

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL111021\
 Data File : VL038012.D
 Acq On : 10 Nov 2021 16:48
 Operator : SY/AP
 Sample : M4598-03DUPDL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Nov 11 03:43:23 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL110121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Nov 02 05:54:07 2021
 QLast Update : Tue Nov 02 05:54:07 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1551710	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.16	114	4430032	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.07	117	3895151	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2861272	10.11	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.10%

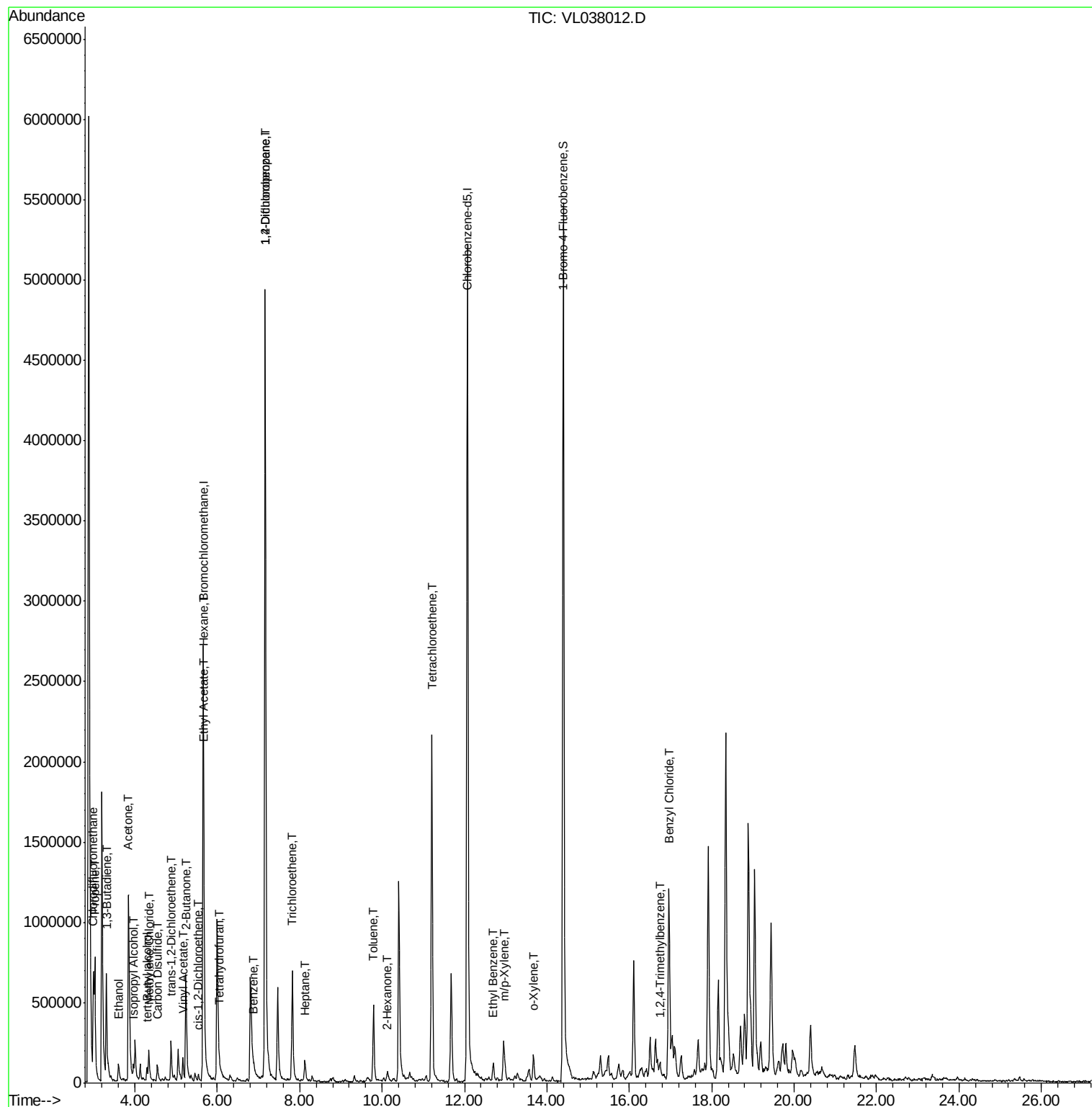
Target Compounds					Ovalue
3) Chlorodifluoromethane	2.99	51	1043075	3.611 ppbv #	91
9) Propene	3.01	41	177886	1.718 ppbv	90
10) Heptane	8.11	43	14023	0.058 ppbv #	73
13) Ethanol	3.60	45	56963	5.452 ppbv #	7
15) Acetone	3.84	43	1554753	12.125 ppbv #	81
16) 1,3-Butadiene	3.30	39	192310	1.903 ppbv #	18
17) tert-Butyl alcohol	4.29	59	69104	0.518 ppbv	95
19) Isopropyl Alcohol	3.97	45	100157	1.221 ppbv #	85
20) Methylene Chloride	4.34	84	69113	0.982 ppbv #	82
22) trans-1,2-Dichloroethene	4.88	96	77044	0.993 ppbv #	87
23) Vinyl Acetate	5.16	43	48288	0.250 ppbv #	1
25) Ethyl Acetate	5.68	43	42576	0.112 ppbv #	81
26) Hexane	5.67	57	46941	0.260 ppbv #	48
27) Carbon Disulfide	4.55	76	136551	0.767 ppbv #	88
31) cis-1,2-Dichloroethene	5.54	61	14176	0.086 ppbv #	65
34) 2-Butanone	5.23	43	927529	5.650 ppbv	99
36) Benzene	6.88	78	27708	0.077 ppbv #	88
38) Trichloroethene	7.82	130	238935	1.596 ppbv	97
39) 1,2-Dichloropropane	7.16	63	1025441	7.554 ppbv #	28
41) Tetrahydrofuran	6.05	42	31271	0.389 ppbv #	45
51) 2-Hexanone	10.11	43	10828	0.119 ppbv #	30
52) Tetrachloroethene	11.21	164	611624	4.469 ppbv	97
53) Toluene	9.79	91	397326	1.027 ppbv	97
58) Ethyl Benzene	12.70	91	30994	0.065 ppbv	99
59) m/p-Xylene	12.97	91	98869	0.234 ppbv #	30
60) o-Xylene	13.67	91	51509	0.129 ppbv #	34
66) Benzyl Chloride	16.96	91	852	0.033 ppbv #	66
74) 1,2,4-Trimethylbenzene	16.74	105	35556	0.079 ppbv #	75

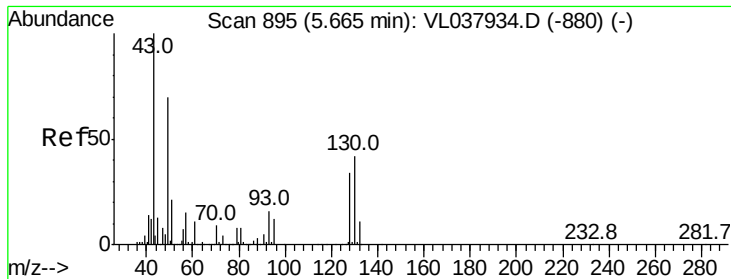
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL11021\
Data File : VL038012.D
Acq On : 10 Nov 2021 16:48
Operator : SY/AP
Sample : M4598-03DUPDL 10X
Misc : 400mL/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :

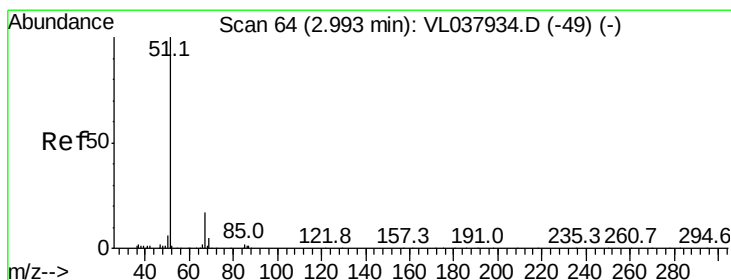
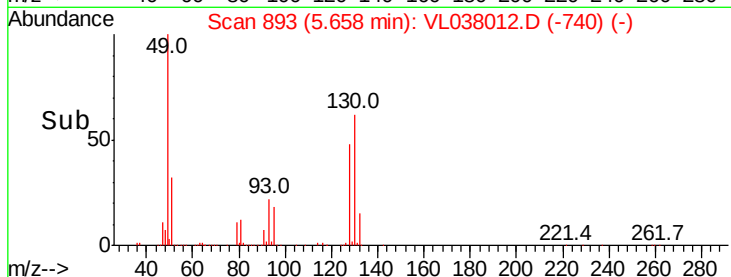
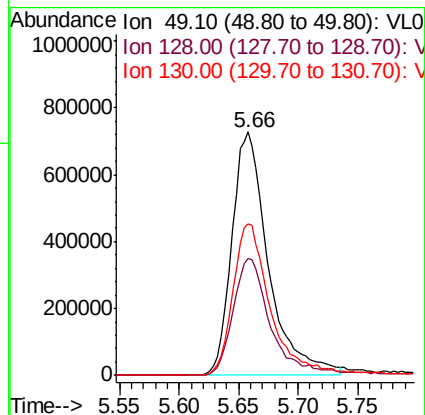
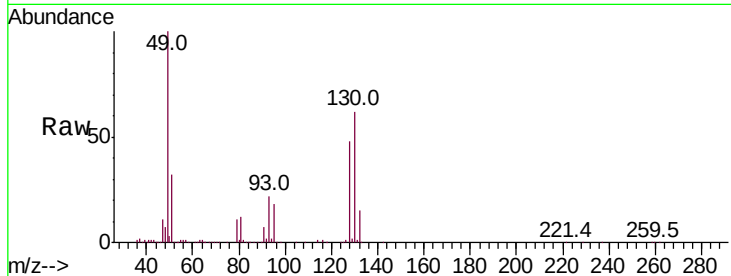
Quant Time: Nov 11 03:43:23 2021
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL110121AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 02 05:54:07 2021
QLast Update : Tue Nov 02 05:54:07 2021
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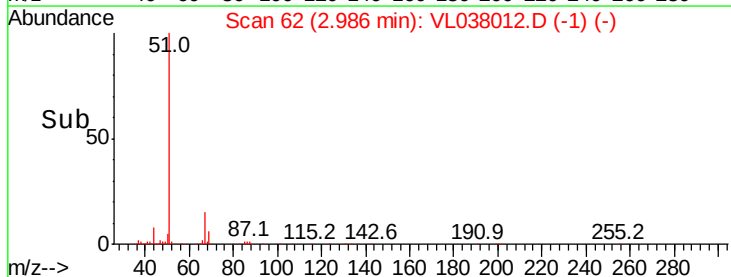
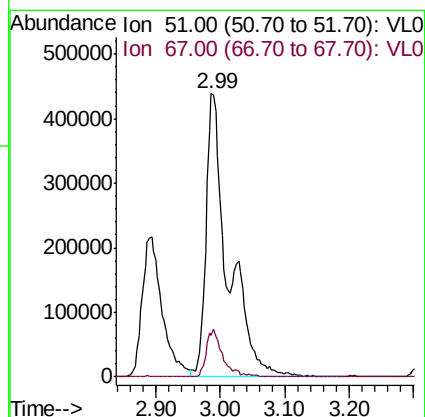
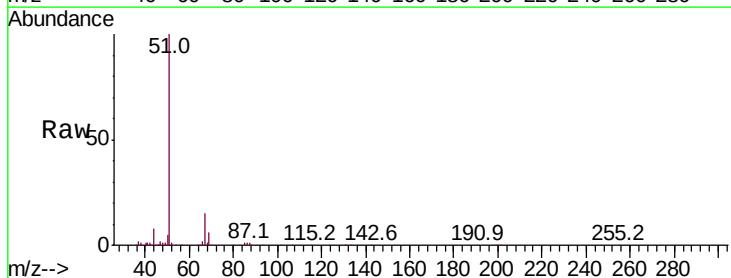
#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.66
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId :
 Acq: 10 Nov 2021 16:48

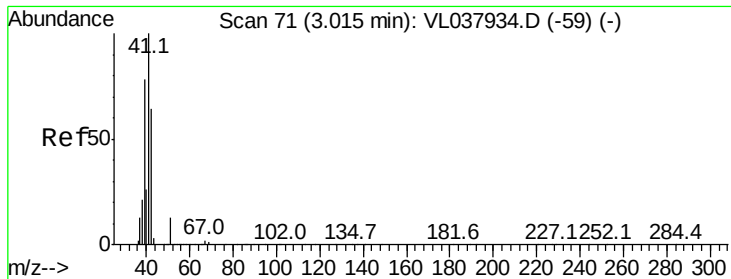
Tot Ion: 49 Resp: 1551710
 Ion Ratio Lower Upper
 49 100
 128 50.9 27.0 81.0
 130 65.9 33.4 100.2



#3
 Chlorodifluoromethane
 Concen: 3.611 ppbv
 RT: 2.99 min Scan# 62
 Delta R.T. -0.01 min
 Lab File: VL038012.D
 Acq: 10 Nov 2021 16:48

Tgt Ion: 51 Resp: 1043075
 Ion Ratio Lower Upper
 51 100
 67 12.6 13.4 20.0#





#9

Propene

Concen: 1.718 ppbv

RT: 3.01

Delta R.T. MSVOA_L

Lab File:

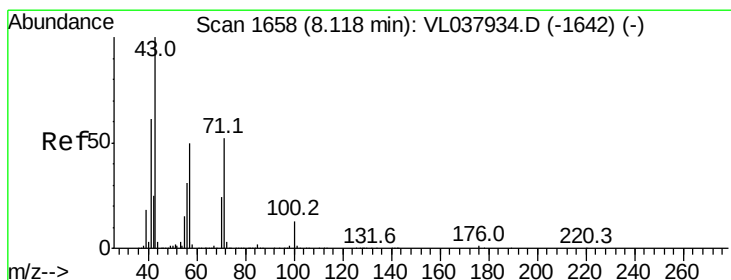
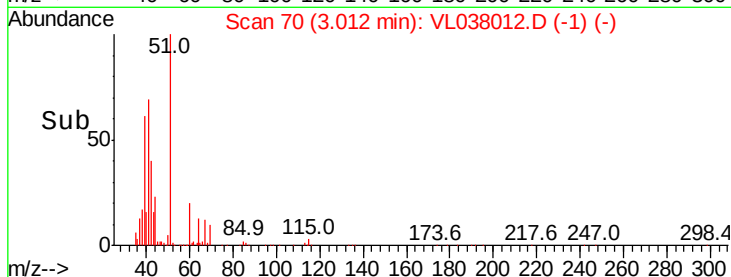
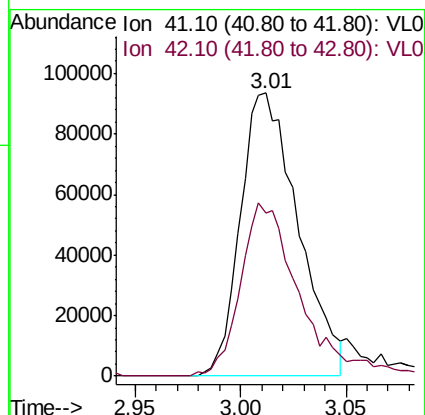
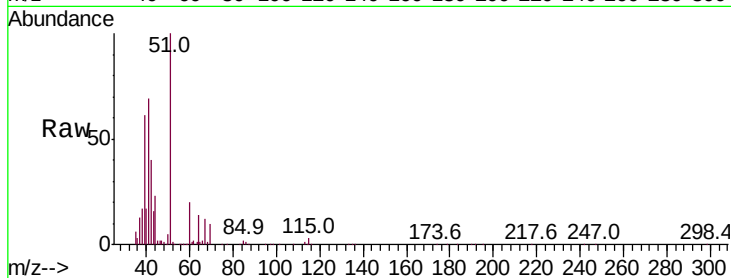
Acq: 10 Nov 2021 16:48

Tot Ion: 41 Resp: 177886

Ion Ratio Lower Upper

41 100

42 64.1 57.6 86.4



#10

Heptane

Concen: 0.058 ppbv

RT: 8.11 min Scan# 1657

Delta R.T. -0.00 min

Lab File: VL038012.D

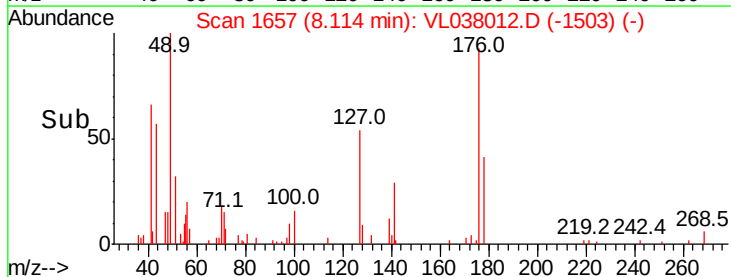
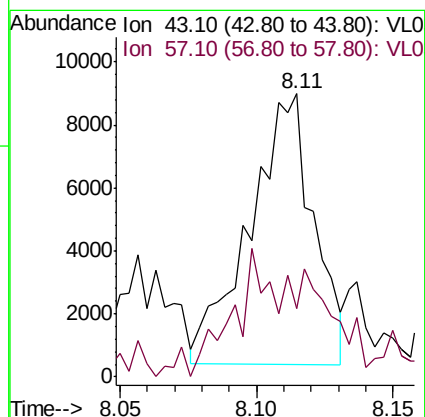
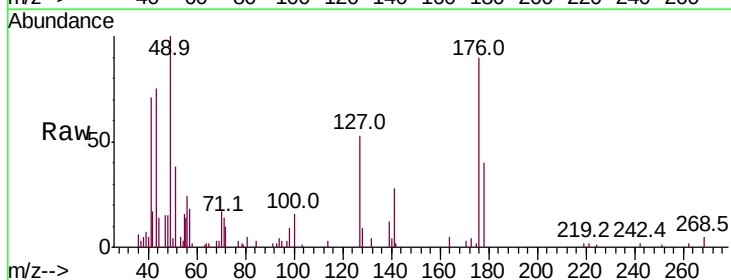
Acq: 10 Nov 2021 16:48

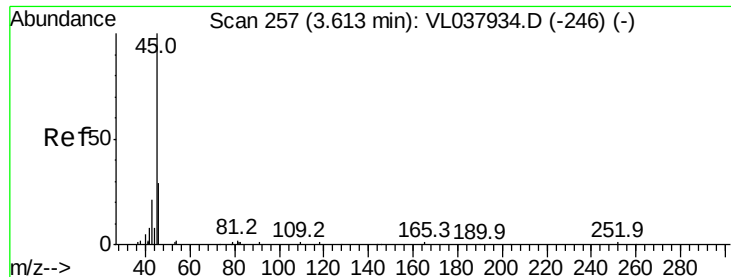
Tgt Ion: 43 Resp: 14023

Ion Ratio Lower Upper

43 100

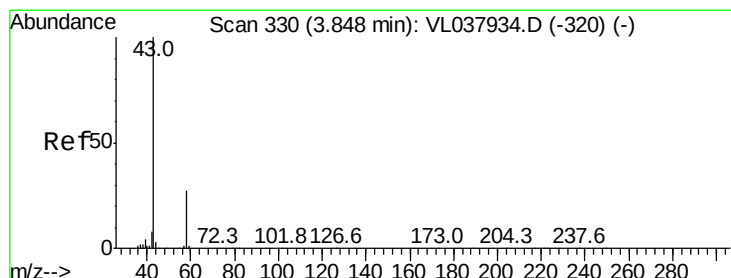
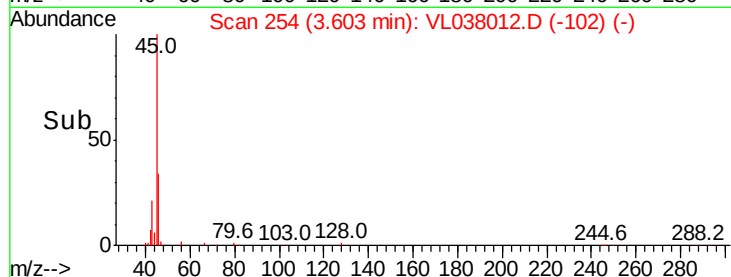
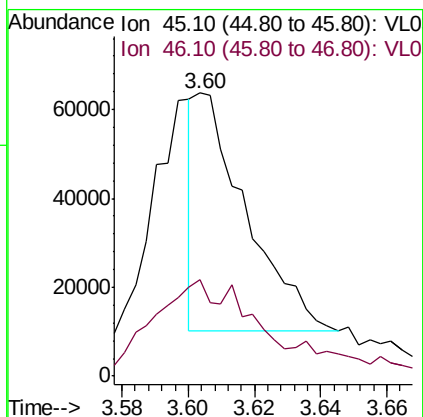
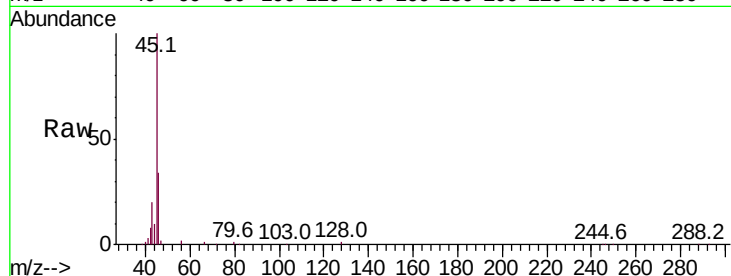
57 68.6 39.8 59.8#





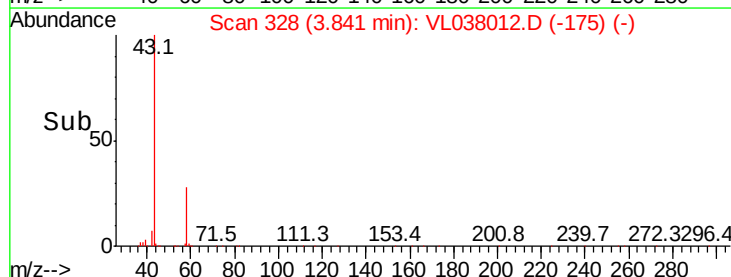
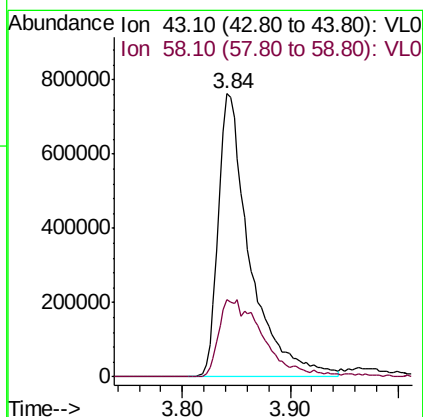
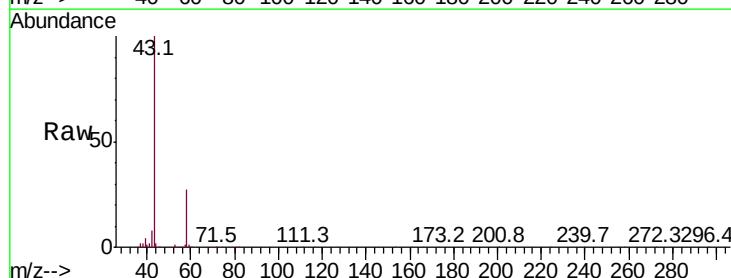
#13
Ethanol
Concen: 5.452 ppbv
RT: 3.60
Instrument : MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 10 Nov 2021 16:48

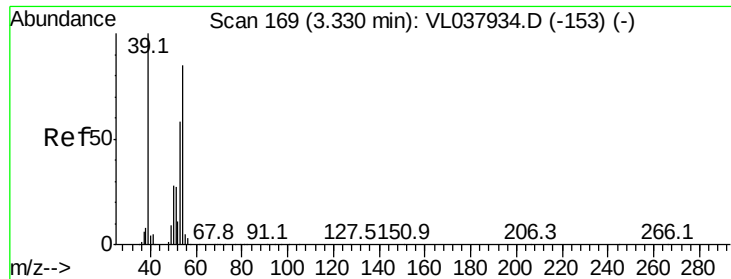
Tot Ion: 45 Resp: 56963
Ion Ratio Lower Upper
45 100
46 103.5 17.4 69.8#



#15
Acetone
Concen: 12.125 ppbv
RT: 3.84 min Scan# 328
Delta R.T. -0.01 min
Lab File: VL038012.D
Acq: 10 Nov 2021 16:48

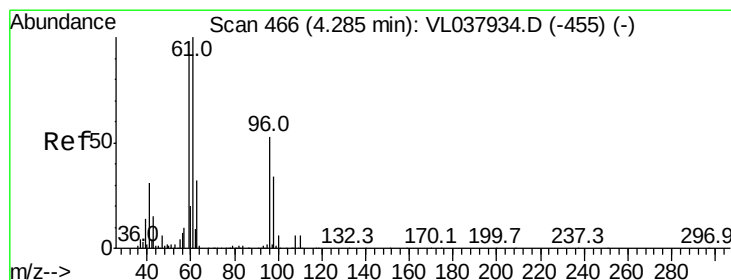
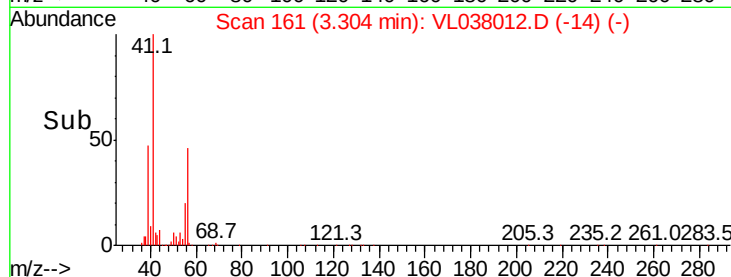
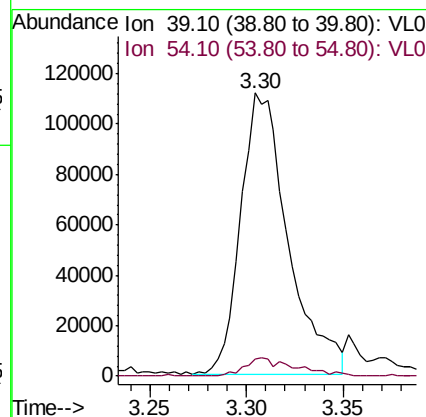
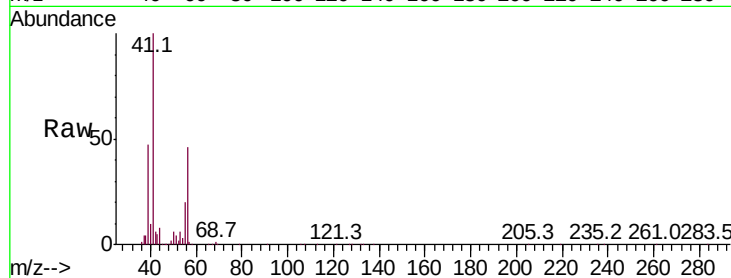
Tgt Ion: 43 Resp: 1554753
Ion Ratio Lower Upper
43 100
58 39.5 23.3 34.9#





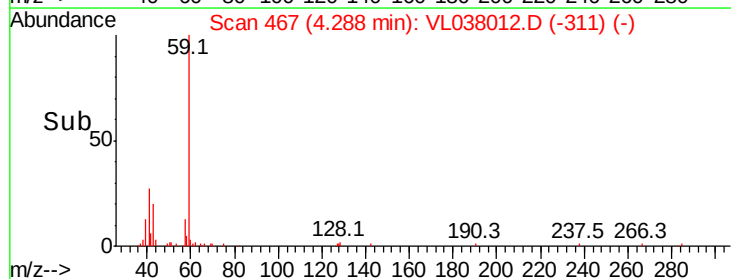
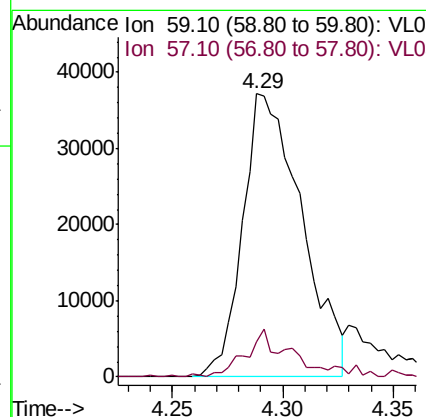
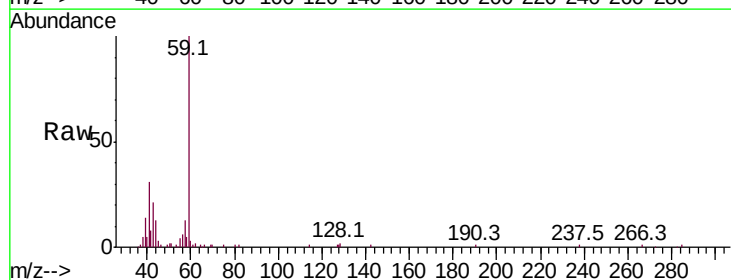
#16
 1,3-Butadiene
 Concen: 1.903 ppbv
 RT: 3.30 Instrument :
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 10 Nov 2021 16:48

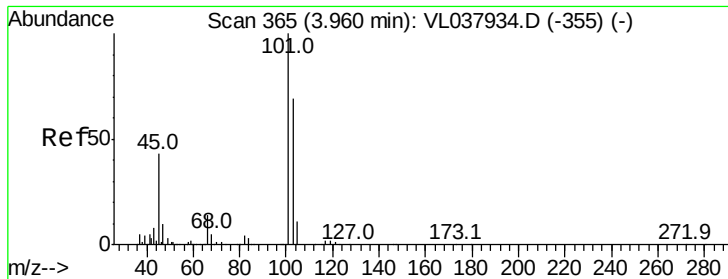
Tot Ion: 39 Resp: 192310
 Ion Ratio Lower Upper
 39 100
 54 7.0 62.6 93.8#



#17
 tert-Butyl alcohol
 Concen: 0.518 ppbv
 RT: 4.29 min Scan# 467
 Delta R.T. 0.00 min
 Lab File: VL038012.D
 Acq: 10 Nov 2021 16:48

Tgt Ion: 59 Resp: 69104
 Ion Ratio Lower Upper
 59 100
 57 13.0 8.9 13.3





#19

Isopropyl Alcohol

Concen: 1.221 ppbv

RT: 3.97 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

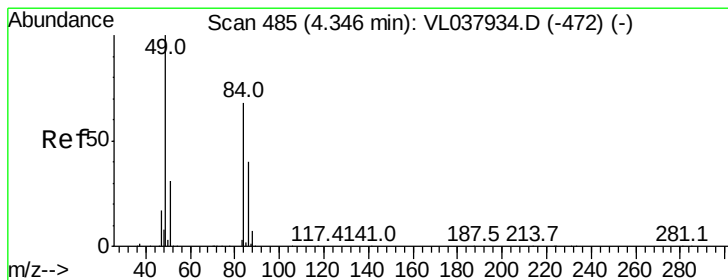
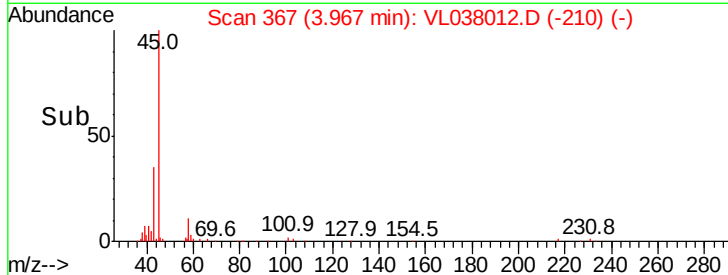
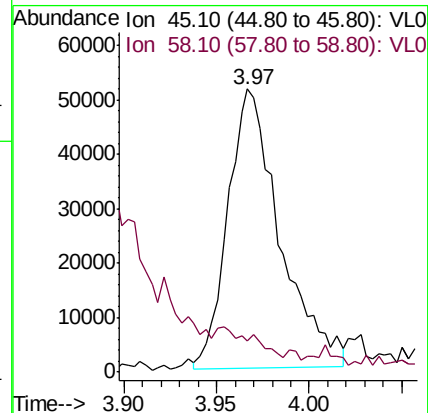
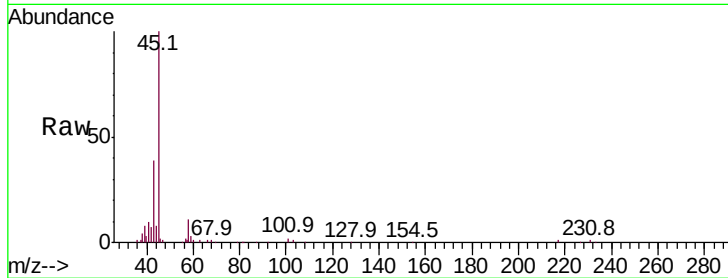
Acq: 10 Nov 2021 16:48

Tot Ion: 45 Resp: 100157

Ion Ratio Lower Upper

45 100

58 0.0 4.0 6.0#



#20

Methylene Chloride

Concen: 0.982 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.01 min

Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

Tgt Ion: 84 Resp: 69113

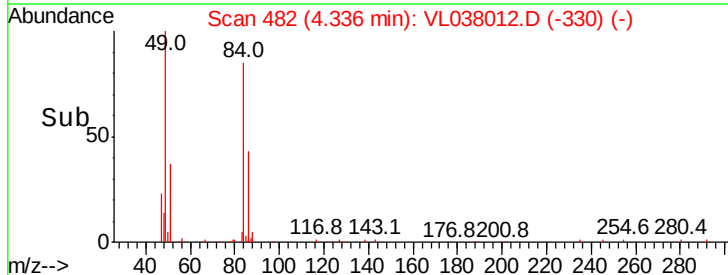
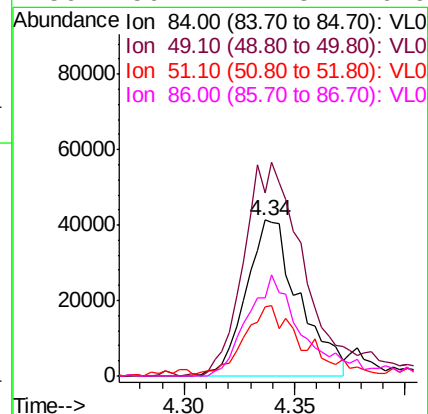
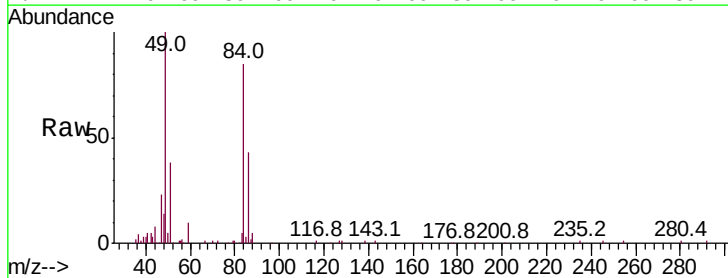
Ion Ratio Lower Upper

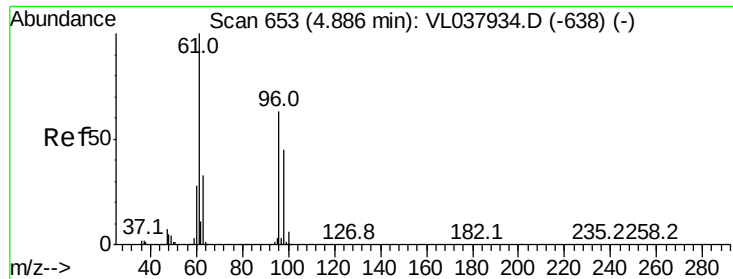
84 100

49 115.6 117.5 176.3#

51 43.1 35.9 53.9

86 50.1 47.3 70.9





#22

trans-1,2-Dichloroethene

Concen: 0.993 ppbv

RT: 4.88 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 10 Nov 2021 16:48

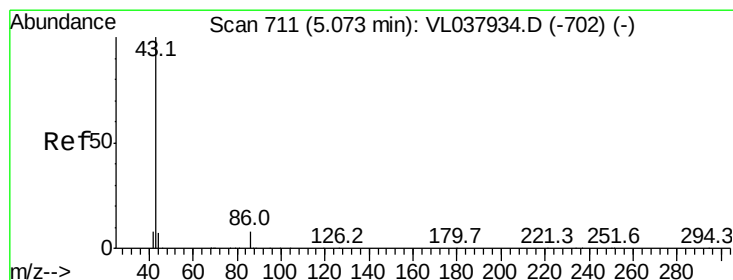
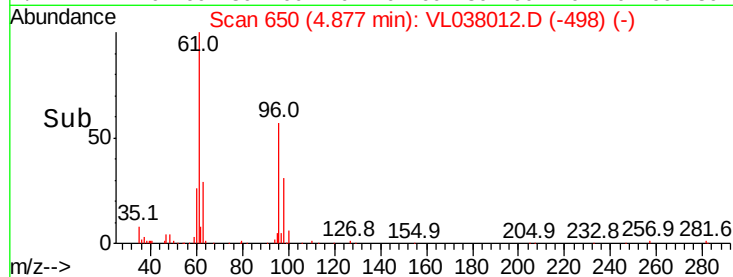
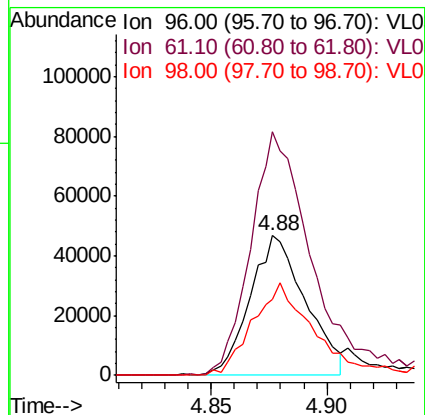
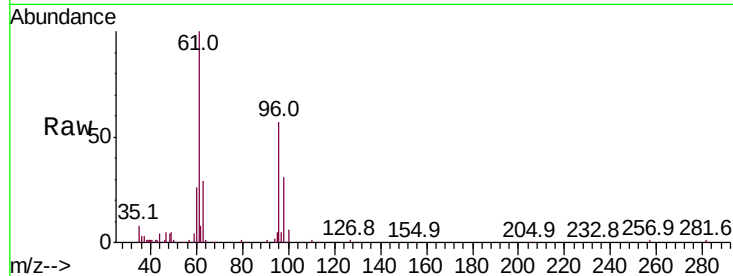
Tot Ion: 96 Resp: 77044

Ion Ratio Lower Upper

96 100

61 173.7 127.8 191.6

98 55.1 56.9 85.3#



#23

Vinyl Acetate

Concen: 0.250 ppbv

RT: 5.16 min Scan# 739

Delta R.T. 0.09 min

Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

Tgt Ion: 43 Resp: 48288

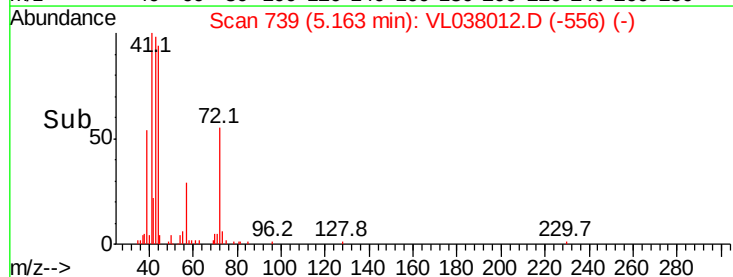
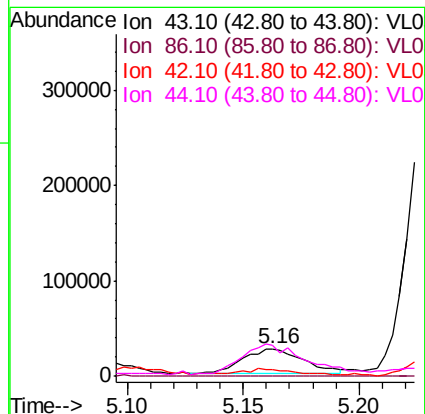
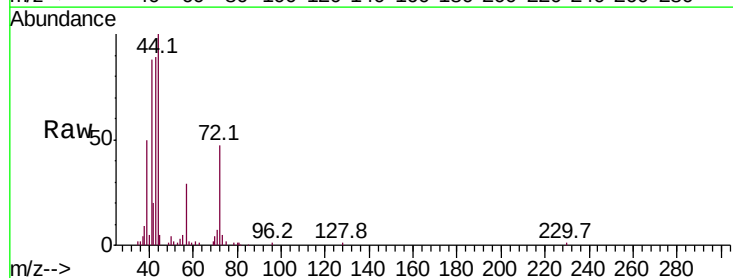
Ion Ratio Lower Upper

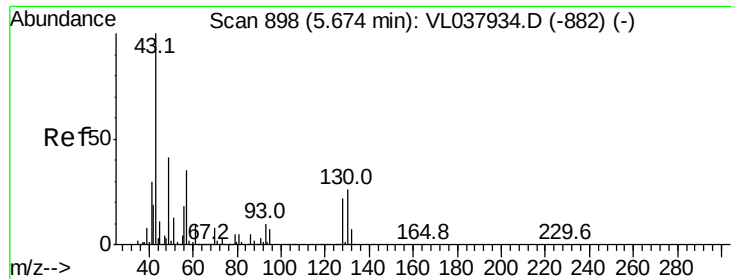
43 100

86 0.0 5.5 8.3#

42 16.8 7.4 11.2#

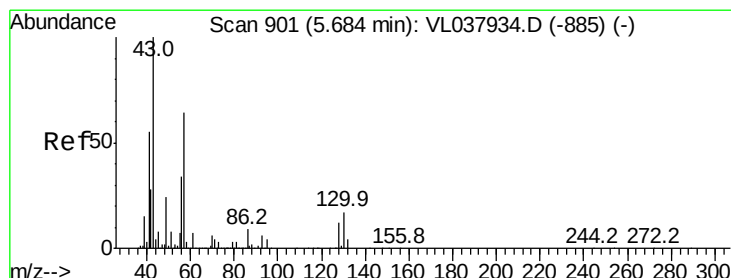
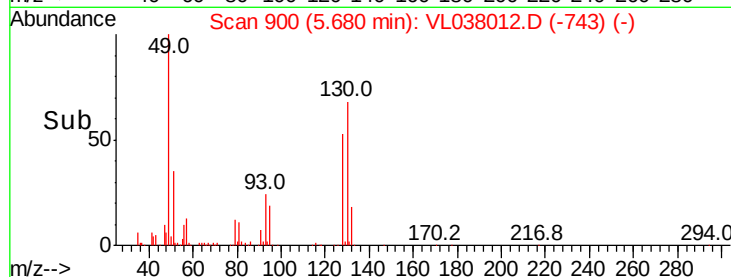
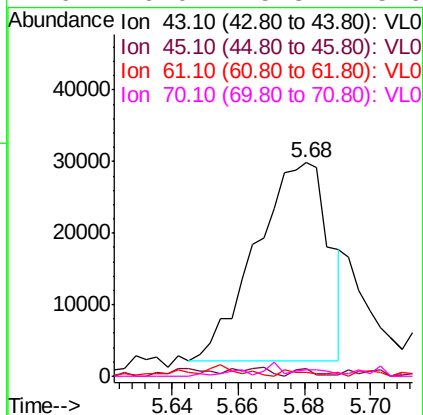
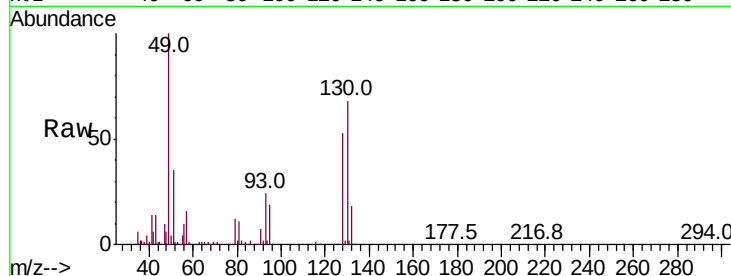
44 114.7 4.7 7.1#





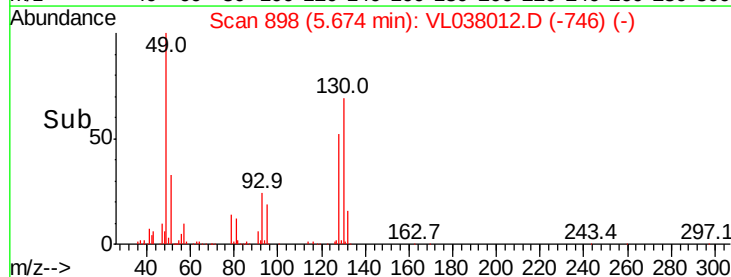
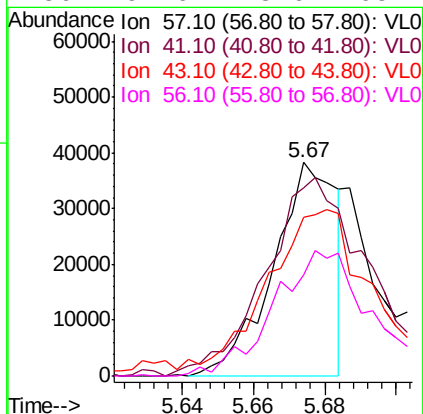
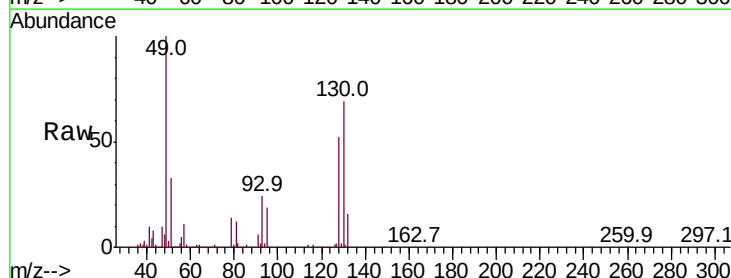
#25
Ethyl Acetate
Concen: 0.112 ppbv
RT: 5.68
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 10 Nov 2021 16:48

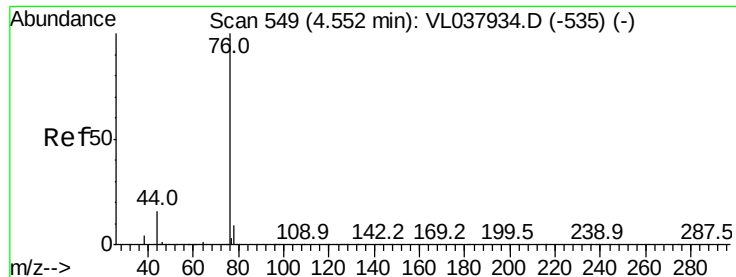
Tot Ion:	43	Resp:	42576
Ion	Ratio	Lower	Upper
43	100		
45	3.1	8.1	12.1#
61	3.0	8.1	12.1#
70	0.0	5.8	8.6#



#26
Hexane
Concen: 0.260 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.01 min
Lab File: VL038012.D
Acq: 10 Nov 2021 16:48

Tgt Ion:	57	Resp:	46941
Ion	Ratio	Lower	Upper
57	100		
41	166.6	71.0	106.6#
43	154.9	173.0	259.6#
56	94.6	43.6	65.4#





#27

Carbon Disulfide

Concen: 0.767 ppbv

RT: 4.55 Instrument:

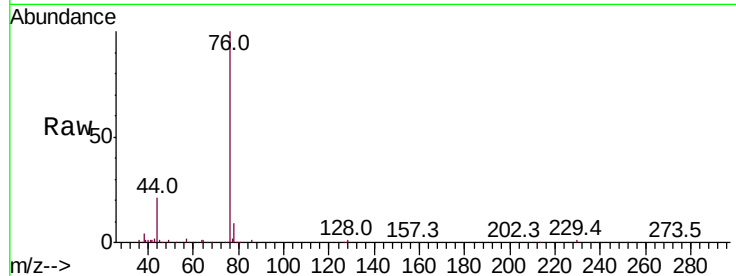
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

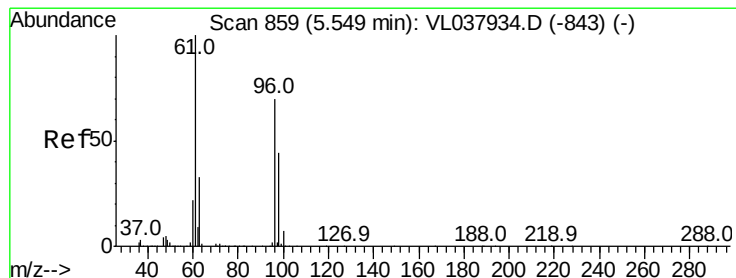
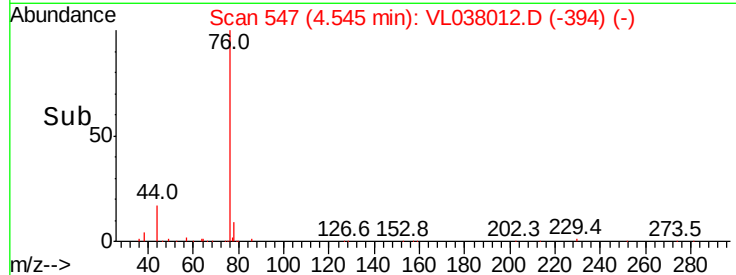
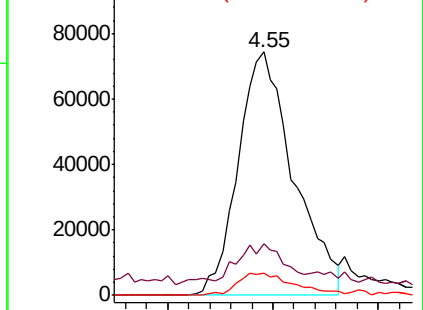
Acq: 10 Nov 2021 16:48

Tot Ion: 76 Resp: 136551

Ion	Ratio	Lower	Upper
76	100		
44	23.7	13.2	19.8#
78	10.0	7.2	10.8



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0



#31

cis-1,2-Dichloroethene

Concen: 0.086 ppbv

RT: 5.54 min Scan# 855

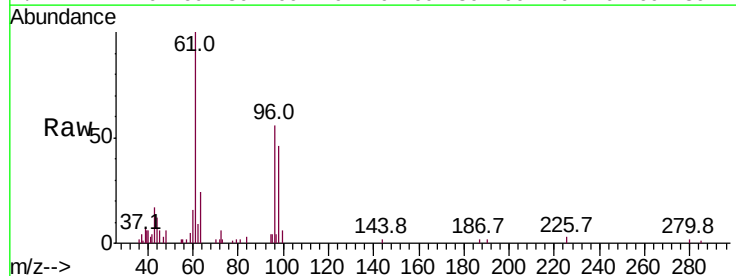
Delta R.T. -0.01 min

Lab File: VL038012.D

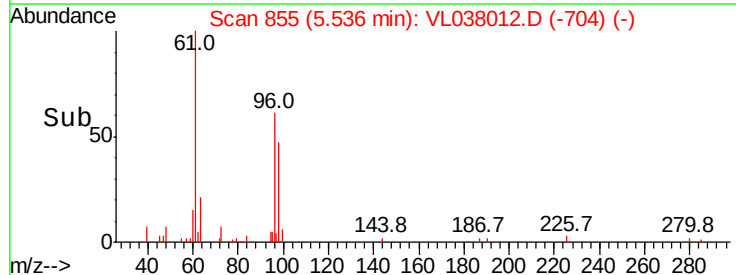
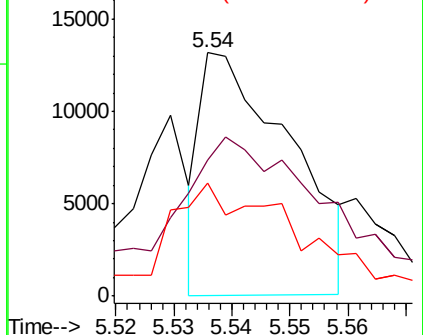
Acq: 10 Nov 2021 16:48

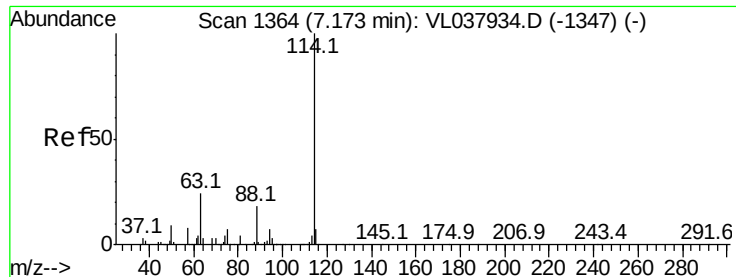
Tgt Ion: 61 Resp: 14176

Ion	Ratio	Lower	Upper
61	100		
96	26.3	55.6	83.4#
98	48.1	34.9	52.3



Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.16 Instrument: MSVOA_1

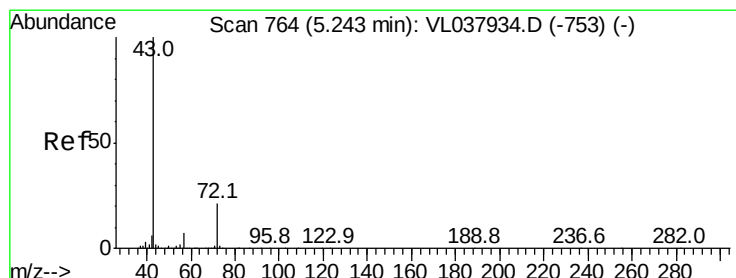
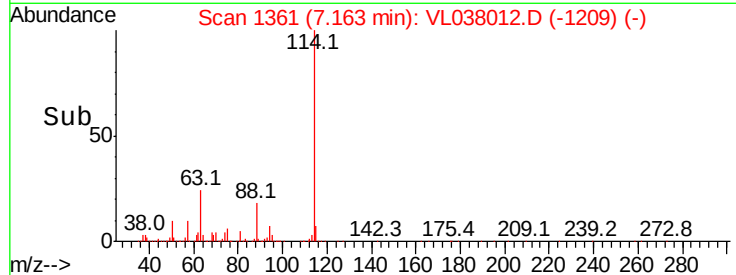
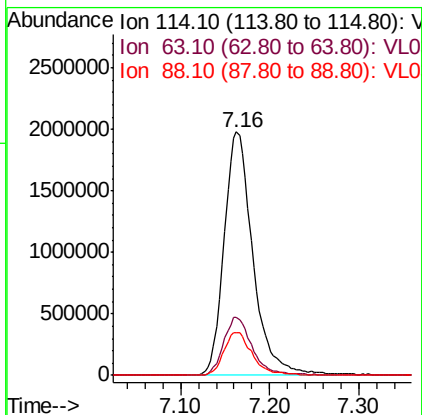
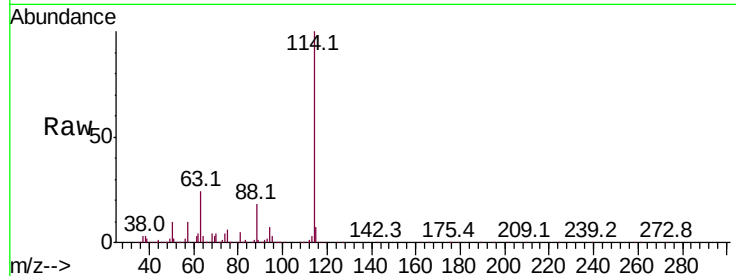
Delta R.T. ClientSampleId:

Lab File:

Acq: 10 Nov 2021 16:48

Tot Ion:114 Resp: 4430032

Ion	Ratio	Lower	Upper
114	100		
63	24.0	19.4	29.0
88	17.6	14.2	21.4



#34

2-Butanone

Concen: 5.650 ppbv

RT: 5.23 min Scan# 761

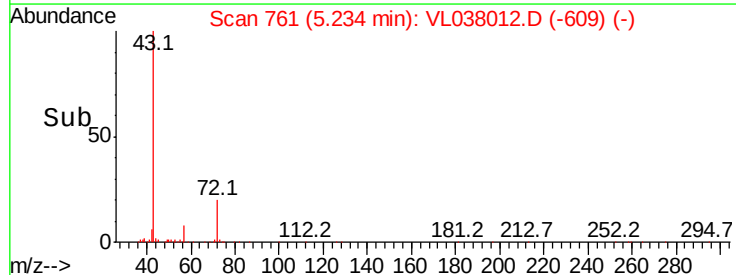
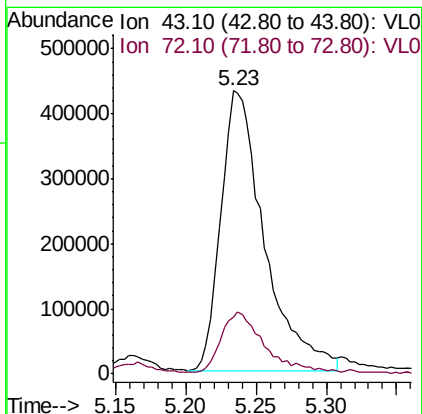
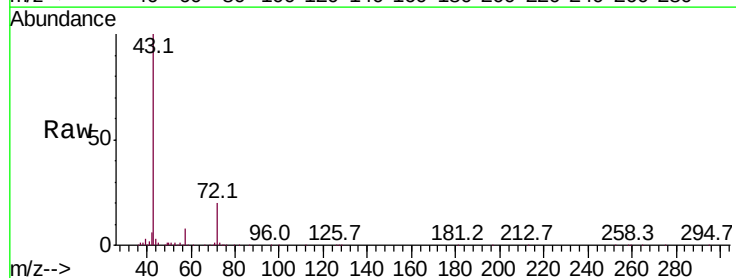
Delta R.T. -0.01 min

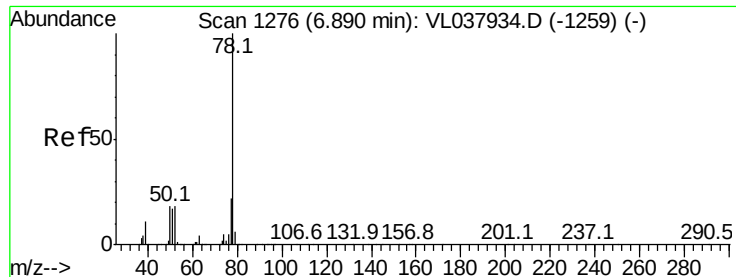
Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

Tgt Ion: 43 Resp: 927529

Ion	Ratio	Lower	Upper
43	100		
72	23.6	18.3	27.5





#36

Benzene

Concen: 0.077 ppbv

RT: 6.88 Instrument:

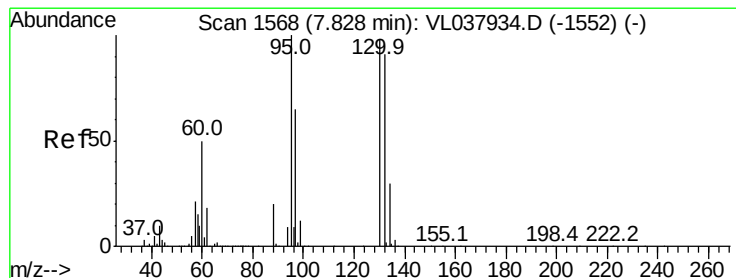
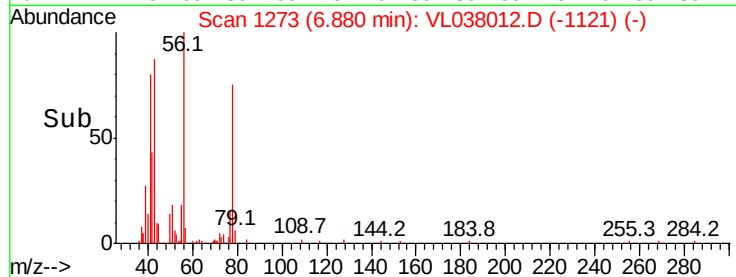
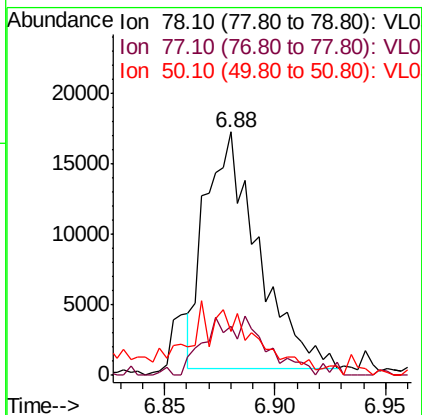
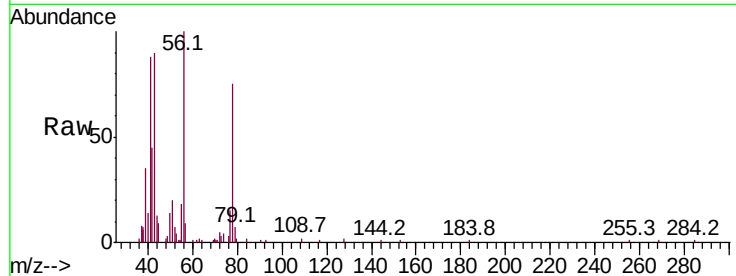
Delta R.T. MSVOA_1

Lab File:

Acq: 10 Nov 2021 16:48 ClientSampleId:

Tot Ion: 78 Resp: 27708

Ion	Ratio	Lower	Upper
78	100		
77	15.0	17.9	26.9#
50	14.9	14.4	21.6



#38

Trichloroethene

Concen: 1.596 ppbv

RT: 7.82 min Scan# 1566

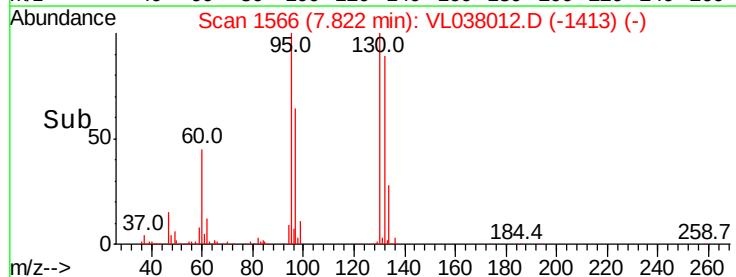
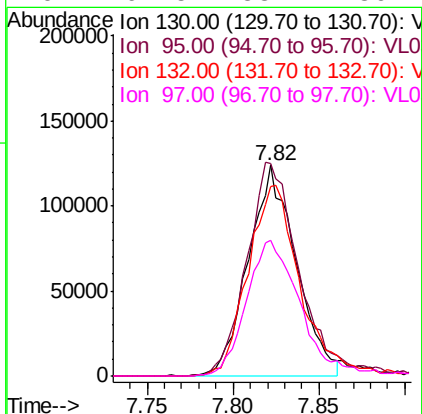
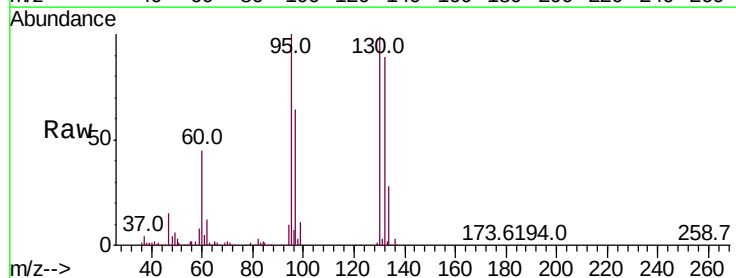
Delta R.T. -0.01 min

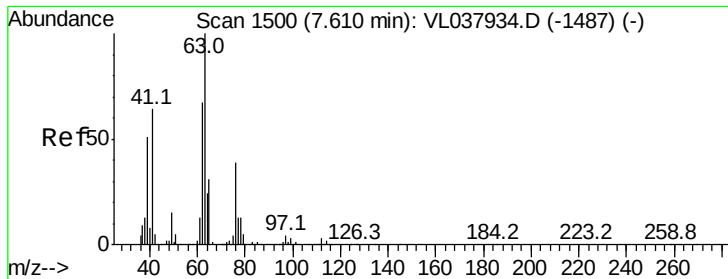
Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

Tgt Ion: 130 Resp: 238935

Ion	Ratio	Lower	Upper
130	100		
95	100.5	81.8	122.8
132	89.5	74.2	111.2
97	64.5	53.4	80.2





#39

1,2-Dichloropropane

Concen: 7.554 ppbv

RT: 7.16 Instrument:

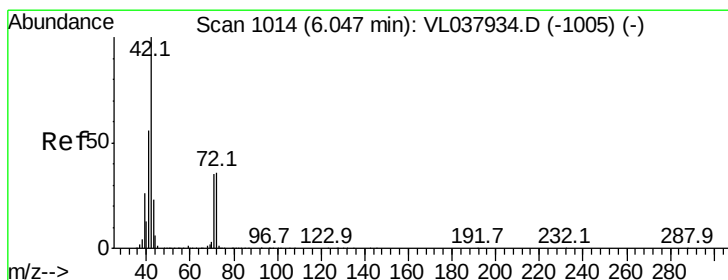
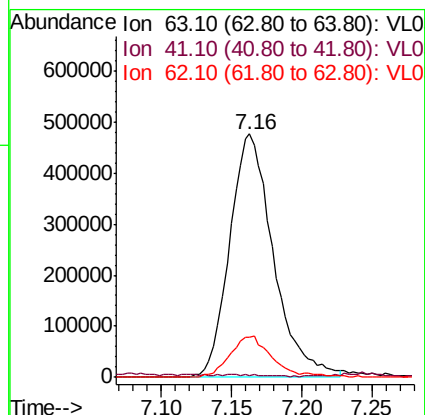
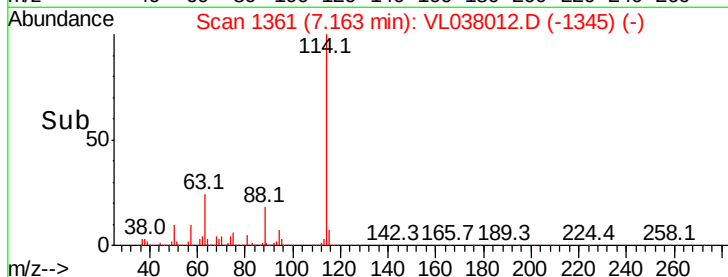
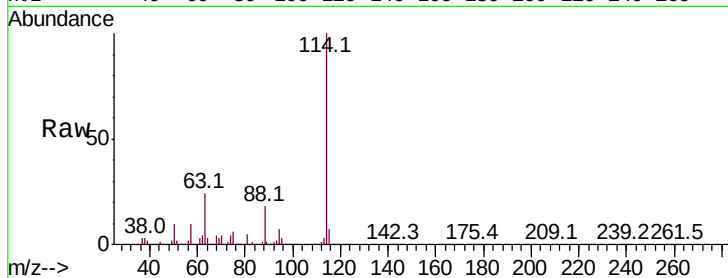
Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 10 Nov 2021 16:48

Tot Ion: 63 Resp: 1025441

Ion	Ratio	Lower	Upper
63	100		
41	0.0	51.6	77.4#
62	16.2	53.5	80.3#



#41

Tetrahydrofuran

Concen: 0.389 ppbv

RT: 6.05 min Scan# 1015

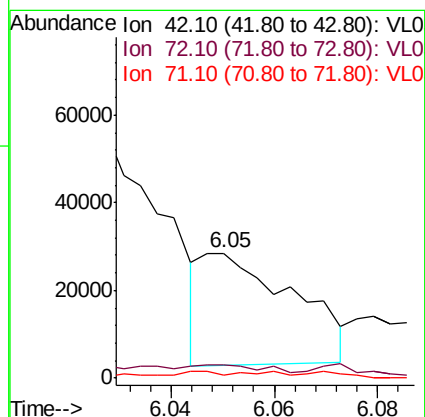
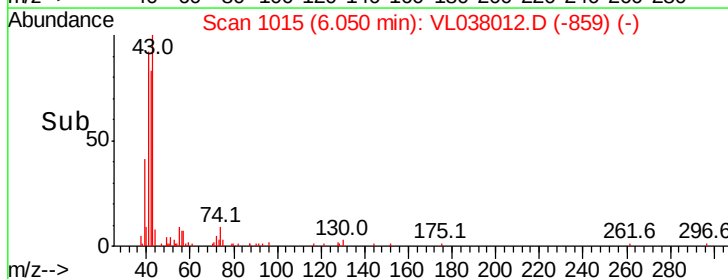
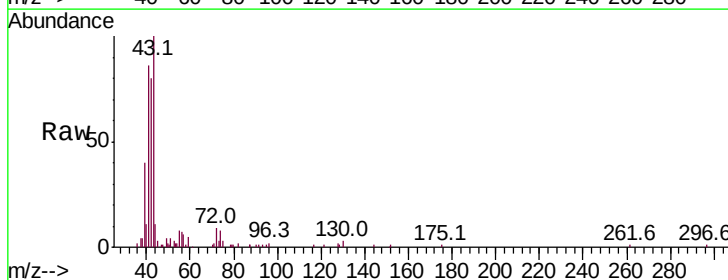
Delta R.T. 0.00 min

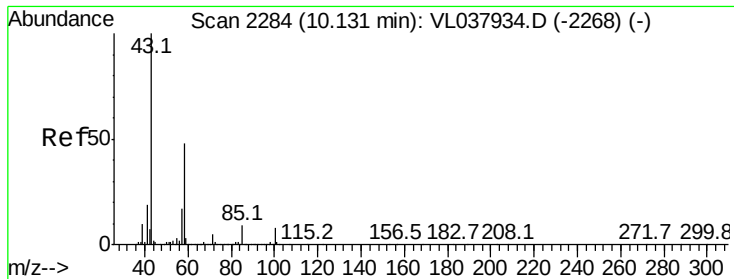
Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

Tgt Ion: 42 Resp: 31271

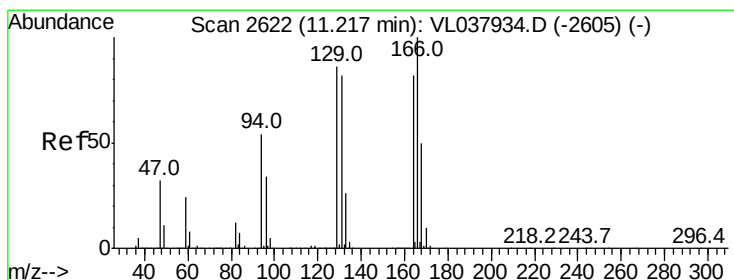
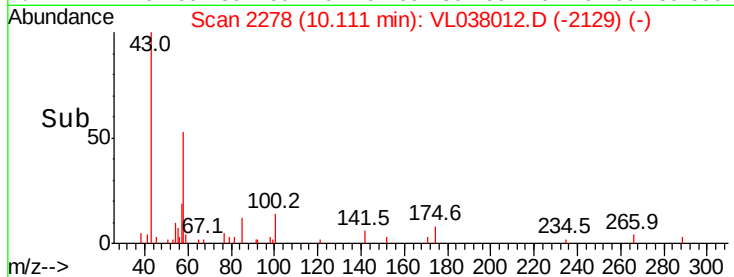
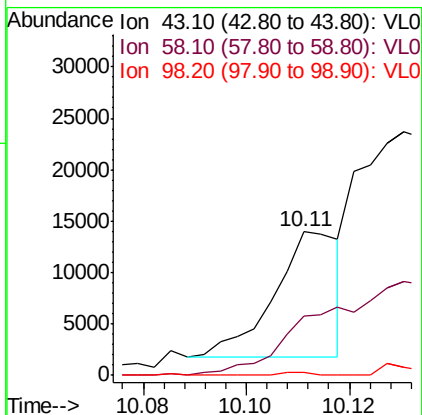
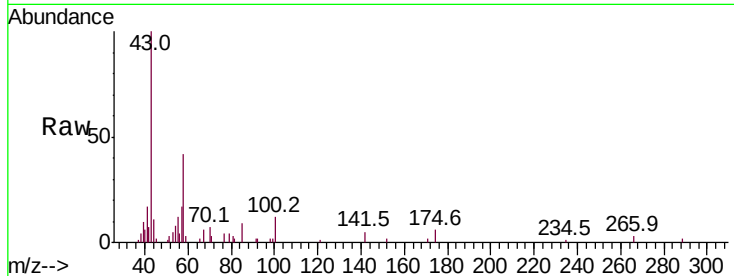
Ion	Ratio	Lower	Upper
42	100		
72	0.0	31.5	47.3#
71	10.2	30.5	45.7#





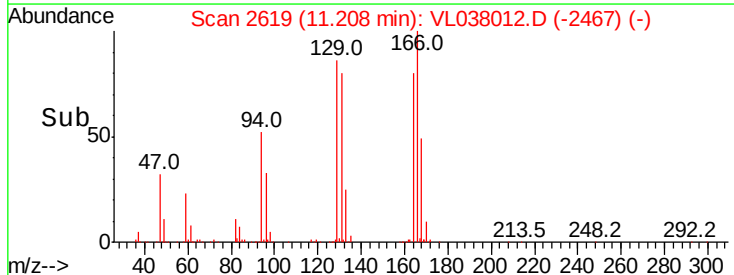
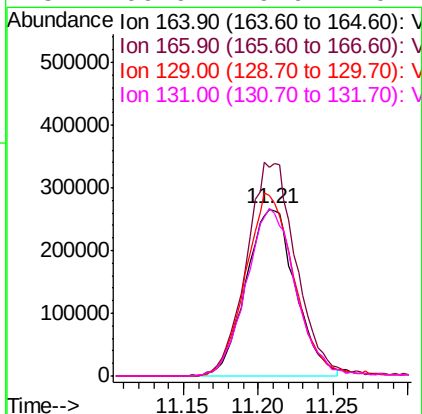
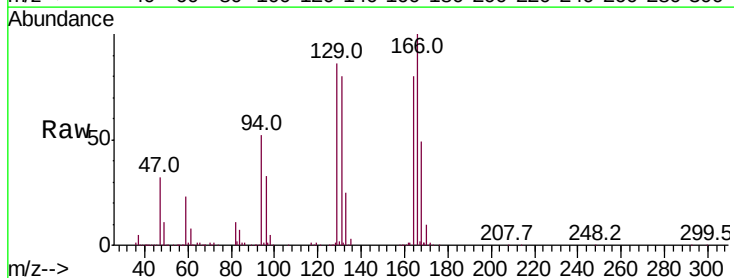
#51
2-Hexanone
Concen: 0.119 ppbv
RT: 10.11 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 10 Nov 2021 16:48

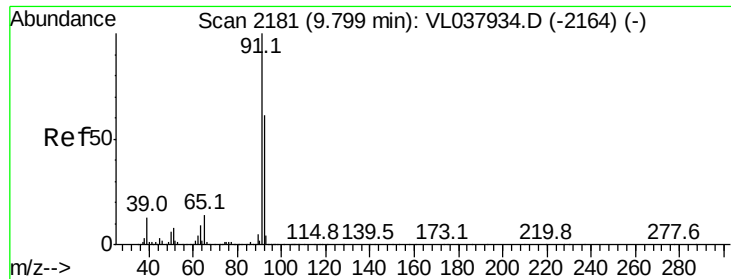
Tot Ion	Ratio	Lower	Upper
43	100		
58	0.0	38.6	57.8#
98	0.0	1.0	1.4#



#52
Tetrachloroethene
Concen: 4.469 ppbv
RT: 11.21 min Scan# 2619
Delta R.T. -0.01 min
Lab File: VL038012.D
Acq: 10 Nov 2021 16:48

Tgt Ion	Ratio	Lower	Upper
164	100		
166	125.5	97.6	146.4
129	108.5	84.2	126.2
131	100.9	79.6	119.4





#53

Toluene

Concen: 1.027 ppbv

RT: 9.79 Instrument:

Delta R.T. MSVOA_1

Lab File: ClientSampleId:

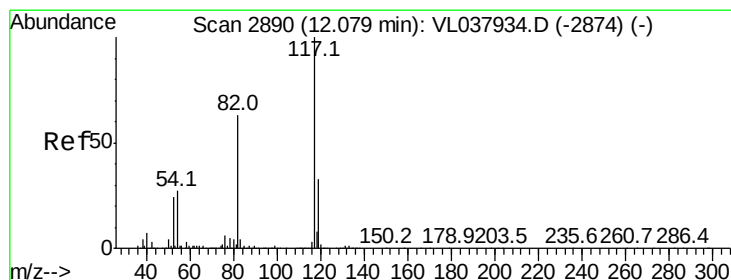
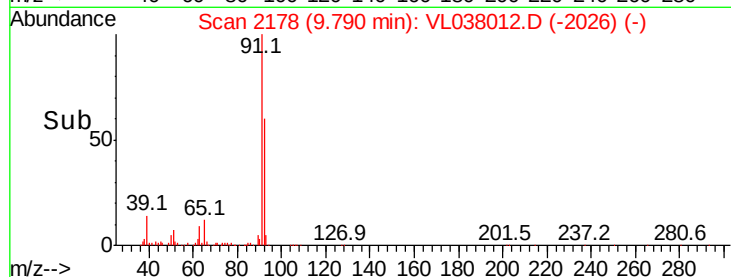
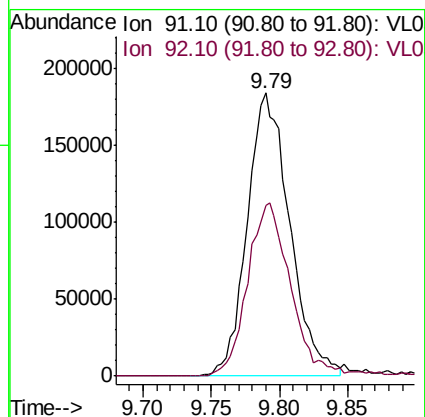
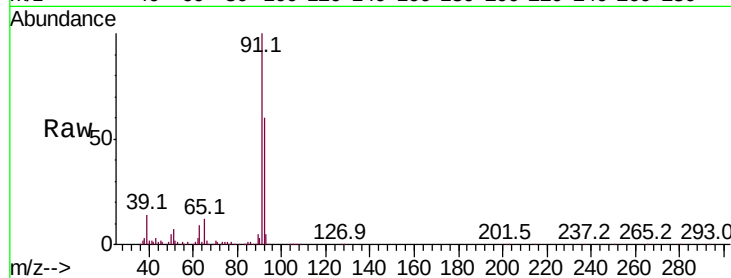
Acq: 10 Nov 2021 16:48

Tot Ion: 91 Resp: 397326

Ion Ratio Lower Upper

91 100

92 62.9 48.2 72.4



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2887

Delta R.T. -0.01 min

Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

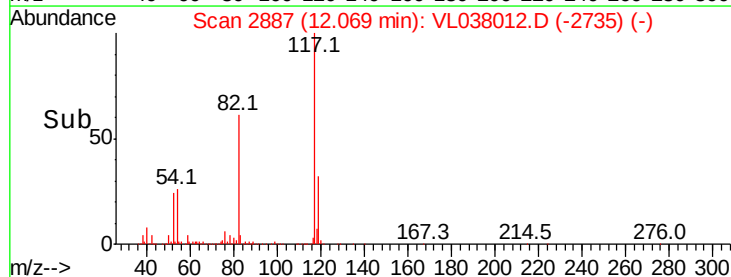
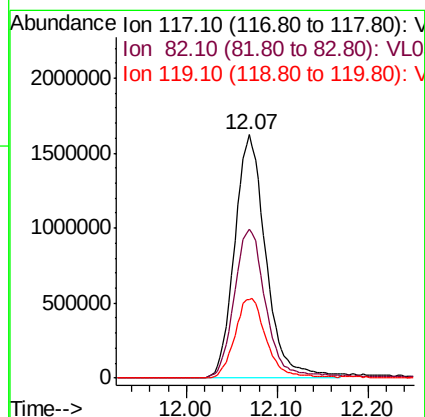
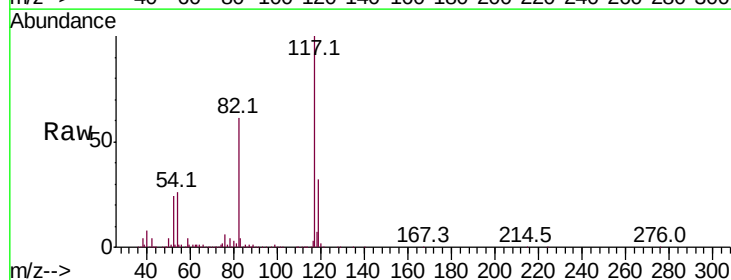
Tgt Ion: 117 Resp: 3895151

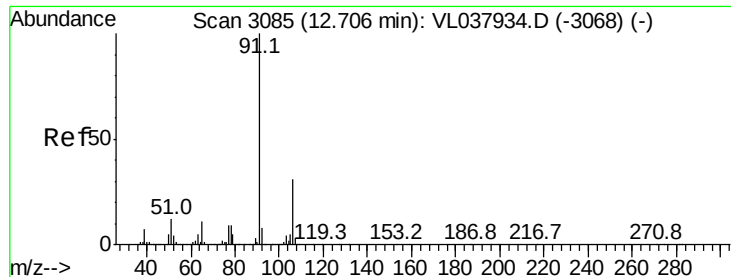
Ion Ratio Lower Upper

117 100

82 63.8 51.0 76.6

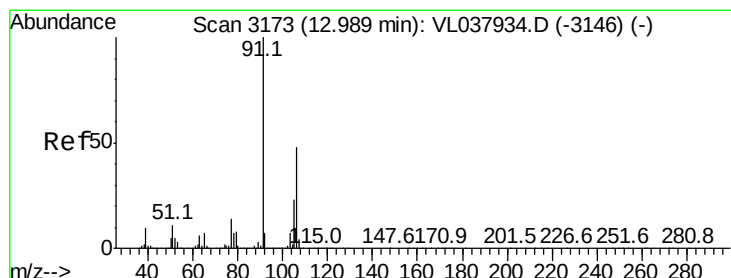
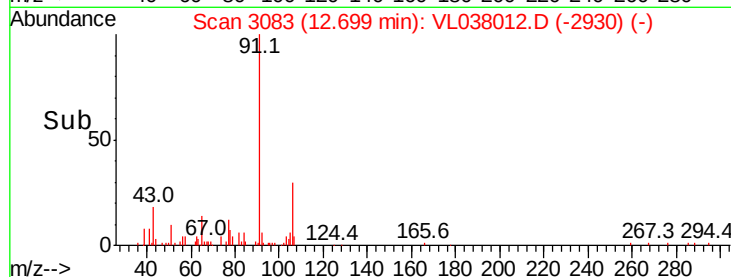
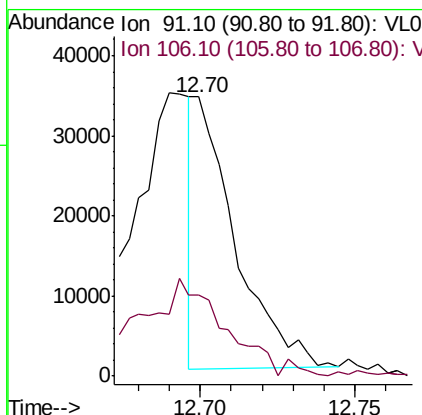
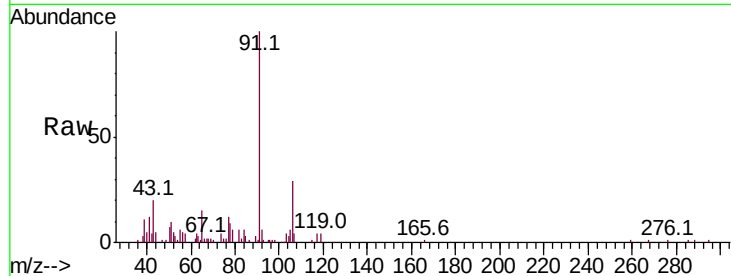
119 33.6 26.9 40.3





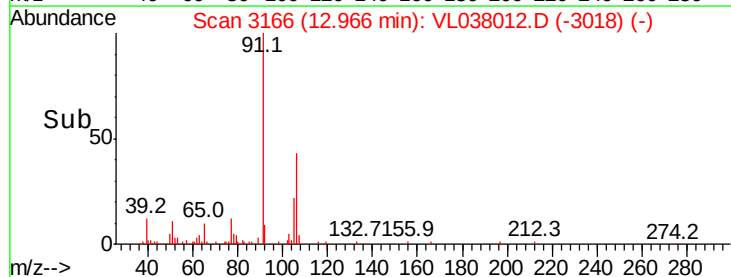
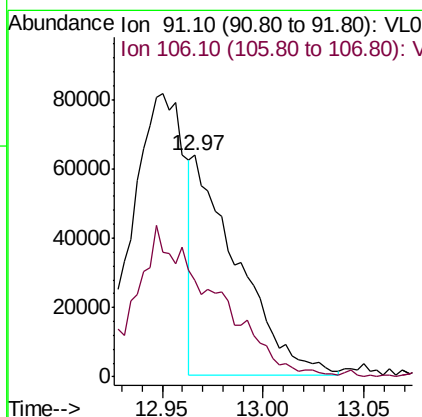
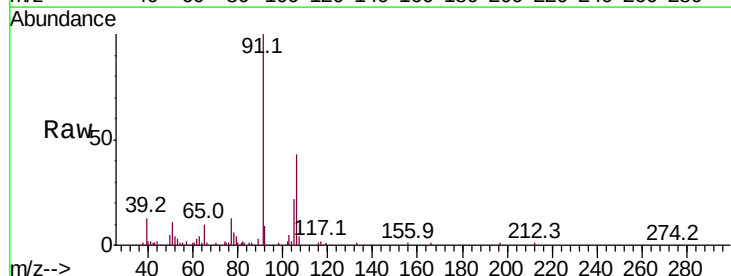
#58
Ethyl Benzene
Concen: 0.065 ppbv
RT: 12.70 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 10 Nov 2021 16:48

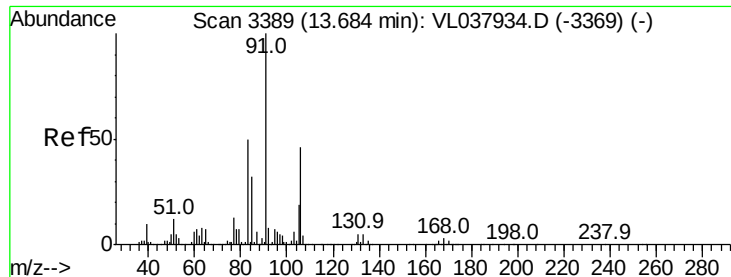
Tot Ion: 91 Resp: 30994
Ion Ratio Lower Upper
91 100
106 32.1 25.1 37.7



#59
m/p-Xylene
Concen: 0.234 ppbv
RT: 12.97 min Scan# 3166
Delta R.T. -0.02 min
Lab File: VL038012.D
Acq: 10 Nov 2021 16:48

Tgt Ion: 91 Resp: 98869
Ion Ratio Lower Upper
91 100
106 0.0 37.1 55.7#





#60

o-Xylene

Concen: 0.129 ppbv

RT: 13.67

Delta R.T. MSVOA_1

Lab File:

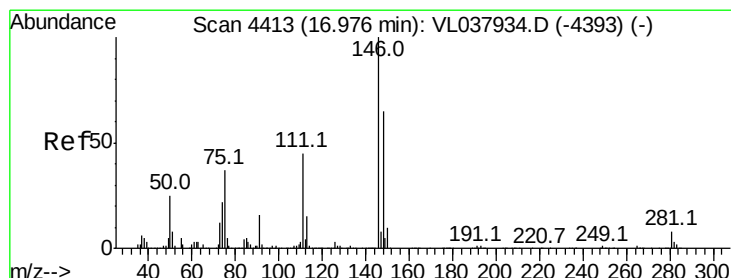
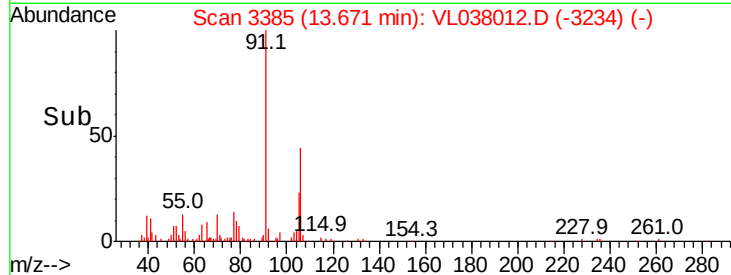
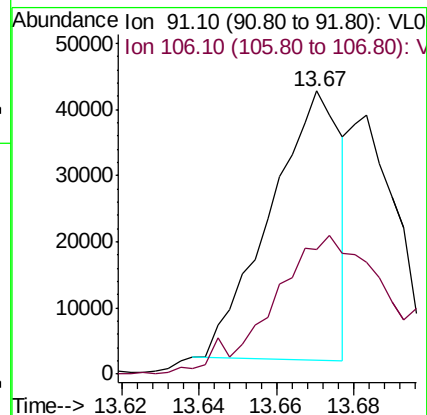
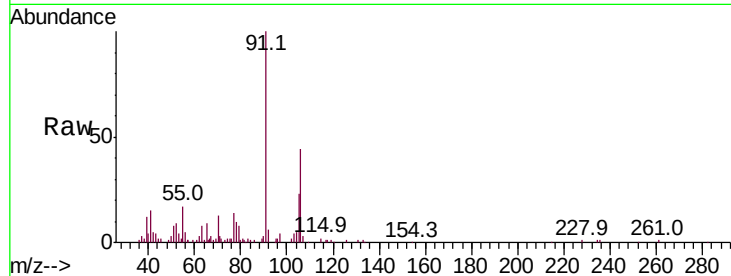
Acq: 10 Nov 2021 16:48

Tot Ion: 91 Resp: 51509

Ion Ratio Lower Upper

91 100

106 91.5 23.5 70.6#



#66

Benzyl Chloride

Concen: 0.033 ppbv

RT: 16.96 min Scan# 4407

Delta R.T. -0.02 min

Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

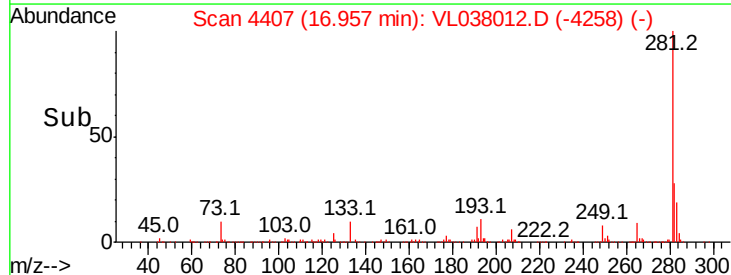
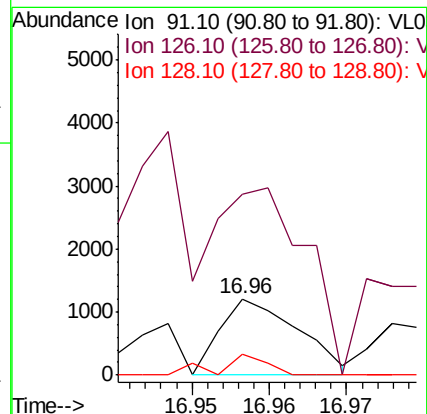
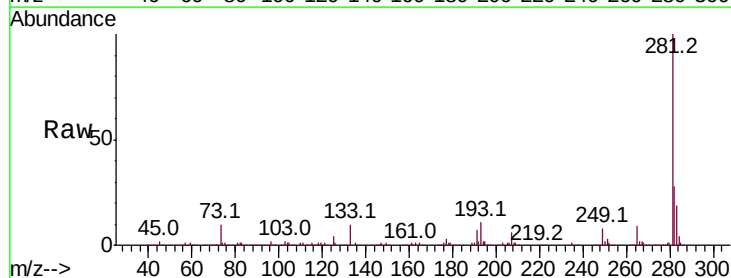
Tgt Ion: 91 Resp: 852

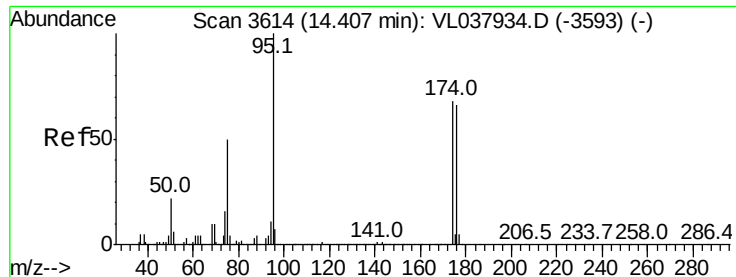
Ion Ratio Lower Upper

91 100

126 0.0 13.8 20.6#

128 0.0 5.1 7.7#





#68

1-Bromo-4-Fluorobenzene

Concen: 10.106 ppbv

RT: 14.40

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 10 Nov 2021 16:48

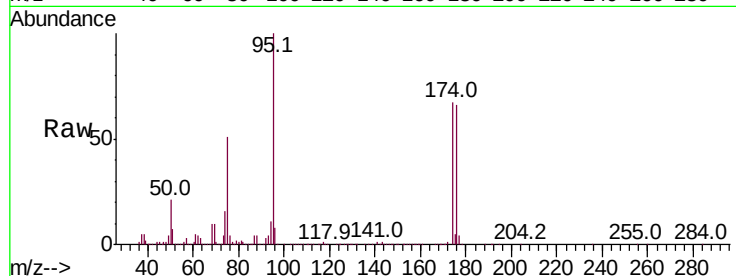
Tot Ion: 95 Resp: 2861272

Ion Ratio Lower Upper

95 100

174 73.4 58.3 87.5

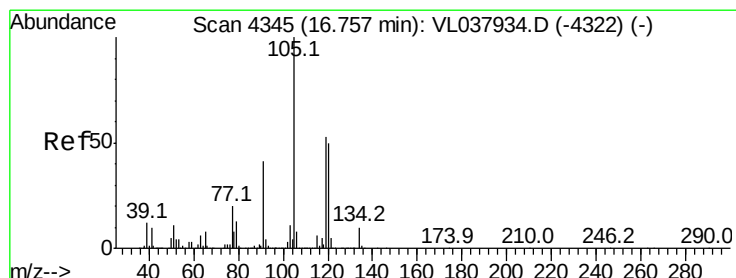
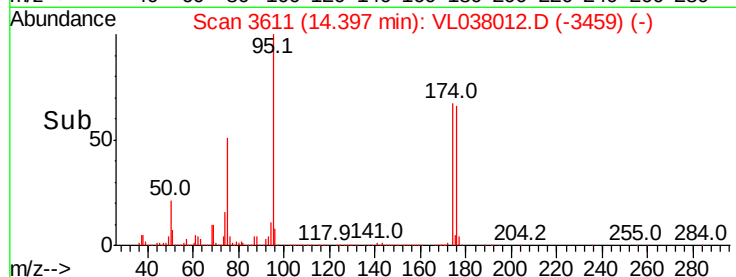
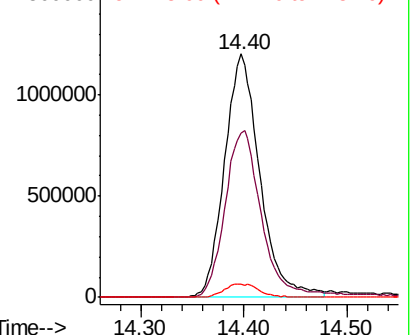
175 5.7 4.6 6.8



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: 0.079 ppbv

RT: 16.74 min Scan# 4341

Delta R.T. -0.01 min

Lab File: VL038012.D

Acq: 10 Nov 2021 16:48

Tgt Ion: 105 Resp: 35556

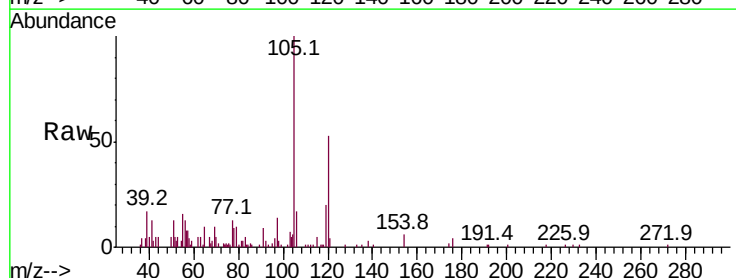
Ion Ratio Lower Upper

105 100

120 54.1 40.0 60.0

91 7.7 32.6 49.0#

77 13.3 15.8 23.8#



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

