

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL102015\
 Data File : VL026230.D
 Acq On : 21 Oct 2015 6:53
 Operator : SY/MD
 Sample : G4112-02 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 RB-SUBSLAB-239

Quant Time: Oct 22 10:14:53 2015
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL102015AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Oct 20 20:24:48 2015
 QLast Update : Tue Oct 20 20:24:48 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.62	49	512991	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	8.29	114	1492138	10.00	ppbv	-0.02
55) Chlorobenzene-d5	13.71	117	1829026	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	16.25	95	1429114	10.13	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.30%

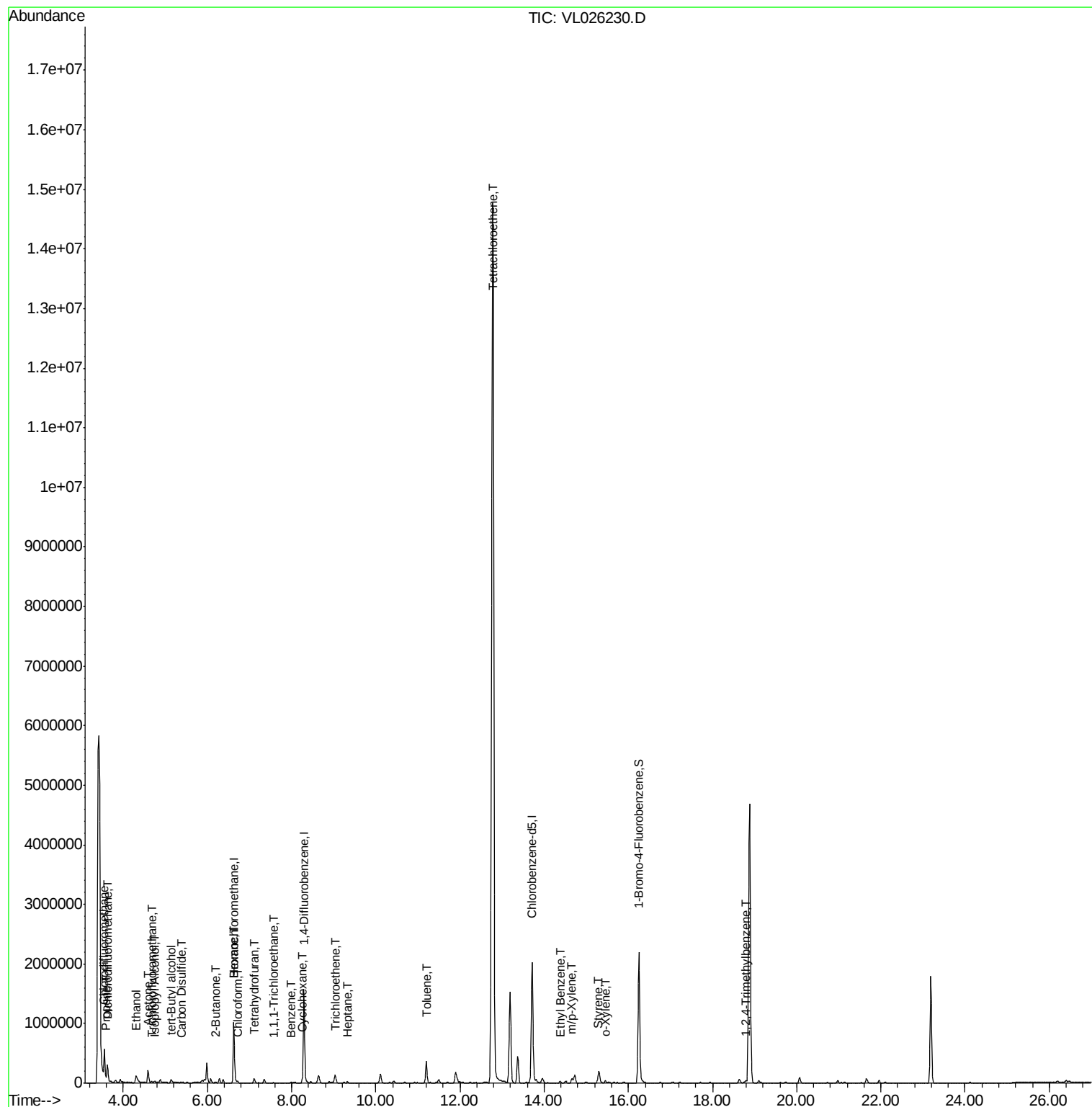
Target Compounds						Ovalue
2) Dichlorodifluoromethane	3.62	85	251418	2.36	ppbv	96
3) Chlorodifluoromethane	3.55	51	580451	8.94	ppbv	100
9) Propene	3.59	41	6974	0.23	ppbv #	77
10) Heptane	9.32	43	13259	0.13	ppbv	95
11) Trichlorofluoromethane	4.67	101	14688	0.14	ppbv	95
13) Ethanol	4.31	45	226701	49.71	ppbv	96
15) Acetone	4.59	43	247560	3.28	ppbv	92
17) tert-Butyl alcohol	5.14	59	77122	1.49	ppbv	98
19) Isopropyl Alcohol	4.75	45	26079	0.88	ppbv #	1
26) Hexane	6.63	57	69517	0.98	ppbv #	56
27) Carbon Disulfide	5.37	76	17099	0.19	ppbv #	81
29) Chloroform	6.71	83	13673	0.13	ppbv	94
30) Cyclohexane	8.25	84	20194	0.29	ppbv #	1
32) 1,1,1-Trichloroethane	7.57	97	3577	0.03	ppbv	93
34) 2-Butanone	6.19	43	25798	0.31	ppbv	99
36) Benzene	7.99	78	14739	0.10	ppbv #	94
38) Trichloroethene	9.03	130	52959	0.72	ppbv	95
41) Tetrahydrofuran	7.11	42	57230	1.17	ppbv	99
52) Tetrachloroethene	12.78	164	6807068	78.10	ppbv	96
53) Toluene	11.20	91	385582	1.87	ppbv	99
58) Ethyl Benzene	14.38	91	37599	0.13	ppbv	100
59) m/p-Xylene	14.66	91	95165	0.41	ppbv	99
60) o-Xylene	15.46	91	39935	0.16	ppbv	99
61) Styrene	15.28	104	36048	0.33	ppbv	98
74) 1,2,4-Trimethylbenzene	18.79	105	32647	0.12	ppbv #	74

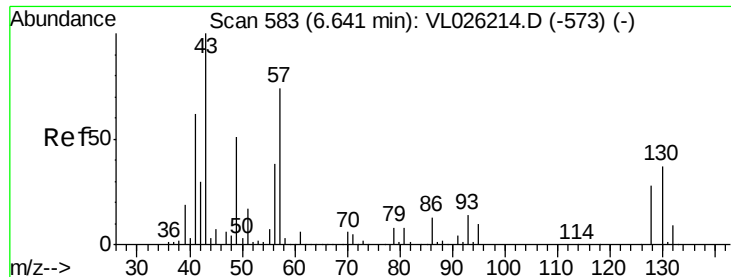
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LTue Oct 20 20:24:48 2015
QLast Update : Tue Oct 20 20:24:48 2015
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.62 min Scan# 580

Delta R.T. -0.02 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239

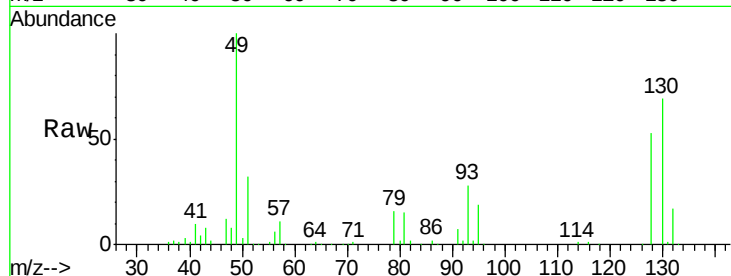
Tot Ion: 49 Resp: 512991

Ion Ratio Lower Upper

49 100

128 56.7 28.2 84.7

130 72.8 36.0 108.1



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

6.62

250000

200000

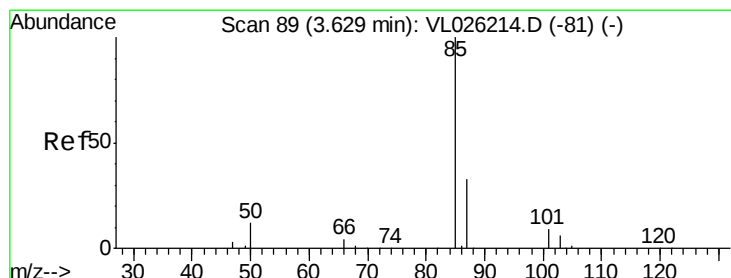
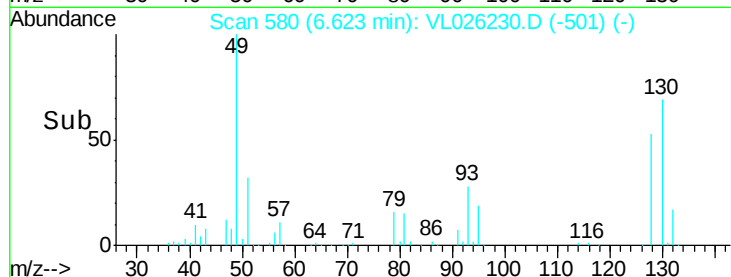
150000

100000

50000

0

Time--> 6.50 6.60 6.70



#2

Dichlorodifluoromethane

Concen: 2.36 ppbv

RT: 3.62 min Scan# 88

Delta R.T. -0.01 min

Lab File: VL026230.D

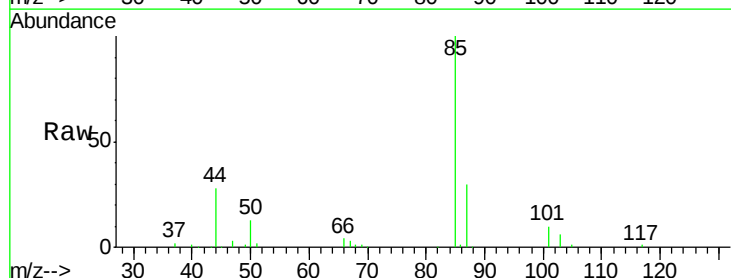
Acq: 21 Oct 2015 6:53

Tgt Ion: 85 Resp: 251418

Ion Ratio Lower Upper

85 100

87 30.1 26.1 39.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.62

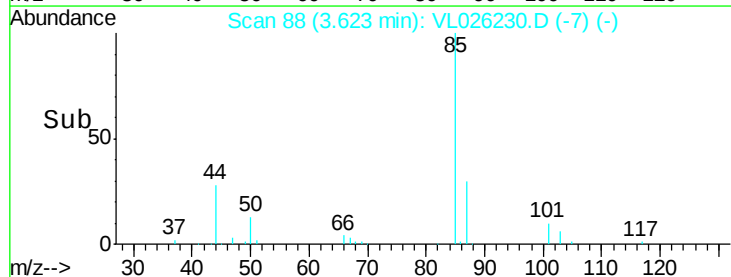
150000

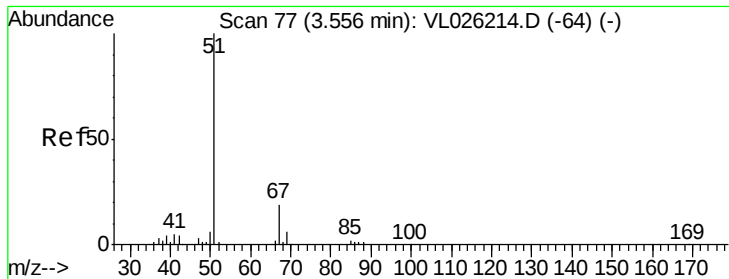
100000

50000

0

Time--> 3.55 3.60 3.65 3.70





#3

Chlorodifluoromethane

Concen: 8.94 ppbv

RT: 3.55 min Scan# 76

Delta R.T. -0.01 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

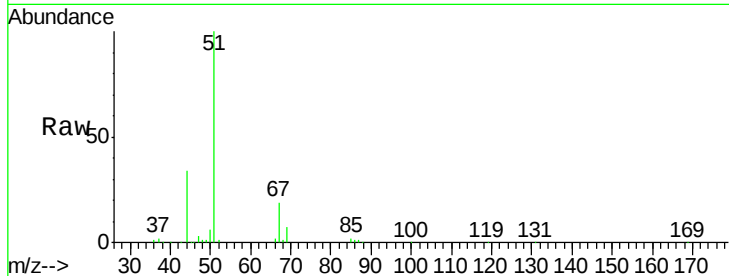
RB-SUBSLAB-239

Tot Ion: 51 Resp: 580451

Ion Ratio Lower Upper

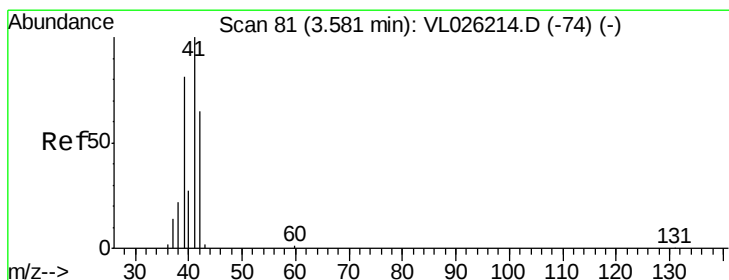
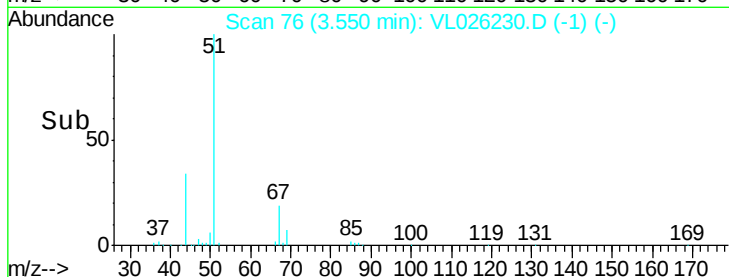
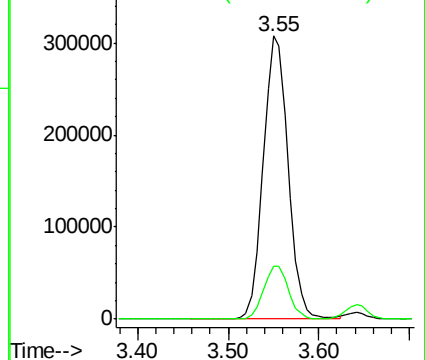
51 100

67 18.9 15.3 22.9



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 0.23 ppbv

RT: 3.59 min Scan# 82

Delta R.T. 0.01 min

Lab File: VL026230.D

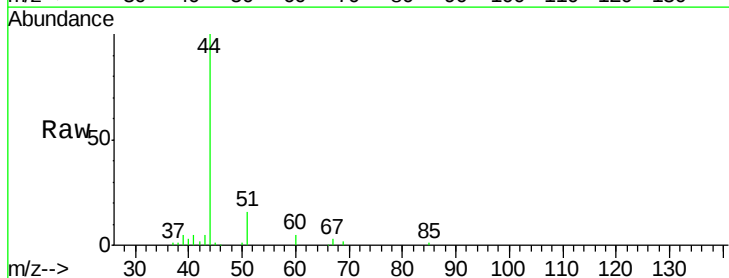
Acq: 21 Oct 2015 6:53

Tgt Ion: 41 Resp: 6974

Ion Ratio Lower Upper

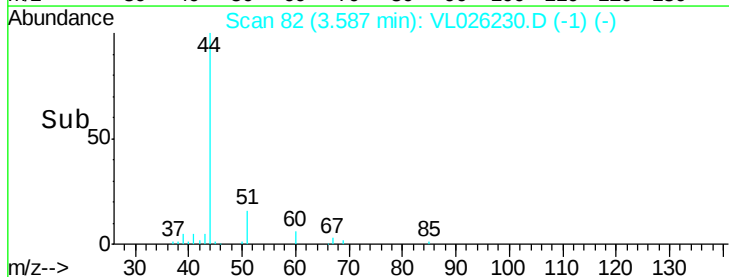
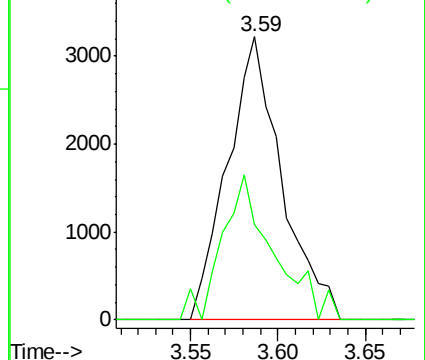
41 100

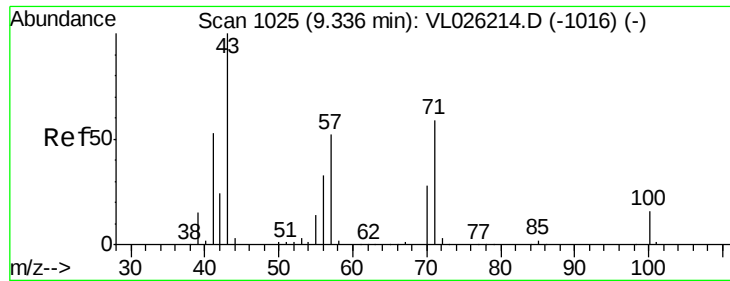
42 48.8 53.8 80.8#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.13 ppbv

RT: 9.32 min Scan# 1022

Delta R.T. -0.02 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

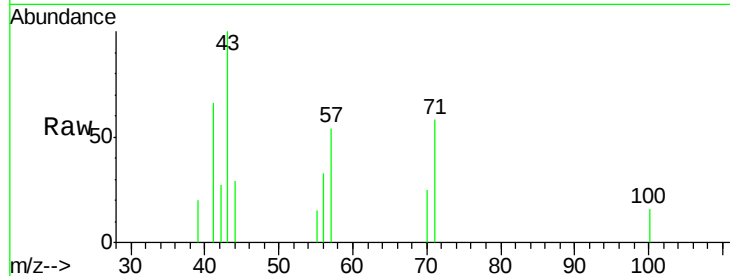
RB-SUBSLAB-239

Tot Ion: 43 Resp: 13259

Ion Ratio Lower Upper

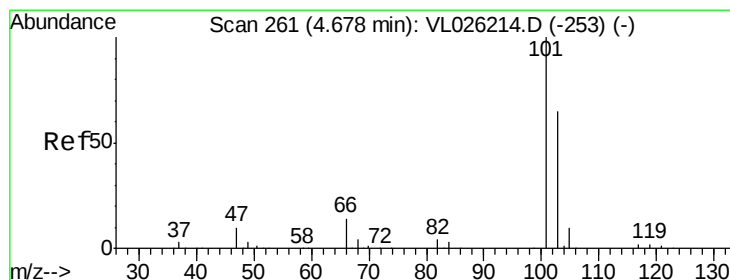
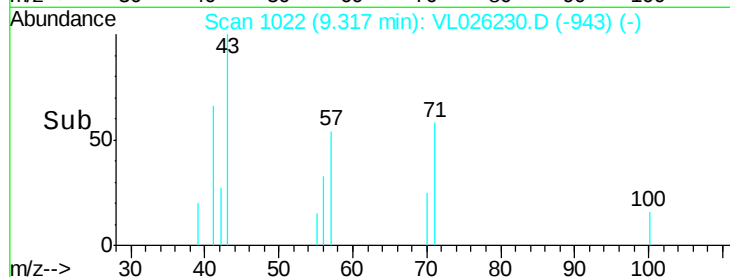
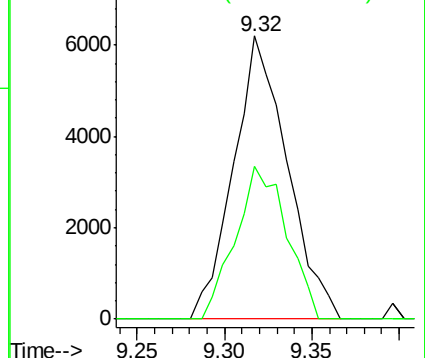
43 100

57 51.3 43.7 65.5



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0



#11

Trichlorofluoromethane

Concen: 0.14 ppbv

RT: 4.67 min Scan# 260

Delta R.T. -0.01 min

Lab File: VL026230.D

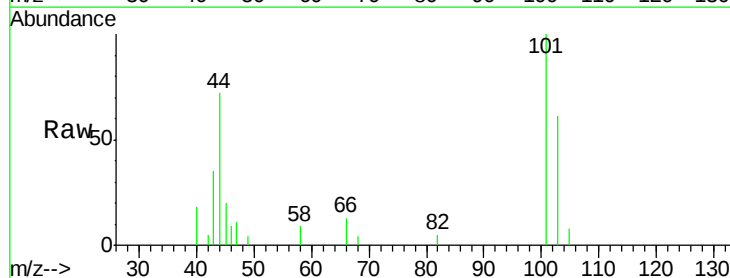
Acq: 21 Oct 2015 6:53

Tgt Ion:101 Resp: 14688

Ion Ratio Lower Upper

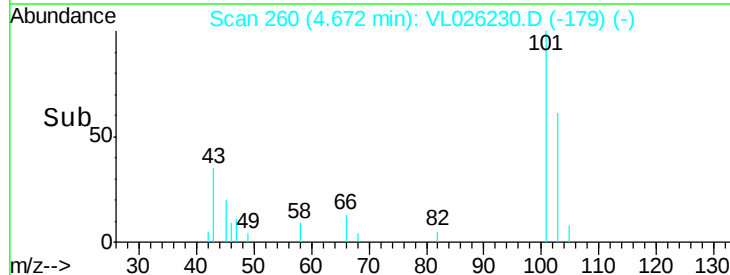
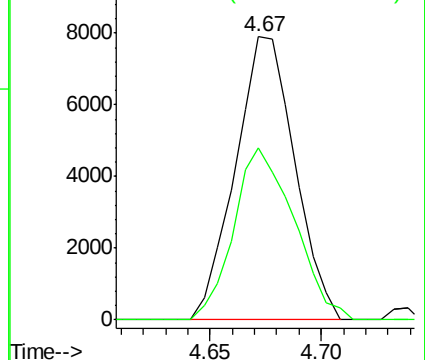
101 100

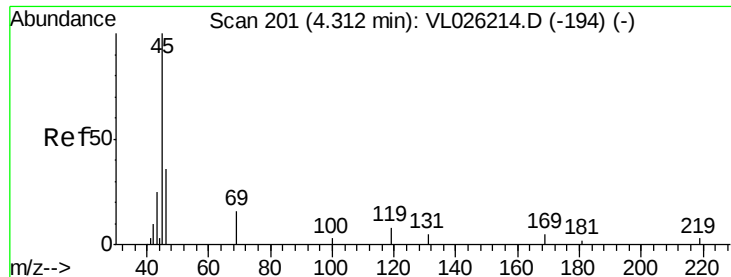
103 61.0 52.2 78.2



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V





#13

Ethanol

Concen: 49.71 ppbv

RT: 4.31 min Scan# 200

Delta R.T. -0.01 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

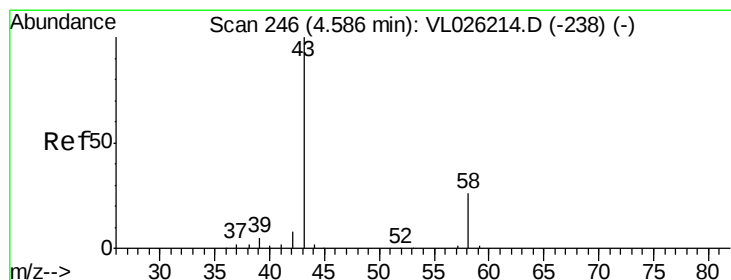
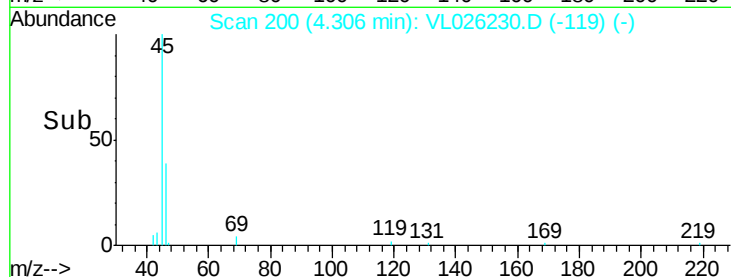
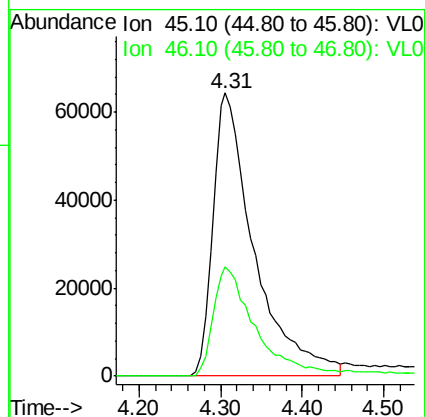
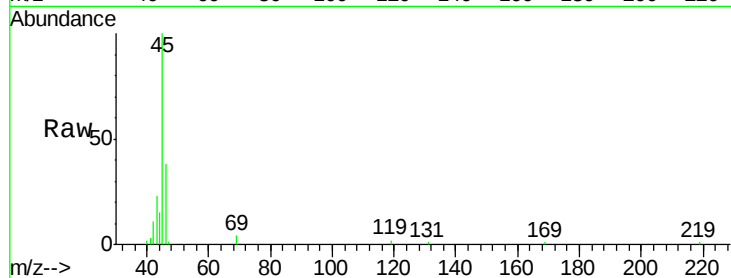
RB-SUBSLAB-239

Tot Ion: 45 Resp: 226701

Ion Ratio Lower Upper

45 100

46 41.9 15.8 63.0



#15

Acetone

Concen: 3.28 ppbv

RT: 4.59 min Scan# 246

Delta R.T. 0.00 min

Lab File: VL026230.D

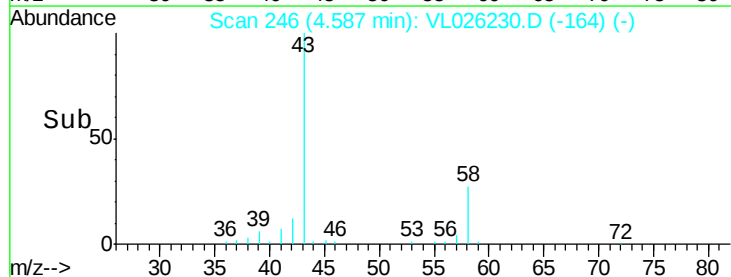
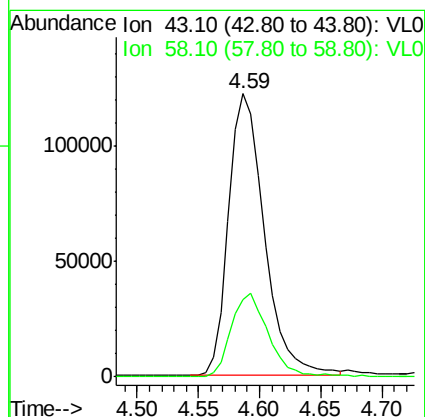
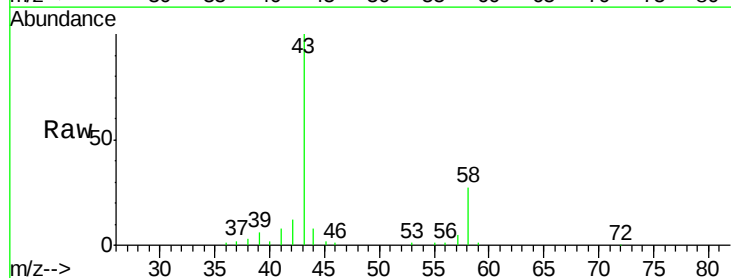
Acq: 21 Oct 2015 6:53

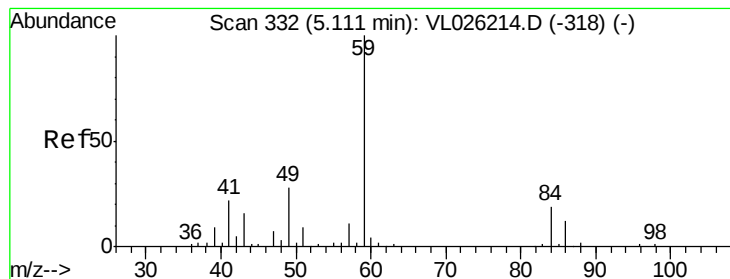
Tgt Ion: 43 Resp: 247560

Ion Ratio Lower Upper

43 100

58 31.1 21.8 32.6



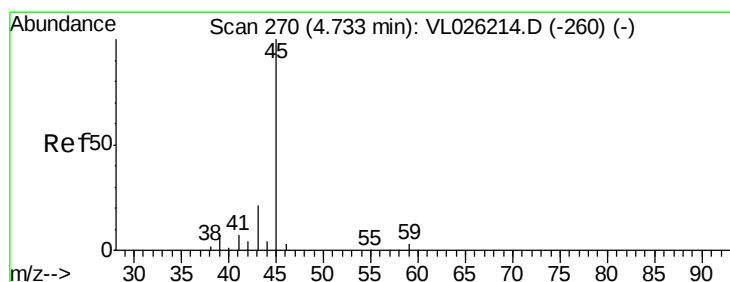
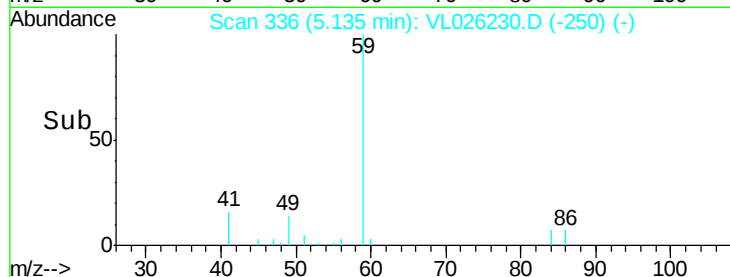
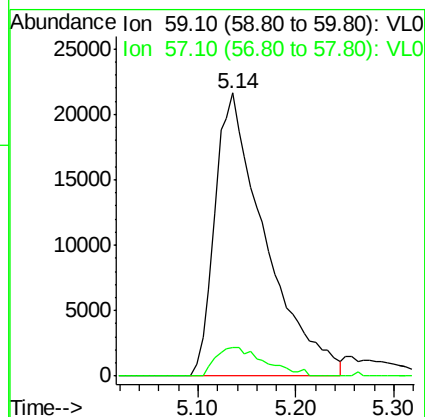
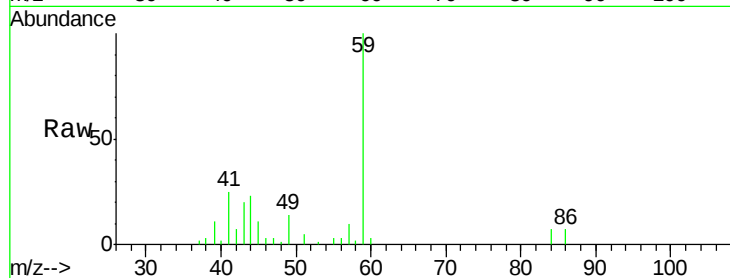


#17

tert-Butyl alcohol
Concen: 1.49 ppbv
RT: 5.14 min Scan# 336
Delta R.T. 0.02 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239

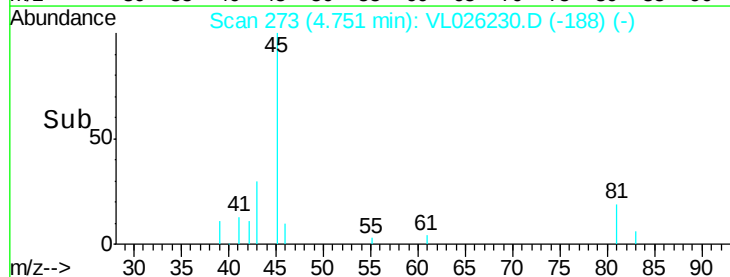
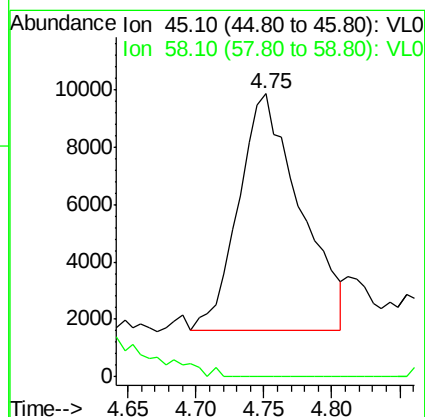
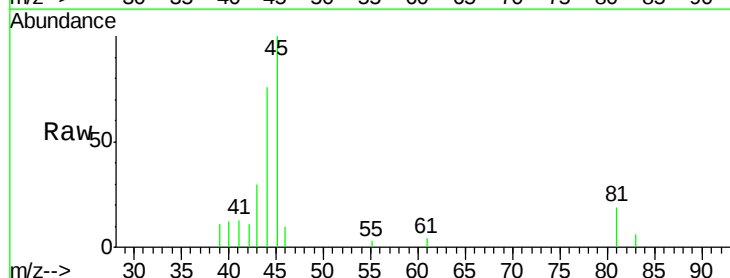
Tot Ion: 59 Resp: 77122
Ion Ratio Lower Upper
59 100
57 10.0 8.5 12.7

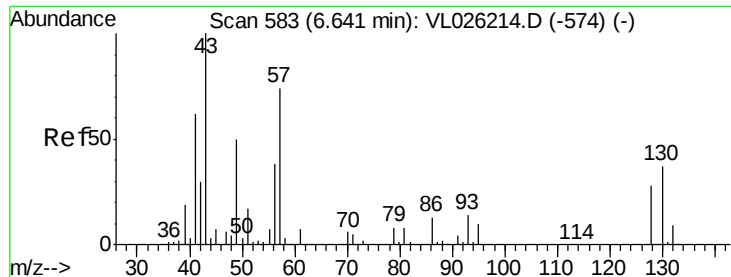


#19

Isopropyl Alcohol
Concen: 0.88 ppbv
RT: 4.75 min Scan# 273
Delta R.T. 0.02 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Tgt Ion: 45 Resp: 26079
Ion Ratio Lower Upper
45 100
58 295.6 40.3 60.5#

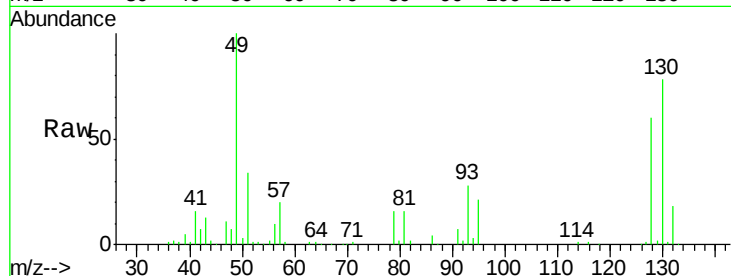




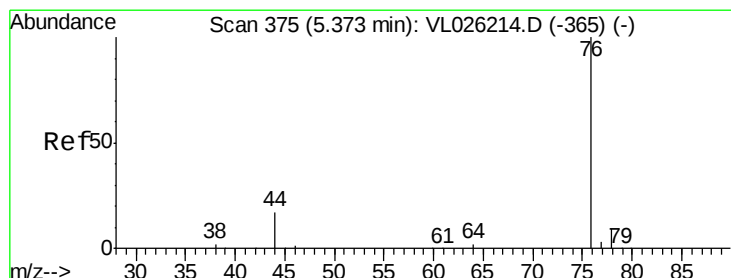
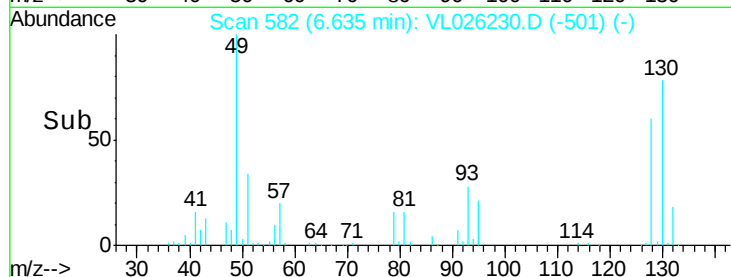
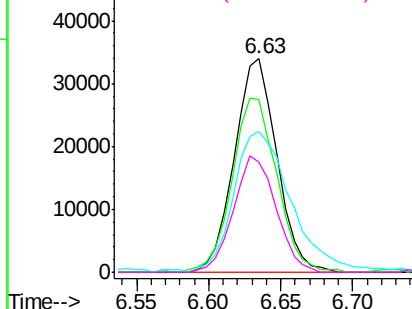
#26
Hexane
Concen: 0.98 ppbv
RT: 6.63 min Scan# 582
Delta R.T. -0.01 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239

Tot Ion: 57 Resp: 69517
Ion Ratio Lower Upper
57 100
41 86.3 68.1 102.1
43 92.4 163.4 245.2#
56 54.4 42.2 63.4

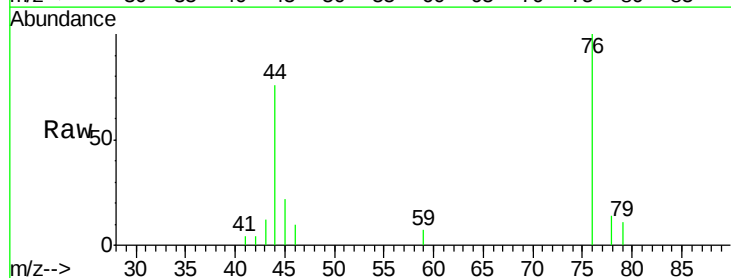


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

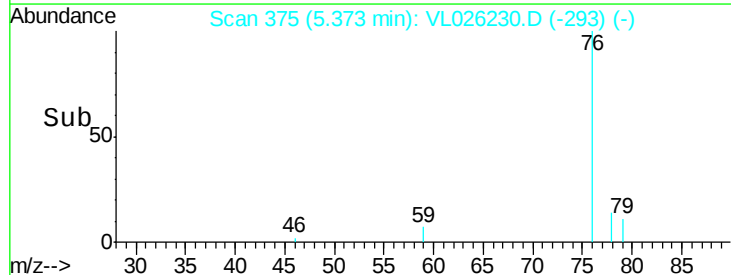
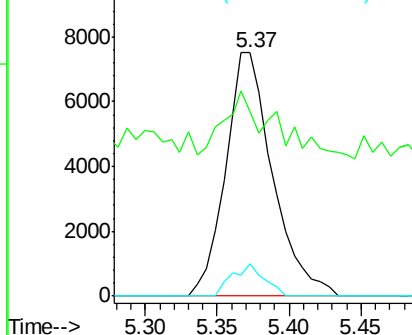


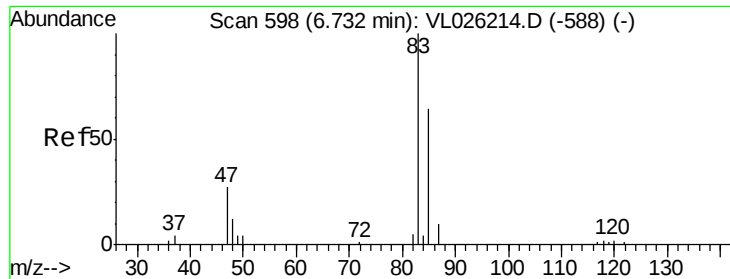
#27
Carbon Disulfide
Concen: 0.19 ppbv
RT: 5.37 min Scan# 375
Delta R.T. 0.00 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Tgt Ion: 76 Resp: 17099
Ion Ratio Lower Upper
76 100
44 30.1 14.0 21.0#
78 9.0 7.4 11.2



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0

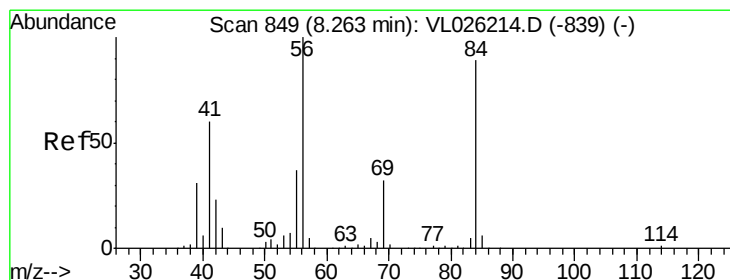
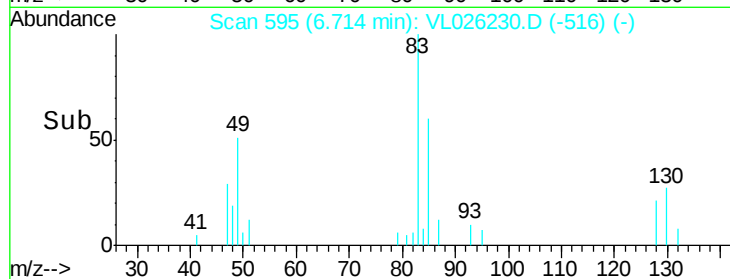
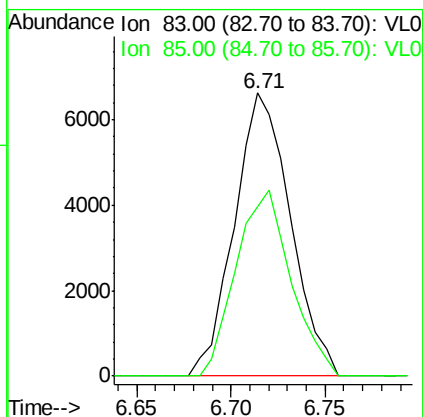
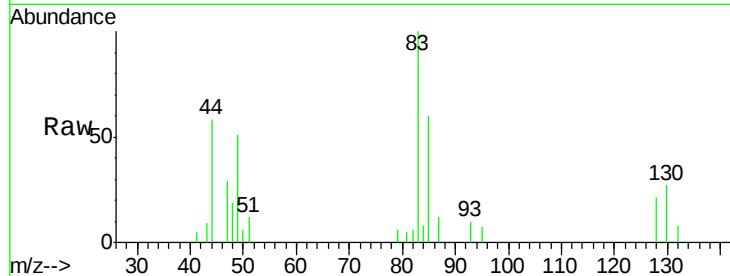




#29
Chloroform
Concen: 0.13 ppbv
RT: 6.71 min Scan# 595
Delta R.T. -0.02 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

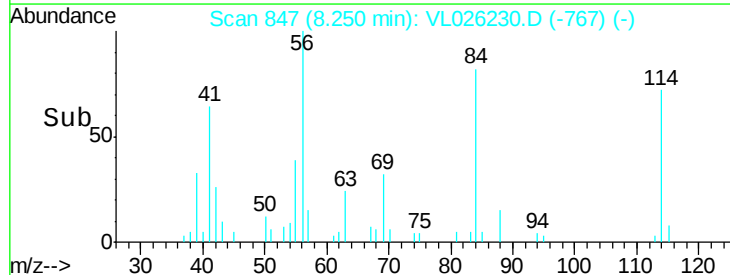
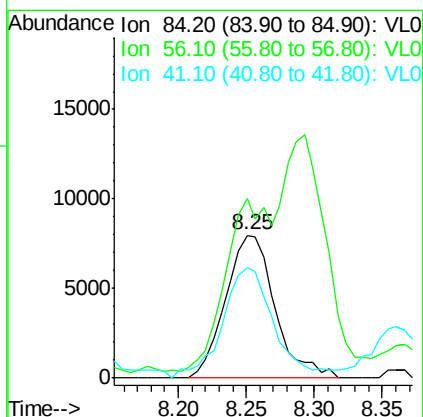
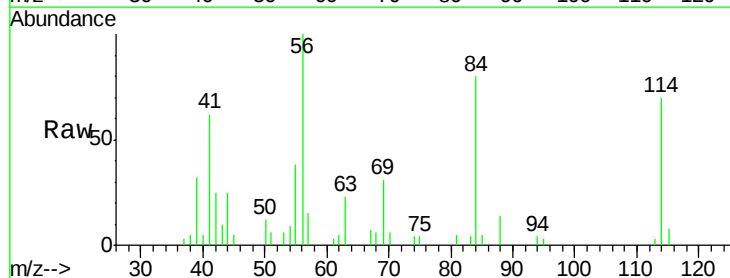
Instrument :
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RB-SUBSLAB-239

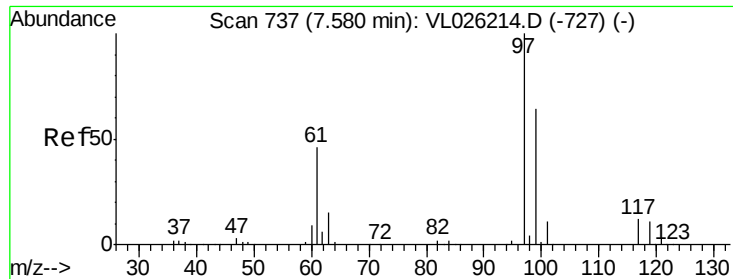
Tot Ion: 83 Resp: 13673
Ion Ratio Lower Upper
83 100
85 59.9 51.5 77.3



#30
Cyclohexane
Concen: 0.29 ppbv
RT: 8.25 min Scan# 847
Delta R.T. -0.01 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Tgt Ion: 84 Resp: 20194
Ion Ratio Lower Upper
84 100
56 296.6 95.9 143.9#
41 79.5 54.8 82.2





#32

1,1,1-Trichloroethane

Concen: 0.03 ppbv

RT: 7.57 min Scan# 736

Delta R.T. -0.01 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239

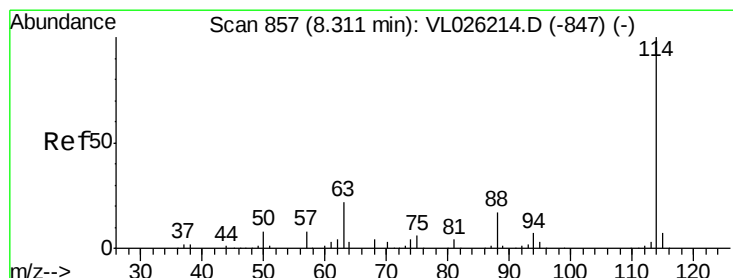
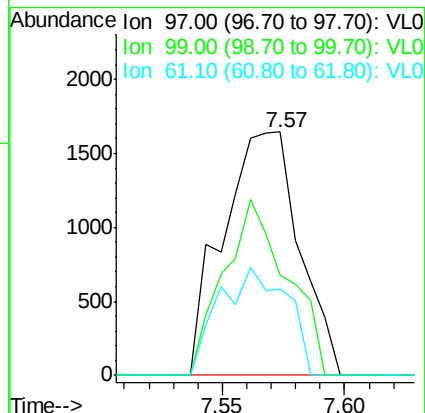
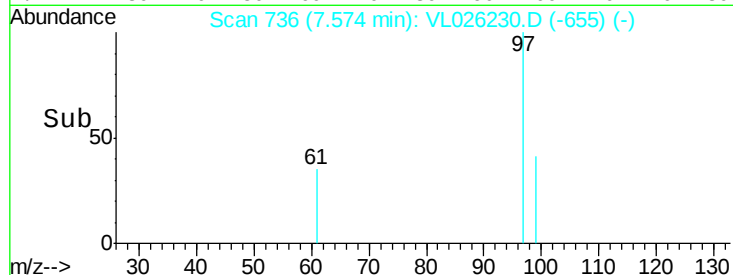
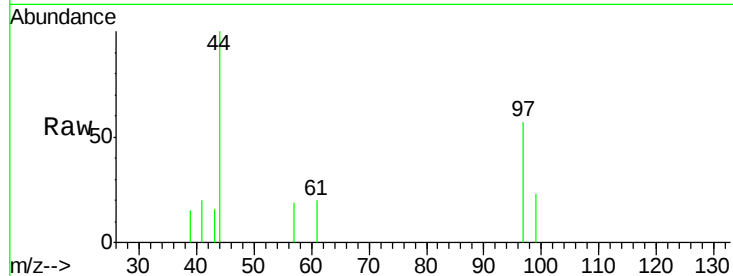
Tot Ion: 97 Resp: 3577

Ion Ratio Lower Upper

97 100

99 59.7 51.4 77.0

61 38.9 36.2 54.4



#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 8.29 min Scan# 854

Delta R.T. -0.02 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

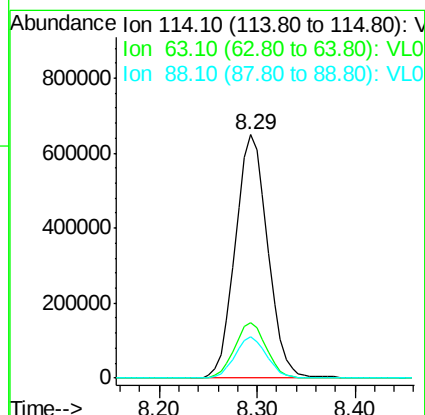
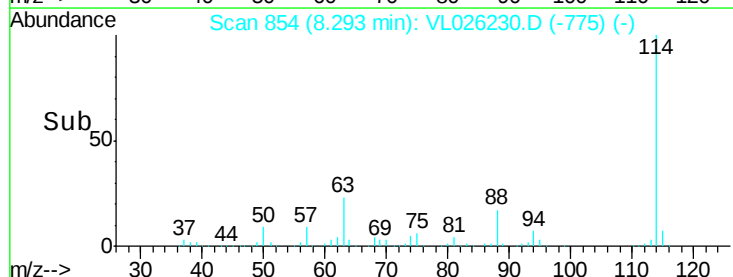
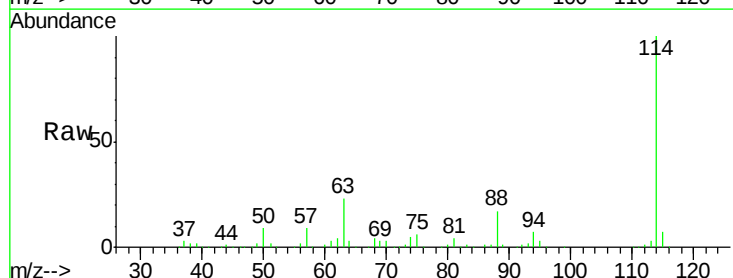
Tgt Ion: 114 Resp: 1492138

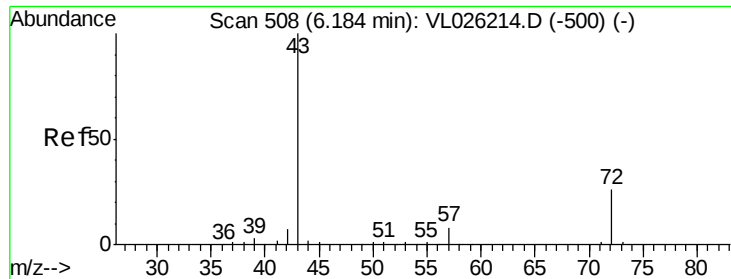
Ion Ratio Lower Upper

114 100

63 22.6 18.2 27.4

88 16.7 13.5 20.3

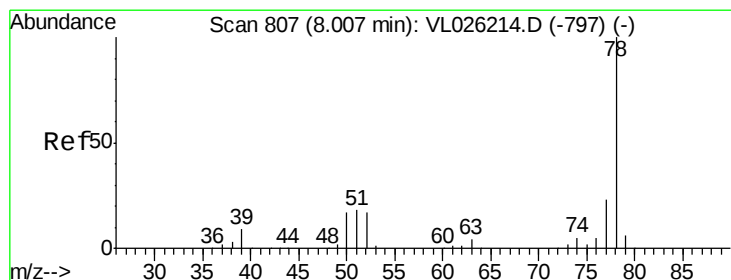
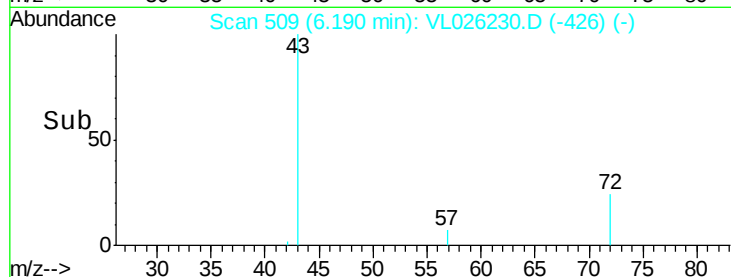
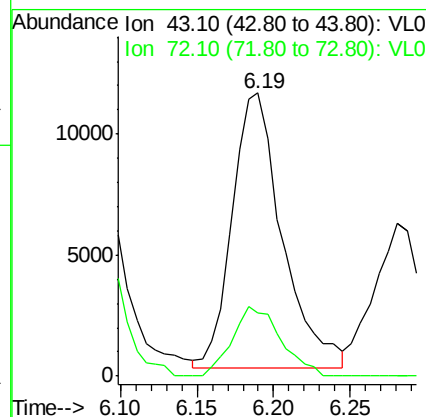
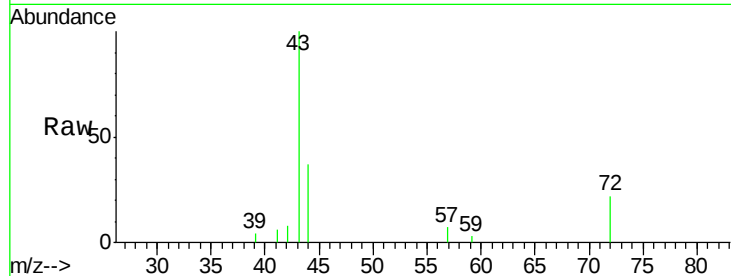




#34
2-Butanone
Concen: 0.31 ppbv
RT: 6.19 min Scan# 509
Delta R.T. 0.01 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

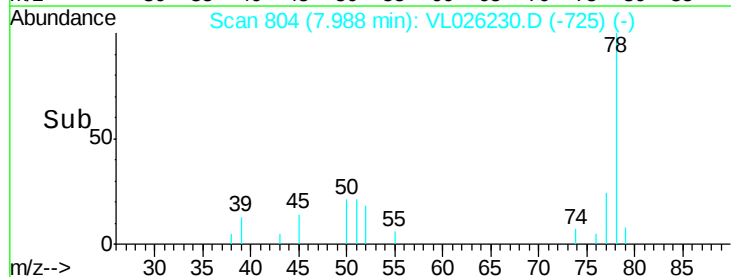
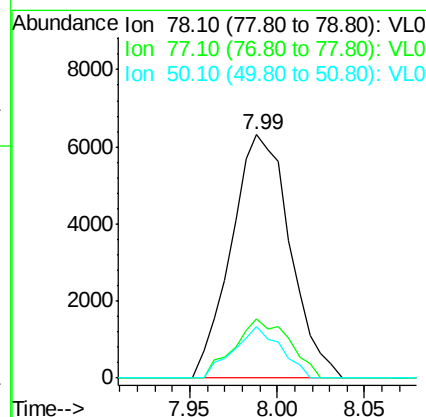
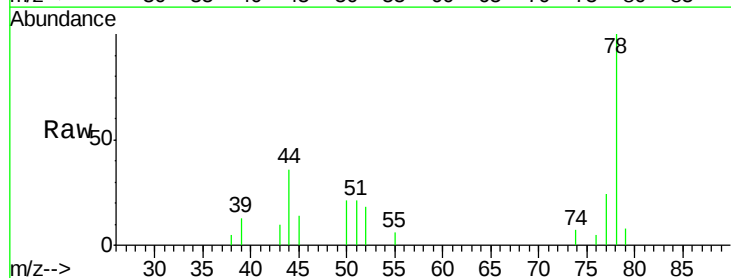
Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239

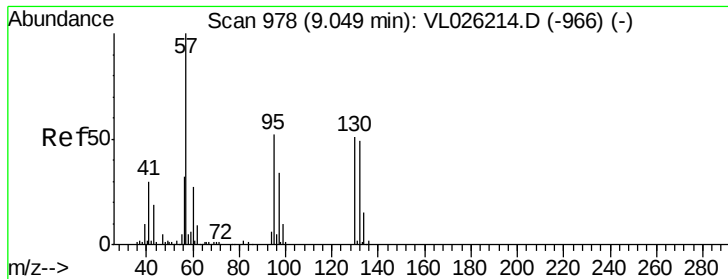
Tot Ion: 43 Resp: 25798
Ion Ratio Lower Upper
43 100
72 24.5 20.1 30.1



#36
Benzene
Concen: 0.10 ppbv
RT: 7.99 min Scan# 804
Delta R.T. -0.02 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Tgt Ion: 78 Resp: 14739
Ion Ratio Lower Upper
78 100
77 24.2 18.1 27.1
50 21.4 13.8 20.8#

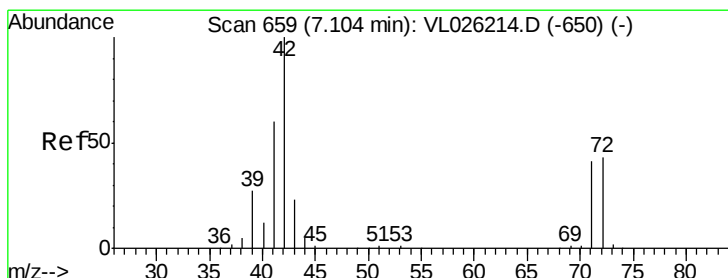
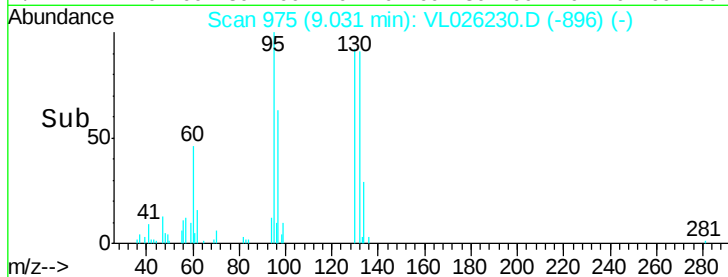
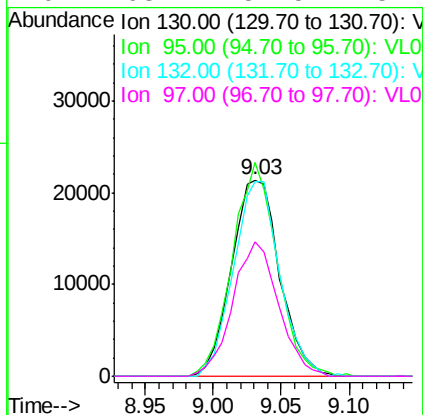
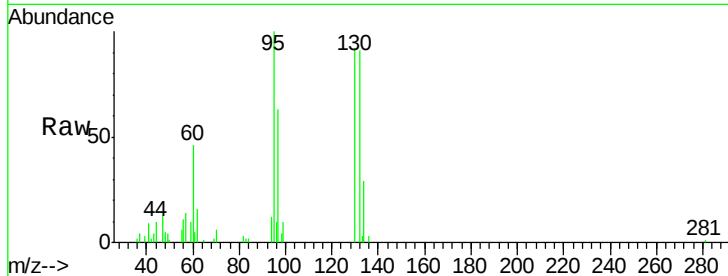




#38
 Trichloroethene
 Concen: 0.72 ppbv
 RT: 9.03 min Scan# 975
 Delta R.T. -0.02 min
 Lab File: VL026230.D
 Acq: 21 Oct 2015 6:53

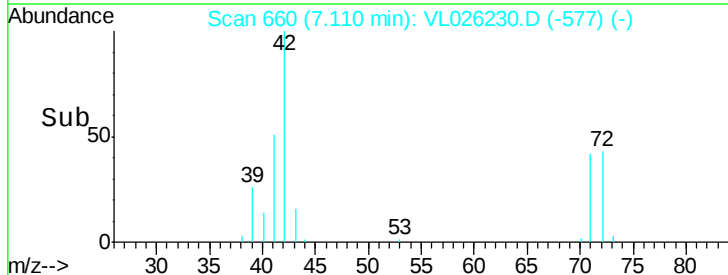
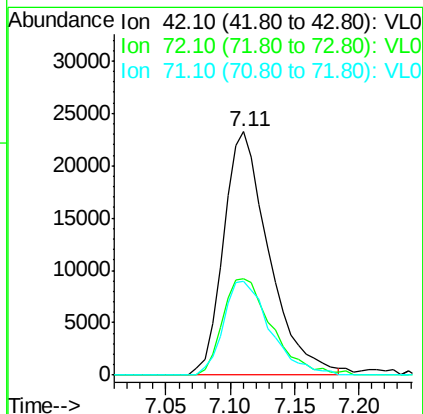
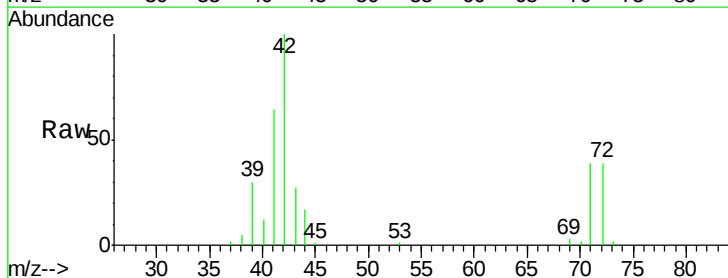
Instrument :
 MSVOA_L
 ClientSampleId :
 RB-SUBSLAB-239

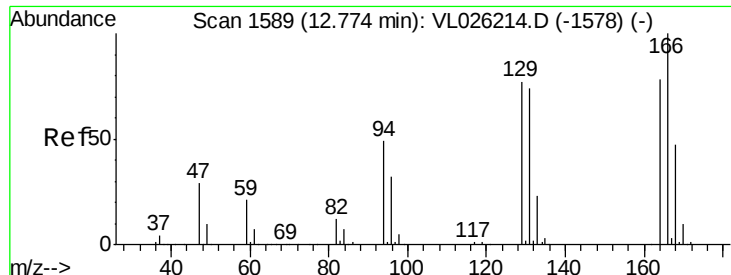
Tot Ion:130	Resp:	52959
Ion	Ratio	Lower Upper
130	100	
95	108.7	81.0 121.4
132	99.1	76.5 114.7
97	68.2	52.5 78.7



#41
 Tetrahydrofuran
 Concen: 1.17 ppbv
 RT: 7.11 min Scan# 660
 Delta R.T. 0.01 min
 Lab File: VL026230.D
 Acq: 21 Oct 2015 6:53

Tgt Ion: 42	Resp:	57230
Ion	Ratio	Lower Upper
42	100	
72	43.1	34.3 51.5
71	39.6	32.1 48.1





#52

Tetrachloroethene

Concen: 78.10 ppbv

RT: 12.78 min Scan# 1590

Delta R.T. 0.01 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239

Tot Ion:164 Resp: 6807068

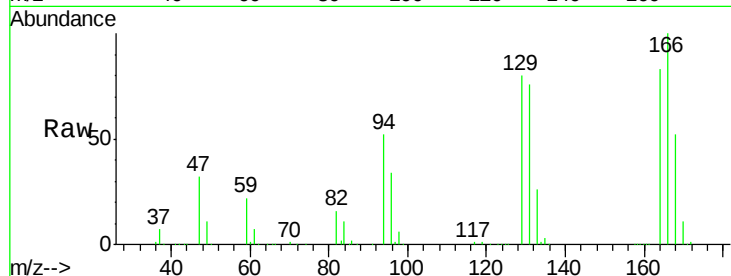
Ion Ratio Lower Upper

164 100

166 120.4 102.3 153.5

129 96.3 78.2 117.4

131 91.0 75.7 113.5

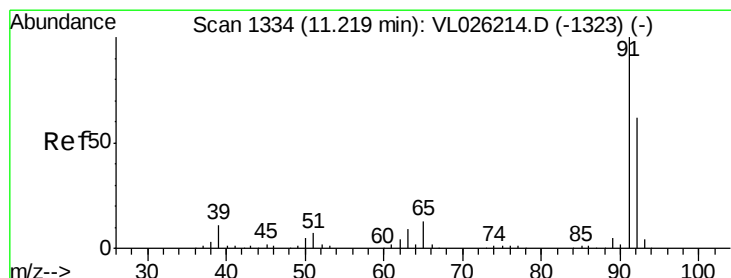
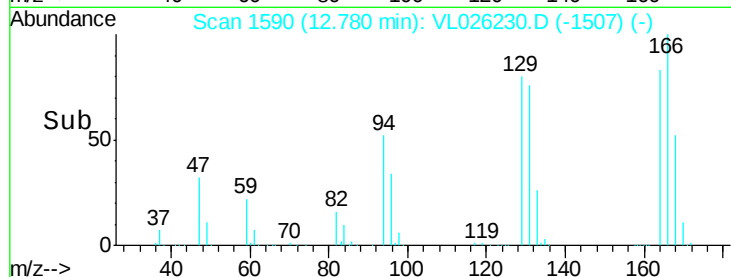
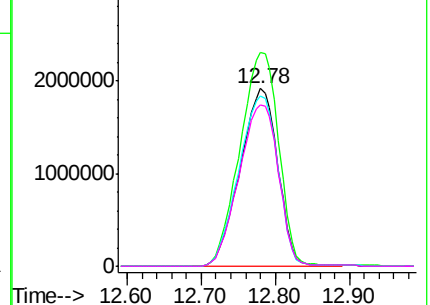


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 1.87 ppbv

RT: 11.20 min Scan# 1331

Delta R.T. -0.02 min

Lab File: VL026230.D

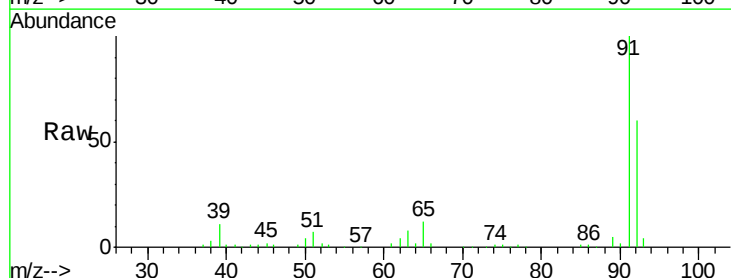
Acq: 21 Oct 2015 6:53

Tgt Ion: 91 Resp: 385582

Ion Ratio Lower Upper

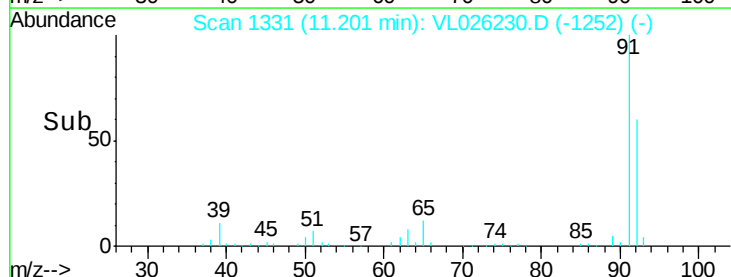
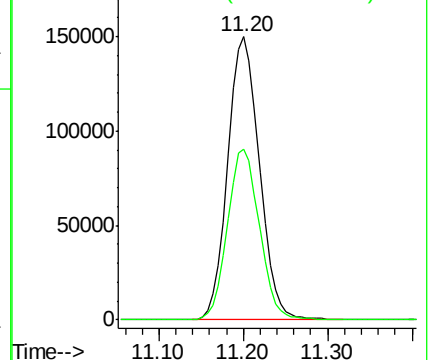
91 100

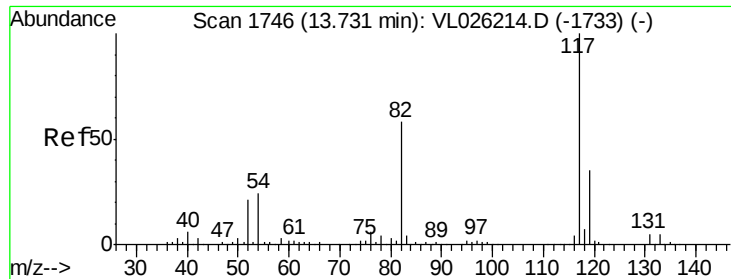
92 60.9 49.2 73.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

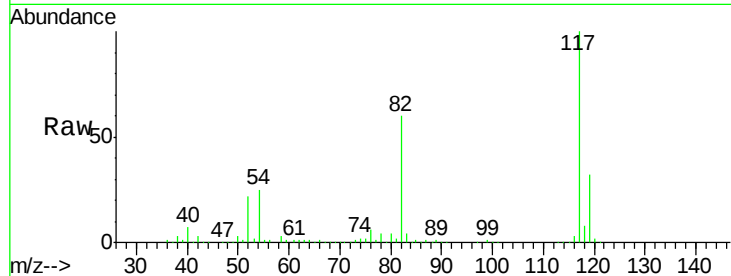




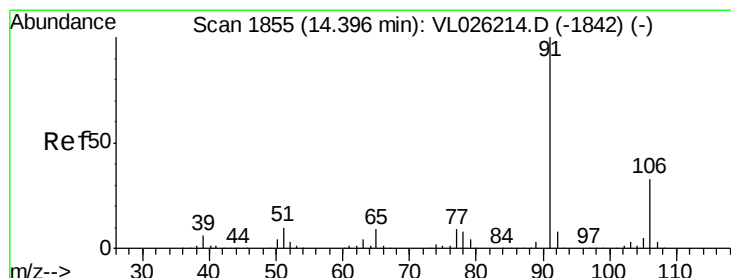
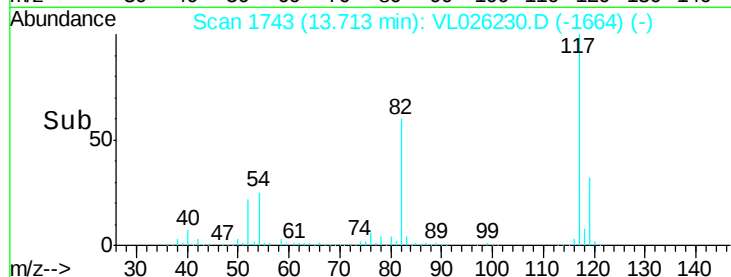
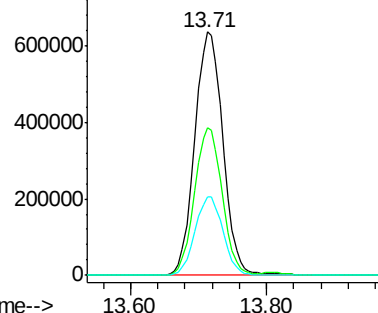
#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 13.71 min Scan# 1743
Delta R.T. -0.02 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239

Tot Ion:117 Resp: 1829026
Ion Ratio Lower Upper
117 100
82 60.8 45.8 68.8
119 32.3 45.0 67.4#

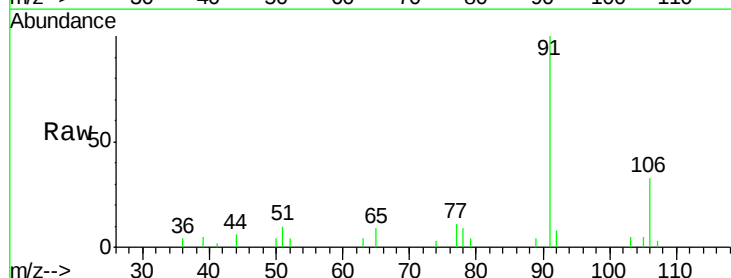


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

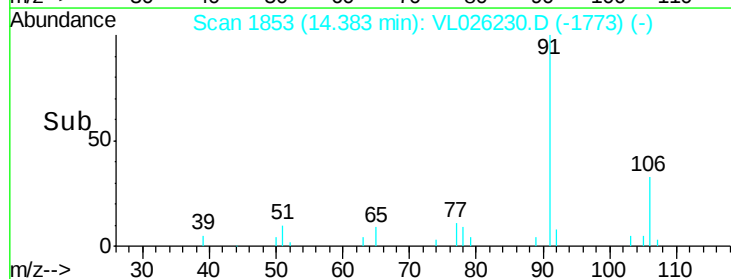
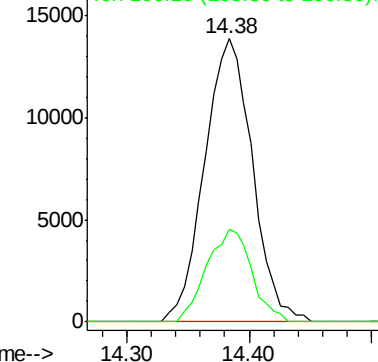


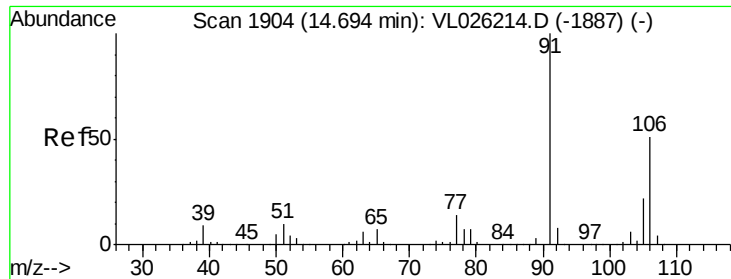
#58
Ethyl Benzene
Concen: 0.13 ppbv
RT: 14.38 min Scan# 1853
Delta R.T. -0.01 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Tgt Ion: 91 Resp: 37599
Ion Ratio Lower Upper
91 100
106 32.9 26.1 39.1



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V

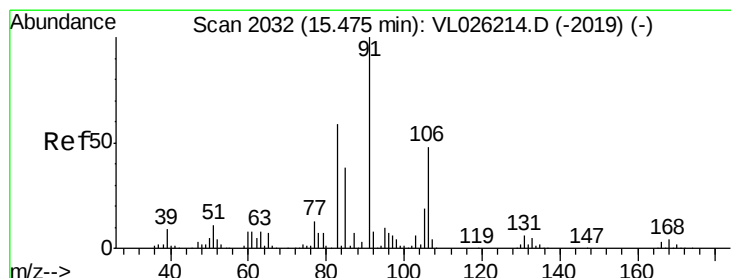
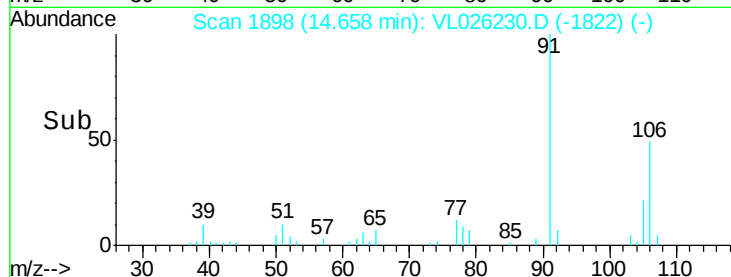
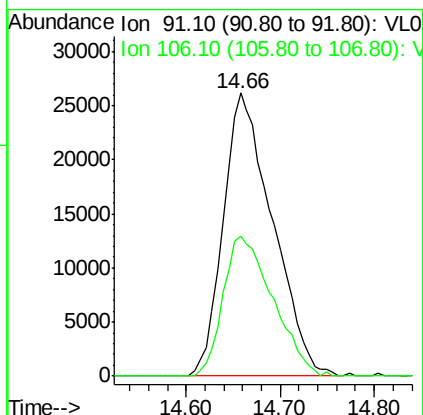
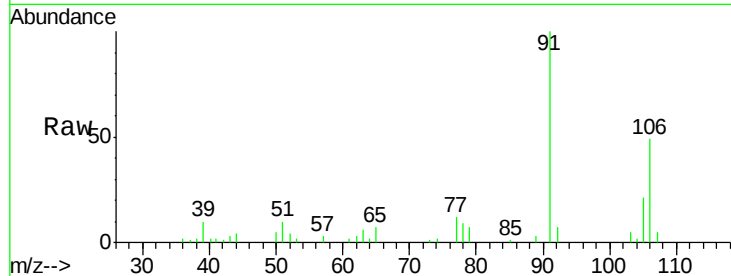




#59
m/p-Xylene
Concen: 0.41 ppbv
RT: 14.66 min Scan# 1898
Delta R.T. -0.04 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

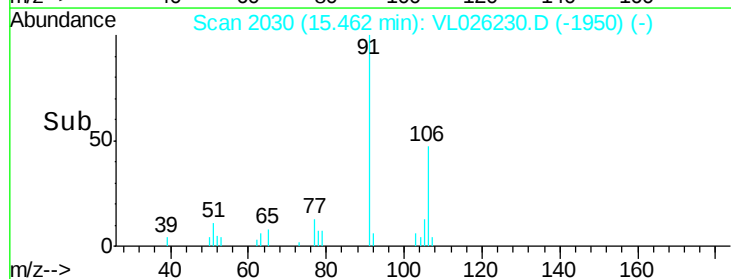
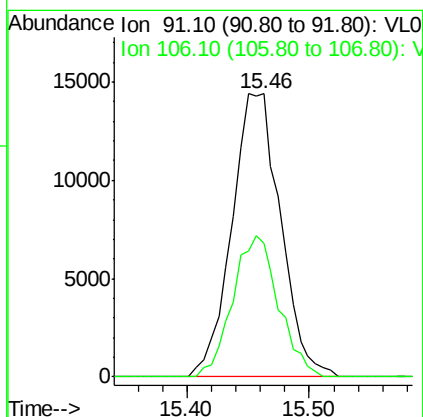
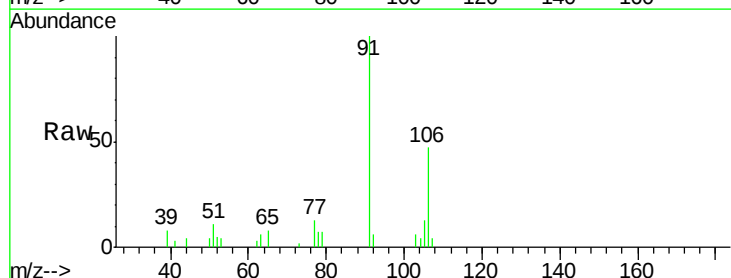
Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239

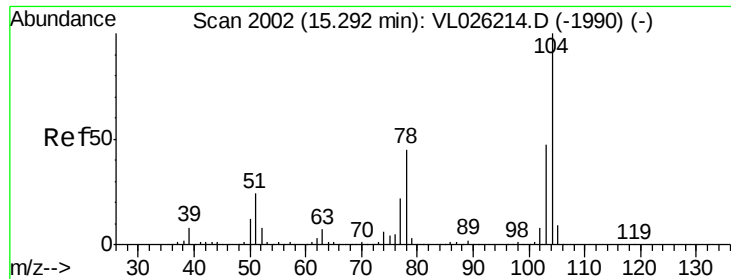
Tot Ion: 91 Resp: 95165
Ion Ratio Lower Upper
91 100
106 50.0 40.6 61.0



#60
o-Xylene
Concen: 0.16 ppbv
RT: 15.46 min Scan# 2030
Delta R.T. -0.01 min
Lab File: VL026230.D
Acq: 21 Oct 2015 6:53

Tgt Ion: 91 Resp: 39935
Ion Ratio Lower Upper
91 100
106 47.0 23.8 71.5





#61

Stvrene

Concen: 0.33 ppbv

RT: 15.28 min Scan# 2000

Delta R.T. -0.01 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239

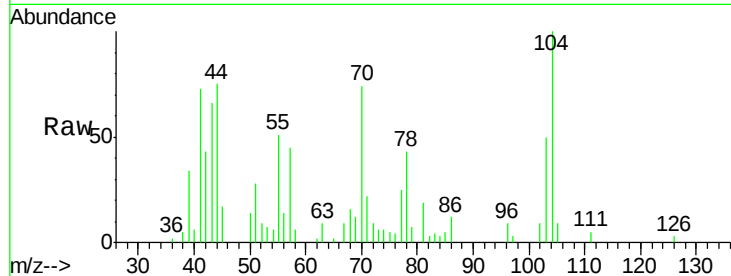
Tot Ion:104 Resp: 36048

Ion Ratio Lower Upper

104 100

78 46.0 35.3 52.9

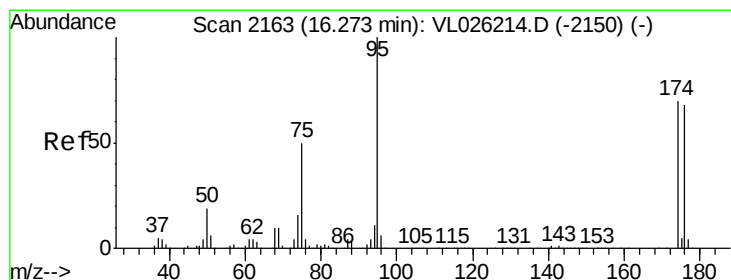
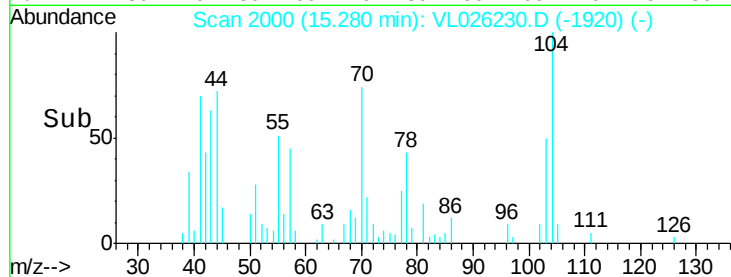
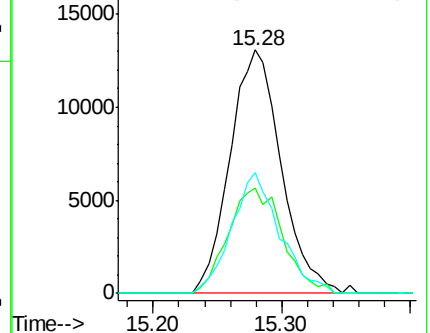
103 46.8 37.0 55.4



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.13 ppbv

RT: 16.25 min Scan# 2159

Delta R.T. -0.02 min

Lab File: VL026230.D

Acq: 21 Oct 2015 6:53

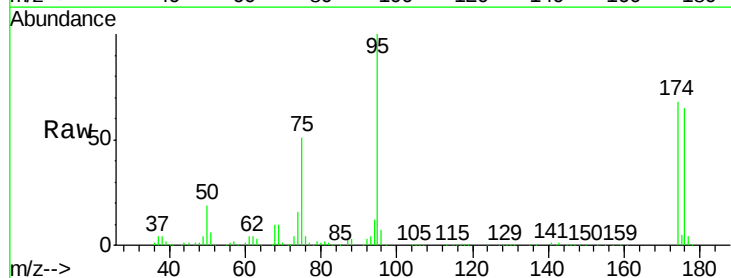
Tgt Ion: 95 Resp: 1429114

Ion Ratio Lower Upper

95 100

174 68.8 55.8 83.8

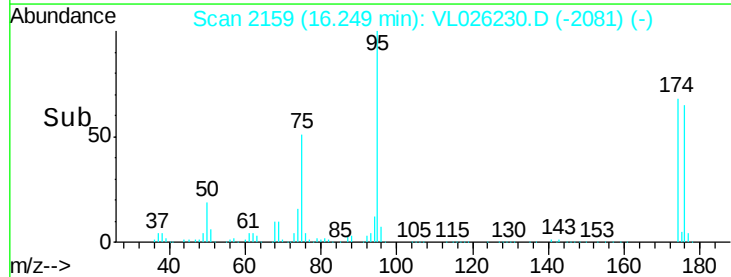
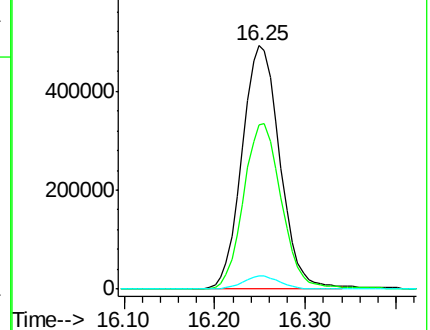
175 5.2 4.3 6.5

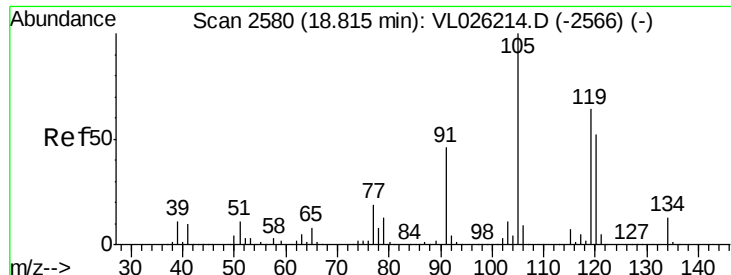


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.12 ppbv
 RT: 18.79 min Scan# 2576
 Delta R.T. -0.02 min
 Lab File: VL026230.D
 Acq: 21 Oct 2015 6:53

Instrument :
 MSVOA_L
 ClientSampleId :
 RB-SUBSLAB-239

Tot Ion:	105	Resp:	32647
Ion Ratio	Lower	Upper	
105	100		
120	46.1	41.2	61.8
91	13.9	37.2	55.8#
77	11.0	15.6	23.4#

