

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL020916\
 Data File : VL026838.D
 Acq On : 10 Feb 2016 3:32
 Operator : SY/AP
 Sample : H1388-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1

Manual Integrations
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MMDadoda
 2/11/2016 1:23:40 PM

Quant Time: Feb 10 08:16:21 2016
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL020916AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Feb 10
 QLast Update : Wed Feb 10 03:14:04 2016
 Response via : Initial Calibration

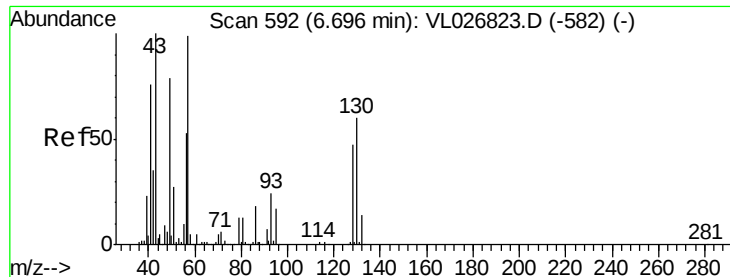
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.70	49	1403883	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	8.37	114	3902904	10.00	ppbv	0.00
55) Chlorobenzene-d5	13.79	117	1776074	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	16.33	95	1670253	13.10	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	131.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.67	85	134863	0.44	ppbv	94
3) Chlorodifluoromethane	3.59	51	806975m	3.54	ppbv	
4) Chloromethane	3.78	50	57259	0.64	ppbv	98
9) Propene	3.64	41	162815	2.65	ppbv #	73
10) Heptane	9.39	43	58006	0.29	ppbv	100
11) Trichlorofluoromethane	4.73	101	146405	0.41	ppbv	95
12) 1,1,2-Trichlorotrifluoroet	5.34	101	37589	0.15	ppbv	100
13) Ethanol	4.35	45	2312591	218.53	ppbv	99
15) Acetone	4.62	43	17309039	89.74	ppbv #	66
19) Isopropyl Alcohol	4.78	45	3226343	46.89	ppbv #	92
20) Methylene Chloride	5.19	84	59089	0.59	ppbv	97
25) Ethyl Acetate	6.71	43	564084	1.95	ppbv #	93
29) Chloroform	6.79	83	31724	0.12	ppbv	98
30) Cyclohexane	8.32	84	25717m	0.19	ppbv	
34) 2-Butanone	6.24	43	102772	0.54	ppbv	99
35) Carbon Tetrachloride	8.21	117	27714	0.10	ppbv	97
36) Benzene	8.07	78	183811	0.59	ppbv	96
38) Trichloroethene	9.10	130	6554	0.05	ppbv #	88
43) Methyl Methacrylate	9.31	69	66387	0.61	ppbv	96
52) Tetrachloroethene	12.84	164	110019	0.90	ppbv	95
53) Toluene	11.28	91	1316261	3.78	ppbv	99
58) Ethyl Benzene	14.46	91	73443	0.34	ppbv	96
59) m/p-Xylene	14.74	91	163225	0.89	ppbv	99
60) o-Xylene	15.54	91	54630	0.27	ppbv	97
61) Styrene	15.36	104	15139	0.22	ppbv	94
72) 4-Ethyltoluene	17.87	105	26109	0.14	ppbv #	89
73) 1,3,5-Trimethylbenzene	18.04	105	25779m	0.14	ppbv	
74) 1,2,4-Trimethylbenzene	18.88	105	78712	0.39	ppbv #	72
79) Naphthalene	23.99	128	15499	0.16	ppbv	97

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



#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.70 min Scan# 592

Delta R.T. -0.00 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampleId :

IAS-1

Tot Ion: 49 Resp: 1403883

Ion Ratio Lower Upper

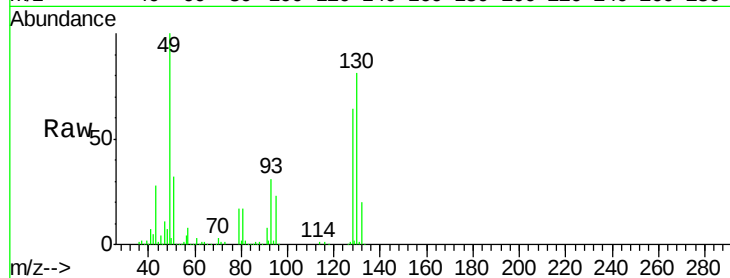
49 100

128 62.2 29.7 89.1

130 80.3 38.3 114.8

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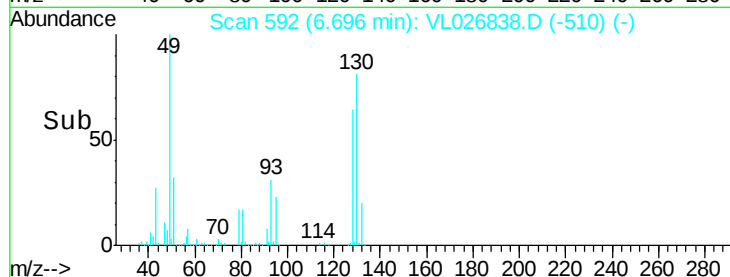
Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

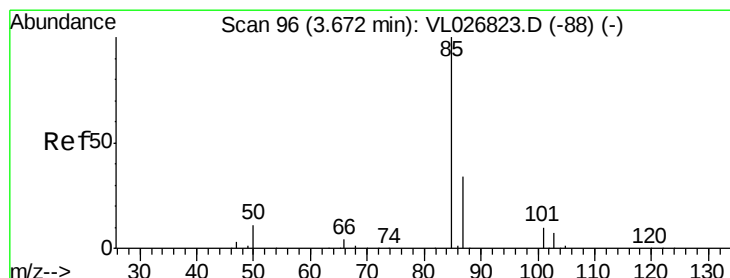
Ion 130.00 (129.70 to 130.70): VL0

6.70

Time-->



Time-->



#2

Dichlorodifluoromethane

Concen: 0.44 ppbv

RT: 3.67 min Scan# 95

Delta R.T. -0.01 min

Lab File: VL026838.D

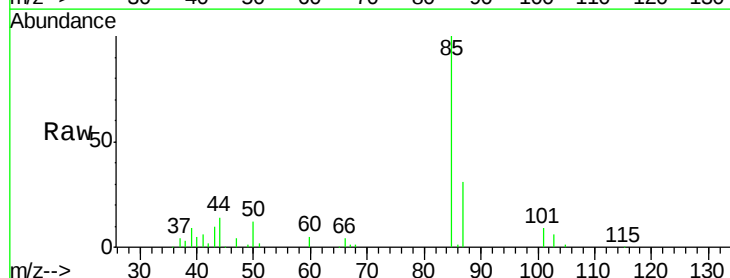
Acq: 10 Feb 2016 3:32

Tgt Ion: 85 Resp: 134863

Ion Ratio Lower Upper

85 100

87 30.8 27.3 40.9

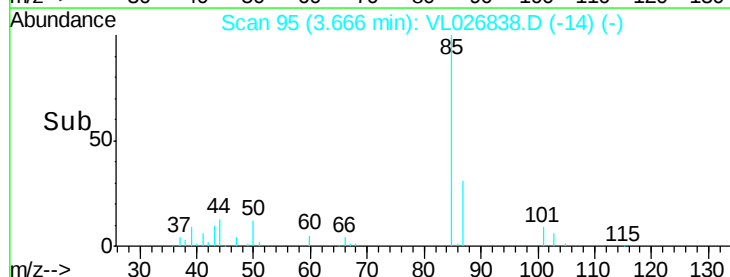


Abundance Ion 85.00 (84.70 to 85.70): VL0

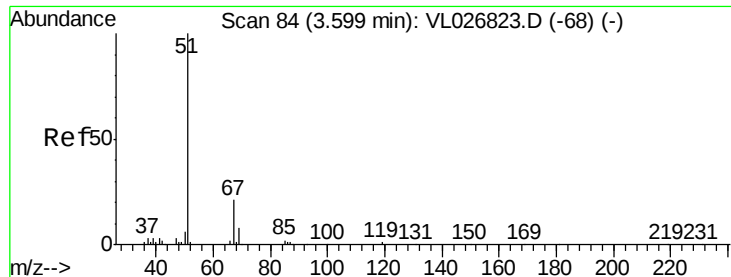
Ion 87.00 (86.70 to 87.70): VL0

3.67

Time-->



Time-->



#3

Chlorodifluoromethane

Concen: 3.54 ppbv m

RT: 3.59 min Scan# 83

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampleId :

IAS-1

Tot Ion: 51 Resp: 806975

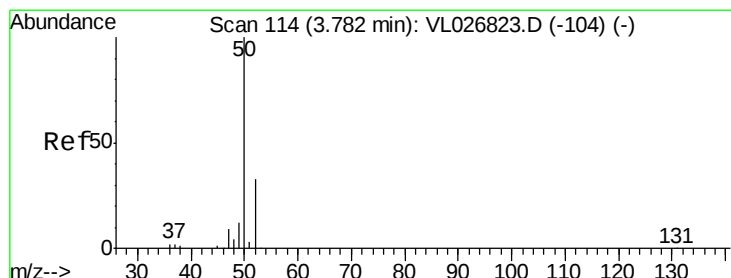
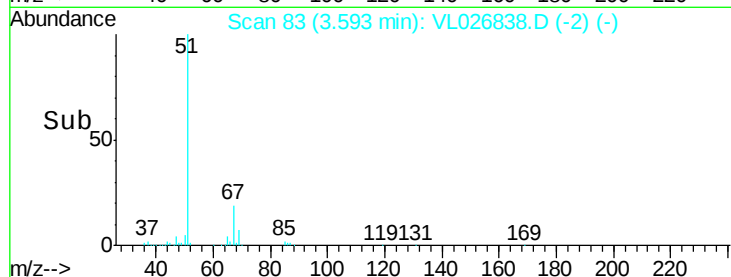
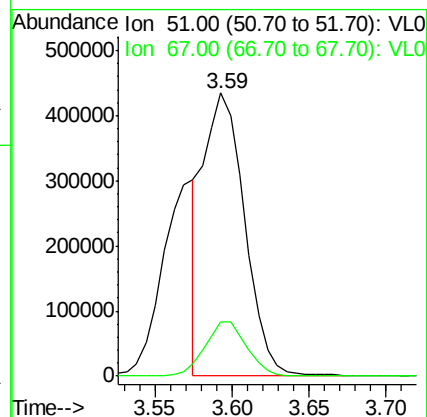
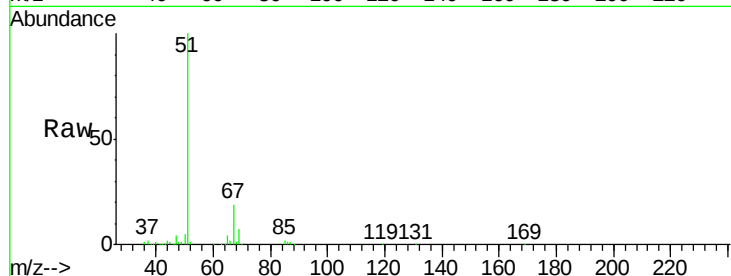
Ion Ratio Lower Upper

51 100

67 19.9 16.4 24.6

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#4

Chloromethane

Concen: 0.64 ppbv

RT: 3.78 min Scan# 113

Delta R.T. -0.01 min

Lab File: VL026838.D

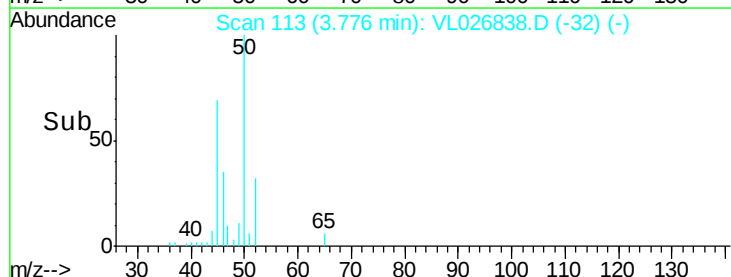
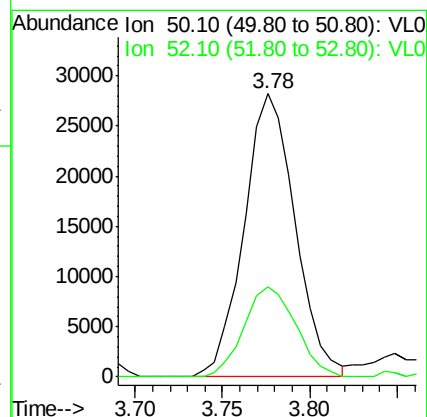
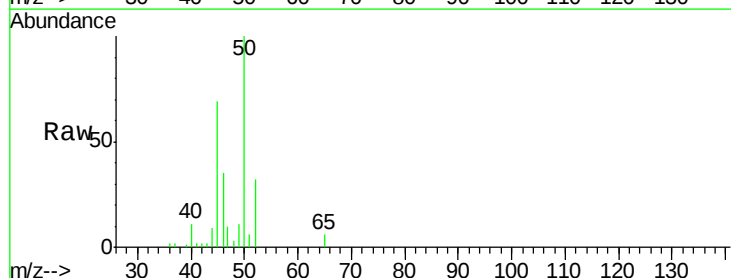
Acq: 10 Feb 2016 3:32

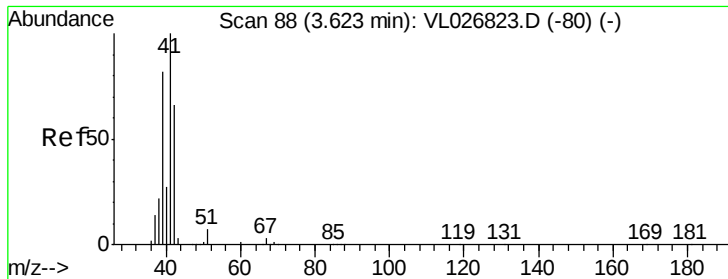
Tgt Ion: 50 Resp: 57259

Ion Ratio Lower Upper

50 100

52 32.0 26.3 39.5





#9

Propene

Concen: 2.65 ppbv

RT: 3.64 min Scan# 90

Delta R.T. 0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampleId :

IAS-1

Tot Ion: 41 Resp: 162815

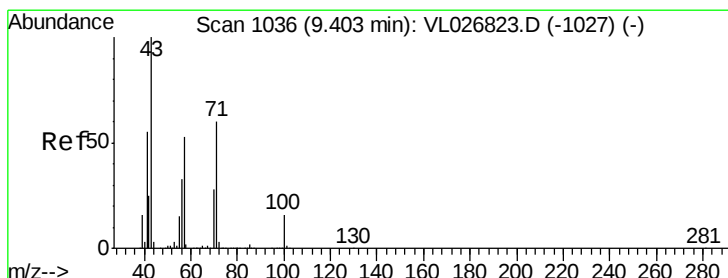
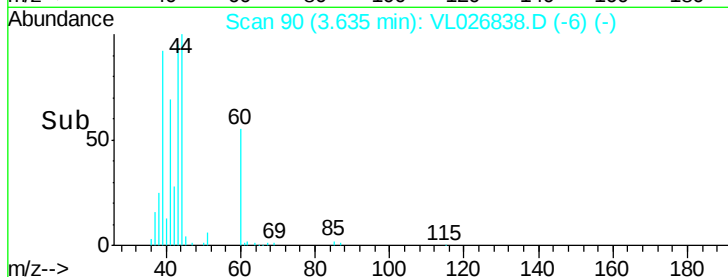
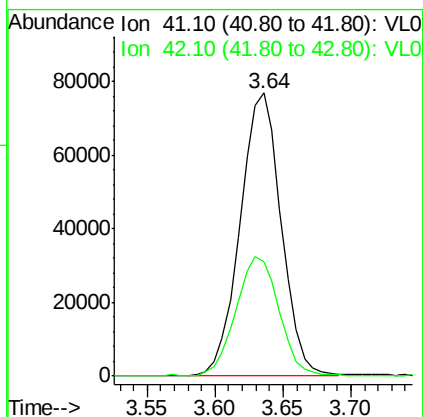
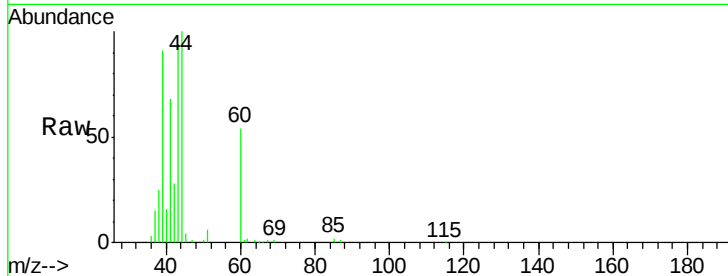
Ion Ratio Lower Upper

41 100

42 44.3 52.8 79.2#

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#10

Heptane

Concen: 0.29 ppbv

RT: 9.39 min Scan# 1034

Delta R.T. -0.01 min

Lab File: VL026838.D

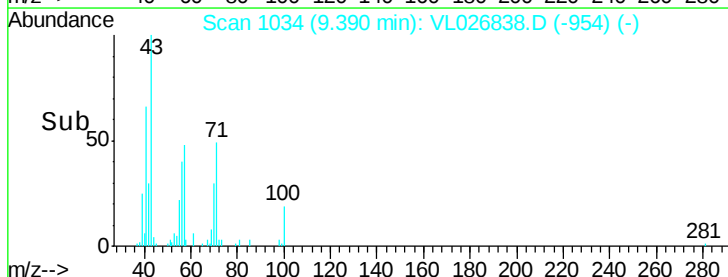
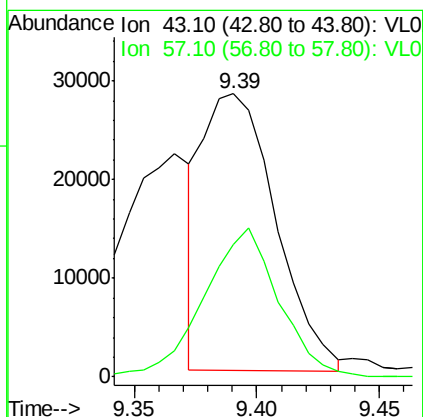
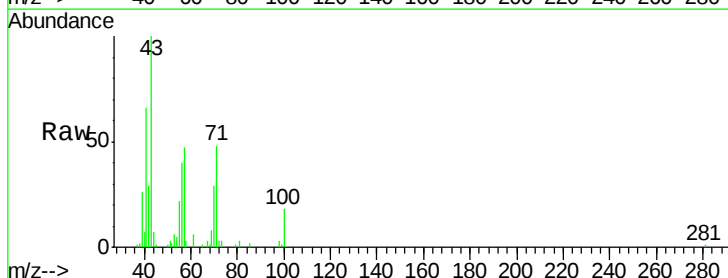
Acq: 10 Feb 2016 3:32

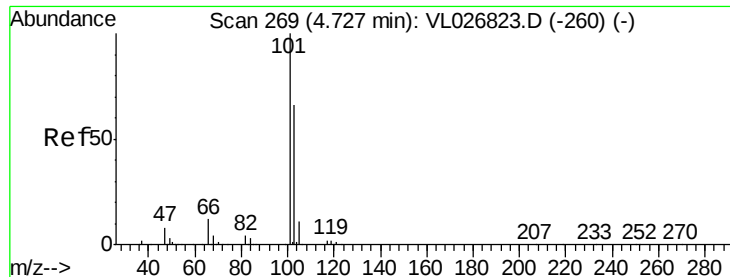
Tgt Ion: 43 Resp: 58006

Ion Ratio Lower Upper

43 100

57 54.9 44.0 66.0





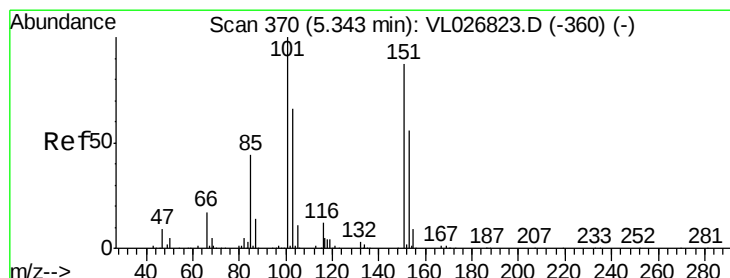
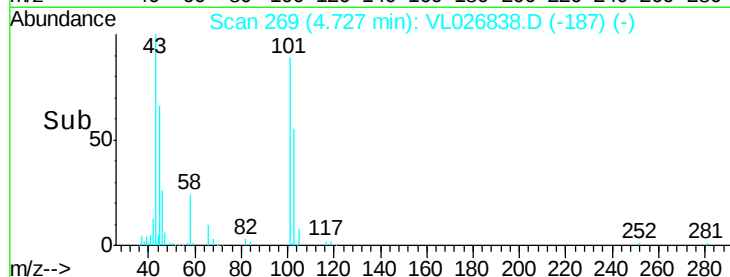
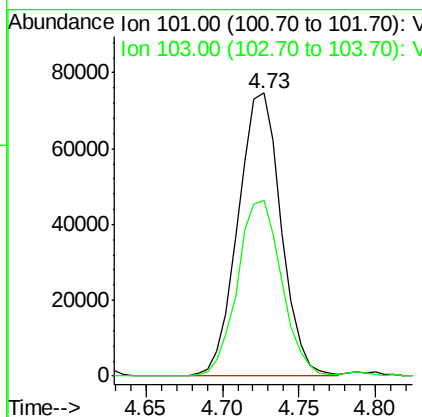
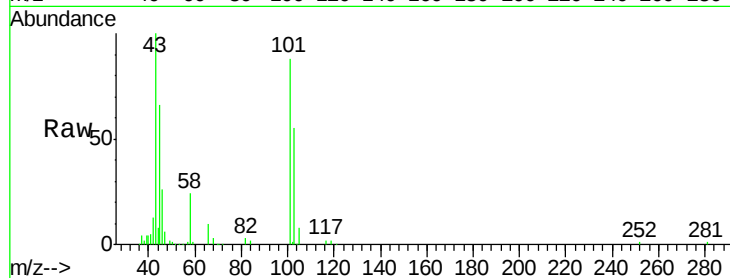
#11
 Trichlorofluoromethane
 Concen: 0.41 ppbv
 RT: 4.73 min Scan# 269
 Delta R.T. -0.00 min
 Lab File: VL026838.D
 Acq: 10 Feb 2016 3:32

Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1

Tot Ion:101 Resp: 146405
 Ion Ratio Lower Upper
 101 100
 103 62.0 52.7 79.1

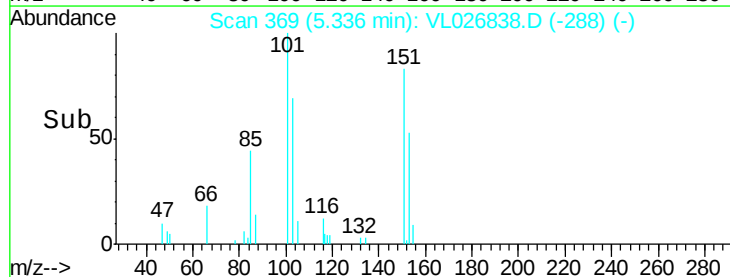
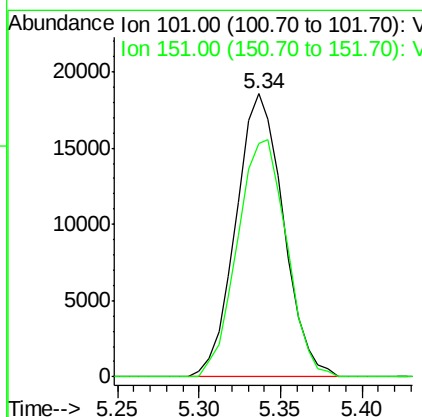
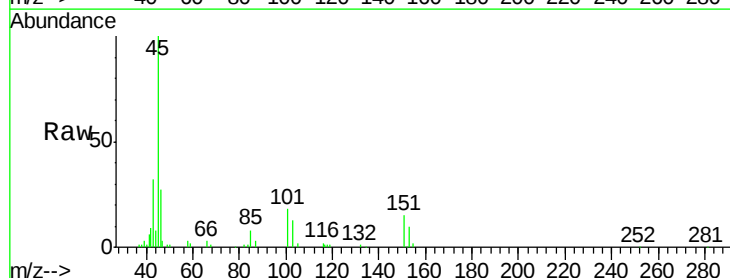
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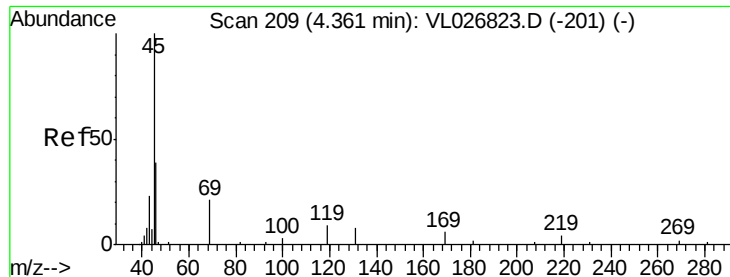
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#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.15 ppbv
 RT: 5.34 min Scan# 369
 Delta R.T. -0.01 min
 Lab File: VL026838.D
 Acq: 10 Feb 2016 3:32

Tgt Ion:101 Resp: 37589
 Ion Ratio Lower Upper
 101 100
 151 86.8 69.4 104.0





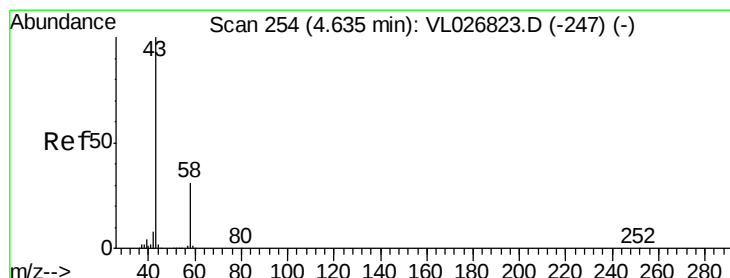
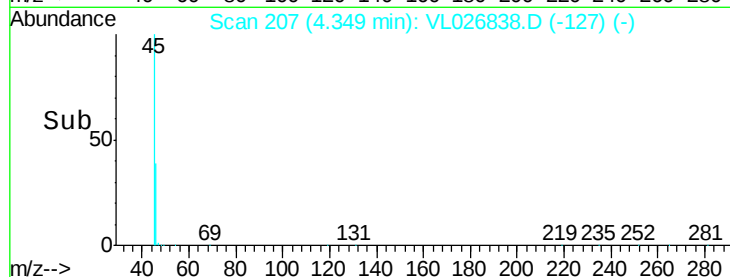
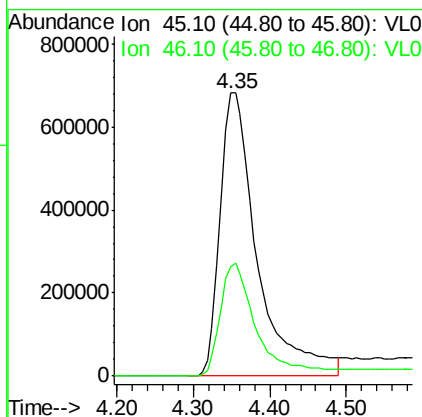
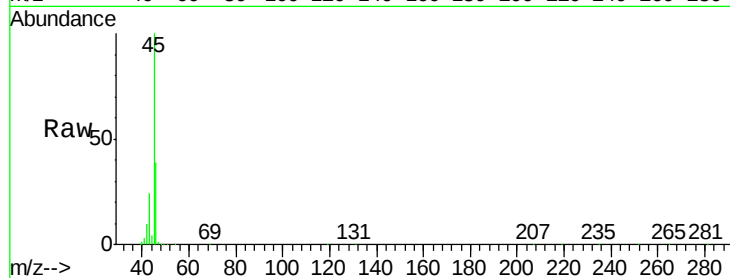
#13
Ethanol
Concen: 218.53 ppbv
RT: 4.35 min Scan# 207
Delta R.T. -0.01 min
Lab File: VL026838.D
Acq: 10 Feb 2016 3:32

Instrument :
MSVOA_L
ClientSampleId :
IAS-1

Tot Ion: 45 Resp: 2312591
Ion Ratio Lower Upper
45 100
46 40.4 15.8 63.4

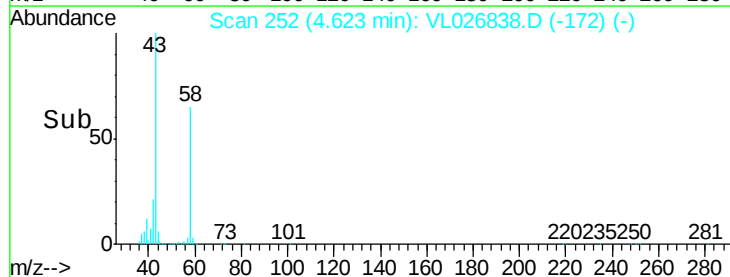
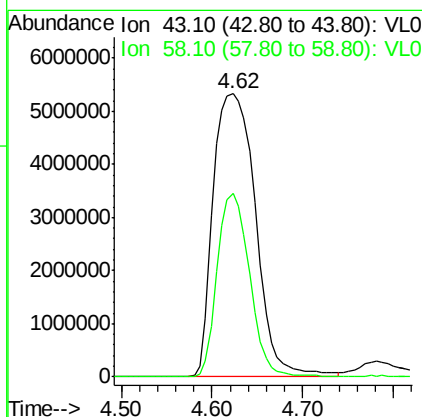
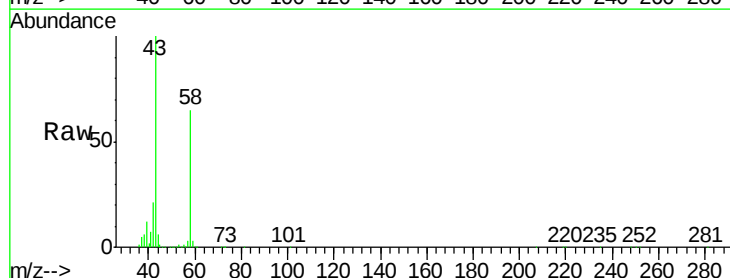
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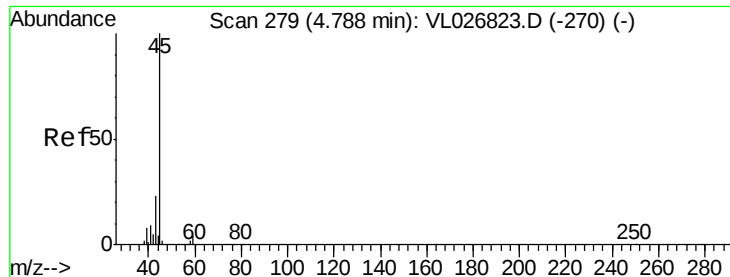
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#15
Acetone
Concen: 89.74 ppbv
RT: 4.62 min Scan# 252
Delta R.T. -0.01 min
Lab File: VL026838.D
Acq: 10 Feb 2016 3:32

Tgt Ion: 43 Resp:17309039
Ion Ratio Lower Upper
43 100
58 50.1 25.2 37.8#





#19

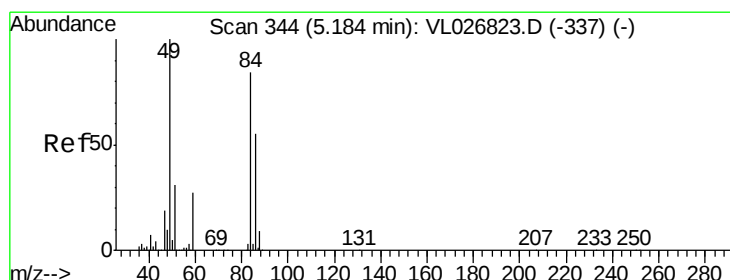
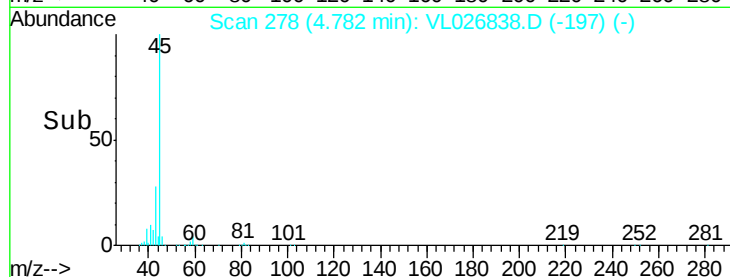
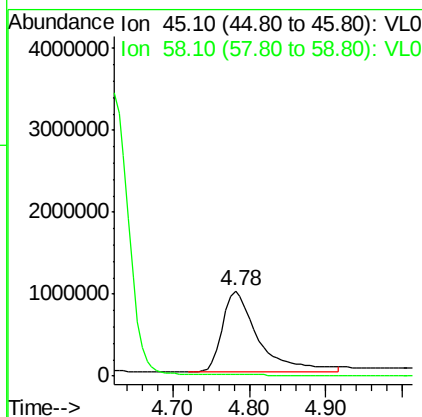
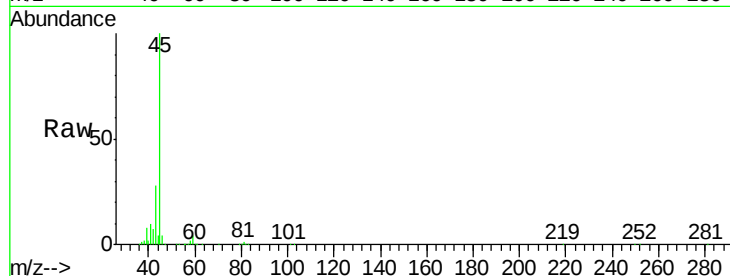
Isopropyl Alcohol
 Concen: 46.89 ppbv
 RT: 4.78 min Scan# 278
 Delta R.T. -0.01 min
 Lab File: VL026838.D
 Acq: 10 Feb 2016 3:32

Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1

Tot Ion: 45 Resp: 3226343
 Ion Ratio Lower Upper
 45 100
 58 0.0 2.2 3.2#

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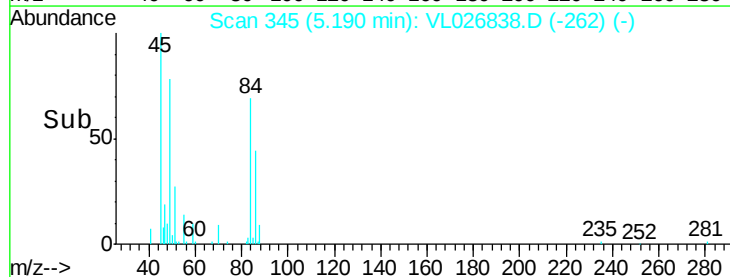
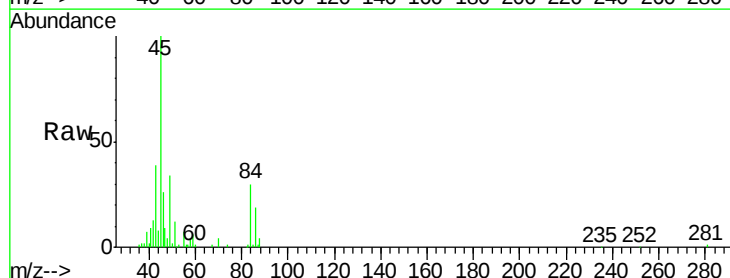
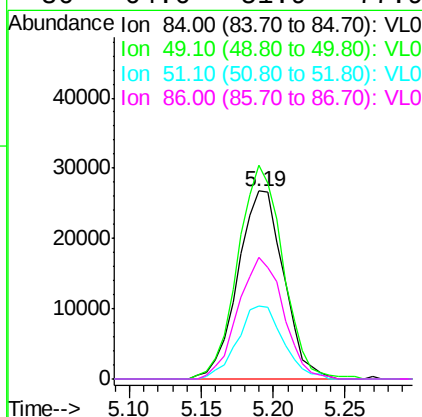
MMDadoda
 2/11/2016 1:23:40 PM

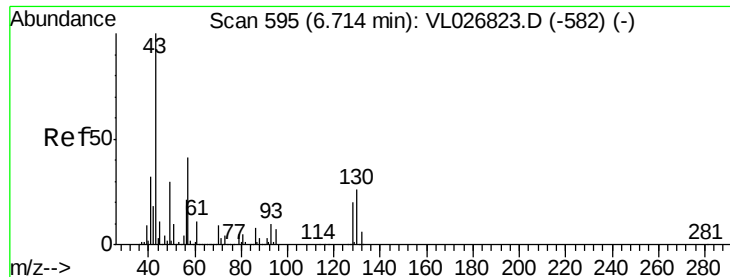


#20

Methylene Chloride
 Concen: 0.59 ppbv
 RT: 5.19 min Scan# 345
 Delta R.T. 0.01 min
 Lab File: VL026838.D
 Acq: 10 Feb 2016 3:32

Tgt Ion: 84 Resp: 59089
 Ion Ratio Lower Upper
 84 100
 49 113.6 94.9 142.3
 51 38.6 29.5 44.3
 86 64.6 51.9 77.9





#25

Ethyl Acetate

Concen: 1.95 ppbv

RT: 6.71 min Scan# 594

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

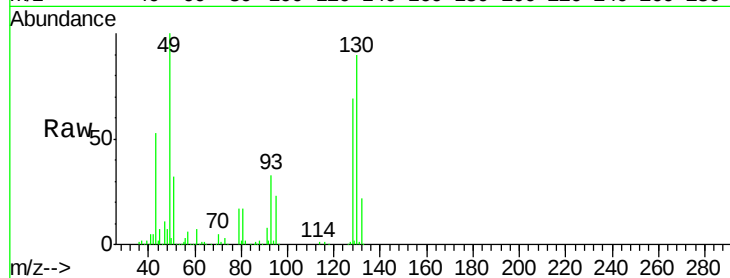
ClientSampleId :

IAS-1

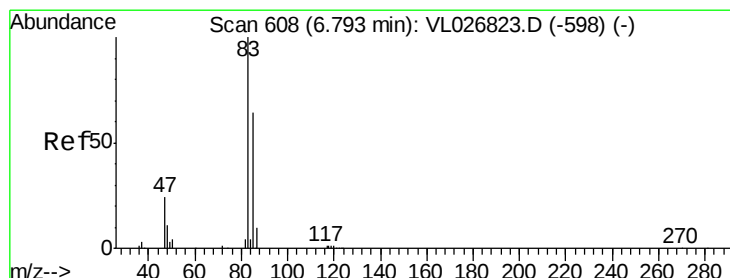
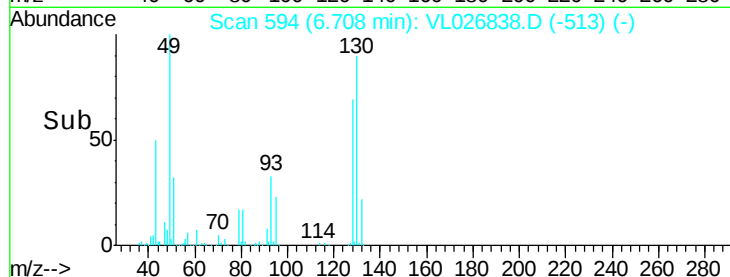
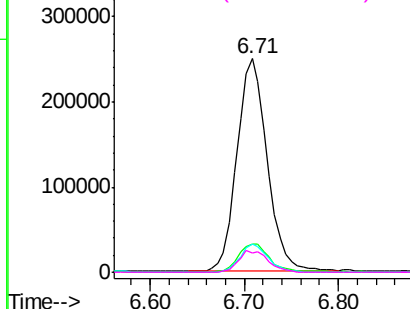
Tot Ion	Ratio	Lower	Upper
43	100		
45	13.4	7.8	11.8#
61	12.3	7.9	11.9#
70	10.0	6.9	10.3

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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



#29

Chloroform

Concen: 0.12 ppbv

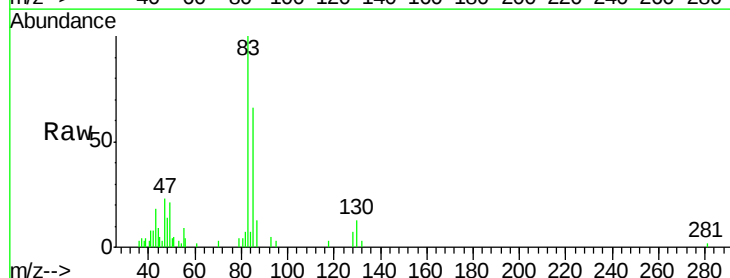
RT: 6.79 min Scan# 608

Delta R.T. -0.00 min

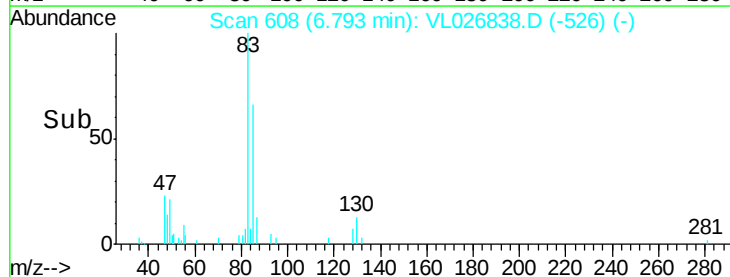
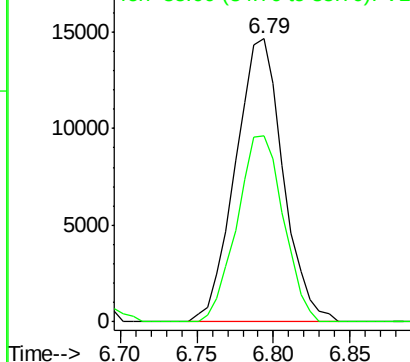
Lab File: VL026838.D

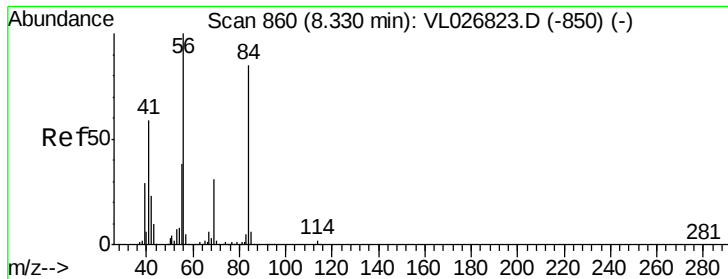
Acq: 10 Feb 2016 3:32

Tgt Ion	Ratio	Lower	Upper
83	100		
85	66.0	51.5	77.3



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0





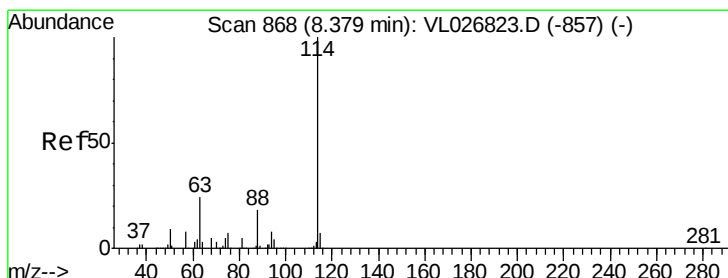
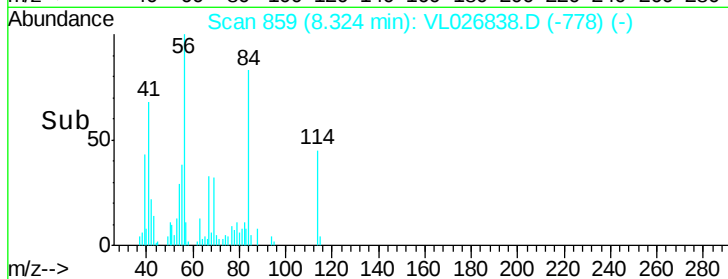
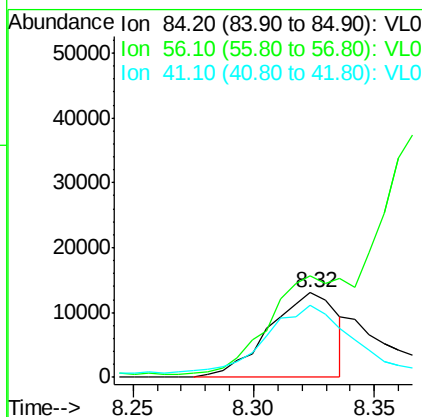
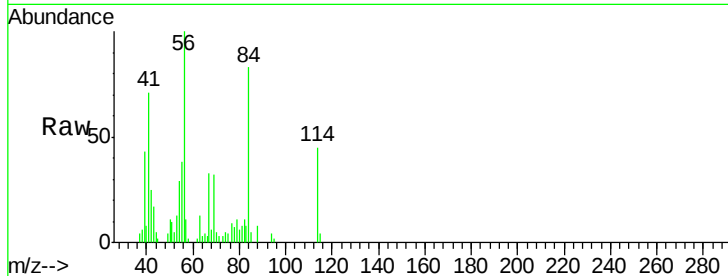
#30
Cvclohexane
Concen: 0.19 ppbv m
RT: 8.32 min Scan# 859
Delta R.T. -0.01 min
Lab File: VL026838.D
Acq: 10 Feb 2016 3:32

Instrument :
MSVOA_L
ClientSampleId :
IAS-1

Tot Ion	Ratio	Lower	Upper
84	100		
56	546.8	99.4	149.2#
41	111.5	56.7	85.1#

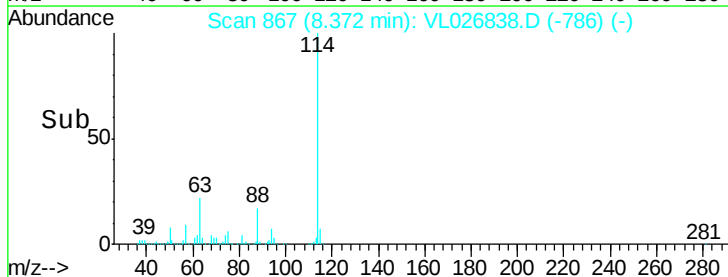
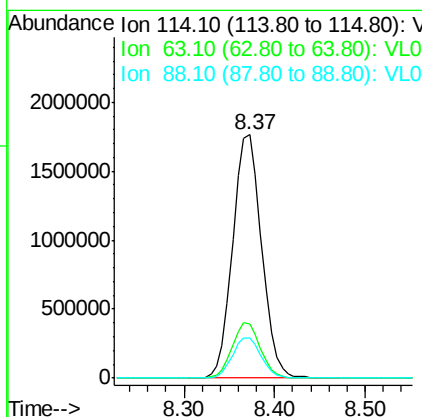
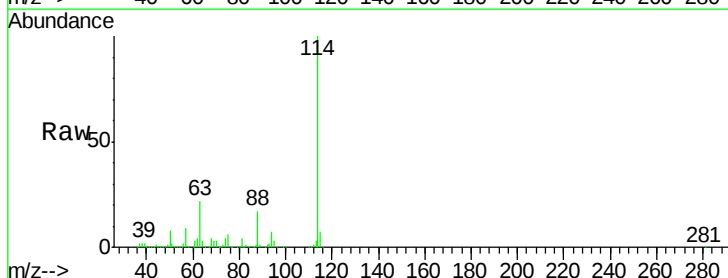
Manual Integrations
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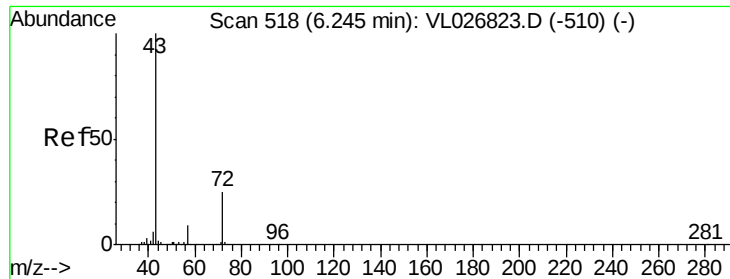
MMDadoda
2/11/2016 1:23:40 PM



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.37 min Scan# 867
Delta R.T. -0.01 min
Lab File: VL026838.D
Acq: 10 Feb 2016 3:32

Tgt Ion	Ratio	Lower	Upper
114	100		
63	22.4	19.7	29.5
88	16.6	13.8	20.6





#34

2-Butanone

Concen: 0.54 ppbv

RT: 6.24 min Scan# 517

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampled :

IAS-1

Tot Ion: 43 Resp: 102772

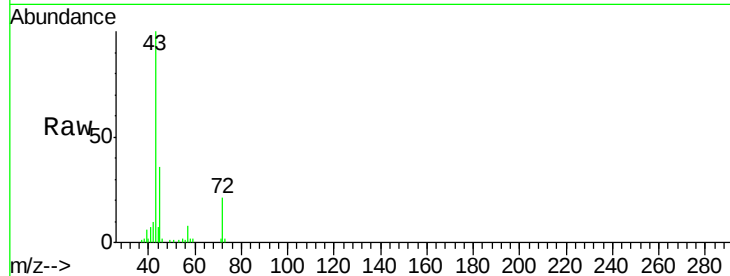
Ion Ratio Lower Upper

43 100

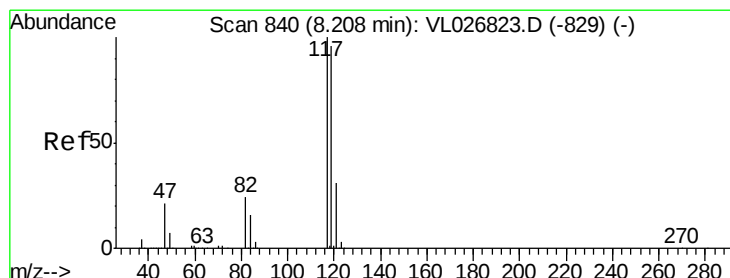
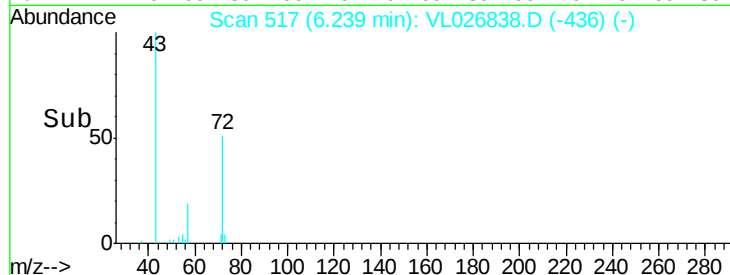
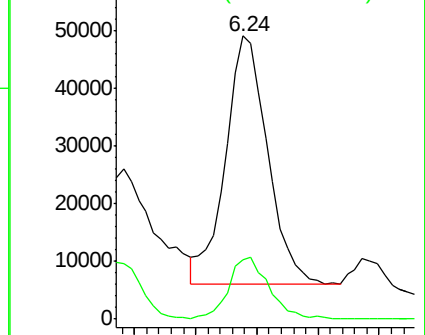
72 24.1 19.8 29.8

Manual Integrations
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2/11/2016 1:23:40 PM



Abundance Ion 43.10 (42.80 to 43.80): VL0
Ion 72.10 (71.80 to 72.80): VL0



#35

Carbon Tetrachloride

Concen: 0.10 ppbv

RT: 8.21 min Scan# 840

Delta R.T. -0.00 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

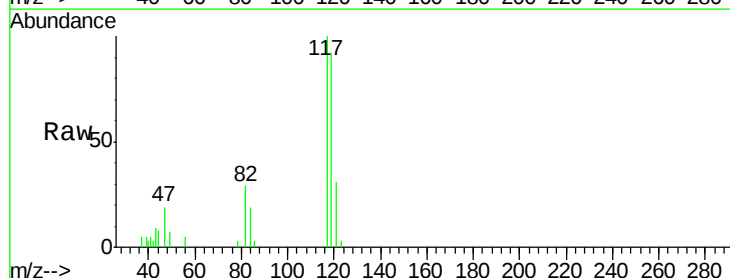
Tgt Ion: 117 Resp: 27714

Ion Ratio Lower Upper

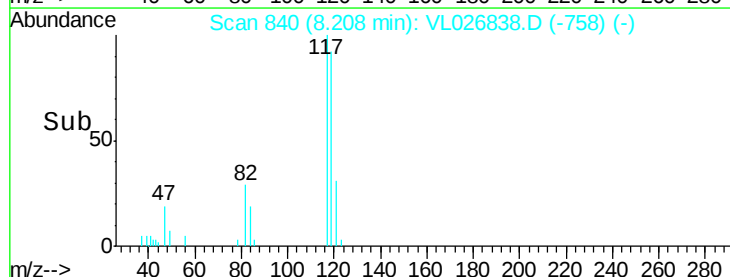
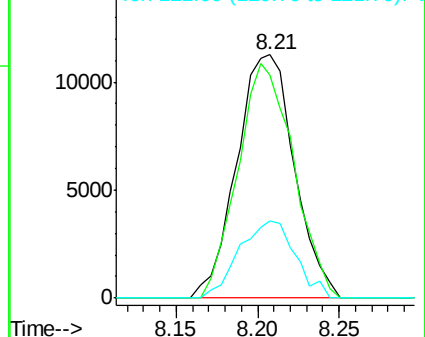
117 100

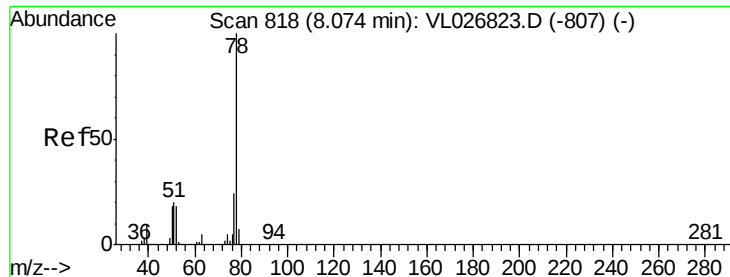
119 91.5 76.6 115.0

121 31.5 25.0 37.4



Abundance Ion 117.00 (116.70 to 117.70): V
Ion 119.00 (118.70 to 119.70): V
Ion 121.00 (120.70 to 121.70): V





#36

Benzene

Concen: 0.59 ppbv

RT: 8.07 min Scan# 817

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

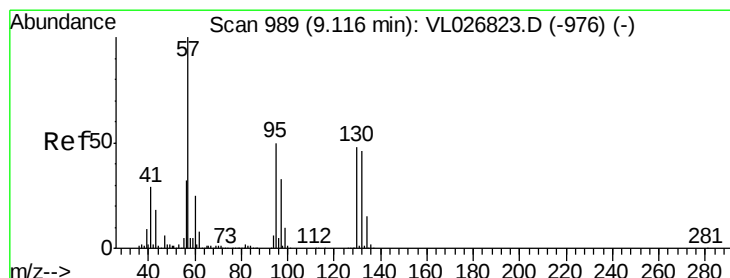
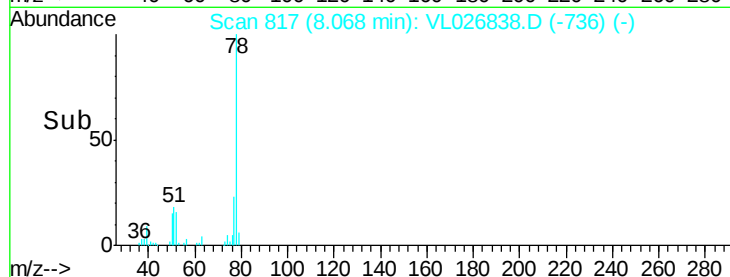
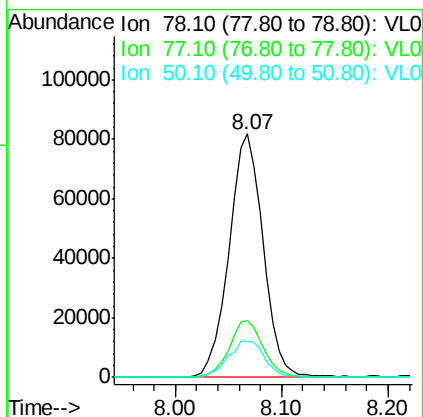
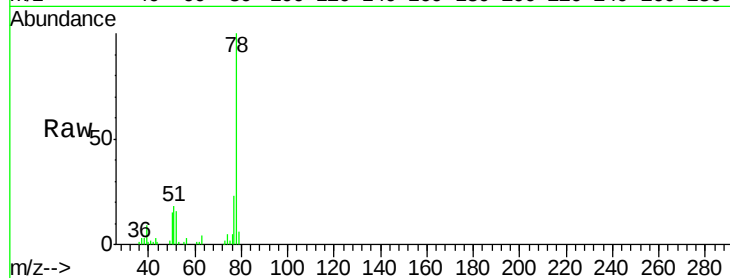
ClientSampled :

IAS-1

Tot Ion:	78	Resp:	183811
Ion Ratio	Lower	Upper	
78	100		
77	23.2	19.0	28.6
50	14.9	14.2	21.4

Manual Integrations
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#38

Trichloroethene

Concen: 0.05 ppbv

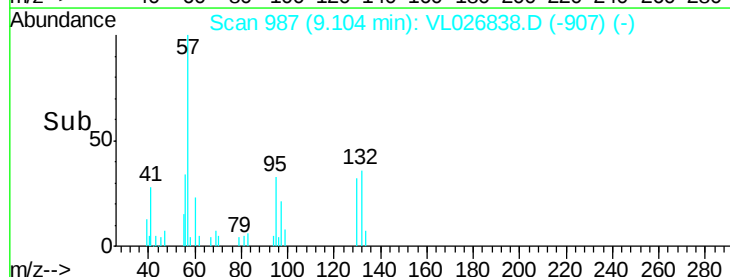
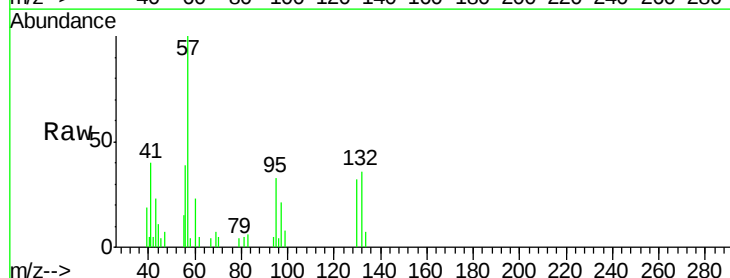
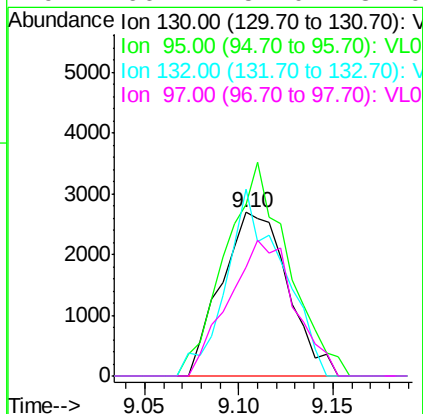
RT: 9.10 min Scan# 987

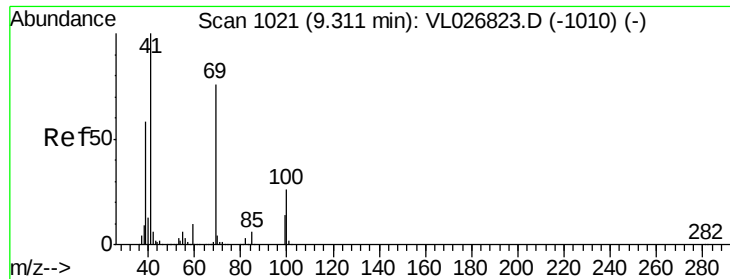
Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Tgt Ion:	130	Resp:	6554
Ion Ratio	Lower	Upper	
130	100		
95	93.1	83.0	124.6
132	114.6	76.0	114.0#
97	66.2	54.0	81.0





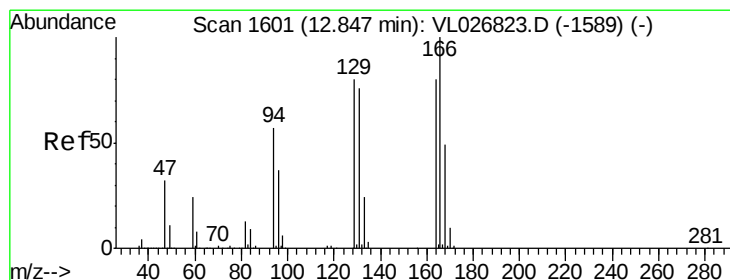
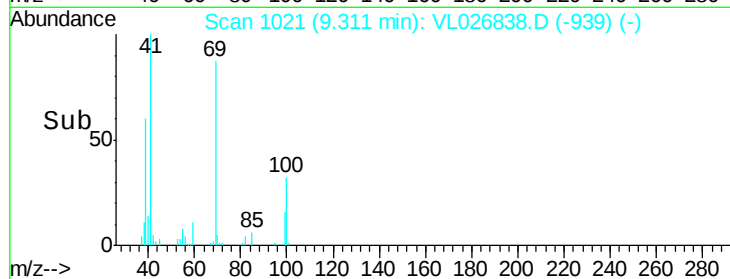
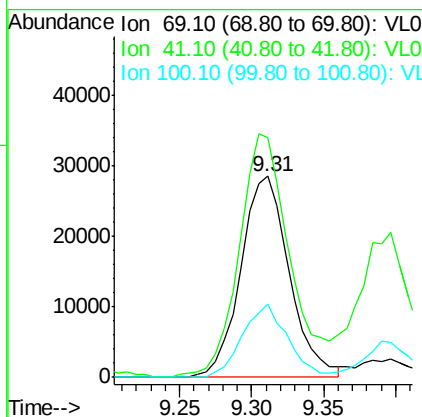
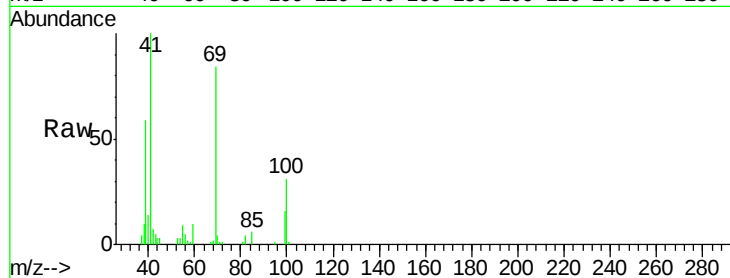
#43
Methvl Methacrlyate
Concen: 0.61 ppbv
RT: 9.31 min Scan# 1021
Delta R.T. -0.00 min
Lab File: VL026838.D
Acq: 10 Feb 2016 3:32

Instrument :
MSVOA_L
ClientSampleId :
IAS-1

Tot Ion	Ion	Ratio	Lower	Upper
69	100			
41	126.7	106.5	159.7	
100	33.7	27.2	40.8	

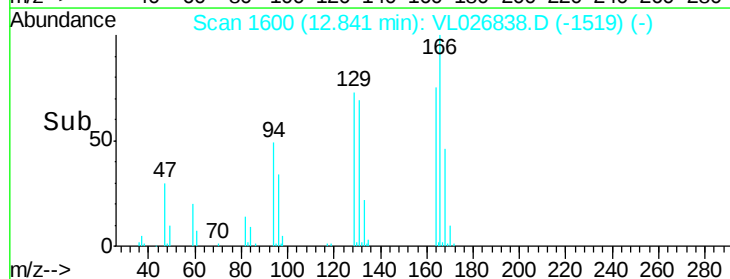
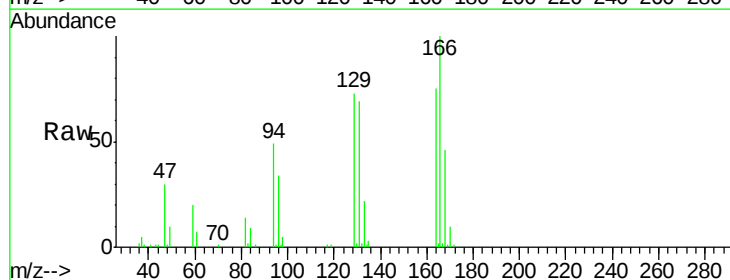
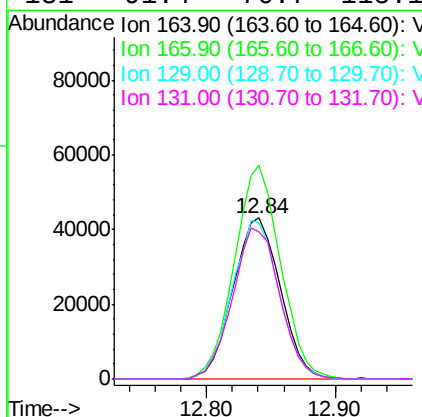
Manual Integrations
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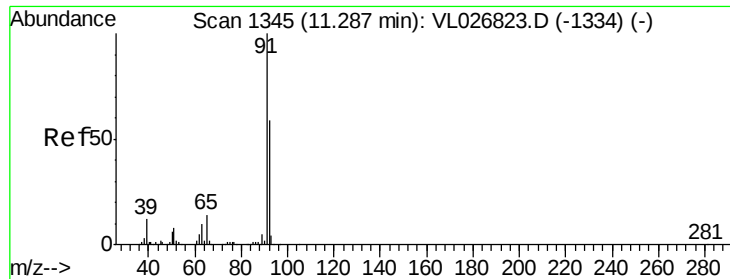
MMDadoda
2/11/2016 1:23:40 PM



#52
Tetrachloroethene
Concen: 0.90 ppbv
RT: 12.84 min Scan# 1600
Delta R.T. -0.01 min
Lab File: VL026838.D
Acq: 10 Feb 2016 3:32

Tgt Ion	Ion	Ratio	Lower	Upper
164	100			
166	132.0	100.3	150.5	
129	97.2	80.0	120.0	
131	91.4	76.7	115.1	





#53

Toluene

Concen: 3.78 ppbv

RT: 11.28 min Scan# 1344

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampleId :

IAS-1

Tot Ion: 91 Resp: 1316261

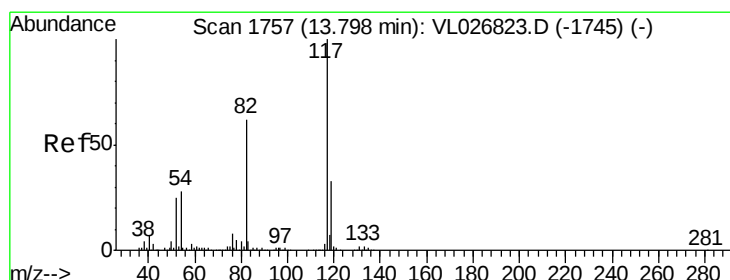
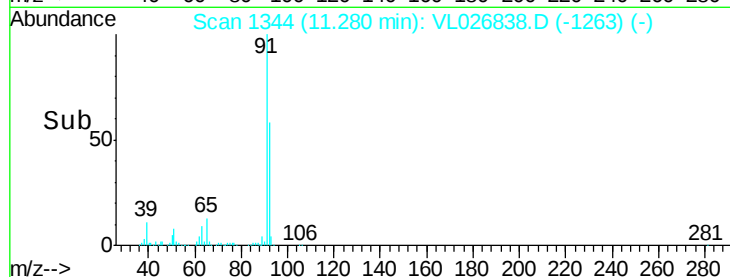
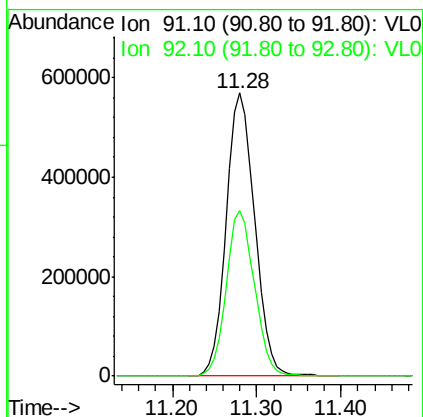
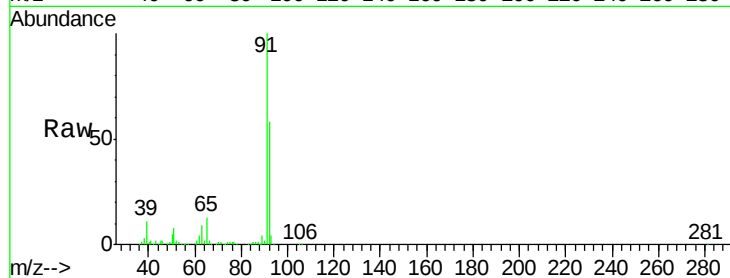
Ion Ratio Lower Upper

91 100

92 58.2 47.3 70.9

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#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.79 min Scan# 1756

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

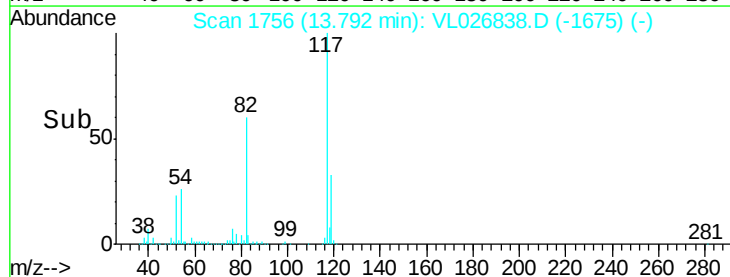
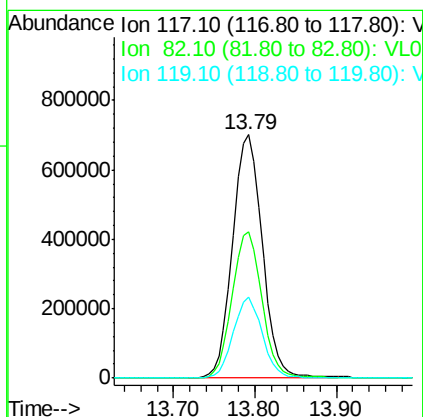
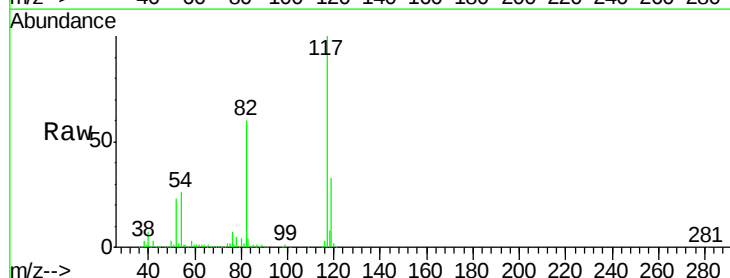
Tgt Ion: 117 Resp: 1776074

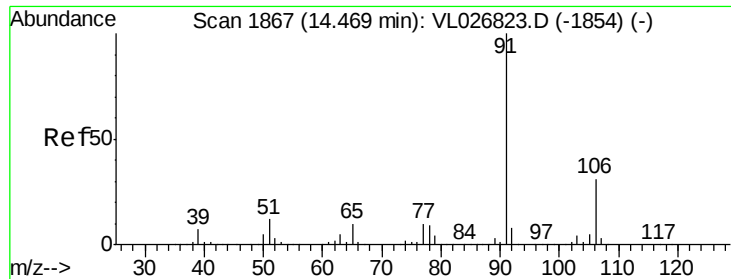
Ion Ratio Lower Upper

117 100

82 60.7 51.9 77.9

119 32.6 48.5 72.7#





#58

Ethyl Benzene

Concen: 0.34 ppbv

RT: 14.46 min Scan# 1865

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampled :

IAS-1

Tot Ion: 91 Resp: 73443

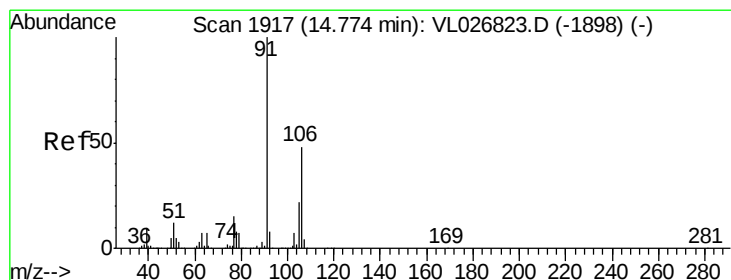
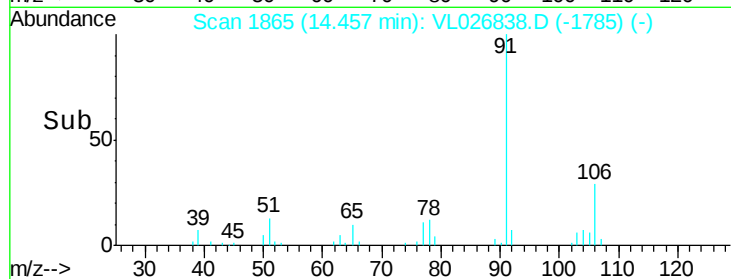
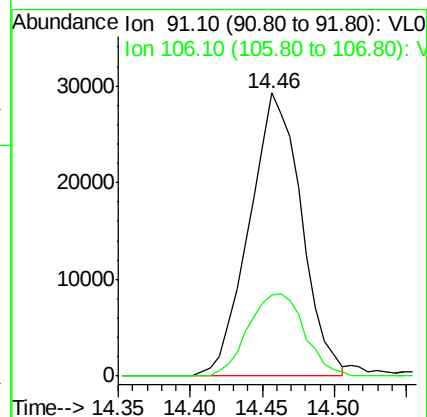
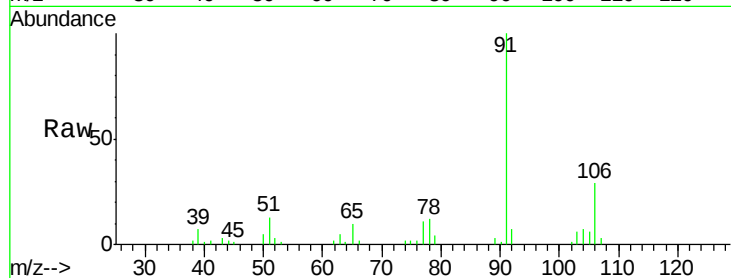
Ion Ratio Lower Upper

91 100

106 28.7 24.9 37.3

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#59

m/p-Xylene

Concen: 0.89 ppbv

RT: 14.74 min Scan# 1911

Delta R.T. -0.04 min

Lab File: VL026838.D

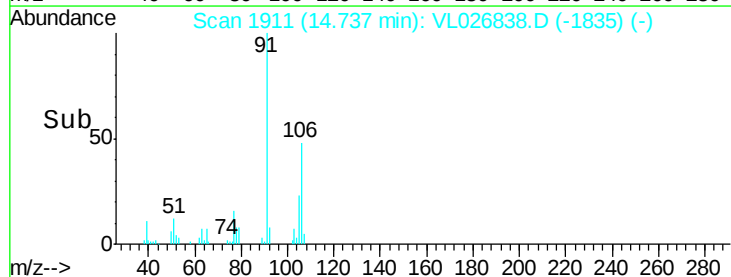
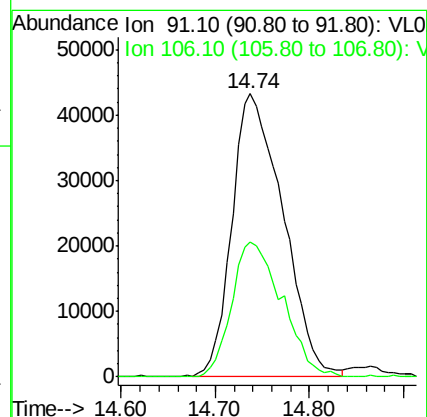
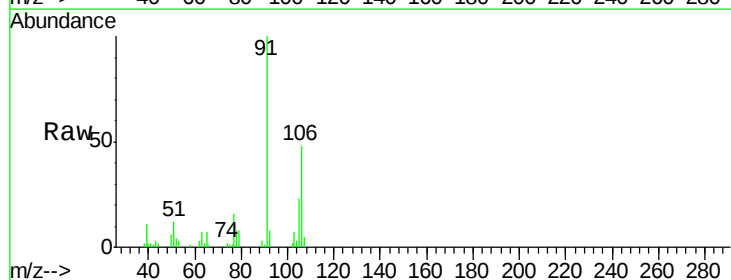
Acq: 10 Feb 2016 3:32

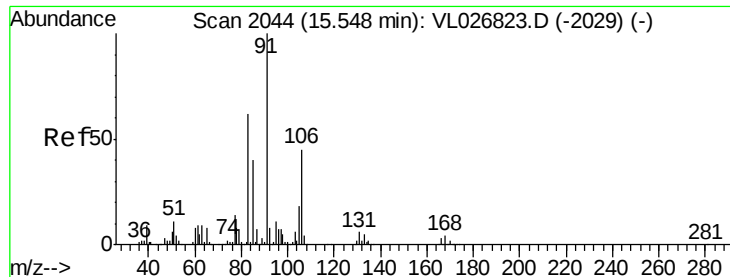
Tgt Ion: 91 Resp: 163225

Ion Ratio Lower Upper

91 100

106 47.0 38.2 57.2





#60

o-Xylene

Concen: 0.27 ppbv

RT: 15.54 min Scan# 2042

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampled :

IAS-1

Tot Ion: 91 Resp: 54630

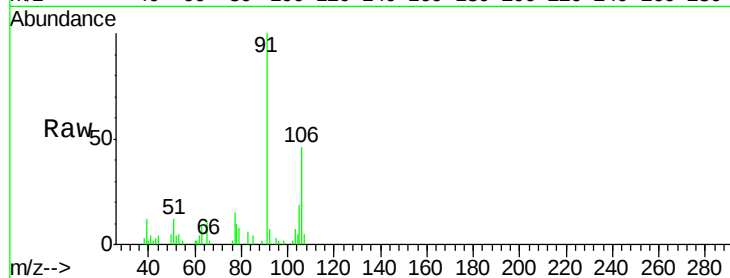
Ion Ratio Lower Upper

91 100

106 46.5 22.3 66.8

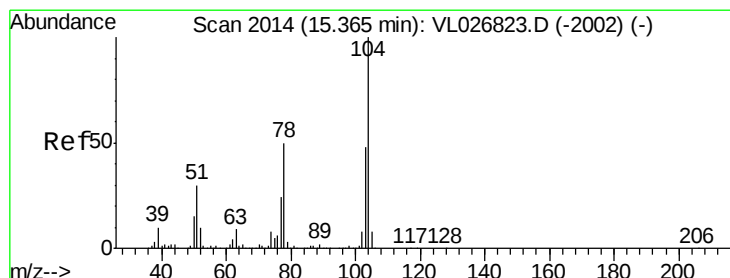
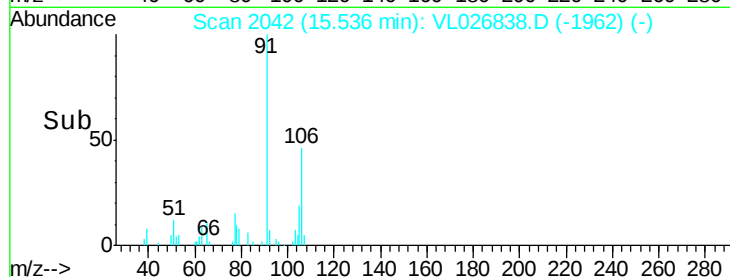
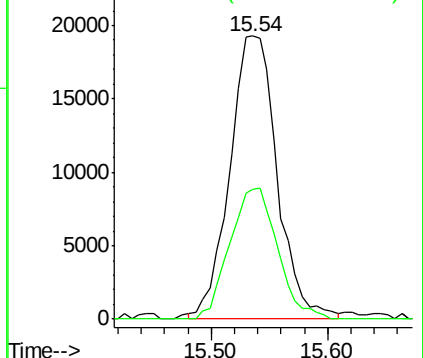
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#61

Styrene

Concen: 0.22 ppbv

RT: 15.36 min Scan# 2013

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

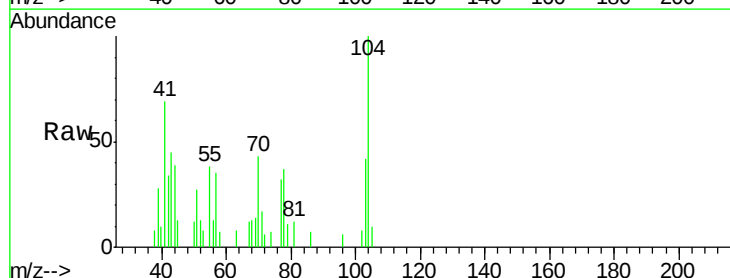
Tgt Ion: 104 Resp: 15139

Ion Ratio Lower Upper

104 100

78 45.4 39.8 59.6

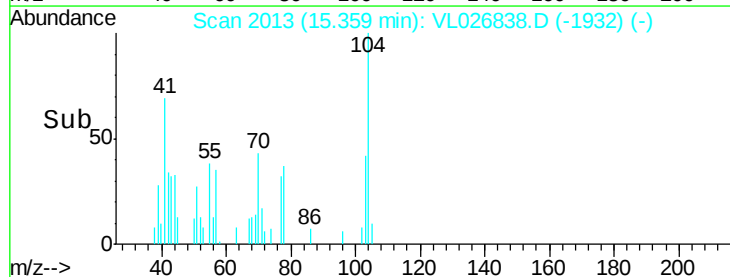
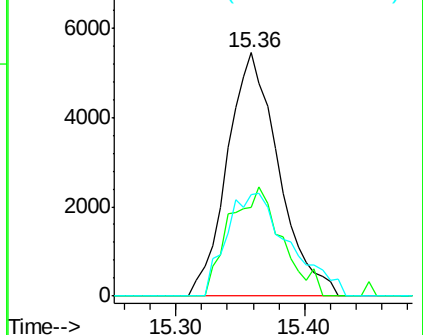
103 51.6 38.2 57.4

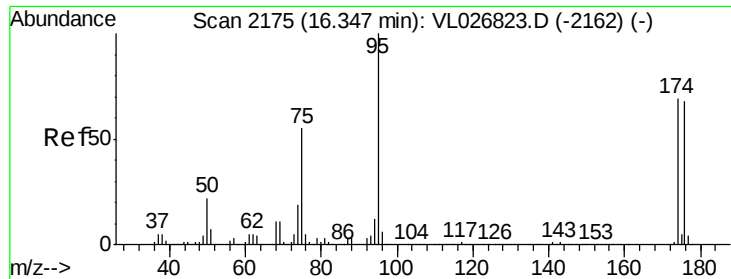


Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VL0

Ion 103.10 (102.80 to 103.80): V





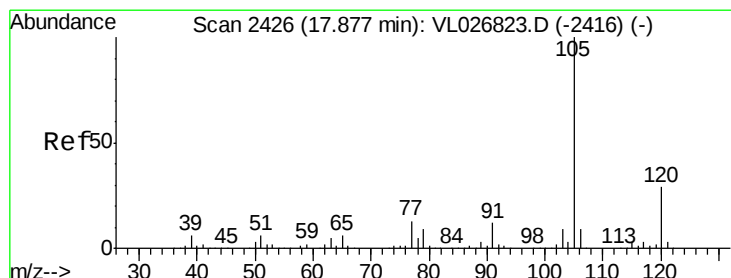
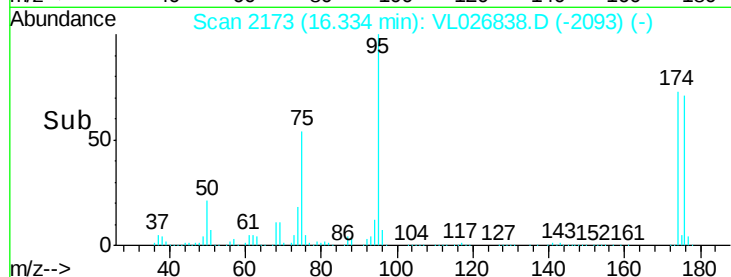
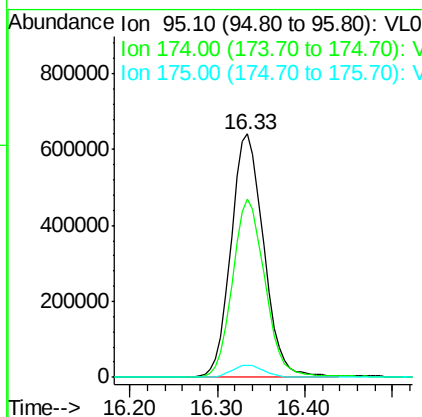
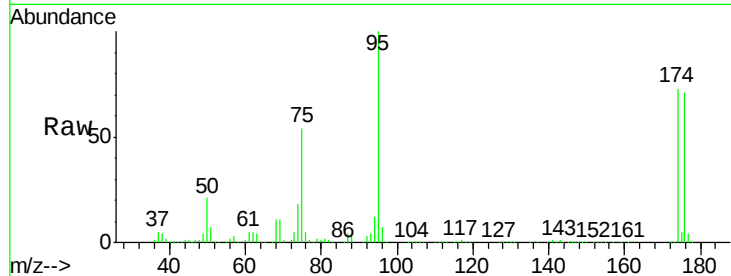
#68
 1-Bromo-4-Fluorobenzene
 Concen: 13.10 ppbv
 RT: 16.33 min Scan# 2173
 Delta R.T. -0.01 min
 Lab File: VL026838.D
 Acq: 10 Feb 2016 3:32

Instrument :
 MSVOA_L
 ClientSampleId :
 IAS-1

Tot Ion: 95 Resp: 1670253
 Ion Ratio Lower Upper
 95 100
 174 73.4 55.6 83.4
 175 5.1 3.9 5.9

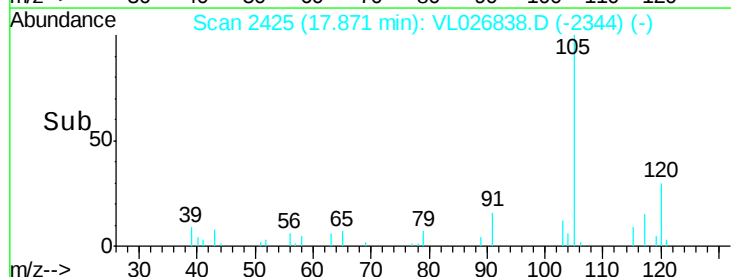
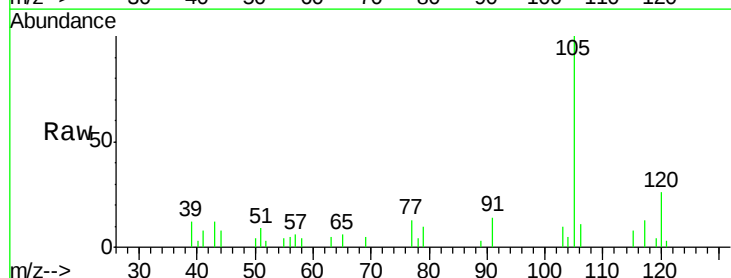
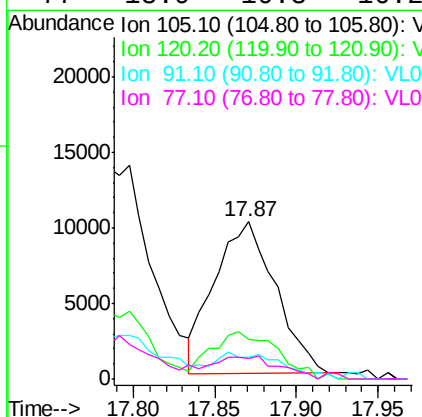
Manual Integrations
 APPROVED

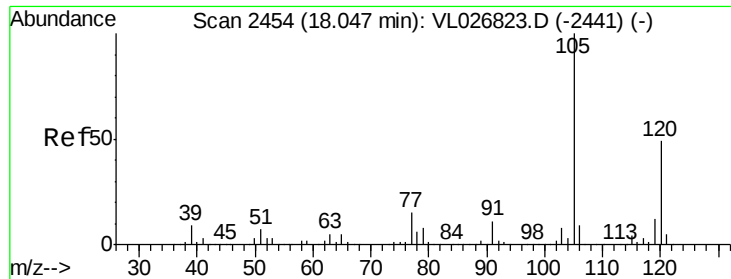
MMDadoda
 2/11/2016 1:23:40 PM



#72
 4-Ethyltoluene
 Concen: 0.14 ppbv
 RT: 17.87 min Scan# 2425
 Delta R.T. -0.01 min
 Lab File: VL026838.D
 Acq: 10 Feb 2016 3:32

Tgt Ion:105 Resp: 26109
 Ion Ratio Lower Upper
 105 100
 120 34.3 23.8 35.6
 91 18.7 10.2 15.4#
 77 18.9 10.8 16.2#





#73

1,3,5-Trimethylbenzene

Concen: 0.14 ppbv m

RT: 18.04 min Scan# 2452

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampled :

IAS-1

Tot Ion:105 Resp: 25779

Ion Ratio Lower Upper

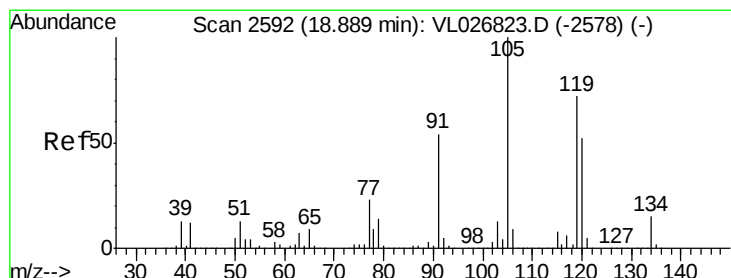
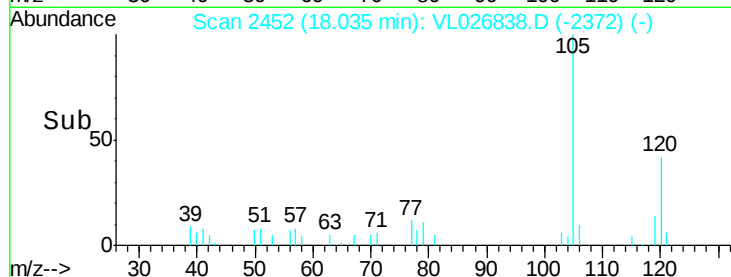
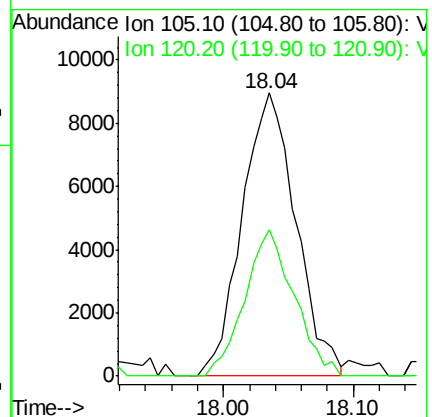
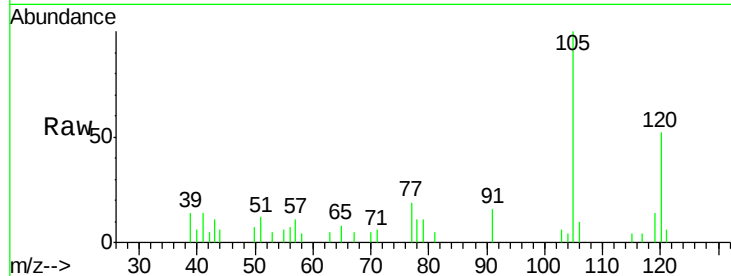
105 100

120 51.6 39.4 59.0

Manual Integrations
APPROVED

MMDadoda

2/11/2016 1:23:40 PM



#74

1,2,4-Trimethylbenzene

Concen: 0.39 ppbv

RT: 18.88 min Scan# 2591

Delta R.T. -0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Tgt Ion:105 Resp: 78712

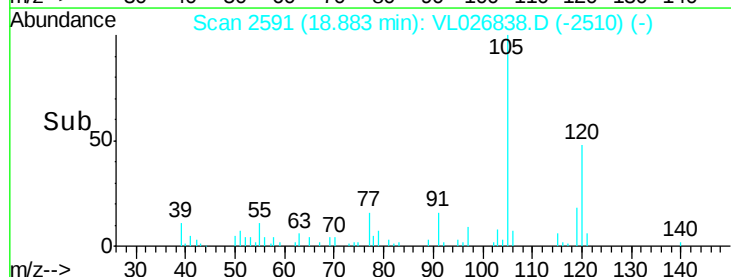
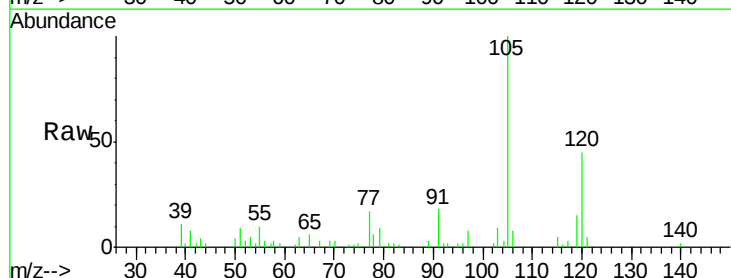
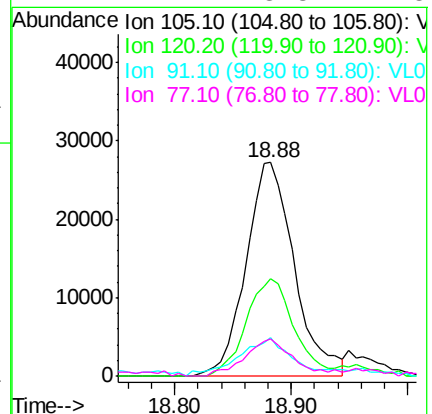
Ion Ratio Lower Upper

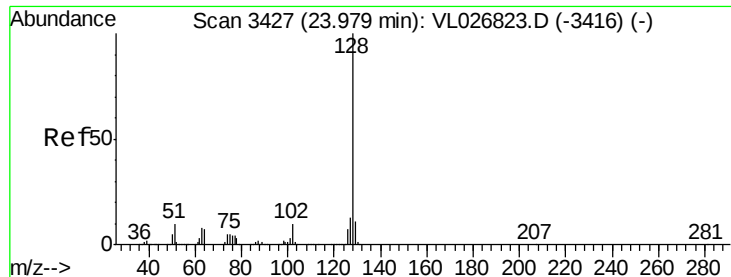
105 100

120 45.4 41.3 61.9

91 15.6 43.3 64.9#

77 17.4 18.3 27.5#





#79

Naphthalene

Concen: 0.16 ppbv

RT: 23.99 min Scan# 3428

Delta R.T. 0.01 min

Lab File: VL026838.D

Acq: 10 Feb 2016 3:32

Instrument :

MSVOA_L

ClientSampleId :

IAS-1

Tot Ion:	128	Resp:	15499
Ion Ratio	Lower	Upper	
128	100		
127	11.5	10.0	15.0
129	9.4	8.7	13.1

Manual Integrations
APPROVED

MMDadoda
2/11/2016 1:23:40 PM

