

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL030322\
 Data File : VL038511.D
 Acq On : 3 Mar 2022 12:50
 Operator : SY/AP
 Sample : N1607-09DL 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MP-3DL

Quant Time: Mar 04 04:33:04 2022
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL022222AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Feb 22 19:45:51 2022
 QLast Update : Tue Feb 22 19:45:51 2022
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	834052	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.17	114	1927121	10.00	ppbv	0.01
55) Chlorobenzene-d5	12.08	117	1814622	10.00	ppbv	0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	1501132	10.00	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.00%

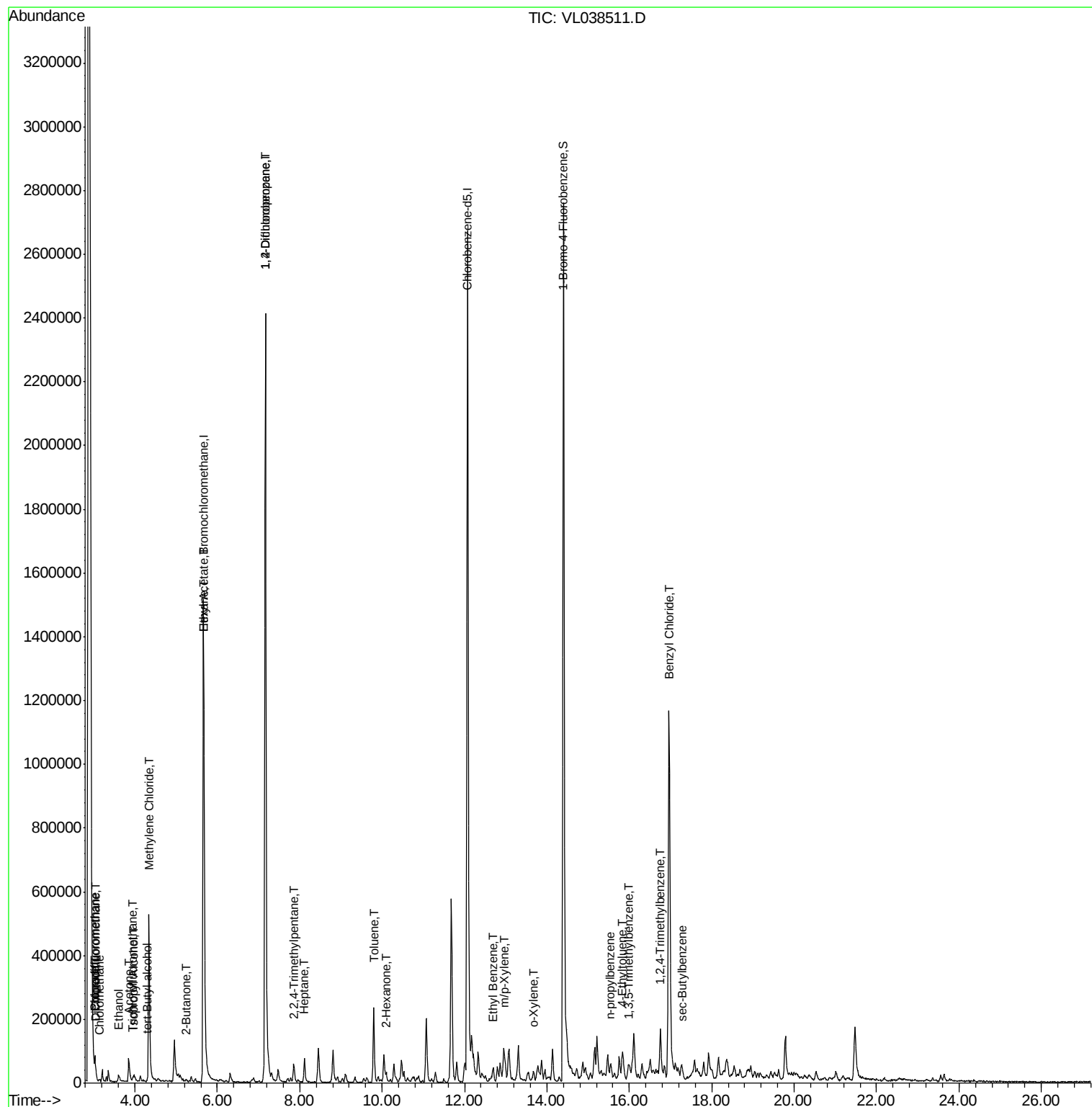
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	20451	0.155	ppbv	89
3) Chlorodifluoromethane	3.03	51	19500	0.132	ppbv #	60
4) Chloromethane	3.13	50	2081	0.041	ppbv	89
9) Propene	3.02	41	7694	0.158	ppbv	94
10) Heptane	8.12	43	4468	0.038	ppbv #	28
11) Trichlorofluoromethane	3.95	101	6677	0.053	ppbv	97
13) Ethanol	3.61	45	960	0.198	ppbv #	1
15) Acetone	3.85	43	82016	1.156	ppbv	93
17) tert-Butyl alcohol	4.30	59	2925	0.041	ppbv #	17
19) Isopropyl Alcohol	3.98	45	21048	0.512	ppbv #	93
20) Methylene Chloride	4.34	84	220307	6.269	ppbv	95
25) Ethyl Acetate	5.68	43	103545	0.543	ppbv #	78
26) Hexane	5.68	57	141254	1.637	ppbv #	43
34) 2-Butanone	5.24	43	3536	0.058	ppbv #	33
39) 1,2-Dichloropropane	7.17	63	530558	7.851	ppbv #	26
44) 2,2,4-Trimethylpentane	7.86	57	17413	0.060	ppbv #	1
51) 2-Hexanone	10.11	43	4235	0.088	ppbv #	35
53) Toluene	9.80	91	173291	0.941	ppbv	99
58) Ethyl Benzene	12.70	91	13772	0.056	ppbv	94
59) m/p-Xylene	12.97	91	32154	0.151	ppbv #	33
60) o-Xylene	13.68	91	8268	0.041	ppbv #	1
64) n-propylbenzene	15.55	120	2204	0.033	ppbv #	1
66) Benzyl Chloride	16.98	91	409	0.032	ppbv #	69
67) sec-Butylbenzene	17.29	105	13632	0.041	ppbv	93
72) 4-Ethyltoluene	15.83	105	27613	0.124	ppbv #	89
73) 1,3,5-Trimethylbenzene	15.99	105	26697	0.132	ppbv	93
74) 1,2,4-Trimethylbenzene	16.75	105	85109	0.400	ppbv #	71

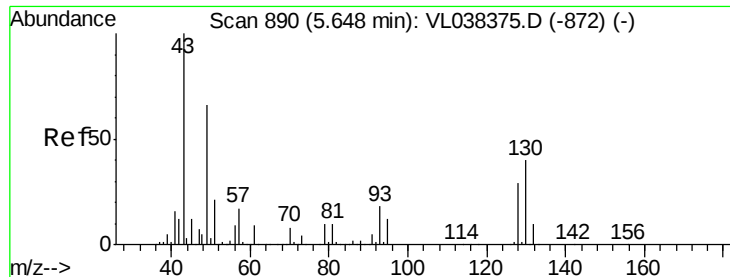
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: MP-3DL

Acq: 3 Mar 2022 12:50

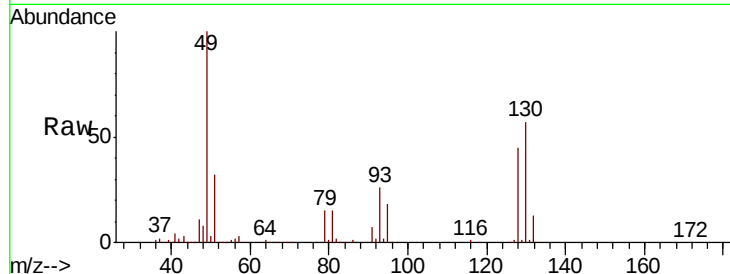
Tot Ion: 49 Resp: 834052

Ion Ratio Lower Upper

49 100

128 46.8 24.3 72.9

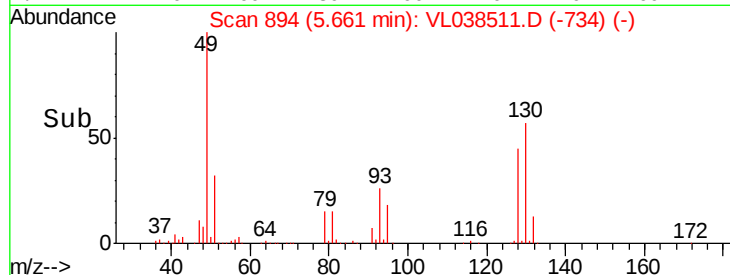
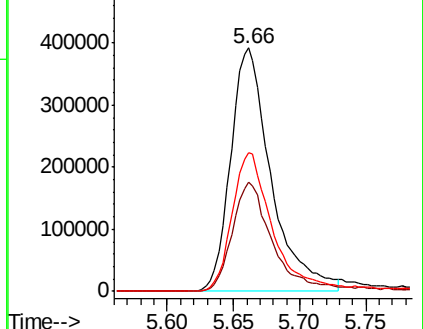
130 59.5 30.1 90.5



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.155 ppbv

RT: 3.05 min Scan# 82

Delta R.T. 0.01 min

Lab File: VL038511.D

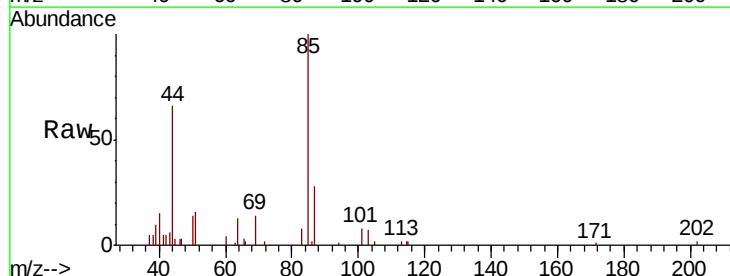
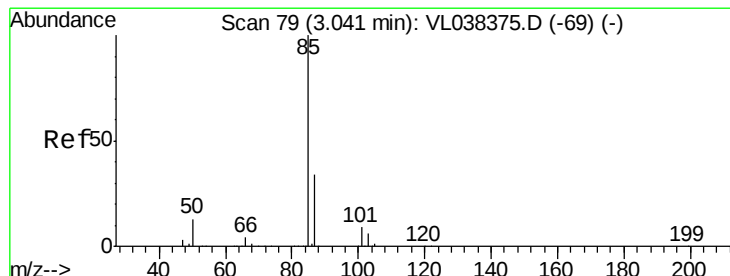
Acq: 3 Mar 2022 12:50

Tgt Ion: 85 Resp: 20451

Ion Ratio Lower Upper

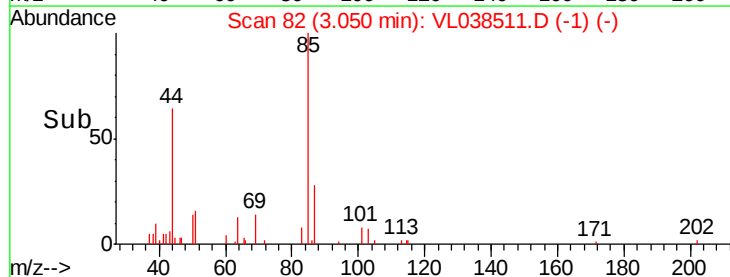
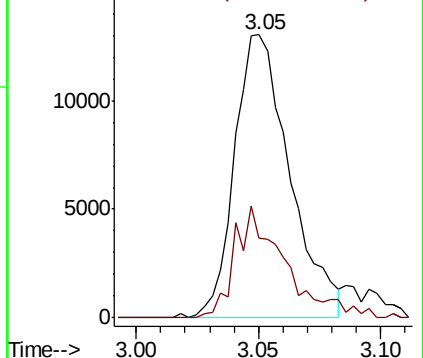
85 100

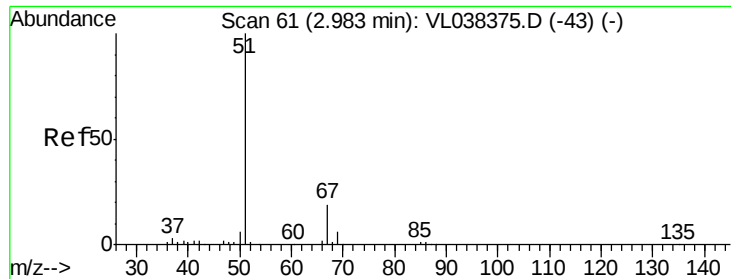
87 28.1 27.4 41.0



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.132 ppbv

RT: 3.03 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampled:

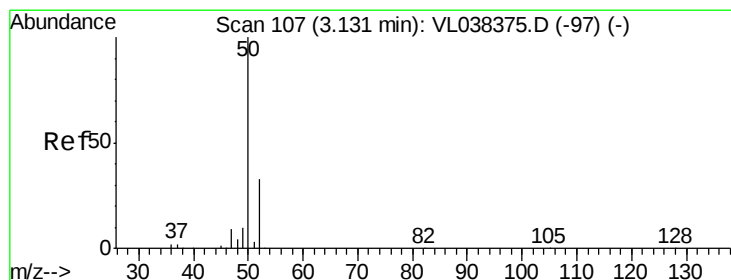
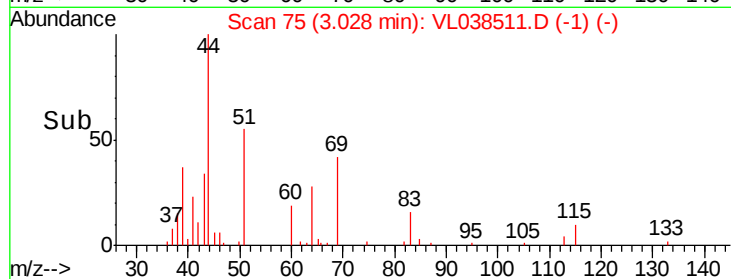
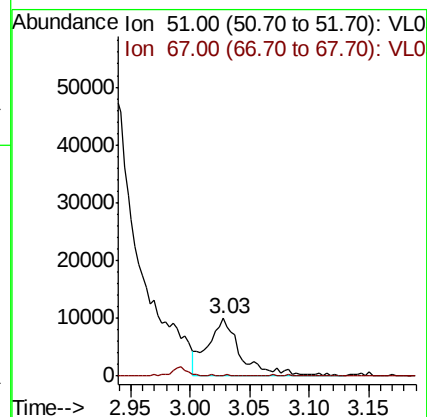
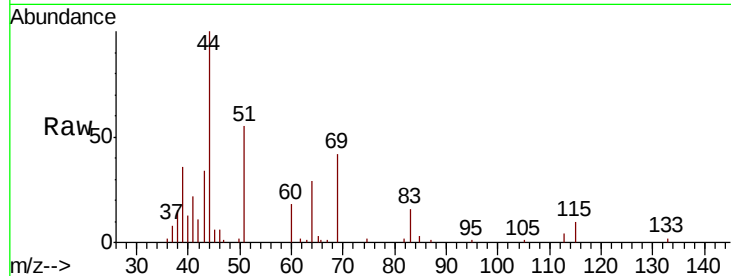
Acq: 3 Mar 2022 12:50

Tot Ion: 51 Resp: 19500

Ion Ratio Lower Upper

51 100

67 0.4 14.7 22.1#



#4

Chloromethane

Concen: 0.041 ppbv

RT: 3.13 min Scan# 108

Delta R.T. 0.00 min

Lab File: VL038511.D

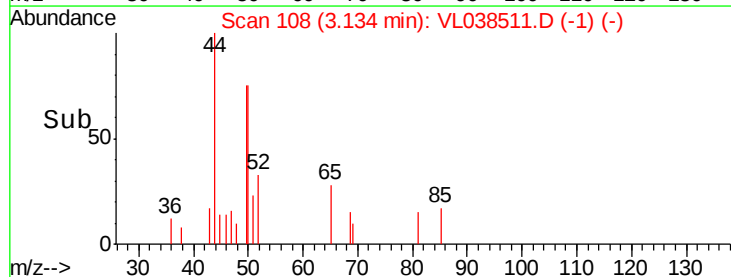
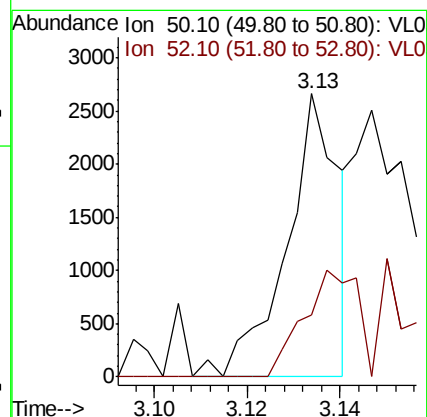
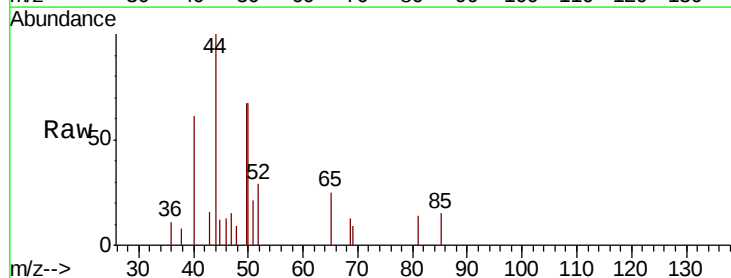
Acq: 3 Mar 2022 12:50

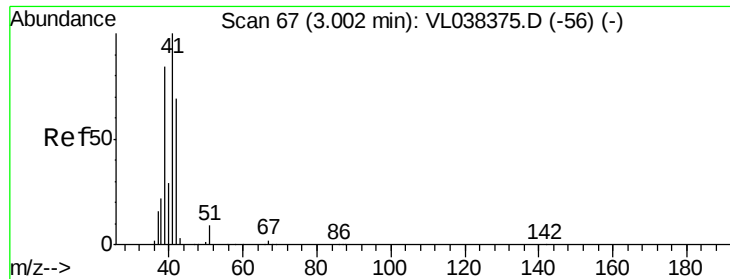
Tgt Ion: 50 Resp: 2081

Ion Ratio Lower Upper

50 100

52 27.0 26.5 39.7





#9

Propene

Concen: 0.158 ppbv

RT: 3.02 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

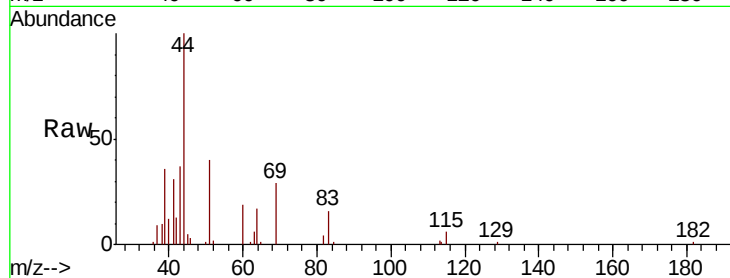
Acq: 3 Mar 2022 12:50

Tot Ion: 41 Resp: 7694

Ion Ratio Lower Upper

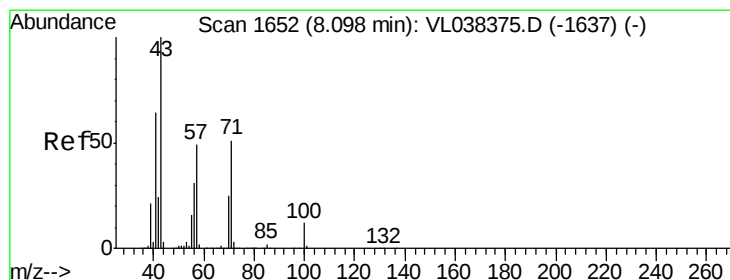
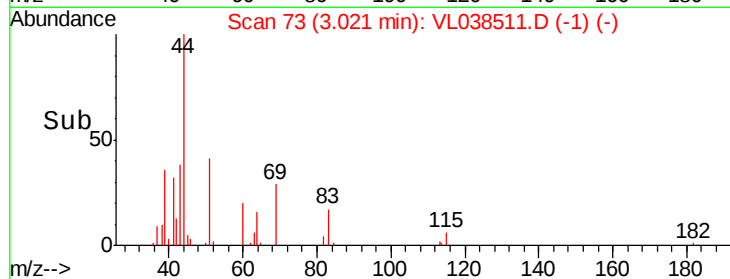
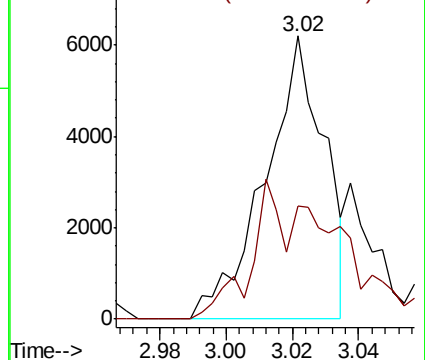
41 100

42 73.4 54.6 82.0



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.038 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. 0.02 min

Lab File: VL038511.D

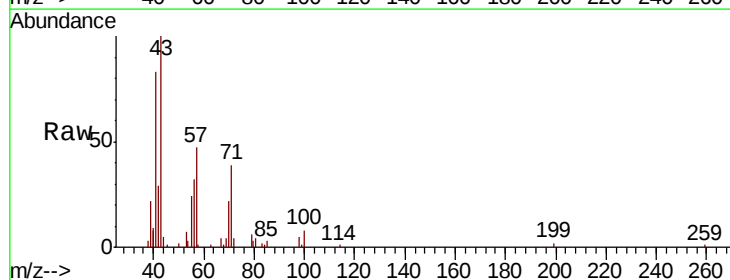
Acq: 3 Mar 2022 12:50

Tgt Ion: 43 Resp: 4468

Ion Ratio Lower Upper

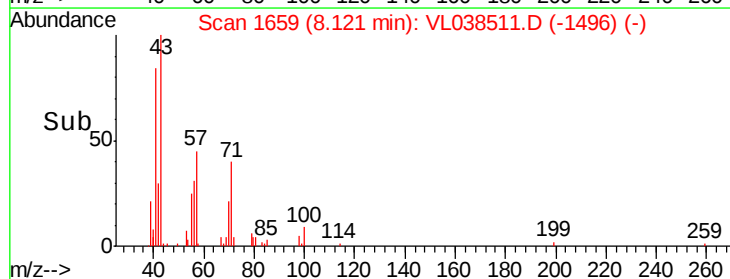
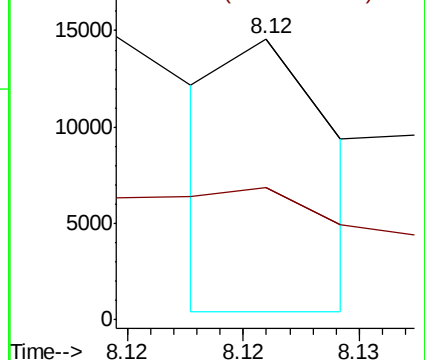
43 100

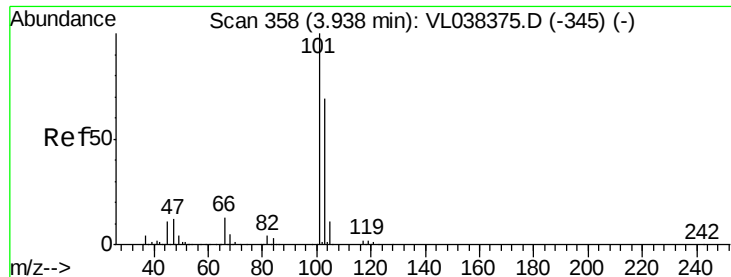
57 0.0 39.8 59.8#



Abundance Ion 43.10 (42.80 to 43.80): VL0

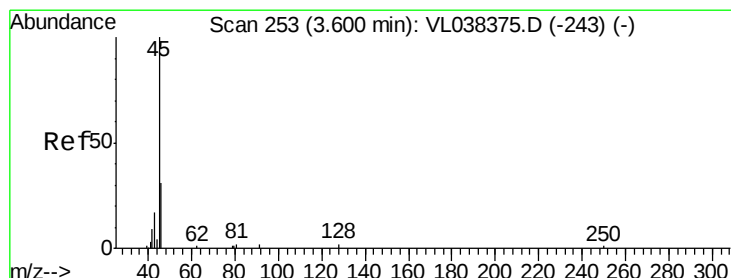
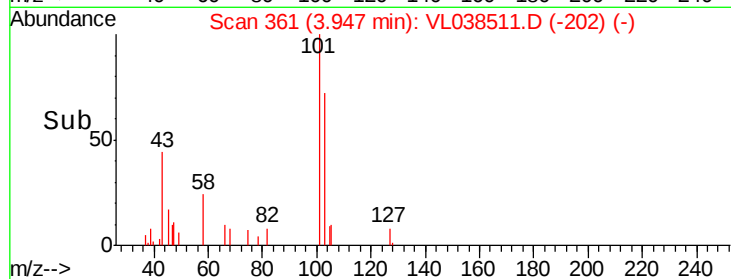
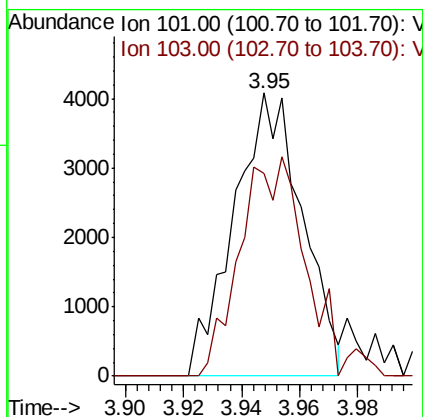
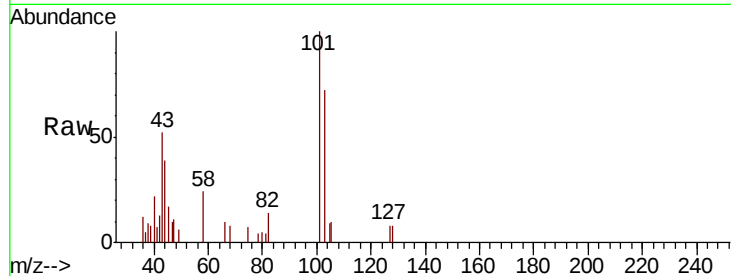
Ion 57.10 (56.80 to 57.80): VL0





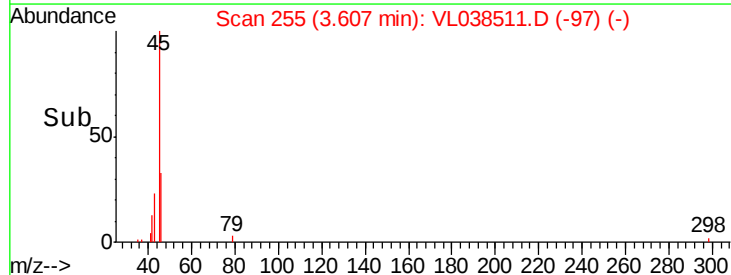
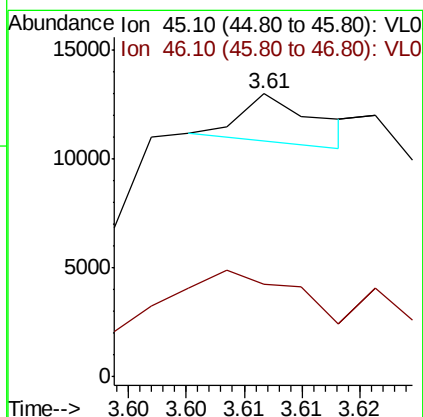
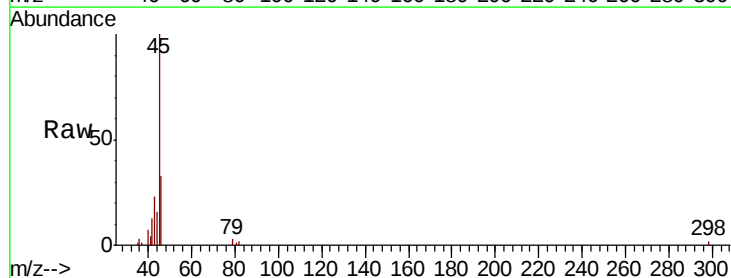
#11
 Trichlorofluoromethane
 Concen: 0.053 ppbv
 RT: 3.95
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Mar 2022 12:50

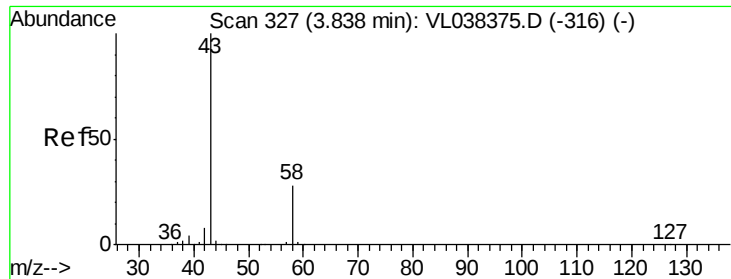
Tot Ion: 101 Resp: 6677
 Ion Ratio Lower Upper
 101 100
 103 71.5 55.0 82.4



#13
 Ethanol
 Concen: 0.198 ppbv
 RT: 3.61 min Scan# 255
 Delta R.T. 0.01 min
 Lab File: VL038511.D
 Acq: 3 Mar 2022 12:50

Tgt Ion: 45 Resp: 960
 Ion Ratio Lower Upper
 45 100
 46 1499.4 18.2 72.8#





#15

Acetone

Concen: 1.156 ppbv

RT: 3.85 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

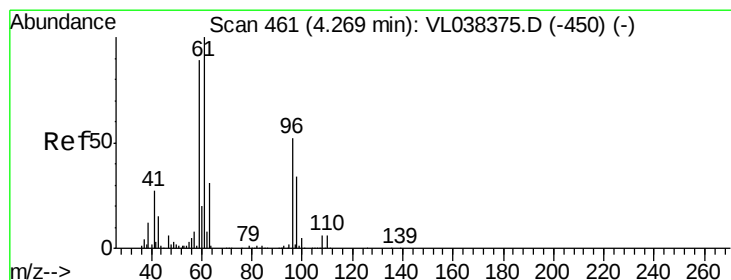
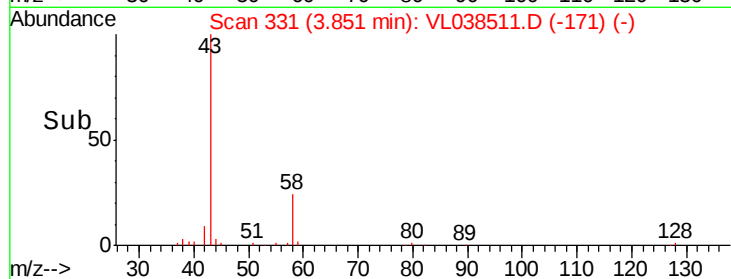
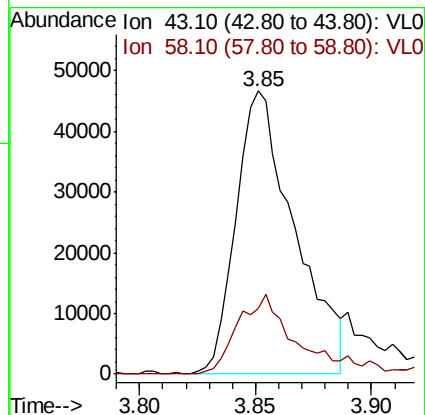
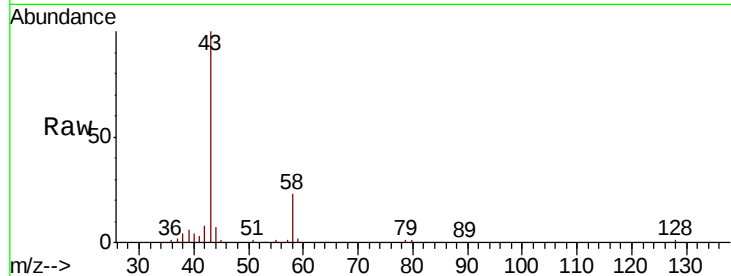
Acq: 3 Mar 2022 12:50

Tot Ion: 43 Resp: 82016

Ion Ratio Lower Upper

43 100

58 30.6 21.7 32.5



#17

tert-Butyl alcohol

Concen: 0.041 ppbv

RT: 4.30 min Scan# 470

Delta R.T. 0.03 min

Lab File: VL038511.D

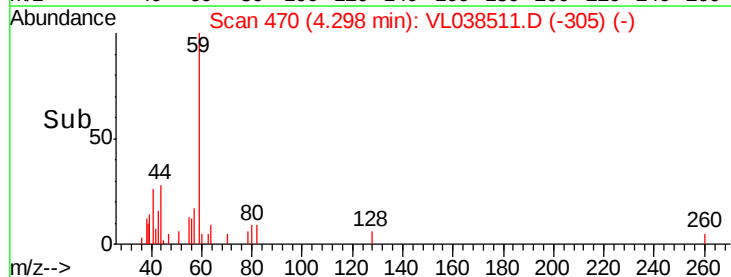
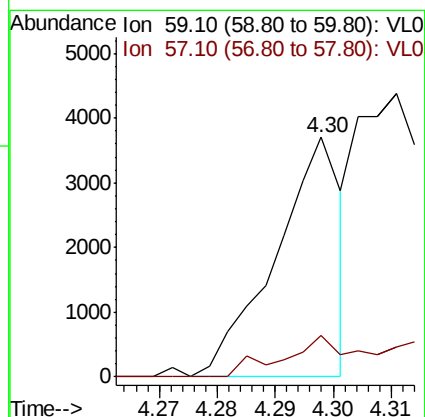
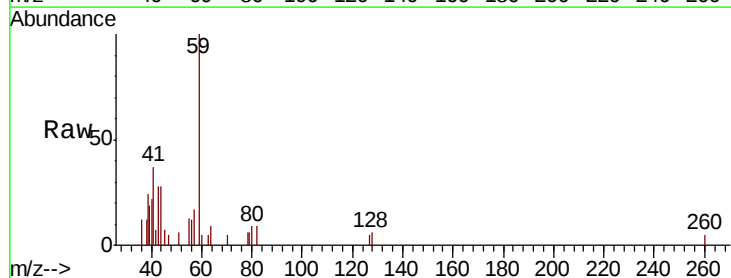
Acq: 3 Mar 2022 12:50

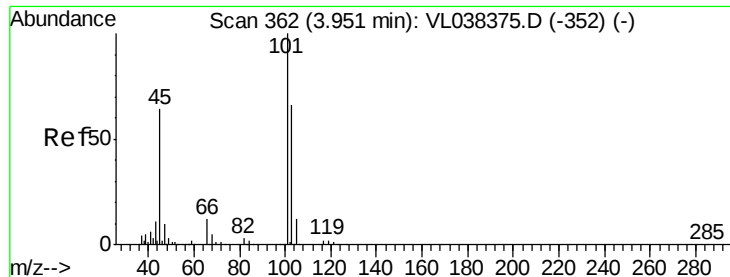
Tgt Ion: 59 Resp: 2925

Ion Ratio Lower Upper

59 100

57 41.5 8.4 12.6#





#19

Isopropyl Alcohol

Concen: 0.512 ppbv

RT: 3.98 Instrument: MSVOA_1

Delta R.T. ClientSampleId:

Lab File: MP-3DL

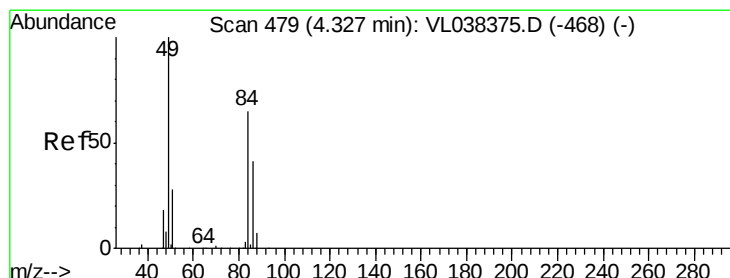
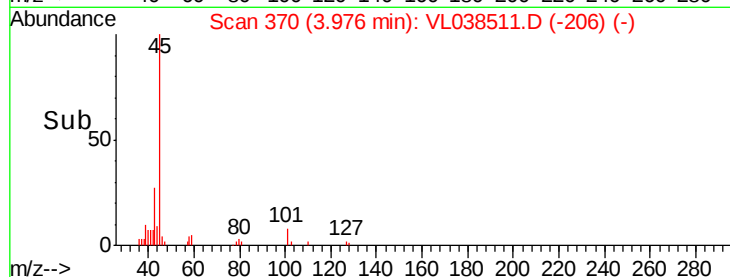
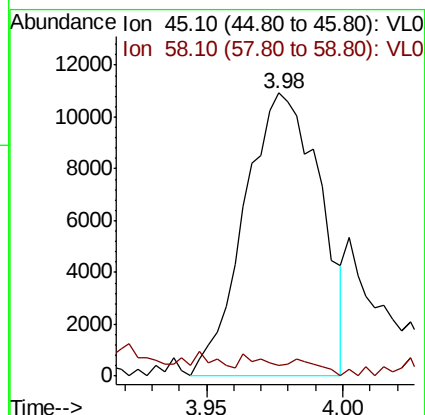
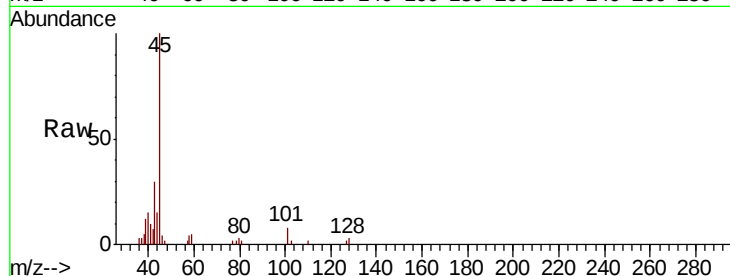
Acq: 3 Mar 2022 12:50

Tot Ion: 45 Resp: 21048

Ion Ratio Lower Upper

45 100

58 0.0 1.8 2.8#



#20

Methylene Chloride

Concen: 6.269 ppbv

RT: 4.34 min Scan# 484

Delta R.T. 0.02 min

Lab File: VL038511.D

Acq: 3 Mar 2022 12:50

Tgt Ion: 84 Resp: 220307

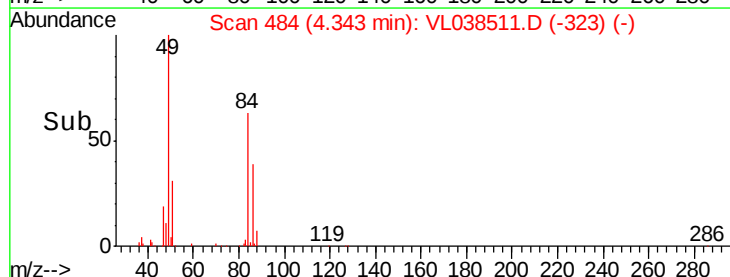
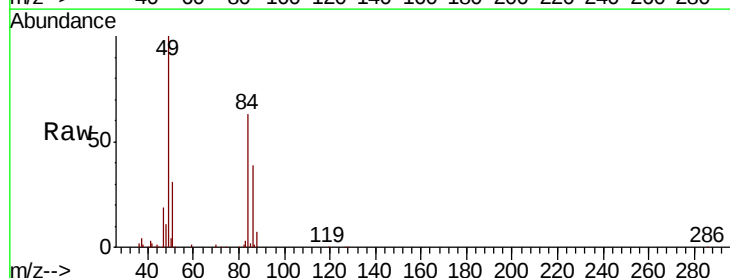
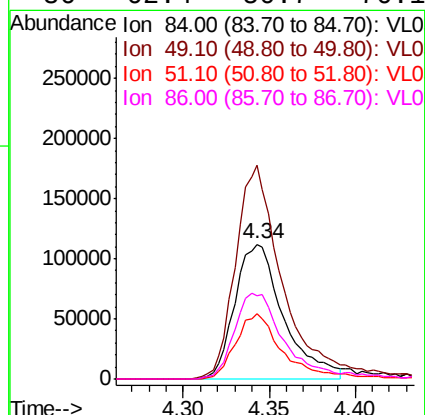
Ion Ratio Lower Upper

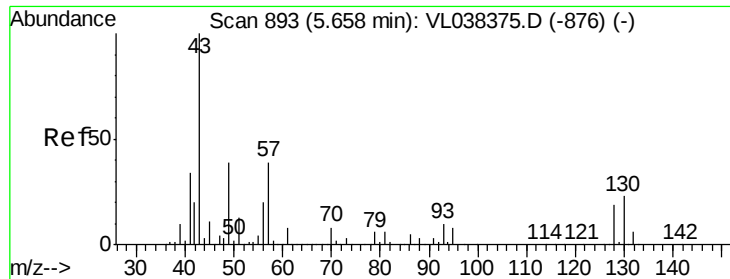
84 100

49 158.7 122.4 183.6

51 48.4 33.3 49.9

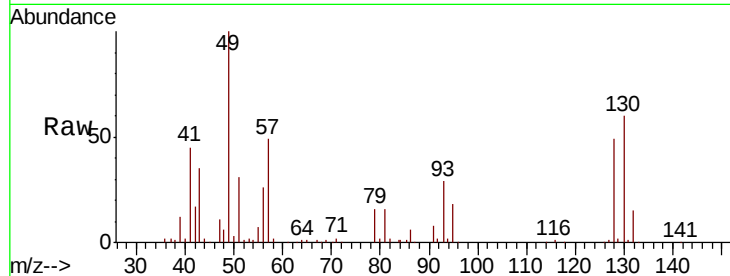
86 62.4 50.7 76.1





#25
Ethyl Acetate
Concen: 0.543 ppbv
RT: 5.68
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 3 Mar 2022 12:50

Tot Ion:	43	Resp:	103545
Ion	Ratio	Lower	Upper
43	100		
45	1.0	7.8	11.6#
61	0.3	7.5	11.3#
70	1.3	5.4	8.0#



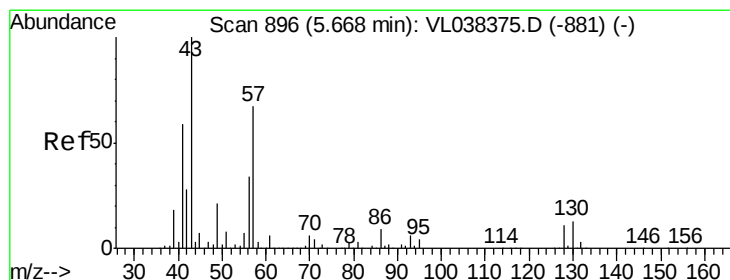
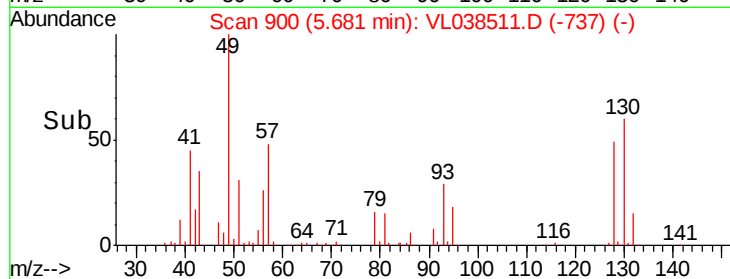
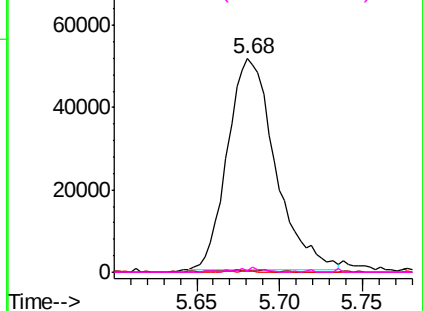
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

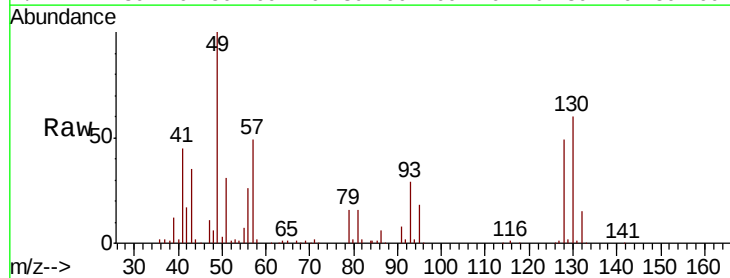
Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26
Hexane
Concen: 1.637 ppbv
RT: 5.68 min Scan# 900
Delta R.T. 0.01 min
Lab File: VL038511.D
Acq: 3 Mar 2022 12:50

Tgt Ion:	57	Resp:	141254
Ion	Ratio	Lower	Upper
57	100		
41	96.6	73.1	109.7
43	77.2	181.0	271.4#
56	57.1	43.4	65.0



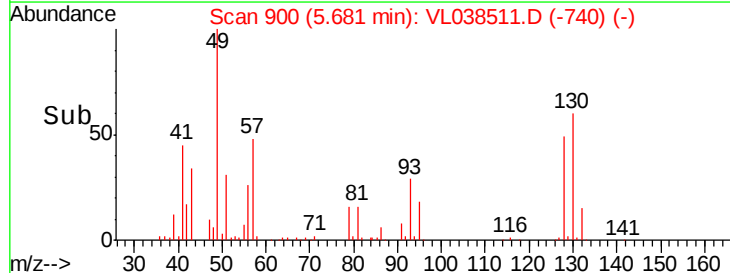
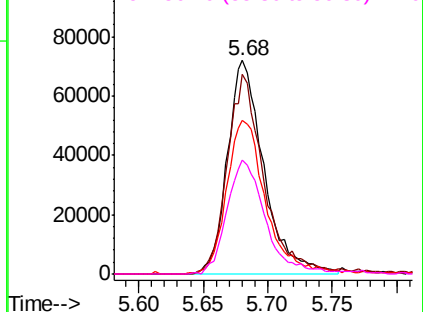
Abundance

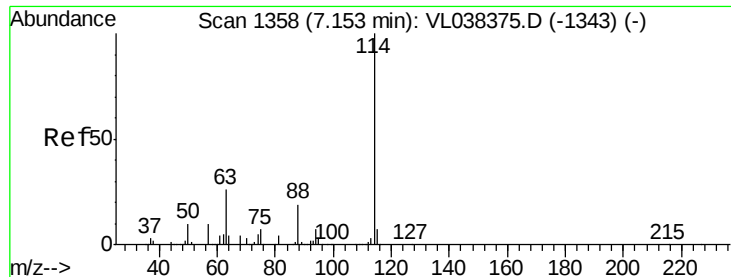
Ion 57.10 (56.80 to 57.80): VL0

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





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.17 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 3 Mar 2022 12:50

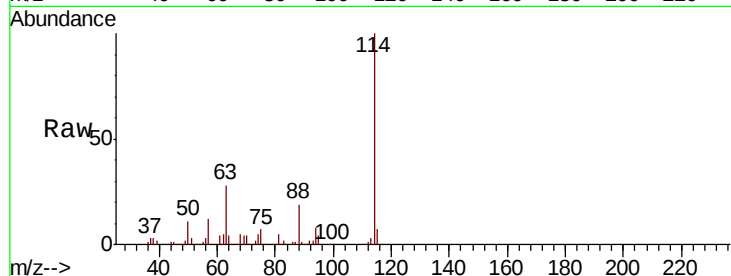
Tot Ion:114 Resp: 1927121

Ion Ratio Lower Upper

114 100

63 28.3 22.2 33.2

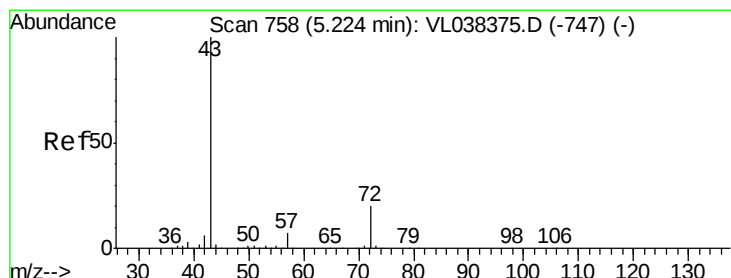
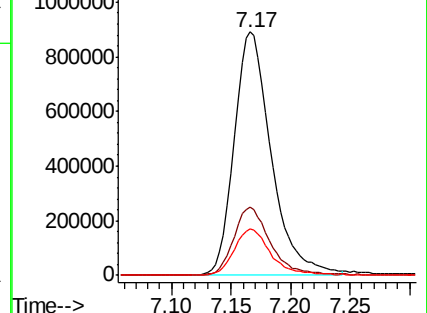
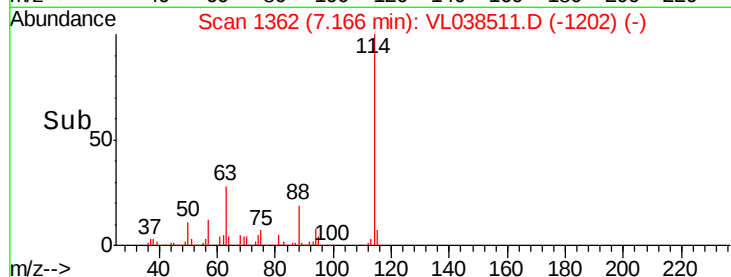
88 19.1 15.2 22.8



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: 0.058 ppbv

RT: 5.24 min Scan# 764

Delta R.T. 0.02 min

Lab File: VL038511.D

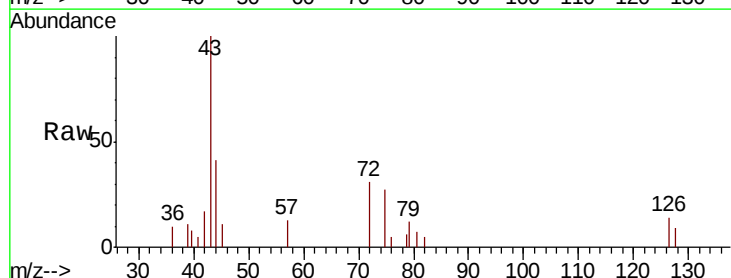
Acq: 3 Mar 2022 12:50

Tgt Ion: 43 Resp: 3536

Ion Ratio Lower Upper

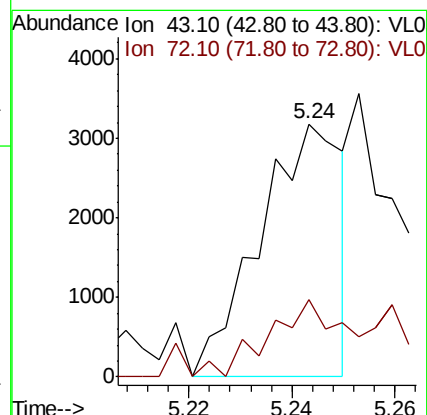
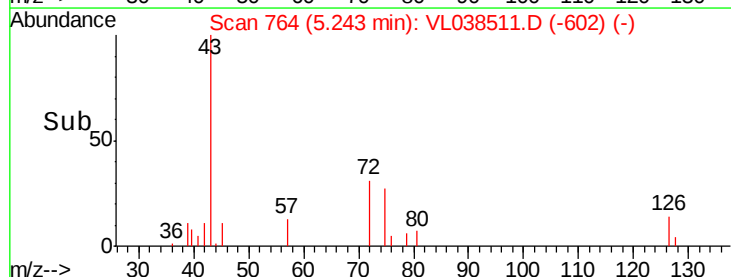
43 100

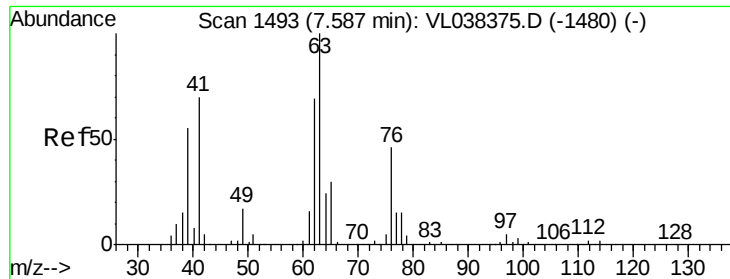
72 53.5 17.4 26.2#



Abundance Ion 43.10 (42.80 to 43.80): VL0

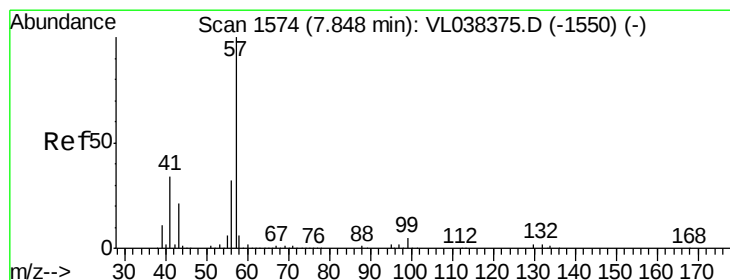
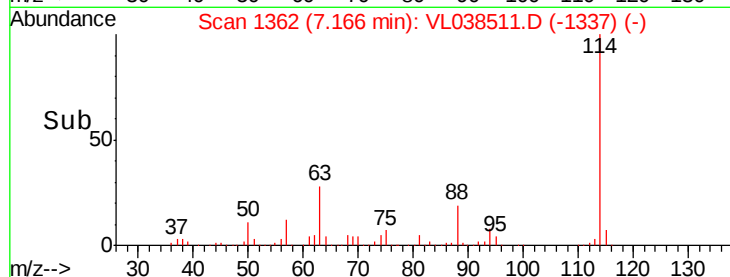
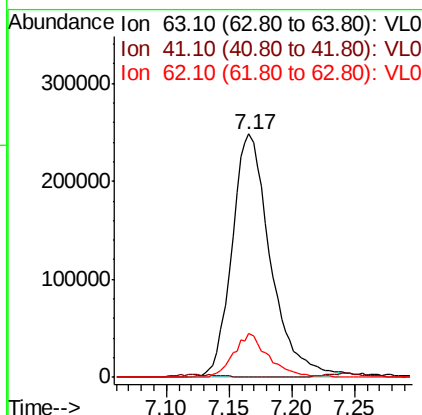
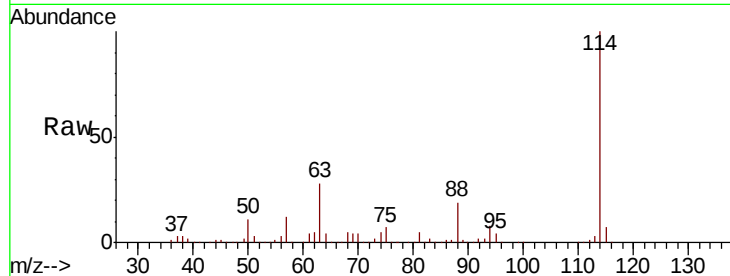
Ion 72.10 (71.80 to 72.80): VL0





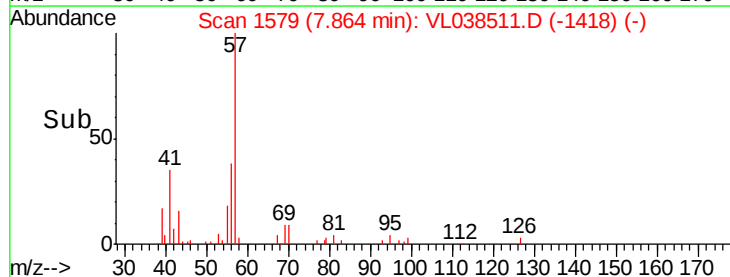
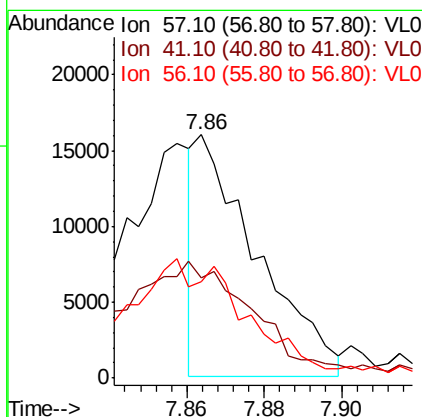
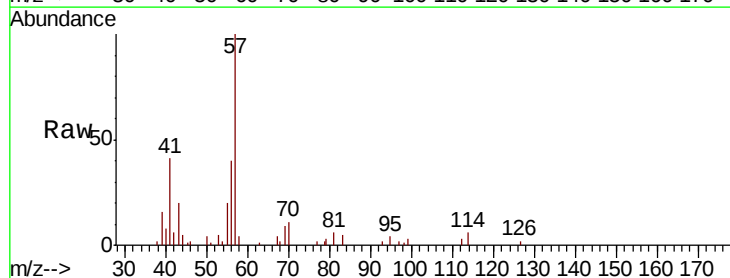
#39
 1,2-Dichloropropane
 Concen: 7.851 ppbv
 RT: 7.17
 Delta R.T. MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Mar 2022 12:50

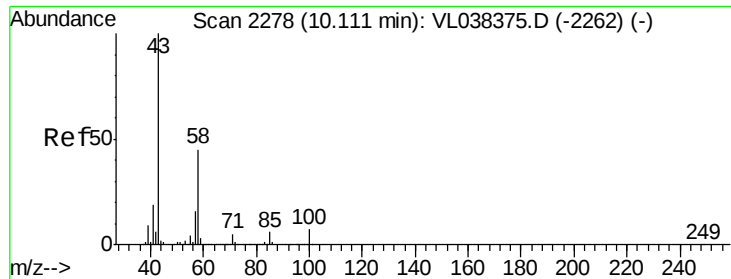
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	56.1	84.1#
62	17.9	55.5	83.3#



#44
 2,2,4-Trimethylpentane
 Concen: 0.060 ppbv
 RT: 7.86 min Scan# 1579
 Delta R.T. 0.02 min
 Lab File: VL038511.D
 Acq: 3 Mar 2022 12:50

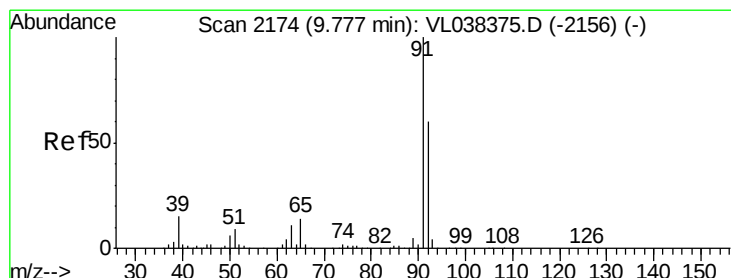
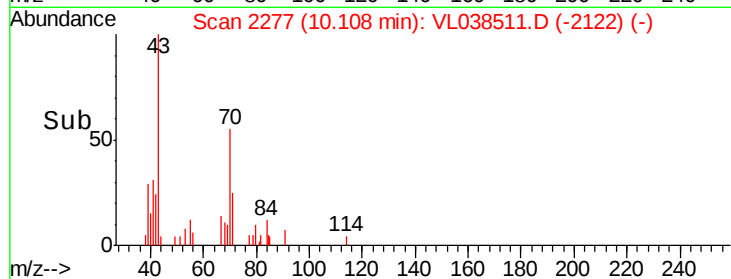
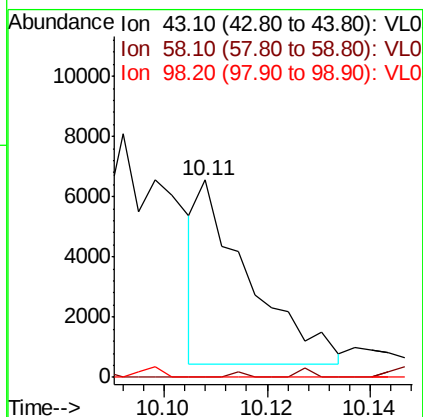
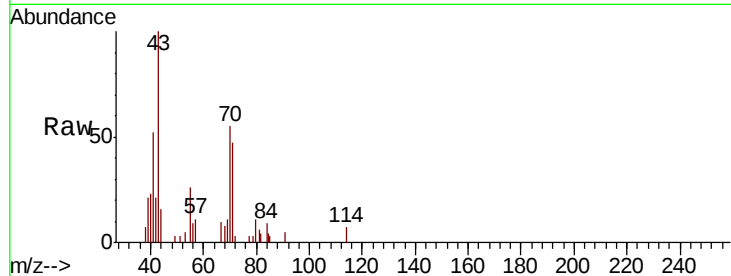
Tgt Ion	Ratio	Lower	Upper
57	100		
41	111.8	26.6	39.8#
56	0.0	25.0	37.6#





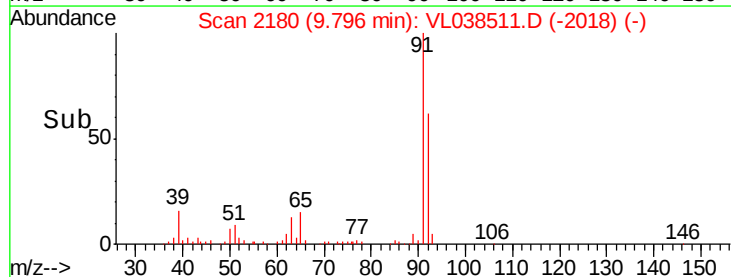
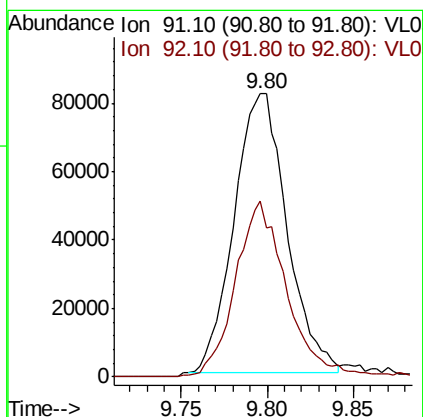
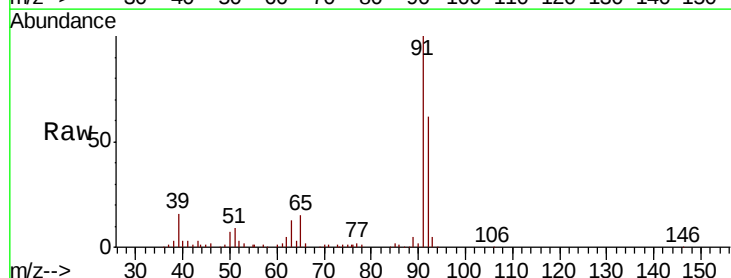
#51
2-Hexanone
Concen: 0.088 ppbv
RT: 10.11
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 3 Mar 2022 12:50

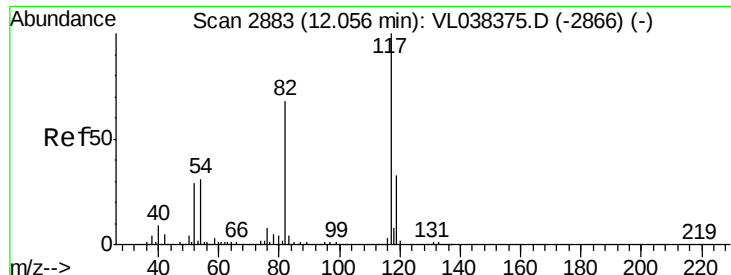
Tot Ion: 43 Resp: 4235
Ion Ratio Lower Upper
43 100
58 3.6 37.4 56.0#
98 0.0 0.1 0.1#



#53
Toluene
Concen: 0.941 ppbv
RT: 9.80 min Scan# 2180
Delta R.T. 0.02 min
Lab File: VL038511.D
Acq: 3 Mar 2022 12:50

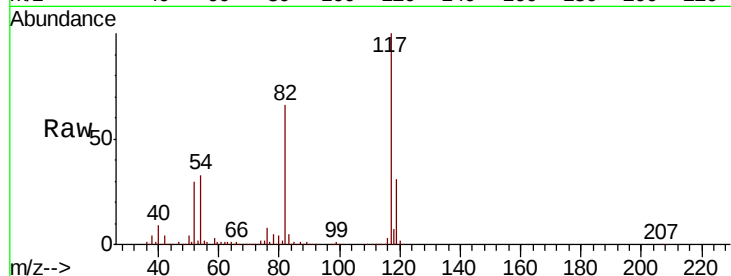
Tgt Ion: 91 Resp: 173291
Ion Ratio Lower Upper
91 100
92 61.2 48.2 72.4



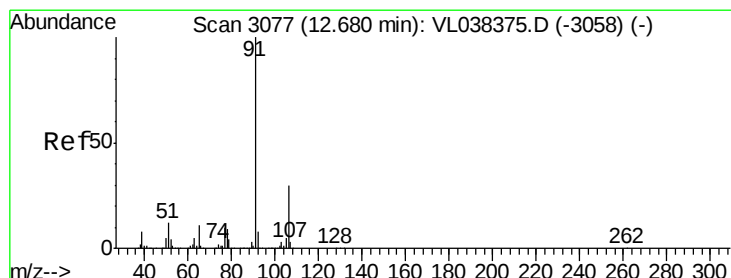
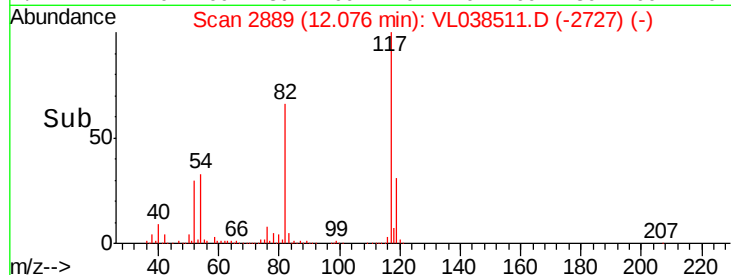
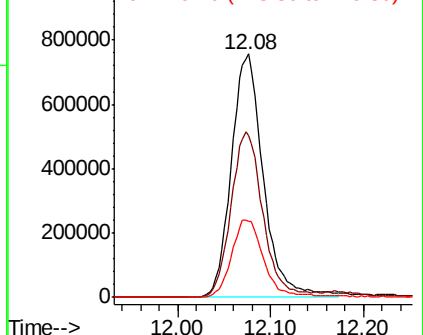


#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.08 min
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 3 Mar 2022 12:50

Tot Ion: 117 Resp: 1814622
Ion Ratio Lower Upper
117 100
82 68.2 54.9 82.3
119 32.8 46.1 69.1#

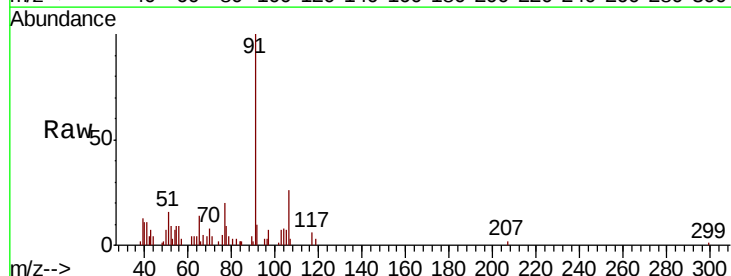


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

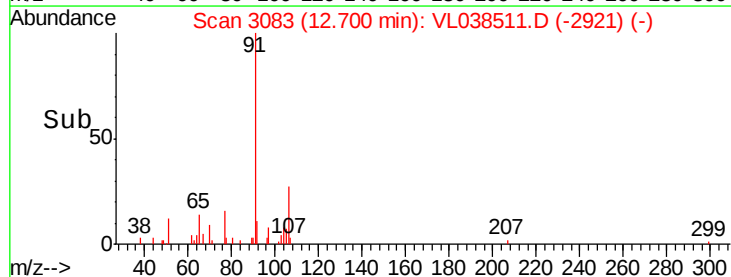
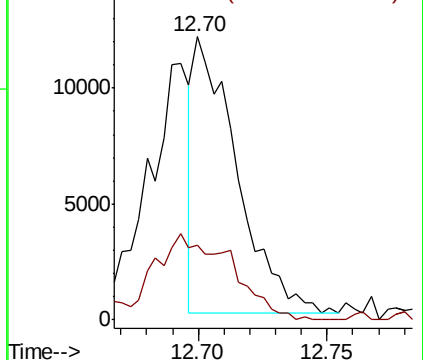


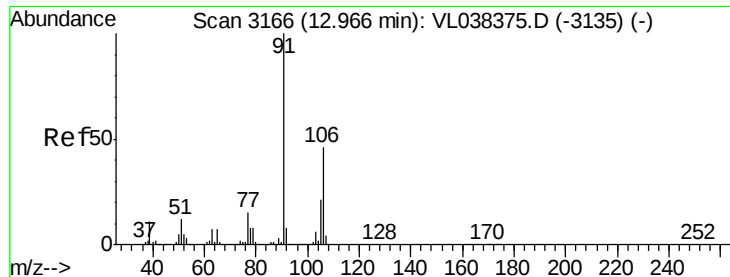
#58
Ethyl Benzene
Concen: 0.056 ppbv
RT: 12.70 min Scan# 3083
Delta R.T.: 0.02 min
Lab File: VL038511.D
Acq: 3 Mar 2022 12:50

Tgt Ion: 91 Resp: 13772
Ion Ratio Lower Upper
91 100
106 26.8 24.0 36.0



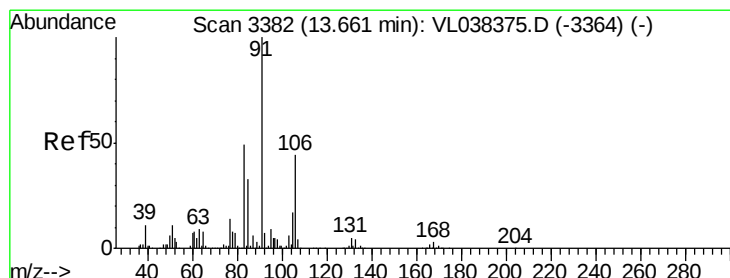
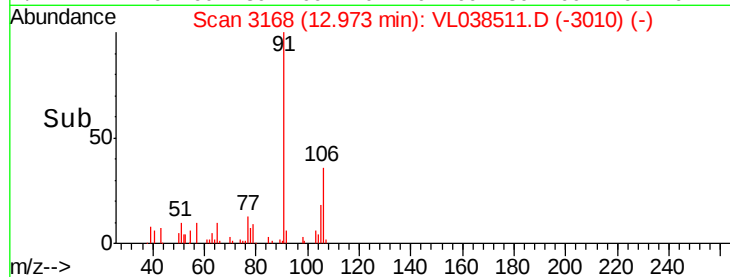
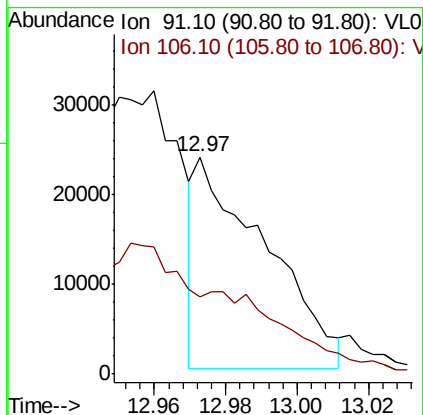
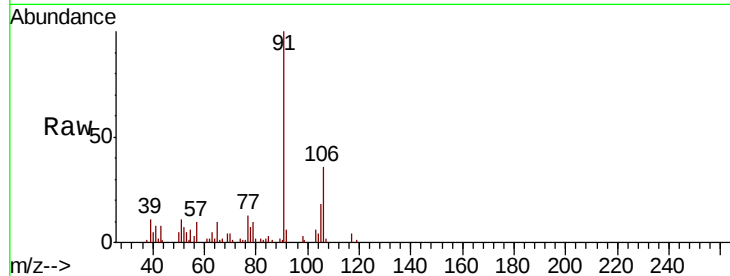
Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





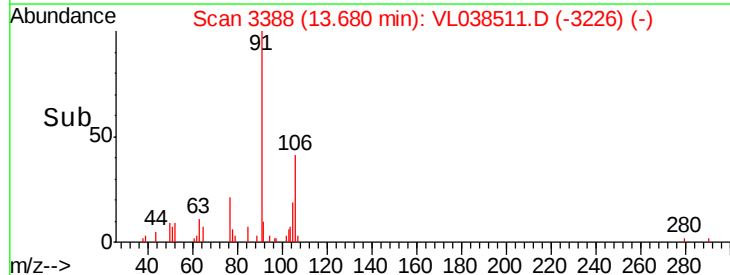
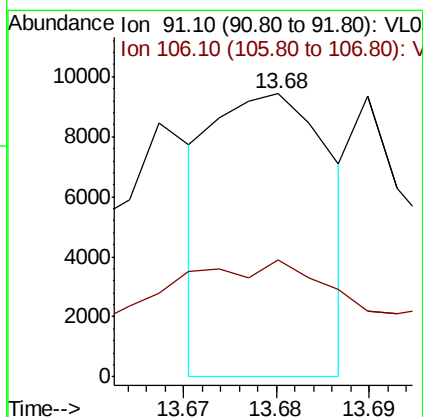
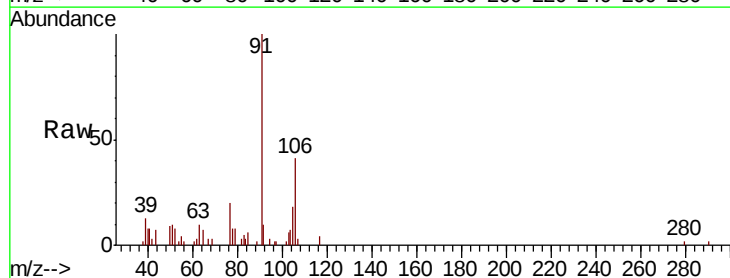
#59
m/p-Xylene
Concen: 0.151 ppbv
RT: 12.97
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
MP-3DL
Acq: 3 Mar 2022 12:50

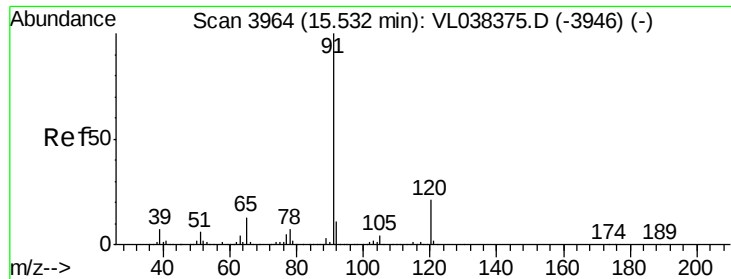
Tot Ion: 91 Resp: 32154
Ion Ratio Lower Upper
91 100
106 0.0 34.4 51.6#



#60
o-Xylene
Concen: 0.041 ppbv
RT: 13.68 min Scan# 3388
Delta R.T. 0.02 min
Lab File: VL038511.D
Acq: 3 Mar 2022 12:50

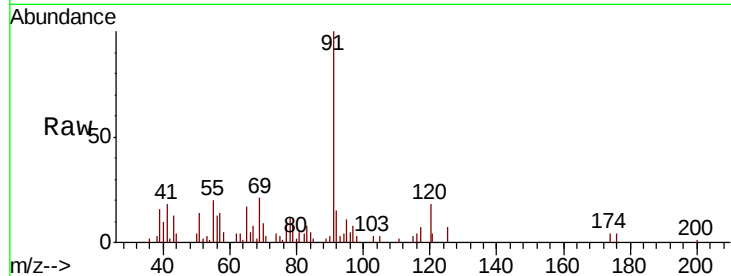
Tgt Ion: 91 Resp: 8268
Ion Ratio Lower Upper
91 100
106 110.8 21.9 65.5#



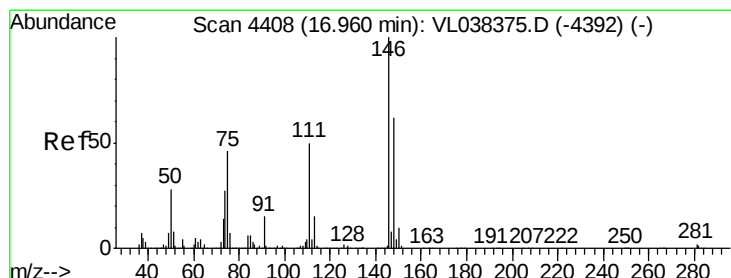
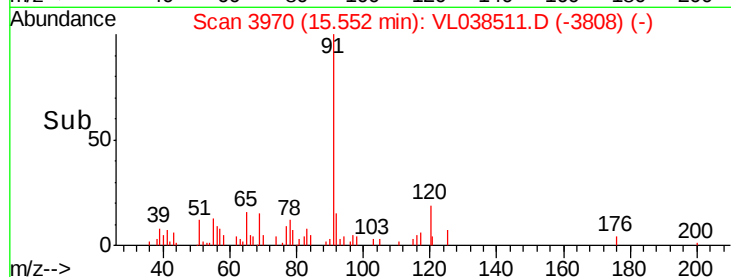
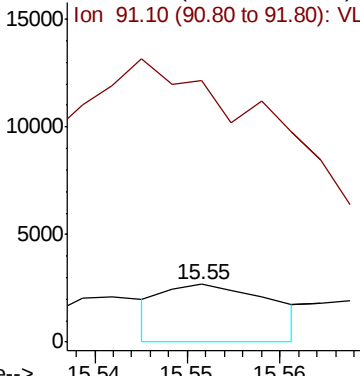


#64
n-propylbenzene
Concen: 0.033 ppbv
RT: 15.55 min
Delta R.T. MSVOA_L
Lab File: ClientSampleId:
Acq: 3 Mar 2022 12:50

Tot Ion: 120 Resp: 2204
Ion Ratio Lower Upper
120 100
91 0.0 388.1 582.1#

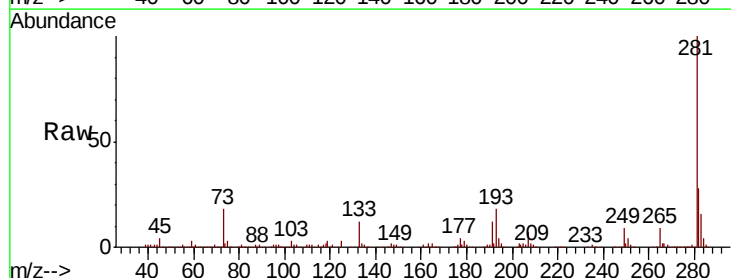


Abundance Ion 120.20 (119.90 to 120.90): V
Ion 91.10 (90.80 to 91.80): VL0

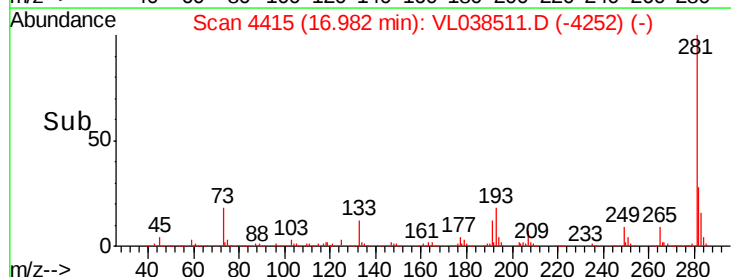
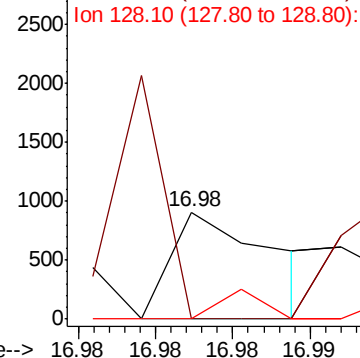


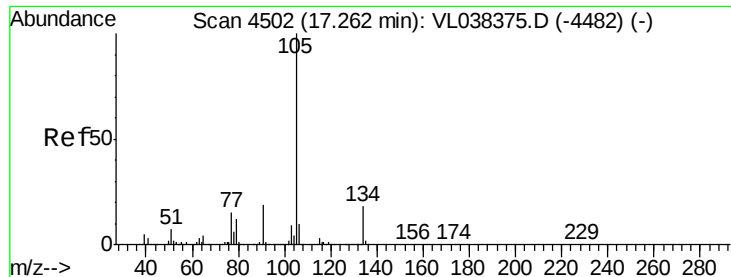
#66
Benzyl Chloride
Concen: 0.032 ppbv
RT: 16.98 min Scan# 4415
Delta R.T. 0.02 min
Lab File: VL038511.D
Acq: 3 Mar 2022 12:50

Tgt Ion: 91 Resp: 409
Ion Ratio Lower Upper
91 100
126 0.0 12.3 18.5#
128 0.0 4.2 6.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 126.10 (125.80 to 126.80): V
Ion 128.10 (127.80 to 128.80): V





#67

sec-Butylbenzene

Concen: 0.041 ppbv

RT: 17.29 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

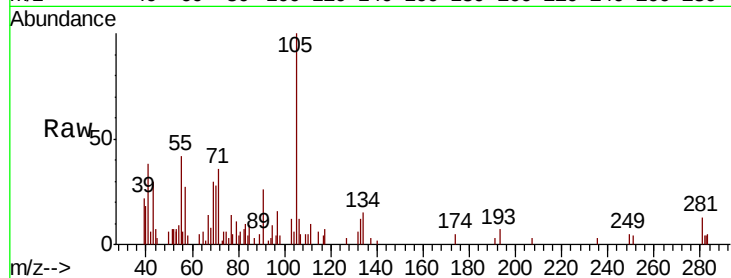
Acq: 3 Mar 2022 12:50

Tot Ion: 105 Resp: 13632

Ion Ratio Lower Upper

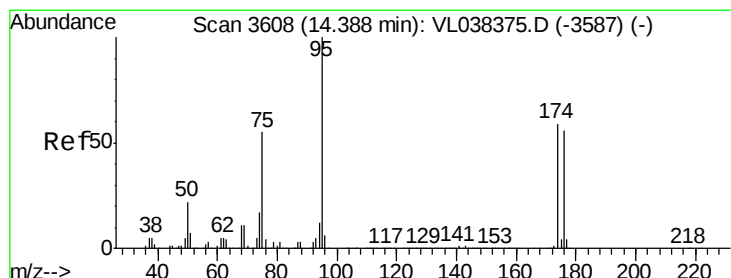
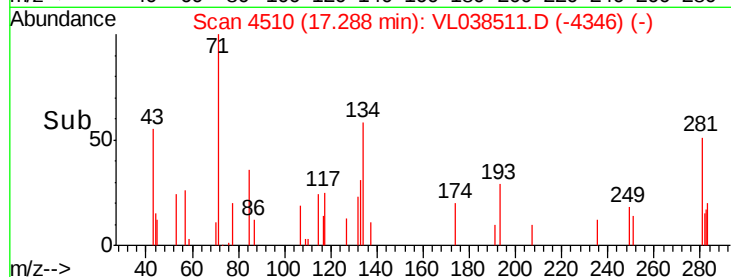
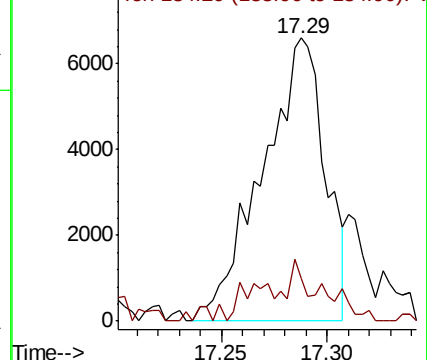
105 100

134 21.5 14.6 21.8



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.998 ppbv

RT: 14.40 min Scan# 3613

Delta R.T. 0.02 min

Lab File: VL038511.D

Acq: 3 Mar 2022 12:50

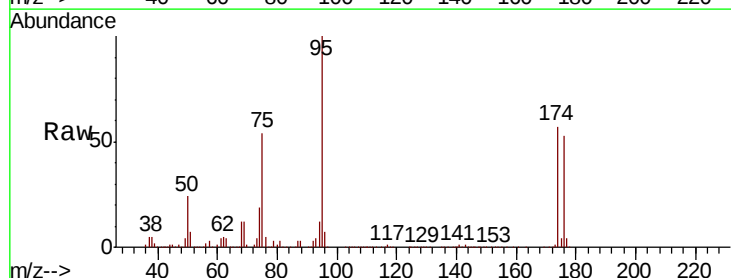
Tgt Ion: 95 Resp: 1501132

Ion Ratio Lower Upper

95 100

174 58.2 49.0 73.4

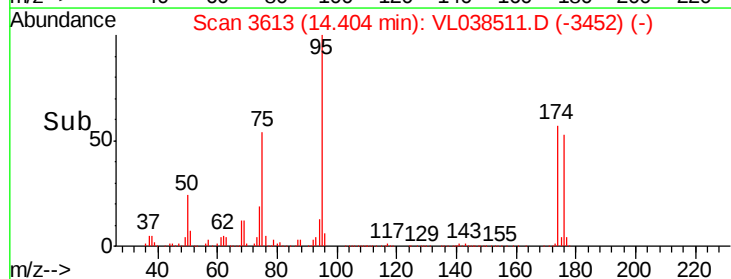
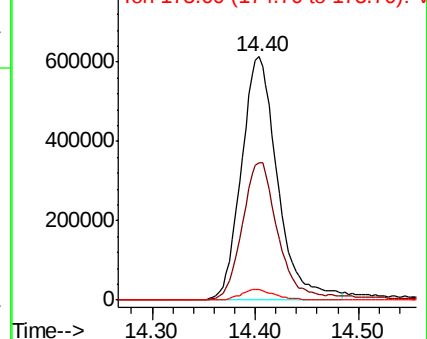
175 4.2 3.6 5.4

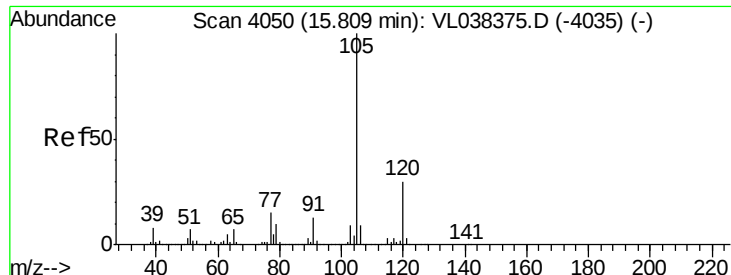


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.124 ppbv

RT: 15.83

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 3 Mar 2022 12:50

Tot Ion:105 Resp: 27613

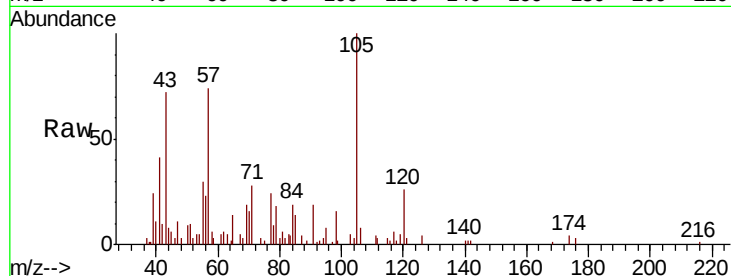
Ion Ratio Lower Upper

105 100

120 30.8 23.4 35.2

91 18.2 10.4 15.6#

77 25.3 11.6 17.4#

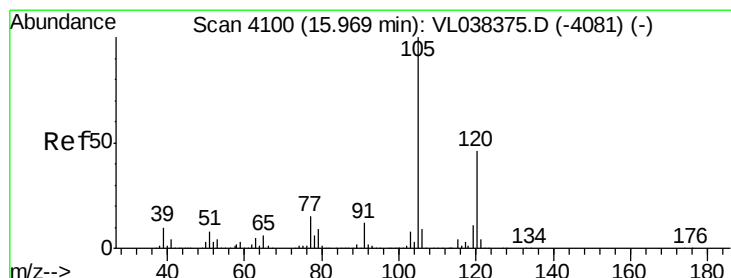
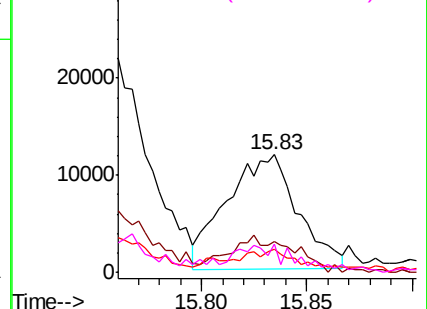
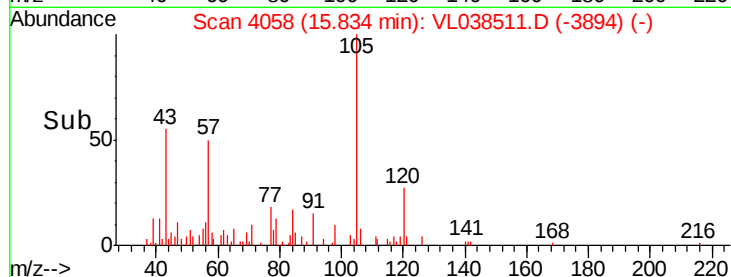


Abundance Ion 105.10 (104.80 to 105.80): V

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: 0.132 ppbv

RT: 15.99 min Scan# 4106

Delta R.T. 0.02 min

Lab File: VL038511.D

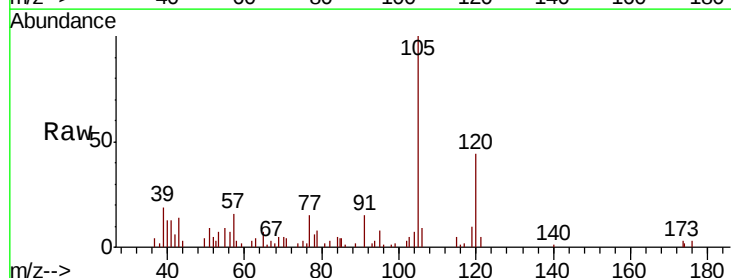
Acq: 3 Mar 2022 12:50

Tgt Ion:105 Resp: 26697

Ion Ratio Lower Upper

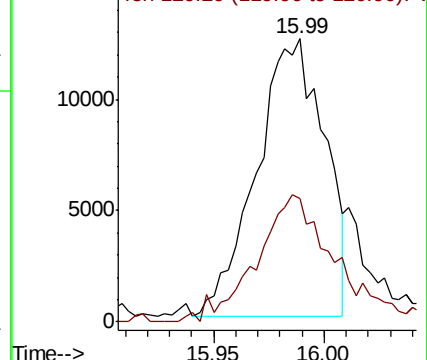
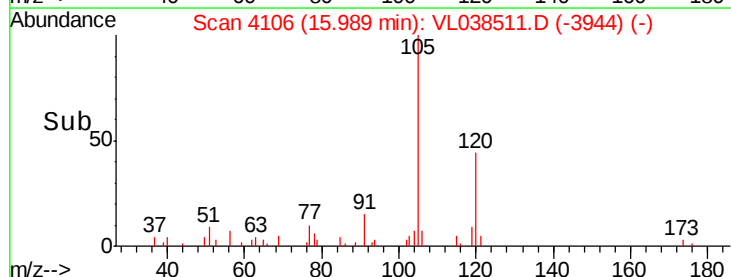
105 100

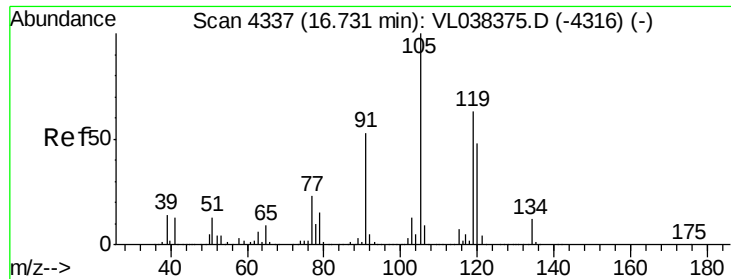
120 41.0 36.6 55.0



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.400 ppbv
 RT: 16.75
 Delta R.T: MSVOA_L
 Lab File: ClientSampleId :
 Acq: 3 Mar 2022 12:30

Tot Ion:	105	Resp:	85109
Ion Ratio	Lower	Upper	
105	100		
120	39.9	38.2	57.4
91	15.8	42.7	64.1#
77	17.6	18.5	27.7#

