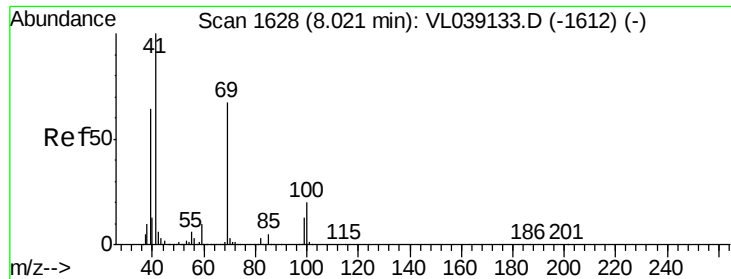
#41
 Tetrahydrofuran
 Concen: 7.662 ppbv
 RT: 5.69 min Scan# 903
 Delta R.T. -0.36 min
 Lab File: VL039174.D
 Acq: 4 Jun 2022 11:54

Tgt Ion	Ratio	Lower	Upper
42	100		
72	0.9	32.0	48.0#
71	11.1	31.1	46.7#



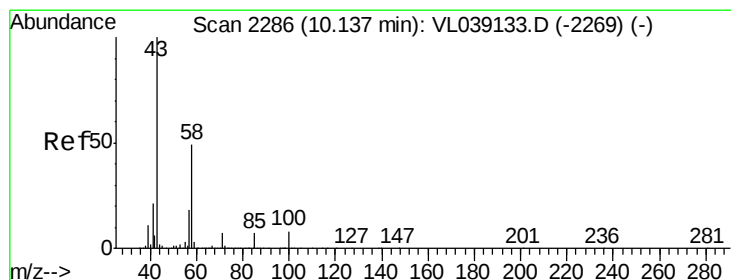
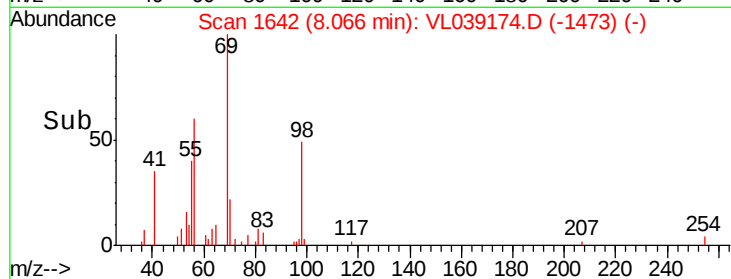
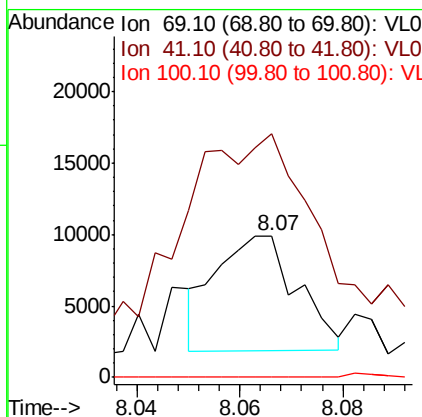
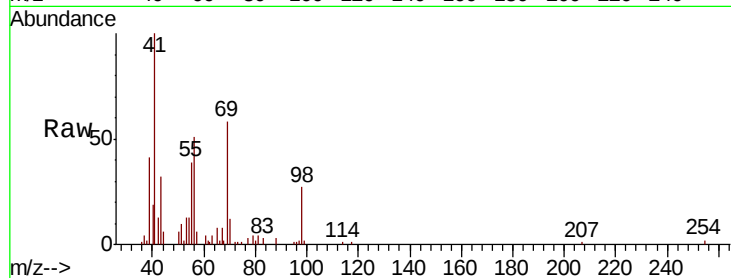
Abundance Ion 42.10 (41.80 to 42.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0
 Ion 71.10 (70.80 to 71.80): VL0





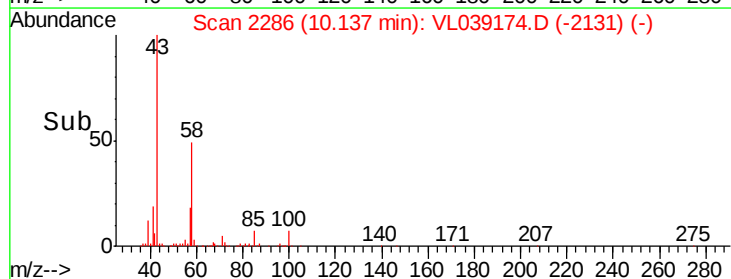
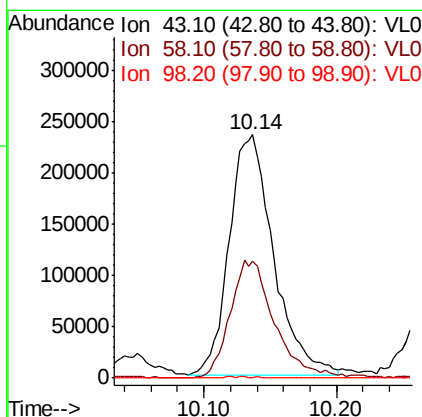
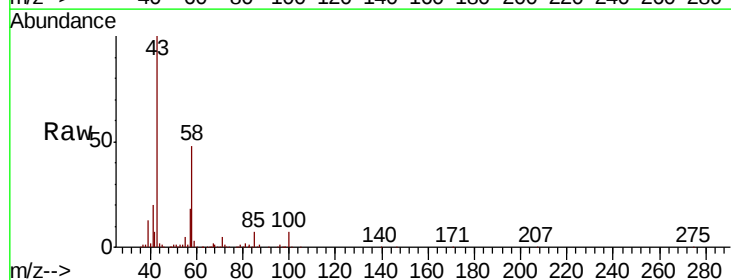
#43
Methvl Methacrylate
Concen: 0.087 ppbv
RT: 8.07 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId : SV4
Acq: 4 Jun 2022 11:54

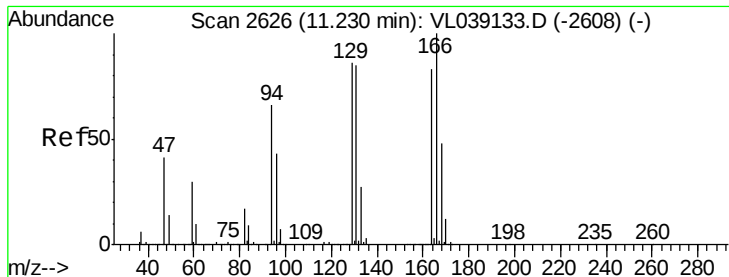
Tot Ion: 69 Resp: 8748
Ion Ratio Lower Upper
69 100
41 390.4 121.9 182.9#
100 0.0 24.1 36.1#



#51
2-Hexanone
Concen: 2.692 ppbv
RT: 10.14 min Scan# 2286
Delta R.T.: -0.00 min
Lab File: VL039174.D
Acq: 4 Jun 2022 11:54

Tgt Ion: 43 Resp: 542080
Ion Ratio Lower Upper
43 100
58 49.3 40.0 60.0
98 0.6 0.1 0.1#





#52

Tetrachloroethene

Concen: 0.036 ppbv

RT: 11.22

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 4 Jun 2022 11:54

Tot Ion: 164 Resp: 3674

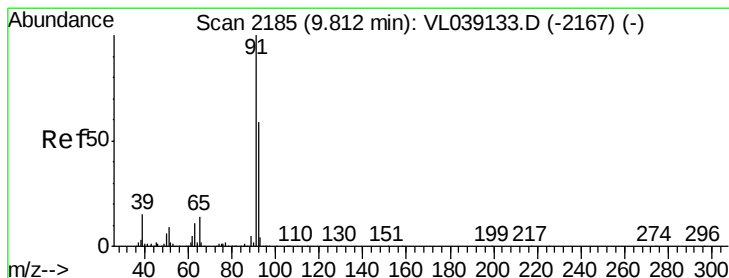
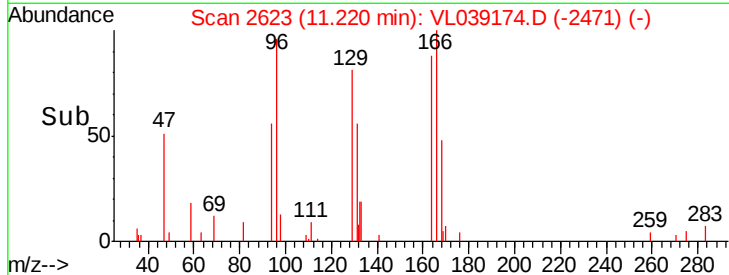
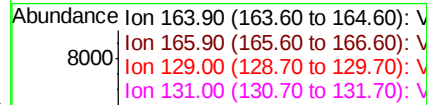
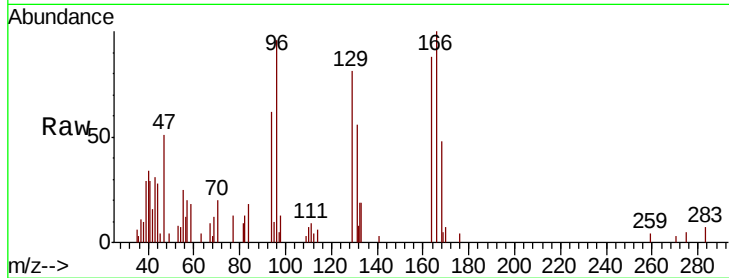
Ion Ratio Lower Upper

164 100

166 102.2 96.3 144.5

129 123.1 82.5 123.7

131 20.6 82.1 123.1#



#53

Toluene

Concen: 0.194 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.00 min

Lab File: VL039174.D

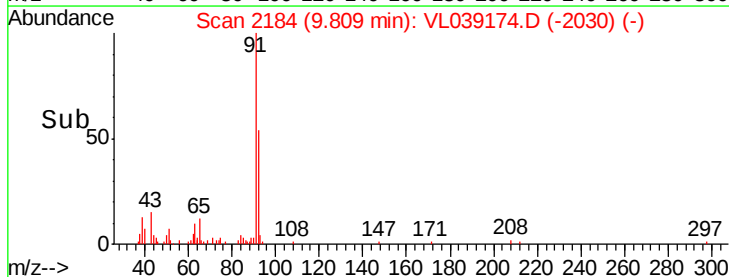
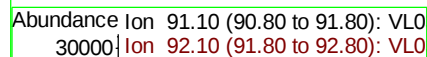
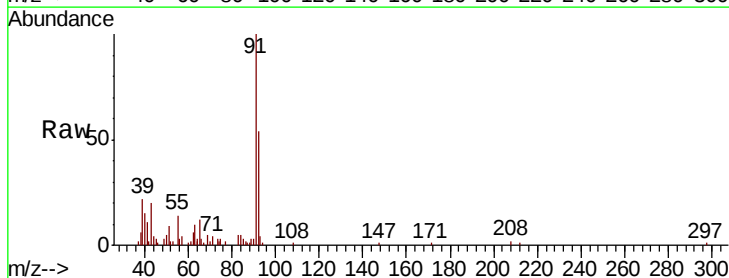
Acq: 4 Jun 2022 11:54

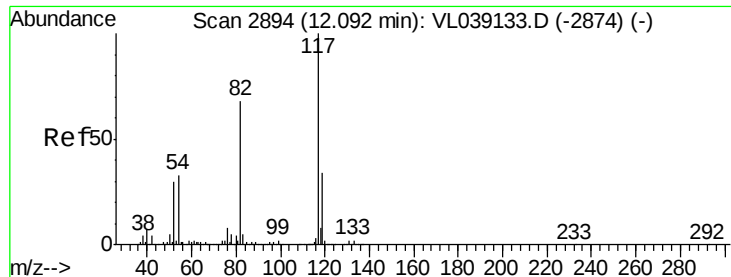
Tgt Ion: 91 Resp: 57703

Ion Ratio Lower Upper

91 100

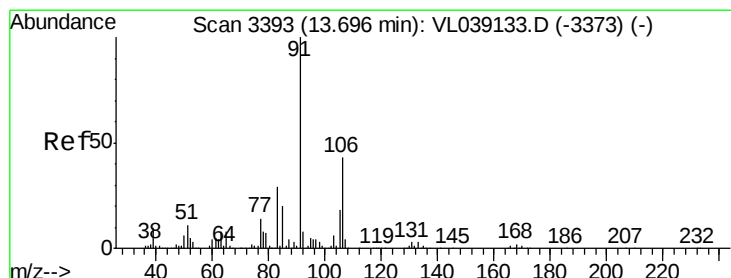
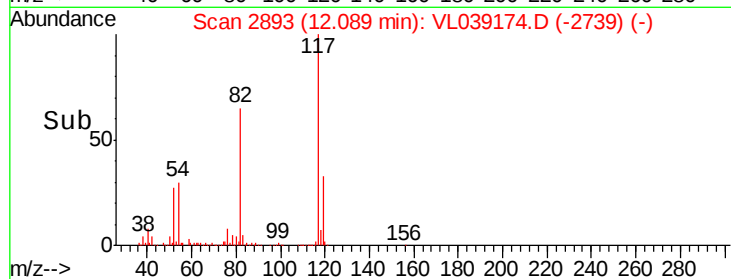
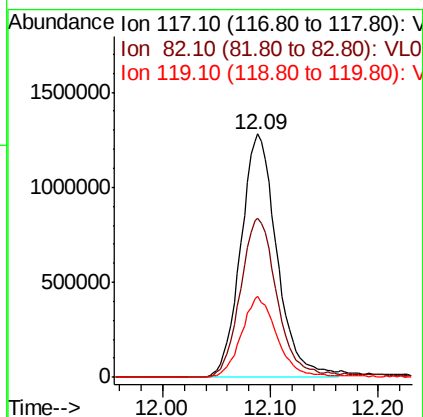
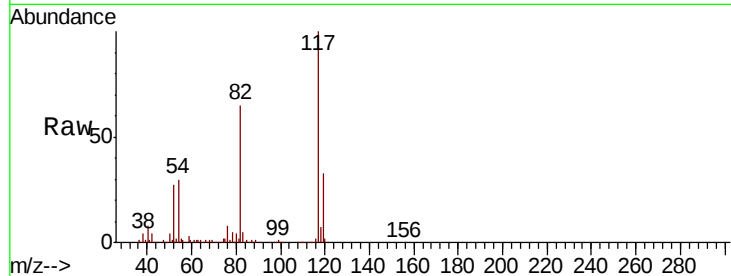
92 65.2 48.1 72.1





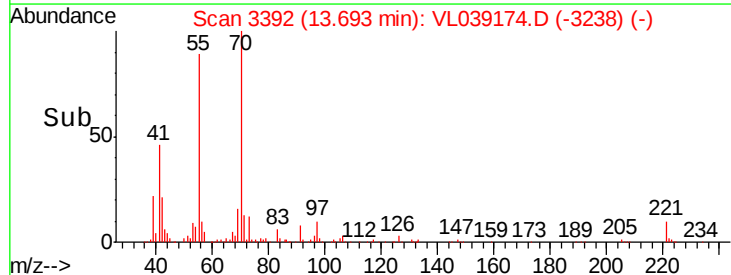
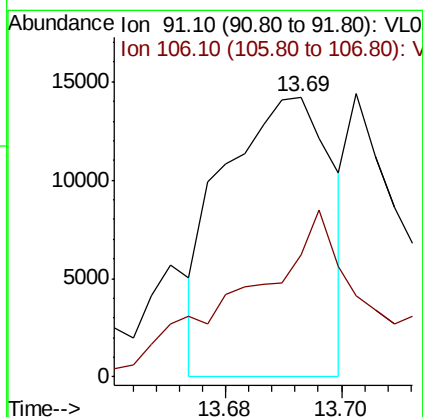
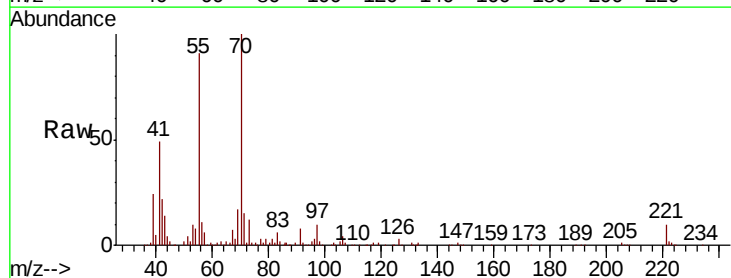
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
SV4
Acq: 4 Jun 2022 11:54

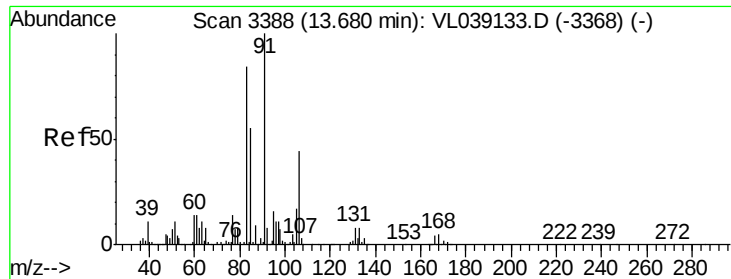
Tot Ion: 117 Resp: 2982308
Ion Ratio Lower Upper
117 100
82 69.1 55.1 82.7
119 33.8 24.7 37.1



#60
o-Xylene
Concen: 0.054 ppbv
RT: 13.69 min Scan# 3392
Delta R.T.: -0.00 min
Lab File: VL039174.D
Acq: 4 Jun 2022 11:54

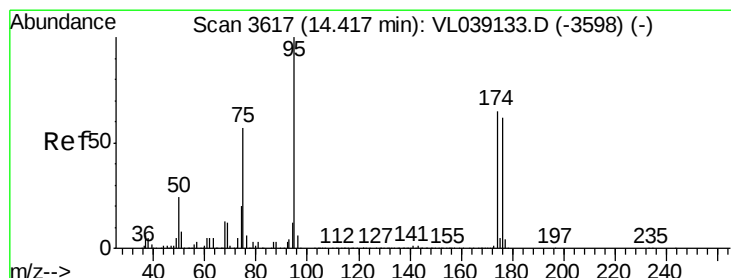
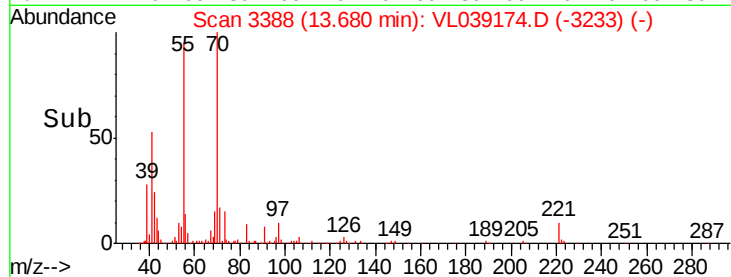
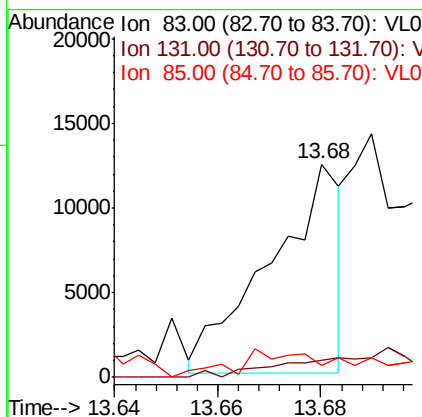
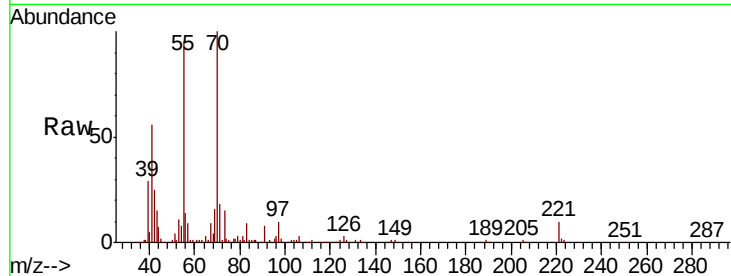
Tgt Ion: 91 Resp: 18484
Ion Ratio Lower Upper
91 100
106 79.1 22.3 66.9#





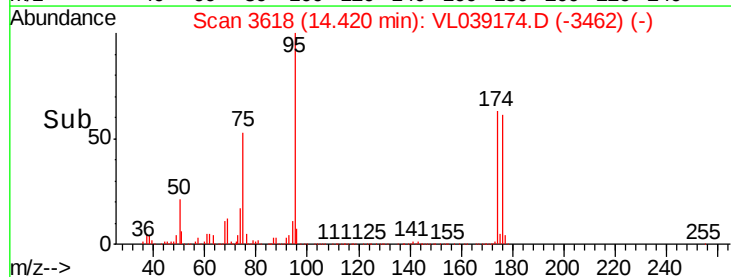
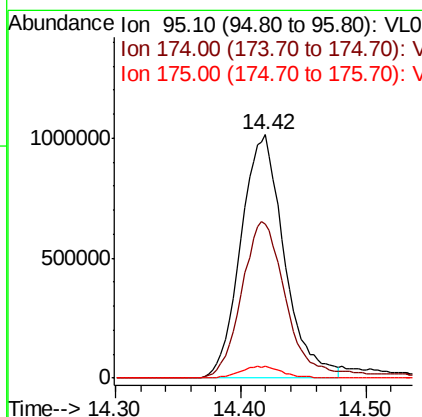
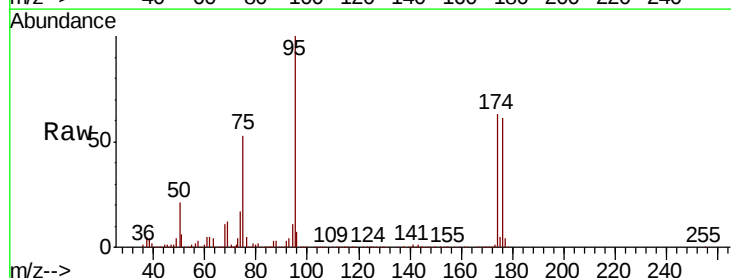
#63
 1,1,2,2-Tetrachloroethane
 Concen: 0.062 ppbv
 RT: 13.68
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 4 Jun 2022 11:54

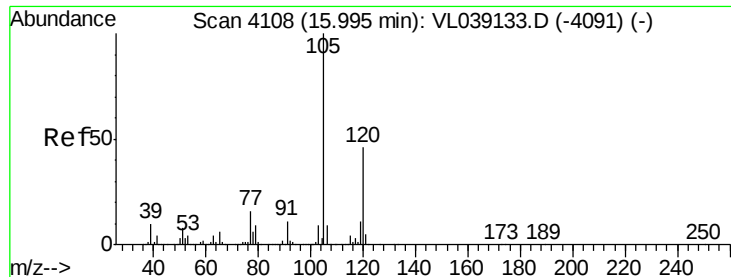
Tot Ion	83	Resp	11832
Ion Ratio	Lower	Upper	
83	100		
131	0.0	4.8	14.3#
85	33.4	33.0	99.0



#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.906 ppbv
 RT: 14.42 min Scan# 3618
 Delta R.T. 0.00 min
 Lab File: VL039174.D
 Acq: 4 Jun 2022 11:54

Tgt Ion	95	Resp	2442381
Ion Ratio	Lower	Upper	
95	100		
174	69.1	53.8	80.8
175	5.1	4.1	6.1





#73

1,3,5-Trimethylbenzene

Concen: 0.043 ppbv

RT: 15.99 min

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

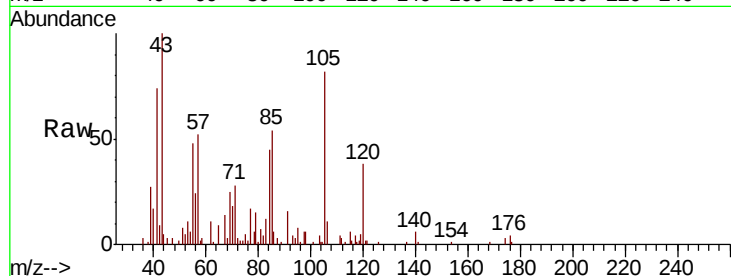
Acq: 4 Jun 2022 11:54

Tot Ion:105 Resp: 15616

Ion Ratio Lower Upper

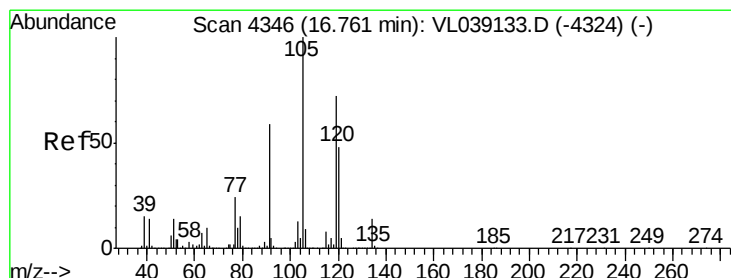
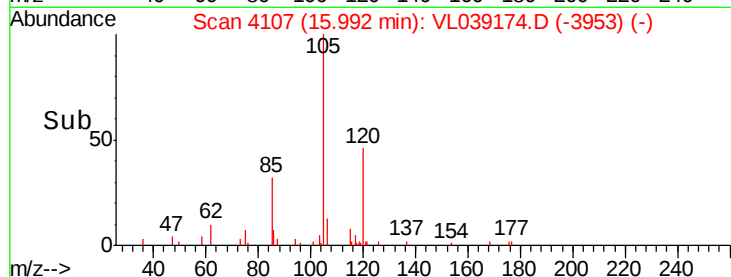
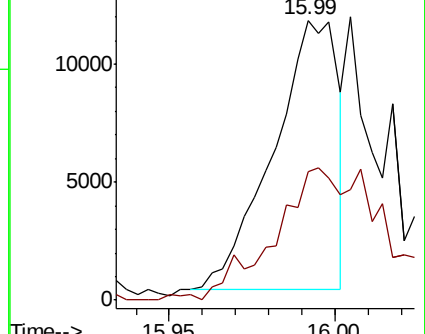
105 100

120 48.6 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: 0.225 ppbv

RT: 16.77 min Scan# 4348

Delta R.T. 0.01 min

Lab File: VL039174.D

Acq: 4 Jun 2022 11:54

Tgt Ion:105 Resp: 90202

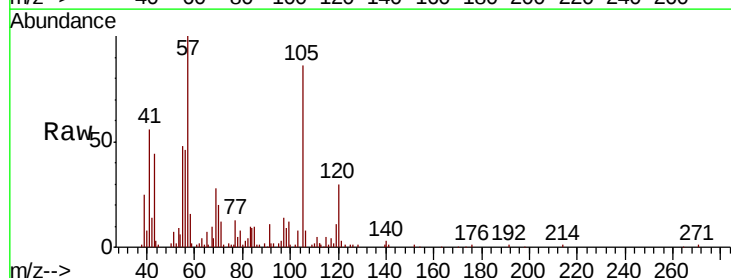
Ion Ratio Lower Upper

105 100

120 34.8 38.1 57.1#

91 11.0 47.4 71.0#

77 12.9 19.5 29.3#

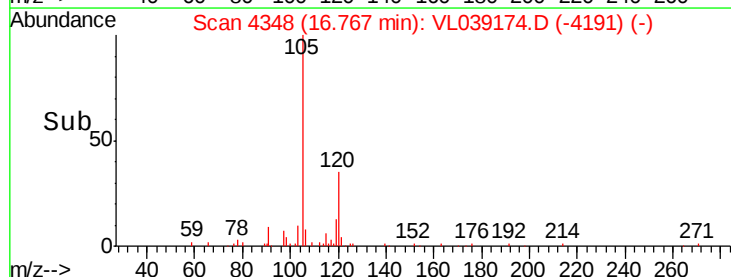
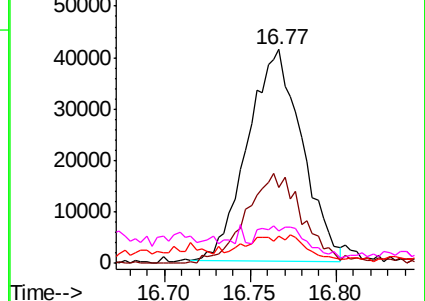


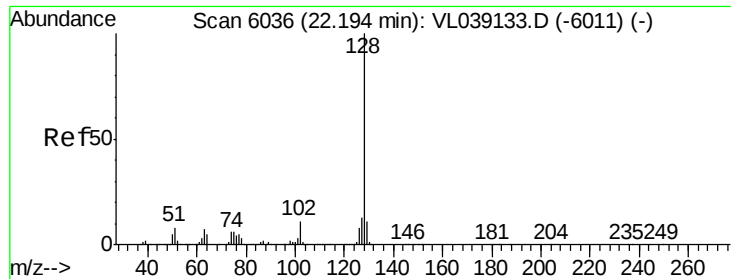
Abundance Ion 105.10 (104.80 to 105.80): V

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





#79

Naphthalene

Concen: 0.034 ppbv

RT: 22.20

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 4 Jun 2022 11:54

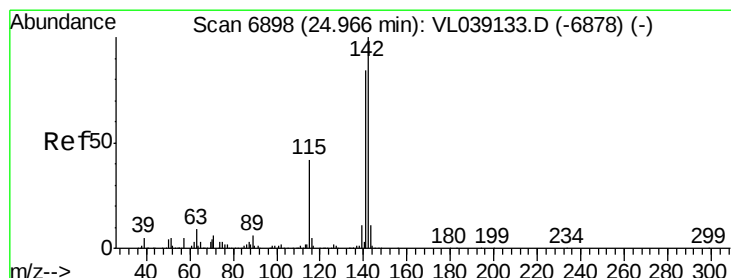
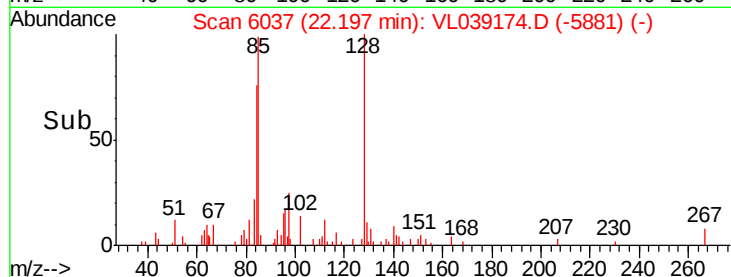
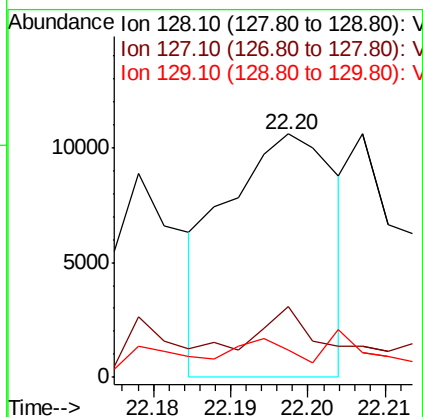
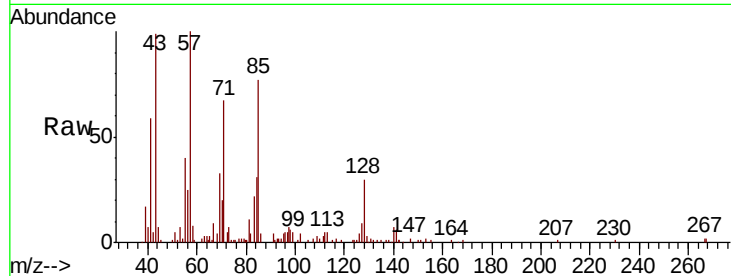
Tot Ion:128 Resp: 10473

Ion Ratio Lower Upper

128 100

127 42.4 10.4 15.6#

129 10.3 9.0 13.6



#80

Naphthalene, 2-methyl-

Concen: 0.037 ppbv

RT: 24.97 min Scan# 6899

Delta R.T. 0.00 min

Lab File: VL039174.D

Acq: 4 Jun 2022 11:54

Tgt Ion:142 Resp: 4254

Ion Ratio Lower Upper

142 100

141 71.0 64.6 96.8

115 62.3 32.7 49.1#

