

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL033121\
 Data File : VL036615.D
 Acq On : 1 Apr 2021 00:02
 Operator : SY/AP
 Sample : M1807-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Apr 01 04:31:14 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	5.68	49	1368213	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	3359722	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.11	117	2983222	10.00	ppbv	0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.44	95	2340097	9.84	ppbv	0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.40%

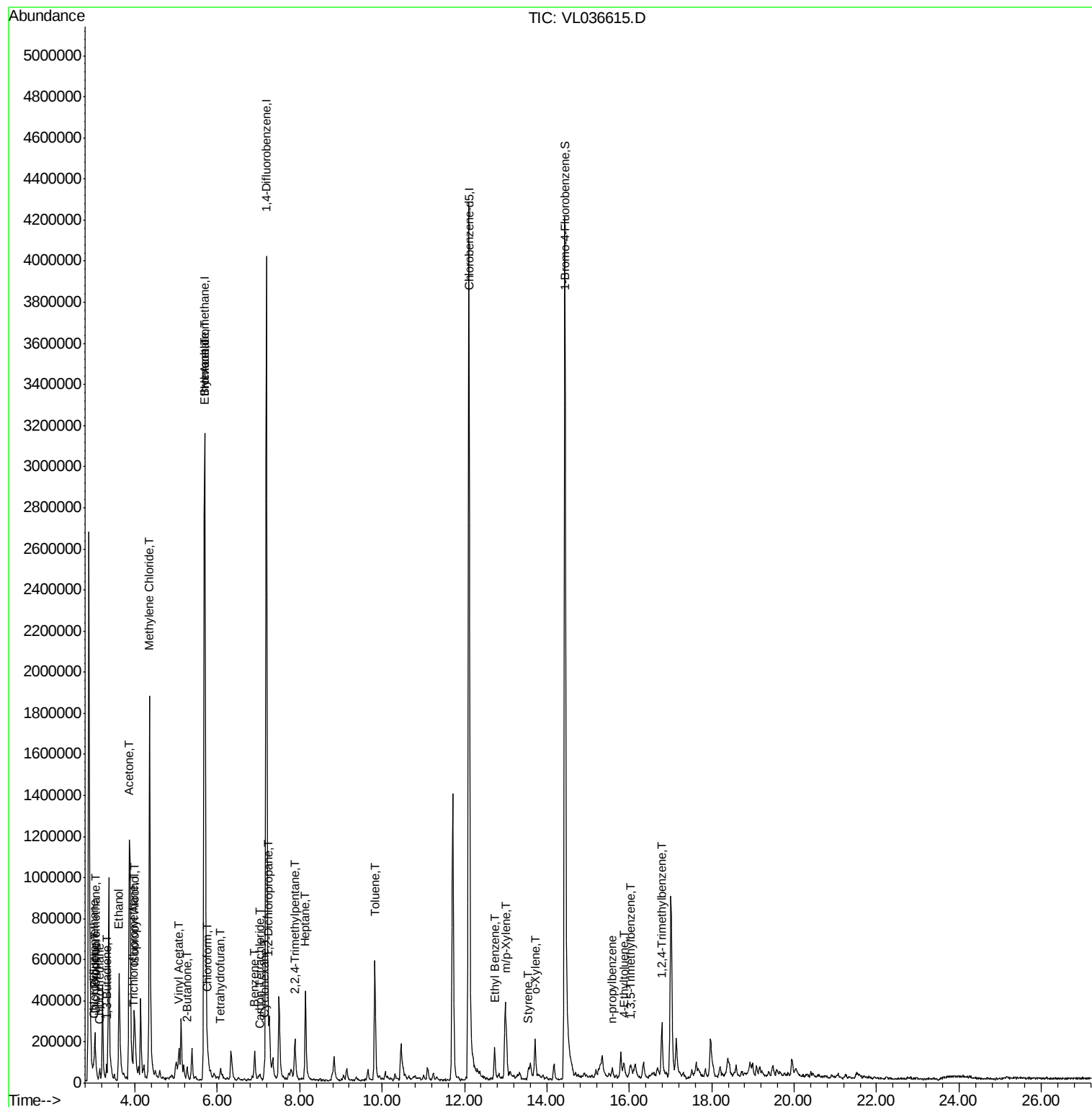
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.05	85	36073	0.162	ppbv 92
3) Chlorodifluoromethane	3.00	51	114465	0.448	ppbv # 87
4) Chloromethane	3.15	50	50057	0.554	ppbv # 87
9) Propene	3.02	41	68763	0.844	ppbv 84
10) Heptane	8.14	43	187535	0.903	ppbv 96
11) Trichlorofluoromethane	3.95	101	43130	0.190	ppbv 86
13) Ethanol	3.61	45	739855	76.237	ppbv 96
15) Acetone	3.86	43	1763717	13.097	ppbv 92
16) 1,3-Butadiene	3.31	39	24977	0.266	ppbv # 19
19) Isopropyl Alcohol	3.99	45	459082	6.197	ppbv # 1
20) Methylene Chloride	4.35	84	685855	10.878	ppbv 94
23) Vinyl Acetate	5.08	43	55435	0.241	ppbv # 1
25) Ethyl Acetate	5.70	43	674590	2.107	ppbv # 80
26) Hexane	5.70	57	872933	5.876	ppbv # 48
29) Chloroform	5.76	83	17666	0.074	ppbv # 74
30) Cyclohexane	7.14	84	5597	0.046	ppbv # 1
34) 2-Butanone	5.27	43	70443	0.430	ppbv # 90
35) Carbon Tetrachloride	7.03	117	8756	0.034	ppbv 90
36) Benzene	6.91	78	105106	0.339	ppbv 95
39) 1,2-Dichloropropane	7.24	63	14190	0.113	ppbv # 15
41) Tetrahydrofuran	6.08	42	28408	0.376	ppbv # 88
44) 2,2,4-Trimethylpentane	7.89	57	154919	0.284	ppbv # 85
53) Toluene	9.83	91	438970	1.330	ppbv 99
58) Ethyl Benzene	12.73	91	130402	0.300	ppbv 92
59) m/p-Xylene	13.01	91	125283	0.331	ppbv # 32
60) o-Xylene	13.72	91	143020	0.391	ppbv 99
61) Styrene	13.55	104	16473	0.089	ppbv # 26
64) n-propylbenzene	15.59	120	2592	0.022	ppbv # 1
72) 4-Ethyltoluene	15.86	105	37929	0.095	ppbv # 57
73) 1,3,5-Trimethylbenzene	16.02	105	16221	0.043	ppbv # 71
74) 1,2,4-Trimethylbenzene	16.79	105	194236	0.485	ppbv # 68

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

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QLast Update : Thu Mar 25 09:42:40 2021
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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

ClientSampleId :

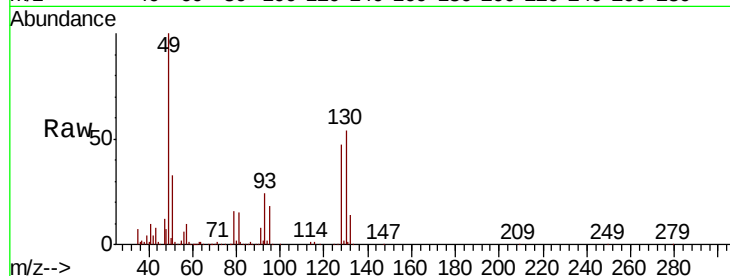
Tot Ion: 49 Resp: 1368213

Ion Ratio Lower Upper

49 100

128 47.5 23.5 70.6

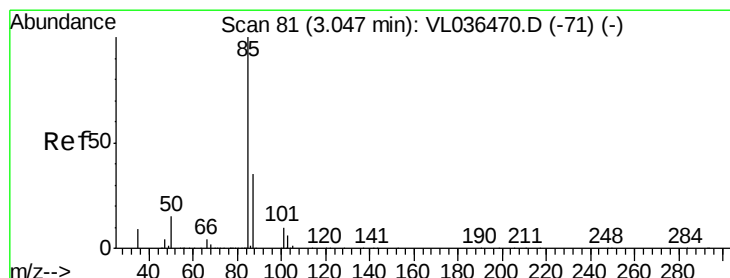
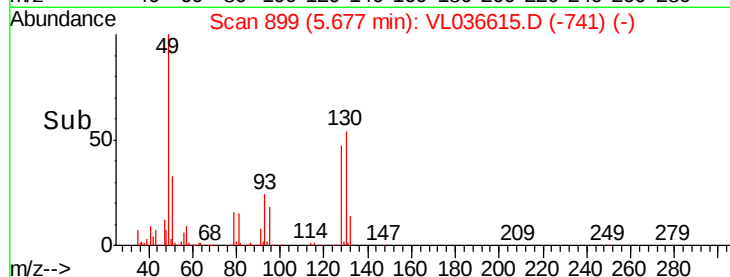
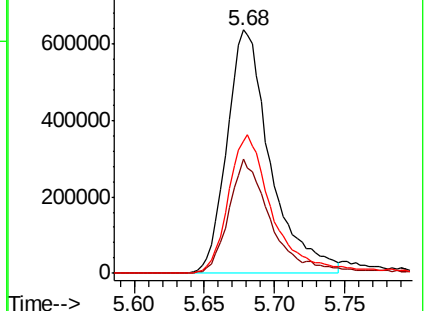
130 60.2 29.1 87.4



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: 0.162 ppbv

RT: 3.05 min Scan# 83

Delta R.T. 0.01 min

Lab File: VL036615.D

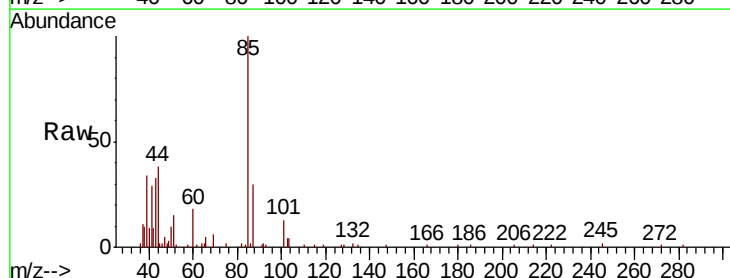
Acq: 1 Apr 2021 00:02

Tgt Ion: 85 Resp: 36073

Ion Ratio Lower Upper

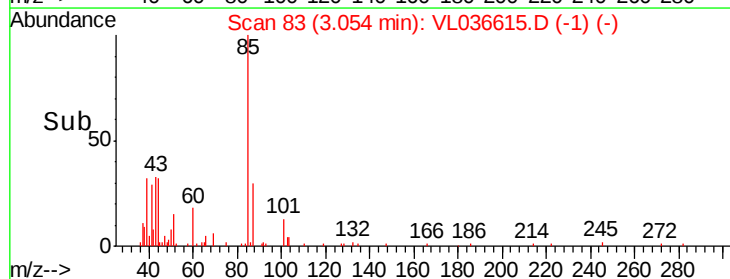
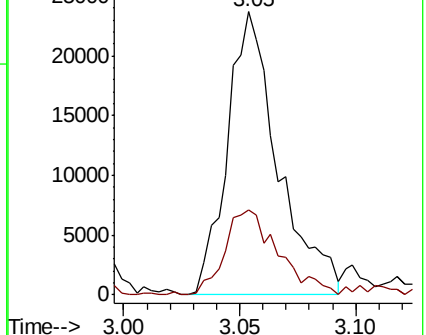
85 100

87 30.0 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: 0.448 ppbv

RT: 3.00 min Scan# 65

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

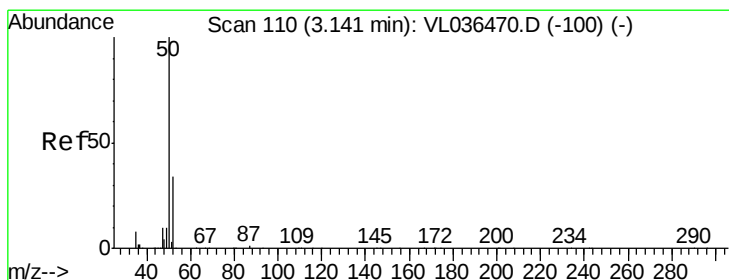
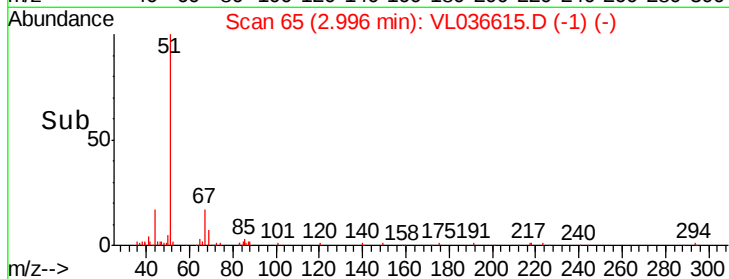
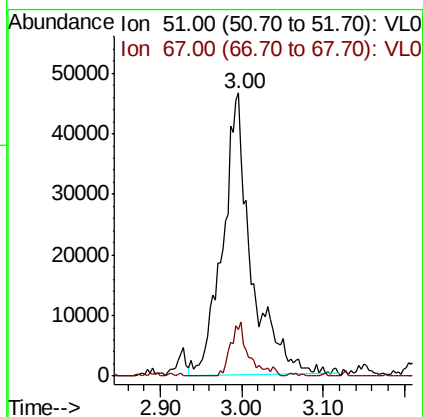
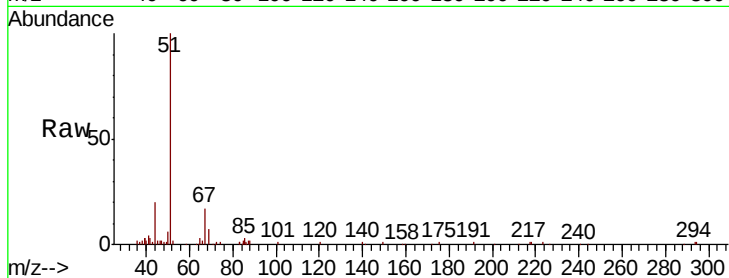
ClientSampleId :

Tot Ion: 51 Resp: 114465

Ion Ratio Lower Upper

51 100

67 12.6 14.7 22.1#



#4

Chloromethane

Concen: 0.554 ppbv

RT: 3.15 min Scan# 112

Delta R.T. 0.01 min

Lab File: VL036615.D

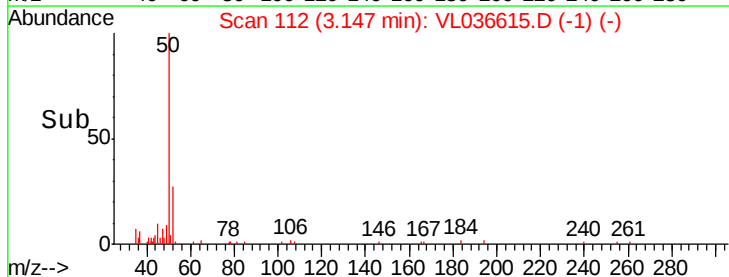
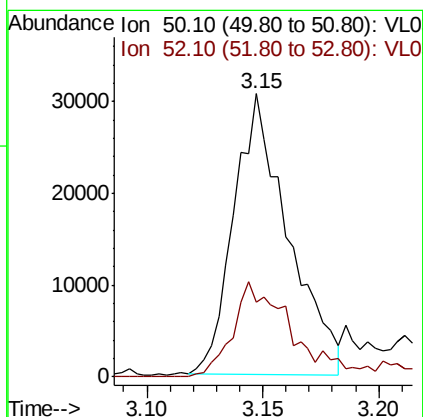
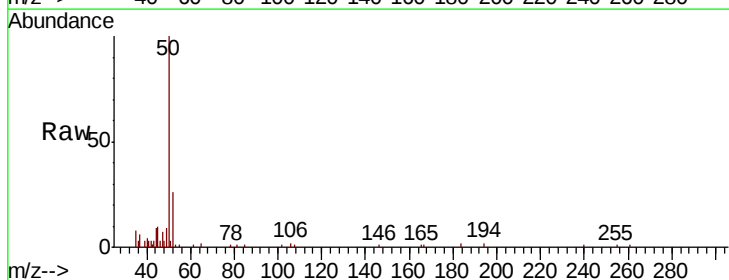
Acq: 1 Apr 2021 00:02

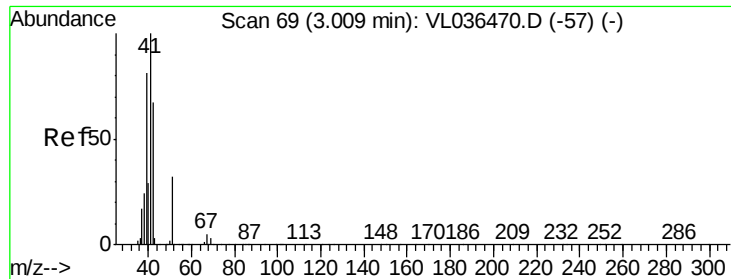
Tgt Ion: 50 Resp: 50057

Ion Ratio Lower Upper

50 100

52 26.6 27.0 40.6#





#9

Propene

Concen: 0.844 ppbv

RT: 3.02 min Scan# 74

Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

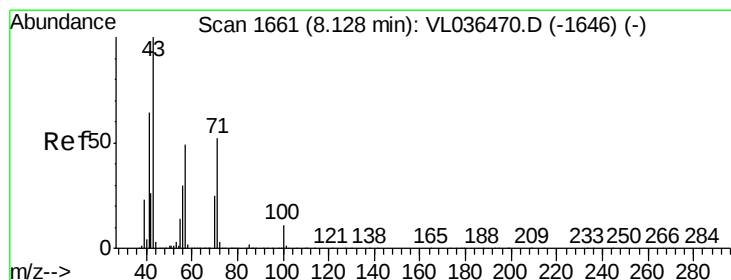
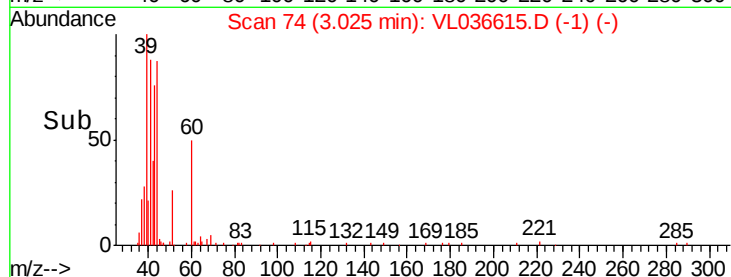
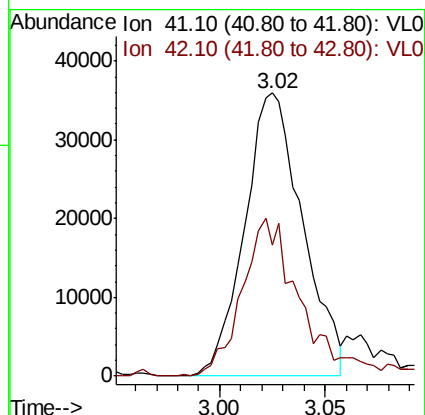
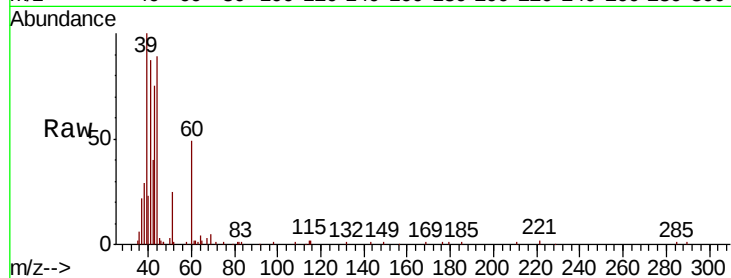
ClientSampleId :

Tot Ion: 41 Resp: 68763

Ion Ratio Lower Upper

41 100

42 57.6 57.0 85.4



#10

Heptane

Concen: 0.903 ppbv

RT: 8.14 min Scan# 1665

Delta R.T. 0.01 min

Lab File: VL036615.D

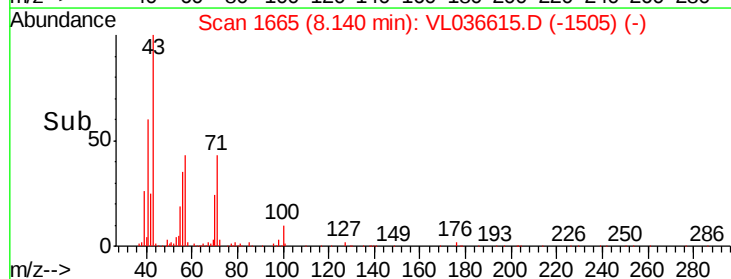
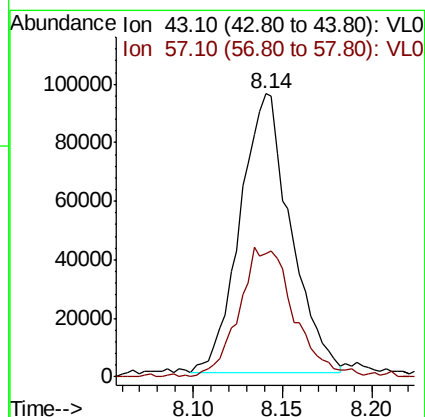
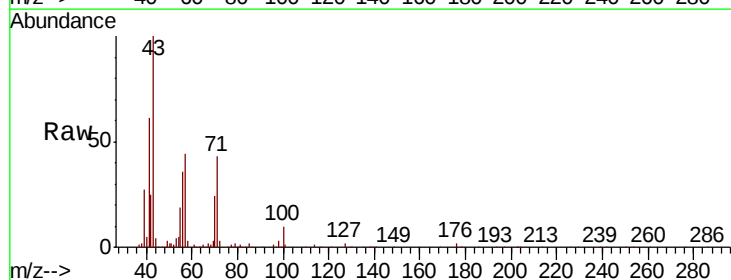
Acq: 1 Apr 2021 00:02

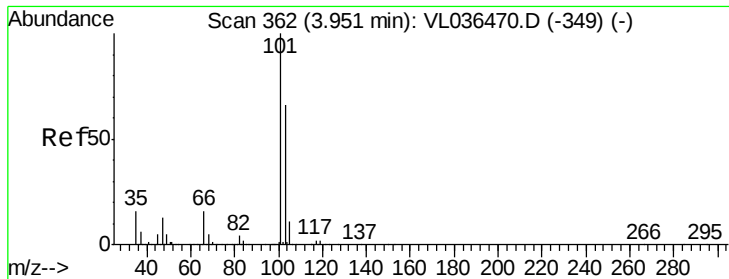
Tgt Ion: 43 Resp: 187535

Ion Ratio Lower Upper

43 100

57 51.5 39.0 58.6

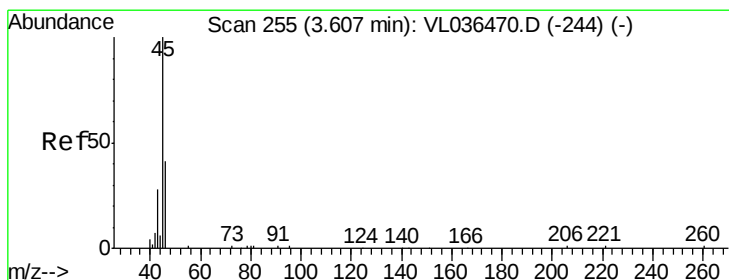
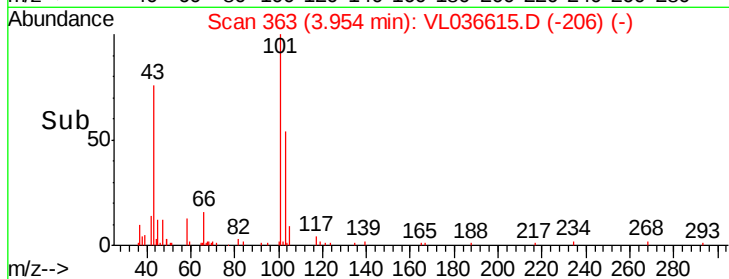
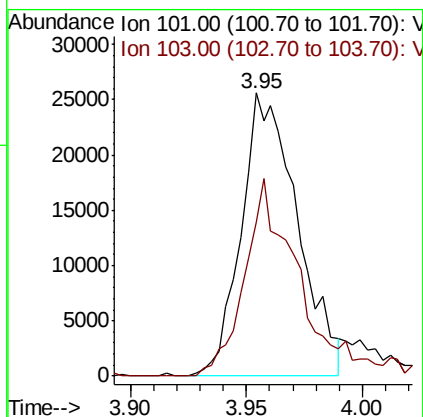
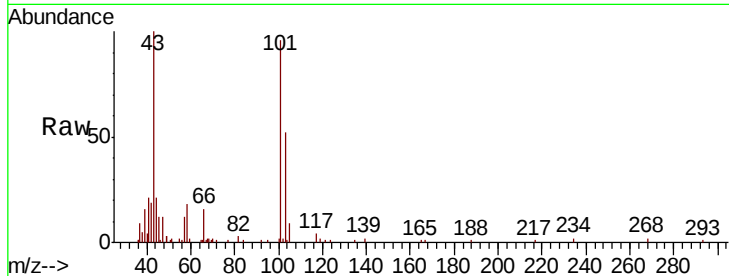




#11
 Trichlorofluoromethane
 Concen: 0.190 ppbv
 RT: 3.95 min Scan# 363
 Delta R.T. 0.00 min
 Lab File: VL036615.D
 Acq: 1 Apr 2021 00:02

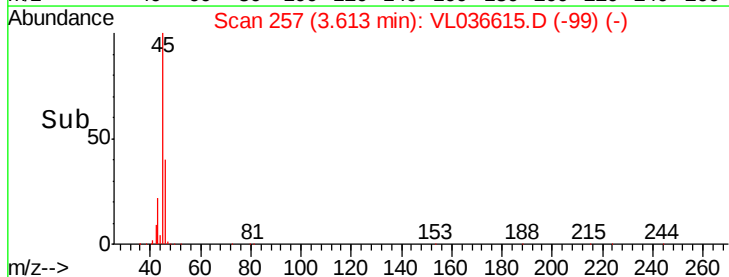
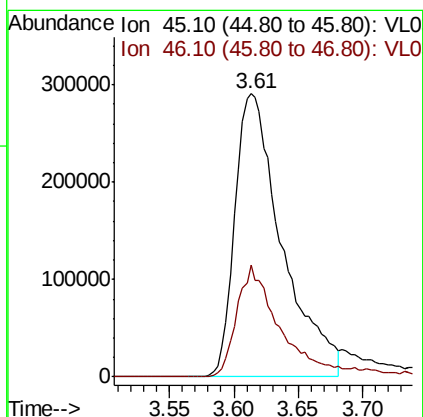
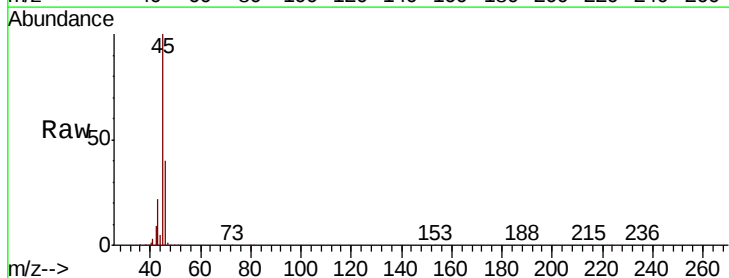
Instrument :
 MSVOA_L
 ClientSampleId :

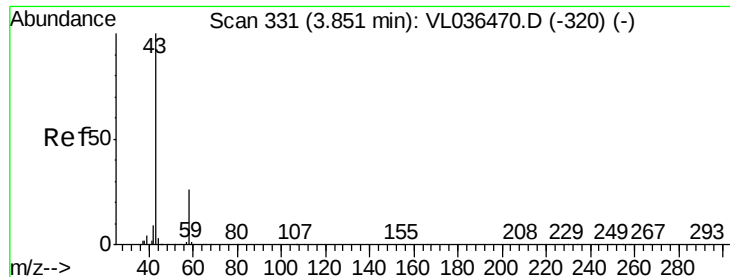
Tot Ion:101 Resp: 43130
 Ion Ratio Lower Upper
 101 100
 103 54.4 52.5 78.7



#13
 Ethanol
 Concen: 76.237 ppbv
 RT: 3.61 min Scan# 257
 Delta R.T. 0.01 min
 Lab File: VL036615.D
 Acq: 1 Apr 2021 00:02

Tgt Ion: 45 Resp: 739855
 Ion Ratio Lower Upper
 45 100
 46 38.8 16.6 66.2





#15

Acetone

Concen: 13.097 ppbv

RT: 3.86 min Scan# 333

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

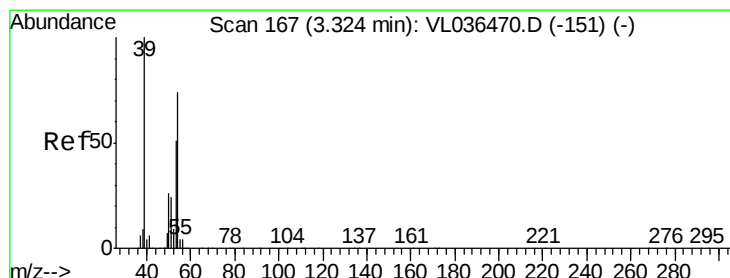
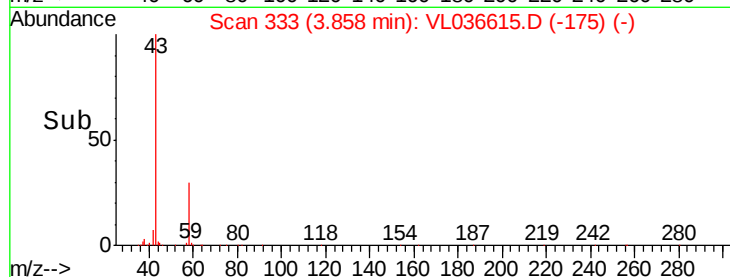
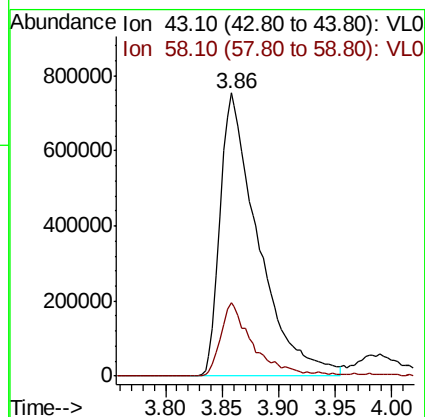
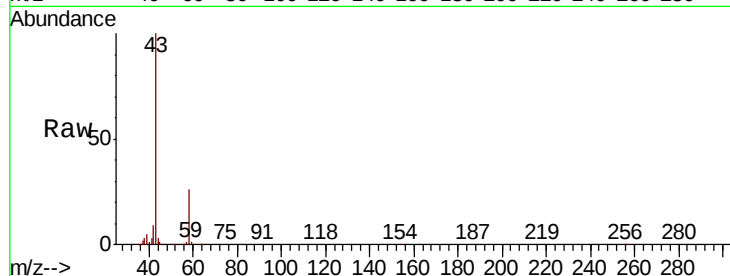
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 43 Resp: 1763717

Ion Ratio Lower Upper

43 100

58 22.4 21.2 31.8



#16

1,3-Butadiene

Concen: 0.266 ppbv

RT: 3.31 min Scan# 164

Delta R.T. -0.01 min

Lab File: VL036615.D

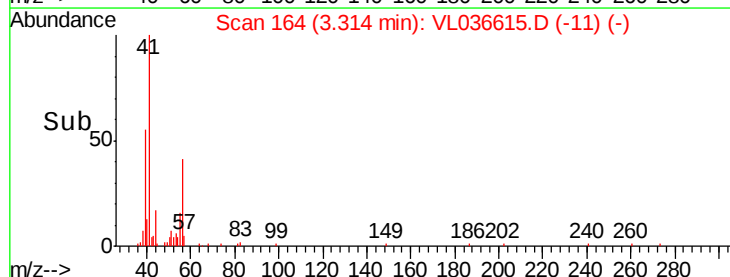
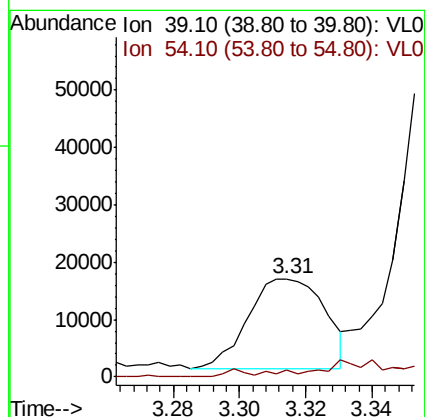
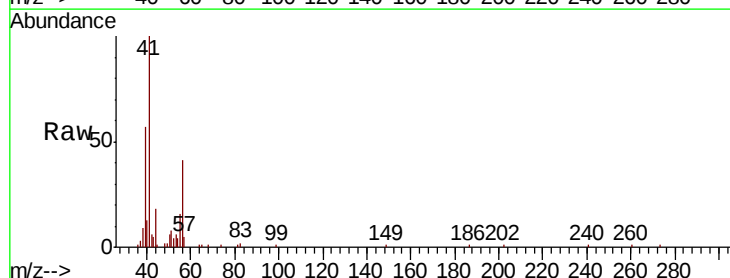
Acq: 1 Apr 2021 00:02

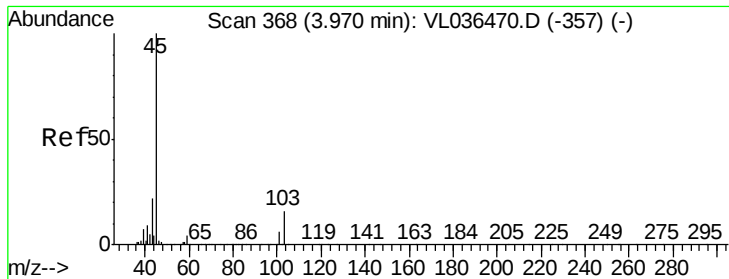
Tgt Ion: 39 Resp: 24977

Ion Ratio Lower Upper

39 100

54 5.0 58.8 88.2#





#19

Isopropyl Alcohol

Concen: 6.197 ppbv

RT: 3.99 min Scan# 374

Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

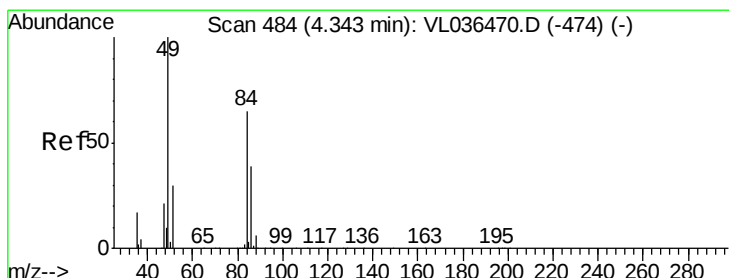
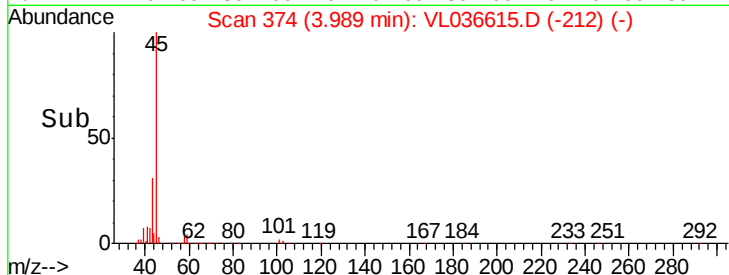
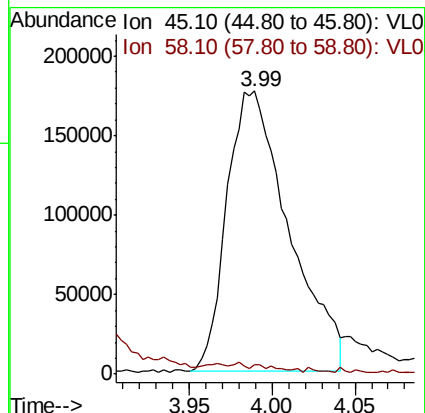
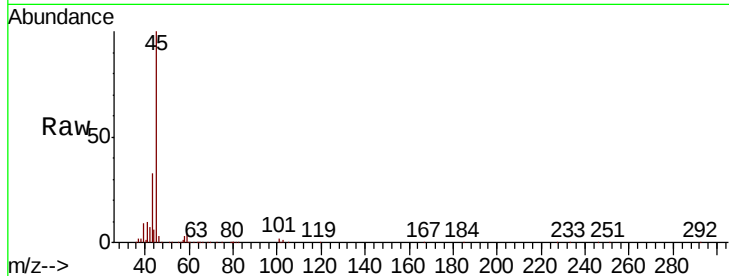
ClientSampleId :

Tot Ion: 45 Resp: 459082

Ion Ratio Lower Upper

45 100

58 91.2 2.9 4.3#



#20

Methylene Chloride

Concen: 10.878 ppbv

RT: 4.35 min Scan# 487

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Tgt Ion: 84 Resp: 685855

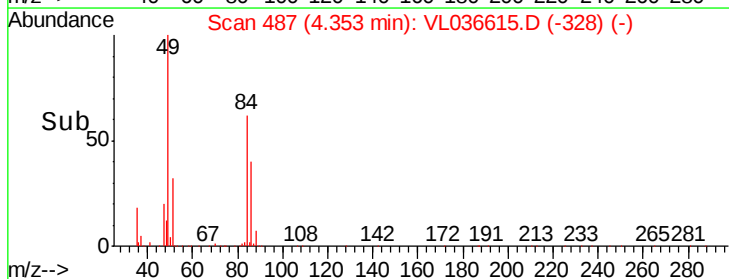
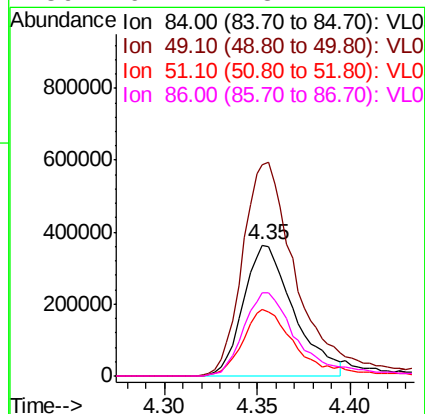
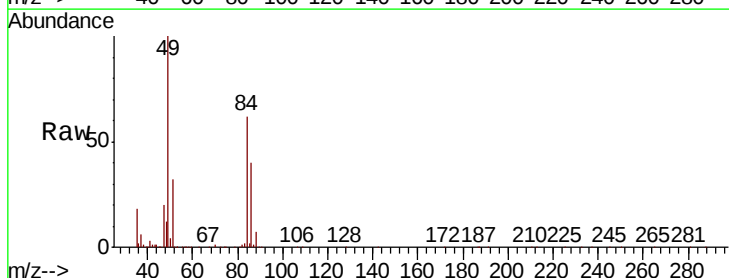
Ion Ratio Lower Upper

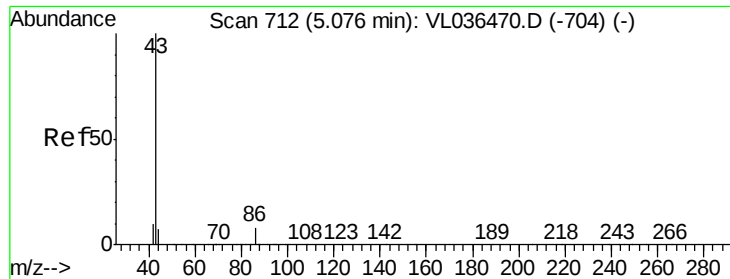
84 100

49 161.9 122.9 184.3

51 51.0 36.9 55.3

86 64.2 48.2 72.4

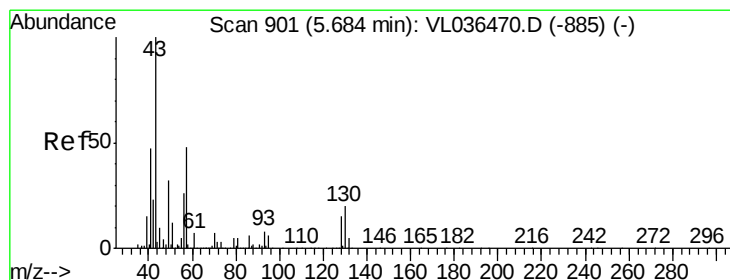
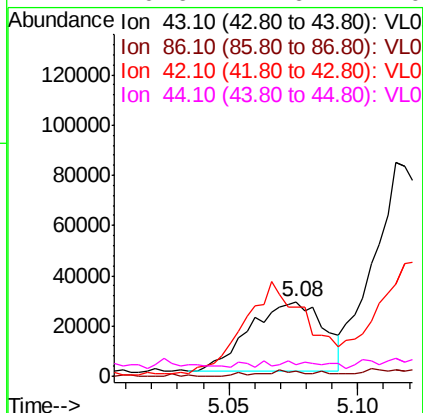
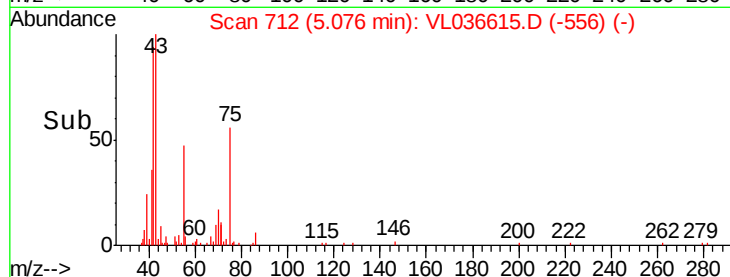
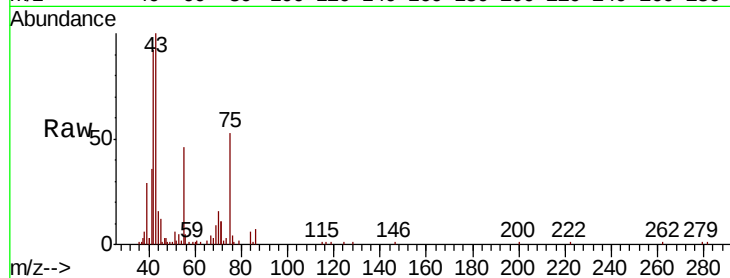




#23
 Vinyl Acetate
 Concen: 0.241 ppbv
 RT: 5.08 min Scan# 712
 Delta R.T. 0.00 min
 Lab File: VL036615.D
 Acq: 1 Apr 2021 00:02

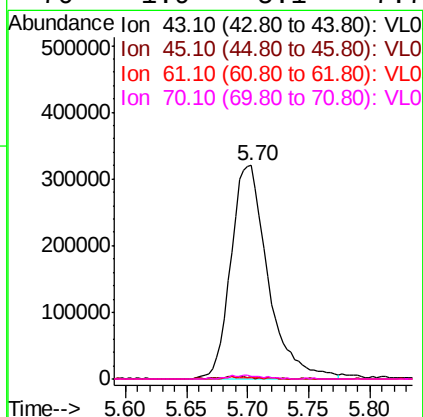
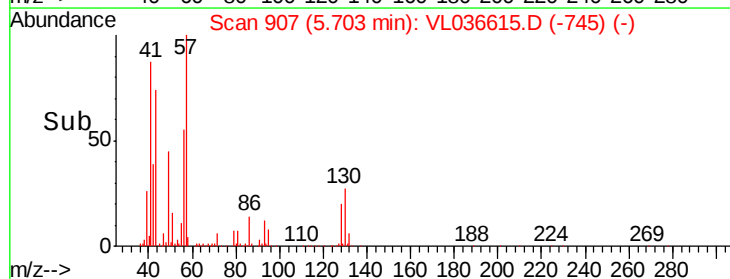
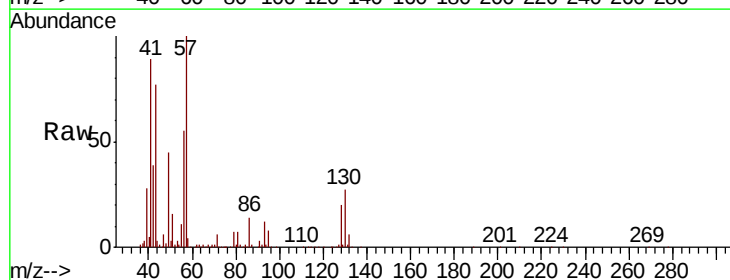
Instrument :
 MSVOA_L
 ClientSampleId :

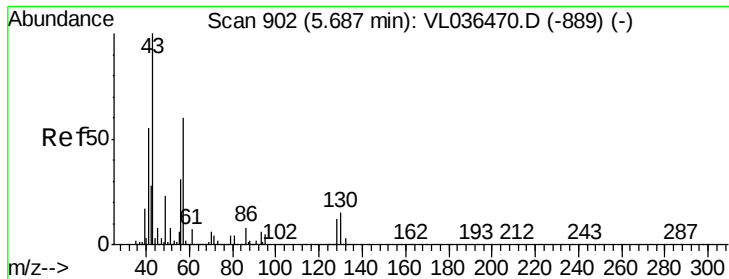
Tot Ion:	43	Resp:	55435
Ion	Ratio	Lower	Upper
43	100		
86	5.9	5.4	8.0
42	95.9	8.5	12.7#
44	0.6	4.6	7.0#



#25
 Ethyl Acetate
 Concen: 2.107 ppbv
 RT: 5.70 min Scan# 907
 Delta R.T. 0.02 min
 Lab File: VL036615.D
 Acq: 1 Apr 2021 00:02

Tgt Ion:	43	Resp:	674590
Ion	Ratio	Lower	Upper
43	100		
45	1.6	7.9	11.9#
61	1.0	7.4	11.2#
70	1.9	5.1	7.7#

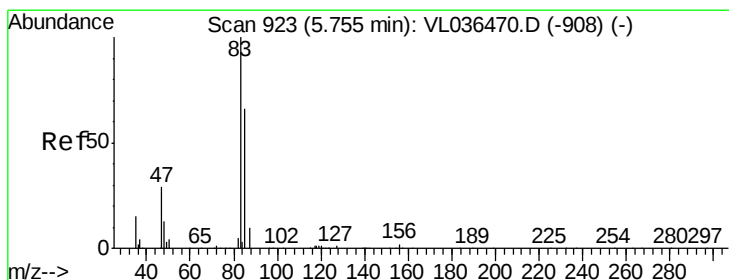
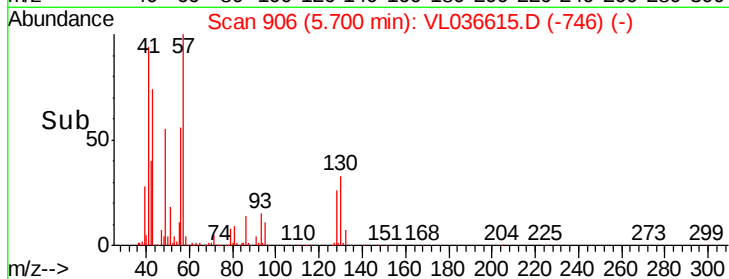
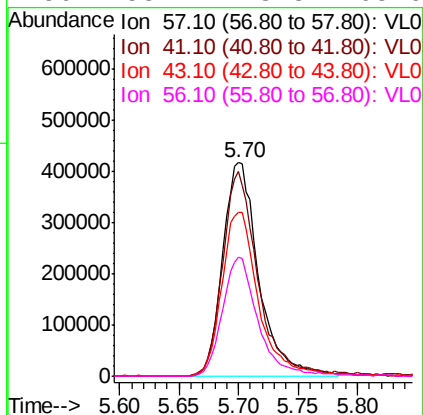
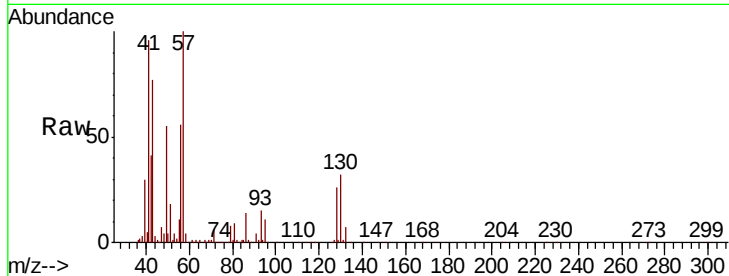




#26
Hexane
Concen: 5.876 ppbv
RT: 5.70 min Scan# 906
Delta R.T. 0.01 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

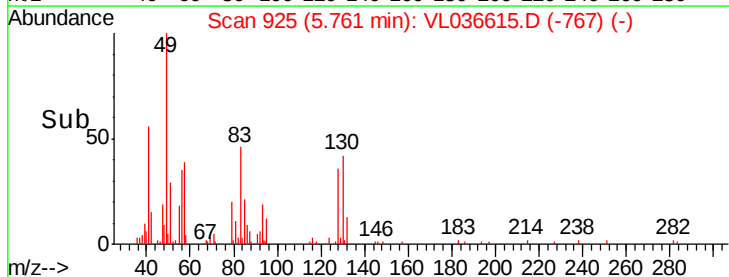
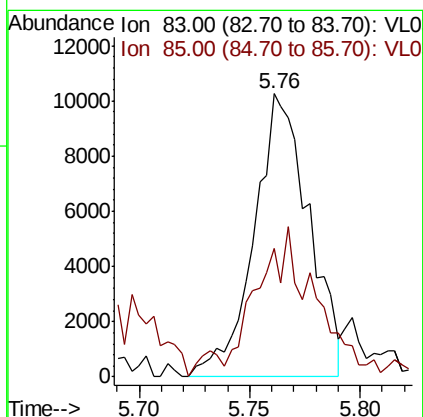
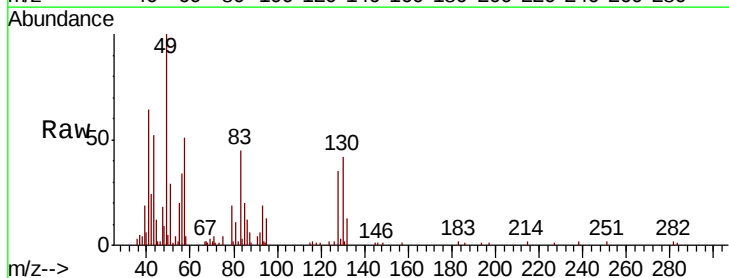
Instrument :
MSVOA_L
ClientSampleId :

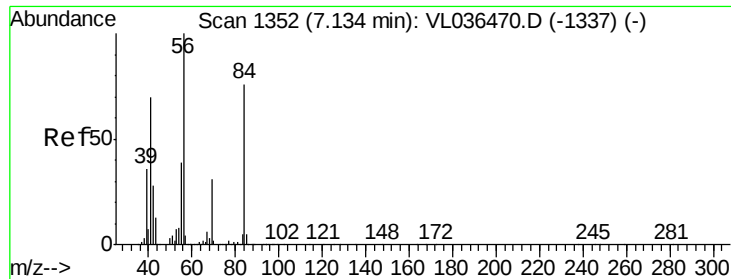
Tot Ion: 57 Resp: 872933
Ion Ratio Lower Upper
57 100
41 95.4 77.2 115.8
43 79.0 173.8 260.6#
56 55.7 43.8 65.6



#29
Chloroform
Concen: 0.074 ppbv
RT: 5.76 min Scan# 925
Delta R.T. 0.01 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

Tgt Ion: 83 Resp: 17666
Ion Ratio Lower Upper
83 100
85 45.4 52.6 78.8#

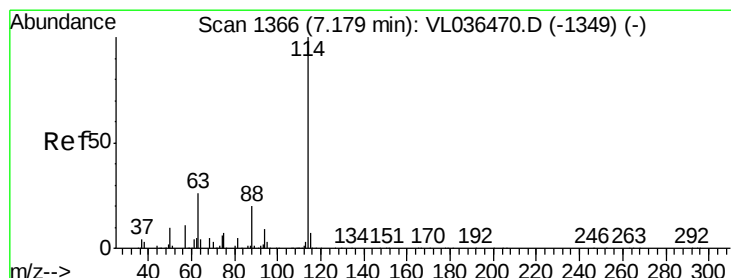
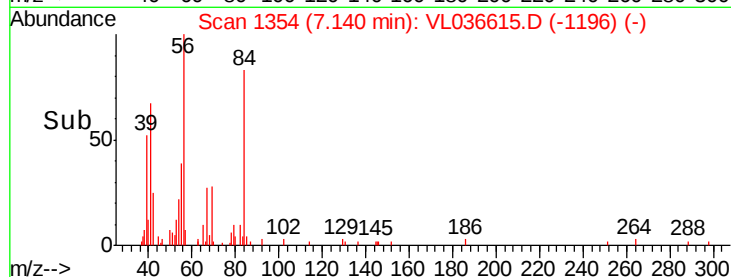
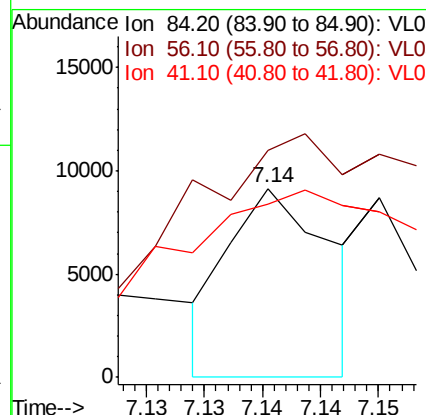
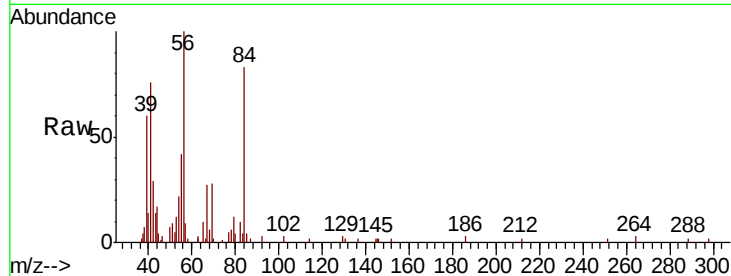




#30
Cyclohexane
Concen: 0.046 ppbv
RT: 7.14 min Scan# 1354
Delta R.T. 0.01 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

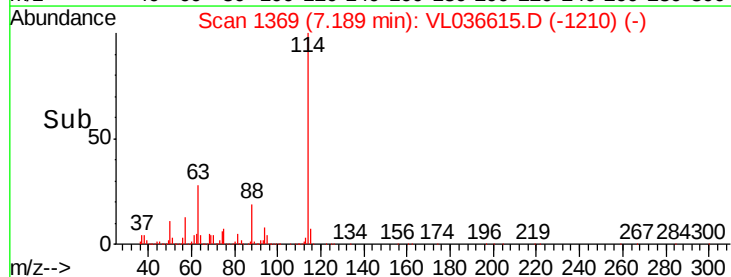
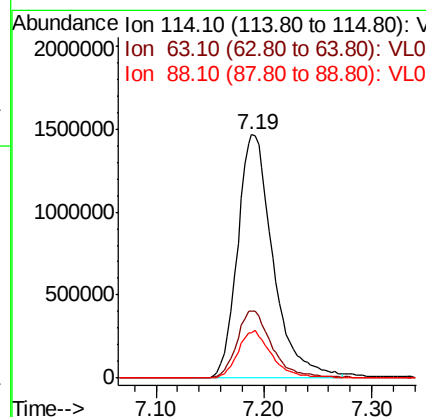
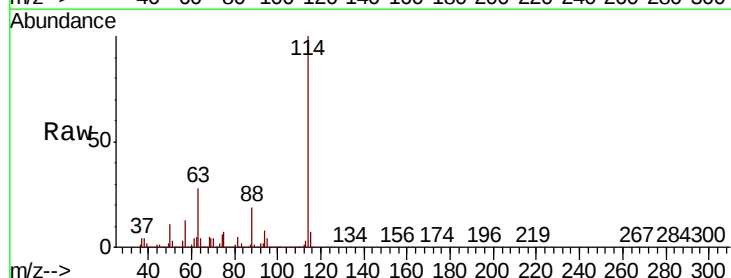
Instrument :
MSVOA_L
ClientSampleId :

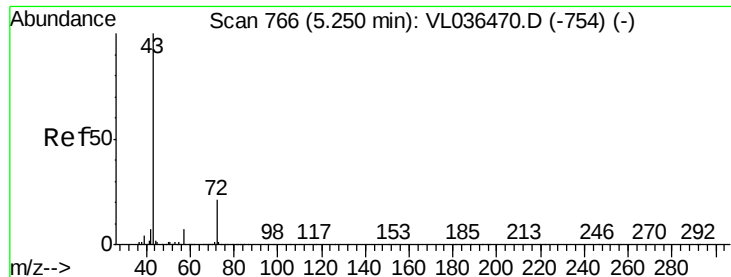
Tot Ion: 84 Resp: 5597
Ion Ratio Lower Upper
84 100
56 0.0 114.6 171.8#
41 414.4 75.3 112.9#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.19 min Scan# 1369
Delta R.T. 0.01 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

Tgt Ion: 114 Resp: 3359722
Ion Ratio Lower Upper
114 100
63 27.8 22.4 33.6
88 18.9 15.4 23.0

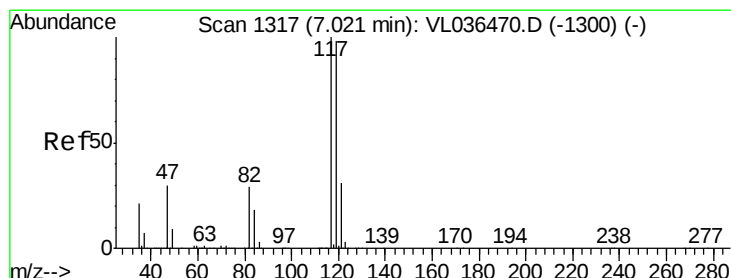
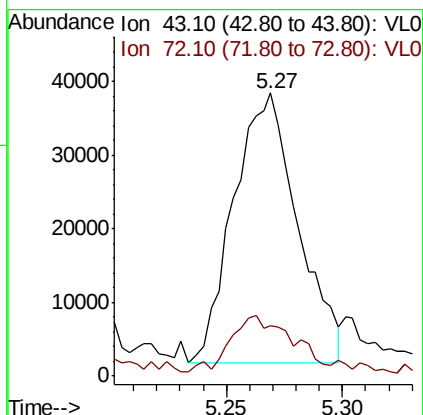
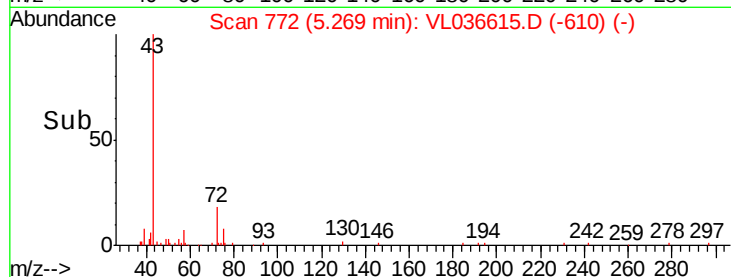
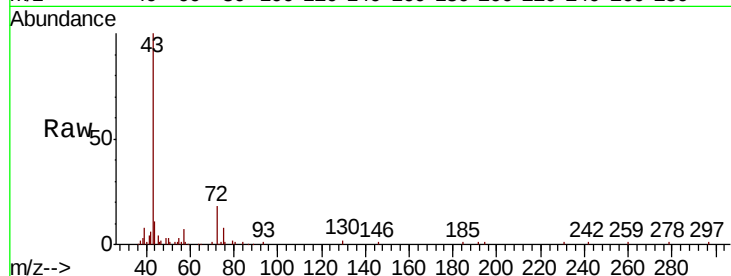




#34
2-Butanone
Concen: 0.430 ppbv
RT: 5.27 min Scan# 772
Delta R.T. 0.02 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

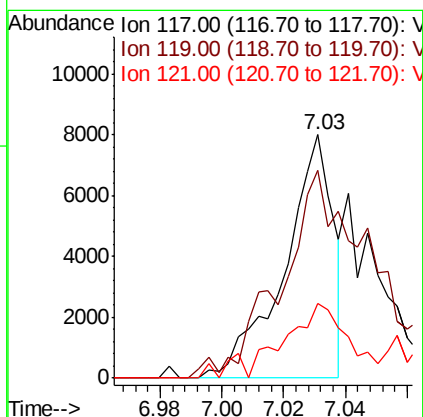
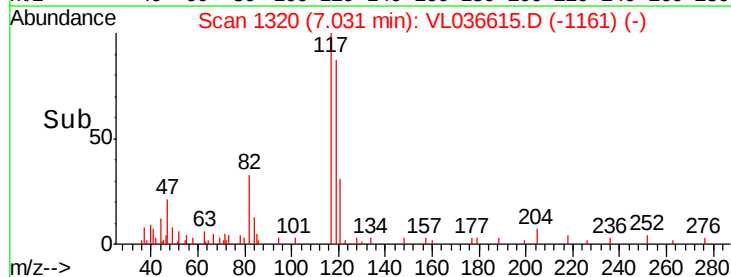
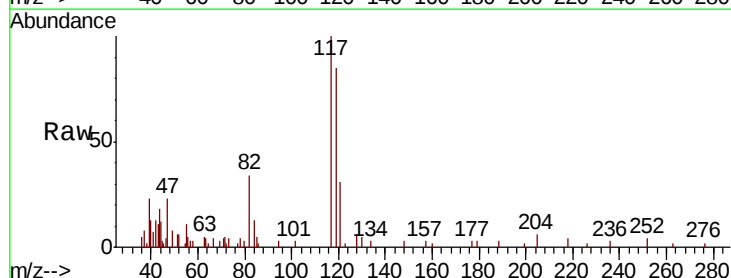
Instrument :
MSVOA_L
ClientSampleId :

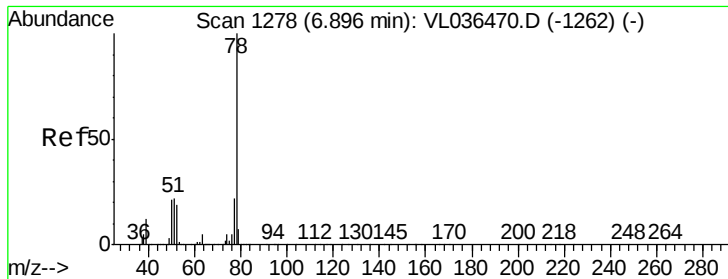
Tot Ion: 43 Resp: 70443
Ion Ratio Lower Upper
43 100
72 26.2 17.0 25.6#



#35
Carbon Tetrachloride
Concen: 0.034 ppbv
RT: 7.03 min Scan# 1320
Delta R.T. 0.01 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

Tgt Ion: 117 Resp: 8756
Ion Ratio Lower Upper
117 100
119 85.1 78.2 117.2
121 30.7 24.5 36.7

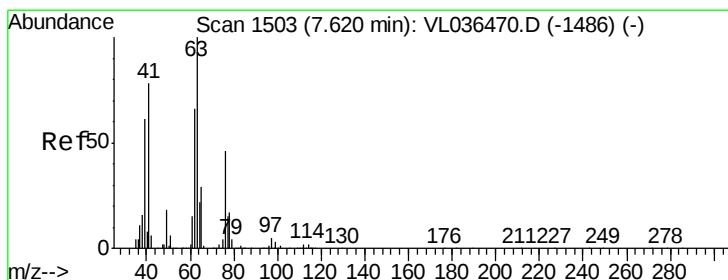
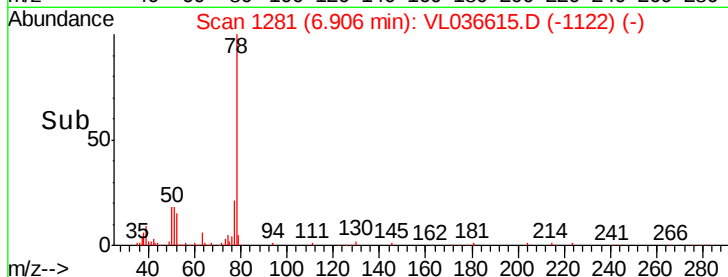
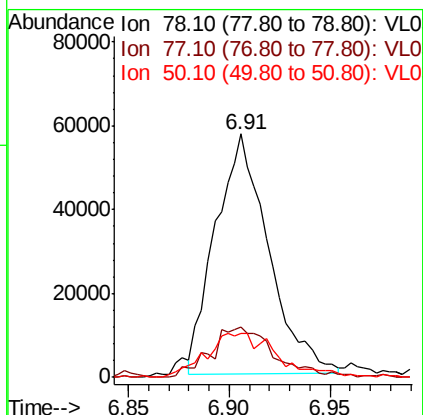
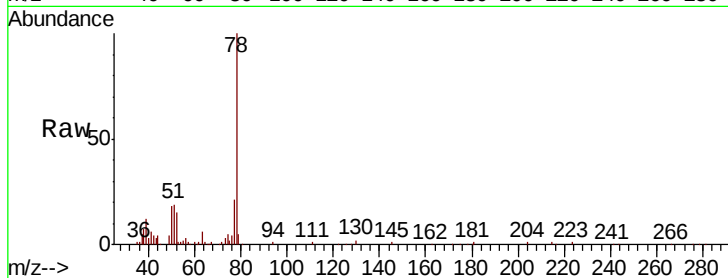




#36
Benzene
Concen: 0.339 ppbv
RT: 6.91 min Scan# 1281
Delta R.T. 0.01 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

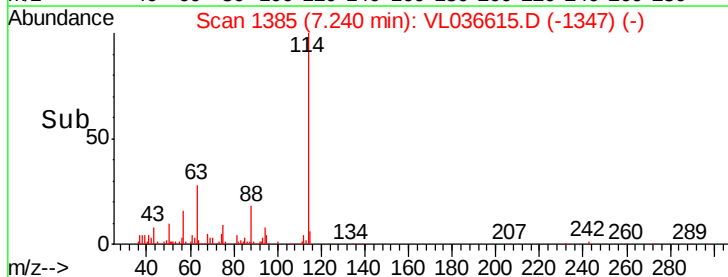
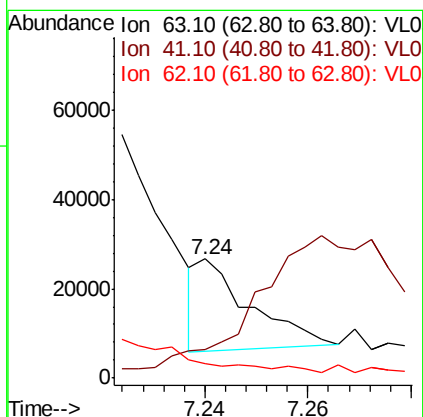
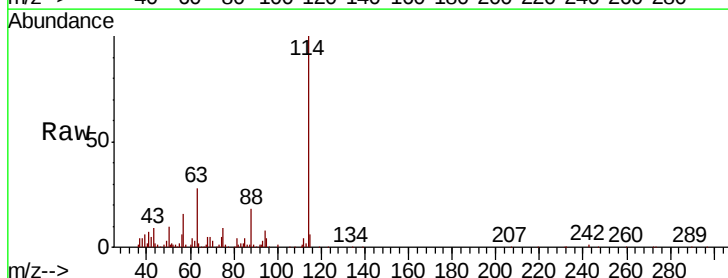
Instrument :
MSVOA_L
ClientSampleId :

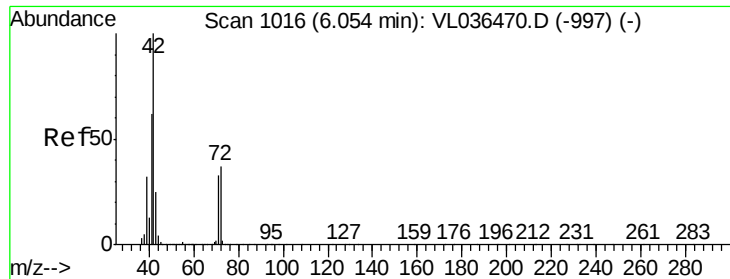
Tot Ion: 78 Resp: 105106
Ion Ratio Lower Upper
78 100
77 20.4 18.0 27.0
50 17.5 16.5 24.7



#39
1,2-Dichloropropane
Concen: 0.113 ppbv
RT: 7.24 min Scan# 1385
Delta R.T. -0.38 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

Tgt Ion: 63 Resp: 14190
Ion Ratio Lower Upper
63 100
41 1.5 62.4 93.6#
62 1.7 52.8 79.2#





#41

Tetrahydrofuran

Concen: 0.376 ppbv

RT: 6.08 min Scan# 1023

Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

ClientSampleId :

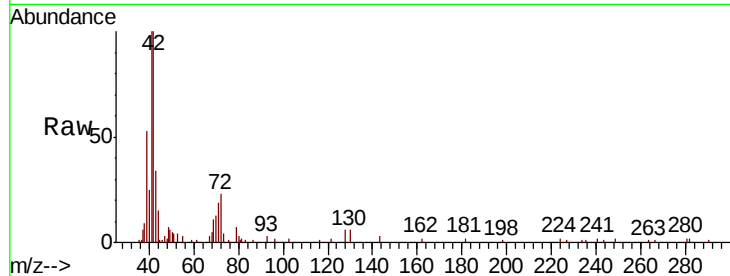
Tot Ion: 42 Resp: 28408

Ion Ratio Lower Upper

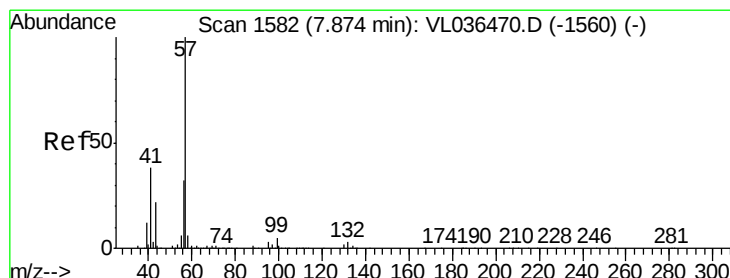
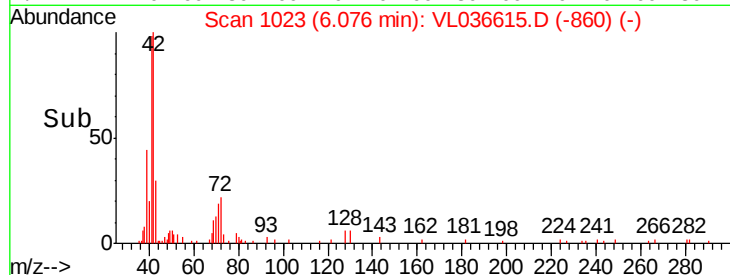
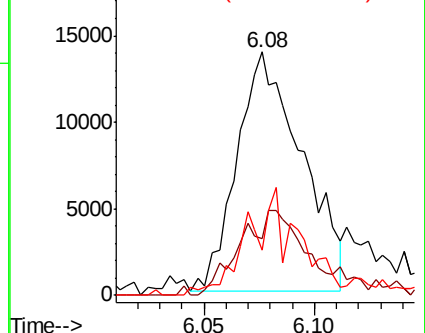
42 100

72 41.8 27.6 41.4#

71 39.8 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: 0.284 ppbv

RT: 7.89 min Scan# 1586

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

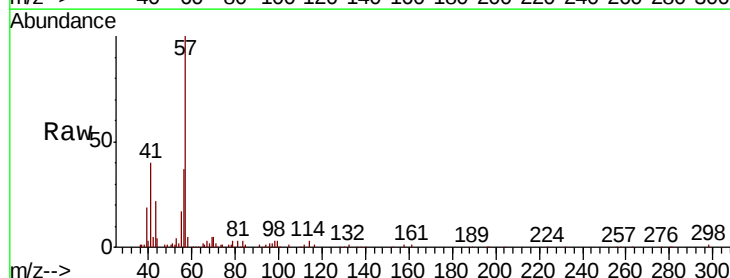
Tgt Ion: 57 Resp: 154919

Ion Ratio Lower Upper

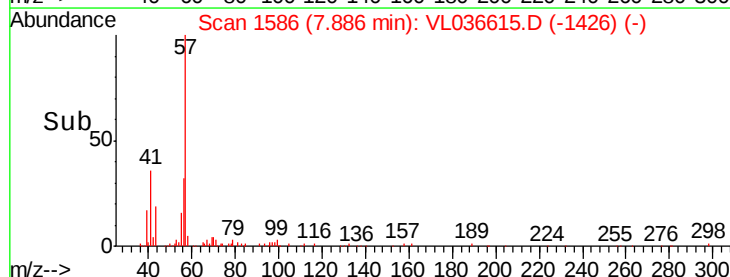
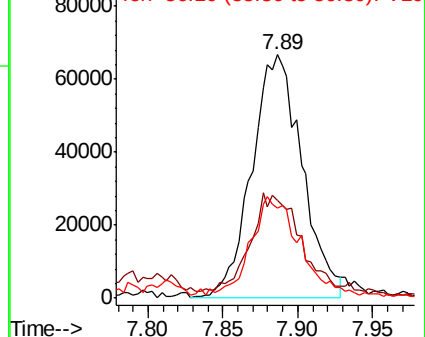
57 100

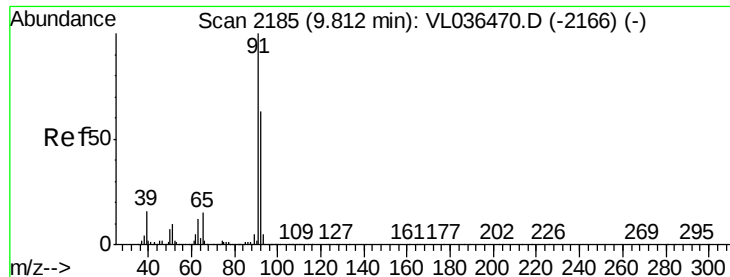
41 43.3 28.8 43.2#

56 42.3 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





#53

Toluene

Concen: 1.330 ppbv

RT: 9.83 min Scan# 2189

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

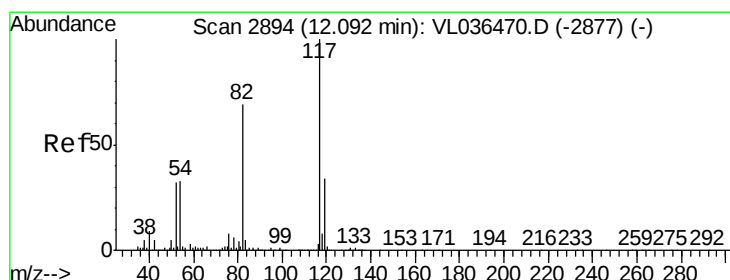
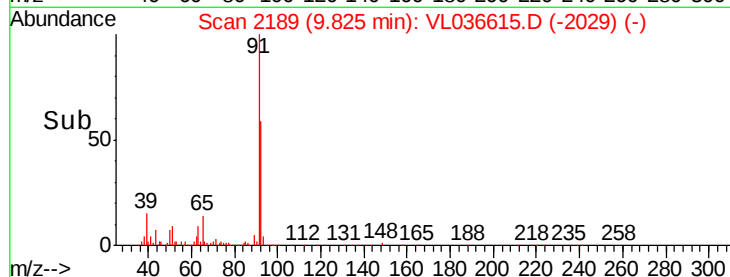
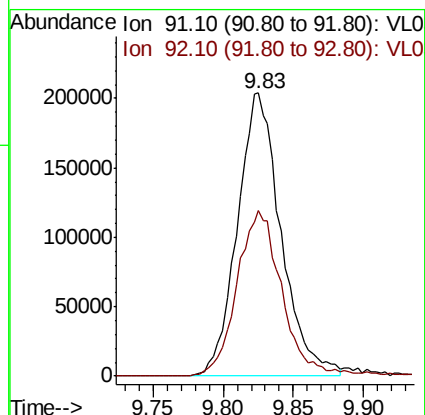
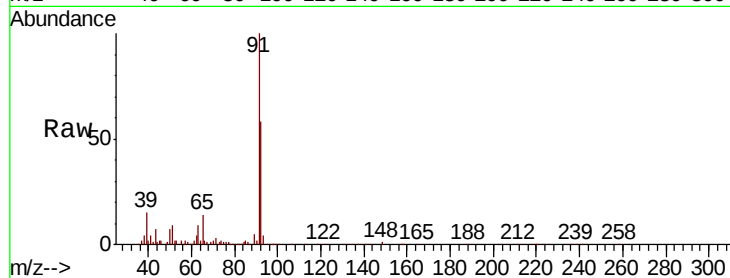
ClientSampleId :

Tot Ion: 91 Resp: 438970

Ion Ratio Lower Upper

91 100

92 61.7 48.8 73.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.11 min Scan# 2899

Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

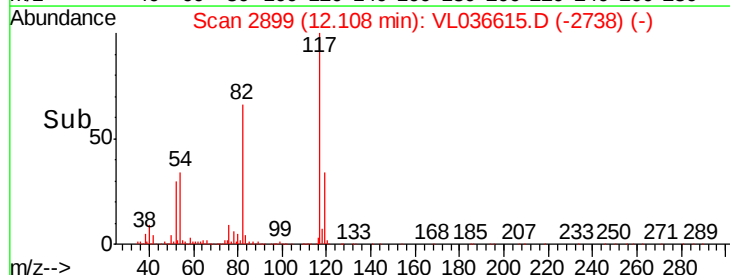
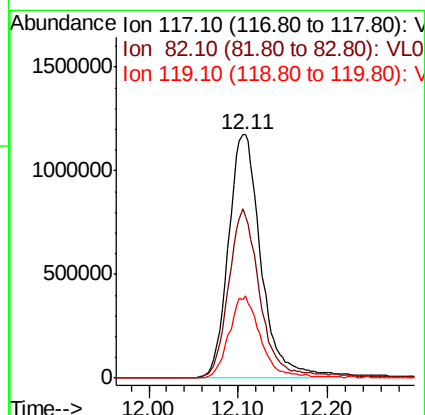
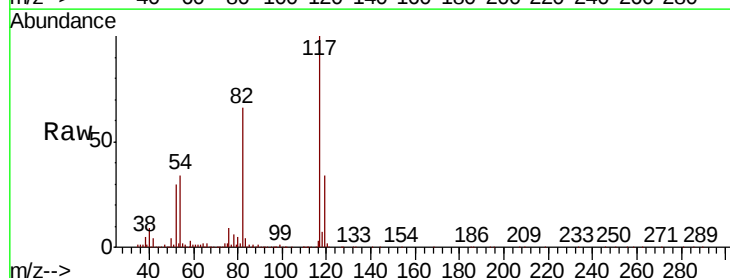
Tgt Ion: 117 Resp: 2983222

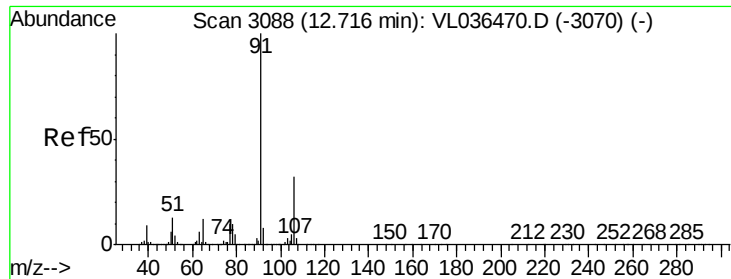
Ion Ratio Lower Upper

117 100

82 67.8 57.4 86.0

119 33.2 47.4 71.0#





#58

Ethyl Benzene

Concen: 0.300 ppbv

RT: 12.73 min Scan# 3093

Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

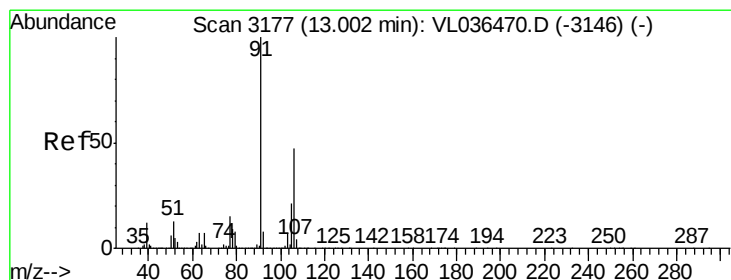
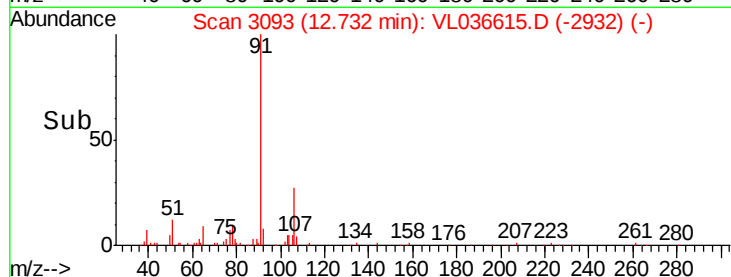
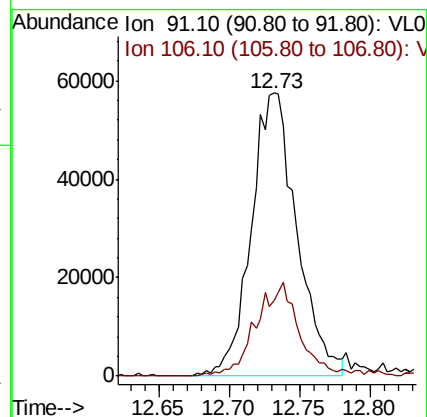
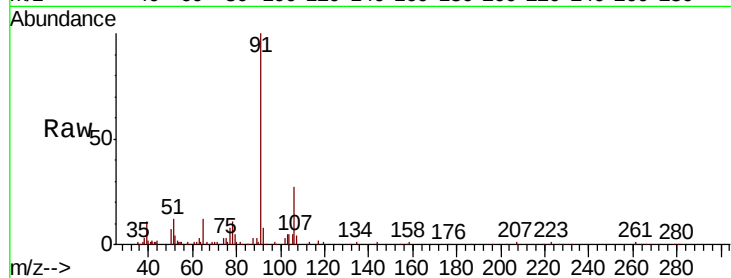
ClientSampleId :

Tot Ion: 91 Resp: 130402

Ion Ratio Lower Upper

91 100

106 27.0 25.3 37.9



#59

m/p-Xylene

Concen: 0.331 ppbv

RT: 13.01 min Scan# 3180

Delta R.T. 0.01 min

Lab File: VL036615.D

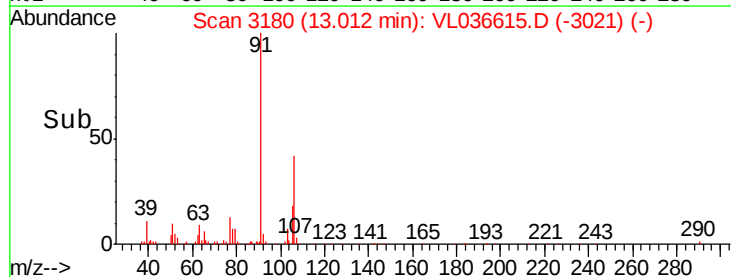
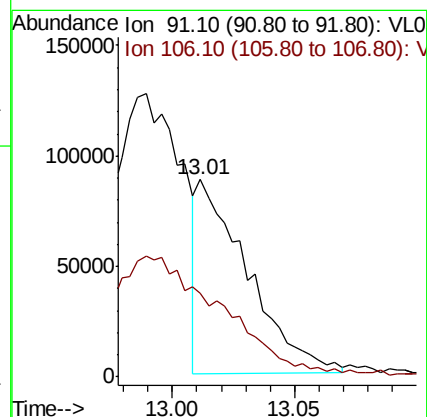
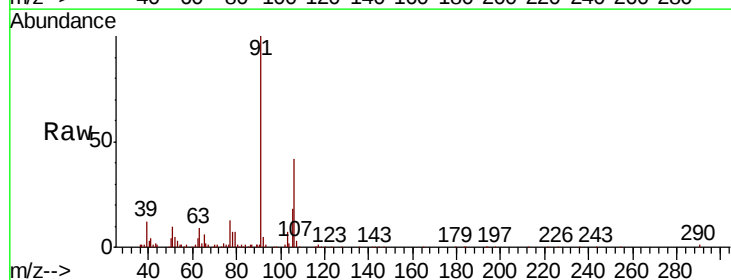
Acq: 1 Apr 2021 00:02

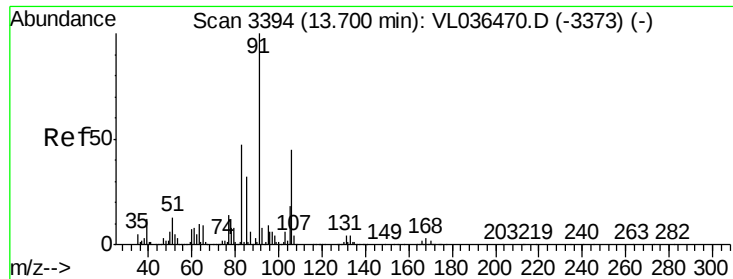
Tgt Ion: 91 Resp: 125283

Ion Ratio Lower Upper

91 100

106 0.0 35.3 52.9#

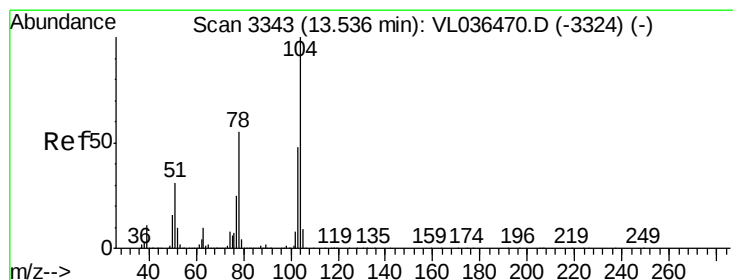
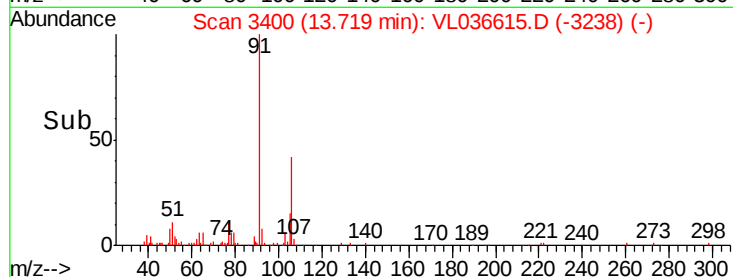
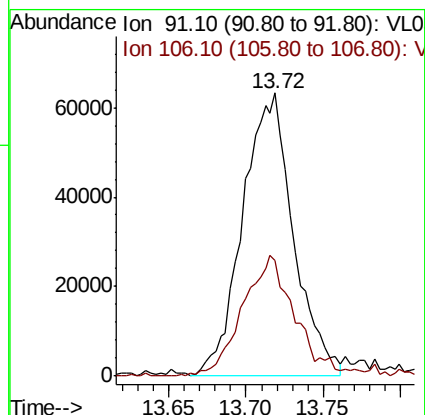
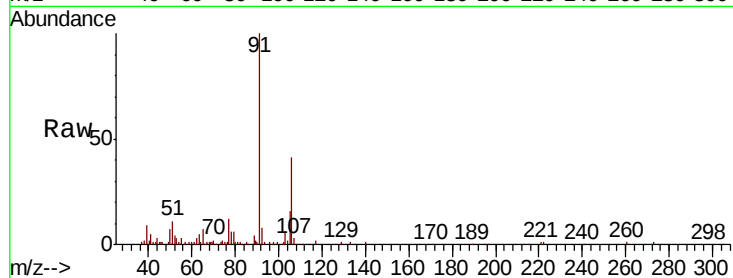




#60
o-Xylene
Concen: 0.391 ppbv
RT: 13.72 min Scan# 3400
Delta R.T. 0.02 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

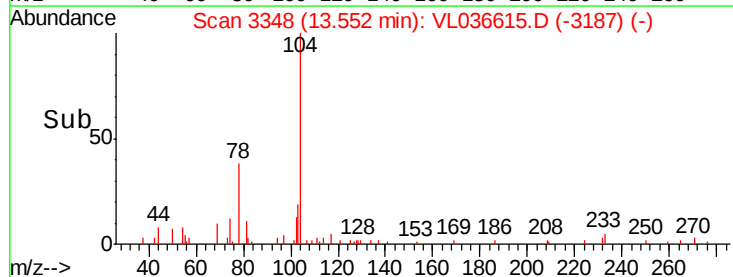
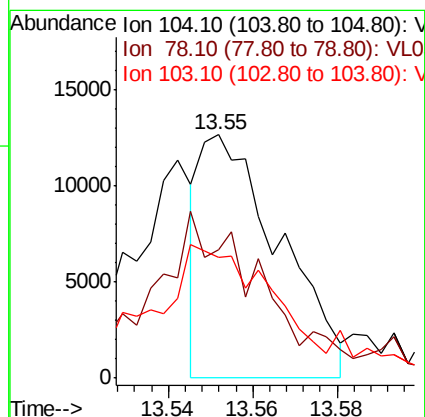
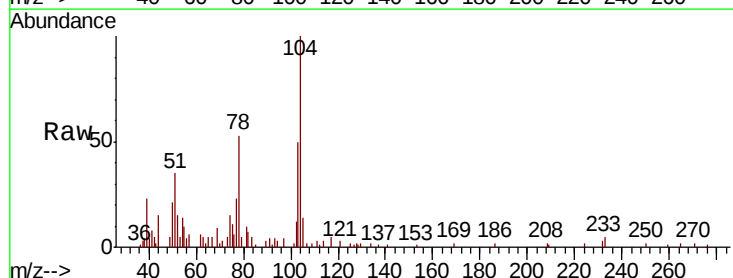
Instrument :
MSVOA_L
ClientSampled :

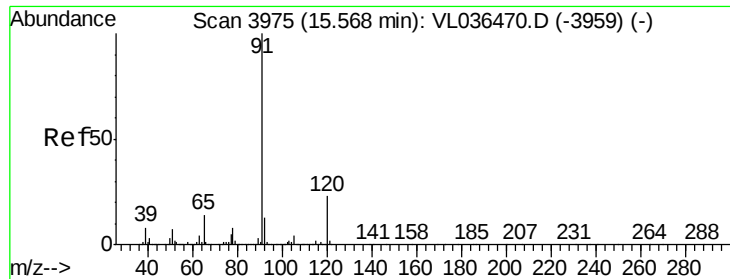
Tot Ion: 91 Resp: 143020
Ion Ratio Lower Upper
91 100
106 45.1 22.3 66.9



#61
Styrene
Concen: 0.089 ppbv
RT: 13.55 min Scan# 3348
Delta R.T. 0.02 min
Lab File: VL036615.D
Acq: 1 Apr 2021 00:02

Tgt Ion:104 Resp: 16473
Ion Ratio Lower Upper
104 100
78 0.0 43.8 65.8#
103 0.0 38.3 57.5#





#64

n-propylbenzene

Concen: 0.022 ppbv

RT: 15.59 min Scan# 3981

Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

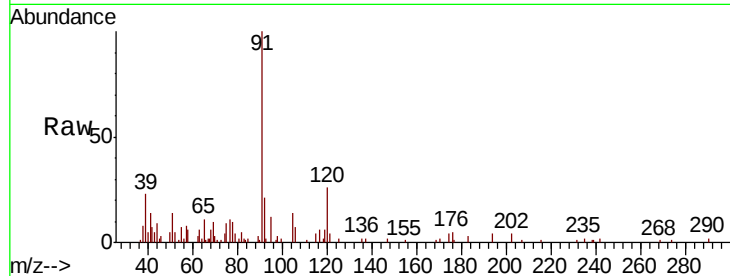
ClientSampleId :

Tot Ion:120 Resp: 2592

Ion Ratio Lower Upper

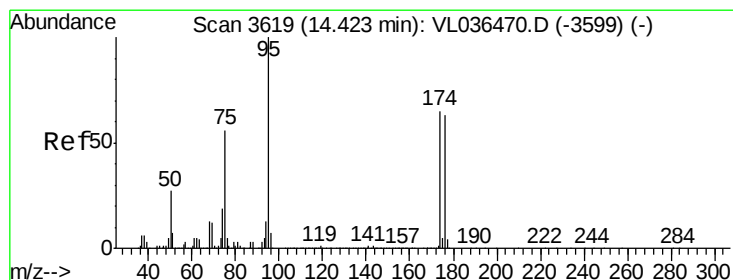
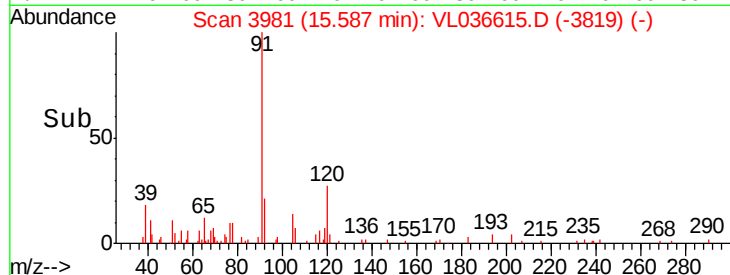
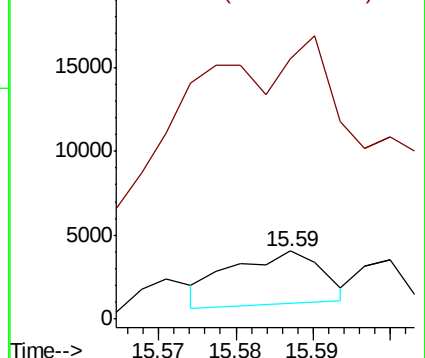
120 100

91 1779.1 377.4 566.2#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#68

1-Bromo-4-Fluorobenzene

Concen: 9.842 ppbv

RT: 14.44 min Scan# 3623

Delta R.T. 0.01 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

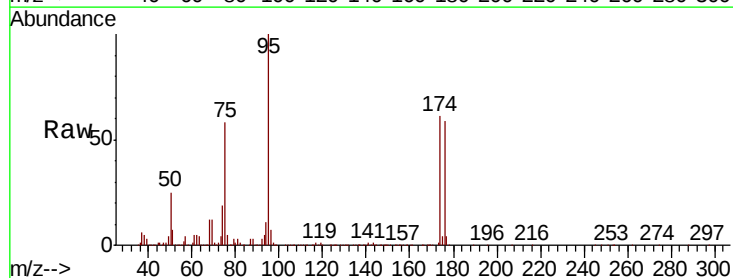
Tgt Ion: 95 Resp: 2340097

Ion Ratio Lower Upper

95 100

174 66.0 51.0 76.6

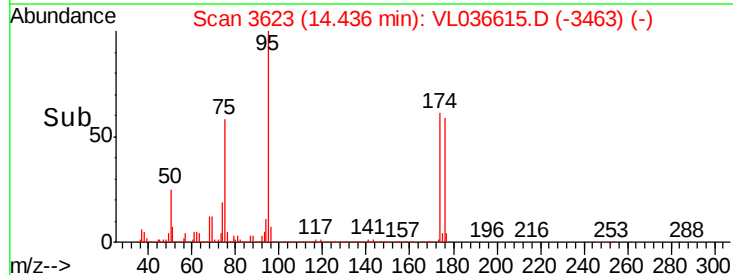
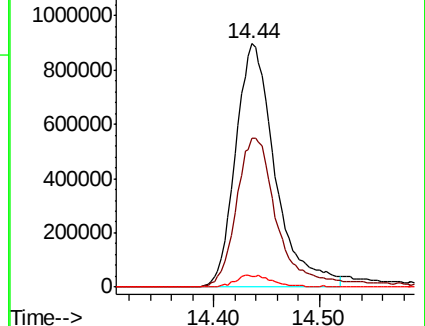
175 4.8 3.9 5.9

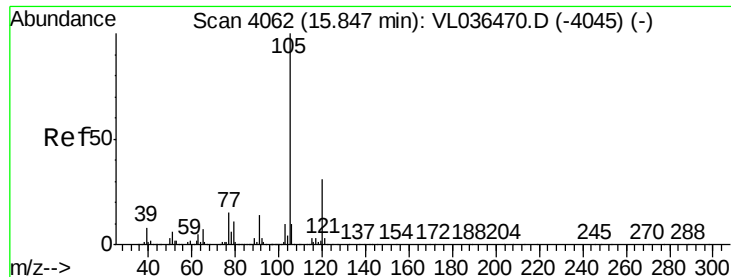


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.095 ppbv

RT: 15.86 min Scan# 4067

Delta R.T. 0.02 min

Lab File: VL036615.D

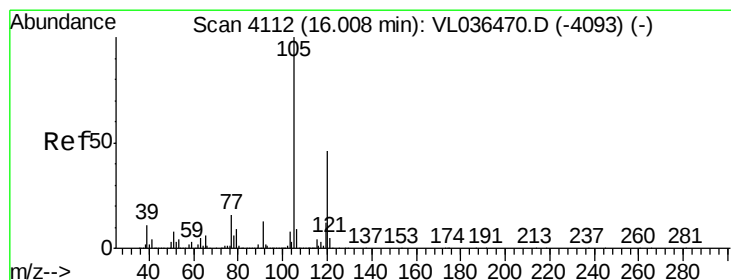
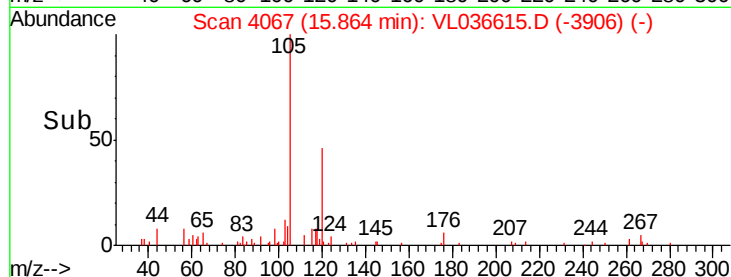
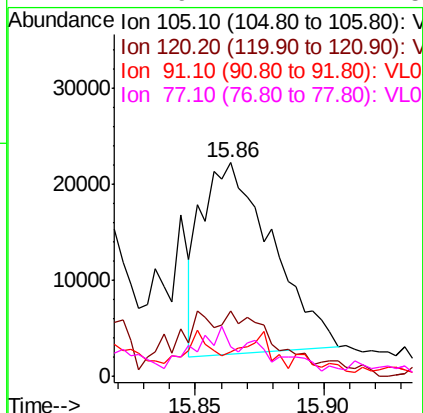
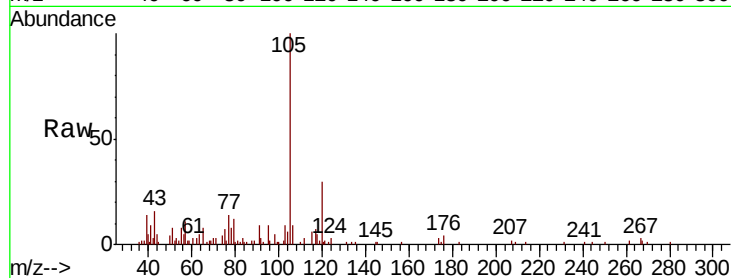
Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	37929
Ion	Ratio	Lower	Upper
105	100		
120	0.0	24.0	36.0#
91	0.0	11.0	16.4#
77	24.9	11.7	17.5#



#73

1,3,5-Trimethylbenzene

Concen: 0.043 ppbv

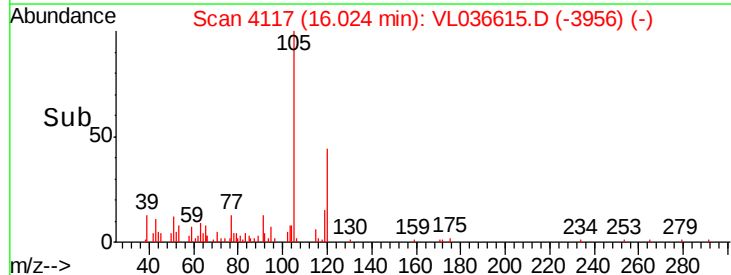
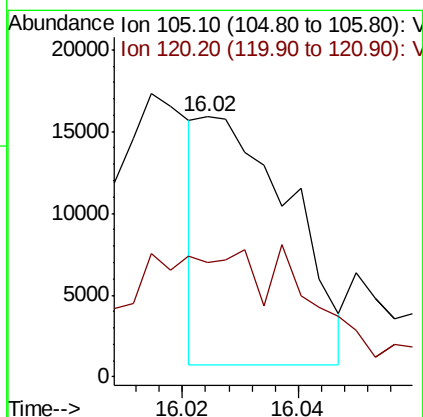
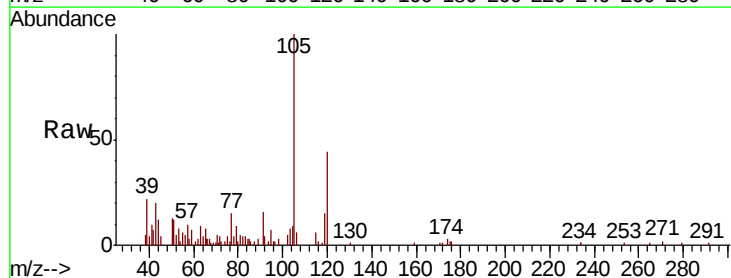
RT: 16.02 min Scan# 4117

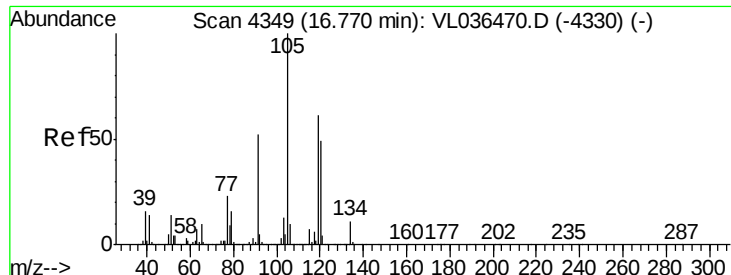
Delta R.T. 0.02 min

Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Tgt Ion:	105	Resp:	16221
Ion	Ratio	Lower	Upper
105	100		
120	26.8	36.6	54.8#





#74

1,2,4-Trimethylbenzene

Concen: 0.485 ppbv

RT: 16.79 min Scan# 4355

Delta R.T. 0.02 min

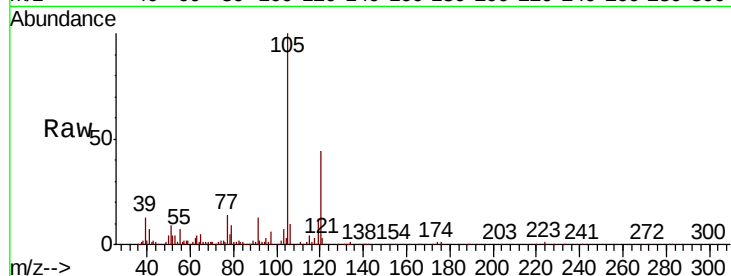
Lab File: VL036615.D

Acq: 1 Apr 2021 00:02

Instrument :

MSVOA_L

ClientSampleId :



Tot Ion:	105	Resp:	194236
Ion Ratio	Lower	Upper	
105	100		
120	43.5	39.2	58.8
91	11.9	42.6	64.0#
77	12.6	18.6	28.0#

