

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032621\
 Data File : VL036507.D
 Acq On : 26 Mar 2021 10:13
 Operator : SY/AP
 Sample : M1748-37
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 27 03:27:15 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	5.69	49	1400766	10.00	ppbv	0.02
33) 1,4-Difluorobenzene	7.20	114	3256244	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.11	117	2846257	10.00	ppbv	0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.45	95	2267156	9.99	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.90%

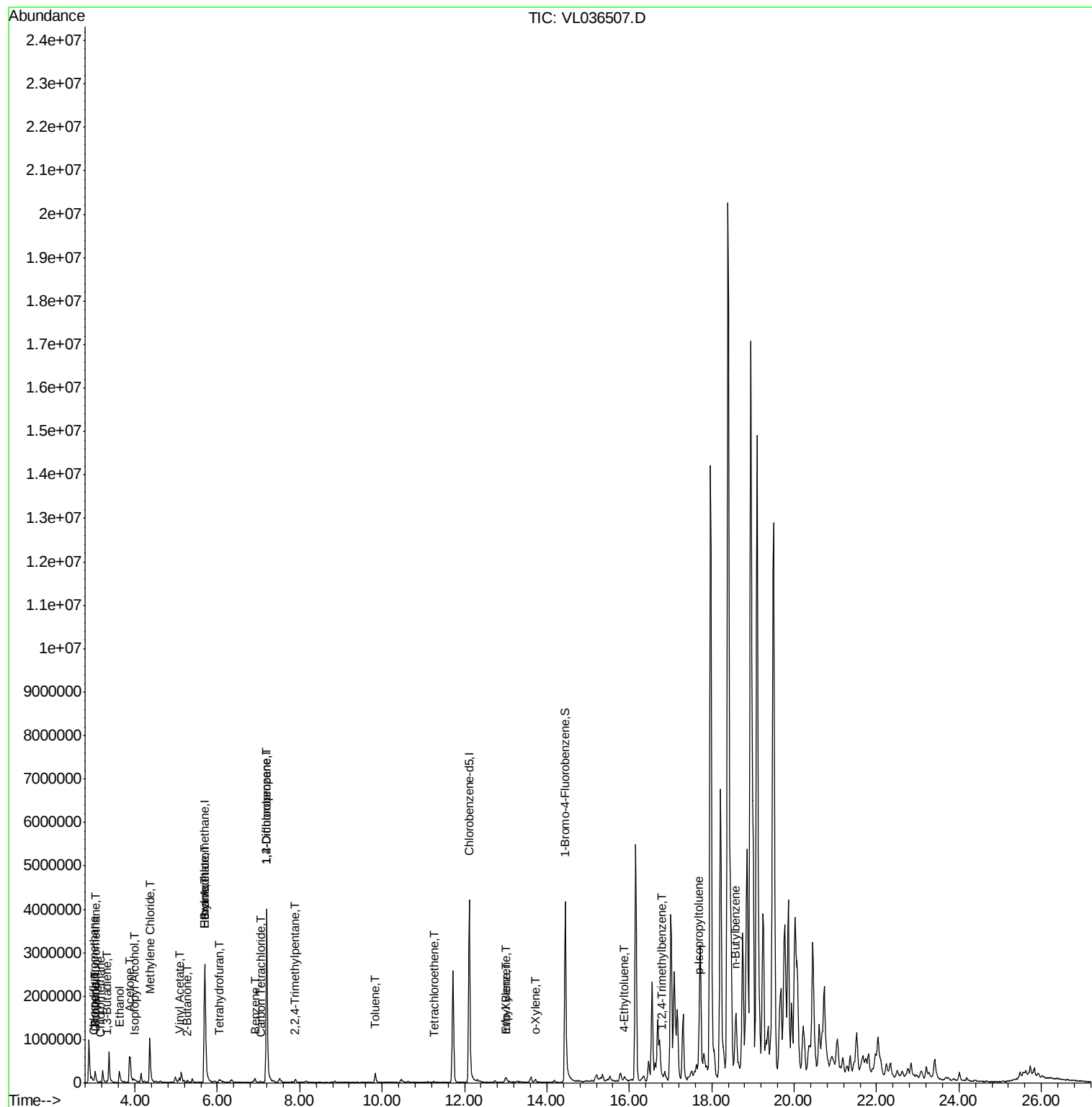
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.06	85	34916	0.153	ppbv #	84
3) Chlorodifluoromethane	3.00	51	78339	0.299	ppbv #	87
4) Chloromethane	3.15	50	5435	0.059	ppbv	93
9) Propene	3.03	41	81255	0.974	ppbv #	79
13) Ethanol	3.62	45	338988	34.119	ppbv	99
15) Acetone	3.87	43	892533	6.474	ppbv	92
16) 1,3-Butadiene	3.33	39	7078	0.074	ppbv #	76
19) Isopropyl Alcohol	4.00	45	47917	0.632	ppbv #	51
20) Methylene Chloride	4.36	84	419443	6.498	ppbv	95
23) Vinyl Acetate	5.09	43	15351	0.065	ppbv #	18
25) Ethyl Acetate	5.71	43	375912	1.147	ppbv #	78
26) Hexane	5.71	57	482396	3.171	ppbv #	47
34) 2-Butanone	5.27	43	35517	0.223	ppbv #	55
35) Carbon Tetrachloride	7.04	117	6263	0.025	ppbv #	57
36) Benzene	6.91	78	72421	0.241	ppbv #	92
39) 1,2-Dichloropropane	7.20	63	884080	7.257	ppbv #	23
41) Tetrahydrofuran	6.05	42	7095	0.097	ppbv #	11
44) 2,2,4-Trimethylpentane	7.90	57	12558	0.024	ppbv #	1
52) Tetrachloroethene	11.27	164	2260	0.020	ppbv #	41
53) Toluene	9.83	91	152484	0.477	ppbv	98
58) Ethyl Benzene	13.02	91	18254	0.044	ppbv	90
59) m/p-Xylene	13.02	91	18254	0.051	ppbv #	32
60) o-Xylene	13.73	91	16984	0.049	ppbv #	1
69) p-Isopropyltoluene	17.68	119	75037	0.167	ppbv #	88
70) n-Butylbenzene	18.59	91	15882	0.034	ppbv #	33
72) 4-Ethyltoluene	15.87	105	19260	0.050	ppbv #	81
74) 1,2,4-Trimethylbenzene	16.81	105	21314	0.056	ppbv #	67

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

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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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

ClientSampleId :

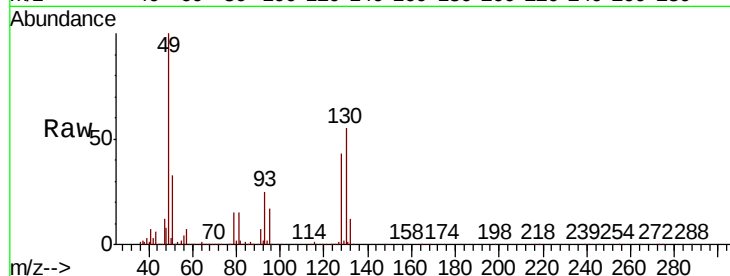
Tot Ion: 49 Resp: 1400766

Ion Ratio Lower Upper

49 100

128 44.6 23.5 70.6

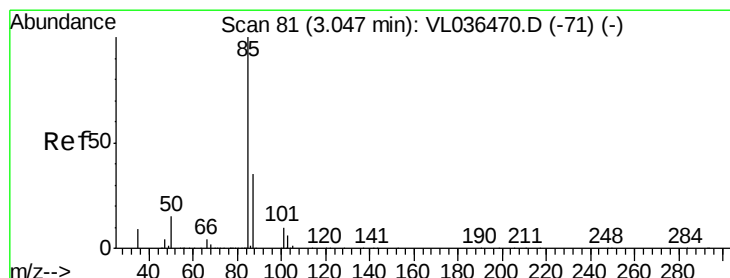
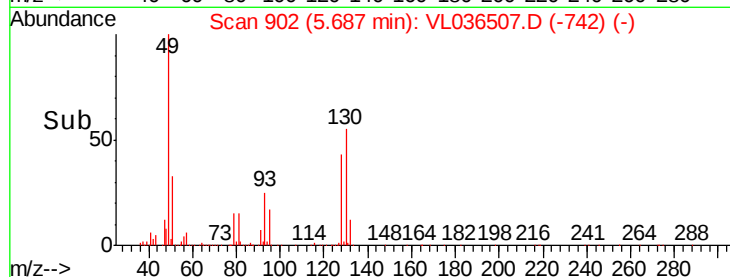
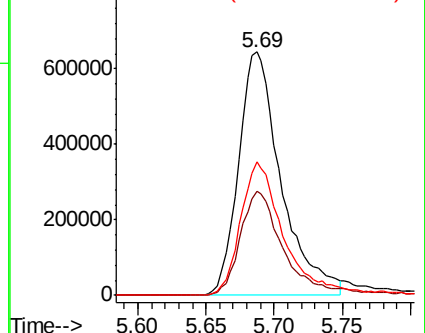
130 56.6 29.1 87.4



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: 0.153 ppbv

RT: 3.06 min Scan# 84

Delta R.T. 0.01 min

Lab File: VL036507.D

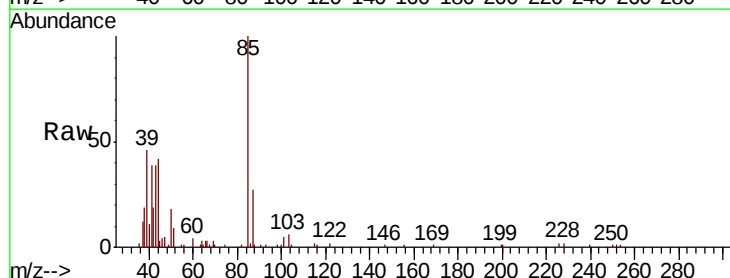
Acq: 26 Mar 2021 10:13

Tgt Ion: 85 Resp: 34916

Ion Ratio Lower Upper

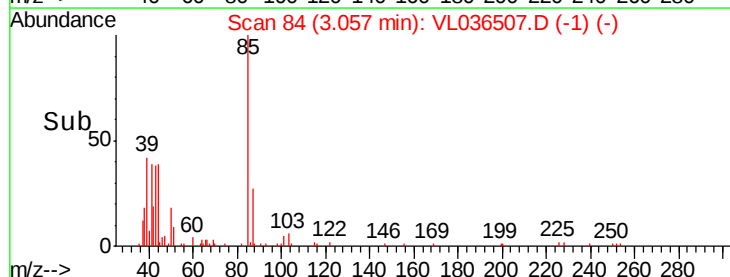
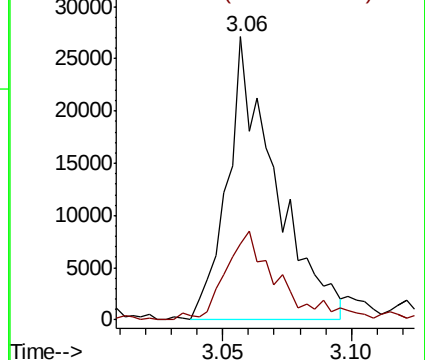
85 100

87 25.6 27.8 41.8#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

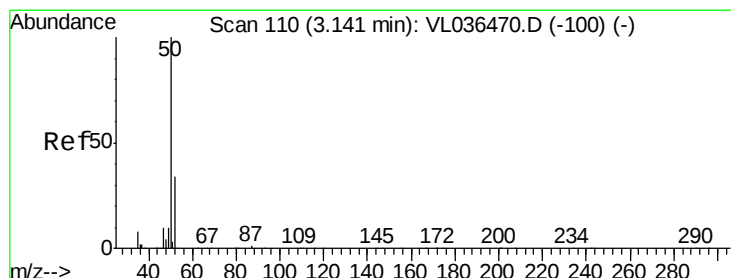
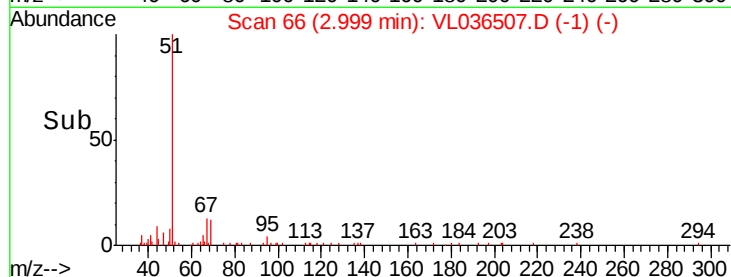
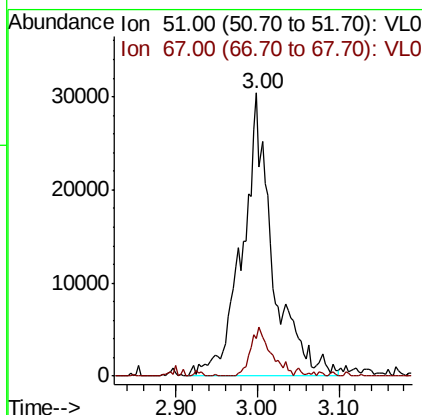
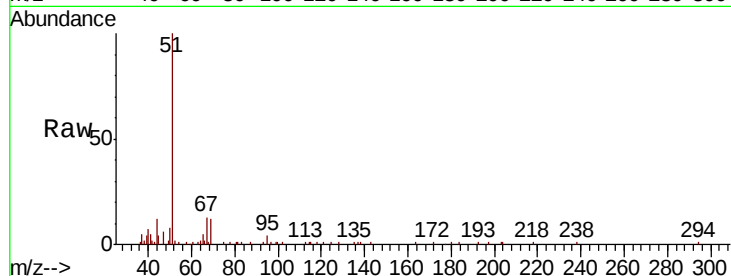




#3
 Chlorodifluoromethane
 Concen: 0.299 ppbv
 RT: 3.00 min Scan# 66
 Delta R.T. 0.01 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

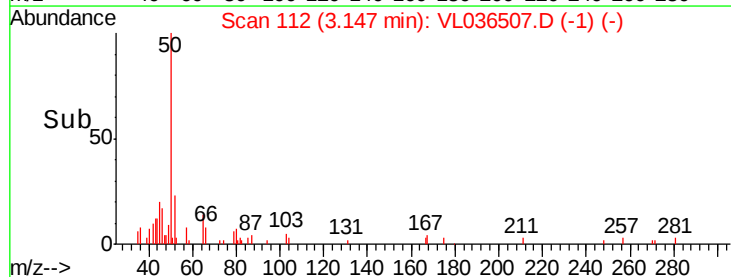
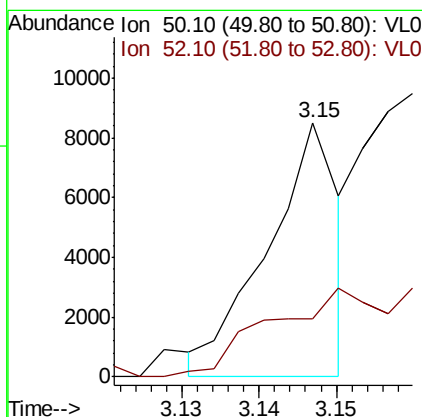
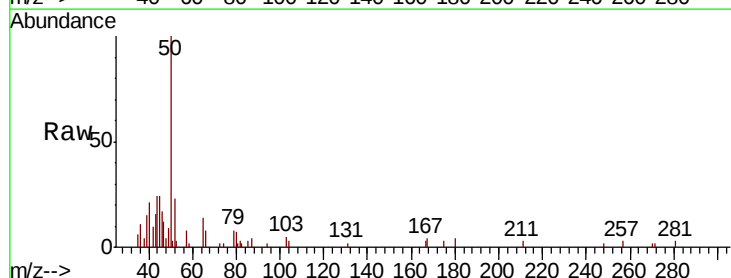
Instrument :
 MSVOA_L
 ClientSampleId :

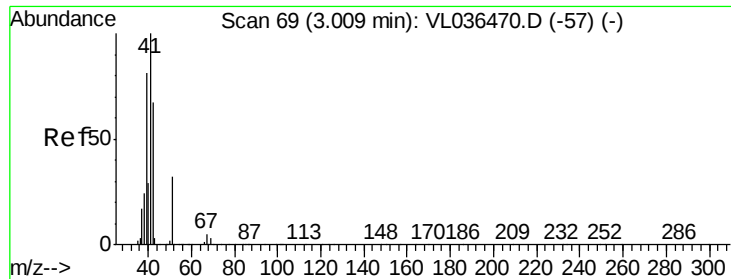
Tot Ion: 51 Resp: 78339
 Ion Ratio Lower Upper
 51 100
 67 12.5 14.7 22.1#



#4
 Chloromethane
 Concen: 0.059 ppbv
 RT: 3.15 min Scan# 112
 Delta R.T. 0.01 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

Tgt Ion: 50 Resp: 5435
 Ion Ratio Lower Upper
 50 100
 52 29.6 27.0 40.6

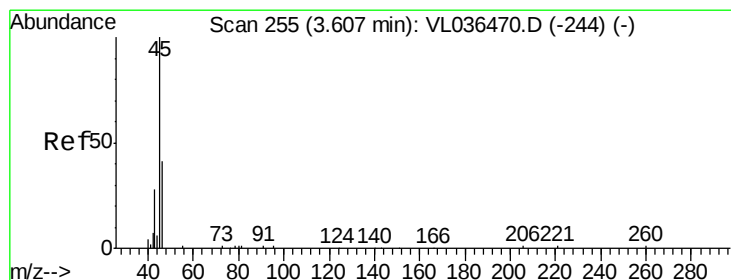
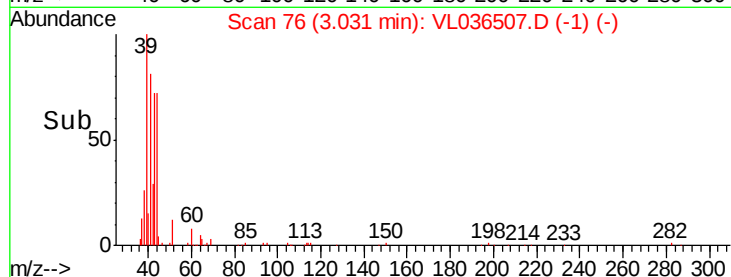
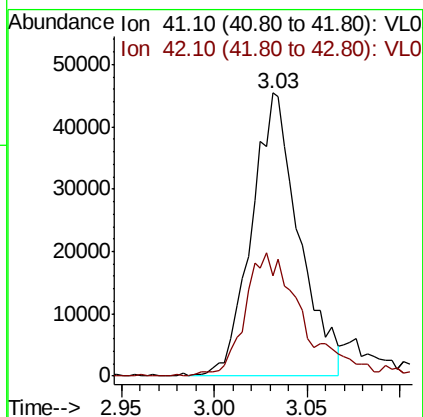
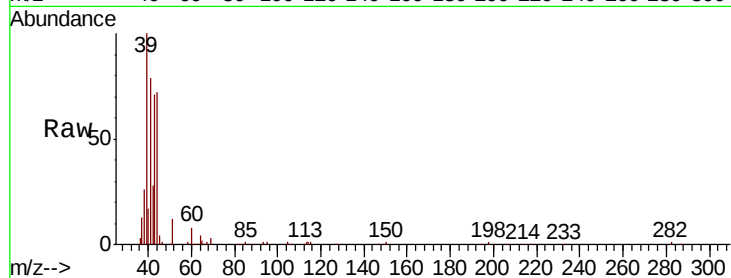




#9
 Propene
 Concen: 0.974 ppbv
 RT: 3.03 min Scan# 76
 Delta R.T. 0.02 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

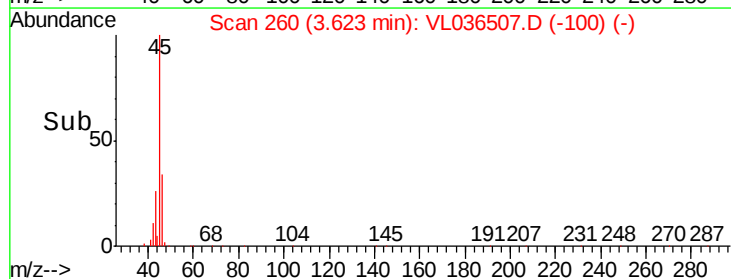
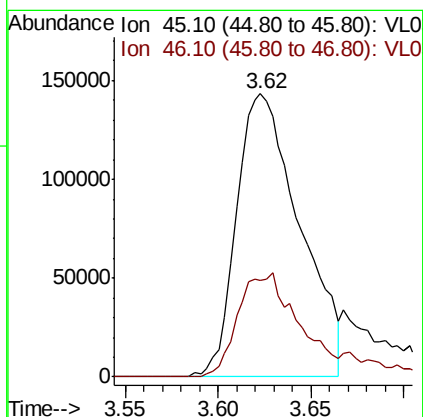
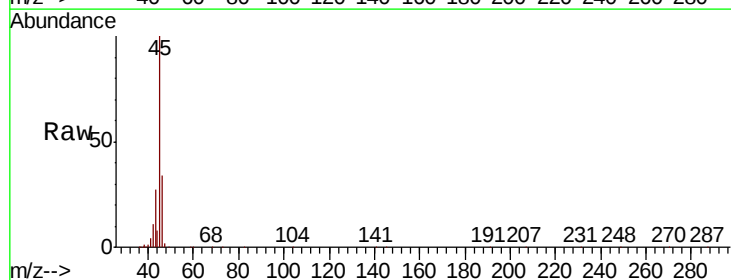
Instrument :
 MSVOA_L
 ClientSampled :

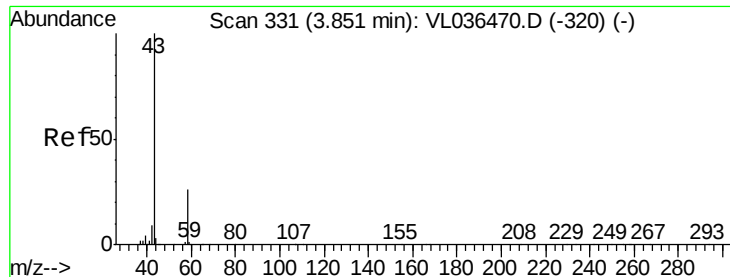
Tot Ion: 41 Resp: 81255
 Ion Ratio Lower Upper
 41 100
 42 53.6 57.0 85.4#



#13
 Ethanol
 Concen: 34.119 ppbv
 RT: 3.62 min Scan# 260
 Delta R.T. 0.02 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

Tgt Ion: 45 Resp: 338988
 Ion Ratio Lower Upper
 45 100
 46 40.9 16.6 66.2





#15

Acetone

Concen: 6.474 ppbv

RT: 3.87 min Scan# 337

Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

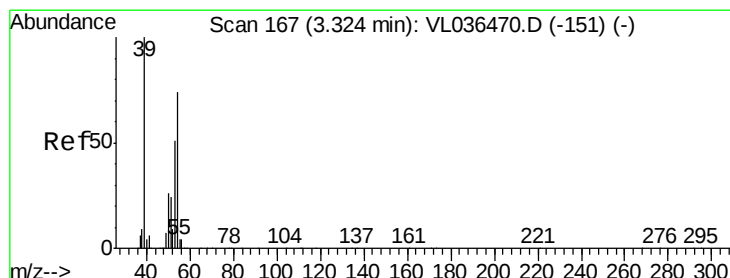
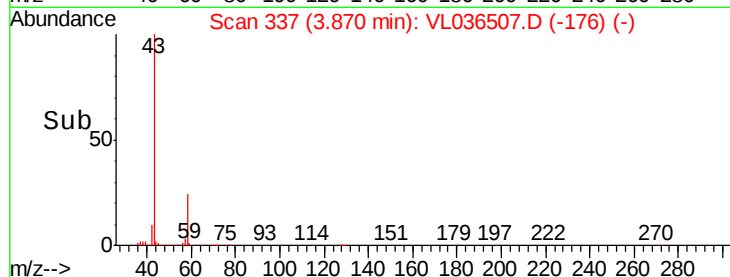
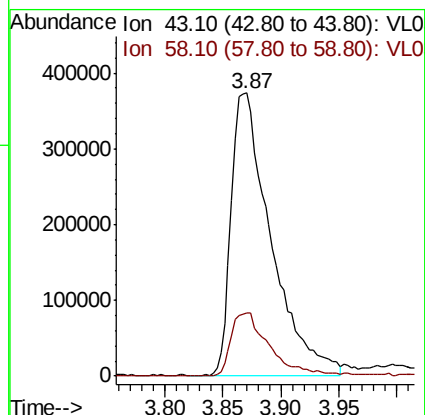
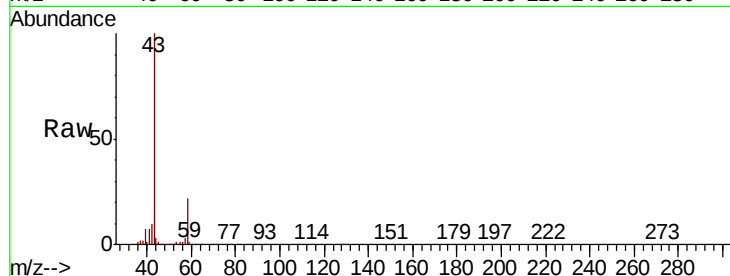
ClientSampleId :

Tot Ion: 43 Resp: 892533

Ion Ratio Lower Upper

43 100

58 22.5 21.2 31.8



#16

1,3-Butadiene

Concen: 0.074 ppbv

RT: 3.33 min Scan# 168

Delta R.T. 0.00 min

Lab File: VL036507.D

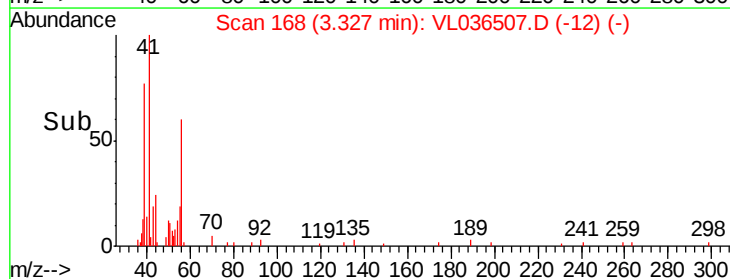
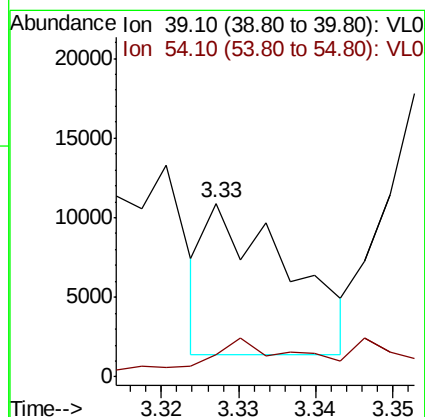
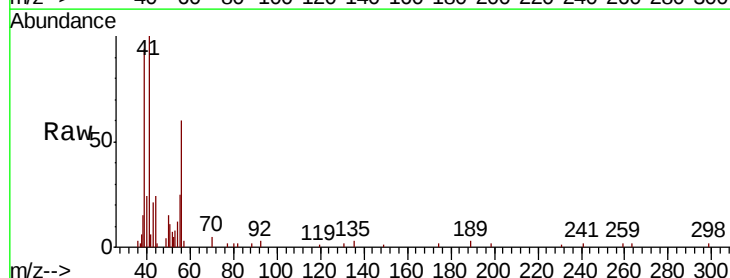
Acq: 26 Mar 2021 10:13

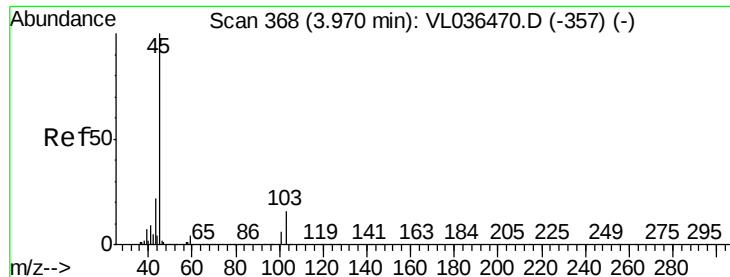
Tgt Ion: 39 Resp: 7078

Ion Ratio Lower Upper

39 100

54 93.6 58.8 88.2#





#19

Isopropyl Alcohol

Concen: 0.632 ppbv

RT: 4.00 min Scan# 377

Delta R.T. 0.03 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

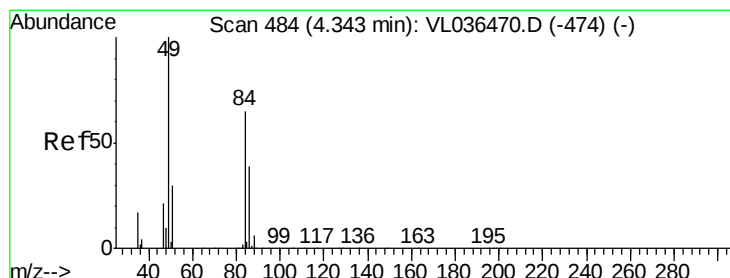
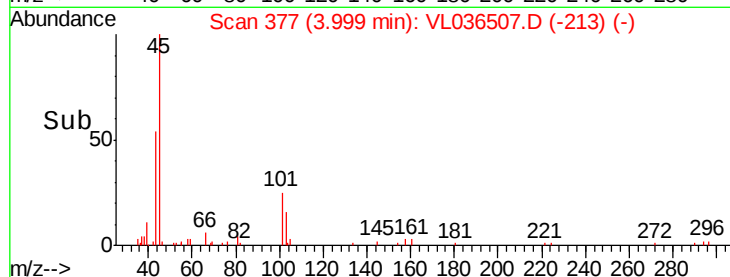
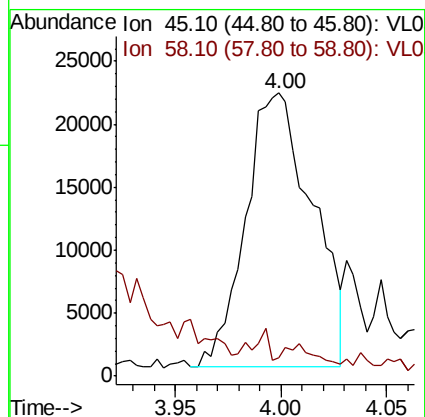
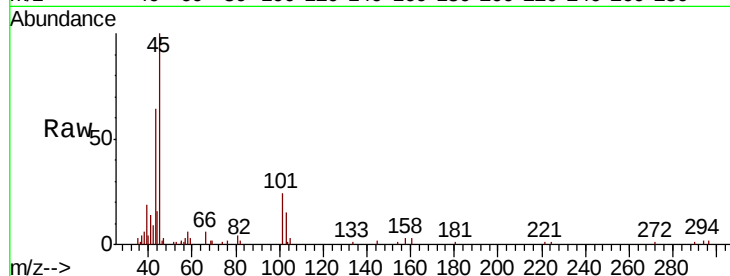
ClientSampleId :

Tot Ion: 45 Resp: 47917

Ion Ratio Lower Upper

45 100

58 19.6 2.9 4.3#



#20

Methylene Chloride

Concen: 6.498 ppbv

RT: 4.36 min Scan# 489

Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Tgt Ion: 84 Resp: 419443

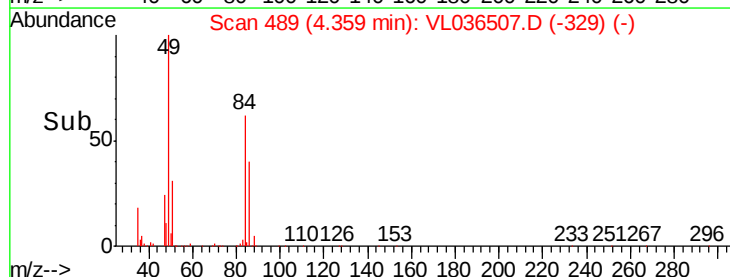
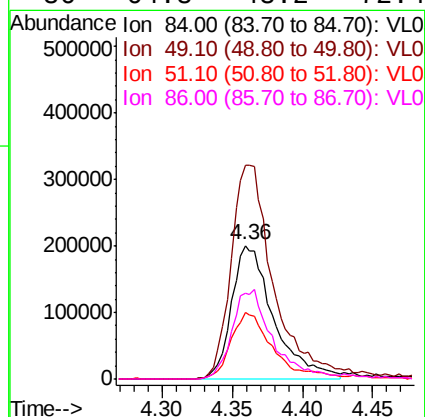
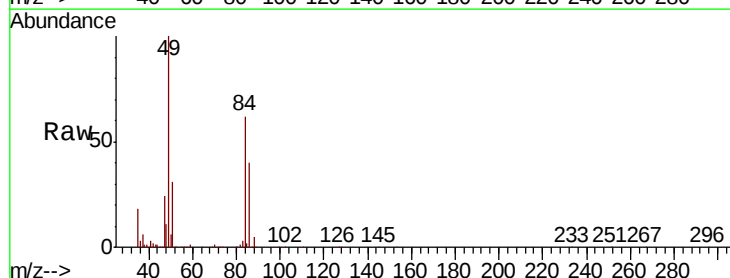
Ion Ratio Lower Upper

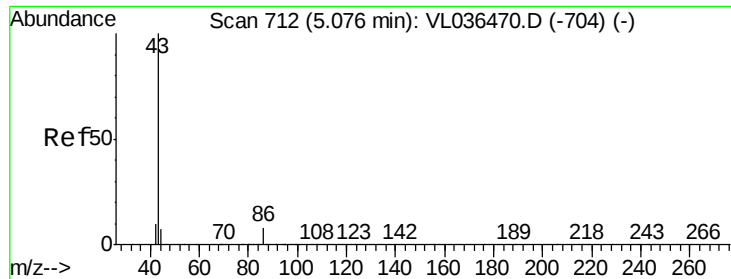
84 100

49 160.1 122.9 184.3

51 49.5 36.9 55.3

86 64.8 48.2 72.4





#23

Vinyl Acetate

Concen: 0.065 ppbv

RT: 5.09 min Scan# 715

Delta R.T. 0.01 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 43 Resp: 15351

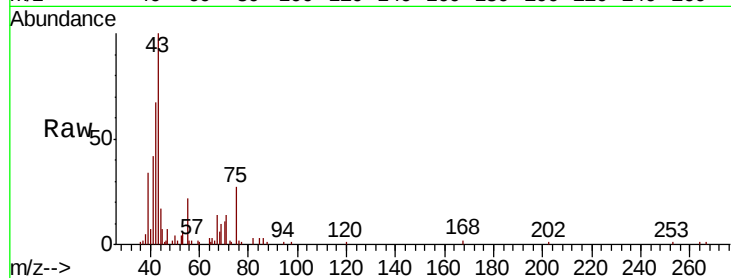
Ion Ratio Lower Upper

43 100

86 2.6 5.4 8.0#

42 72.7 8.5 12.7#

44 2.8 4.6 7.0#

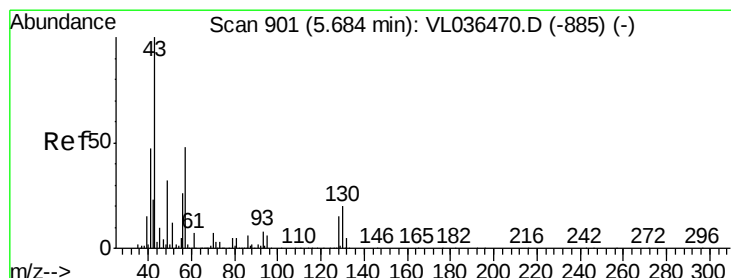
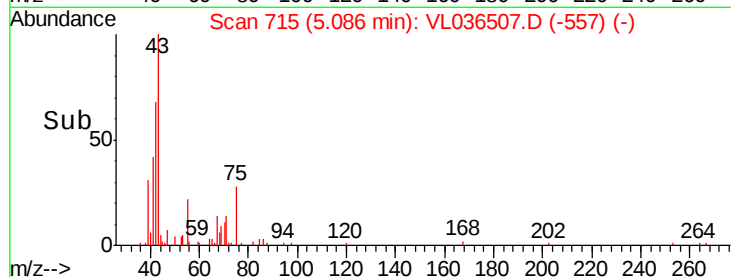
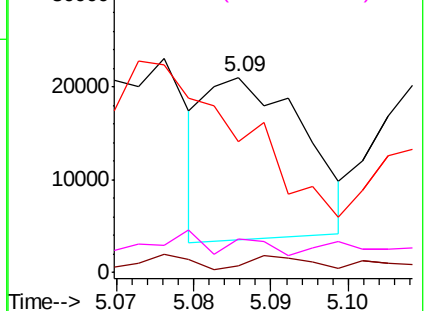


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 1.147 ppbv

RT: 5.71 min Scan# 909

Delta R.T. 0.03 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Tgt Ion: 43 Resp: 375912

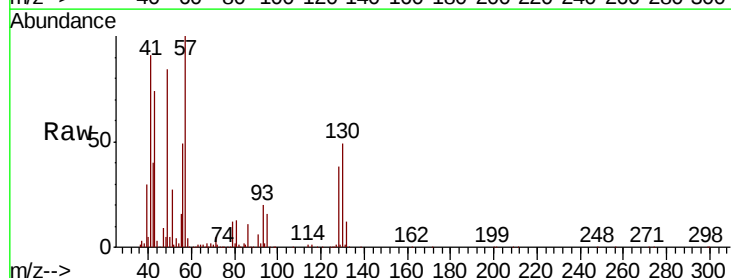
Ion Ratio Lower Upper

43 100

45 0.9 7.9 11.9#

61 0.5 7.4 11.2#

70 2.0 5.1 7.7#

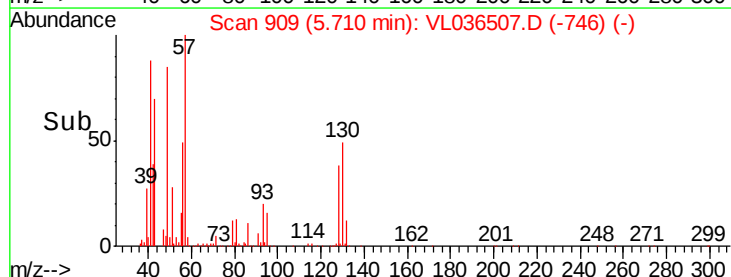
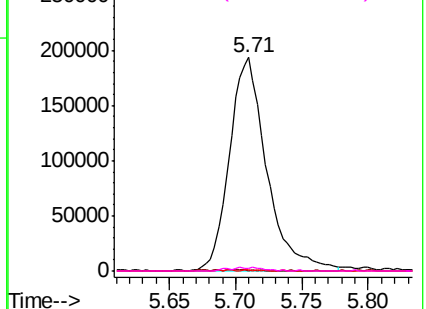


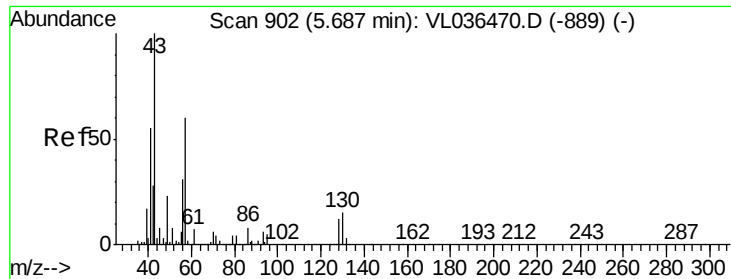
Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 3.171 ppbv

RT: 5.71 min Scan# 909

Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

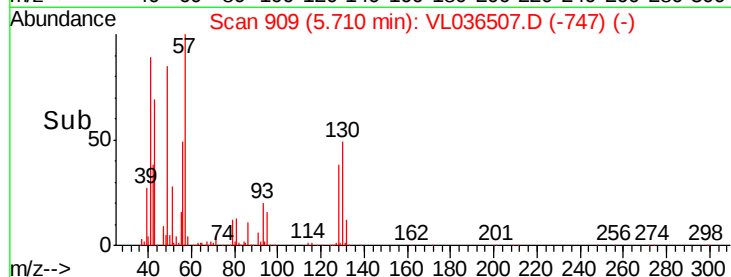
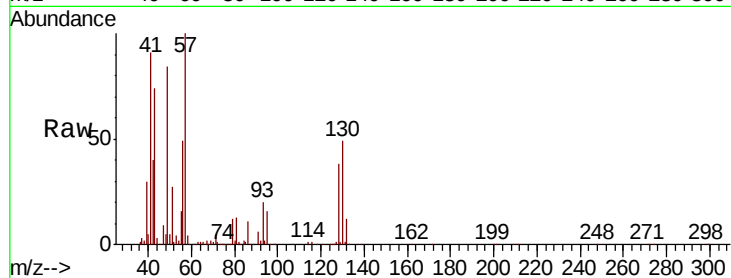
Instrument :

MSVOA_L

ClientSampled :

Tot Ion: 57 Resp: 482396

Ion	Ratio	Lower	Upper
57	100		
41	103.0	77.2	115.8
43	80.0	173.8	260.6#
56	57.7	43.8	65.6

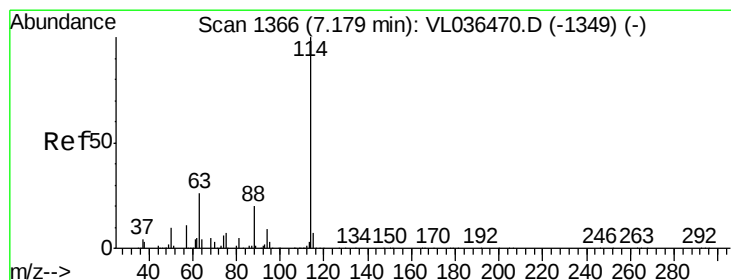
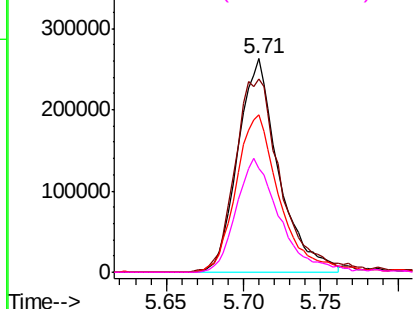


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.20 min Scan# 1372

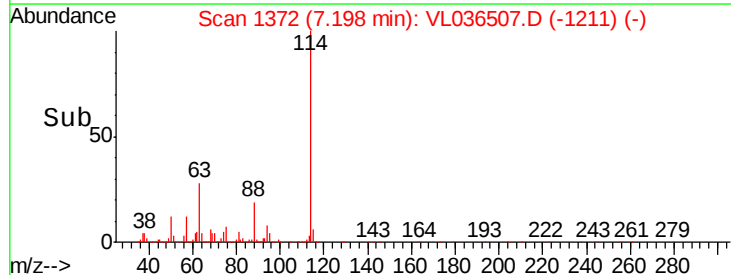
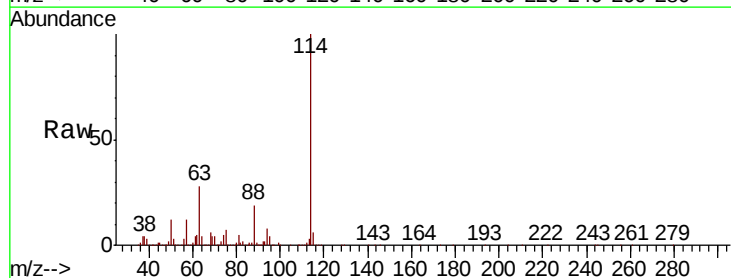
Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Tgt Ion: 114 Resp: 3256244

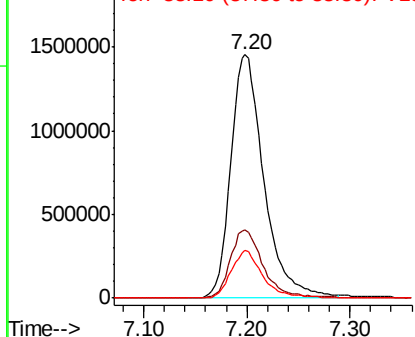
Ion	Ratio	Lower	Upper
114	100		
63	27.9	22.4	33.6
88	18.9	15.4	23.0

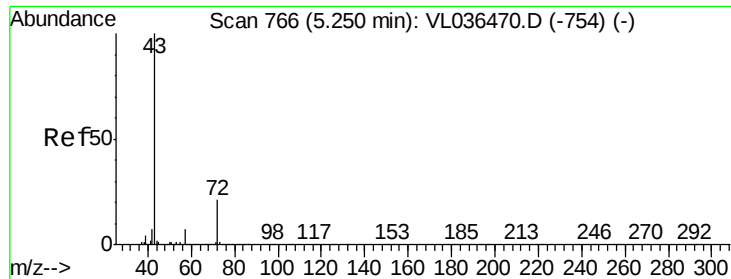


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0

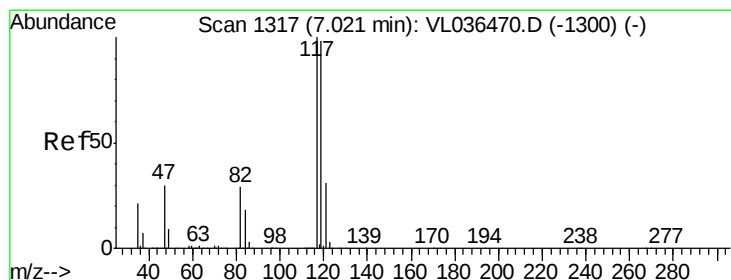
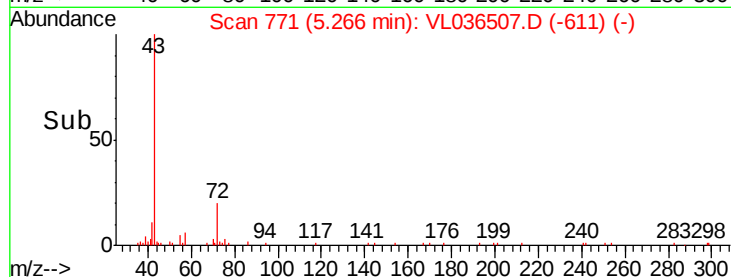
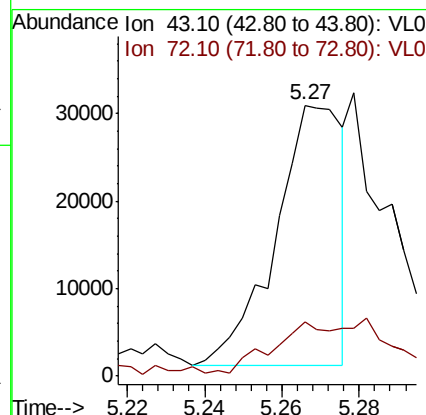
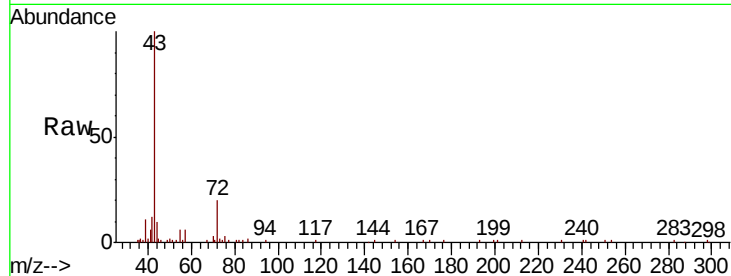




#34
2-Butanone
Concen: 0.223 ppbv
RT: 5.27 min Scan# 771
Delta R.T. 0.02 min
Lab File: VL036507.D
Acq: 26 Mar 2021 10:13

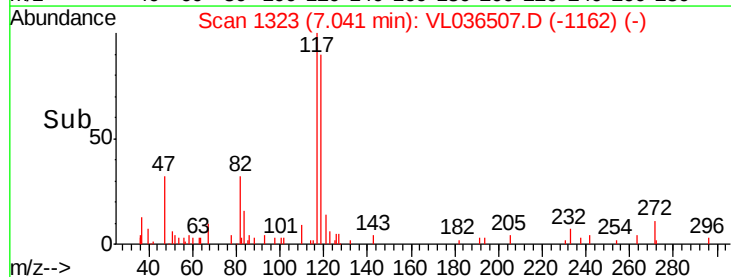
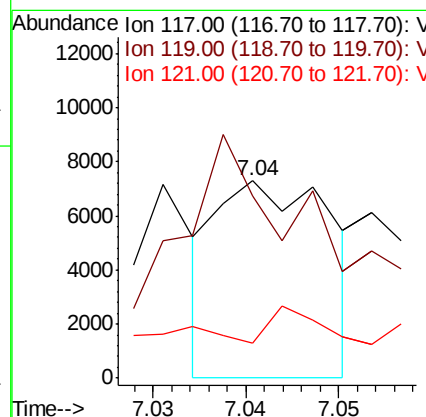
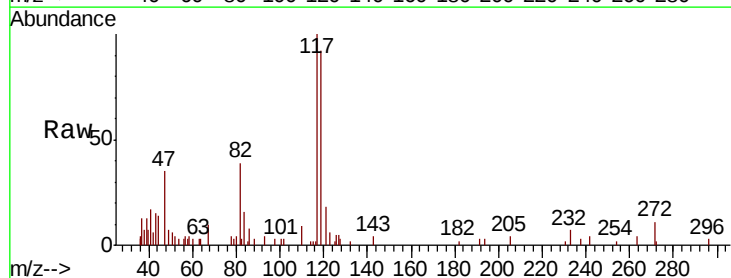
Instrument :
MSVOA_L
ClientSampleId :

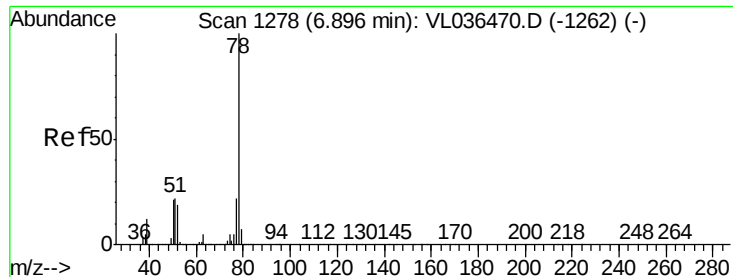
Tot Ion: 43 Resp: 35517
Ion Ratio Lower Upper
43 100
72 0.0 17.0 25.6#



#35
Carbon Tetrachloride
Concen: 0.025 ppbv
RT: 7.04 min Scan# 1323
Delta R.T. 0.02 min
Lab File: VL036507.D
Acq: 26 Mar 2021 10:13

Tgt Ion: 117 Resp: 6263
Ion Ratio Lower Upper
117 100
119 136.2 78.2 117.2#
121 0.0 24.5 36.7#

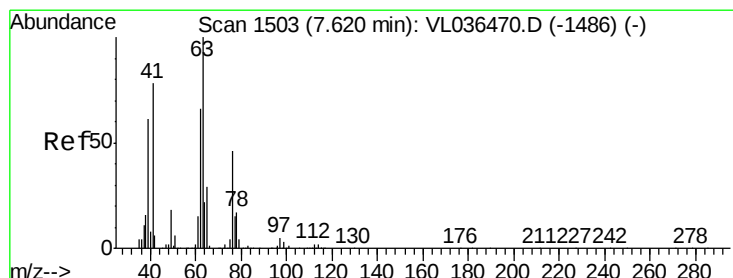
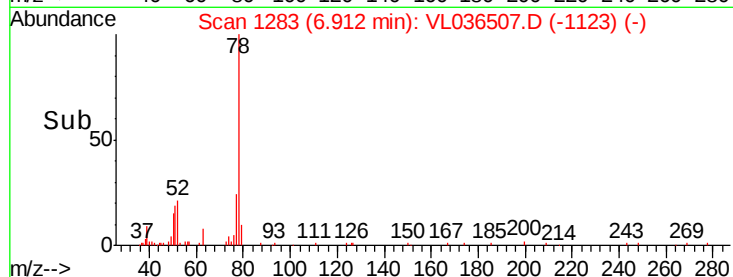
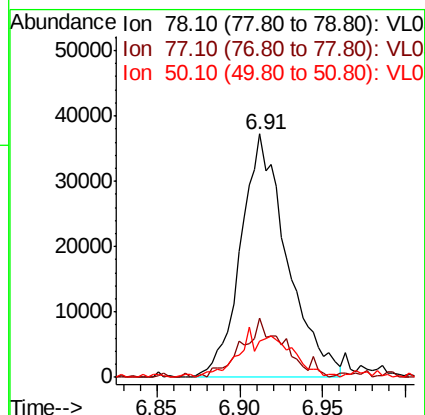
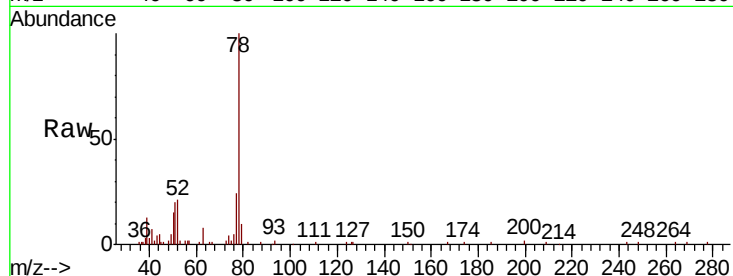




#36
Benzene
Concen: 0.241 ppbv
RT: 6.91 min Scan# 1283
Delta R.T. 0.02 min
Lab File: VL036507.D
Acq: 26 Mar 2021 10:13

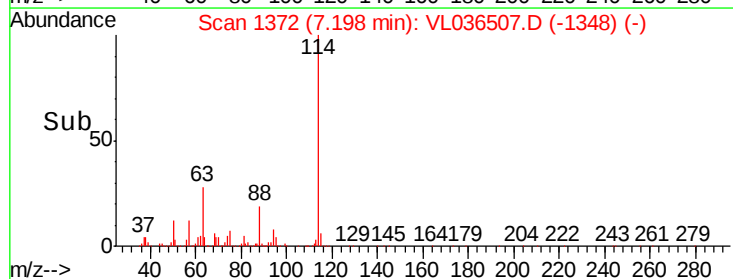
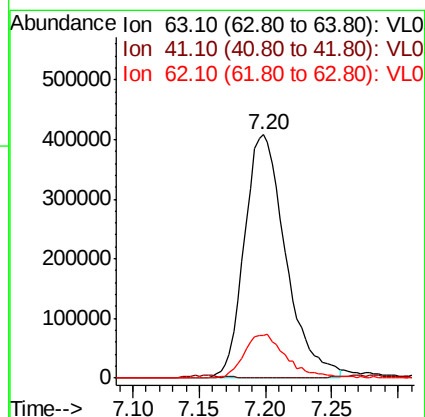
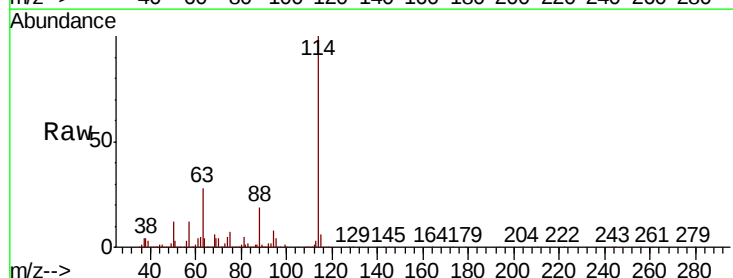
Instrument :
MSVOA_L
ClientSampleId :

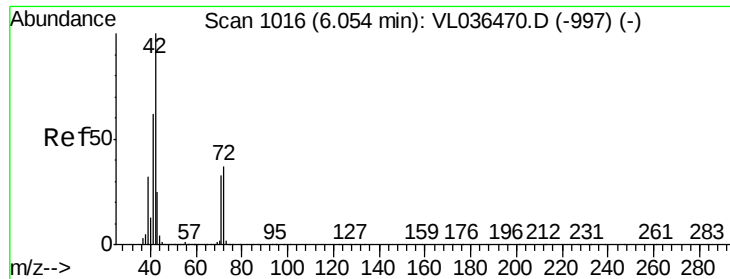
Tot Ion: 78 Resp: 72421
Ion Ratio Lower Upper
78 100
77 24.2 18.0 27.0
50 14.9 16.5 24.7#



#39
1,2-Dichloropropane
Concen: 7.257 ppbv
RT: 7.20 min Scan# 1372
Delta R.T. -0.42 min
Lab File: VL036507.D
Acq: 26 Mar 2021 10:13

Tgt Ion: 63 Resp: 884080
Ion Ratio Lower Upper
63 100
41 0.0 62.4 93.6#
62 17.4 52.8 79.2#





#41

Tetrahydrofuran

Concen: 0.097 ppbv

RT: 6.05 min Scan# 1014

Delta R.T. -0.01 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

ClientSampleId :

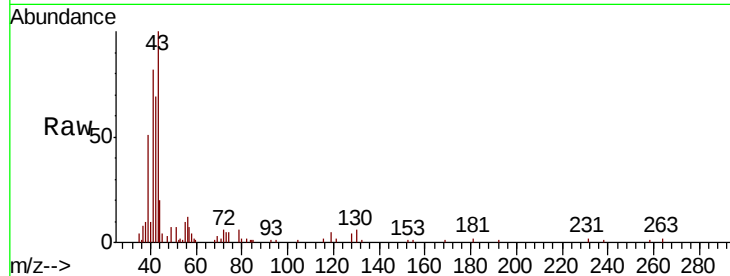
Tot Ion: 42 Resp: 7095

Ion Ratio Lower Upper

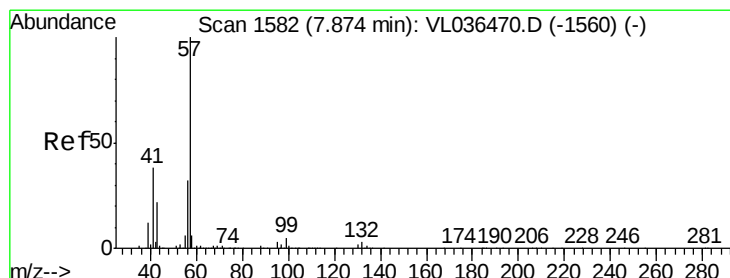
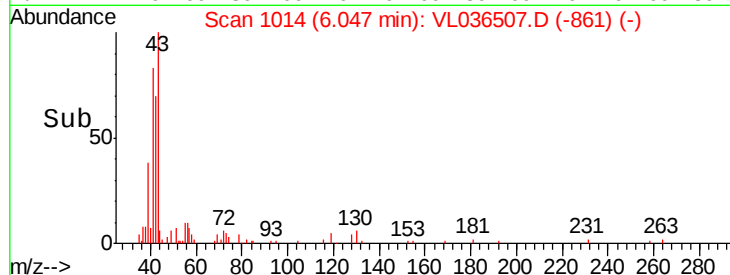
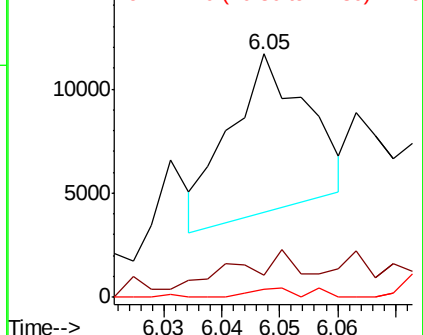
42 100

72 102.9 27.6 41.4#

71 0.0 27.0 40.4#



Abundance Ion 42.10 (41.80 to 42.80): VL0
Ion 72.10 (71.80 to 72.80): VL0
Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.024 ppbv

RT: 7.90 min Scan# 1590

Delta R.T. 0.03 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

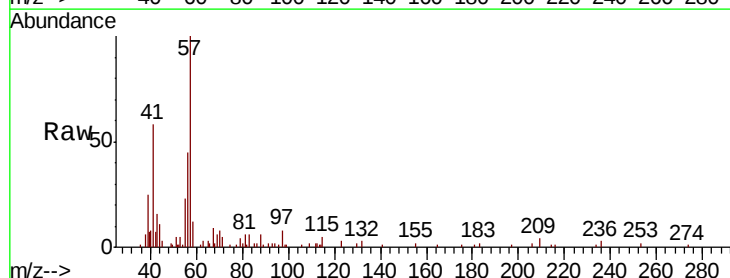
Tgt Ion: 57 Resp: 12558

Ion Ratio Lower Upper

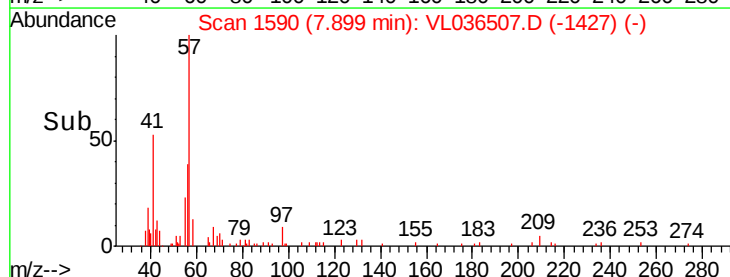
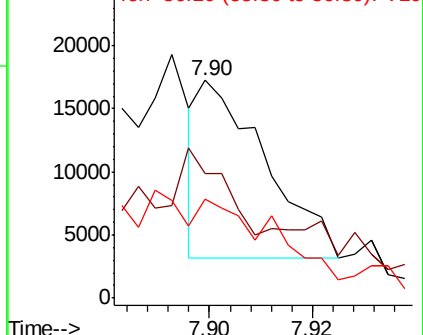
57 100

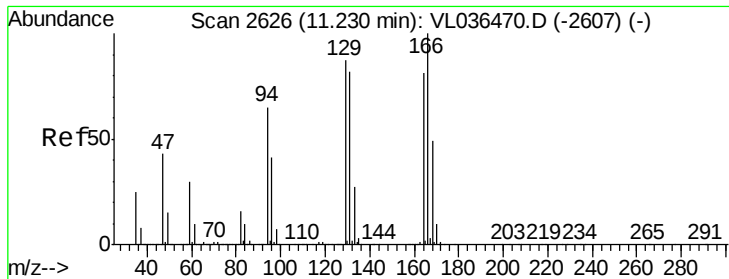
41 235.0 28.8 43.2#

56 0.0 26.1 39.1#



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





#52

Tetrachloroethene

Concen: 0.020 ppbv

RT: 11.27 min Scan# 2637

Delta R.T. 0.04 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 2260

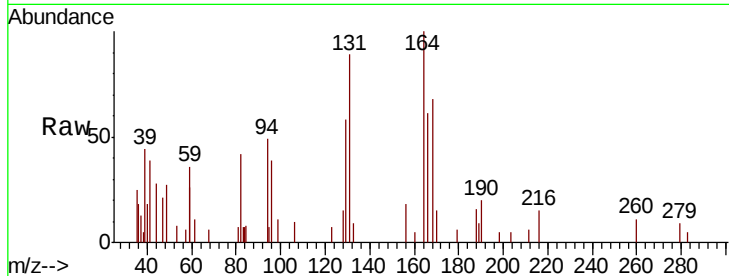
Ion Ratio Lower Upper

164 100

166 44.3 98.3 147.5#

129 19.6 85.8 128.8#

131 81.5 80.9 121.3

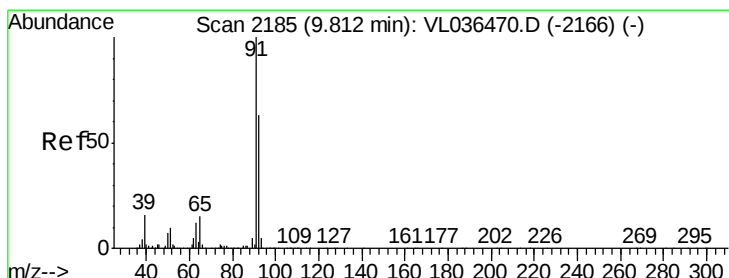
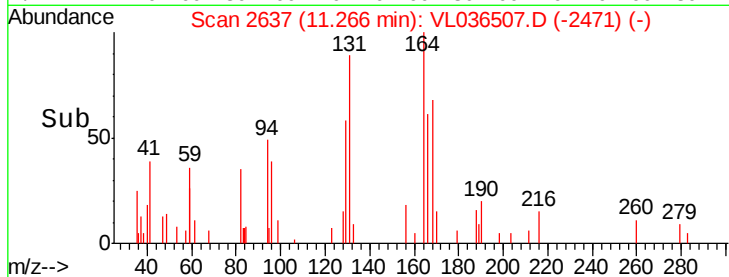
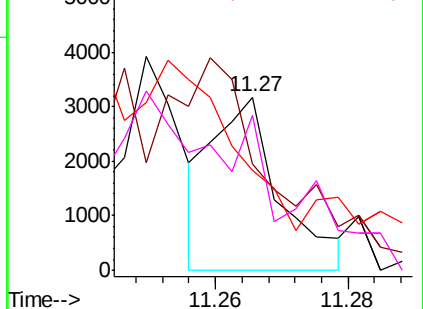


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 0.477 ppbv

RT: 9.83 min Scan# 2192

Delta R.T. 0.02 min

Lab File: VL036507.D

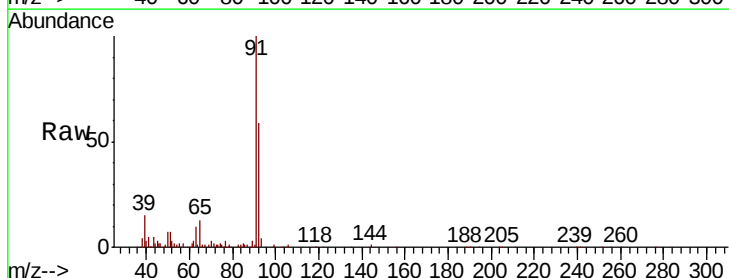
Acq: 26 Mar 2021 10:13

Tgt Ion: 91 Resp: 152484

Ion Ratio Lower Upper

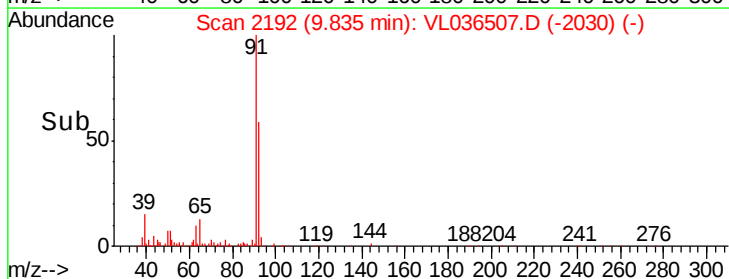
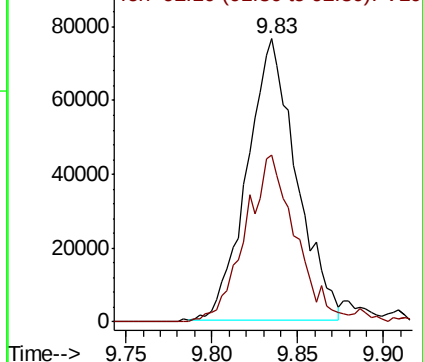
91 100

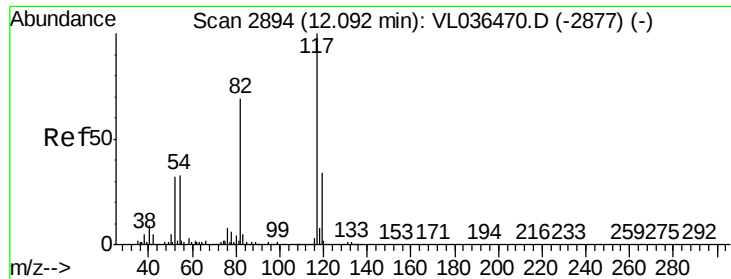
92 62.6 48.8 73.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

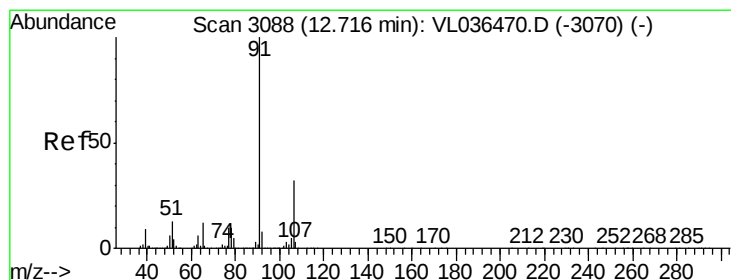
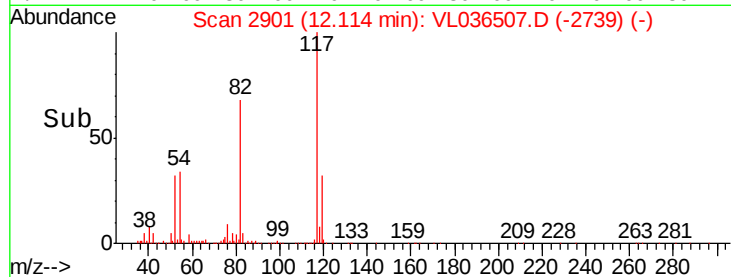
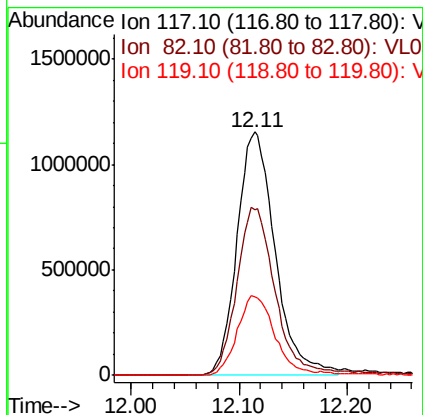
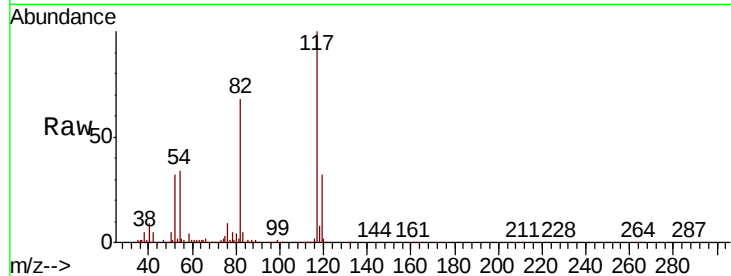




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.11 min Scan# 2901
Delta R.T. 0.02 min
Lab File: VL036507.D
Acq: 26 Mar 2021 10:13

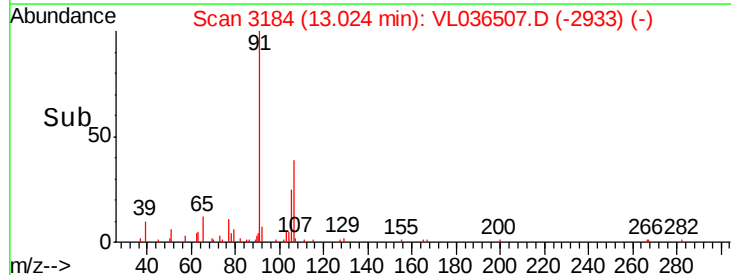
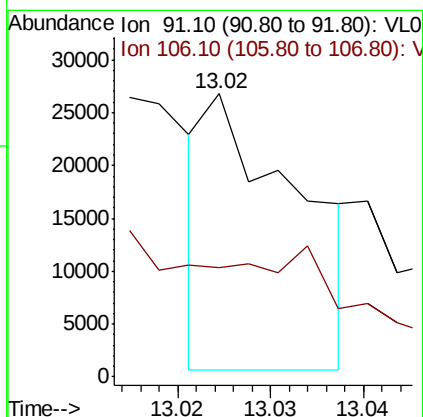
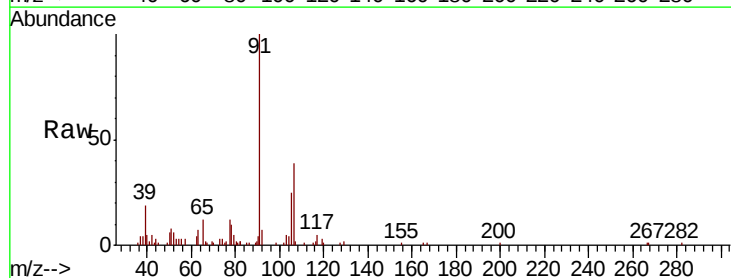
Instrument :
MSVOA_L
ClientSampleId :

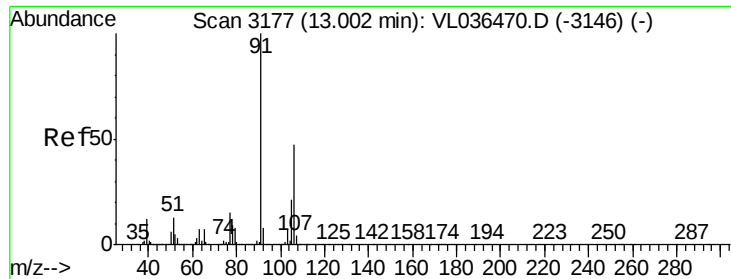
Tot Ion:117 Resp: 2846257
Ion Ratio Lower Upper
117 100
82 70.8 57.4 86.0
119 33.1 47.4 71.0#



#58
Ethyl Benzene
Concen: 0.044 ppbv
RT: 13.02 min Scan# 3184
Delta R.T. 0.31 min
Lab File: VL036507.D
Acq: 26 Mar 2021 10:13

Tgt Ion: 91 Resp: 18254
Ion Ratio Lower Upper
91 100
106 37.3 25.3 37.9





#59

m/p-Xylene

Concen: 0.051 ppbv

RT: 13.02 min Scan# 3184

Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

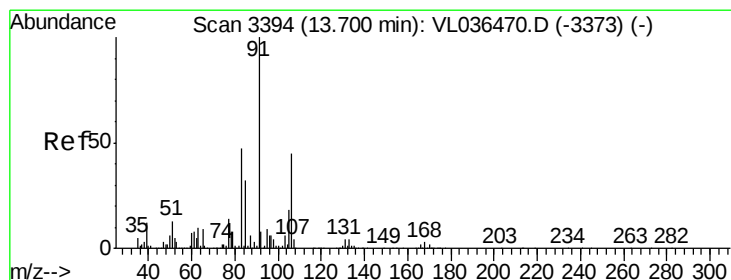
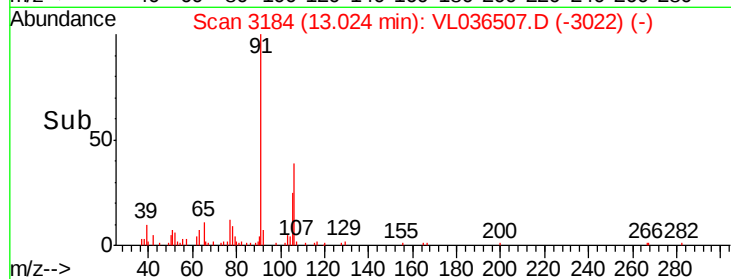
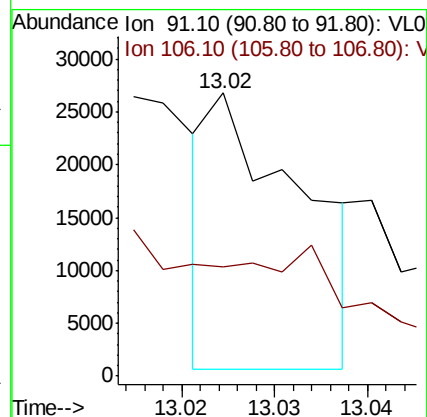
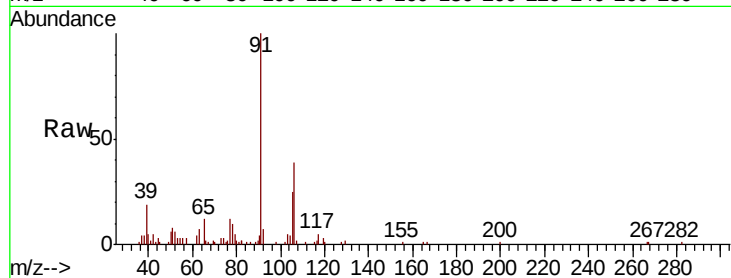
ClientSampleId :

Tot Ion: 91 Resp: 18254

Ion Ratio Lower Upper

91 100

106 0.0 35.3 52.9#



#60

o-Xylene

Concen: 0.049 ppbv

RT: 13.73 min Scan# 3402

Delta R.T. 0.03 min

Lab File: VL036507.D

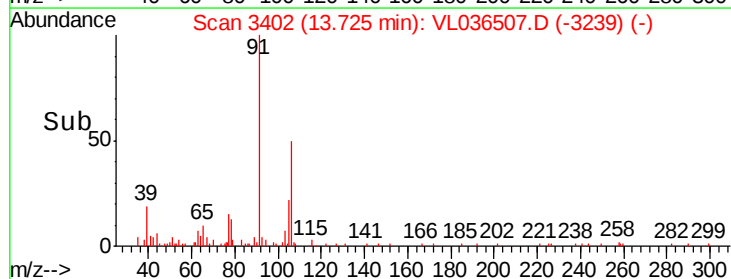
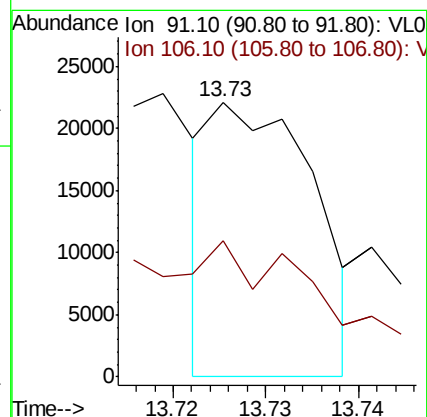
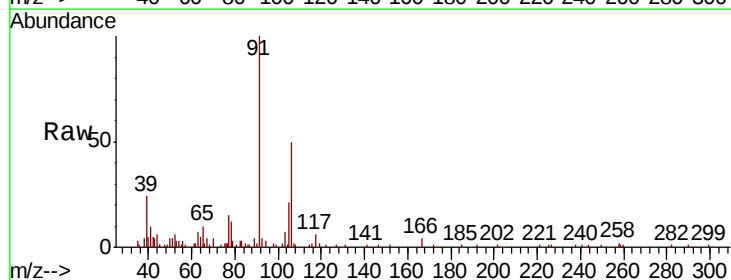
Acq: 26 Mar 2021 10:13

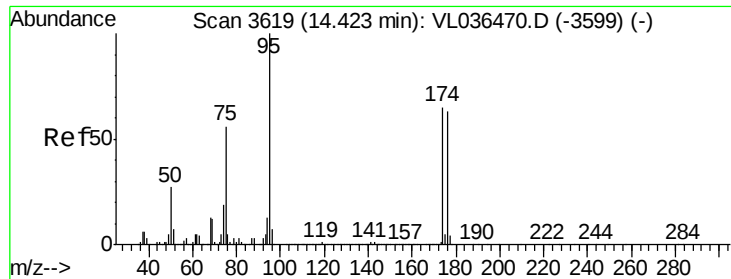
Tgt Ion: 91 Resp: 16984

Ion Ratio Lower Upper

91 100

106 140.9 22.3 66.9#

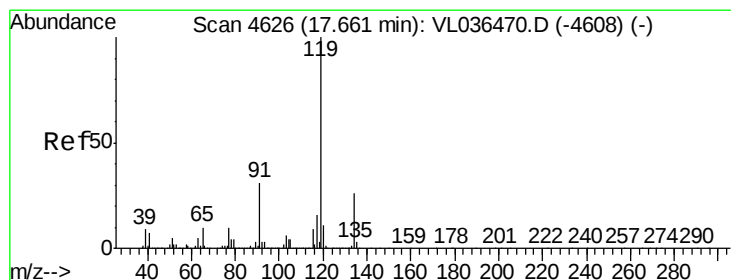
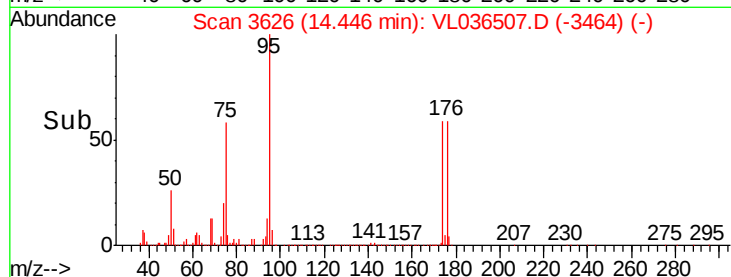
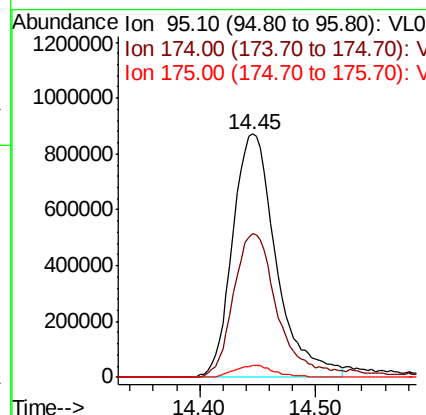
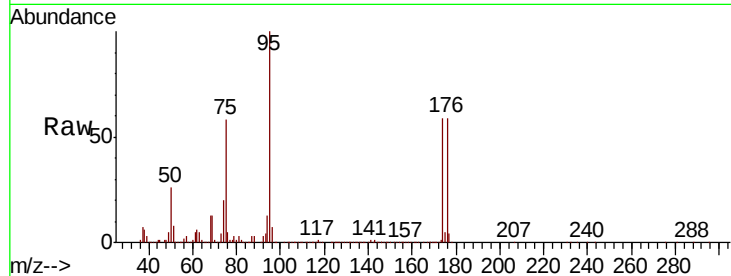




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.994 ppbv
 RT: 14.45 min Scan# 3626
 Delta R.T. 0.02 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

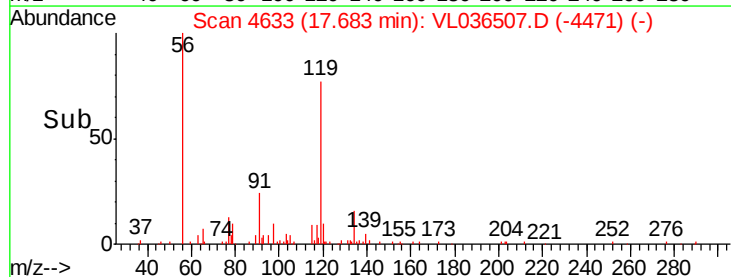
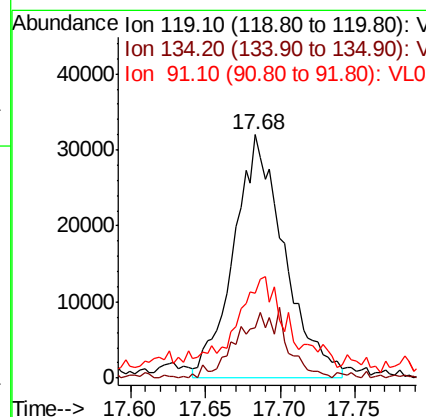
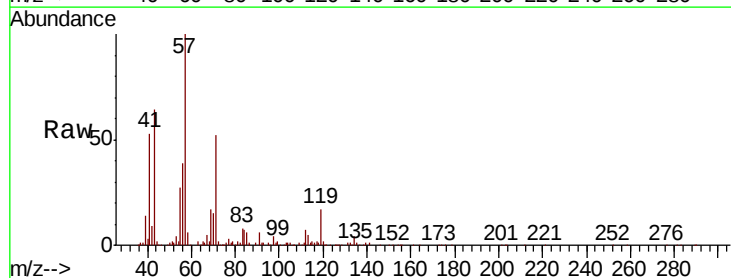
Instrument :
 MSVOA_L
 ClientSampled :

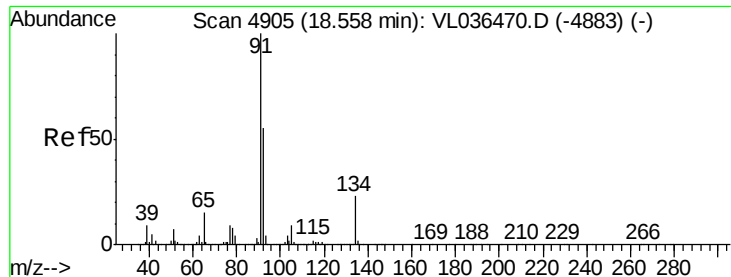
Tot Ion: 95 Resp: 2267156
 Ion Ratio Lower Upper
 95 100
 174 63.5 51.0 76.6
 175 4.8 3.9 5.9



#69
 p-Isopropyltoluene
 Concen: 0.167 ppbv
 RT: 17.68 min Scan# 4633
 Delta R.T. 0.02 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

Tgt Ion: 119 Resp: 75037
 Ion Ratio Lower Upper
 119 100
 134 27.8 20.6 30.8
 91 41.1 25.0 37.6#





#70

n-Butylbenzene

Concen: 0.034 ppbv

RT: 18.59 min Scan# 4916

Delta R.T. 0.04 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Instrument :

MSVOA_L

ClientSampleId :

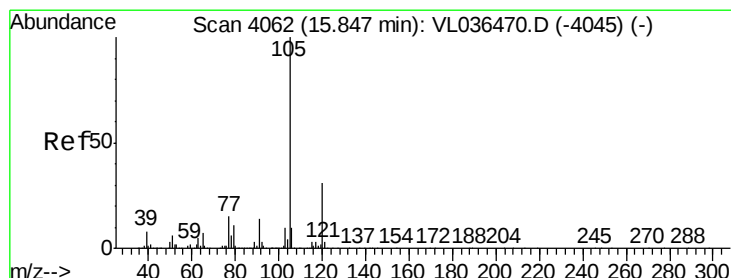
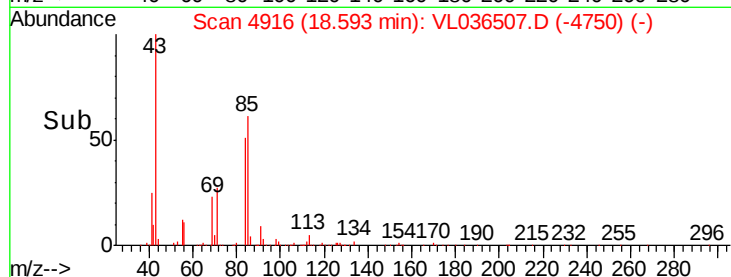
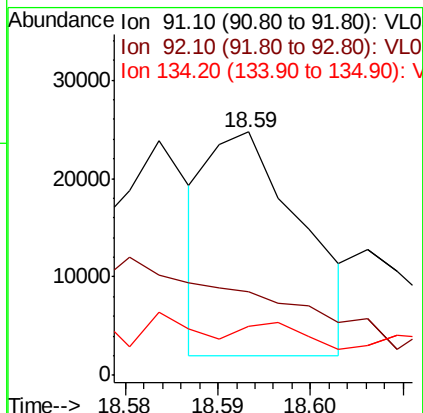
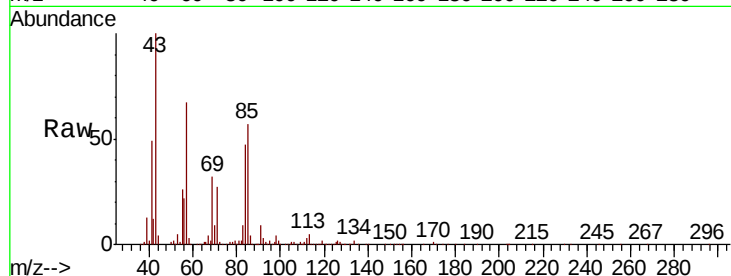
Tot Ion: 91 Resp: 15882

Ion Ratio Lower Upper

91 100

92 0.0 43.8 65.8#

134 0.0 18.0 27.0#



#72

4-Ethyltoluene

Concen: 0.050 ppbv

RT: 15.87 min Scan# 4069

Delta R.T. 0.02 min

Lab File: VL036507.D

Acq: 26 Mar 2021 10:13

Tgt Ion:105 Resp: 19260

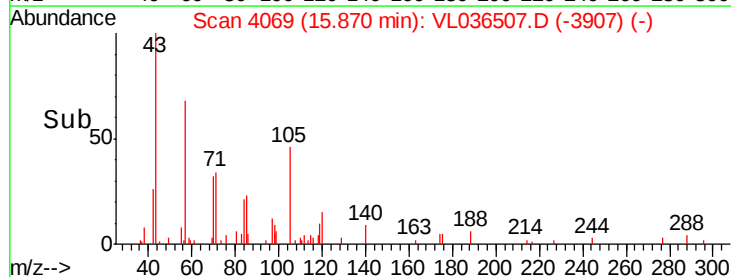
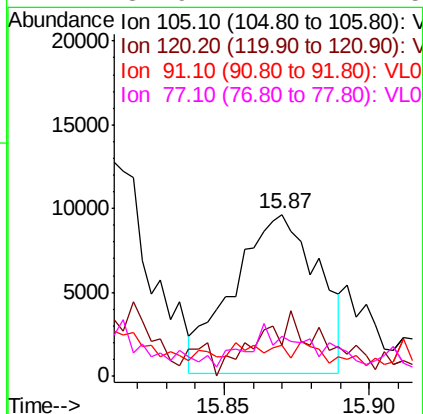
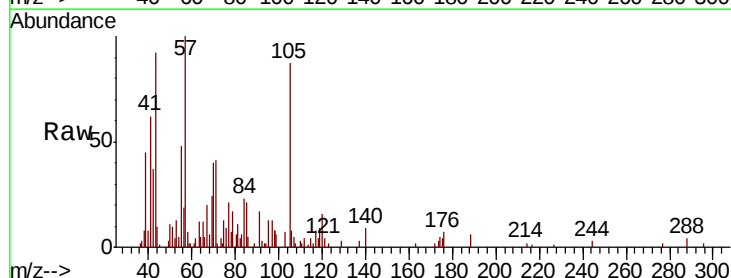
Ion Ratio Lower Upper

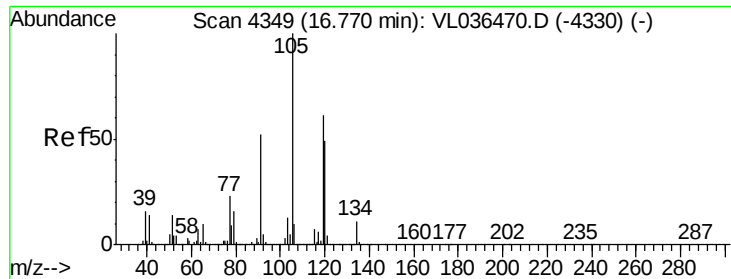
105 100

120 37.3 24.0 36.0#

91 15.9 11.0 16.4

77 31.9 11.7 17.5#

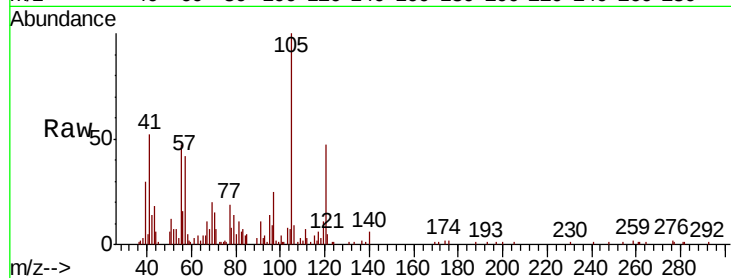




#74
 1,2,4-Trimethylbenzene
 Concen: 0.056 ppbv
 RT: 16.81 min Scan# 4360
 Delta R.T. 0.04 min
 Lab File: VL036507.D
 Acq: 26 Mar 2021 10:13

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:	105	Resp:	21314
Ion	Ratio	Lower	Upper
105	100		
120	46.2	39.2	58.8
91	3.6	42.6	64.0#
77	18.0	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

