

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL071222\
 Data File : VL039451.D
 Acq On : 12 Jul 2022 16:36
 Operator : SY/AP
 Sample : N3660-02 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-1

Quant Time: Jul 13 01:34:20 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL062922AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul 06 02:15:38 2022
 QLast Update : Wed Jul 06 02:15:38 2022
 Response via : Initial Calibration

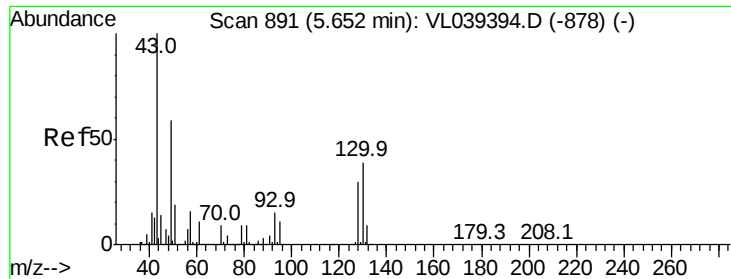
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	1471201	10.00	ppbv	0.04
33) 1,4-Difluorobenzene	7.20	114	4108692	10.00	ppbv	0.04
55) Chlorobenzene-d5	12.11	117	3737963	10.00	ppbv	0.04

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	2854186	10.29	ppbv	0.04
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.07	85	99022	0.47	ppbv	96
3) Chlorodifluoromethane	3.01	51	36198	0.19	ppbv #	91
4) Chloromethane	3.16	50	3762	0.04	ppbv #	42
9) Propene	3.04	41	18405	0.22	ppbv	92
11) Trichlorofluoromethane	3.97	101	79567	0.34	ppbv	93
13) Ethanol	3.62	45	53479	10.94	ppbv	70
15) Acetone	3.87	43	747258	4.29	ppbv	95
16) 1,3-Butadiene	3.32	39	8242	0.09	ppbv #	10
19) Isopropyl Alcohol	3.99	45	10534	0.11	ppbv #	88
20) Methylene Chloride	4.37	84	1730944	24.95	ppbv	98
23) Vinyl Acetate	5.08	43	30712	0.26	ppbv #	87
25) Ethyl Acetate	5.71	43	2233490	6.26	ppbv #	75
26) Hexane	5.71	57	3162343	21.98	ppbv #	37
27) Carbon Disulfide	4.57	76	80968	0.47	ppbv #	87
29) Chloroform	5.77	83	70135	0.28	ppbv #	81
34) 2-Butanone	5.13	43	21078	0.10	ppbv #	84
39) 1,2-Dichloropropane	7.19	63	1003584	8.45	ppbv #	25
41) Tetrahydrofuran	5.71	42	1155025	9.64	ppbv #	49
52) Tetrachloroethene	11.25	164	165257	1.29	ppbv	94
53) Toluene	9.83	91	84390	0.23	ppbv	98
58) Ethyl Benzene	12.73	91	102423	0.21	ppbv	94
59) m/p-Xylene	13.01	91	87505	0.21	ppbv #	32
60) o-Xylene	13.72	91	88660	0.22	ppbv #	18
65) tert-Butylbenzene	16.78	119	63780	0.11	ppbv #	61
67) sec-Butylbenzene	17.62	105	88904	0.12	ppbv	95
70) n-Butylbenzene	18.58	91	20637	0.03	ppbv #	1
72) 4-Ethyltoluene	15.86	105	71314	0.15	ppbv #	52
73) 1,3,5-Trimethylbenzene	16.01	105	153174	0.35	ppbv	91
74) 1,2,4-Trimethylbenzene	16.78	105	579183	1.20	ppbv #	69
79) Naphthalene	22.22	128	172313	0.52	ppbv	96

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.69 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId :

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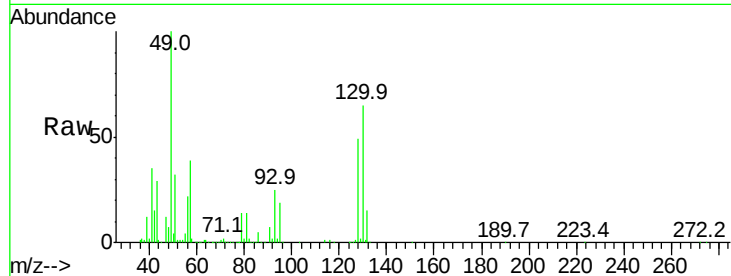
Tgt Ion: 49 Resp: 1471201

Ion Ratio Lower Upper

49 100

128 53.1 26.7 80.0

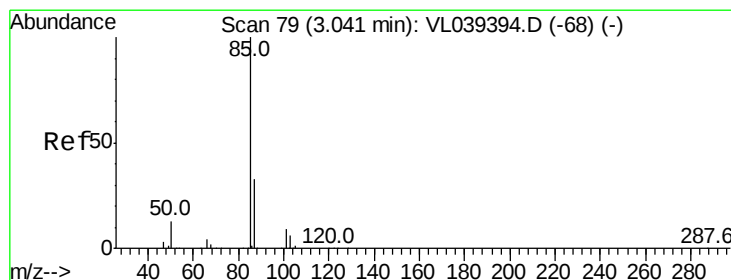
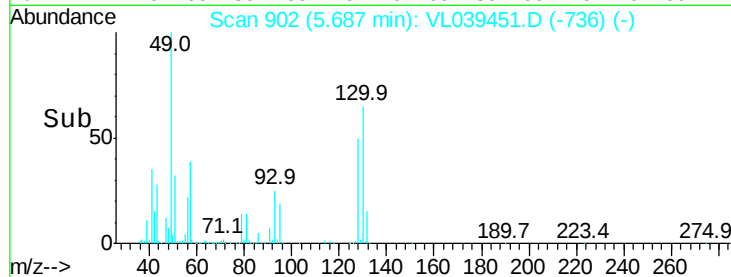
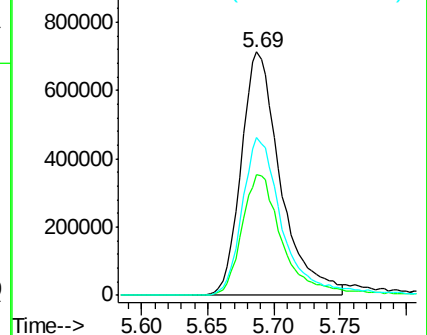
130 67.4 34.3 102.8



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.47 ppbv

RT: 3.07 min Scan# 88

Delta R.T. 0.03 min

Lab File: VL039451.D

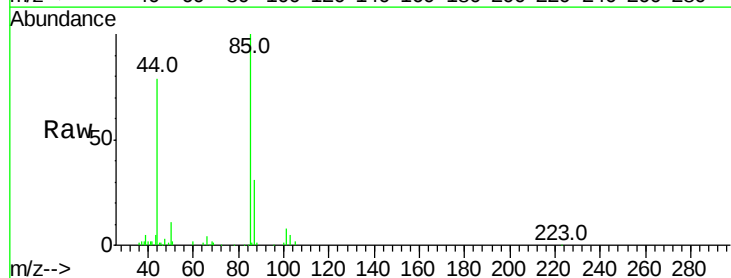
Acq: 12 Jul 2022 16:36

Tgt Ion: 85 Resp: 99022

Ion Ratio Lower Upper

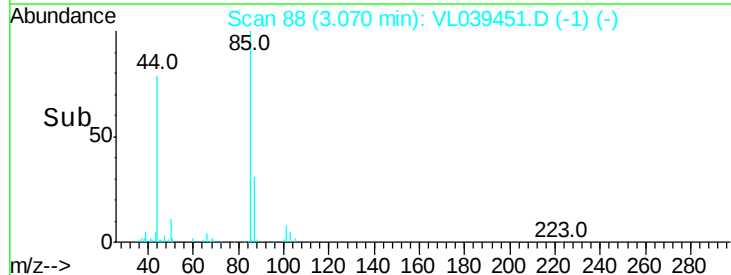
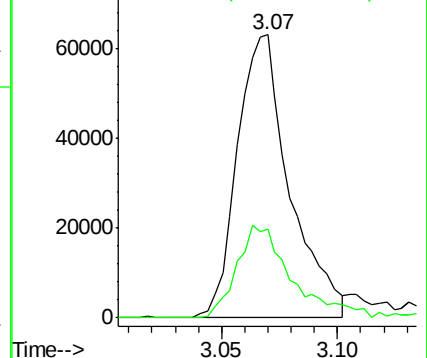
85 100

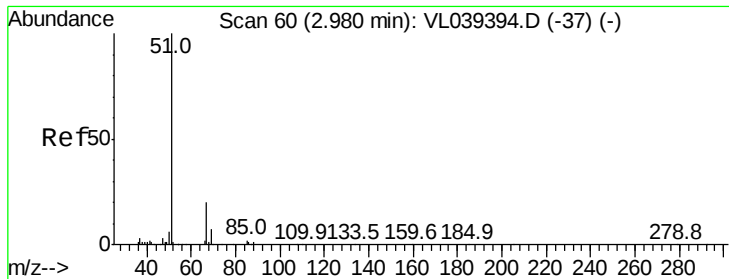
87 31.2 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.19 ppbv

RT: 3.01

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

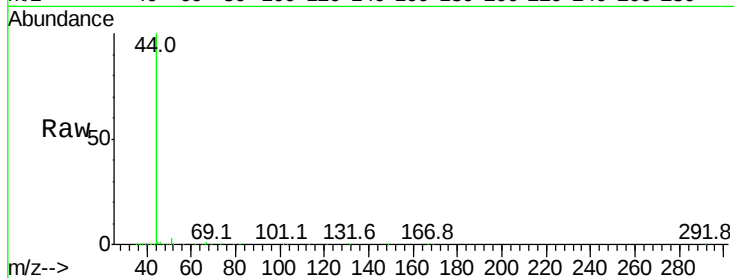
Acq: 12 Jul 2022 16:36

Tgt Ion: 51 Resp: 36198

Ion Ratio Lower Upper

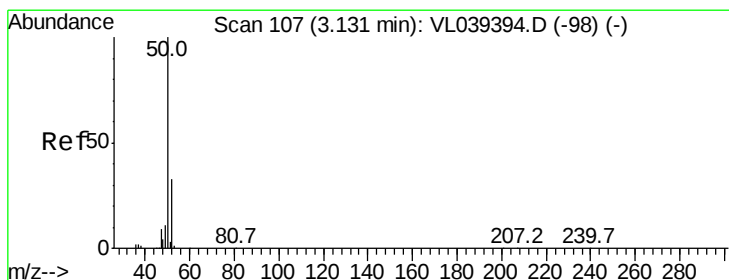
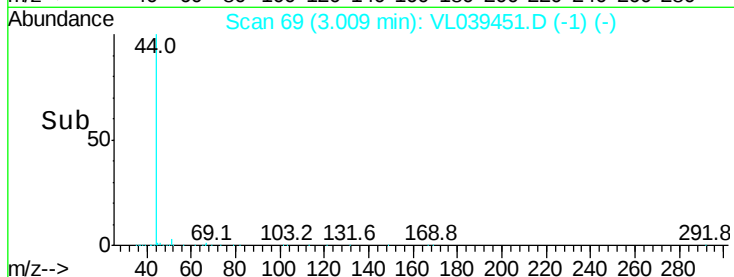
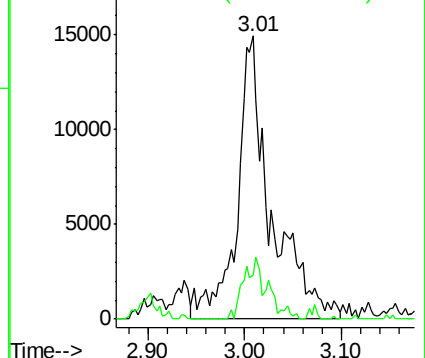
51 100

67 15.3 15.7 23.5#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.04 ppbv

RT: 3.16 min Scan# 115

Delta R.T. 0.03 min

Lab File: VL039451.D

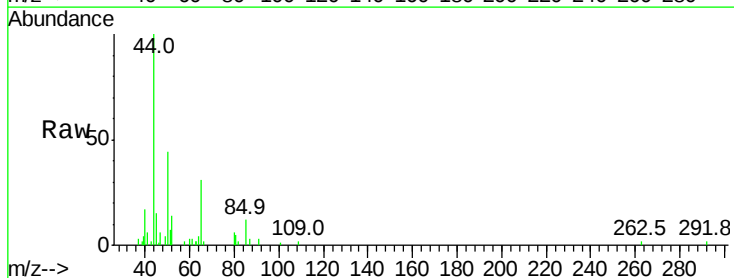
Acq: 12 Jul 2022 16:36

Tgt Ion: 50 Resp: 3762

Ion Ratio Lower Upper

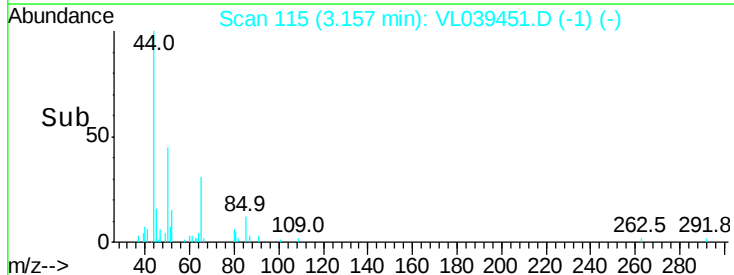
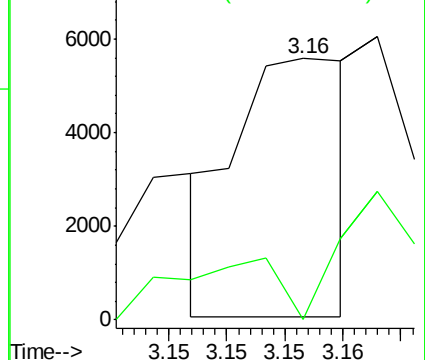
50 100

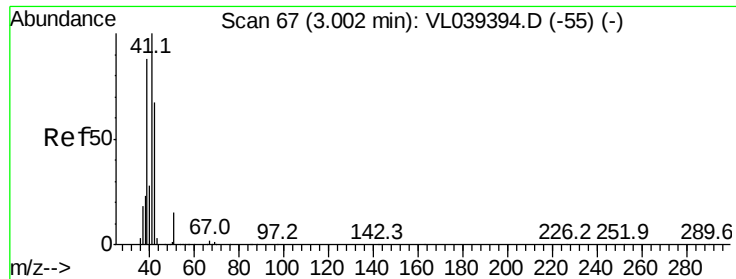
52 0.0 26.5 39.7#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.22 ppbv

RT: 3.04 Instrument: MSVOA_1

Delta R.T.

Lab File: ClientSampleId:

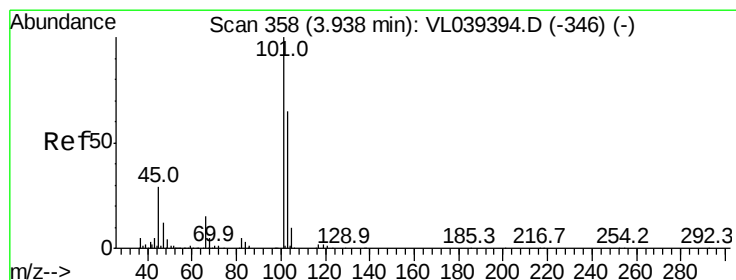
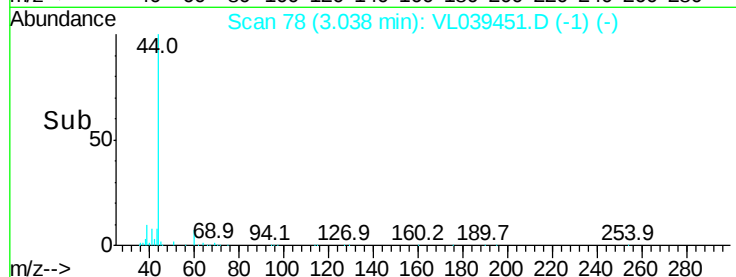
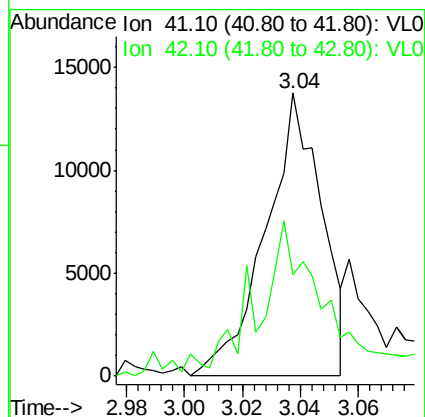
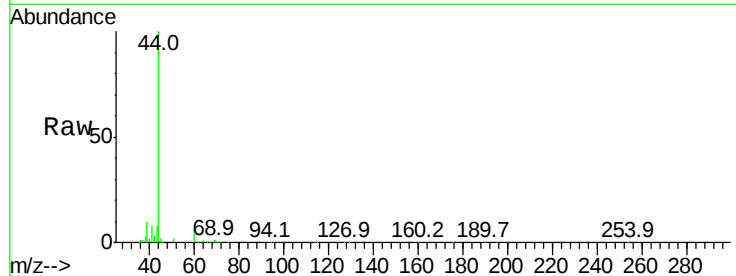
Acq: 12 Jul 2022 16:36

Tgt Ion: 41 Resp: 18405

Ion Ratio Lower Upper

41 100

42 75.5 55.2 82.8



#11

Trichlorofluoromethane

Concen: 0.34 ppbv

RT: 3.97 min Scan# 368

Delta R.T. 0.03 min

Lab File: VL039451.D

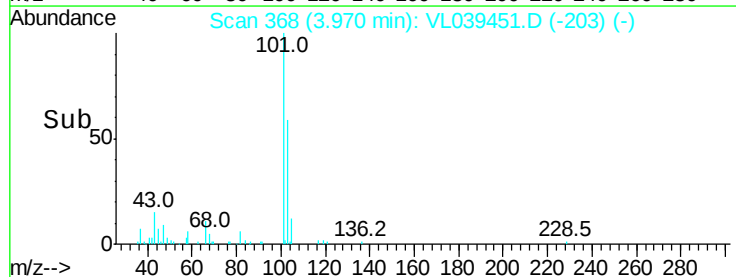
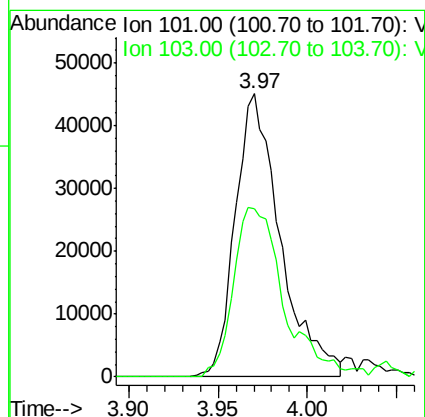
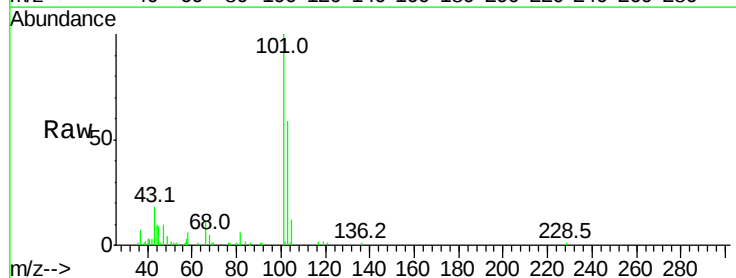
Acq: 12 Jul 2022 16:36

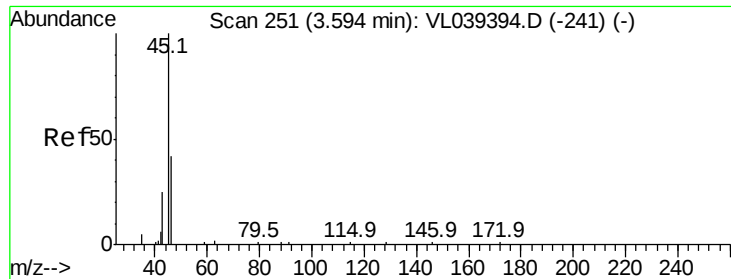
Tgt Ion: 101 Resp: 79567

Ion Ratio Lower Upper

101 100

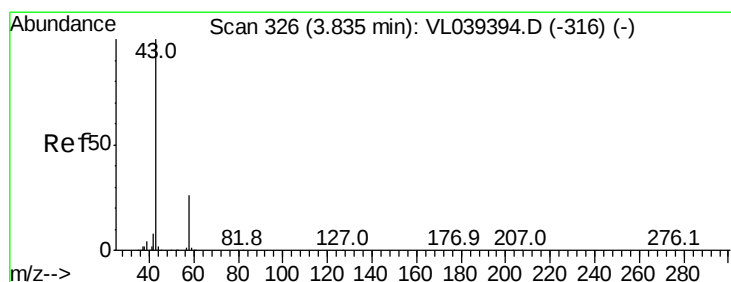
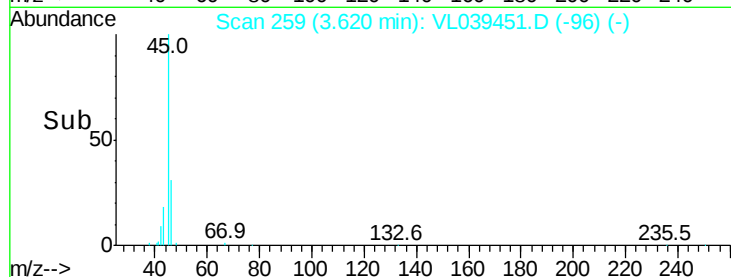
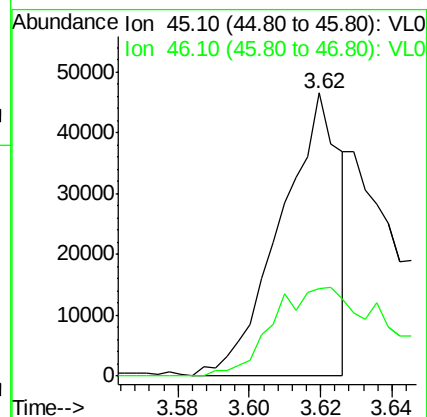
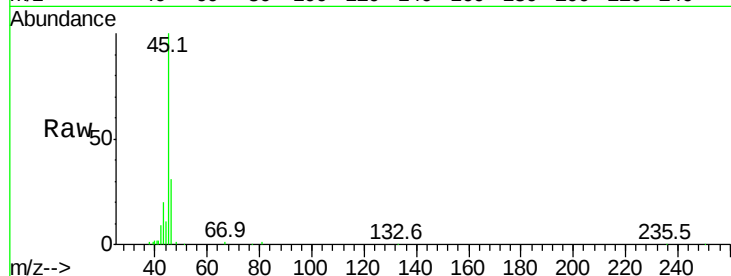
103 59.4 51.8 77.8





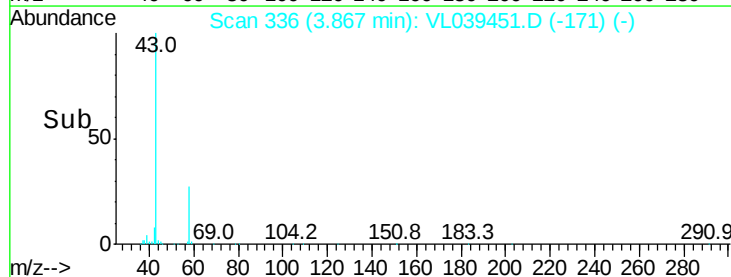
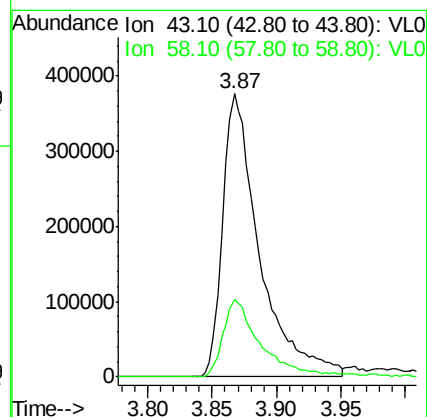
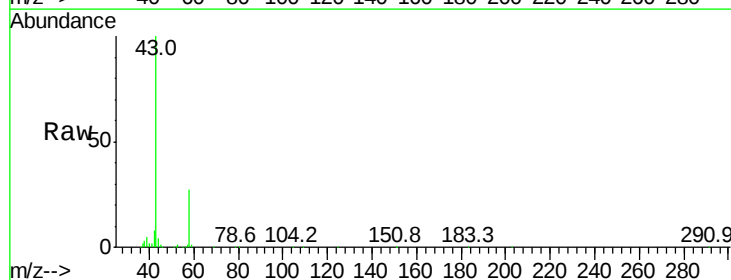
#13
Ethanol
Concen: 10.94 ppbv
RT: 3.62
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Jul 2022 16:36

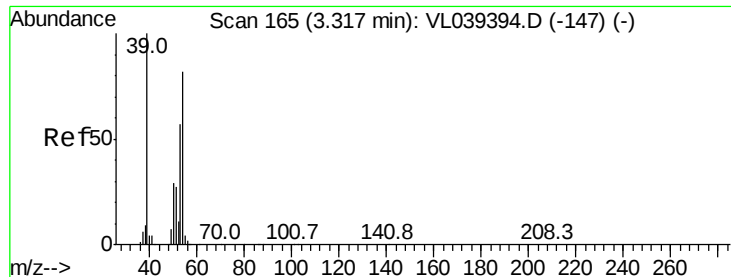
Tgt Ion: 45 Resp: 53479
Ion Ratio Lower Upper
45 100
46 78.9 22.8 91.2



#15
Acetone
Concen: 4.29 ppbv
RT: 3.87 min Scan# 336
Delta R.T. 0.03 min
Lab File: VL039451.D
Acq: 12 Jul 2022 16:36

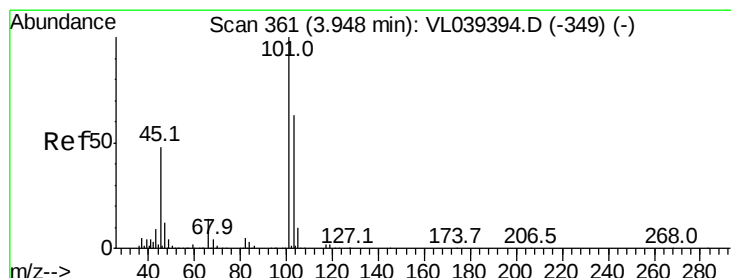
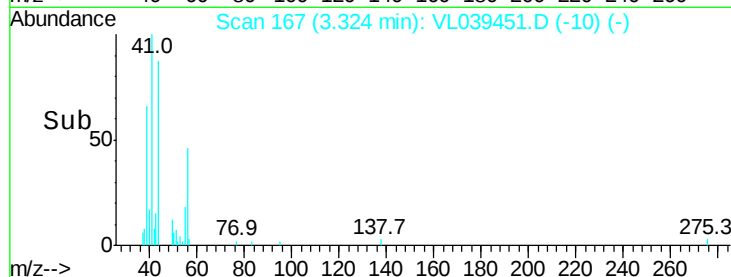
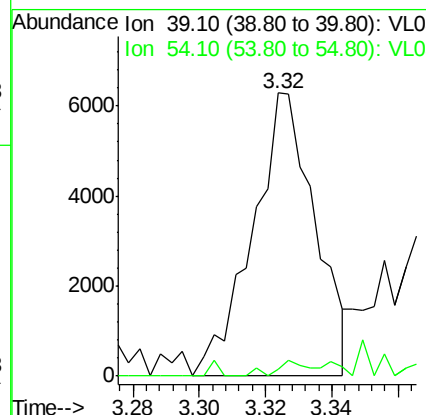
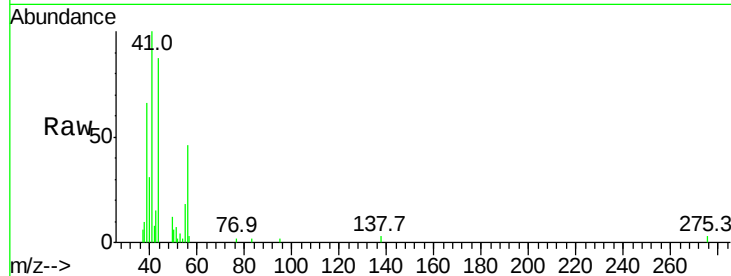
Tgt Ion: 43 Resp: 747258
Ion Ratio Lower Upper
43 100
58 28.8 21.0 31.6





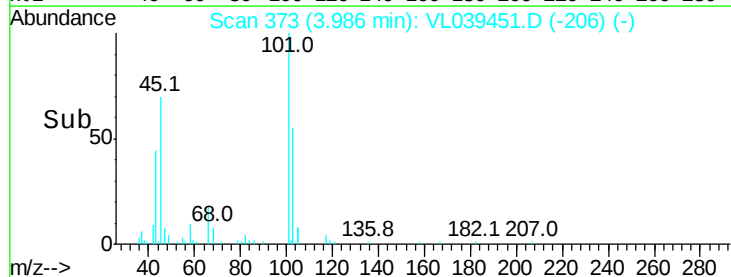
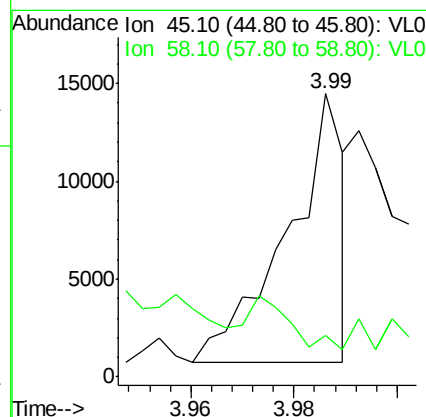
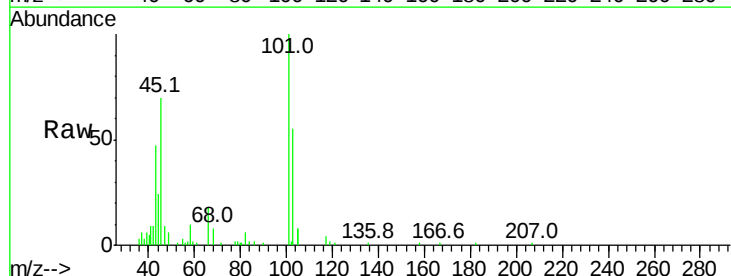
#16
 1,3-Butadiene
 Concen: 0.09 ppbv
 RT: 3.32
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 12 Jul 2022 16:36

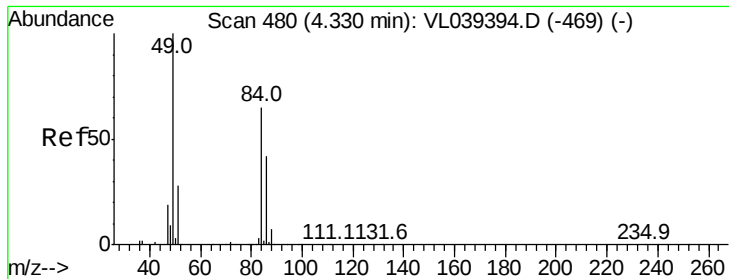
Tgt Ion: 39 Resp: 8242
 Ion Ratio Lower Upper
 39 100
 54 0.0 63.7 95.5#



#19
 Isopropyl Alcohol
 Concen: 0.11 ppbv
 RT: 3.99 min Scan# 373
 Delta R.T. 0.04 min
 Lab File: VL039451.D
 Acq: 12 Jul 2022 16:36

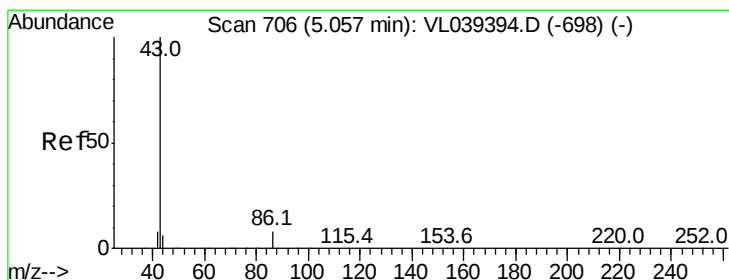
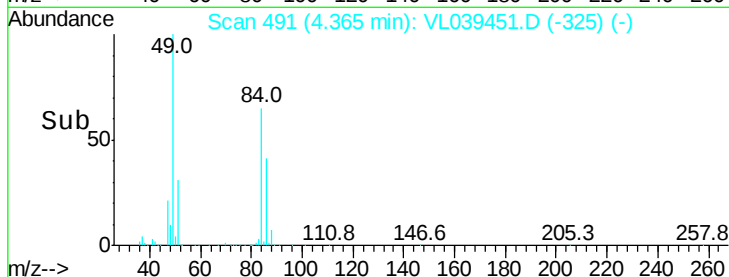
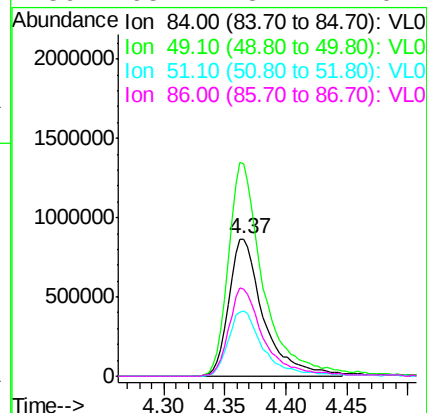
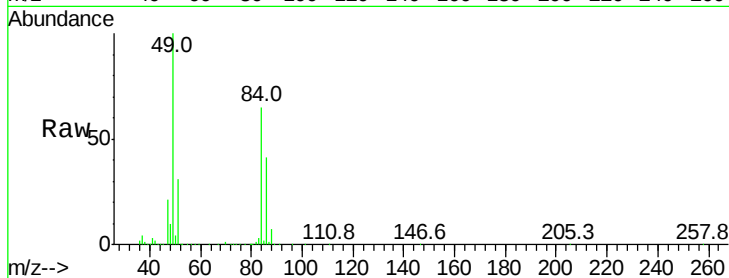
Tgt Ion: 45 Resp: 10534
 Ion Ratio Lower Upper
 45 100
 58 0.0 3.2 4.8#





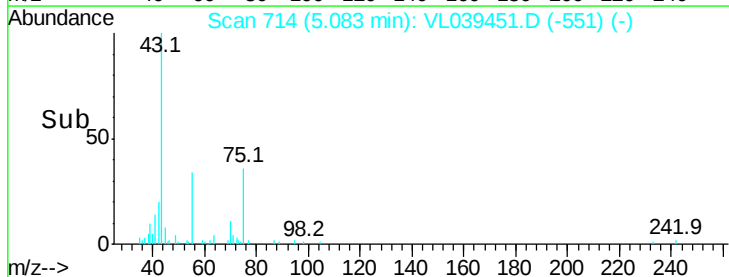
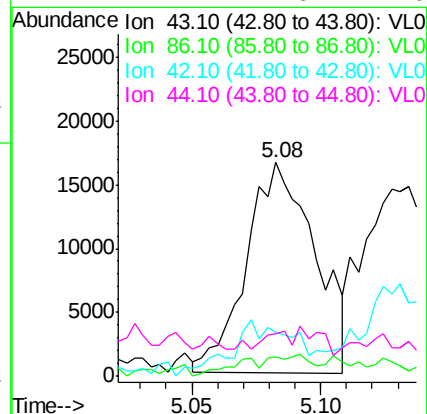
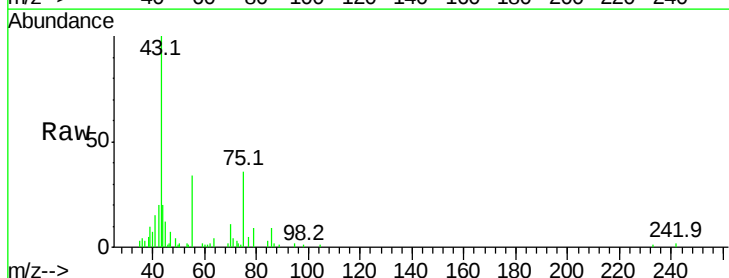
#20
Methylene Chloride
Concen: 24.95 ppbv
RT: 4.37
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 12 Jul 2022 16:36

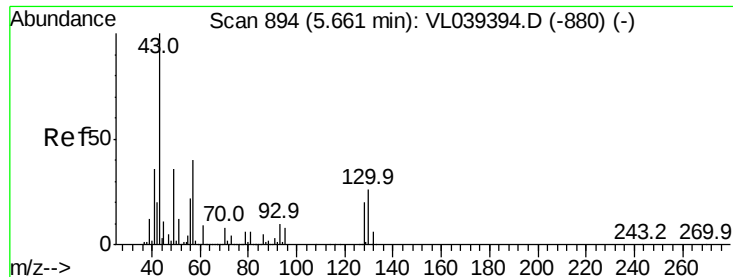
Tgt Ion:	84	Resp:	1730944
Ion	Ratio	Lower	Upper
84	100		
49	154.6	123.1	184.7
51	47.4	34.4	51.6
86	63.4	51.1	76.7



#23
Vinyl Acetate
Concen: 0.26 ppbv
RT: 5.08 min Scan# 714
Delta R.T. 0.03 min
Lab File: VL039451.D
Acq: 12 Jul 2022 16:36

Tgt Ion:	43	Resp:	30712
Ion	Ratio	Lower	Upper
43	100		
86	11.7	5.0	7.6#
42	15.5	7.7	11.5#
44	7.4	4.6	7.0#

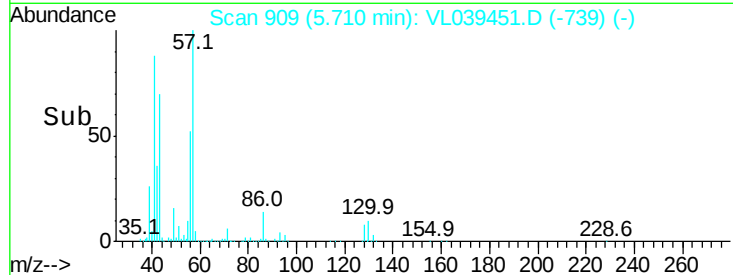
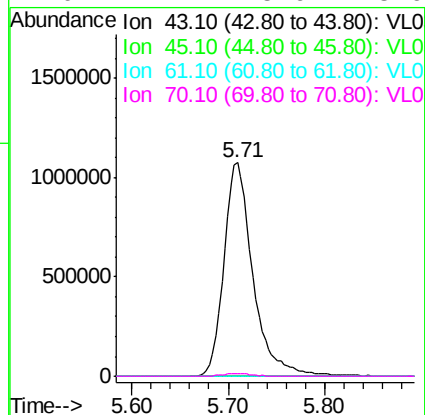
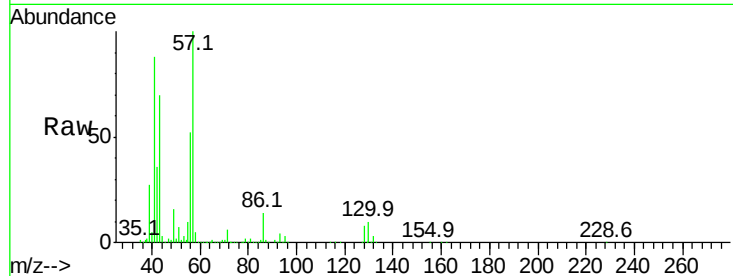




#25
Ethyl Acetate
Concen: 6.26 ppbv
RT: 5.71 min
Delta R.T.: 0.04 min
Lab File: VL039451.D
Acq: 12 Jul 2022 16:36

Tgt Ion: 43 Resp: 2233490

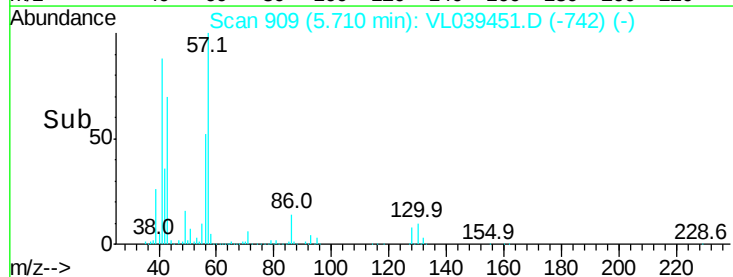
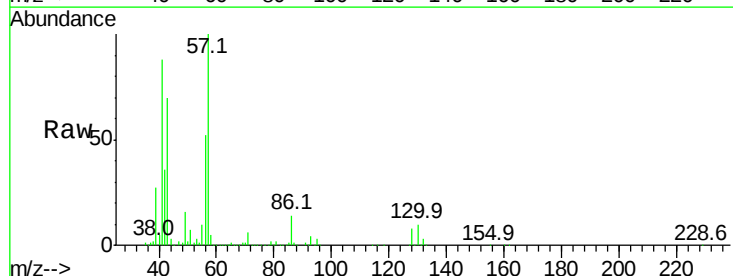
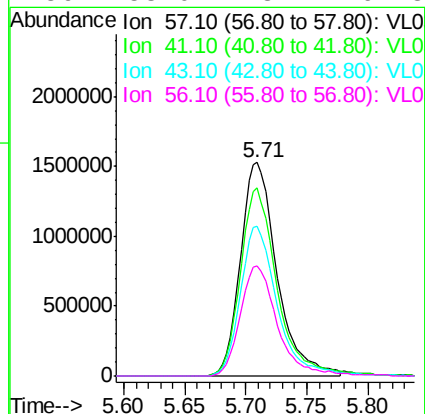
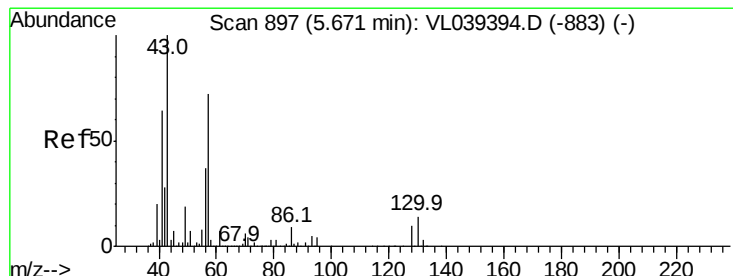
Ion	Ratio	Lower	Upper
43	100		
45	0.2	8.2	12.4#
61	0.2	8.3	12.5#
70	1.4	5.9	8.9#

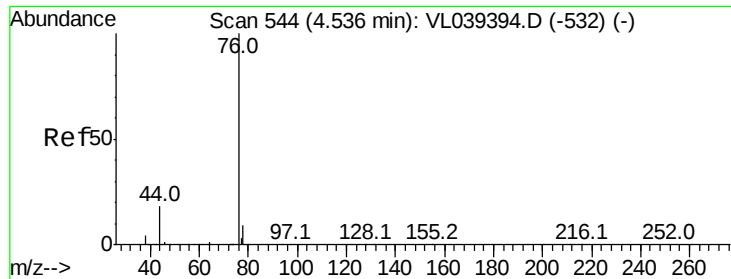


#26
Hexane
Concen: 21.98 ppbv
RT: 5.71 min Scan# 909
Delta R.T.: 0.04 min
Lab File: VL039451.D
Acq: 12 Jul 2022 16:36

Tgt Ion: 57 Resp: 3162343

Ion	Ratio	Lower	Upper
57	100		
41	89.0	76.9	115.3
43	71.0	191.0	286.6#
56	53.0	43.2	64.8





#27

Carbon Disulfide

Concen: 0.47 ppbv

RT: 4.57 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 12 Jul 2022 16:36 SG-1

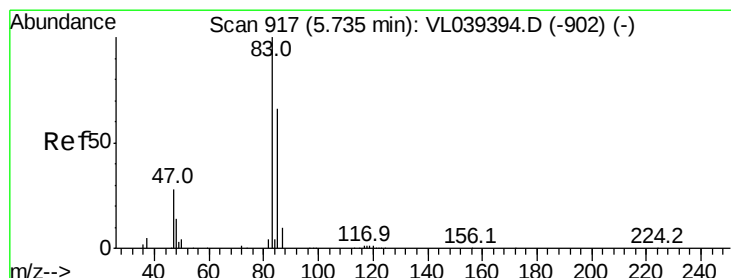
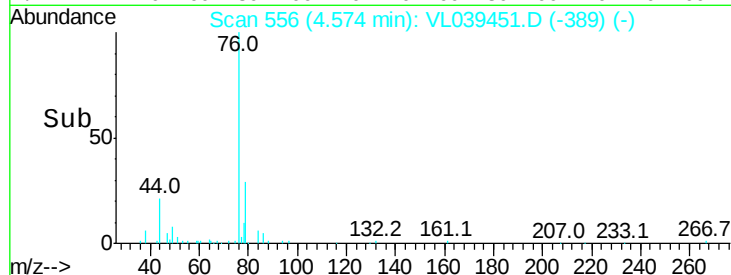
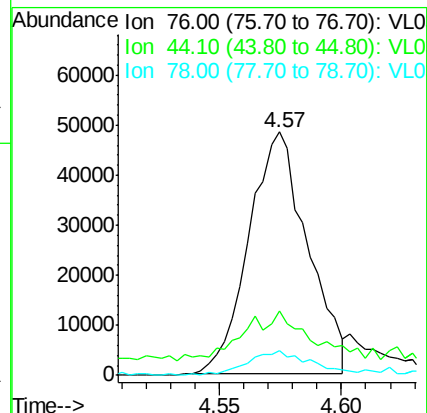
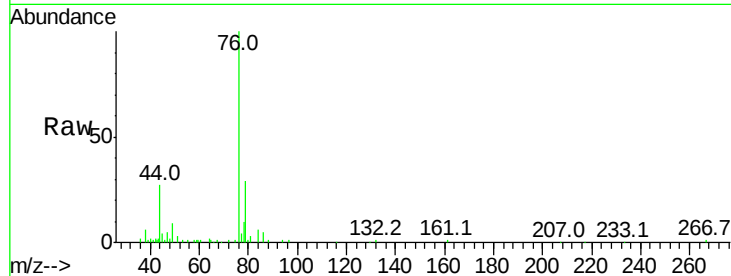
Tgt Ion: 76 Resp: 80968

Ion Ratio Lower Upper

76 100

44 24.7 14.6 21.8#

78 12.9 7.8 11.6#



#29

Chloroform

Concen: 0.28 ppbv

RT: 5.77 min Scan# 928

Delta R.T. 0.04 min

Lab File: VL039451.D

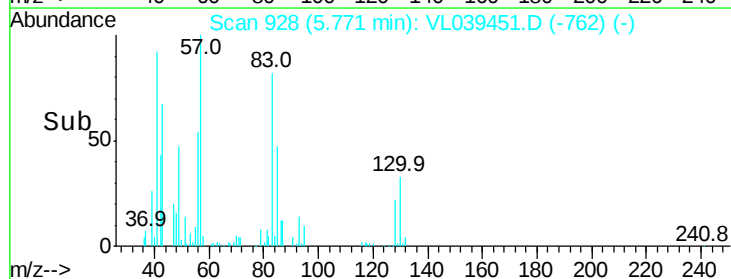
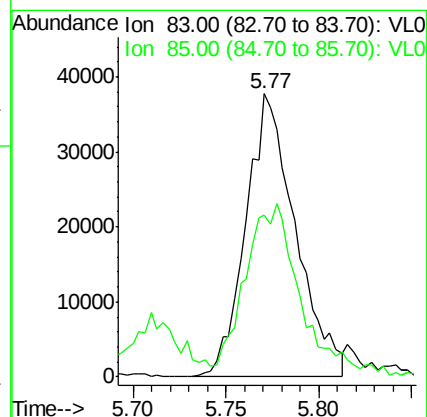
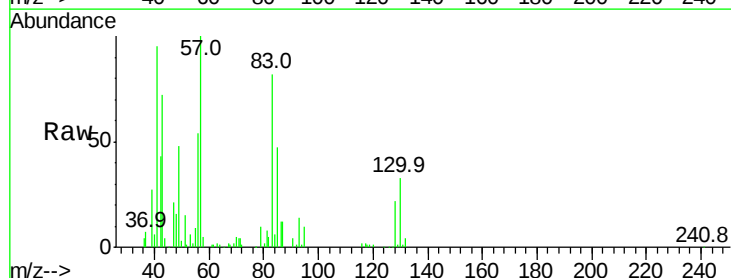
Acq: 12 Jul 2022 16:36

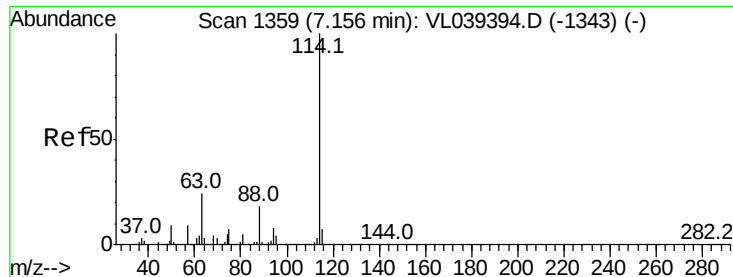
Tgt Ion: 83 Resp: 70135

Ion Ratio Lower Upper

83 100

85 51.3 52.8 79.2#





#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.20

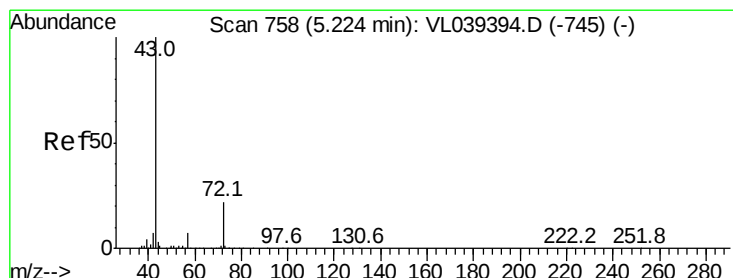
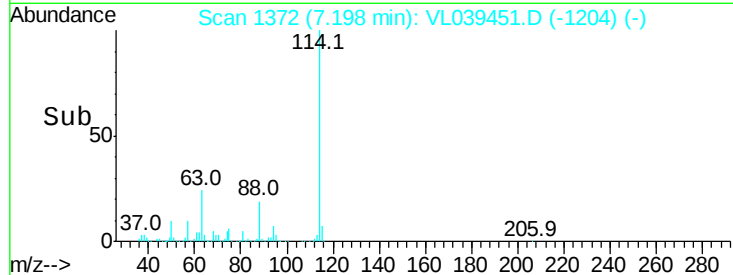
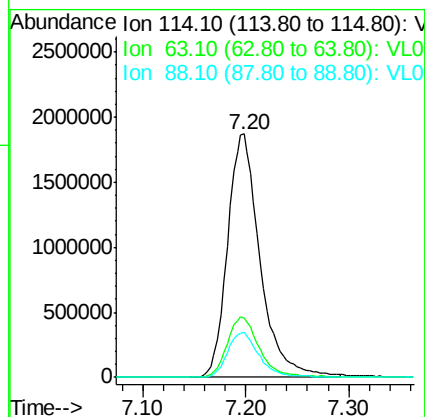
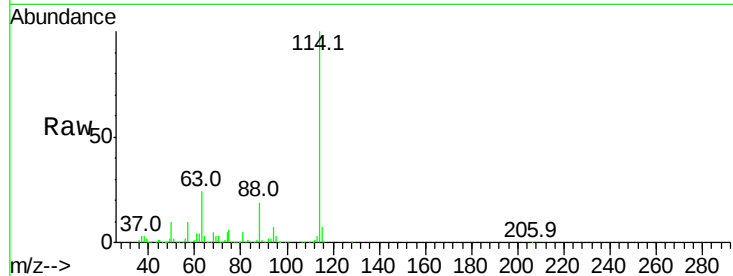
Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 12 Jul 2022 16:36

Tgt Ion: 114 Resp: 4108692

Ion	Ratio	Lower	Upper
114	100		
63	24.9	20.2	30.4
88	18.3	14.5	21.7



#34

2-Butanone

Concen: 0.10 ppbv

RT: 5.13 min Scan# 730

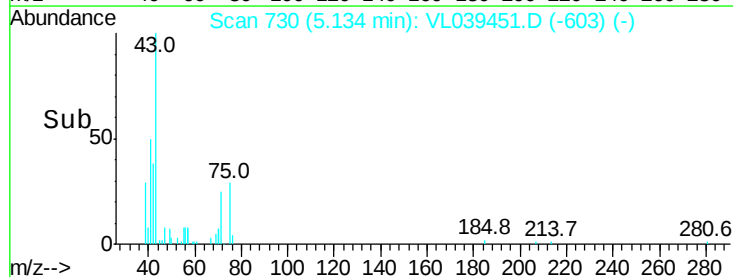
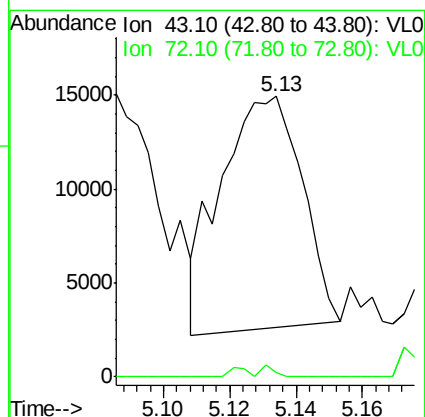
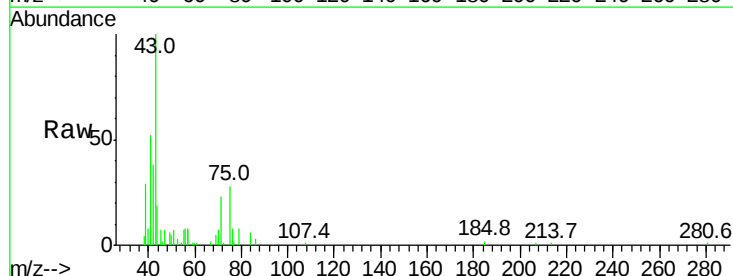
Delta R.T. -0.09 min

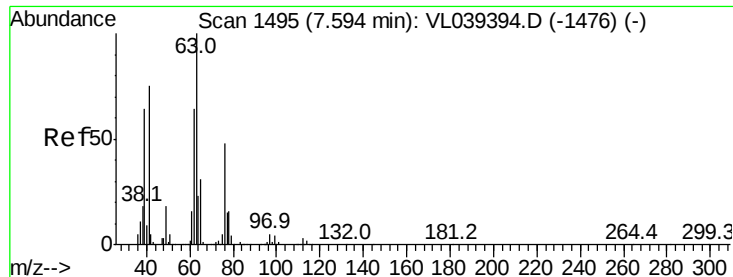
Lab File: VL039451.D

Acq: 12 Jul 2022 16:36

Tgt Ion: 43 Resp: 21078

Ion	Ratio	Lower	Upper
43	100		
72	30.1	17.9	26.9





#39

1,2-Dichloropropane

Concen: 8.45 ppbv

RT: 7.19 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

Acq: 12 Jul 2022 16:36 SG-1

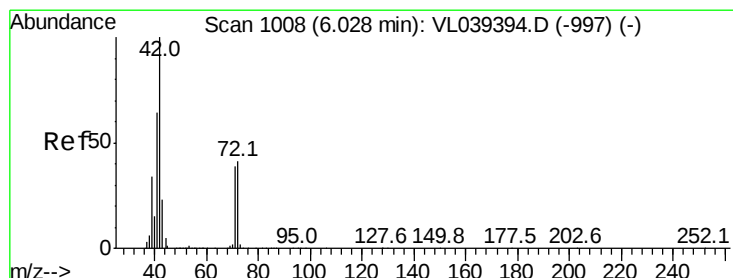
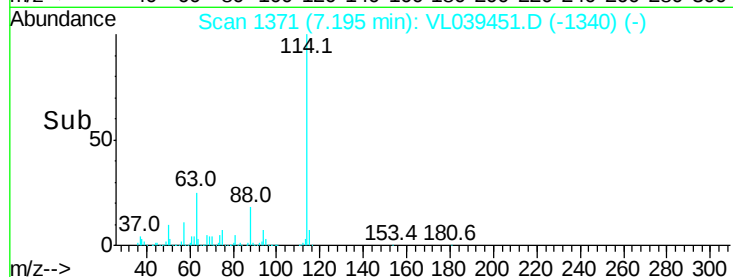
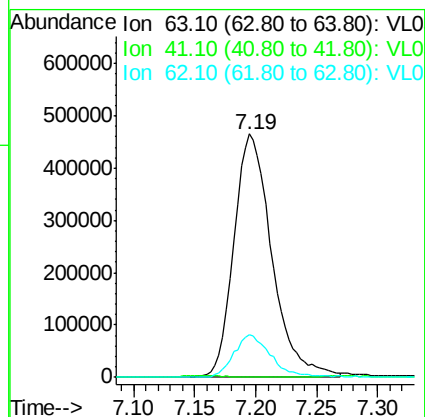
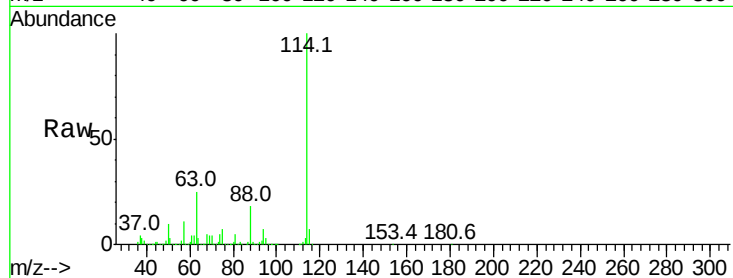
Tgt Ion: 63 Resp: 1003584

Ion Ratio Lower Upper

63 100

41 0.0 59.6 89.4#

62 17.6 51.4 77.0#



#41

Tetrahydrofuran

Concen: 9.64 ppbv

RT: 5.71 min Scan# 909

Delta R.T. -0.32 min

Lab File: VL039451.D

Acq: 12 Jul 2022 16:36

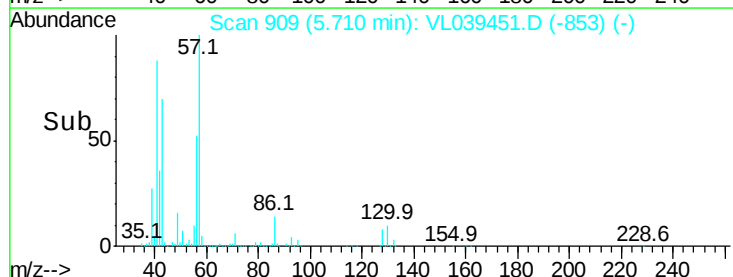
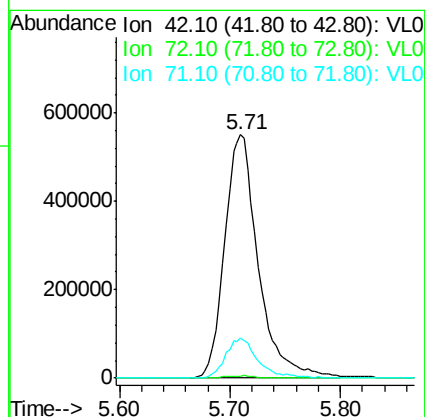
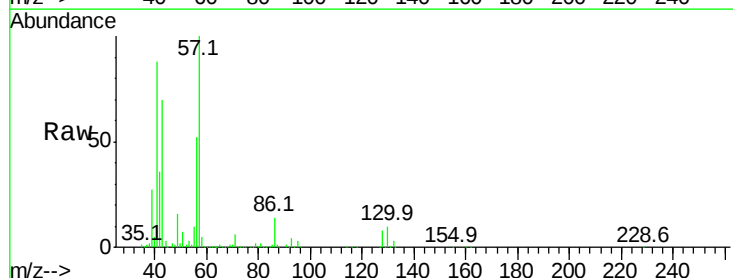
Tgt Ion: 42 Resp: 1155025

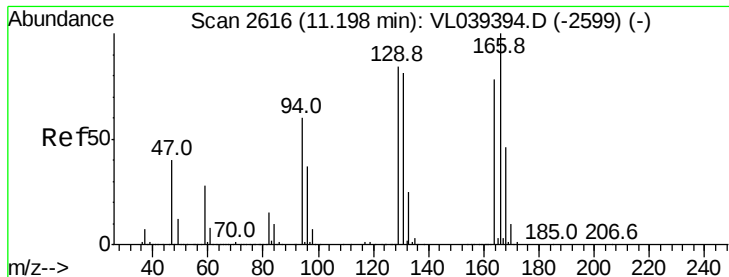
Ion Ratio Lower Upper

42 100

72 1.0 31.8 47.8#

71 15.9 31.8 47.8#





#52

Tetrachloroethene

Concen: 1.29 ppbv

RT: 11.25

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 12 Jul 2022 16:36

Tgt Ion: 164 Resp: 165257

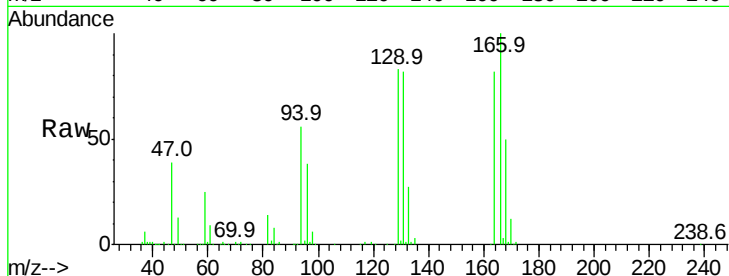
Ion Ratio Lower Upper

164 100

166 120.3 102.2 153.2

129 101.1 85.8 128.8

131 99.2 83.3 124.9

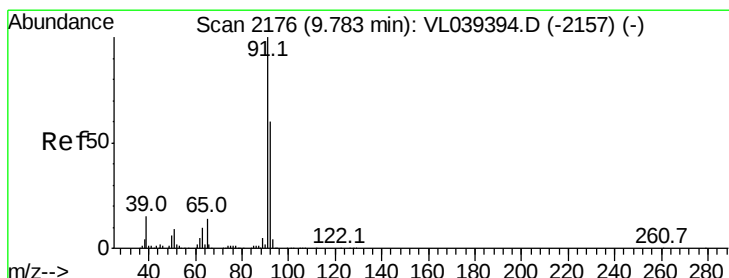
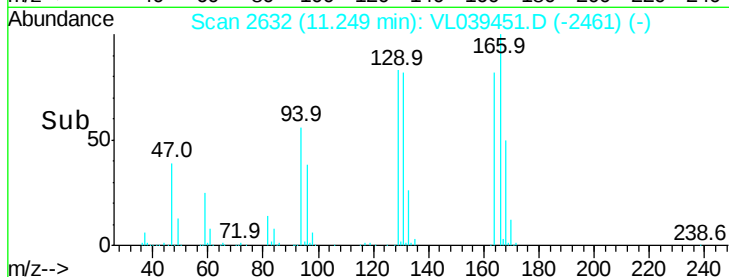
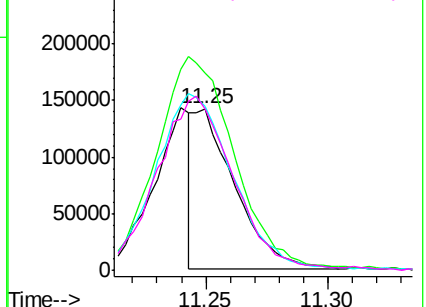


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.23 ppbv

RT: 9.83 min Scan# 2191

Delta R.T. 0.05 min

Lab File: VL039451.D

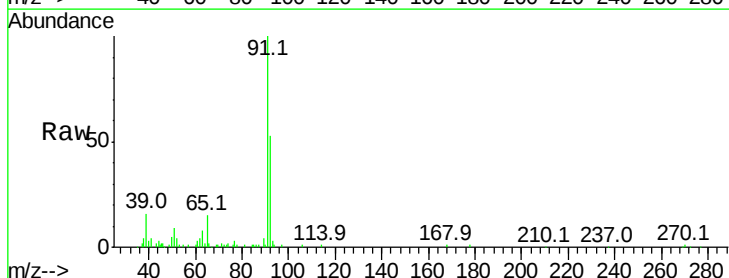
Acq: 12 Jul 2022 16:36

Tgt Ion: 91 Resp: 84390

Ion Ratio Lower Upper

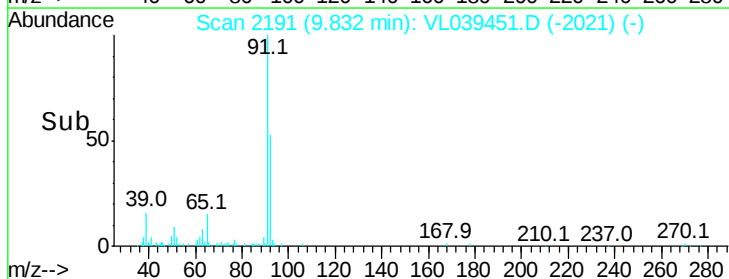
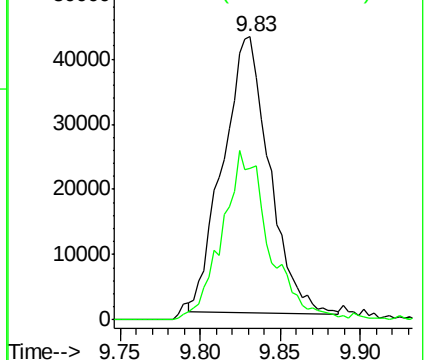
91 100

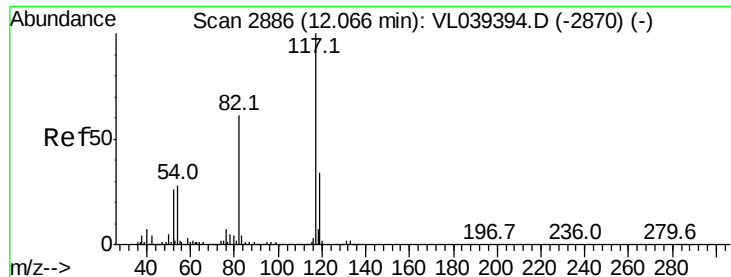
92 62.0 48.2 72.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

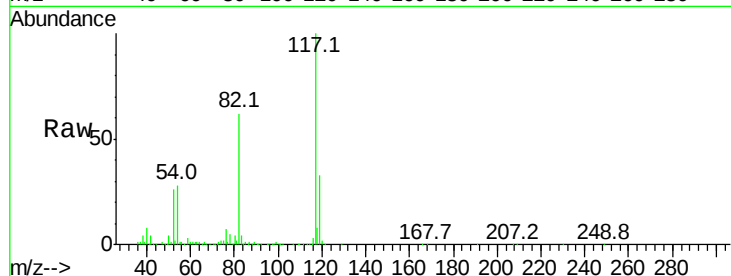
Ion 92.10 (91.80 to 92.80): VL0



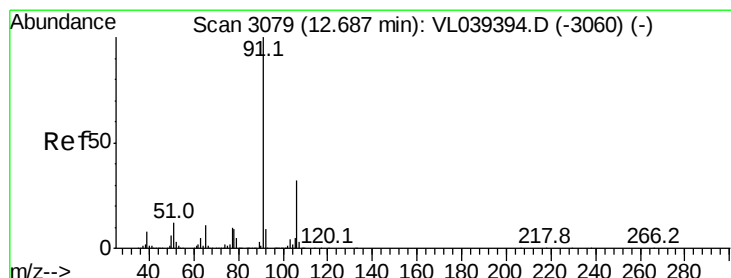
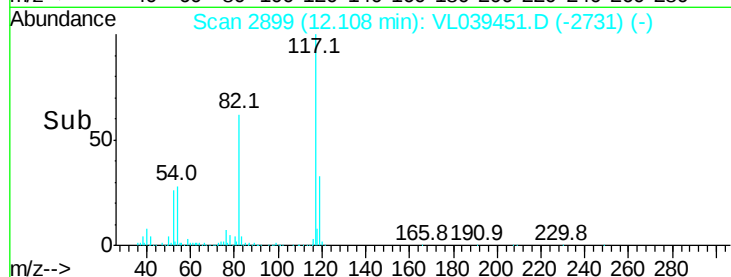
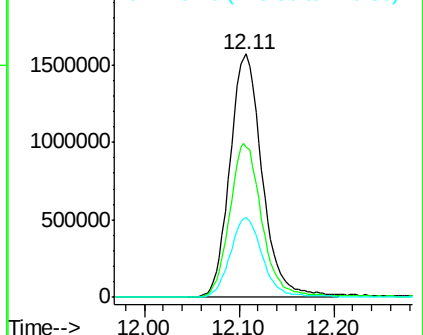


#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 12.11 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 12 Jul 2022 16:36

Tgt Ion: 117 Resp: 3737963
Ion Ratio Lower Upper
117 100
82 63.7 50.8 76.2
119 33.4 24.1 36.1

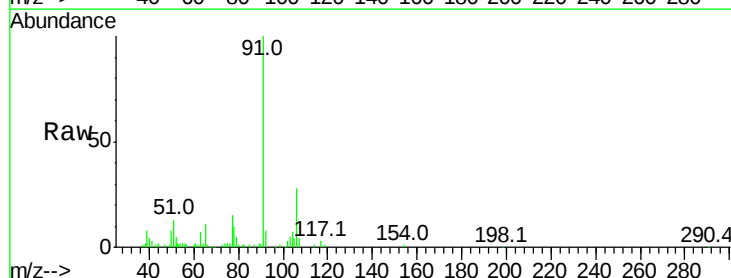


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

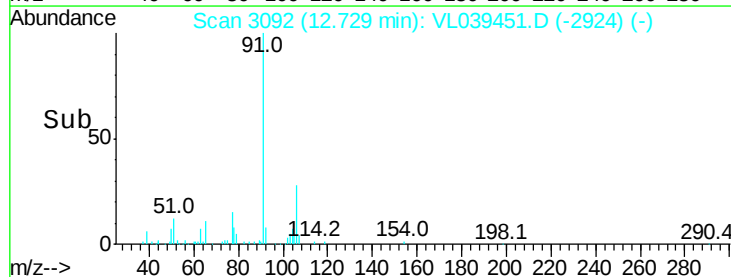
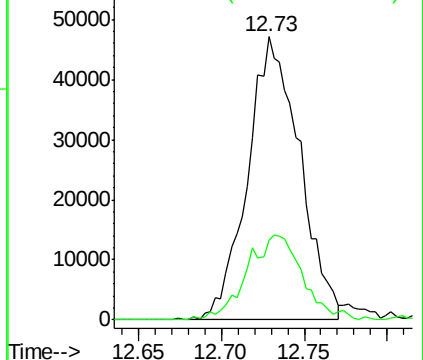


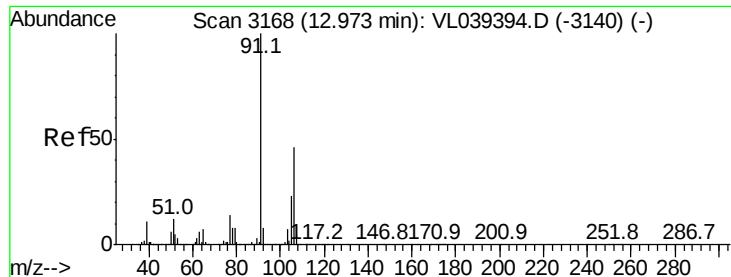
#58
Ethyl Benzene
Concen: 0.21 ppbv
RT: 12.73 min Scan# 3092
Delta R.T.: 0.04 min
Lab File: VL039451.D
Acq: 12 Jul 2022 16:36

Tgt Ion: 91 Resp: 102423
Ion Ratio Lower Upper
91 100
106 28.2 25.4 38.0



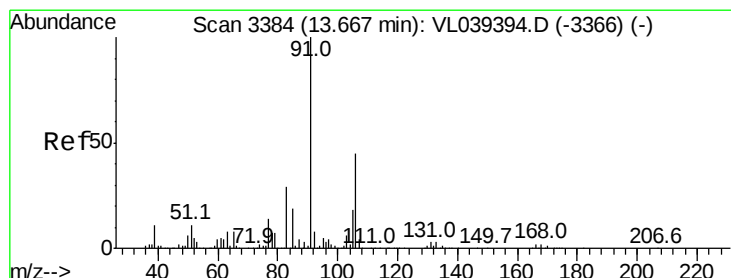
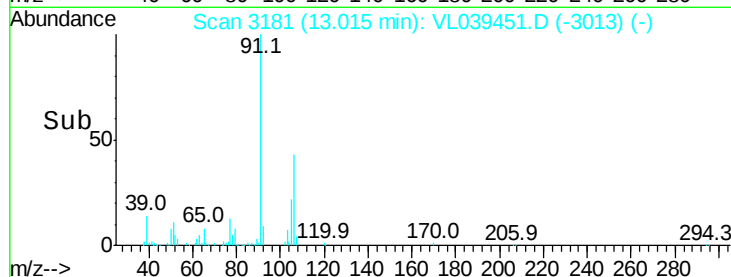
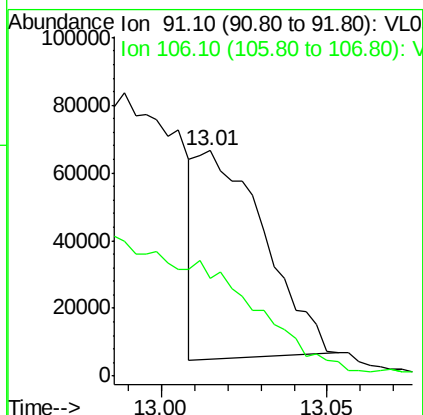
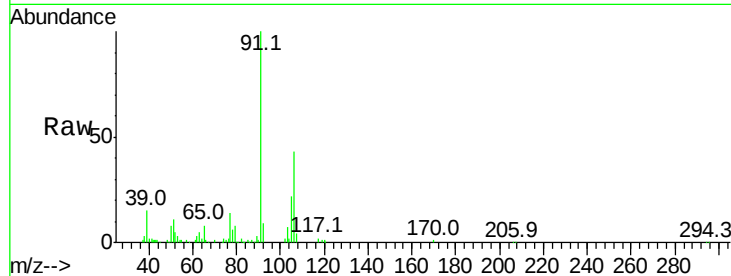
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





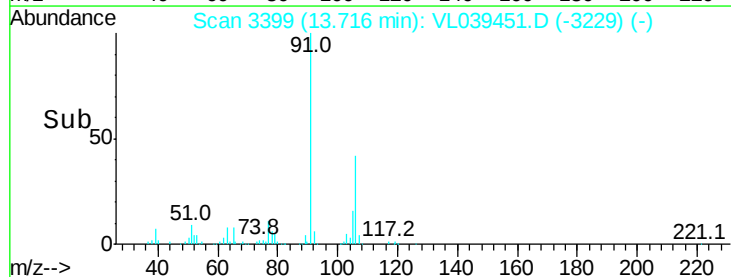
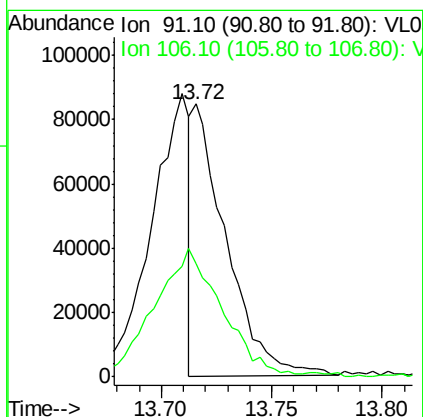
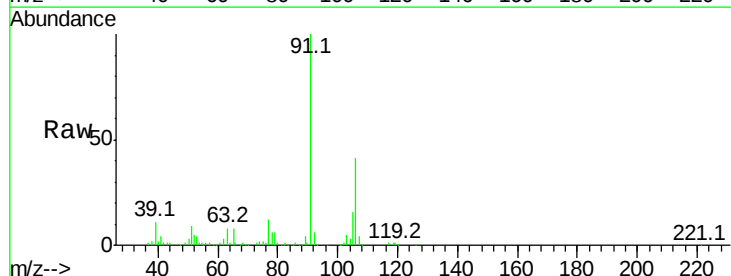
#59
m/p-Xylene
Concen: 0.21 ppbv
RT: 13.01 min
Delta R.T. MSVOA_1
Lab File: ClientSampleId :
Acq: 12 Jul 2022 16:36

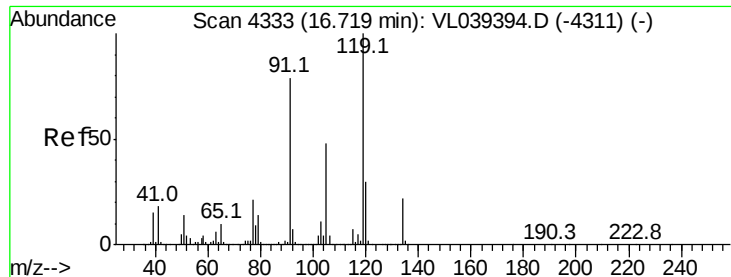
Tgt Ion: 91 Resp: 87505
Ion Ratio Lower Upper
91 100
106 0.0 35.4 53.2#



#60
o-Xylene
Concen: 0.22 ppbv
RT: 13.72 min Scan# 3399
Delta R.T. 0.05 min
Lab File: VL039451.D
Acq: 12 Jul 2022 16:36

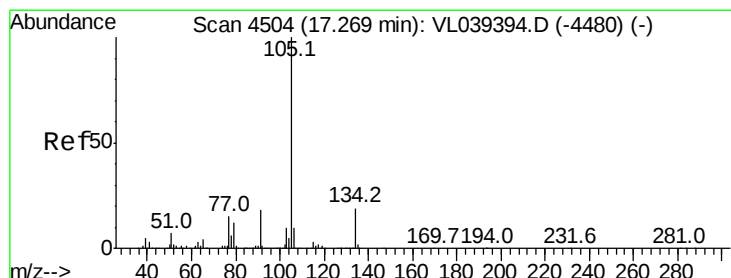
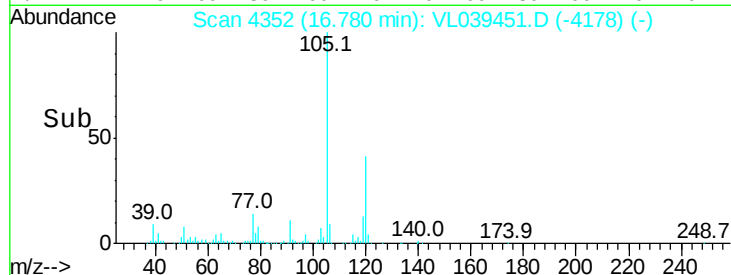
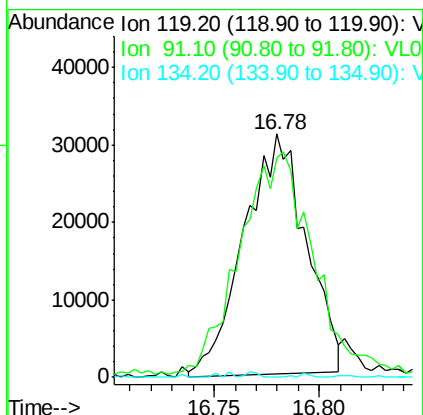
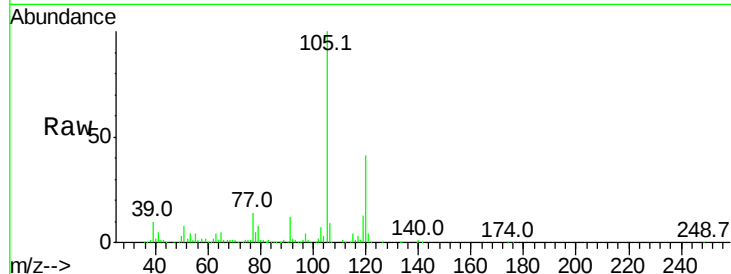
Tgt Ion: 91 Resp: 88660
Ion Ratio Lower Upper
91 100
106 98.1 22.4 67.3#





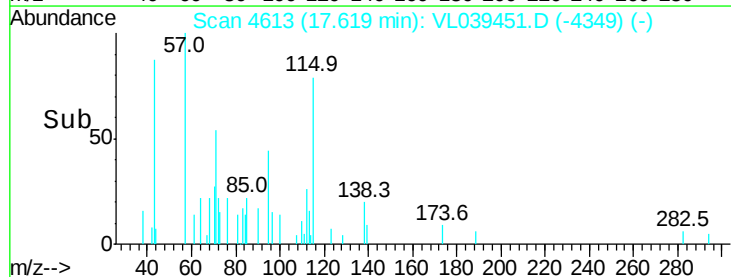
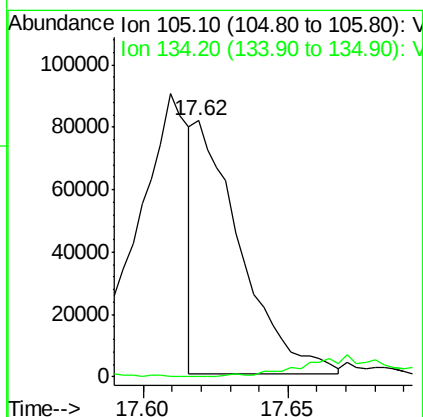
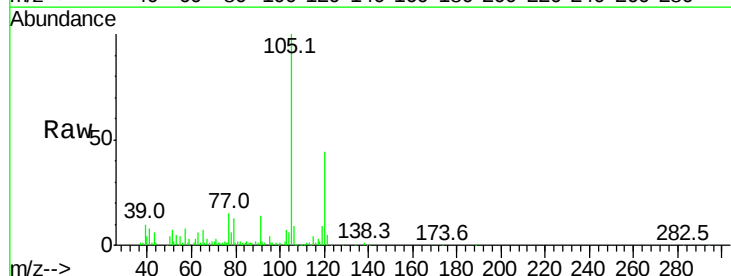
#65
 tert-Butylbenzene
 Concen: 0.11 ppbv
 RT: 16.78 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 12 Jul 2022 16:36

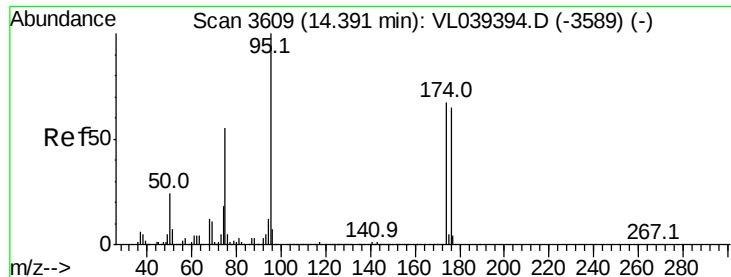
Tgt Ion:119 Resp: 63780
 Ion Ratio Lower Upper
 119 100
 91 112.9 63.4 95.2#
 134 0.0 15.9 23.9#



#67
 sec-Butylbenzene
 Concen: 0.12 ppbv
 RT: 17.62 min Scan# 4613
 Delta R.T. 0.35 min
 Lab File: VL039451.D
 Acq: 12 Jul 2022 16:36

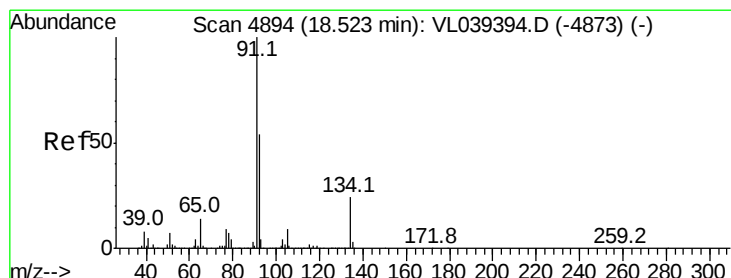
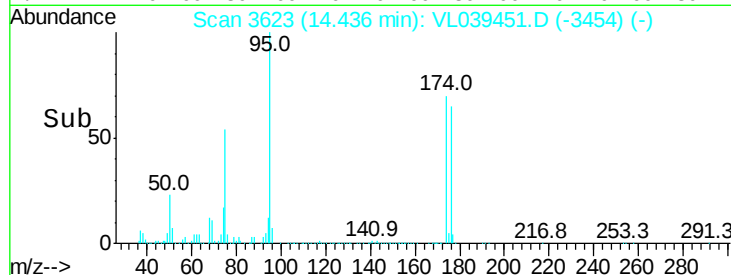
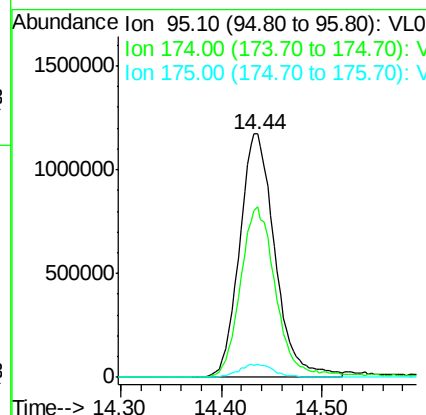
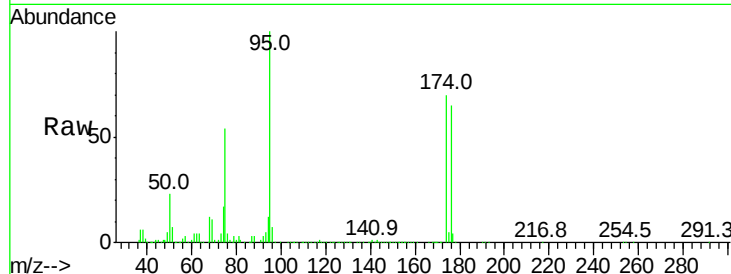
Tgt Ion:105 Resp: 88904
 Ion Ratio Lower Upper
 105 100
 134 16.2 14.8 22.2





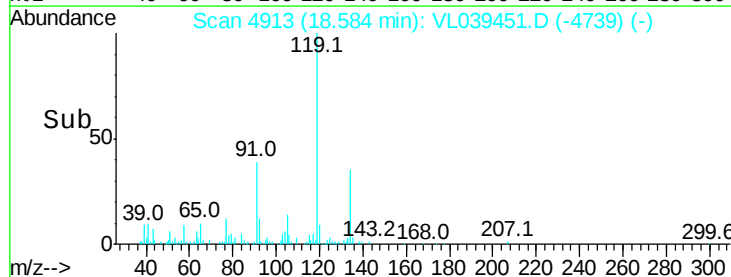
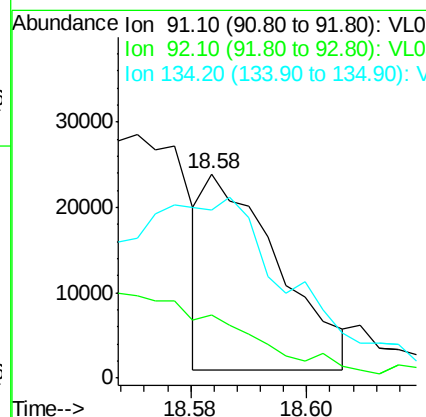
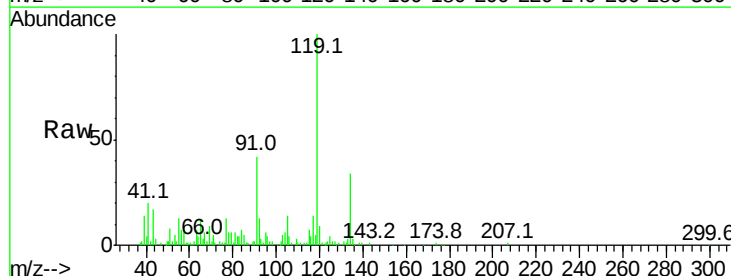
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.29 ppbv
 RT: 14.44 min
 Delta R.T. 0.06 min
 Lab File: VL039451.D
 Acq: 12 Jul 2022 16:36

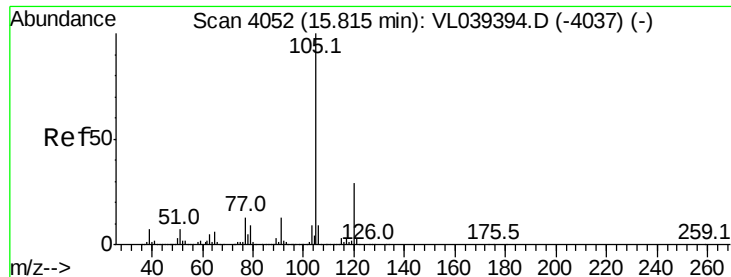
Tgt Ion: 95 Resp: 2854186
 Ion Ratio Lower Upper
 95 100
 174 71.7 55.9 83.9
 175 5.3 4.2 6.4



#70
 n-Butylbenzene
 Concen: 0.03 ppbv
 RT: 18.58 min Scan# 4913
 Delta R.T. 0.06 min
 Lab File: VL039451.D
 Acq: 12 Jul 2022 16:36

Tgt Ion: 91 Resp: 20637
 Ion Ratio Lower Upper
 91 100
 92 0.0 43.4 65.2#
 134 357.6 18.9 28.3#





#72

4-Ethyltoluene

Concen: 0.15 ppbv

RT: 15.86

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 12 Jul 2022 16:36

Tgt Ion:105 Resp: 71314

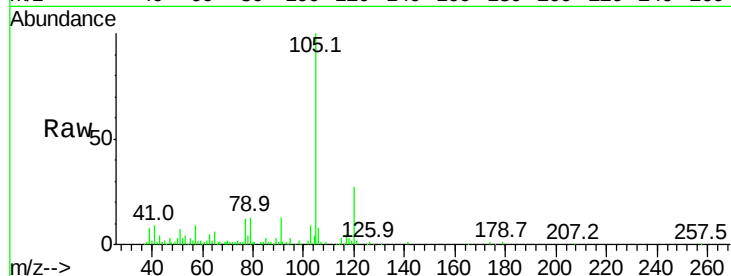
Ion Ratio Lower Upper

105 100

120 0.0 24.2 36.2#

91 30.9 10.2 15.4#

77 0.0 11.1 16.7#

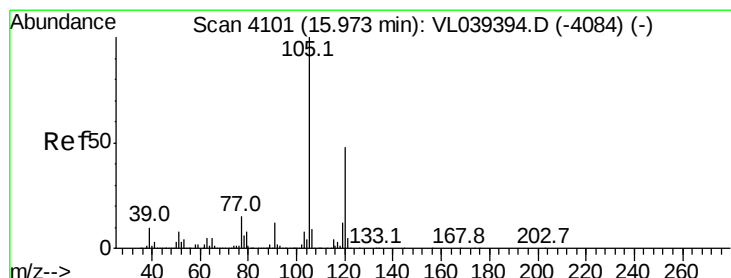
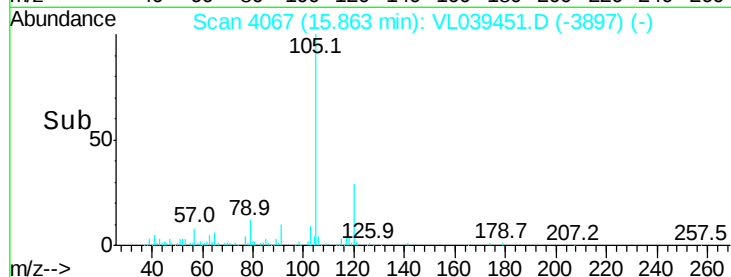
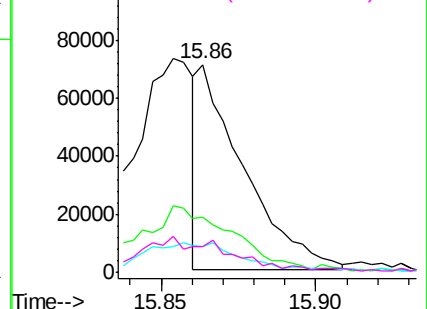


Abundance Ion 105.10 (104.80 to 105.80): V

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



#73

1,3,5-Trimethylbenzene

Concen: 0.35 ppbv

RT: 16.01 min Scan# 4114

Delta R.T. 0.04 min

Lab File: VL039451.D

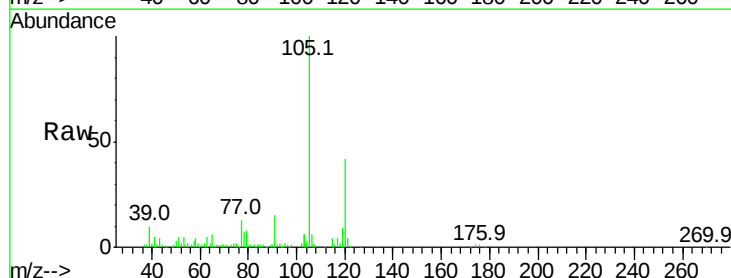
Acq: 12 Jul 2022 16:36

Tgt Ion:105 Resp: 153174

Ion Ratio Lower Upper

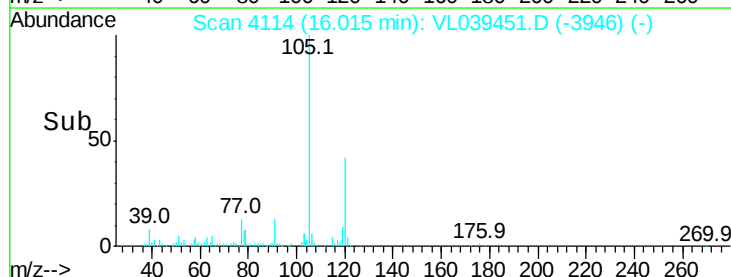
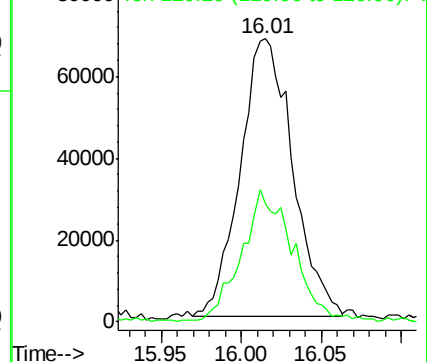
105 100

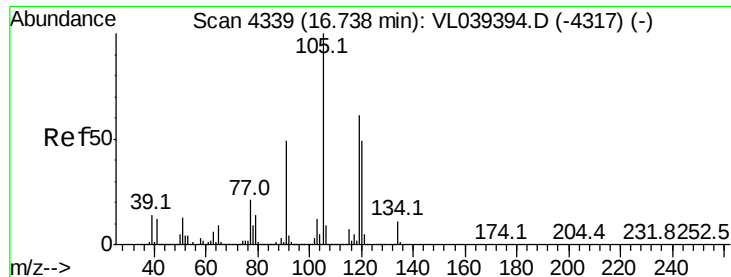
120 41.7 38.2 57.4



Abundance Ion 105.10 (104.80 to 105.80): V

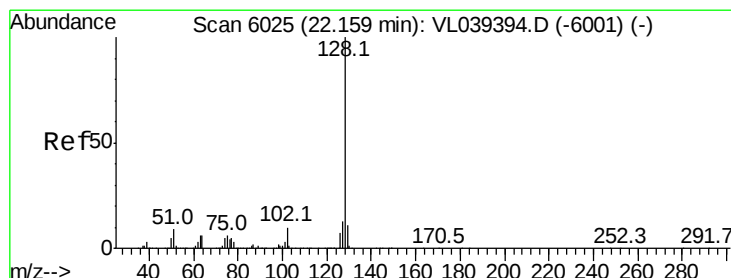
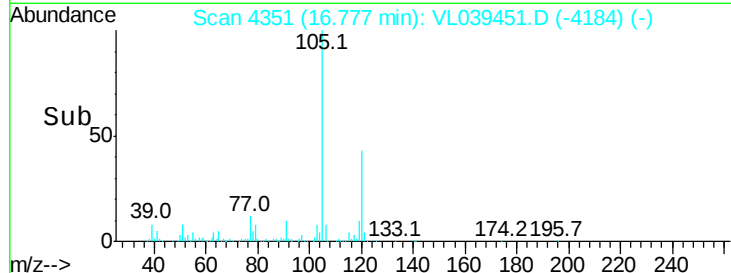
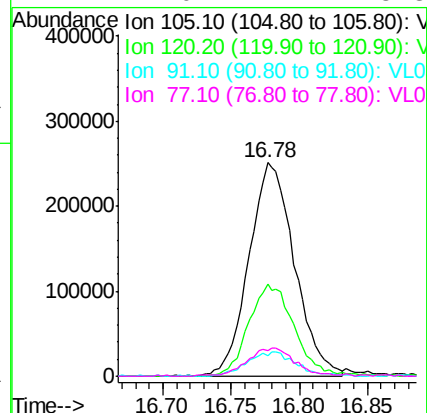
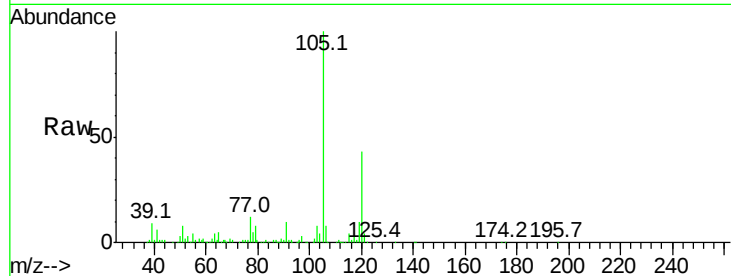
Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 1.20 ppbv
 RT: 16.78 min
 Delta R.T. 0.06 min
 Lab File: VL039451.D
 Acq: 12 Jul 2022 16:36

Tgt Ion:	105	Resp:	579183
Ion Ratio	Lower	Upper	
105	100		
120	43.1	39.5	59.3
91	9.5	39.2	58.8#
77	12.0	17.2	25.8#



#79
 Naphthalene
 Concen: 0.52 ppbv
 RT: 22.22 min Scan# 6043
 Delta R.T. 0.06 min
 Lab File: VL039451.D
 Acq: 12 Jul 2022 16:36

Tgt Ion:	128	Resp:	172313
Ion Ratio	Lower	Upper	
128	100		
127	11.1	10.6	15.8
129	12.2	8.8	13.2

