

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL101221\
 Data File : VL037838.D
 Acq On : 12 Oct 2021 20:34
 Operator : SY/AP
 Sample : M4079-08
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 C0P20

Quant Time: Oct 14 01:06:17 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL100421AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021
 QLast Update : Mon Oct 04 17:43:54 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1224522	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3619876	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	3111275	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2248784	10.34	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.40%

Target Compounds						Qvalue
3) Chlorodifluoromethane	2.99	51	21787	0.093	ppbv	94
4) Chloromethane	3.14	50	8168	0.095	ppbv	97
9) Propene	3.01	41	59120	0.683	ppbv	96
10) Heptane	8.11	43	14160	0.072	ppbv #	43
11) Trichlorofluoromethane	3.94	101	33008	0.189	ppbv	86
12) 1,1,2-Trichlorotrifluoroet	4.48	101	3808	0.029	ppbv #	1
13) Ethanol	3.60	45	180309	25.468	ppbv	86
15) Acetone	3.84	43	2873497	26.140	ppbv	95
16) 1,3-Butadiene	3.31	39	185707	2.322	ppbv #	20
17) tert-Butyl alcohol	4.30	59	16688	0.147	ppbv #	56
19) Isopropyl Alcohol	3.96	45	6216	0.091	ppbv #	96
20) Methylene Chloride	4.34	84	290116	5.223	ppbv	95
23) Vinyl Acetate	5.06	43	66978	0.407	ppbv #	84
25) Ethyl Acetate	5.68	43	168251	0.545	ppbv #	81
26) Hexane	5.68	57	107474	0.708	ppbv #	37
27) Carbon Disulfide	4.55	76	31946	0.237	ppbv #	68
29) Chloroform	5.75	83	176896	0.815	ppbv	98
34) 2-Butanone	5.24	43	548905	3.756	ppbv	96
36) Benzene	6.88	78	14560	0.047	ppbv	95
39) 1,2-Dichloropropane	7.17	63	851334	7.320	ppbv #	27
51) 2-Hexanone	10.14	43	32815	0.386	ppbv #	29
52) Tetrachloroethene	11.21	164	174794	1.453	ppbv	92
53) Toluene	9.80	91	55008	0.161	ppbv	98
58) Ethyl Benzene	12.70	91	95436	0.228	ppbv	93
59) m/p-Xylene	12.98	91	25326	0.071	ppbv #	30
60) o-Xylene	13.68	91	119414	0.347	ppbv	100
74) 1,2,4-Trimethylbenzene	16.75	105	36354	0.098	ppbv #	70
79) Naphthalene	22.17	128	4580	0.020	ppbv #	93
80) Naphthalene,2-methyl-	24.97	142	2020	0.033	ppbv	96

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

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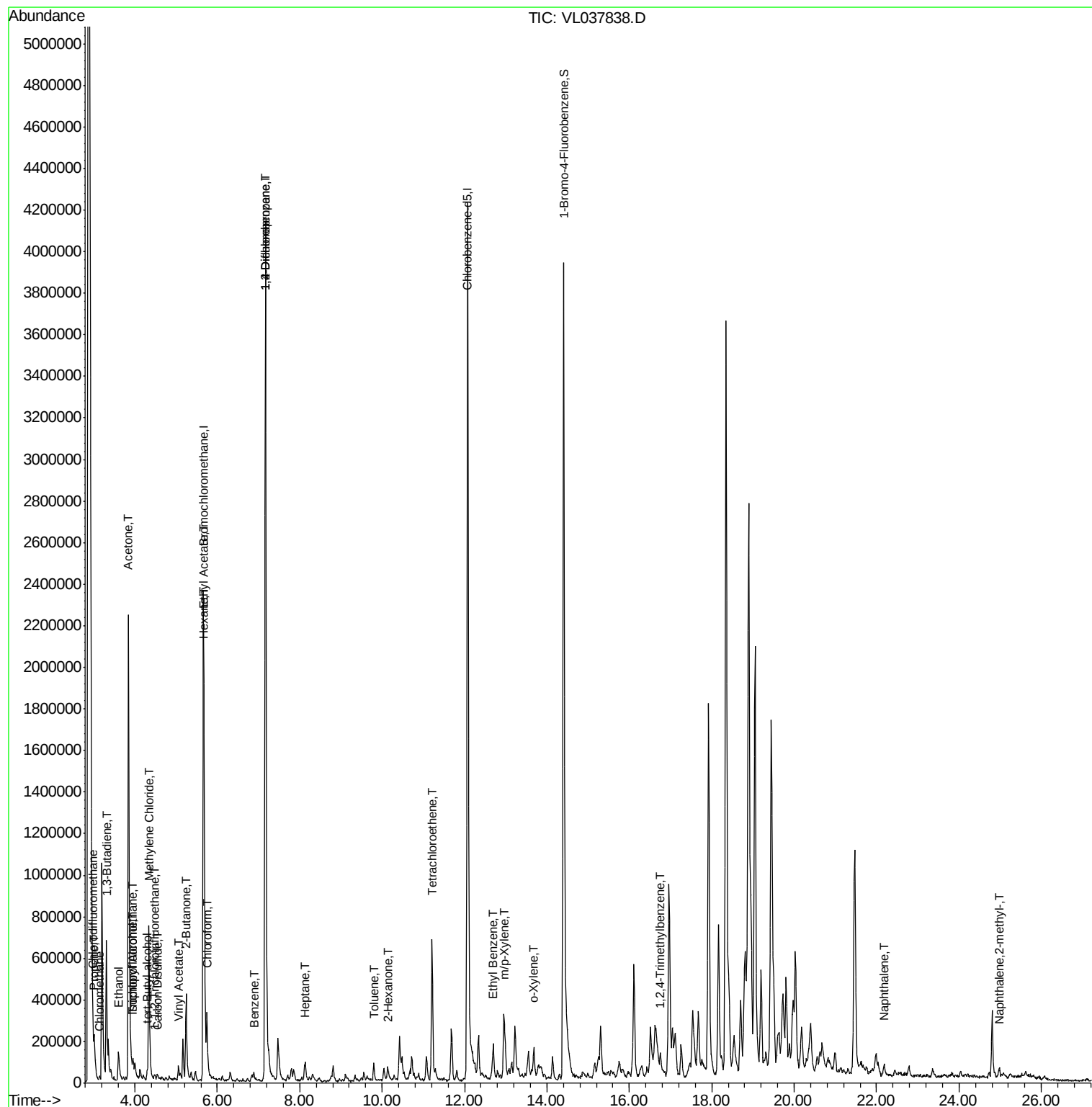
Quant Time: Oct 14 01:06:17 2021

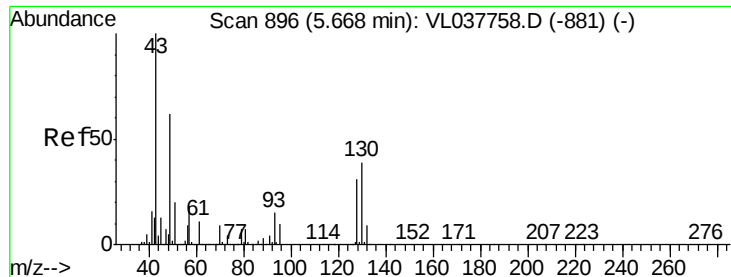
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL100421AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Oct 04 17:43:54 2021

QLast Update : Mon Oct 04 17:43:54 2021

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 12 Oct 2021 20:34

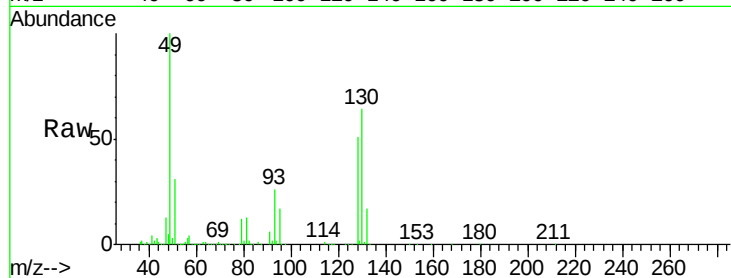
Tgt Ion: 49 Resp: 1224522

Ion Ratio Lower Upper

49 100

128 53.9 27.1 81.3

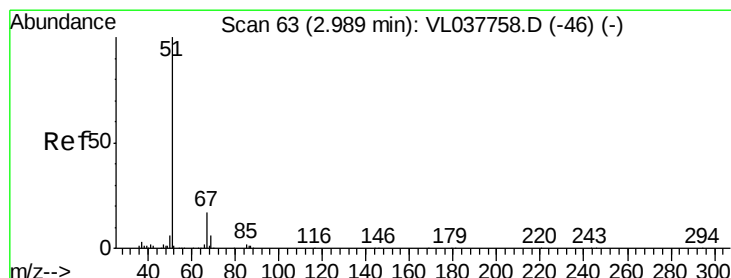
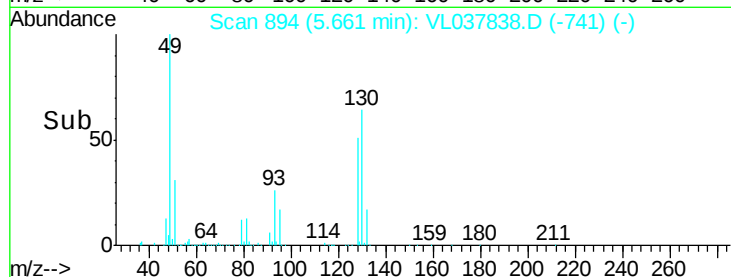
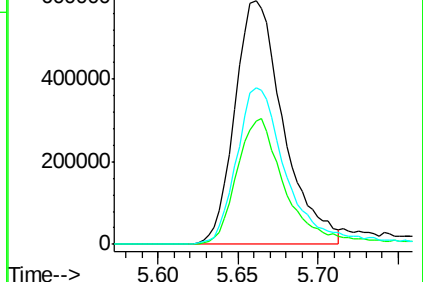
130 68.6 33.2 99.6



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



#3

Chlorodifluoromethane

Concen: 0.093 ppbv

RT: 2.99 min Scan# 62

Delta R.T. -0.00 min

Lab File: VL037838.D

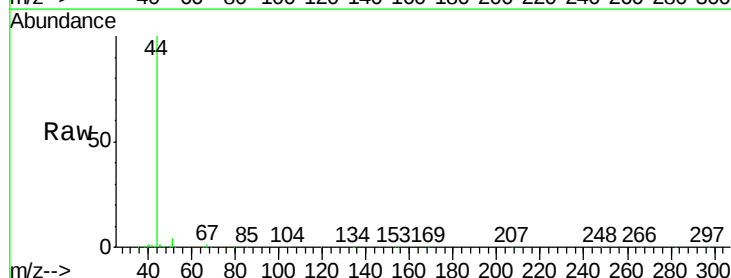
Acq: 12 Oct 2021 20:34

Tgt Ion: 51 Resp: 21787

Ion Ratio Lower Upper

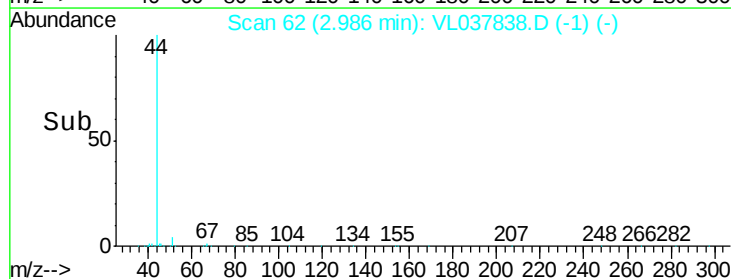
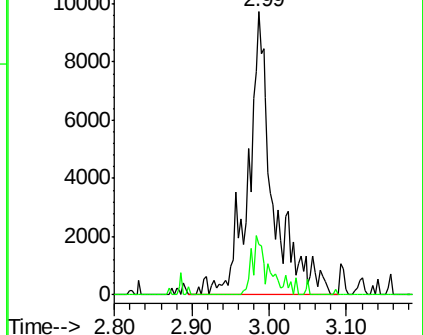
51 100

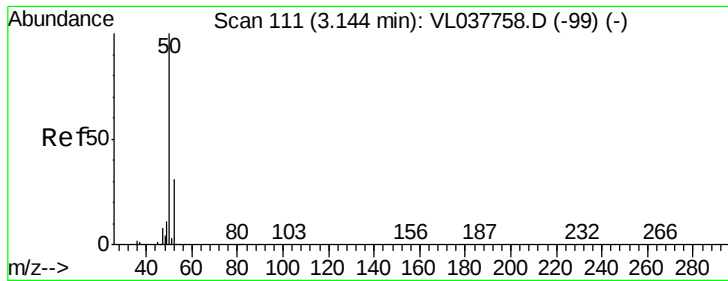
67 14.5 13.5 20.3



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.095 ppbv

RT: 3.14 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

COP20

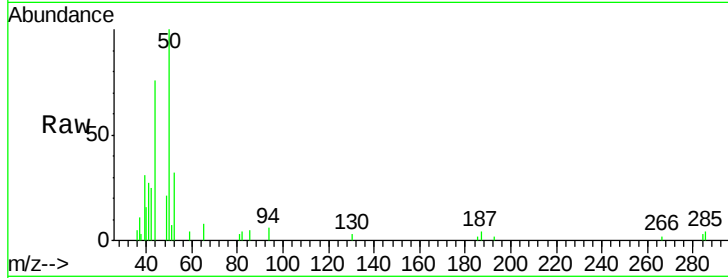
Acq: 12 Oct 2021 20:34

Tgt Ion: 50 Resp: 8168

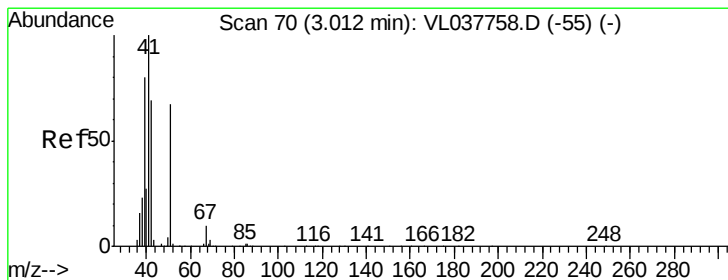
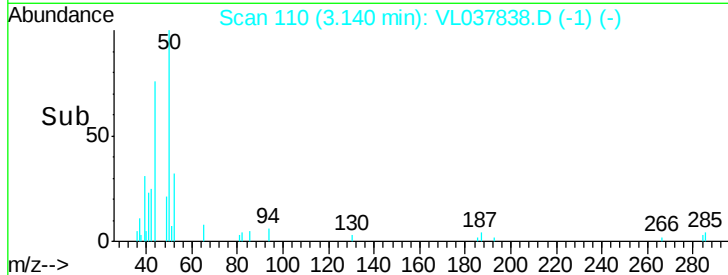
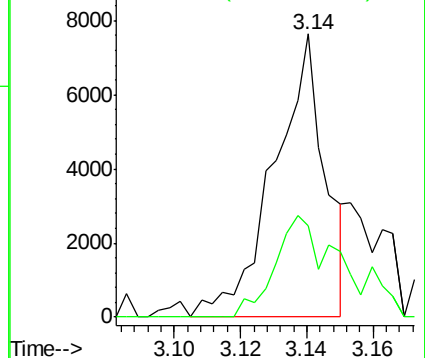
Ion Ratio Lower Upper

50 100

52 32.3 24.4 36.6



Abundance Ion 50.10 (49.80 to 50.80): VL0
Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.683 ppbv

RT: 3.01 min Scan# 69

Delta R.T. -0.00 min

Lab File: VL037838.D

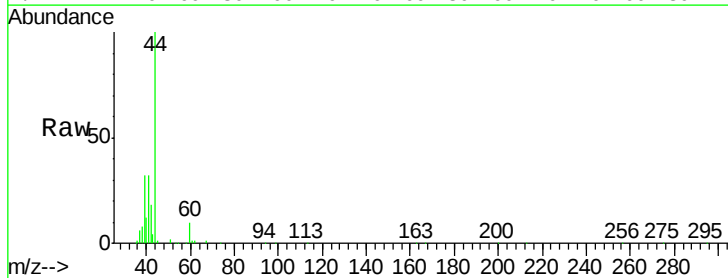
Acq: 12 Oct 2021 20:34

Tgt Ion: 41 Resp: 59120

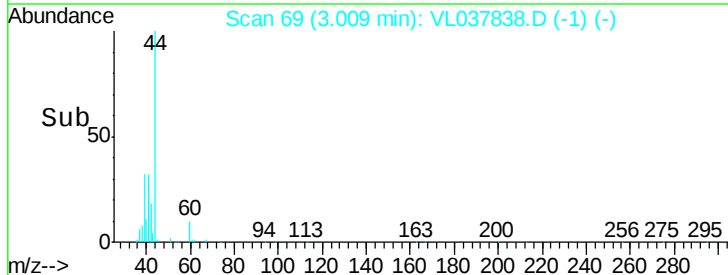
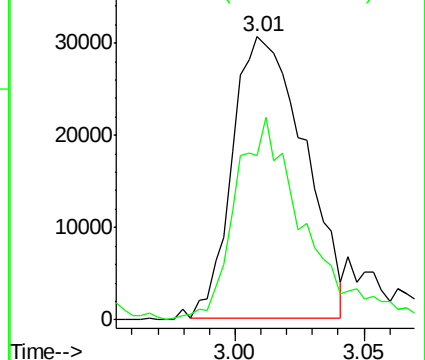
Ion Ratio Lower Upper

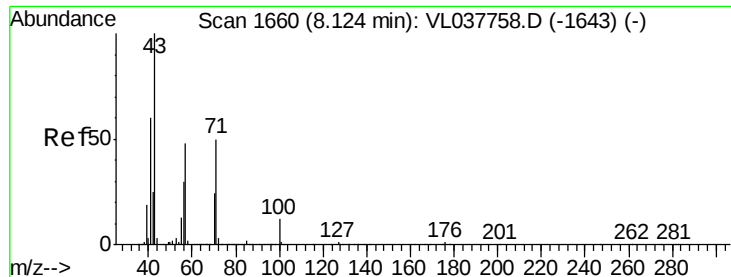
41 100

42 71.2 54.2 81.2



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.072 ppbv

RT: 8.11 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

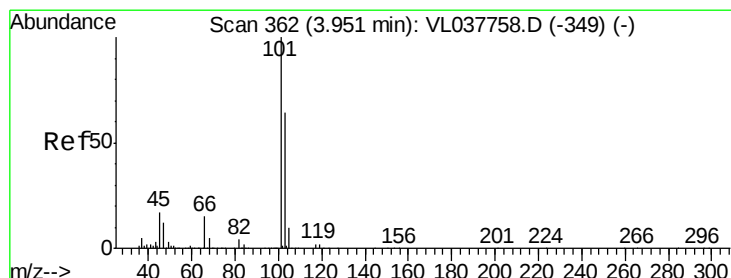
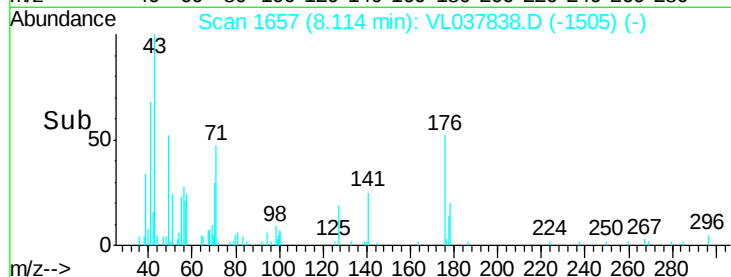
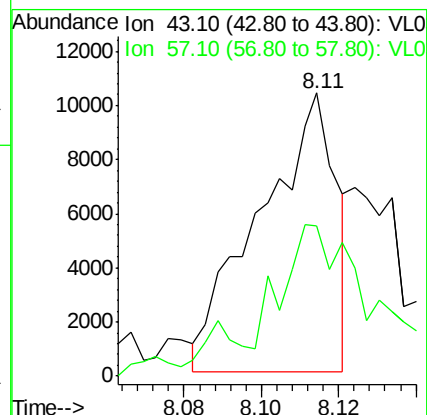
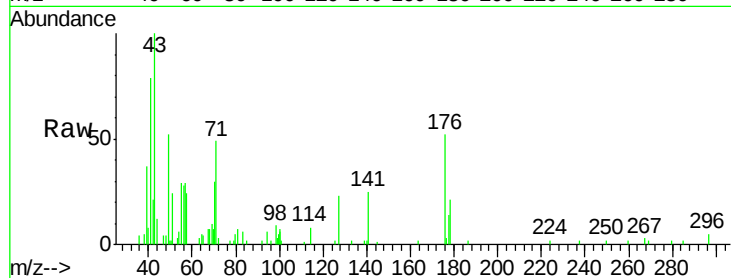
Acq: 12 Oct 2021 20:34 COP20

Tgt Ion: 43 Resp: 14160

Ion Ratio Lower Upper

43 100

57 89.3 40.0 60.0#



#11

Trichlorofluoromethane

Concen: 0.189 ppbv

RT: 3.94 min Scan# 360

Delta R.T. -0.01 min

Lab File: VL037838.D

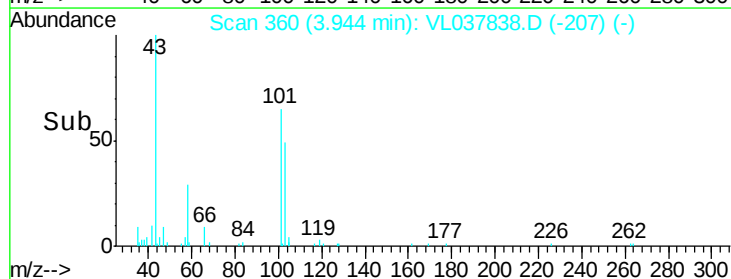
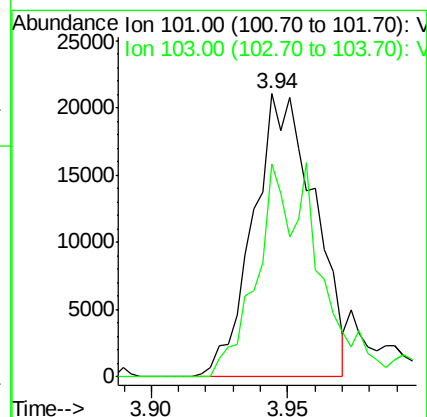
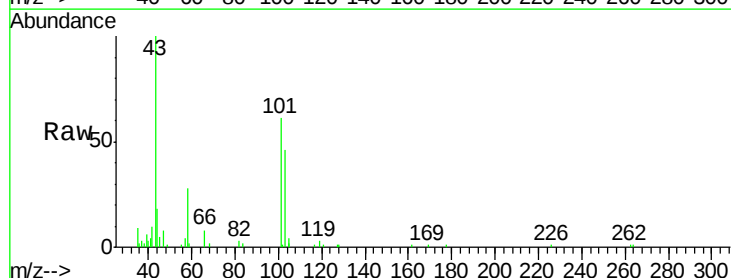
Acq: 12 Oct 2021 20:34

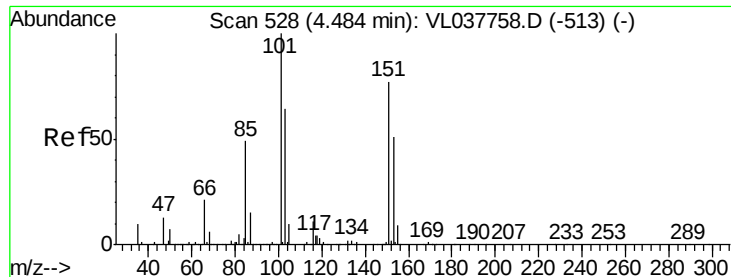
Tgt Ion: 101 Resp: 33008

Ion Ratio Lower Upper

101 100

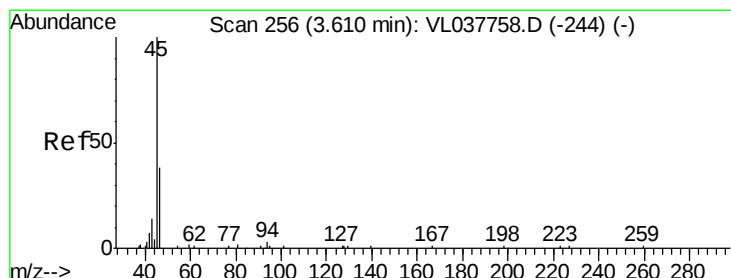
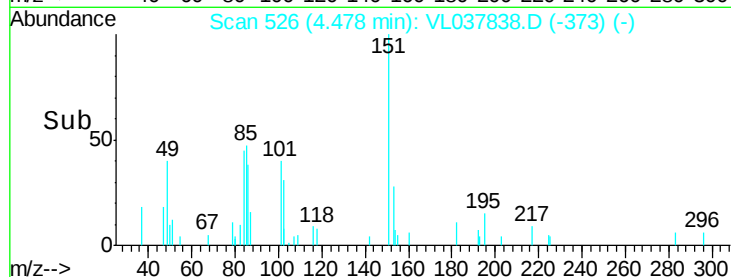
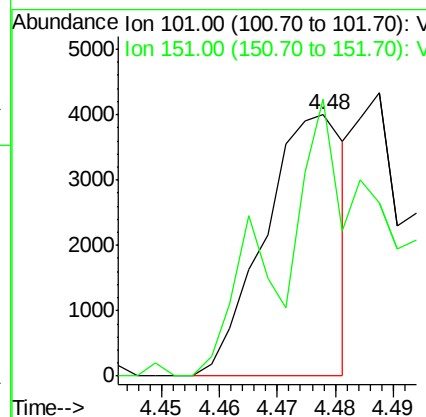
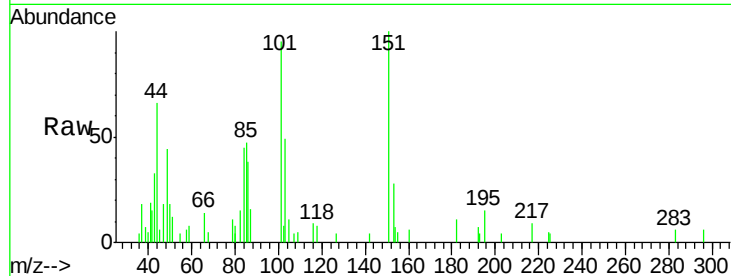
103 75.2 51.5 77.3





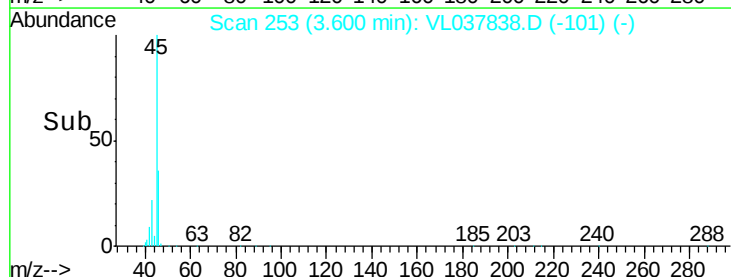
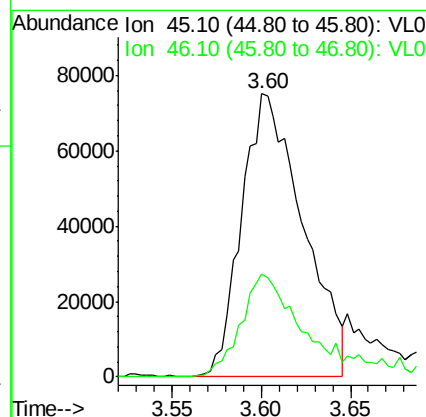
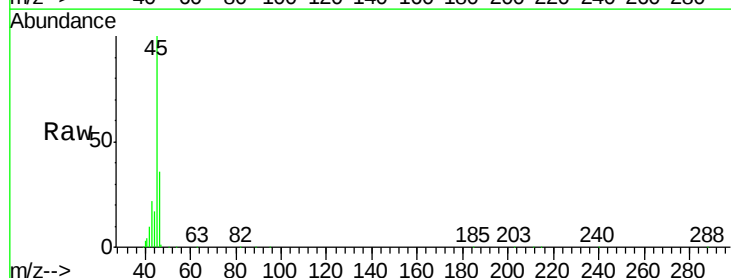
#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.029 ppbv
 RT: 4.48
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId:
 Acq: 12 Oct 2021 20:34

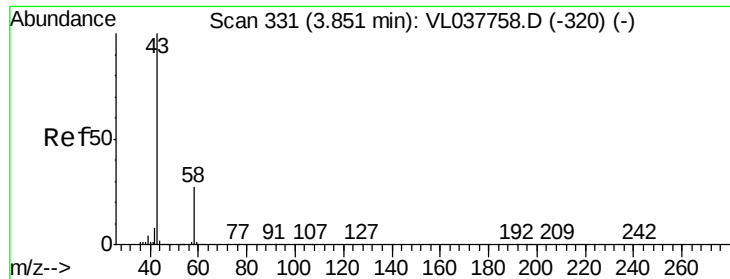
Tgt Ion: 101 Resp: 3808
 Ion Ratio Lower Upper
 101 100
 151 178.5 62.9 94.3#



#13
 Ethanol
 Concen: 25.468 ppbv
 RT: 3.60 min Scan# 253
 Delta R.T. -0.01 min
 Lab File: VL037838.D
 Acq: 12 Oct 2021 20:34

Tgt Ion: 45 Resp: 180309
 Ion Ratio Lower Upper
 45 100
 46 40.6 20.2 81.0





#15

Acetone

Concen: 26.140 ppbv

RT: 3.84 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

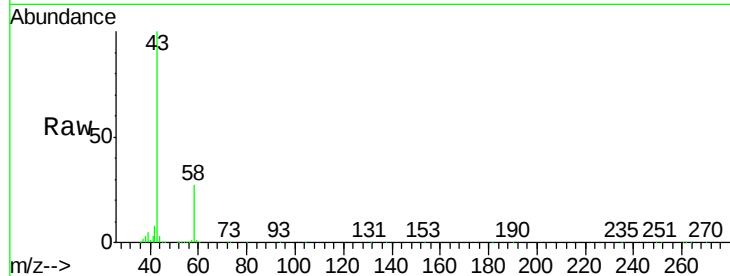
Acq: 12 Oct 2021 20:34

Tgt Ion: 43 Resp: 2873497

Ion Ratio Lower Upper

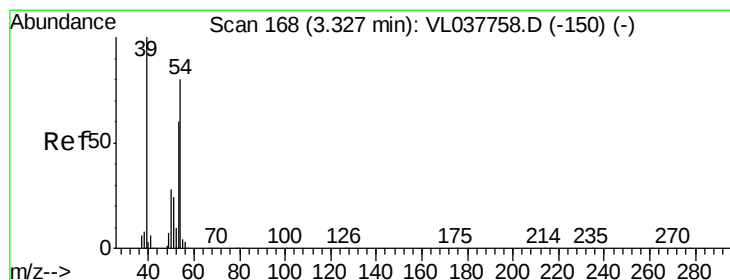
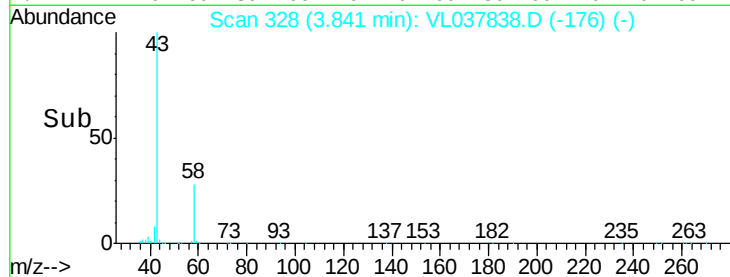
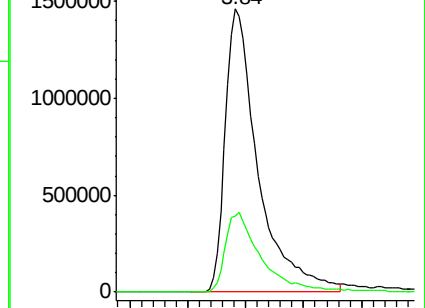
43 100

58 31.5 23.0 34.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 2.322 ppbv

RT: 3.31 min Scan# 162

Delta R.T. -0.02 min

Lab File: VL037838.D

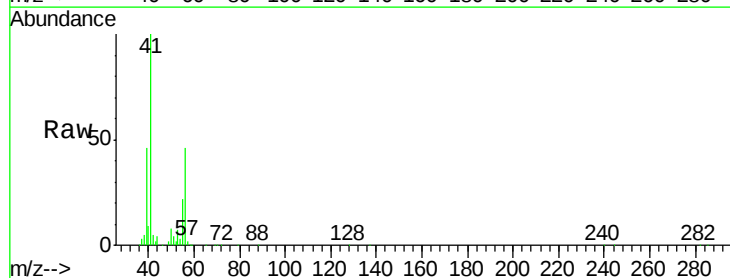
Acq: 12 Oct 2021 20:34

Tgt Ion: 39 Resp: 185707

Ion Ratio Lower Upper

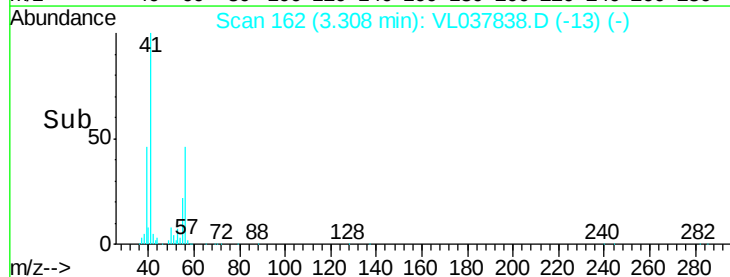
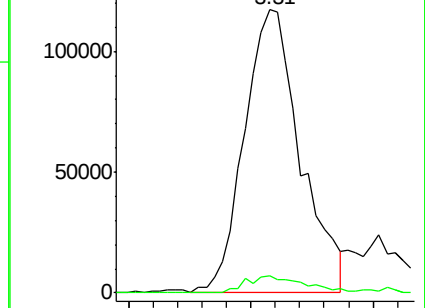
39 100

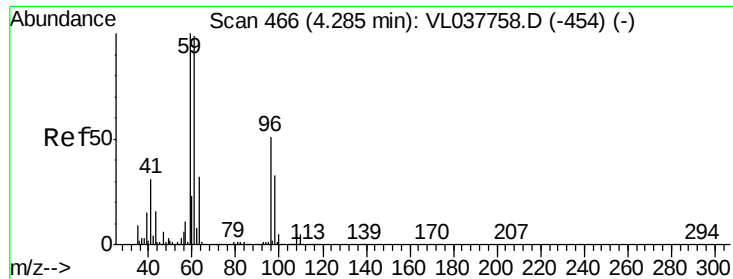
54 7.5 61.7 92.5#



Abundance Ion 39.10 (38.80 to 39.80): VL0

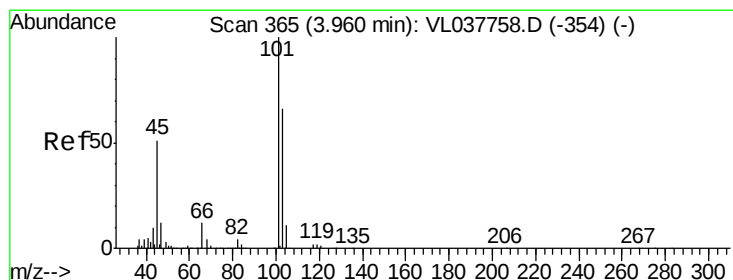
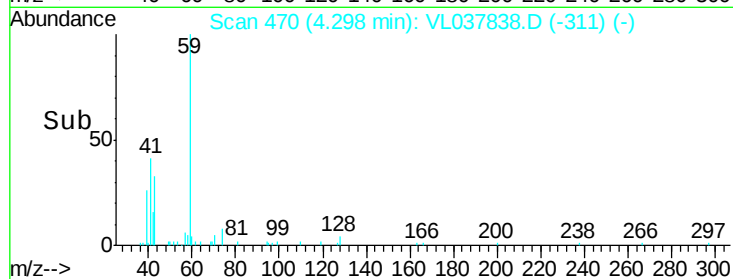
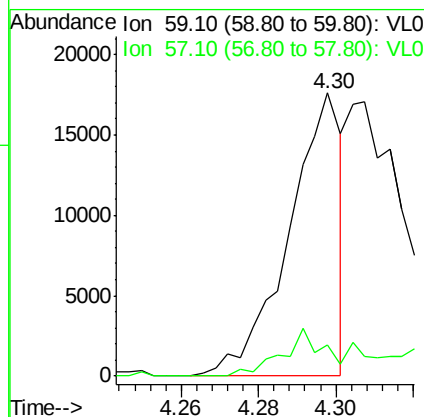
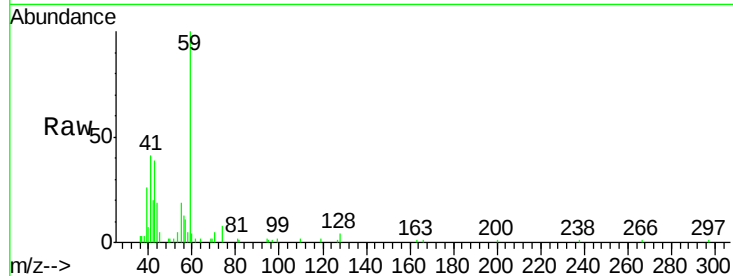
Ion 54.10 (53.80 to 54.80): VL0





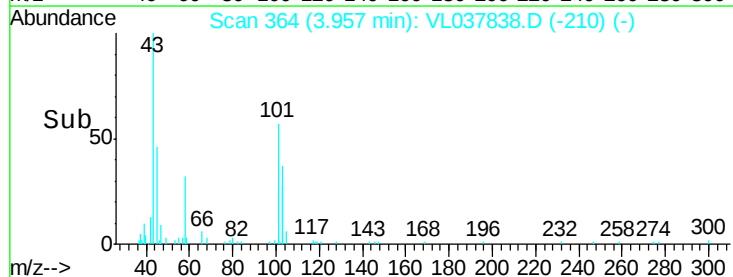
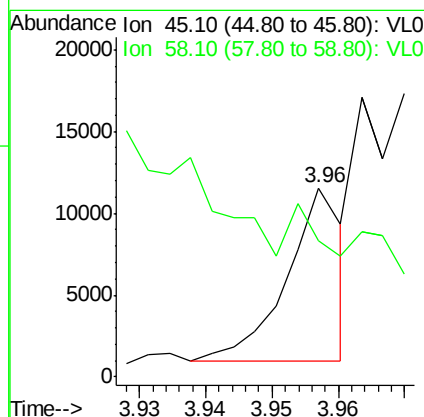
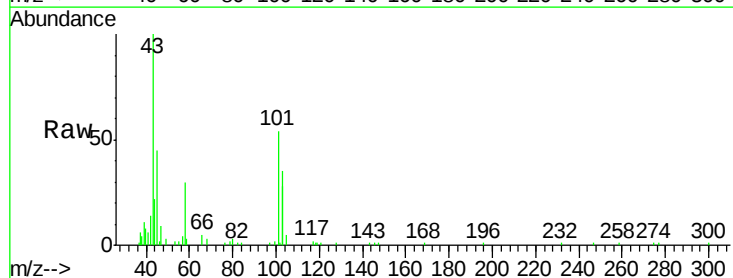
#17
 tert-Butyl alcohol
 Concen: 0.147 ppbv
 RT: 4.30
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 COP20
 Acq: 12 Oct 2021 20:34

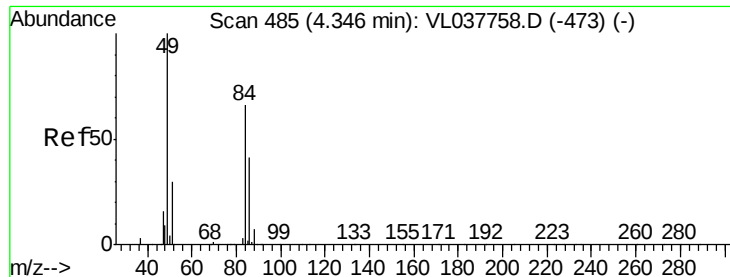
Tgt Ion: 59 Resp: 16688
 Ion Ratio Lower Upper
 59 100
 57 27.2 8.6 13.0#



#19
 Isopropyl Alcohol
 Concen: 0.091 ppbv
 RT: 3.96 min Scan# 364
 Delta R.T.: -0.00 min
 Lab File: VL037838.D
 Acq: 12 Oct 2021 20:34

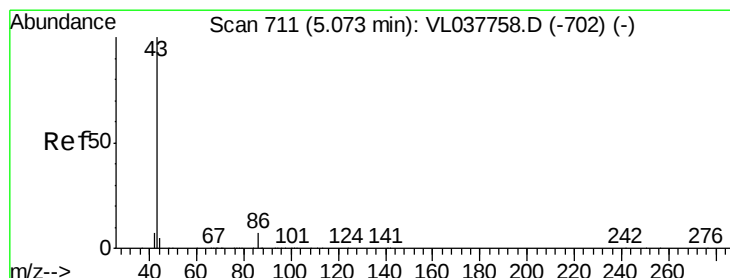
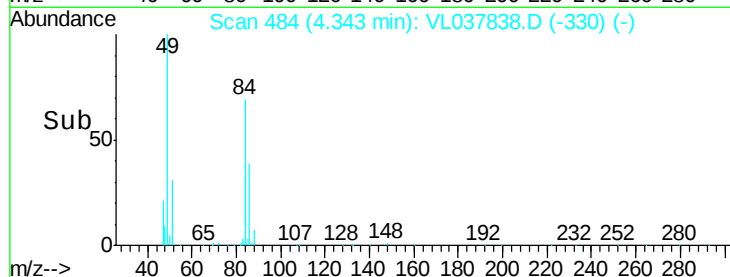
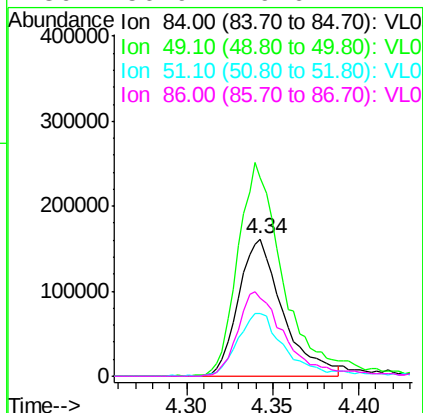
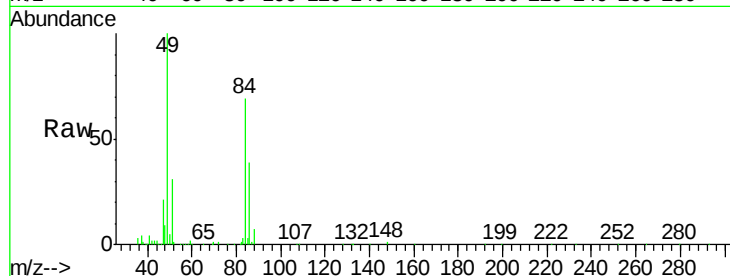
Tgt Ion: 45 Resp: 6216
 Ion Ratio Lower Upper
 45 100
 58 0.0 1.1 1.7#





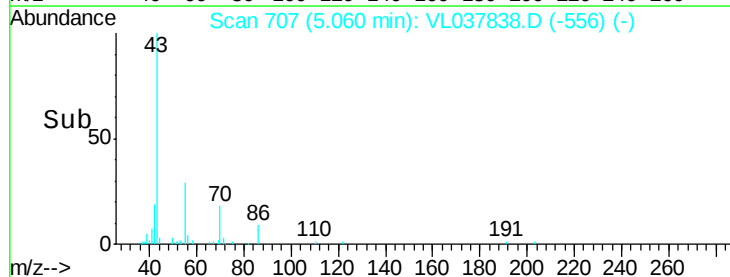
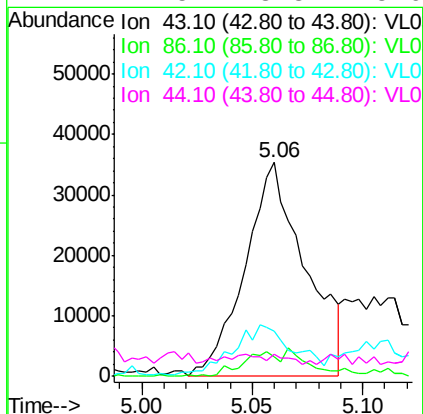
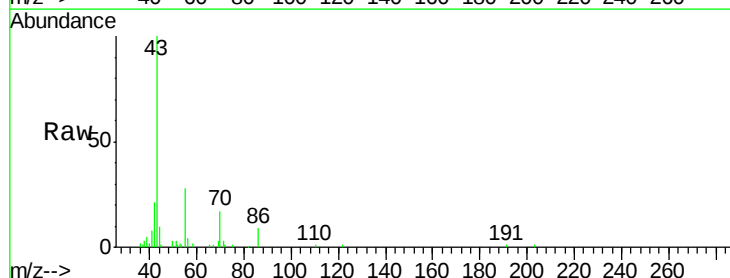
#20
Methylene Chloride
Concen: 5.223 ppbv
RT: 4.34
Delta R.T.: MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Oct 2021 20:34

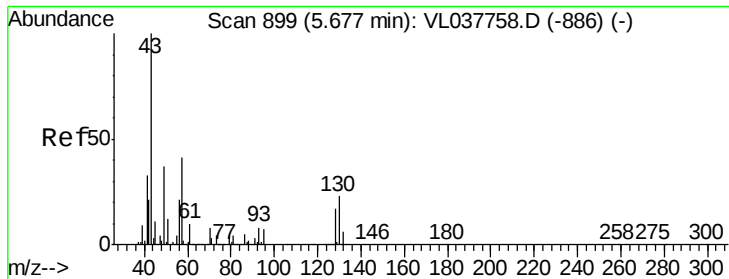
Tgt Ion:	84	Resp:	290116
Ion	Ratio	Lower	Upper
84	100		
49	144.8	120.7	181.1
51	44.7	36.2	54.4
86	56.9	49.6	74.4



#23
Vinyl Acetate
Concen: 0.407 ppbv
RT: 5.06 min Scan# 707
Delta R.T.: -0.01 min
Lab File: VL037838.D
Acq: 12 Oct 2021 20:34

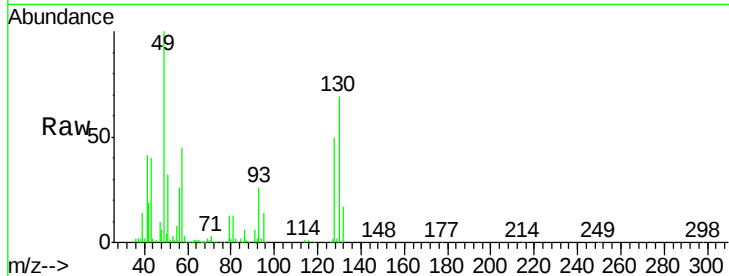
Tgt Ion:	43	Resp:	66978
Ion	Ratio	Lower	Upper
43	100		
86	8.4	5.0	7.4#
42	19.4	7.4	11.0#
44	2.5	3.8	5.6#



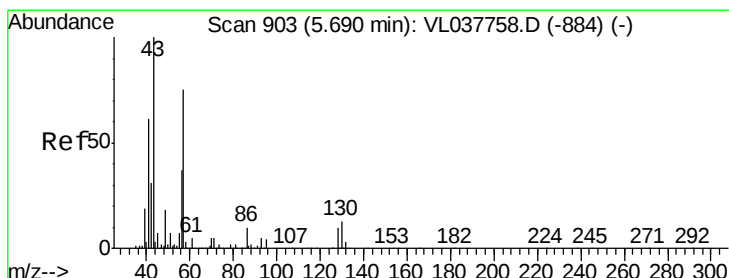
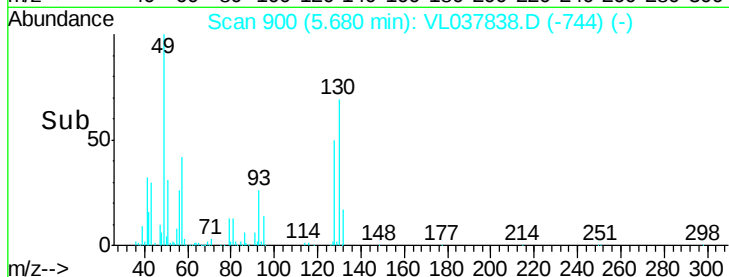
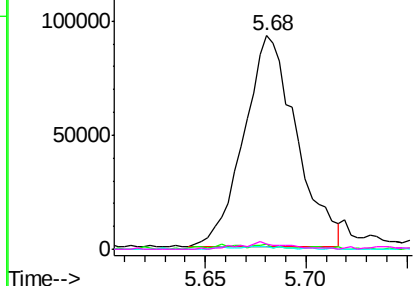


#25
Ethyl Acetate
Concen: 0.545 ppbv
RT: 5.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 12 Oct 2021 20:34

Tgt Ion:	43	Resp:	168251
Ion	Ratio	Lower	Upper
43	100		
45	2.3	8.1	12.1#
61	1.4	7.5	11.3#
70	3.1	5.9	8.9#

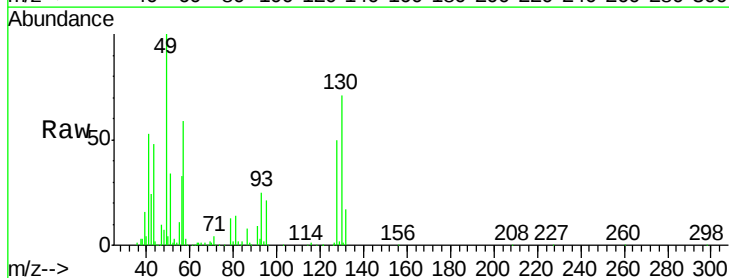


Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 45.10 (44.80 to 45.80): VL0
Ion 61.10 (60.80 to 61.80): VL0
Ion 70.10 (69.80 to 70.80): VL0

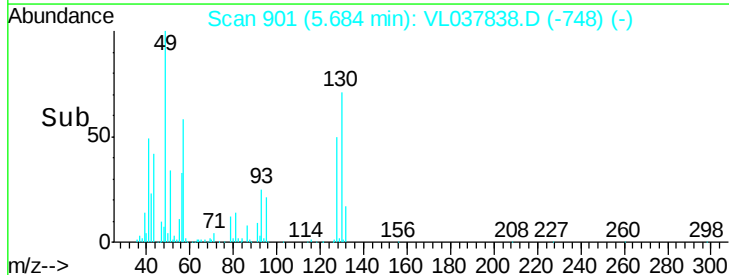
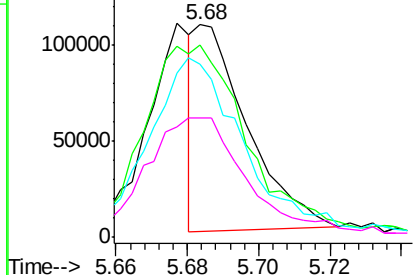


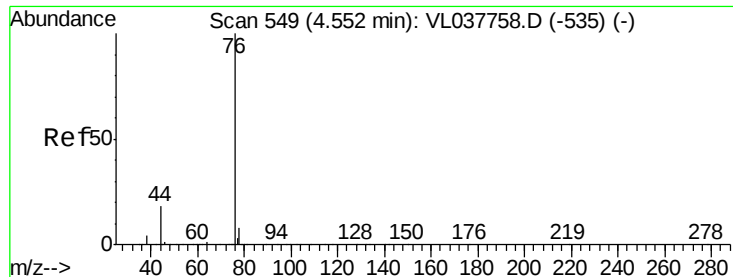
#26
Hexane
Concen: 0.708 ppbv
RT: 5.68 min Scan# 901
Delta R.T. -0.01 min
Lab File: VL037838.D
Acq: 12 Oct 2021 20:34

Tgt Ion:	57	Resp:	107474
Ion	Ratio	Lower	Upper
57	100		
41	203.8	69.6	104.4#
43	169.5	171.4	257.0#
56	122.8	42.0	63.0#



Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0





#27

Carbon Disulfide

Concen: 0.237 ppbv

RT: 4.55 Instrument: MSVOA_1

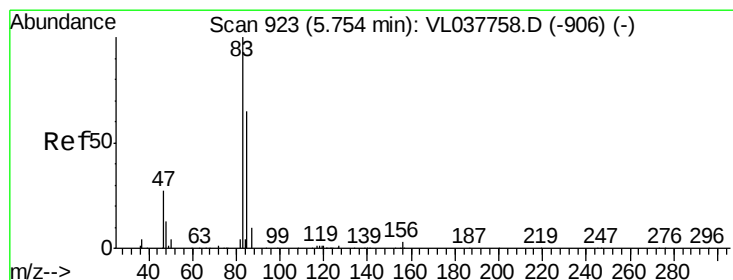
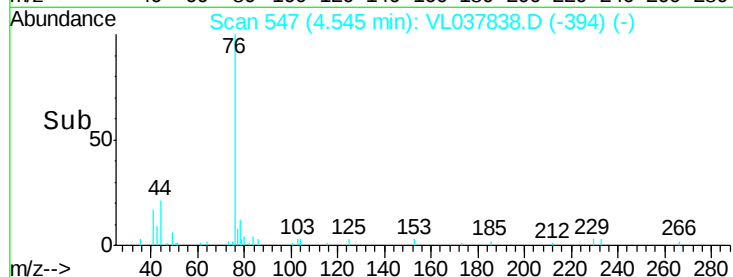
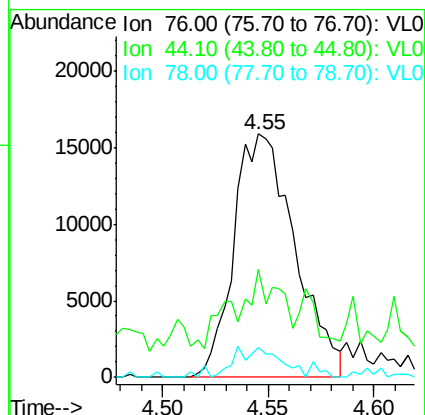
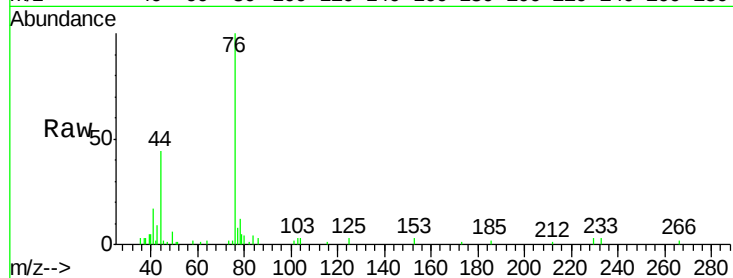
Delta R.T. ClientSampleId:

Lab File: COP20

Acq: 12 Oct 2021 20:34

Tgt Ion: 76 Resp: 31946

Ion	Ratio	Lower	Upper
76	100		
44	39.2	14.3	21.5#
78	10.7	7.8	11.6



#29

Chloroform

Concen: 0.815 ppbv

RT: 5.75 min Scan# 921

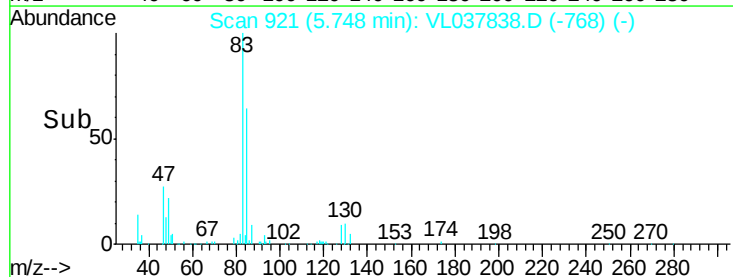
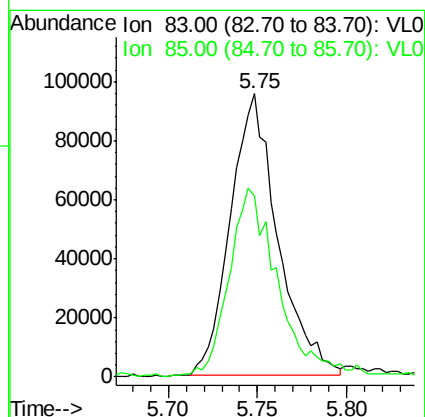
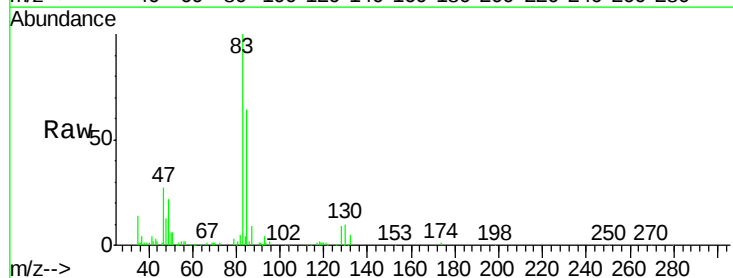
Delta R.T. -0.01 min

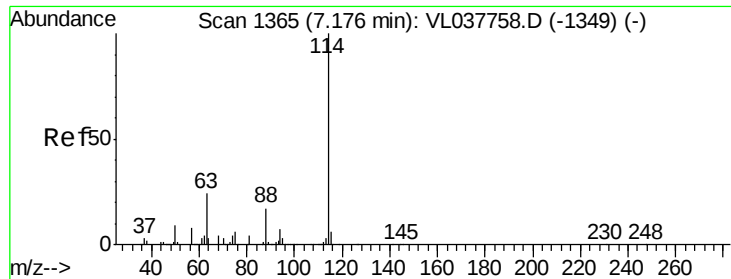
Lab File: VL037838.D

Acq: 12 Oct 2021 20:34

Tgt Ion: 83 Resp: 176896

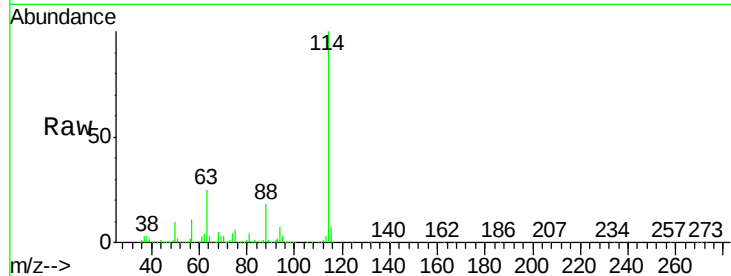
Ion	Ratio	Lower	Upper
83	100		
85	63.4	51.8	77.8



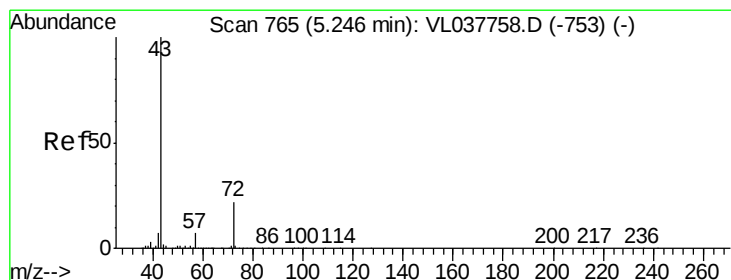
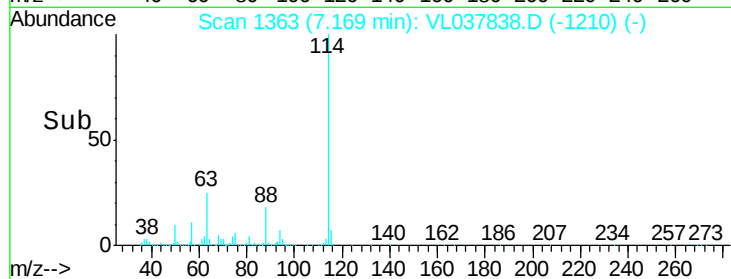
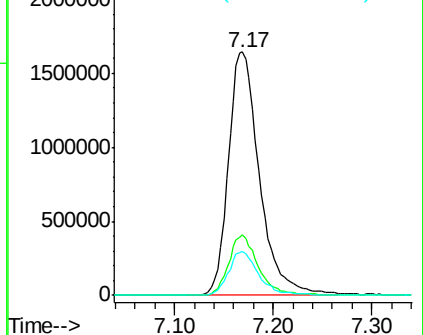


#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 C0P20
 Acq: 12 Oct 2021 20:34

Tgt Ion: 114 Resp: 3619876
 Ion Ratio Lower Upper
 114 100
 63 23.9 19.4 29.2
 88 17.7 14.4 21.6

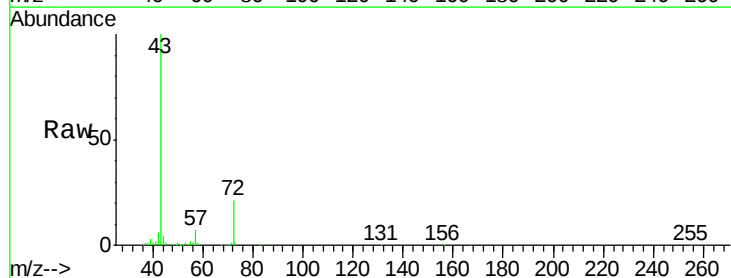


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

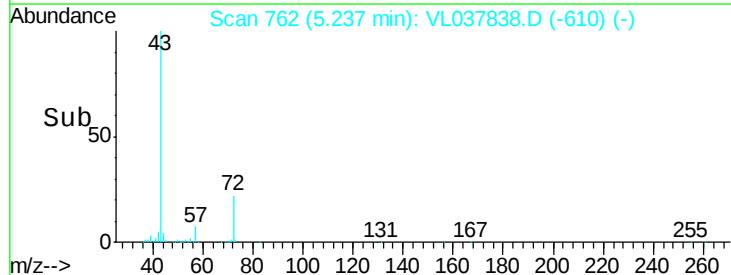
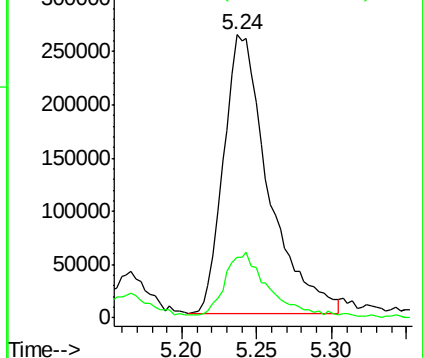


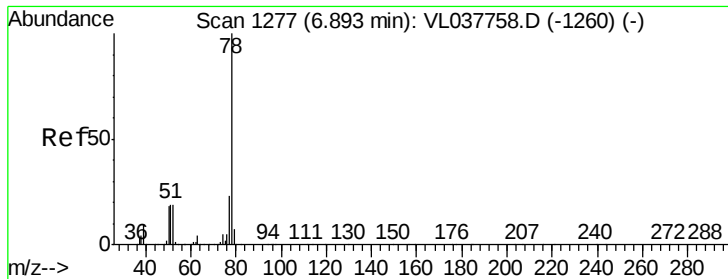
#34
 2-Butanone
 Concen: 3.756 ppbv
 RT: 5.24 min Scan# 762
 Delta R.T. -0.01 min
 Lab File: VL037838.D
 Acq: 12 Oct 2021 20:34

Tgt Ion: 43 Resp: 548905
 Ion Ratio Lower Upper
 43 100
 72 24.8 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: 0.047 ppbv

RT: 6.88 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: COP20

Acq: 12 Oct 2021 20:34

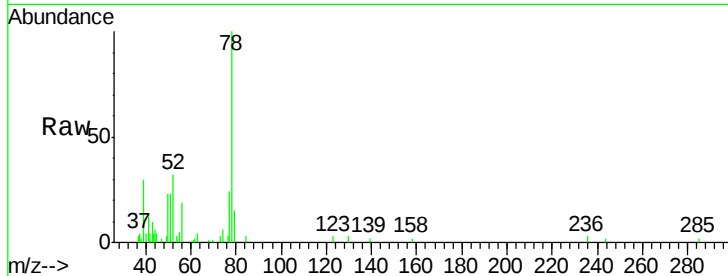
Tgt Ion: 78 Resp: 14560

Ion Ratio Lower Upper

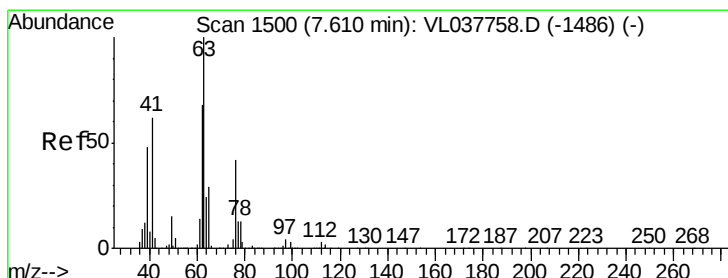
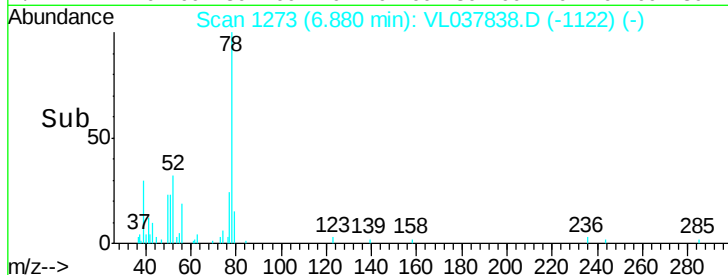
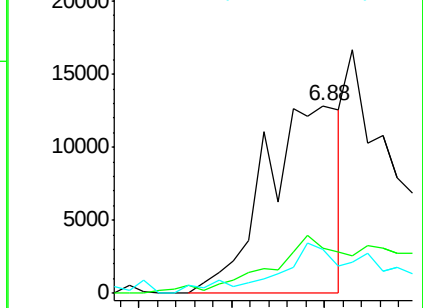
78 100

77 19.7 18.8 28.2

50 19.0 14.7 22.1



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 7.320 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. -0.44 min

Lab File: VL037838.D

Acq: 12 Oct 2021 20:34

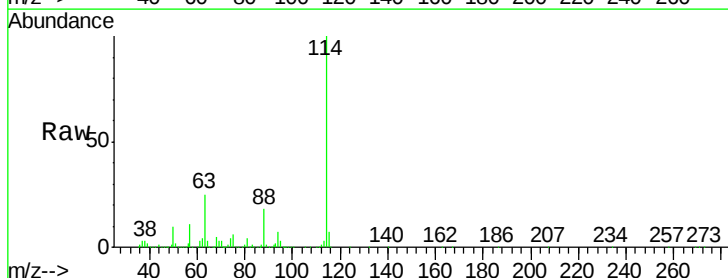
Tgt Ion: 63 Resp: 851334

Ion Ratio Lower Upper

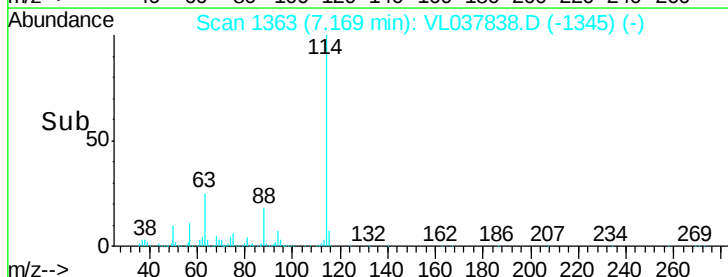
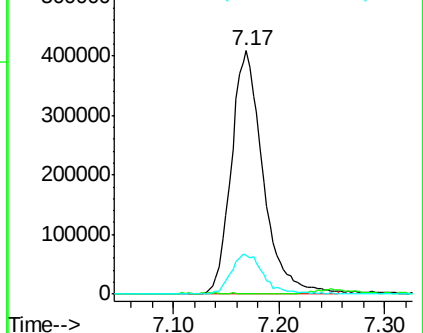
63 100

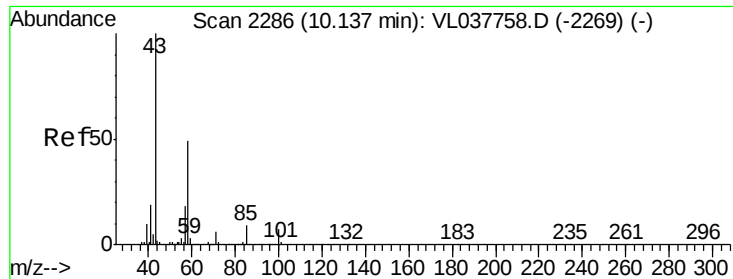
41 0.0 49.8 74.6#

62 15.6 54.6 82.0#



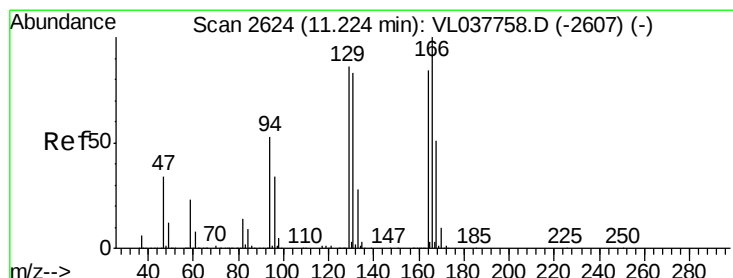
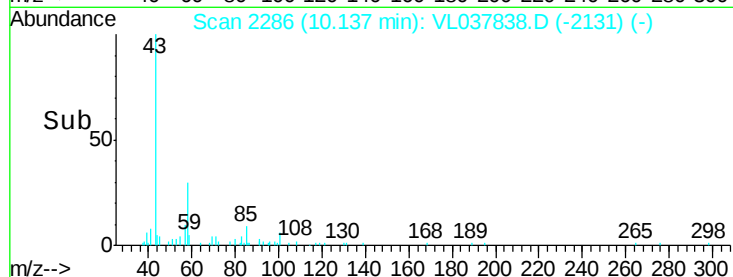
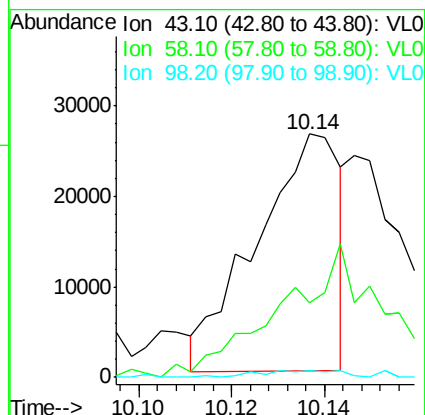
Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





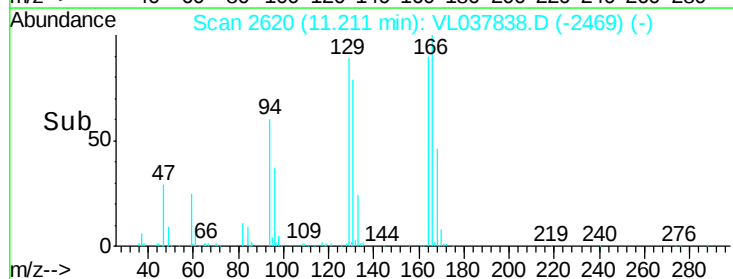
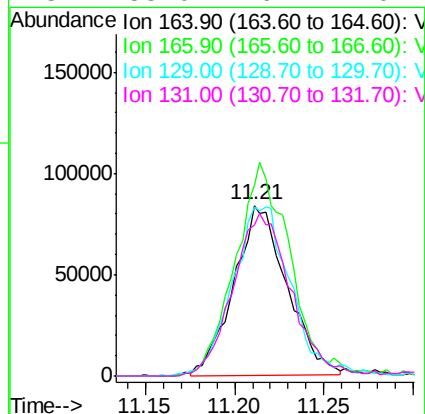
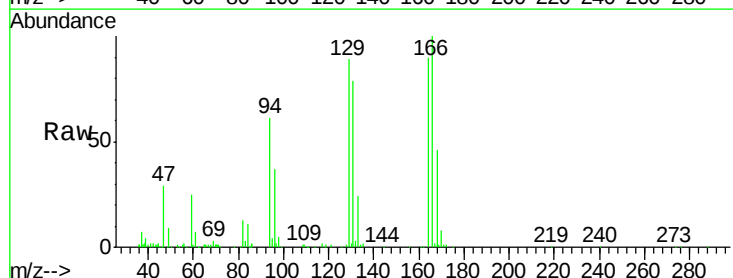
#51
 2-Hexanone
 Concen: 0.386 ppbv
 RT: 10.14 min
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 12 Oct 2021 20:34

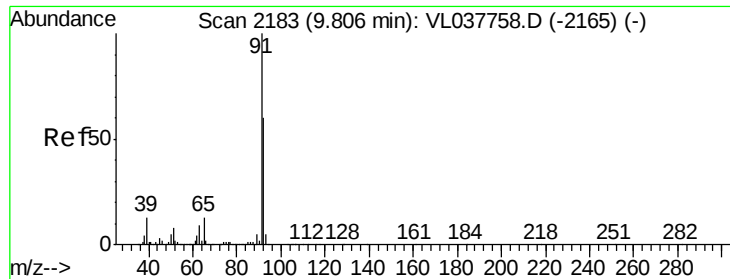
Tgt Ion:	43	Resp:	32815
Ion Ratio	Lower	Upper	
43	100		
58	0.0	39.4	59.0#
98	0.0	0.3	0.5#



#52
 Tetrachloroethene
 Concen: 1.453 ppbv
 RT: 11.21 min Scan# 2620
 Delta R.T. -0.01 min
 Lab File: VL037838.D
 Acq: 12 Oct 2021 20:34

Tgt Ion:	164	Resp:	174794
Ion Ratio	Lower	Upper	
164	100		
166	111.3	95.4	143.2
129	97.9	82.2	123.4
131	88.0	79.4	119.2





#53

Toluene

Concen: 0.161 ppbv

RT: 9.80 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

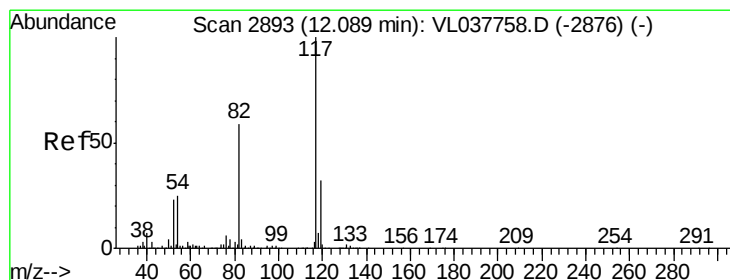
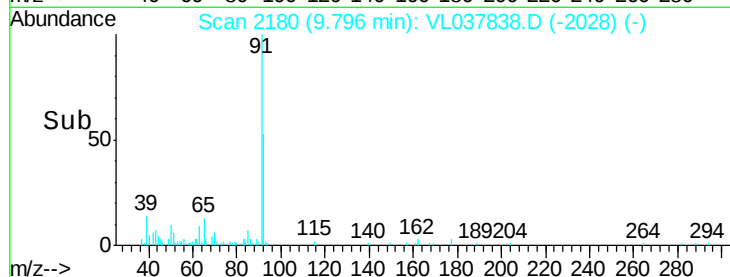
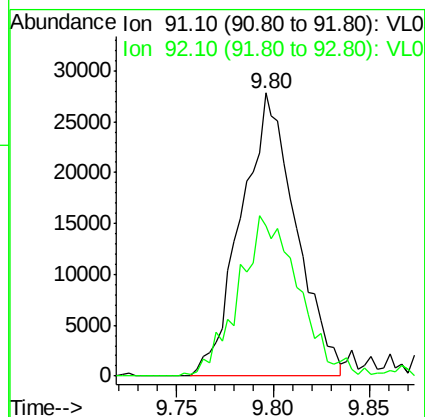
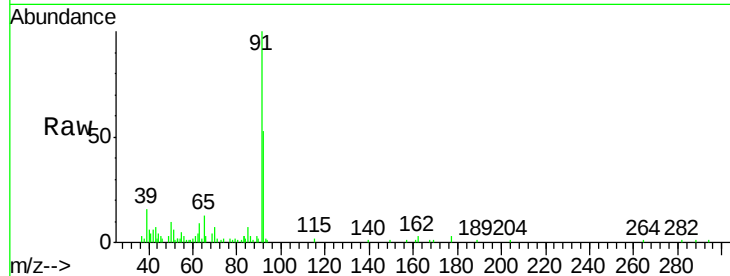
Acq: 12 Oct 2021 20:34 COP20

Tgt Ion: 91 Resp: 55008

Ion Ratio Lower Upper

91 100

92 61.9 48.4 72.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2889

Delta R.T. -0.01 min

Lab File: VL037838.D

Acq: 12 Oct 2021 20:34

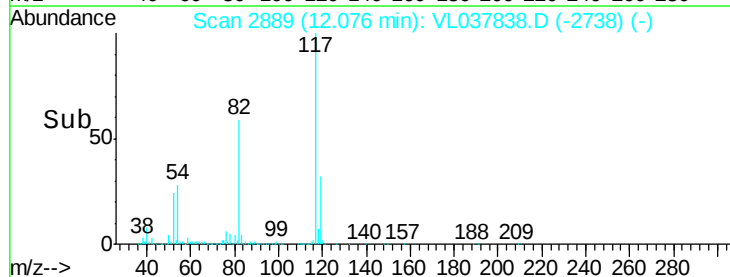
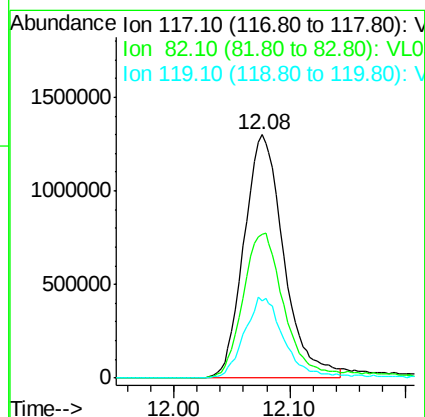
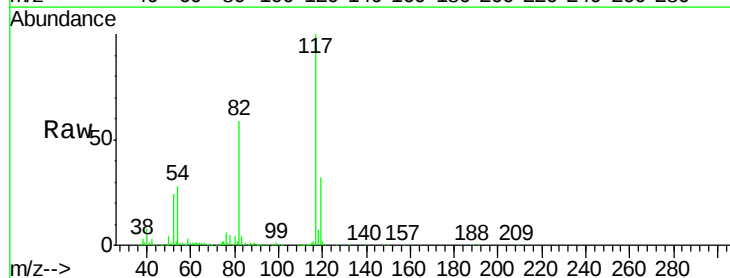
Tgt Ion: 117 Resp: 3111275

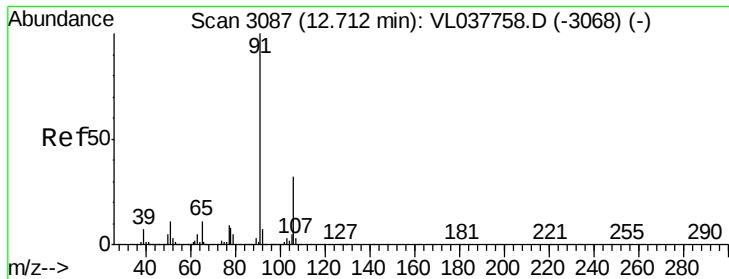
Ion Ratio Lower Upper

117 100

82 65.2 52.2 78.2

119 34.9 26.0 39.0





#58

Ethyl Benzene

Concen: 0.228 ppbv

RT: 12.70

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

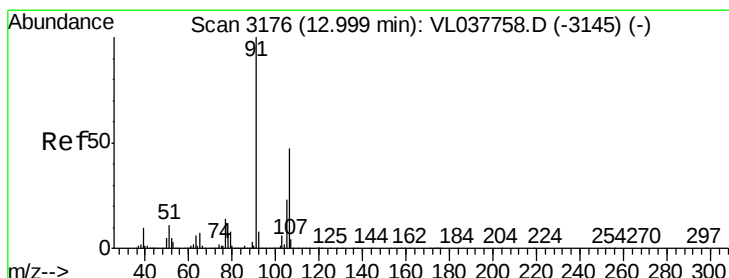
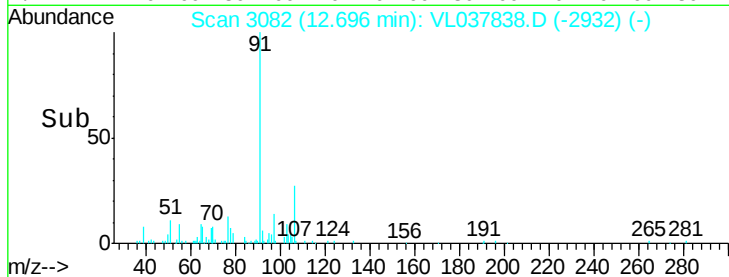
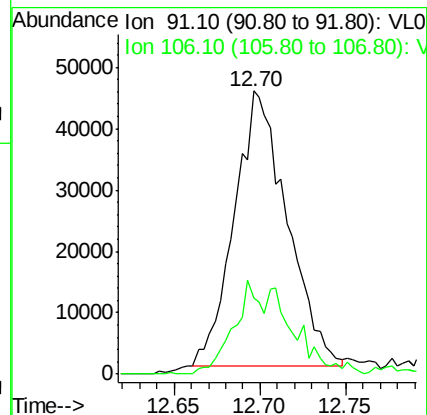
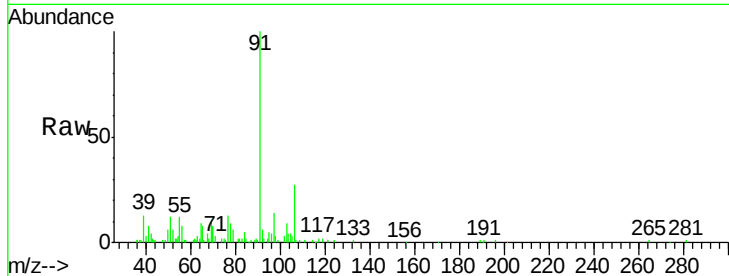
Acq: 12 Oct 2021 20:34

Tgt Ion: 91 Resp: 95436

Ion Ratio Lower Upper

91 100

106 27.6 25.3 37.9



#59

m/p-Xylene

Concen: 0.071 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. -0.02 min

Lab File: VL037838.D

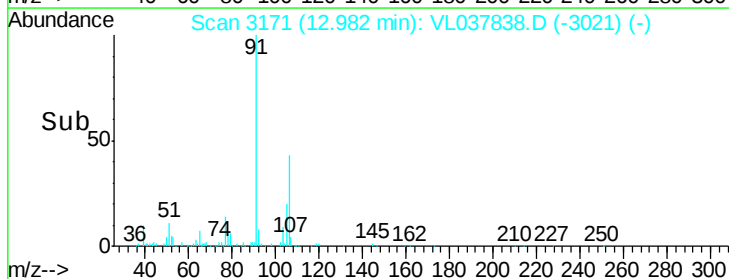
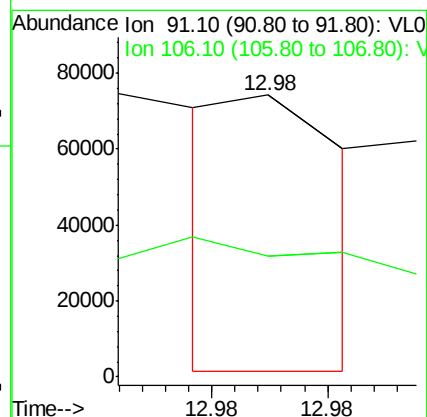
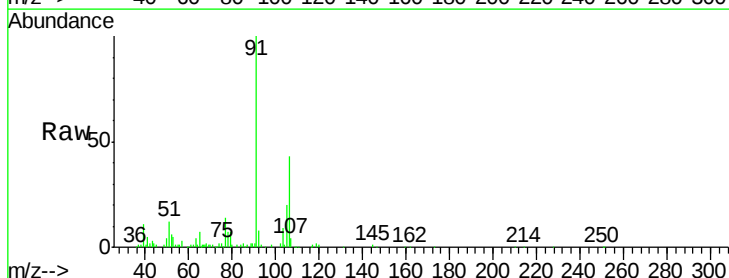
Acq: 12 Oct 2021 20:34

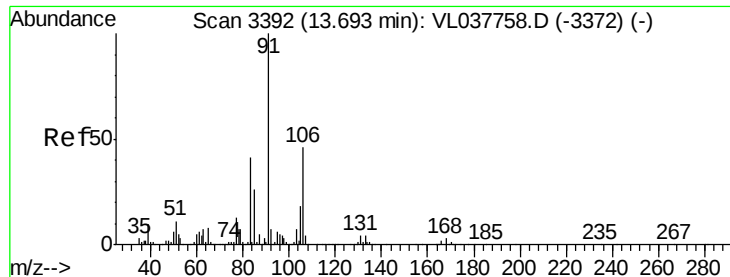
Tgt Ion: 91 Resp: 25326

Ion Ratio Lower Upper

91 100

106 0.0 36.7 55.1#





#60

o-Xylene

Concen: 0.347 ppbv

RT: 13.68

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

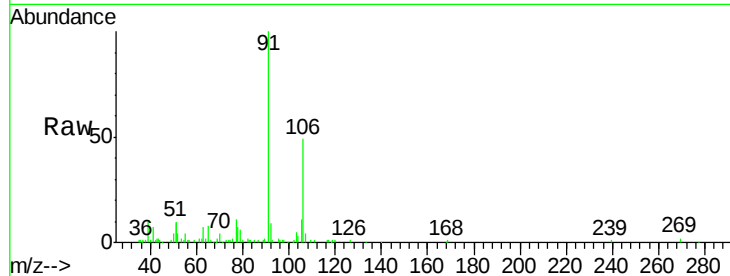
Acq: 12 Oct 2021 20:34

Tgt Ion: 91 Resp: 119414

Ion Ratio Lower Upper

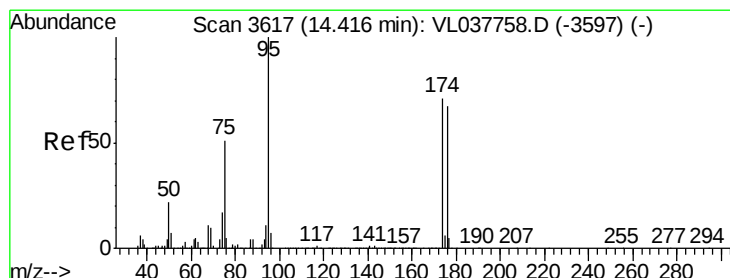
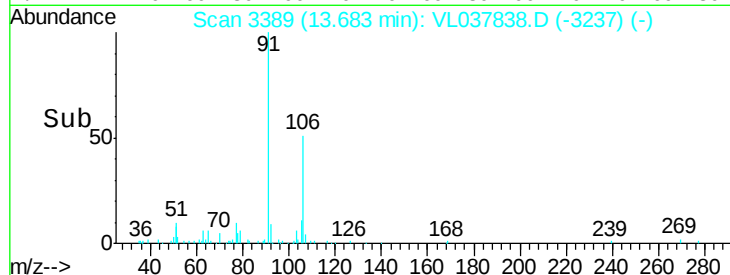
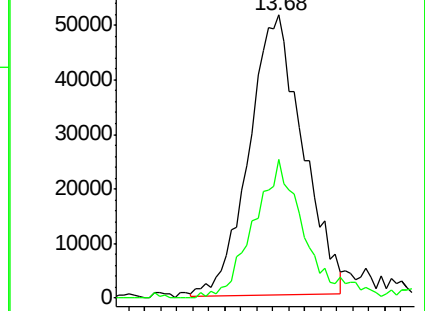
91 100

106 46.9 23.5 70.5



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.336 ppbv

RT: 14.40 min Scan# 3613

Delta R.T. -0.01 min

Lab File: VL037838.D

Acq: 12 Oct 2021 20:34

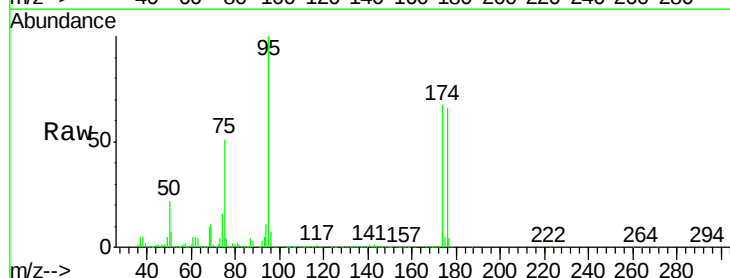
Tgt Ion: 95 Resp: 2248784

Ion Ratio Lower Upper

95 100

174 74.7 57.8 86.6

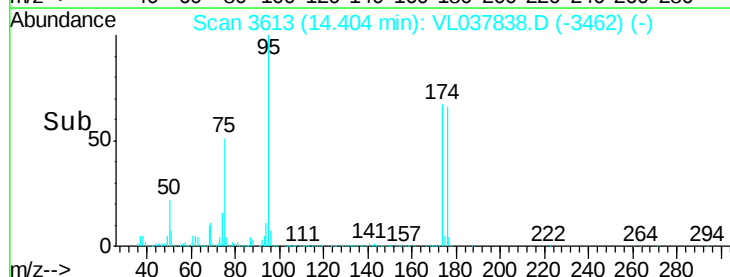
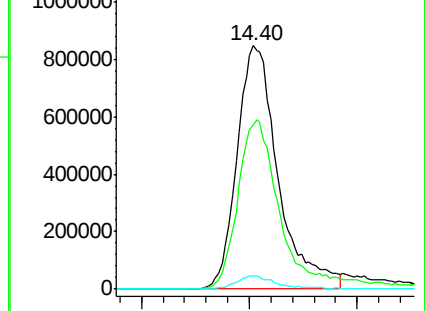
175 5.1 4.7 7.1

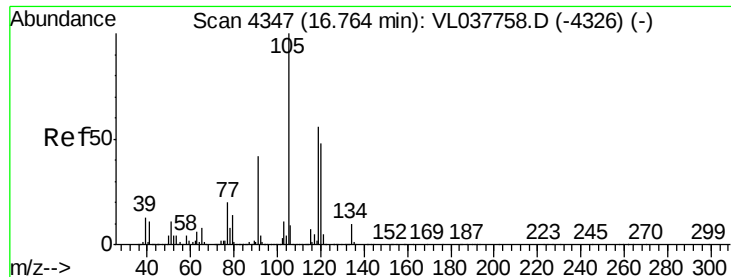


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#74

1,2,4-Trimethylbenzene

Concen: 0.098 ppbv

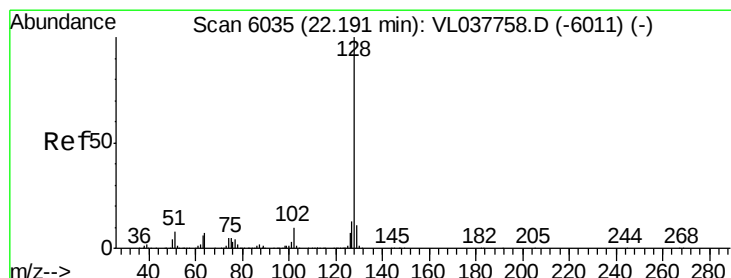
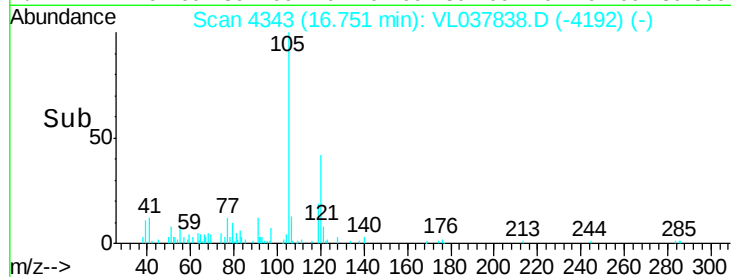
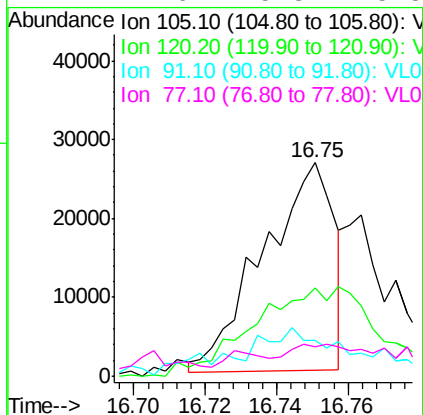
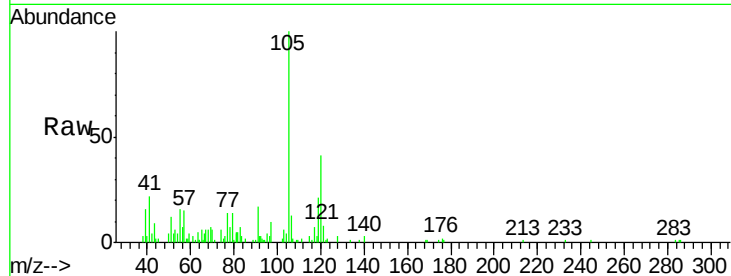
RT: 16.75

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 12 Oct 2021 20:34

Tgt Ion:	105	Resp:	36354
Ion Ratio	Lower	Upper	
105	100		
120	39.6	38.4	57.6
91	9.4	34.2	51.2#
77	7.6	15.8	23.8#



#79

Naphthalene

Concen: 0.020 ppbv

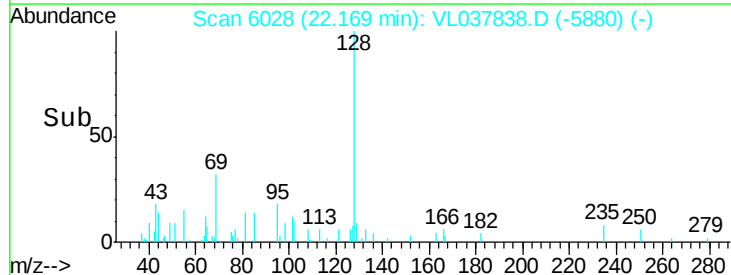
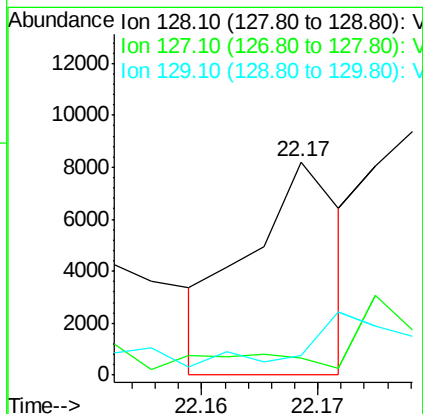
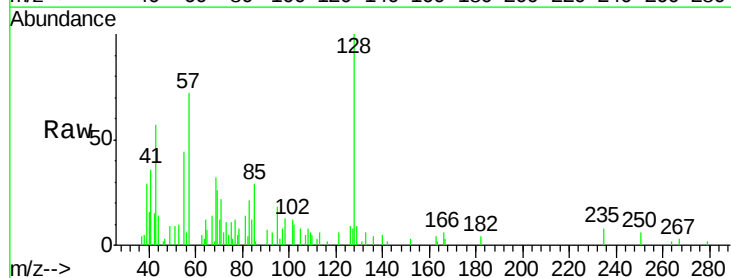
RT: 22.17 min Scan# 6028

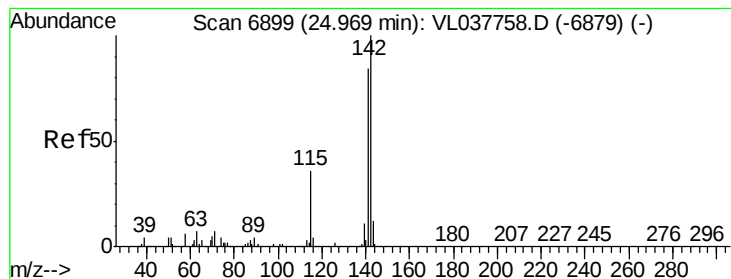
Delta R.T. -0.02 min

Lab File: VL037838.D

Acq: 12 Oct 2021 20:34

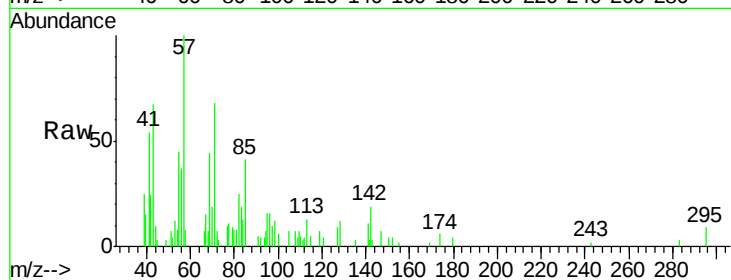
Tgt Ion:	128	Resp:	4580
Ion Ratio	Lower	Upper	
128	100		
127	8.6	10.1	15.1#
129	9.8	9.1	13.7





#80
 Naphthalene, 2-methyl-
 Concen: 0.033 ppbv
 RT: 24.97
 Delta R.T: MSVOA_L
 Lab File: ClientSampleId :
 C0P20
 Acq: 12 Oct 2021 20:34

Tgt Ion:	142	Resp:	2020
Ion	Ratio	Lower	Upper
142	100		
141	83.4	68.6	102.8
115	32.5	29.0	43.6



Abundance Ion 142.00 (141.70 to 142.70): V
 Ion 141.00 (140.70 to 141.70): V
 Ion 115.00 (114.70 to 115.70): V

