

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL011321\
 Data File : VL036231.D
 Acq On : 13 Jan 2021 18:53
 Operator : SY/AP
 Sample : M1066-05
 Misc : 400ml/MSVOA L
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS1

Quant Time: Jan 13 22:09:12 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL011321AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jan 13 07:53:51 2021
 QLast Update : Wed Jan 13 07:53:51 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1442455	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3326760	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2982720	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2459295	9.96	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.60%

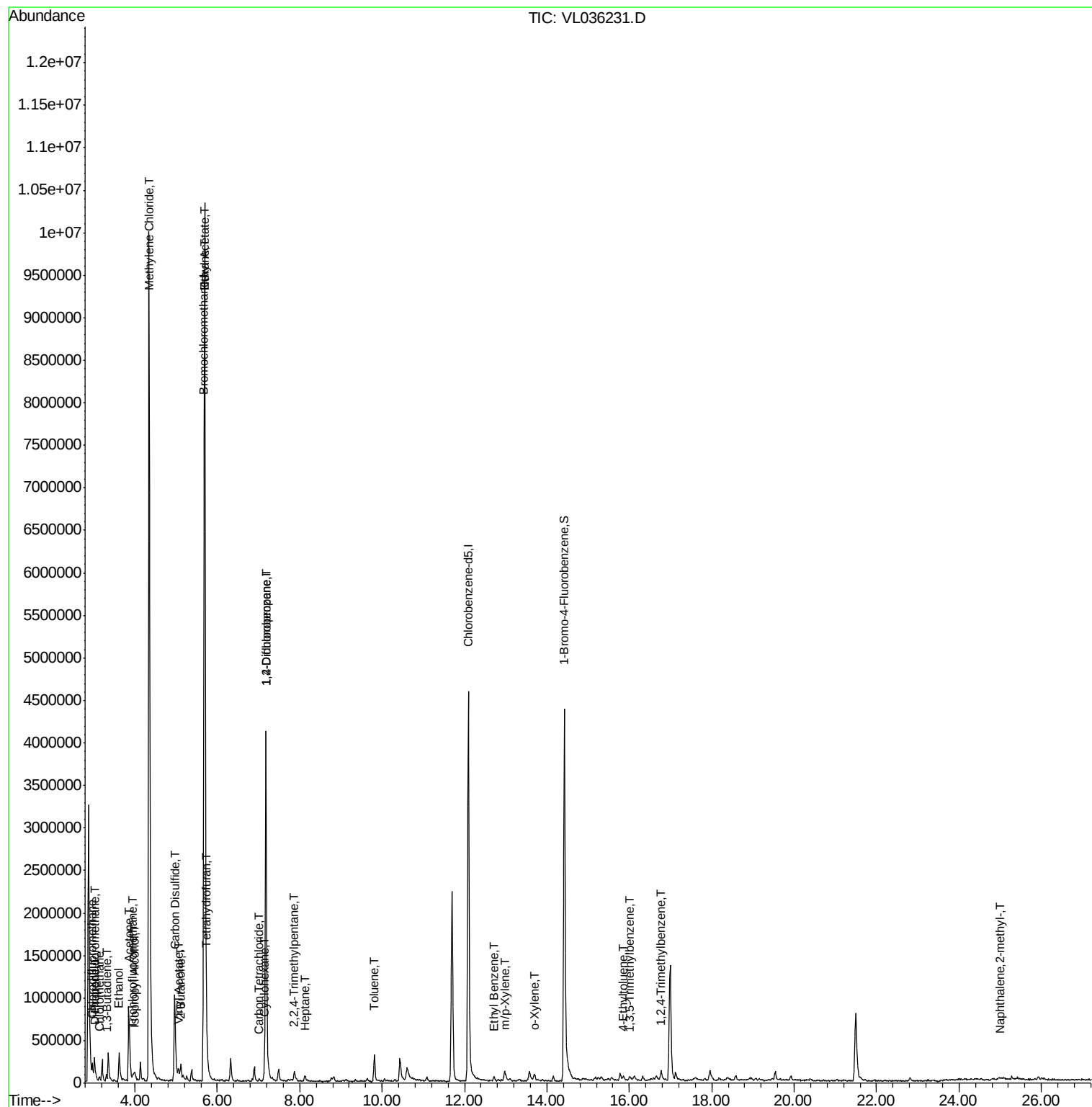
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	21370	0.109 ppbv	94
3) Chlorodifluoromethane	2.96	51	199622	1.115 ppbv #	74
4) Chloromethane	3.14	50	46658	0.527 ppbv	92
9) Propene	3.02	41	85218	0.999 ppbv	92
10) Heptane	8.12	43	26475	0.125 ppbv #	79
11) Trichlorofluoromethane	3.95	101	38156	0.199 ppbv	87
13) Ethanol	3.62	45	468388	26.158 ppbv	83
15) Acetone	3.85	43	1213428	7.083 ppbv	95
16) 1,3-Butadiene	3.32	39	3073	0.038 ppbv #	1
19) Isopropyl Alcohol	3.99	45	88875	0.898 ppbv #	93
20) Methylene Chloride	4.34	84	4046478	77.132 ppbv	96
23) Vinyl Acetate	5.08	43	7082	0.033 ppbv #	38
25) Ethyl Acetate	5.69	43	3524106	10.102 ppbv #	76
26) Hexane	5.69	57	4757247	32.609 ppbv #	36
27) Carbon Disulfide	4.96	76	87942	0.750 ppbv #	62
30) Cyclohexane	7.14	84	11880	0.104 ppbv #	1
34) 2-Butanone	5.11	43	98780	0.466 ppbv #	62
35) Carbon Tetrachloride	7.02	117	6345	0.030 ppbv #	67
39) 1,2-Dichloropropane	7.18	63	969661	7.835 ppbv #	21
41) Tetrahydrofuran	5.74	42	38559	0.309 ppbv #	39
44) 2,2,4-Trimethylpentane	7.87	57	66855	0.119 ppbv #	32
53) Toluene	9.81	91	231140	0.685 ppbv	94
58) Ethyl Benzene	12.71	91	22253	0.050 ppbv	94
59) m/p-Xylene	13.00	91	15167	0.040 ppbv #	33
60) o-Xylene	13.70	91	48506	0.132 ppbv	100
72) 4-Ethyltoluene	15.84	105	15306	0.037 ppbv #	55
73) 1,3,5-Trimethylbenzene	16.00	105	14539	0.037 ppbv #	68
74) 1,2,4-Trimethylbenzene	16.77	105	36697	0.091 ppbv #	63
80) Naphthalene,2-methyl-	25.01	142	1922	0.041 ppbv #	49

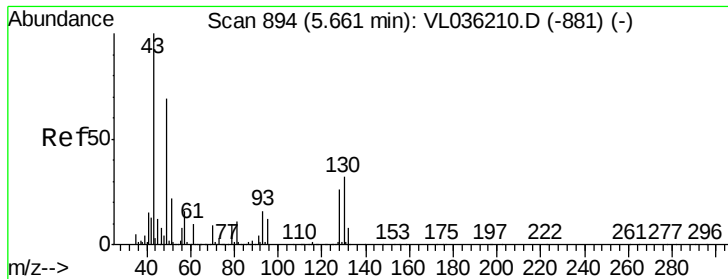
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Jan 13 07:53:51 2021
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

0121-SS1

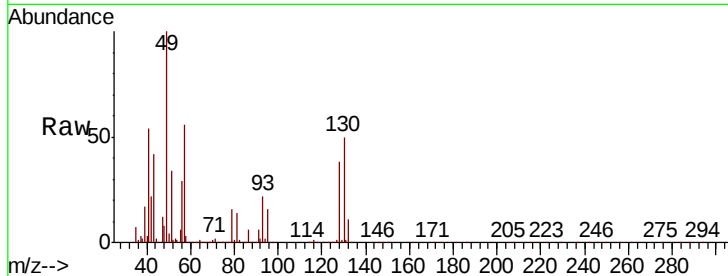
Tot Ion: 49 Resp: 1442455

Ion Ratio Lower Upper

49 100

128 41.1 20.1 60.2

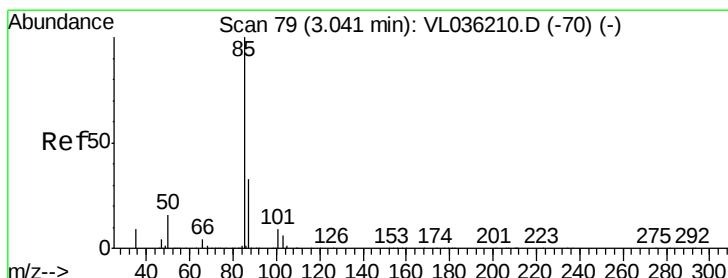
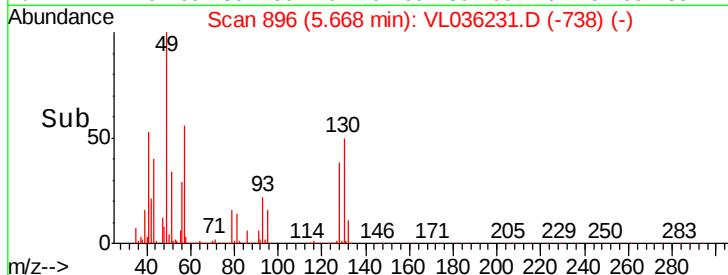
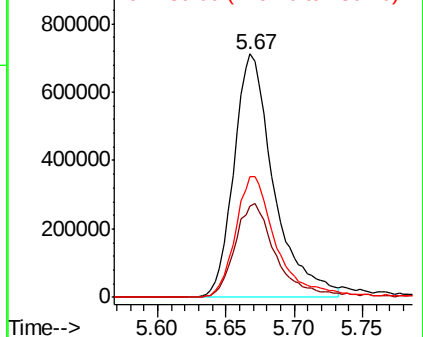
130 51.9 25.3 75.9



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: 0.109 ppbv

RT: 3.04 min Scan# 80

Delta R.T. 0.00 min

Lab File: VL036231.D

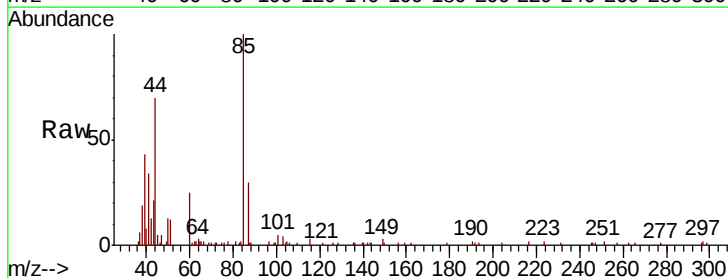
Acq: 13 Jan 2021 18:53

Tgt Ion: 85 Resp: 21370

Ion Ratio Lower Upper

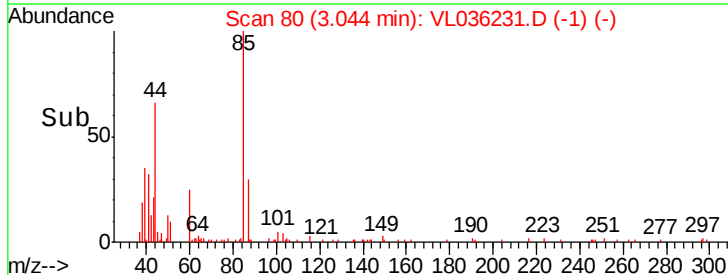
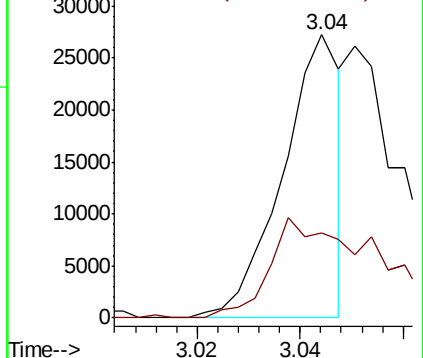
85 100

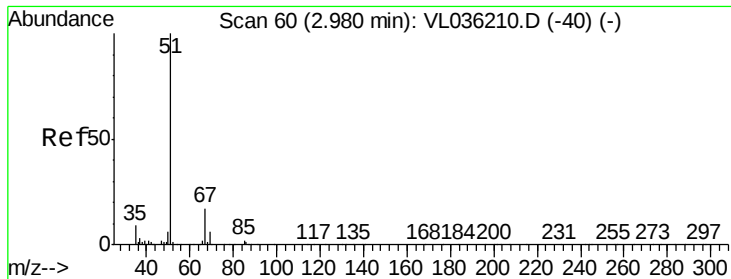
87 29.9 26.4 39.6



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.115 ppbv

RT: 2.96 min Scan# 54

Delta R.T. -0.02 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

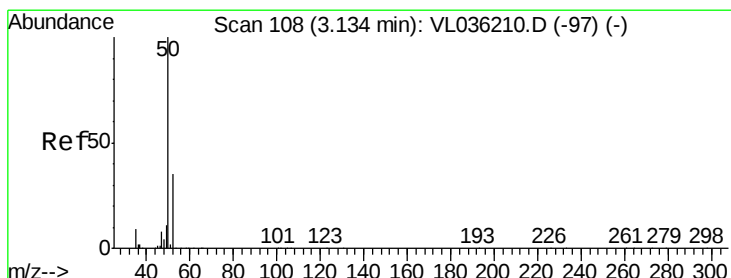
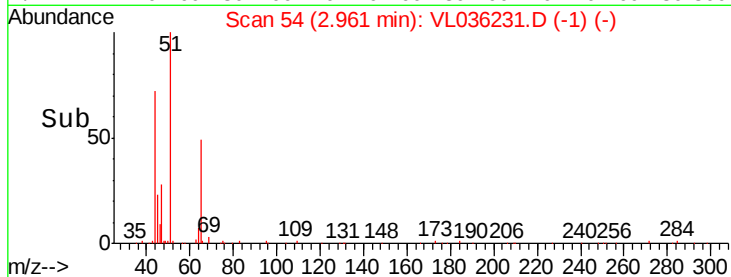
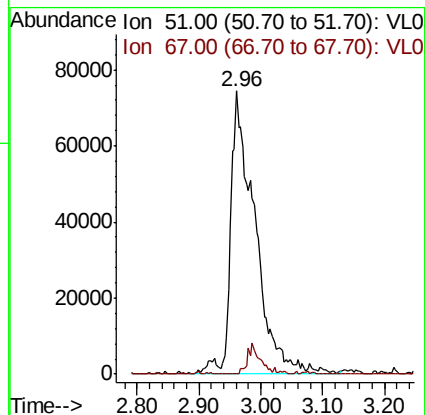
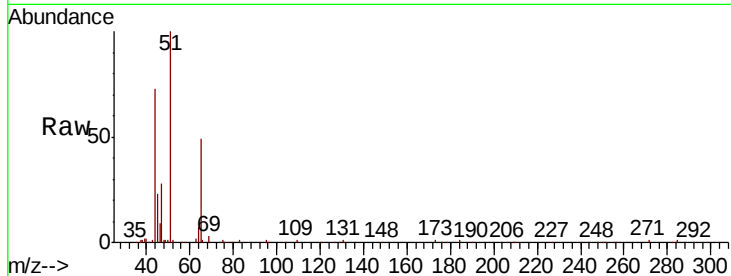
0121-SS1

Tot Ion: 51 Resp: 199622

Ion Ratio Lower Upper

51 100

67 6.1 14.0 21.0#



#4

Chloromethane

Concen: 0.527 ppbv

RT: 3.14 min Scan# 109

Delta R.T. 0.00 min

Lab File: VL036231.D

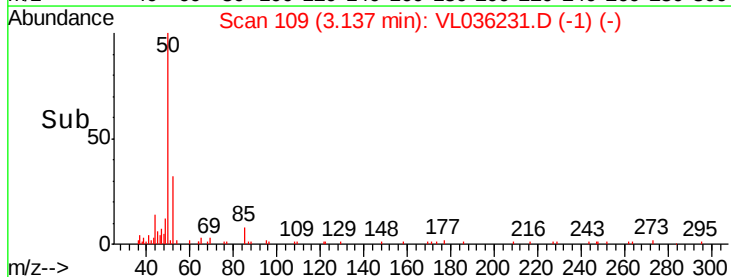
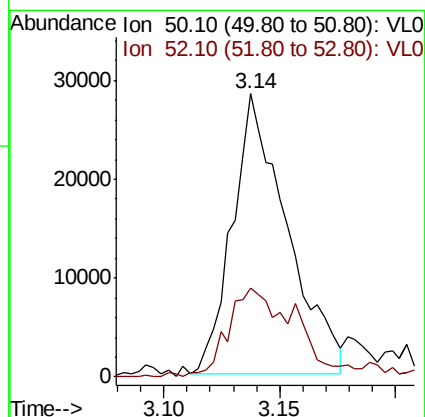
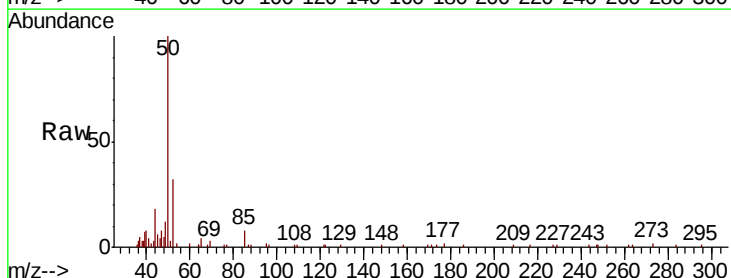
Acq: 13 Jan 2021 18:53

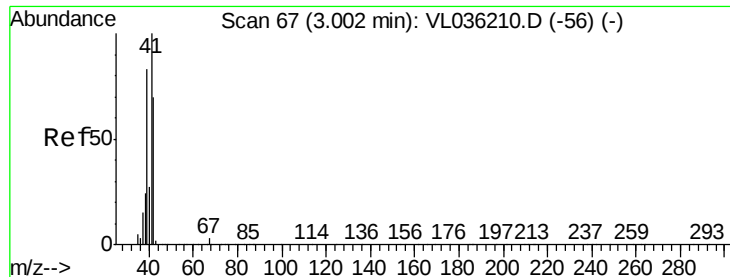
Tgt Ion: 50 Resp: 46658

Ion Ratio Lower Upper

50 100

52 30.5 27.8 41.8





#9

Propene

Concen: 0.999 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

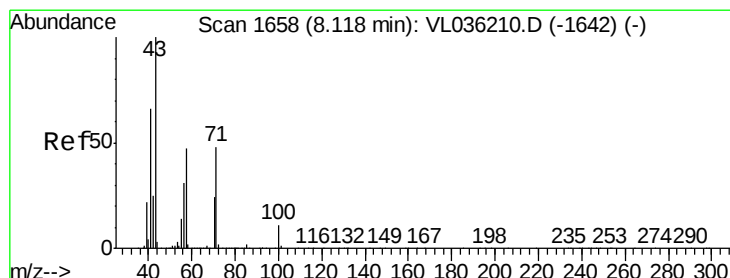
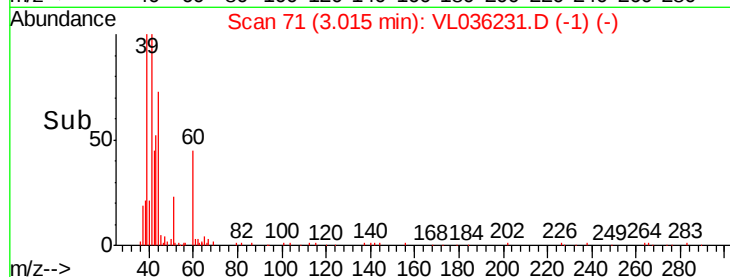
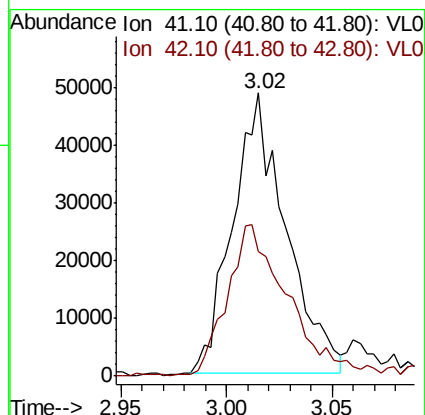
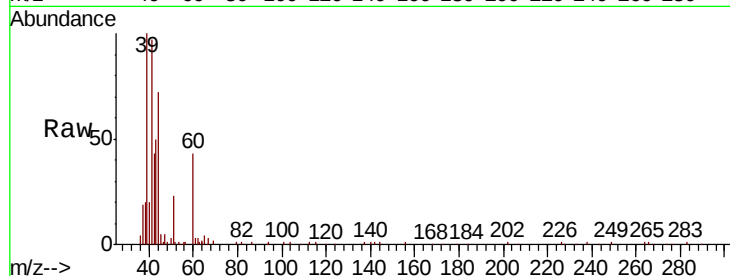
0121-SS1

Tot Ion: 41 Resp: 85218

Ion Ratio Lower Upper

41 100

42 65.1 57.1 85.7



#10

Heptane

Concen: 0.125 ppbv

RT: 8.12 min Scan# 1660

Delta R.T. 0.01 min

Lab File: VL036231.D

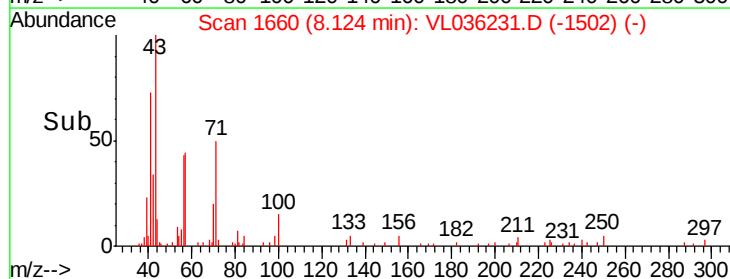
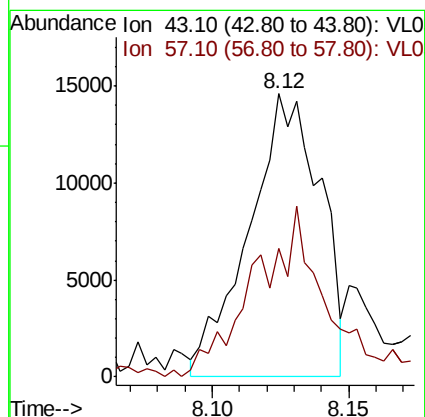
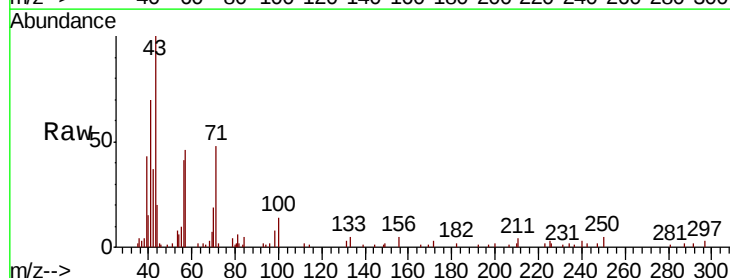
Acq: 13 Jan 2021 18:53

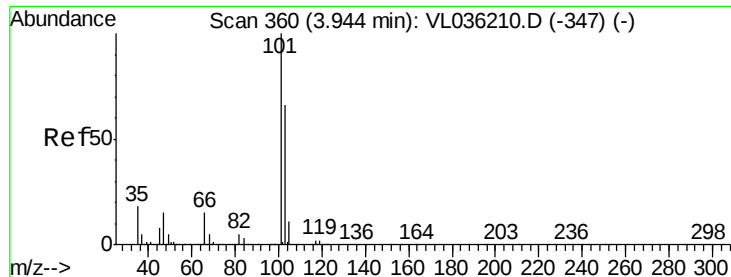
Tgt Ion: 43 Resp: 26475

Ion Ratio Lower Upper

43 100

57 61.7 38.1 57.1#





#11

Trichlorofluoromethane

Concen: 0.199 ppbv

RT: 3.95 min Scan# 362

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

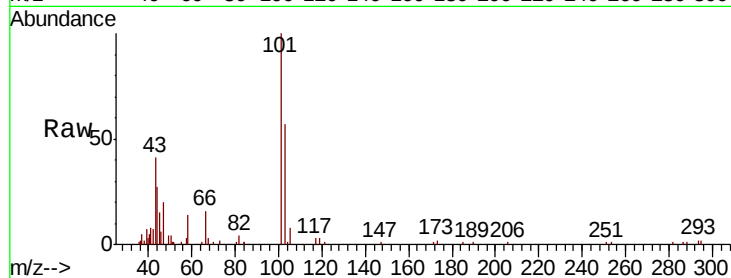
0121-SS1

Tot Ion:101 Resp: 38156

Ion Ratio Lower Upper

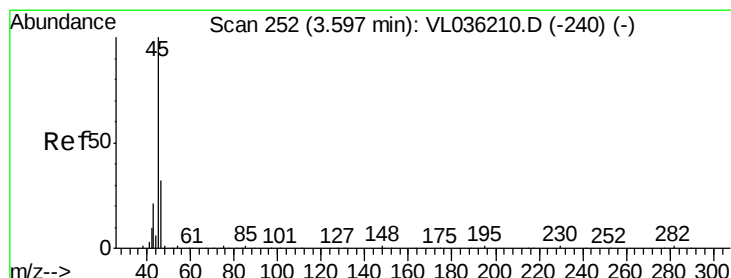
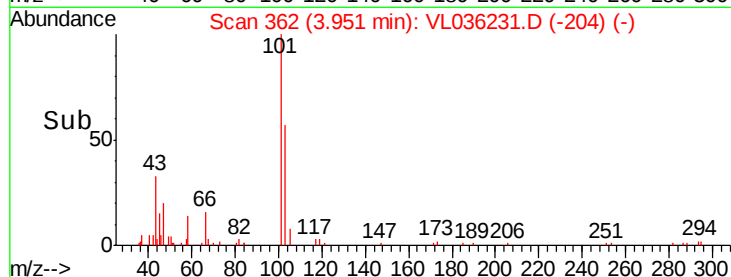
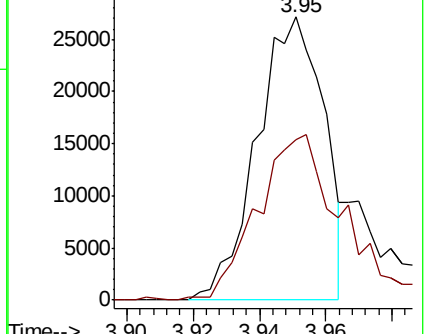
101 100

103 55.7 52.6 78.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#13

Ethanol

Concen: 26.158 ppbv

RT: 3.62 min Scan# 259

Delta R.T. 0.02 min

Lab File: VL036231.D

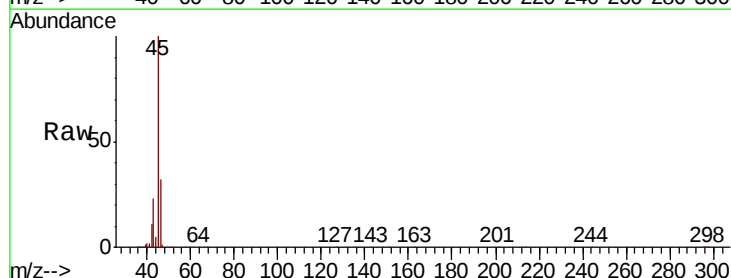
Acq: 13 Jan 2021 18:53

Tgt Ion: 45 Resp: 468388

Ion Ratio Lower Upper

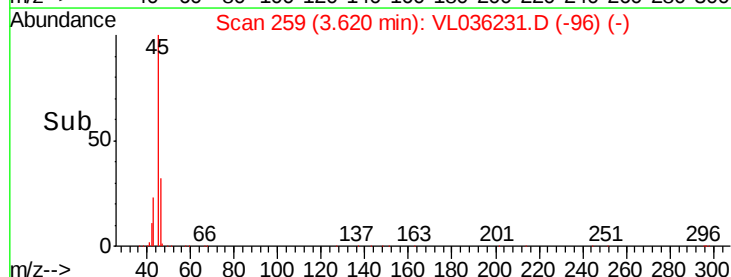
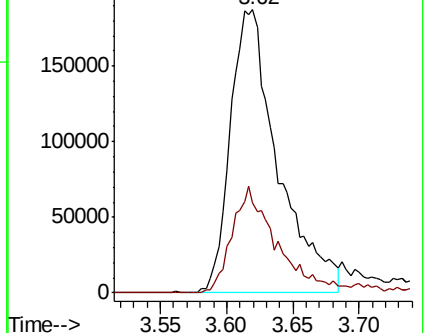
45 100

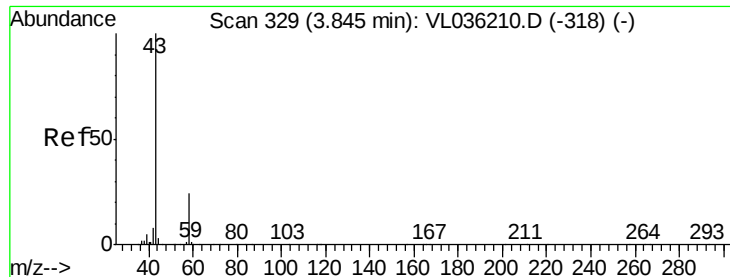
46 36.7 19.2 77.0



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

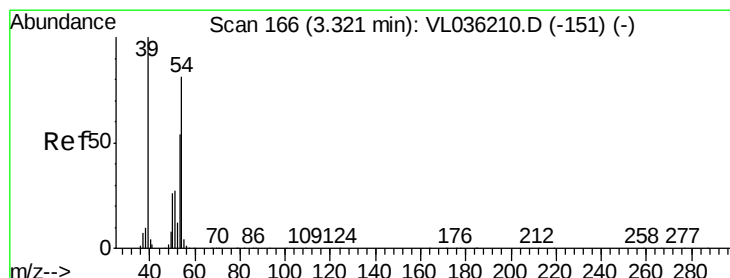
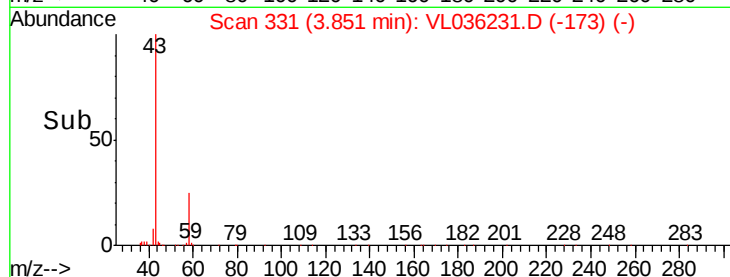
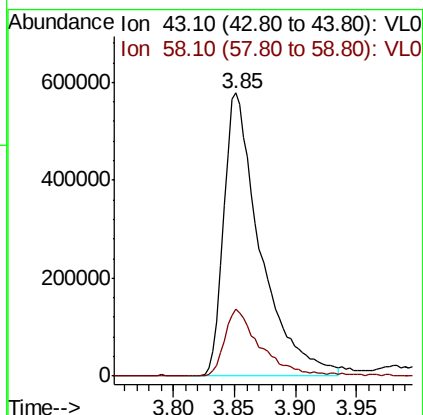
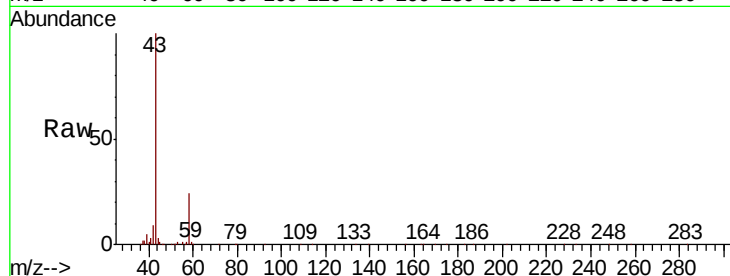




#15
Acetone
Concen: 7.083 ppbv
RT: 3.85 min Scan# 331
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

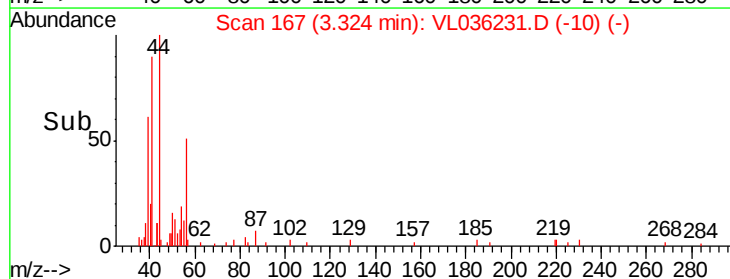
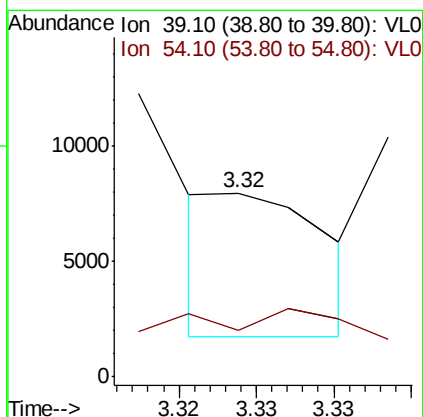
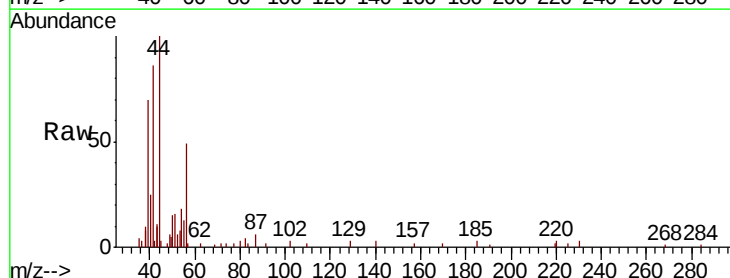
Instrument :
MSVOA_L
ClientSampleId :
0121-SS1

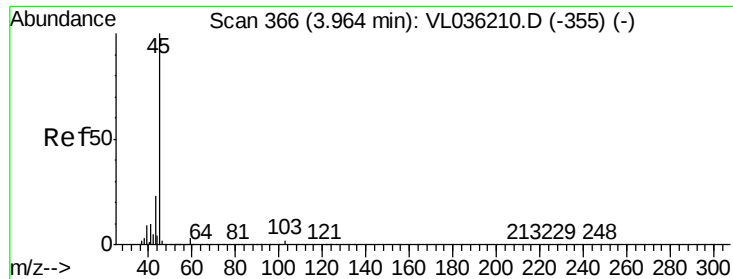
Tot Ion: 43 Resp: 1213428
Ion Ratio Lower Upper
43 100
58 23.6 20.9 31.3



#16
1,3-Butadiene
Concen: 0.038 ppbv
RT: 3.32 min Scan# 167
Delta R.T. 0.00 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Tgt Ion: 39 Resp: 3073
Ion Ratio Lower Upper
39 100
54 233.3 62.5 93.7#





#19

Isopropyl Alcohol

Concen: 0.898 ppbv

RT: 3.99 min Scan# 374

Delta R.T. 0.03 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

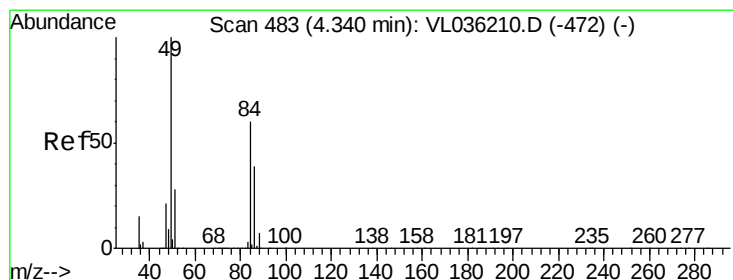
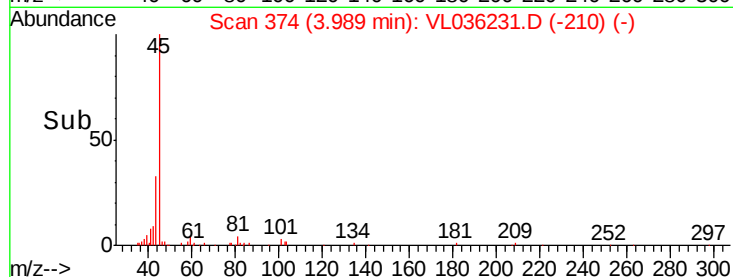
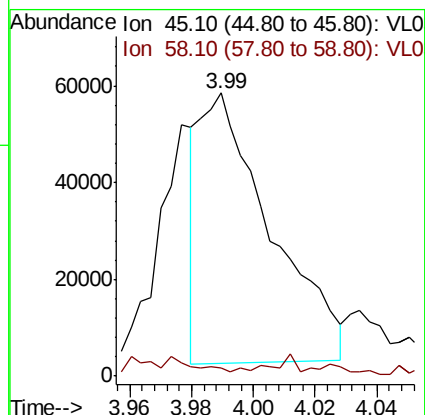
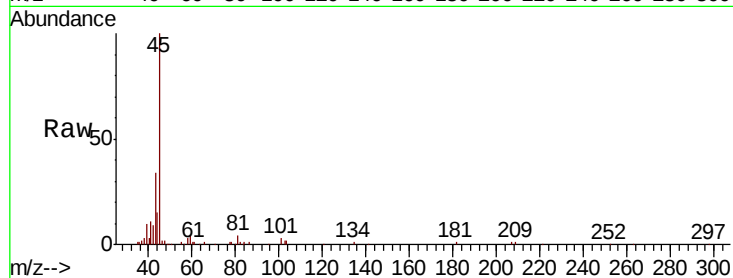
0121-SS1

Tot Ion: 45 Resp: 88875

Ion Ratio Lower Upper

45 100

58 0.0 1.9 2.9#



#20

Methylene Chloride

Concen: 77.132 ppbv

RT: 4.34 min Scan# 484

Delta R.T. 0.00 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Tgt Ion: 84 Resp: 4046478

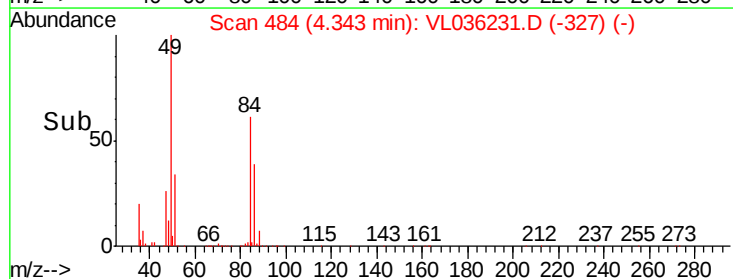
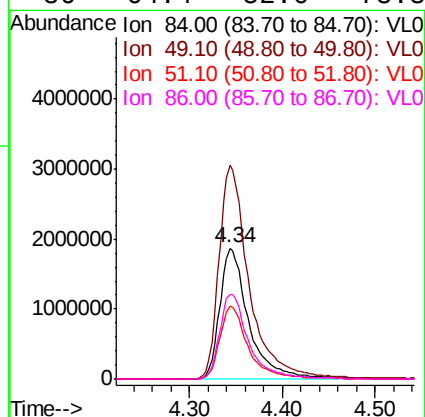
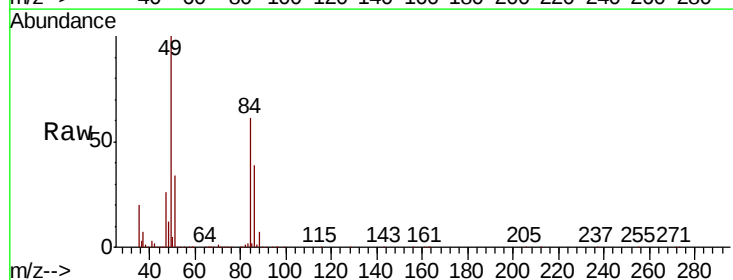
Ion Ratio Lower Upper

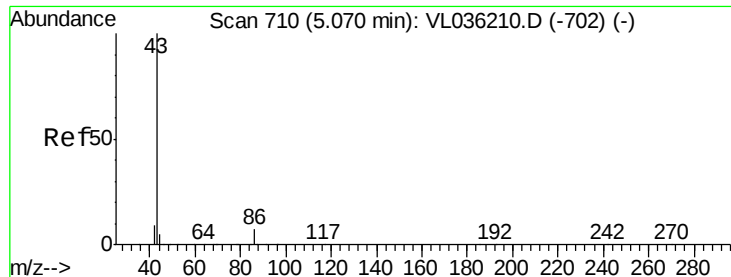
84 100

49 163.6 134.1 201.1

51 55.5 37.4 56.0

86 64.4 52.6 78.8





#23

Vinyl Acetate

Concen: 0.033 ppbv

RT: 5.08 min Scan# 712

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

0121-SS1

Tot Ion: 43 Resp: 7082

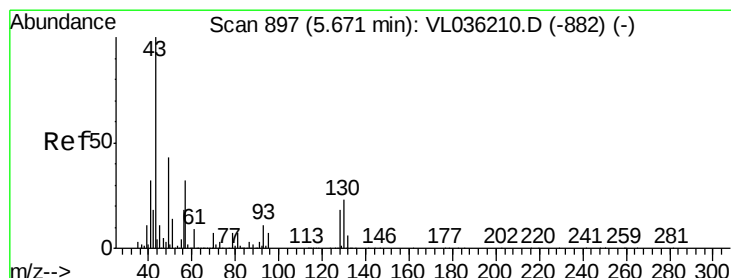
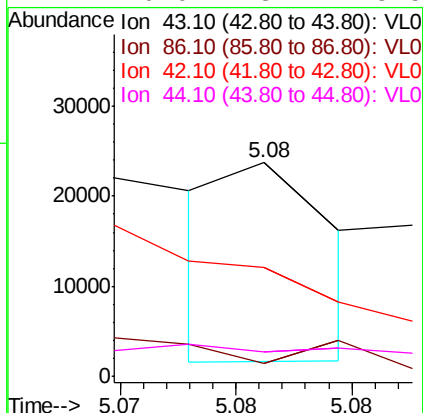
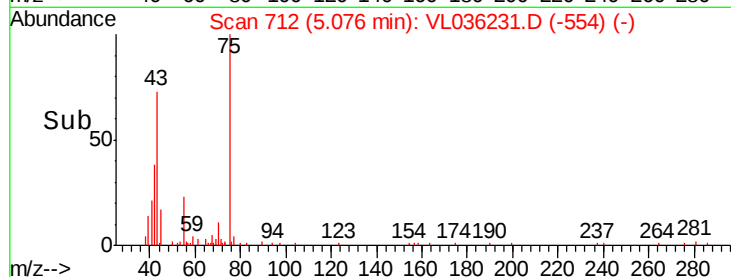
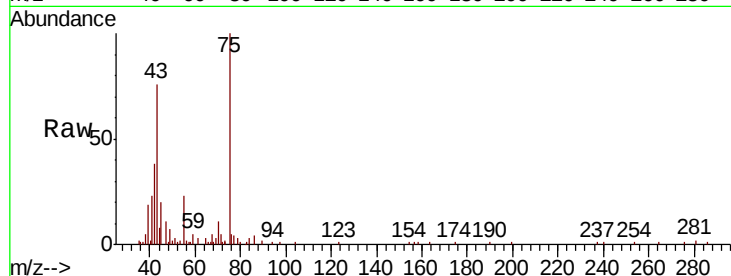
Ion Ratio Lower Upper

43 100

86 0.0 4.9 7.3#

42 51.3 7.8 11.6#

44 0.0 3.7 5.5#



#25

Ethyl Acetate

Concen: 10.102 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.02 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Tgt Ion: 43 Resp: 3524106

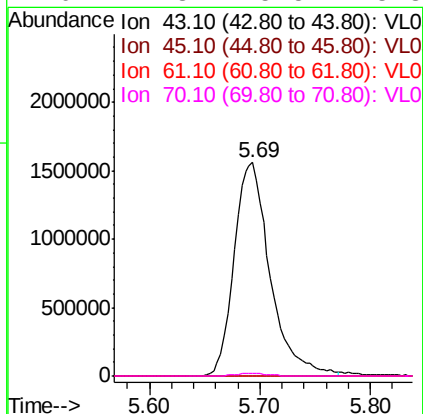
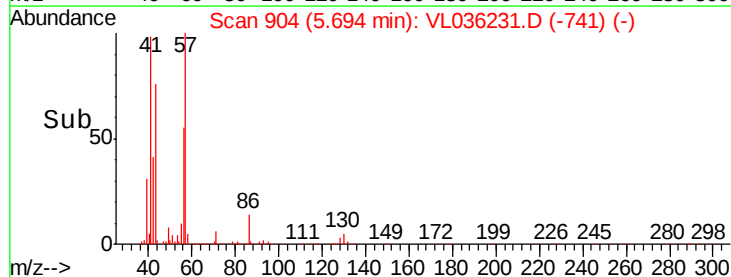
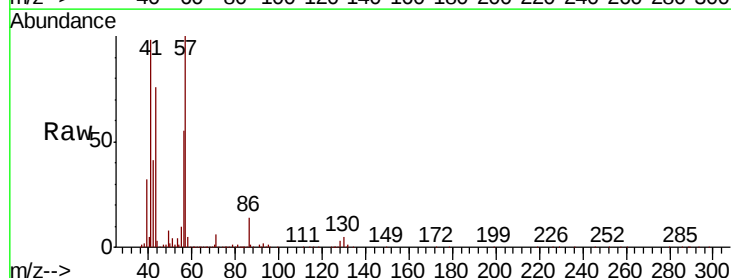
Ion Ratio Lower Upper

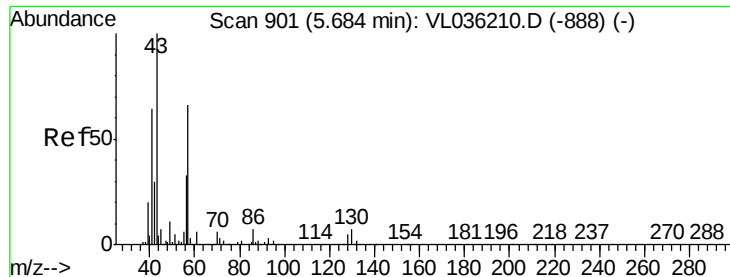
43 100

45 0.1 8.3 12.5#

61 0.2 7.4 11.2#

70 1.3 5.5 8.3#



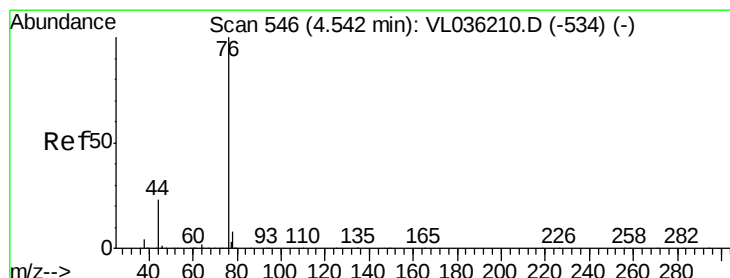
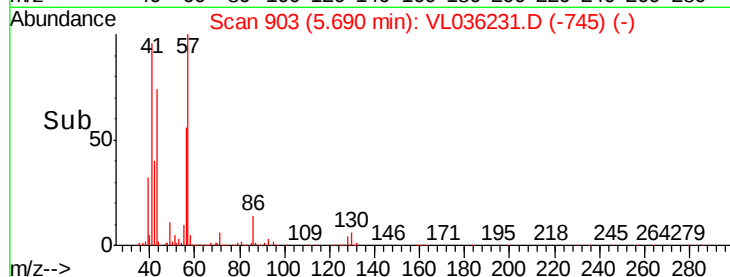
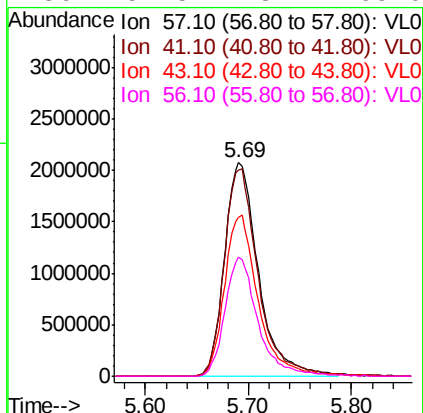
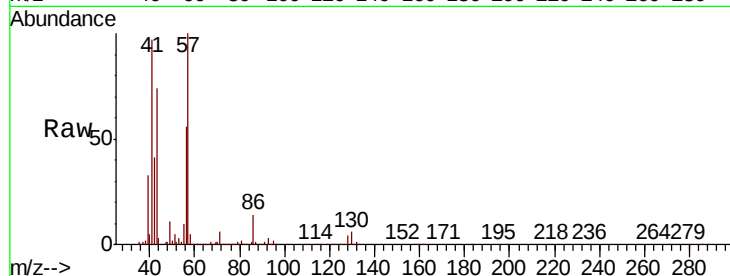


#26
Hexane
Concen: 32.609 ppbv
RT: 5.69 min Scan# 903
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Instrument :
MSVOA_L
ClientSampleId :
0121-SS1

Tot Ion: 57 Resp: 4757247

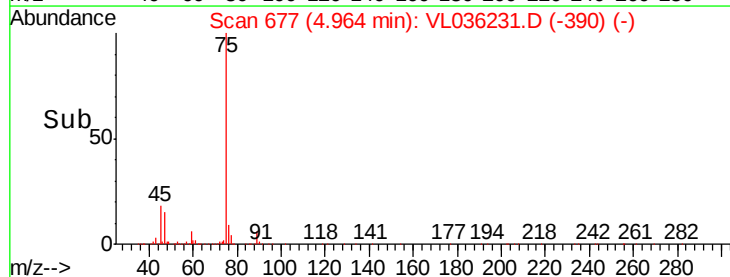
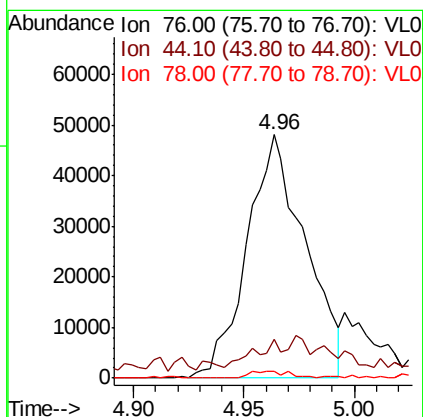
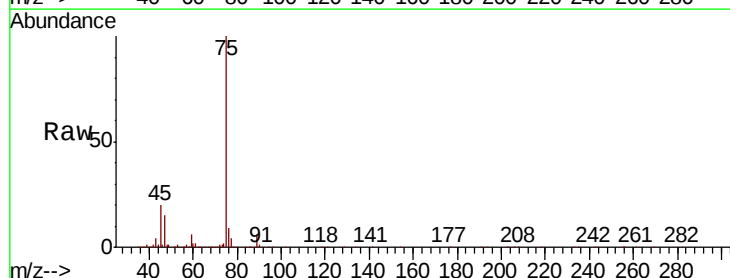
Ion	Ratio	Lower	Upper
57	100		
41	97.8	83.0	124.6
43	75.1	202.4	303.6#
56	54.5	43.4	65.0

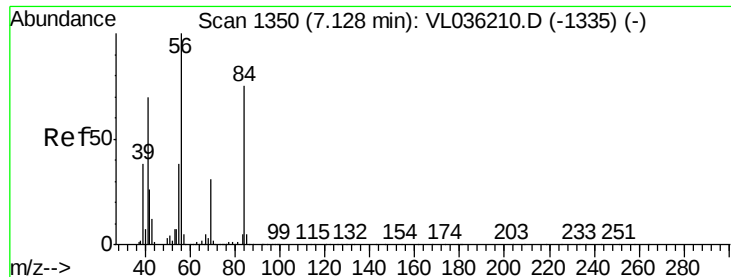


#27
Carbon Disulfide
Concen: 0.750 ppbv
RT: 4.96 min Scan# 677
Delta R.T. 0.42 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Tgt Ion: 76 Resp: 87942

Ion	Ratio	Lower	Upper
76	100		
44	3.0	19.0	28.6#
78	0.2	8.0	12.0#

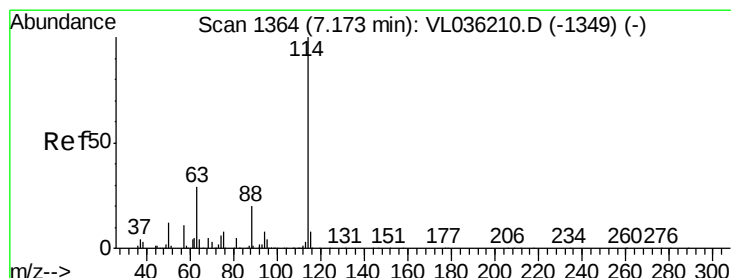
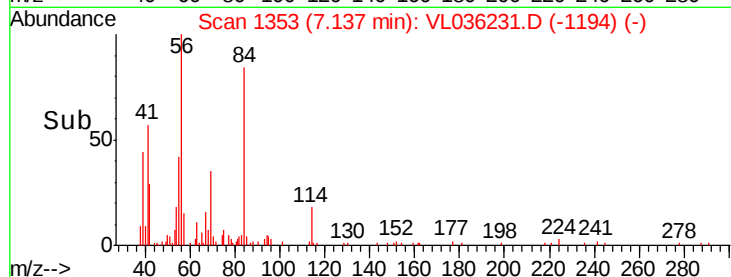
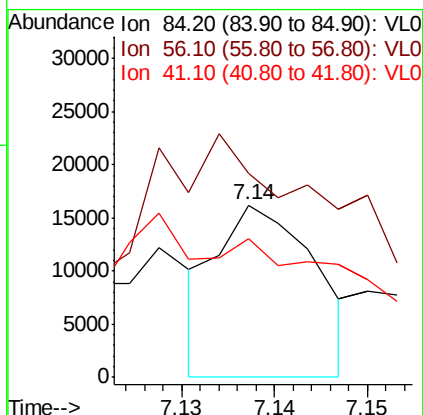
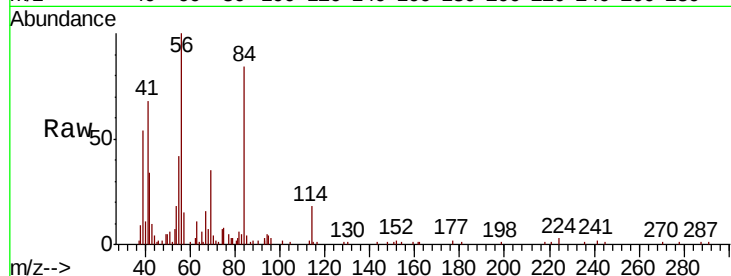




#30
Cyclohexane
Concen: 0.104 ppbv
RT: 7.14 min Scan# 1353
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

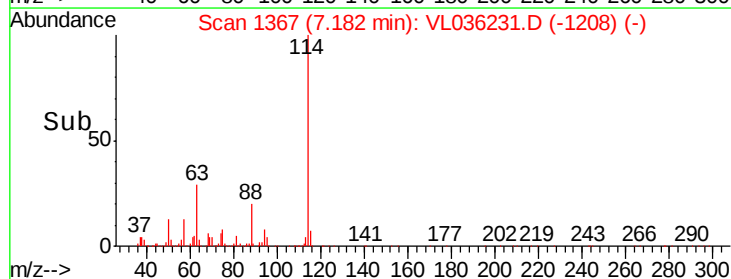
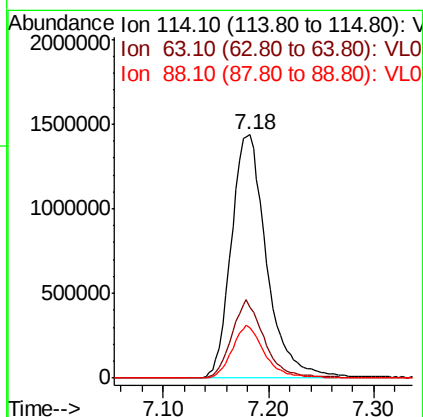
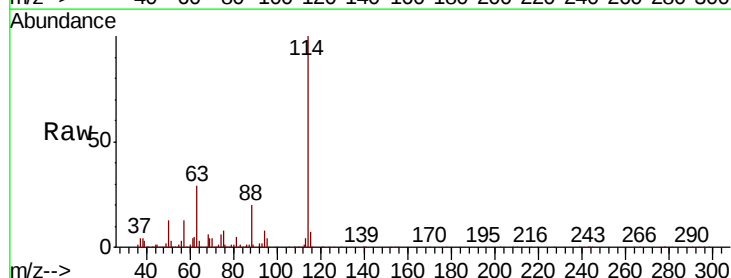
Instrument :
MSVOA_L
ClientSampled :
0121-SS1

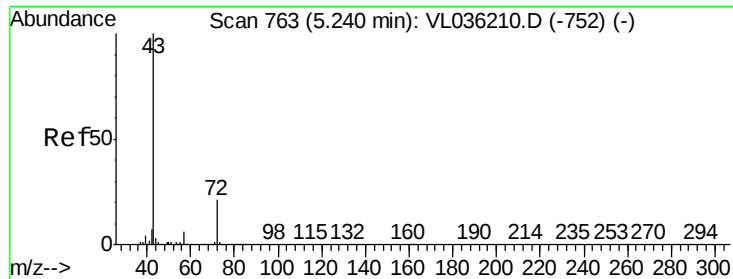
Tot Ion: 84 Resp: 11880
Ion Ratio Lower Upper
84 100
56 293.8 119.4 179.0#
41 0.0 79.4 119.0#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1367
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Tgt Ion: 114 Resp: 3326760
Ion Ratio Lower Upper
114 100
63 30.2 24.7 37.1
88 20.1 16.6 24.8

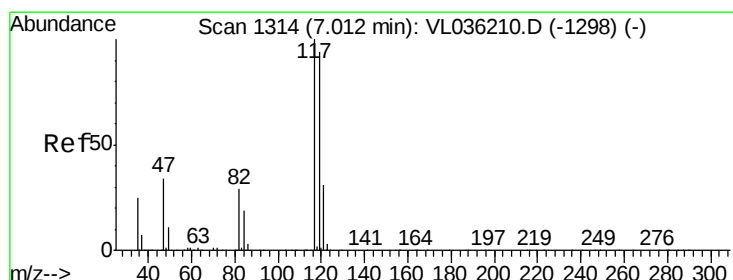
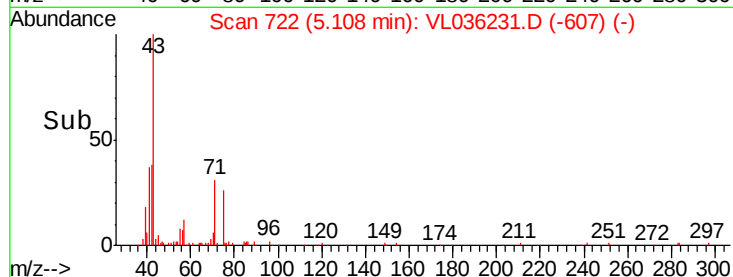
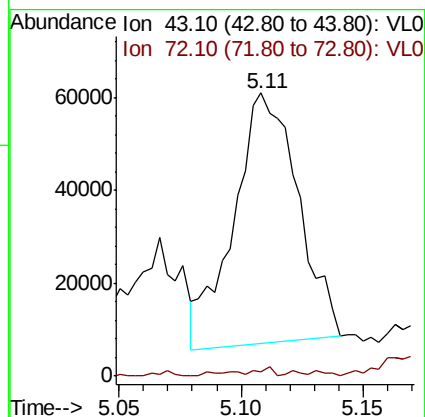
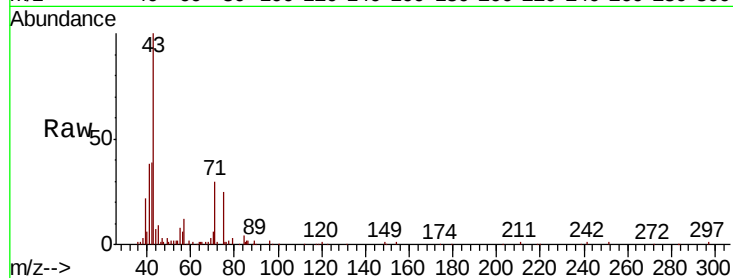




#34
2-Butanone
Concen: 0.466 ppbv
RT: 5.11 min Scan# 722
Delta R.T. -0.13 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

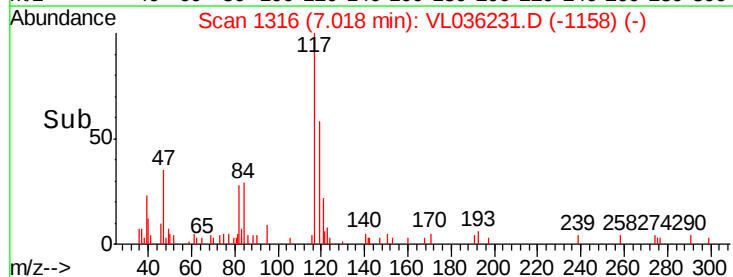
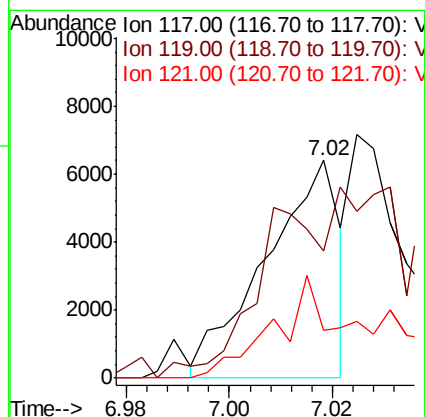
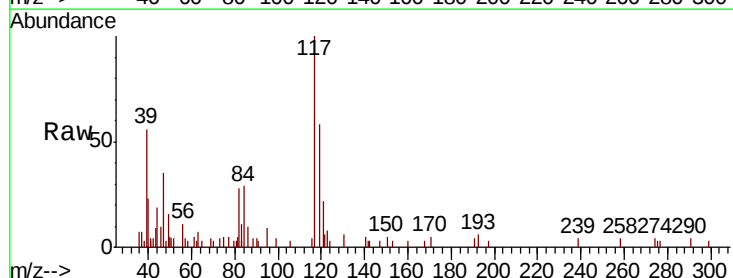
Instrument :
MSVOA_L
ClientSampleId :
0121-SS1

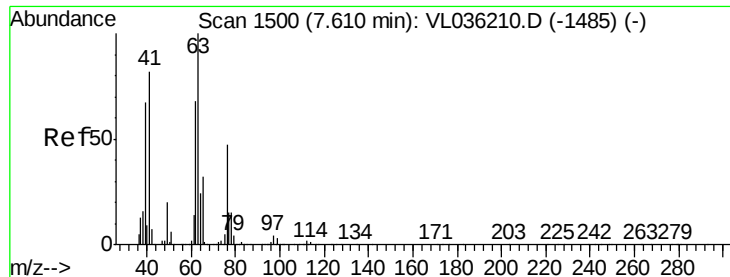
Tot Ion: 43 Resp: 98780
Ion Ratio Lower Upper
43 100
72 2.6 16.1 24.1#



#35
Carbon Tetrachloride
Concen: 0.030 ppbv
RT: 7.02 min Scan# 1316
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Tgt Ion: 117 Resp: 6345
Ion Ratio Lower Upper
117 100
119 55.7 74.9 112.3#
121 23.5 25.0 37.6#





#39

1,2-Dichloropropane

Concen: 7.835 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. -0.43 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

0121-SS1

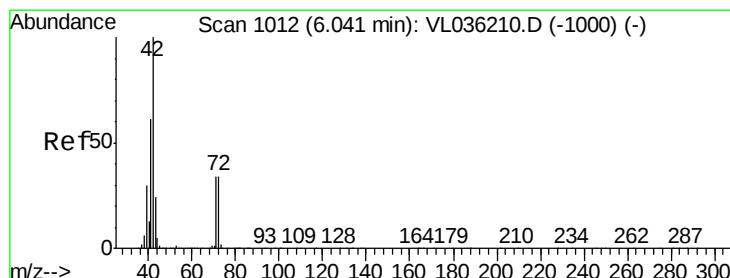
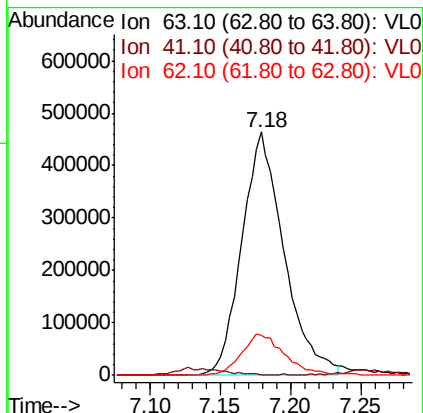
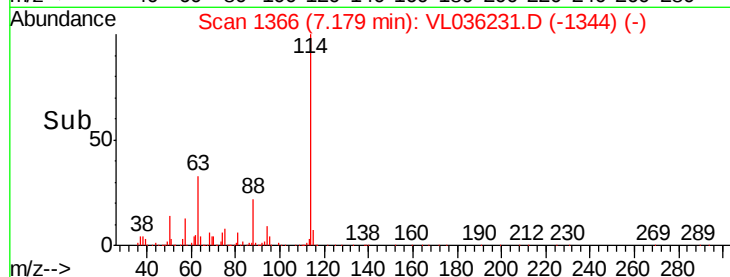
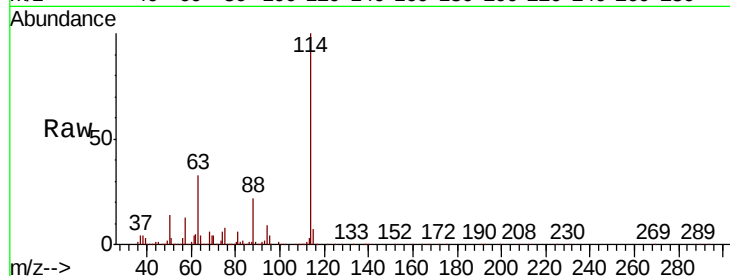
Tot Ion: 63 Resp: 969661

Ion Ratio Lower Upper

63 100

41 0.0 66.1 99.1#

62 16.6 54.8 82.2#



#41

Tetrahydrofuran

Concen: 0.309 ppbv

RT: 5.74 min Scan# 919

Delta R.T. -0.30 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

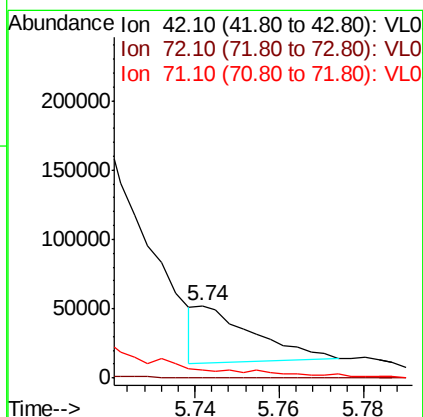
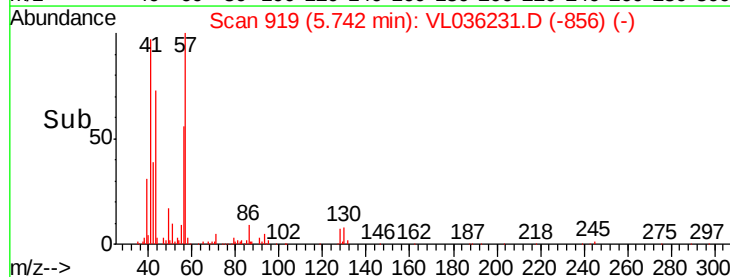
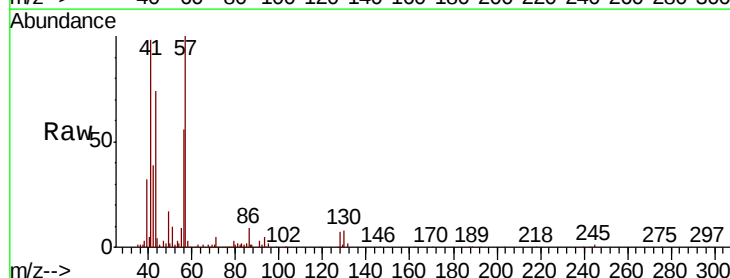
Tgt Ion: 42 Resp: 38559

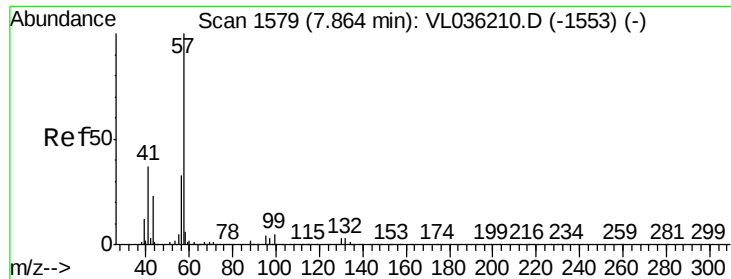
Ion Ratio Lower Upper

42 100

72 1.4 29.5 44.3#

71 0.0 29.1 43.7#

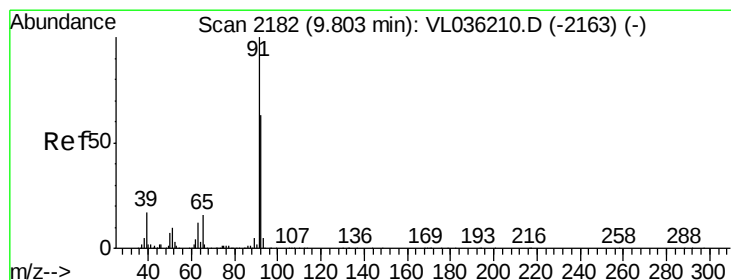
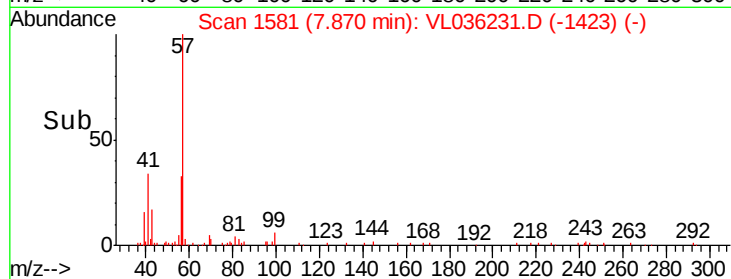
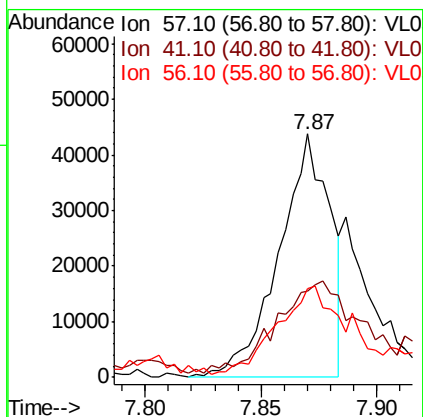
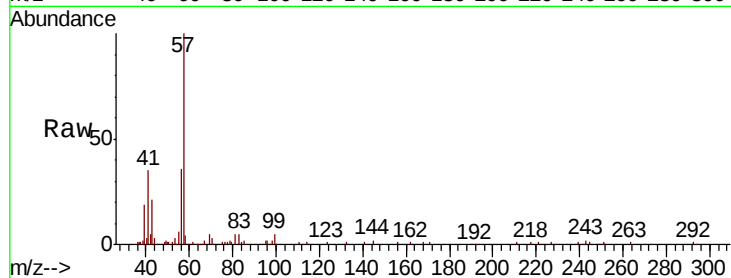




#44
2,2,4-Trimethylpentane
Concen: 0.119 ppbv
RT: 7.87 min Scan# 1581
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

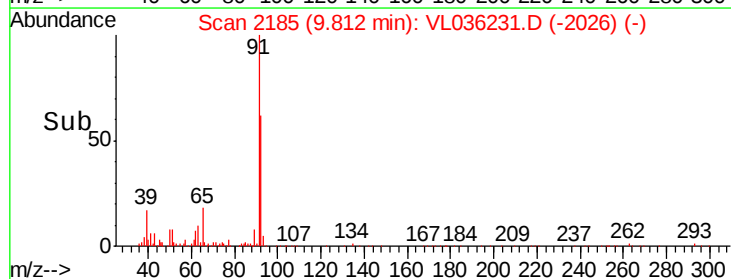
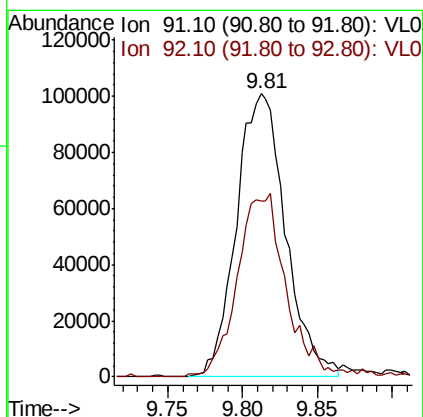
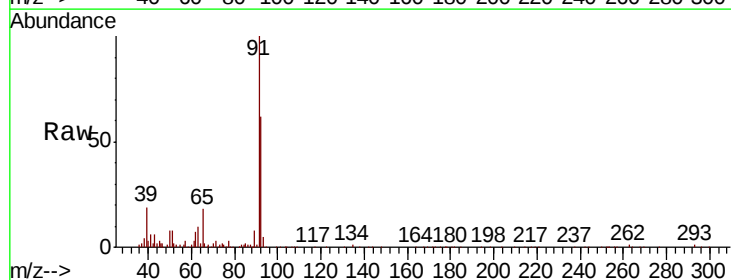
Instrument :
MSVOA_L
ClientSampled :
0121-SS1

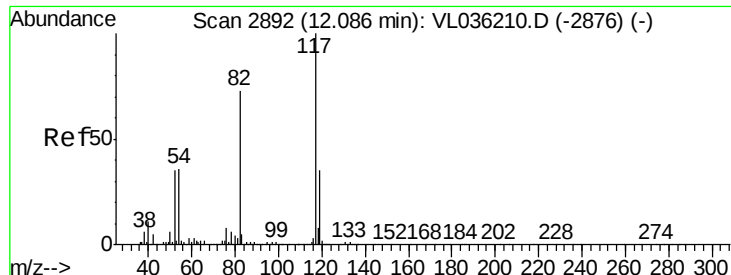
Tot Ion: 57 Resp: 66855
Ion Ratio Lower Upper
57 100
41 78.7 28.5 42.7#
56 66.4 25.5 38.3#



#53
Toluene
Concen: 0.685 ppbv
RT: 9.81 min Scan# 2185
Delta R.T. 0.01 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Tgt Ion: 91 Resp: 231140
Ion Ratio Lower Upper
91 100
92 65.4 48.5 72.7

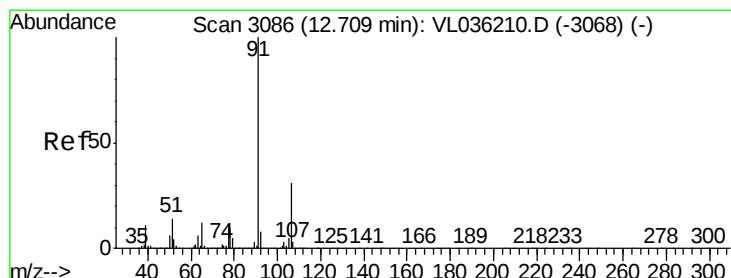
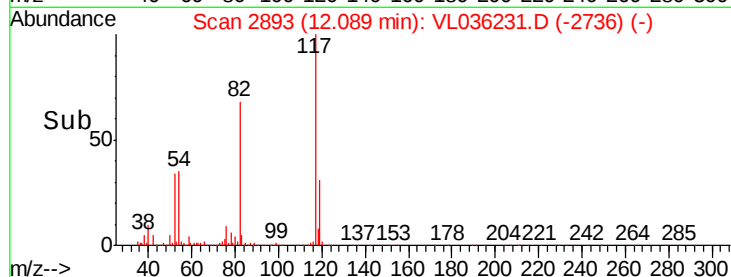
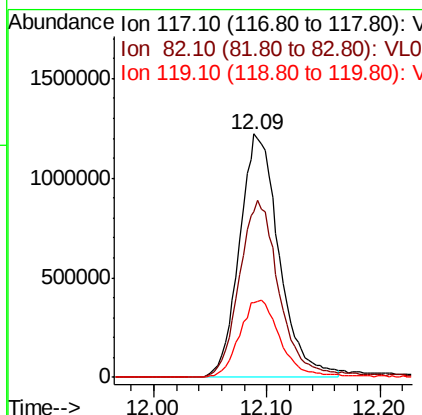
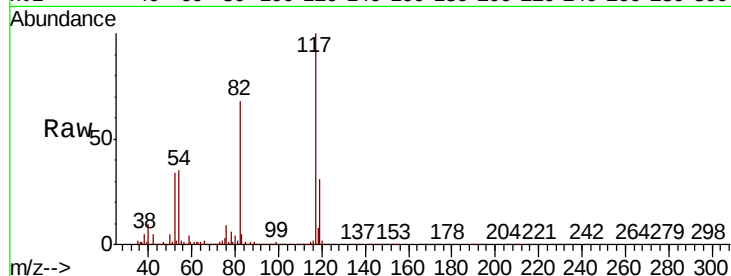




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.09 min Scan# 2893
Delta R.T. 0.00 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

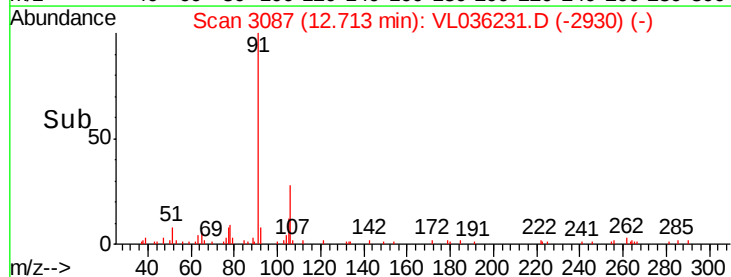
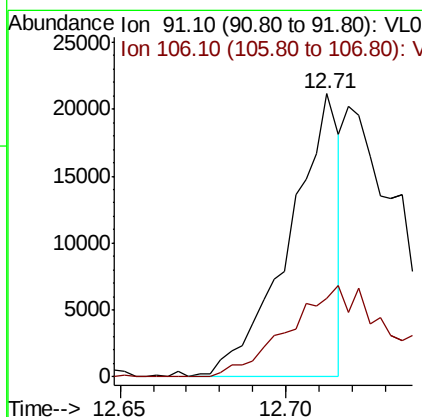
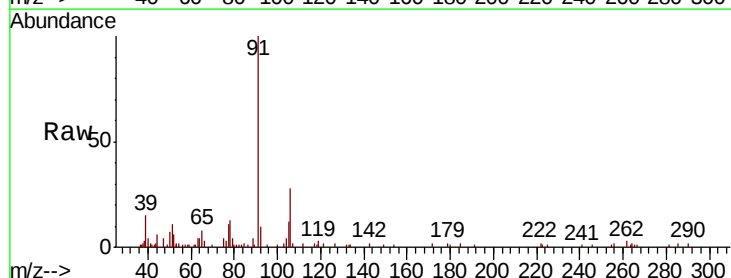
Instrument :
MSVOA_L
ClientSampleId :
0121-SS1

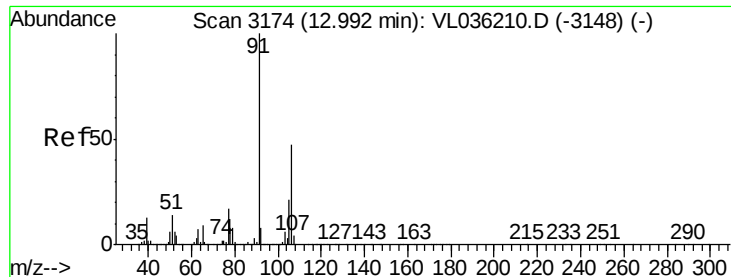
Tot Ion:117 Resp: 2982720
Ion Ratio Lower Upper
117 100
82 74.9 59.7 89.5
119 33.0 28.6 43.0



#58
Ethyl Benzene
Concen: 0.050 ppbv
RT: 12.71 min Scan# 3087
Delta R.T. 0.00 min
Lab File: VL036231.D
Acq: 13 Jan 2021 18:53

Tgt Ion: 91 Resp: 22253
Ion Ratio Lower Upper
91 100
106 27.8 24.8 37.2





#59

m/p-Xylene

Concen: 0.040 ppbv

RT: 13.00 min Scan# 3177

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

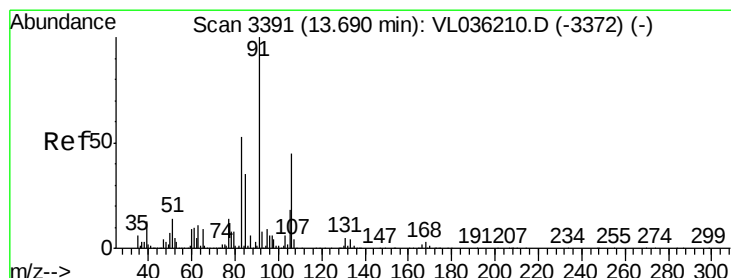
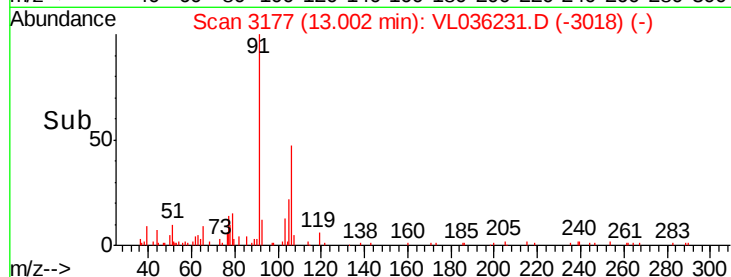
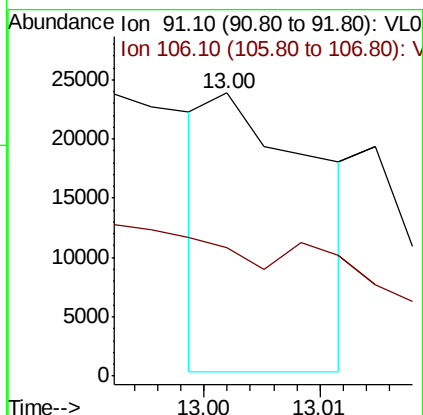
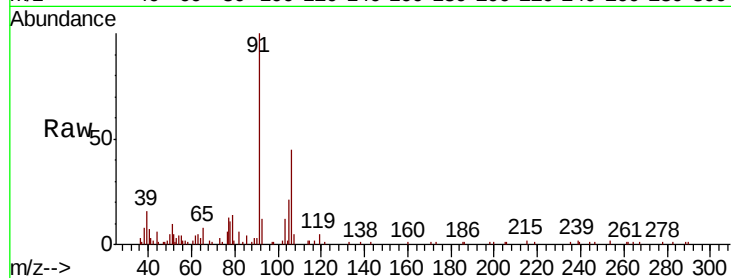
0121-SS1

Tot Ion: 91 Resp: 15167

Ion Ratio Lower Upper

91 100

106 0.0 34.6 51.8#



#60

o-Xylene

Concen: 0.132 ppbv

RT: 13.70 min Scan# 3393

Delta R.T. 0.01 min

Lab File: VL036231.D

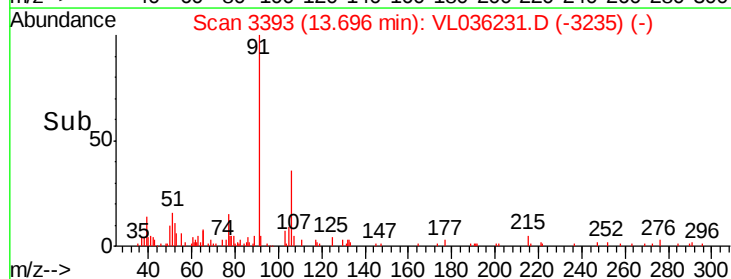
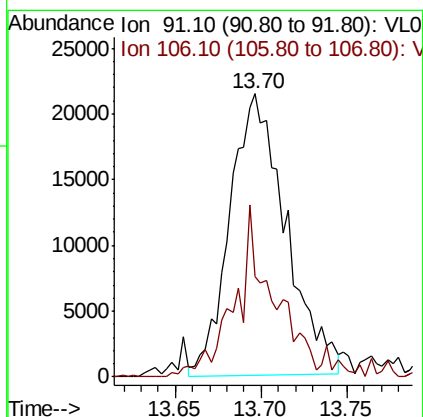
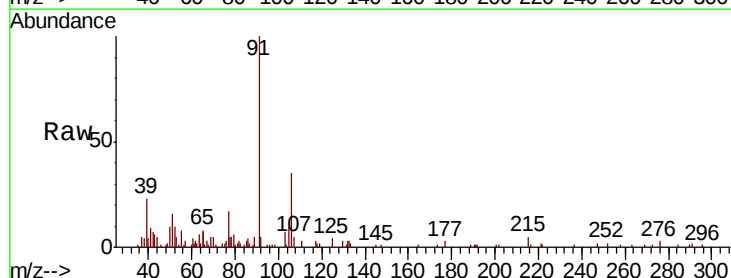
Acq: 13 Jan 2021 18:53

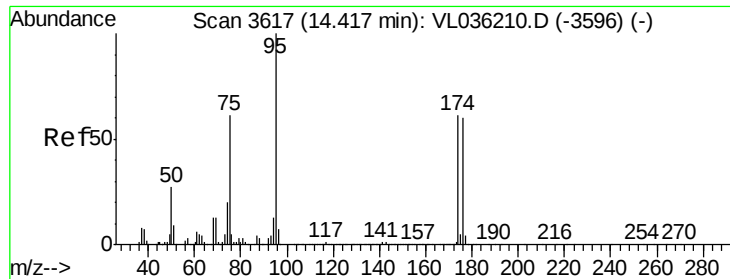
Tgt Ion: 91 Resp: 48506

Ion Ratio Lower Upper

91 100

106 44.1 21.9 65.8





#68

1-Bromo-4-Fluorobenzene

Concen: 9.961 ppbv

RT: 14.42 min Scan# 3619

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

0121-SS1

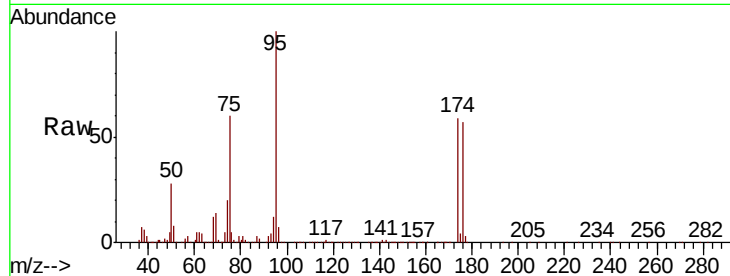
Tot Ion: 95 Resp: 2459295

Ion Ratio Lower Upper

95 100

174 62.4 49.4 74.0

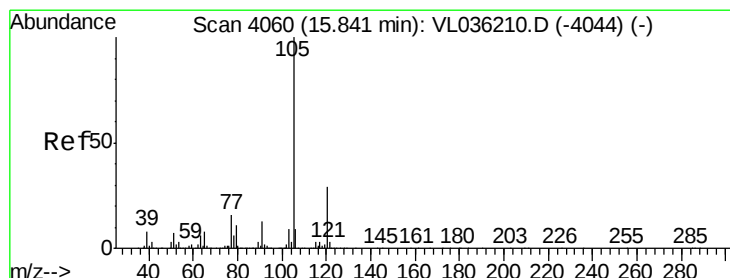
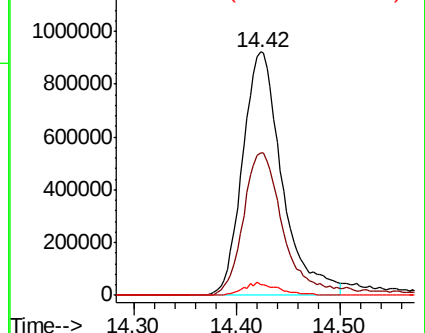
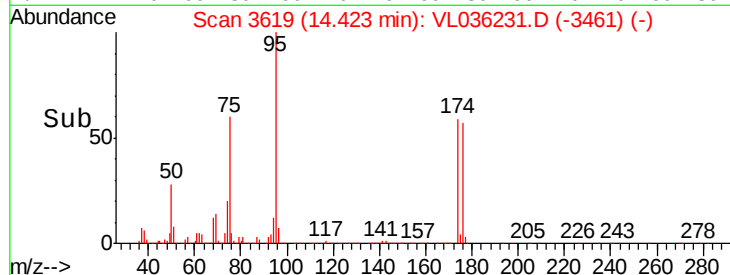
175 4.7 3.8 5.8



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



#72

4-Ethyltoluene

Concen: 0.037 ppbv

RT: 15.84 min Scan# 4061

Delta R.T. 0.00 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Tgt Ion: 105 Resp: 15306

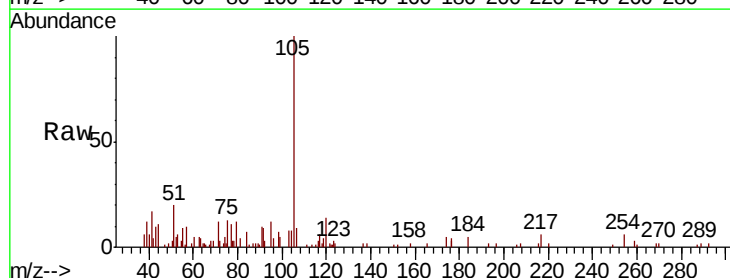
Ion Ratio Lower Upper

105 100

120 66.6 23.7 35.5#

91 17.8 11.9 17.9

77 0.0 12.6 18.8#

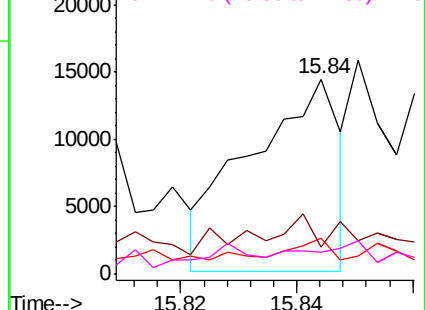
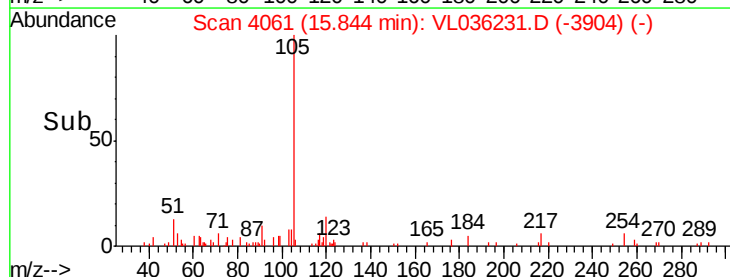


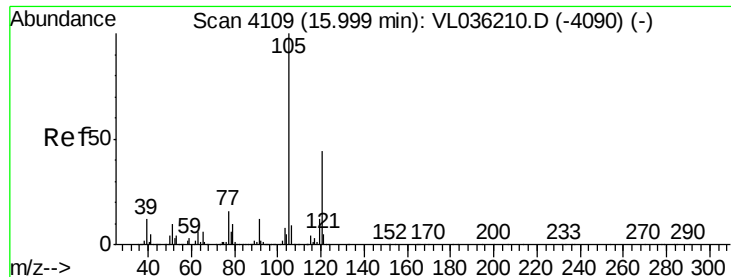
Abundance Ion 105.10 (104.80 to 105.80): V

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





#73

1,3,5-Trimethylbenzene

Concen: 0.037 ppbv

RT: 16.00 min Scan# 4111

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampled :

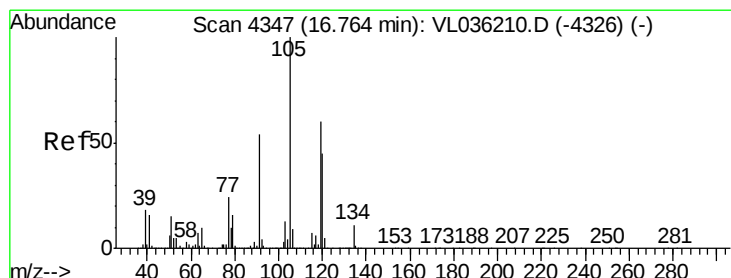
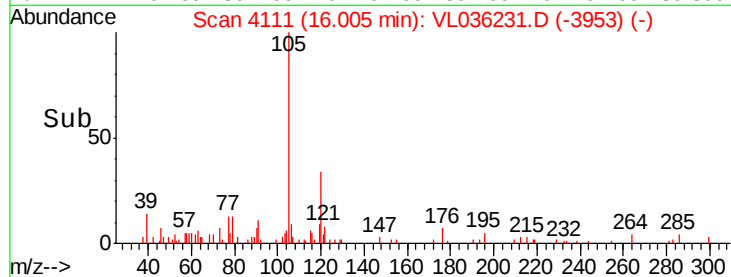
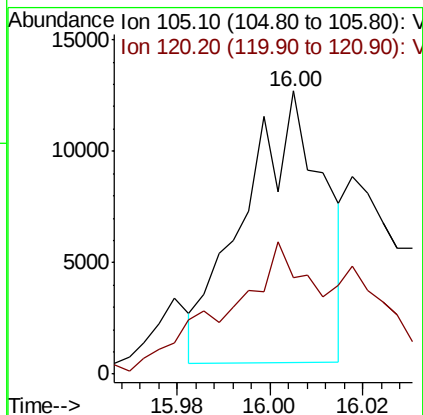
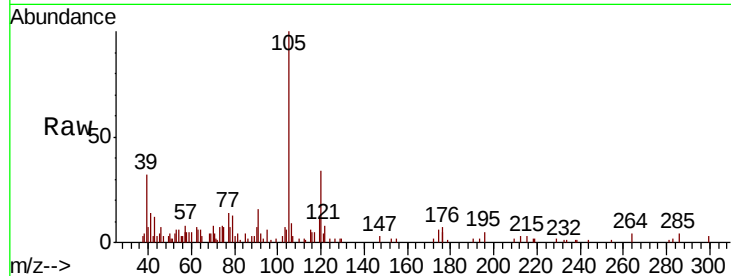
0121-SS1

Tot Ion:105 Resp: 14539

Ion Ratio Lower Upper

105 100

120 23.9 35.5 53.3#



#74

1,2,4-Trimethylbenzene

Concen: 0.091 ppbv

RT: 16.77 min Scan# 4349

Delta R.T. 0.01 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Tgt Ion:105 Resp: 36697

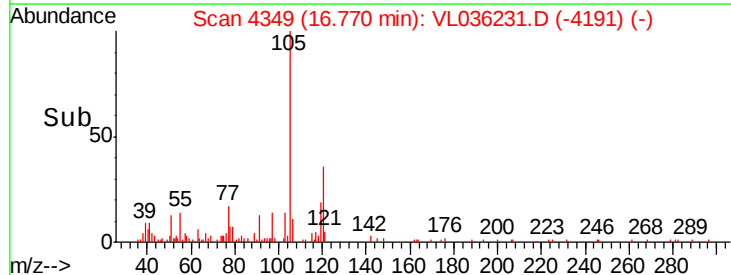
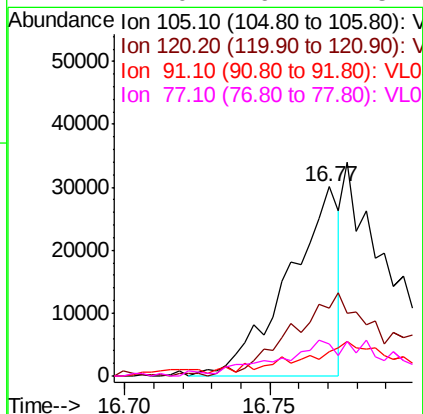
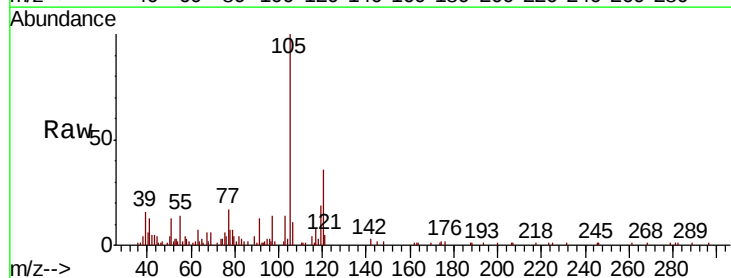
Ion Ratio Lower Upper

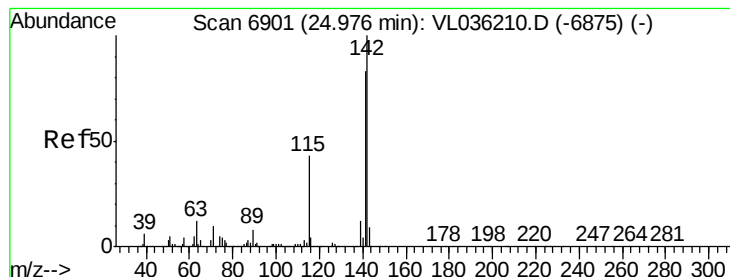
105 100

120 34.3 36.2 54.2#

91 9.9 43.3 64.9#

77 14.0 19.1 28.7#





#80

Naphthalene,2-methyl-

Concen: 0.041 ppbv

RT: 25.01 min Scan# 6912

Delta R.T. 0.04 min

Lab File: VL036231.D

Acq: 13 Jan 2021 18:53

Instrument :

MSVOA_L

ClientSampleId :

0121-SS1

Tot Ion:142 Resp: 1922

Ion Ratio Lower Upper

142 100

141 53.0 68.6 102.8#

115 92.6 32.9 49.3#

