

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL050620\
 Data File : VL034953.D
 Acq On : 7 May 2020 3:23
 Operator : SY/AP
 Sample : L2507-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: May 07 06:37:26 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050620AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 06 14:49:39 2020
 QLast Update : Wed May 06 14:49:39 2020
 Response via : Initial Calibration

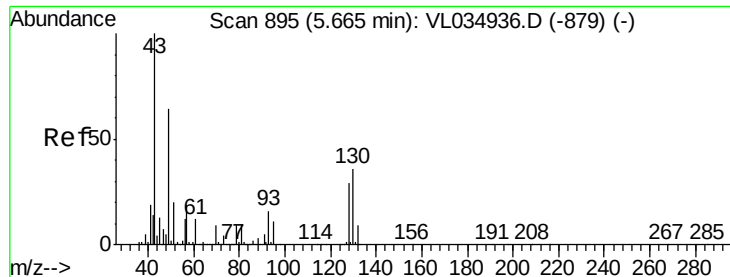
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1019484	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2351563	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.12	117	2145347	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	1800614	10.37	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	38850	0.269	ppbv	92
3) Chlorodifluoromethane	2.95	51	44760	0.385	ppbv	95
4) Chloromethane	3.11	50	36414	0.546	ppbv	99
9) Propene	2.98	41	30794	0.610	ppbv	93
11) Trichlorofluoromethane	3.93	101	36164	0.242	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.46	101	2640	0.025	ppbv #	14
13) Ethanol	3.57	45	218119	13.087	ppbv	97
15) Acetone	3.83	43	619504	4.596	ppbv	99
16) 1,3-Butadiene	3.28	39	3839	0.066	ppbv	96
17) tert-Butyl alcohol	4.73	59	22456	0.187	ppbv	96
19) Isopropyl Alcohol	3.95	45	174748	1.944	ppbv #	95
20) Methylene Chloride	4.33	84	65107	1.459	ppbv	95
23) Vinyl Acetate	5.05	43	69329	0.406	ppbv #	84
25) Ethyl Acetate	5.69	43	42548	0.188	ppbv #	84
26) Hexane	5.69	57	49680	0.506	ppbv #	43
29) Chloroform	5.74	83	9186	0.057	ppbv	95
34) 2-Butanone	5.24	43	24220	0.166	ppbv #	44
35) Carbon Tetrachloride	7.03	117	5327	0.036	ppbv #	66
36) Benzene	6.91	78	13987	0.072	ppbv	98
39) 1,2-Dichloropropane	7.19	63	662265	8.521	ppbv #	25
44) 2,2,4-Trimethylpentane	7.88	57	8909	0.026	ppbv #	42
53) Toluene	9.84	91	36708	0.179	ppbv #	20

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 895

Delta R.T. -0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :
MSVOA_L
ClientSampleId :

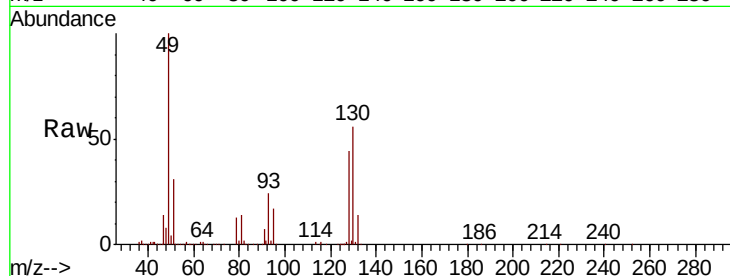
Tot Ion: 49 Resp: 1019484

Ion Ratio Lower Upper

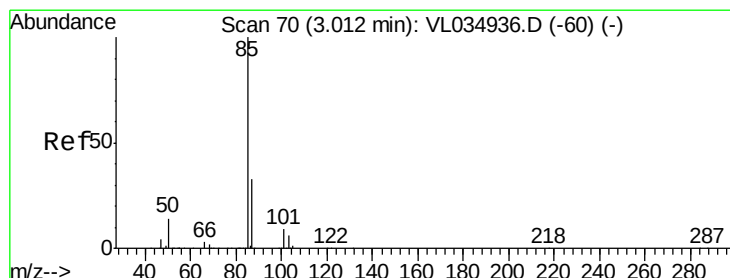
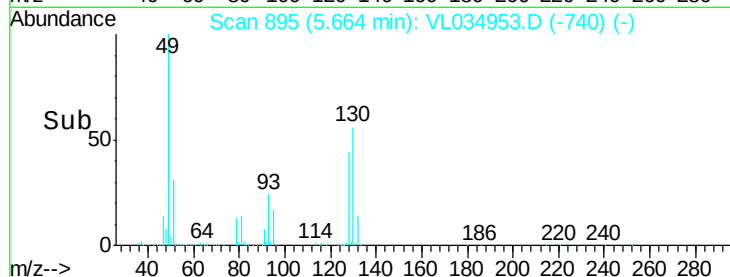
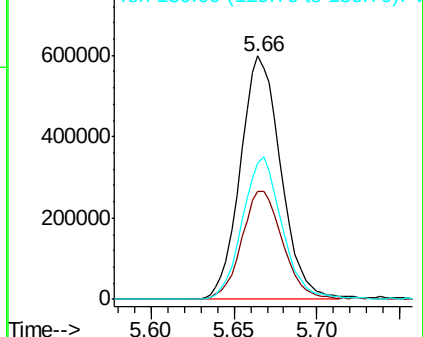
49 100

128 45.1 22.1 66.5

130 57.6 29.1 87.3



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: 0.269 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.00 min

Lab File: VL034953.D

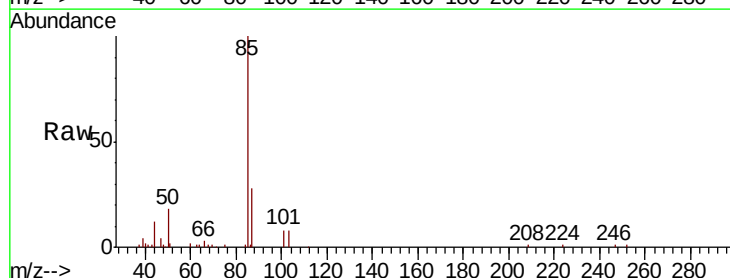
Acq: 7 May 2020 3:23

Tgt Ion: 85 Resp: 38850

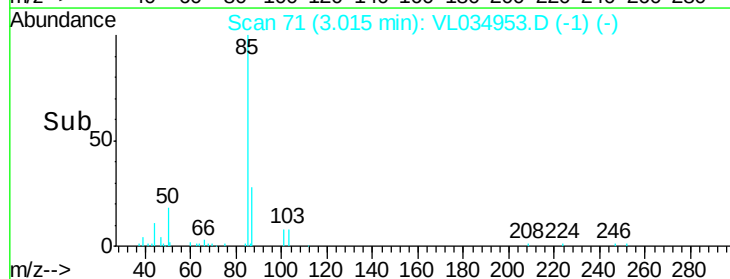
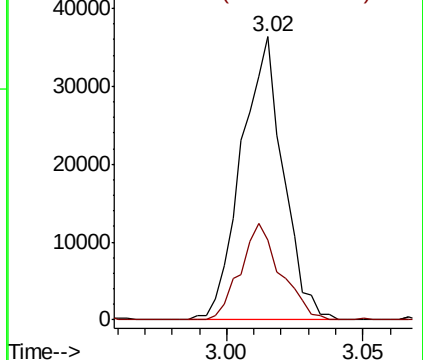
Ion Ratio Lower Upper

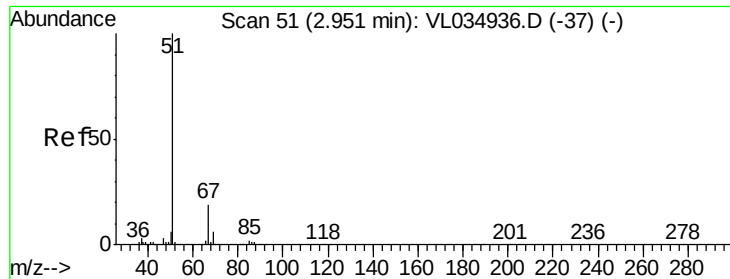
85 100

87 28.4 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.385 ppbv

RT: 2.95 min Scan# 51

Delta R.T. -0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

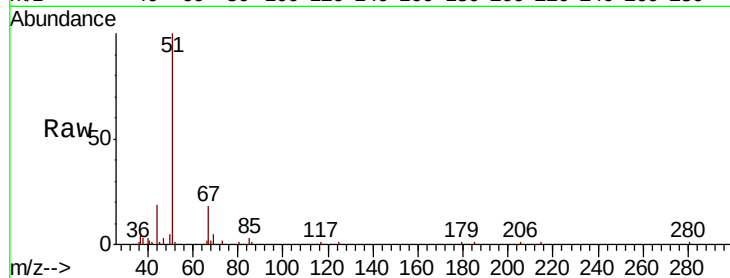
ClientSampleId :

Tot Ion: 51 Resp: 44760

Ion Ratio Lower Upper

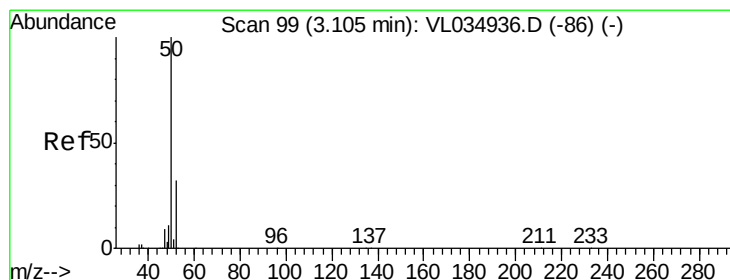
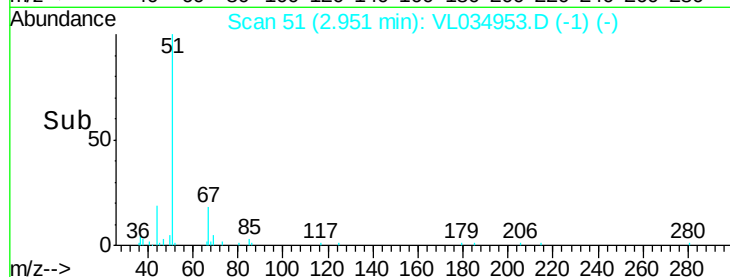
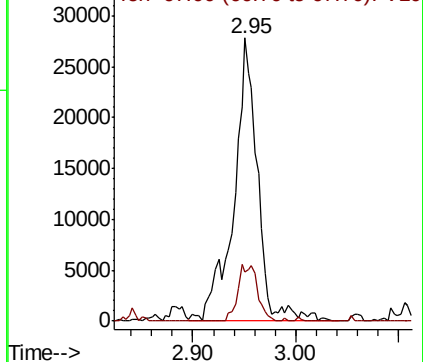
51 100

67 16.4 15.0 22.6



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.546 ppbv

RT: 3.11 min Scan# 99

Delta R.T. -0.00 min

Lab File: VL034953.D

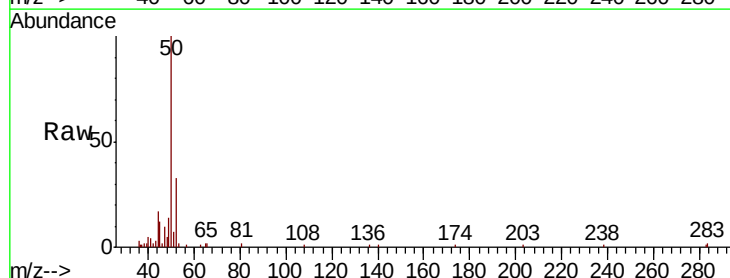
Acq: 7 May 2020 3:23

Tgt Ion: 50 Resp: 36414

Ion Ratio Lower Upper

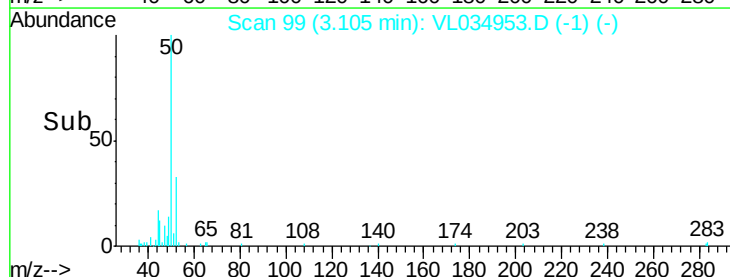
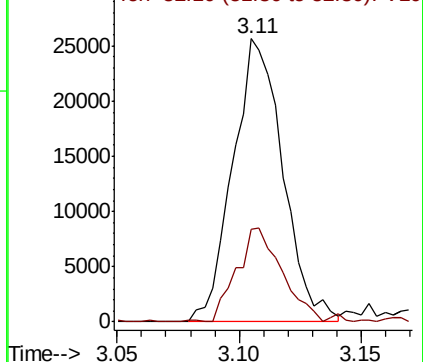
50 100

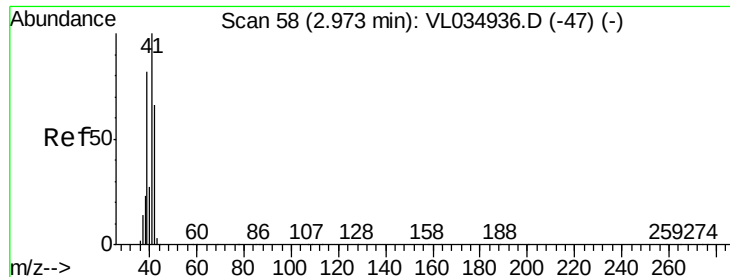
52 32.3 25.4 38.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.610 ppbv

RT: 2.98 min Scan# 60

Delta R.T. 0.01 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

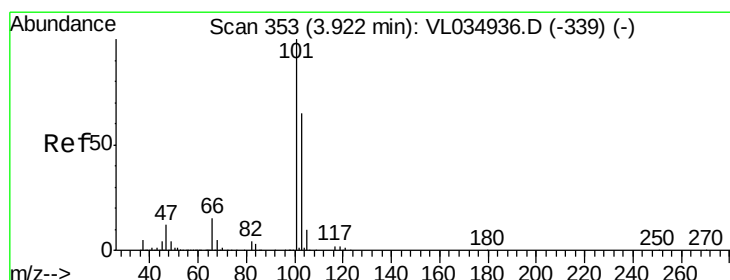
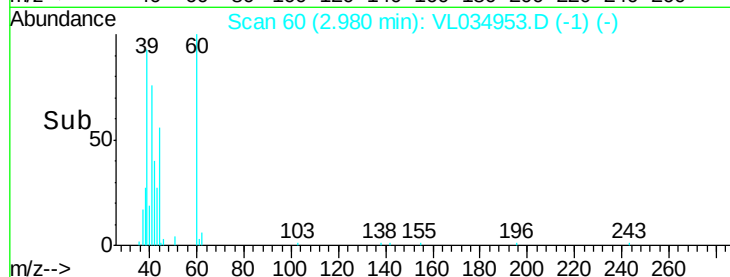
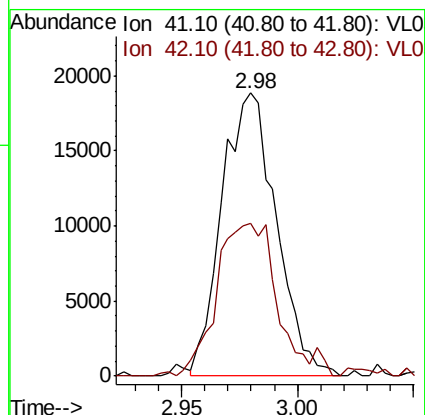
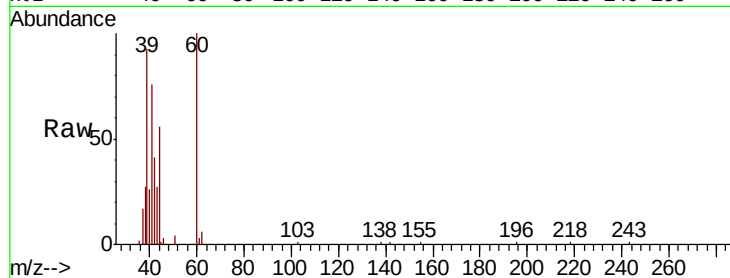
ClientSampleId :

Tot Ion: 41 Resp: 30794

Ion Ratio Lower Upper

41 100

42 62.5 54.5 81.7



#11

Trichlorofluoromethane

Concen: 0.242 ppbv

RT: 3.93 min Scan# 355

Delta R.T. 0.01 min

Lab File: VL034953.D

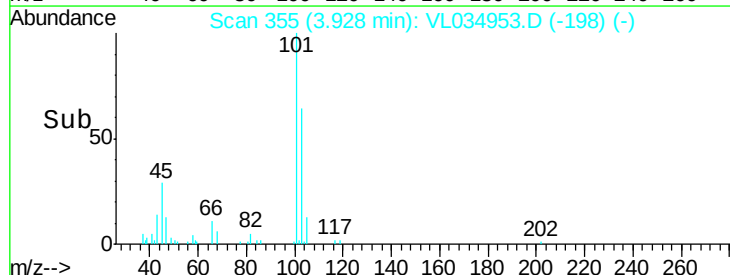
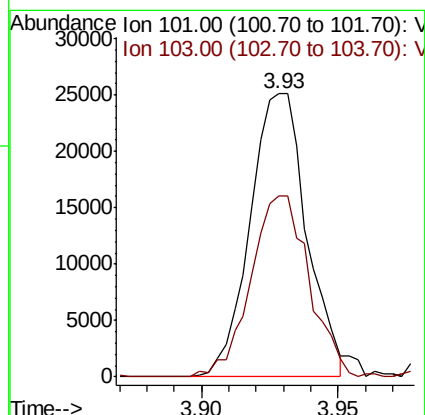
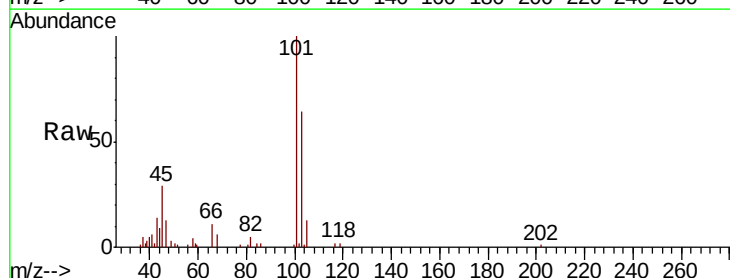
Acq: 7 May 2020 3:23

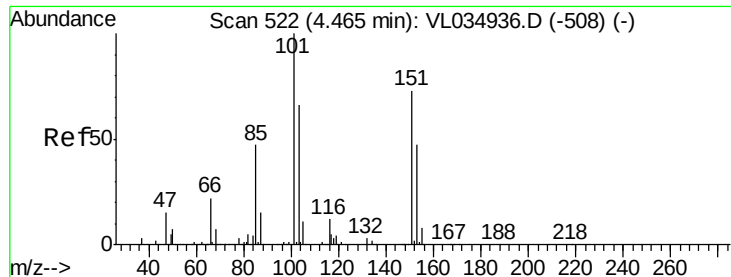
Tgt Ion: 101 Resp: 36164

Ion Ratio Lower Upper

101 100

103 64.0 51.9 77.9





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.025 ppbv

RT: 4.46 min Scan# 520

Delta R.T. -0.01 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

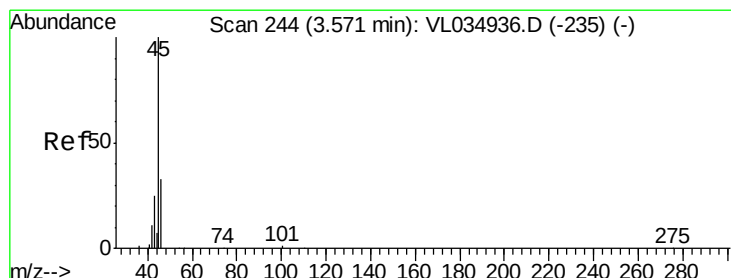
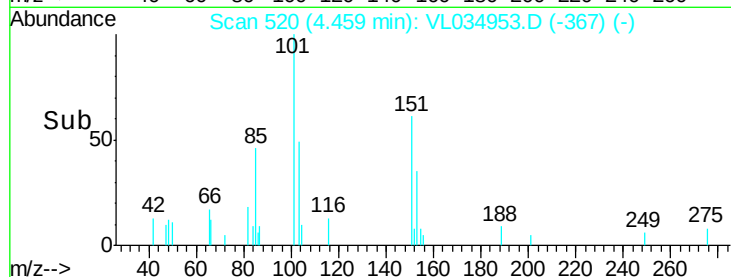
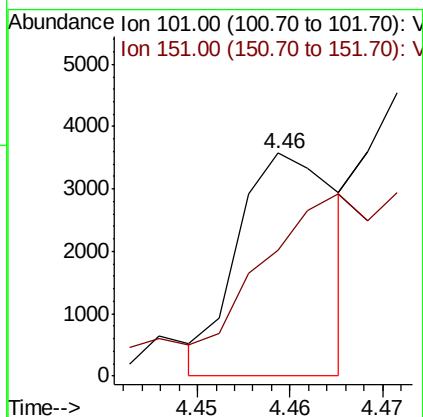
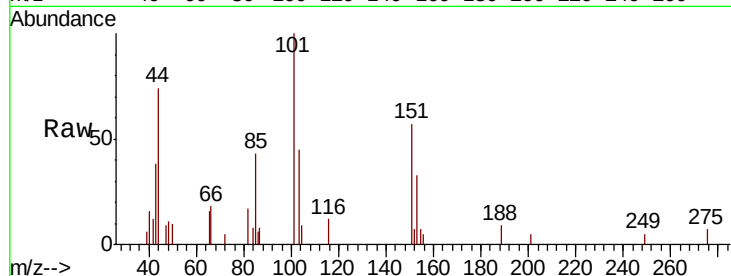
ClientSampleId :

Tot Ion:101 Resp: 2640

Ion Ratio Lower Upper

101 100

151 0.0 57.6 86.4#



#13

Ethanol

Concen: 13.087 ppbv

RT: 3.57 min Scan# 245

Delta R.T. 0.00 min

Lab File: VL034953.D

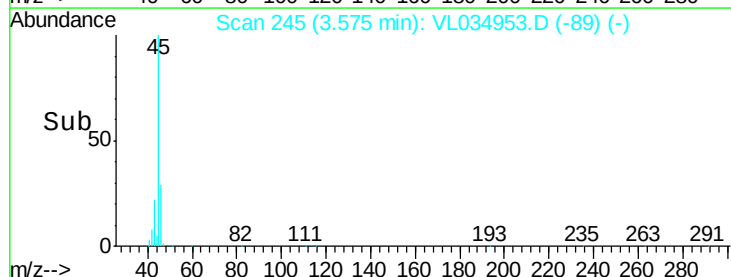
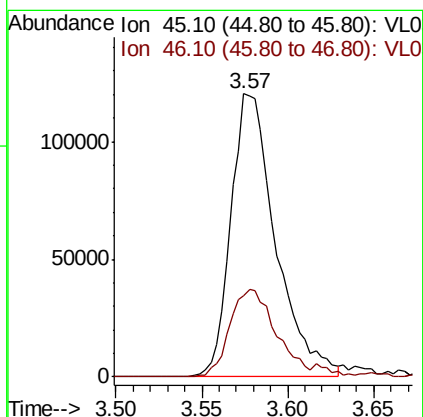
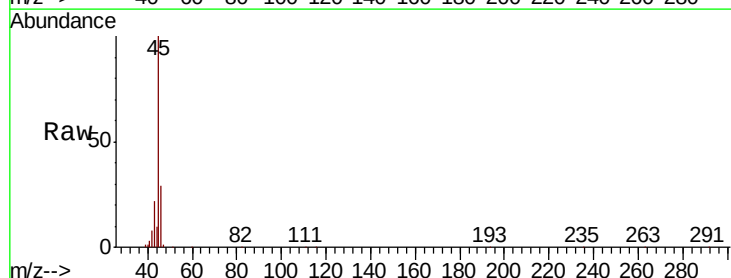
Acq: 7 May 2020 3:23

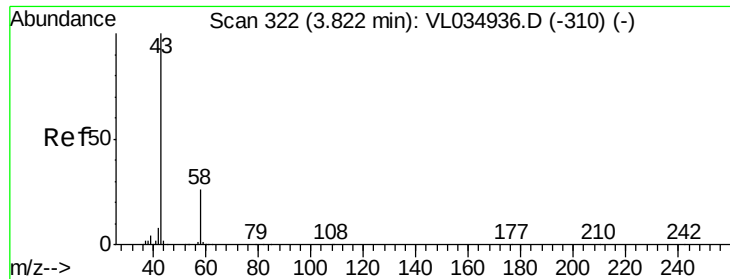
Tgt Ion: 45 Resp: 218119

Ion Ratio Lower Upper

45 100

46 34.2 14.3 57.3





#15

Acetone

Concen: 4.596 ppbv

RT: 3.83 min Scan# 323

Delta R.T. 0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

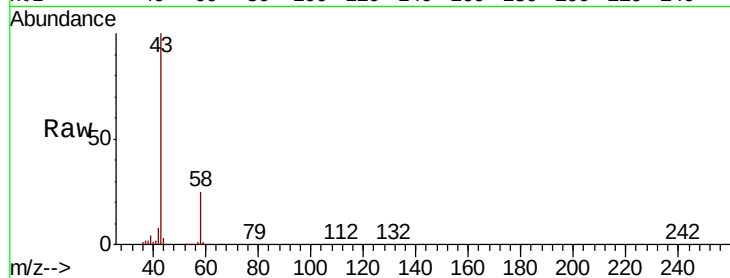
ClientSampleId :

Tot Ion: 43 Resp: 619504

Ion Ratio Lower Upper

43 100

58 26.8 21.7 32.5



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.83

400000

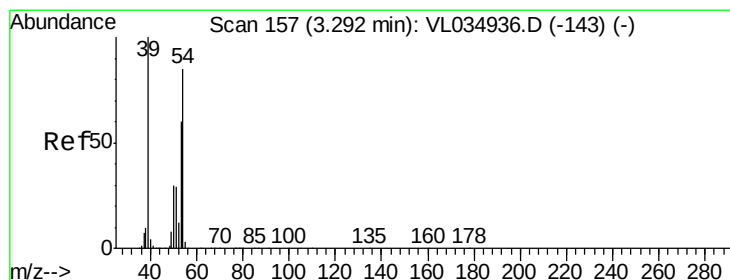
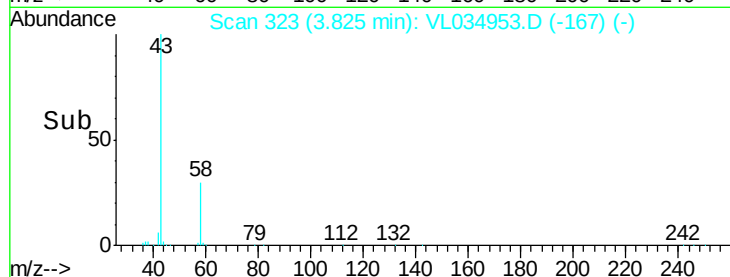
300000

200000

100000

0

Time--> 3.75 3.80 3.85 3.90



#16

1,3-Butadiene

Concen: 0.066 ppbv

RT: 3.28 min Scan# 153

Delta R.T. -0.01 min

Lab File: VL034953.D

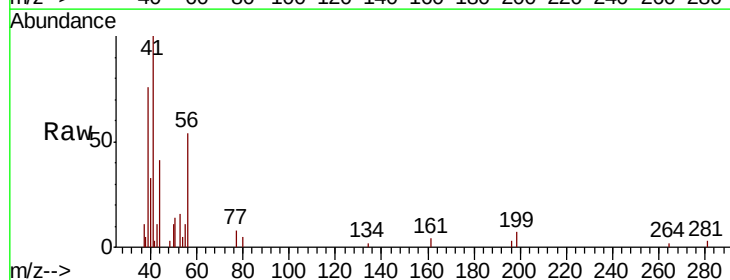
Acq: 7 May 2020 3:23

Tgt Ion: 39 Resp: 3839

Ion Ratio Lower Upper

39 100

54 80.0 66.6 100.0



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

3.28

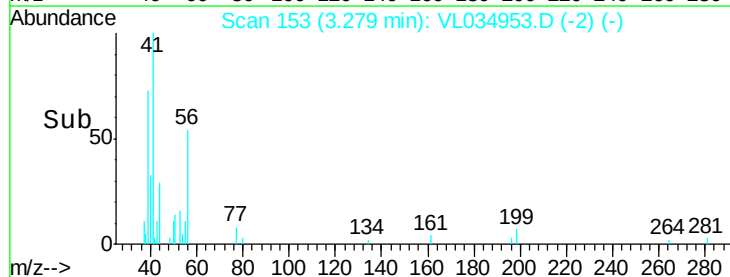
6000

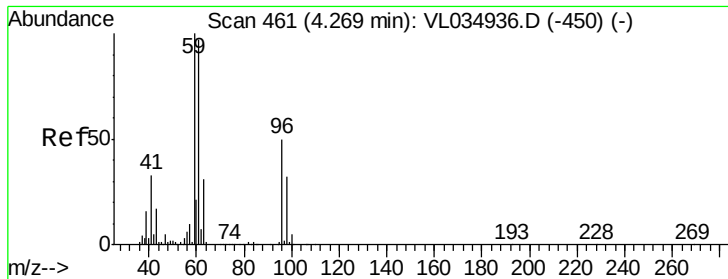
4000

2000

0

Time--> 3.27 3.28 3.29 3.30



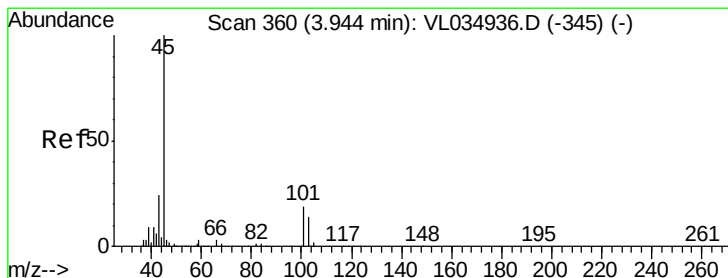
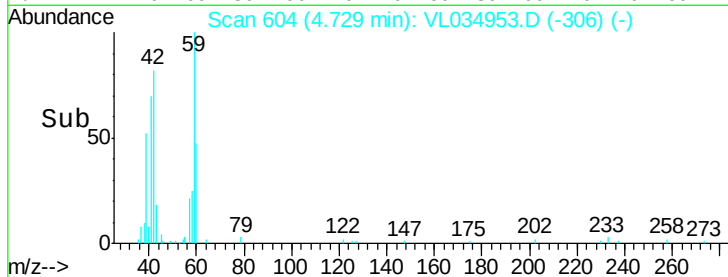
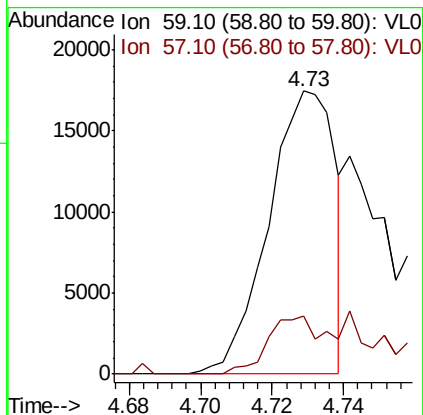
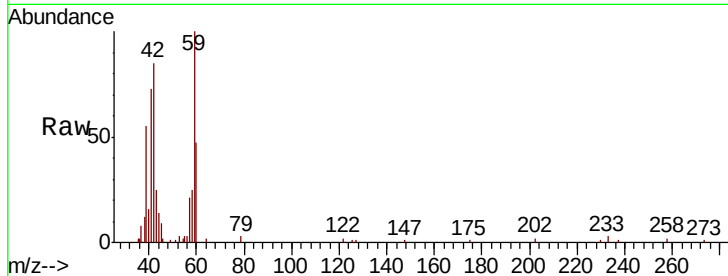


#17

tert-Butyl alcohol
 Concen: 0.187 ppbv
 RT: 4.73 min Scan# 604
 Delta R.T. 0.46 min
 Lab File: VL034953.D
 Acq: 7 May 2020 3:23

Instrument :
 MSVOA_L
 ClientSampleId :

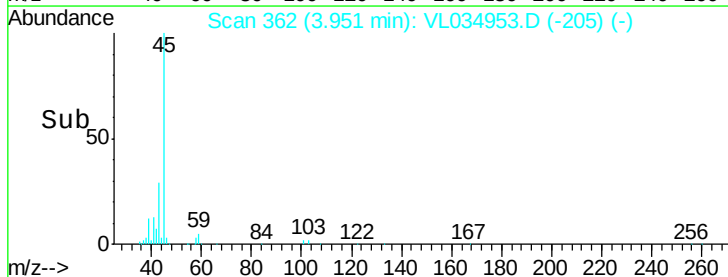
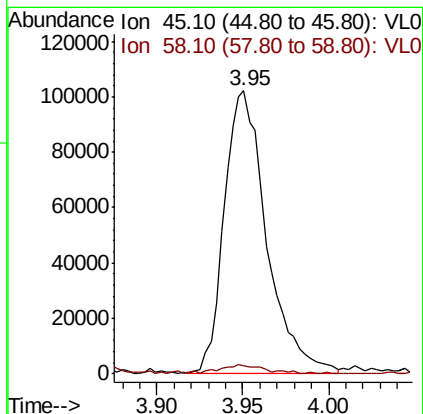
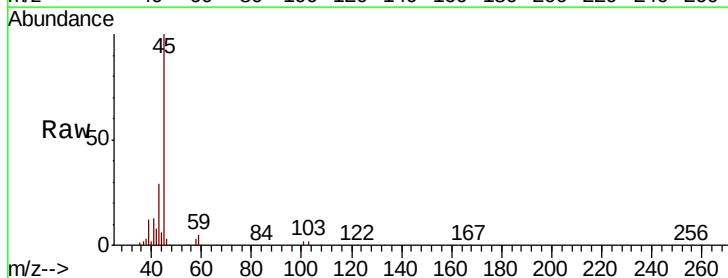
Tot Ion: 59 Resp: 22456
 Ion Ratio Lower Upper
 59 100
 57 9.3 8.7 13.1

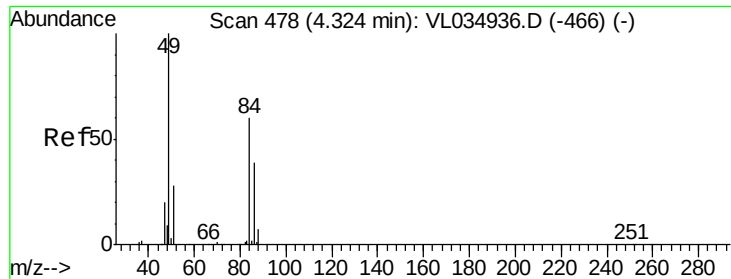


#19

Isopropyl Alcohol
 Concen: 1.944 ppbv
 RT: 3.95 min Scan# 362
 Delta R.T. 0.01 min
 Lab File: VL034953.D
 Acq: 7 May 2020 3:23

Tgt Ion: 45 Resp: 174748
 Ion Ratio Lower Upper
 45 100
 58 4.0 1.7 2.5#

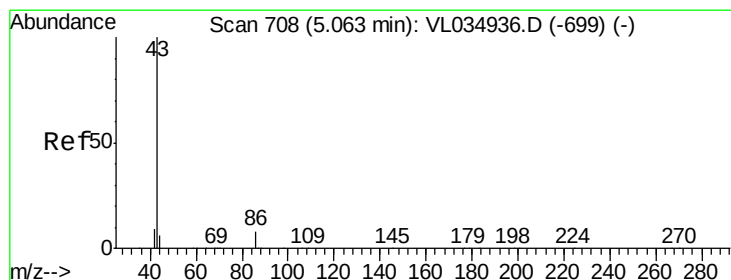
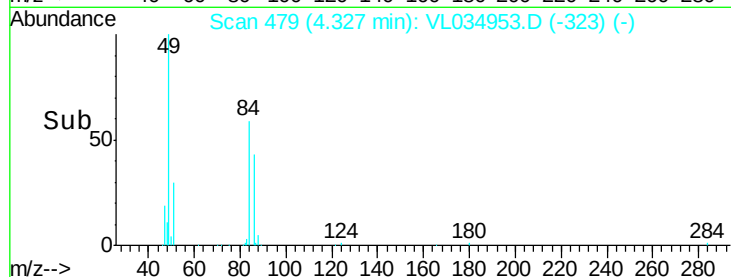
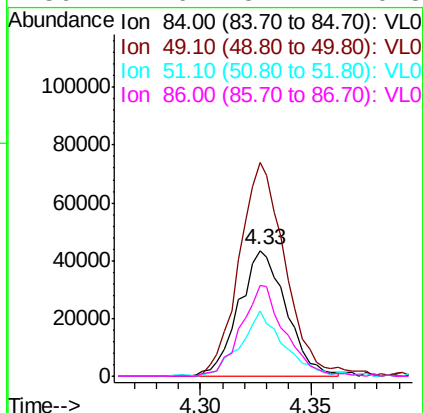
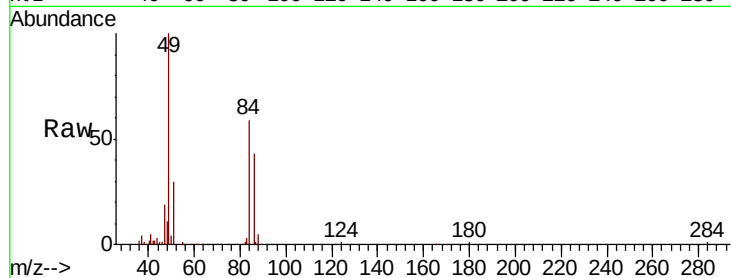




#20
Methylene Chloride
Concen: 1.459 ppbv
RT: 4.33 min Scan# 479
Delta R.T. 0.00 min
Lab File: VL034953.D
Acq: 7 May 2020 3:23

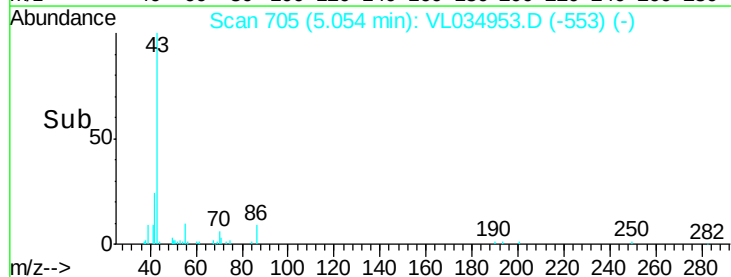
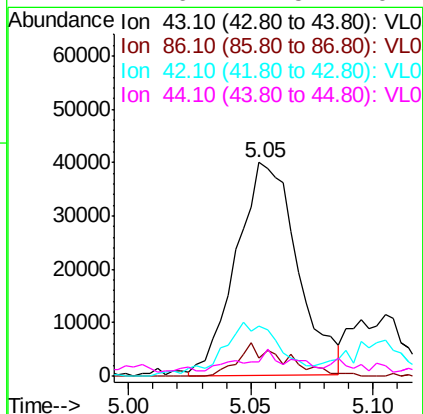
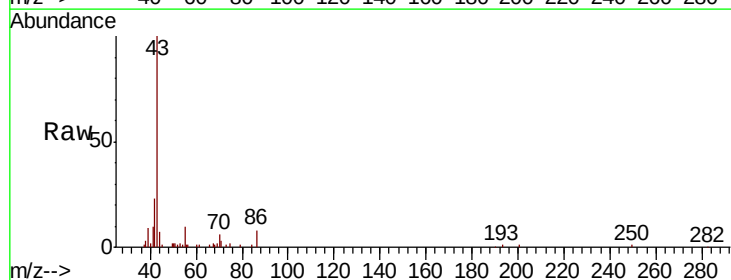
Instrument :
MSVOA_L
ClientSampleId :

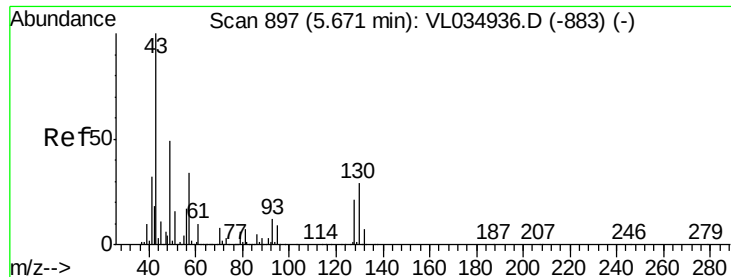
Tot Ion:	84	Resp:	65107
Ion	Ratio	Lower	Upper
84	100		
49	170.2	132.5	198.7
51	50.7	38.4	57.6
86	72.6	51.2	76.8



#23
Vinyl Acetate
Concen: 0.406 ppbv
RT: 5.05 min Scan# 705
Delta R.T. -0.01 min
Lab File: VL034953.D
Acq: 7 May 2020 3:23

Tgt Ion:	43	Resp:	69329
Ion	Ratio	Lower	Upper
43	100		
86	8.6	5.5	8.3#
42	20.3	8.0	12.0#
44	2.6	4.5	6.7#

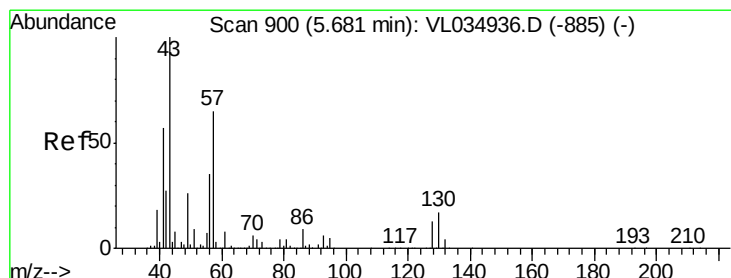
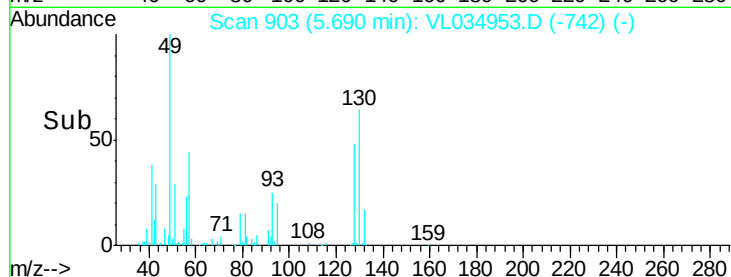
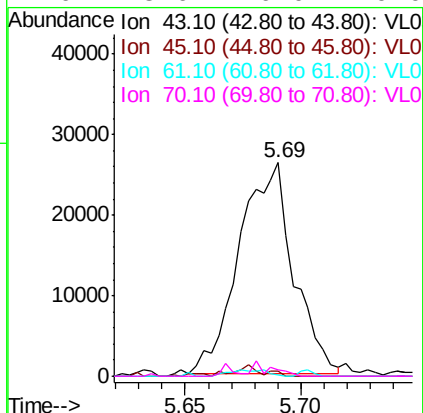
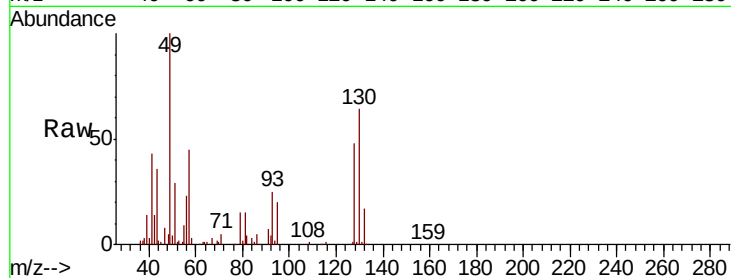




#25
Ethyl Acetate
Concen: 0.188 ppbv
RT: 5.69 min Scan# 903
Delta R.T. 0.02 min
Lab File: VL034953.D
Acq: 7 May 2020 3:23

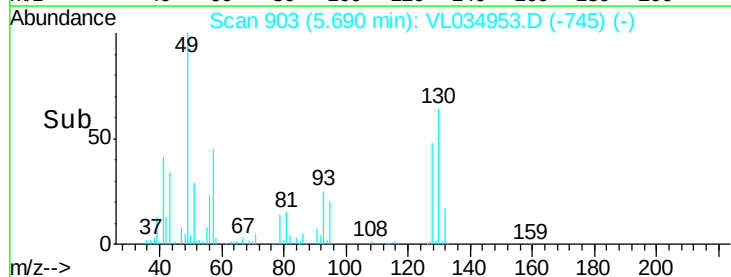
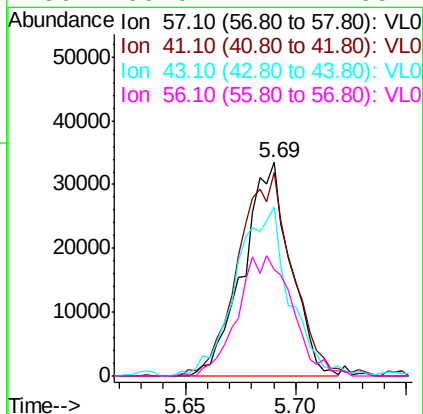
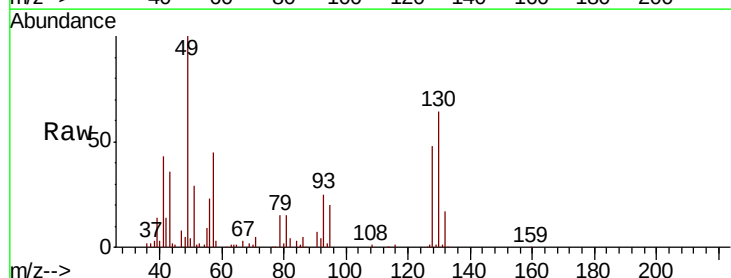
Instrument :
MSVOA_L
ClientSampleId :

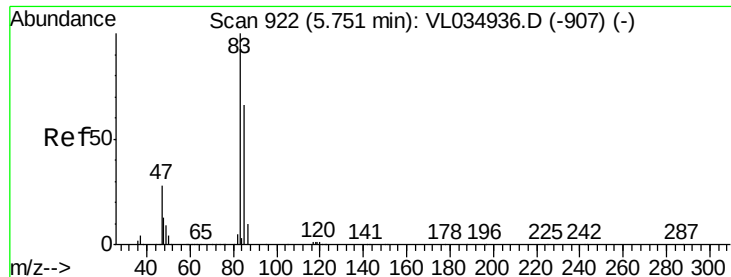
Tot Ion:	43	Resp:	42548
Ion	Ratio	Lower	Upper
43	100		
45	3.2	8.1	12.1#
61	3.2	7.8	11.8#
70	3.6	6.0	9.0#



#26
Hexane
Concen: 0.506 ppbv
RT: 5.69 min Scan# 903
Delta R.T. 0.01 min
Lab File: VL034953.D
Acq: 7 May 2020 3:23

Tgt Ion:	57	Resp:	49680
Ion	Ratio	Lower	Upper
57	100		
41	109.1	72.7	109.1#
43	93.9	182.1	273.1#
56	65.0	42.2	63.2#





#29

Chloroform

Concen: 0.057 ppbv

RT: 5.74 min Scan# 920

Delta R.T. -0.01 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

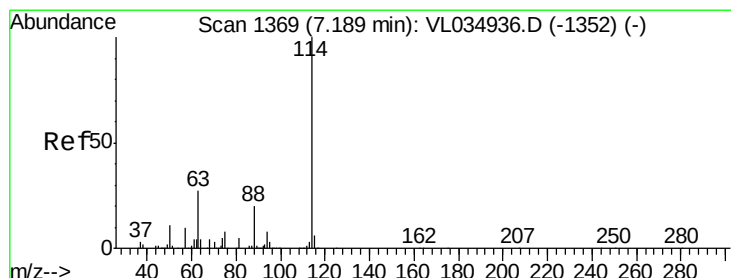
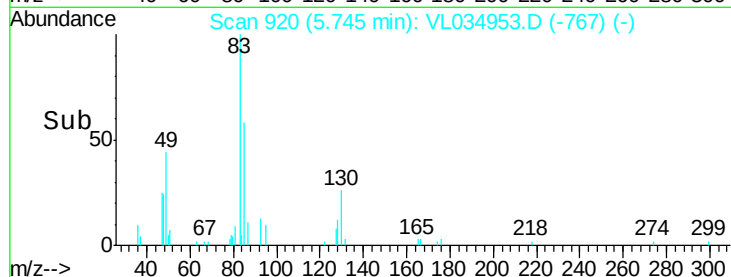
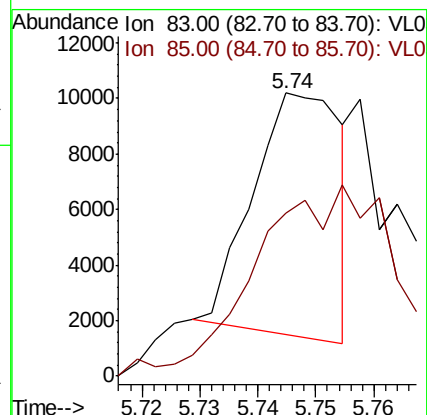
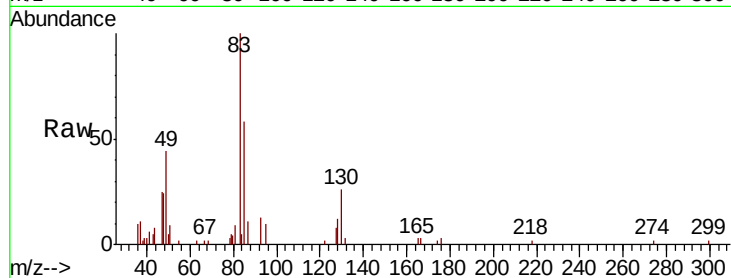
ClientSampleId :

Tot Ion: 83 Resp: 9186

Ion Ratio Lower Upper

83 100

85 62.5 53.0 79.6



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. -0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

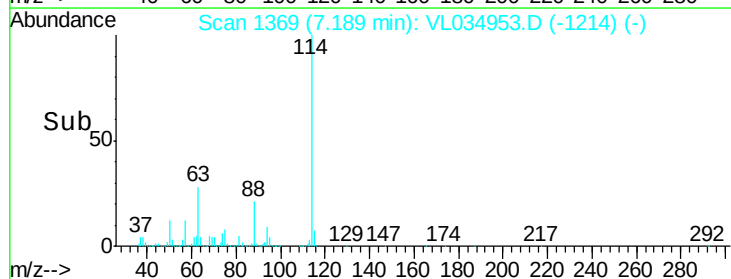
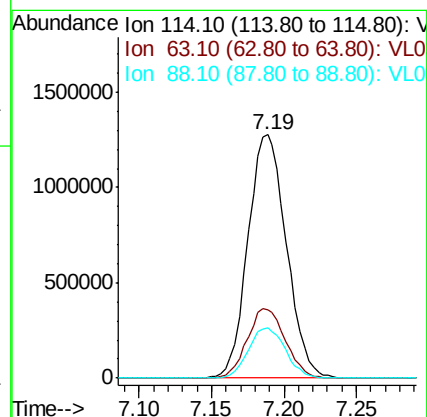
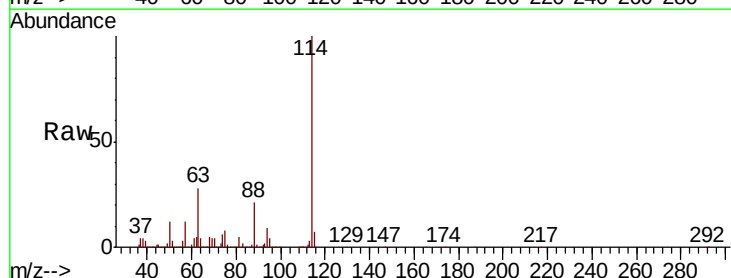
Tgt Ion: 114 Resp: 2351563

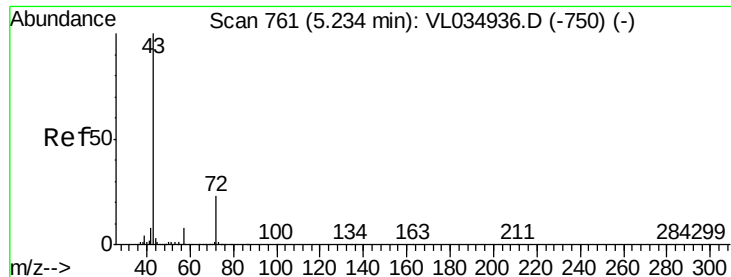
Ion Ratio Lower Upper

114 100

63 28.5 22.2 33.4

88 20.1 15.5 23.3





#34

2-Butanone

Concen: 0.166 ppbv

RT: 5.24 min Scan# 763

Delta R.T. 0.01 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

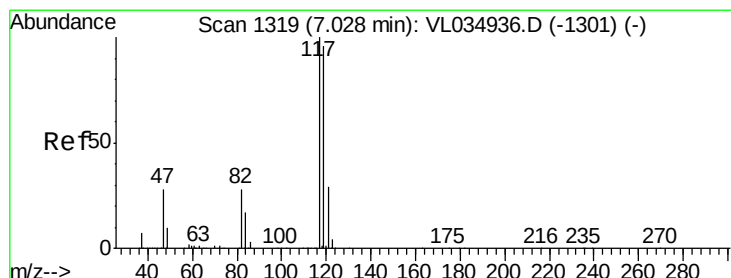
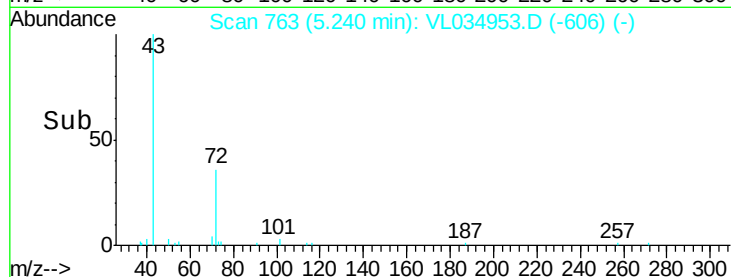
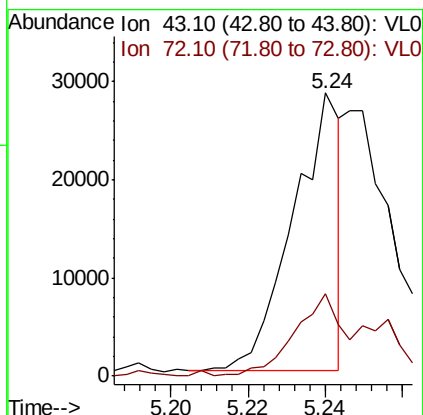
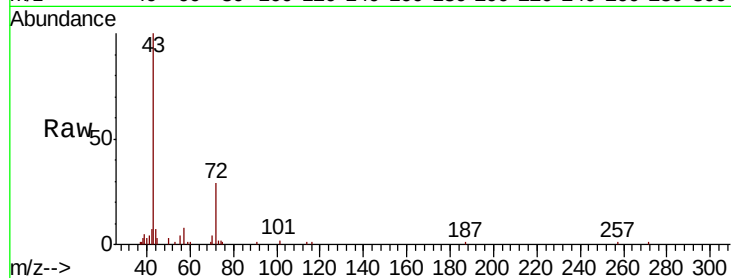
ClientSampleId :

Tot Ion: 43 Resp: 24220

Ion Ratio Lower Upper

43 100

72 49.6 18.0 27.0#



#35

Carbon Tetrachloride

Concen: 0.036 ppbv

RT: 7.03 min Scan# 1320

Delta R.T. 0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

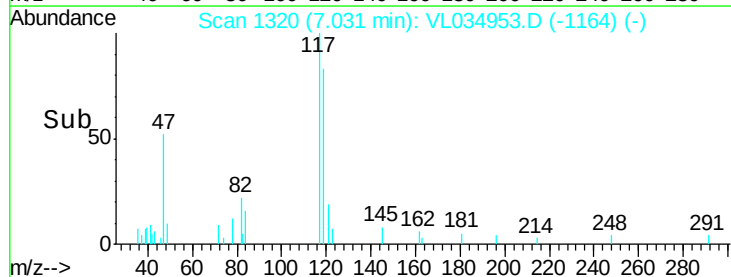
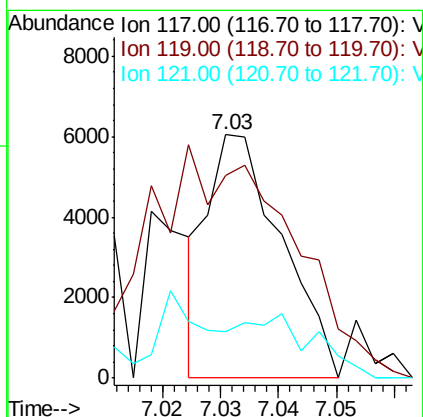
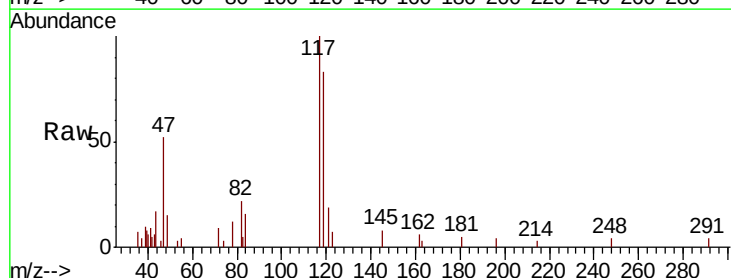
Tgt Ion: 117 Resp: 5327

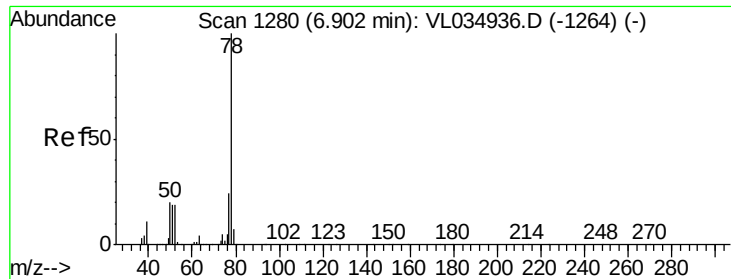
Ion Ratio Lower Upper

117 100

119 63.0 77.0 115.6#

121 9.8 23.0 34.6#





#36

Benzene

Concen: 0.072 ppbv

RT: 6.91 min Scan# 1281

Delta R.T. 0.00 min

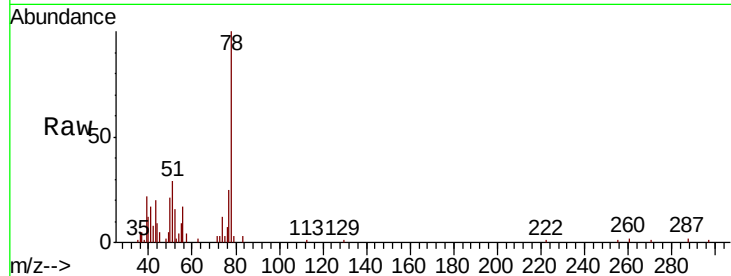
Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 78 Resp: 13987

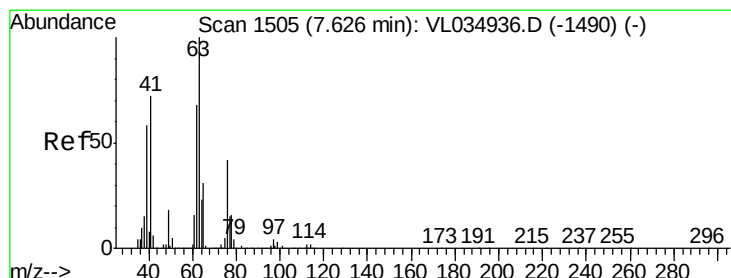
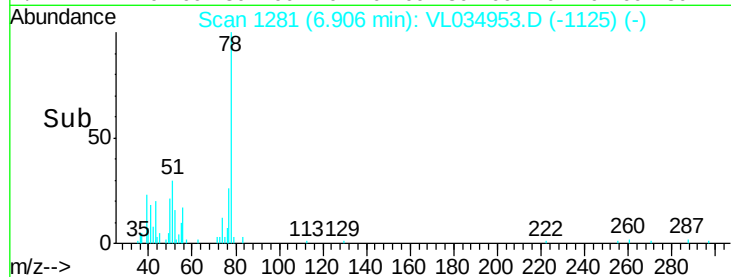
Ion	Ratio	Lower	Upper
78	100		
77	24.1	19.0	28.6
50	18.0	15.8	23.8



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: 8.521 ppbv

RT: 7.19 min Scan# 1368

Delta R.T. -0.44 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

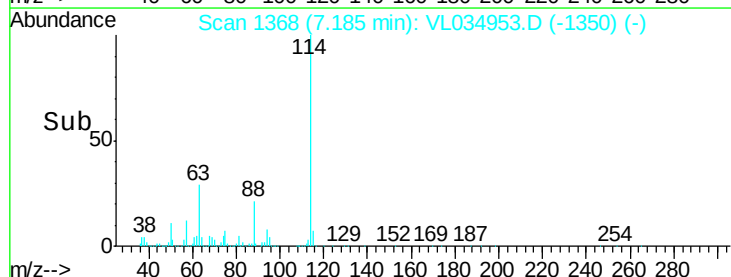
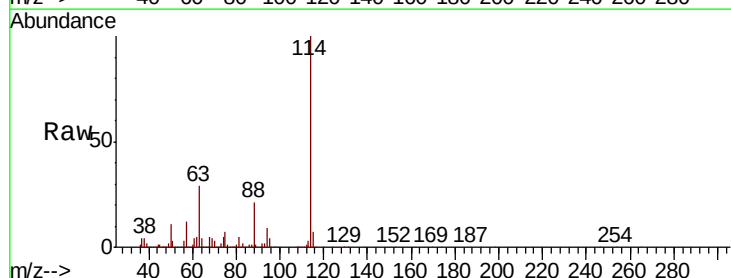
Tgt Ion: 63 Resp: 662265

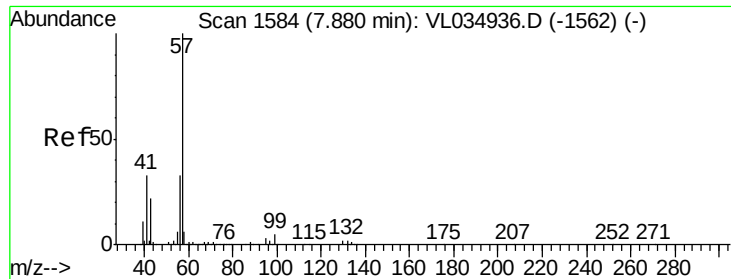
Ion	Ratio	Lower	Upper
63	100		
41	0.3	57.8	86.8#
62	17.6	54.2	81.2#

Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0

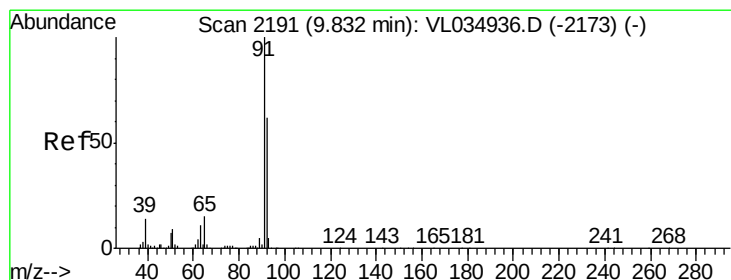
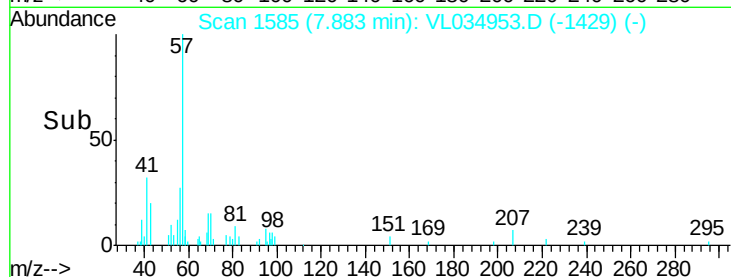
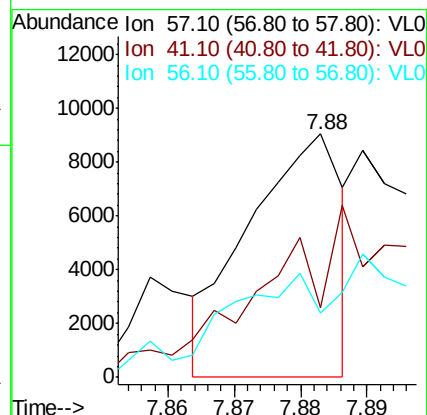
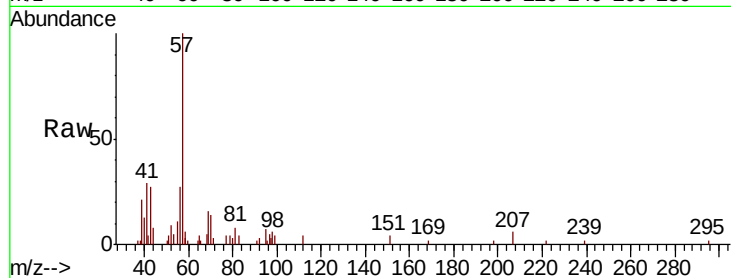




#44
 2,2,4-Trimethylpentane
 Concen: 0.026 ppbv
 RT: 7.88 min Scan# 1585
 Delta R.T. 0.00 min
 Lab File: VL034953.D
 Acq: 7 May 2020 3:23

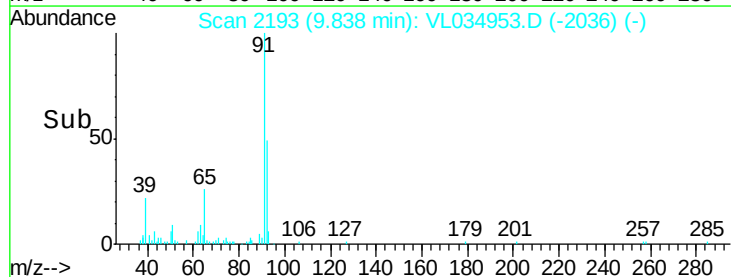
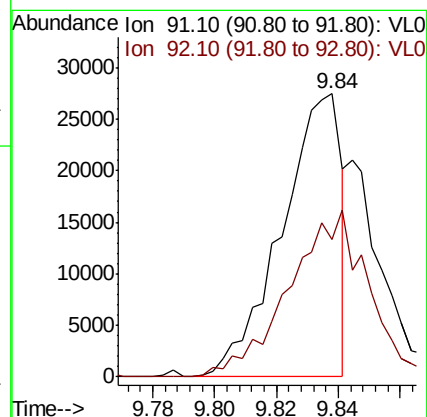
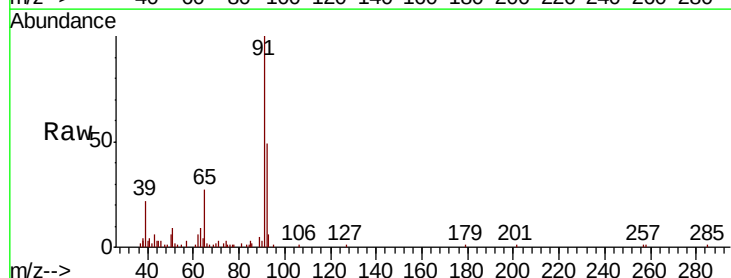
Instrument :
 MSVOA_L
 ClientSampleId :

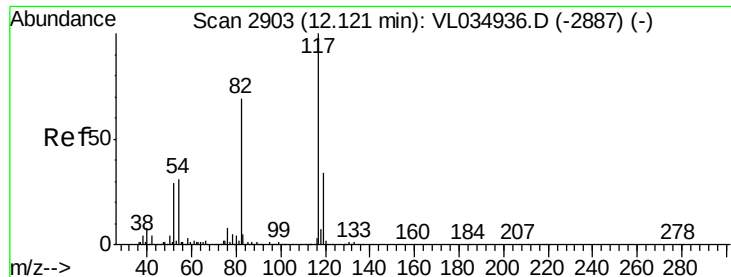
Tot Ion: 57 Resp: 8909
 Ion Ratio Lower Upper
 57 100
 41 0.0 26.4 39.6#
 56 0.0 25.5 38.3#



#53
 Toluene
 Concen: 0.179 ppbv
 RT: 9.84 min Scan# 2193
 Delta R.T. 0.01 min
 Lab File: VL034953.D
 Acq: 7 May 2020 3:23

Tgt Ion: 91 Resp: 36708
 Ion Ratio Lower Upper
 91 100
 92 0.0 48.6 73.0#





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.12 min Scan# 2904

Delta R.T. 0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

Instrument :

MSVOA_L

ClientSampleId :

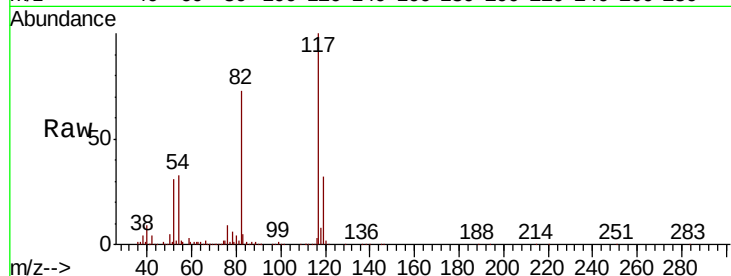
Tot Ion:117 Resp: 2145347

Ion	Ratio	Lower	Upper
117	100		
82	70.7	53.1	79.7
119	33.3	26.7	40.1

117 100

82 70.7 53.1 79.7

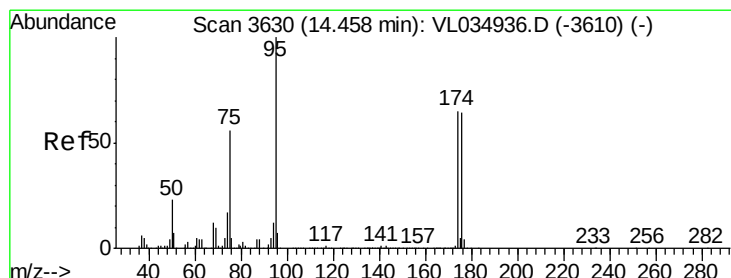
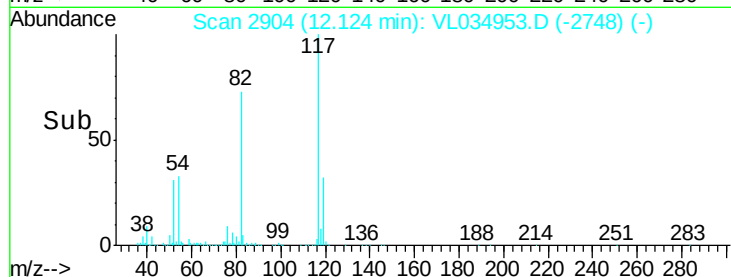
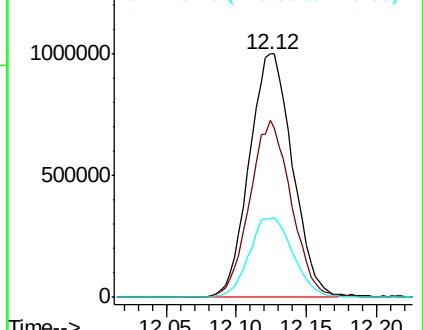
119 33.3 26.7 40.1



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



#68

1-Bromo-4-Fluorobenzene

Concen: 10.369 ppbv

RT: 14.46 min Scan# 3631

Delta R.T. 0.00 min

Lab File: VL034953.D

Acq: 7 May 2020 3:23

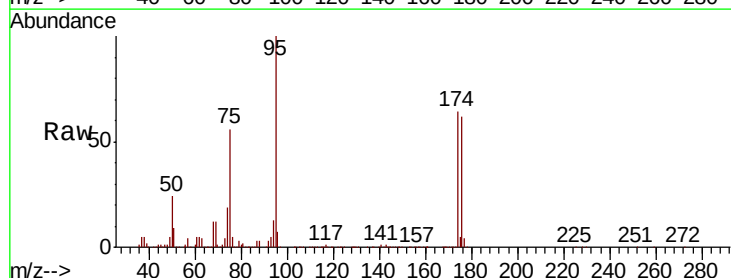
Tgt Ion: 95 Resp: 1800614

Ion	Ratio	Lower	Upper
95	100		
174	62.8	51.5	77.3
175	4.7	3.8	5.8

95 100

174 62.8 51.5 77.3

175 4.7 3.8 5.8



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

