

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL011216\
 Data File : VL026674.D
 Acq On : 12 Jan 2016 14:43
 Operator : SY/AP
 Sample : H1064-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Jan 13 03:01:35 2016
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL010816AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Jan 11 17:14:02 2016
 QLast Update : Mon Jan 11 17:14:02 2016
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.68	49	905904	10.00	ppbv	0.05
33) 1,4-Difluorobenzene	8.36	114	2624971	10.00	ppbv	0.05
55) Chlorobenzene-d5	13.78	117	3152866	10.00	ppbv	0.05

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	16.32	95	2557857	10.18	ppbv	0.05
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.80%

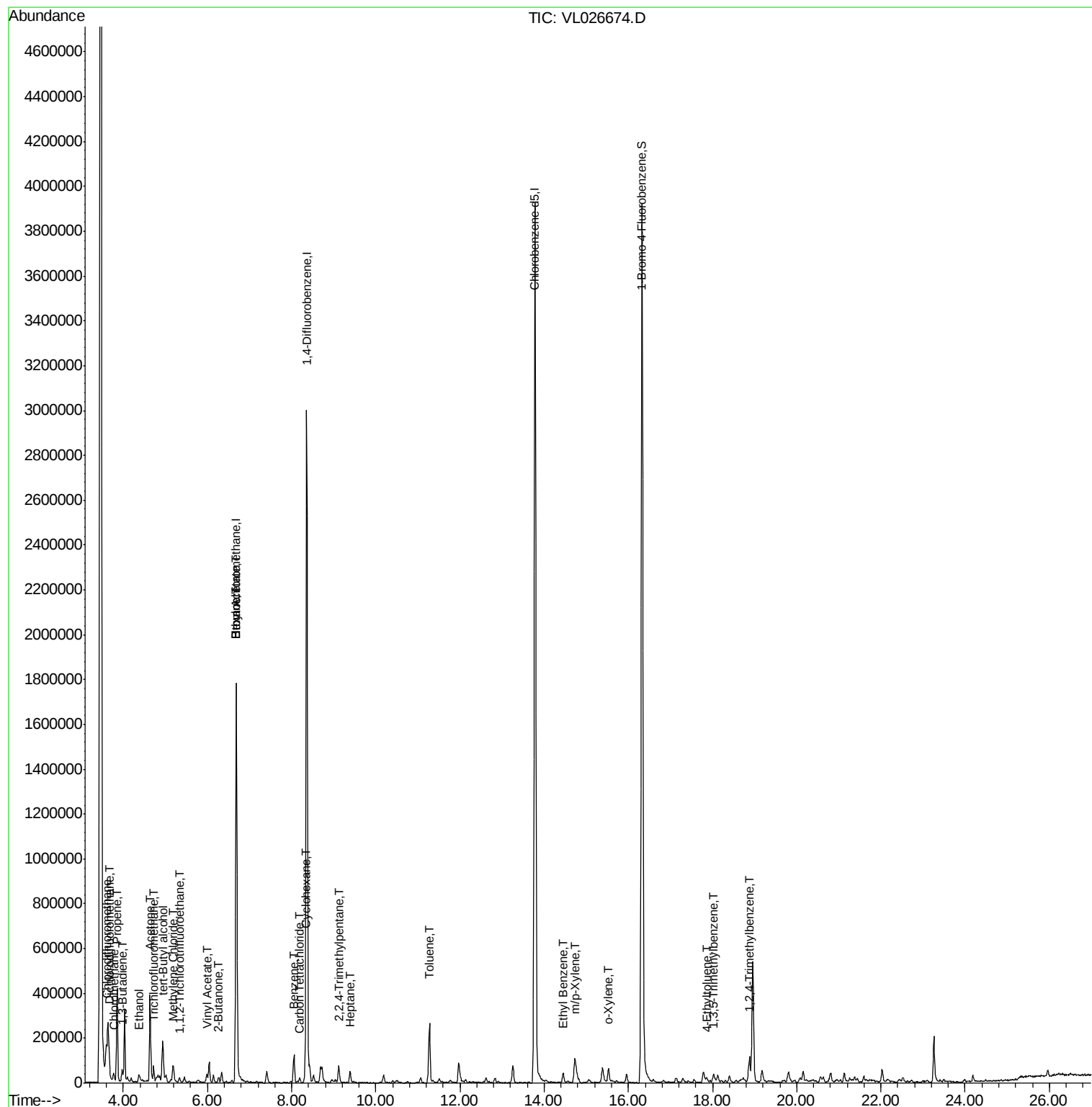
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.67	85	119287	0.50	ppbv	98
3) Chlorodifluoromethane	3.59	51	179086	1.49	ppbv	91
4) Chloromethane	3.78	50	27308	0.46	ppbv	93
9) Propene	3.86	41	164036	3.78	ppbv	90
10) Heptane	9.38	43	20469	0.13	ppbv	96
11) Trichlorofluoromethane	4.72	101	54276	0.22	ppbv	96
12) 1,1,2-Trichlorotrifluoroet	5.33	101	5798	0.04	ppbv #	16
13) Ethanol	4.37	45	48427	5.88	ppbv	95
15) Acetone	4.64	43	316534	2.12	ppbv	93
16) 1,3-Butadiene	3.98	39	8671	0.15	ppbv #	60
17) tert-Butyl alcohol	4.95	59	70086	0.62	ppbv #	77
20) Methylene Chloride	5.18	84	27265	0.45	ppbv	99
23) Vinyl Acetate	5.99	43	15940	0.07	ppbv #	1
25) Ethyl Acetate	6.69	43	47693	0.21	ppbv #	78
26) Hexane	6.69	57	76132	0.64	ppbv #	50
30) Cyclohexane	8.32	84	9971	0.08	ppbv #	23
34) 2-Butanone	6.26	43	30637	0.22	ppbv	99
35) Carbon Tetrachloride	8.19	117	13252	0.06	ppbv #	77
36) Benzene	8.06	78	133897	0.50	ppbv	97
44) 2,2,4-Trimethylpentane	9.12	57	58776	0.13	ppbv #	85
53) Toluene	11.27	91	244586	0.64	ppbv	100
58) Ethyl Benzene	14.46	91	47045	0.08	ppbv	97
59) m/p-Xylene	14.73	91	140434	0.30	ppbv	97
60) o-Xylene	15.53	91	59593	0.12	ppbv	100
72) 4-Ethyltoluene	17.86	105	22557	0.04	ppbv #	88
73) 1,3,5-Trimethylbenzene	18.02	105	31717	0.06	ppbv	86
74) 1,2,4-Trimethylbenzene	18.88	105	107095	0.19	ppbv #	77

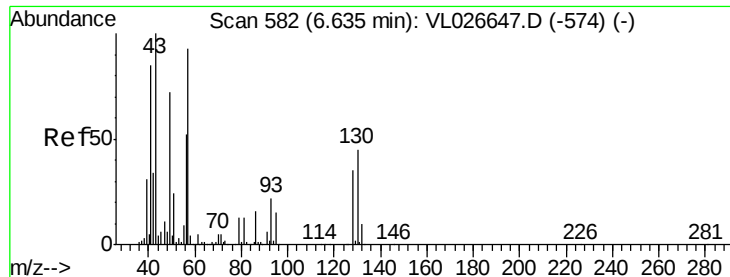
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Jan 13 03:01:35 2016
Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL010816AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Jan 11 17:14:02 2016
QLast Update : Mon Jan 11 17:14:02 2016
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.68 min Scan# 590

Delta R.T. 0.05 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :
MSVOA_L
ClientSampleId :

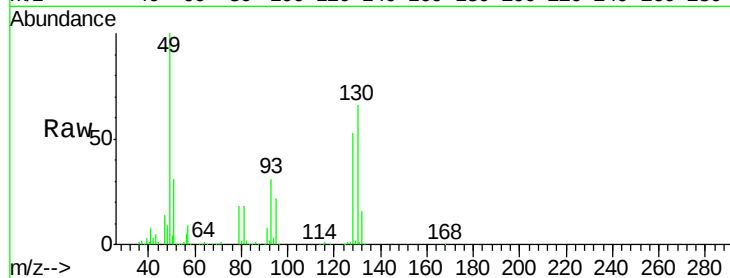
Tot Ion: 49 Resp: 905904

Ion Ratio Lower Upper

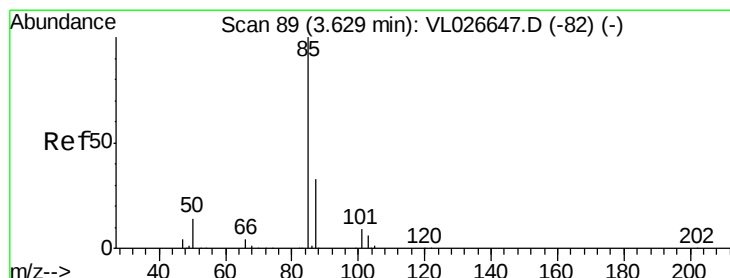
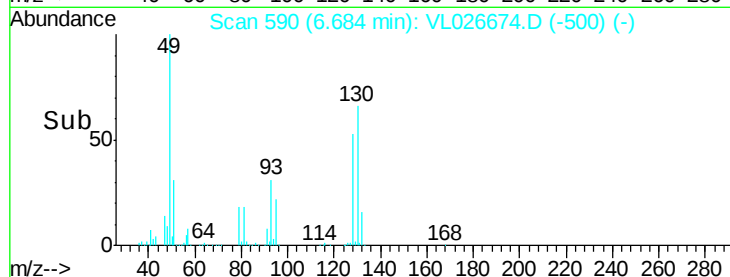
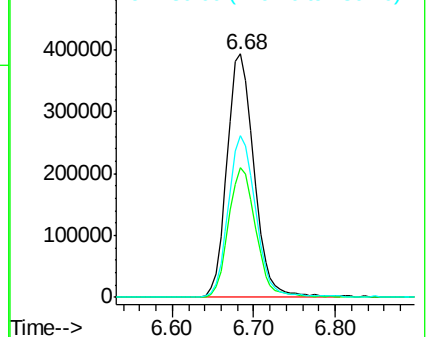
49 100

128 54.2 25.9 77.7

130 67.2 33.6 100.8



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: 0.50 ppbv

RT: 3.67 min Scan# 95

Delta R.T. 0.04 min

Lab File: VL026674.D

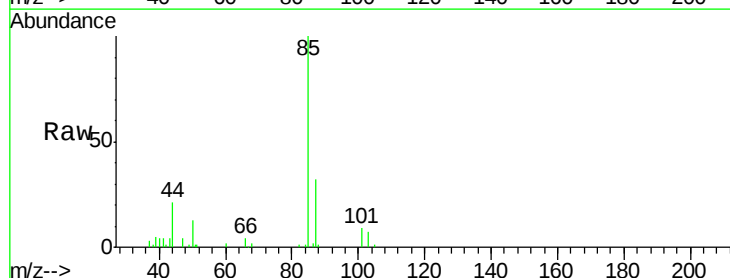
Acq: 12 Jan 2016 14:43

Tgt Ion: 85 Resp: 119287

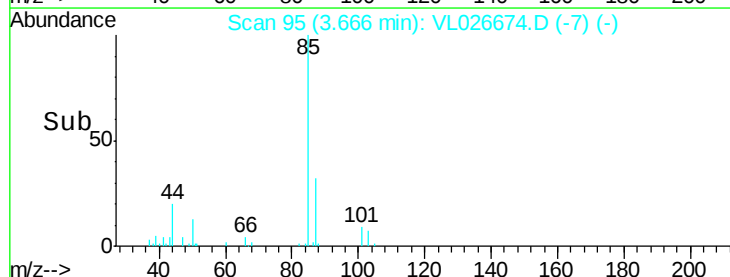
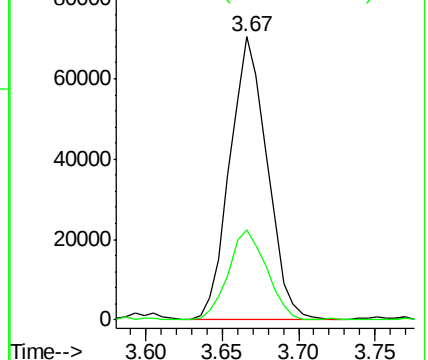
Ion Ratio Lower Upper

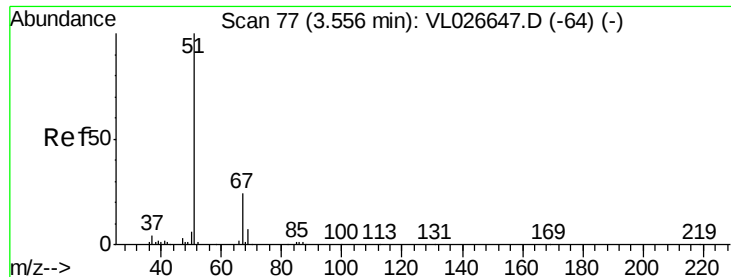
85 100

87 31.7 26.4 39.6



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





#3

Chlorodifluoromethane

Concen: 1.49 ppbv

RT: 3.59 min Scan# 83

Delta R.T. 0.04 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

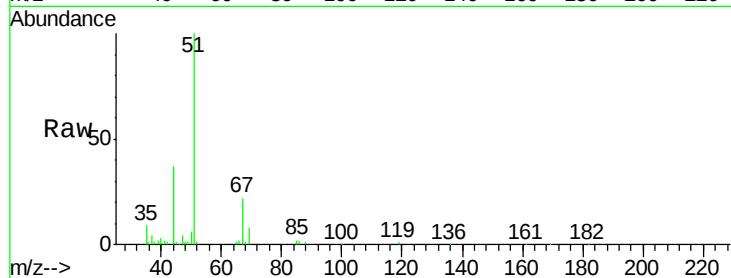
ClientSampleId :

Tot Ion: 51 Resp: 179086

Ion Ratio Lower Upper

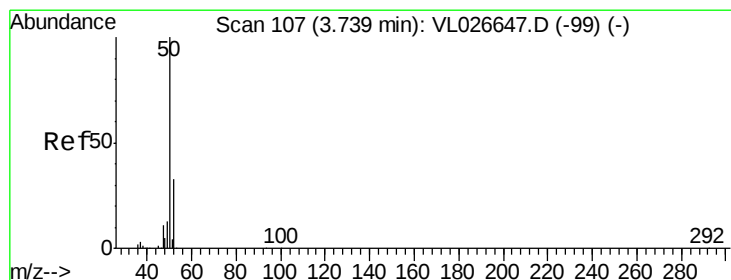
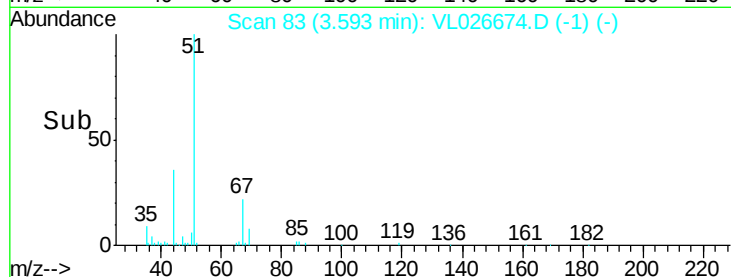
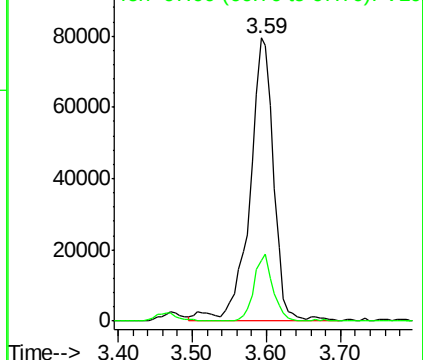
51 100

67 18.7 18.6 28.0



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.46 ppbv

RT: 3.78 min Scan# 114

Delta R.T. 0.04 min

Lab File: VL026674.D

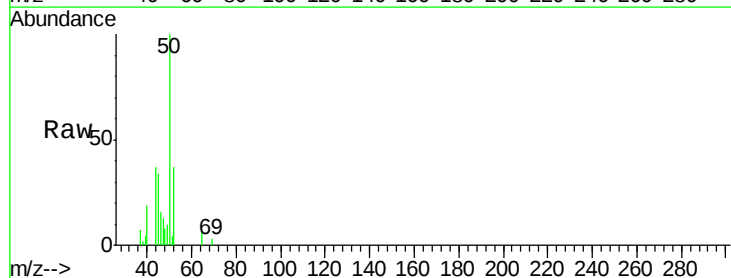
Acq: 12 Jan 2016 14:43

Tgt Ion: 50 Resp: 27308

Ion Ratio Lower Upper

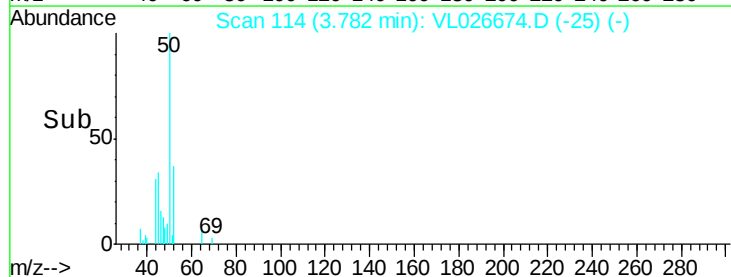
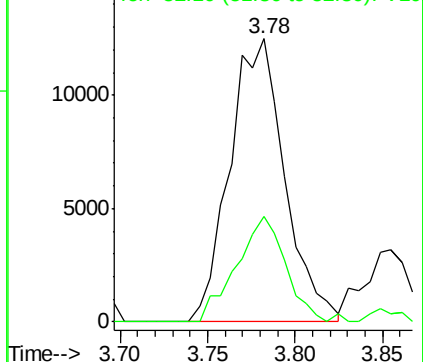
50 100

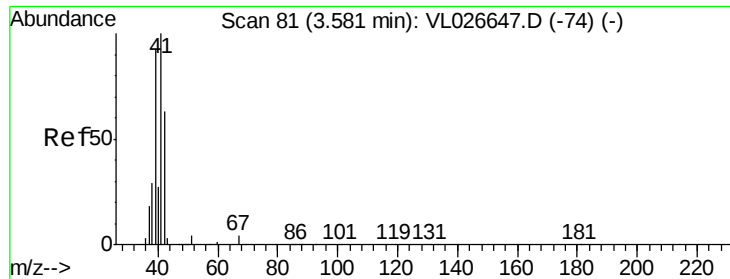
52 37.5 26.7 40.1



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 3.78 ppbv

RT: 3.86 min Scan# 126

Delta R.T. 0.27 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

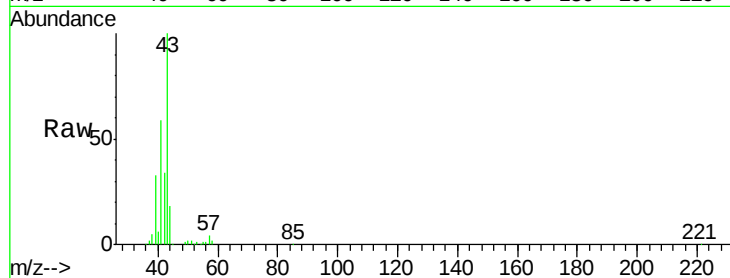
ClientSampleId :

Tot Ion: 41 Resp: 164036

Ion Ratio Lower Upper

41 100

42 59.2 53.6 80.4



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

3.86

100000

80000

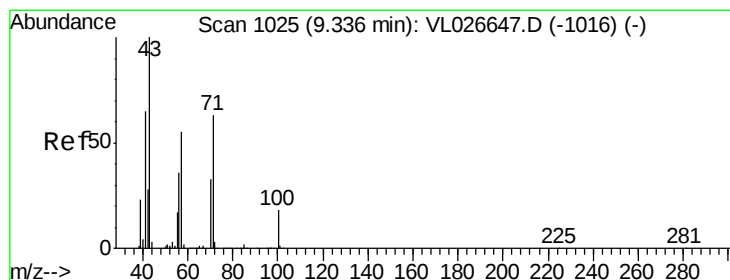
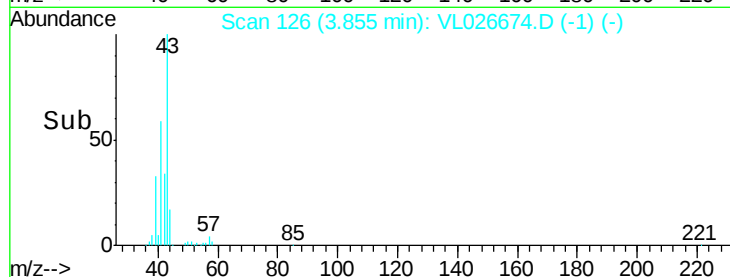
60000

40000

20000

0

Time-->



#10

Heptane

Concen: 0.13 ppbv

RT: 9.38 min Scan# 1033

Delta R.T. 0.05 min

Lab File: VL026674.D

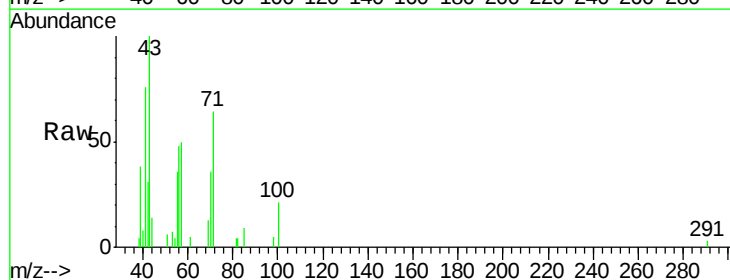
Acq: 12 Jan 2016 14:43

Tgt Ion: 43 Resp: 20469

Ion Ratio Lower Upper

43 100

57 59.9 45.8 68.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

9.38

10000

8000

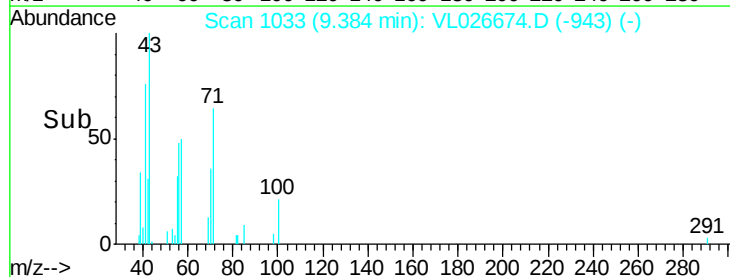
6000

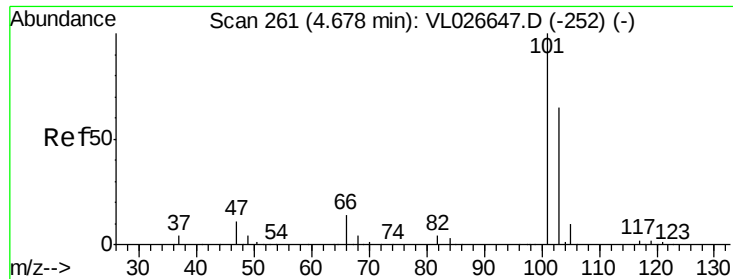
4000

2000

0

Time-->

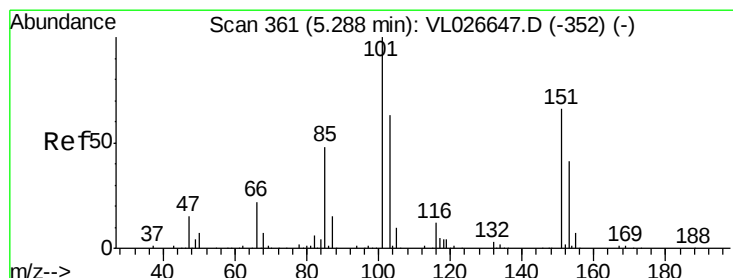
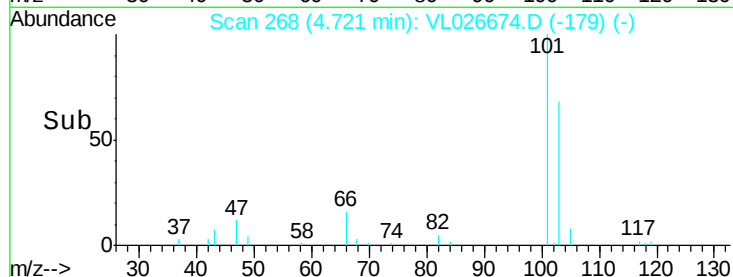
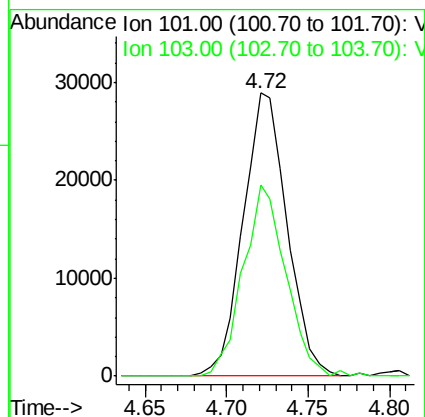
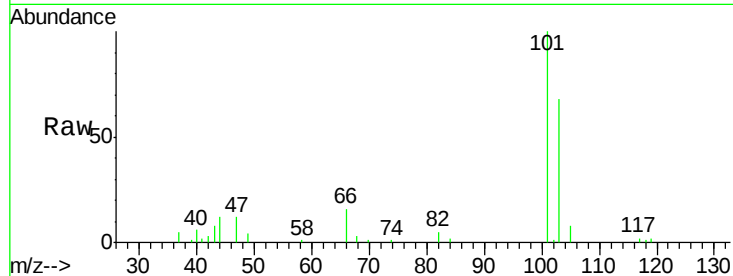




#11
 Trichlorofluoromethane
 Concen: 0.22 ppbv
 RT: 4.72 min Scan# 268
 Delta R.T. 0.04 min
 Lab File: VL026674.D
 Acq: 12 Jan 2016 14:43

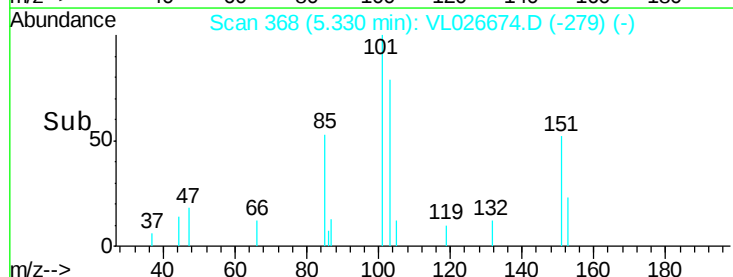
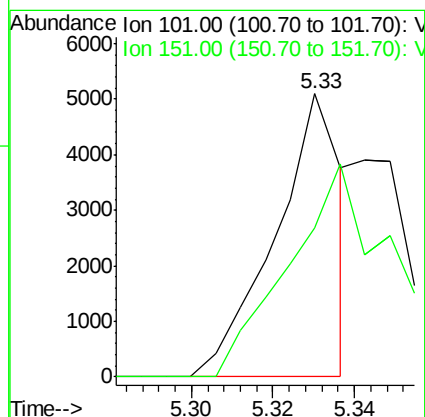
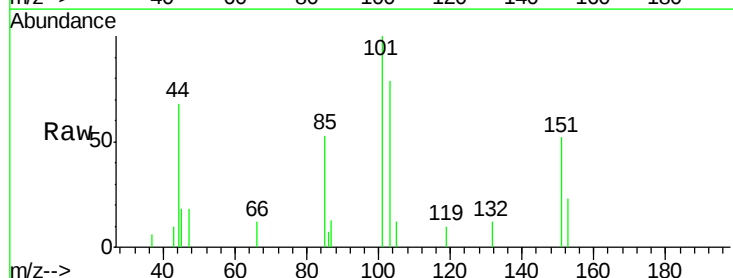
Instrument :
 MSVOA_L
 ClientSampleId :

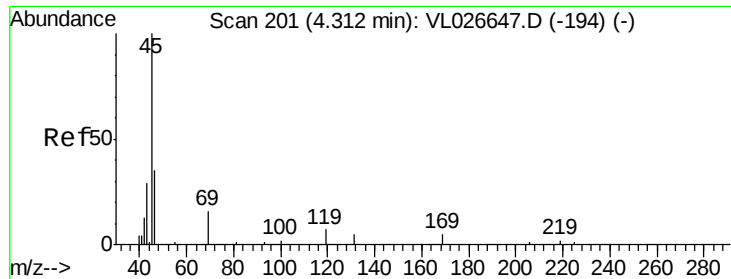
Tot Ion:101 Resp: 54276
 Ion Ratio Lower Upper
 101 100
 103 67.7 51.7 77.5



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.04 ppbv
 RT: 5.33 min Scan# 368
 Delta R.T. 0.04 min
 Lab File: VL026674.D
 Acq: 12 Jan 2016 14:43

Tgt Ion:101 Resp: 5798
 Ion Ratio Lower Upper
 101 100
 151 0.0 54.2 81.4#

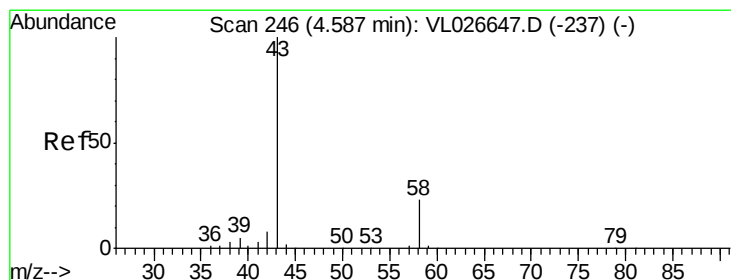
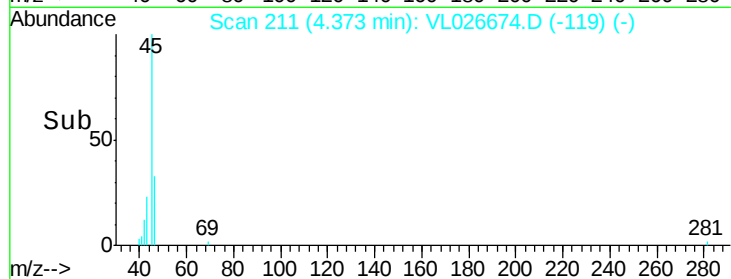
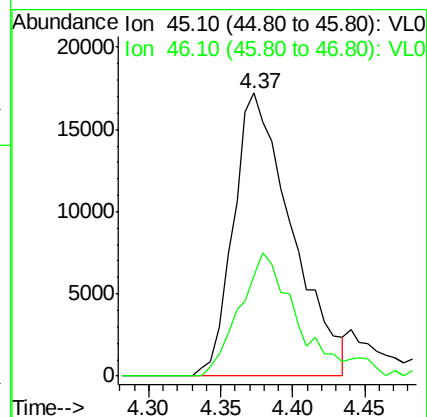
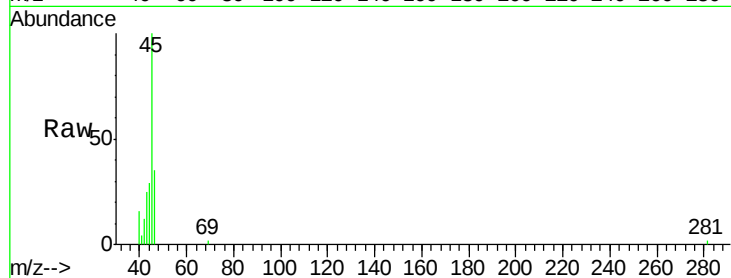




#13
Ethanol
Concen: 5.88 ppbv
RT: 4.37 min Scan# 211
Delta R.T. 0.06 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

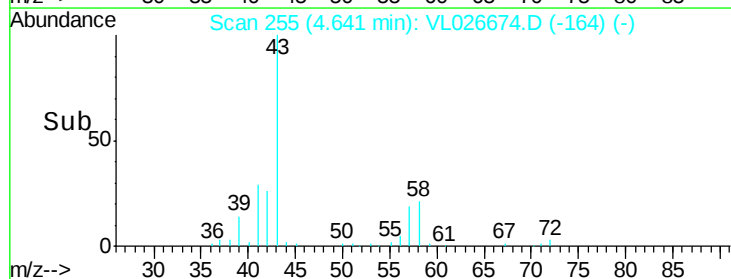
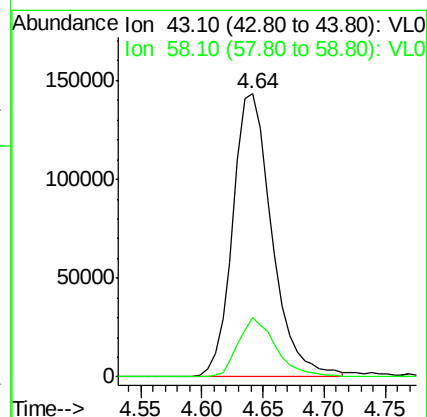
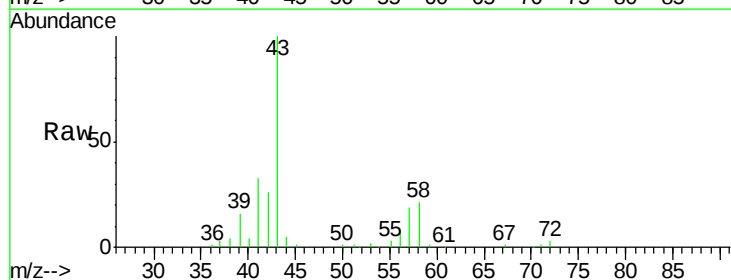
Instrument :
MSVOA_L
ClientSampleId :

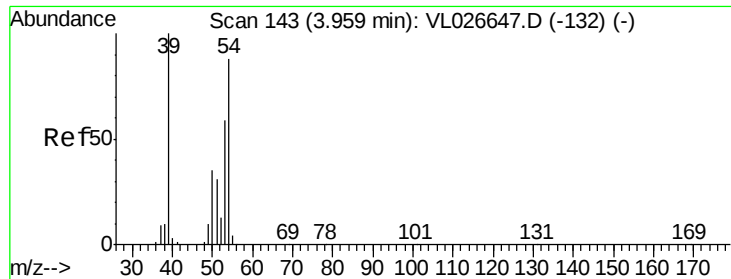
Tot Ion: 45 Resp: 48427
Ion Ratio Lower Upper
45 100
46 44.9 16.7 66.7



#15
Acetone
Concen: 2.12 ppbv
RT: 4.64 min Scan# 255
Delta R.T. 0.05 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

Tgt Ion: 43 Resp: 316534
Ion Ratio Lower Upper
43 100
58 20.6 19.2 28.8

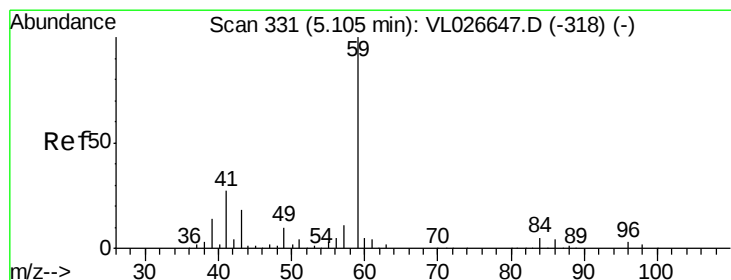
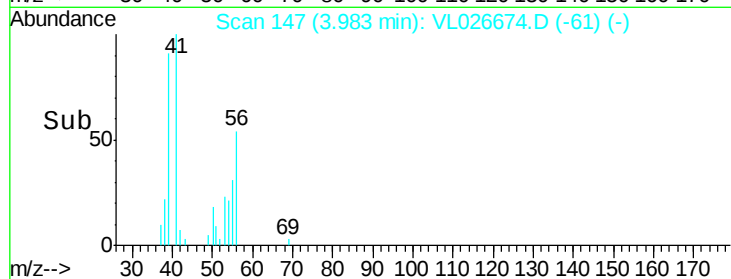
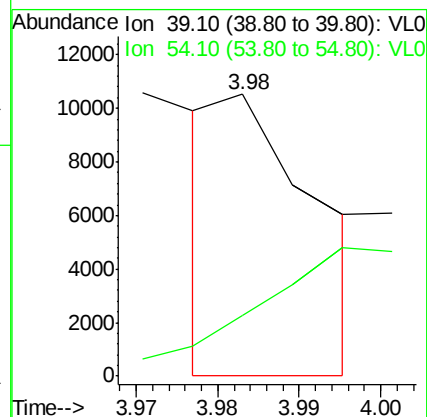
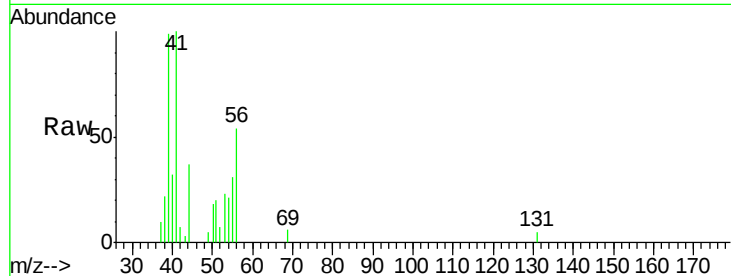




#16
1,3-Butadiene
Concen: 0.15 ppbv
RT: 3.98 min Scan# 147
Delta R.T. 0.02 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

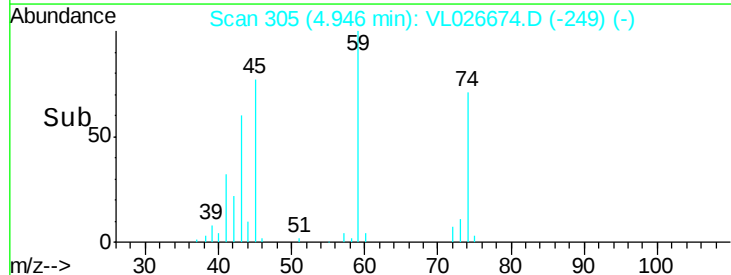
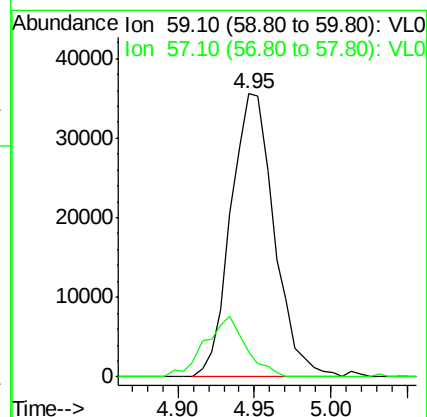
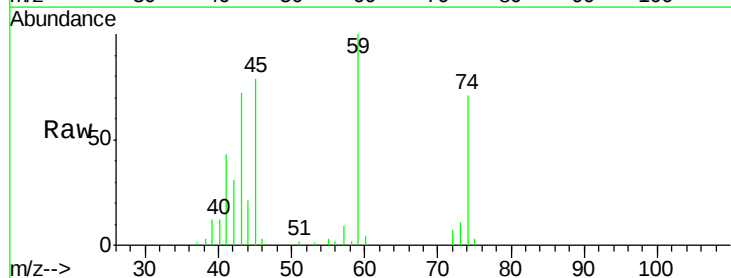
Instrument :
MSVOA_L
ClientSampled :

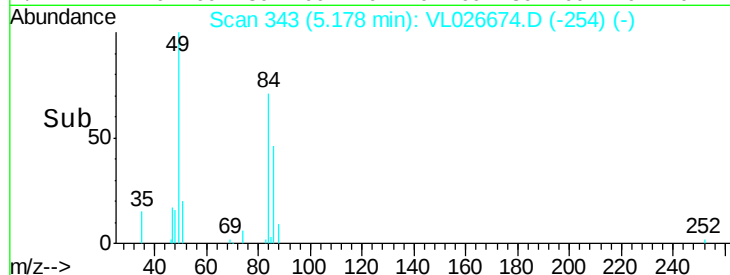
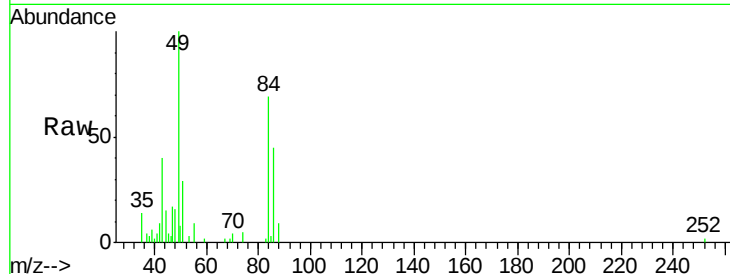
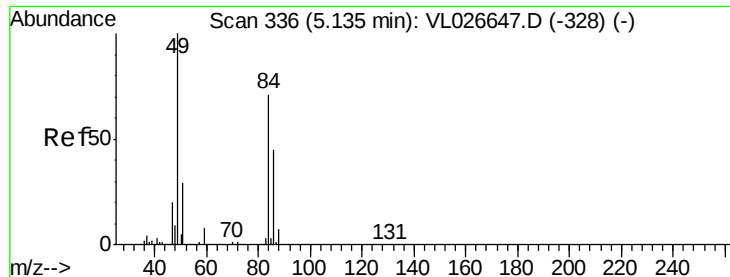
Tot Ion: 39 Resp: 8671
Ion Ratio Lower Upper
39 100
54 119.3 66.6 100.0#



#17
tert-Butyl alcohol
Concen: 0.62 ppbv
RT: 4.95 min Scan# 305
Delta R.T. -0.16 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

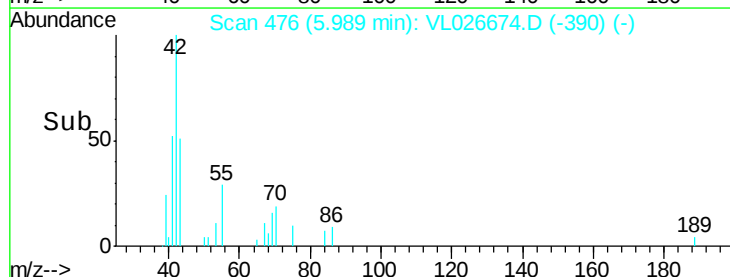
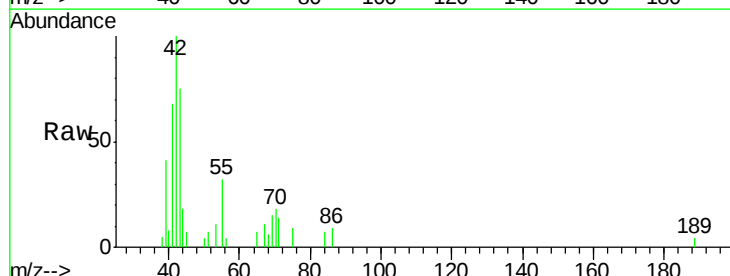
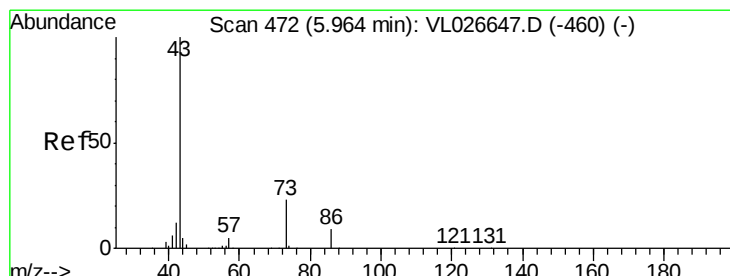
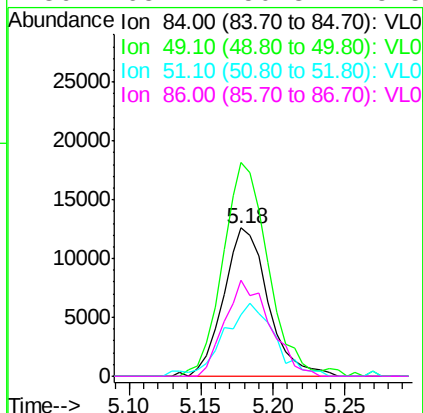
Tgt Ion: 59 Resp: 70086
Ion Ratio Lower Upper
59 100
57 20.1 9.0 13.6#





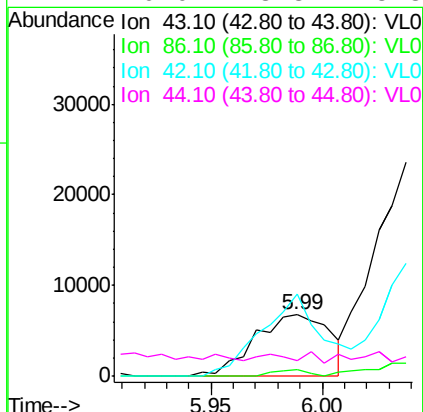
#20
Methvlene Chloride
Concen: 0.45 ppbv
RT: 5.18 min Scan# 343
Delta R.T. 0.04 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

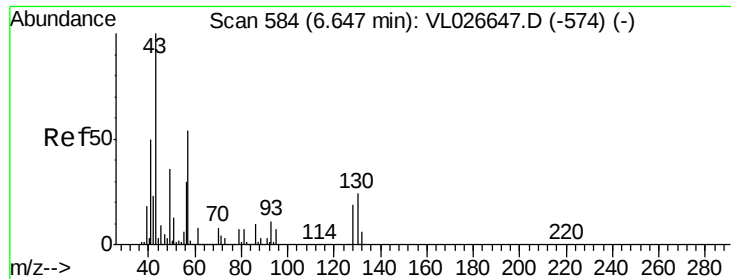
Tot Ion:	84	Resp:	27265
Ion	Ratio	Lower	Upper
84	100		
49	139.5	112.3	168.5
51	41.6	32.5	48.7
86	65.1	50.3	75.5



#23
Vinyl Acetate
Concen: 0.07 ppbv
RT: 5.99 min Scan# 476
Delta R.T. 0.02 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

Tgt Ion:	43	Resp:	15940
Ion	Ratio	Lower	Upper
43	100		
86	11.5	7.4	11.0#
42	133.7	9.2	13.8#
44	0.0	3.8	5.8#

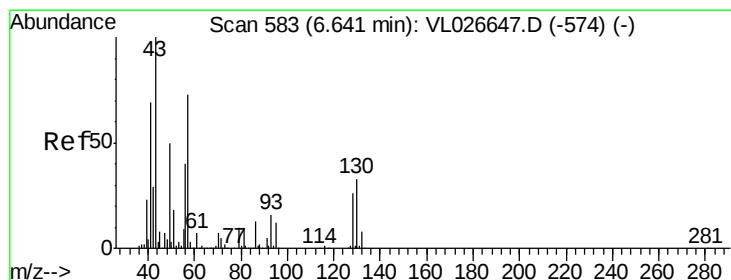
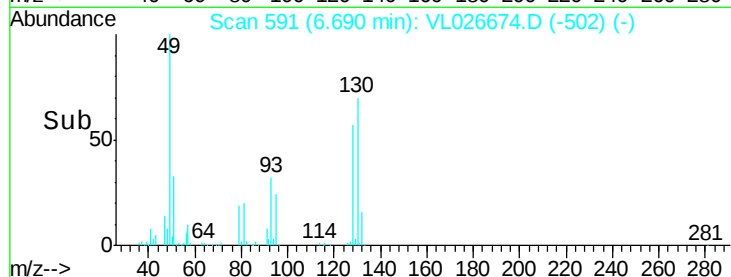
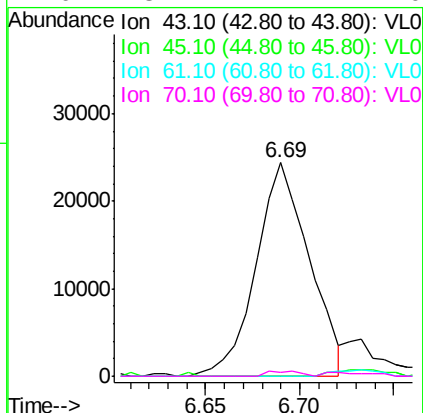
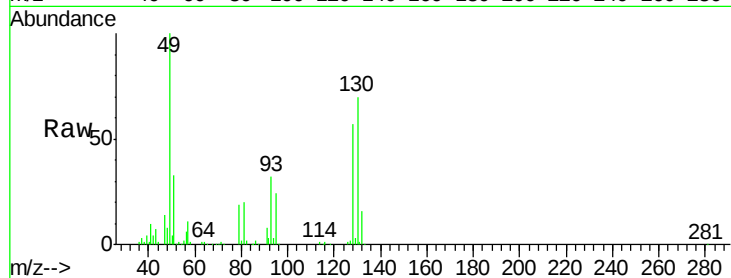




#25
Ethyl Acetate
Concen: 0.21 ppbv
RT: 6.69 min Scan# 591
Delta R.T. 0.04 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

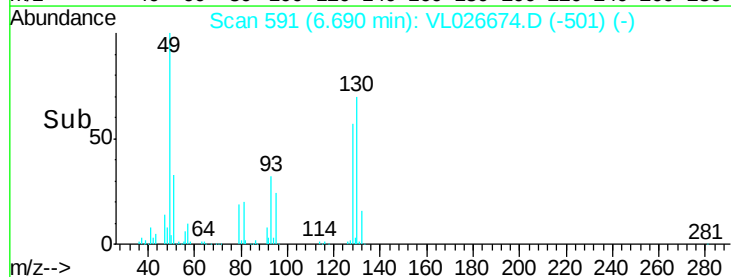
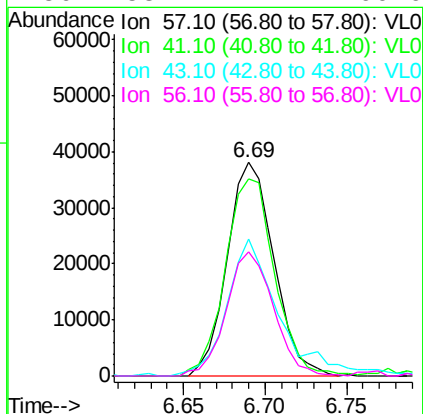
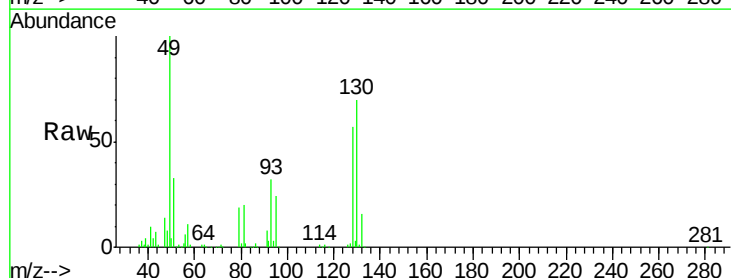
Instrument :
MSVOA_L
ClientSampleId :

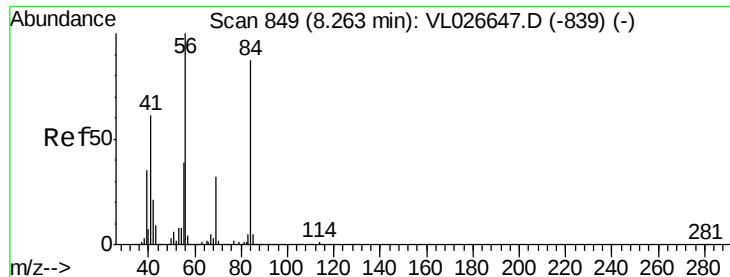
Tot Ion:	43	Resp:	47693
Ion	Ratio	Lower	Upper
43	100		
45	0.7	7.5	11.3#
61	0.0	7.3	10.9#
70	3.2	7.4	11.0#



#26
Hexane
Concen: 0.64 ppbv
RT: 6.69 min Scan# 591
Delta R.T. 0.05 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

Tgt Ion:	57	Resp:	76132
Ion	Ratio	Lower	Upper
57	100		
41	97.5	74.8	112.2
43	73.1	161.5	242.3#
56	58.7	44.4	66.6

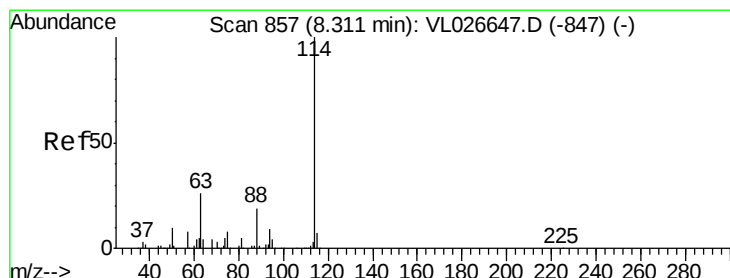
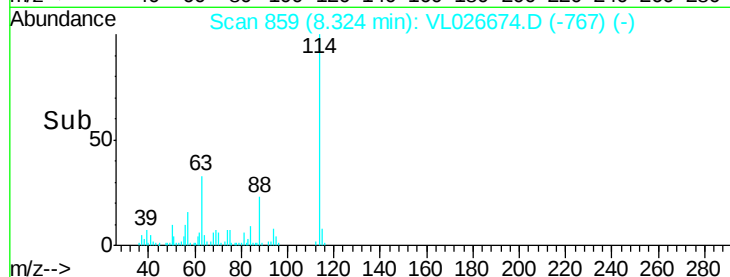
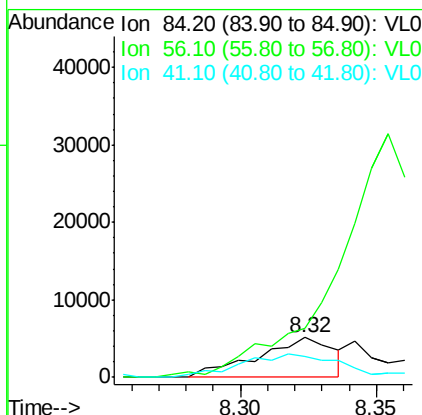
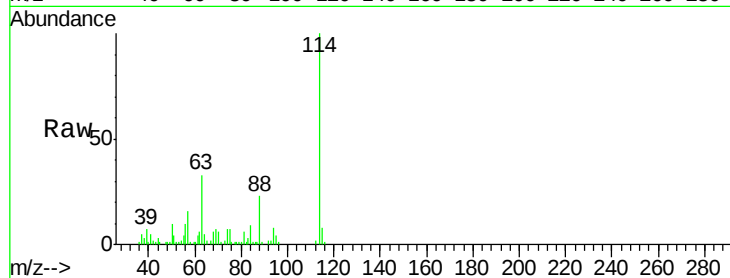




#30
Cvclohexane
Concen: 0.08 ppbv
RT: 8.32 min Scan# 859
Delta R.T. 0.06 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

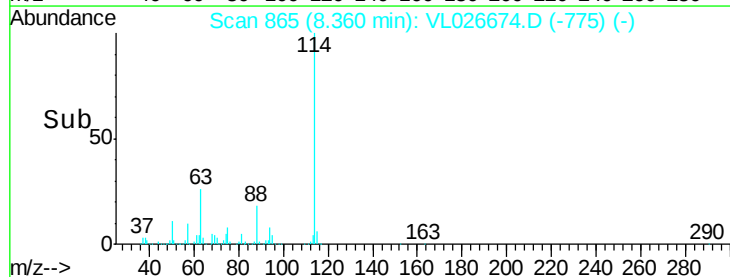
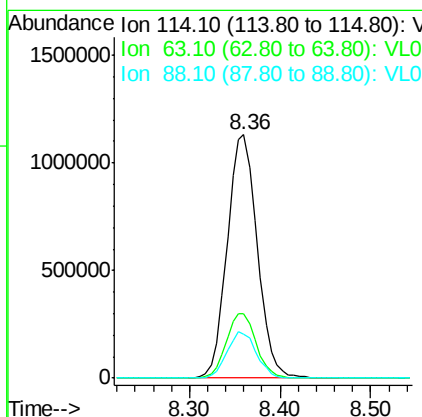
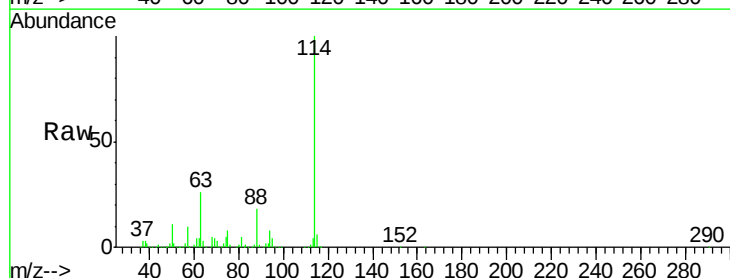
Instrument :
MSVOA_L
ClientSampleId :

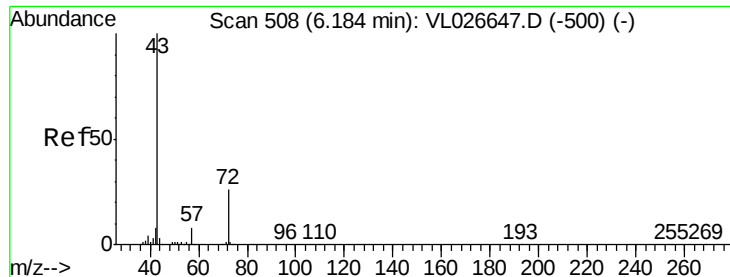
Tot Ion: 84 Resp: 9971
Ion Ratio Lower Upper
84 100
56 0.0 95.9 143.9#
41 86.9 54.8 82.2#



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.36 min Scan# 865
Delta R.T. 0.05 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

Tgt Ion:114 Resp: 2624971
Ion Ratio Lower Upper
114 100
63 26.6 21.7 32.5
88 18.7 15.2 22.8





#34

2-Butanone

Concen: 0.22 ppbv

RT: 6.26 min Scan# 521

Delta R.T. 0.08 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

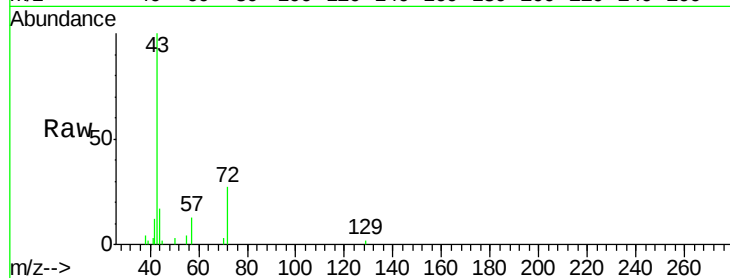
ClientSampled :

Tot Ion: 43 Resp: 30637

Ion Ratio Lower Upper

43 100

72 25.7 20.9 31.3



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

6.26

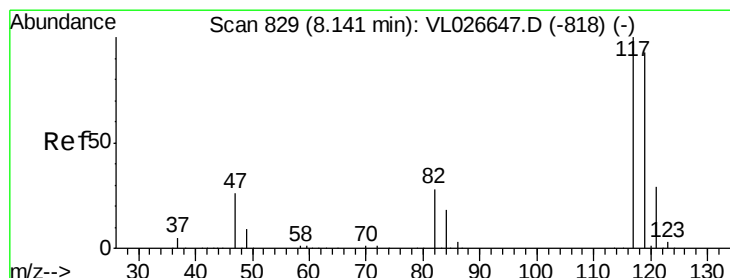
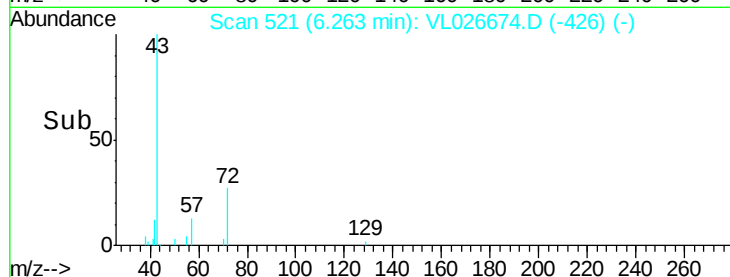
15000

10000

5000

0

Time-->



#35

Carbon Tetrachloride

Concen: 0.06 ppbv

RT: 8.19 min Scan# 837

Delta R.T. 0.05 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

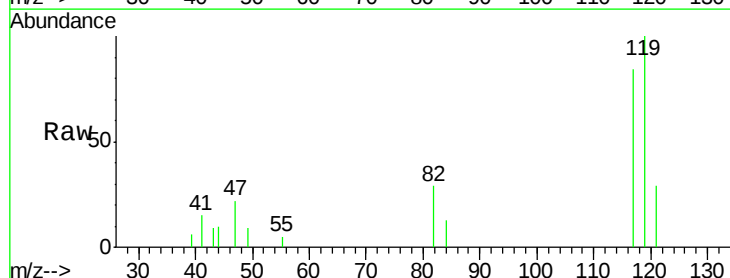
Tgt Ion: 117 Resp: 13252

Ion Ratio Lower Upper

117 100

119 119.1 74.7 112.1#

121 34.6 23.1 34.7



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

8.19

8000

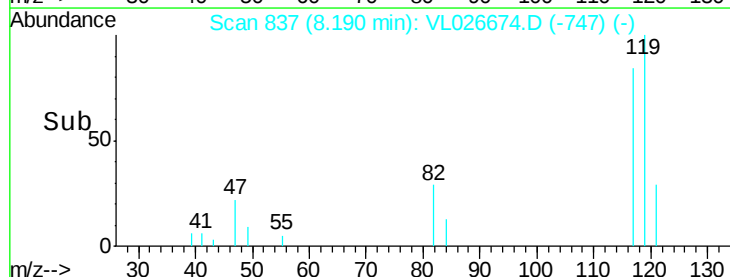
6000

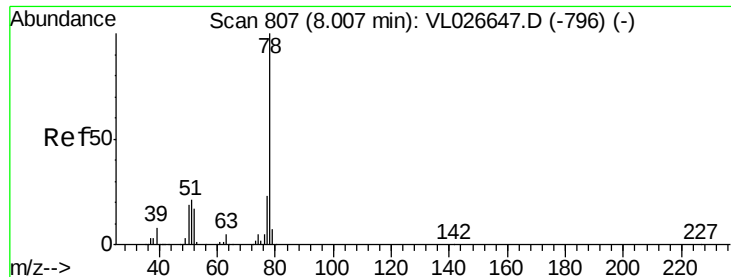
4000

2000

0

Time-->





#36

Benzene

Concen: 0.50 ppbv

RT: 8.06 min Scan# 815

Delta R.T. 0.05 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

ClientSampleId :

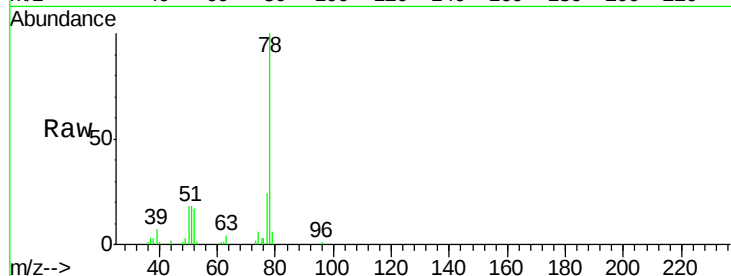
Tot Ion: 78 Resp: 133897

Ion Ratio Lower Upper

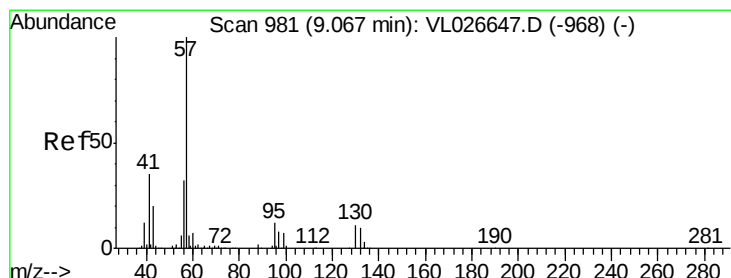
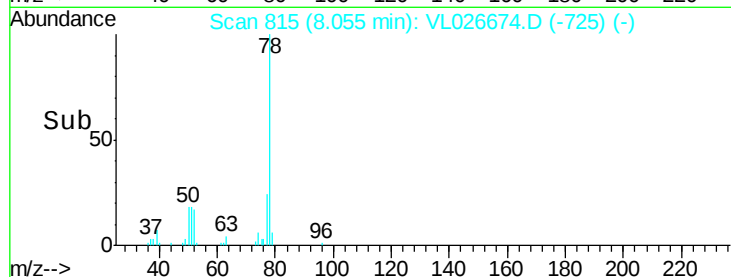
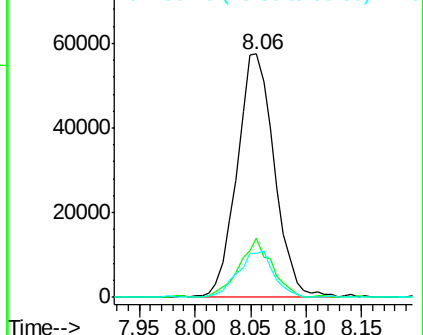
78 100

77 24.4 18.5 27.7

50 17.9 15.4 23.2



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



#44

2,2,4-Trimethylpentane

Concen: 0.13 ppbv

RT: 9.12 min Scan# 990

Delta R.T. 0.05 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

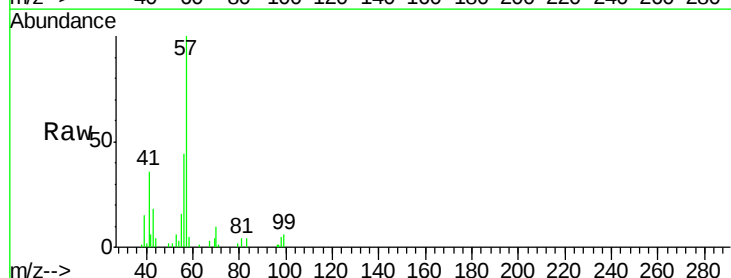
Tgt Ion: 57 Resp: 58776

Ion Ratio Lower Upper

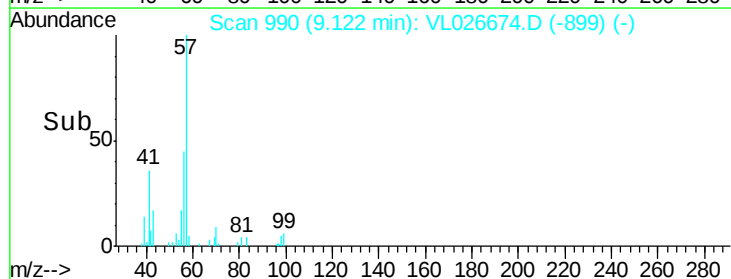
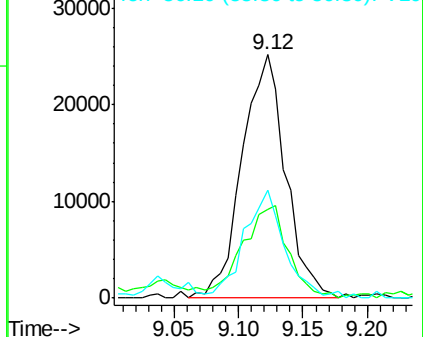
57 100

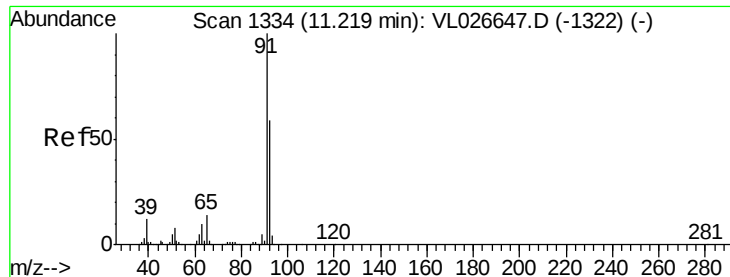
41 40.6 26.9 40.3#

56 41.8 25.4 38.0#



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: 0.64 ppbv

RT: 11.27 min Scan# 1343

Delta R.T. 0.05 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

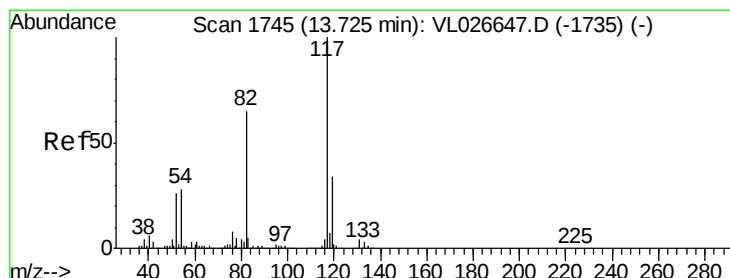
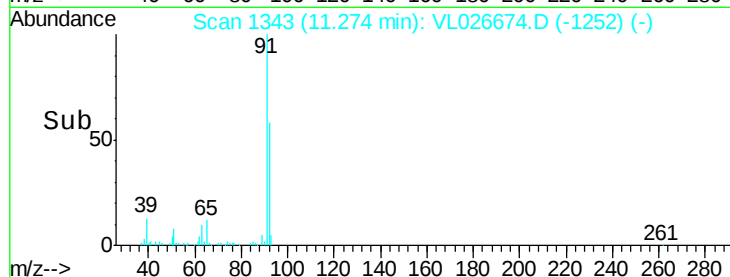
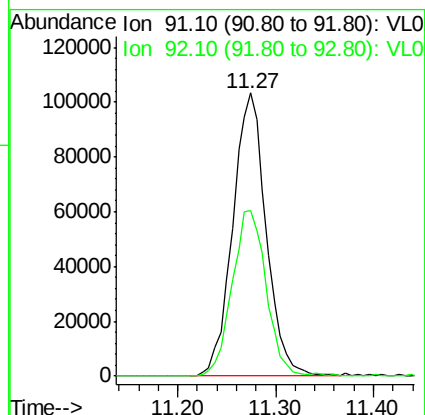
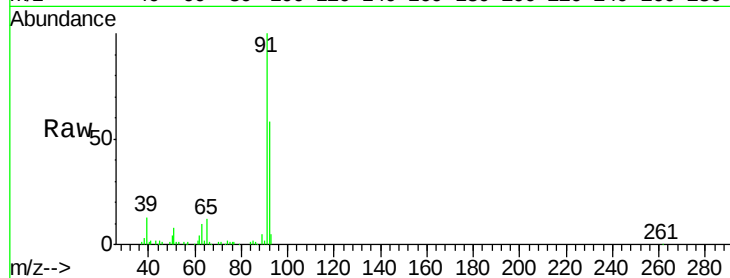
ClientSampleId :

Tot Ion: 91 Resp: 244586

Ion Ratio Lower Upper

91 100

92 59.9 48.2 72.4



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.78 min Scan# 1754

Delta R.T. 0.05 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

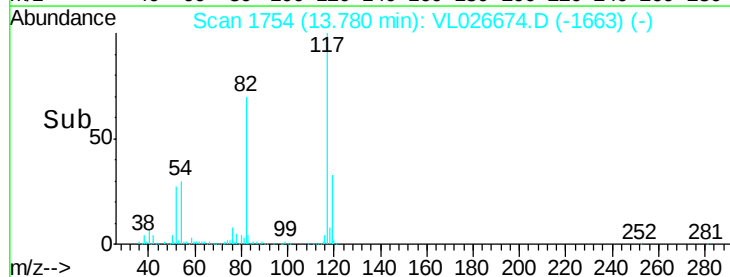
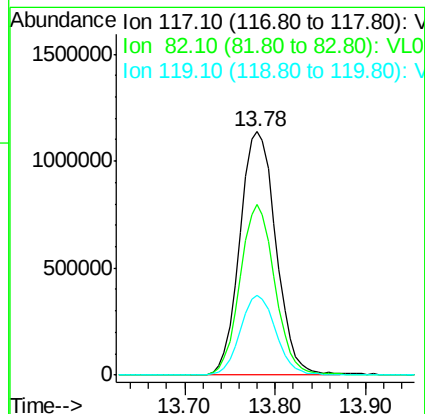
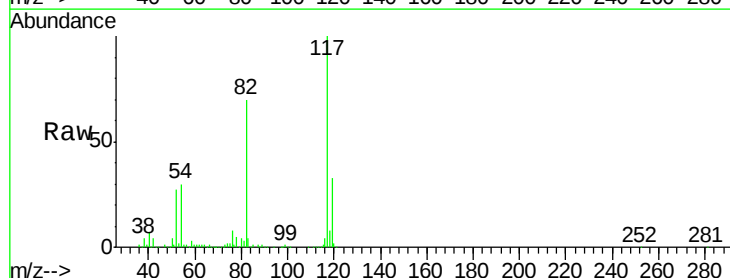
Tgt Ion: 117 Resp: 3152866

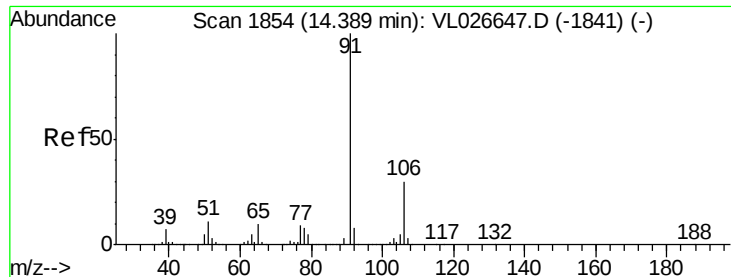
Ion Ratio Lower Upper

117 100

82 68.2 49.7 74.5

119 32.5 43.8 65.8#





#58

Ethyl Benzene

Concen: 0.08 ppbv

RT: 14.46 min Scan# 1865

Delta R.T. 0.07 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

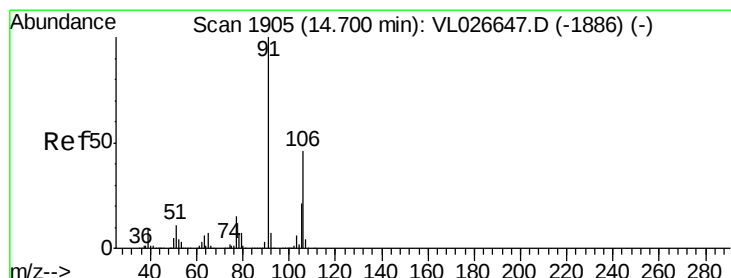
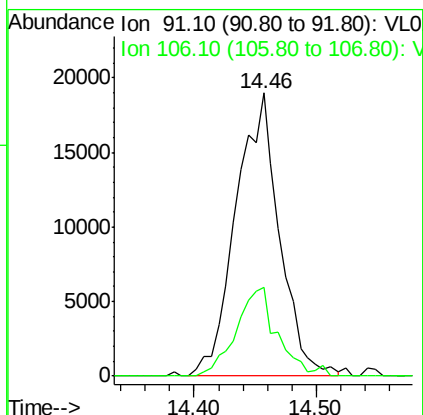
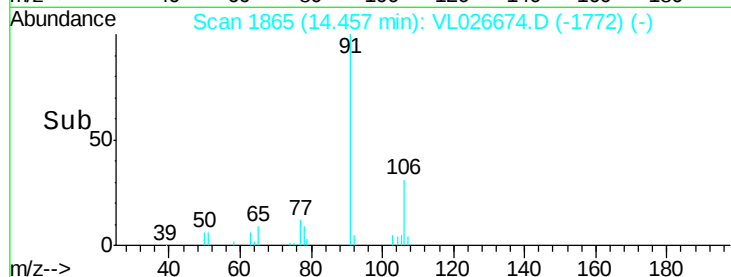
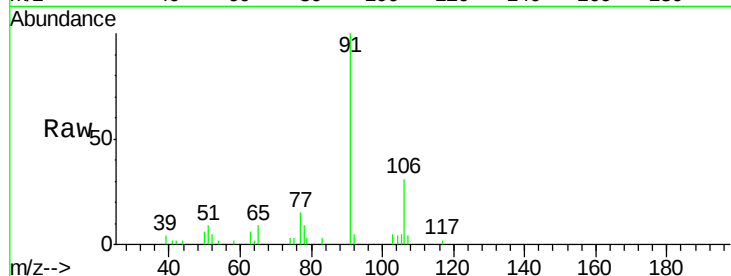
ClientSampleId :

Tot Ion: 91 Resp: 47045

Ion Ratio Lower Upper

91 100

106 31.2 23.8 35.6



#59

m/p-Xylene

Concen: 0.30 ppbv

RT: 14.73 min Scan# 1910

Delta R.T. 0.03 min

Lab File: VL026674.D

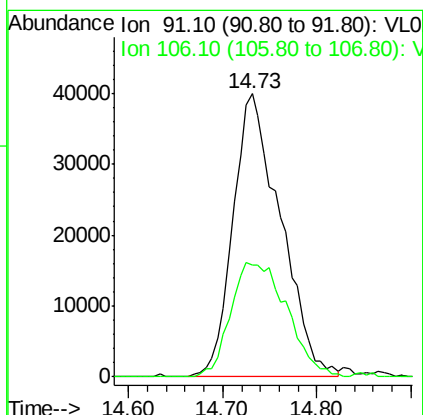
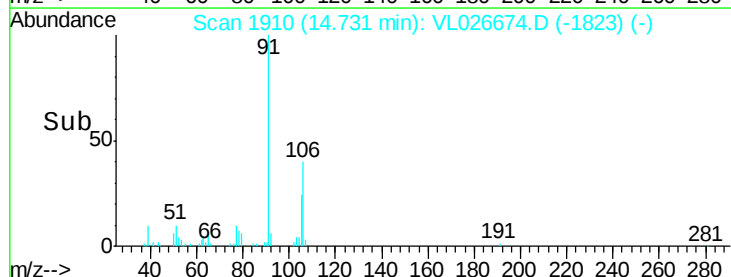
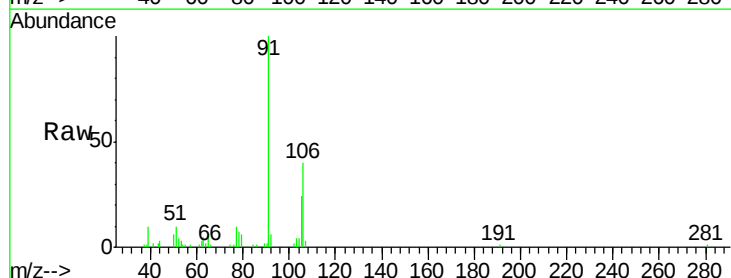
Acq: 12 Jan 2016 14:43

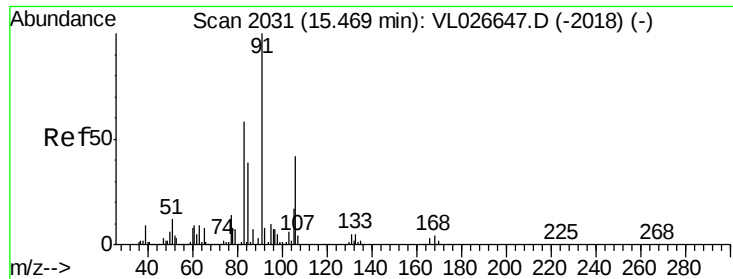
Tgt Ion: 91 Resp: 140434

Ion Ratio Lower Upper

91 100

106 48.1 36.6 55.0

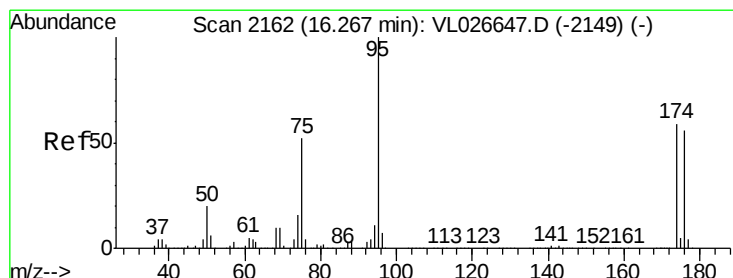
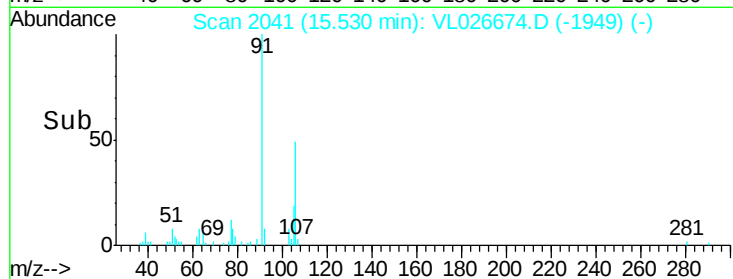
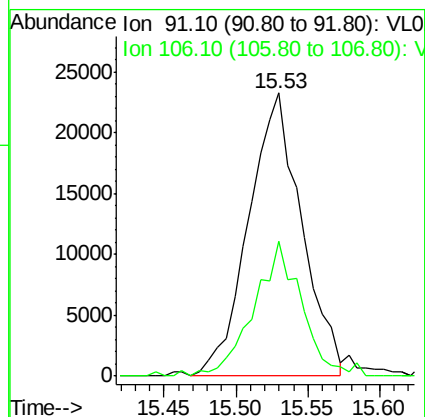
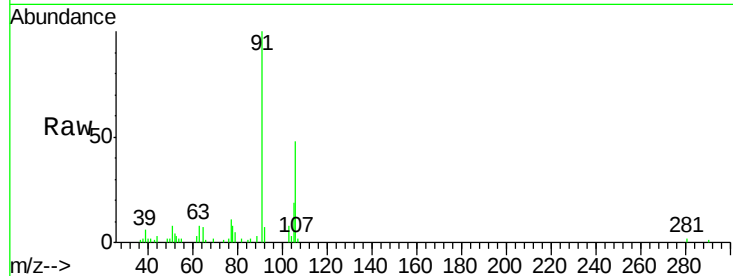




#60
o-Xylene
Concen: 0.12 ppbv
RT: 15.53 min Scan# 2041
Delta R.T. 0.06 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

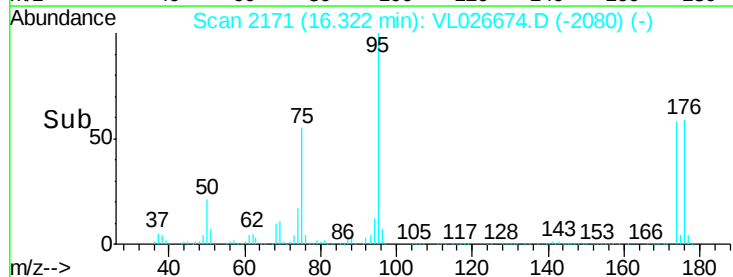
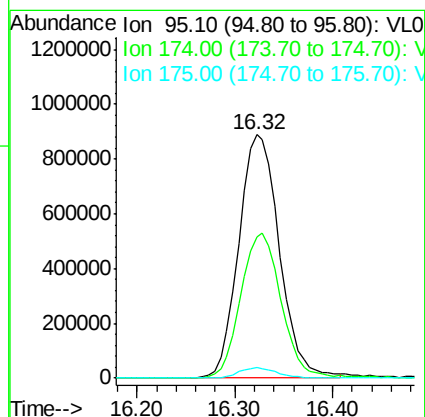
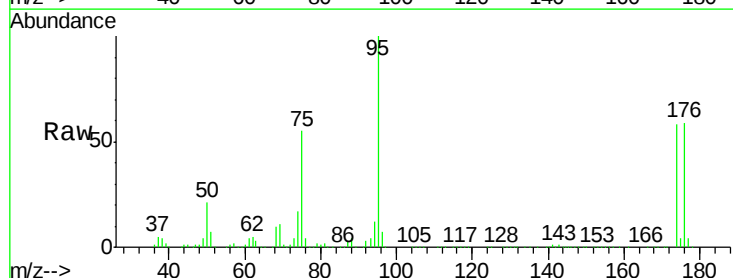
Instrument :
MSVOA_L
ClientSampled :

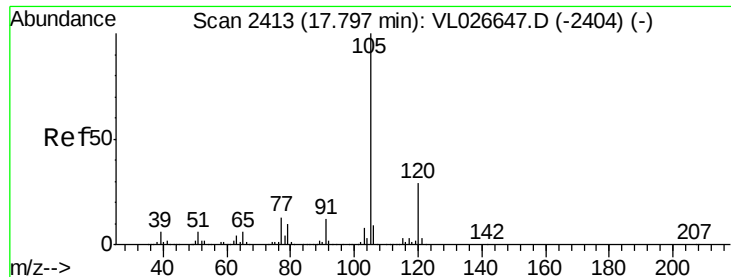
Tot Ion: 91 Resp: 59593
Ion Ratio Lower Upper
91 100
106 43.1 21.5 64.5



#68
1-Bromo-4-Fluorobenzene
Concen: 10.18 ppbv
RT: 16.32 min Scan# 2171
Delta R.T. 0.05 min
Lab File: VL026674.D
Acq: 12 Jan 2016 14:43

Tgt Ion: 95 Resp: 2557857
Ion Ratio Lower Upper
95 100
174 60.2 47.8 71.8
175 4.4 3.6 5.4





#72

4-Ethyltoluene

Concen: 0.04 ppbv

RT: 17.86 min Scan# 2423

Delta R.T. 0.06 min

Lab File: VL026674.D

Acq: 12 Jan 2016 14:43

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:105 Resp: 22557

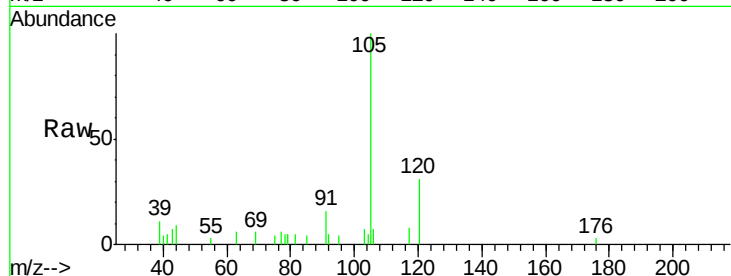
Ion Ratio Lower Upper

105 100

120 33.2 23.7 35.5

91 11.2 9.7 14.5

77 0.0 10.3 15.5#

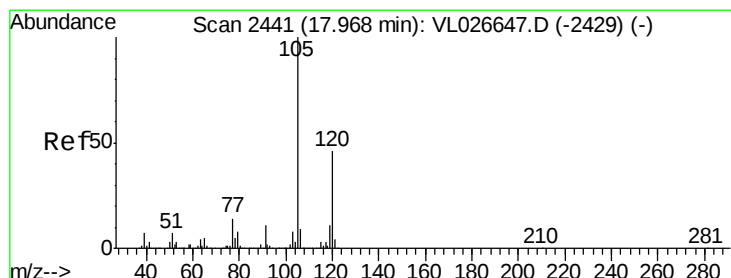
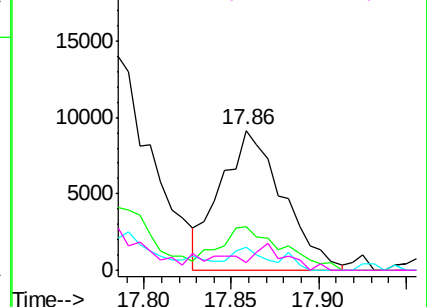
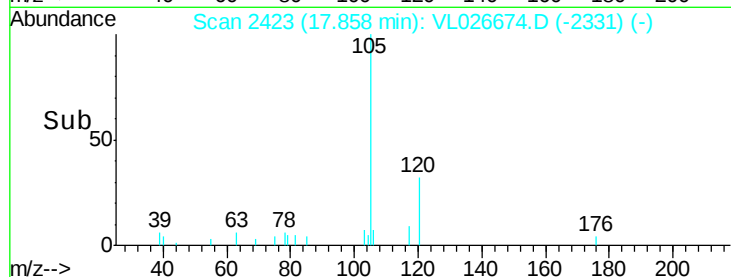


Abundance Ion 105.10 (104.80 to 105.80): V

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



#73

1,3,5-Trimethylbenzene

Concen: 0.06 ppbv

RT: 18.02 min Scan# 2450

Delta R.T. 0.05 min

Lab File: VL026674.D

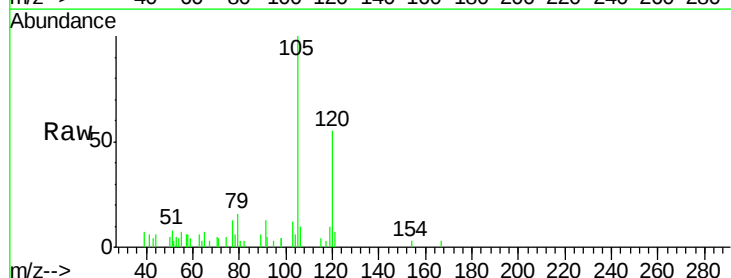
Acq: 12 Jan 2016 14:43

Tgt Ion:105 Resp: 31717

Ion Ratio Lower Upper

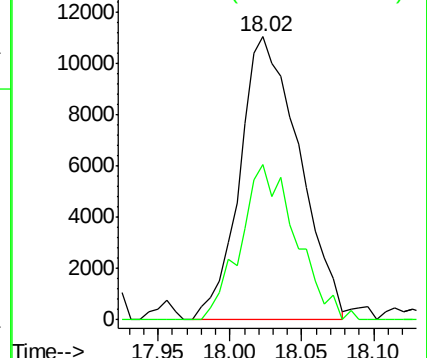
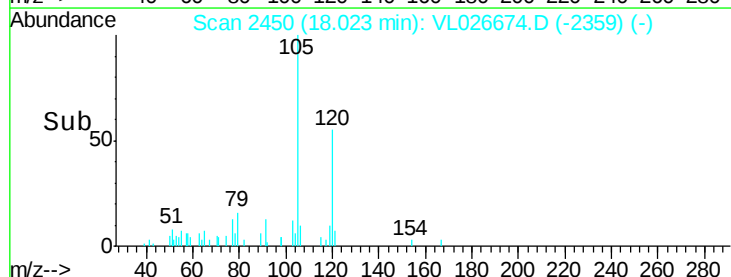
105 100

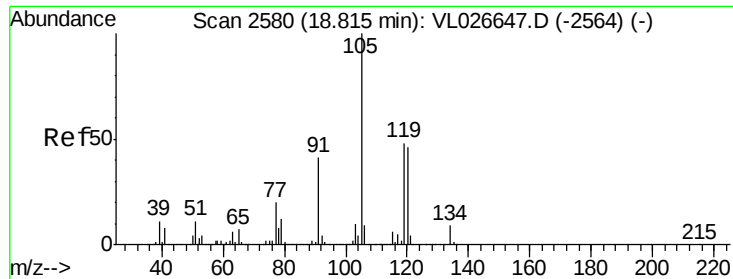
120 54.7 36.6 54.8



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.19 ppbv
 RT: 18.88 min Scan# 2590
 Delta R.T. 0.06 min
 Lab File: VL026674.D
 Acq: 12 Jan 2016 14:43

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion:	105	Resp:	107095
Ion	Ratio	Lower	Upper
105	100		
120	44.8	36.6	55.0
91	9.2	32.5	48.7#
77	12.6	15.7	23.5#

