

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032921\
 Data File : VL036543.D
 Acq On : 29 Mar 2021 17:29
 Operator : SY/AP
 Sample : M1760-07
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Mar 30 06:41:21 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	5.66	49	1498234	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.17	114	3465086	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.08	117	3127745	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	2596240	10.41	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.10%

Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.04	85	55072	0.225 ppbv	91
3) Chlorodifluoromethane	2.96	51	165358	0.591 ppbv #	78
4) Chloromethane	3.13	50	105769	1.070 ppbv	99
9) Propene	3.01	41	50539	0.566 ppbv #	64
10) Heptane	8.11	43	32054	0.141 ppbv	86
11) Trichlorofluoromethane	3.94	101	30601	0.123 ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.47	101	3576	0.022 ppbv #	1
13) Ethanol	3.61	45	1817253	171.005 ppbv	94
15) Acetone	3.84	43	1511968	10.253 ppbv	98
16) 1,3-Butadiene	3.30	39	6547	0.064 ppbv #	13
17) tert-Butyl alcohol	4.30	59	12533	0.098 ppbv #	72
19) Isopropyl Alcohol	3.97	45	921681	11.362 ppbv	98
20) Methylene Chloride	4.34	84	328716	4.761 ppbv	99
21) Allyl Chloride	4.29	41	7539	0.064 ppbv	92
23) Vinyl Acetate	5.06	43	74623	0.296 ppbv #	84
25) Ethyl Acetate	5.68	43	822752	2.347 ppbv #	80
26) Hexane	5.68	57	1067956	6.564 ppbv #	48
34) 2-Butanone	5.24	43	98350	0.581 ppbv #	77
35) Carbon Tetrachloride	7.01	117	5924	0.022 ppbv #	78
36) Benzene	6.88	78	85430	0.267 ppbv	96
39) 1,2-Dichloropropane	7.17	63	950429	7.332 ppbv #	23
41) Tetrahydrofuran	5.68	42	443367	5.685 ppbv #	53
44) 2,2,4-Trimethylpentane	7.86	57	22220	0.040 ppbv #	1
50) 4-Methyl-2-Pentanone	8.74	43	12582	0.051 ppbv #	40
53) Toluene	9.80	91	543243	1.596 ppbv	98
58) Ethyl Benzene	12.71	91	11796	0.026 ppbv	97
59) m/p-Xylene	12.99	91	20306	0.051 ppbv #	32
60) o-Xylene	13.68	91	28028	0.073 ppbv #	31
74) 1,2,4-Trimethylbenzene	16.75	105	15120	0.036 ppbv #	60

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 893

Delta R.T. -0.01 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

ClientSampleId :

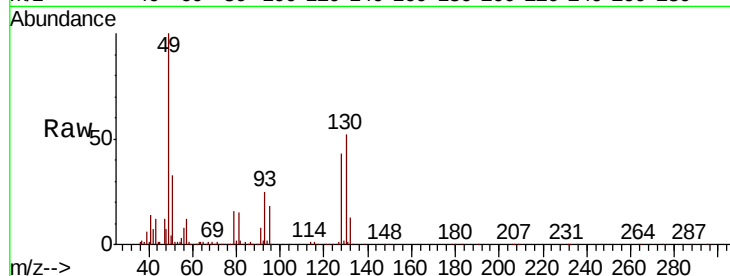
Tot Ion: 49 Resp: 1498234

Ion Ratio Lower Upper

49 100

128 44.8 23.5 70.6

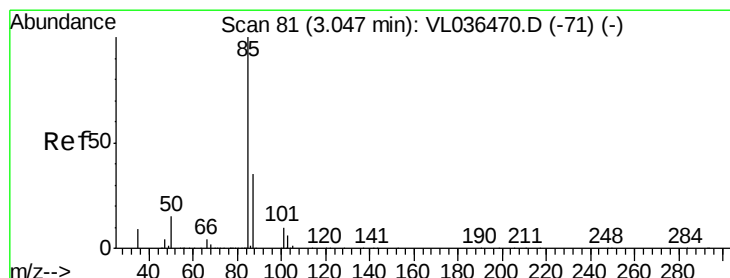
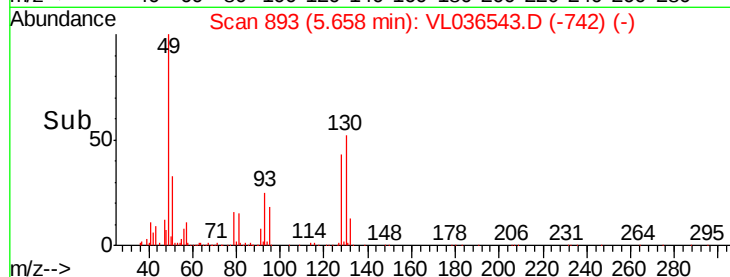
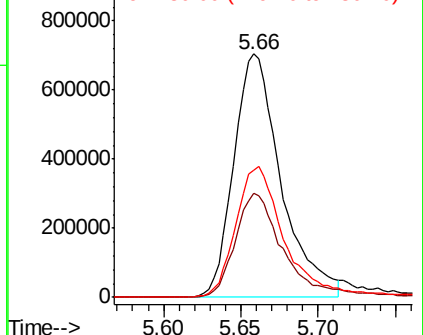
130 57.1 29.1 87.4



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: 0.225 ppbv

RT: 3.04 min Scan# 79

Delta R.T. -0.01 min

Lab File: VL036543.D

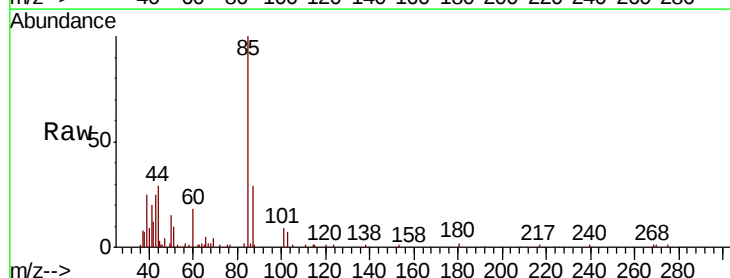
Acq: 29 Mar 2021 17:29

Tgt Ion: 85 Resp: 55072

Ion Ratio Lower Upper

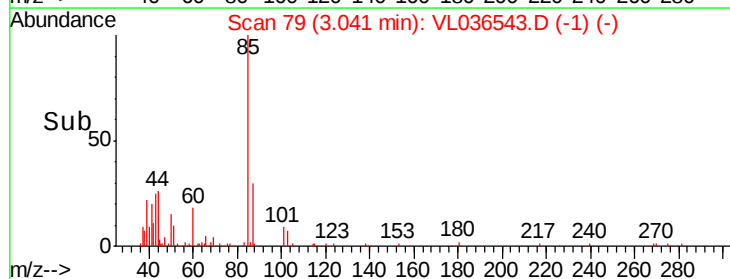
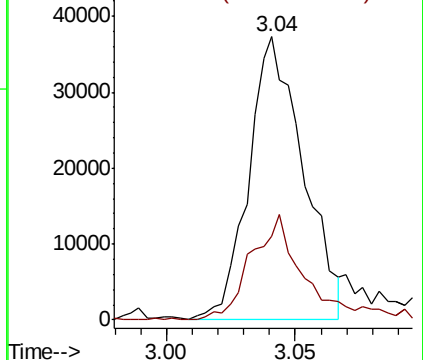
85 100

87 29.4 27.8 41.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

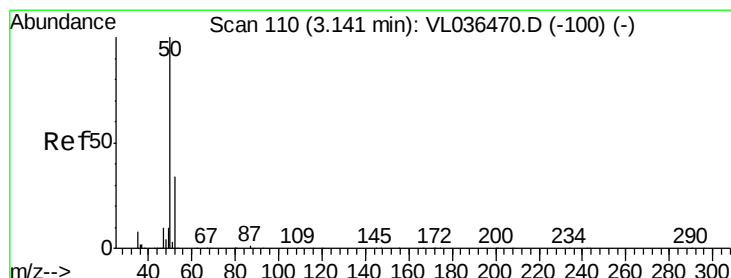
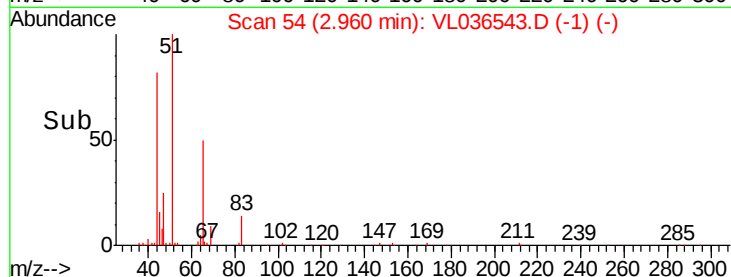
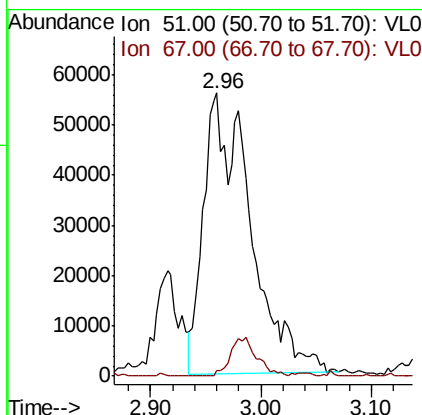
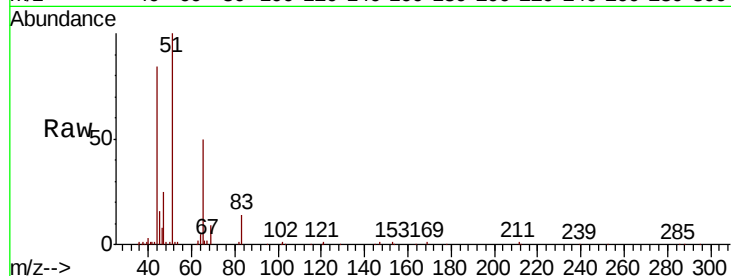




#3
 Chlorodifluoromethane
 Concen: 0.591 ppbv
 RT: 2.96 min Scan# 54
 Delta R.T. -0.03 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

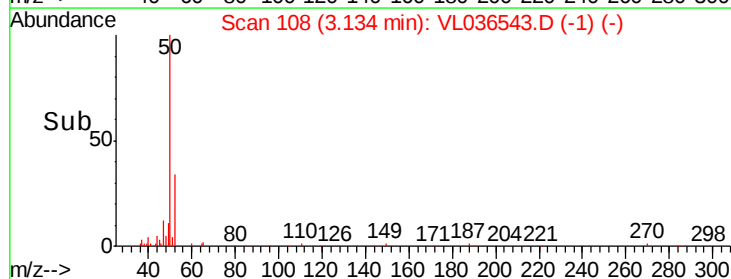
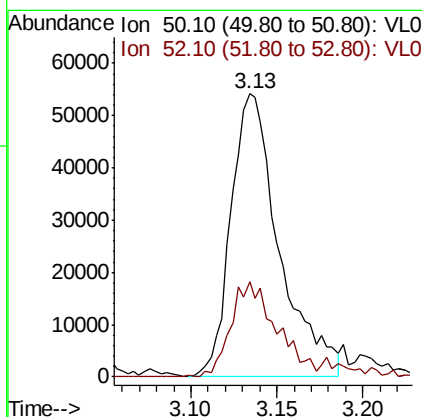
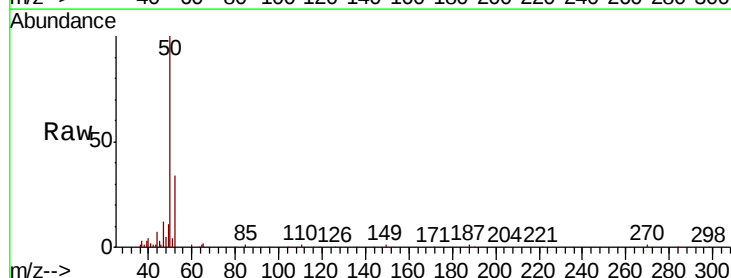
Instrument :
 MSVOA_L
 ClientSampleId :

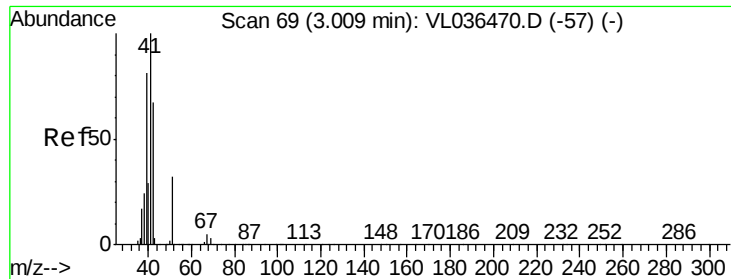
Tot Ion: 51 Resp: 165358
 Ion Ratio Lower Upper
 51 100
 67 8.5 14.7 22.1#



#4
 Chloromethane
 Concen: 1.070 ppbv
 RT: 3.13 min Scan# 108
 Delta R.T. -0.01 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Tgt Ion: 50 Resp: 105769
 Ion Ratio Lower Upper
 50 100
 52 33.3 27.0 40.6





#9

Propene

Concen: 0.566 ppbv

RT: 3.01 min Scan# 69

Delta R.T. -0.00 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

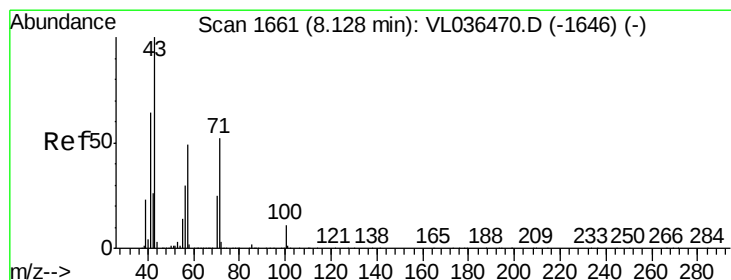
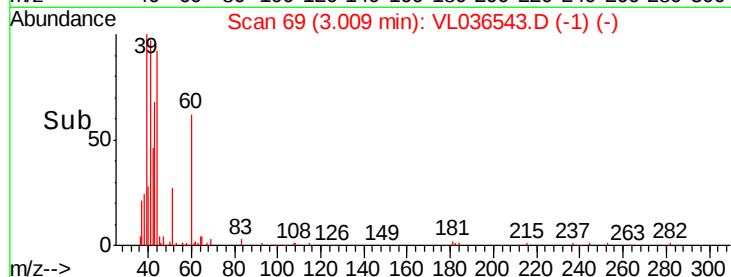
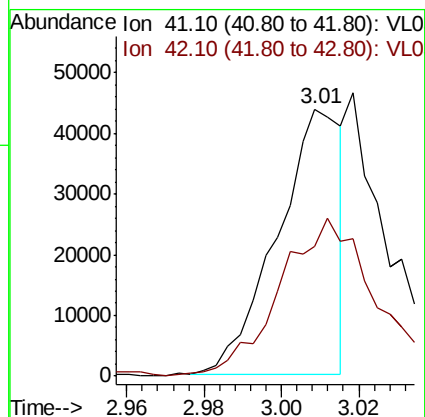
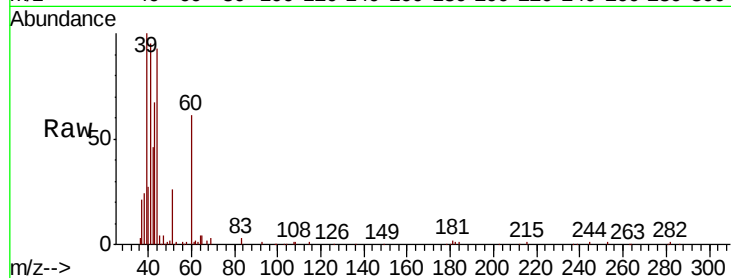
ClientSampleId :

Tot Ion: 41 Resp: 50539

Ion Ratio Lower Upper

41 100

42 100.9 57.0 85.4#



#10

Heptane

Concen: 0.141 ppbv

RT: 8.11 min Scan# 1656

Delta R.T. -0.02 min

Lab File: VL036543.D

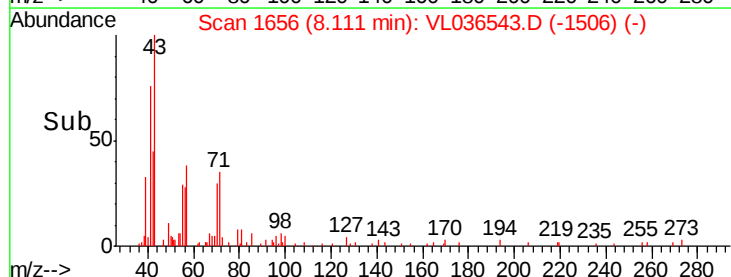
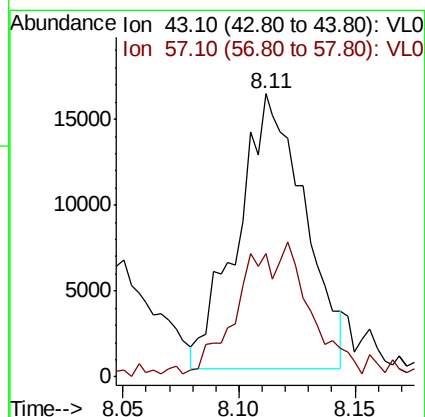
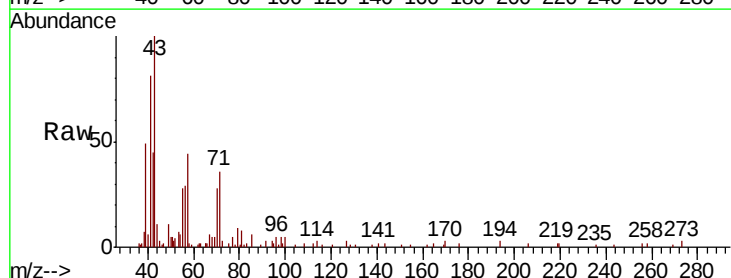
Acq: 29 Mar 2021 17:29

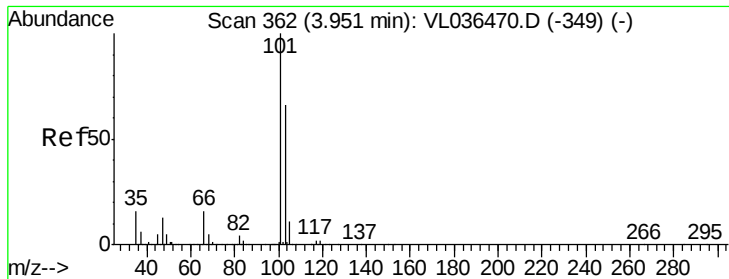
Tgt Ion: 43 Resp: 32054

Ion Ratio Lower Upper

43 100

57 58.1 39.0 58.6





#11

Trichlorofluoromethane

Concen: 0.123 ppbv

RT: 3.94 min Scan# 359

Delta R.T. -0.01 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

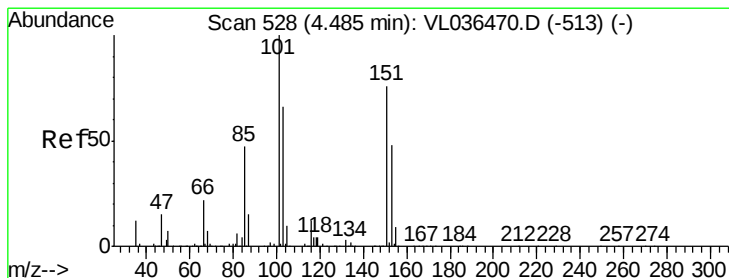
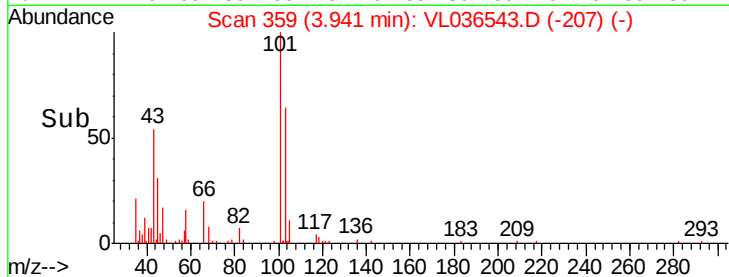
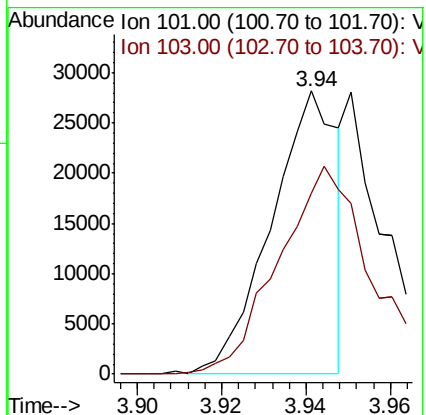
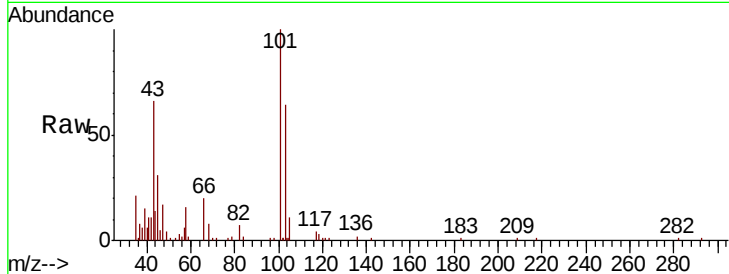
ClientSampleId :

Tot Ion:101 Resp: 30601

Ion Ratio Lower Upper

101 100

103 63.1 52.5 78.7



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.022 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.02 min

Lab File: VL036543.D

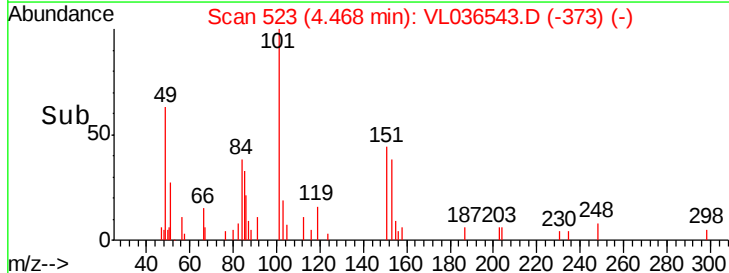
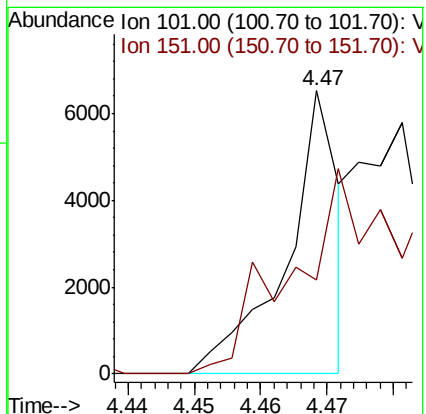
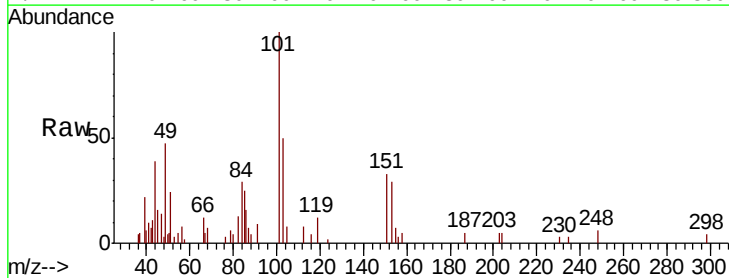
Acq: 29 Mar 2021 17:29

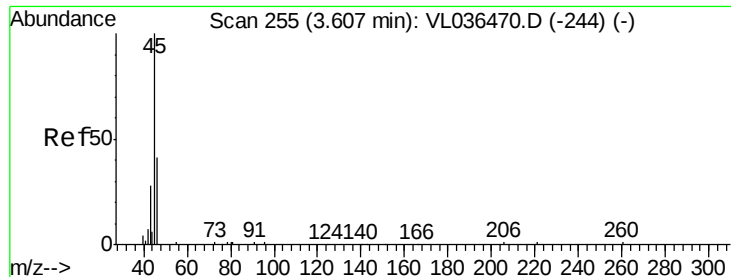
Tgt Ion:101 Resp: 3576

Ion Ratio Lower Upper

101 100

151 228.7 60.9 91.3#

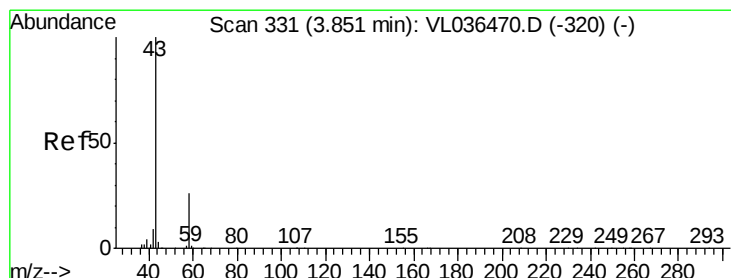
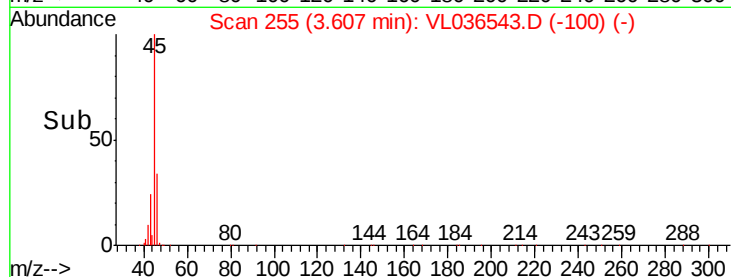
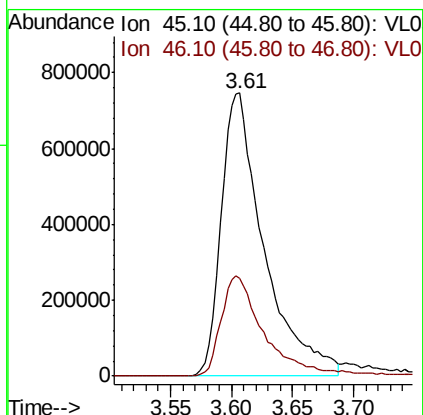
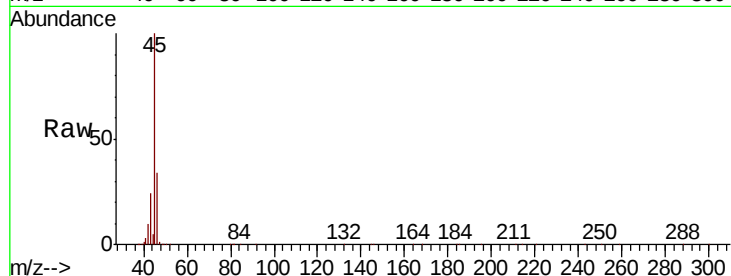




#13
Ethanol
Concen: 171.005 ppbv
RT: 3.61 min Scan# 255
Delta R.T. -0.00 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

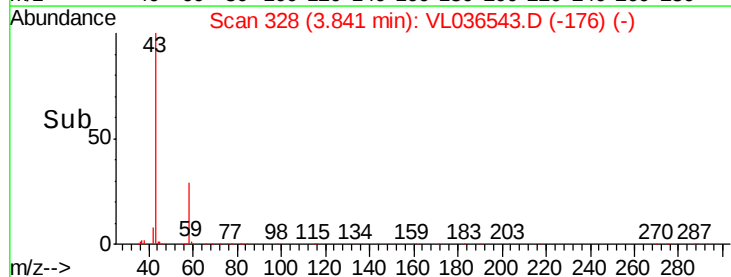
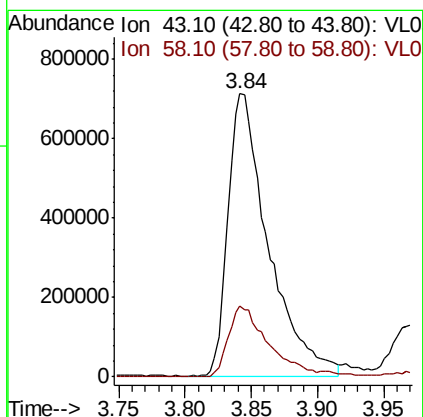
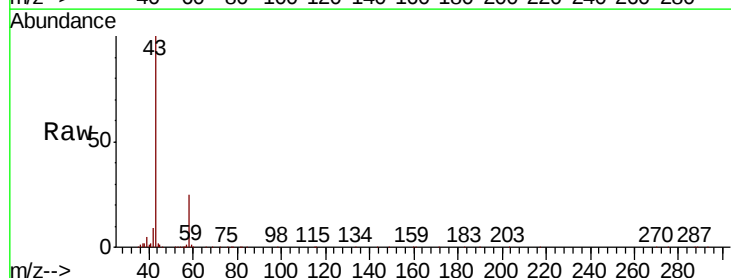
Instrument :
MSVOA_L
ClientSampleId :

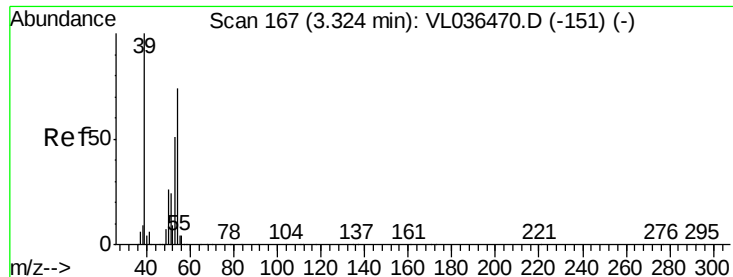
Tot Ion: 45 Resp: 1817253
Ion Ratio Lower Upper
45 100
46 37.5 16.6 66.2



#15
Acetone
Concen: 10.253 ppbv
RT: 3.84 min Scan# 328
Delta R.T. -0.01 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

Tgt Ion: 43 Resp: 1511968
Ion Ratio Lower Upper
43 100
58 25.7 21.2 31.8





#16

1,3-Butadiene

Concen: 0.064 ppbv

RT: 3.30 min Scan# 161

Delta R.T. -0.02 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

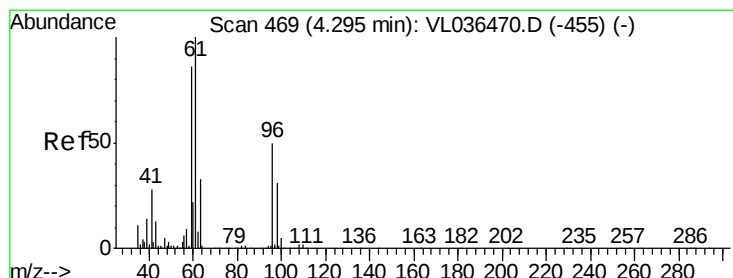
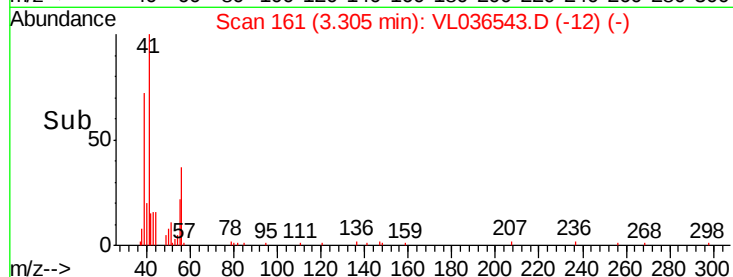
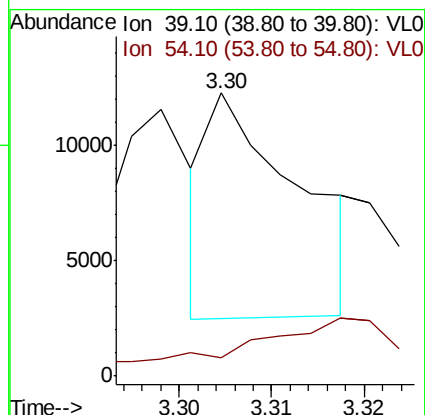
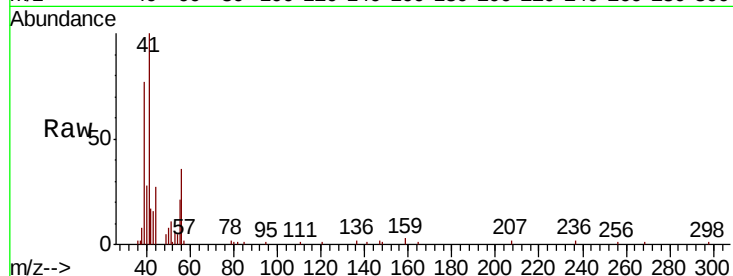
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 39 Resp: 6547

Ion Ratio Lower Upper

39 100

54 0.0 58.8 88.2#



#17

tert-Butyl alcohol

Concen: 0.098 ppbv

RT: 4.30 min Scan# 470

Delta R.T. 0.00 min

Lab File: VL036543.D

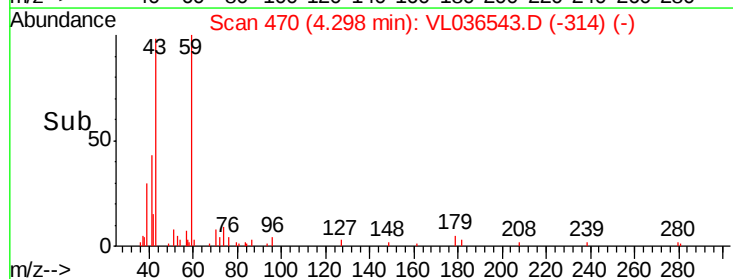
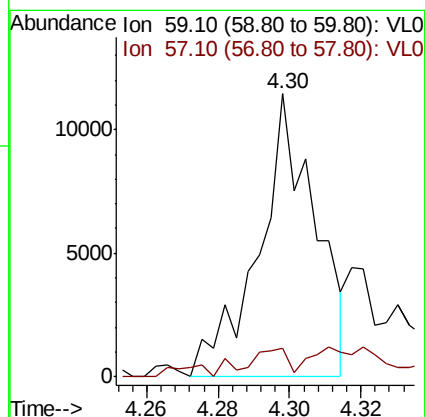
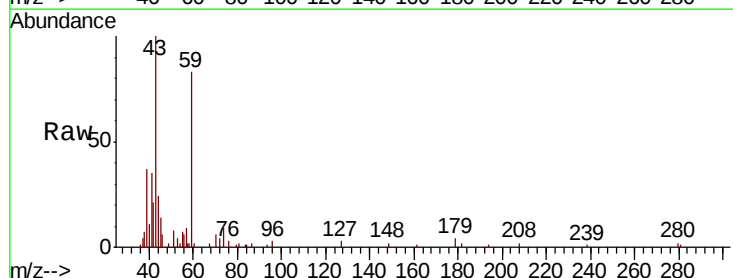
Acq: 29 Mar 2021 17:29

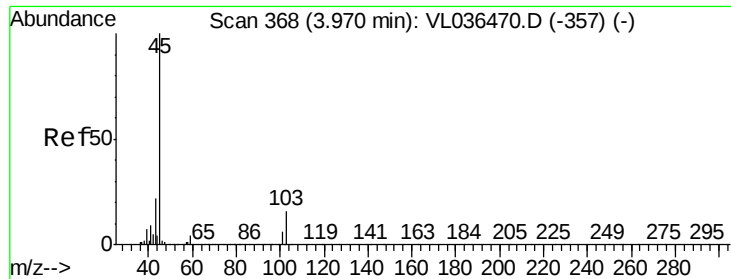
Tgt Ion: 59 Resp: 12533

Ion Ratio Lower Upper

59 100

57 0.0 8.6 12.8#



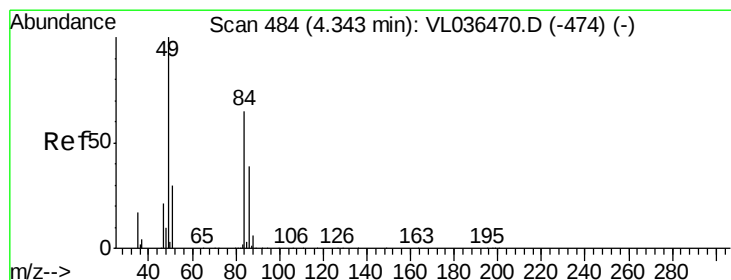
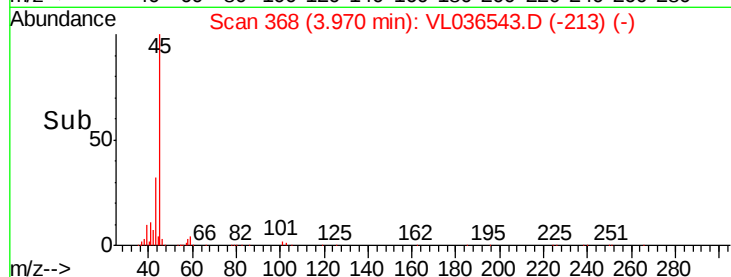
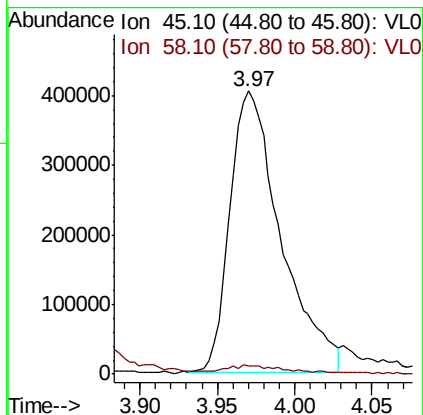
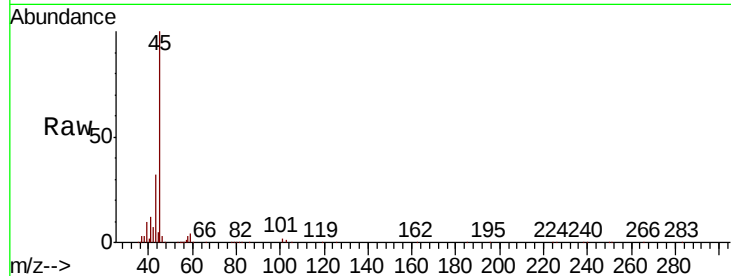


#19

Isopropyl Alcohol
 Concen: 11.362 ppbv
 RT: 3.97 min Scan# 368
 Delta R.T. -0.00 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Instrument :
 MSVOA_L
 ClientSampleId :

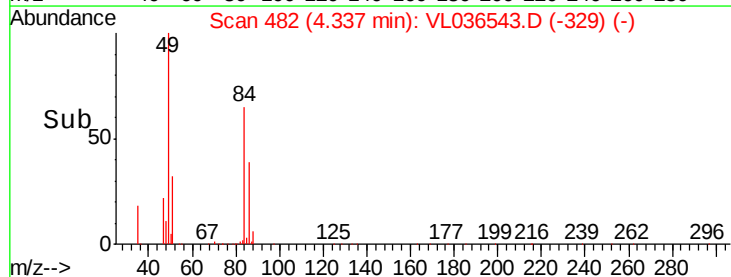
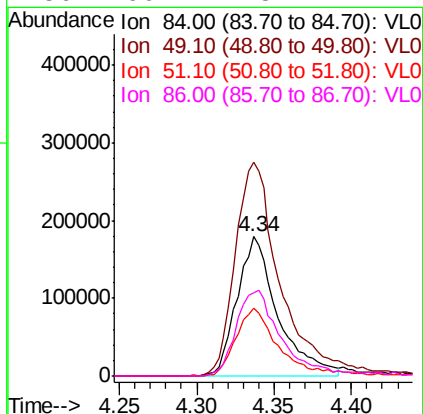
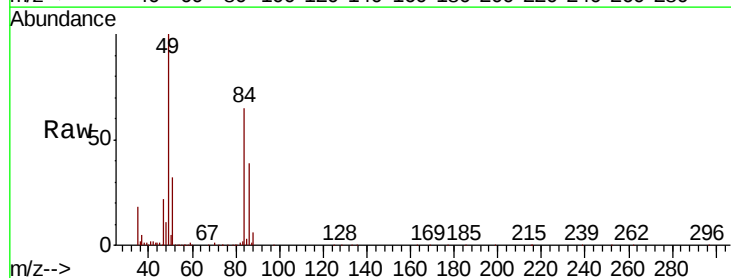
Tot Ion: 45 Resp: 921681
 Ion Ratio Lower Upper
 45 100
 58 4.1 2.9 4.3

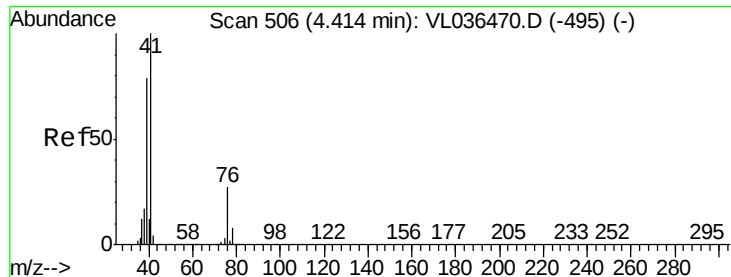


#20

Methylene Chloride
 Concen: 4.761 ppbv
 RT: 4.34 min Scan# 482
 Delta R.T. -0.01 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Tgt Ion: 84 Resp: 328716
 Ion Ratio Lower Upper
 84 100
 49 153.5 122.9 184.3
 51 49.1 36.9 55.3
 86 60.1 48.2 72.4

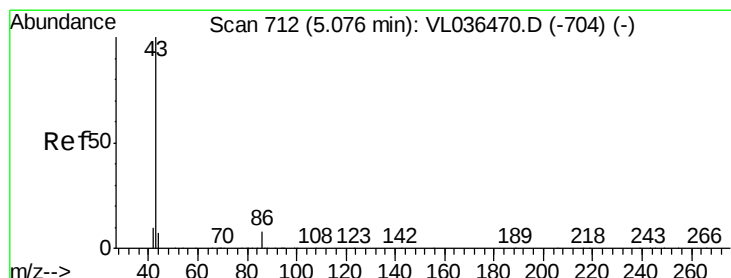
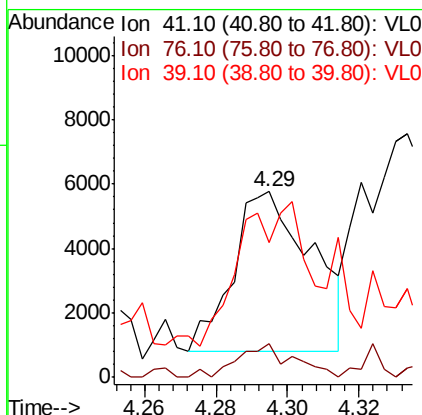
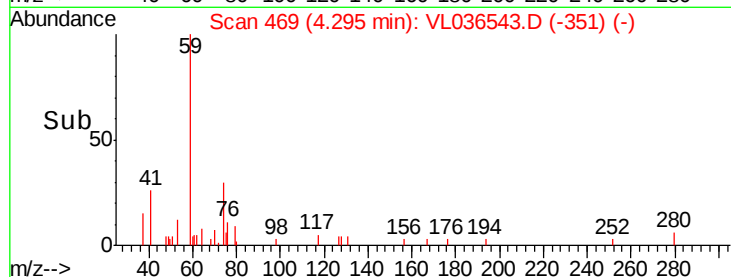
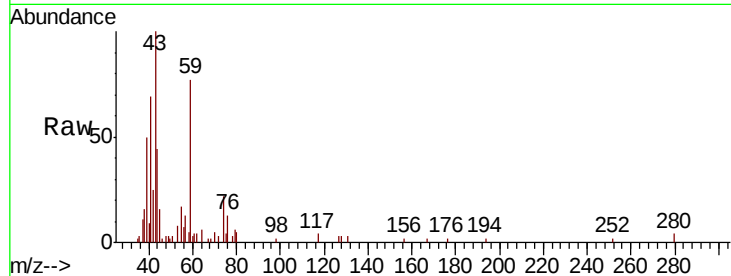




#21
Allvl Chloride
Concen: 0.064 ppbv
RT: 4.29 min Scan# 469
Delta R.T. -0.12 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

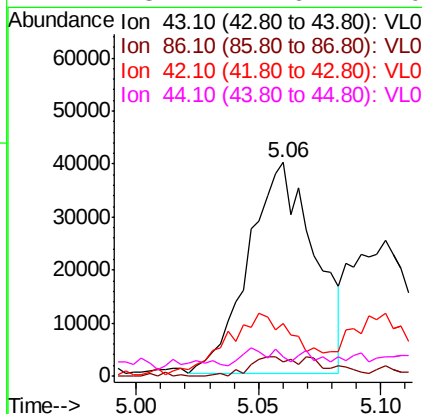
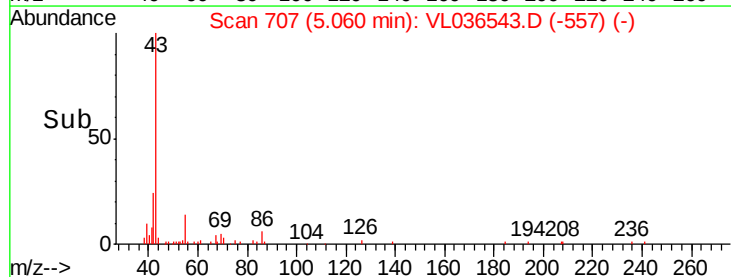
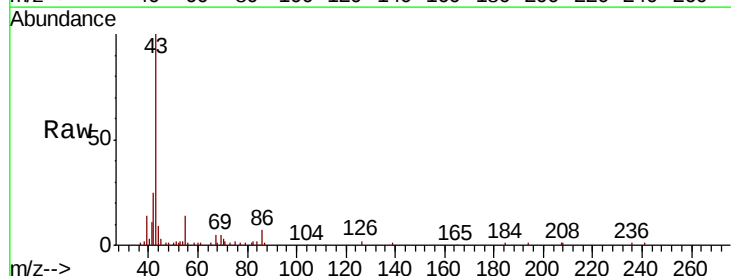
Instrument :
MSVOA_L
ClientSampleId :

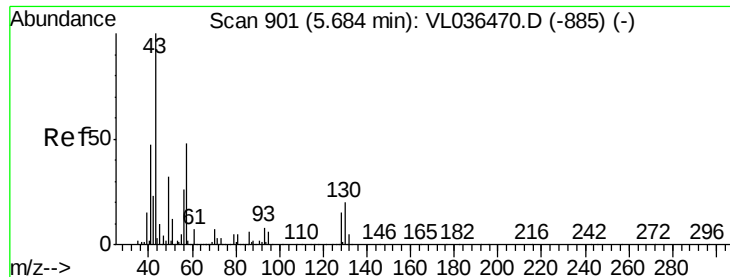
Tot Ion: 41 Resp: 7539
Ion Ratio Lower Upper
41 100
76 23.9 22.9 34.3
39 90.7 67.3 100.9



#23
Vinyl Acetate
Concen: 0.296 ppbv
RT: 5.06 min Scan# 707
Delta R.T. -0.02 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

Tgt Ion: 43 Resp: 74623
Ion Ratio Lower Upper
43 100
86 6.7 5.4 8.0
42 22.2 8.5 12.7#
44 3.1 4.6 7.0#

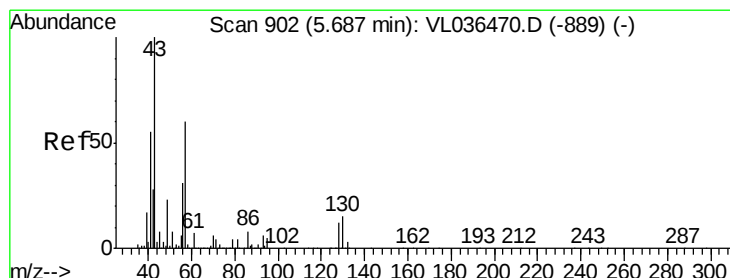
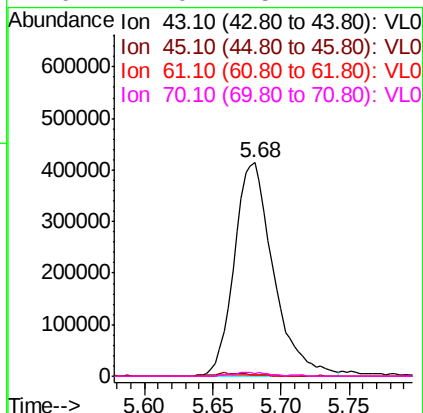
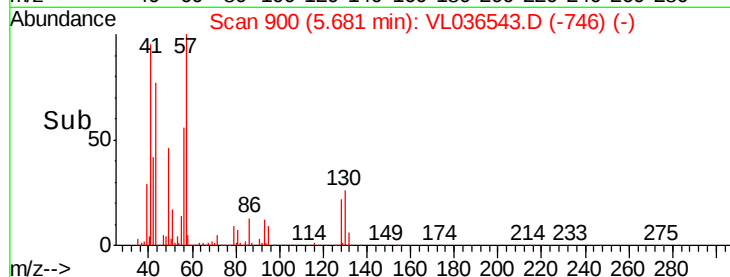
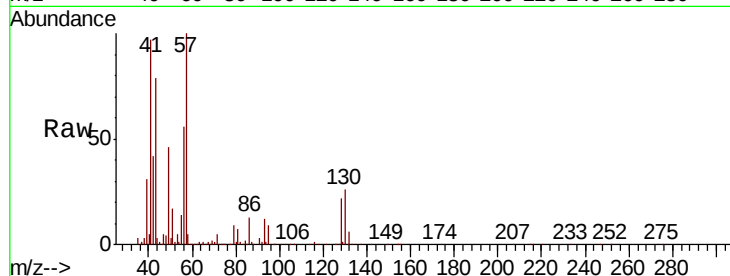




#25
Ethyl Acetate
Concen: 2.347 ppbv
RT: 5.68 min Scan# 900
Delta R.T. -0.00 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

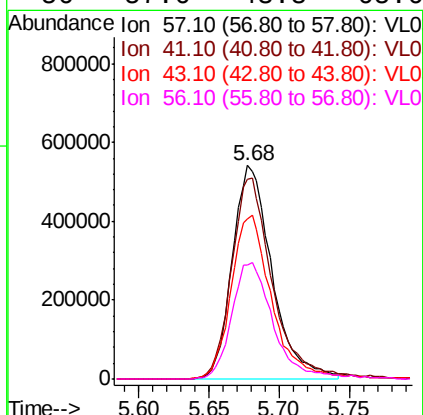
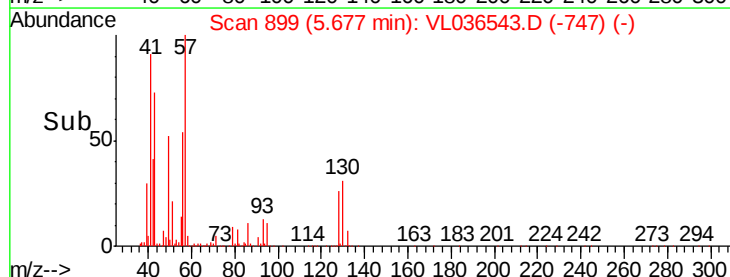
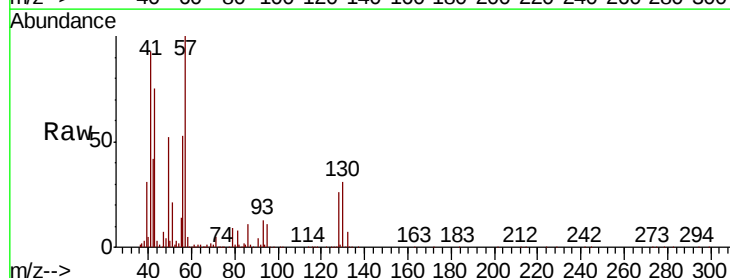
Instrument :
MSVOA_L
ClientSampleId :

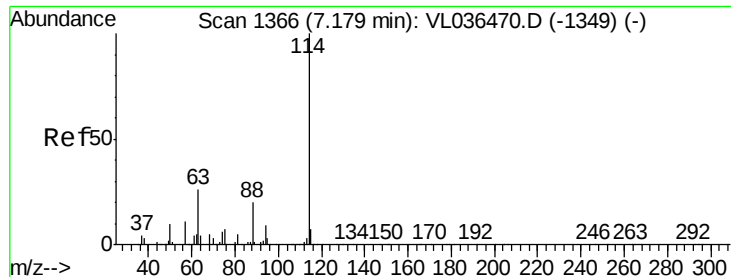
Tot Ion:	43	Resp:	822752
Ion	Ratio	Lower	Upper
43	100		
45	1.8	7.9	11.9#
61	0.8	7.4	11.2#
70	2.0	5.1	7.7#



#26
Hexane
Concen: 6.564 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.01 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

Tgt Ion:	57	Resp:	1067956
Ion	Ratio	Lower	Upper
57	100		
41	98.7	77.2	115.8
43	79.3	173.8	260.6#
56	57.6	43.8	65.6

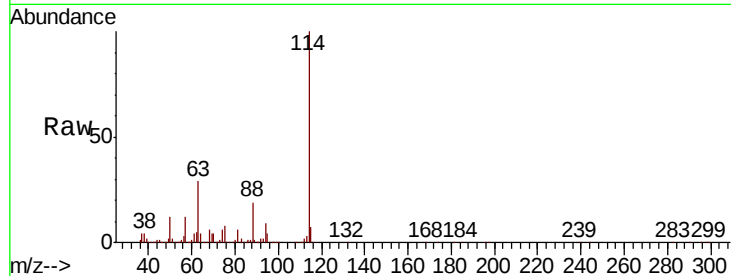




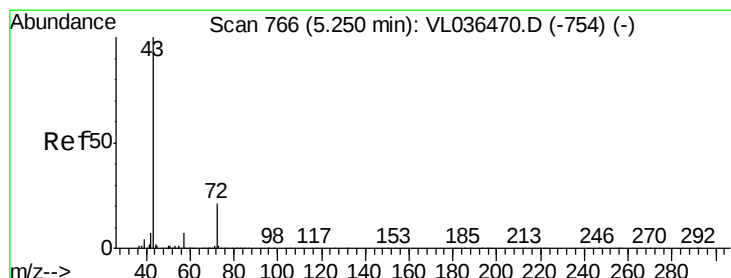
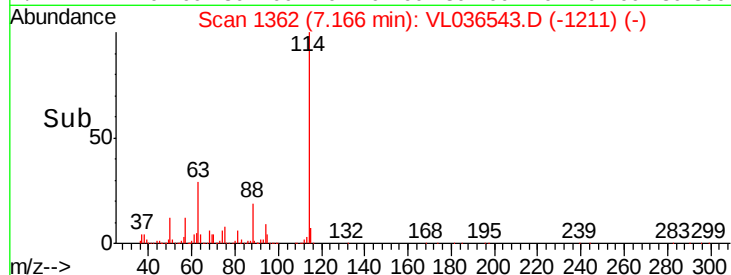
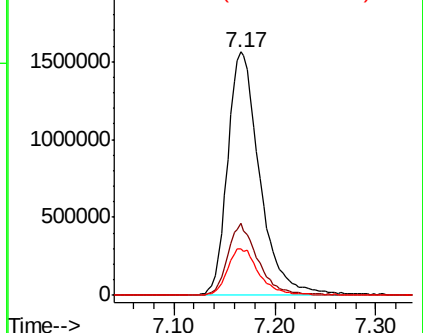
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.01 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:114 Resp: 3465086
 Ion Ratio Lower Upper
 114 100
 63 28.3 22.4 33.6
 88 19.2 15.4 23.0

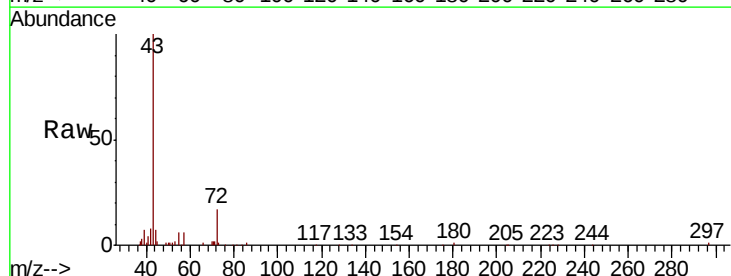


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

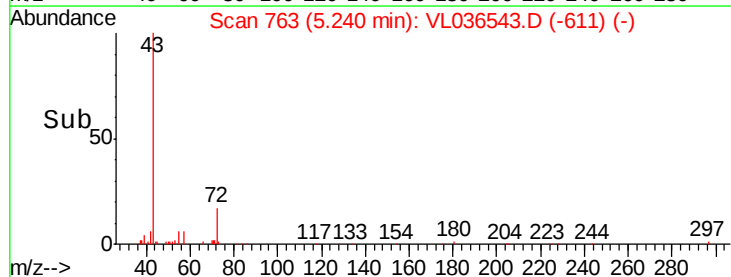
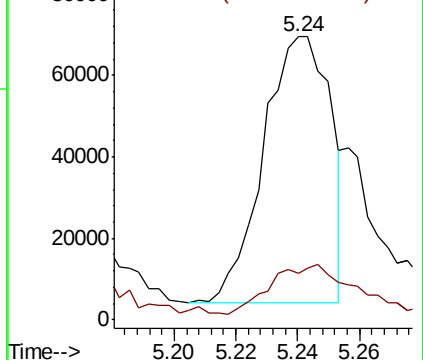


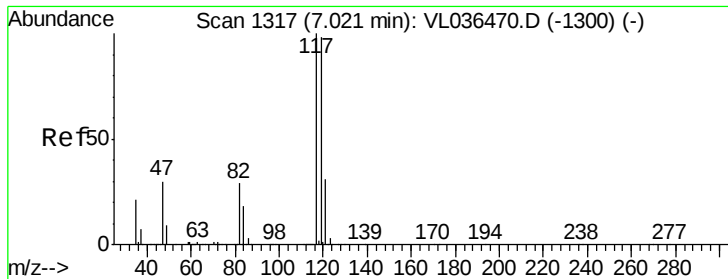
#34
 2-Butanone
 Concen: 0.581 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. -0.01 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Tgt Ion: 43 Resp: 98350
 Ion Ratio Lower Upper
 43 100
 72 32.0 17.0 25.6#



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





#35

Carbon Tetrachloride

Concen: 0.022 ppbv

RT: 7.01 min Scan# 1313

Delta R.T. -0.01 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

ClientSampleId :

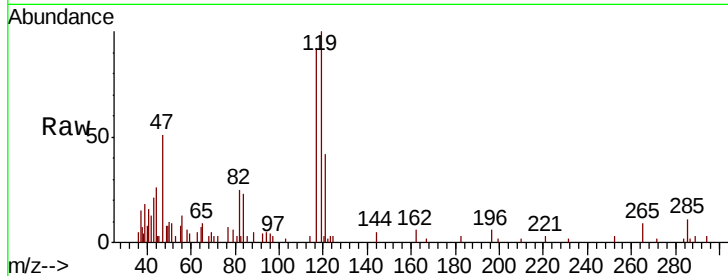
Tot Ion:117 Resp: 5924

Ion Ratio Lower Upper

117 100

119 85.0 78.2 117.2

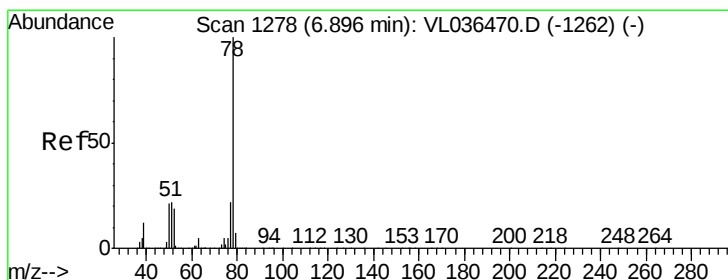
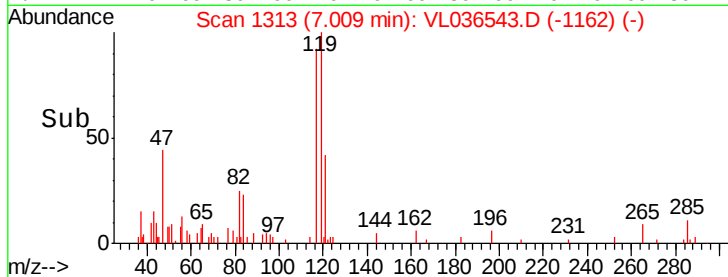
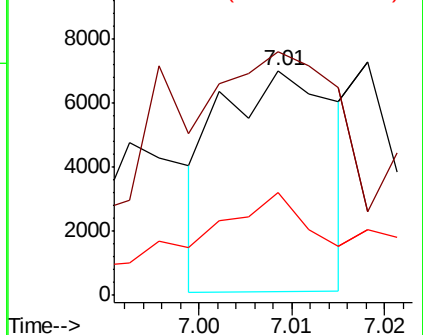
121 58.1 24.5 36.7#



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.267 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.02 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

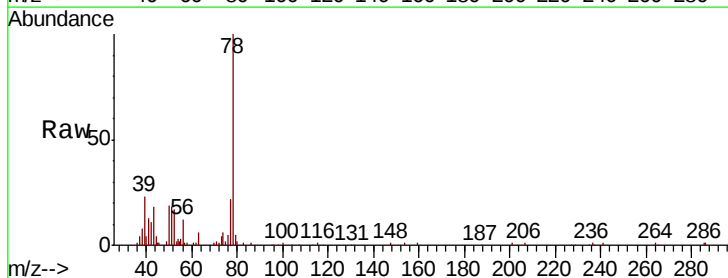
Tgt Ion: 78 Resp: 85430

Ion Ratio Lower Upper

78 100

77 22.2 18.0 27.0

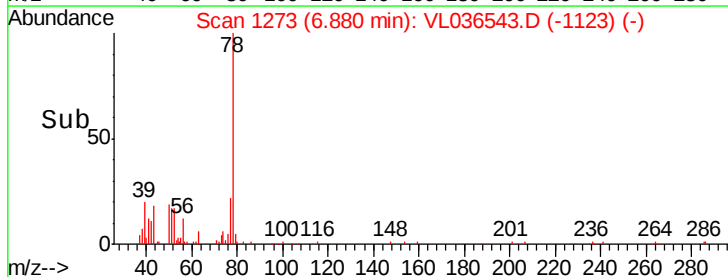
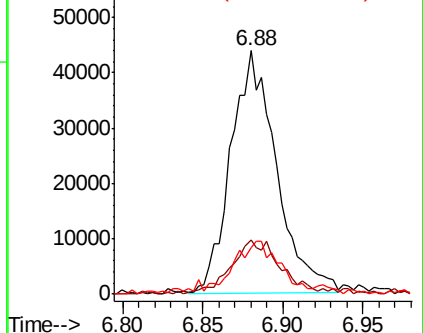
50 17.3 16.5 24.7

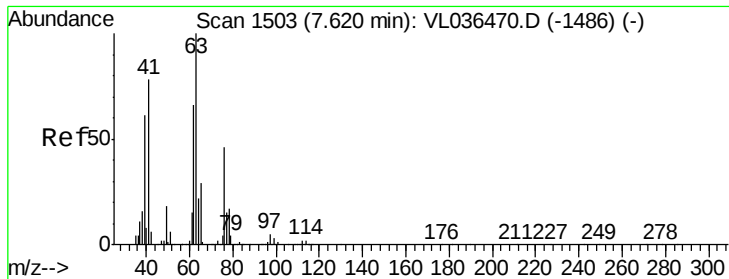


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

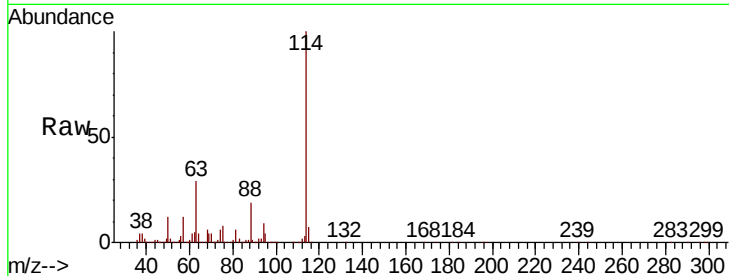




#39
 1,2-Dichloropropane
 Concen: 7.332 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.45 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Instrument :
 MSVOA_L
 ClientSampled :

Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	62.4	93.6#
62	16.7	52.8	79.2#

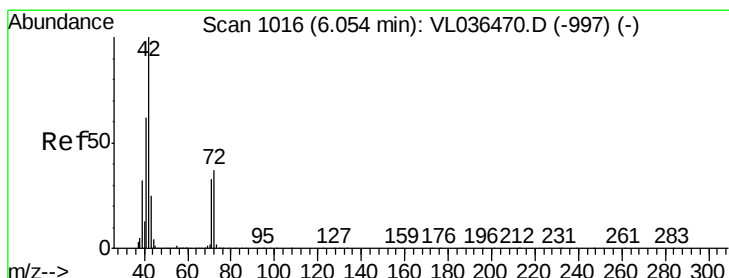
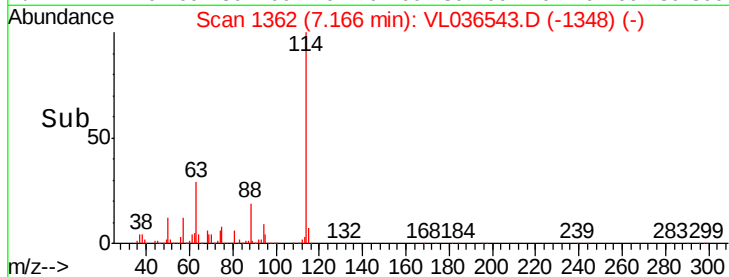
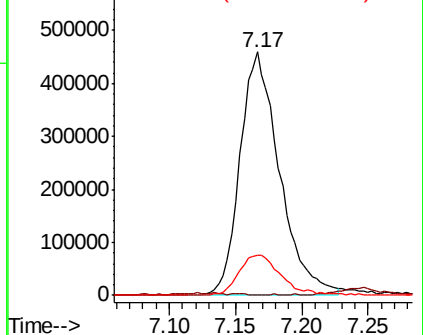


Abundance

Ion 63.10 (62.80 to 63.80): VL0

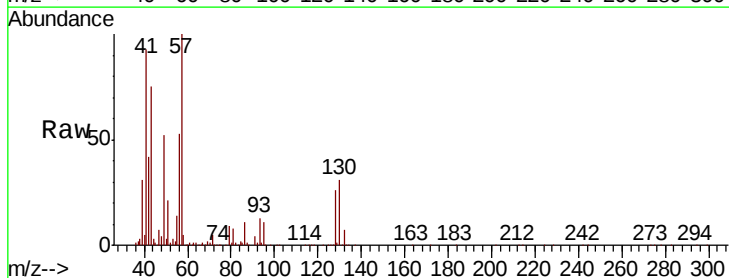
Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41
 Tetrahydrofuran
 Concen: 5.685 ppbv
 RT: 5.68 min Scan# 899
 Delta R.T. -0.38 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Tgt Ion	Ratio	Lower	Upper
42	100		
72	1.1	27.6	41.4#
71	12.8	27.0	40.4#

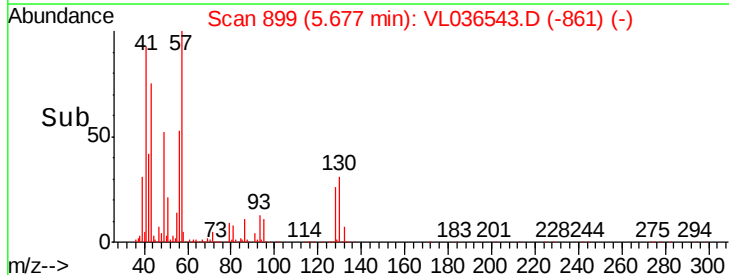
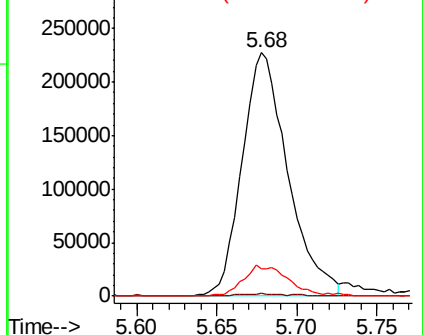


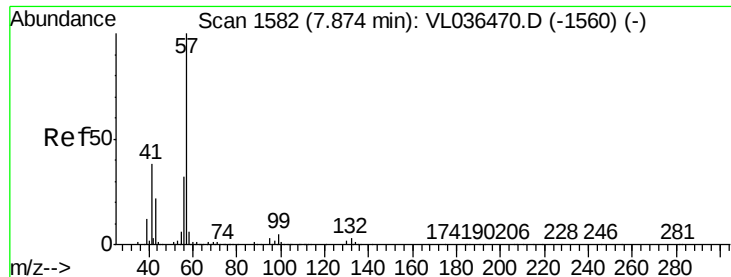
Abundance

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

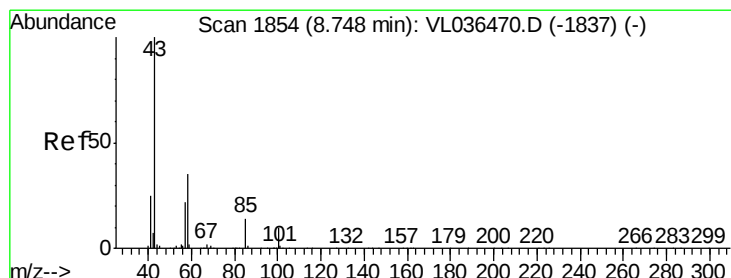
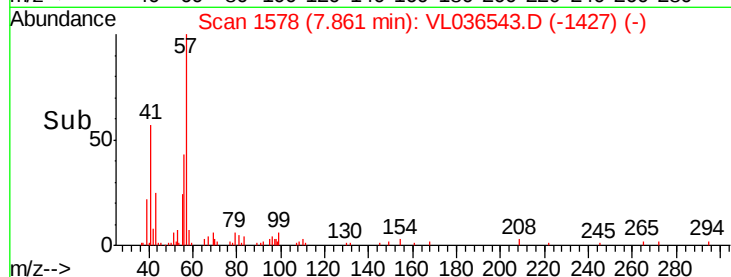
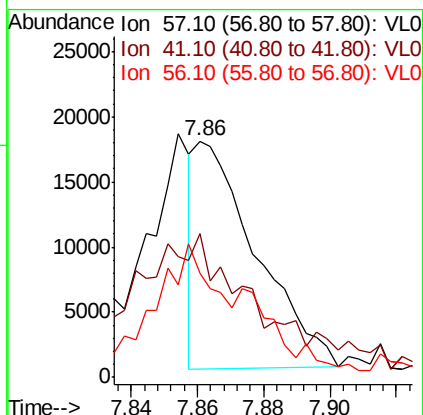
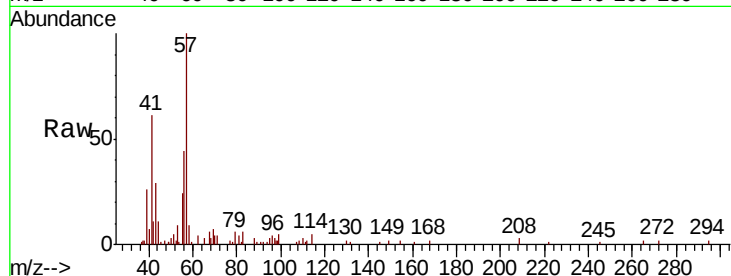




#44
 2,2,4-Trimethylpentane
 Concen: 0.040 ppbv
 RT: 7.86 min Scan# 1578
 Delta R.T. -0.01 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

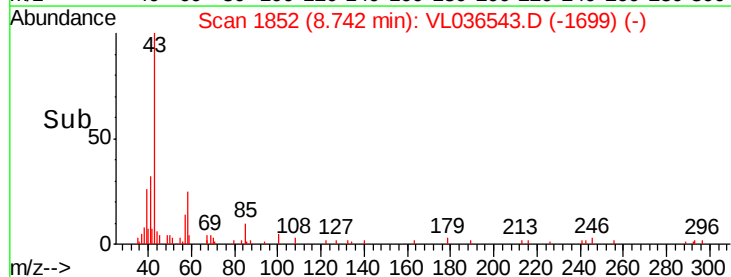
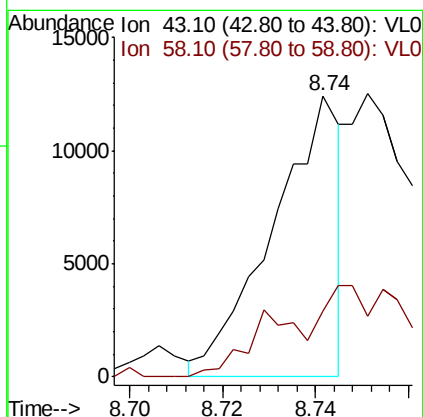
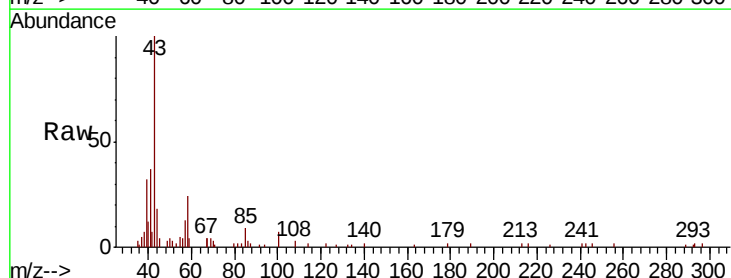
Instrument :
 MSVOA_L
 ClientSampled :

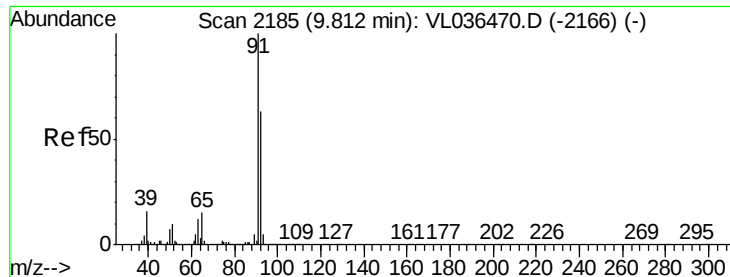
Tot Ion: 57 Resp: 22220
 Ion Ratio Lower Upper
 57 100
 41 111.8 28.8 43.2#
 56 93.3 26.1 39.1#



#50
 4-Methyl-2-Pentanone
 Concen: 0.051 ppbv
 RT: 8.74 min Scan# 1852
 Delta R.T. -0.01 min
 Lab File: VL036543.D
 Acq: 29 Mar 2021 17:29

Tgt Ion: 43 Resp: 12582
 Ion Ratio Lower Upper
 43 100
 58 0.0 28.2 42.2#





#53

Toluene

Concen: 1.596 ppbv

RT: 9.80 min Scan# 2181

Delta R.T. -0.01 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

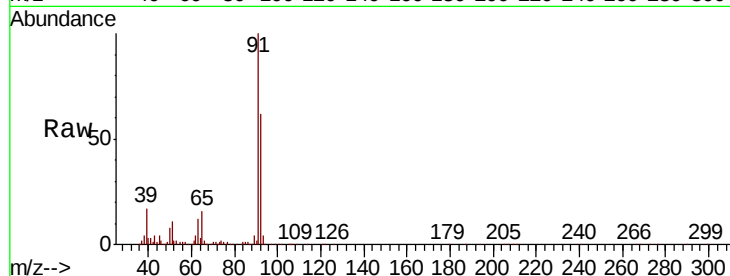
ClientSampleId :

Tot Ion: 91 Resp: 543243

Ion Ratio Lower Upper

91 100

92 59.6 48.8 73.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.80

250000

200000

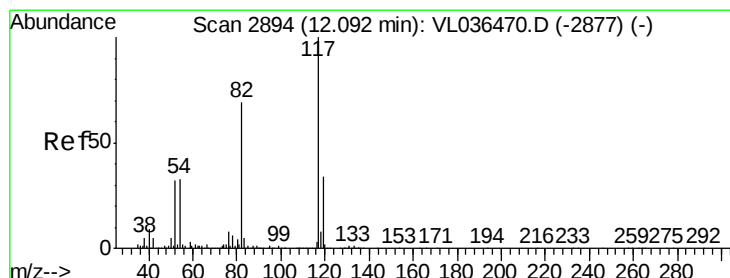
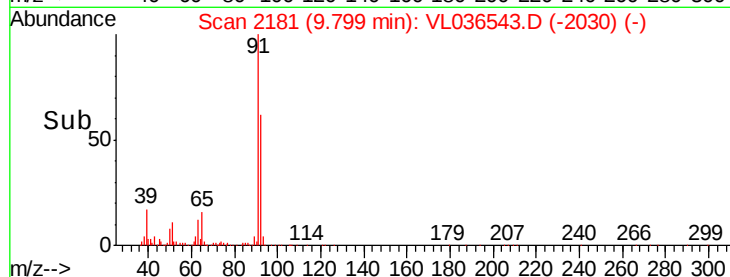
150000

100000

50000

0

Time--> 9.70 9.75 9.80 9.85



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2890

Delta R.T. -0.01 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

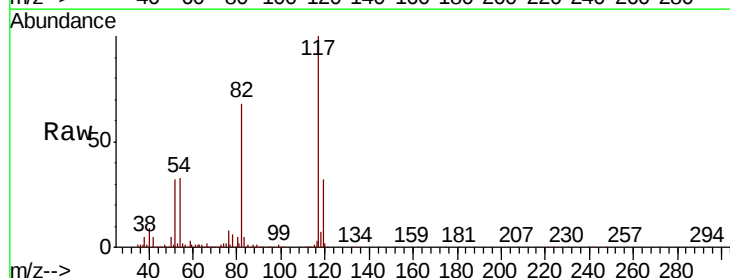
Tgt Ion: 117 Resp: 3127745

Ion Ratio Lower Upper

117 100

82 71.4 57.4 86.0

119 33.4 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

12.08

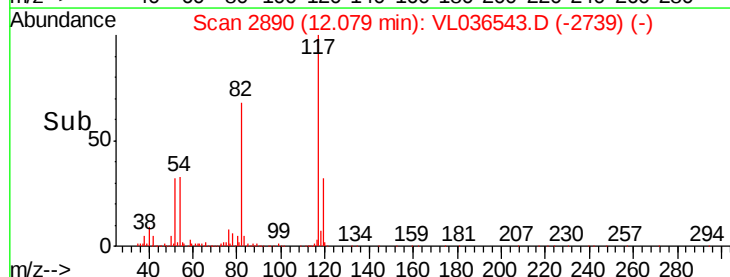
1500000

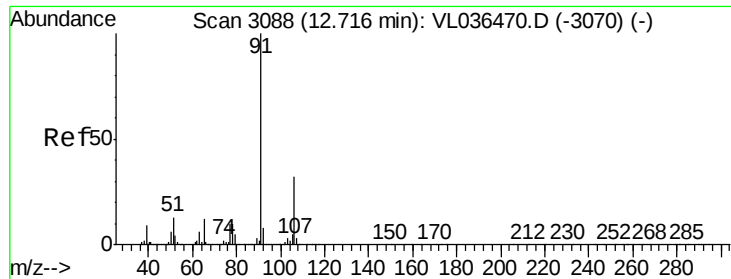
1000000

500000

0

Time--> 12.00 12.10





#58

Ethyl Benzene

Concen: 0.026 ppbv

RT: 12.71 min Scan# 3087

Delta R.T. -0.00 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

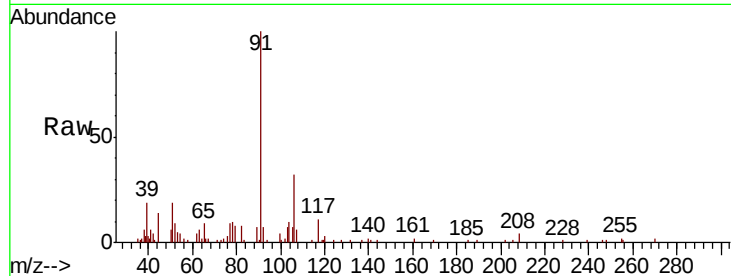
ClientSampleId :

Tot Ion: 91 Resp: 11796

Ion Ratio Lower Upper

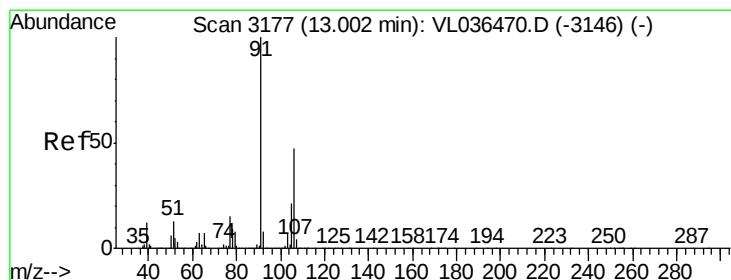
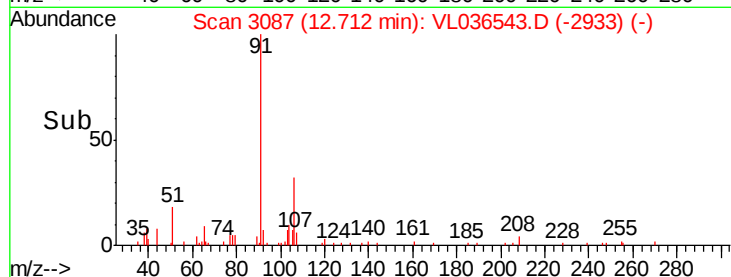
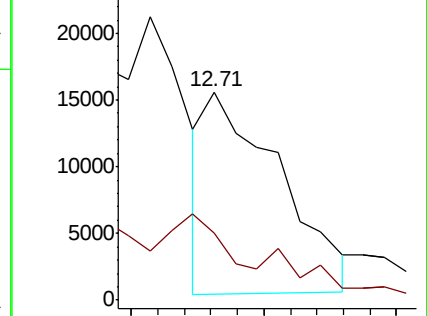
91 100

106 33.5 25.3 37.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.051 ppbv

RT: 12.99 min Scan# 3173

Delta R.T. -0.01 min

Lab File: VL036543.D

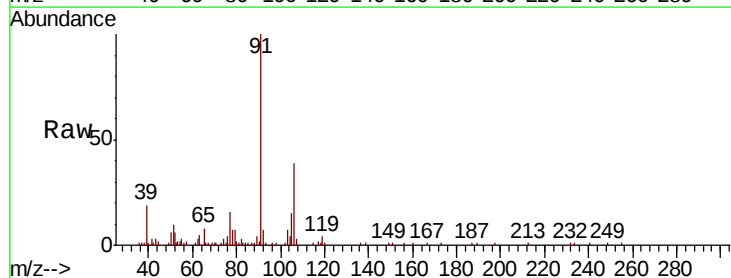
Acq: 29 Mar 2021 17:29

Tgt Ion: 91 Resp: 20306

Ion Ratio Lower Upper

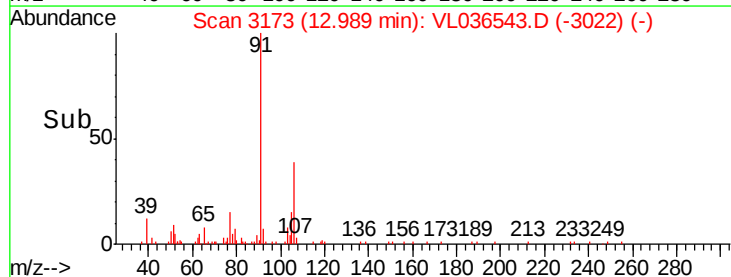
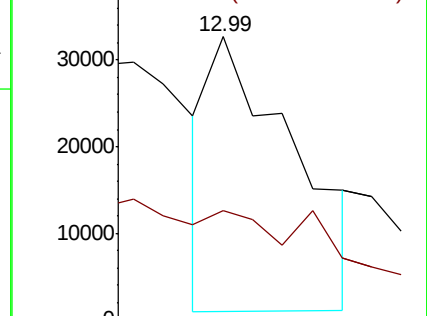
91 100

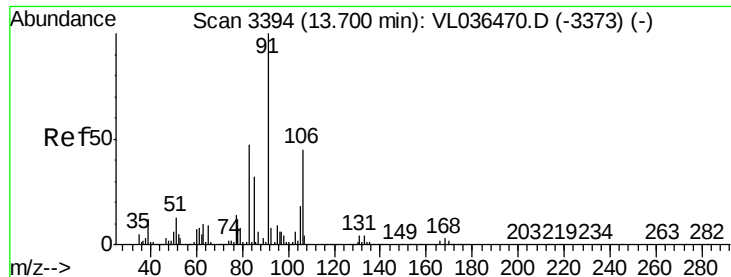
106 0.0 35.3 52.9#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

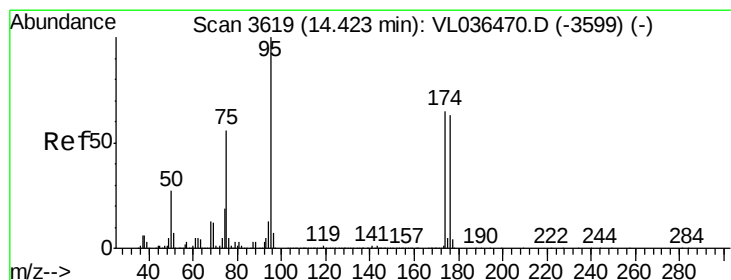
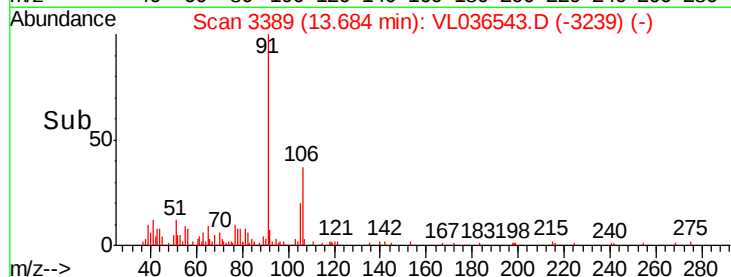
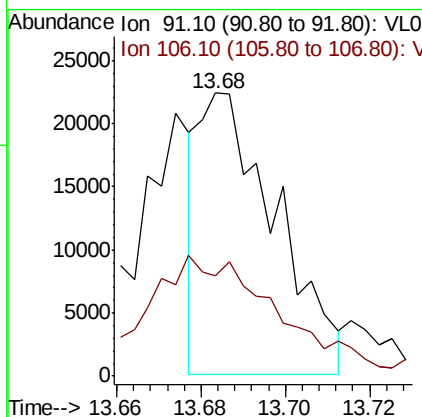
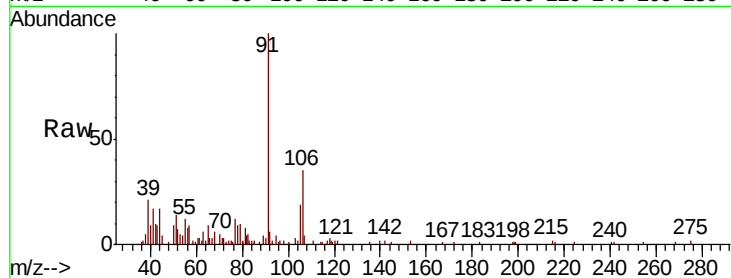




#60
o-Xylene
Concen: 0.073 ppbv
RT: 13.68 min Scan# 3389
Delta R.T. -0.02 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

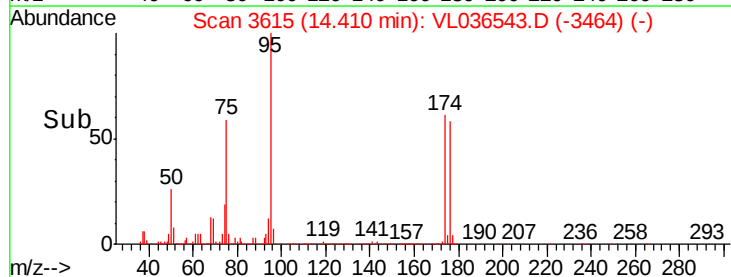
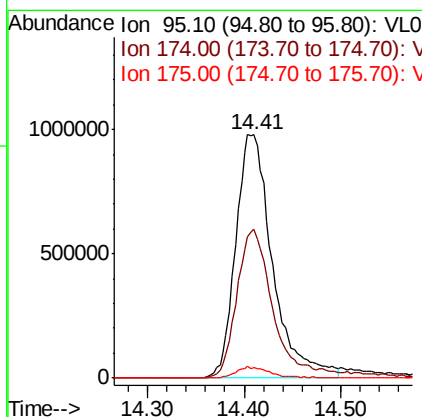
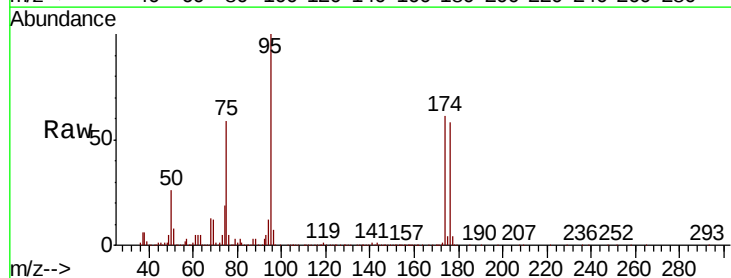
Instrument :
MSVOA_L
ClientSampled :

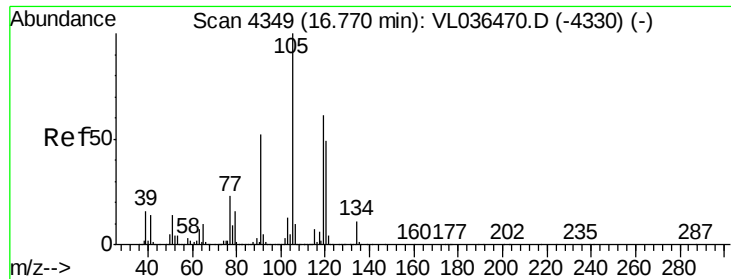
Tot Ion: 91 Resp: 28028
Ion Ratio Lower Upper
91 100
106 0.0 22.3 66.9#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.415 ppbv
RT: 14.41 min Scan# 3615
Delta R.T. -0.01 min
Lab File: VL036543.D
Acq: 29 Mar 2021 17:29

Tgt Ion: 95 Resp: 2596240
Ion Ratio Lower Upper
95 100
174 63.6 51.0 76.6
175 4.6 3.9 5.9





#74

1,2,4-Trimethylbenzene

Concen: 0.036 ppbv

RT: 16.75 min Scan# 4342

Delta R.T. -0.02 min

Lab File: VL036543.D

Acq: 29 Mar 2021 17:29

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 15120

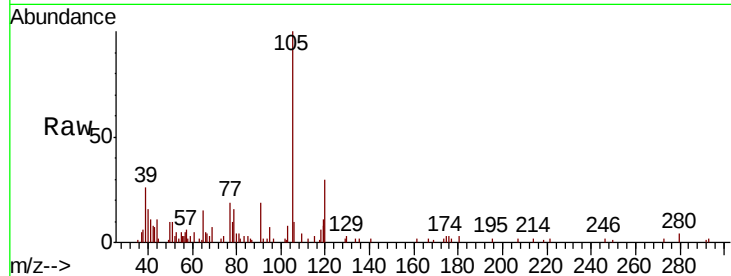
Ion Ratio Lower Upper

105 100

120 28.6 39.2 58.8#

91 12.9 42.6 64.0#

77 12.9 18.6 28.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

