

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL100719\
 Data File : VL034244.D
 Acq On : 8 Oct 2019 5:38
 Operator : SY/AP
 Sample : K5222-04DL 10X
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 V-4DL

Quant Time: Oct 09 02:24:35 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL091719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Sep 18 12:53:31 2019
 QLast Update : Wed Sep 18 12:53:31 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	897258	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.21	114	1682811	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.15	117	1699494	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.49	95	1462157	9.90	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.00%

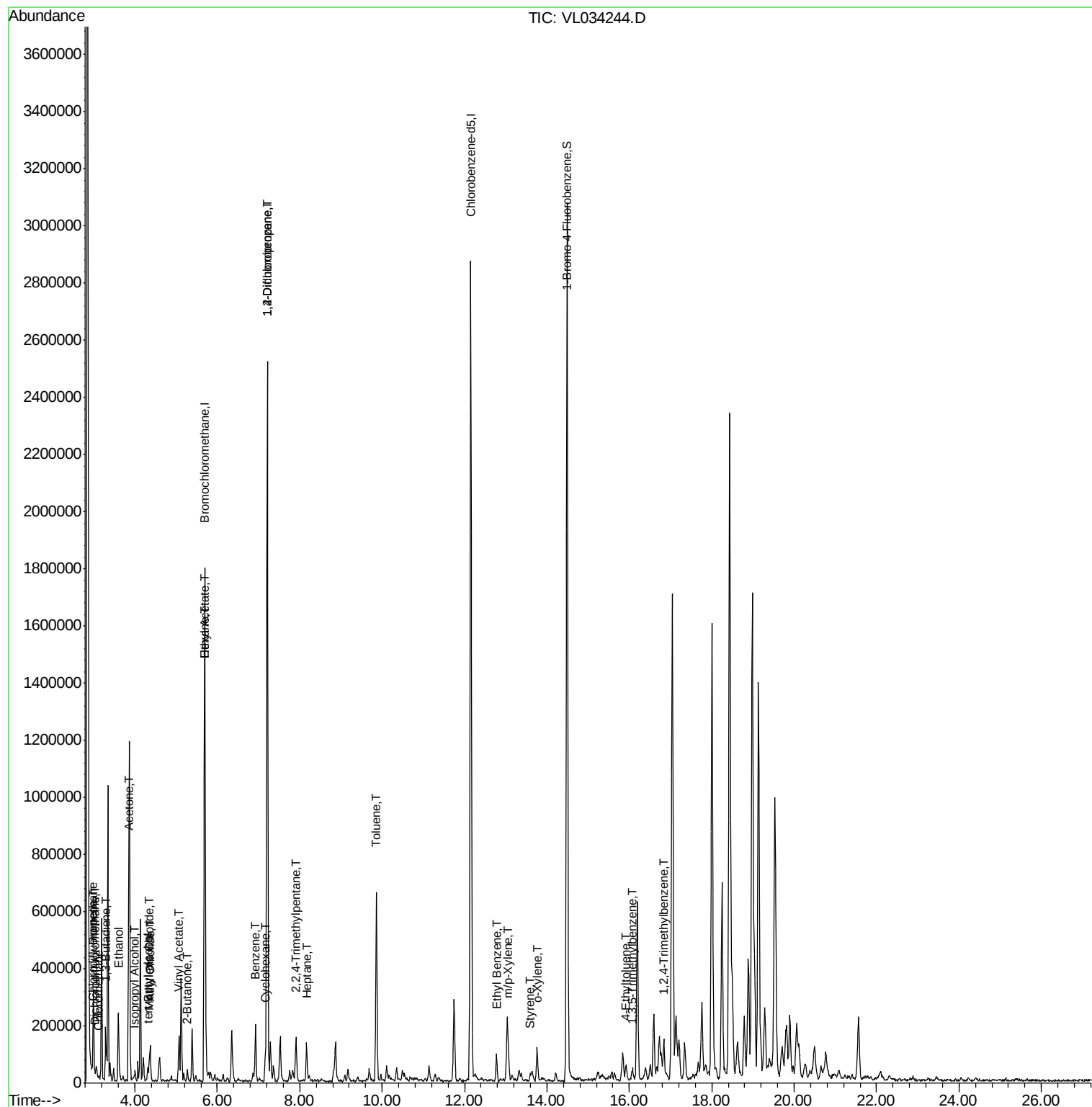
Target Compounds						Qvalue
2) Dichlorodifluoromethane	3.03	85	9436	0.071	ppbv	92
3) Chlorodifluoromethane	2.97	51	9678	0.092	ppbv #	78
4) Chloromethane	3.12	50	3834	0.062	ppbv #	75
9) Propene	2.99	41	117438	2.263	ppbv	92
10) Heptane	8.17	43	55726	0.412	ppbv	91
13) Ethanol	3.60	45	254374	20.239	ppbv	98
15) Acetone	3.84	43	507302	4.218	ppbv	98
16) 1,3-Butadiene	3.29	39	69830	1.331	ppbv #	48
17) tert-Butyl alcohol	4.32	59	4687	0.062	ppbv #	71
19) Isopropyl Alcohol	3.99	45	6679	0.090	ppbv #	95
20) Methylene Chloride	4.35	84	11680	0.337	ppbv #	90
21) Allyl Chloride	4.37	41	16340	0.241	ppbv #	34
23) Vinyl Acetate	5.07	43	57806	0.326	ppbv #	1
25) Ethyl Acetate	5.71	43	78862	0.347	ppbv #	81
26) Hexane	5.71	57	106120	1.122	ppbv #	42
30) Cyclohexane	7.17	84	22381	0.328	ppbv #	10
34) 2-Butanone	5.27	43	47733	0.278	ppbv	95
36) Benzene	6.92	78	149194	0.803	ppbv #	89
39) 1,2-Dichloropropane	7.21	63	521064	6.240	ppbv #	21
44) 2,2,4-Trimethylpentane	7.91	57	72920	0.204	ppbv #	42
53) Toluene	9.86	91	487923	2.402	ppbv	96
58) Ethyl Benzene	12.78	91	45426	0.166	ppbv	95
59) m/p-Xylene	13.07	91	44152	0.194	ppbv #	32
60) o-Xylene	13.77	91	55056	0.242	ppbv #	65
61) Styrene	13.59	104	5918	0.036	ppbv #	24
72) 4-Ethyltoluene	15.91	105	8388	0.033	ppbv #	19
73) 1,3,5-Trimethylbenzene	16.06	105	10849	0.044	ppbv	99
74) 1,2,4-Trimethylbenzene	16.84	105	93515	0.355	ppbv #	65

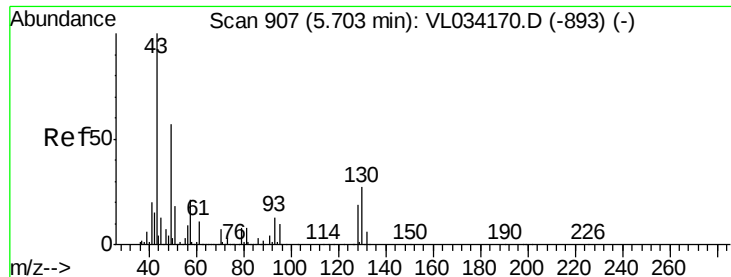
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed Sep 18 12:53:31 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 903

Delta R.T. -0.01 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

V-4DL

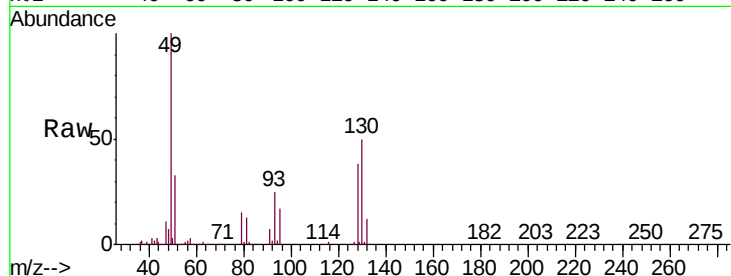
Tgt Ion: 49 Resp: 897258

Ion Ratio Lower Upper

49 100

128 38.0 17.6 52.9

130 49.1 22.3 66.9



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

5.69

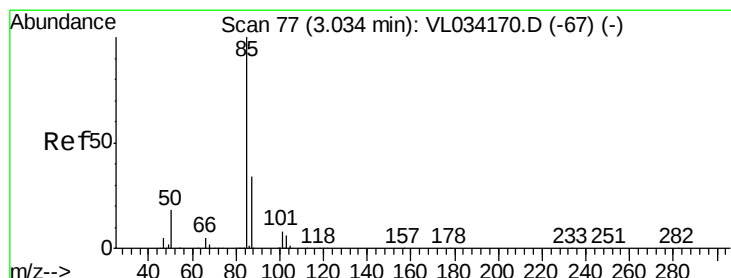
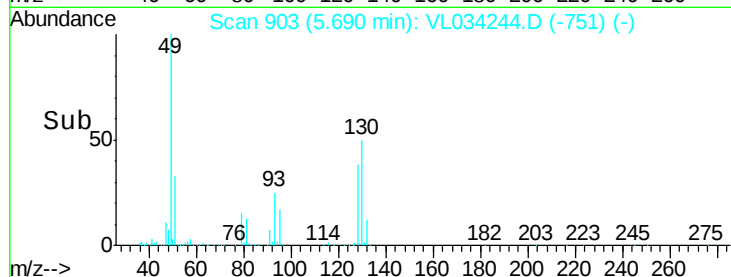
600000

400000

200000

0

Time-->



#2

Dichlorodifluoromethane

Concen: 0.071 ppbv

RT: 3.03 min Scan# 76

Delta R.T. -0.00 min

Lab File: VL034244.D

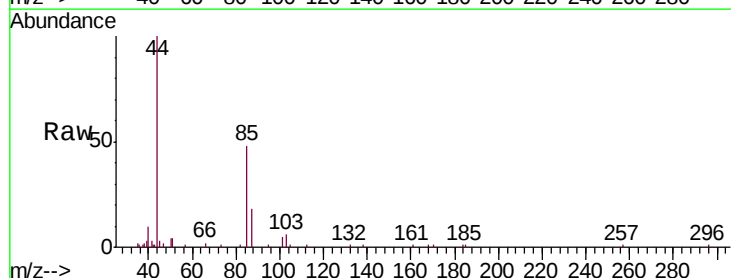
Acq: 8 Oct 2019 5:38

Tgt Ion: 85 Resp: 9436

Ion Ratio Lower Upper

85 100

87 38.7 27.2 40.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.03

10000

8000

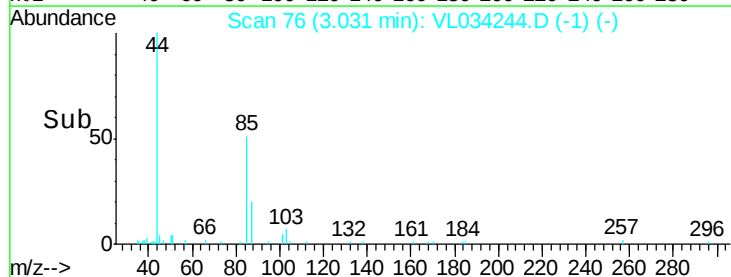
6000

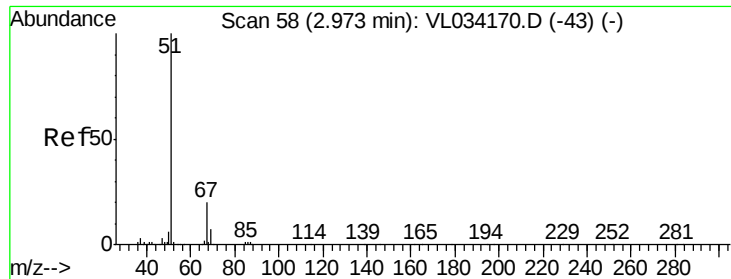
4000

2000

0

Time-->





#3

Chlorodifluoromethane

Concen: 0.092 ppbv

RT: 2.97 min Scan# 56

Delta R.T. -0.01 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

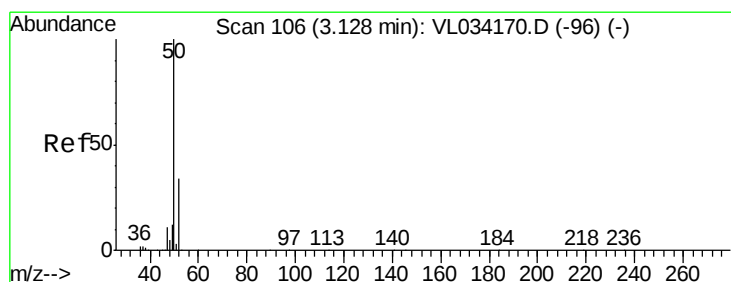
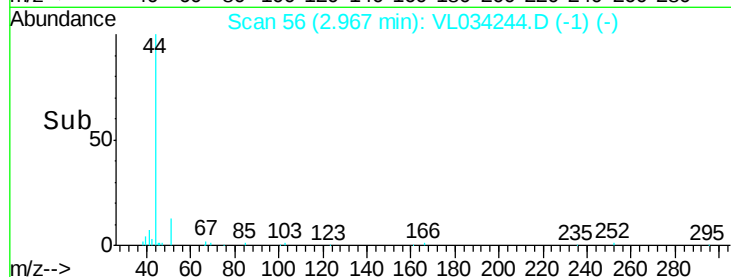
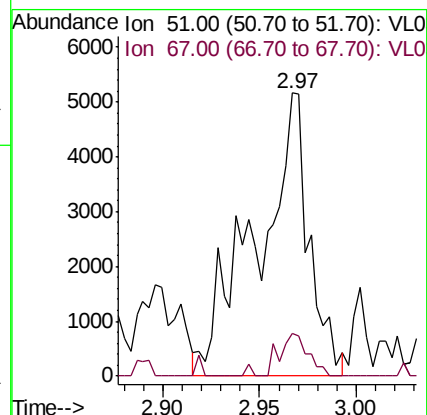
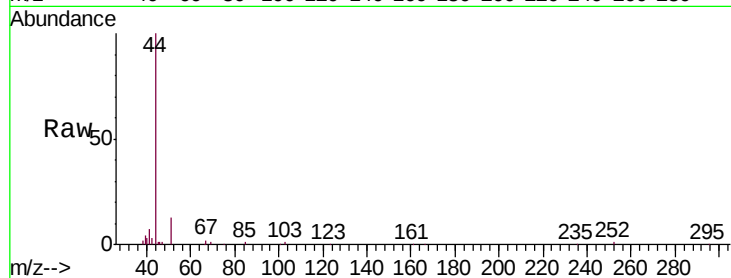
V-4DL

Tgt Ion: 51 Resp: 9678

Ion Ratio Lower Upper

51 100

67 8.6 14.8 22.2#



#4

Chloromethane

Concen: 0.062 ppbv

RT: 3.12 min Scan# 103

Delta R.T. -0.01 min

Lab File: VL034244.D

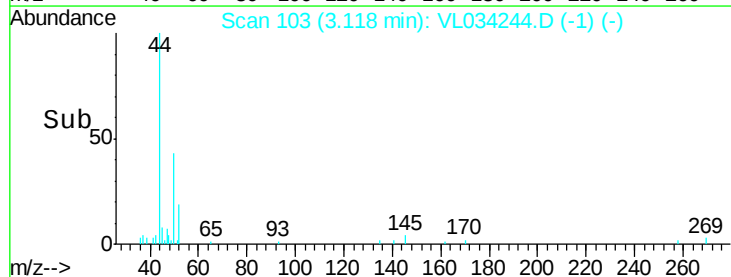
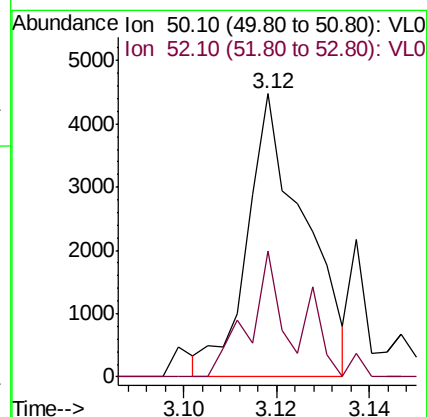
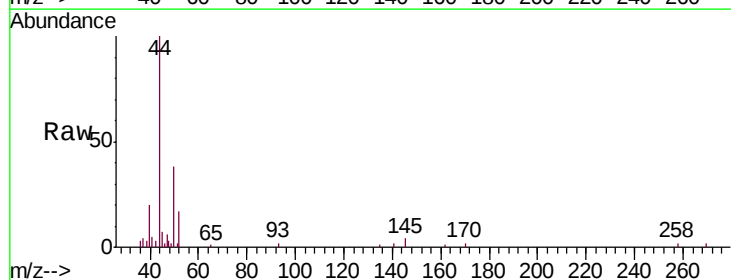
Acq: 8 Oct 2019 5:38

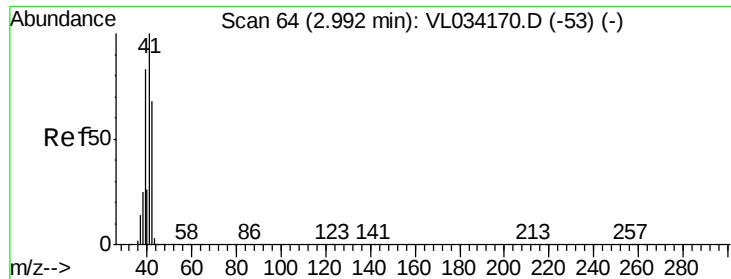
Tgt Ion: 50 Resp: 3834

Ion Ratio Lower Upper

50 100

52 48.0 27.1 40.7#





#9

Propene

Concen: 2.263 ppbv

RT: 2.99 min Scan# 64

Delta R.T. 0.00 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

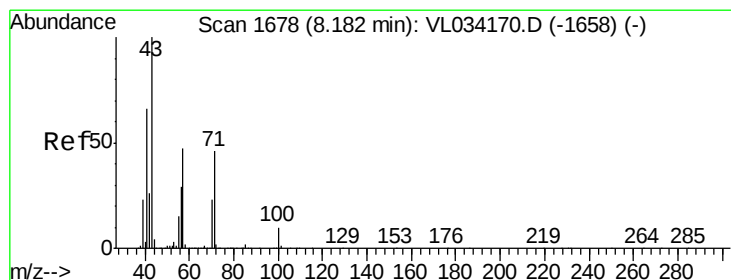
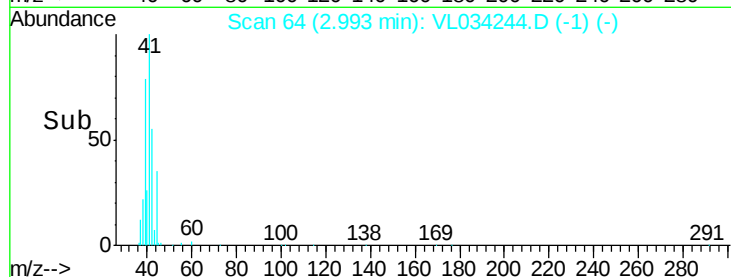
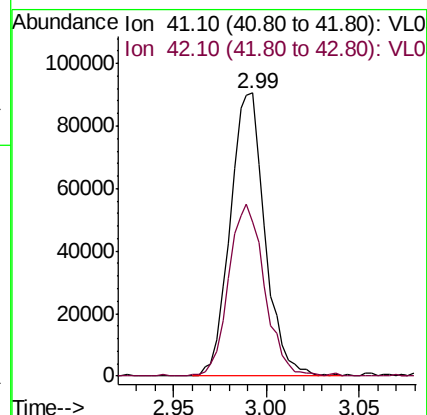
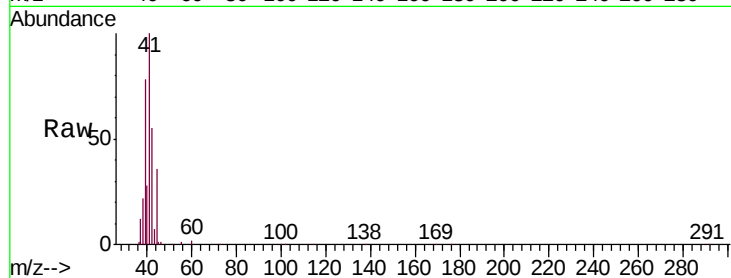
V-4DL

Tgt Ion: 41 Resp: 117438

Ion Ratio Lower Upper

41 100

42 63.4 55.8 83.6



#10

Heptane

Concen: 0.412 ppbv

RT: 8.17 min Scan# 1674

Delta R.T. -0.01 min

Lab File: VL034244.D

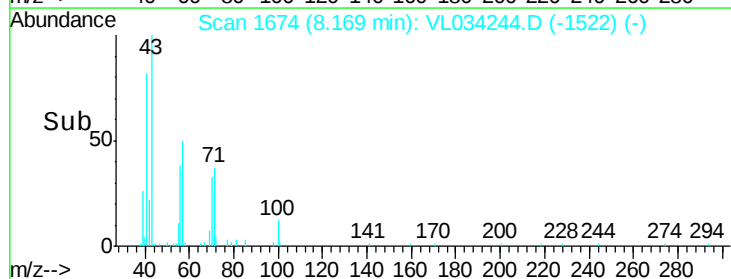
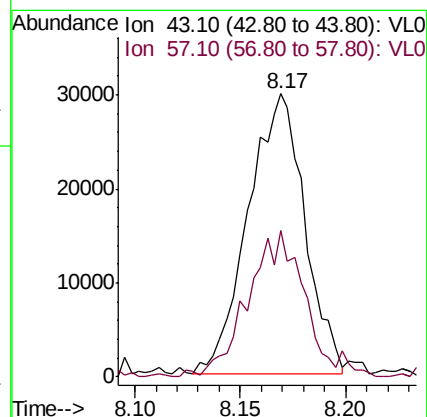
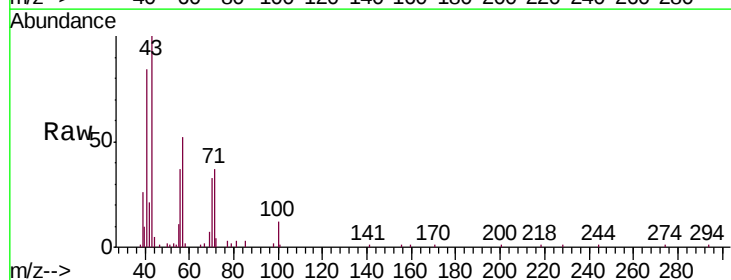
Acq: 8 Oct 2019 5:38

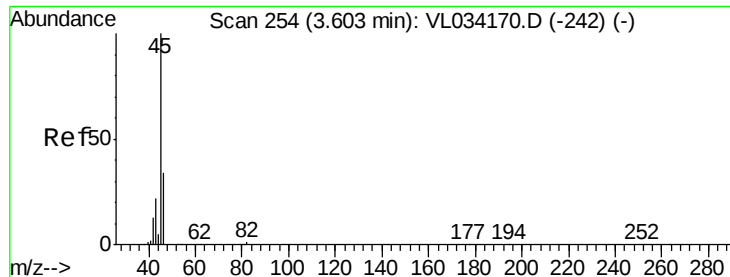
Tgt Ion: 43 Resp: 55726

Ion Ratio Lower Upper

43 100

57 52.7 37.5 56.3





#13

Ethanol

Concen: 20.239 ppbv

RT: 3.60 min Scan# 252

Delta R.T. -0.01 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

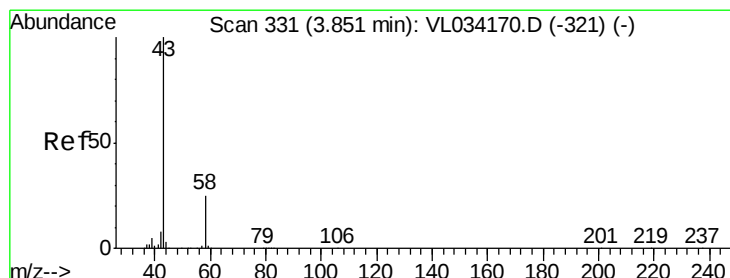
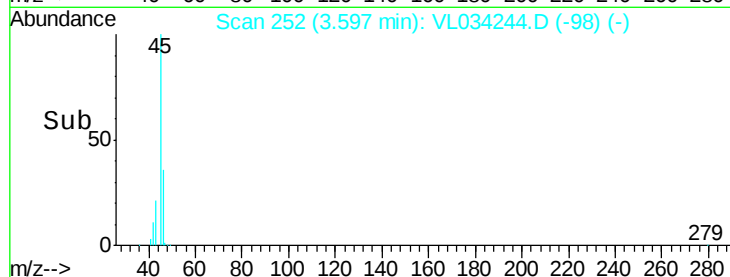
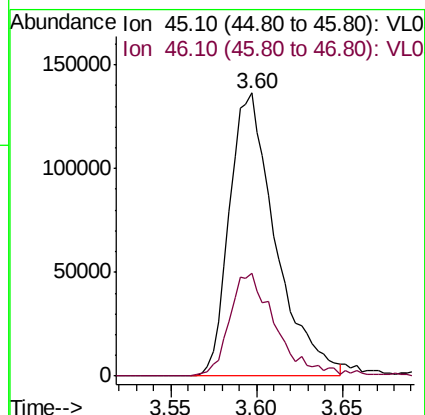
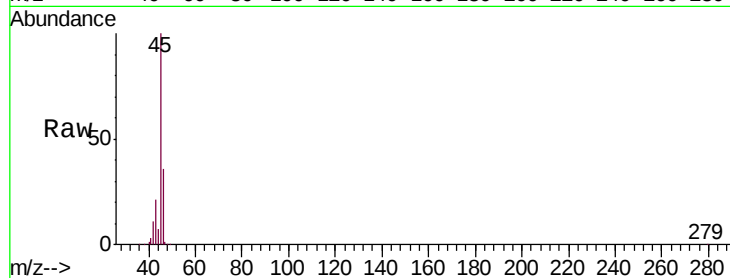
V-4DL

Tgt Ion: 45 Resp: 254374

Ion Ratio Lower Upper

45 100

46 37.4 15.5 61.9



#15

Acetone

Concen: 4.218 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.01 min

Lab File: VL034244.D

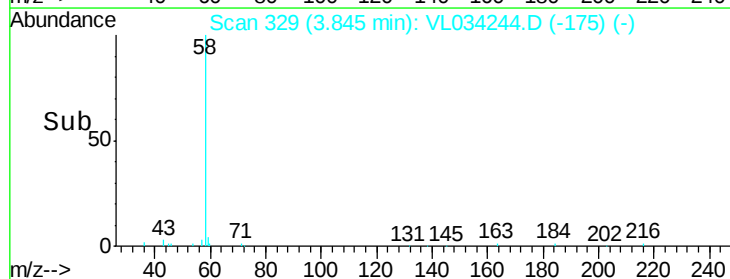
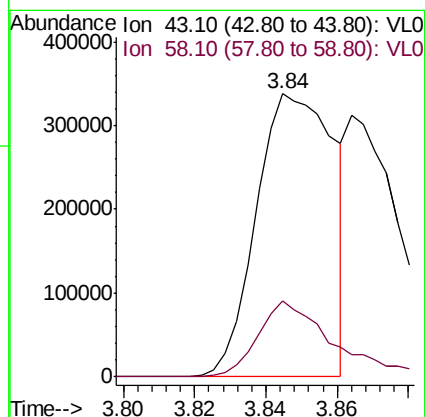
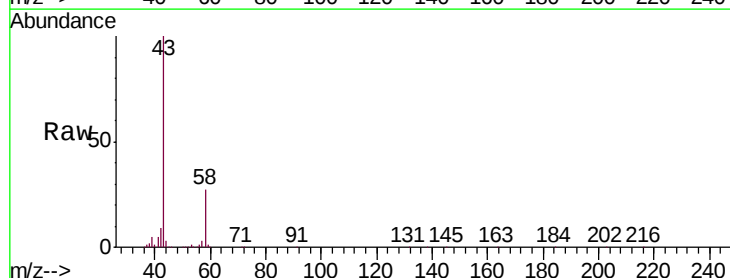
Acq: 8 Oct 2019 5:38

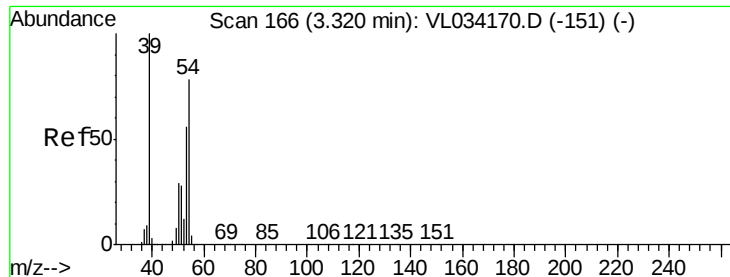
Tgt Ion: 43 Resp: 507302

Ion Ratio Lower Upper

43 100

58 26.6 20.5 30.7

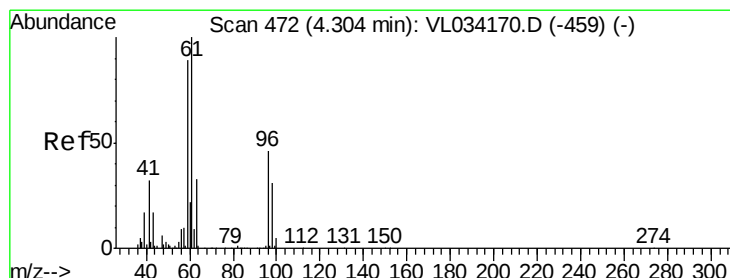
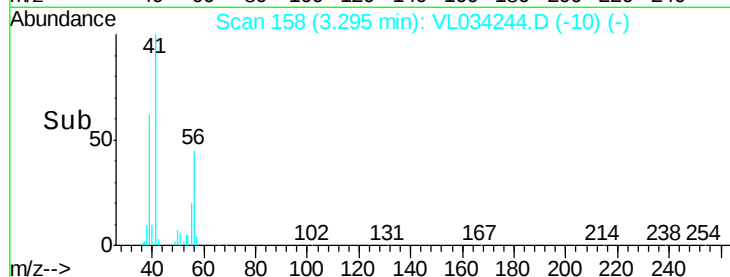
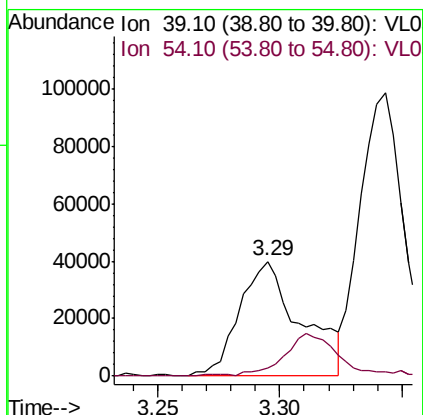
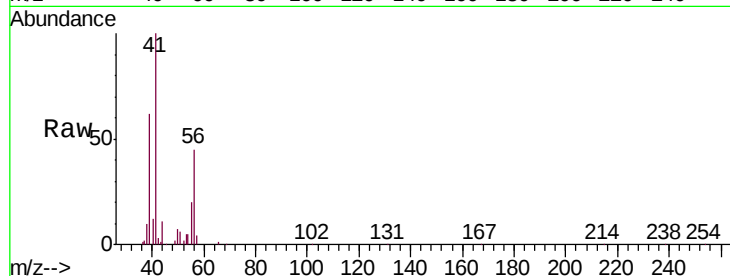




#16
 1,3-Butadiene
 Concen: 1.331 ppbv
 RT: 3.29 min Scan# 158
 Delta R.T. -0.03 min
 Lab File: VL034244.D
 Acq: 8 Oct 2019 5:38

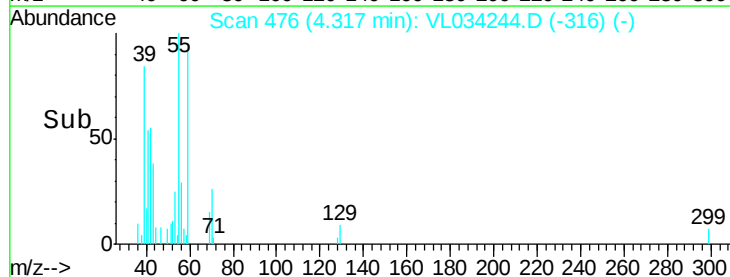
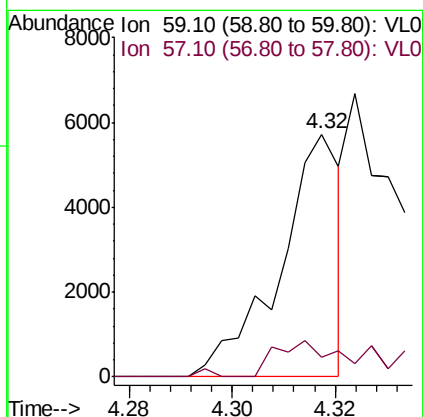
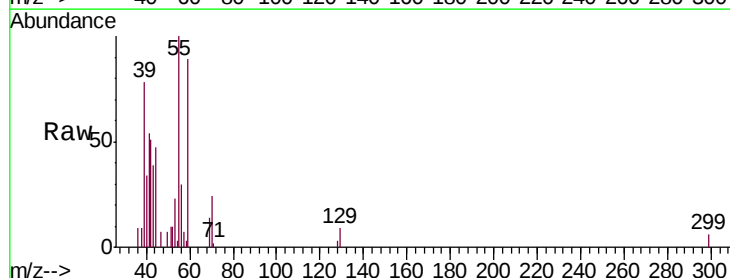
Instrument :
 MSVOA_L
 ClientSampleId :
 V-4DL

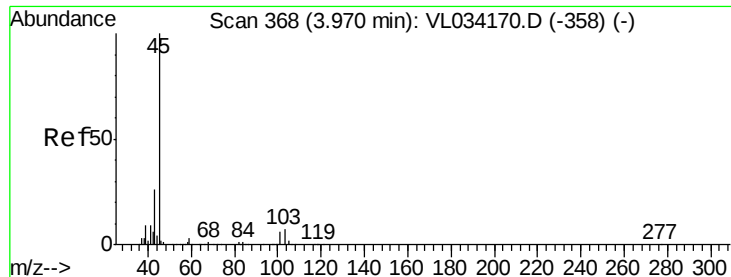
Tgt Ion: 39 Resp: 69830
 Ion Ratio Lower Upper
 39 100
 54 33.5 63.4 95.0#



#17
 tert-Butyl alcohol
 Concen: 0.062 ppbv
 RT: 4.32 min Scan# 476
 Delta R.T. 0.01 min
 Lab File: VL034244.D
 Acq: 8 Oct 2019 5:38

Tgt Ion: 59 Resp: 4687
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.7 13.1#





#19

Isopropyl Alcohol

Concen: 0.090 ppbv

RT: 3.99 min Scan# 373

Delta R.T. 0.02 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

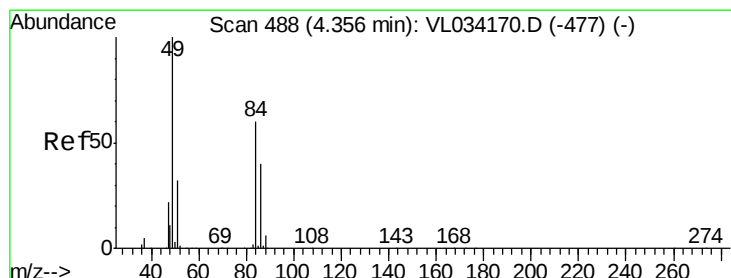
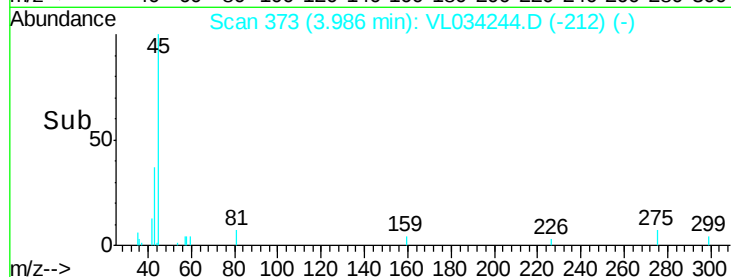
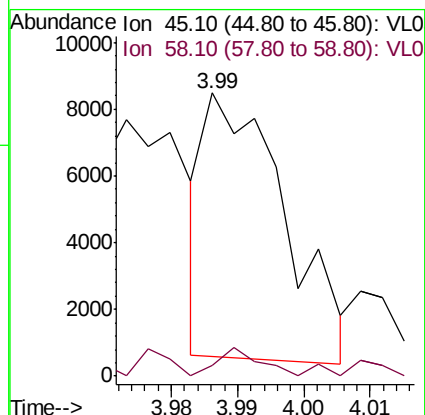
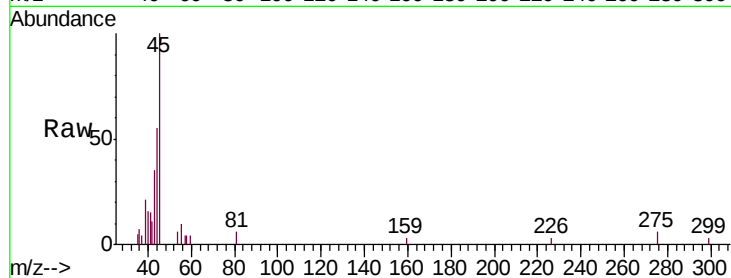
V-4DL

Tgt Ion: 45 Resp: 6679

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.0#



#20

Methylene Chloride

Concen: 0.337 ppbv

RT: 4.35 min Scan# 485

Delta R.T. -0.01 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Tgt Ion: 84 Resp: 11680

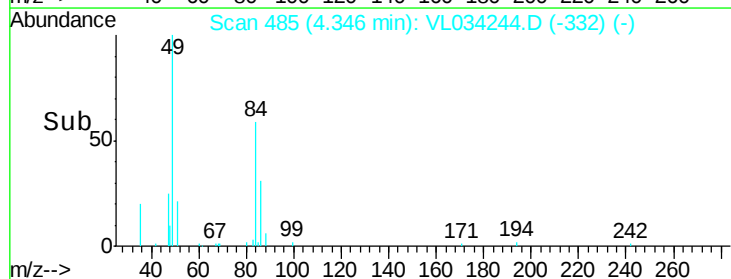
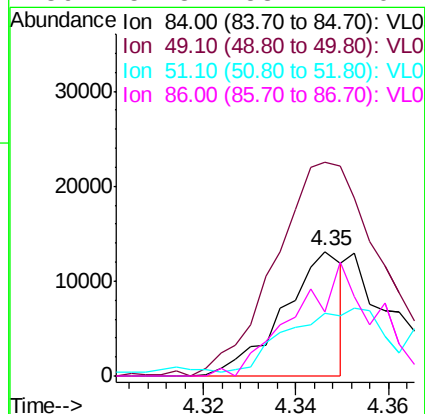
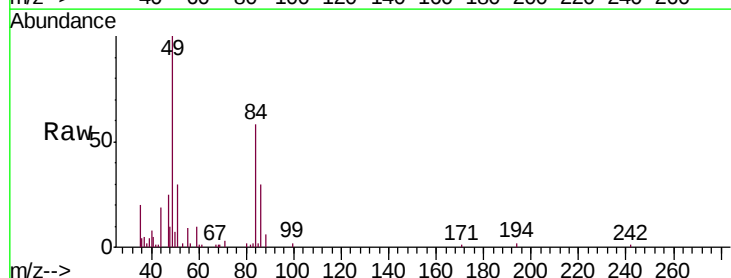
Ion Ratio Lower Upper

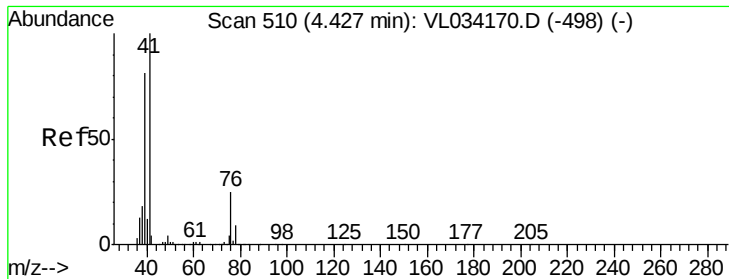
84 100

49 171.6 133.8 200.8

51 40.9 43.6 65.4#

86 51.8 53.1 79.7#





#21

Allyl Chloride

Concen: 0.241 ppbv

RT: 4.37 min Scan# 492

Delta R.T. -0.06 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

V-4DL

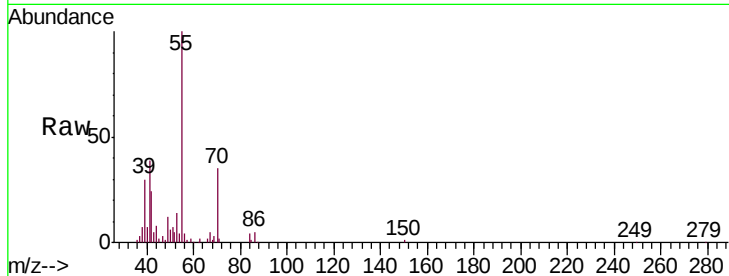
Tgt Ion: 41 Resp: 16340

Ion Ratio Lower Upper

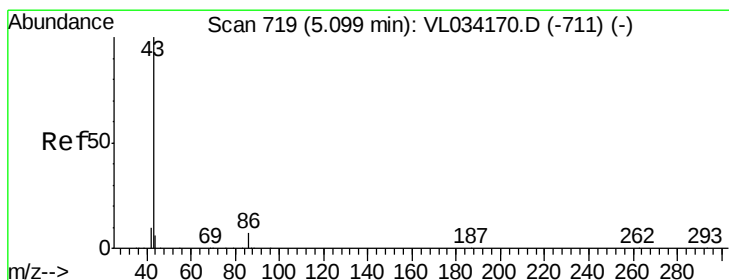
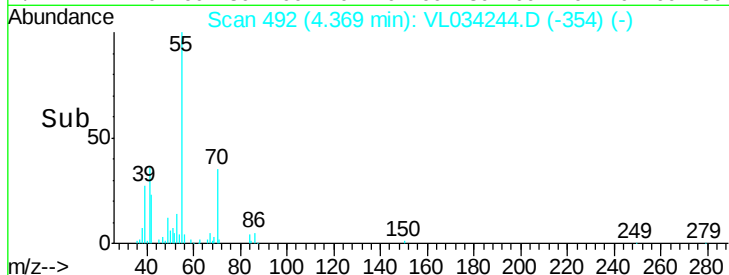
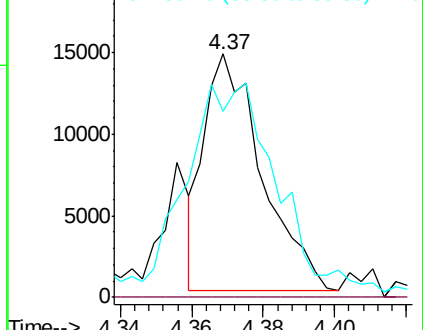
41 100

76 0.0 21.8 32.6#

39 143.1 64.8 97.2#



Abundance Ion 41.10 (40.80 to 41.80): VL0
Ion 76.10 (75.80 to 76.80): VL0
Ion 39.10 (38.80 to 39.80): VL0



#23

Vinyl Acetate

Concen: 0.326 ppbv

RT: 5.07 min Scan# 711

Delta R.T. -0.03 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Tgt Ion: 43 Resp: 57806

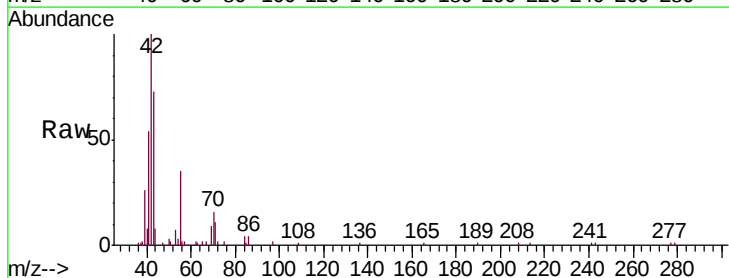
Ion Ratio Lower Upper

43 100

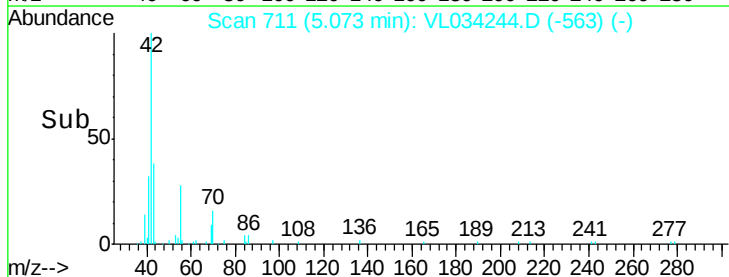
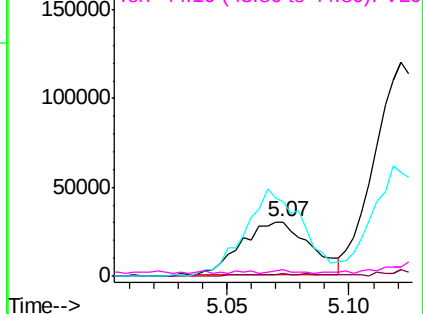
86 4.9 5.1 7.7#

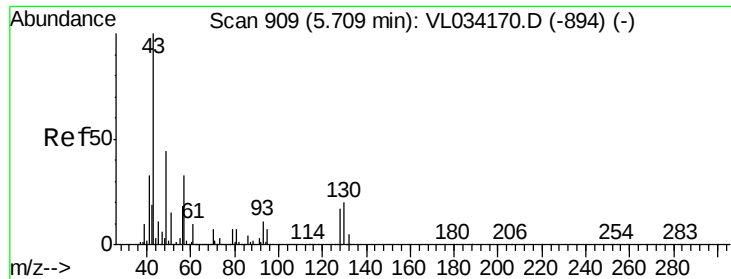
42 139.6 8.6 12.8#

44 6.1 4.7 7.1



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 86.10 (85.80 to 86.80): VL0
Ion 42.10 (41.80 to 42.80): VL0
Ion 44.10 (43.80 to 44.80): VL0

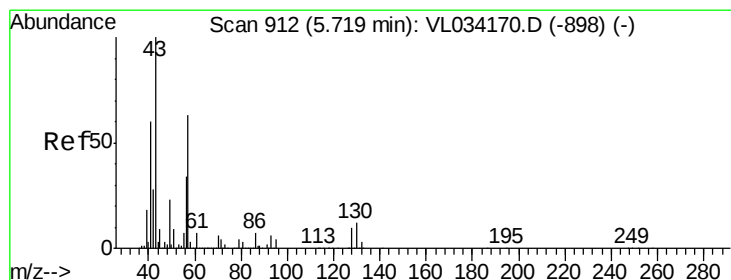
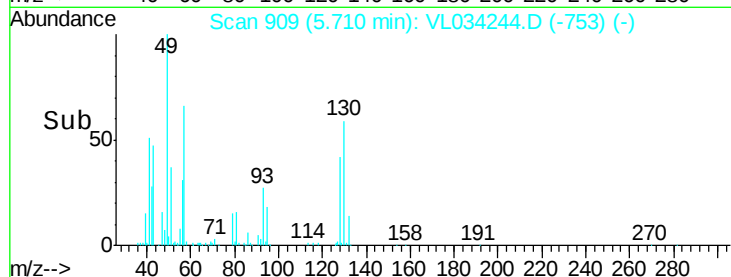
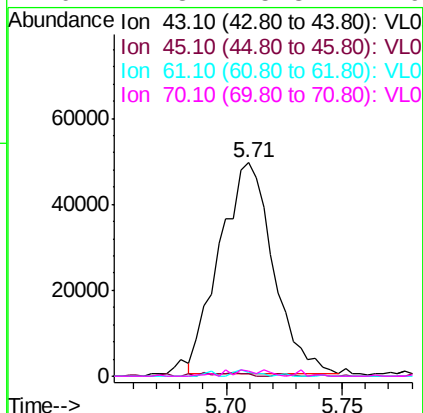
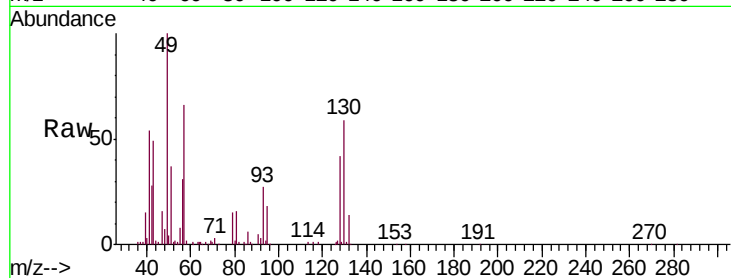




#25
Ethyl Acetate
Concen: 0.347 ppbv
RT: 5.71 min Scan# 909
Delta R.T. 0.00 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

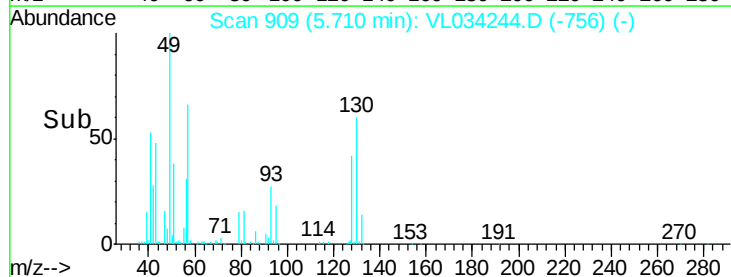
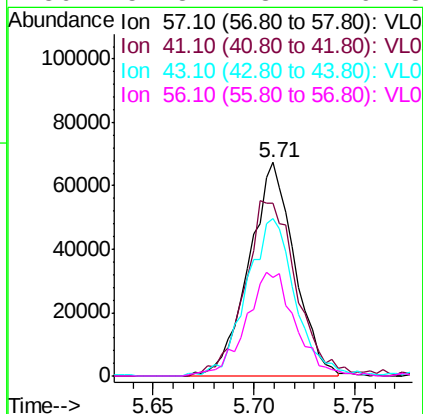
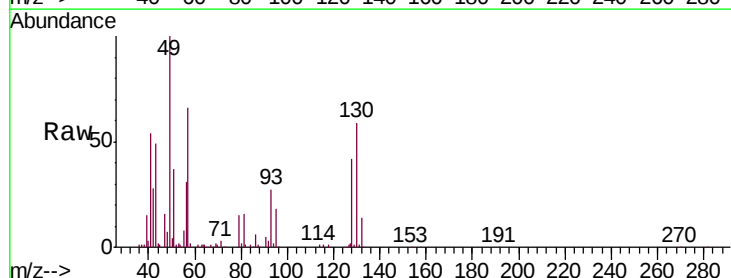
Instrument :
MSVOA_L
ClientSampleId :
V-4DL

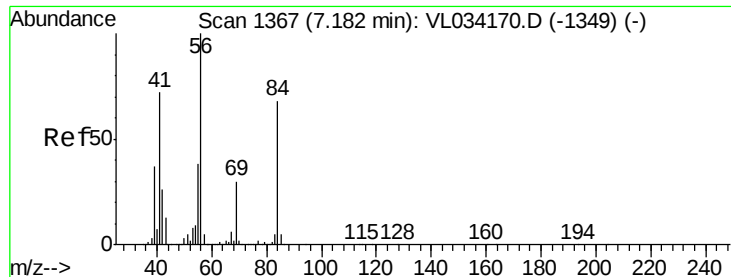
Tgt Ion:	43	Resp:	78862
Ion	Ratio	Lower	Upper
43	100		
45	2.3	8.4	12.6#
61	1.7	7.2	10.8#
70	2.8	5.3	7.9#



#26
Hexane
Concen: 1.122 ppbv
RT: 5.71 min Scan# 909
Delta R.T. -0.01 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

Tgt Ion:	57	Resp:	106120
Ion	Ratio	Lower	Upper
57	100		
41	94.2	78.5	117.7
43	79.1	189.5	284.3#
56	52.8	43.2	64.8

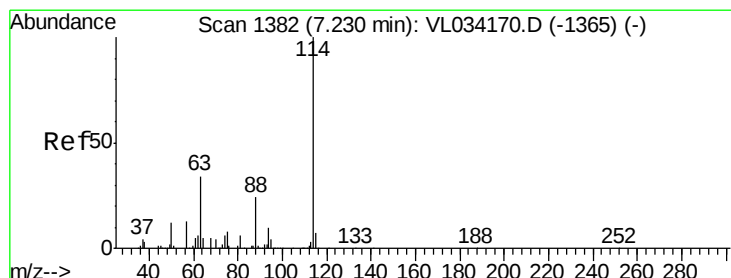
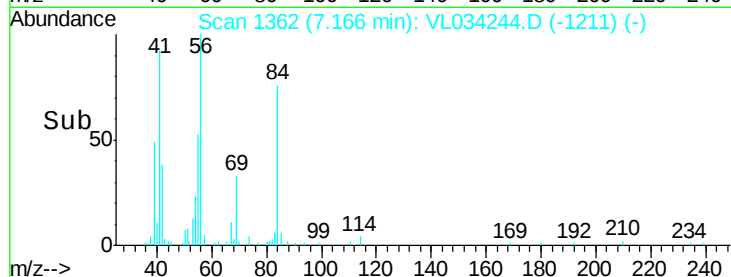
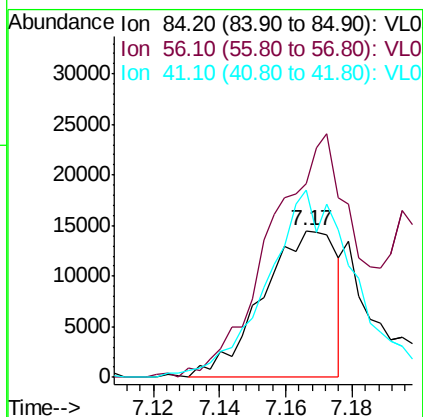
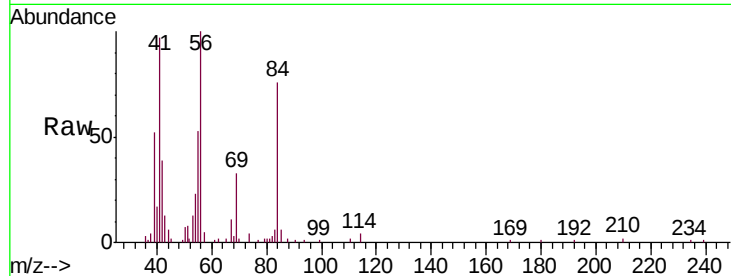




#30
Cyclohexane
Concen: 0.328 ppbv
RT: 7.17 min Scan# 1362
Delta R.T. -0.02 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

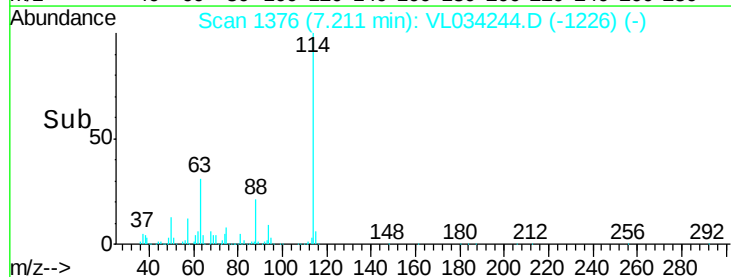
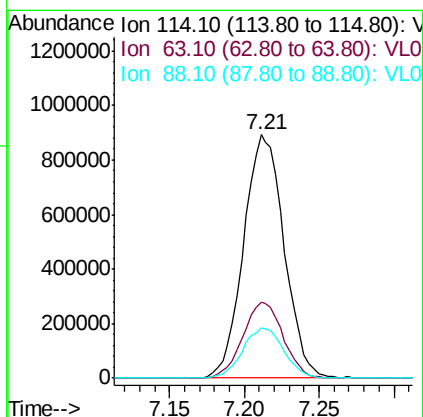
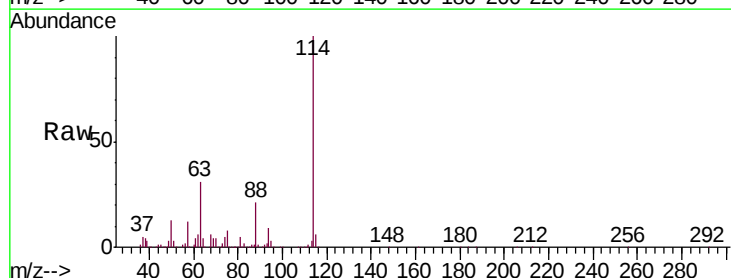
Instrument :
MSVOA_L
ClientSampleId :
V-4DL

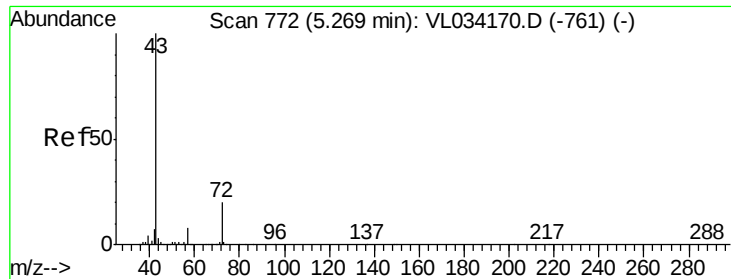
Tgt Ion: 84 Resp: 22381
Ion Ratio Lower Upper
84 100
56 0.0 126.2 189.2#
41 155.0 85.8 128.8#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.21 min Scan# 1376
Delta R.T. -0.02 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

Tgt Ion: 114 Resp: 1682811
Ion Ratio Lower Upper
114 100
63 31.1 27.8 41.6
88 21.0 17.1 25.7

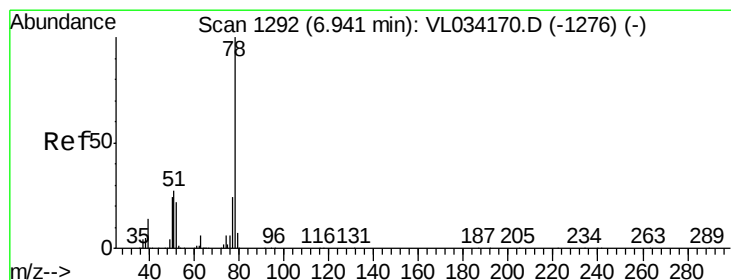
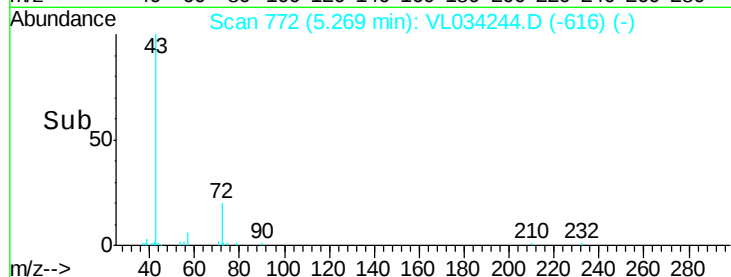
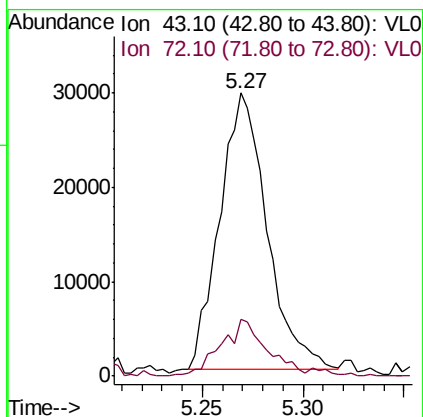
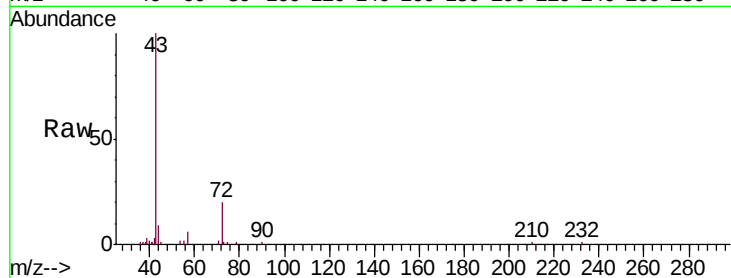




#34
2-Butanone
Concen: 0.278 ppbv
RT: 5.27 min Scan# 772
Delta R.T. 0.00 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

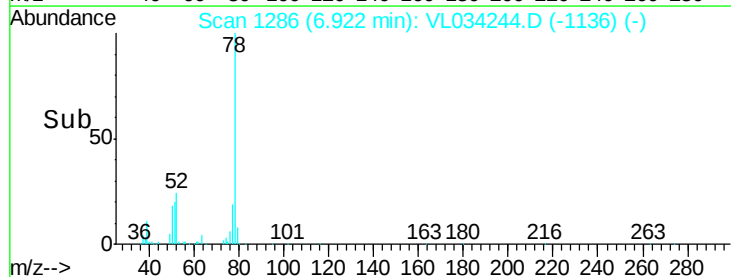
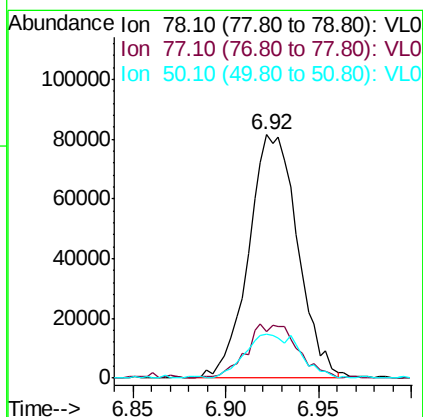
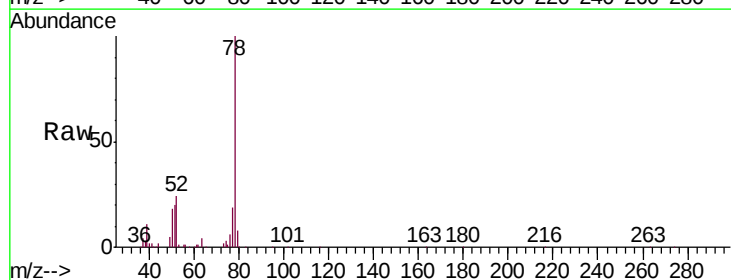
Instrument :
MSVOA_L
ClientSampleId :
V-4DL

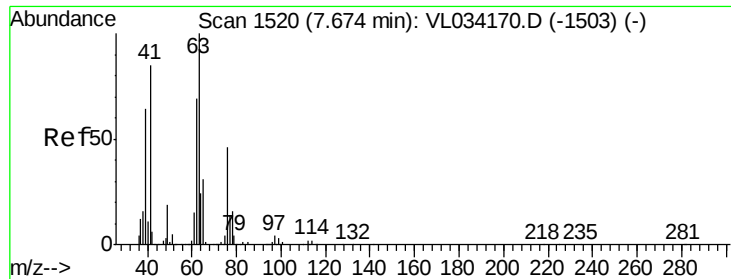
Tgt Ion: 43 Resp: 47733
Ion Ratio Lower Upper
43 100
72 21.3 15.0 22.6



#36
Benzene
Concen: 0.803 ppbv
RT: 6.92 min Scan# 1286
Delta R.T. -0.02 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

Tgt Ion: 78 Resp: 149194
Ion Ratio Lower Upper
78 100
77 18.9 19.0 28.4#
50 17.7 18.9 28.3#





#39

1,2-Dichloropropane

Concen: 6.240 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. -0.46 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

V-4DL

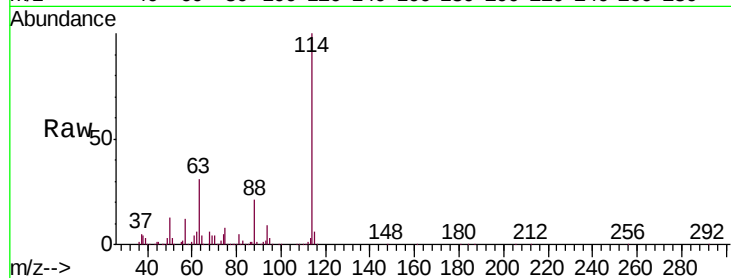
Tgt Ion: 63 Resp: 521064

Ion Ratio Lower Upper

63 100

41 0.0 68.4 102.6#

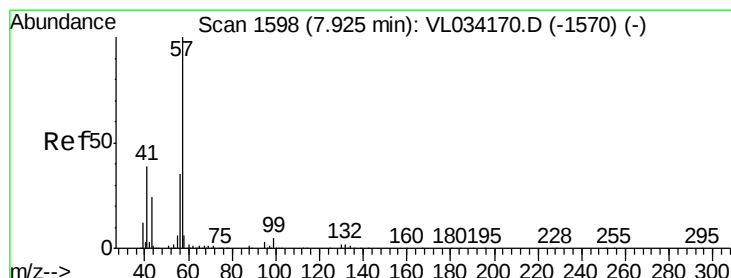
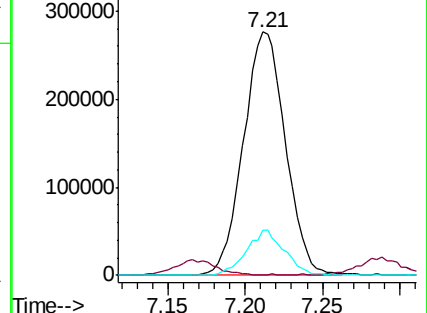
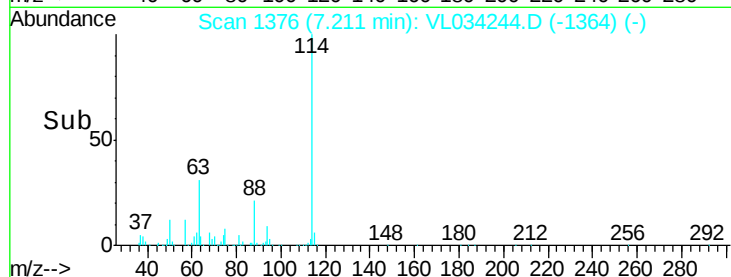
62 18.5 55.4 83.2#



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: 0.204 ppbv

RT: 7.91 min Scan# 1594

Delta R.T. -0.01 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

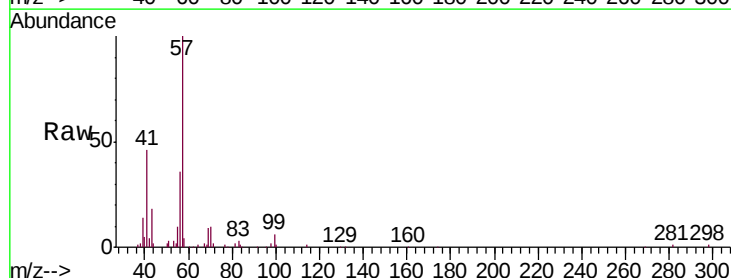
Tgt Ion: 57 Resp: 72920

Ion Ratio Lower Upper

57 100

41 68.9 29.8 44.6#

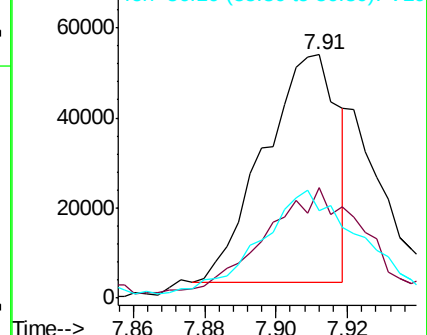
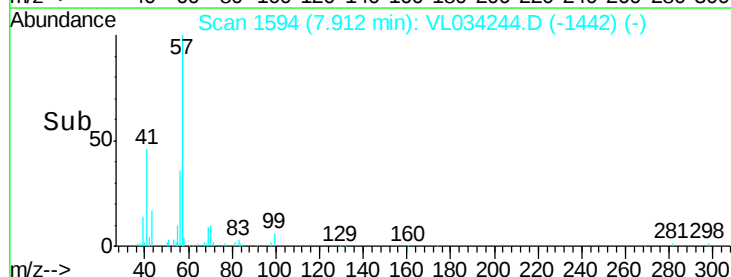
56 68.3 25.9 38.9#

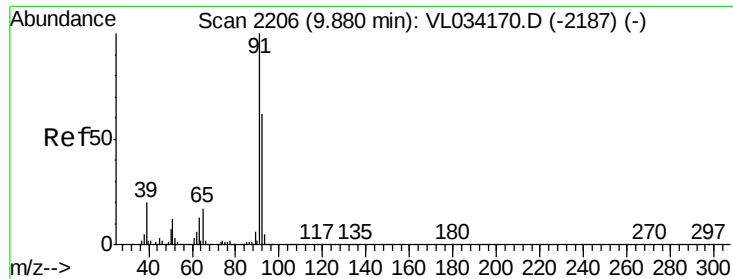


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





#53

Toluene

Concen: 2.402 ppbv

RT: 9.86 min Scan# 2200

Delta R.T. -0.02 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampled :

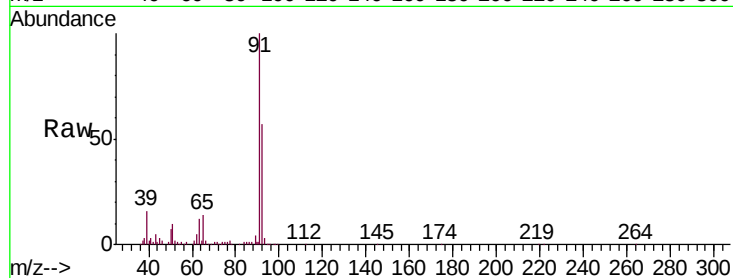
V-4DL

Tgt Ion: 91 Resp: 487923

Ion Ratio Lower Upper

91 100

92 58.3 49.0 73.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.86

250000

200000

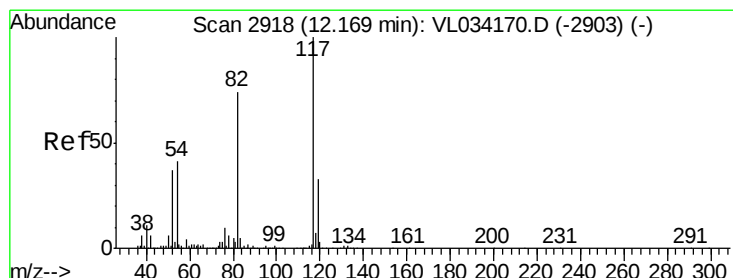
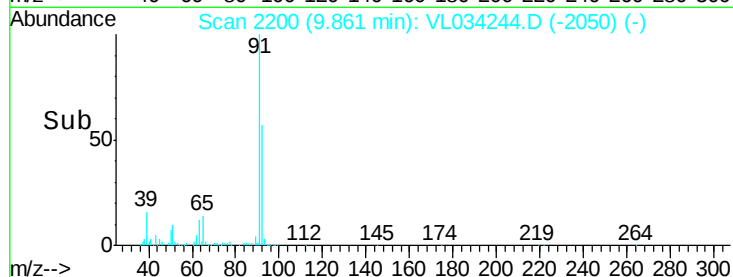
150000

100000

50000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2912

Delta R.T. -0.02 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

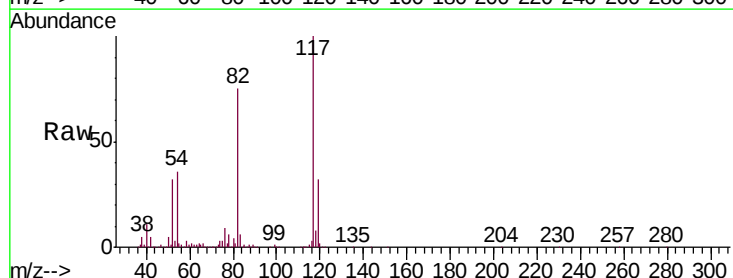
Tgt Ion: 117 Resp: 1699494

Ion Ratio Lower Upper

117 100

82 73.4 58.2 87.4

119 32.8 23.7 35.5



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

12.15

1000000

800000

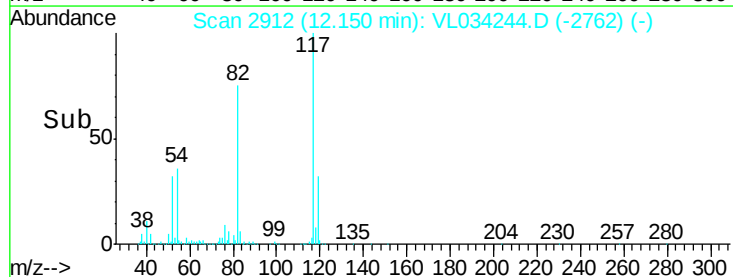
600000

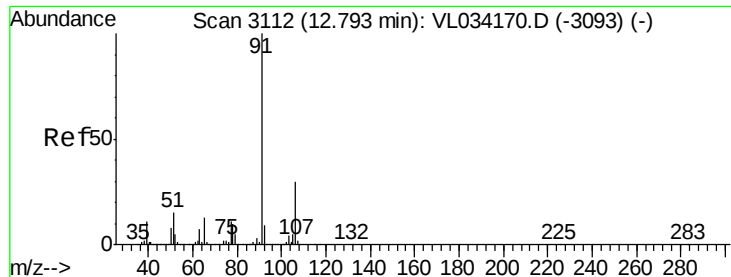
400000

200000

0

Time-->





#58

Ethyl Benzene

Concen: 0.166 ppbv

RT: 12.78 min Scan# 3107

Delta R.T. -0.02 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampled :

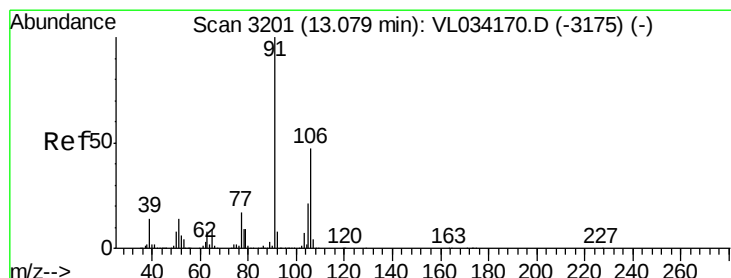
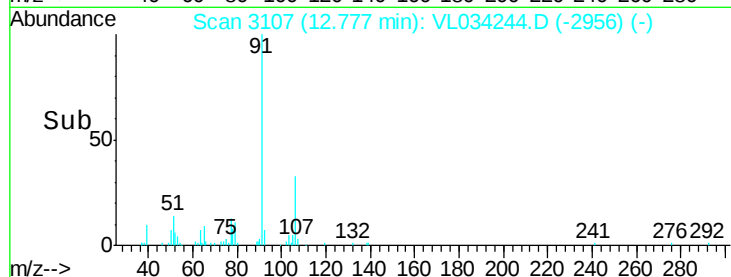
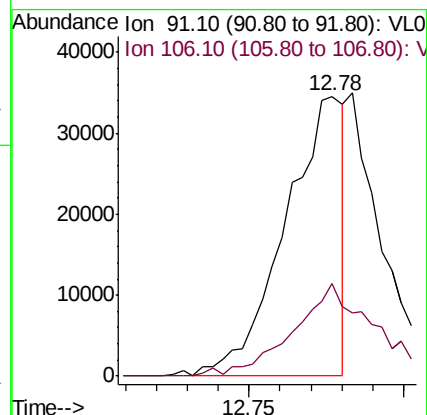
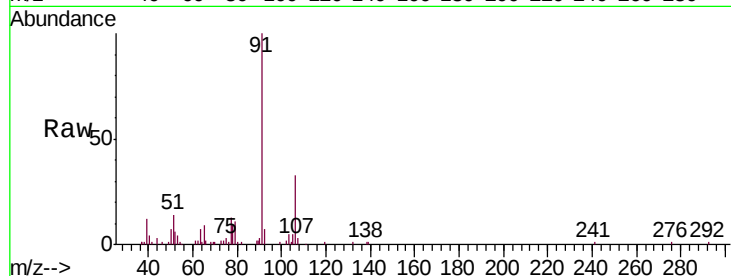
V-4DL

Tgt Ion: 91 Resp: 45426

Ion Ratio Lower Upper

91 100

106 33.2 24.2 36.4



#59

m/p-Xylene

Concen: 0.194 ppbv

RT: 13.07 min Scan# 3197

Delta R.T. -0.01 min

Lab File: VL034244.D

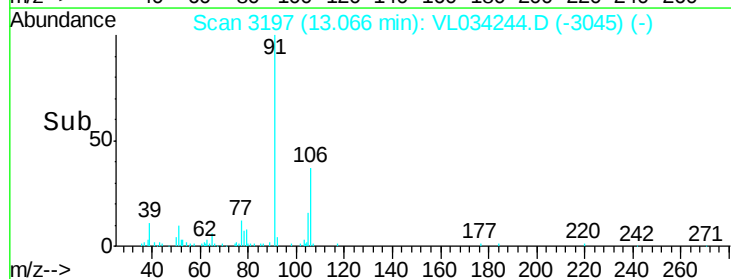
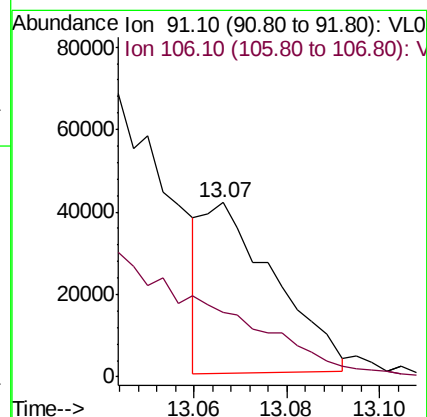
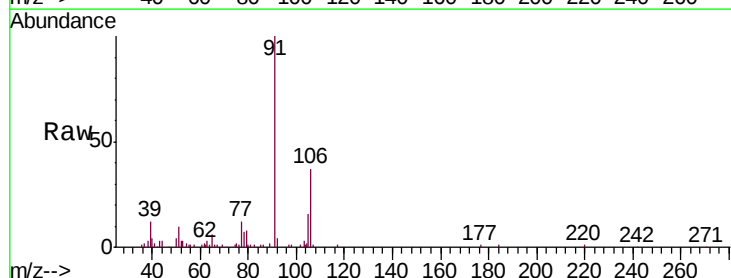
Acq: 8 Oct 2019 5:38

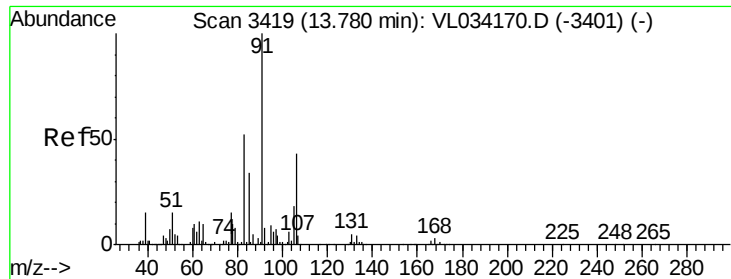
Tgt Ion: 91 Resp: 44152

Ion Ratio Lower Upper

91 100

106 0.0 35.5 53.3#

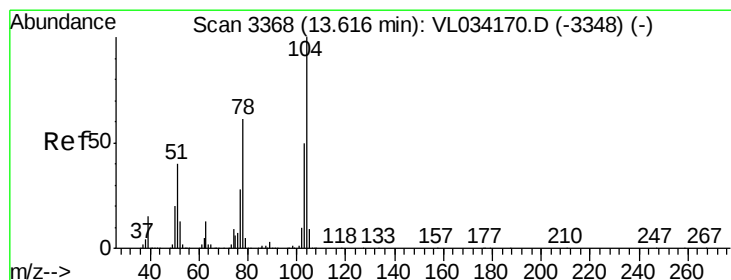
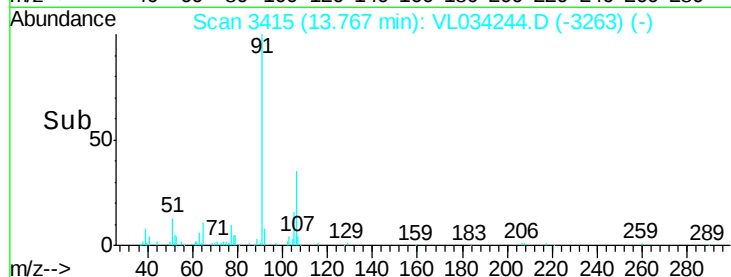
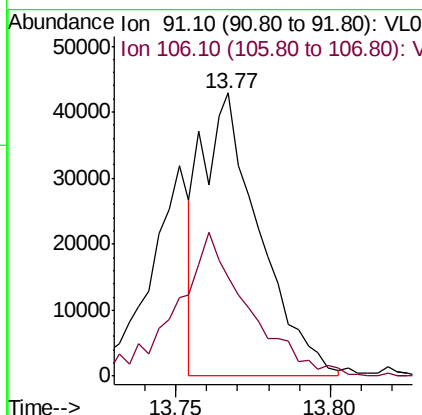
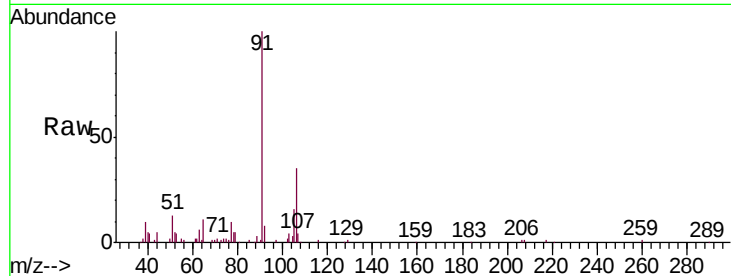




#60
o-Xylene
Concen: 0.242 ppbv
RT: 13.77 min Scan# 3415
Delta R.T. -0.01 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

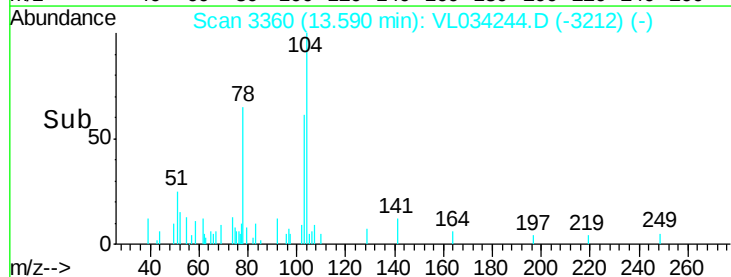
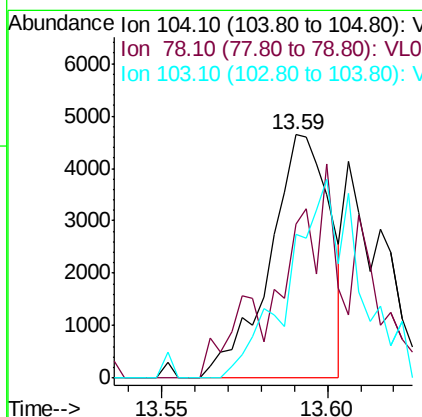
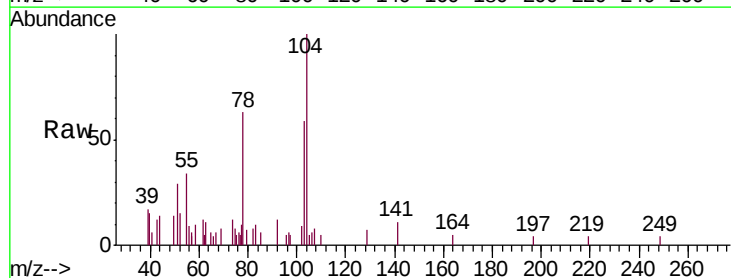
Instrument :
MSVOA_L
ClientSampleId :
V-4DL

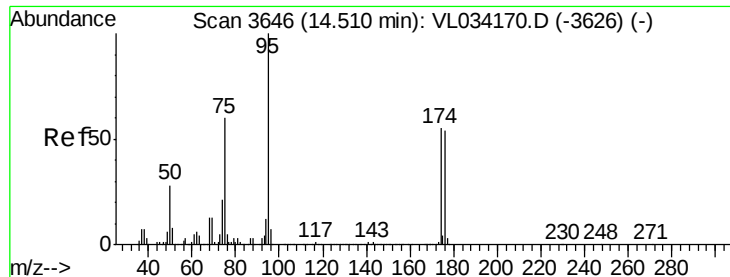
Tgt Ion: 91 Resp: 55056
Ion Ratio Lower Upper
91 100
106 64.5 21.2 63.6#



#61
Styrene
Concen: 0.036 ppbv
RT: 13.59 min Scan# 3360
Delta R.T. -0.03 min
Lab File: VL034244.D
Acq: 8 Oct 2019 5:38

Tgt Ion: 104 Resp: 5918
Ion Ratio Lower Upper
104 100
78 0.0 49.7 74.5#
103 0.0 38.4 57.6#





#68

1-Bromo-4-Fluorobenzene

Concen: 9.901 ppbv

RT: 14.49 min Scan# 3639

Delta R.T. -0.02 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Instrument :

MSVOA_L

ClientSampleId :

V-4DL

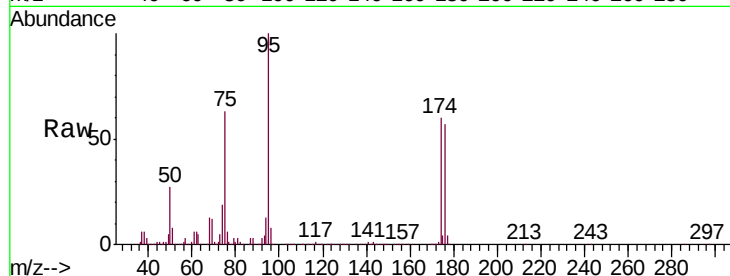
Tgt Ion: 95 Resp: 1462157

Ion Ratio Lower Upper

95 100

174 59.9 45.1 67.7

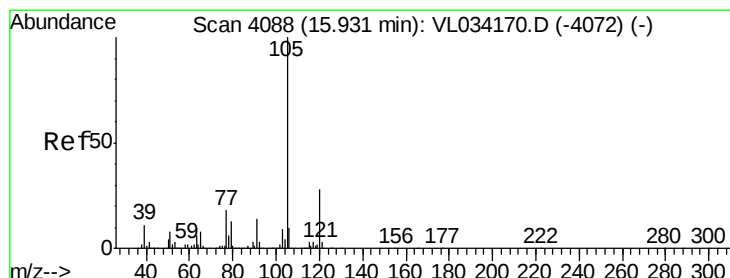
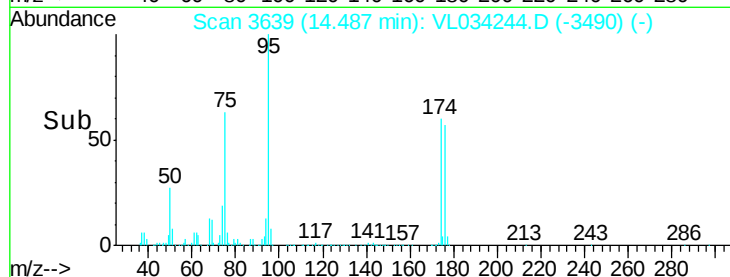
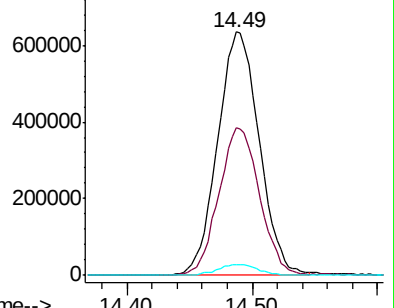
175 4.4 3.3 4.9



Abundance Ion 95.10 (94.80 to 95.80): VL034170.D (-3626) (-)

Ion 174.00 (173.70 to 174.70): VL034170.D (-3626) (-)

Ion 175.00 (174.70 to 175.70): VL034170.D (-3626) (-)



#72

4-Ethyltoluene

Concen: 0.033 ppbv

RT: 15.91 min Scan# 4080

Delta R.T. -0.03 min

Lab File: VL034244.D

Acq: 8 Oct 2019 5:38

Tgt Ion: 105 Resp: 8388

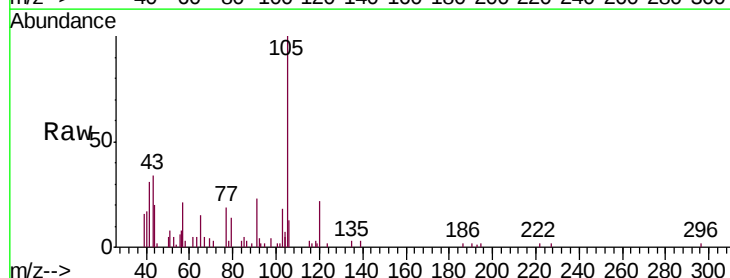
Ion Ratio Lower Upper

105 100

120 0.0 23.3 34.9#

91 53.2 11.4 17.2#

77 66.4 13.3 19.9#

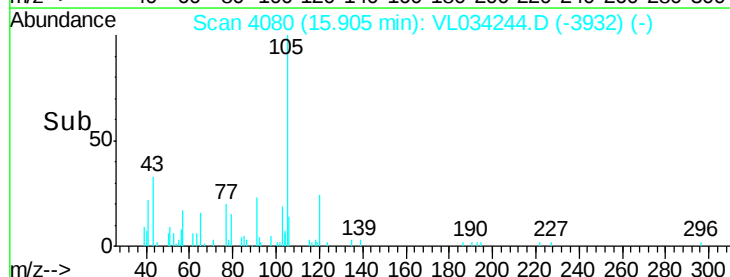
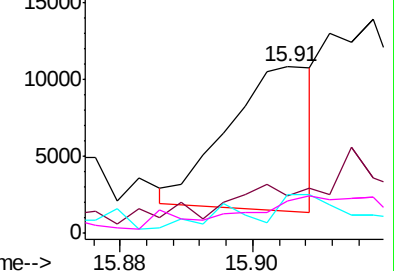


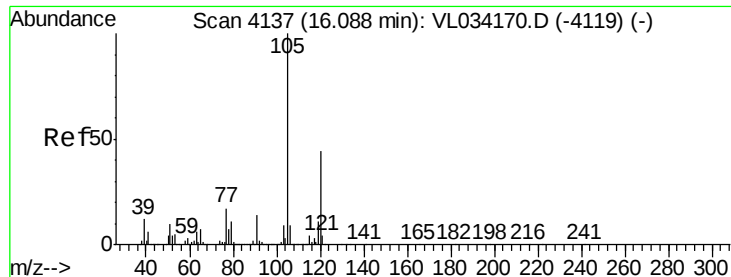
Abundance Ion 105.10 (104.80 to 105.80): VL034170.D (-4072) (-)

Ion 120.20 (119.90 to 120.90): VL034170.D (-4072) (-)

Ion 91.10 (90.80 to 91.80): VL034170.D (-4072) (-)

Ion 77.10 (76.80 to 77.80): VL034170.D (-4072) (-)

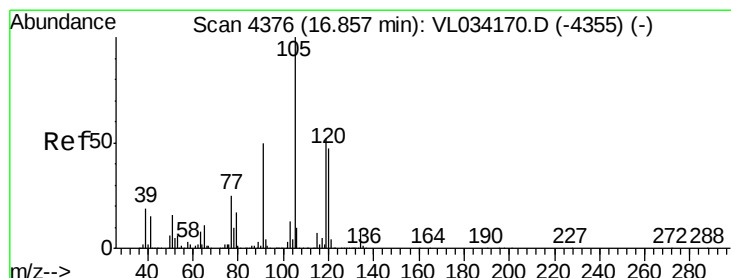
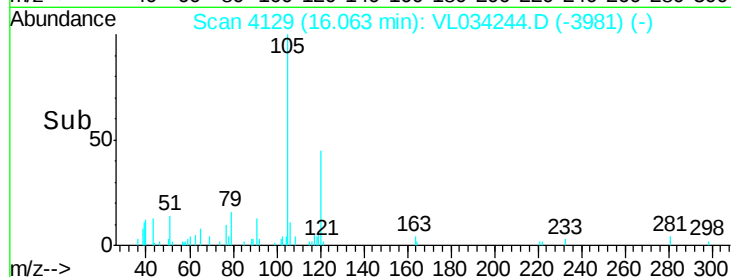
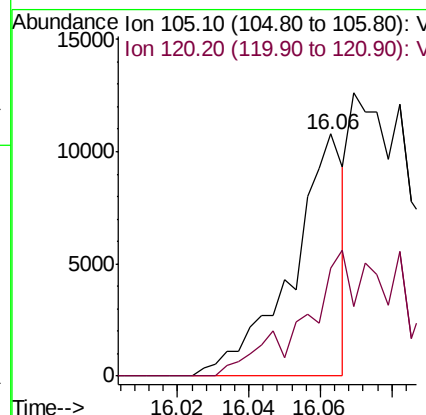
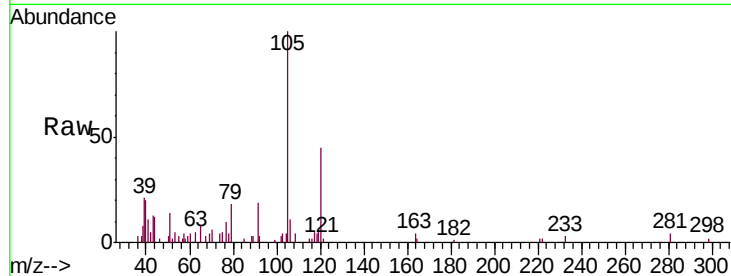




#73
 1,3,5-Trimethylbenzene
 Concen: 0.044 ppbv
 RT: 16.06 min Scan# 4129
 Delta R.T. -0.03 min
 Lab File: VL034244.D
 Acq: 8 Oct 2019 5:38

Instrument :
 MSVOA_L
 ClientSampled :
 V-4DL

Tgt Ion:105 Resp: 10849
 Ion Ratio Lower Upper
 105 100
 120 44.8 35.6 53.4



#74
 1,2,4-Trimethylbenzene
 Concen: 0.355 ppbv
 RT: 16.84 min Scan# 4370
 Delta R.T. -0.02 min
 Lab File: VL034244.D
 Acq: 8 Oct 2019 5:38

Tgt Ion:105 Resp: 93515
 Ion Ratio Lower Upper
 105 100
 120 34.0 37.5 56.3#
 91 13.6 41.1 61.7#
 77 12.3 19.9 29.9#

