

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040221\
 Data File : VL036653.D
 Acq On : 2 Apr 2021 20:22
 Operator : SY/AP
 Sample : M1841-07DUPDL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 03 02:58:33 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 09:42:40 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1313911	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	3437321	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.06	117	3049359	10.00	ppbv	-0.03

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.40	95	2337691	9.62	ppbv	-0.03
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.20%

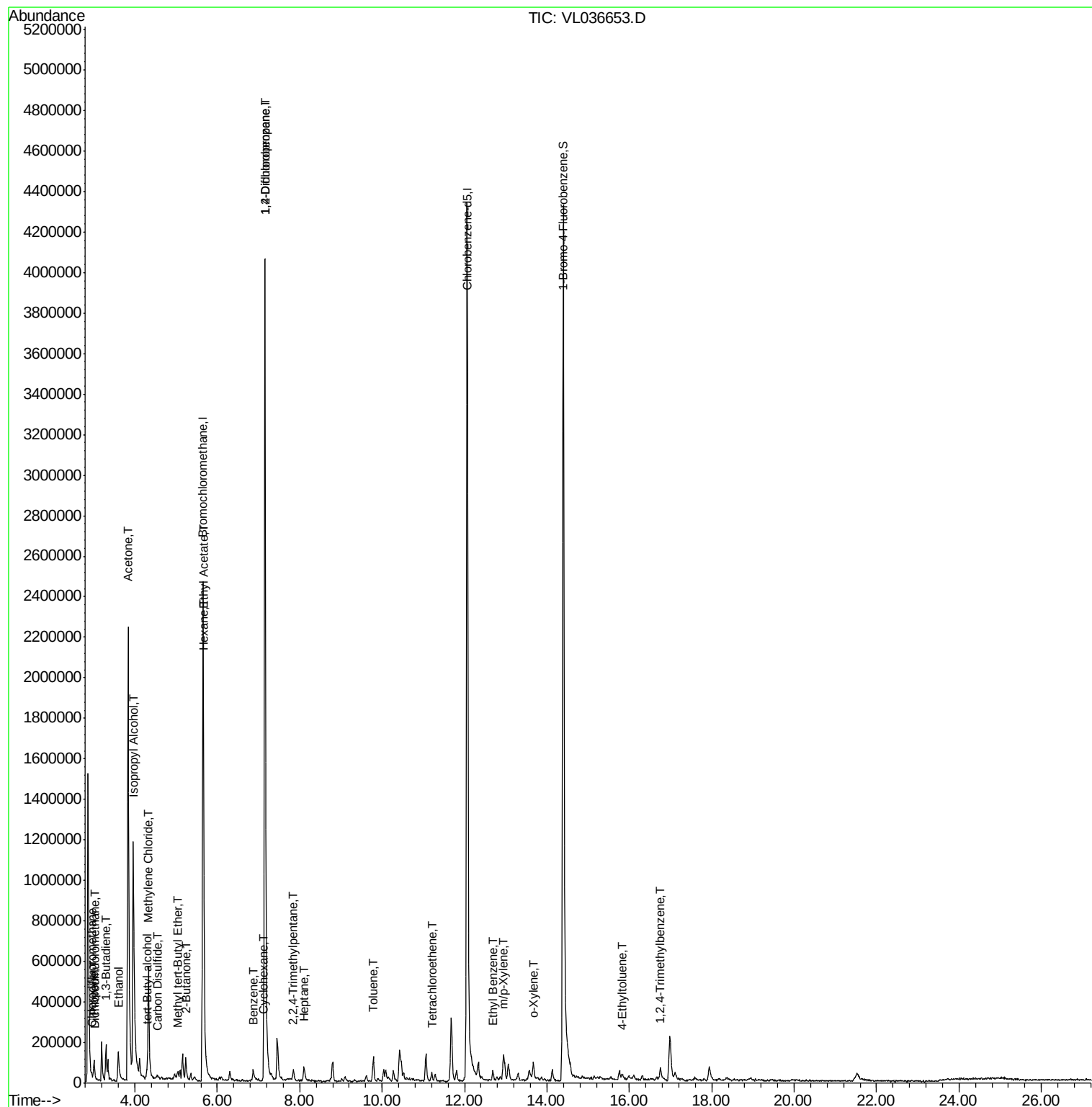
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	6066	0.028	ppbv	94
3) Chlorodifluoromethane	2.95	51	27401	0.112	ppbv #	68
9) Propene	3.00	41	38376	0.490	ppbv	92
10) Heptane	8.10	43	21052	0.106	ppbv #	60
13) Ethanol	3.60	45	168326	18.062	ppbv	87
15) Acetone	3.83	43	3074088	23.771	ppbv	100
16) 1,3-Butadiene	3.29	39	57044	0.634	ppbv #	29
17) tert-Butyl alcohol	4.29	59	40586	0.361	ppbv #	66
19) Isopropyl Alcohol	3.95	45	1859202	26.135	ppbv #	96
20) Methylene Chloride	4.33	84	185599	3.065	ppbv	93
25) Ethyl Acetate	5.67	43	143700	0.467	ppbv #	80
26) Hexane	5.67	57	187590	1.315	ppbv #	48
27) Carbon Disulfide	4.55	76	4510	0.032	ppbv #	1
28) Methyl tert-Butyl Ether	5.02	73	6755	0.040	ppbv	94
30) Cyclohexane	7.11	84	3231	0.028	ppbv #	1
34) 2-Butanone	5.23	43	137182	0.818	ppbv #	86
36) Benzene	6.88	78	13167	0.042	ppbv #	89
39) 1,2-Dichloropropane	7.16	63	883062	6.867	ppbv #	24
44) 2,2,4-Trimethylpentane	7.85	57	27478	0.049	ppbv #	35
52) Tetrachloroethene	11.20	164	5363	0.046	ppbv #	22
53) Toluene	9.78	91	77438	0.229	ppbv	99
58) Ethyl Benzene	12.69	91	22624	0.051	ppbv	99
59) m/p-Xylene	12.95	91	90940	0.235	ppbv #	66
60) o-Xylene	13.67	91	28682	0.077	ppbv #	31
72) 4-Ethyltoluene	15.82	105	8249	0.020	ppbv #	37
74) 1,2,4-Trimethylbenzene	16.75	105	18527	0.045	ppbv #	60

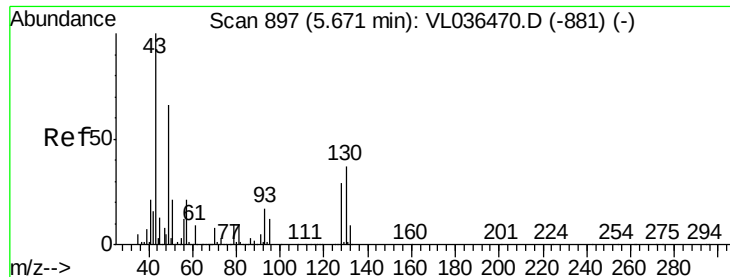
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Thu Mar 25 09:42:40 2021
Response via : Initial Calibration

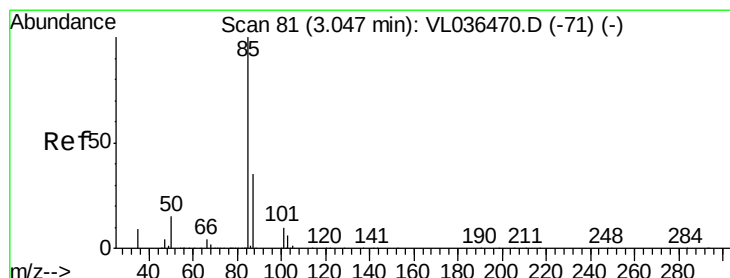
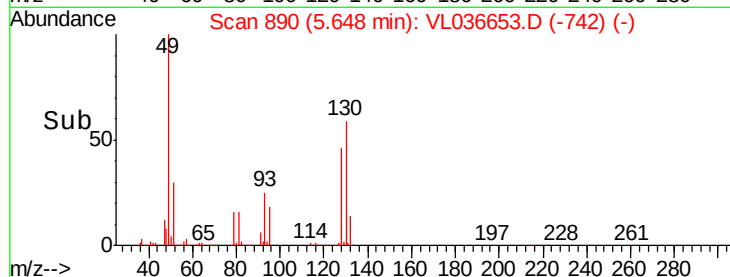
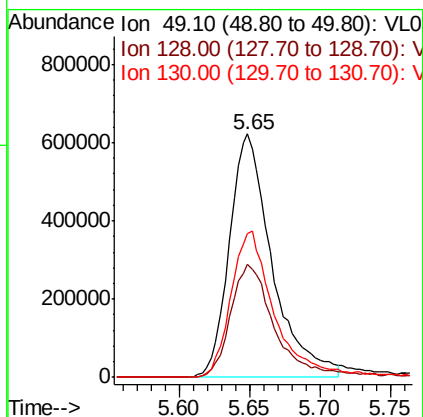
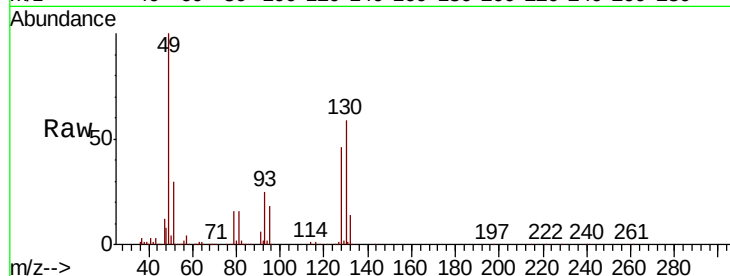




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.65 min Scan# 890
 Delta R.T. -0.02 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

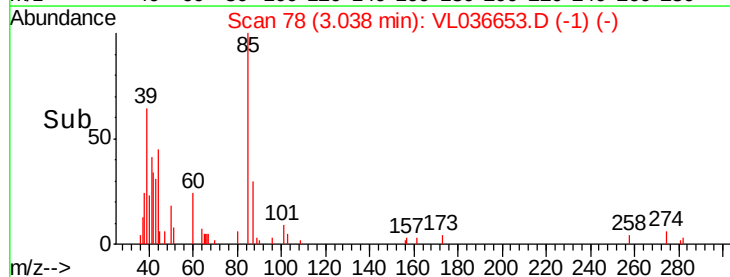
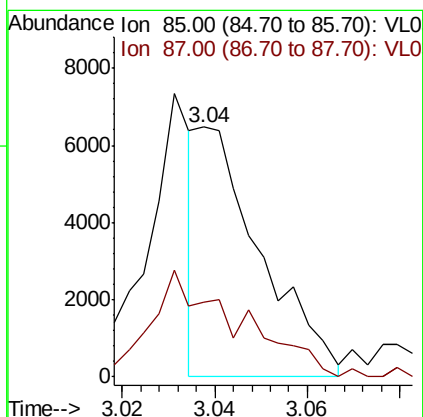
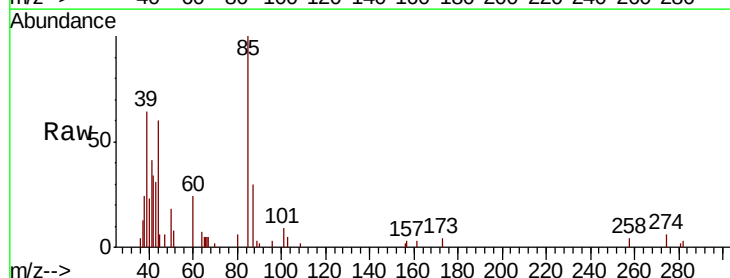
Instrument :
 MSVOA_L
 ClientSampleId :

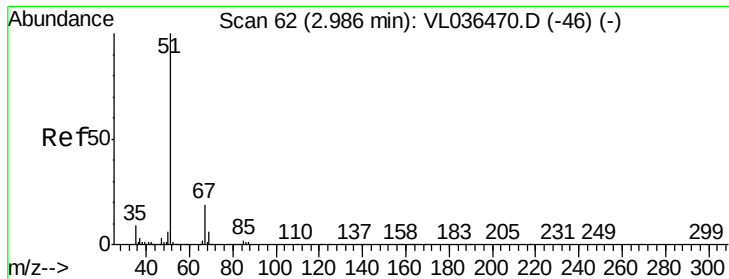
Tot Ion: 49 Resp: 1313911
 Ion Ratio Lower Upper
 49 100
 128 49.3 23.5 70.6
 130 62.9 29.1 87.4



#2
 Dichlorodifluoromethane
 Concen: 0.028 ppbv
 RT: 3.04 min Scan# 78
 Delta R.T. -0.01 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Tgt Ion: 85 Resp: 6066
 Ion Ratio Lower Upper
 85 100
 87 31.5 27.8 41.8





#3

Chlorodifluoromethane

Concen: 0.112 ppbv

RT: 2.95 min Scan# 51

Delta R.T. -0.04 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

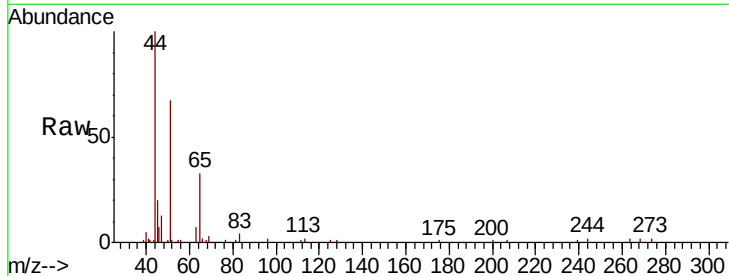
ClientSampleId :

Tot Ion: 51 Resp: 27401

Ion Ratio Lower Upper

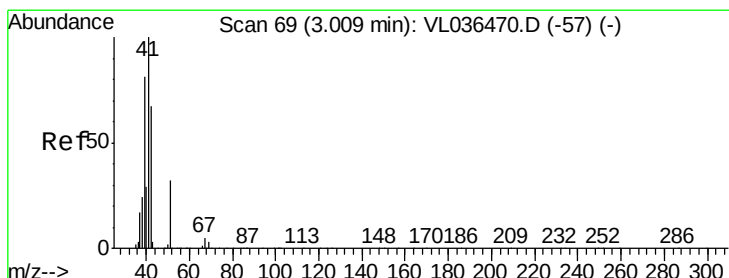
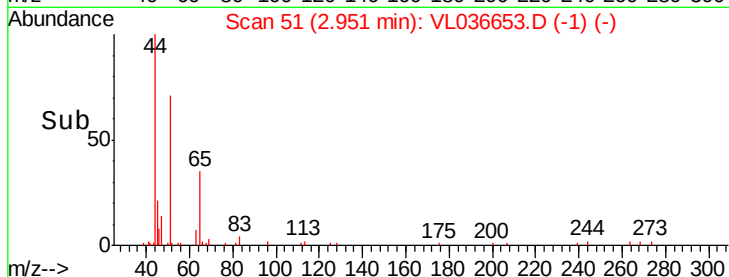
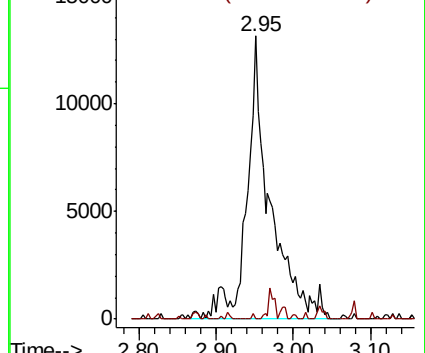
51 100

67 4.3 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 0.490 ppbv

RT: 3.00 min Scan# 65

Delta R.T. -0.01 min

Lab File: VL036653.D

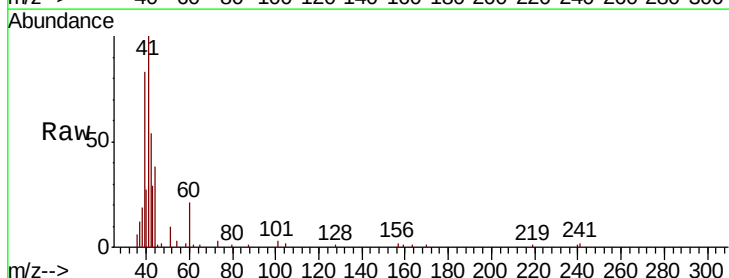
Acq: 2 Apr 2021 20:22

Tgt Ion: 41 Resp: 38376

Ion Ratio Lower Upper

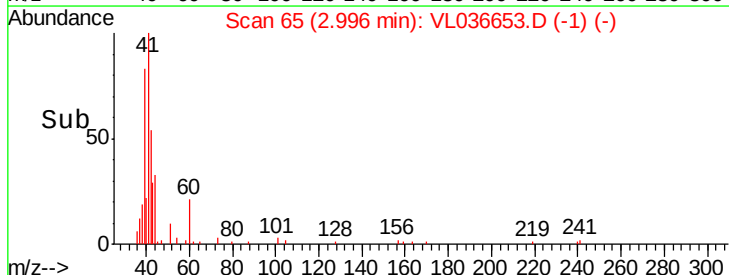
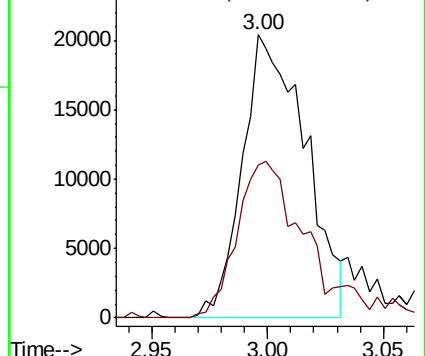
41 100

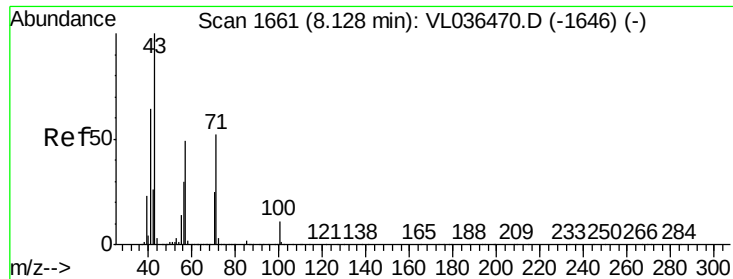
42 64.6 57.0 85.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

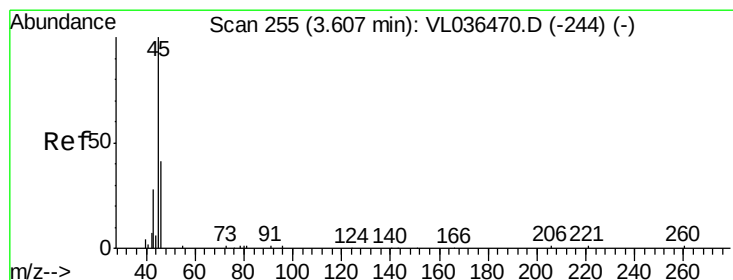
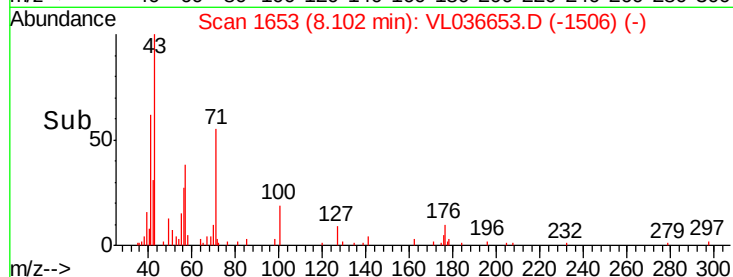
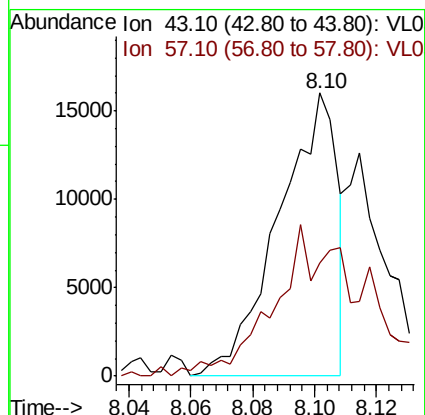
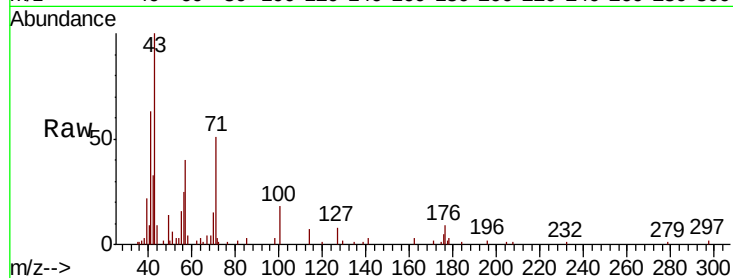




#10
 Heptane
 Concen: 0.106 ppbv
 RT: 8.10 min Scan# 1653
 Delta R.T. -0.03 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

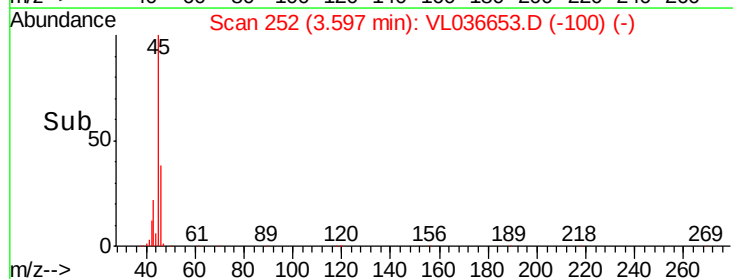
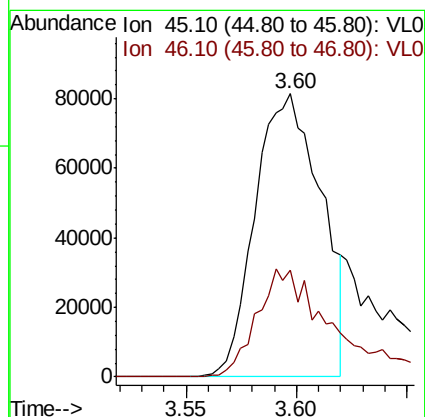
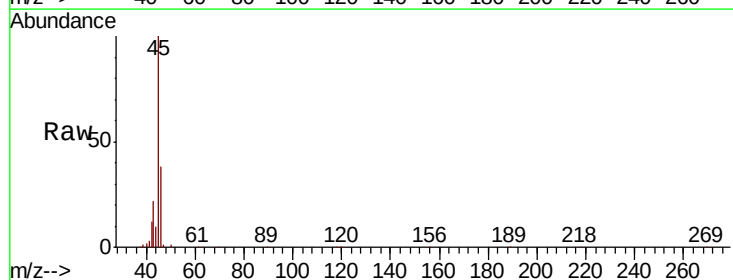
Instrument :
 MSVOA_L
 ClientSampleId :

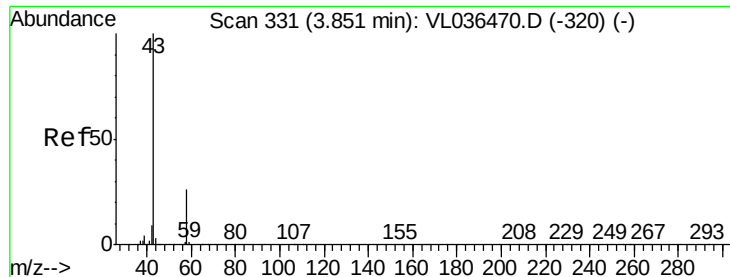
Tot Ion: 43 Resp: 21052
 Ion Ratio Lower Upper
 43 100
 57 75.9 39.0 58.6#



#13
 Ethanol
 Concen: 18.062 ppbv
 RT: 3.60 min Scan# 252
 Delta R.T. -0.01 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Tgt Ion: 45 Resp: 168326
 Ion Ratio Lower Upper
 45 100
 46 49.5 16.6 66.2

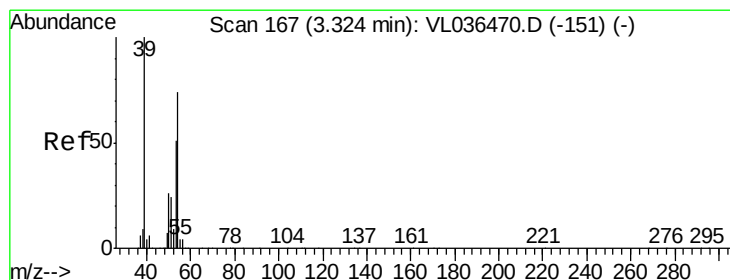
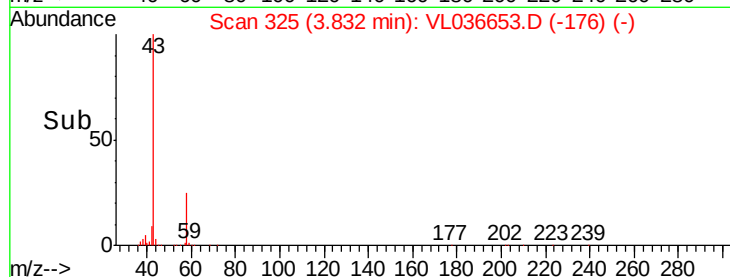
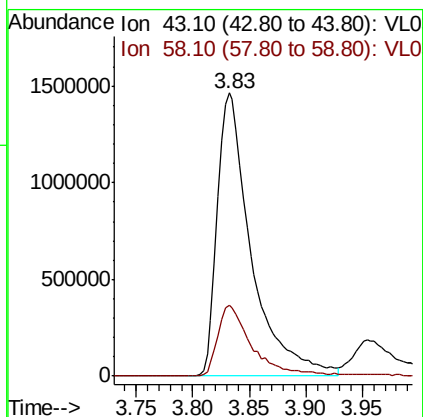
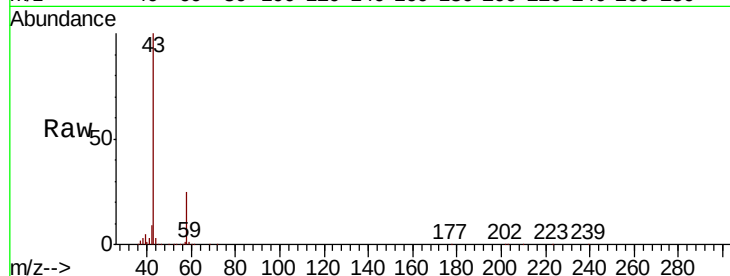




#15
Acetone
Concen: 23.771 ppbv
RT: 3.83 min Scan# 325
Delta R.T. -0.02 min
Lab File: VL036653.D
Acq: 2 Apr 2021 20:22

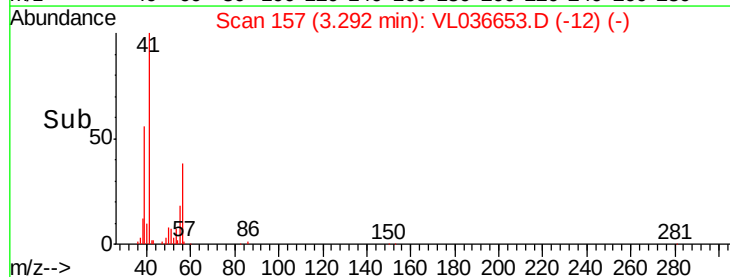
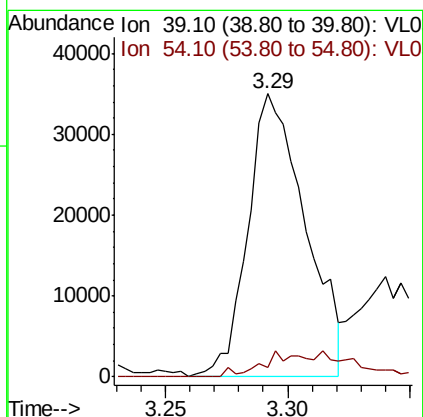
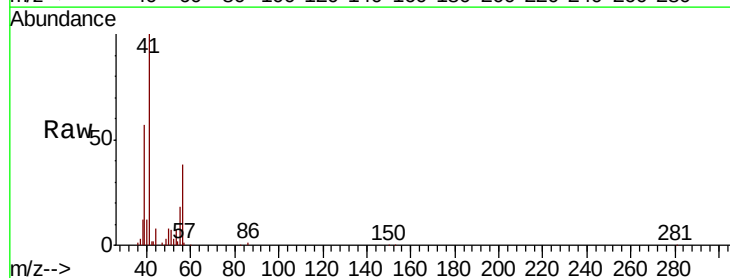
Instrument :
MSVOA_L
ClientSampleId :

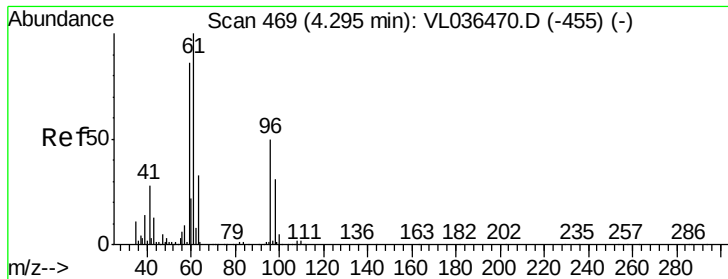
Tot Ion: 43 Resp: 3074088
Ion Ratio Lower Upper
43 100
58 26.6 21.2 31.8



#16
1,3-Butadiene
Concen: 0.634 ppbv
RT: 3.29 min Scan# 157
Delta R.T. -0.03 min
Lab File: VL036653.D
Acq: 2 Apr 2021 20:22

Tgt Ion: 39 Resp: 57044
Ion Ratio Lower Upper
39 100
54 13.9 58.8 88.2#



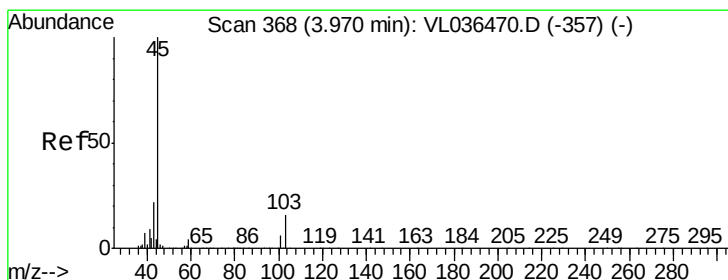
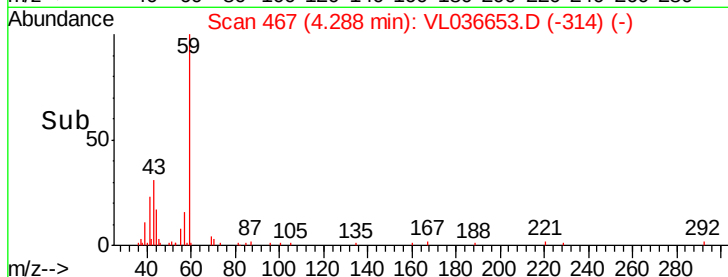
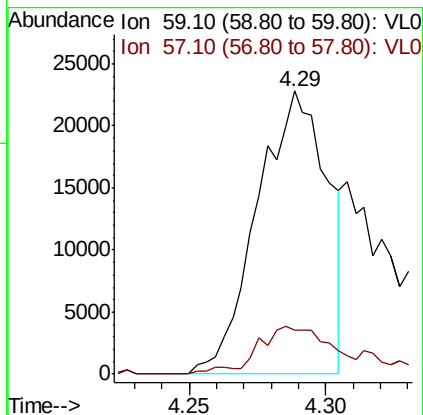
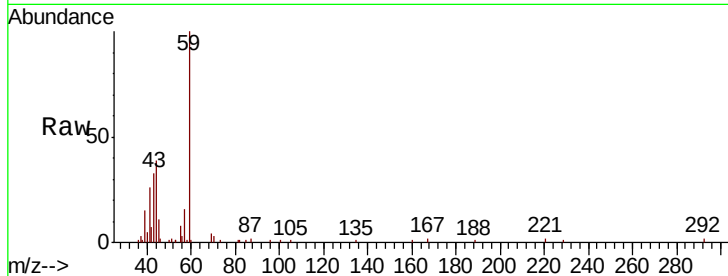


#17

tert-Butyl alcohol
Concen: 0.361 ppbv
RT: 4.29 min Scan# 467
Delta R.T. -0.01 min
Lab File: VL036653.D
Acq: 2 Apr 2021 20:22

Instrument :
MSVOA_L
ClientSampleId :

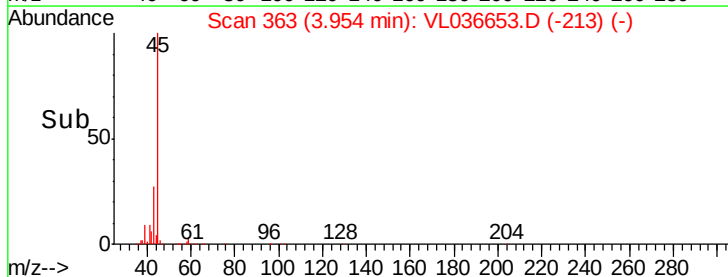
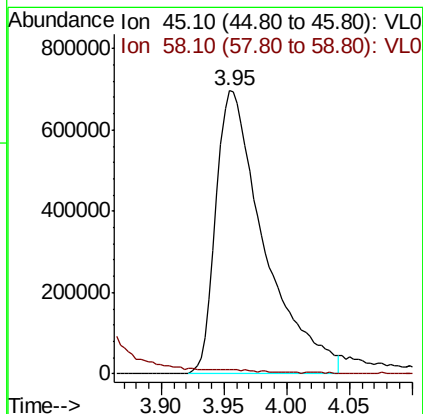
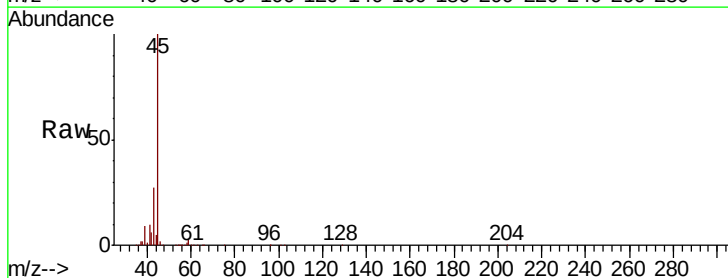
Tot Ion: 59 Resp: 40586
Ion Ratio Lower Upper
59 100
57 23.5 8.6 12.8#

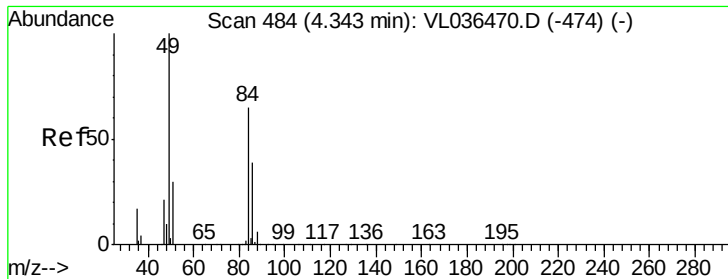


#19

Isopropyl Alcohol
Concen: 26.135 ppbv
RT: 3.95 min Scan# 363
Delta R.T. -0.02 min
Lab File: VL036653.D
Acq: 2 Apr 2021 20:22

Tgt Ion: 45 Resp: 1859202
Ion Ratio Lower Upper
45 100
58 2.2 2.9 4.3#

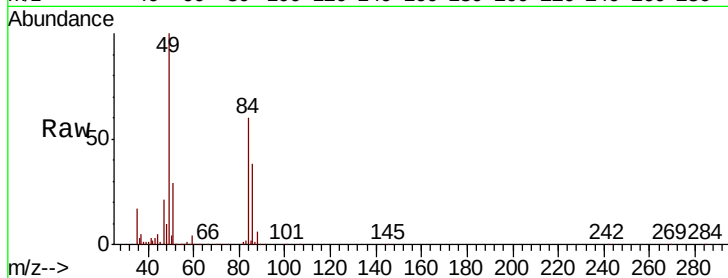




#20
Methylene Chloride
Concen: 3.065 ppbv
RT: 4.33 min Scan# 479
Delta R.T. -0.02 min
Lab File: VL036653.D
Acq: 2 Apr 2021 20:22

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:	84	Resp:	185599
Ion	Ratio	Lower	Upper
84	100		
49	165.1	122.9	184.3
51	48.3	36.9	55.3
86	62.5	48.2	72.4



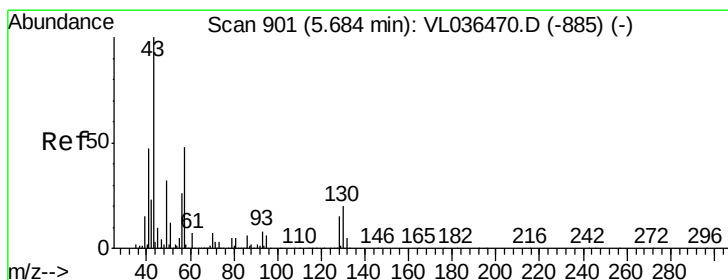
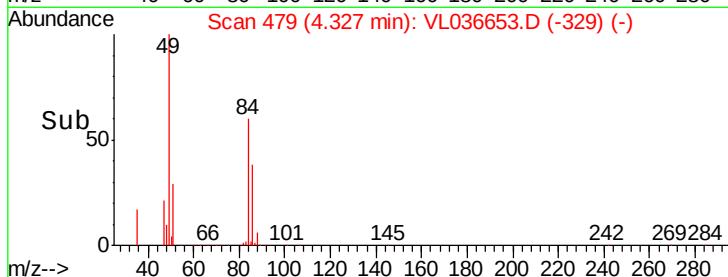
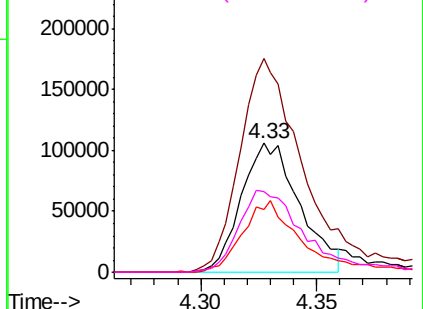
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

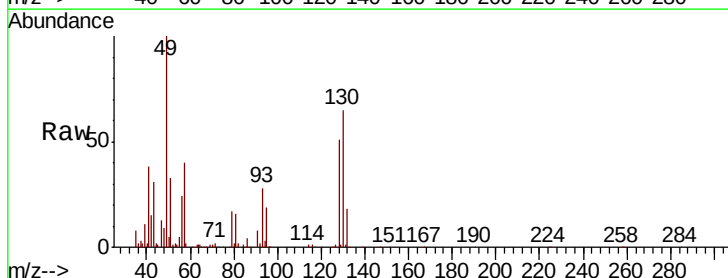
Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#25
Ethyl Acetate
Concen: 0.467 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.02 min
Lab File: VL036653.D
Acq: 2 Apr 2021 20:22

Tgt Ion:	43	Resp:	143700
Ion	Ratio	Lower	Upper
43	100		
45	1.0	7.9	11.9#
61	1.3	7.4	11.2#
70	2.6	5.1	7.7#



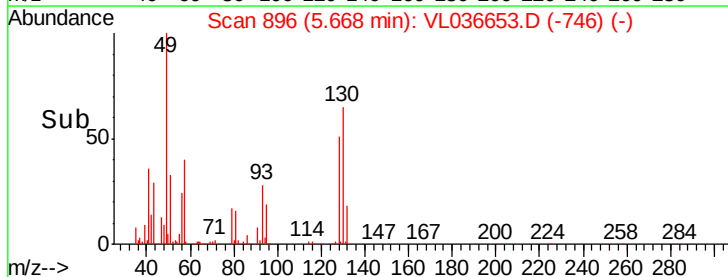
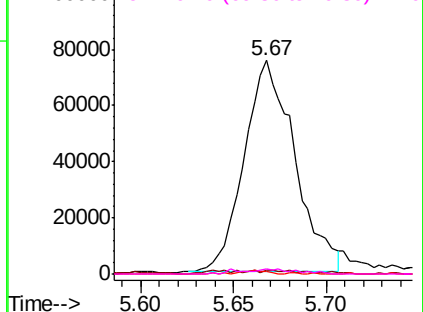
Abundance

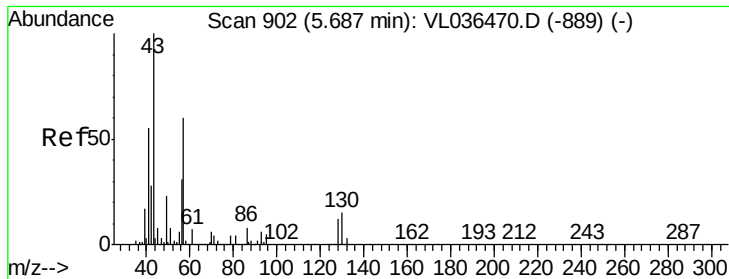
Ion 43.10 (42.80 to 43.80): VL0

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: 1.315 ppbv

RT: 5.67 min Scan# 897

Delta R.T. -0.02 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

ClientSampled :

Tot Ion: 57 Resp: 187590

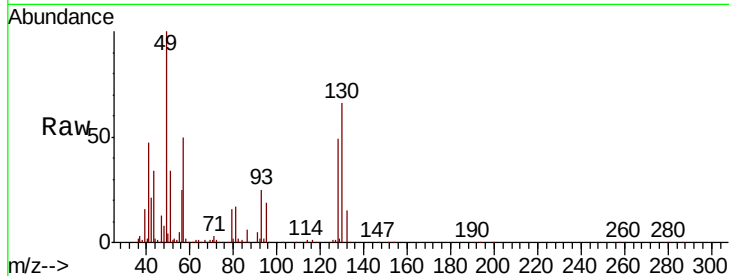
Ion Ratio Lower Upper

57 100

41 103.0 77.2 115.8

43 83.1 173.8 260.6#

56 57.7 43.8 65.6

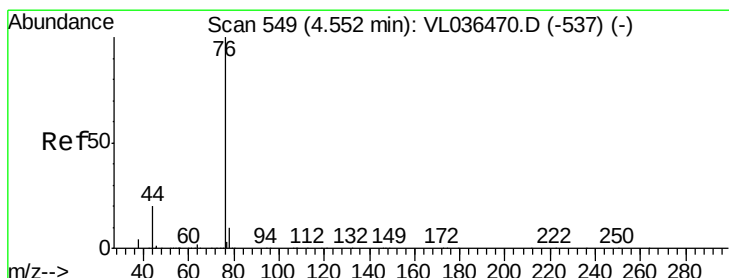
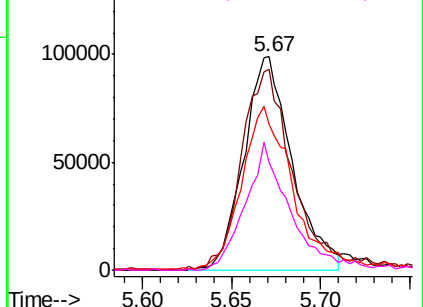
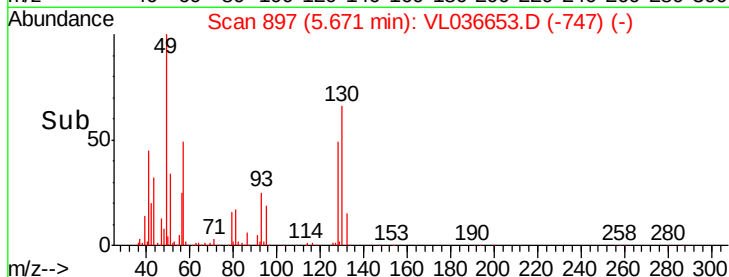


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#27

Carbon Disulfide

Concen: 0.032 ppbv

RT: 4.55 min Scan# 547

Delta R.T. -0.01 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

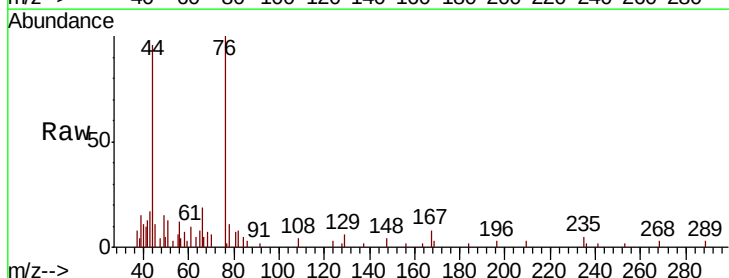
Tgt Ion: 76 Resp: 4510

Ion Ratio Lower Upper

76 100

44 158.1 17.5 26.3#

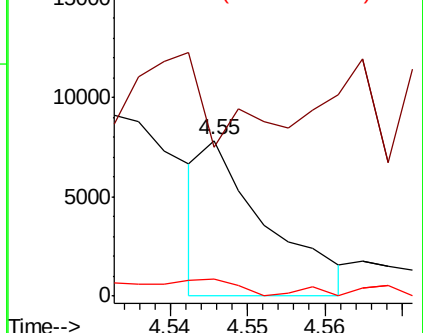
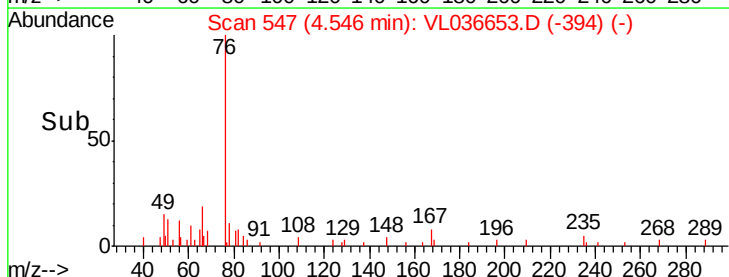
78 33.2 8.6 13.0#

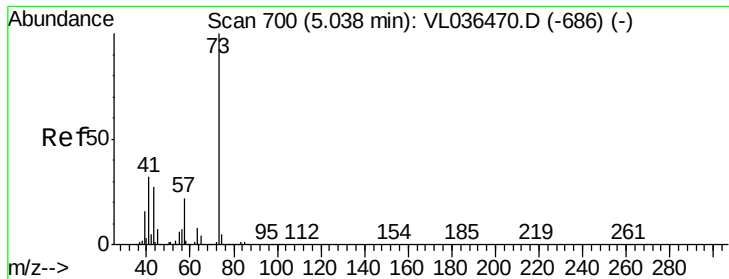


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



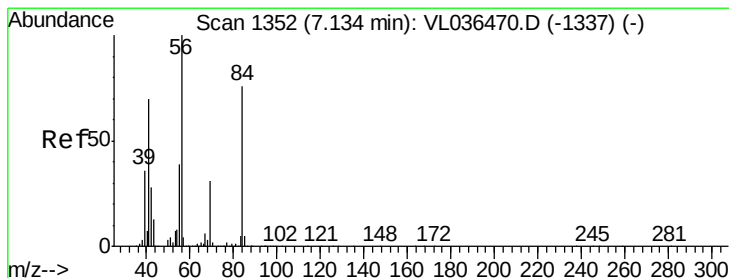
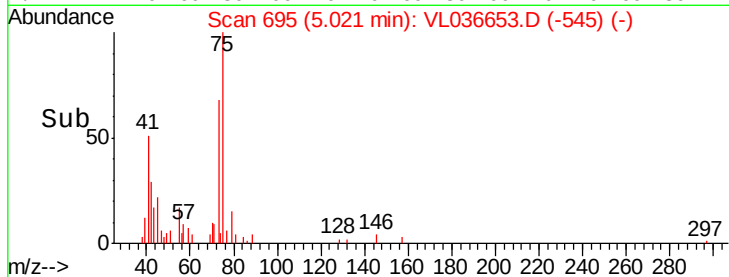
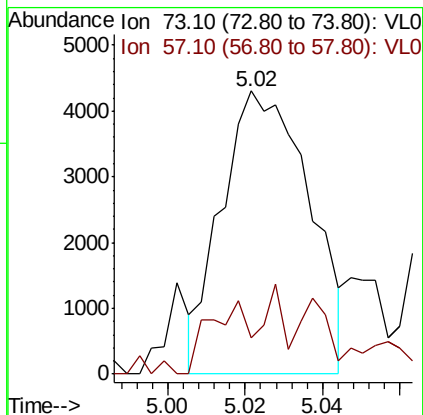
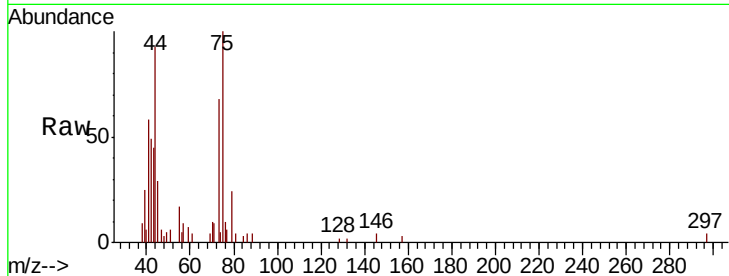


#28

Methyl tert-Butyl Ether
 Concen: 0.040 ppbv
 RT: 5.02 min Scan# 695
 Delta R.T. -0.02 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Instrument :
 MSVOA_L
 ClientSampled :

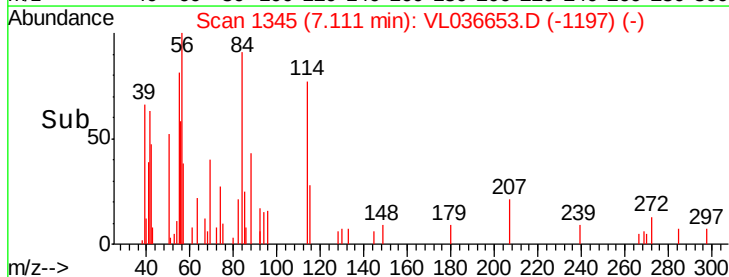
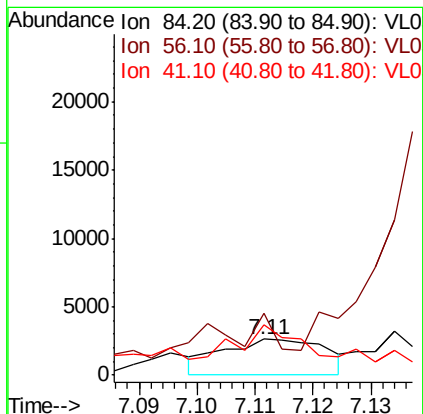
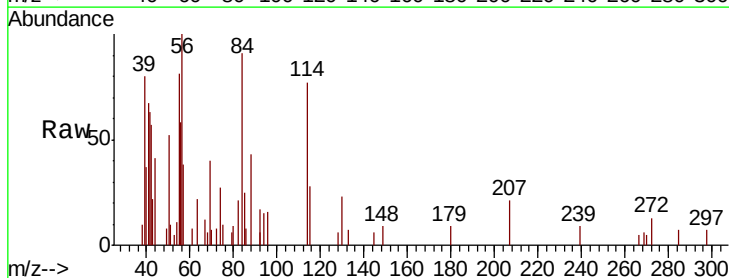
Tot Ion: 73 Resp: 6755
 Ion Ratio Lower Upper
 73 100
 57 20.1 18.5 27.7

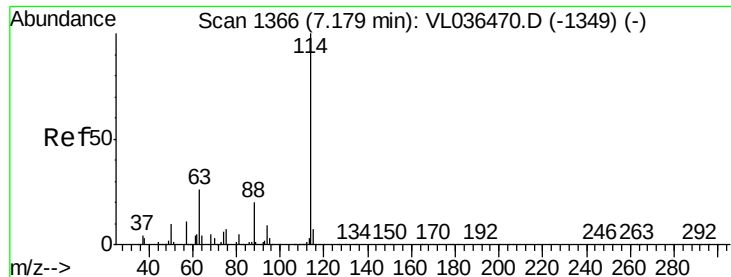


#30

Cyclohexane
 Concen: 0.028 ppbv
 RT: 7.11 min Scan# 1345
 Delta R.T. -0.02 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Tgt Ion: 84 Resp: 3231
 Ion Ratio Lower Upper
 84 100
 56 0.0 114.6 171.8#
 41 176.7 75.3 112.9#

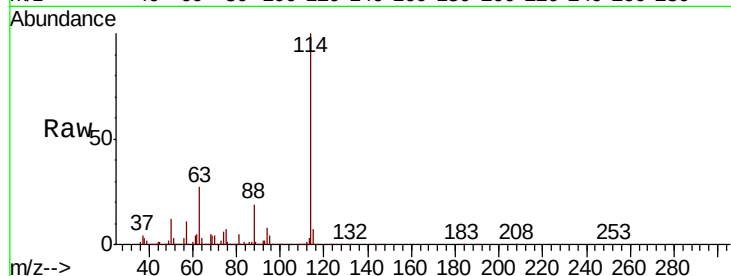




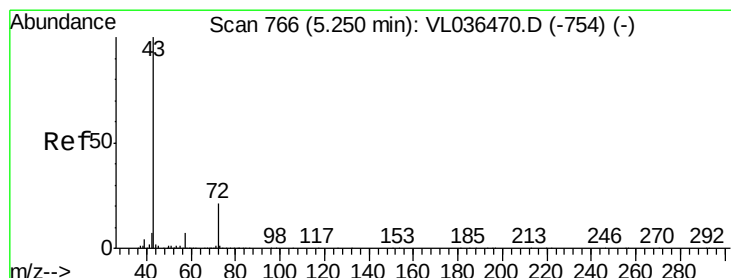
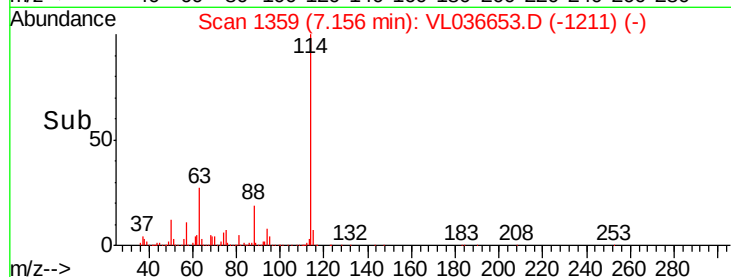
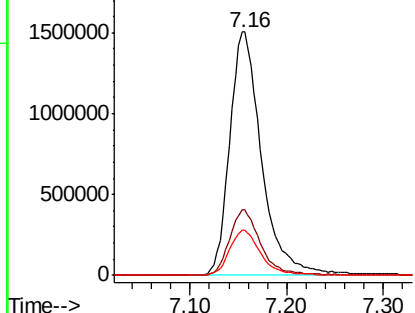
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.16 min Scan# 1359
 Delta R.T. -0.02 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:114 Resp: 3437321
 Ion Ratio Lower Upper
 114 100
 63 26.7 22.4 33.6
 88 18.6 15.4 23.0

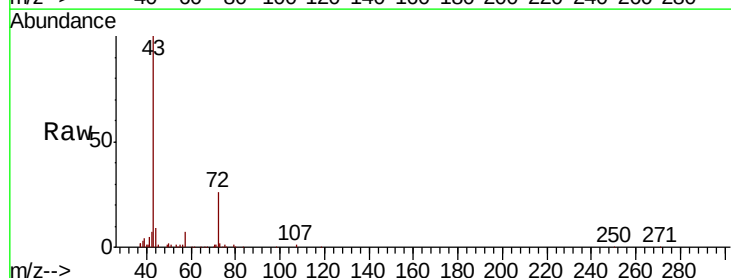


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

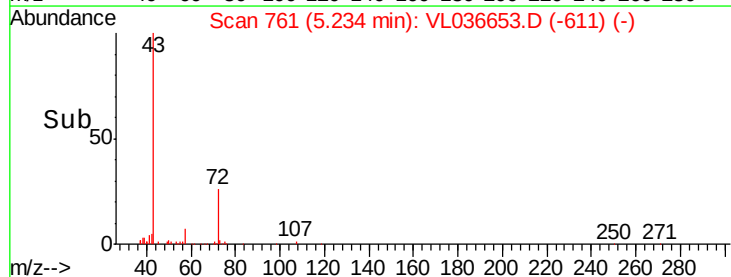
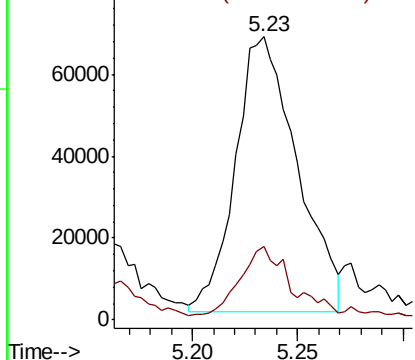


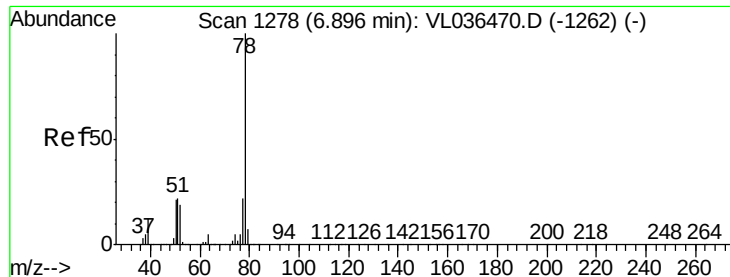
#34
 2-Butanone
 Concen: 0.818 ppbv
 RT: 5.23 min Scan# 761
 Delta R.T. -0.02 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Tgt Ion: 43 Resp: 137182
 Ion Ratio Lower Upper
 43 100
 72 27.8 17.0 25.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.042 ppbv

RT: 6.88 min Scan# 1272

Delta R.T. -0.02 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

ClientSampleId :

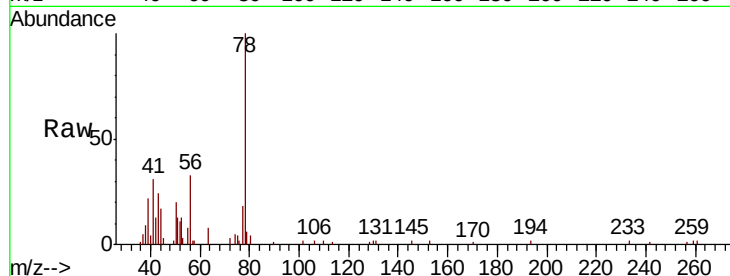
Tot Ion: 78 Resp: 13167

Ion Ratio Lower Upper

78 100

77 14.9 18.0 27.0#

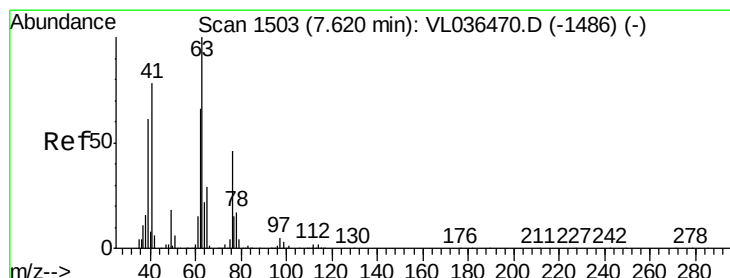
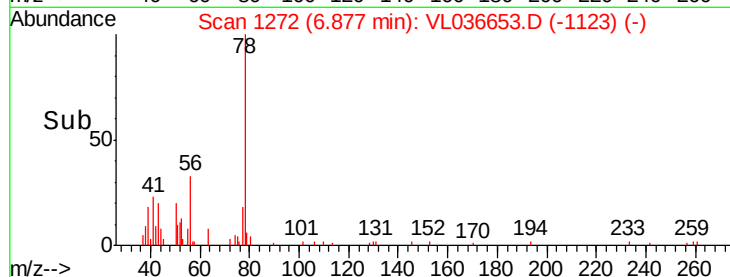
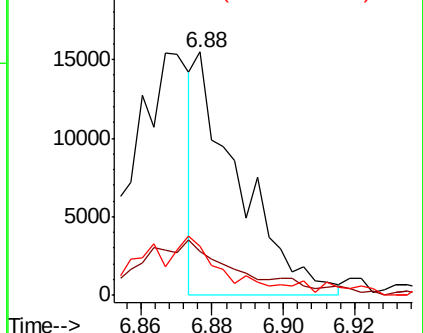
50 17.5 16.5 24.7



Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 6.867 ppbv

RT: 7.16 min Scan# 1359

Delta R.T. -0.46 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

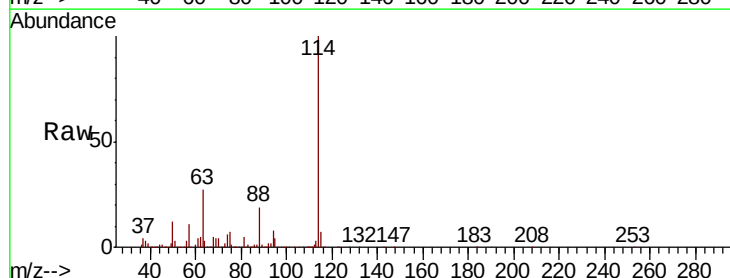
Tgt Ion: 63 Resp: 883062

Ion Ratio Lower Upper

63 100

41 0.0 62.4 93.6#

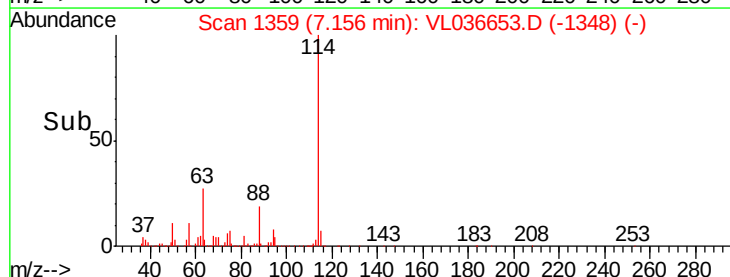
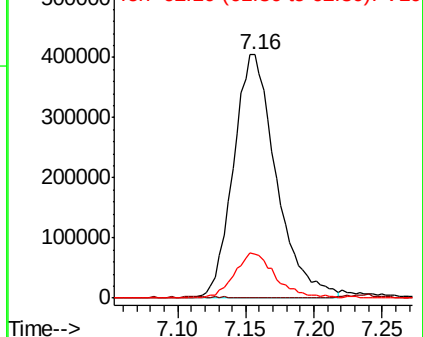
62 18.2 52.8 79.2#

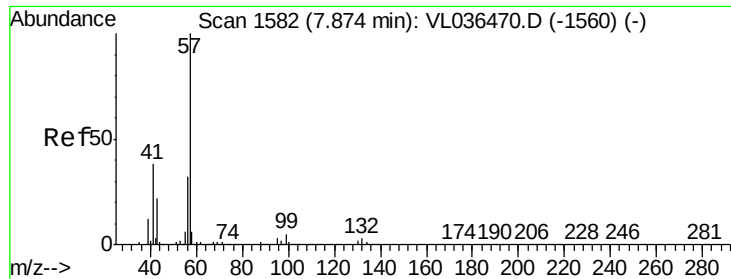


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

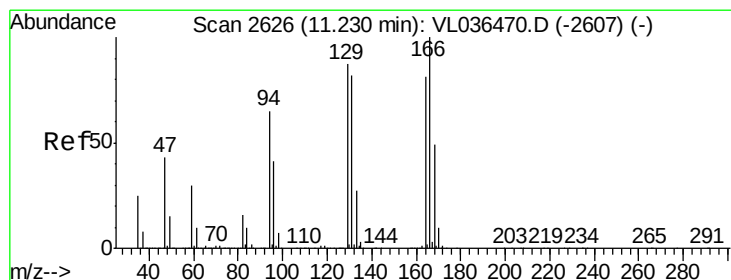
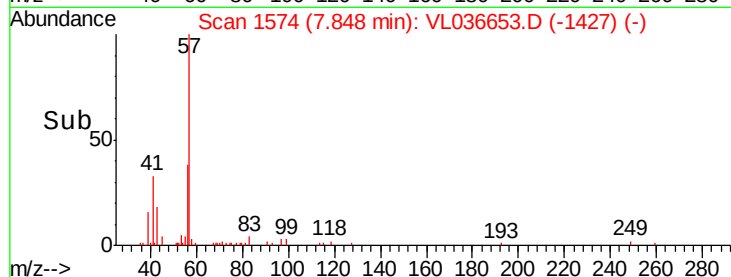
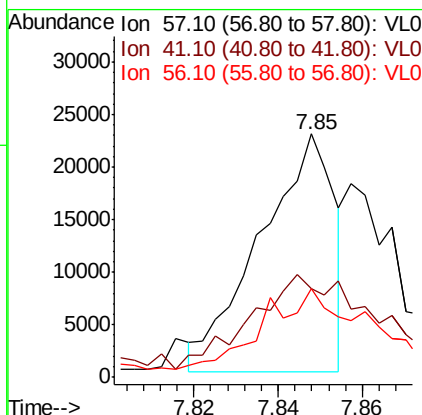
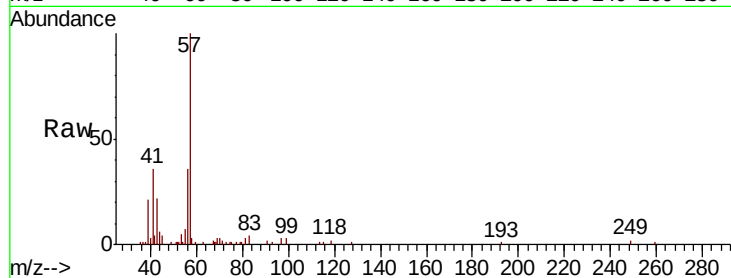




#44
 2,2,4-Trimethylpentane
 Concen: 0.049 ppbv
 RT: 7.85 min Scan# 1574
 Delta R.T. -0.03 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

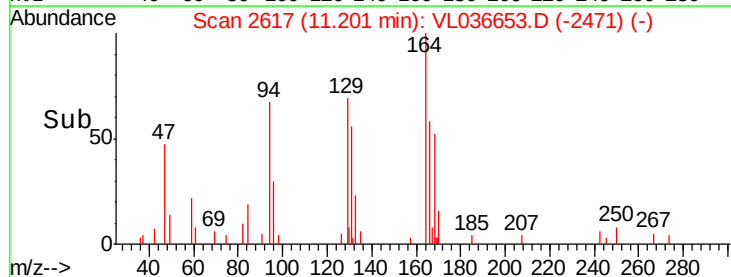
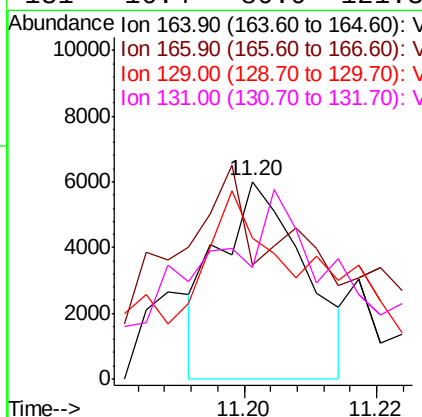
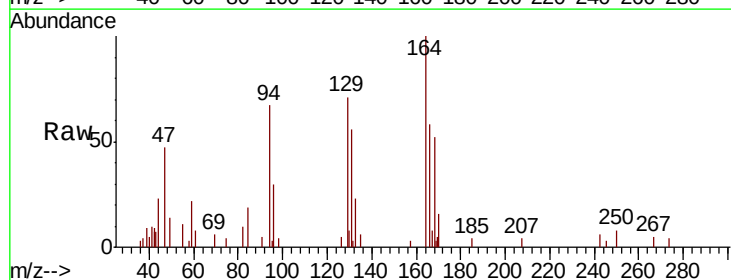
Instrument :
 MSVOA_L
 ClientSampleId :

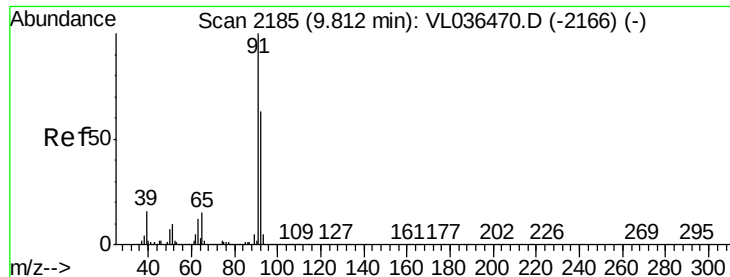
Tot Ion: 57 Resp: 27478
 Ion Ratio Lower Upper
 57 100
 41 78.3 28.8 43.2#
 56 64.8 26.1 39.1#



#52
 Tetrachloroethene
 Concen: 0.046 ppbv
 RT: 11.20 min Scan# 2617
 Delta R.T. -0.03 min
 Lab File: VL036653.D
 Acq: 2 Apr 2021 20:22

Tgt Ion: 164 Resp: 5363
 Ion Ratio Lower Upper
 164 100
 166 16.7 98.3 147.5#
 129 52.5 85.8 128.8#
 131 16.4 80.9 121.3#





#53

Toluene

Concen: 0.229 ppbv

RT: 9.78 min Scan# 2176

Delta R.T. -0.03 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

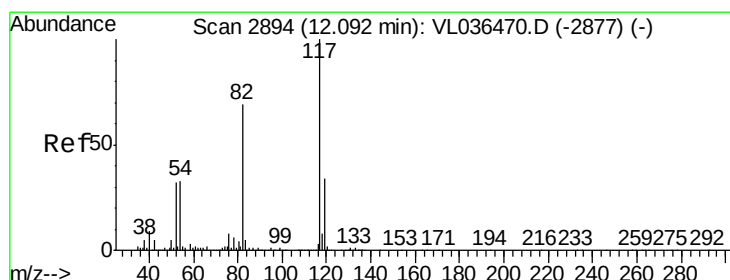
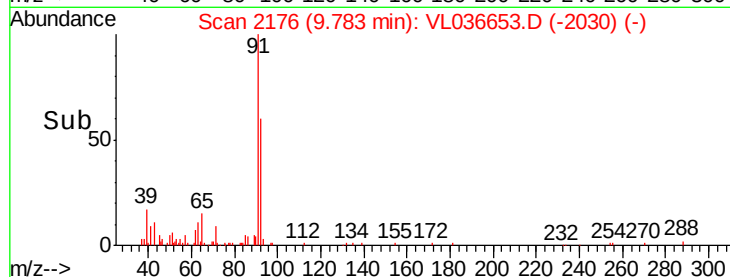
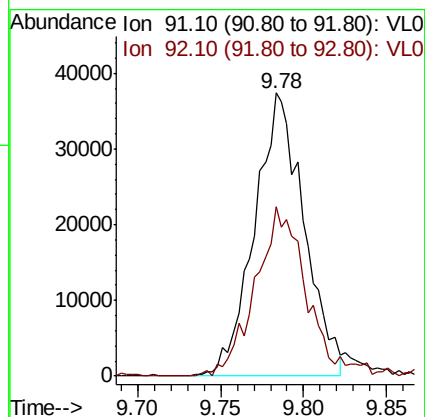
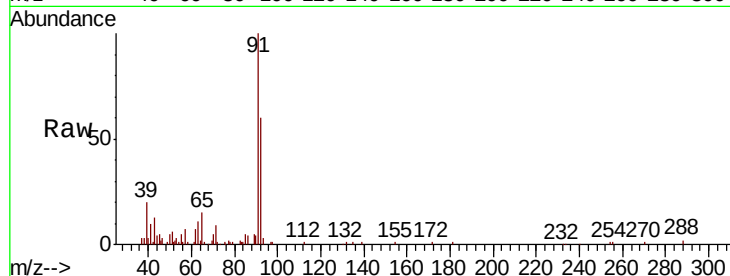
ClientSampleId :

Tot Ion: 91 Resp: 77438

Ion Ratio Lower Upper

91 100

92 61.6 48.8 73.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.06 min Scan# 2885

Delta R.T. -0.03 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

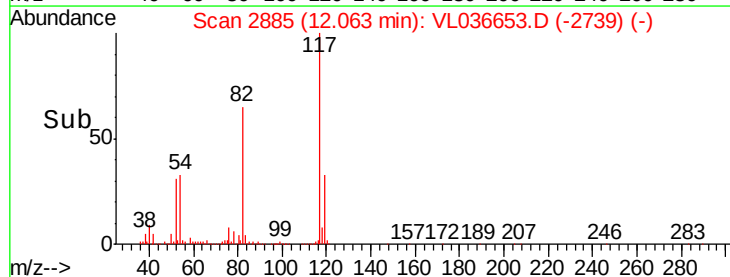
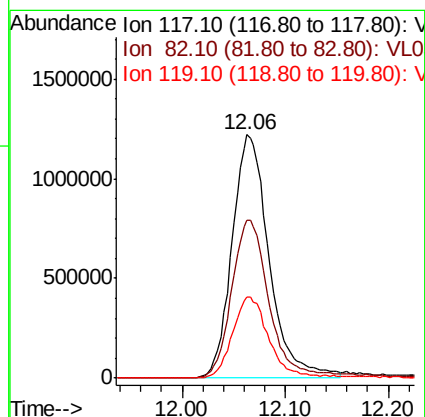
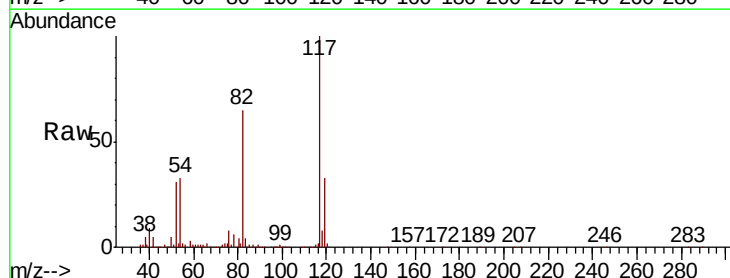
Tgt Ion: 117 Resp: 3049359

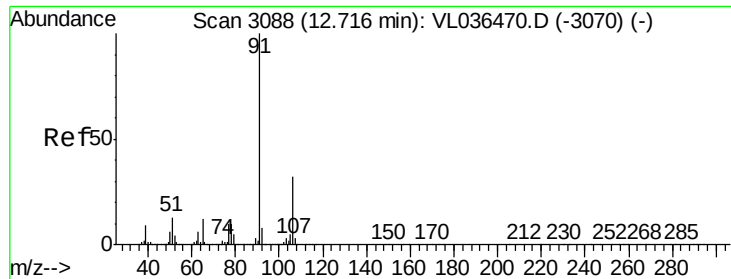
Ion Ratio Lower Upper

117 100

82 68.8 57.4 86.0

119 33.5 47.4 71.0#





#58

Ethyl Benzene

Concen: 0.051 ppbv

RT: 12.69 min Scan# 3079

Delta R.T. -0.03 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

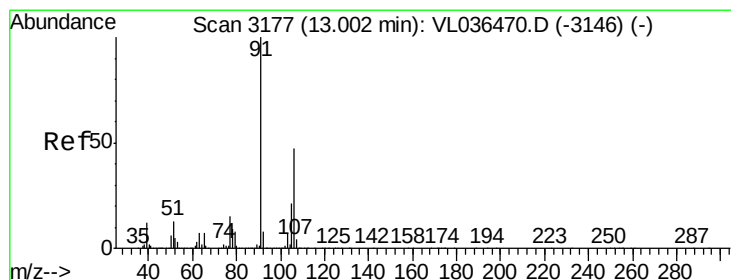
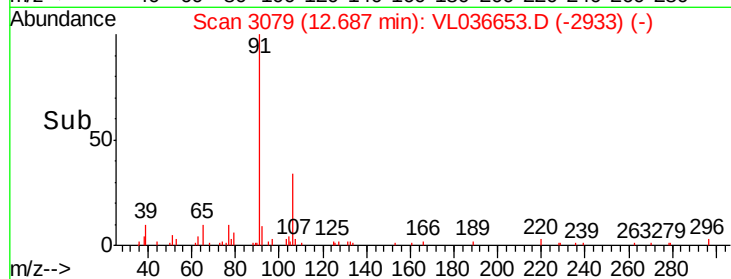
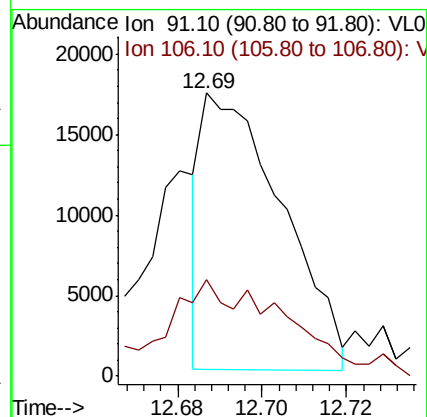
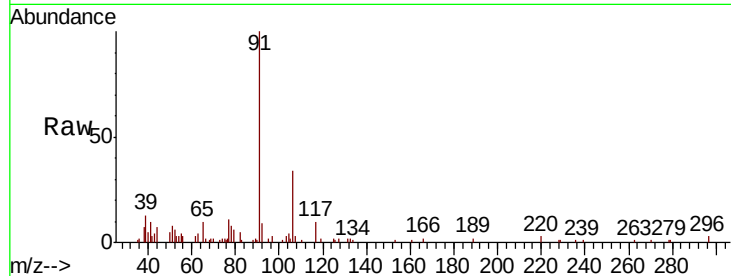
ClientSampleId :

Tot Ion: 91 Resp: 22624

Ion Ratio Lower Upper

91 100

106 30.8 25.3 37.9



#59

m/p-Xylene

Concen: 0.235 ppbv

RT: 12.95 min Scan# 3160

Delta R.T. -0.05 min

Lab File: VL036653.D

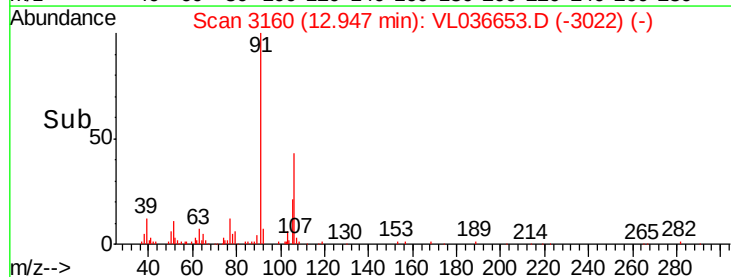
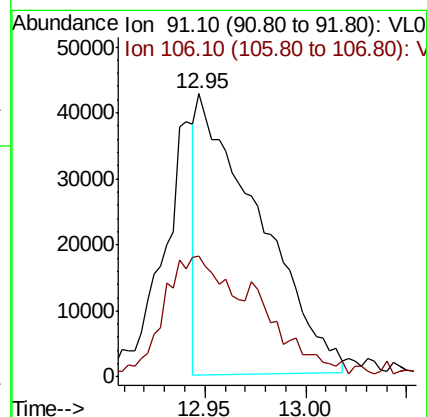
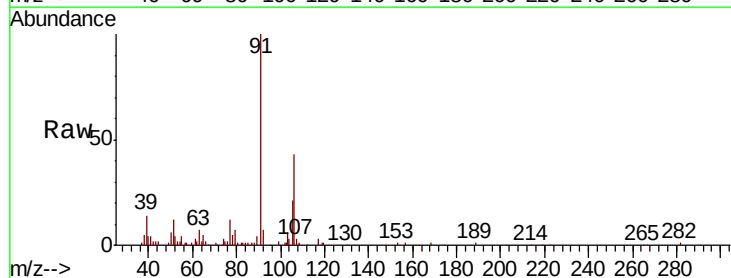
Acq: 2 Apr 2021 20:22

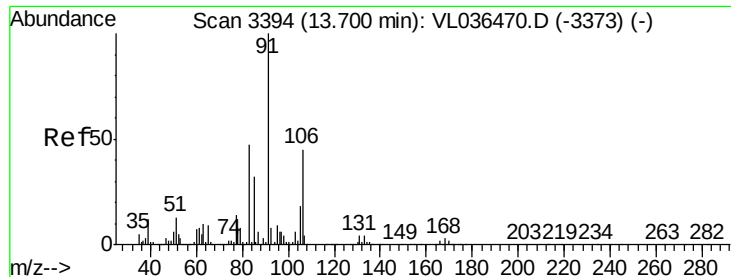
Tgt Ion: 91 Resp: 90940

Ion Ratio Lower Upper

91 100

106 65.9 35.3 52.9#





#60

o-Xylene

Concen: 0.077 ppbv

RT: 13.67 min Scan# 3384

Delta R.T. -0.03 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

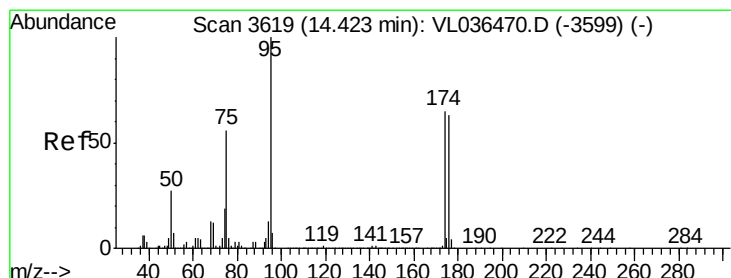
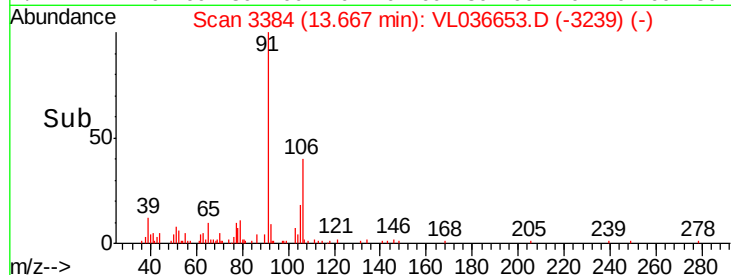
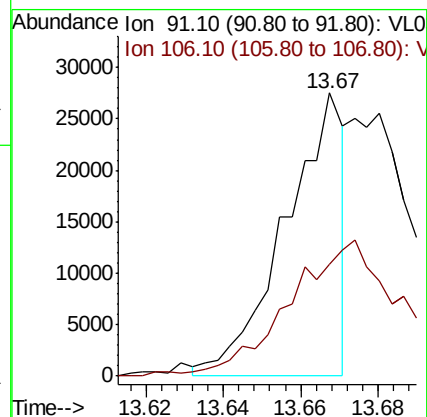
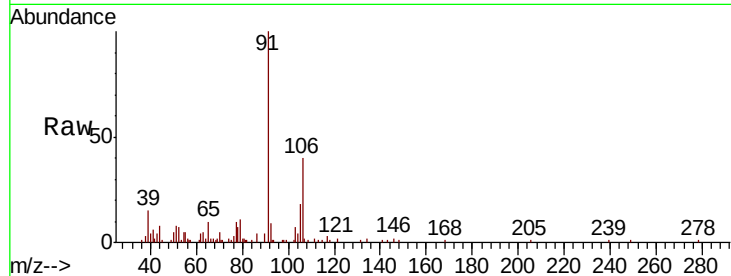
ClientSampled :

Tot Ion: 91 Resp: 28682

Ion Ratio Lower Upper

91 100

106 0.0 22.3 66.9#



#68

1-Bromo-4-Fluorobenzene

Concen: 9.619 ppbv

RT: 14.40 min Scan# 3611

Delta R.T. -0.03 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

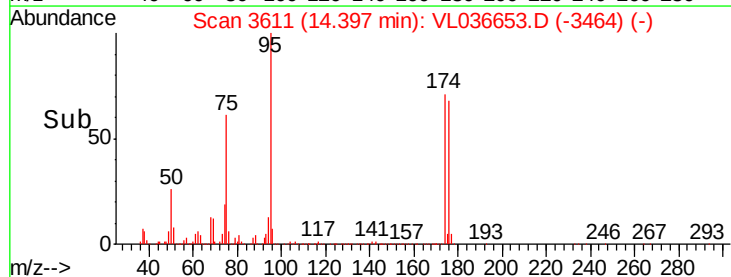
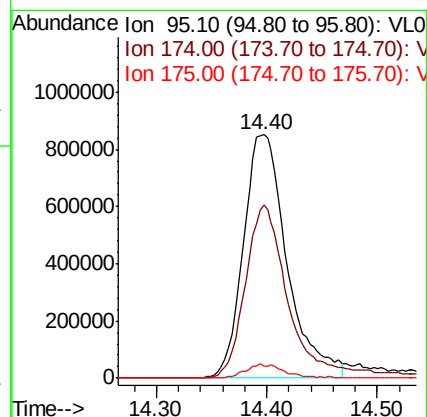
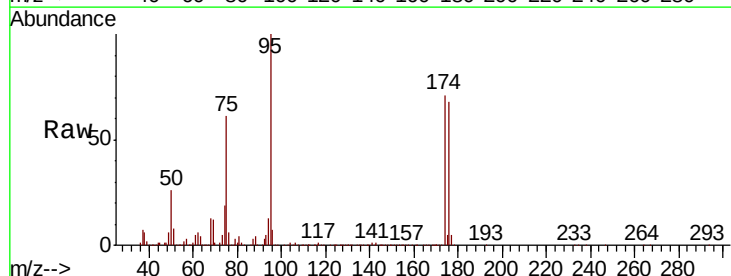
Tgt Ion: 95 Resp: 2337691

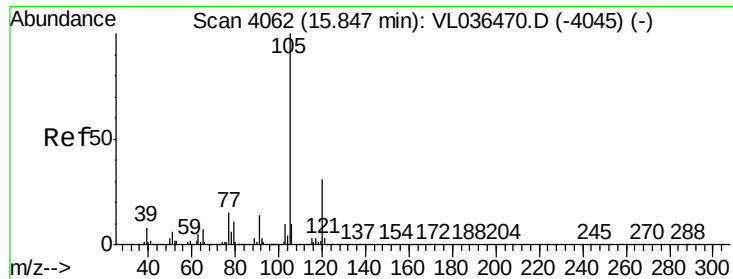
Ion Ratio Lower Upper

95 100

174 73.3 51.0 76.6

175 5.3 3.9 5.9





#72

4-Ethyltoluene

Concen: 0.020 ppbv

RT: 15.82 min Scan# 4054

Delta R.T. -0.03 min

Lab File: VL036653.D

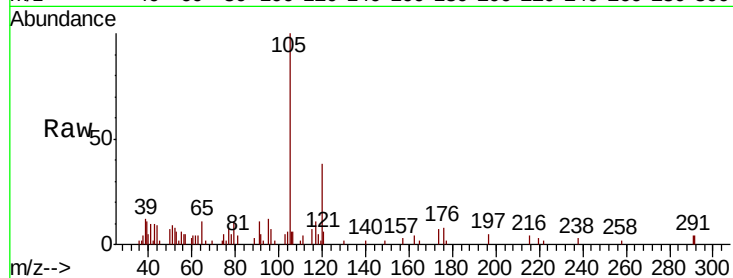
Acq: 2 Apr 2021 20:22

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	8249
Ion	Ratio	Lower	Upper
105	100		
120	86.7	24.0	36.0#
91	0.0	11.0	16.4#
77	12.2	11.7	17.5

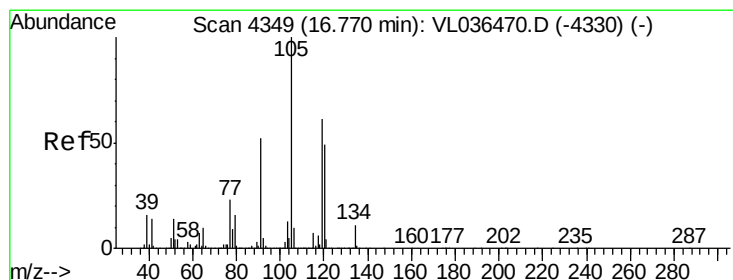
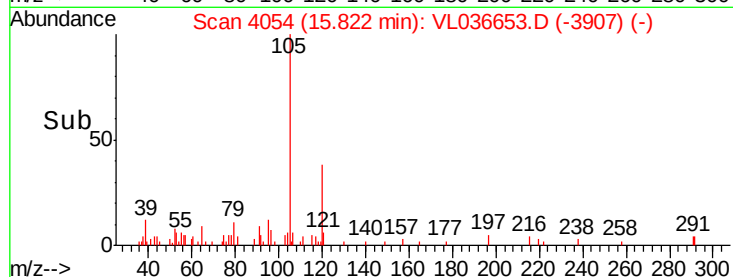
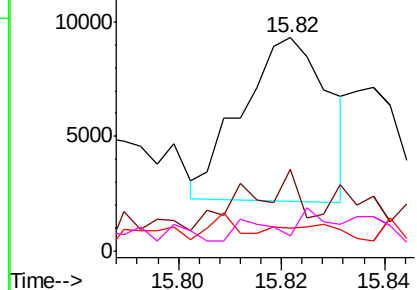


Abundance Ion 105.10 (104.80 to 105.80): V

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



#74

1,2,4-Trimethylbenzene

Concen: 0.045 ppbv

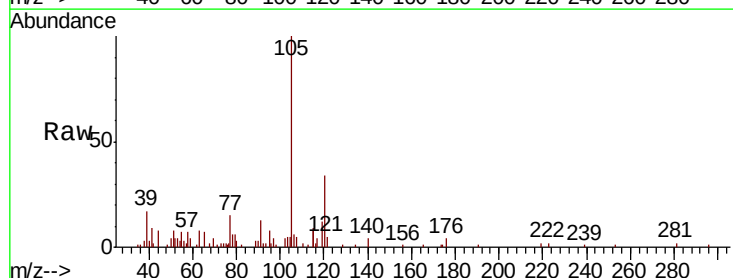
RT: 16.75 min Scan# 4342

Delta R.T. -0.02 min

Lab File: VL036653.D

Acq: 2 Apr 2021 20:22

Tgt Ion:	105	Resp:	18527
Ion	Ratio	Lower	Upper
105	100		
120	34.6	39.2	58.8#
91	8.9	42.6	64.0#
77	9.9	18.6	28.0#



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

