

Data Path : W:\HPCHEM1\MSVOA_L\DATA\VL102115\
 Data File : VL026237.D
 Acq On : 21 Oct 2015 14:35
 Operator : SY/MD
 Sample : G4112-02DL 100X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 RB-SUBSLAB-239DL

Quant Time: Oct 22 08:33:00 2015
 Quant Method : W:\HPCHEM1\MSVOA_L\METHODS\VL102015AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Oct 21 01:20:55 2015
 QLast Update : Wed Oct 21 01:20:55 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.62	49	480465	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	8.29	114	1339649	10.00	ppbv	-0.02
55) Chlorobenzene-d5	13.71	117	1683037	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	16.25	95	1339851	10.32	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.20%

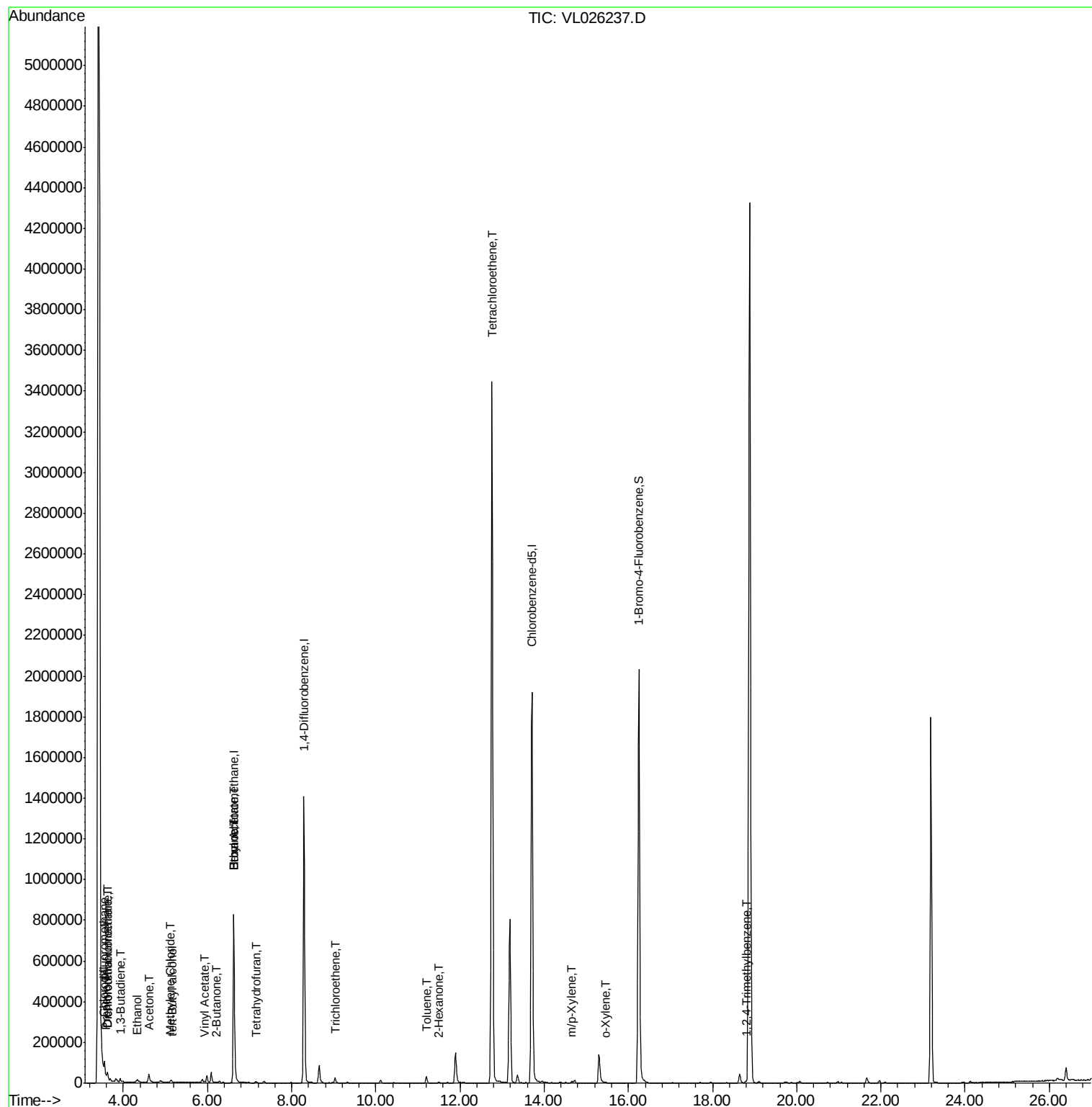
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.62	85	28280	0.28	ppbv	98
3) Chlorodifluoromethane	3.56	51	57495	0.95	ppbv	97
8) Dichlorotetrafluoroethane	3.62	85	28280	0.33	ppbv #	13
9) Propene	3.59	41	2010	0.07	ppbv #	68
13) Ethanol	4.34	45	19755	4.62	ppbv	95
15) Acetone	4.61	43	50588	0.72	ppbv #	75
16) 1,3-Butadiene	3.92	39	4272	0.14	ppbv #	7
17) tert-Butyl alcohol	5.16	59	5318	0.11	ppbv #	78
20) Methylene Chloride	5.13	84	6734	0.24	ppbv	89
23) Vinyl Acetate	5.93	43	2776	0.02	ppbv #	1
25) Ethyl Acetate	6.63	43	6887	0.05	ppbv #	83
26) Hexane	6.63	57	7655	0.12	ppbv #	53
34) 2-Butanone	6.21	43	7682	0.10	ppbv	99
38) Trichloroethene	9.03	130	9961	0.15	ppbv	96
41) Tetrahydrofuran	7.15	42	4311	0.10	ppbv	99
51) 2-Hexanone	11.50	43	4051	0.04	ppbv #	25
52) Tetrachloroethene	12.76	164	1196519	15.29	ppbv	99
53) Toluene	11.21	91	35699	0.19	ppbv	98
59) m/p-Xylene	14.66	91	12820	0.06	ppbv	97
60) o-Xylene	15.46	91	5798	0.03	ppbv	97
74) 1,2,4-Trimethylbenzene	18.80	105	13513	0.05	ppbv #	70

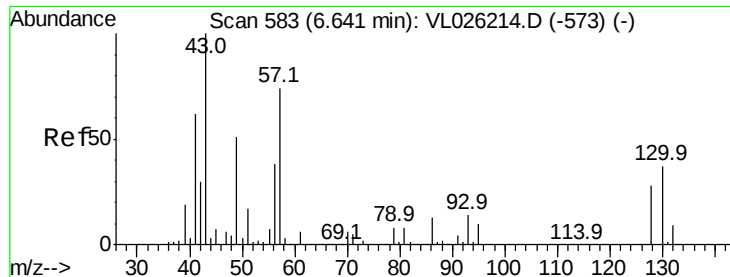
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Oct 21 01:20:55 2015
QLast Update : Wed Oct 21 01:20:55 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: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239DL

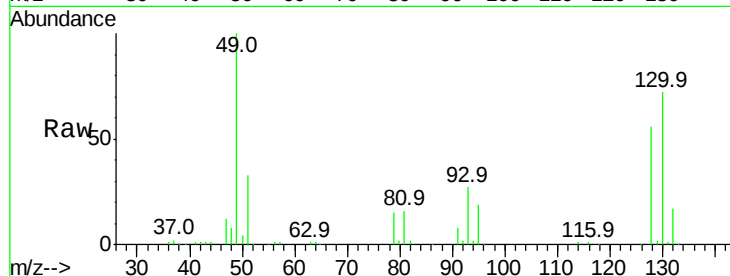
Tgt Ion: 49 Resp: 480465

Ion Ratio Lower Upper

49 100

128 57.6 28.2 84.7

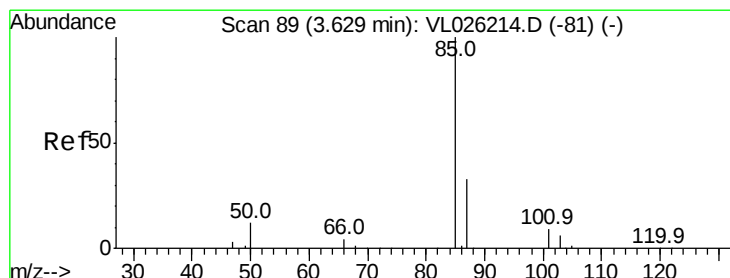
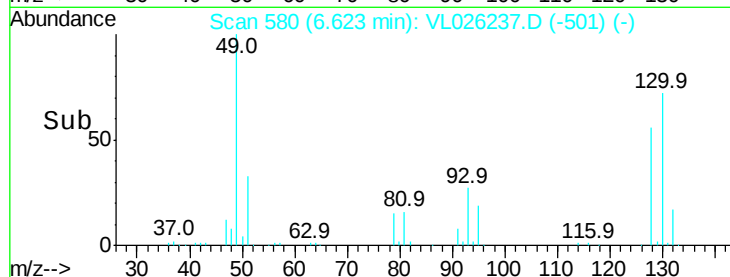
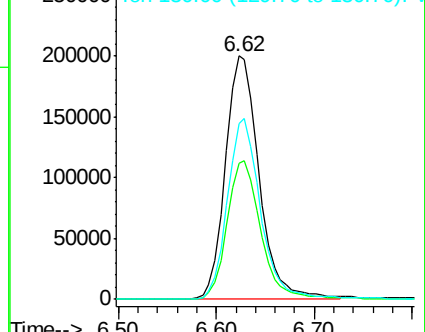
130 74.0 36.0 108.1



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



#2

Dichlorodifluoromethane

Concen: 0.28 ppbv

RT: 3.62 min Scan# 88

Delta R.T. -0.01 min

Lab File: VL026237.D

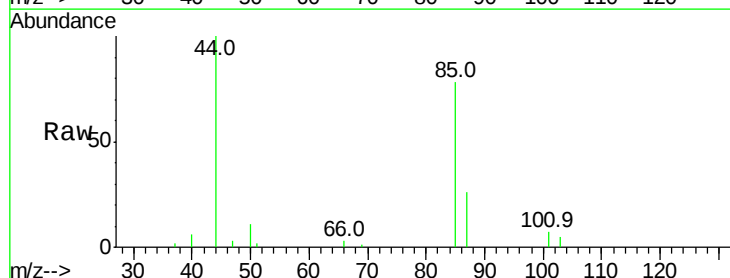
Acq: 21 Oct 2015 14:35

Tgt Ion: 85 Resp: 28280

Ion Ratio Lower Upper

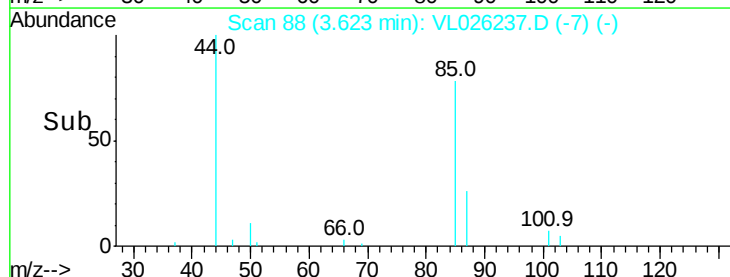
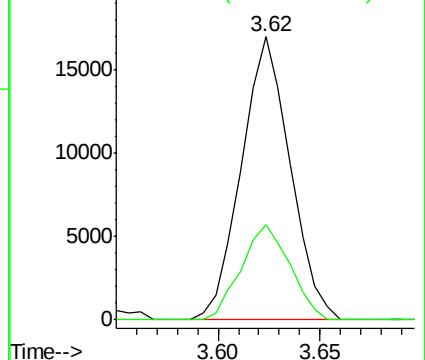
85 100

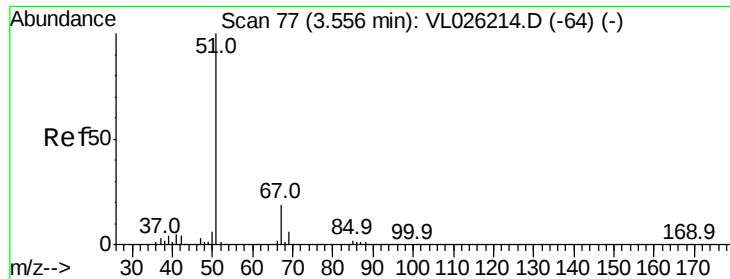
87 33.7 26.1 39.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.95 ppbv

RT: 3.56 min Scan# 77

Delta R.T. -0.00 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

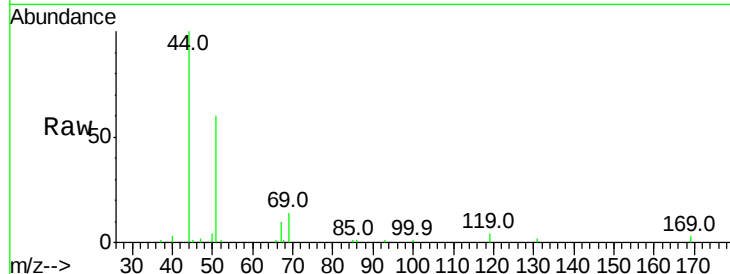
RB-SUBSLAB-239DL

Tgt Ion: 51 Resp: 57495

Ion Ratio Lower Upper

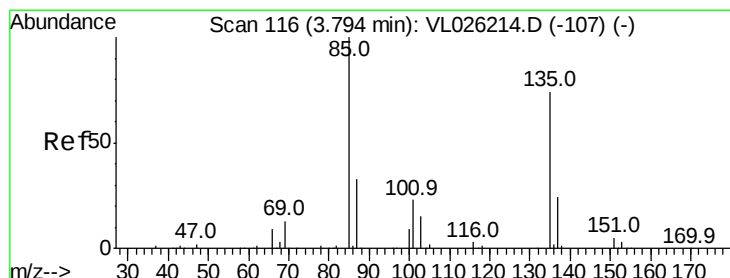
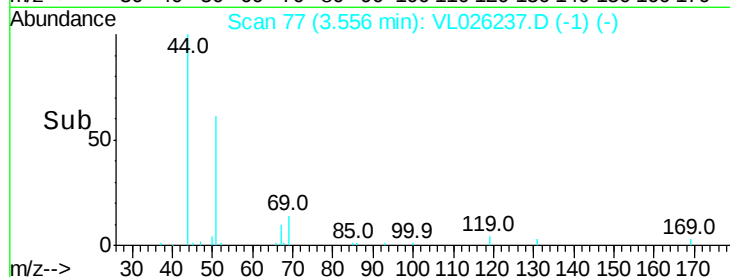
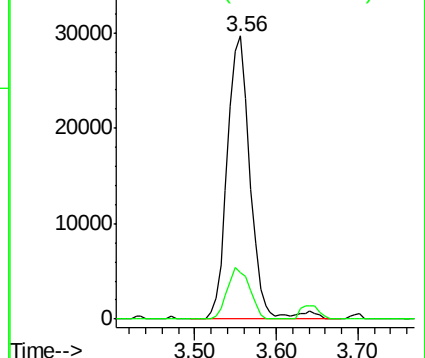
51 100

67 17.6 15.3 22.9



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#8

Dichlorotetrafluoroethane

Concen: 0.33 ppbv

RT: 3.62 min Scan# 88

Delta R.T. -0.17 min

Lab File: VL026237.D

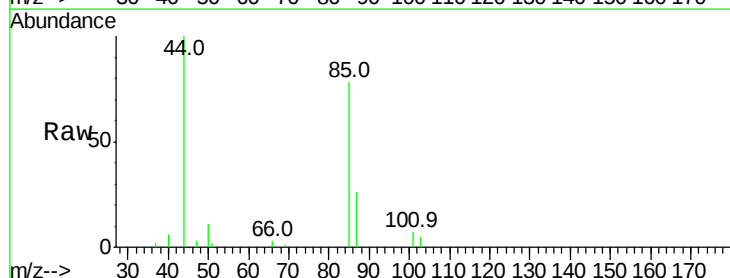
Acq: 21 Oct 2015 14:35

Tgt Ion: 85 Resp: 28280

Ion Ratio Lower Upper

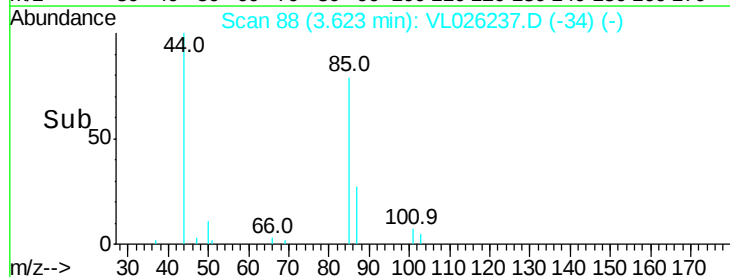
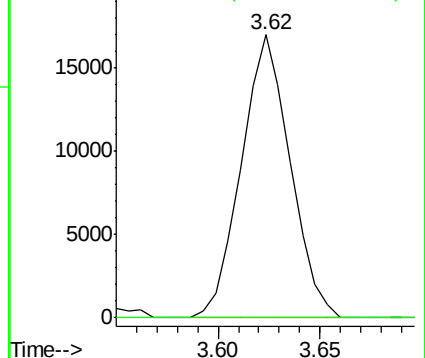
85 100

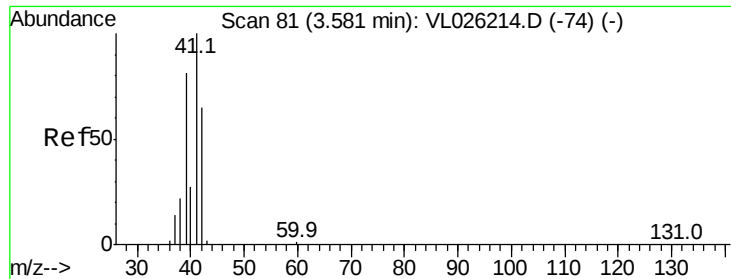
135 0.0 57.8 86.8#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V





#9

Propene

Concen: 0.07 ppbv

RT: 3.59 min Scan# 82

Delta R.T. 0.01 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

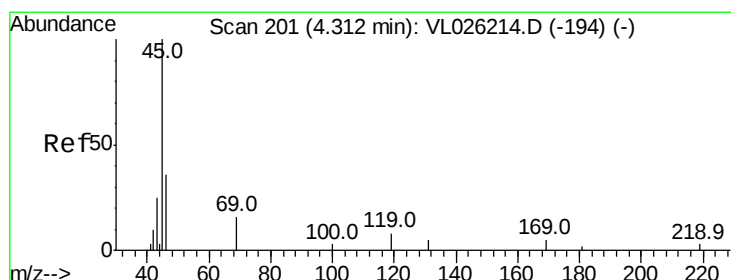
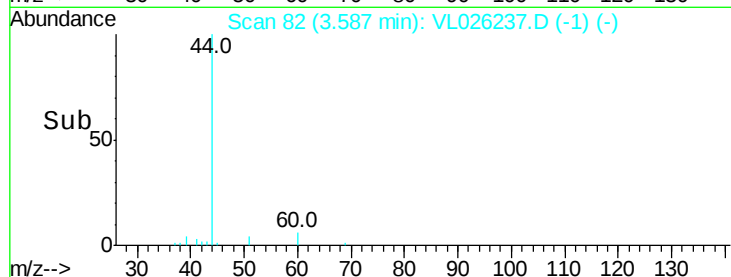
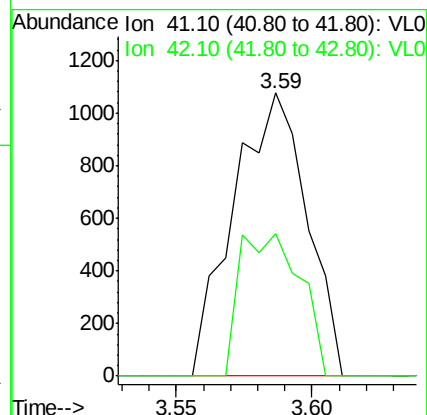
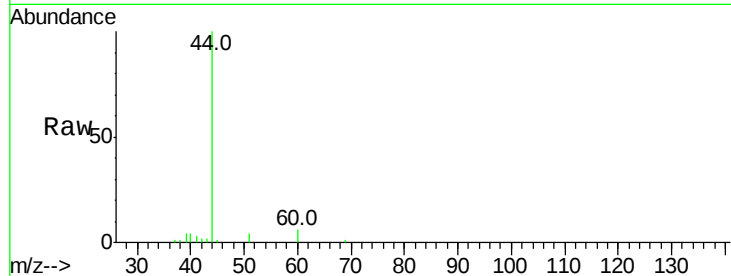
RB-SUBSLAB-239DL

Tgt Ion: 41 Resp: 2010

Ion Ratio Lower Upper

41 100

42 41.6 53.8 80.8#



#13

Ethanol

Concen: 4.62 ppbv

RT: 4.34 min Scan# 205

Delta R.T. 0.02 min

Lab File: VL026237.D

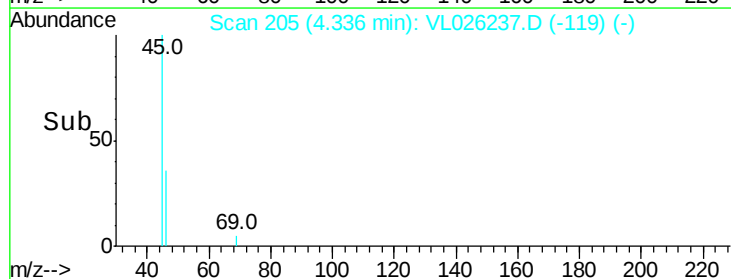
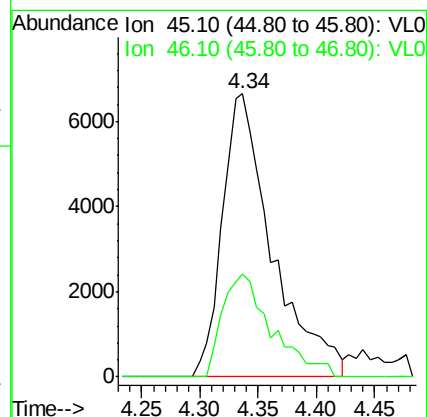
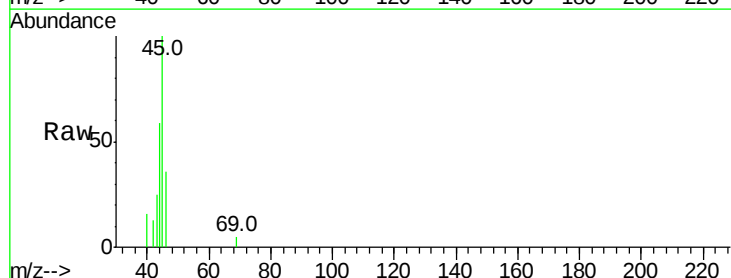
Acq: 21 Oct 2015 14:35

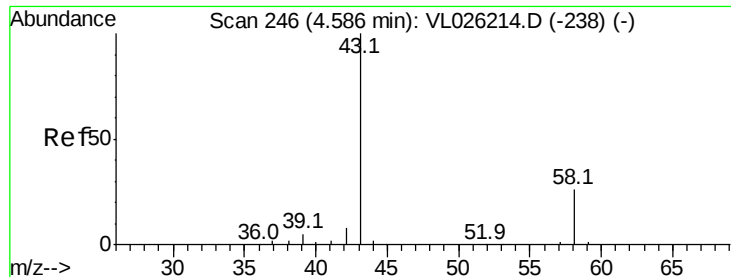
Tgt Ion: 45 Resp: 19755

Ion Ratio Lower Upper

45 100

46 36.0 15.8 63.0





#15

Acetone

Concen: 0.72 ppbv

RT: 4.61 min Scan# 250

Delta R.T. 0.02 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

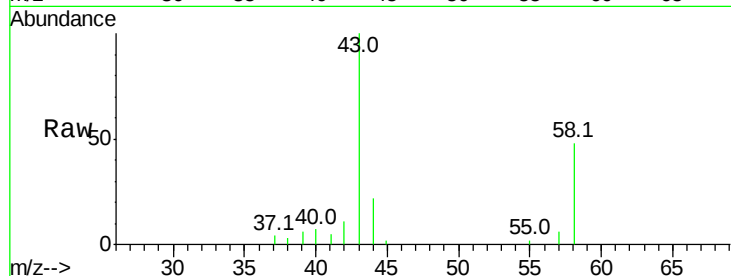
RB-SUBSLAB-239DL

Tgt Ion: 43 Resp: 50588

Ion Ratio Lower Upper

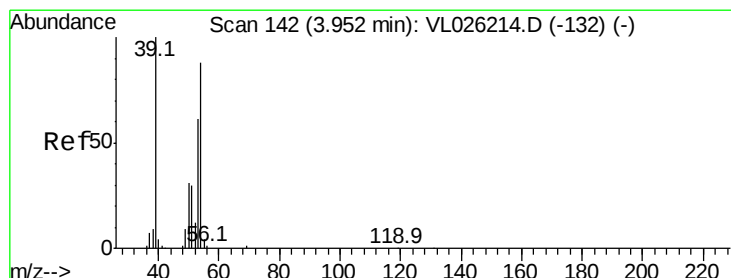
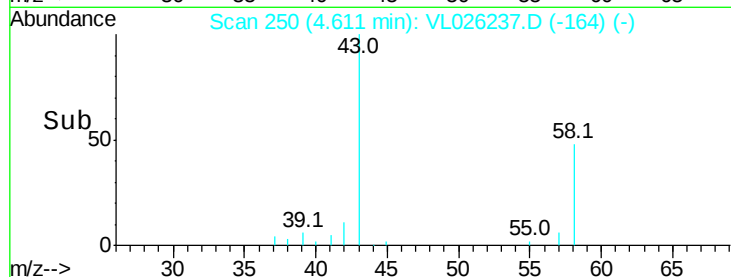
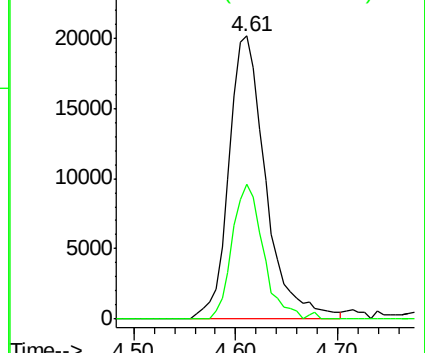
43 100

58 40.2 21.8 32.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.14 ppbv

RT: 3.92 min Scan# 137

Delta R.T. -0.03 min

Lab File: VL026237.D

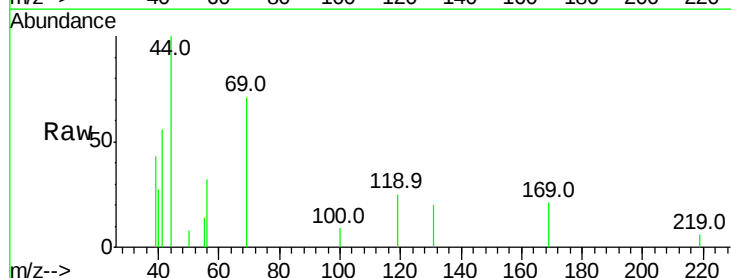
Acq: 21 Oct 2015 14:35

Tgt Ion: 39 Resp: 4272

Ion Ratio Lower Upper

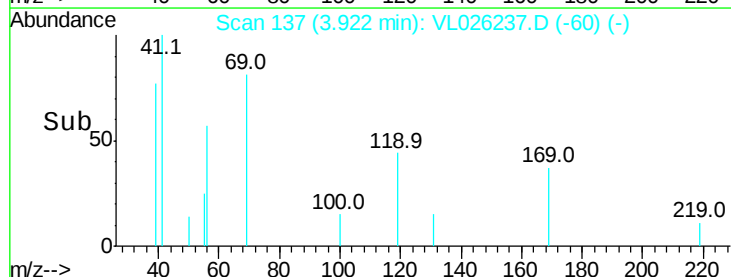
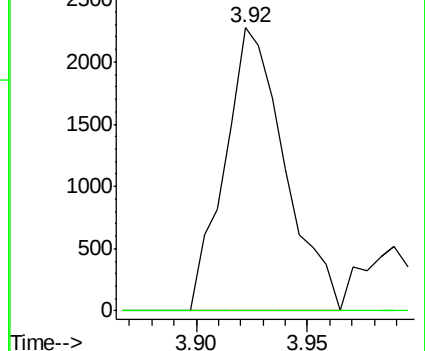
39 100

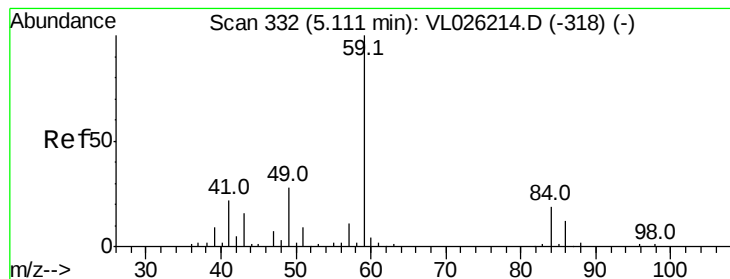
54 0.0 67.3 100.9#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#17

tert-Butyl alcohol

Concen: 0.11 ppbv

RT: 5.16 min Scan# 340

Delta R.T. 0.05 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

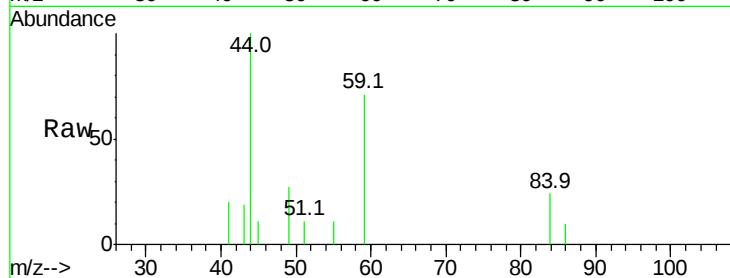
RB-SUBSLAB-239DL

Tgt Ion: 59 Resp: 5318

Ion Ratio Lower Upper

59 100

57 2.4 8.5 12.7#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

5.16

2500

2000

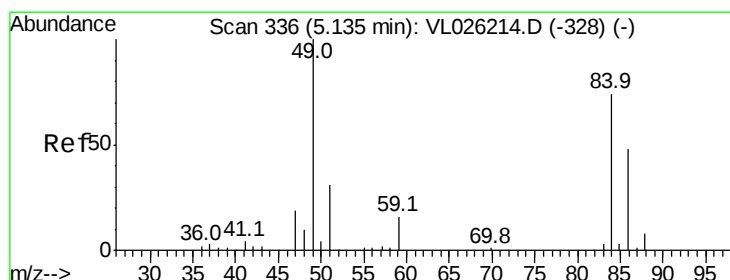
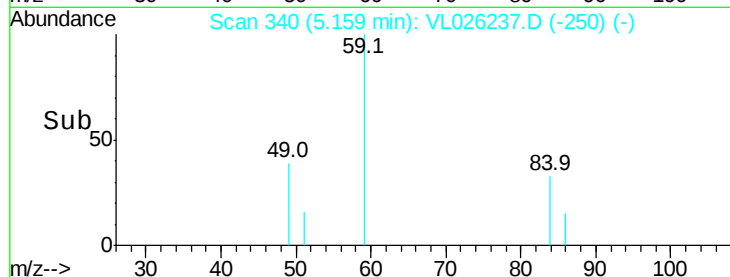
1500

1000

500

0

Time--> 5.10 5.15 5.20



#20

Methylene Chloride

Concen: 0.24 ppbv

RT: 5.13 min Scan# 335

Delta R.T. -0.01 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Tgt Ion: 84 Resp: 6734

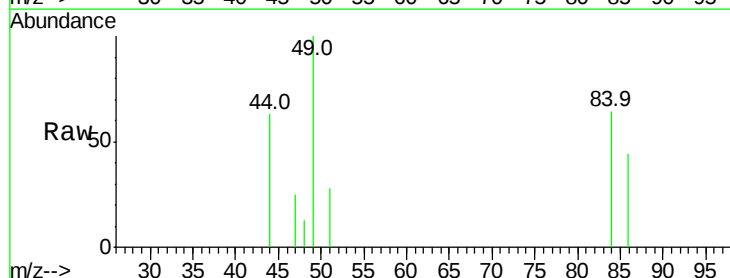
Ion Ratio Lower Upper

84 100

49 156.5 108.7 163.1

51 43.4 33.7 50.5

86 68.3 52.2 78.2



Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

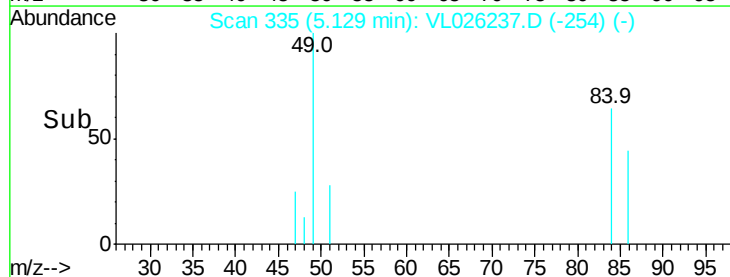
6000

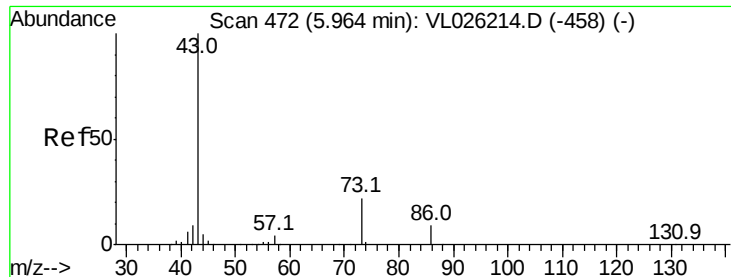
4000

2000

0

Time--> 5.10 5.15 5.20





#23

Vinyl Acetate

Concen: 0.02 ppbv

RT: 5.93 min Scan# 466

Delta R.T. -0.04 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239DL

Tgt Ion: 43 Resp: 2776

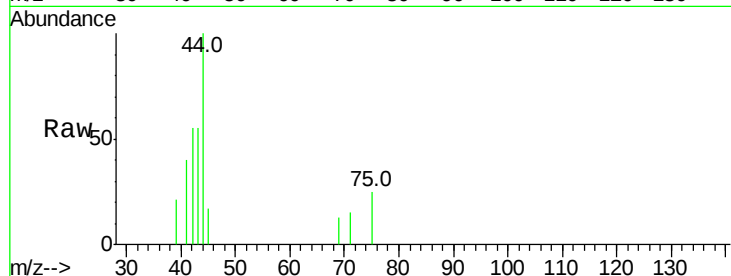
Ion Ratio Lower Upper

43 100

86 0.0 7.0 10.6#

42 100.4 7.5 11.3#

44 3.9 3.6 5.4

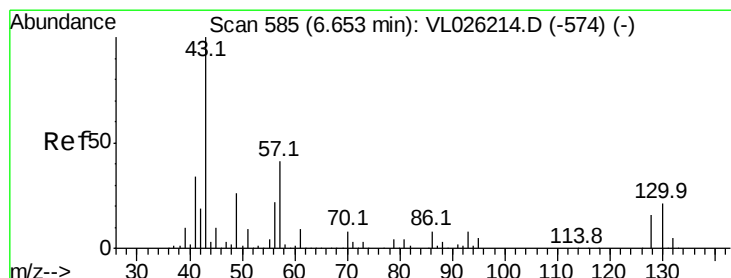
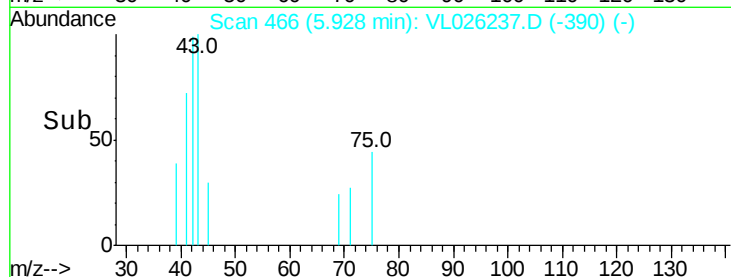
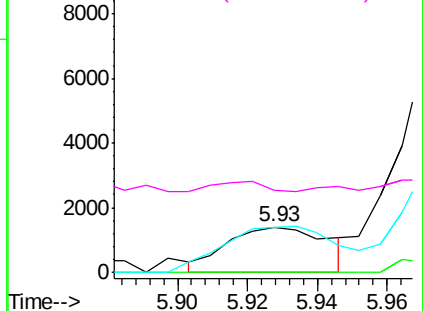


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.05 ppbv

RT: 6.63 min Scan# 582

Delta R.T. -0.02 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Tgt Ion: 43 Resp: 6887

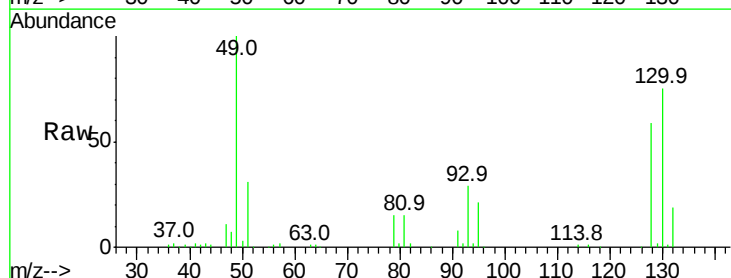
Ion Ratio Lower Upper

43 100

45 9.1 7.7 11.5

61 0.0 7.5 11.3#

70 0.0 6.9 10.3#

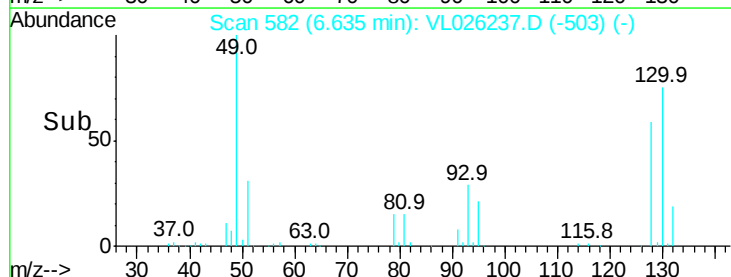
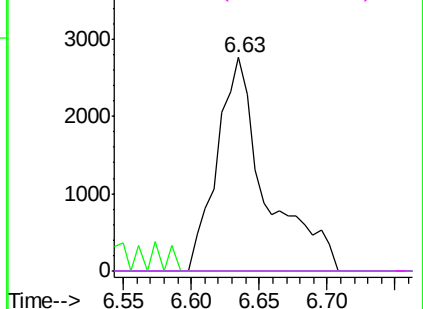


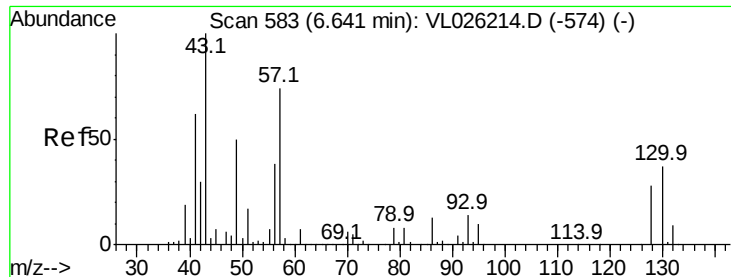
Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0

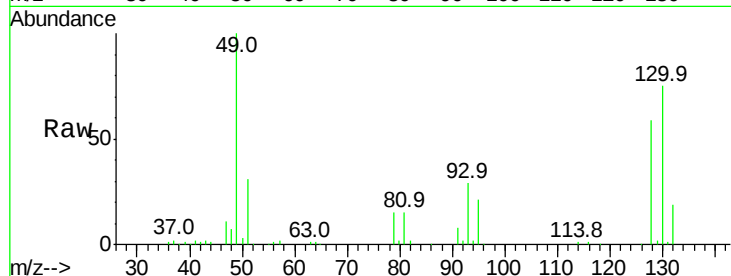




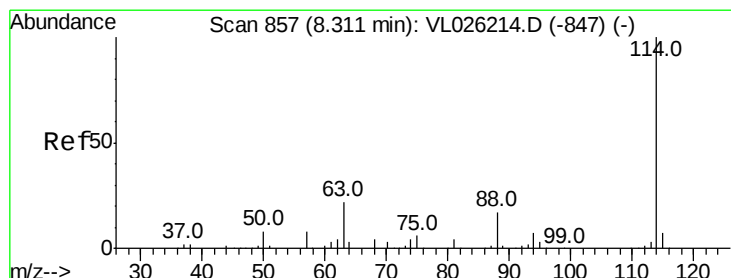
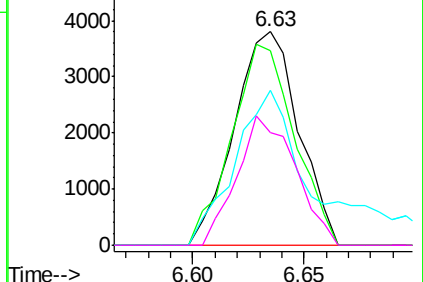
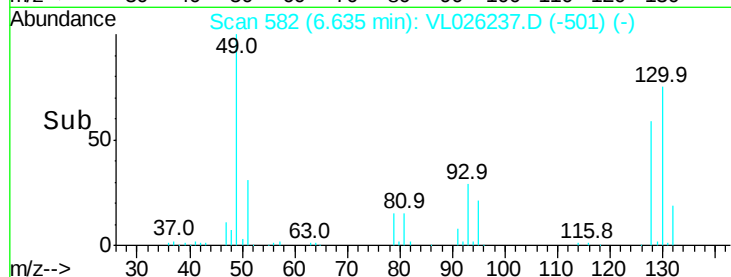
#26
Hexane
Concen: 0.12 ppbv
RT: 6.63 min Scan# 582
Delta R.T. -0.01 min
Lab File: VL026237.D
Acq: 21 Oct 2015 14:35

Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239DL

Tgt Ion: 57 Resp: 7655
Ion Ratio Lower Upper
57 100
41 91.4 68.1 102.1
43 90.0 163.4 245.2#
56 55.0 42.2 63.4

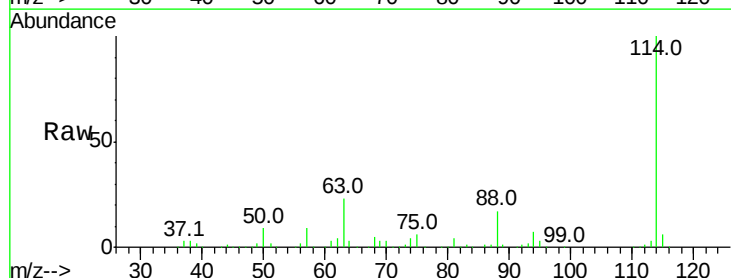


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

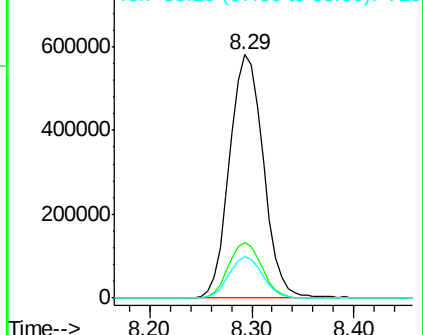
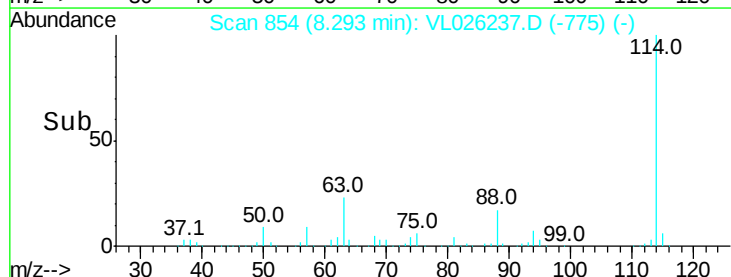


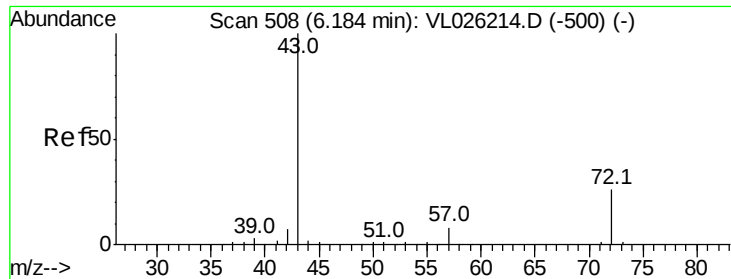
#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.29 min Scan# 854
Delta R.T. -0.02 min
Lab File: VL026237.D
Acq: 21 Oct 2015 14:35

Tgt Ion: 114 Resp: 1339649
Ion Ratio Lower Upper
114 100
63 22.6 18.2 27.4
88 16.8 13.5 20.3



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





#34

2-Butanone

Concen: 0.10 ppbv

RT: 6.21 min Scan# 512

Delta R.T. 0.02 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

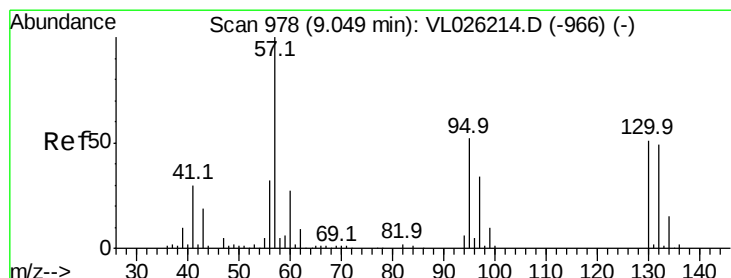
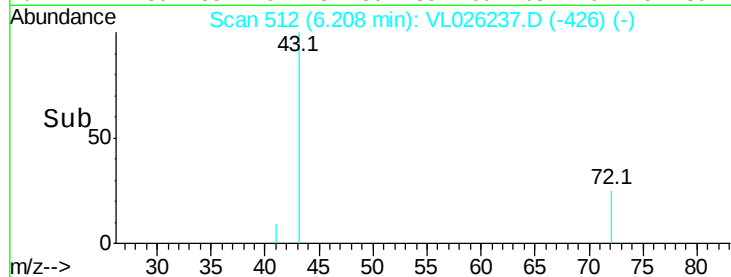
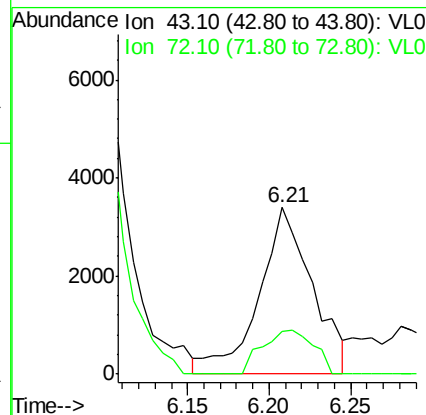
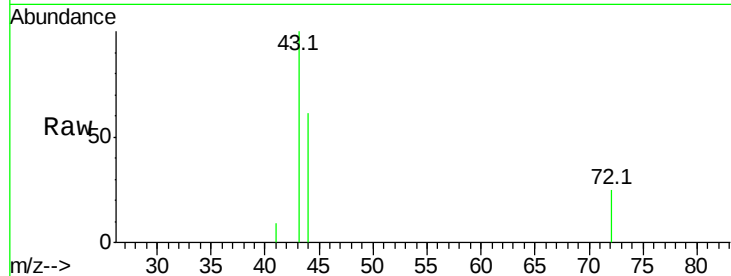
RB-SUBSLAB-239DL

Tgt Ion: 43 Resp: 7682

Ion Ratio Lower Upper

43 100

72 25.6 20.1 30.1



#38

Trichloroethene

Concen: 0.15 ppbv

RT: 9.03 min Scan# 975

Delta R.T. -0.02 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Tgt Ion: 130 Resp: 9961

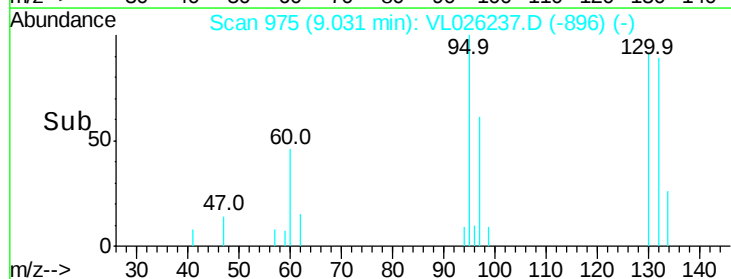
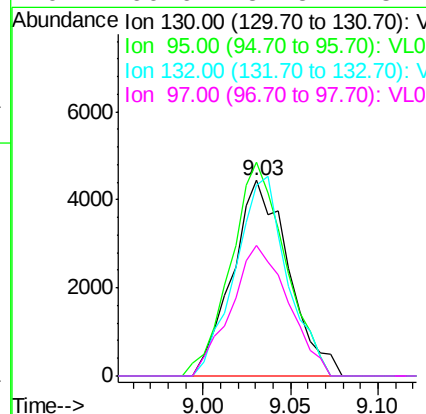
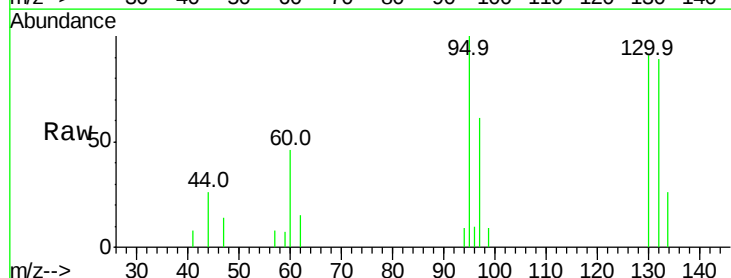
Ion Ratio Lower Upper

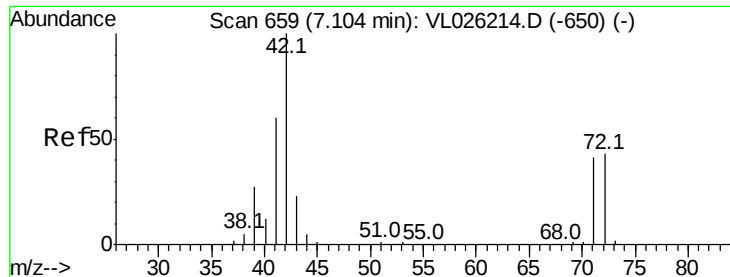
130 100

95 109.4 81.0 121.4

132 97.4 76.5 114.7

97 66.6 52.5 78.7





#41

Tetrahydrofuran

Concen: 0.10 ppbv

RT: 7.15 min Scan# 667

Delta R.T. 0.05 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239DL

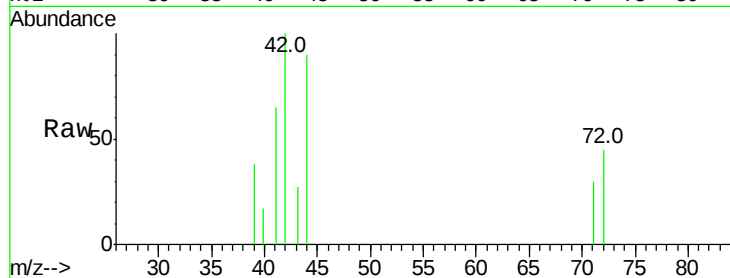
Tgt Ion: 42 Resp: 4311

Ion Ratio Lower Upper

42 100

72 44.1 34.3 51.5

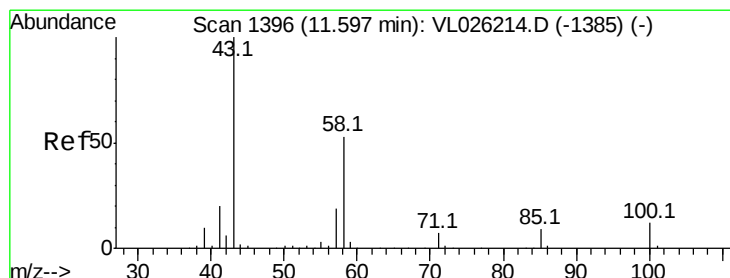
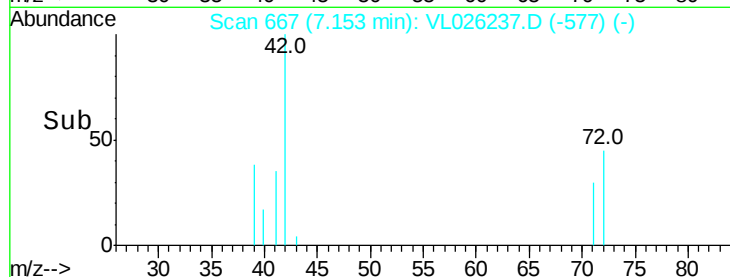
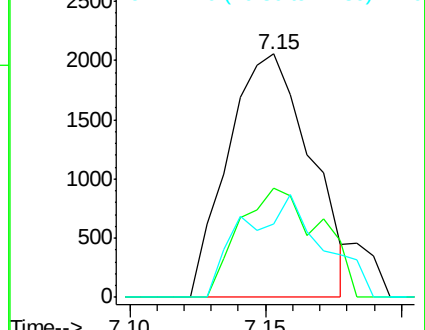
71 40.4 32.1 48.1



Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0



#51

2-Hexanone

Concen: 0.04 ppbv

RT: 11.50 min Scan# 1380

Delta R.T. -0.10 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

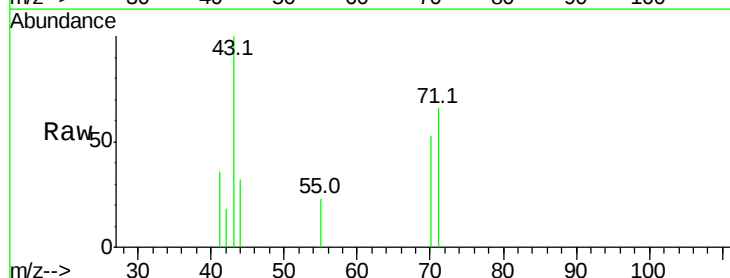
Tgt Ion: 43 Resp: 4051

Ion Ratio Lower Upper

43 100

58 0.0 43.2 64.8#

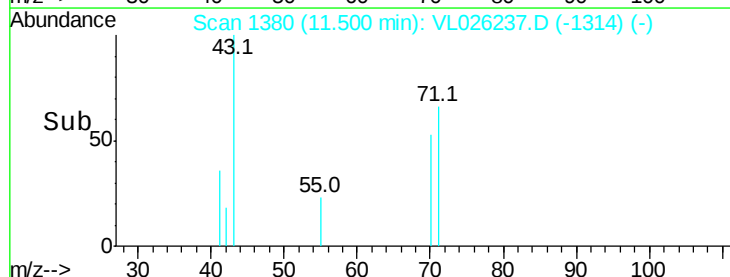
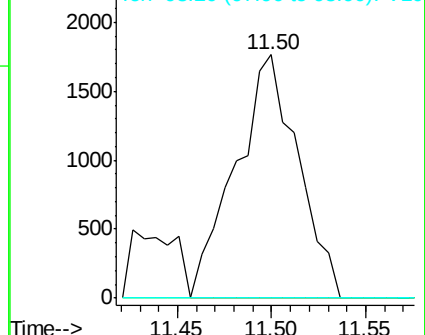
98 0.0 0.0 0.0

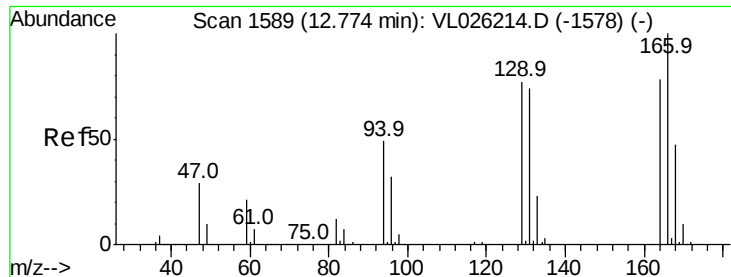


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 98.20 (97.90 to 98.90): VL0





#52

Tetrachloroethene

Concen: 15.29 ppbv

RT: 12.76 min Scan# 1587

Delta R.T. -0.01 min

Lab File: VL026237.D

Acq: 21 Oct 2015 14:35

Instrument :

MSVOA_L

ClientSampleId :

RB-SUBSLAB-239DL

Tgt Ion:164 Resp: 1196519

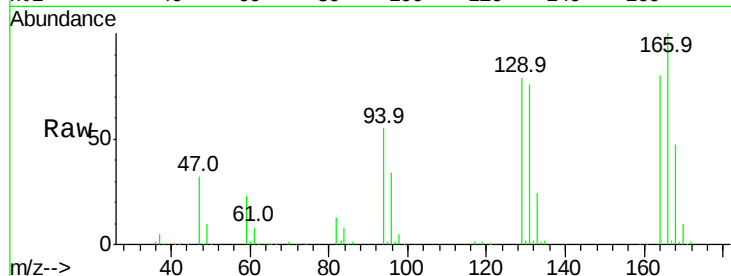
Ion Ratio Lower Upper

164 100

166 125.1 102.3 153.5

129 98.5 78.2 117.4

131 94.8 75.7 113.5

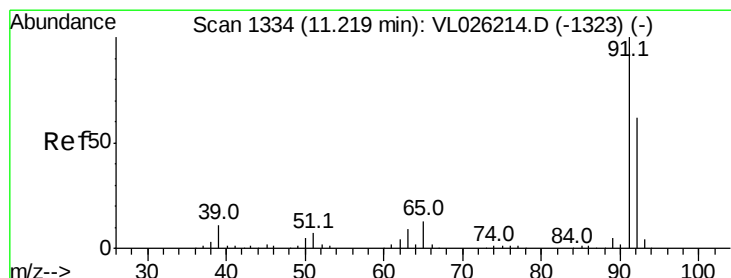
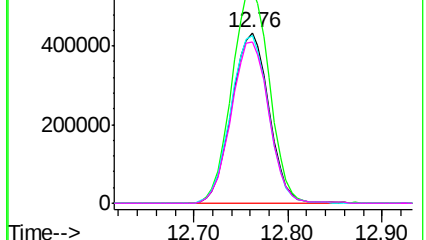
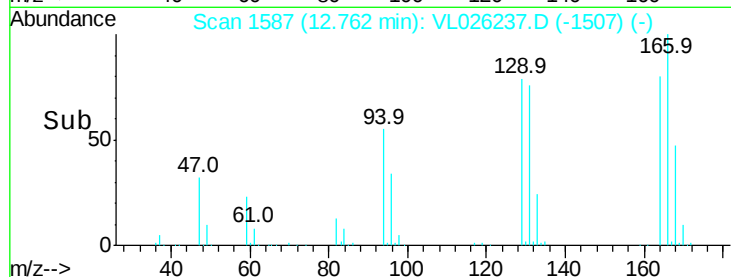


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.19 ppbv

RT: 11.21 min Scan# 1332

Delta R.T. -0.01 min

Lab File: VL026237.D

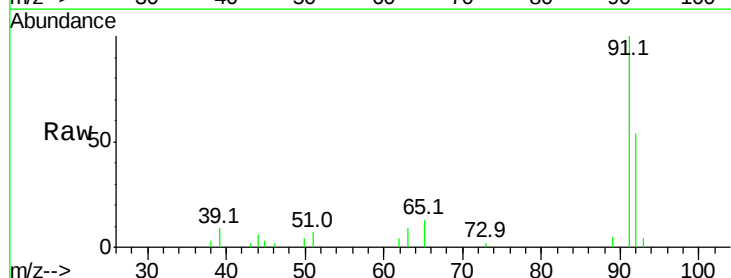
Acq: 21 Oct 2015 14:35

Tgt Ion: 91 Resp: 35699

Ion Ratio Lower Upper

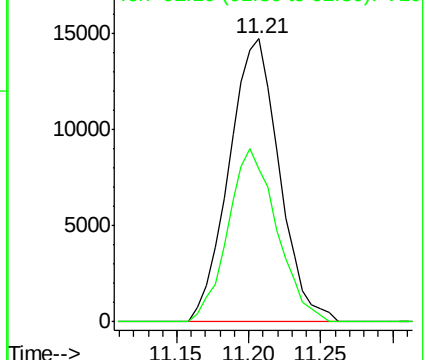
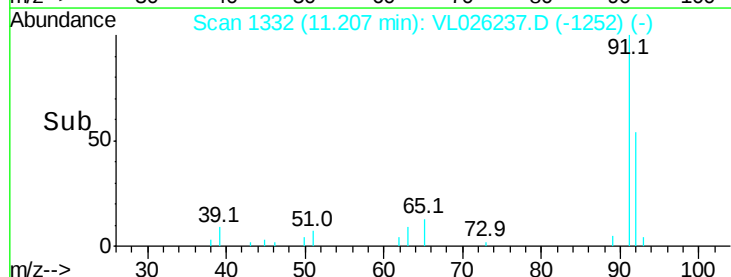
91 100

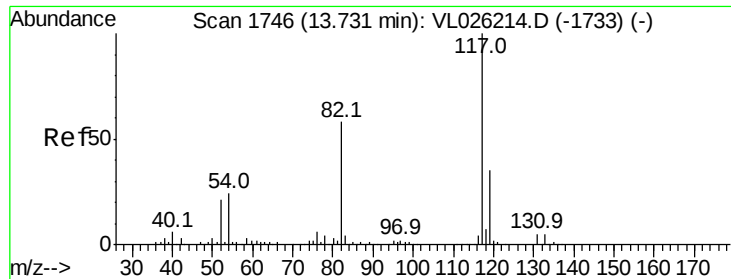
92 59.6 49.2 73.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

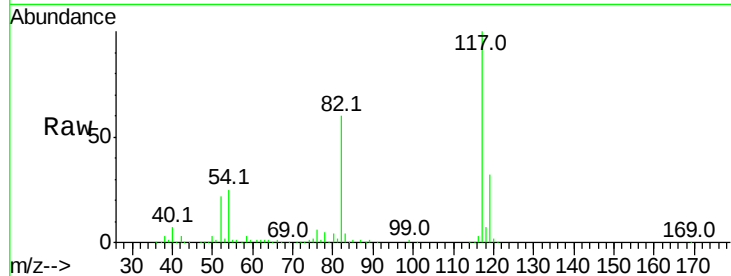




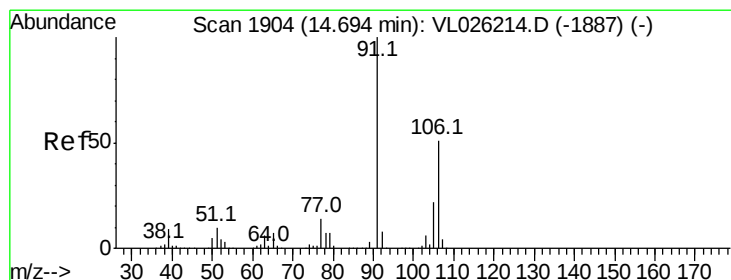
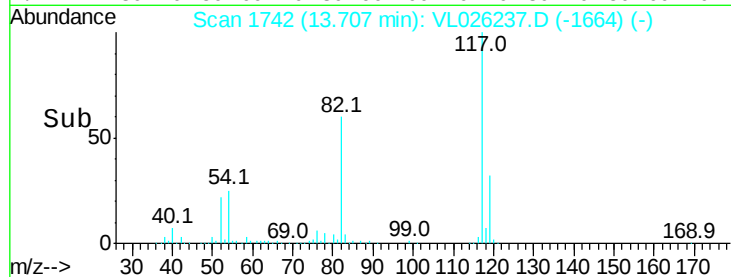
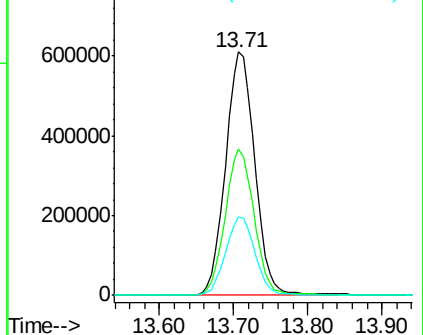
#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 13.71 min Scan# 1742
Delta R.T. -0.02 min
Lab File: VL026237.D
Acq: 21 Oct 2015 14:35

Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239DL

Tgt Ion: 117 Resp: 1683037
Ion Ratio Lower Upper
117 100
82 60.0 45.8 68.8
119 32.3 45.0 67.4#

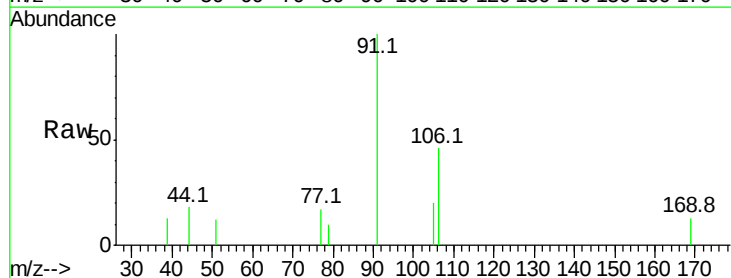


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): V
Ion 119.10 (118.80 to 119.80): V

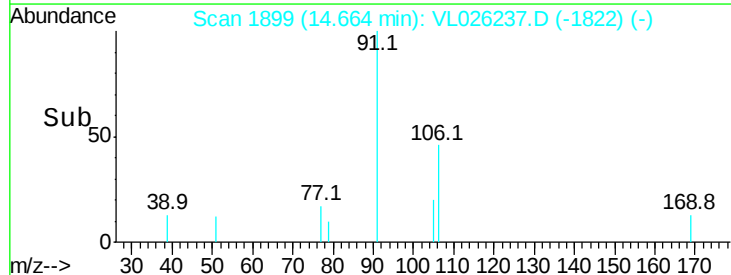
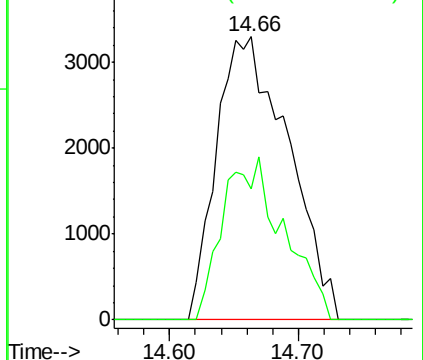


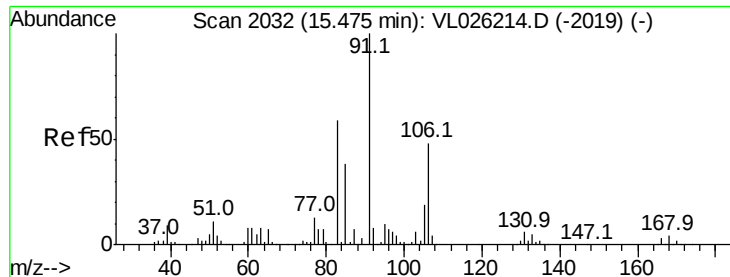
#59
m/p-Xylene
Concen: 0.06 ppbv
RT: 14.66 min Scan# 1899
Delta R.T. -0.03 min
Lab File: VL026237.D
Acq: 21 Oct 2015 14:35

Tgt Ion: 91 Resp: 12820
Ion Ratio Lower Upper
91 100
106 48.6 40.6 61.0



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

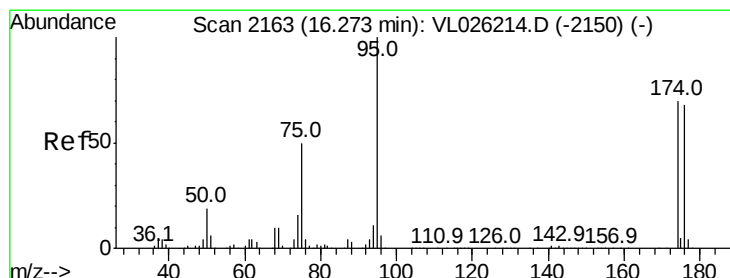
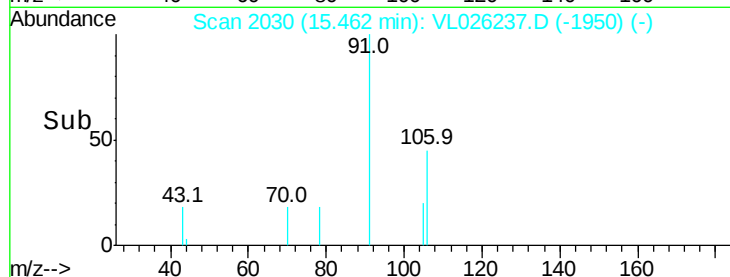
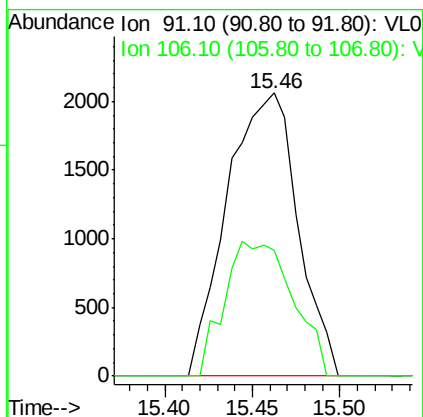
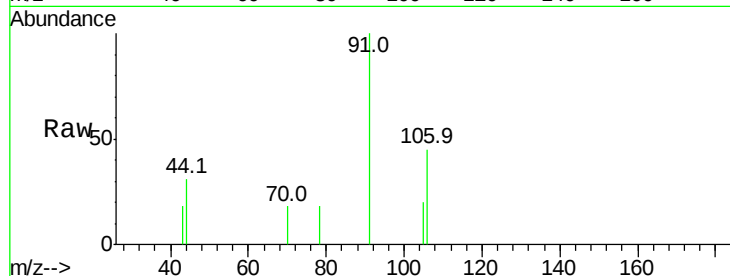




#60
o-Xylene
Concen: 0.03 ppbv
RT: 15.46 min Scan# 2030
Delta R.T. -0.01 min
Lab File: VL026237.D
Acq: 21 Oct 2015 14:35

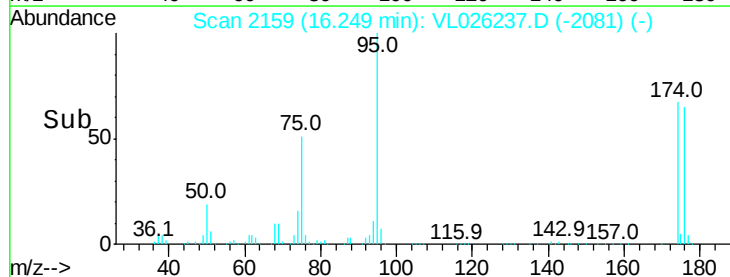
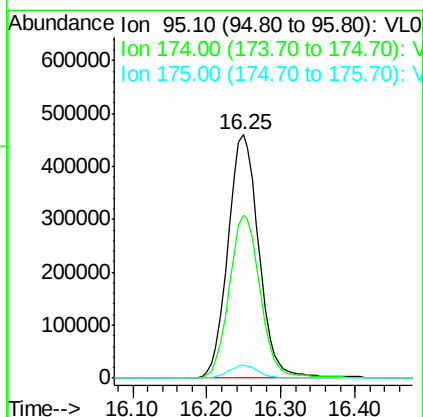
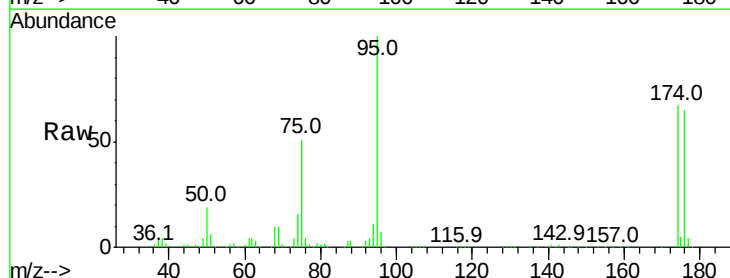
Instrument :
MSVOA_L
ClientSampleId :
RB-SUBSLAB-239DL

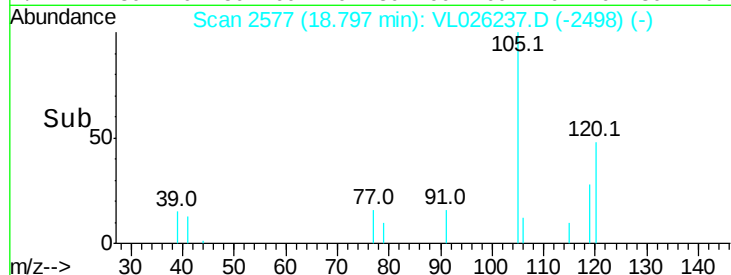
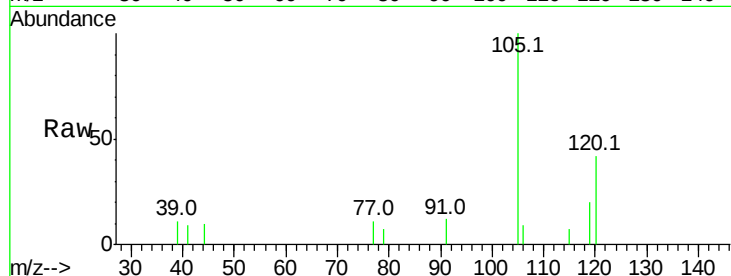
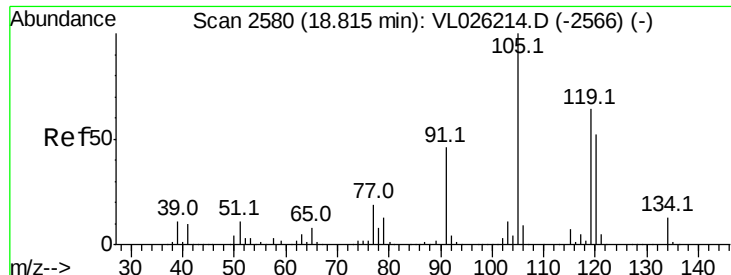
Tgt Ion: 91 Resp: 5798
Ion Ratio Lower Upper
91 100
106 46.0 23.8 71.5



#68
1-Bromo-4-Fluorobenzene
Concen: 10.32 ppbv
RT: 16.25 min Scan# 2159
Delta R.T. -0.02 min
Lab File: VL026237.D
Acq: 21 Oct 2015 14:35

Tgt Ion: 95 Resp: 1339851
Ion Ratio Lower Upper
95 100
174 67.7 55.8 83.8
175 5.0 4.3 6.5





#74
 1,2,4-Trimethylbenzene
 Concen: 0.05 ppbv
 RT: 18.80 min Scan# 2577
 Delta R.T. -0.02 min
 Lab File: VL026237.D
 Acq: 21 Oct 2015 14:35

Instrument :
 MSVOA_L
 ClientSampleId :
 RB-SUBSLAB-239DL

Tgt Ion:	105	Resp:	13513
Ion Ratio	Lower	Upper	
105	100		
120	41.8	41.2	61.8
91	11.9	37.2	55.8#
77	11.3	15.6	23.4#

