

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL072715\
 Data File : VL025766.D
 Acq On : 27 Jul 2015 23:39
 Operator : SY/MD
 Sample : G3100-02DL 10X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-2DL

Quant Time: Jul 28 01:04:14 2015
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL070715AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jul 08 02:22:55 2015
 QLast Update : Wed Jul 08 02:22:55 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.65	49	818934	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	8.32	114	2243238	10.00	ppbv	-0.01
55) Chlorobenzene-d5	13.74	117	2749299	10.00	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	16.28	95	2382341	10.27	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.70%

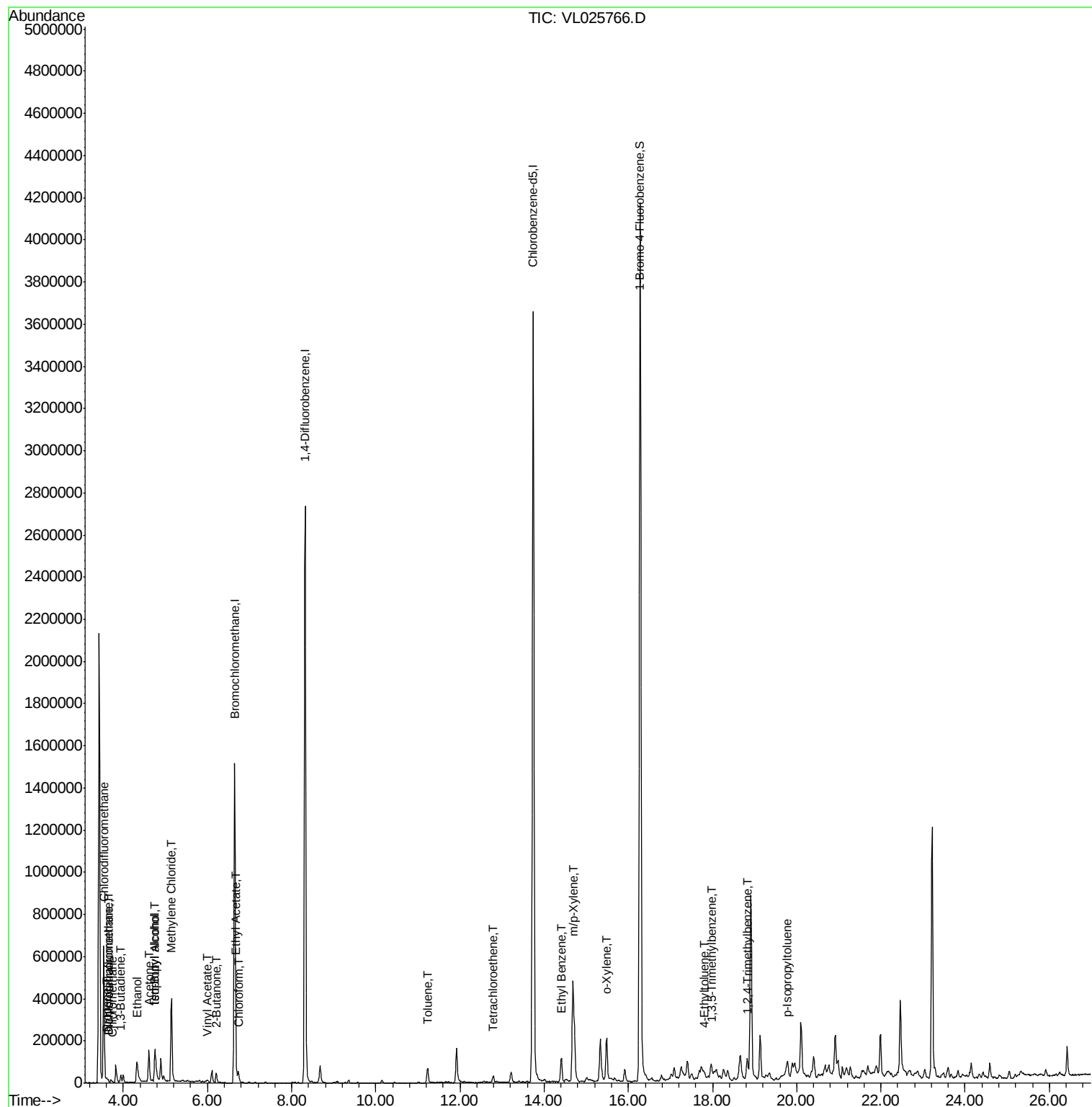
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.64	85	11243	0.05	ppbv	90
3) Chlorodifluoromethane	3.54	51	498385	4.32	ppbv #	52
4) Chloromethane	3.75	50	3024	0.06	ppbv #	87
8) Dichlorotetrafluoroethane	3.64	85	11243	0.06	ppbv #	17
9) Propene	3.60	41	8517	0.22	ppbv	84
13) Ethanol	4.32	45	170563	28.61	ppbv	98
15) Acetone	4.61	43	161975	1.12	ppbv #	83
16) 1,3-Butadiene	3.95	39	10902	0.19	ppbv #	12
17) tert-Butyl alcohol	4.76	59	6179	0.05	ppbv	97
19) Isopropyl Alcohol	4.76	45	244306	4.23	ppbv #	99
20) Methylene Chloride	5.15	84	179105	3.05	ppbv	96
23) Vinyl Acetate	5.99	43	11167	0.05	ppbv #	74
25) Ethyl Acetate	6.68	43	13880	0.06	ppbv #	78
29) Chloroform	6.74	83	34012	0.17	ppbv	99
34) 2-Butanone	6.21	43	64797	0.51	ppbv	100
52) Tetrachloroethene	12.79	164	8217	0.08	ppbv #	84
53) Toluene	11.24	91	60676	0.20	ppbv	98
58) Ethyl Benzene	14.40	91	115823	0.26	ppbv	90
59) m/p-Xylene	14.68	91	562793	1.41	ppbv	100
60) o-Xylene	15.49	91	181189	0.42	ppbv	98
69) p-Isopropyltoluene	19.78	119	43691	0.07	ppbv #	87
72) 4-Ethyltoluene	17.82	105	21068	0.04	ppbv #	91
73) 1,3,5-Trimethylbenzene	17.99	105	25192	0.05	ppbv	91
74) 1,2,4-Trimethylbenzene	18.83	105	63363	0.12	ppbv #	68

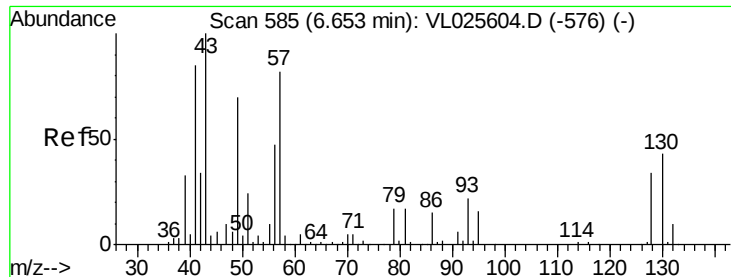
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL070715AIR.M
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QLast Update : Wed Jul 08 02:22:55 2015
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.65 min Scan# 584

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

SV-2DL

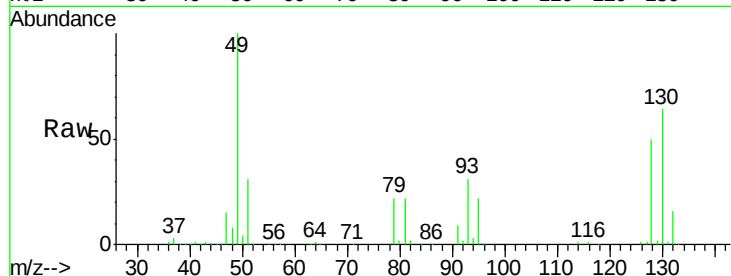
Tot Ion: 49 Resp: 818934

Ion Ratio Lower Upper

49 100

128 50.7 25.4 76.0

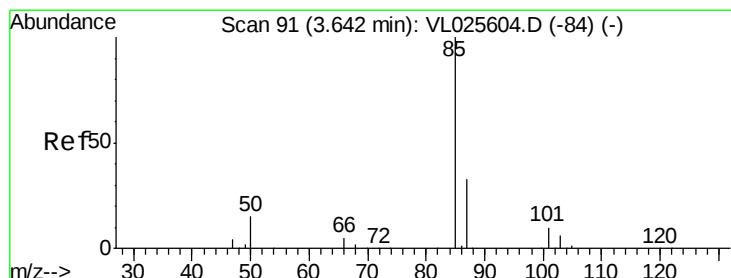
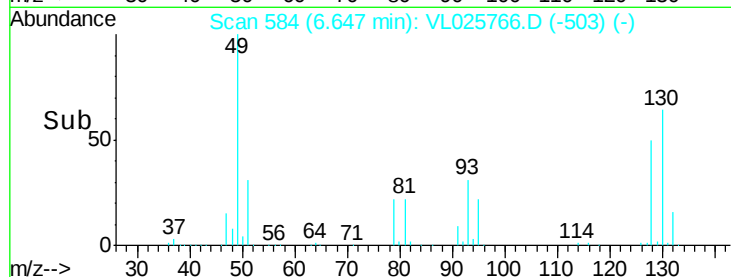
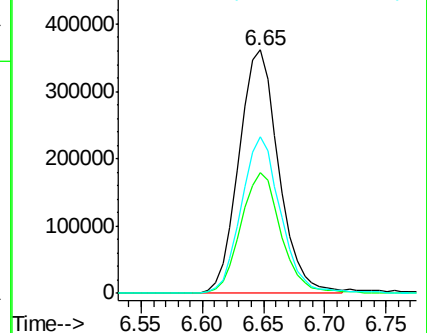
130 64.5 31.9 95.9



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



#2

Dichlorodifluoromethane

Concen: 0.05 ppbv

RT: 3.64 min Scan# 91

Delta R.T. -0.00 min

Lab File: VL025766.D

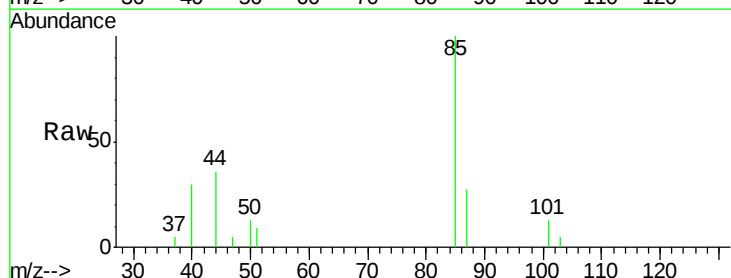
Acq: 27 Jul 2015 23:39

Tgt Ion: 85 Resp: 11243

Ion Ratio Lower Upper

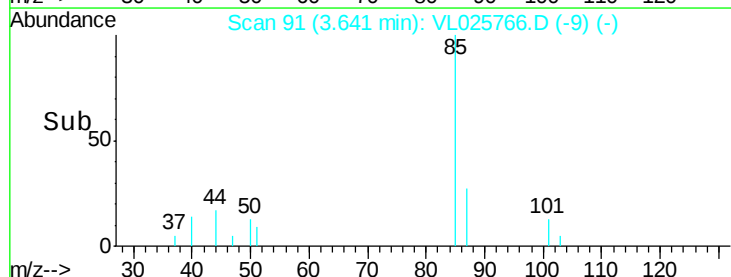
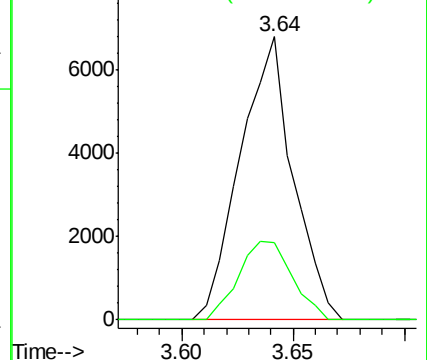
85 100

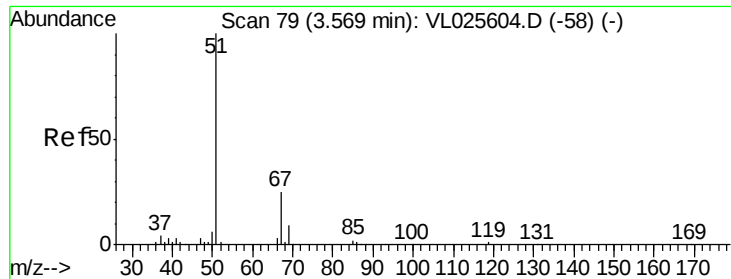
87 27.4 26.5 39.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 4.32 ppbv

RT: 3.54 min Scan# 74

Delta R.T. -0.03 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

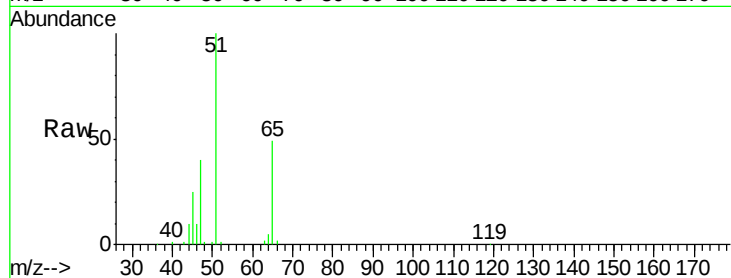
SV-2DL

Tot Ion: 51 Resp: 498385

Ion Ratio Lower Upper

51 100

67 0.4 19.5 29.3#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

3.54

250000

200000

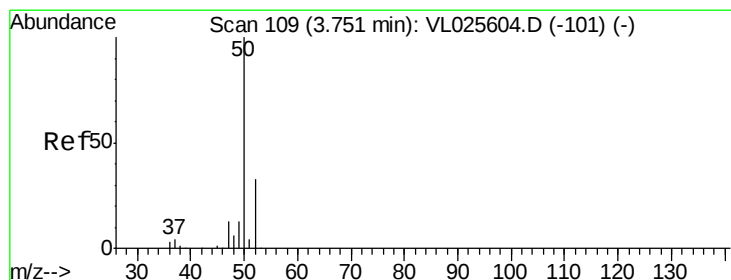
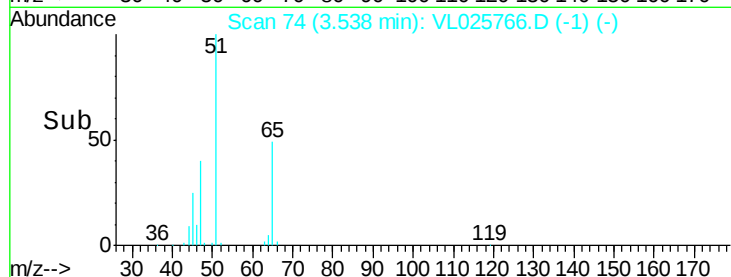
150000

100000

50000

0

Time-->



#4

Chloromethane

Concen: 0.06 ppbv

RT: 3.75 min Scan# 108

Delta R.T. -0.01 min

Lab File: VL025766.D

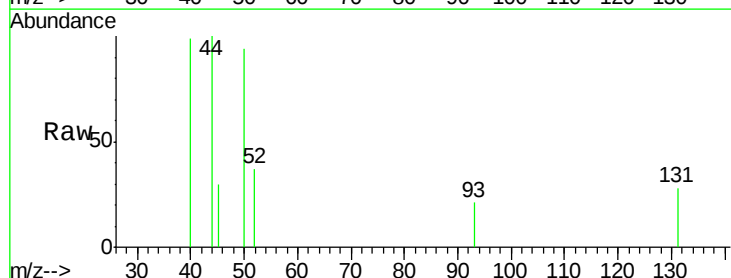
Acq: 27 Jul 2015 23:39

Tgt Ion: 50 Resp: 3024

Ion Ratio Lower Upper

50 100

52 39.8 26.2 39.2#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.75

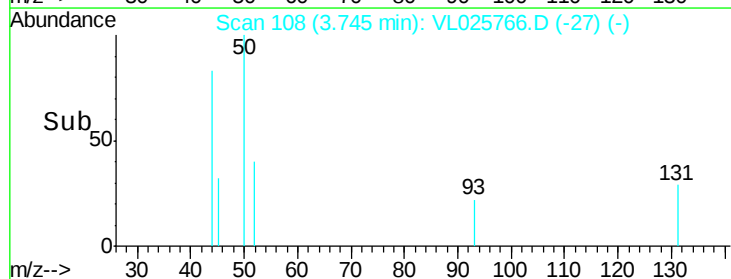
1500

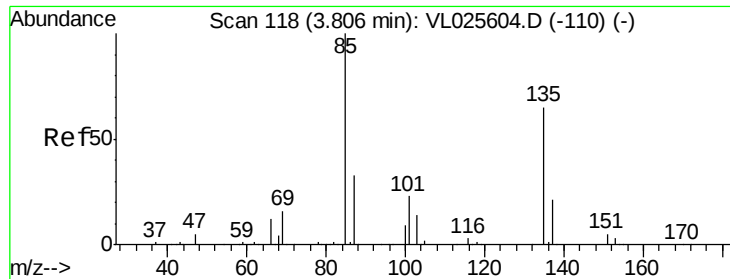
1000

500

0

Time-->





#8

Dichlorotetrafluoroethane

Concen: 0.06 ppbv

RT: 3.64 min Scan# 91

Delta R.T. -0.16 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

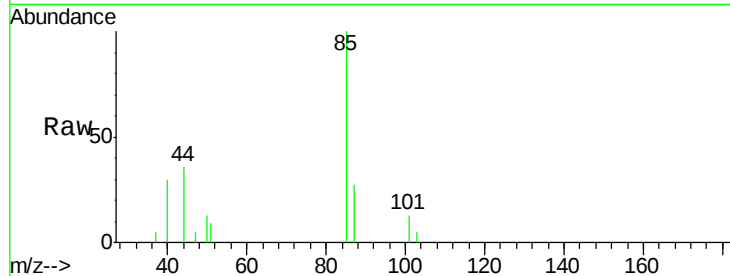
SV-2DL

Tot Ion: 85 Resp: 11243

Ion Ratio Lower Upper

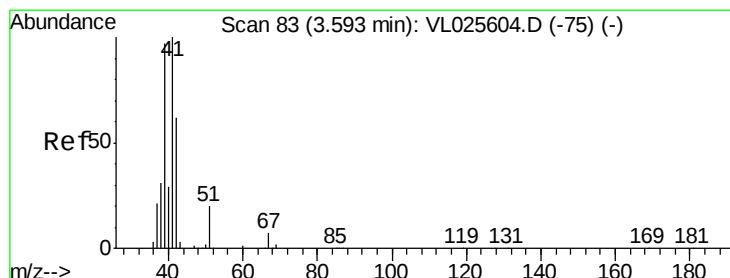
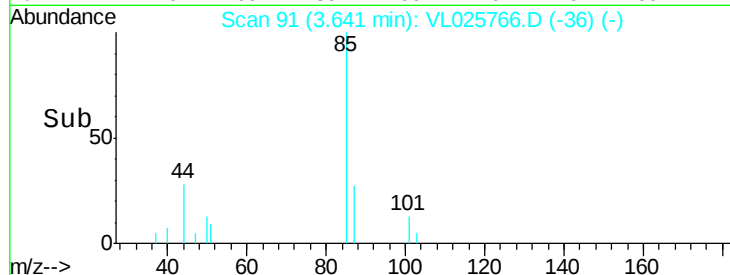
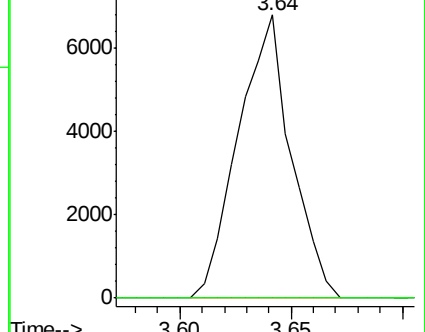
85 100

135 0.0 52.2 78.4#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V



#9

Propene

Concen: 0.22 ppbv

RT: 3.60 min Scan# 84

Delta R.T. 0.01 min

Lab File: VL025766.D

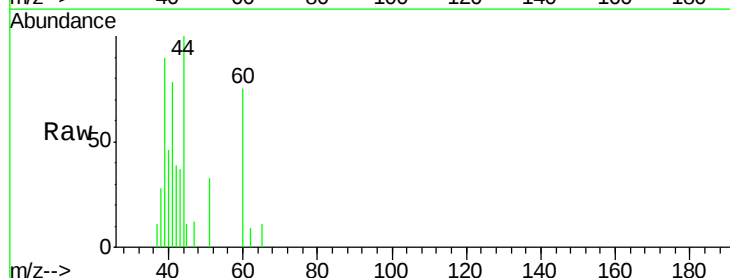
Acq: 27 Jul 2015 23:39

Tgt Ion: 41 Resp: 8517

Ion Ratio Lower Upper

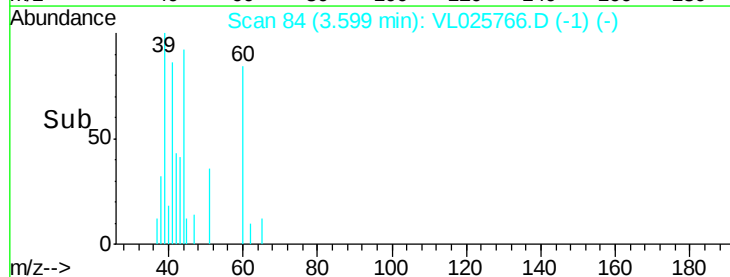
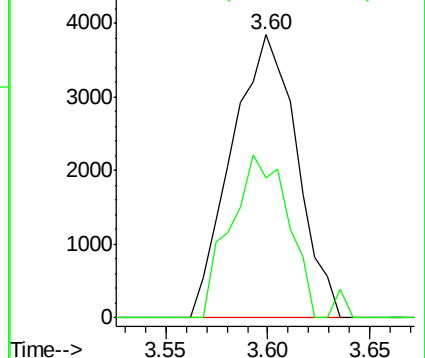
41 100

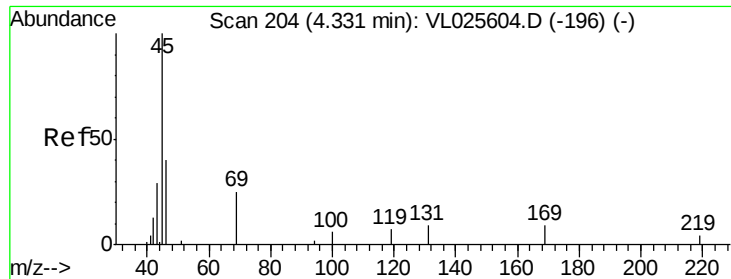
42 52.6 52.4 78.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#13

Ethanol

Concen: 28.61 ppbv

RT: 4.32 min Scan# 203

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

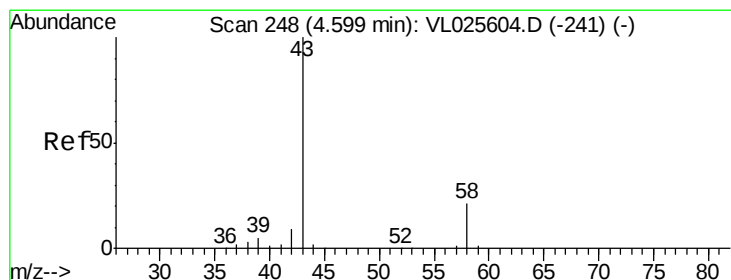
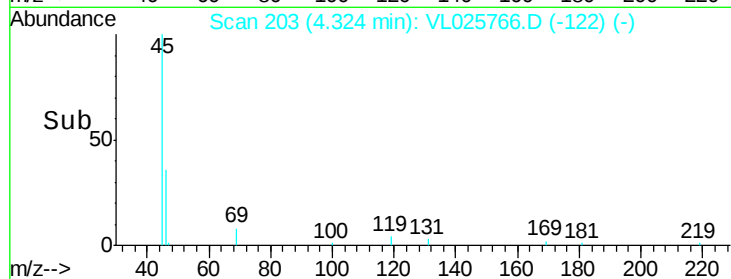
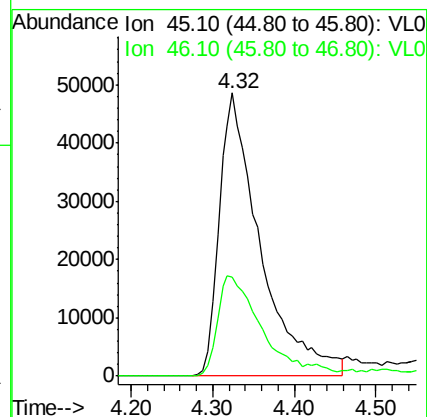
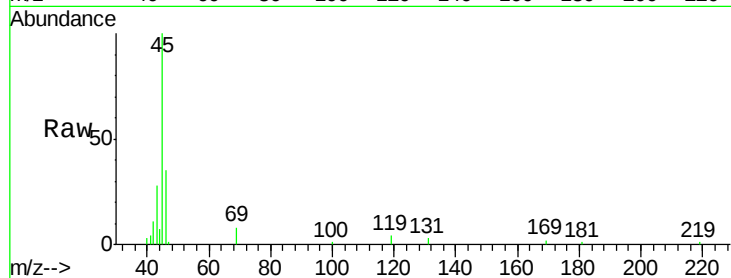
SV-2DL

Tot Ion: 45 Resp: 170563

Ion Ratio Lower Upper

45 100

46 41.1 16.0 64.0



#15

Acetone

Concen: 1.12 ppbv

RT: 4.61 min Scan# 250

Delta R.T. 0.01 min

Lab File: VL025766.D

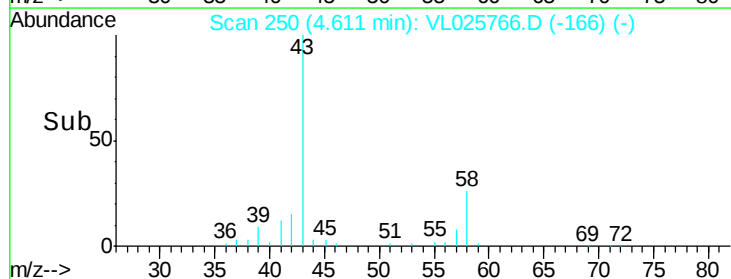
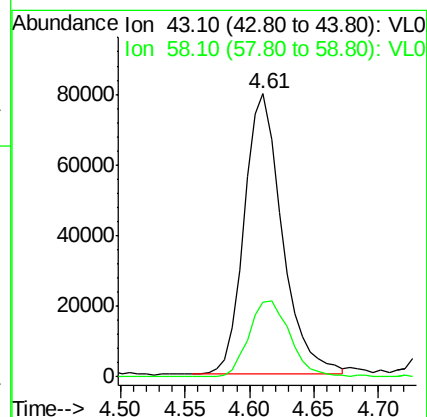
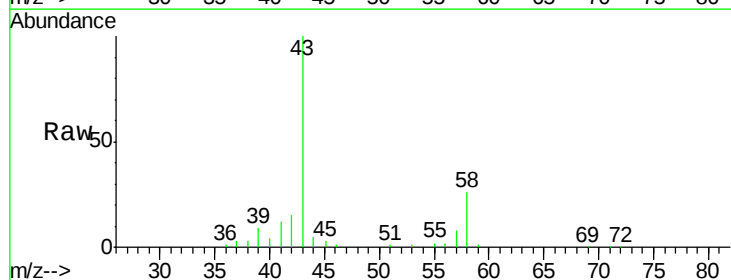
Acq: 27 Jul 2015 23:39

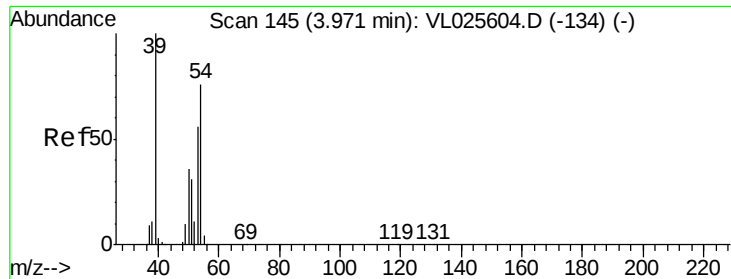
Tgt Ion: 43 Resp: 161975

Ion Ratio Lower Upper

43 100

58 29.5 17.2 25.8#

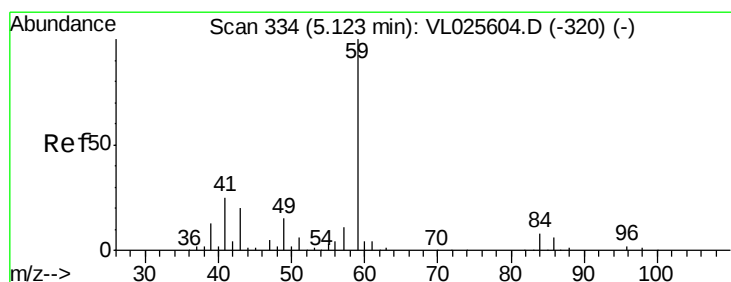
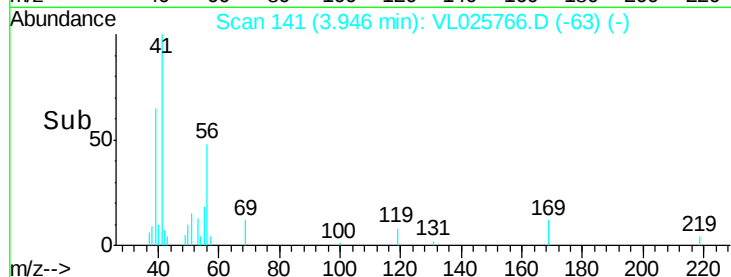
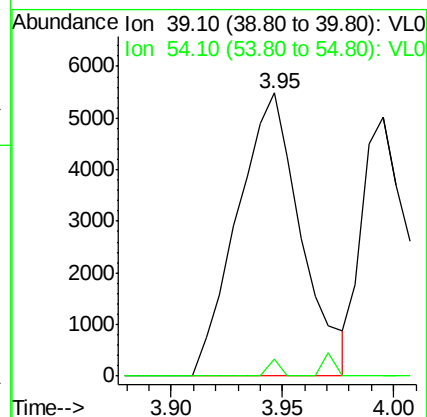
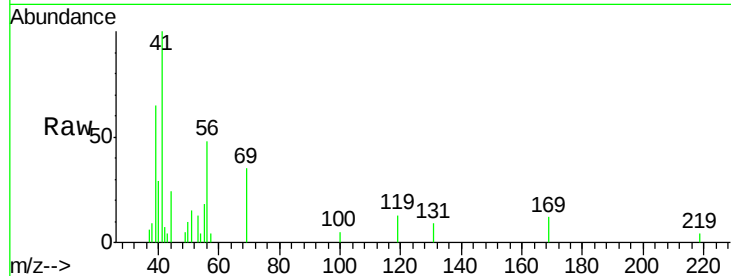




#16
 1,3-Butadiene
 Concen: 0.19 ppbv
 RT: 3.95 min Scan# 141
 Delta R.T. -0.02 min
 Lab File: VL025766.D
 Acq: 27 Jul 2015 23:39

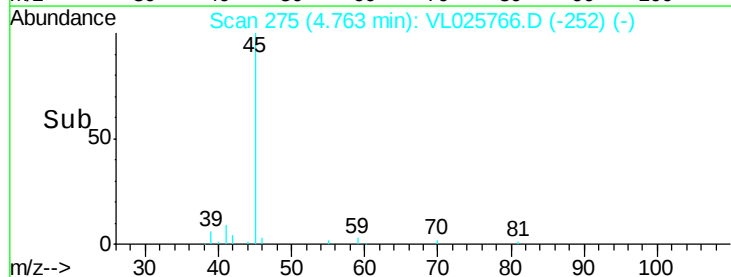
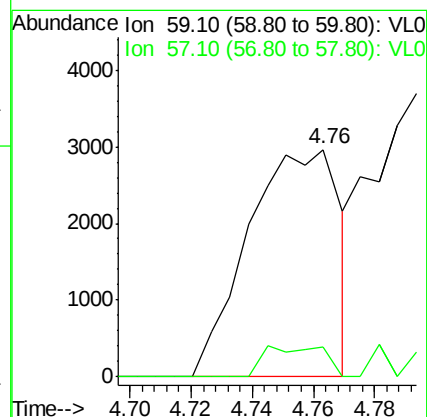
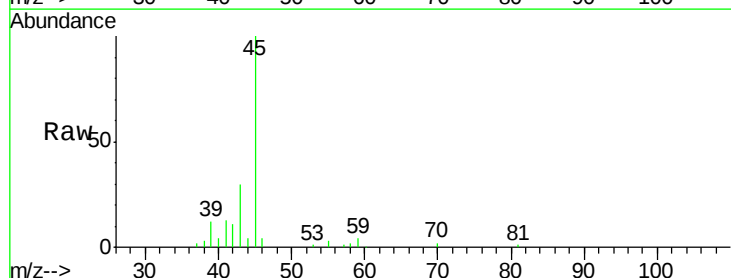
Instrument :
 MSVOA_L
 ClientSampleId :
 SV-2DL

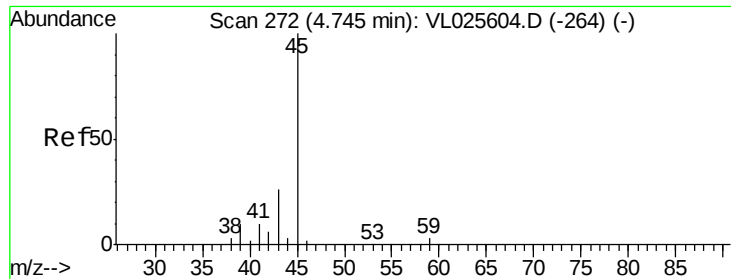
Tot Ion: 39 Resp: 10902
 Ion Ratio Lower Upper
 39 100
 54 0.0 59.3 88.9#



#17
 tert-Butyl alcohol
 Concen: 0.05 ppbv
 RT: 4.76 min Scan# 275
 Delta R.T. -0.36 min
 Lab File: VL025766.D
 Acq: 27 Jul 2015 23:39

Tgt Ion: 59 Resp: 6179
 Ion Ratio Lower Upper
 59 100
 57 13.1 9.4 14.2





#19

Isopropyl Alcohol

Concen: 4.23 ppbv

RT: 4.76 min Scan# 274

Delta R.T. 0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

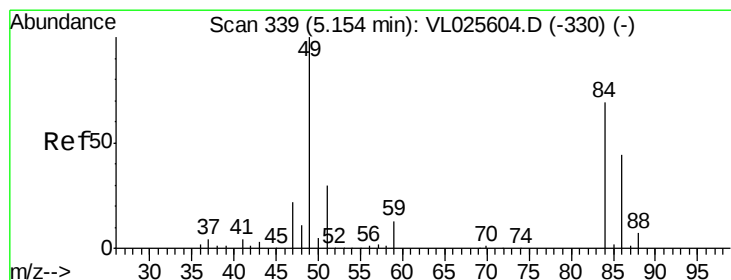
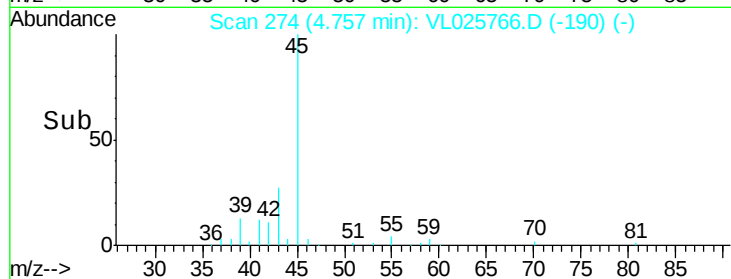
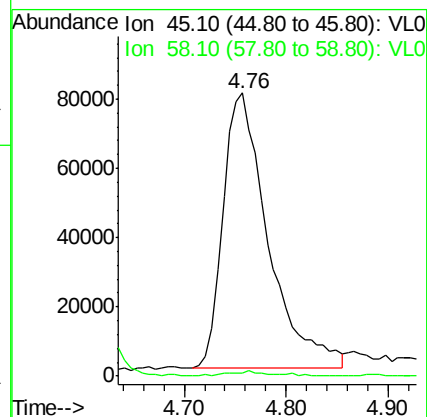
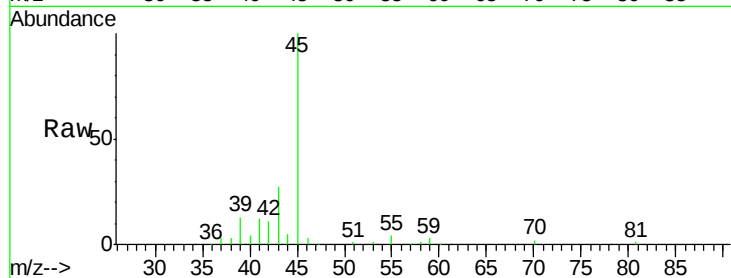
SV-2DL

Tot Ion: 45 Resp: 244306

Ion Ratio Lower Upper

45 100

58 1.7 1.1 1.7#



#20

Methylene Chloride

Concen: 3.05 ppbv

RT: 5.15 min Scan# 338

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Tgt Ion: 84 Resp: 179105

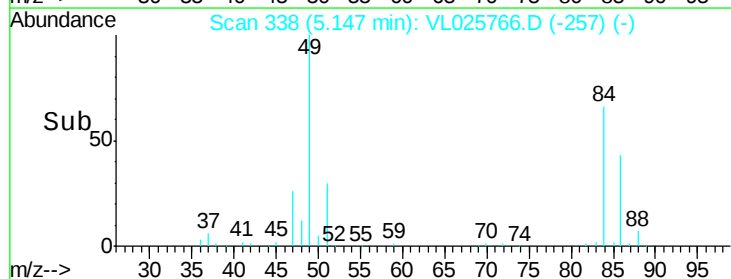
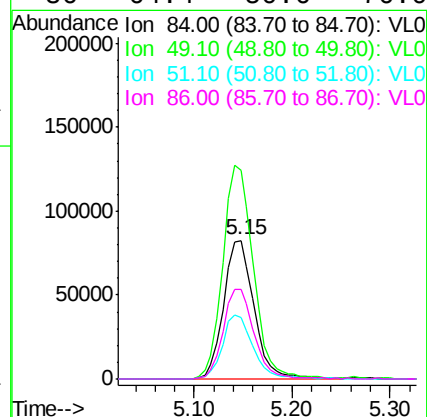
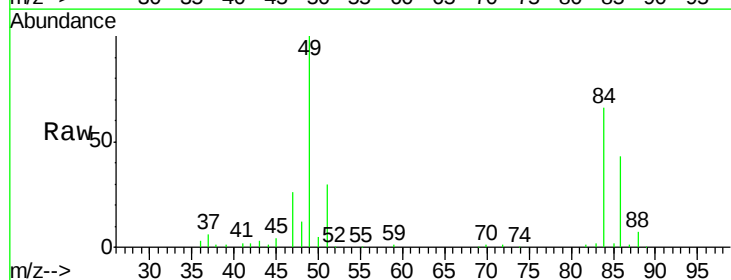
Ion Ratio Lower Upper

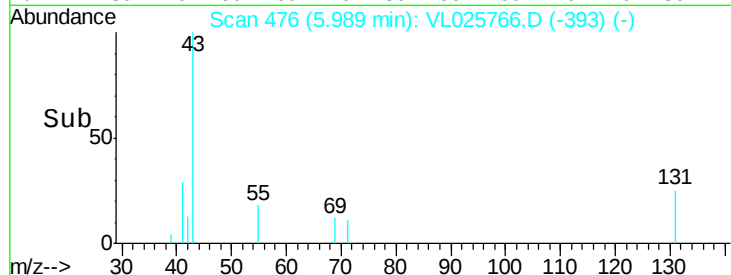
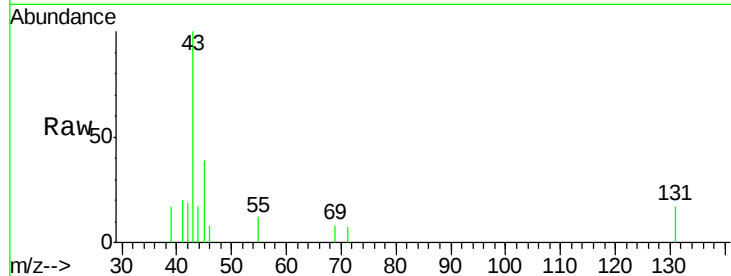
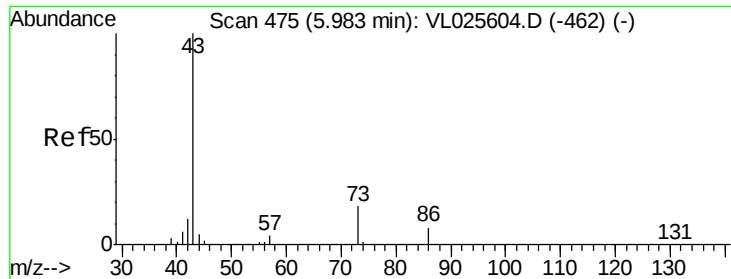
84 100

49 150.4 115.2 172.8

51 44.5 35.0 52.6

86 64.4 50.6 76.0





#23

Vinyl Acetate

Concen: 0.05 ppbv

RT: 5.99 min Scan# 476

Delta R.T. 0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleID :

SV-2DL

Tot Ion: 43 Resp: 11167

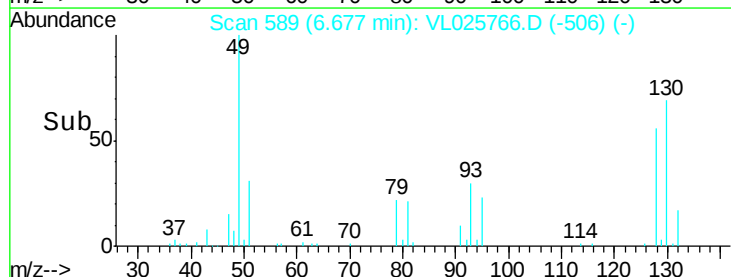
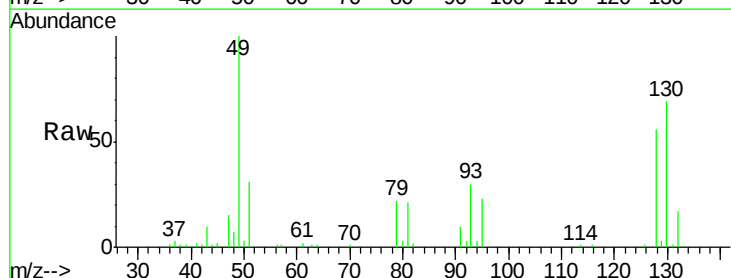
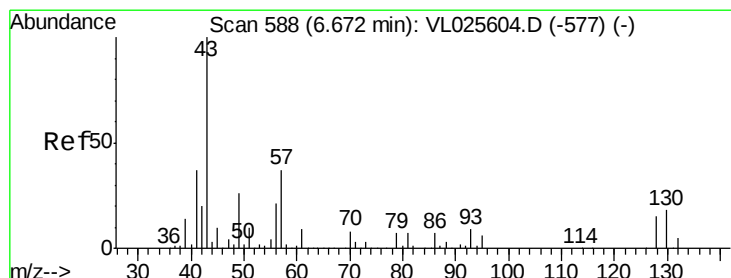
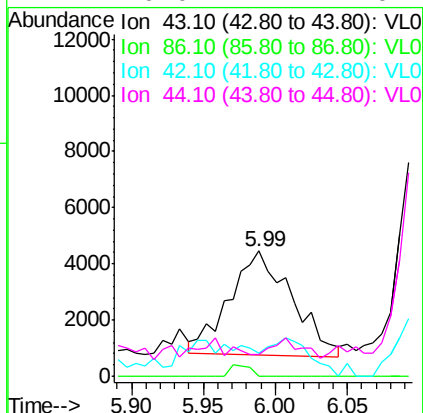
Ion Ratio Lower Upper

43 100

86 0.0 6.7 10.1#

42 24.4 9.8 14.6#

44 0.0 4.1 6.1#



#25

Ethyl Acetate

Concen: 0.06 ppbv

RT: 6.68 min Scan# 589

Delta R.T. 0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Tgt Ion: 43 Resp: 13880

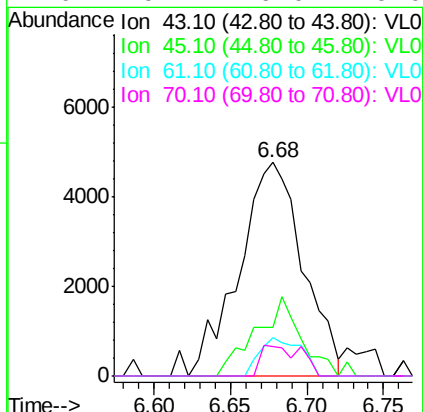
Ion Ratio Lower Upper

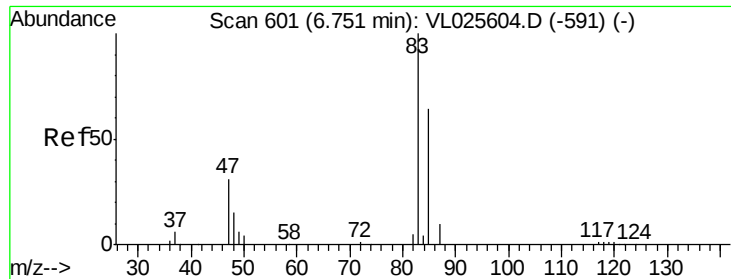
43 100

45 26.9 7.5 11.3#

61 11.6 6.6 10.0#

70 9.1 6.0 9.0#

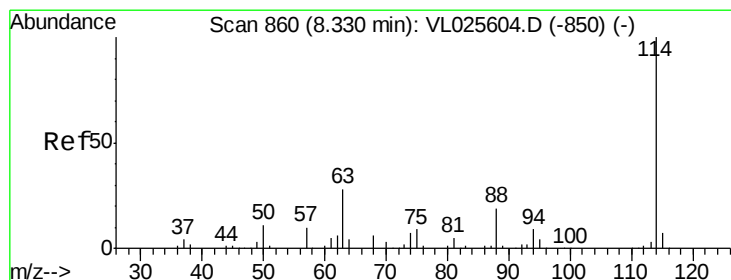
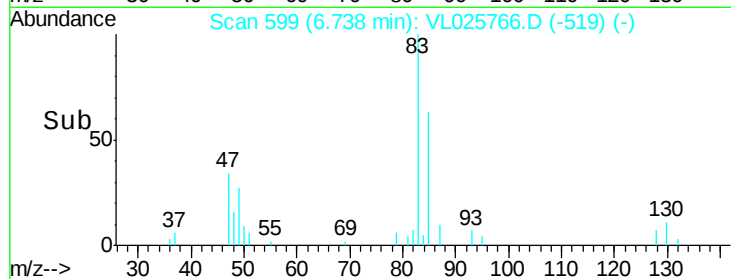
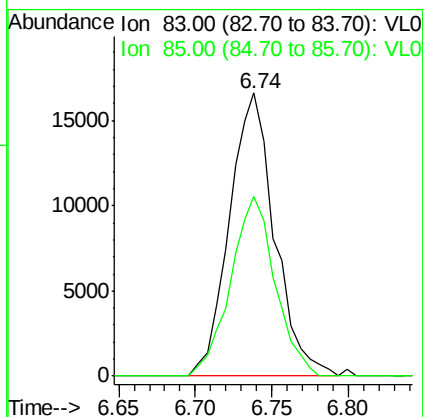
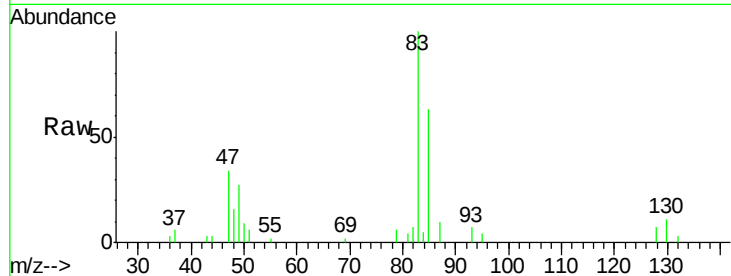




#29
Chloroform
Concen: 0.17 ppbv
RT: 6.74 min Scan# 599
Delta R.T. -0.01 min
Lab File: VL025766.D
Acq: 27 Jul 2015 23:39

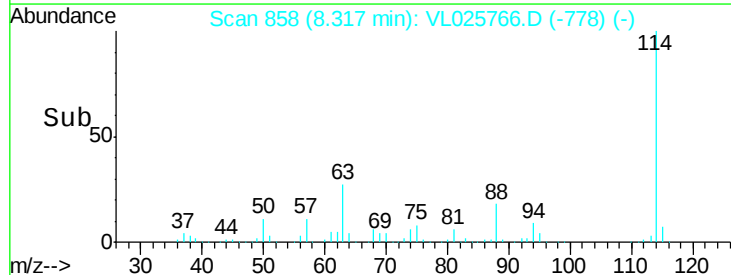
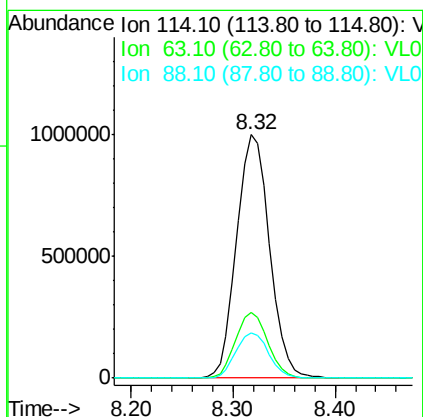
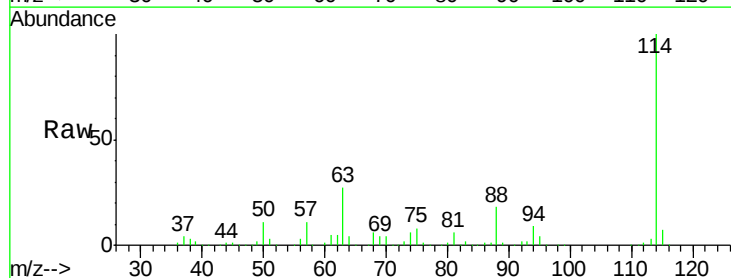
Instrument :
MSVOA_L
ClientSampleId :
SV-2DL

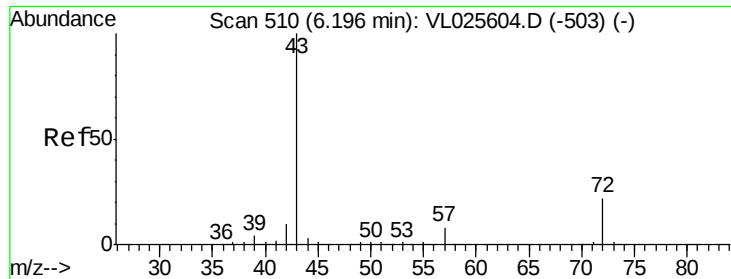
Tot Ion: 83 Resp: 34012
Ion Ratio Lower Upper
83 100
85 63.4 51.6 77.4



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.32 min Scan# 858
Delta R.T. -0.01 min
Lab File: VL025766.D
Acq: 27 Jul 2015 23:39

Tgt Ion: 114 Resp: 2243238
Ion Ratio Lower Upper
114 100
63 26.6 22.4 33.6
88 18.4 15.0 22.4





#34

2-Butanone

Concen: 0.51 ppbv

RT: 6.21 min Scan# 512

Delta R.T. 0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

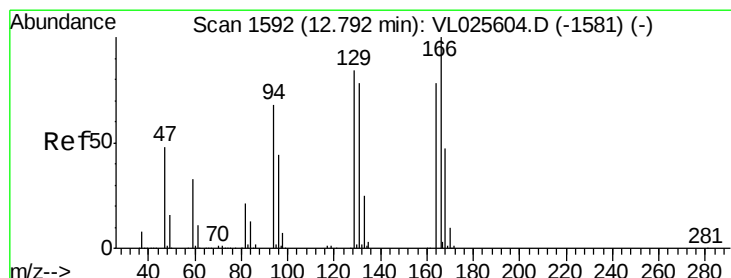
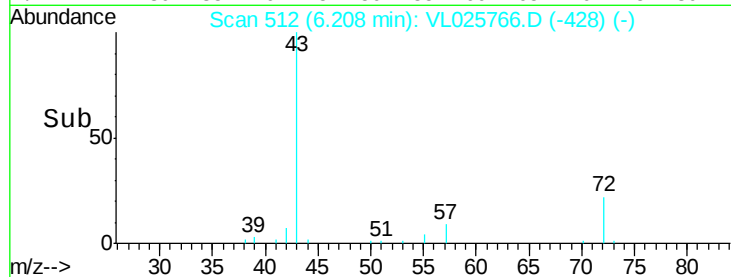
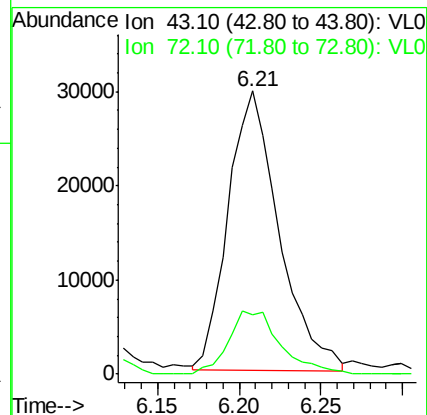
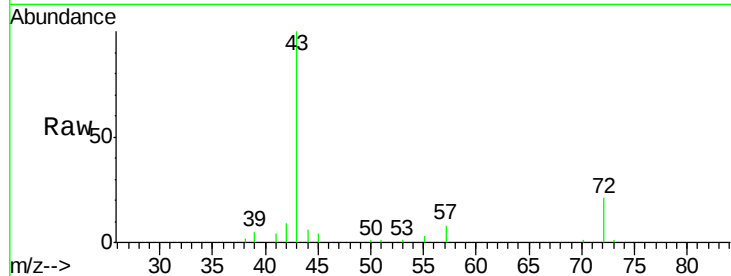
SV-2DL

Tot Ion: 43 Resp: 64797

Ion Ratio Lower Upper

43 100

72 23.1 18.6 28.0



#52

Tetrachloroethene

Concen: 0.08 ppbv

RT: 12.79 min Scan# 1592

Delta R.T. -0.00 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Tgt Ion: 164 Resp: 8217

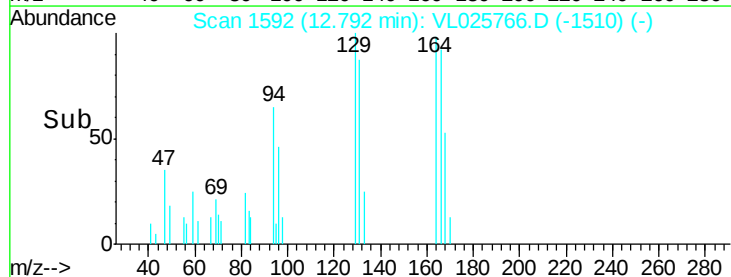
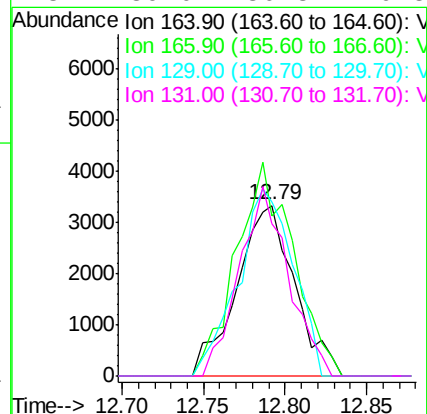
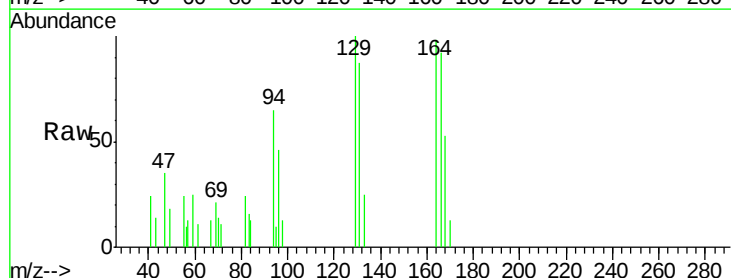
Ion Ratio Lower Upper

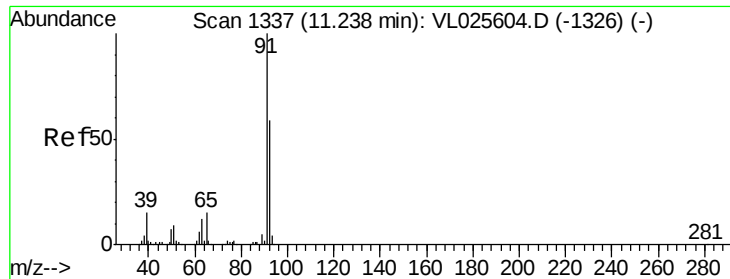
164 100

166 94.0 102.3 153.5#

129 101.8 86.2 129.4

131 89.0 80.3 120.5





#53

Toluene

Concen: 0.20 ppbv

RT: 11.24 min Scan# 1337

Delta R.T. -0.00 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampled :

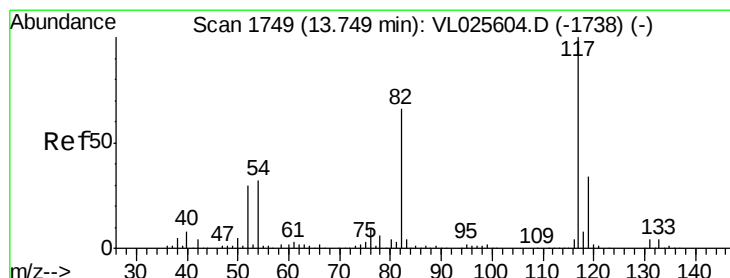
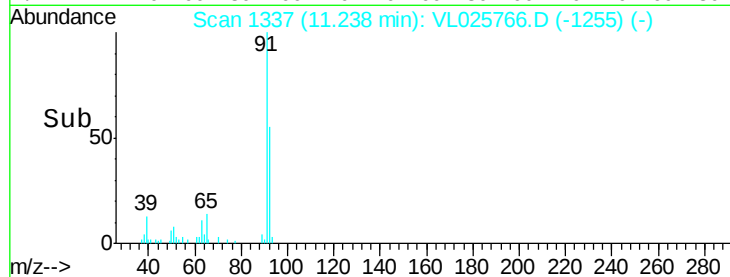
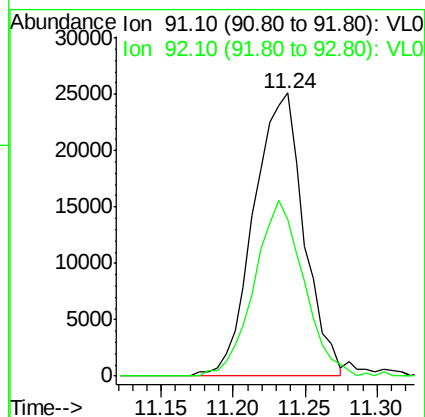
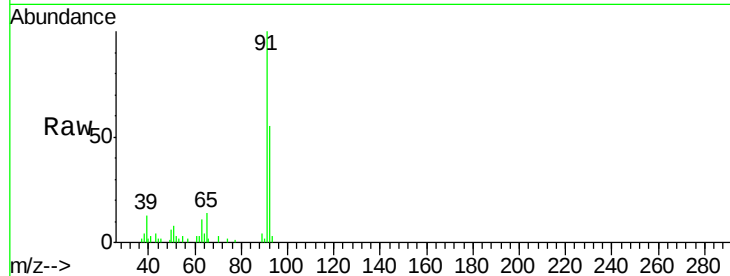
SV-2DL

Tot Ion: 91 Resp: 60676

Ion Ratio Lower Upper

91 100

92 61.5 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.74 min Scan# 1747

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

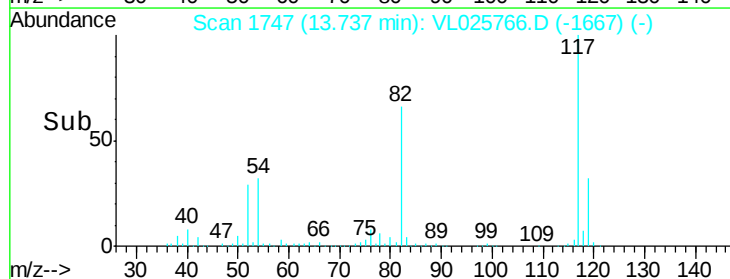
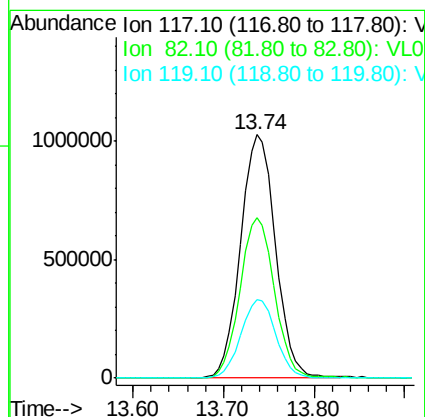
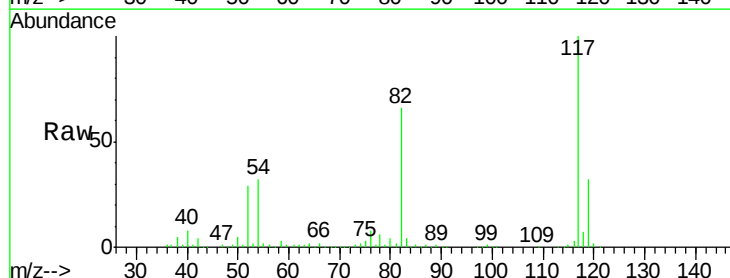
Tgt Ion: 117 Resp: 2749299

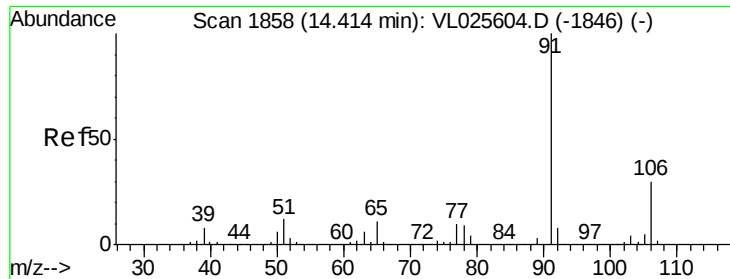
Ion Ratio Lower Upper

117 100

82 65.9 50.5 75.7

119 32.7 45.1 67.7#





#58

Ethyl Benzene

Concen: 0.26 ppbv

RT: 14.40 min Scan# 1856

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

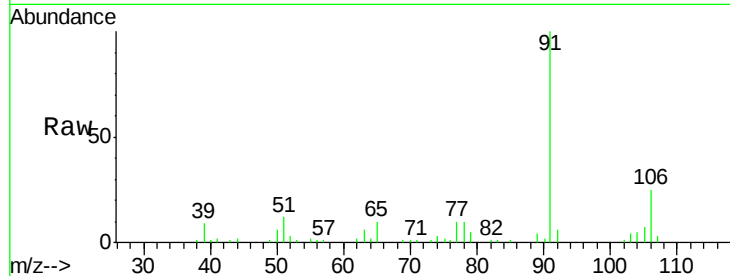
SV-2DL

Tot Ion: 91 Resp: 115823

Ion Ratio Lower Upper

91 100

106 24.6 24.2 36.2



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

14.40

40000

30000

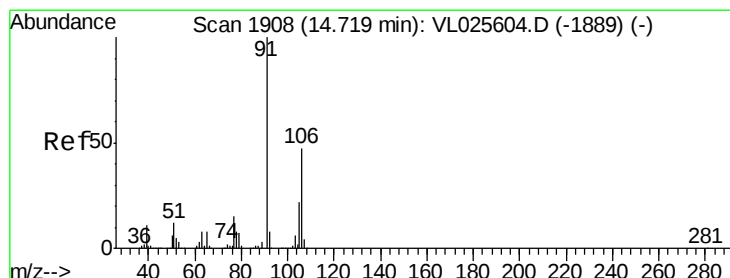
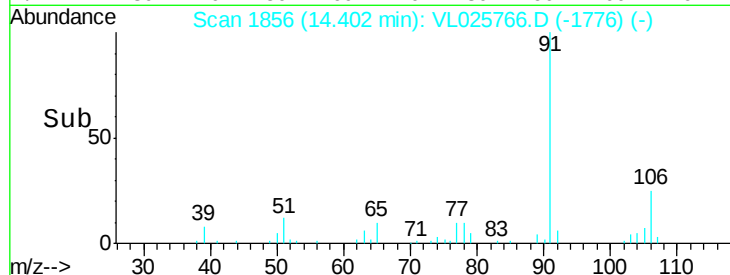
20000

10000

0

Time-->

14.30 14.40 14.50



#59

m/p-Xylene

Concen: 1.41 ppbv

RT: 14.68 min Scan# 1902

Delta R.T. -0.04 min

Lab File: VL025766.D

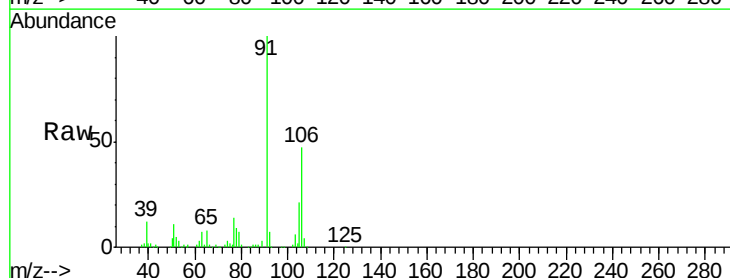
Acq: 27 Jul 2015 23:39

Tgt Ion: 91 Resp: 562793

Ion Ratio Lower Upper

91 100

106 47.6 37.9 56.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

14.68

150000

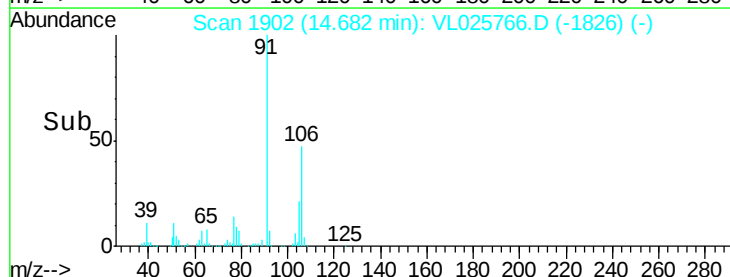
100000

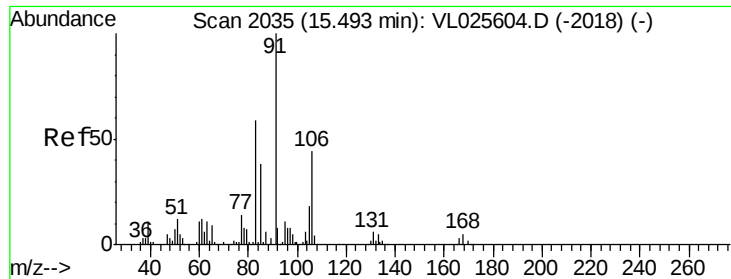
50000

0

Time-->

14.60 14.70 14.80

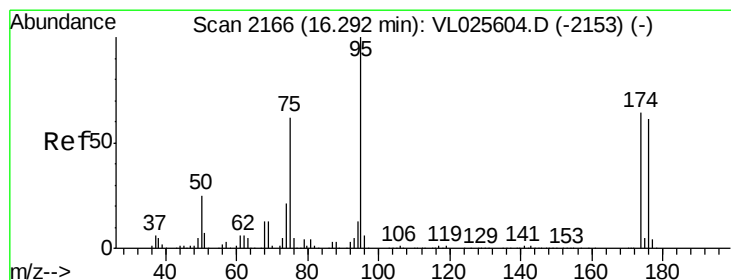
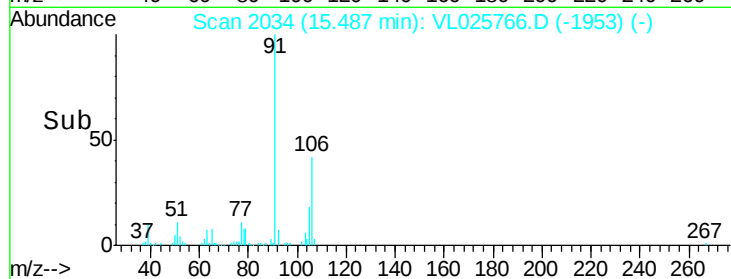
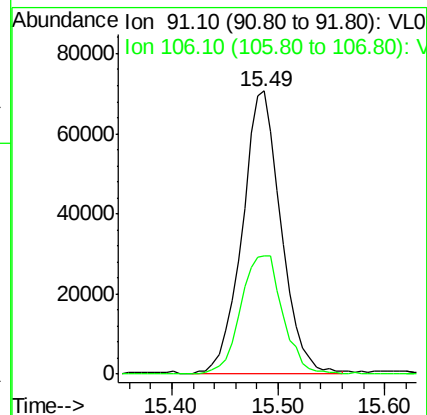
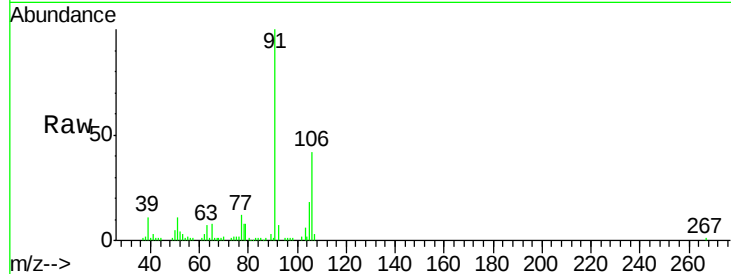




#60
o-Xylene
Concen: 0.42 ppbv
RT: 15.49 min Scan# 2034
Delta R.T. -0.01 min
Lab File: VL025766.D
Acq: 27 Jul 2015 23:39

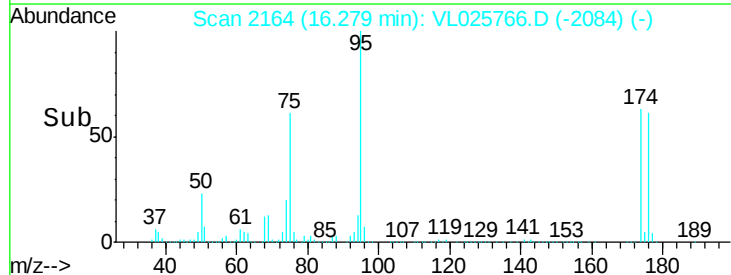
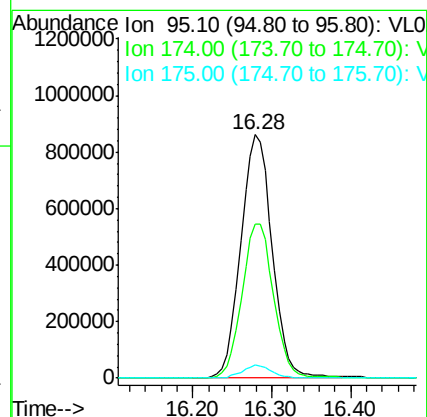
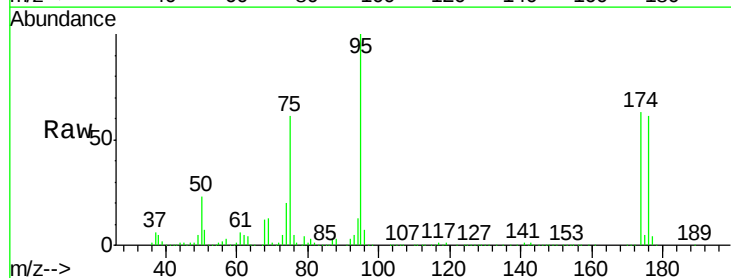
Instrument :
MSVOA_L
ClientSampleId :
SV-2DL

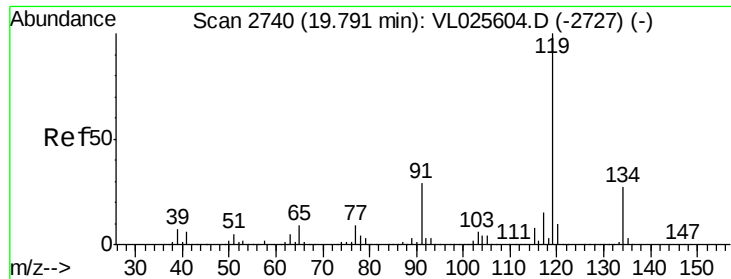
Tot Ion: 91 Resp: 181189
Ion Ratio Lower Upper
91 100
106 45.2 22.1 66.1



#68
1-Bromo-4-Fluorobenzene
Concen: 10.27 ppbv
RT: 16.28 min Scan# 2164
Delta R.T. -0.01 min
Lab File: VL025766.D
Acq: 27 Jul 2015 23:39

Tgt Ion: 95 Resp: 2382341
Ion Ratio Lower Upper
95 100
174 64.3 52.0 78.0
175 5.0 3.9 5.9





#69

p-Isopropyltoluene

Concen: 0.07 ppbv

RT: 19.78 min Scan# 2739

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampleId :

SV-2DL

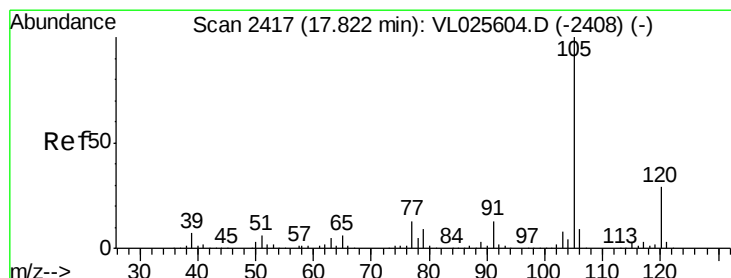
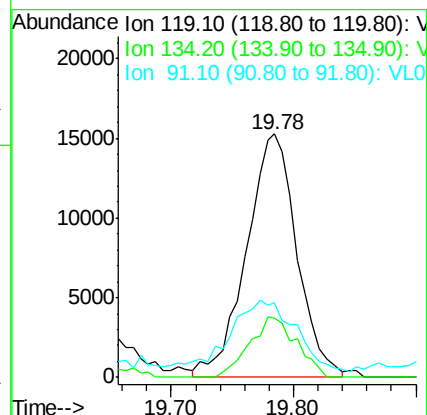
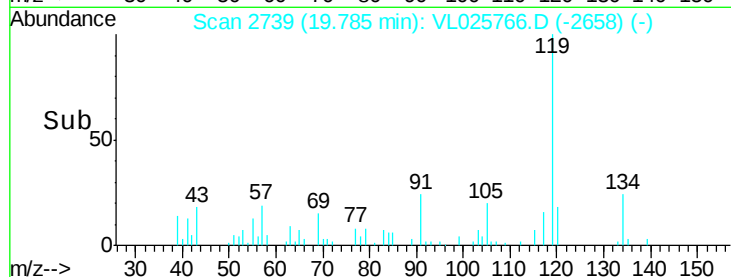
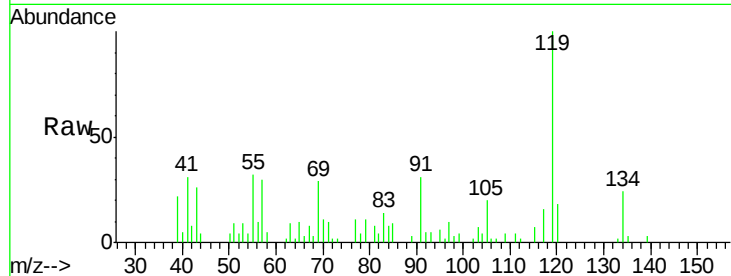
Tot Ion:119 Resp: 43691

Ion Ratio Lower Upper

119 100

134 23.1 20.7 31.1

91 39.2 22.6 34.0#



#72

4-Ethyltoluene

Concen: 0.04 ppbv

RT: 17.82 min Scan# 2416

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Tgt Ion:105 Resp: 21068

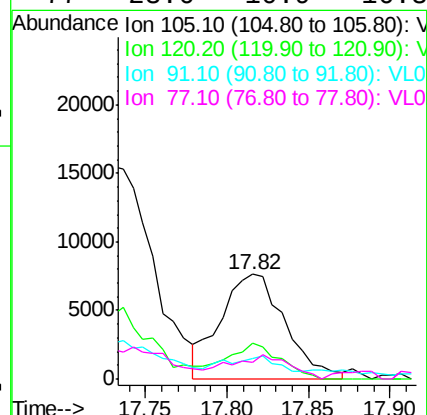
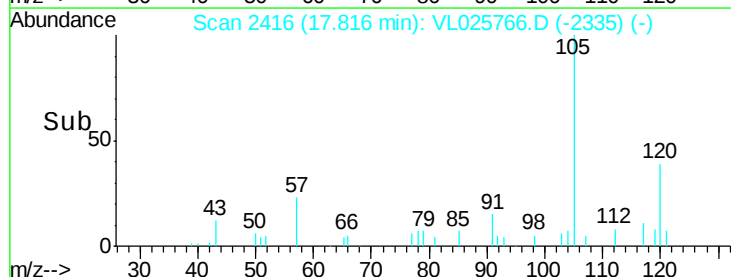
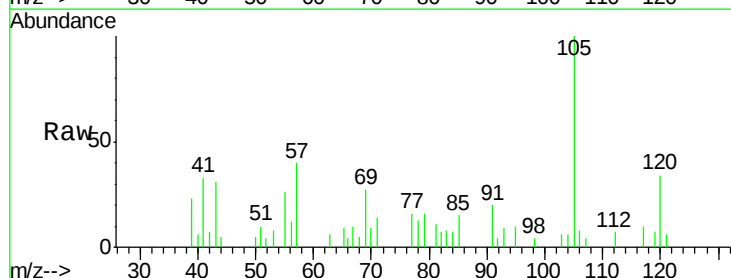
Ion Ratio Lower Upper

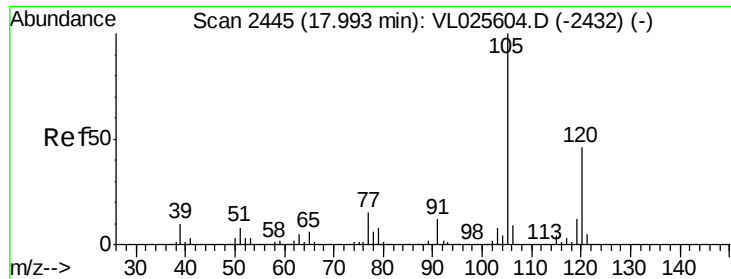
105 100

120 29.4 23.9 35.9

91 18.0 10.3 15.5#

77 23.6 10.9 16.3#





#73

1,3,5-Trimethylbenzene

Concen: 0.05 ppbv

RT: 17.99 min Scan# 2444

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Instrument :

MSVOA_L

ClientSampled :

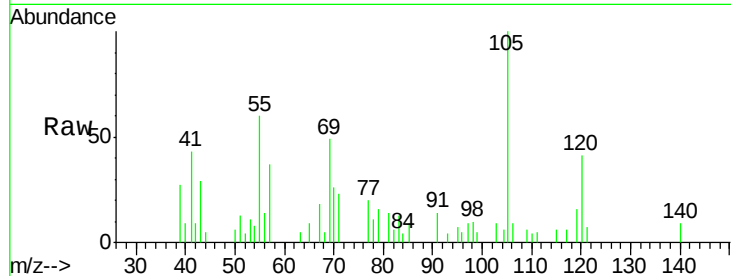
SV-2DL

Tot Ion:105 Resp: 25192

Ion Ratio Lower Upper

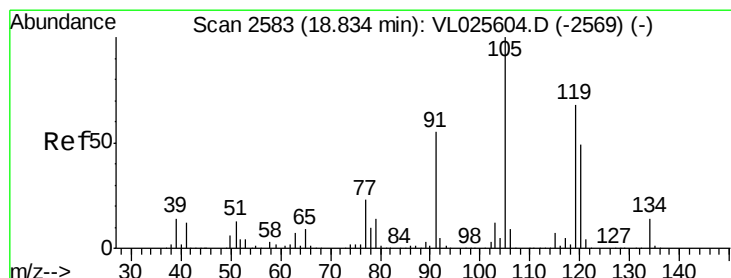
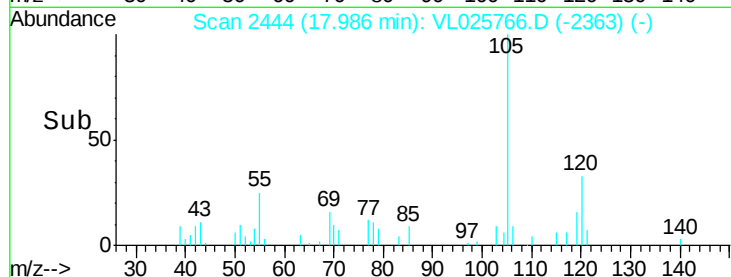
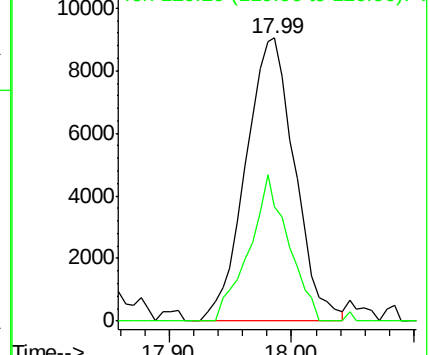
105 100

120 40.6 37.0 55.4



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: 0.12 ppbv

RT: 18.83 min Scan# 2582

Delta R.T. -0.01 min

Lab File: VL025766.D

Acq: 27 Jul 2015 23:39

Tgt Ion:105 Resp: 63363

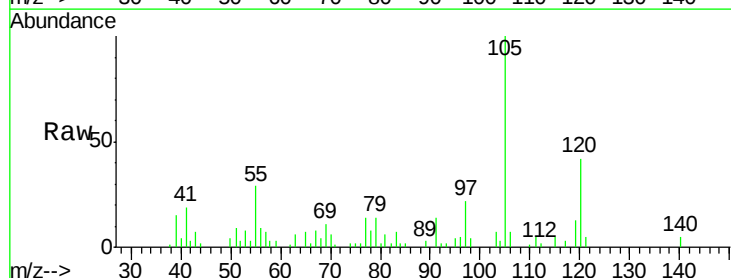
Ion Ratio Lower Upper

105 100

120 42.1 39.3 58.9

91 14.1 43.8 65.6#

77 12.6 18.3 27.5#



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

