

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032921\
 Data File : VL036547.D
 Acq On : 29 Mar 2021 20:11
 Operator : SY/AP
 Sample : M1760-11
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 30 06:42:35 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	1576267	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.16	114	3505323	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.07	117	3097310	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.40	95	2596365	10.52	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.20%

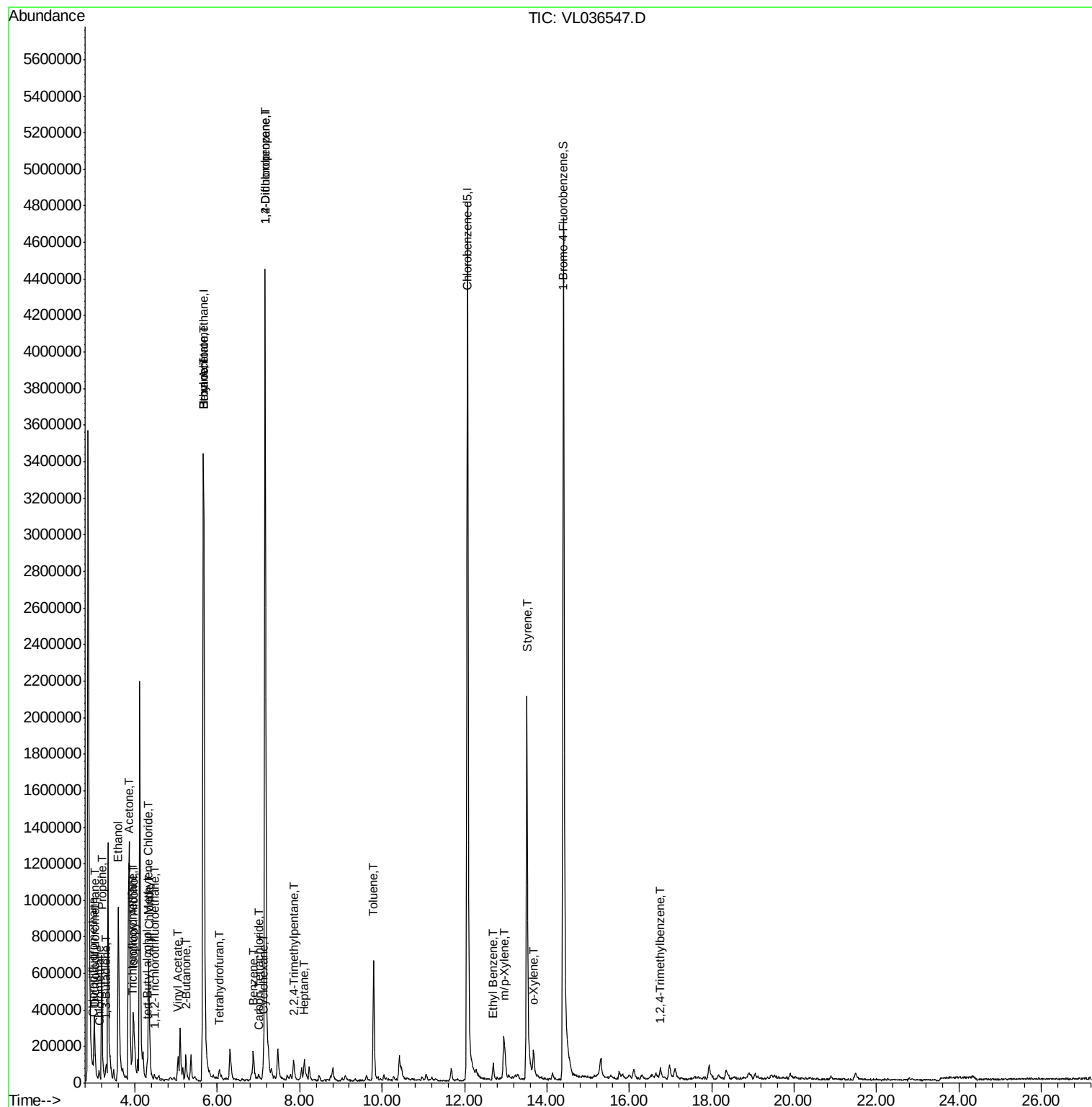
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	57314	0.223	ppbv	90
3) Chlorodifluoromethane	2.98	51	128138	0.435	ppbv #	83
4) Chloromethane	3.13	50	47848	0.460	ppbv #	75
9) Propene	3.19	41	199228	2.122	ppbv	92
10) Heptane	8.10	43	16020	0.067	ppbv #	28
11) Trichlorofluoromethane	3.94	101	47461	0.181	ppbv	92
12) 1,1,2-Trichlorotrifluoroet	4.47	101	7001	0.042	ppbv #	54
13) Ethanol	3.59	45	1262574	112.928	ppbv	96
15) Acetone	3.84	43	1520430	9.800	ppbv	90
16) 1,3-Butadiene	3.30	39	24373	0.226	ppbv #	37
17) tert-Butyl alcohol	4.29	59	9242	0.068	ppbv #	72
19) Isopropyl Alcohol	3.97	45	441259	5.170	ppbv #	91
20) Methylene Chloride	4.33	84	231051	3.181	ppbv	92
21) Allyl Chloride	4.36	41	27832	0.225	ppbv #	48
23) Vinyl Acetate	5.05	43	18049	0.068	ppbv #	1
25) Ethyl Acetate	5.67	43	680257	1.844	ppbv #	80
26) Hexane	5.67	57	847144	4.949	ppbv #	49
30) Cyclohexane	7.11	84	7911	0.057	ppbv #	1
34) 2-Butanone	5.24	43	163228	0.954	ppbv	96
35) Carbon Tetrachloride	7.01	117	6826	0.025	ppbv #	74
36) Benzene	6.88	78	110549	0.342	ppbv #	92
39) 1,2-Dichloropropane	7.16	63	981474	7.484	ppbv #	23
41) Tetrahydrofuran	6.04	42	10599	0.134	ppbv #	8
44) 2,2,4-Trimethylpentane	7.85	57	61790	0.109	ppbv #	46
53) Toluene	9.79	91	487573	1.416	ppbv	100
58) Ethyl Benzene	12.69	91	39520	0.088	ppbv	94
59) m/p-Xylene	12.98	91	76486	0.195	ppbv #	32
60) o-Xylene	13.68	91	87422	0.230	ppbv	90
61) Styrene	13.52	104	1269284	6.639	ppbv	97
74) 1,2,4-Trimethylbenzene	16.75	105	24319	0.058	ppbv #	54

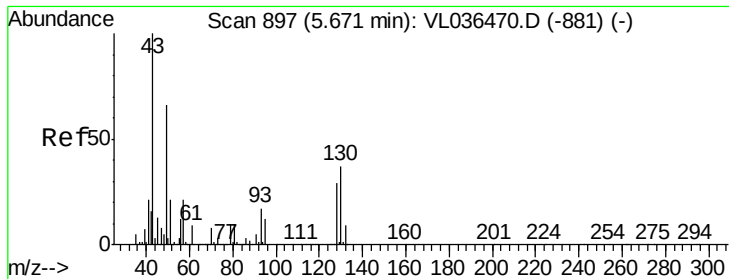
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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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# 892

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

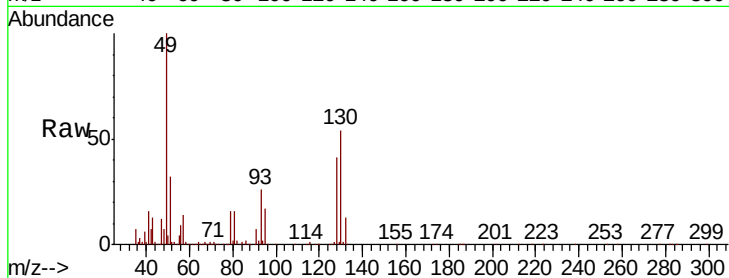
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 49 Resp: 1576267

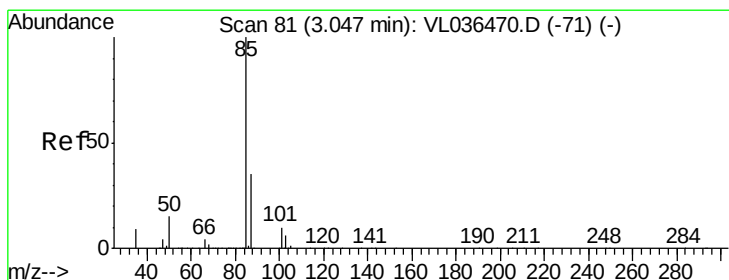
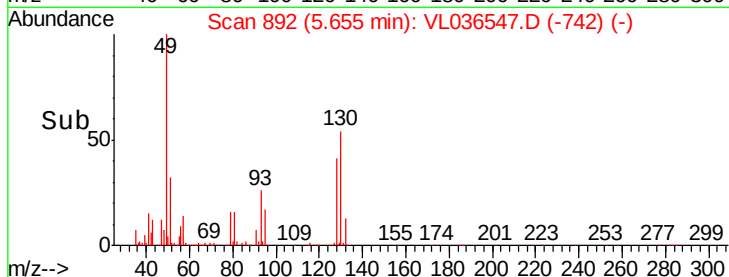
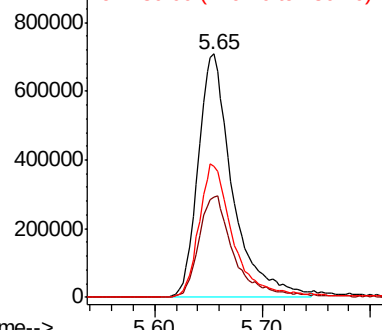
Ion	Ratio	Lower	Upper
49	100		
128	43.5	23.5	70.6
130	56.1	29.1	87.4



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.223 ppbv

RT: 3.04 min Scan# 79

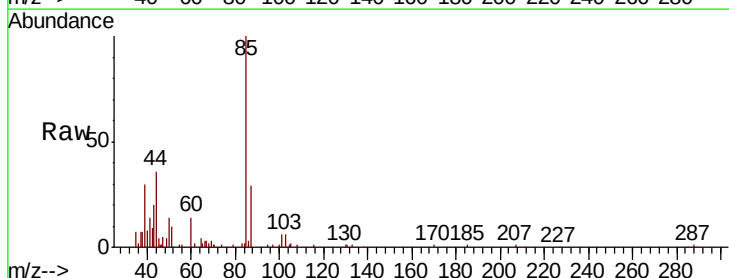
Delta R.T. -0.01 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

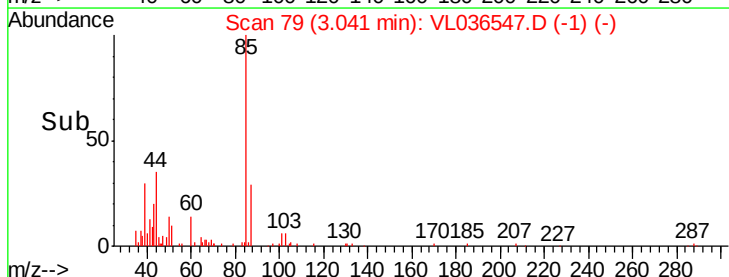
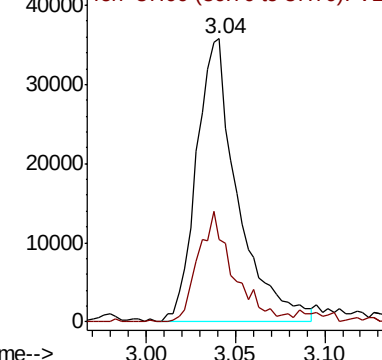
Tgt Ion: 85 Resp: 57314

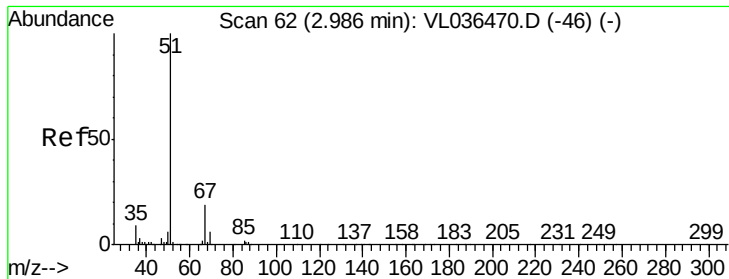
Ion	Ratio	Lower	Upper
85	100		
87	29.0	27.8	41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.435 ppbv

RT: 2.98 min Scan# 59

Delta R.T. -0.01 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

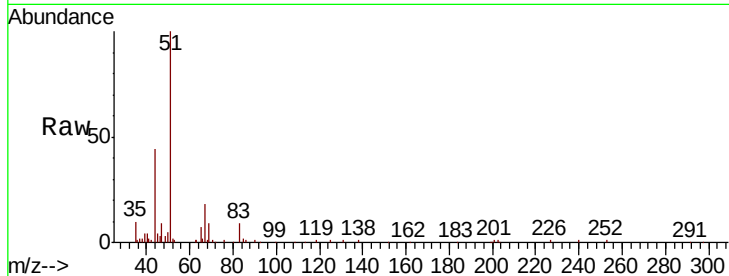
ClientSampleId :

Tot Ion: 51 Resp: 128138

Ion Ratio Lower Upper

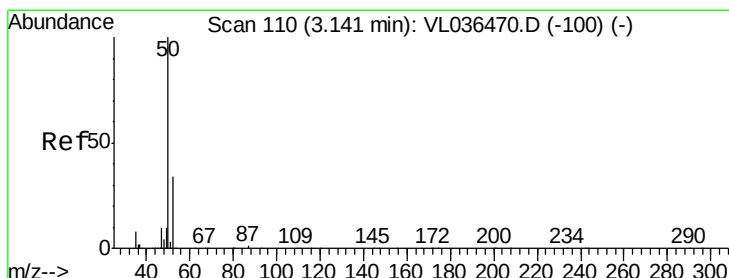
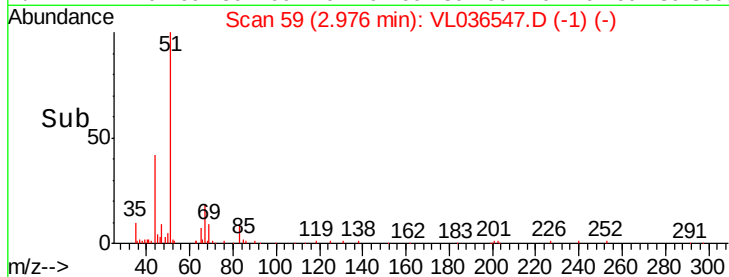
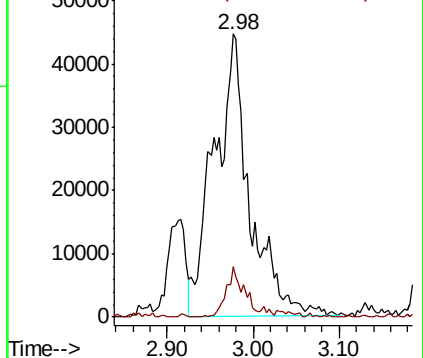
51 100

67 10.8 14.7 22.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.460 ppbv

RT: 3.13 min Scan# 107

Delta R.T. -0.01 min

Lab File: VL036547.D

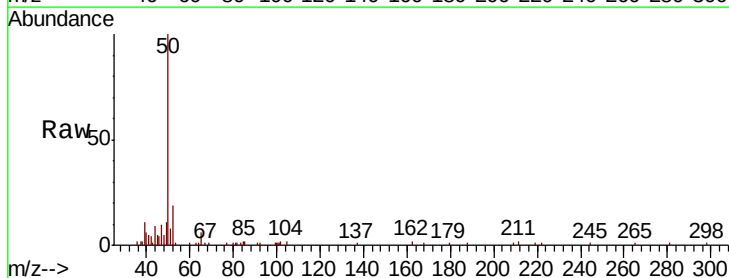
Acq: 29 Mar 2021 20:11

Tgt Ion: 50 Resp: 47848

Ion Ratio Lower Upper

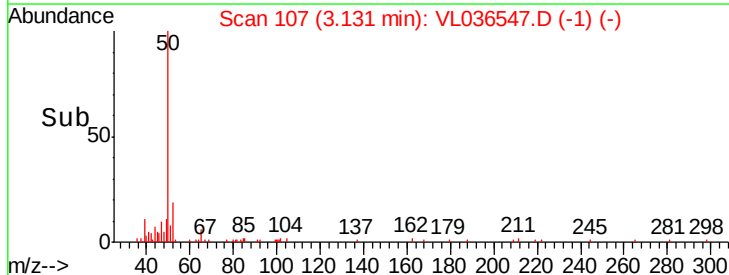
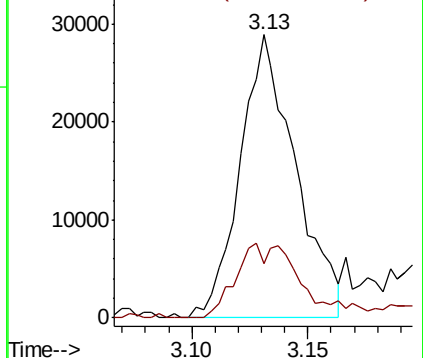
50 100

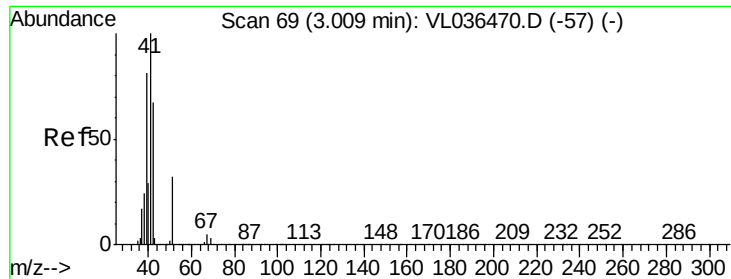
52 19.4 27.0 40.6#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 2.122 ppbv

RT: 3.19 min Scan# 126

Delta R.T. 0.18 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

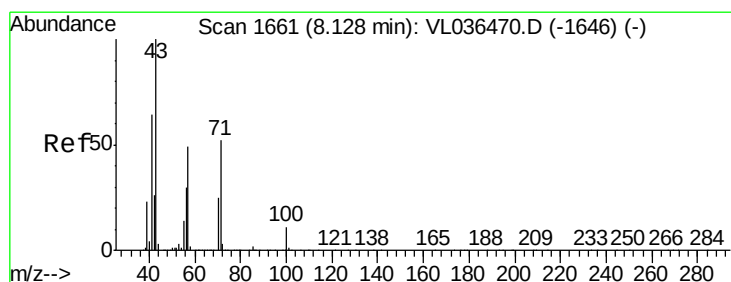
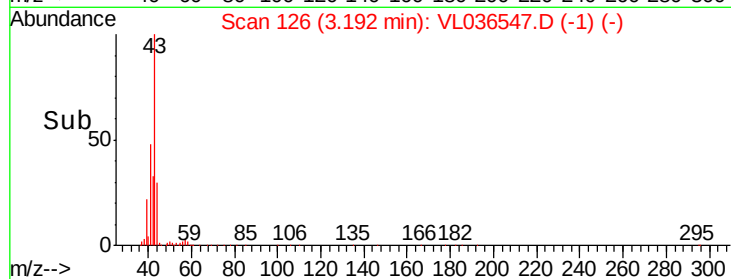
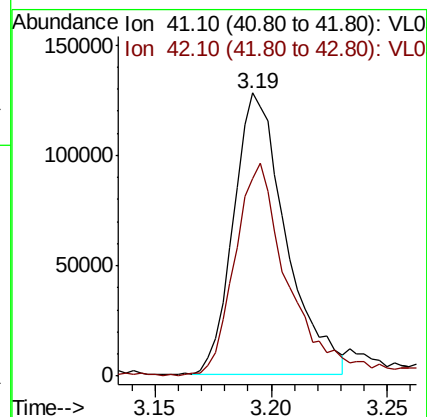
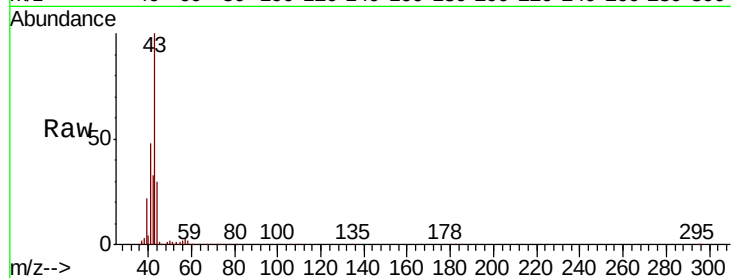
ClientSampled :

Tot Ion: 41 Resp: 199228

Ion Ratio Lower Upper

41 100

42 77.5 57.0 85.4



#10

Heptane

Concen: 0.067 ppbv

RT: 8.10 min Scan# 1653

Delta R.T. -0.03 min

Lab File: VL036547.D

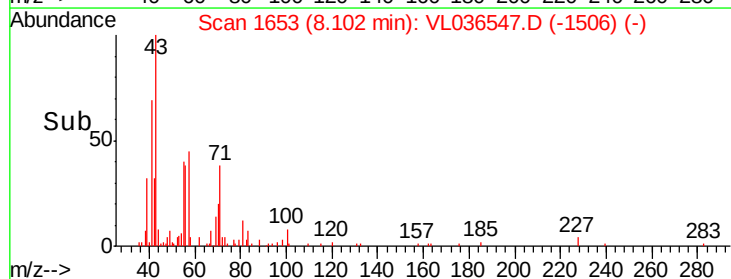
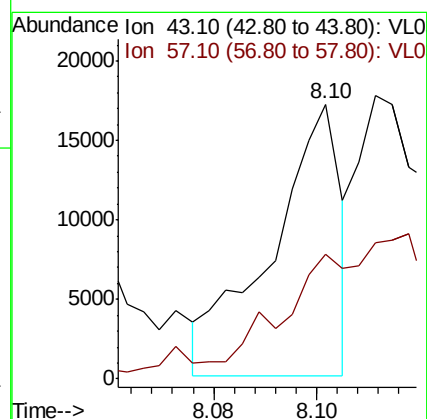
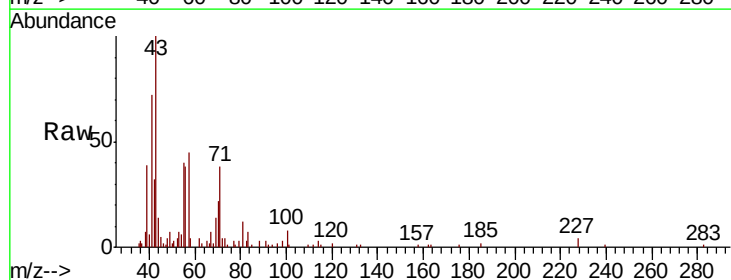
Acq: 29 Mar 2021 20:11

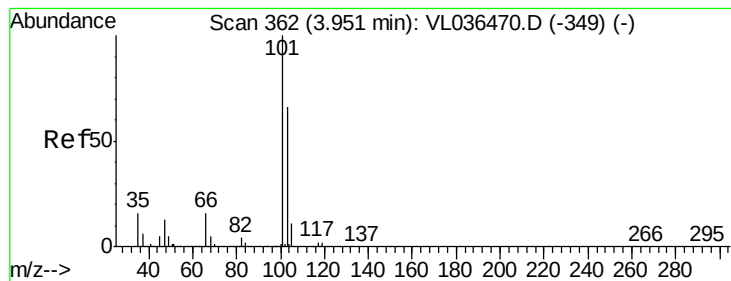
Tgt Ion: 43 Resp: 16020

Ion Ratio Lower Upper

43 100

57 0.0 39.0 58.6#





#11

Trichlorofluoromethane

Concen: 0.181 ppbv

RT: 3.94 min Scan# 358

Delta R.T. -0.01 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

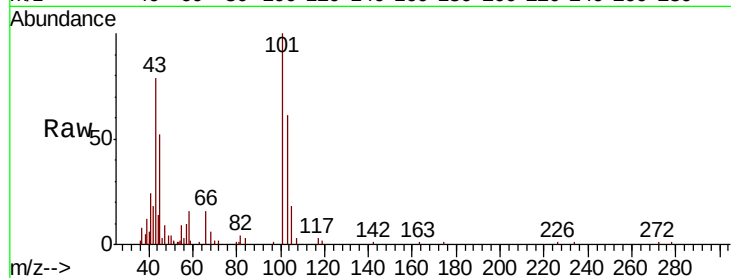
ClientSampleId :

Tot Ion:101 Resp: 47461

Ion Ratio Lower Upper

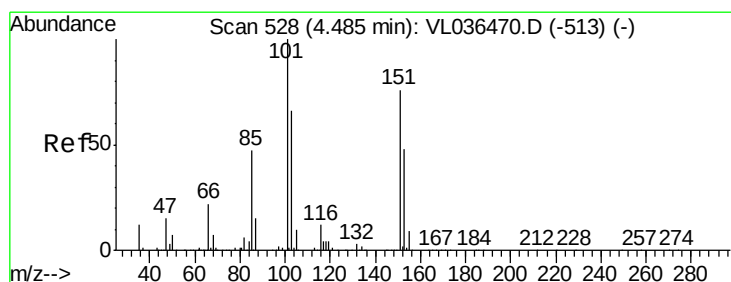
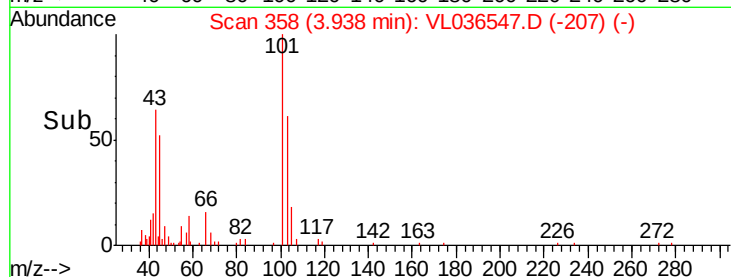
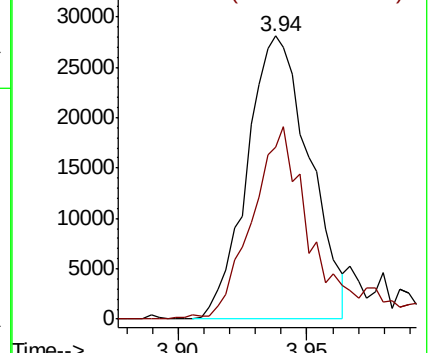
101 100

103 59.2 52.5 78.7



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.042 ppbv

RT: 4.47 min Scan# 524

Delta R.T. -0.01 min

Lab File: VL036547.D

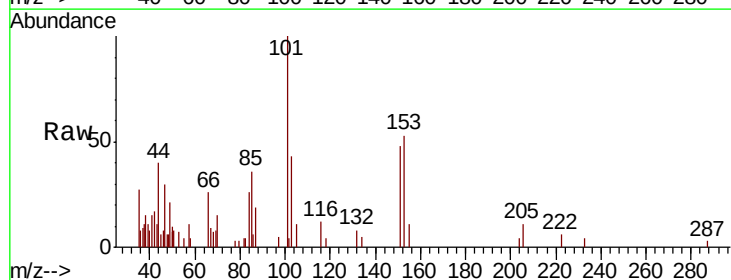
Acq: 29 Mar 2021 20:11

Tgt Ion:101 Resp: 7001

Ion Ratio Lower Upper

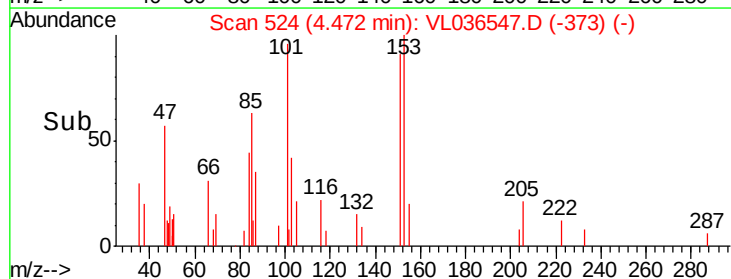
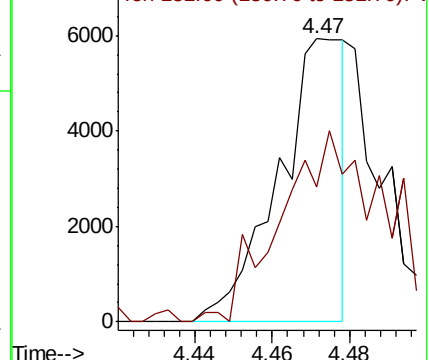
101 100

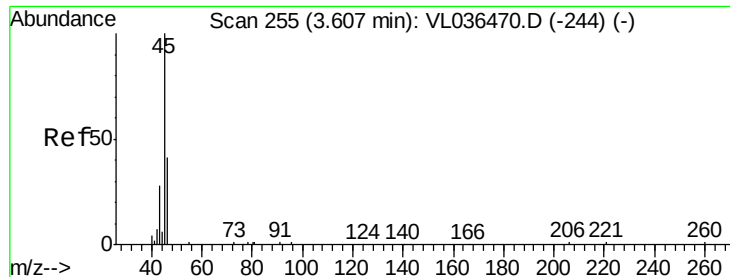
151 115.4 60.9 91.3#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 112.928 ppbv

RT: 3.59 min Scan# 251

Delta R.T. -0.01 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

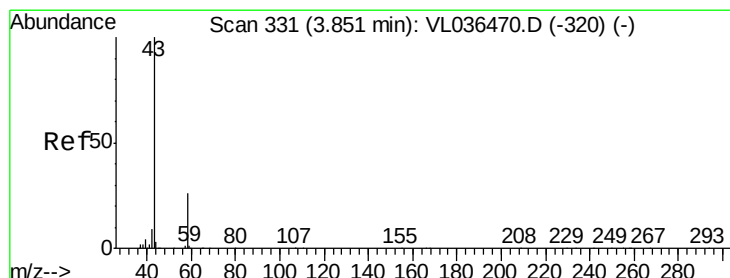
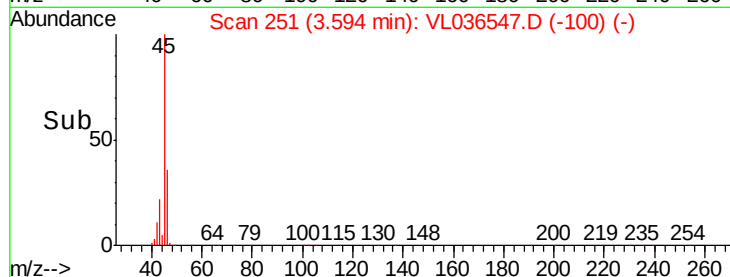
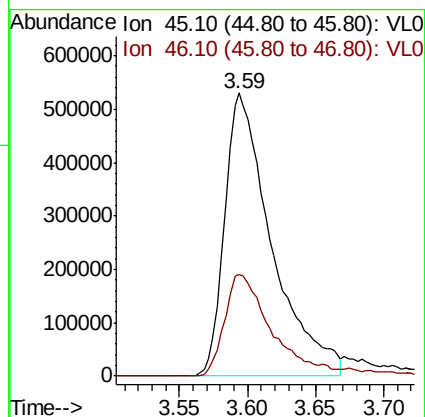
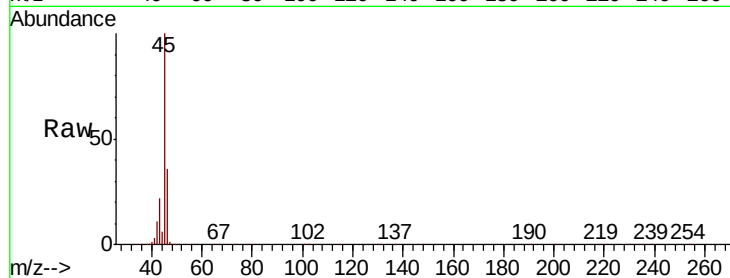
ClientSampleId :

Tot Ion: 45 Resp: 1262574

Ion Ratio Lower Upper

45 100

46 38.9 16.6 66.2



#15

Acetone

Concen: 9.800 ppbv

RT: 3.84 min Scan# 328

Delta R.T. -0.01 min

Lab File: VL036547.D

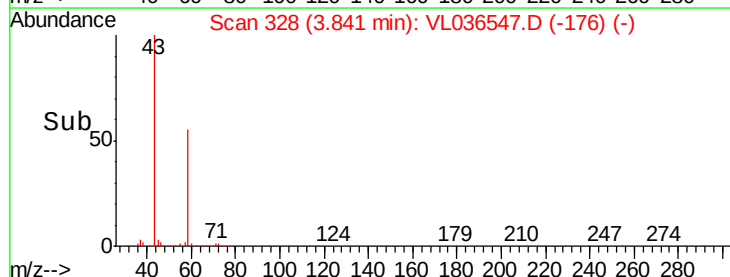
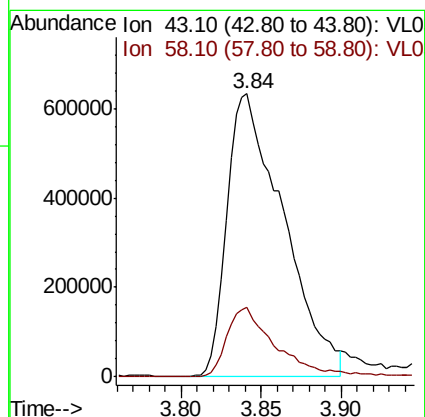
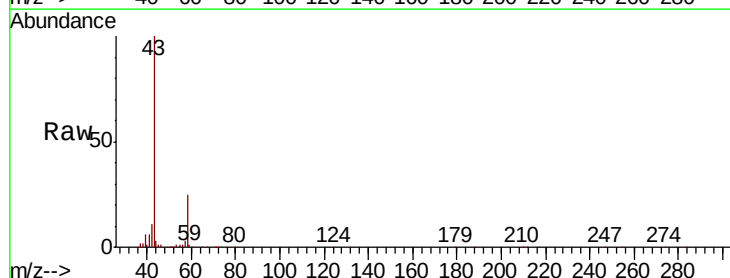
Acq: 29 Mar 2021 20:11

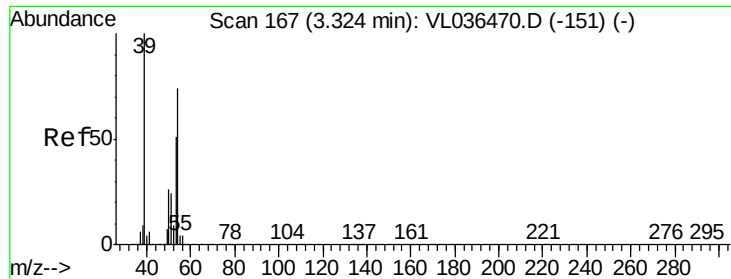
Tgt Ion: 43 Resp: 1520430

Ion Ratio Lower Upper

43 100

58 21.6 21.2 31.8

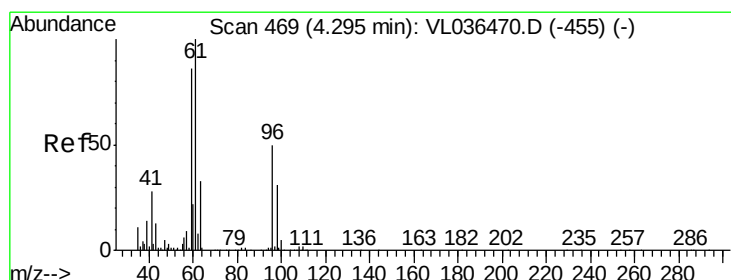
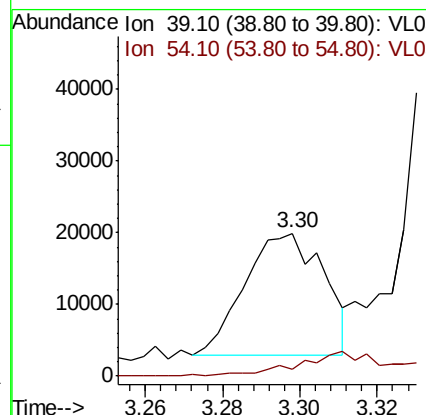
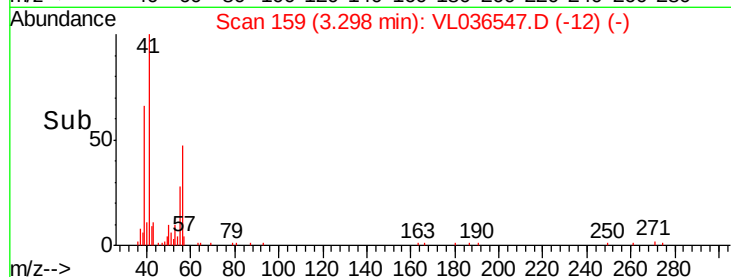
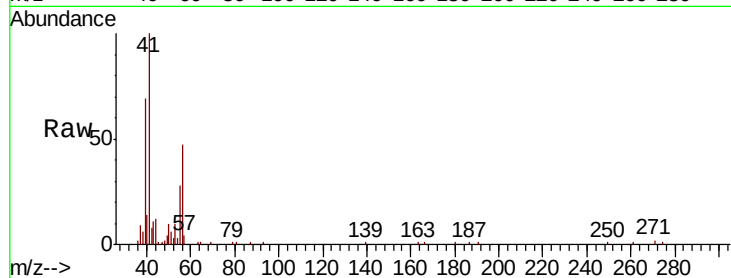




#16
 1,3-Butadiene
 Concen: 0.226 ppbv
 RT: 3.30 min Scan# 159
 Delta R.T. -0.03 min
 Lab File: VL036547.D
 Acq: 29 Mar 2021 20:11

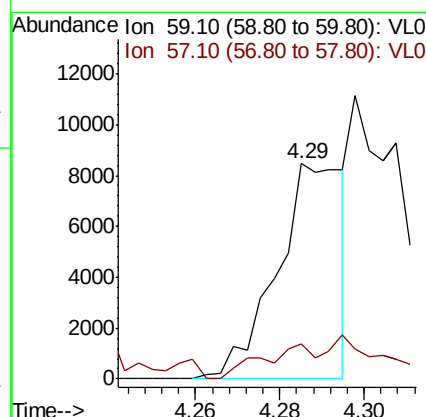
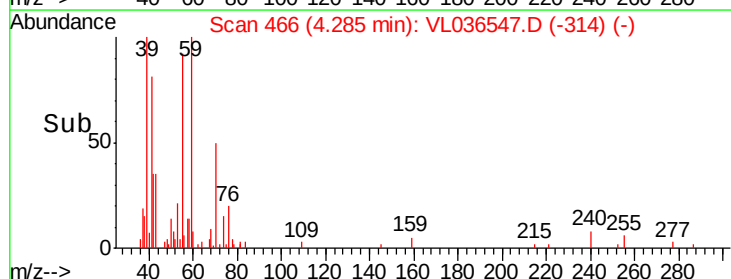
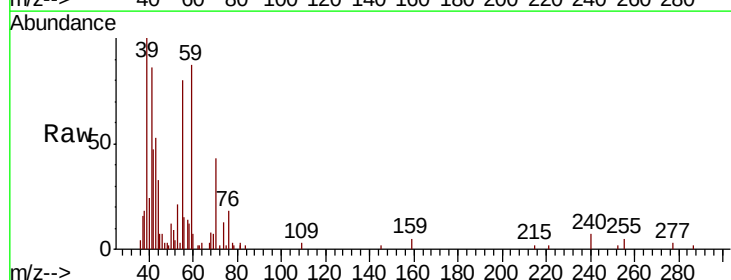
Instrument :
 MSVOA_L
 ClientSampleId :

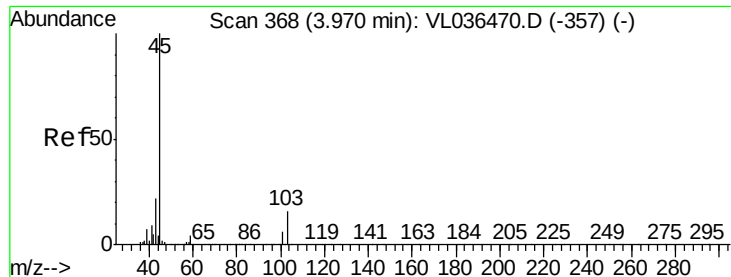
Tot Ion: 39 Resp: 24373
 Ion Ratio Lower Upper
 39 100
 54 20.4 58.8 88.2#



#17
 tert-Butyl alcohol
 Concen: 0.068 ppbv
 RT: 4.29 min Scan# 466
 Delta R.T. -0.01 min
 Lab File: VL036547.D
 Acq: 29 Mar 2021 20:11

Tgt Ion: 59 Resp: 9242
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.6 12.8#





#19

Isopropyl Alcohol

Concen: 5.170 ppbv

RT: 3.97 min Scan# 367

Delta R.T. -0.00 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

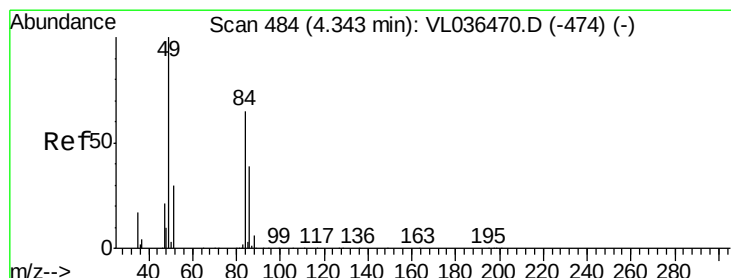
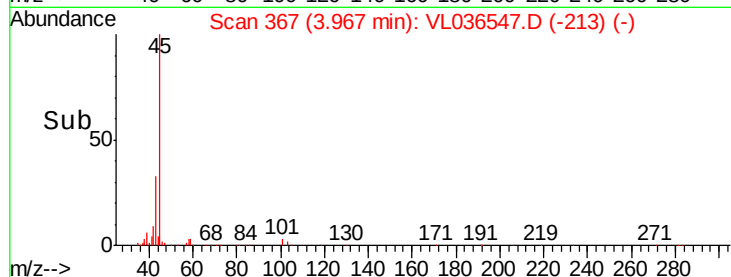
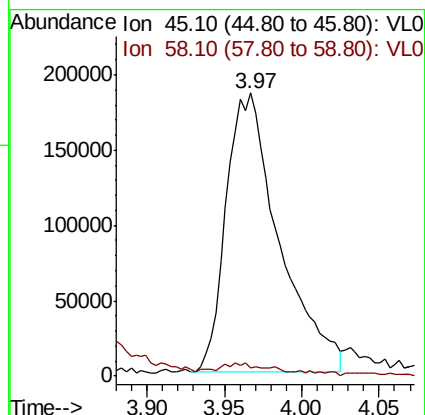
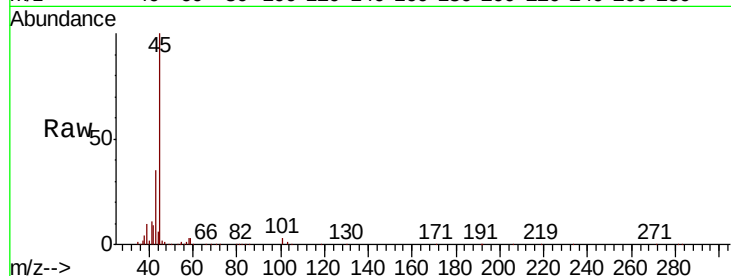
ClientSampleId :

Tot Ion: 45 Resp: 441259

Ion Ratio Lower Upper

45 100

58 6.7 2.9 4.3#



#20

Methylene Chloride

Concen: 3.181 ppbv

RT: 4.33 min Scan# 481

Delta R.T. -0.01 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Tgt Ion: 84 Resp: 231051

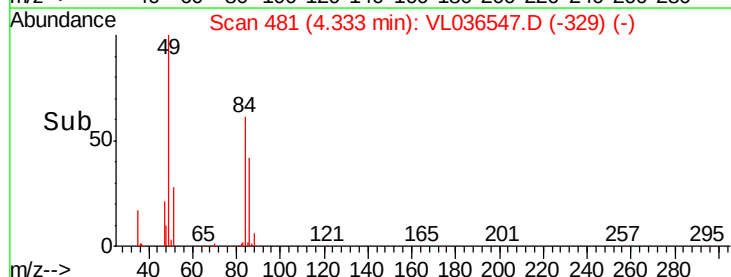
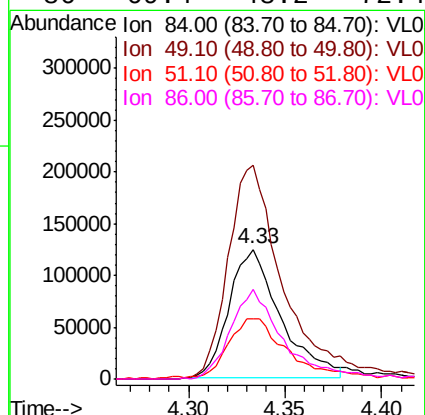
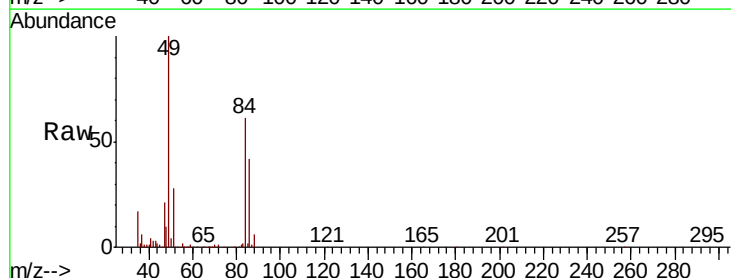
Ion Ratio Lower Upper

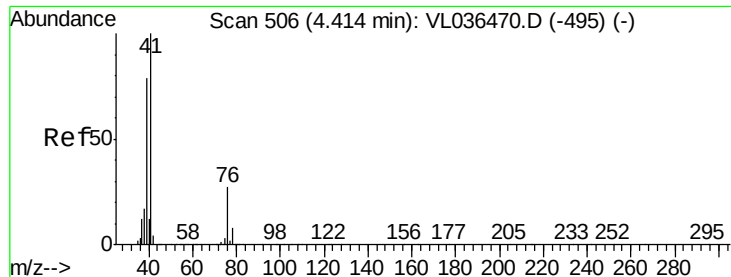
84 100

49 164.7 122.9 184.3

51 44.5 36.9 55.3

86 69.4 48.2 72.4

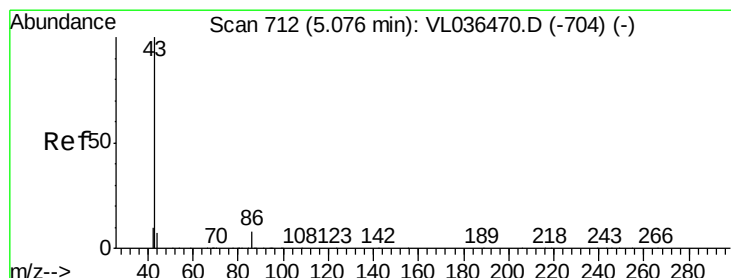
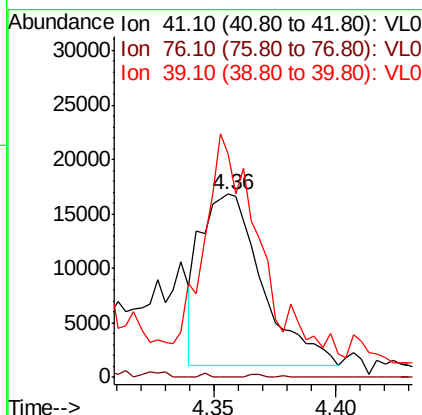
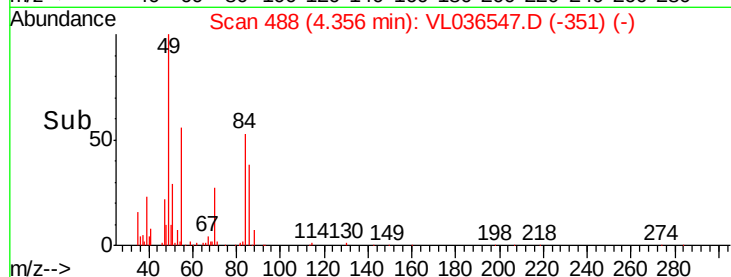
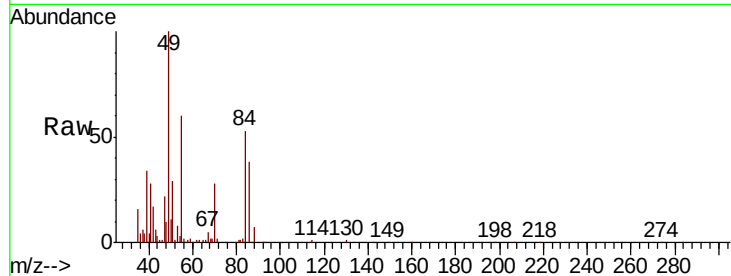




#21
Allvl Chloride
Concen: 0.225 ppbv
RT: 4.36 min Scan# 488
Delta R.T. -0.06 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

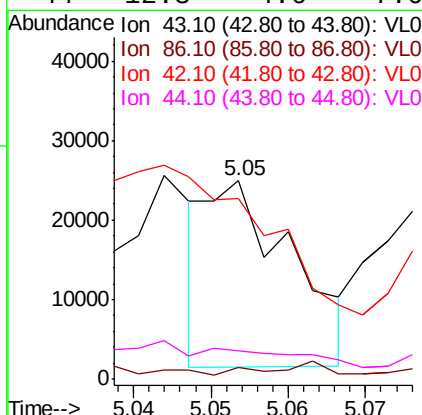
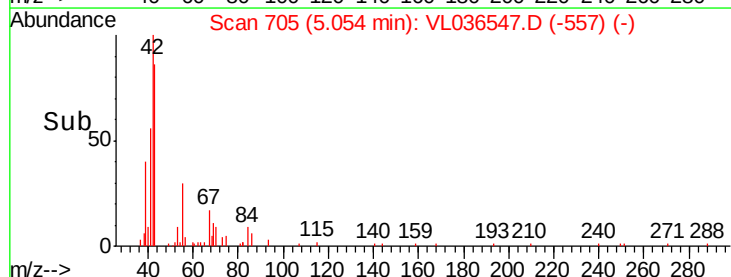
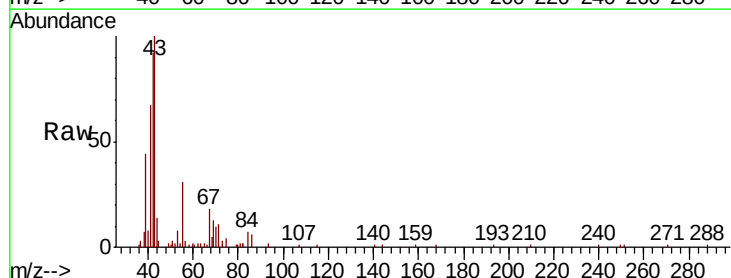
Instrument :
MSVOA_L
ClientSampled :

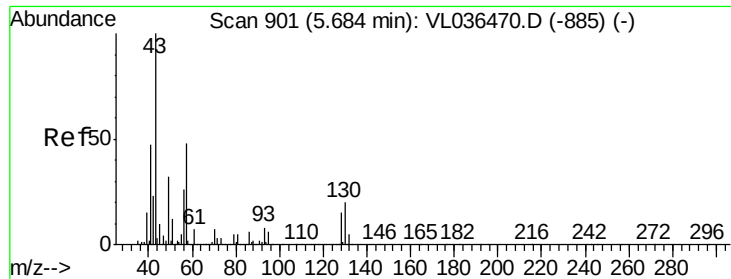
Tot Ion: 41 Resp: 27832
Ion Ratio Lower Upper
41 100
76 0.7 22.9 34.3#
39 131.6 67.3 100.9#



#23
Vinyl Acetate
Concen: 0.068 ppbv
RT: 5.05 min Scan# 705
Delta R.T. -0.02 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

Tgt Ion: 43 Resp: 18049
Ion Ratio Lower Upper
43 100
86 5.1 5.4 8.0#
42 92.3 8.5 12.7#
44 12.3 4.6 7.0#

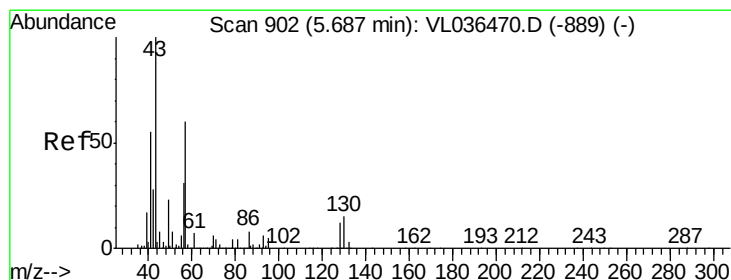
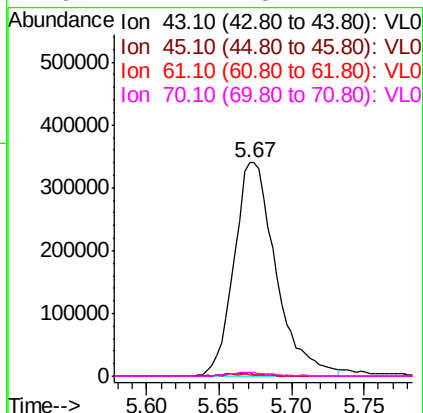
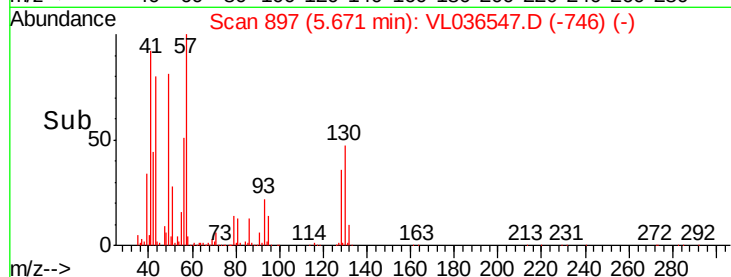
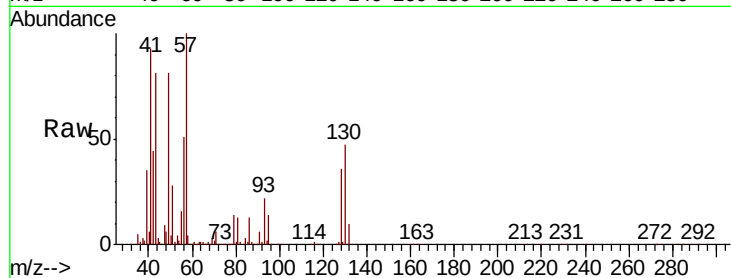




#25
Ethyl Acetate
Concen: 1.844 ppbv
RT: 5.67 min Scan# 897
Delta R.T. -0.01 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

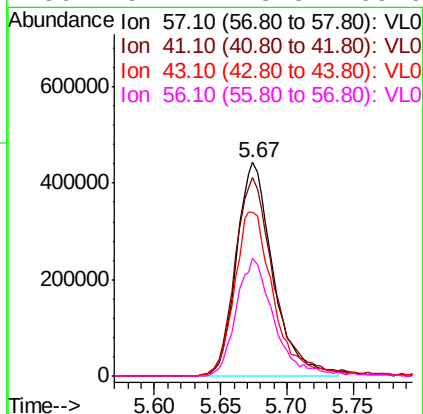
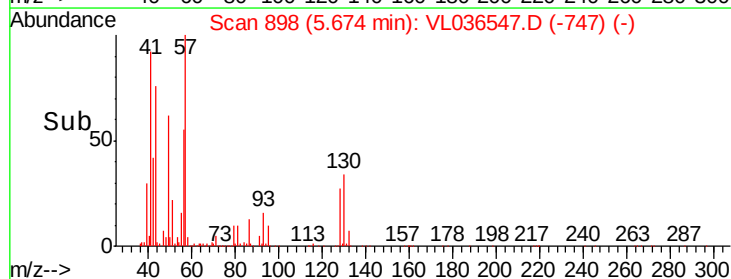
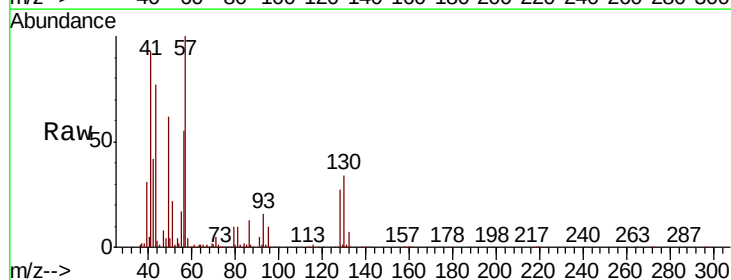
Instrument :
MSVOA_L
ClientSampleId :

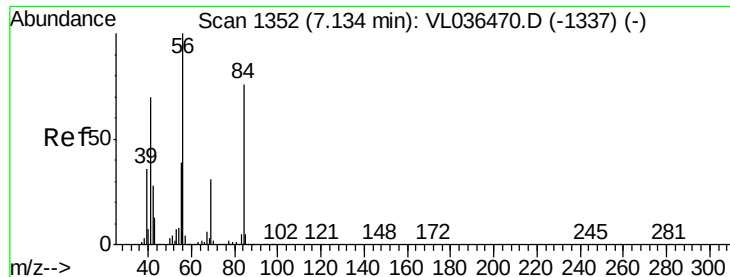
Tot Ion:	43	Resp:	680257
Ion	Ratio	Lower	Upper
43	100		
45	1.7	7.9	11.9#
61	1.1	7.4	11.2#
70	2.2	5.1	7.7#



#26
Hexane
Concen: 4.949 ppbv
RT: 5.67 min Scan# 898
Delta R.T. -0.01 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

Tgt Ion:	57	Resp:	847144
Ion	Ratio	Lower	Upper
57	100		
41	99.9	77.2	115.8
43	83.6	173.8	260.6#
56	57.4	43.8	65.6

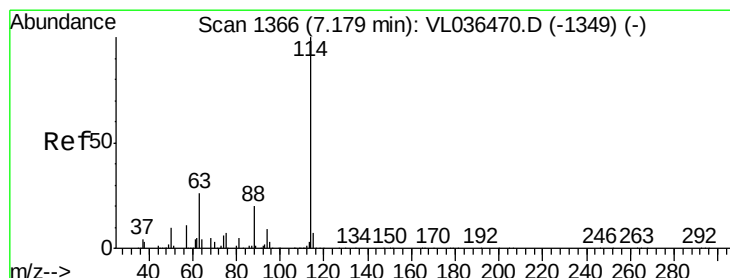
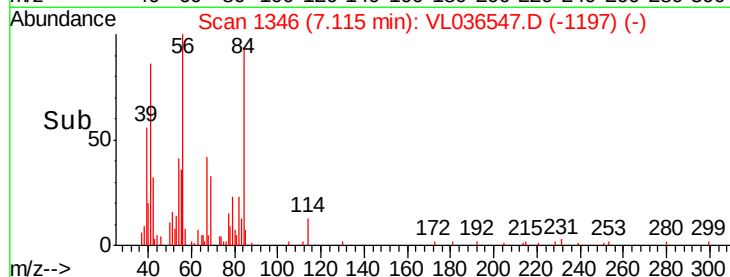
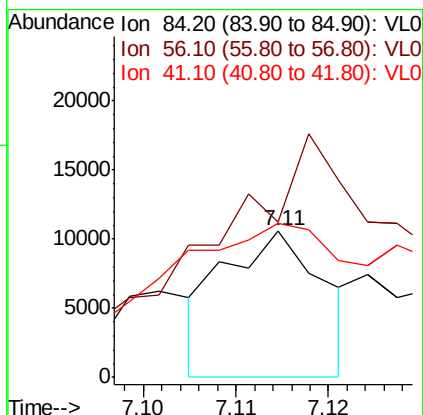
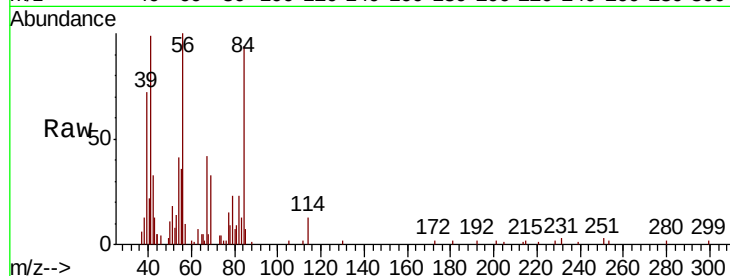




#30
Cvclohexane
Concen: 0.057 ppbv
RT: 7.11 min Scan# 1346
Delta R.T. -0.02 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

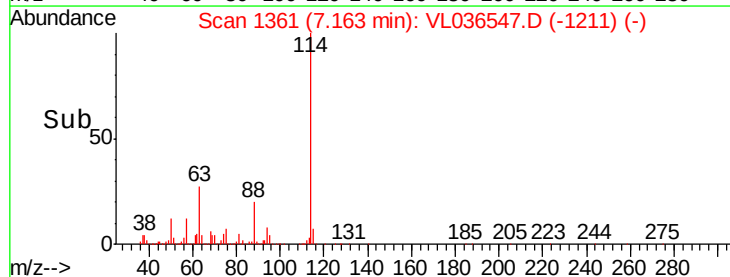
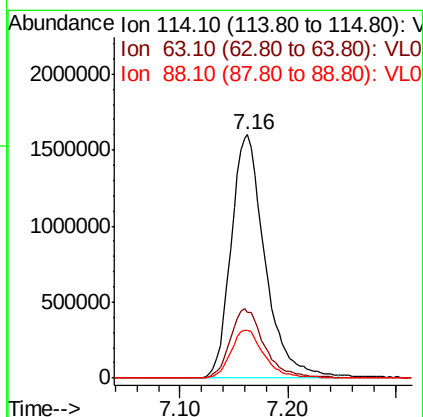
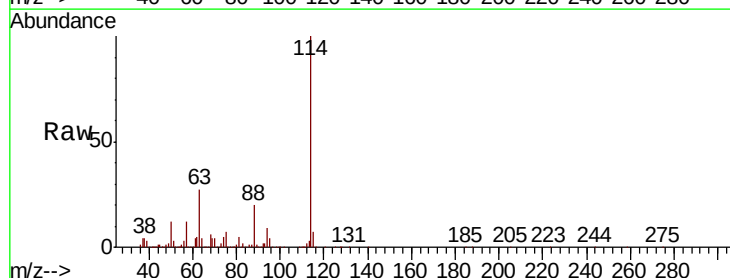
Instrument :
MSVOA_L
ClientSampled :

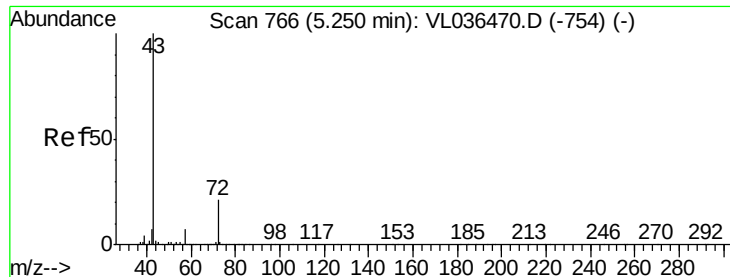
Tot Ion: 84 Resp: 7911
Ion Ratio Lower Upper
84 100
56 0.0 114.6 171.8#
41 377.0 75.3 112.9#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.16 min Scan# 1361
Delta R.T. -0.02 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

Tgt Ion: 114 Resp: 3505323
Ion Ratio Lower Upper
114 100
63 28.7 22.4 33.6
88 19.7 15.4 23.0

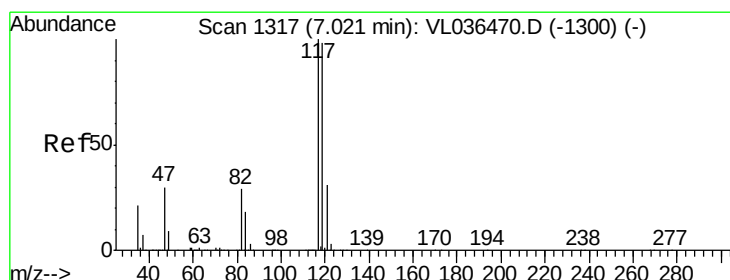
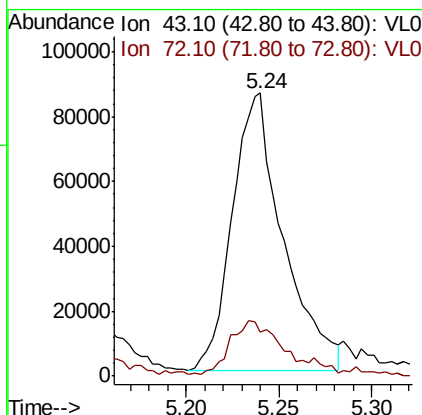
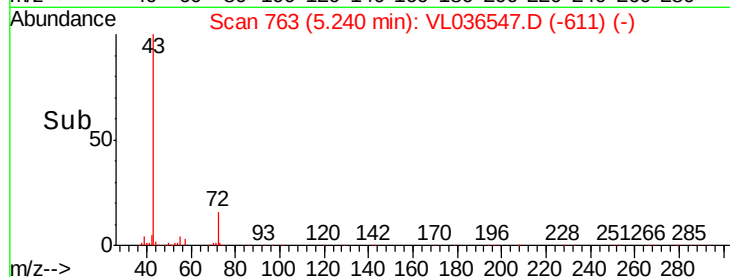
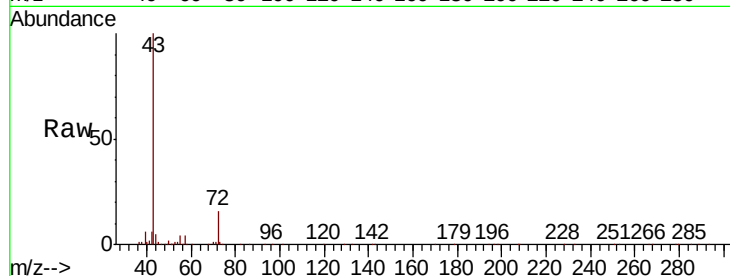




#34
2-Butanone
Concen: 0.954 ppbv
RT: 5.24 min Scan# 763
Delta R.T. -0.01 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

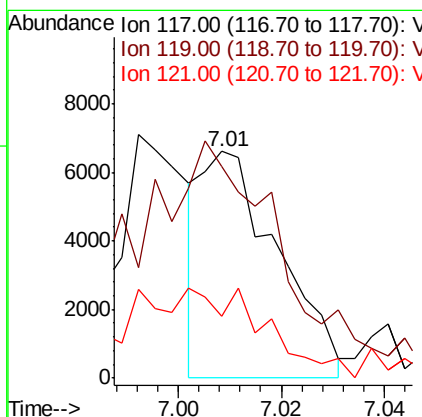
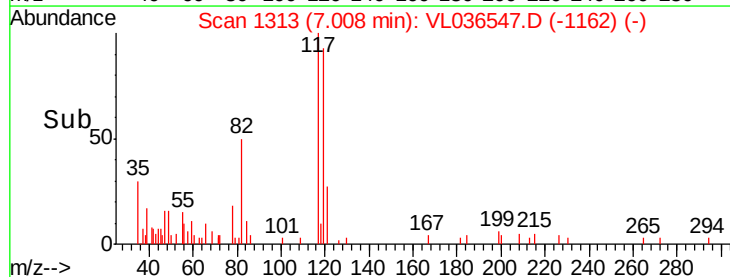
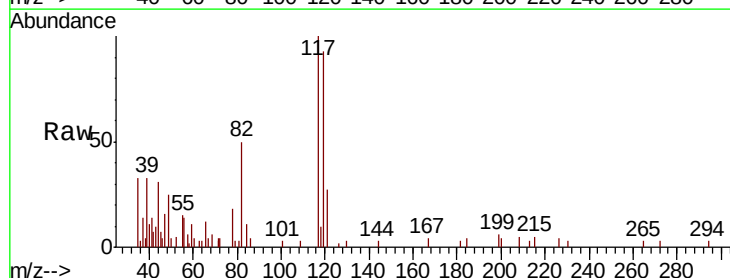
Instrument :
MSVOA_L
ClientSampled :

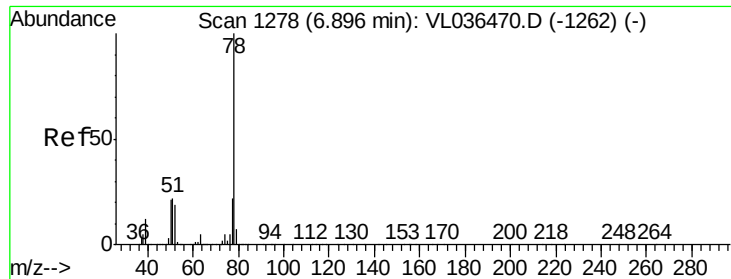
Tot Ion: 43 Resp: 163228
Ion Ratio Lower Upper
43 100
72 23.3 17.0 25.6



#35
Carbon Tetrachloride
Concen: 0.025 ppbv
RT: 7.01 min Scan# 1313
Delta R.T. -0.01 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

Tgt Ion: 117 Resp: 6826
Ion Ratio Lower Upper
117 100
119 69.3 78.2 117.2#
121 20.1 24.5 36.7#





#36

Benzene

Concen: 0.342 ppbv

RT: 6.88 min Scan# 1272

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

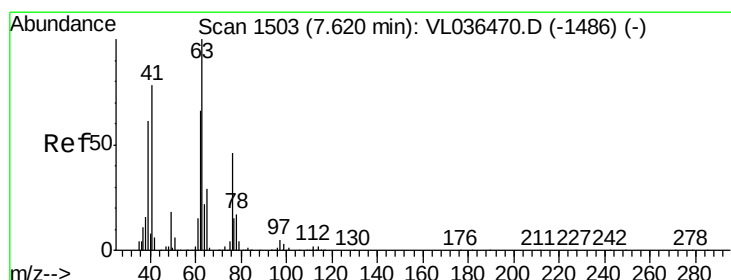
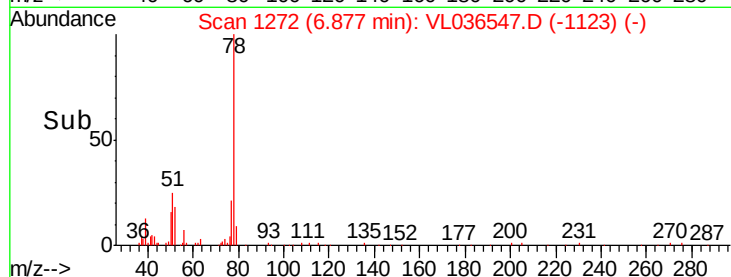
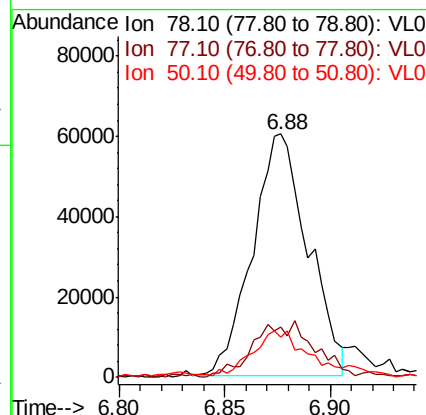
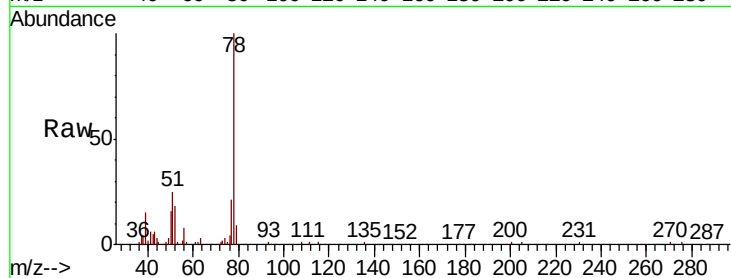
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion: 78 Resp: 110549

Ion	Ratio	Lower	Upper
78	100		
77	20.2	18.0	27.0
50	15.3	16.5	24.7#



#39

1,2-Dichloropropane

Concen: 7.484 ppbv

RT: 7.16 min Scan# 1360

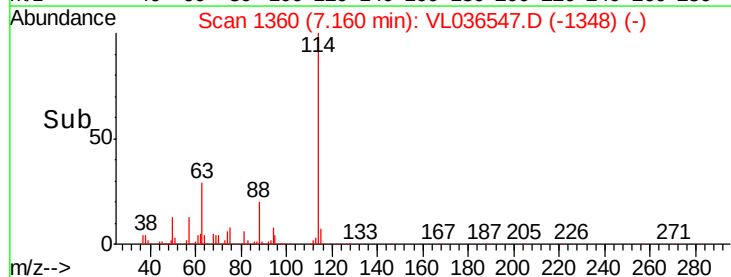
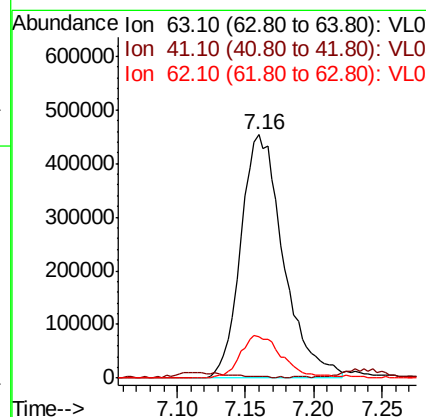
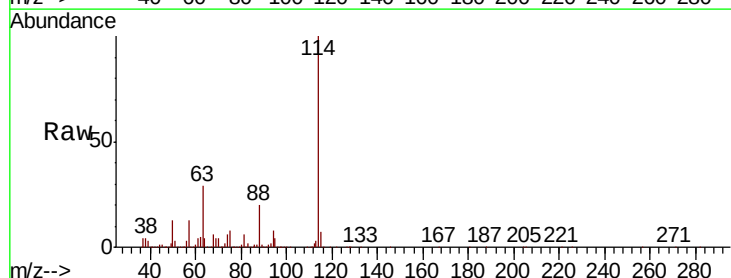
Delta R.T. -0.46 min

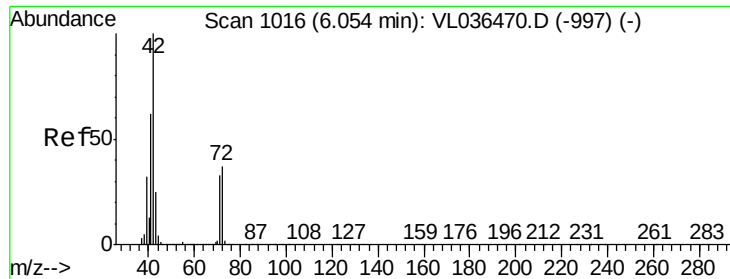
Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Tgt Ion: 63 Resp: 981474

Ion	Ratio	Lower	Upper
63	100		
41	0.0	62.4	93.6#
62	16.9	52.8	79.2#





#41

Tetrahydrofuran

Concen: 0.134 ppbv

RT: 6.04 min Scan# 1012

Delta R.T. -0.01 min

Lab File: VL036547.D

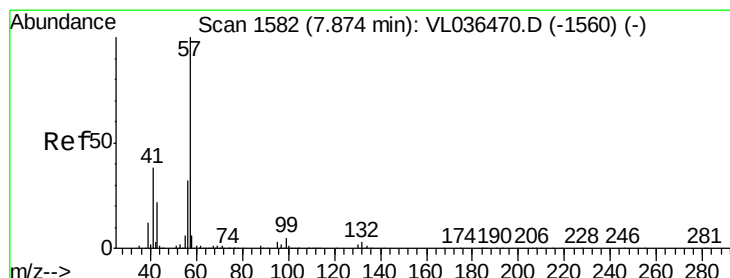
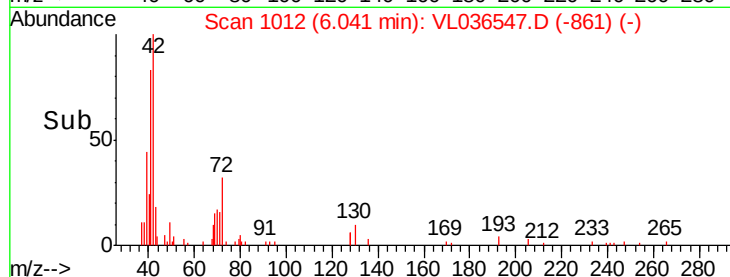
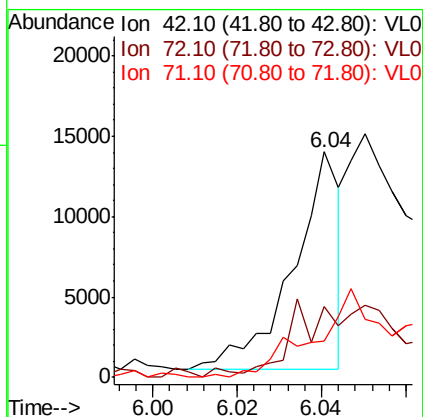
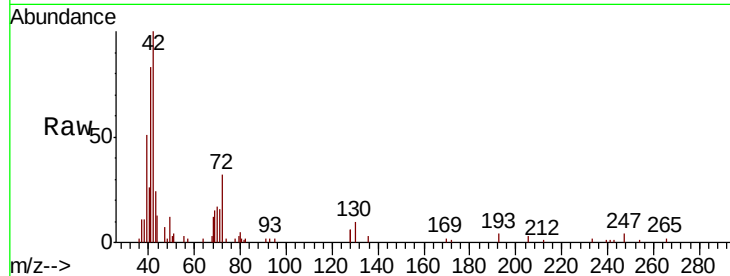
Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	42	Resp:	10599
Ion	Ratio	Lower	Upper
42	100		
72	106.4	27.6	41.4#
71	0.0	27.0	40.4#



#44

2,2,4-Trimethylpentane

Concen: 0.109 ppbv

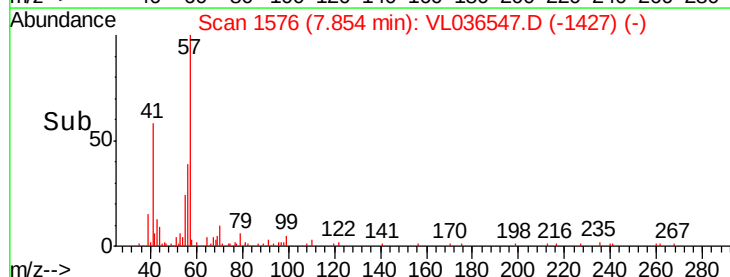
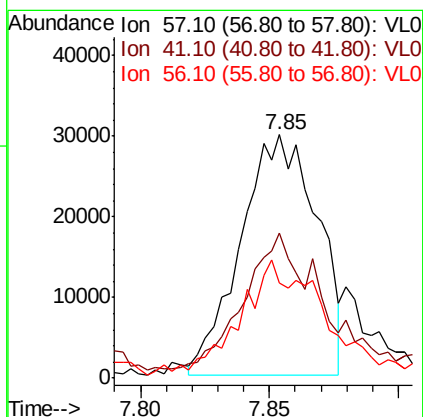
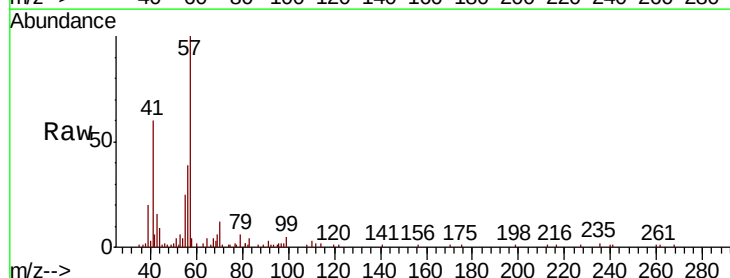
RT: 7.85 min Scan# 1576

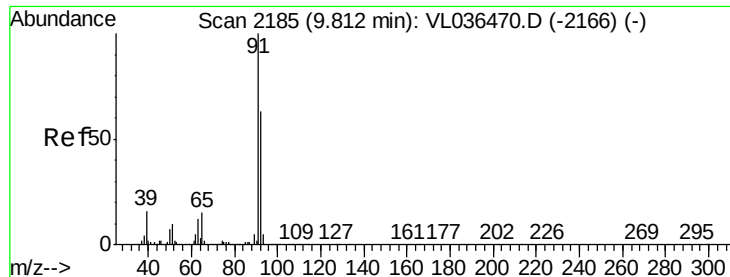
Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Tgt Ion:	57	Resp:	61790
Ion	Ratio	Lower	Upper
57	100		
41	70.4	28.8	43.2#
56	59.9	26.1	39.1#





#53

Toluene

Concen: 1.416 ppbv

RT: 9.79 min Scan# 2179

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

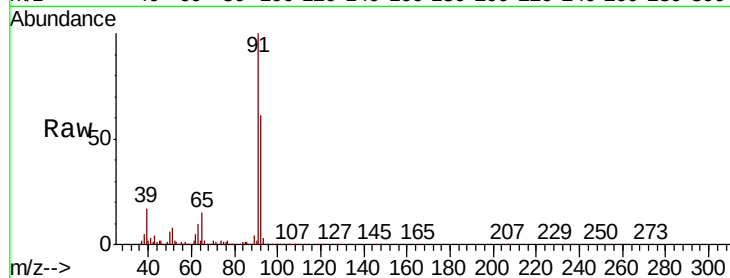
ClientSampled :

Tot Ion: 91 Resp: 487573

Ion Ratio Lower Upper

91 100

92 60.9 48.8 73.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.79

250000

200000

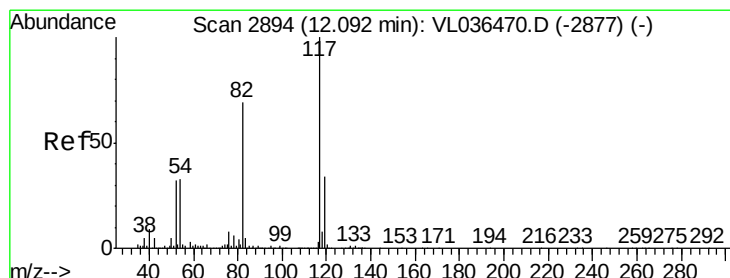
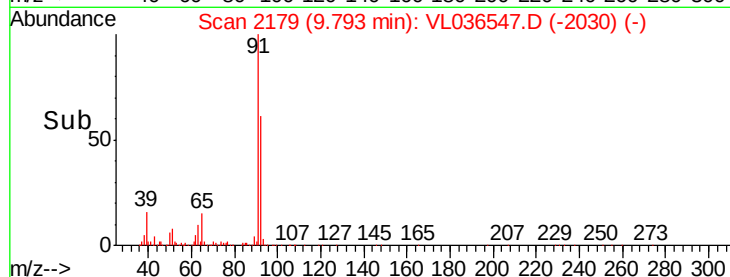
150000

100000

50000

0

Time--> 9.70 9.75 9.80 9.85



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.07 min Scan# 2888

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

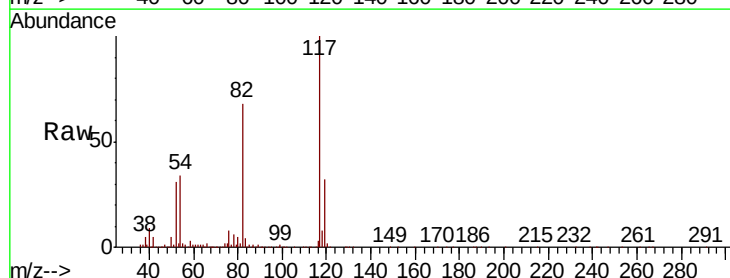
Tgt Ion: 117 Resp: 3097310

Ion Ratio Lower Upper

117 100

82 72.7 57.4 86.0

119 34.5 47.4 71.0#



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V

12.07

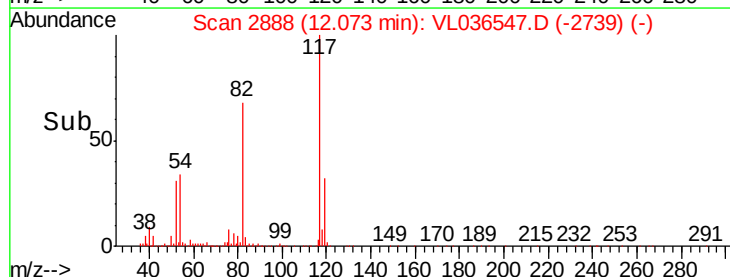
1500000

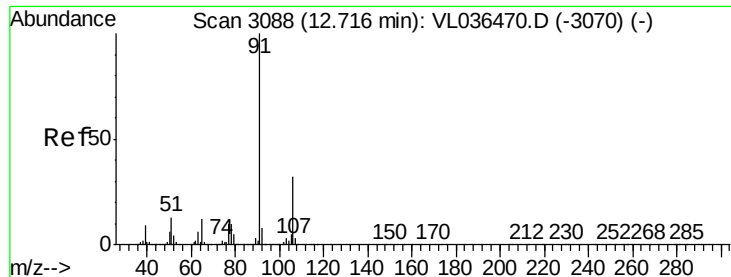
1000000

500000

0

Time--> 12.00 12.10





#58

Ethyl Benzene

Concen: 0.088 ppbv

RT: 12.69 min Scan# 3081

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

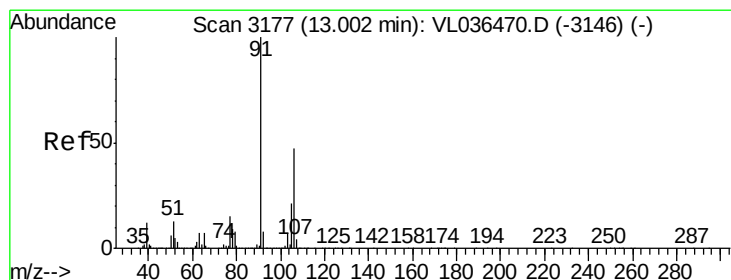
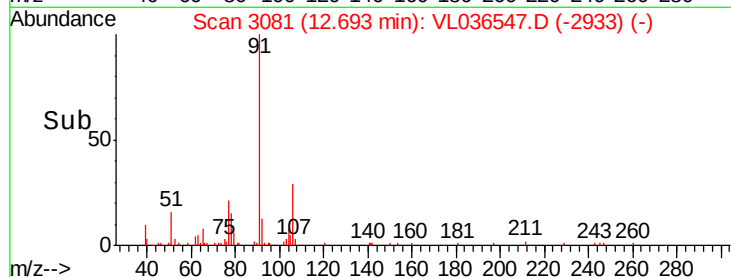
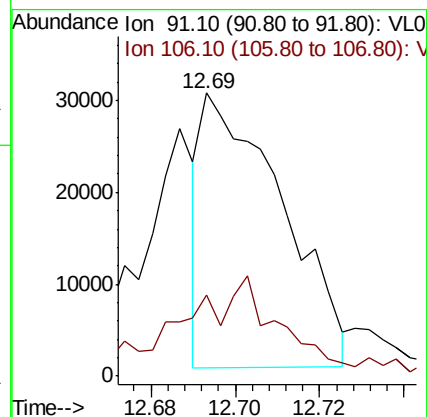
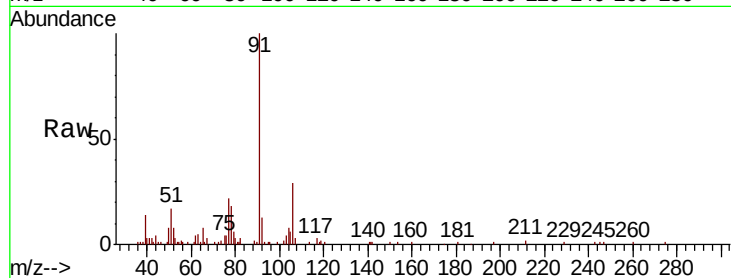
ClientSampleId :

Tot Ion: 91 Resp: 39520

Ion Ratio Lower Upper

91 100

106 28.4 25.3 37.9



#59

m/p-Xylene

Concen: 0.195 ppbv

RT: 12.98 min Scan# 3170

Delta R.T. -0.02 min

Lab File: VL036547.D

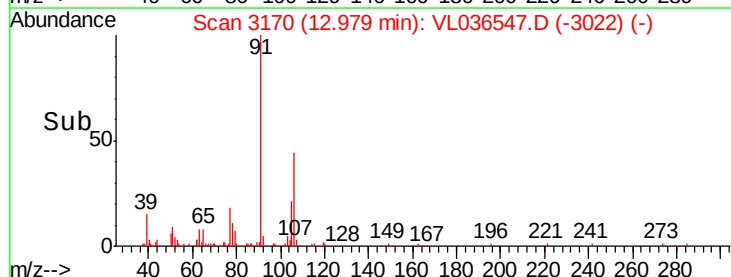
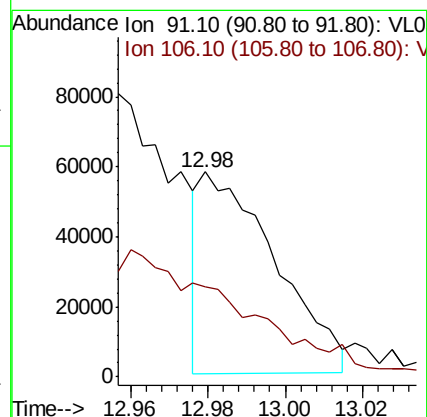
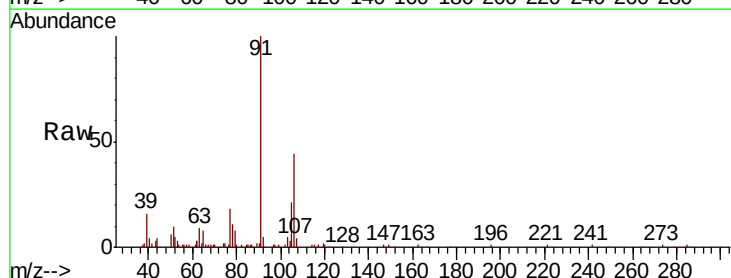
Acq: 29 Mar 2021 20:11

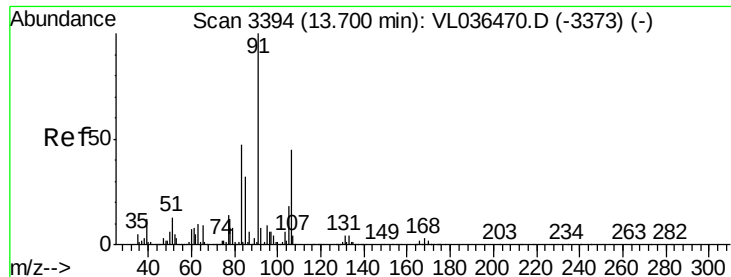
Tgt Ion: 91 Resp: 76486

Ion Ratio Lower Upper

91 100

106 0.0 35.3 52.9#

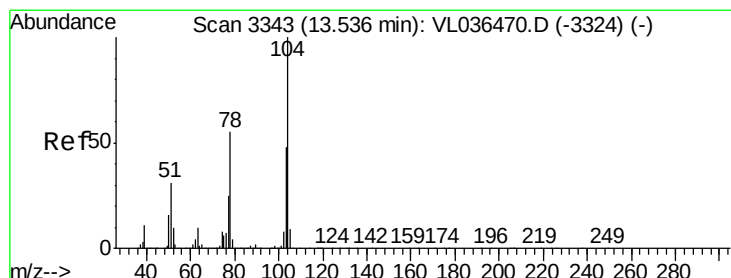
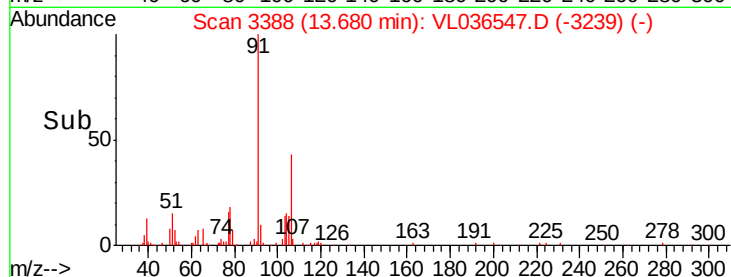
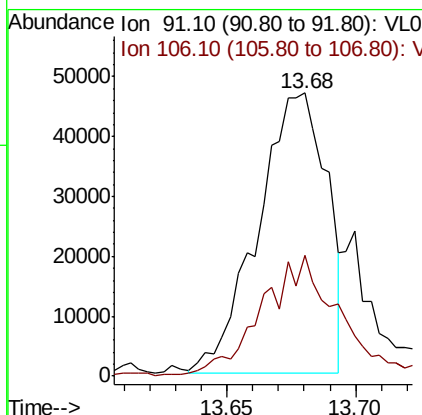
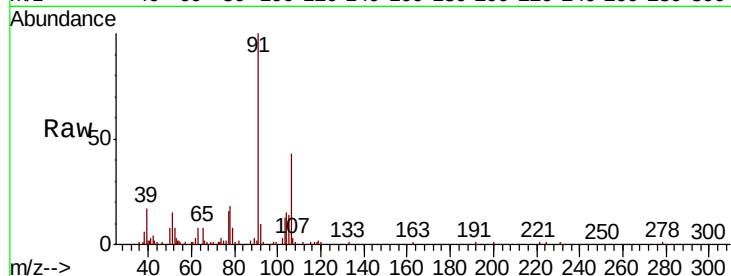




#60
o-Xylene
Concen: 0.230 ppbv
RT: 13.68 min Scan# 3388
Delta R.T. -0.02 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

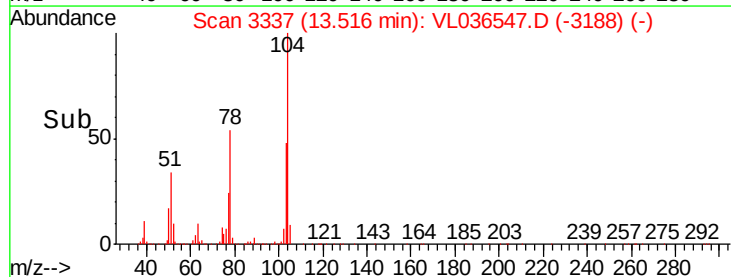
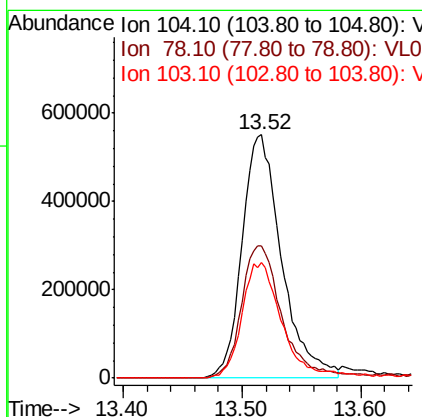
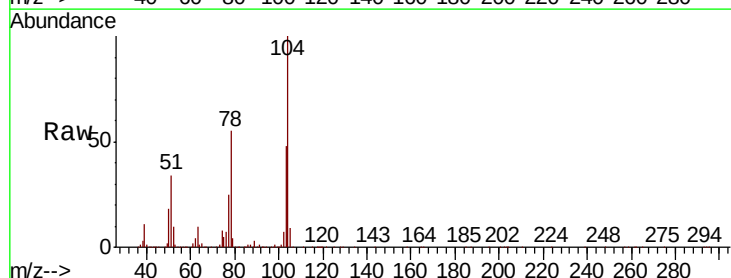
Instrument :
MSVOA_L
ClientSampled :

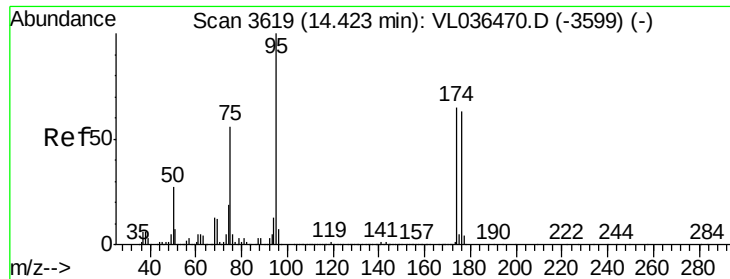
Tot Ion: 91 Resp: 87422
Ion Ratio Lower Upper
91 100
106 51.3 22.3 66.9



#61
Styrene
Concen: 6.639 ppbv
RT: 13.52 min Scan# 3337
Delta R.T. -0.02 min
Lab File: VL036547.D
Acq: 29 Mar 2021 20:11

Tgt Ion: 104 Resp: 1269284
Ion Ratio Lower Upper
104 100
78 57.5 43.8 65.8
103 49.1 38.3 57.5





#68

1-Bromo-4-Fluorobenzene

Concen: 10.518 ppbv

RT: 14.40 min Scan# 3612

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Instrument :

MSVOA_L

ClientSampled :

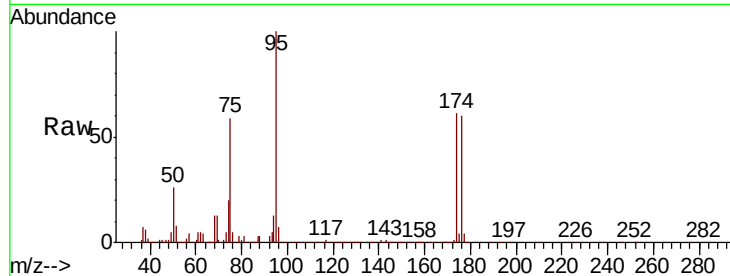
Tot Ion: 95 Resp: 2596365

Ion Ratio Lower Upper

95 100

174 65.6 51.0 76.6

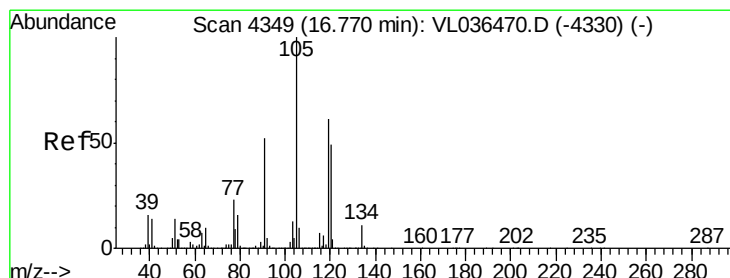
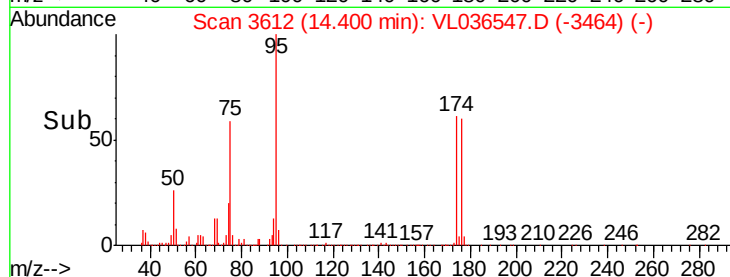
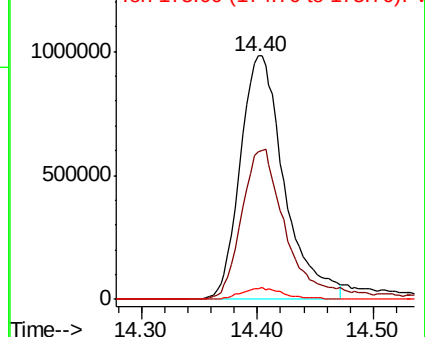
175 4.9 3.9 5.9



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



#74

1,2,4-Trimethylbenzene

Concen: 0.058 ppbv

RT: 16.75 min Scan# 4344

Delta R.T. -0.02 min

Lab File: VL036547.D

Acq: 29 Mar 2021 20:11

Tgt Ion: 105 Resp: 24319

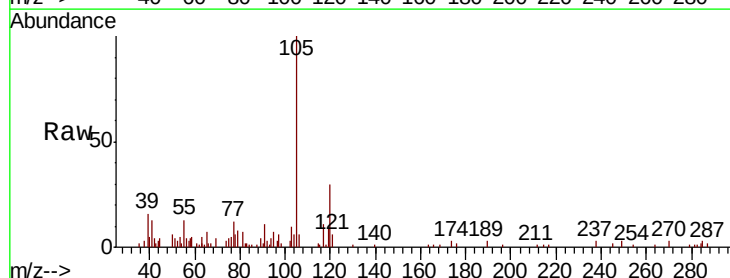
Ion Ratio Lower Upper

105 100

120 27.9 39.2 58.8#

91 10.2 42.6 64.0#

77 1.6 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

