

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL102915\
 Data File : VL026268.D
 Acq On : 29 Oct 2015 16:05
 Operator : SY/AP
 Sample : VL1029ABL01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Oct 29 23:01:39 2015
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL102915AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Oct 29 14:29:54 2015
 QLast Update : Thu Oct 29 14:29:54 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.69	49	626573	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	8.37	114	1725881	10.00	ppbv	0.00
55) Chlorobenzene-d5	13.79	117	1938491	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	16.33	95	1497862	10.19	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.90%

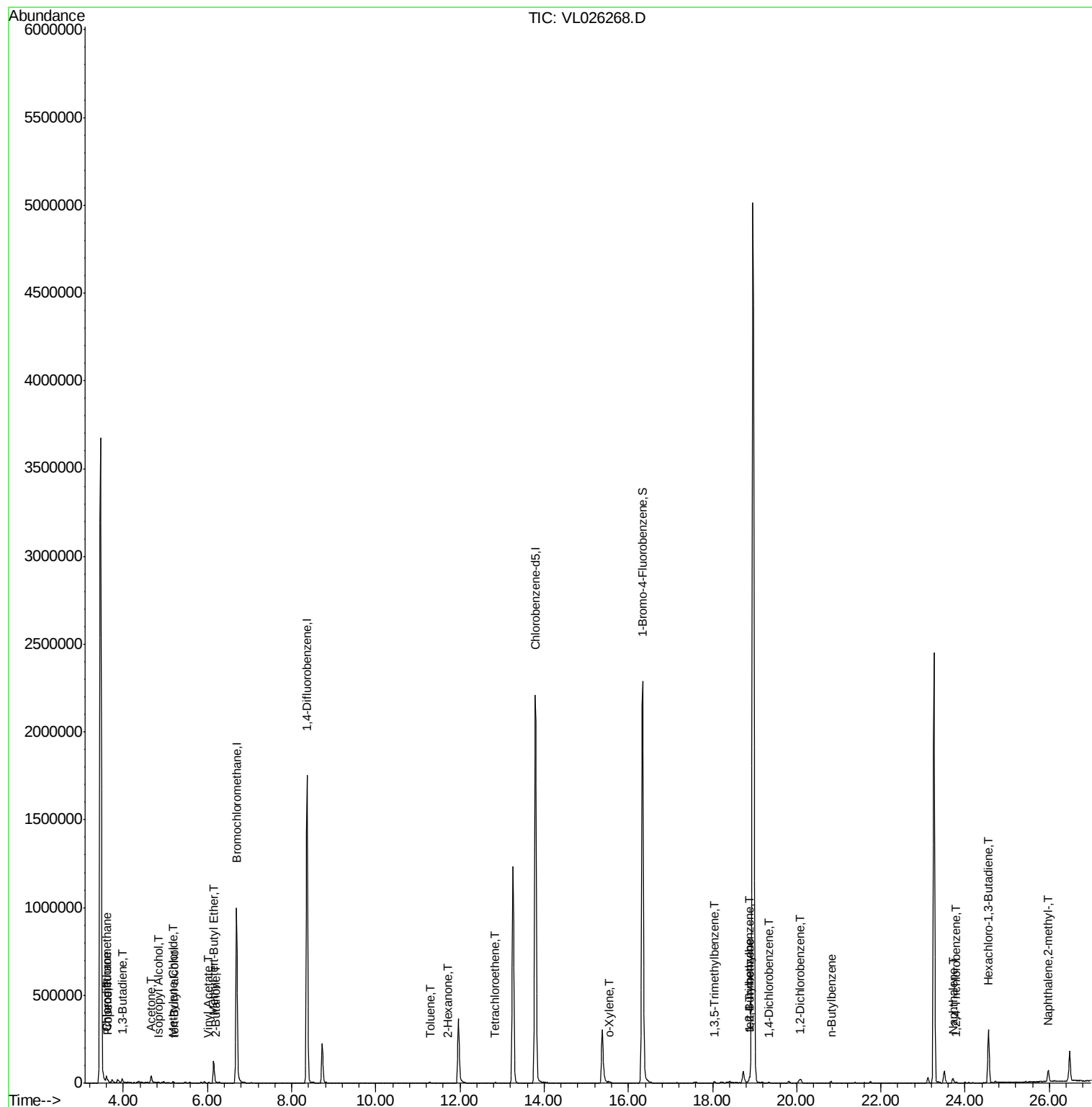
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	3.60	51	15739	0.20	ppbv	96
4) Chloromethane	3.61	50	1120	0.02	ppbv #	42
9) Propene	3.63	41	2899	0.08	ppbv #	80
15) Acetone	4.67	43	35332	0.43	ppbv #	1
16) 1,3-Butadiene	3.97	39	4905	0.12	ppbv #	7
17) tert-Butyl alcohol	5.21	59	2358	0.04	ppbv #	71
19) Isopropyl Alcohol	4.83	45	717	0.02	ppbv #	1
20) Methylene Chloride	5.18	84	3693	0.10	ppbv	97
23) Vinyl Acetate	6.03	43	4058	0.03	ppbv #	77
28) Methyl tert-Butyl Ether	6.15	73	1585	0.01	ppbv #	1
34) 2-Butanone	6.20	43	1276	0.01	ppbv #	50
51) 2-Hexanone	11.71	43	2031	0.02	ppbv #	64
52) Tetrachloroethene	12.83	164	1037	0.01	ppbv #	61
53) Toluene	11.28	91	6147	0.03	ppbv	97
60) o-Xylene	15.54	91	4673	0.02	ppbv	78
65) tert-Butylbenzene	18.88	119	13452	0.04	ppbv #	66
70) n-Butylbenzene	20.82	91	4724	0.01	ppbv #	45
73) 1,3,5-Trimethylbenzene	18.03	105	9989	0.04	ppbv #	82
74) 1,2,4-Trimethylbenzene	18.88	105	23387	0.08	ppbv #	81
76) 1,4-Dichlorobenzene	19.33	146	2898	0.02	ppbv #	65
77) 1,2-Dichlorobenzene	20.08	146	2532	0.01	ppbv	86
78) Hexachloro-1,3-Butadiene	24.56	225	87551	1.14	ppbv	99
79) Naphthalene	23.70	128	37797	0.18	ppbv	97
80) Naphthalene, 2-methyl-	25.98	142	56411	1.46	ppbv	95
81) 1,2,4-Trichlorobenzene	23.78	180	3513	0.03	ppbv #	95

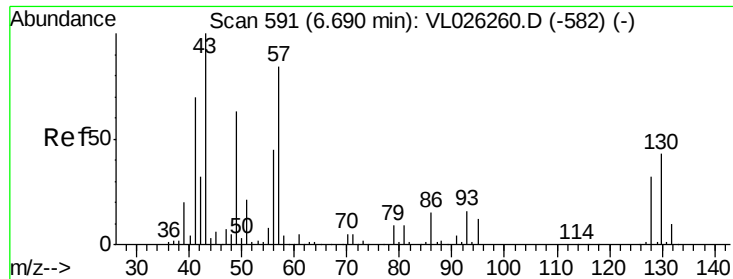
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.69 min Scan# 591

Delta R.T. 0.00 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

ClientSampleId :

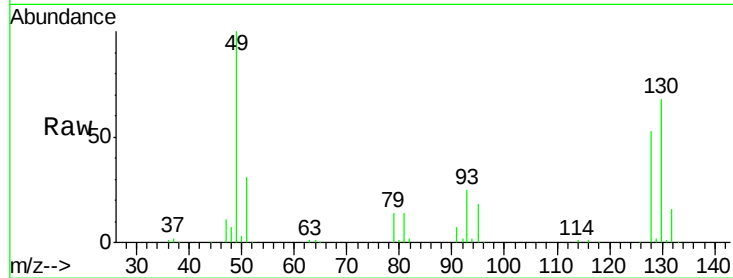
Tot Ion: 49 Resp: 626573

Ion Ratio Lower Upper

49 100

128 53.3 26.7 80.1

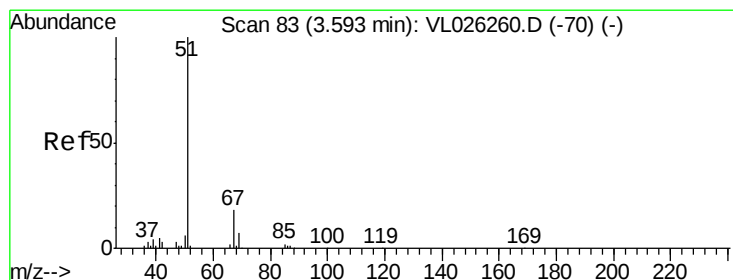
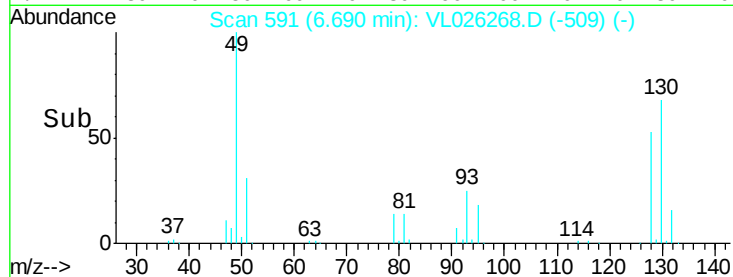
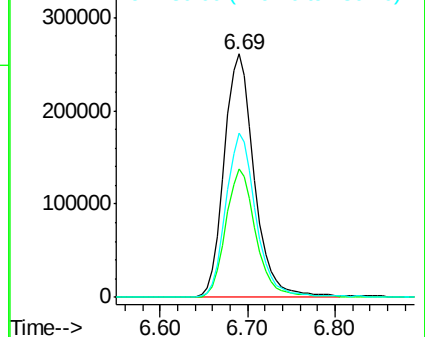
130 68.4 34.4 103.2



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



#3

Chlorodifluoromethane

Concen: 0.20 ppbv

RT: 3.60 min Scan# 84

Delta R.T. 0.01 min

Lab File: VL026268.D

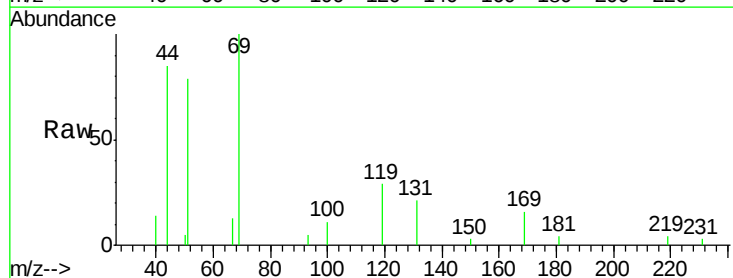
Acq: 29 Oct 2015 16:05

Tgt Ion: 51 Resp: 15739

Ion Ratio Lower Upper

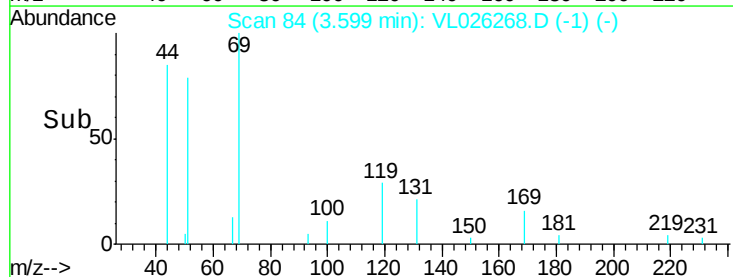
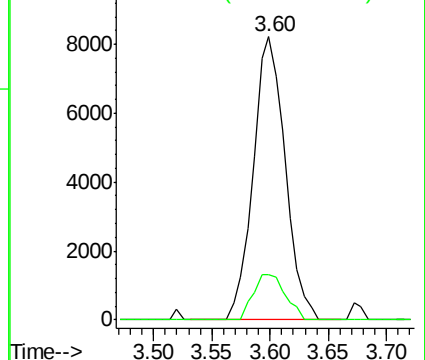
51 100

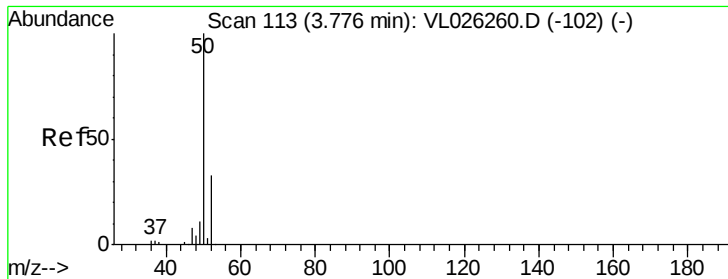
67 16.1 14.5 21.7



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#4

Chloromethane

Concen: 0.02 ppbv

RT: 3.61 min Scan# 85

Delta R.T. -0.17 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

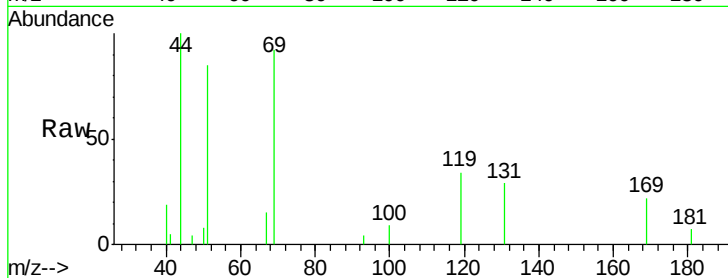
ClientSampleId :

Tot Ion: 50 Resp: 1120

Ion Ratio Lower Upper

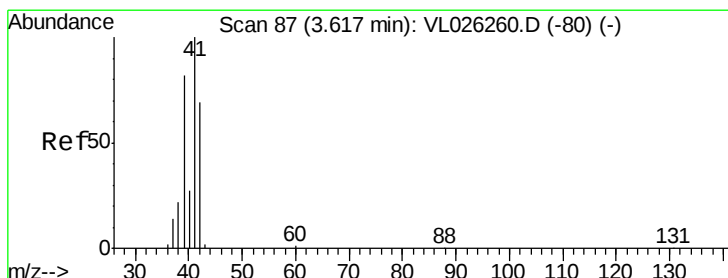
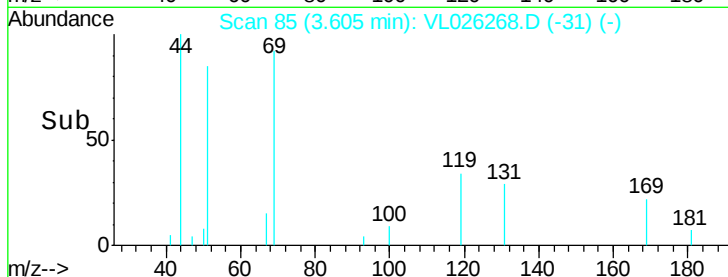
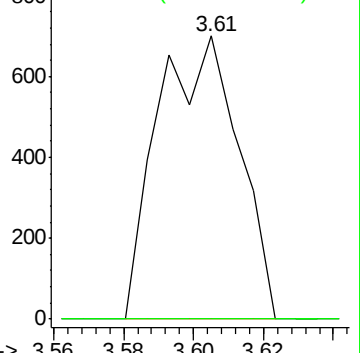
50 100

52 0.0 26.1 39.1#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.08 ppbv

RT: 3.63 min Scan# 89

Delta R.T. 0.01 min

Lab File: VL026268.D

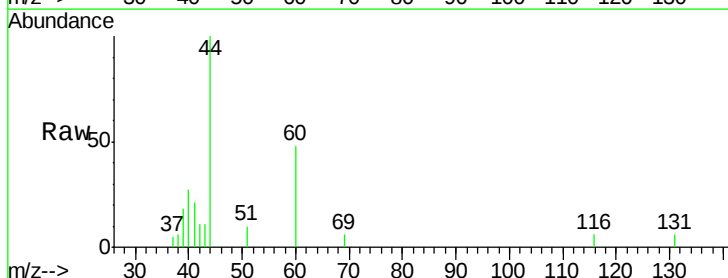
Acq: 29 Oct 2015 16:05

Tgt Ion: 41 Resp: 2899

Ion Ratio Lower Upper

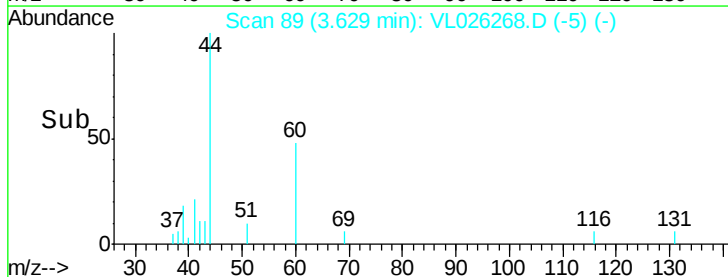
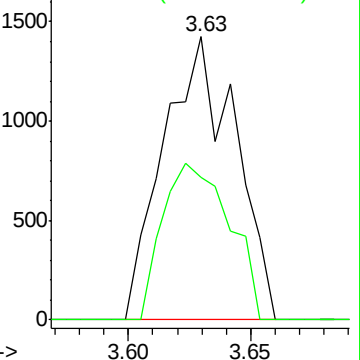
41 100

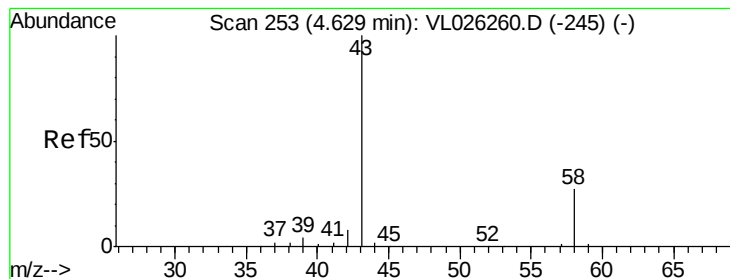
42 51.6 54.5 81.7#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#15

Acetone

Concen: 0.43 ppbv

RT: 4.67 min Scan# 260

Delta R.T. 0.04 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

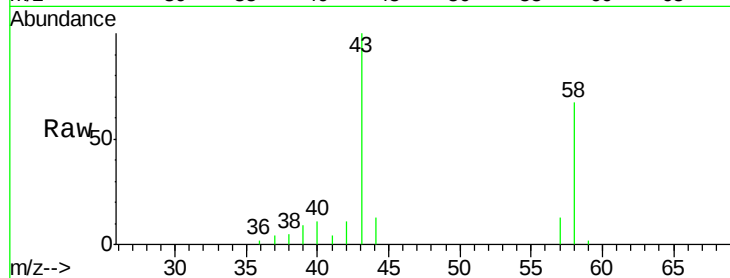
ClientSampleId :

Tot Ion: 43 Resp: 35332

Ion Ratio Lower Upper

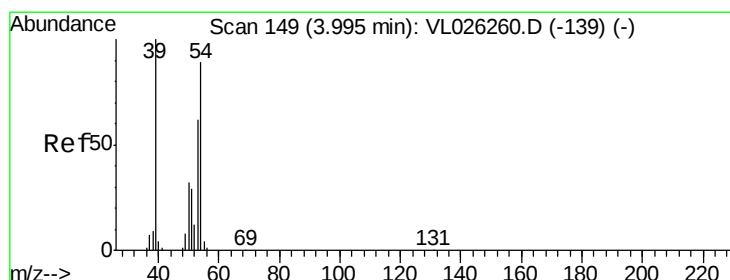
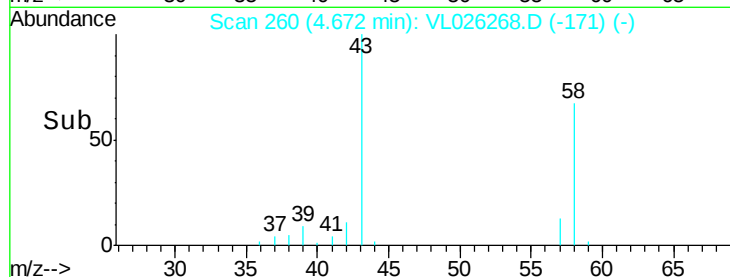
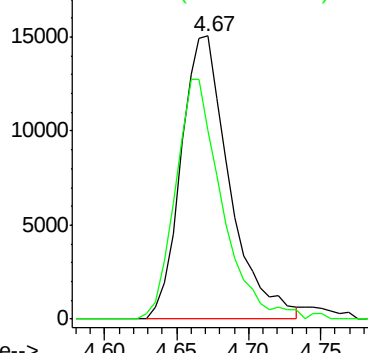
43 100

58 81.6 22.3 33.5#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 0.12 ppbv

RT: 3.97 min Scan# 145

Delta R.T. -0.02 min

Lab File: VL026268.D

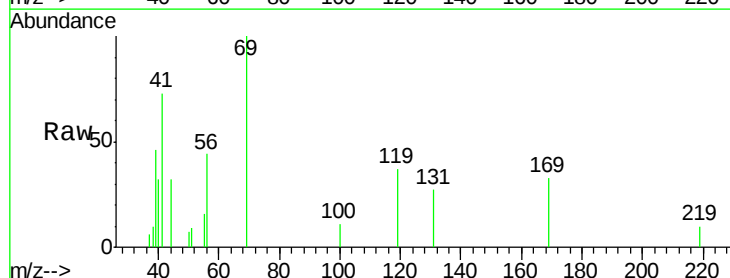
Acq: 29 Oct 2015 16:05

Tgt Ion: 39 Resp: 4905

Ion Ratio Lower Upper

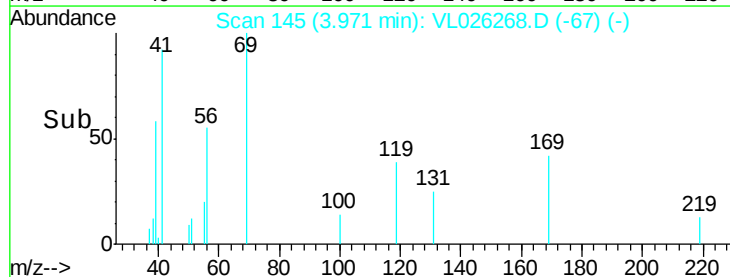
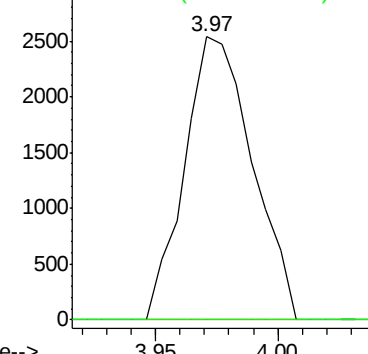
39 100

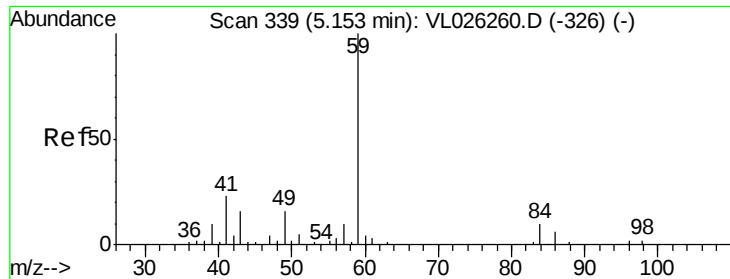
54 0.0 67.3 100.9#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0



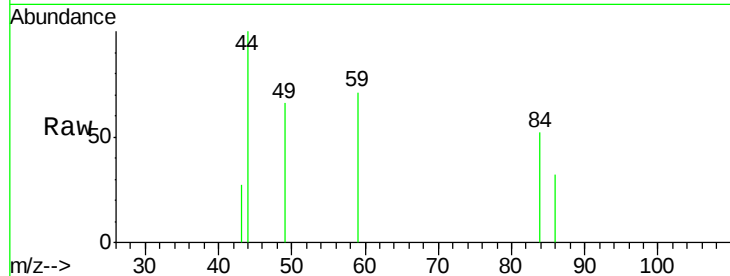


#17

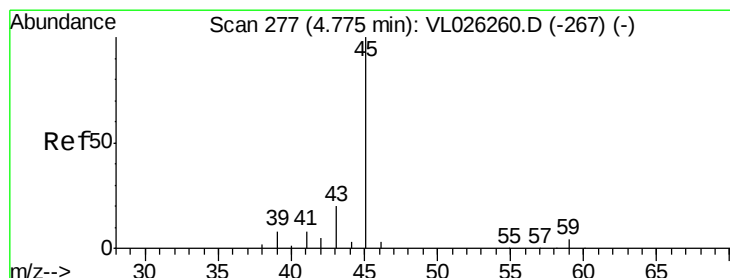
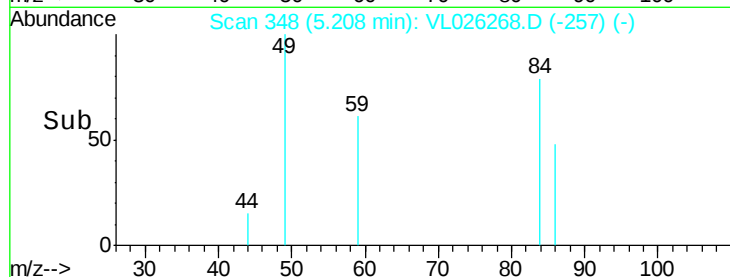
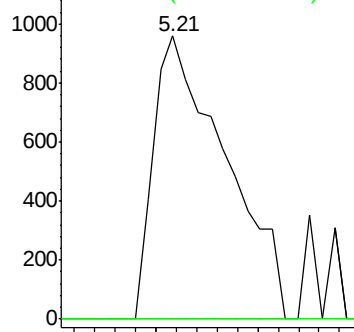
tert-Butyl alcohol
Concen: 0.04 ppbv
RT: 5.21 min Scan# 348
Delta R.T. 0.06 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 59 Resp: 2358
Ion Ratio Lower Upper
59 100
57 0.0 8.7 13.1#



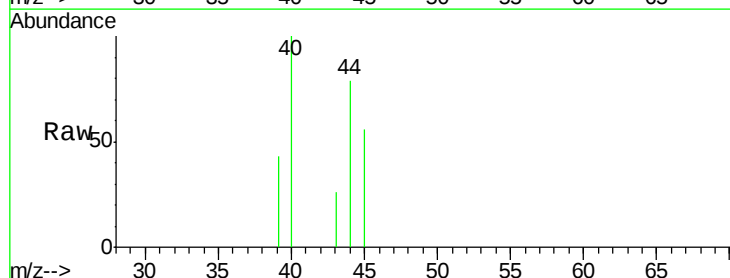
Abundance Ion 59.10 (58.80 to 59.80): VL0
Ion 57.10 (56.80 to 57.80): VL0



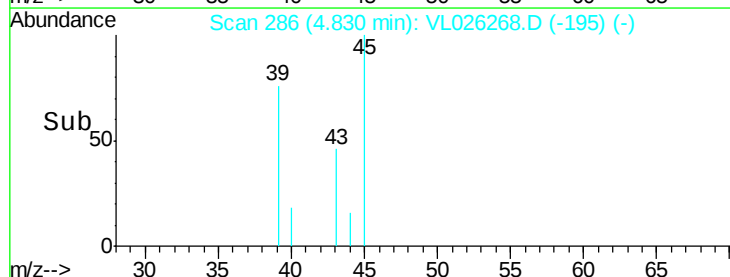
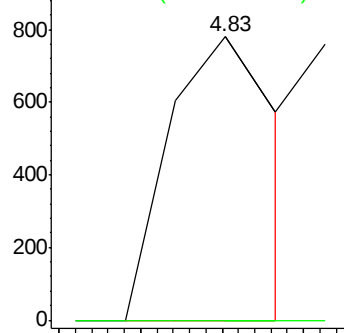
#19

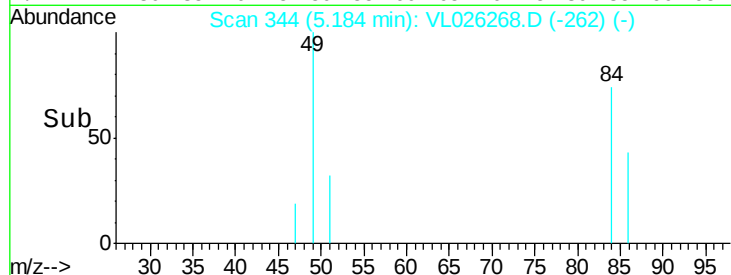
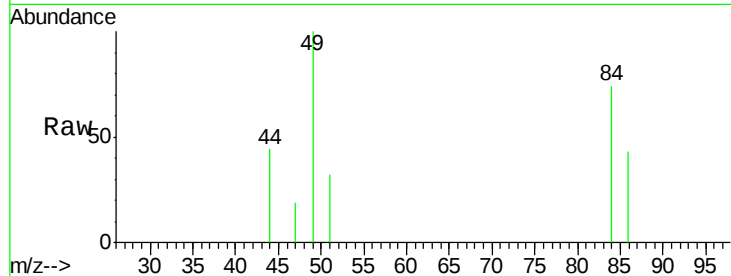
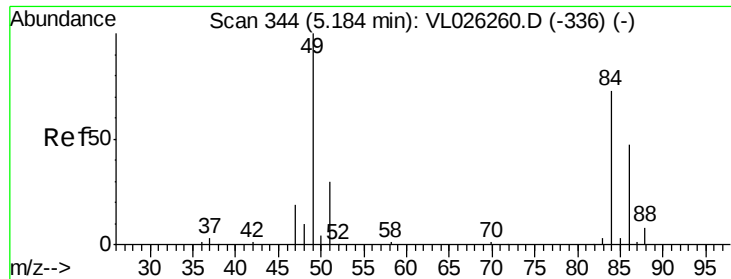
Isopropyl Alcohol
Concen: 0.02 ppbv
RT: 4.83 min Scan# 286
Delta R.T. 0.06 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

Tgt Ion: 45 Resp: 717
Ion Ratio Lower Upper
45 100
58 4022.2 43.8 65.8#



Abundance Ion 45.10 (44.80 to 45.80): VL0
Ion 58.10 (57.80 to 58.80): VL0

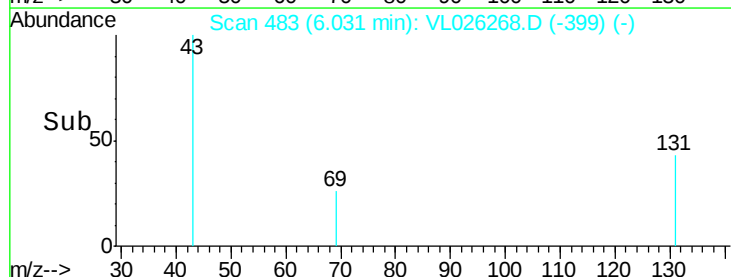
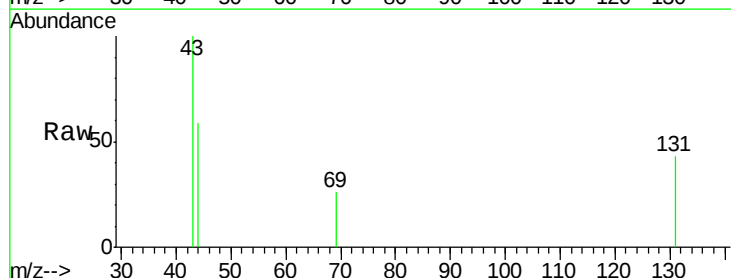
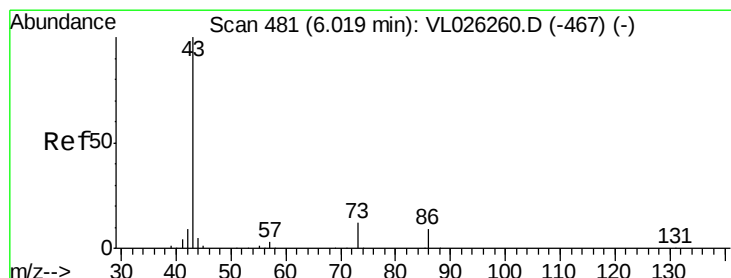
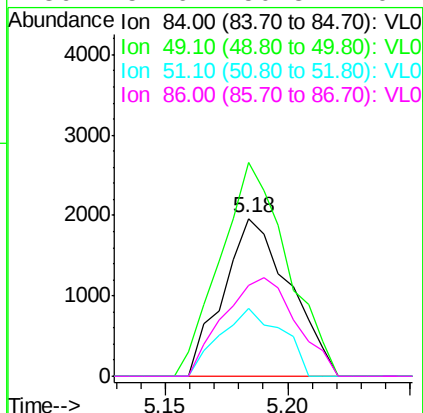




#20
Methvlene Chloride
Concen: 0.10 ppbv
RT: 5.18 min Scan# 344
Delta R.T. 0.00 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

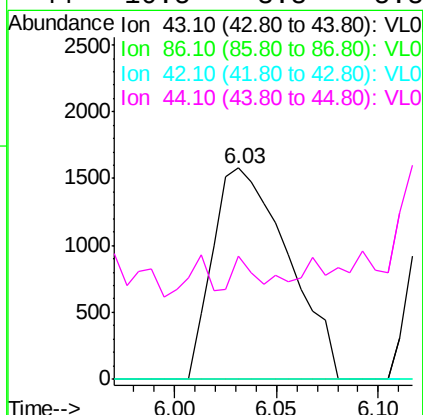
Instrument :
MSVOA_L
ClientSampleId :

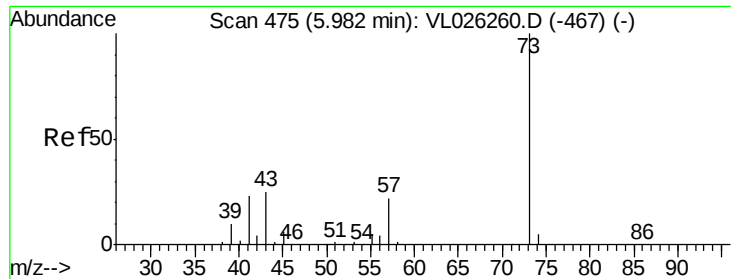
Tot Ion: 84 Resp: 3693
Ion Ratio Lower Upper
84 100
49 135.3 109.0 163.4
51 43.2 32.8 49.2
86 57.6 50.8 76.2



#23
Vinyl Acetate
Concen: 0.03 ppbv
RT: 6.03 min Scan# 483
Delta R.T. 0.01 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

Tgt Ion: 43 Resp: 4058
Ion Ratio Lower Upper
43 100
86 0.0 7.3 10.9#
42 0.0 7.2 10.8#
44 10.5 3.8 5.8#



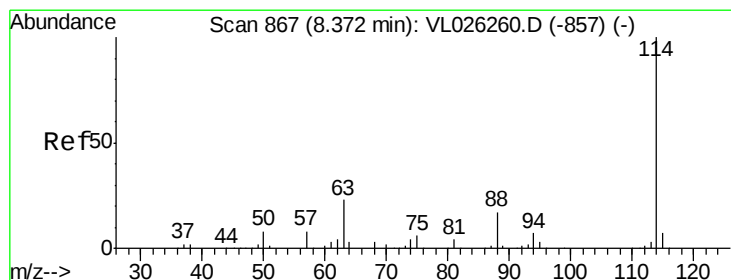
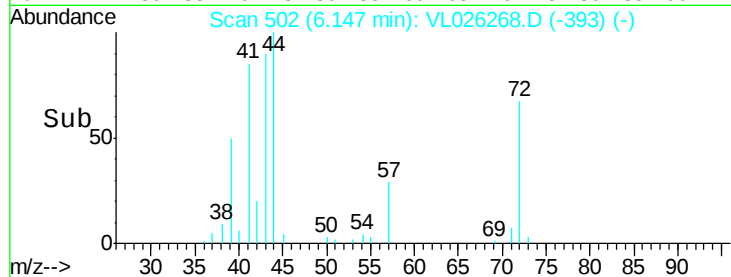
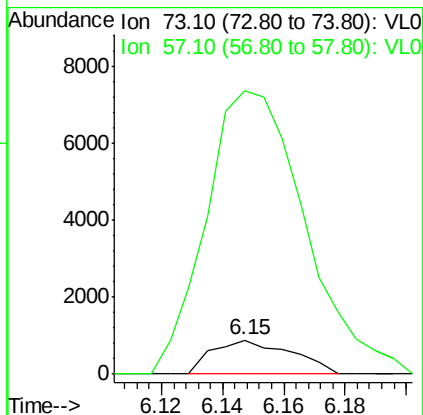
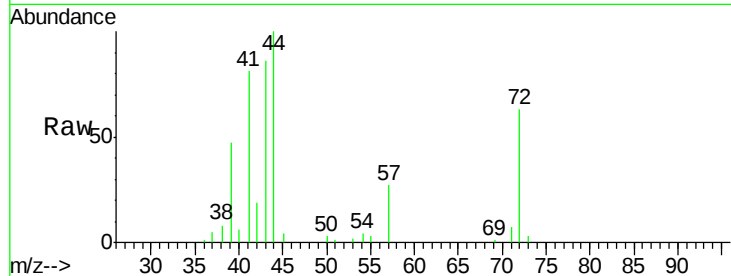


#28

Methvl tert-Butvl Ether
 Concen: 0.01 ppbv
 RT: 6.15 min Scan# 502
 Delta R.T. 0.16 min
 Lab File: VL026268.D
 Acq: 29 Oct 2015 16:05

Instrument :
 MSVOA_L
 ClientSampleId :

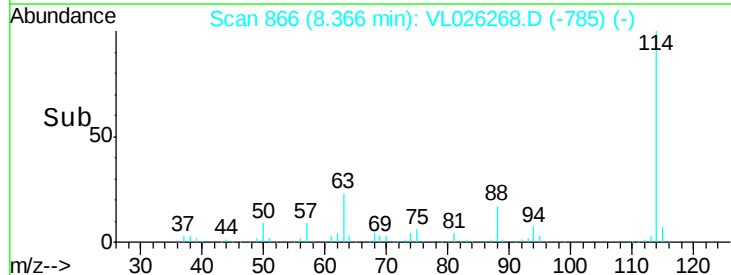
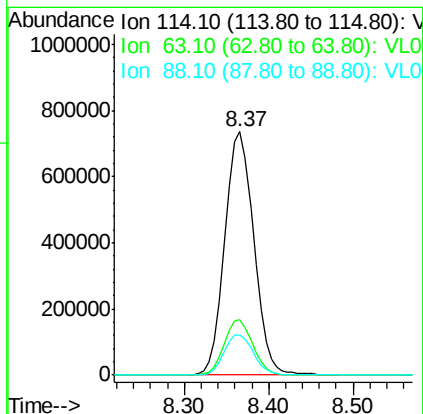
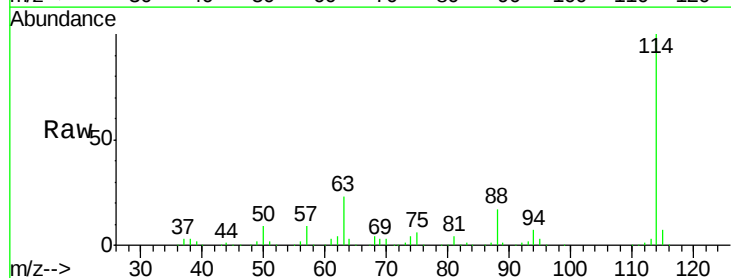
Tot Ion: 73 Resp: 1585
 Ion Ratio Lower Upper
 73 100
 57 1052.6 17.8 26.6#

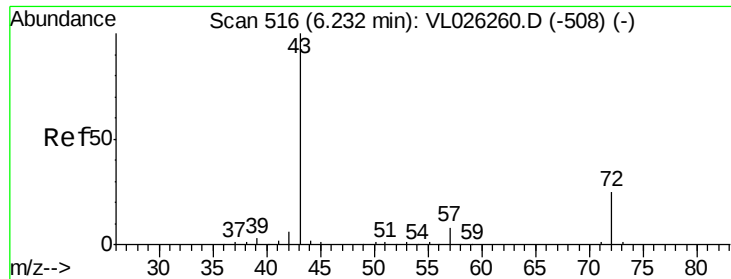


#33

1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 8.37 min Scan# 866
 Delta R.T. -0.01 min
 Lab File: VL026268.D
 Acq: 29 Oct 2015 16:05

Tgt Ion: 114 Resp: 1725881
 Ion Ratio Lower Upper
 114 100
 63 22.7 18.6 28.0
 88 16.8 13.4 20.2

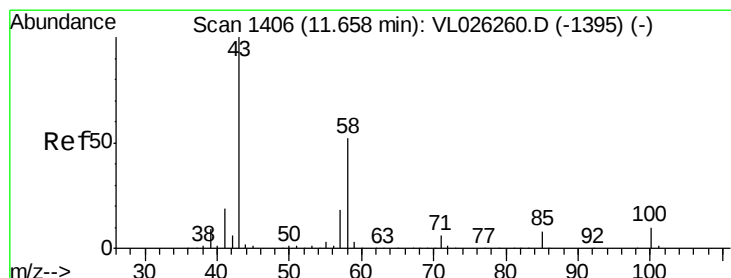
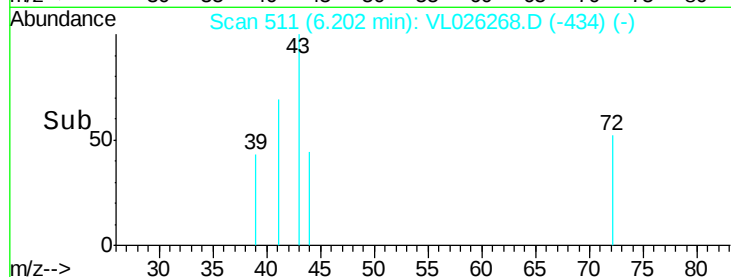
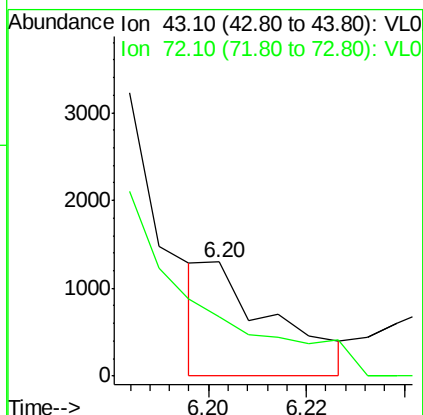
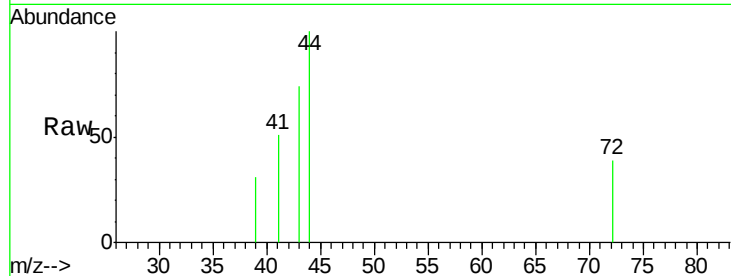




#34
2-Butanone
Concen: 0.01 ppbv
RT: 6.20 min Scan# 511
Delta R.T. -0.03 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

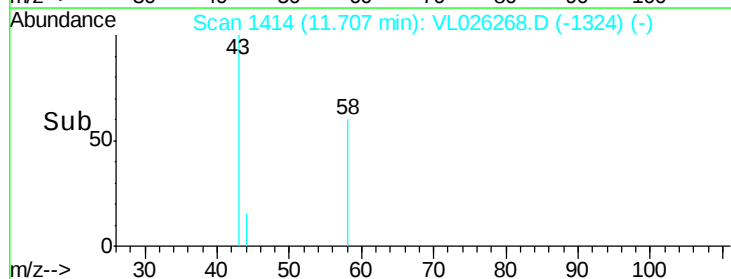
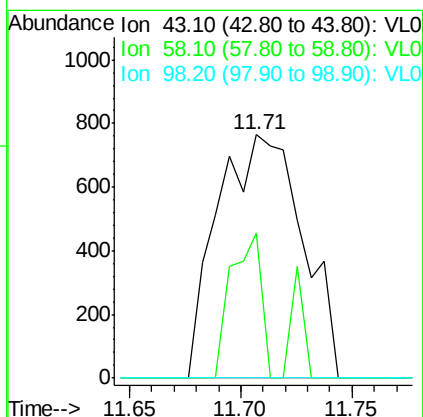
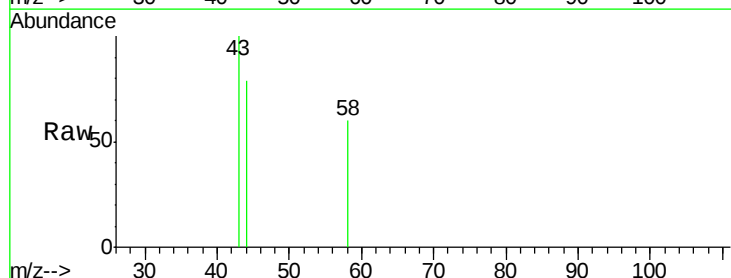
Instrument :
MSVOA_L
ClientSampled :

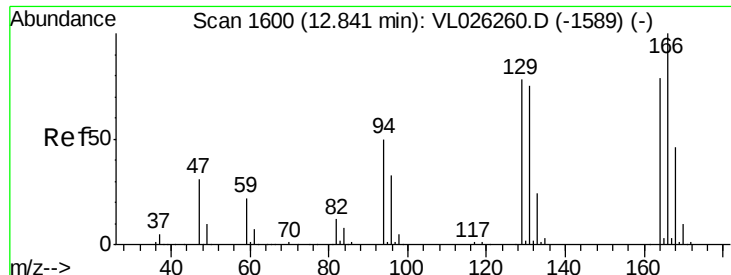
Tot Ion: 43 Resp: 1276
Ion Ratio Lower Upper
43 100
72 0.0 19.9 29.9#



#51
2-Hexanone
Concen: 0.02 ppbv
RT: 11.71 min Scan# 1414
Delta R.T. 0.05 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

Tgt Ion: 43 Resp: 2031
Ion Ratio Lower Upper
43 100
58 27.4 42.7 64.1#
98 0.0 0.0 0.0





#52

Tetrachloroethene

Concen: 0.01 ppbv

RT: 12.83 min Scan# 1599

Delta R.T. -0.01 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 1037

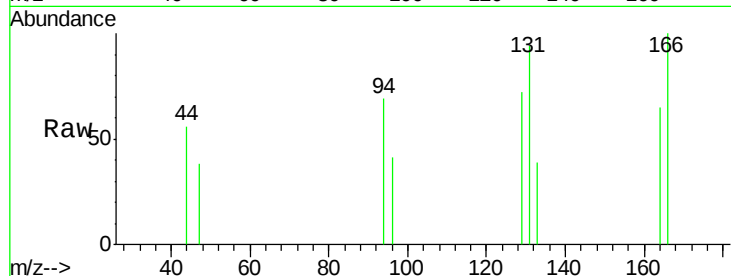
Ion Ratio Lower Upper

164 100

166 154.6 101.4 152.0#

129 55.0 78.8 118.2#

131 145.5 75.6 113.4#

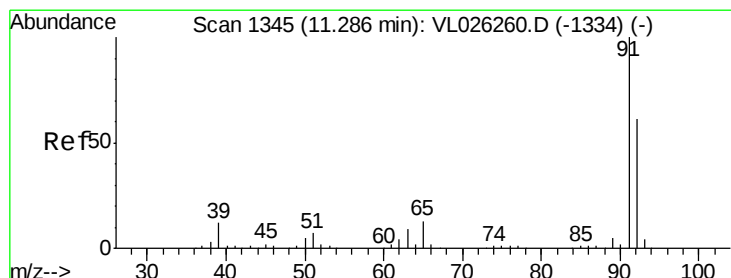
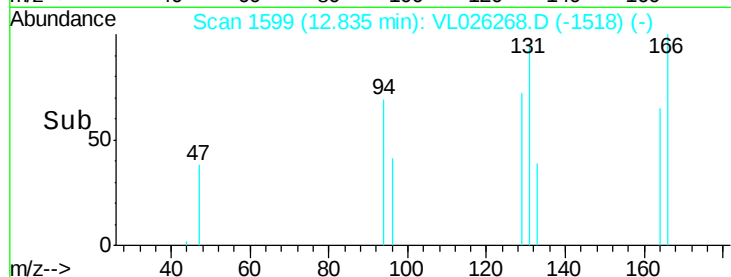
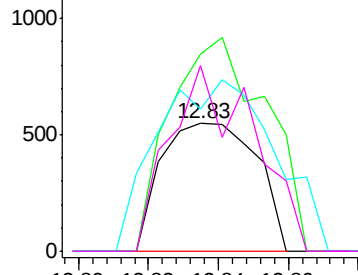


Abundance Ion 163.90 (163.60 to 164.60): V

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: 0.03 ppbv

RT: 11.28 min Scan# 1344

Delta R.T. -0.01 min

Lab File: VL026268.D

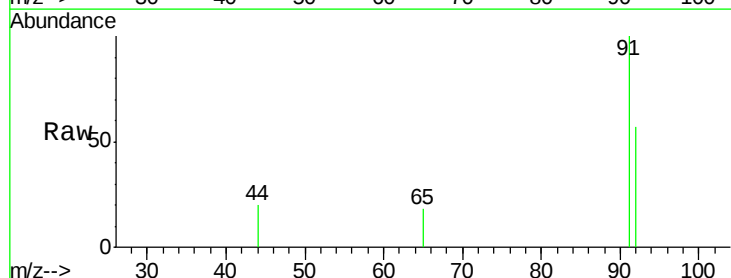
Acq: 29 Oct 2015 16:05

Tgt Ion: 91 Resp: 6147

Ion Ratio Lower Upper

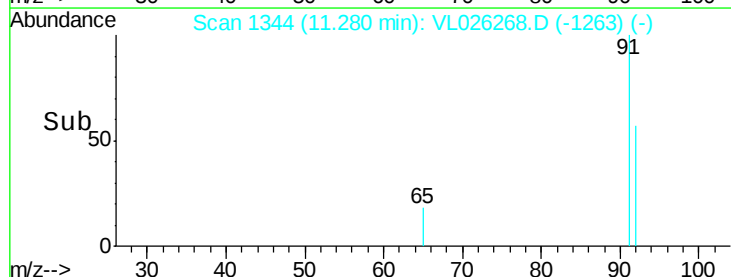
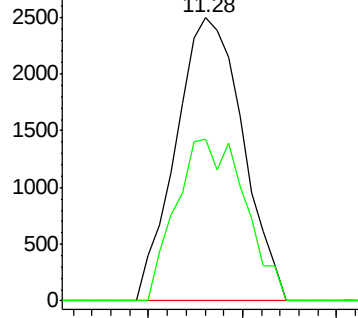
91 100

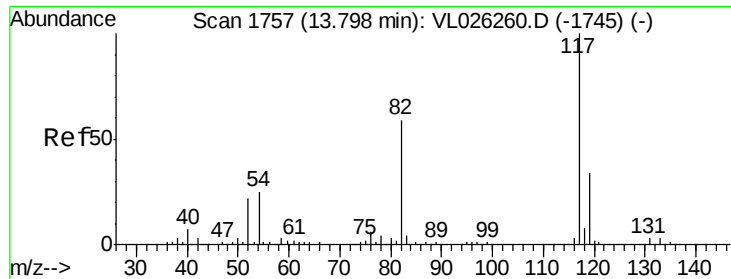
92 58.7 48.6 73.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

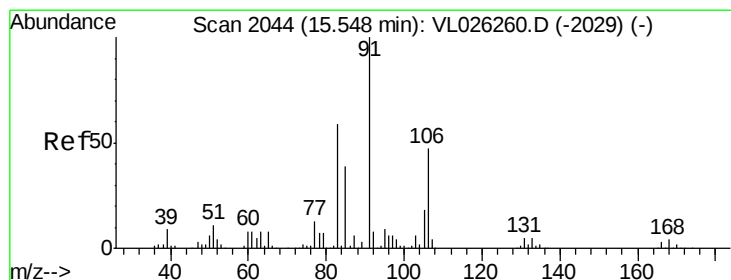
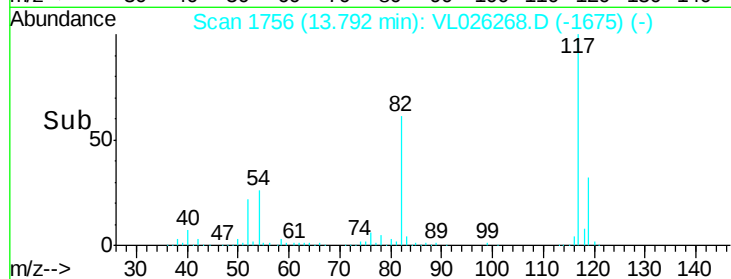
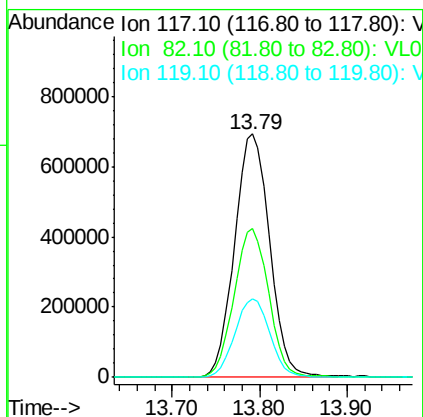
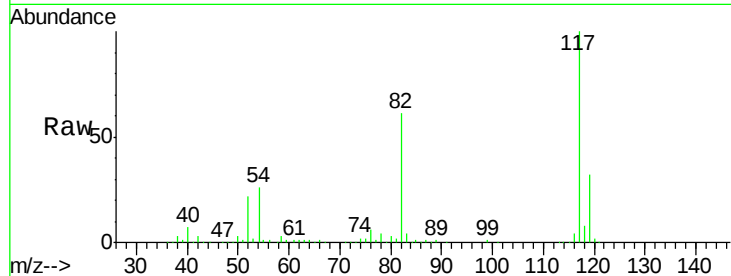




#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 13.79 min Scan# 1756
Delta R.T. -0.01 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

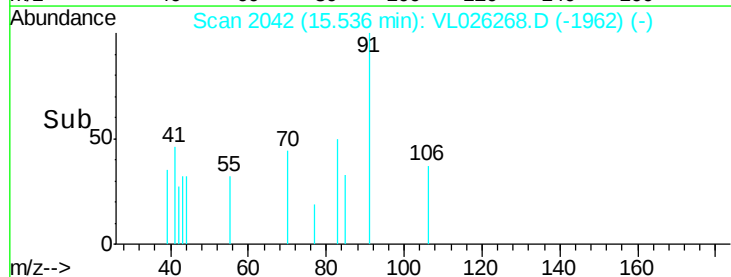
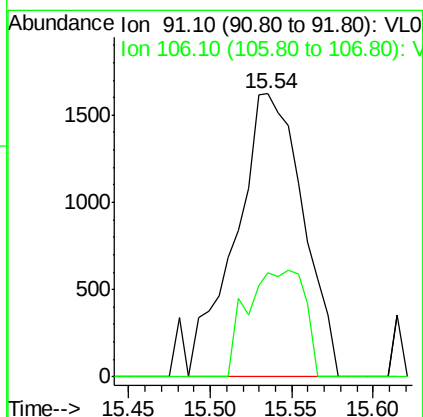
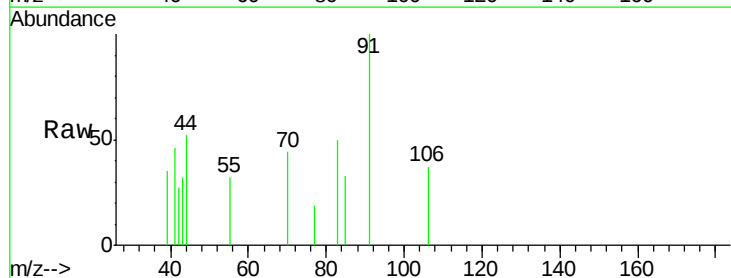
Instrument :
MSVOA_L
ClientSampled :

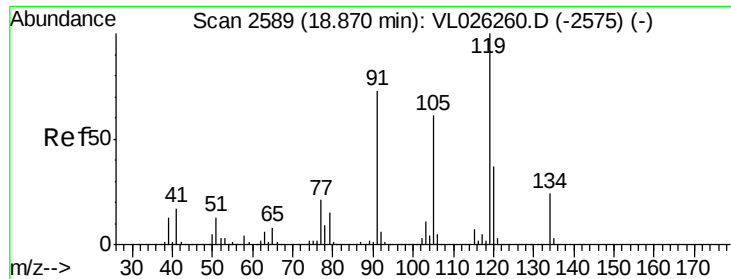
Tot Ion:117 Resp: 1938491
Ion Ratio Lower Upper
117 100
82 61.1 48.2 72.4
119 32.6 46.2 69.2#



#60
o-Xylene
Concen: 0.02 ppbv
RT: 15.54 min Scan# 2042
Delta R.T. -0.01 min
Lab File: VL026268.D
Acq: 29 Oct 2015 16:05

Tgt Ion: 91 Resp: 4673
Ion Ratio Lower Upper
91 100
106 32.2 23.6 70.8





#65

tert-Butylbenzene

Concen: 0.04 ppbv

RT: 18.88 min Scan# 2590

Delta R.T. 0.01 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

ClientSampleId :

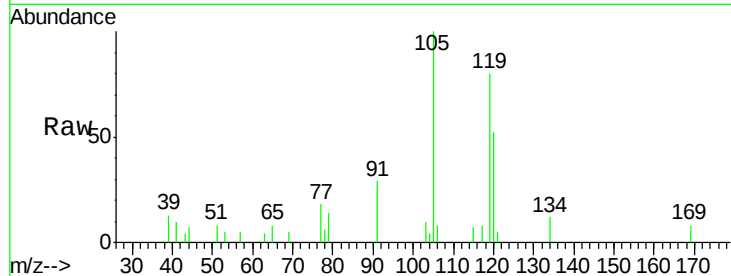
Tot Ion:119 Resp: 13452

Ion Ratio Lower Upper

119 100

91 91.1 57.7 86.5#

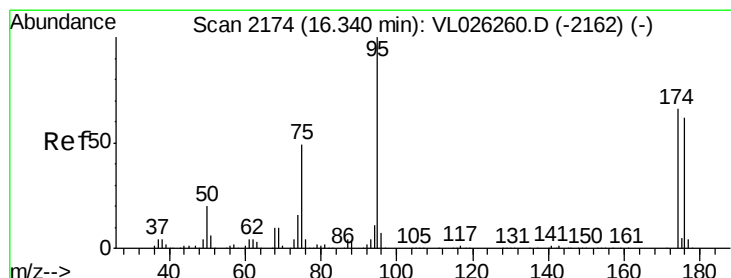
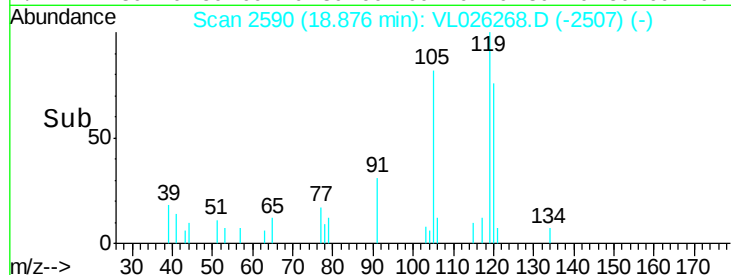
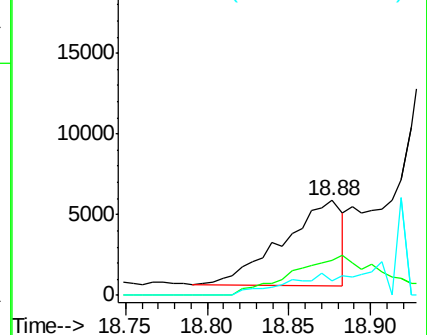
134 56.0 18.0 27.0#



Abundance Ion 119.20 (118.90 to 119.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 134.20 (133.90 to 134.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.19 ppbv

RT: 16.33 min Scan# 2173

Delta R.T. -0.01 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

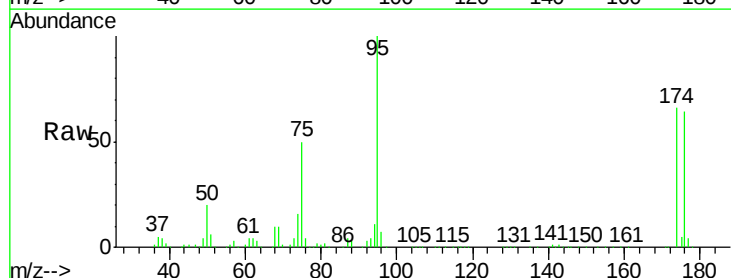
Tgt Ion: 95 Resp: 1497862

Ion Ratio Lower Upper

95 100

174 66.5 52.9 79.3

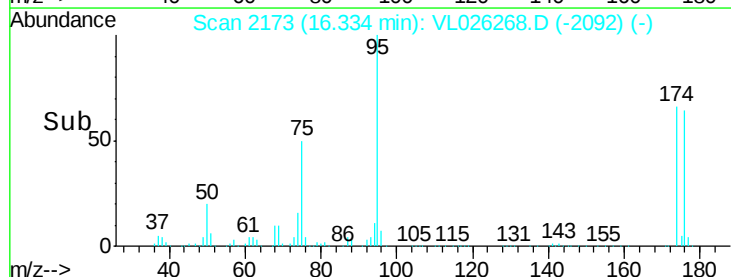
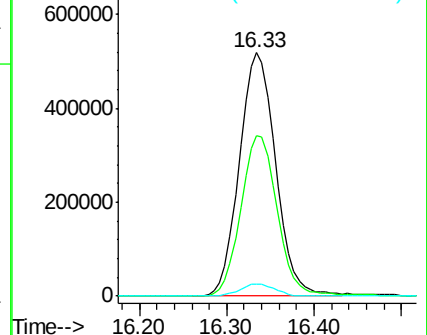
175 4.9 3.8 5.8

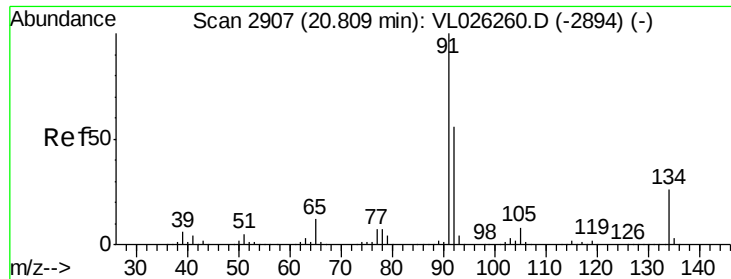


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#70

n-Butylbenzene

Concen: 0.01 ppbv

RT: 20.82 min Scan# 2908

Delta R.T. 0.01 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

ClientSampleId :

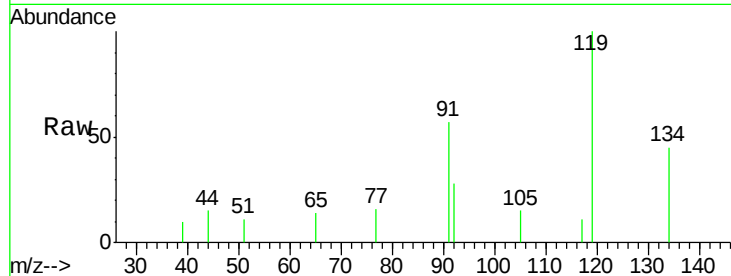
Tot Ion: 91 Resp: 4724

Ion Ratio Lower Upper

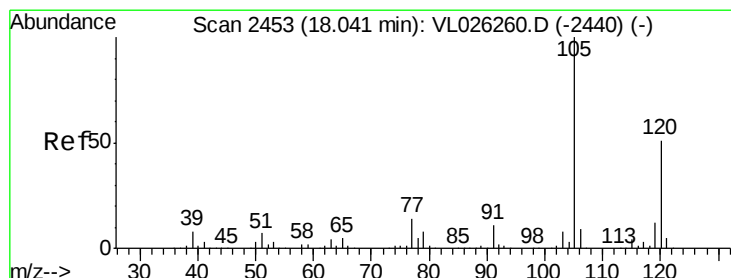
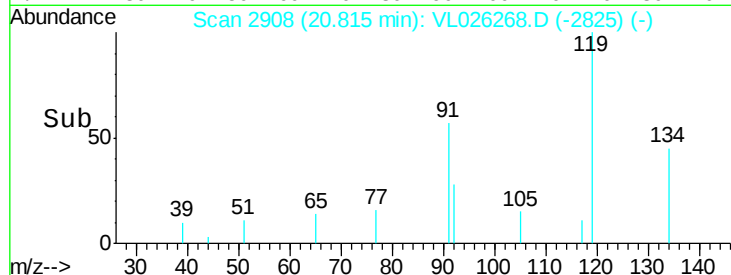
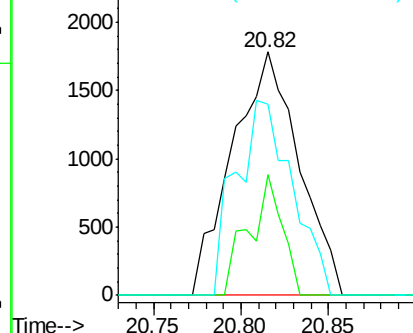
91 100

92 24.8 44.9 67.3#

134 67.5 20.5 30.7#



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 92.10 (91.80 to 92.80): VL0
Ion 134.20 (133.90 to 134.90): V



#73

1,3,5-Trimethylbenzene

Concen: 0.04 ppbv

RT: 18.03 min Scan# 2451

Delta R.T. -0.01 min

Lab File: VL026268.D

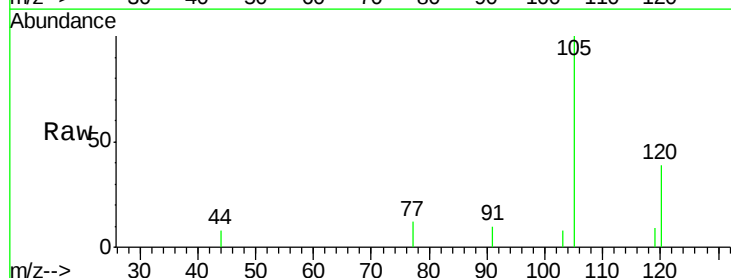
Acq: 29 Oct 2015 16:05

Tgt Ion:105 Resp: 9989

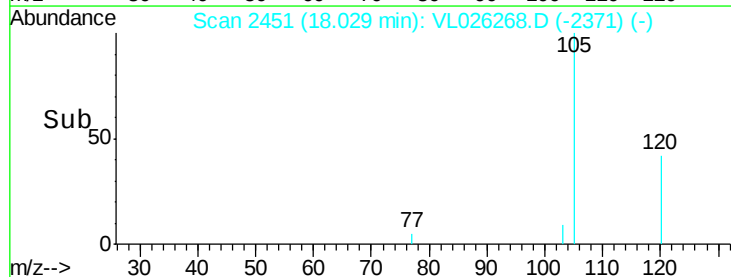
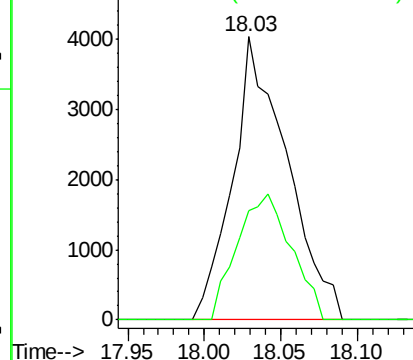
Ion Ratio Lower Upper

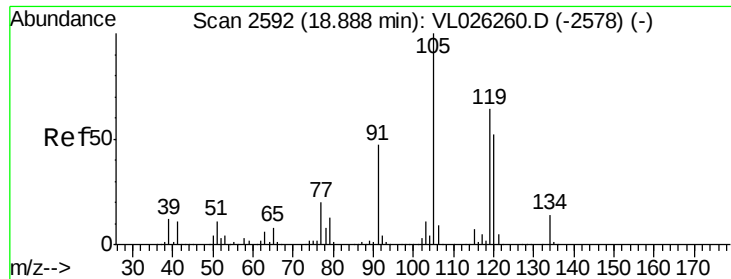
105 100

120 38.6 40.6 61.0#



Abundance Ion 105.10 (104.80 to 105.80): V
Ion 120.20 (119.90 to 120.90): V

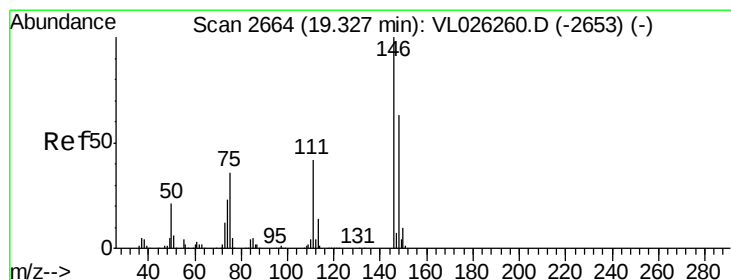
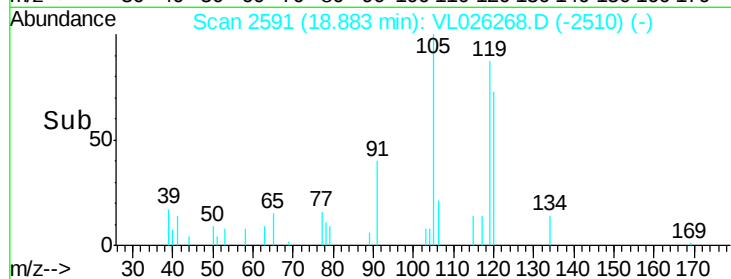
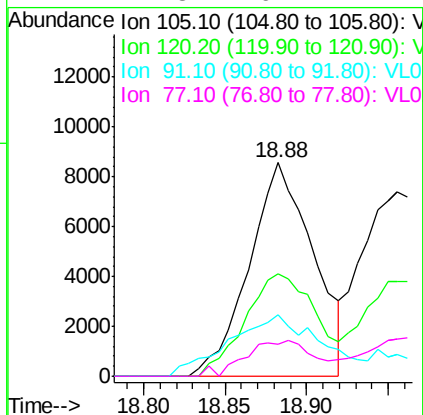
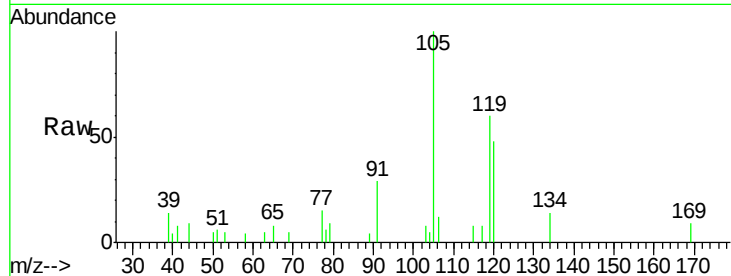




#74
 1,2,4-Trimethylbenzene
 Concen: 0.08 ppbv
 RT: 18.88 min Scan# 2591
 Delta R.T. -0.01 min
 Lab File: VL026268.D
 Acq: 29 Oct 2015 16:05

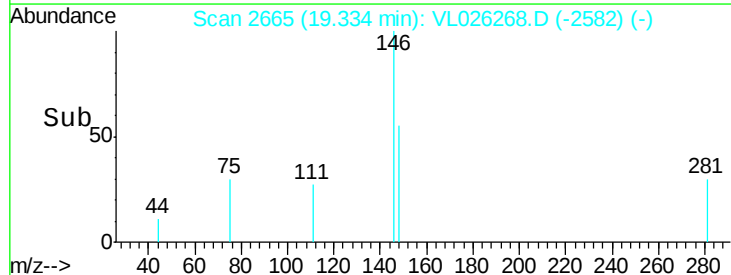
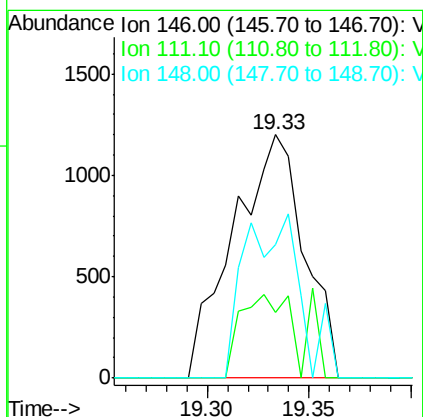
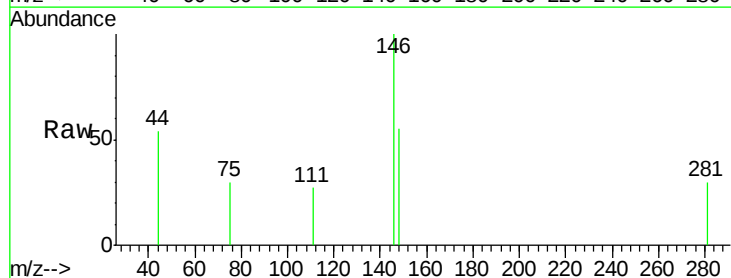
Instrument :
 MSVOA_L
 ClientSampleId :

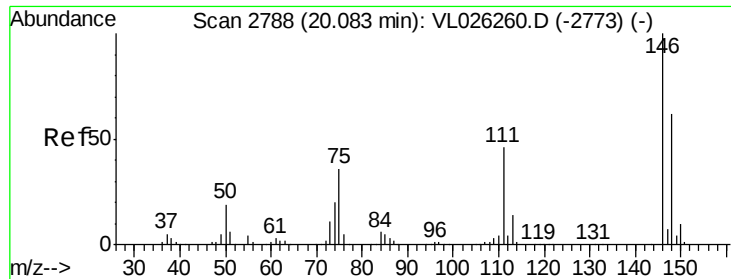
Tot Ion:105 Resp: 23387
 Ion Ratio Lower Upper
 105 100
 120 48.0 41.2 61.8
 91 22.5 37.8 56.8#
 77 14.8 16.1 24.1#



#76
 1,4-Dichlorobenzene
 Concen: 0.02 ppbv
 RT: 19.33 min Scan# 2665
 Delta R.T. 0.01 min
 Lab File: VL026268.D
 Acq: 29 Oct 2015 16:05

Tgt Ion:146 Resp: 2898
 Ion Ratio Lower Upper
 146 100
 111 0.0 21.1 63.4#
 148 52.3 31.8 95.3

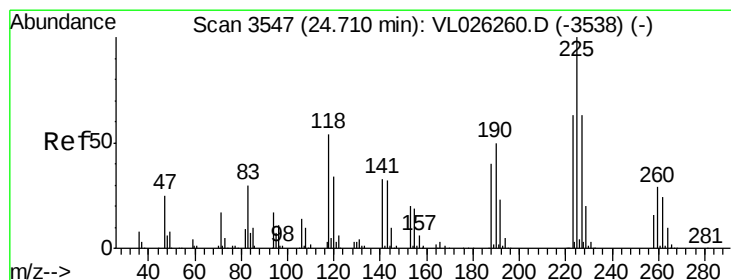
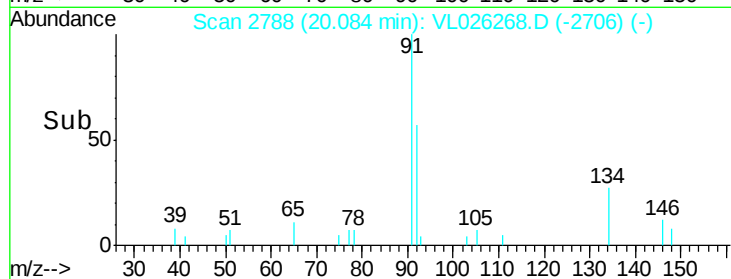
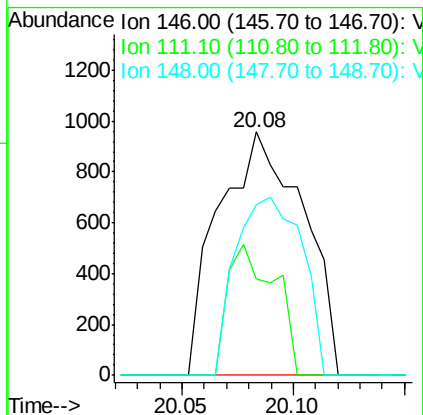
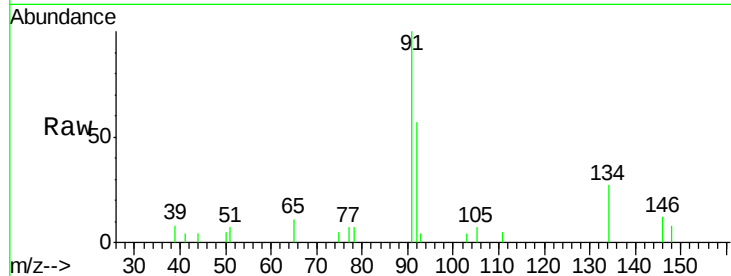




#77
 1,2-Dichlorobenzene
 Concen: 0.01 ppbv
 RT: 20.08 min Scan# 2788
 Delta R.T. 0.00 min
 Lab File: VL026268.D
 Acq: 29 Oct 2015 16:05

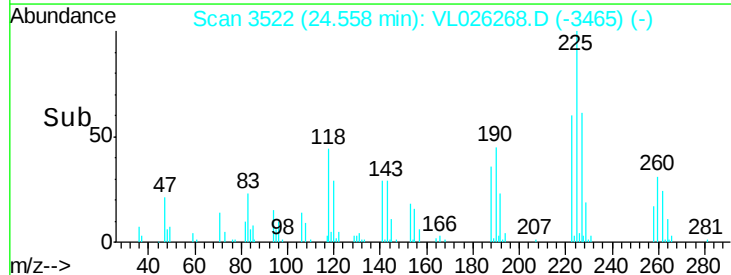
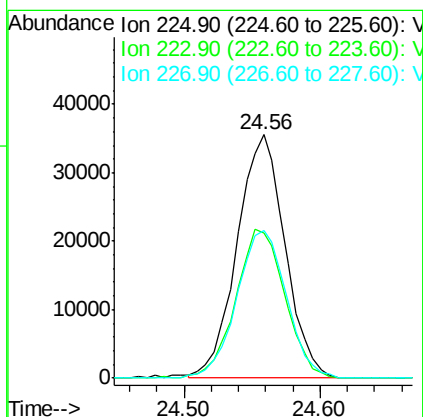
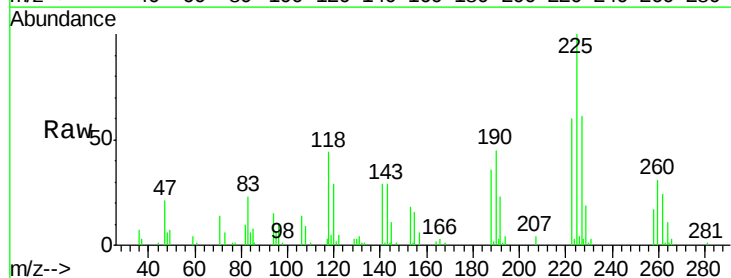
Instrument :
 MSVOA_L
 ClientSampled :

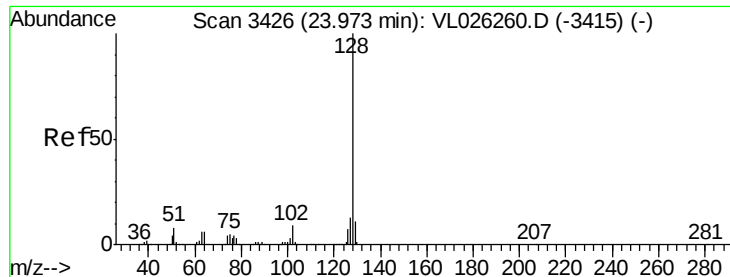
Tot Ion:146 Resp: 2532
 Ion Ratio Lower Upper
 146 100
 111 29.9 22.8 68.3
 148 57.4 31.6 94.8



#78
 Hexachloro-1,3-Butadiene
 Concen: 1.14 ppbv
 RT: 24.56 min Scan# 3522
 Delta R.T. -0.15 min
 Lab File: VL026268.D
 Acq: 29 Oct 2015 16:05

Tgt Ion:225 Resp: 87551
 Ion Ratio Lower Upper
 225 100
 223 63.0 51.0 76.6
 227 63.1 51.3 76.9





#79

Naphthalene

Concen: 0.18 ppbv

RT: 23.70 min Scan# 3382

Delta R.T. -0.27 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

ClientSampleId :

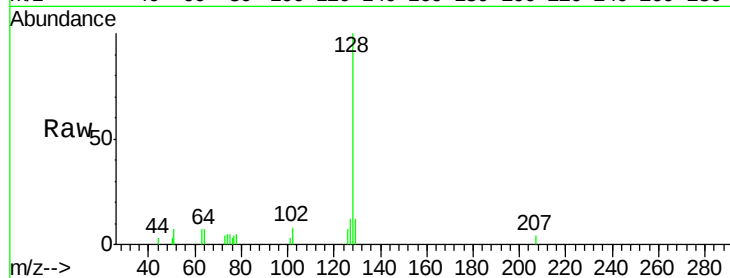
Tot Ion:128 Resp: 37797

Ion Ratio Lower Upper

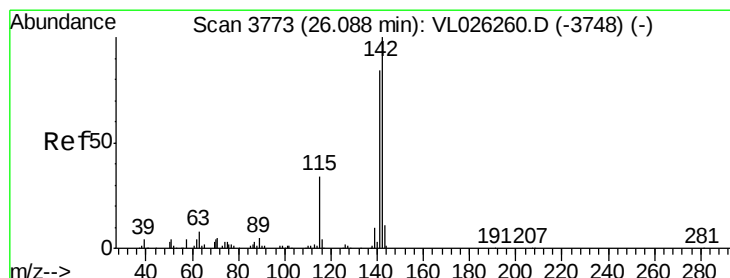
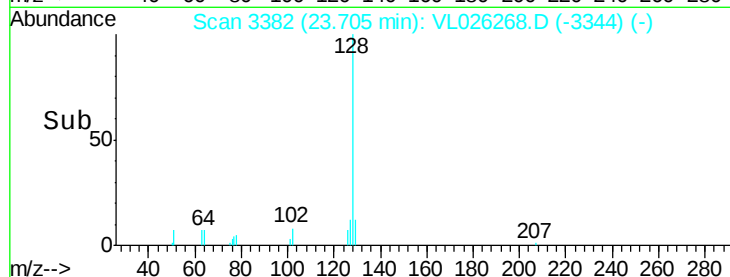
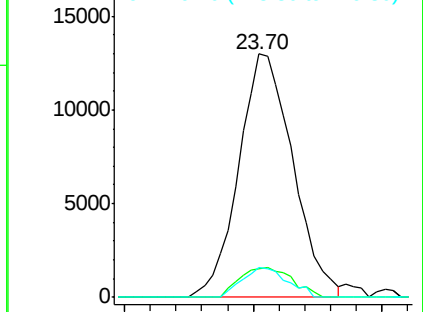
128 100

127 11.8 10.1 15.1

129 12.3 8.8 13.2



Abundance Ion 128.10 (127.80 to 128.80): V
Ion 127.10 (126.80 to 127.80): V
Ion 129.10 (128.80 to 129.80): V



#80

Naphthalene, 2-methyl-

Concen: 1.46 ppbv

RT: 25.98 min Scan# 3755

Delta R.T. -0.11 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

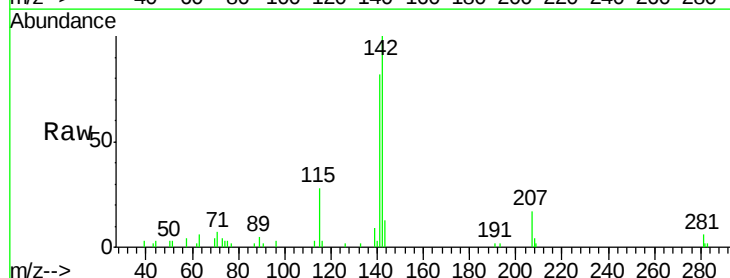
Tgt Ion:142 Resp: 56411

Ion Ratio Lower Upper

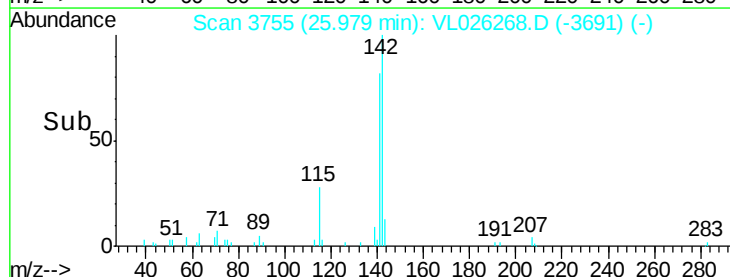
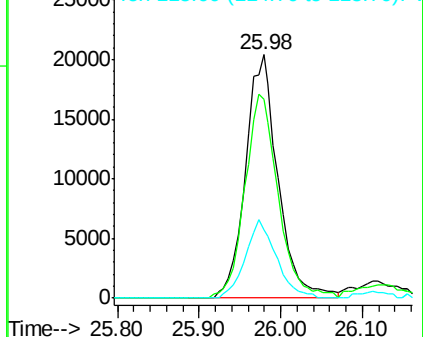
142 100

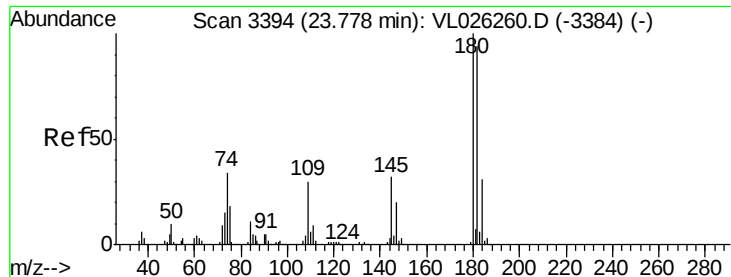
141 85.9 66.1 99.1

115 30.8 28.1 42.1



Abundance Ion 142.00 (141.70 to 142.70): V
Ion 141.00 (140.70 to 141.70): V
Ion 115.00 (114.70 to 115.70): V





#81

1,2,4-Trichlorobenzene

Concen: 0.03 ppbv

RT: 23.78 min Scan# 3395

Delta R.T. 0.01 min

Lab File: VL026268.D

Acq: 29 Oct 2015 16:05

Instrument :

MSVOA_L

ClientSampleId :

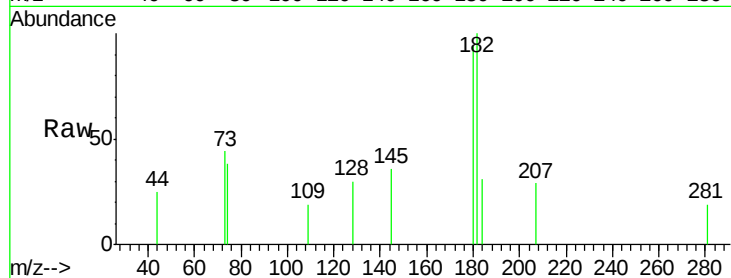
Tot Ion:180 Resp: 3513

Ion Ratio Lower Upper

180 100

182 96.3 76.0 114.0

184 20.8 24.2 36.4#



Abundance Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 184.00 (183.70 to 184.70): V

