

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL102015\
 Data File : VL026226.D
 Acq On : 21 Oct 2015 4:17
 Operator : SY/MD
 Sample : G4112-03
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 INDOOR-239

Manual Integrations
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MMDadoda
 10/22/2015 4:32:50 PM

Quant Time: Oct 21 17:00:58 2015
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL102015AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Oct 21 2015
 QLast Update : Wed Oct 21 01:20:55 2015
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	6.63	49	544068	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	8.30	114	1587224	10.00	ppbv	-0.01
55) Chlorobenzene-d5	13.72	117	1889477	10.00	ppbv	-0.01

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	16.25	95	1483273	10.18	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.80%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.63	85	74252	0.66	ppbv	98
3) Chlorodifluoromethane	3.56	51	210538m	3.06	ppbv	
4) Chloromethane	3.74	50	17069	0.46	ppbv	95
9) Propene	3.59	41	44231	1.37	ppbv #	74
10) Heptane	9.32	43	18979	0.18	ppbv	86
11) Trichlorofluoromethane	4.68	101	62579	0.57	ppbv	95
13) Ethanol	4.32	45	199505	41.25	ppbv	97
15) Acetone	4.59	43	374575	4.68	ppbv	96
19) Isopropyl Alcohol	4.78	45	27821	0.89	ppbv #	27
20) Methylene Chloride	5.14	84	113549	3.55	ppbv	99
25) Ethyl Acetate	6.66	43	63466	0.42	ppbv #	97
30) Cyclohexane	8.25	84	7894	0.11	ppbv #	13
34) 2-Butanone	6.20	43	29366	0.33	ppbv	98
35) Carbon Tetrachloride	8.13	117	8851	0.07	ppbv	88
36) Benzene	8.00	78	47105	0.29	ppbv	99
38) Trichloroethene	9.04	130	55802	0.71	ppbv	98
41) Tetrahydrofuran	7.14	42	5102	0.10	ppbv #	71
44) 2,2,4-Trimethylpentane	9.06	57	37203	0.14	ppbv #	88
50) 4-Methyl-2-Pentanone	10.11	43	17385	0.14	ppbv	93
52) Tetrachloroethene	12.78	164	5127865	55.31	ppbv	98
53) Toluene	11.21	91	308864	1.40	ppbv	98
58) Ethyl Benzene	14.38	91	38395	0.13	ppbv	96
59) m/p-Xylene	14.66	91	94710	0.40	ppbv	100
60) o-Xylene	15.46	91	38153	0.15	ppbv	99
72) 4-Ethyltoluene	17.78	105	28198	0.10	ppbv	94
74) 1,2,4-Trimethylbenzene	18.80	105	69462	0.25	ppbv #	73

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

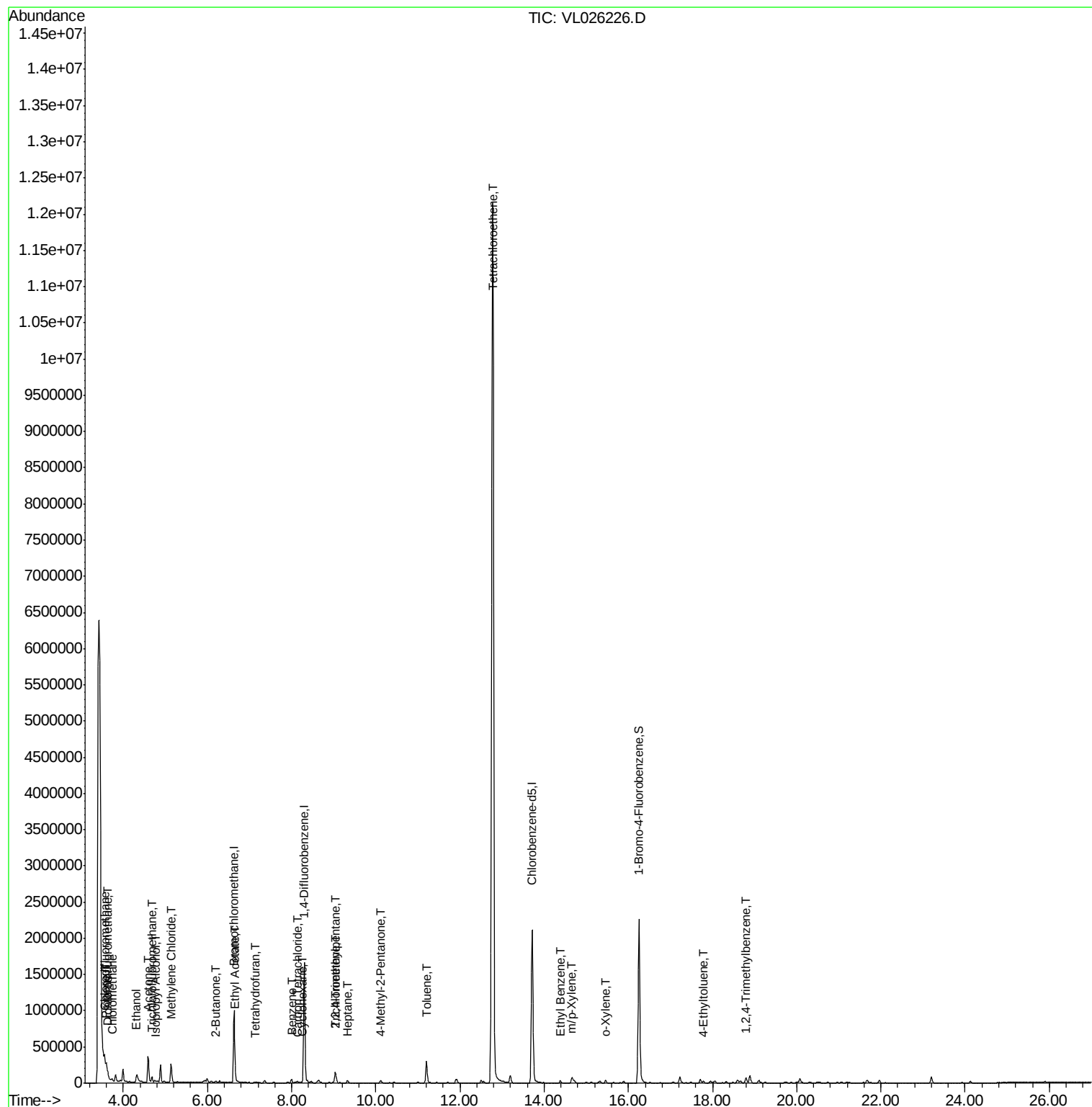
Data Path : W:\HPCHEM1\MSVOA L\DATA\VL102015\
Data File : VL026226.D
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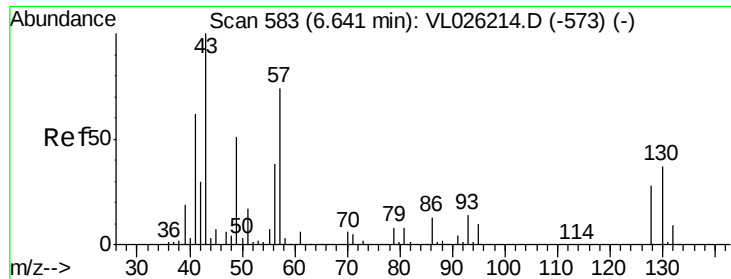
Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239

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Quant Time: Oct 21 17:00:58 2015
Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL102015AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Oct
QLast Update : Wed Oct 21 01:20:55 2015
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 6.63 min Scan# 581

Delta R.T. -0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239

Tot Ion: 49 Resp: 544068

Ion Ratio Lower Upper

49 100

128 56.4 28.2 84.7

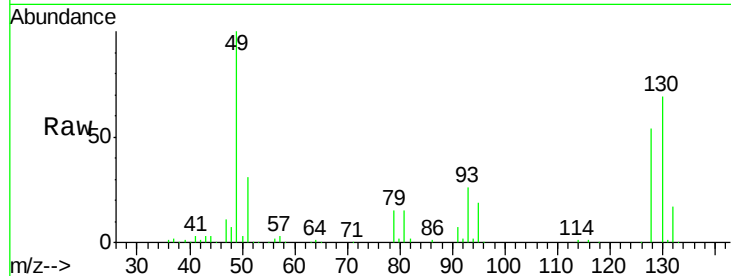
130 72.5 36.0 108.1

Manual Integrations

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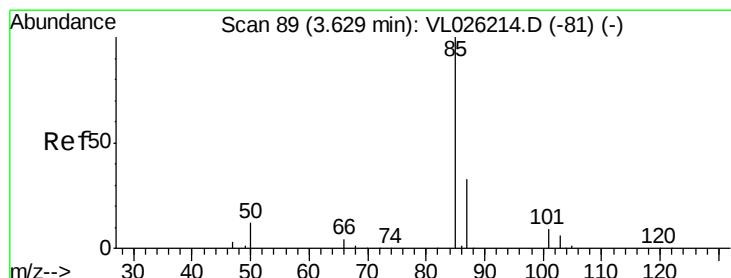
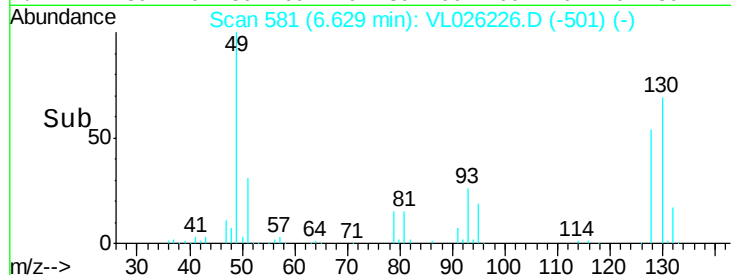
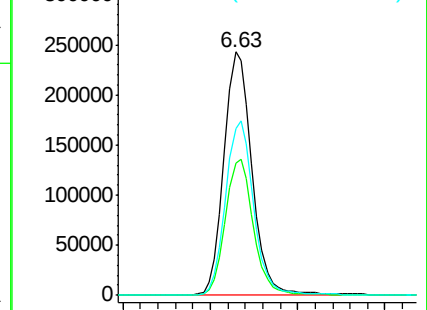
10/22/2015 4:32:50 PM



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: 0.66 ppbv

RT: 3.63 min Scan# 89

Delta R.T. -0.00 min

Lab File: VL026226.D

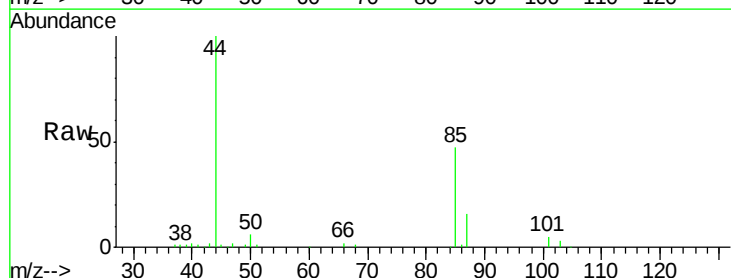
Acq: 21 Oct 2015 4:17

Tgt Ion: 85 Resp: 74252

Ion Ratio Lower Upper

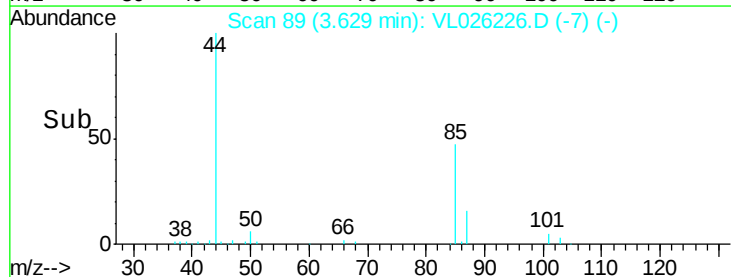
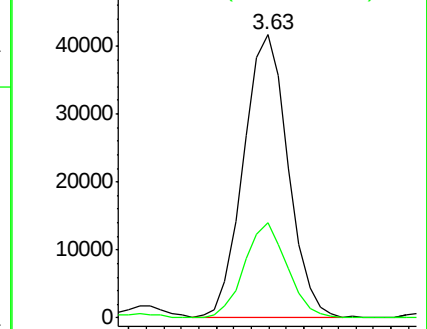
85 100

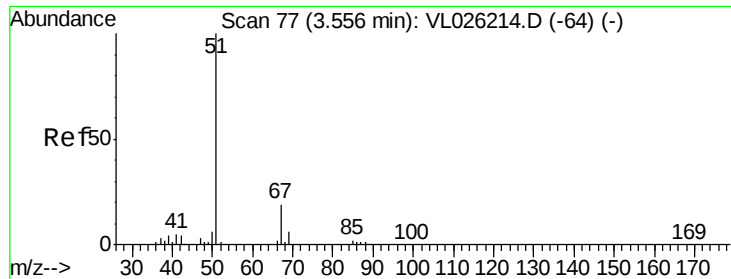
87 33.5 26.1 39.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 3.06 ppbv m

RT: 3.56 min Scan# 77

Delta R.T. -0.00 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Tot Ion: 51 Resp: 210538

Ion Ratio Lower Upper

51 100

67 17.2 15.3 22.9

Instrument :

MSVOA_L

ClientSampleId :

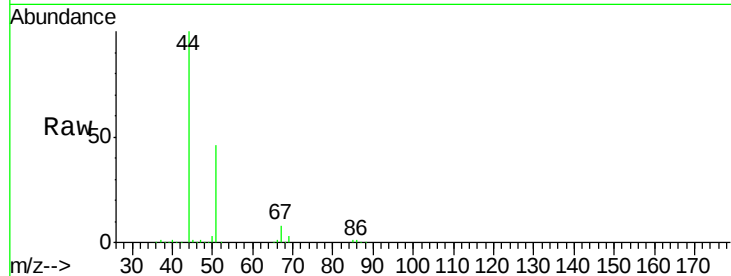
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

3.56

120000

100000

80000

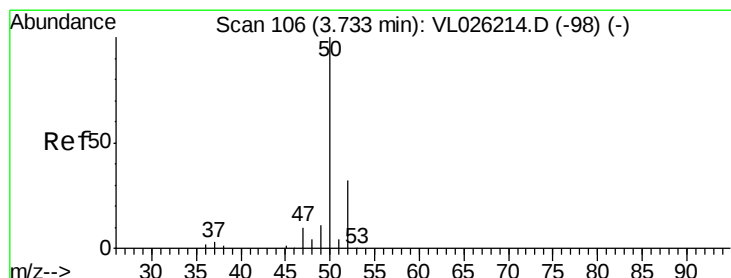
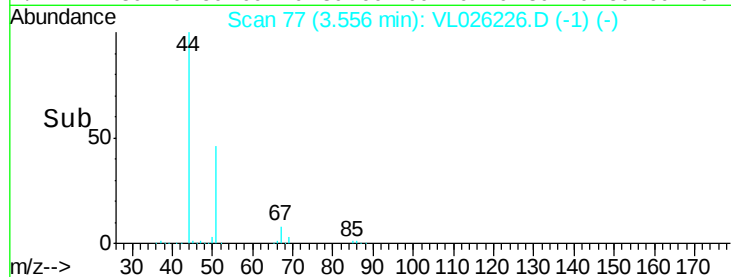
60000

40000

20000

0

Time--> 3.45 3.50 3.55 3.60



#4

Chloromethane

Concen: 0.46 ppbv

RT: 3.74 min Scan# 107

Delta R.T. 0.01 min

Lab File: VL026226.D

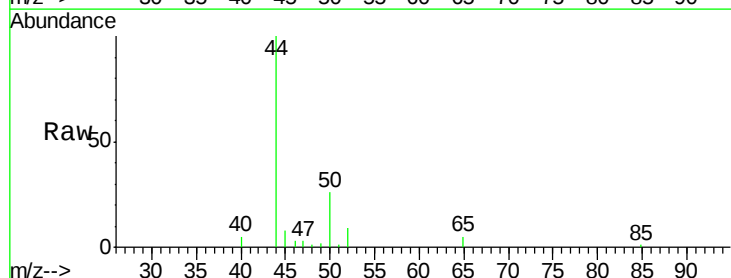
Acq: 21 Oct 2015 4:17

Tgt Ion: 50 Resp: 17069

Ion Ratio Lower Upper

50 100

52 35.0 25.8 38.6



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.74

8000

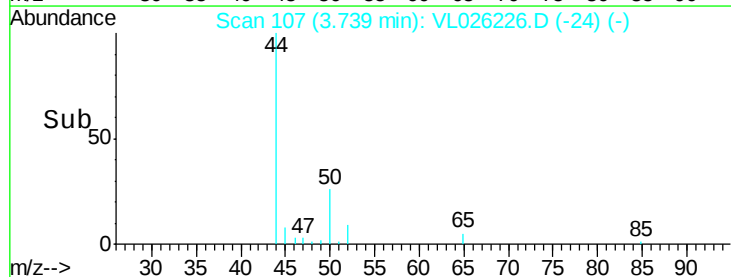
6000

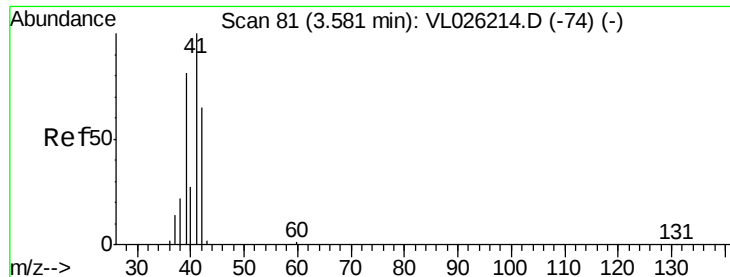
4000

2000

0

Time--> 3.70 3.75 3.80





#9

Propene

Concen: 1.37 ppbv

RT: 3.59 min Scan# 83

Delta R.T. 0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239

Tot Ion: 41 Resp: 44231

Ion Ratio Lower Upper

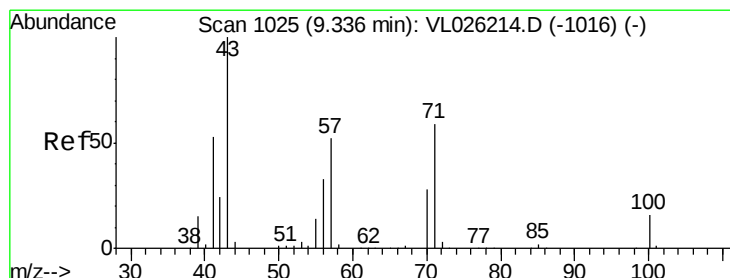
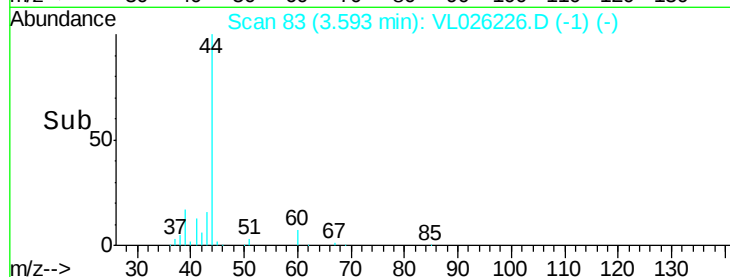
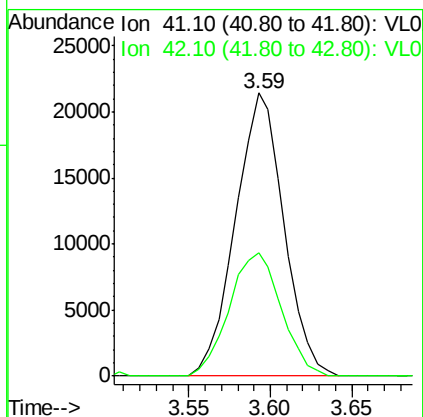
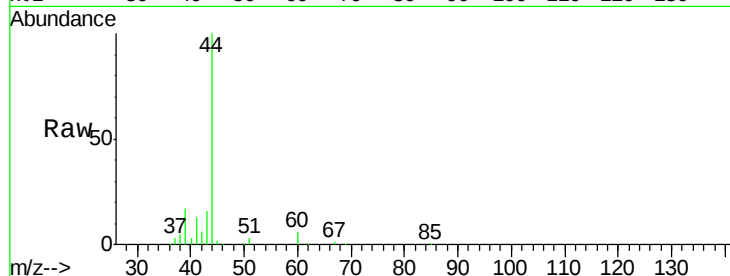
41 100

42 46.7 53.8 80.8#

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#10

Heptane

Concen: 0.18 ppbv

RT: 9.32 min Scan# 1023

Delta R.T. -0.01 min

Lab File: VL026226.D

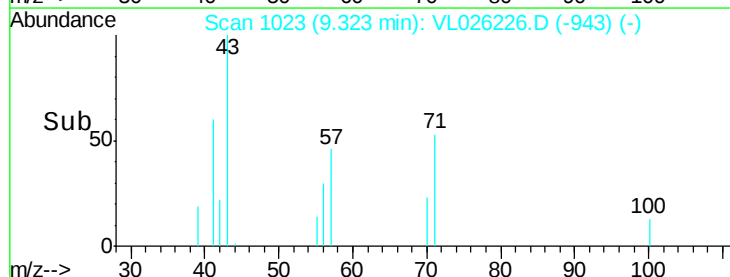
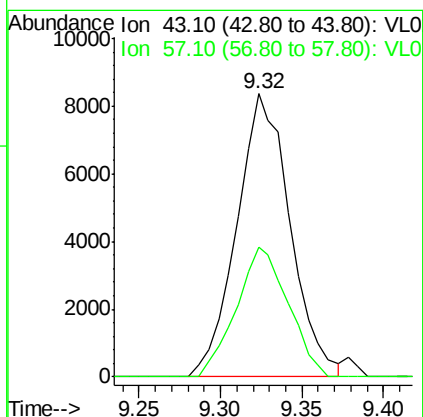
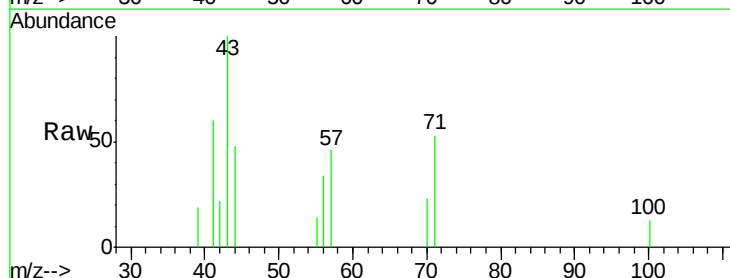
Acq: 21 Oct 2015 4:17

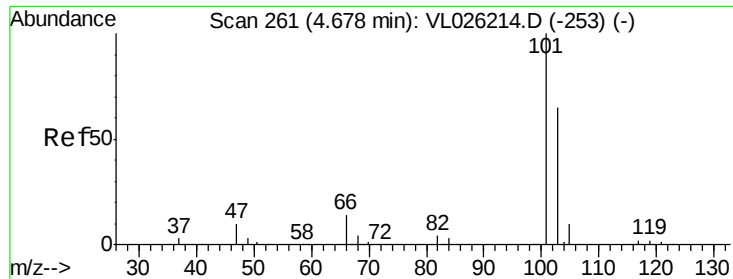
Tgt Ion: 43 Resp: 18979

Ion Ratio Lower Upper

43 100

57 44.5 43.7 65.5





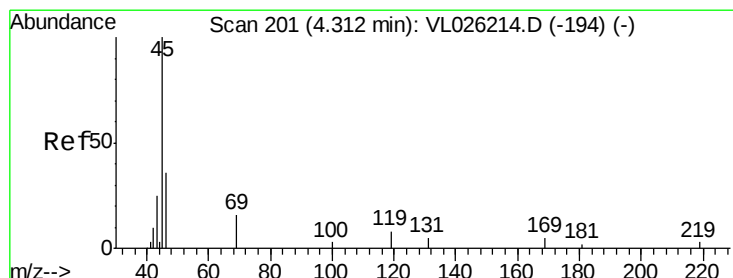
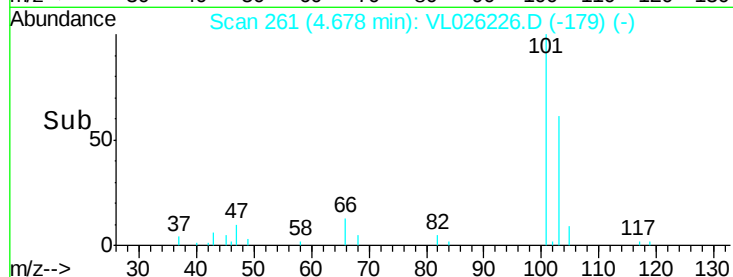
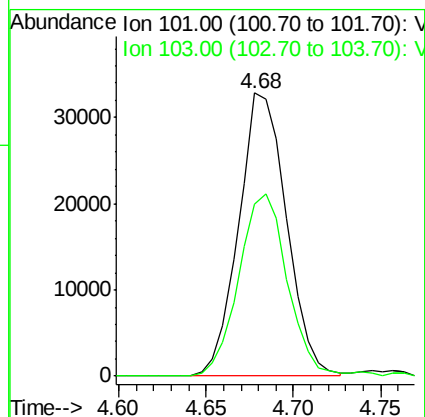
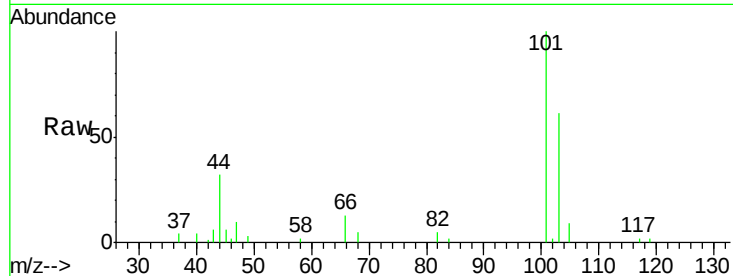
#11
 Trichlorofluoromethane
 Concen: 0.57 ppbv
 RT: 4.68 min Scan# 261
 Delta R.T. -0.00 min
 Lab File: VL026226.D
 Acq: 21 Oct 2015 4:17

Instrument :
 MSVOA_L
 ClientSampleId :
 INDOOR-239

Tot Ion:101 Resp: 62579
 Ion Ratio Lower Upper
 101 100
 103 60.9 52.2 78.2

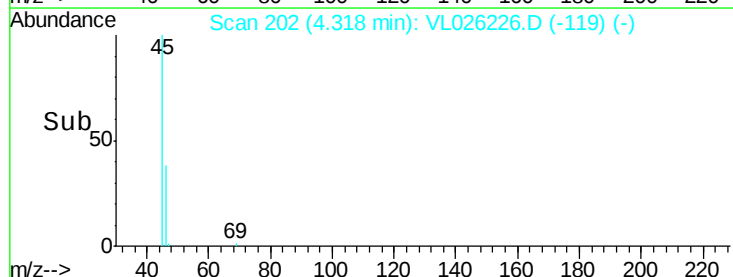
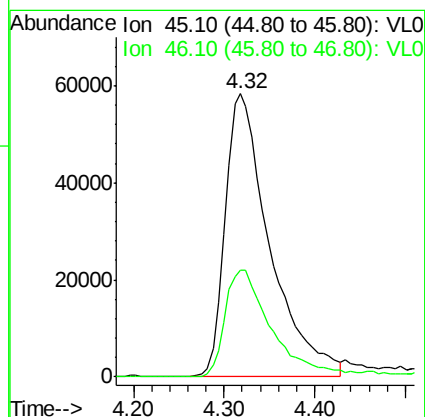
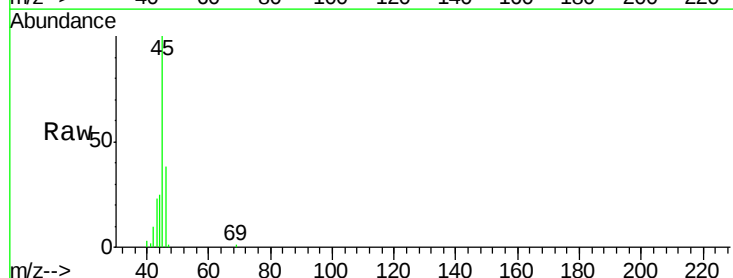
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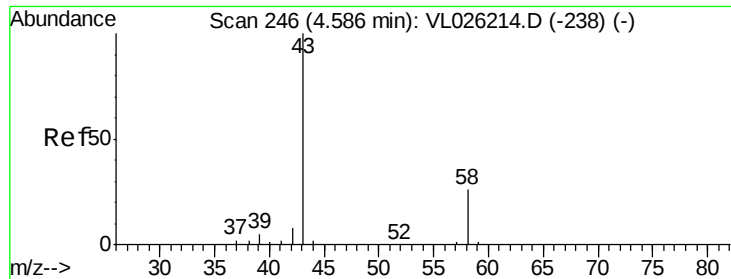
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#13
 Ethanol
 Concen: 41.25 ppbv
 RT: 4.32 min Scan# 202
 Delta R.T. 0.01 min
 Lab File: VL026226.D
 Acq: 21 Oct 2015 4:17

Tgt Ion: 45 Resp: 199505
 Ion Ratio Lower Upper
 45 100
 46 41.2 15.8 63.0





#15

Acetone

Concen: 4.68 ppbv

RT: 4.59 min Scan# 246

Delta R.T. -0.00 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Tot Ion: 43 Resp: 374575

Ion Ratio Lower Upper

43 100

58 24.9 21.8 32.6

Instrument :

MSVOA_L

ClientSampleId :

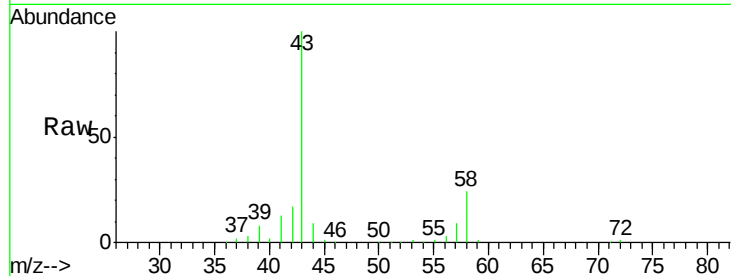
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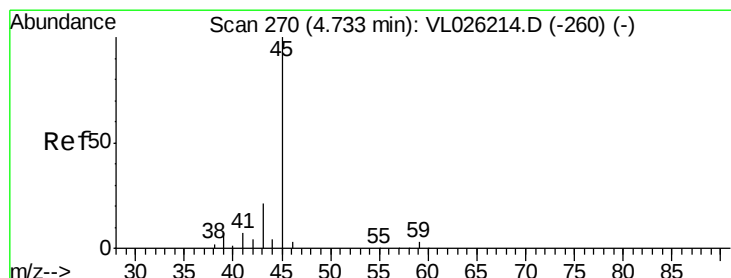
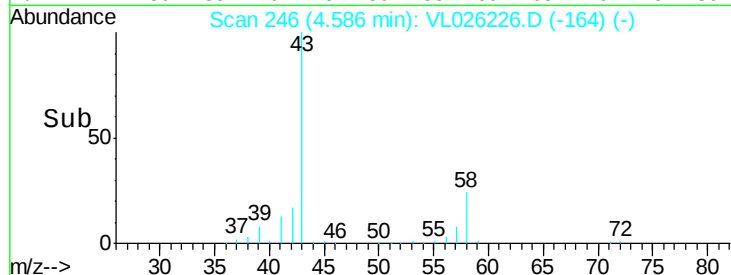
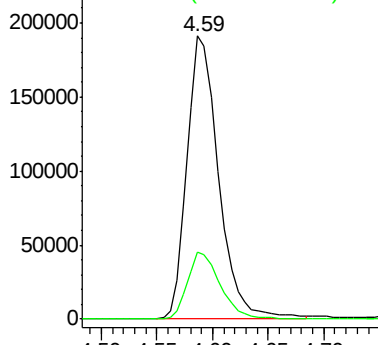
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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#19

Isopropyl Alcohol

Concen: 0.89 ppbv

RT: 4.78 min Scan# 277

Delta R.T. 0.04 min

Lab File: VL026226.D

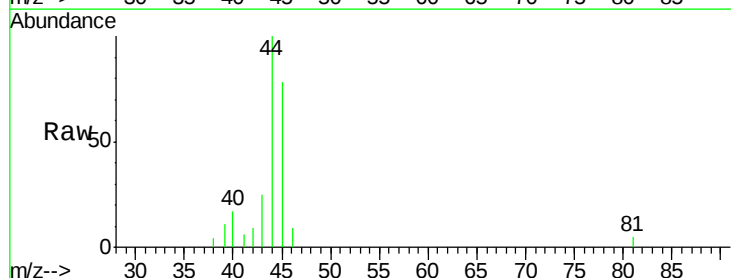
Acq: 21 Oct 2015 4:17

Tgt Ion: 45 Resp: 27821

Ion Ratio Lower Upper

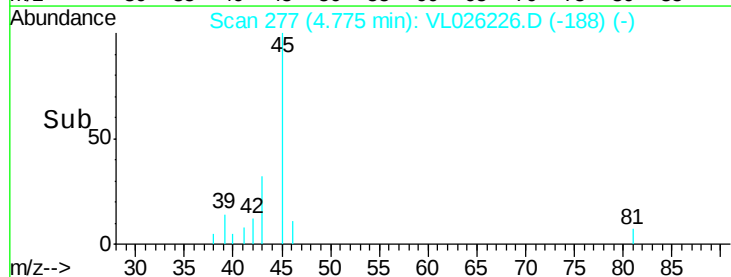
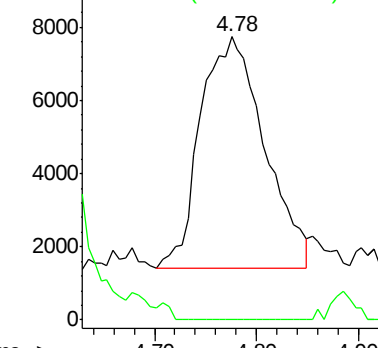
45 100

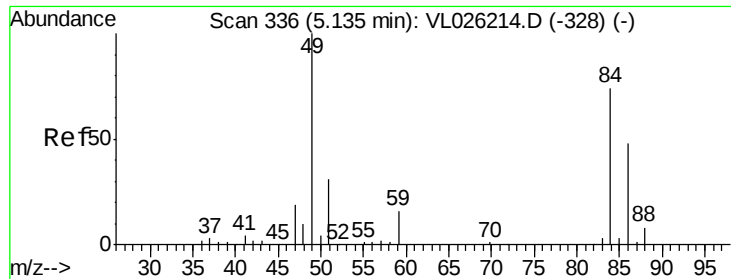
58 0.0 40.3 60.5#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





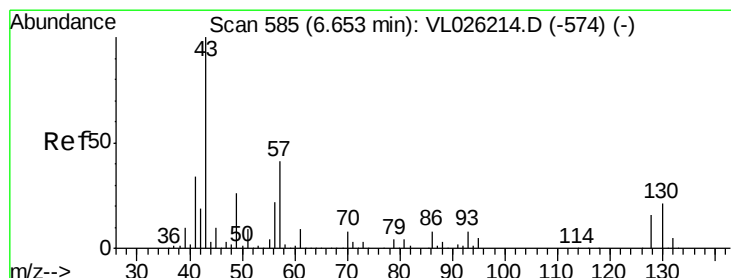
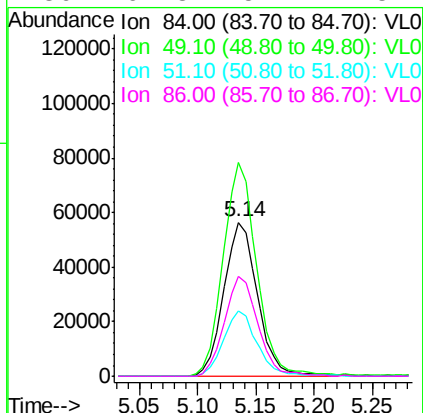
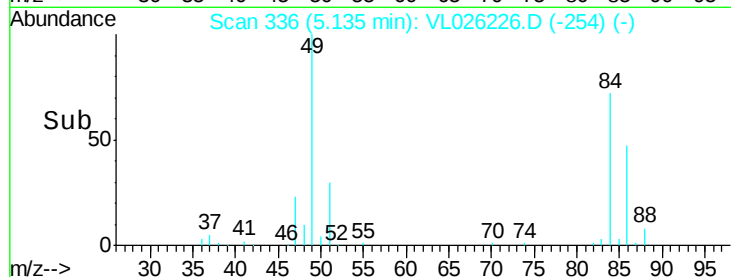
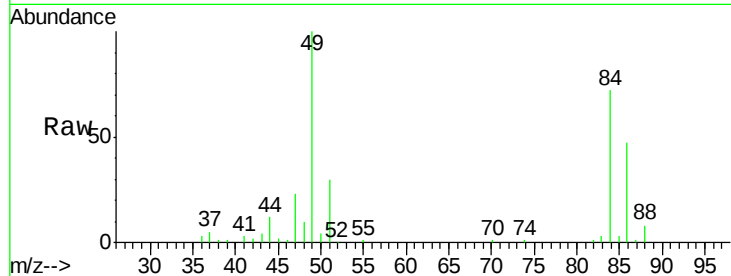
#20
Methvlene Chloride
Concen: 3.55 ppbv
RT: 5.14 min Scan# 336
Delta R.T. -0.00 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Instrument :
MSVOA_L
ClientSampleId :
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Tot Ion:	84	Resp:	113549
Ion	Ratio	Lower	Upper
84	100		
49	138.6	108.7	163.1
51	42.3	33.7	50.5
86	64.8	52.2	78.2

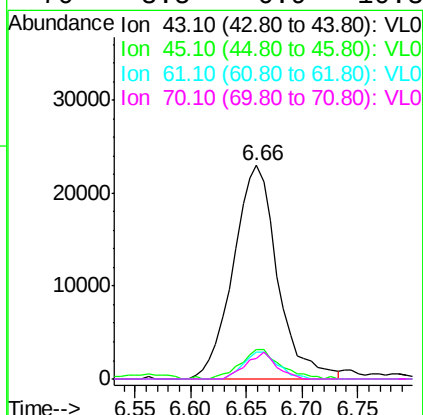
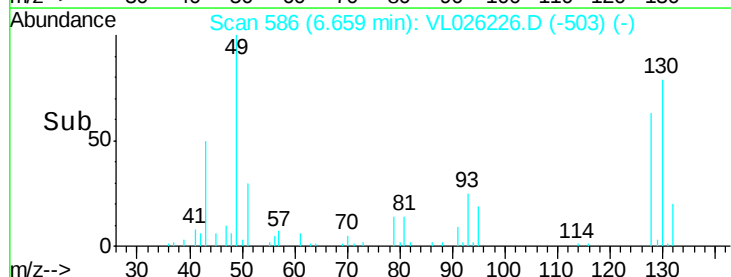
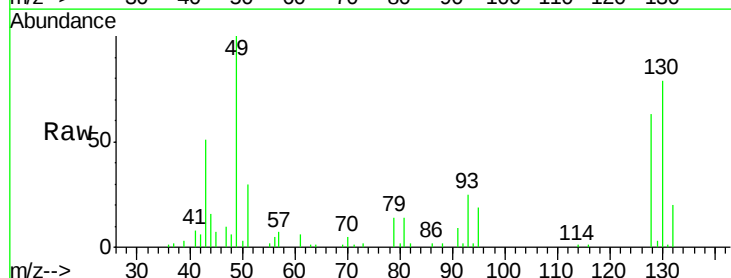
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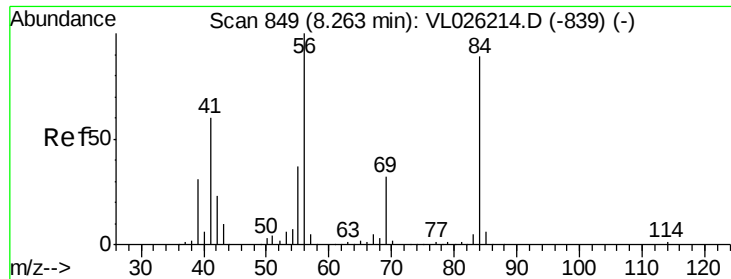
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#25
Ethyl Acetate
Concen: 0.42 ppbv
RT: 6.66 min Scan# 586
Delta R.T. 0.01 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tgt Ion:	43	Resp:	63466
Ion	Ratio	Lower	Upper
43	100		
45	12.6	7.7	11.5#
61	9.9	7.5	11.3
70	8.5	6.9	10.3





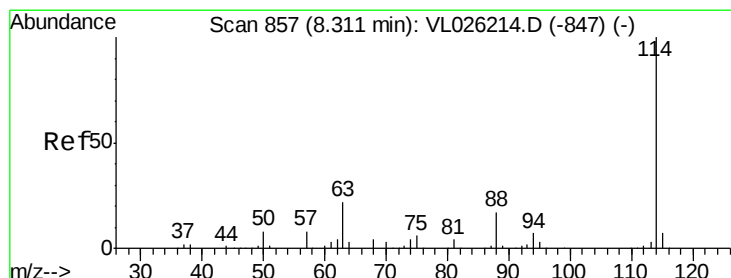
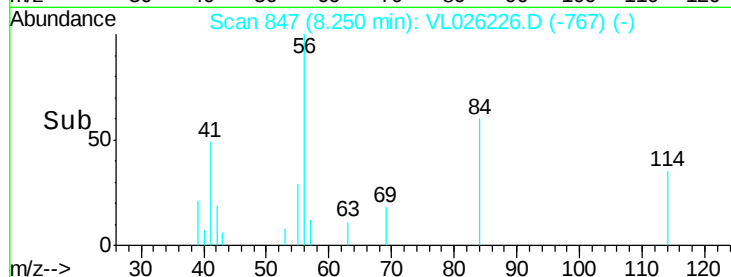
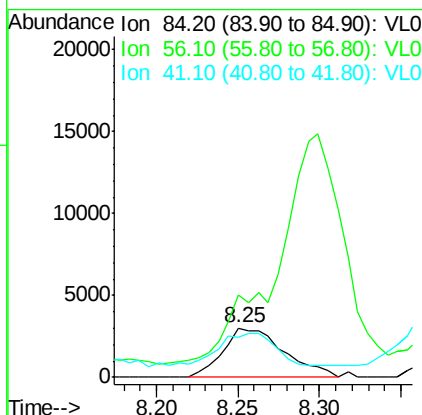
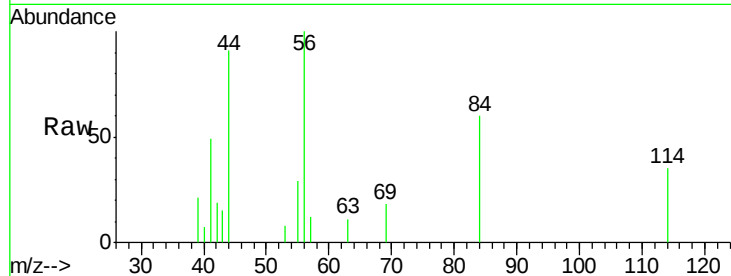
#30
Cvclohexane
Concen: 0.11 ppbv
RT: 8.25 min Scan# 847
Delta R.T. -0.01 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239

Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	95.9	143.9#
41	109.3	54.8	82.2#

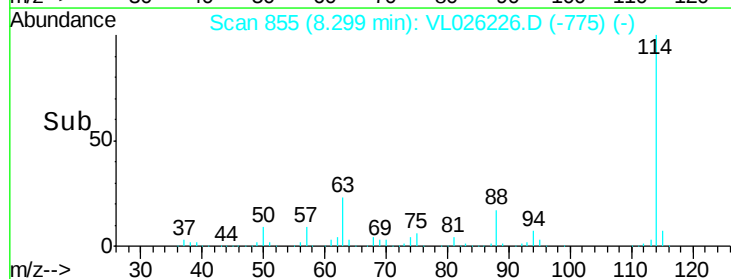
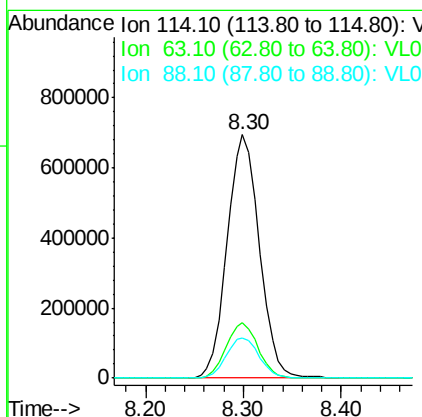
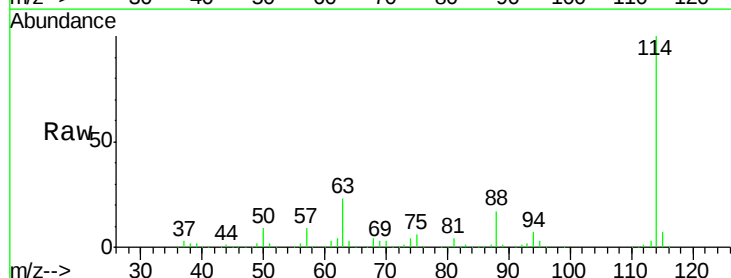
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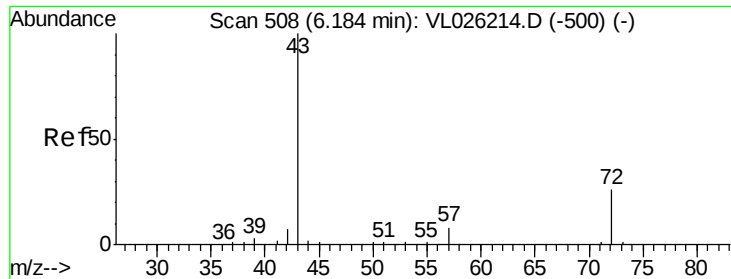
MMDadoda
10/22/2015 4:32:50 PM



#33
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 8.30 min Scan# 855
Delta R.T. -0.01 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tgt Ion	Ratio	Lower	Upper
114	100		
63	22.6	18.2	27.4
88	17.0	13.5	20.3





#34

2-Butanone

Concen: 0.33 ppbv

RT: 6.20 min Scan# 510

Delta R.T. 0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239

Tot Ion: 43 Resp: 29366

Ion Ratio Lower Upper

43 100

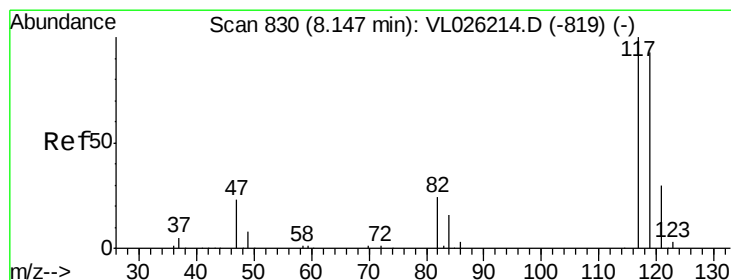
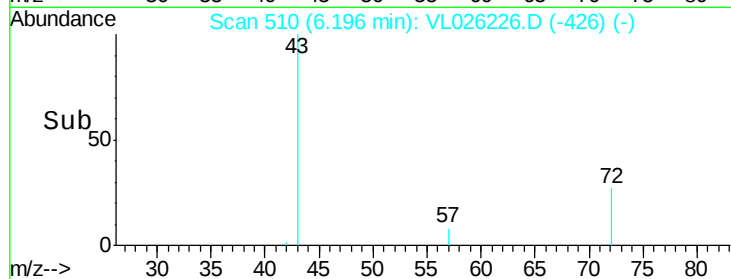
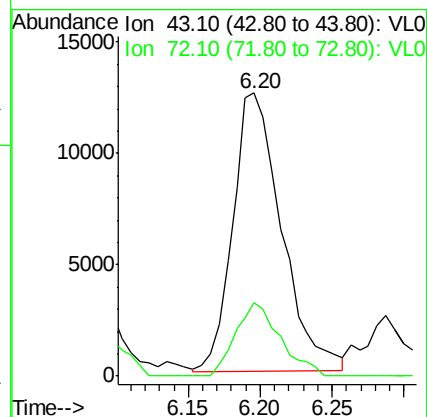
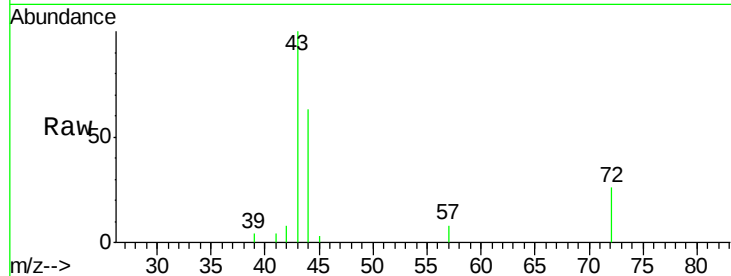
72 24.3 20.1 30.1

Manual Integrations

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#35

Carbon Tetrachloride

Concen: 0.07 ppbv

RT: 8.13 min Scan# 828

Delta R.T. -0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

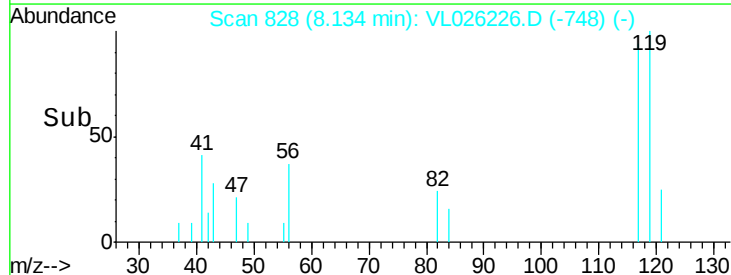
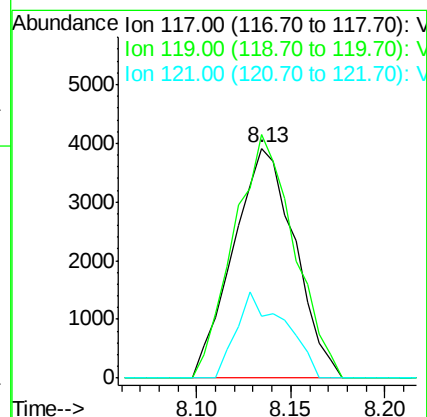
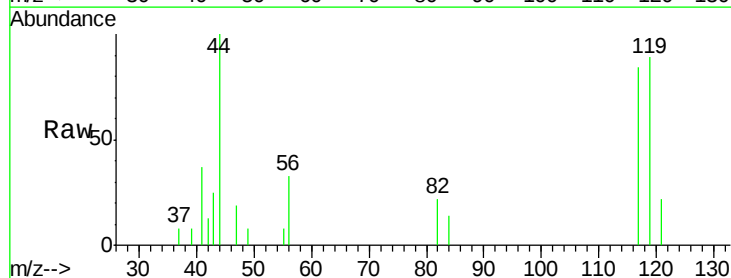
Tgt Ion: 117 Resp: 8851

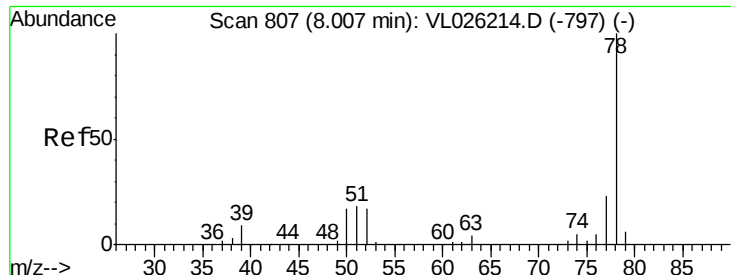
Ion Ratio Lower Upper

117 100

119 106.0 74.6 111.8

121 26.7 24.2 36.2





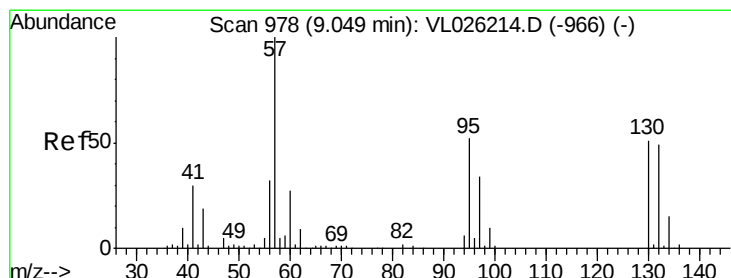
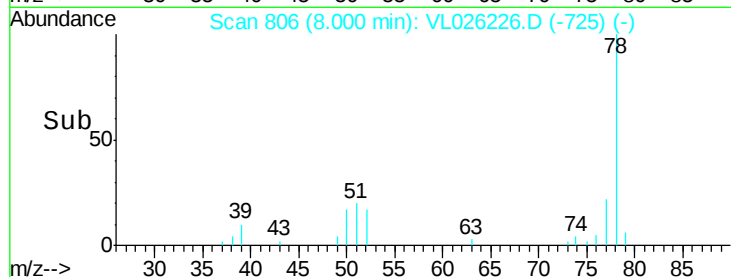
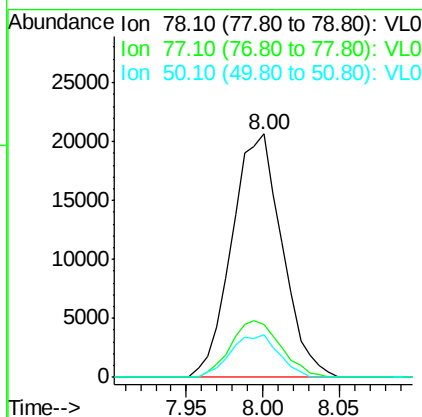
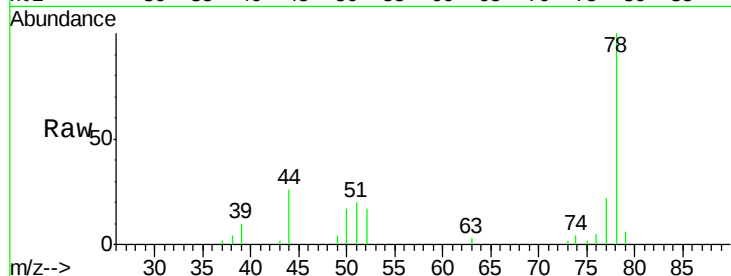
#36
Benzene
Concen: 0.29 ppbv
RT: 8.00 min Scan# 806
Delta R.T. -0.01 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239

Tot Ion	Ratio	Lower	Upper
78	100		
77	21.8	18.1	27.1
50	17.5	13.8	20.8

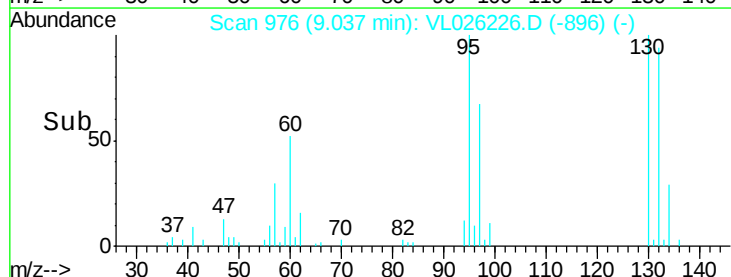
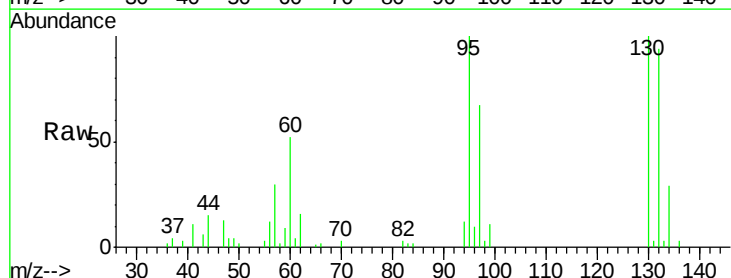
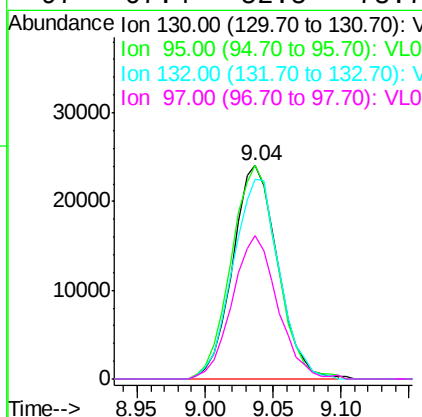
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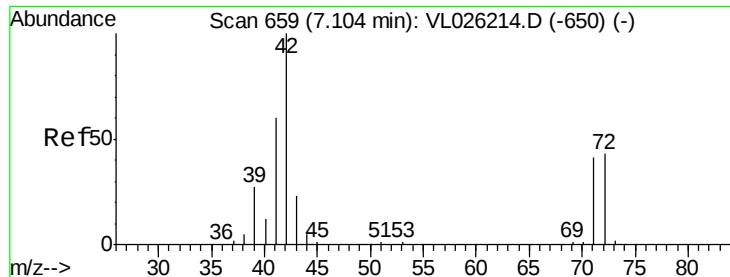
MMDadoda
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#38
Trichloroethene
Concen: 0.71 ppbv
RT: 9.04 min Scan# 976
Delta R.T. -0.01 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tgt Ion	Ratio	Lower	Upper
130	100		
95	99.9	81.0	121.4
132	93.6	76.5	114.7
97	67.4	52.5	78.7





#41

Tetrahydrofuran

Concen: 0.10 ppbv

RT: 7.14 min Scan# 665

Delta R.T. 0.04 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Instrument :

MSVOA_L

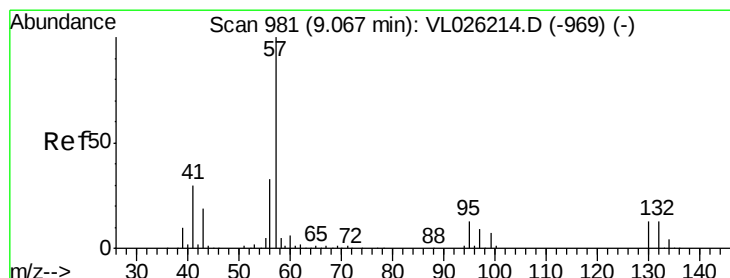
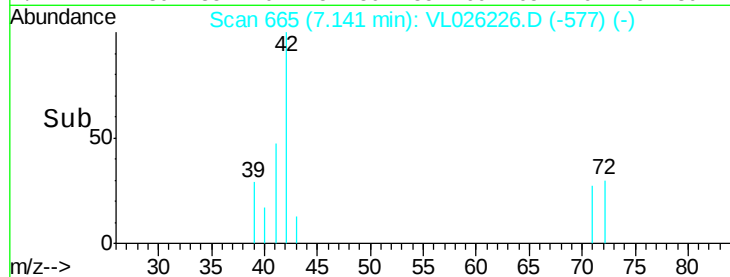
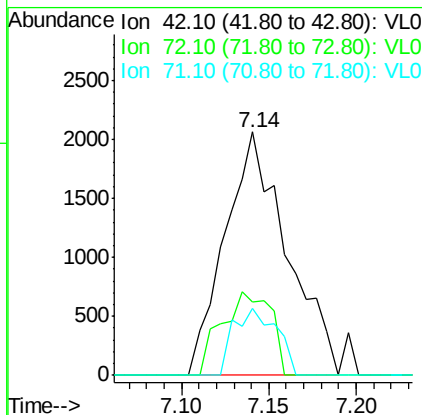
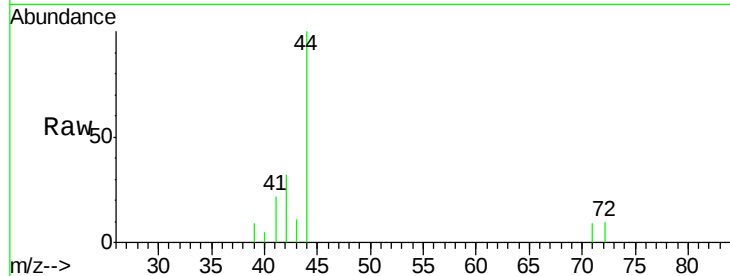
ClientSampleId :

INDOOR-239

Tot Ion:	42	Resp:	5102
Ion	Ratio	Lower	Upper
42	100		
72	27.3	34.3	51.5#
71	19.0	32.1	48.1#

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#44

2,2,4-Trimethylpentane

Concen: 0.14 ppbv

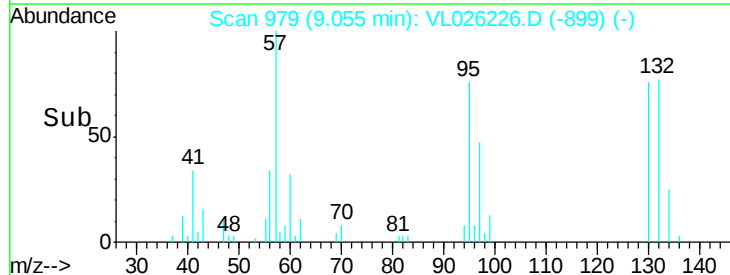
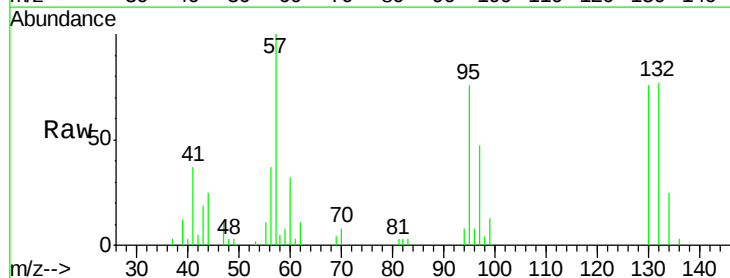
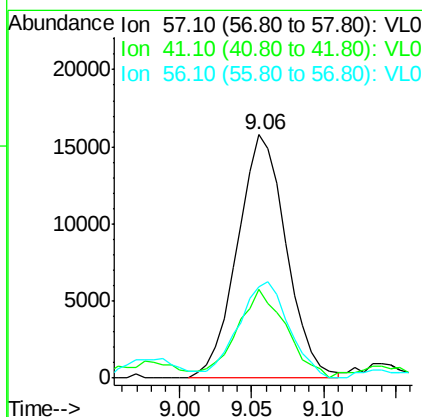
RT: 9.06 min Scan# 979

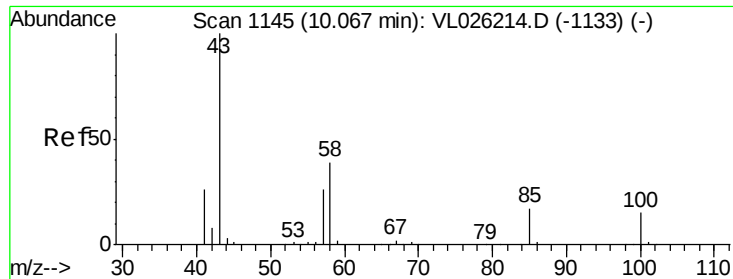
Delta R.T. -0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Tgt Ion:	57	Resp:	37203
Ion	Ratio	Lower	Upper
57	100		
41	36.7	23.7	35.5#
56	38.9	25.9	38.9#





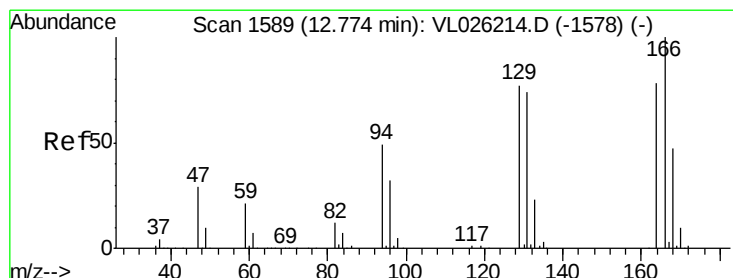
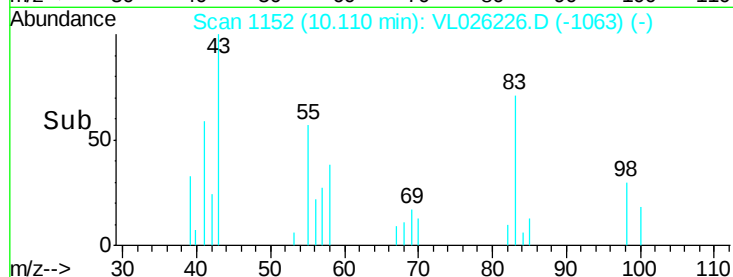
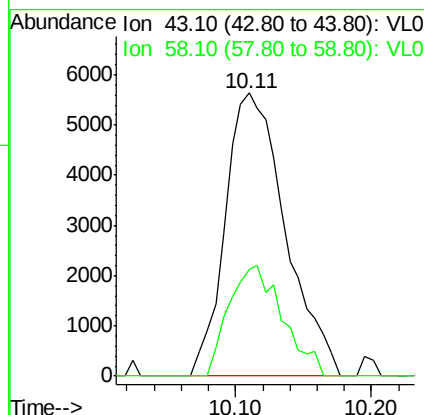
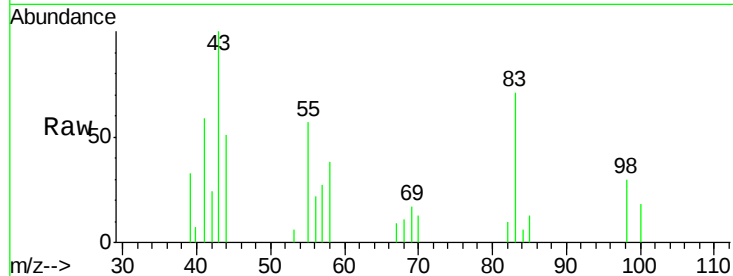
#50
4-Methyl-2-Pentanone
Concen: 0.14 ppbv
RT: 10.11 min Scan# 1152
Delta R.T. 0.04 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239

Tot Ion: 43 Resp: 17385
Ion Ratio Lower Upper
43 100
58 34.9 31.1 46.7

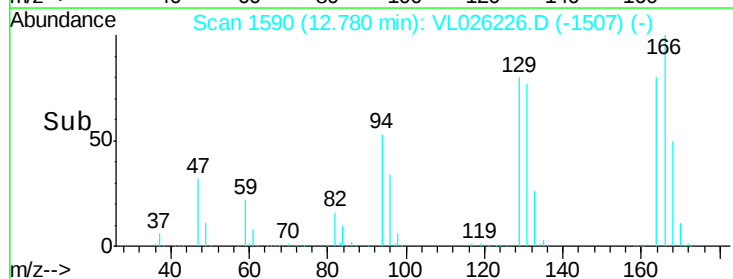
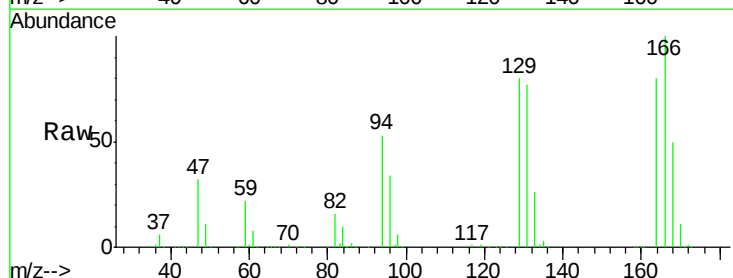
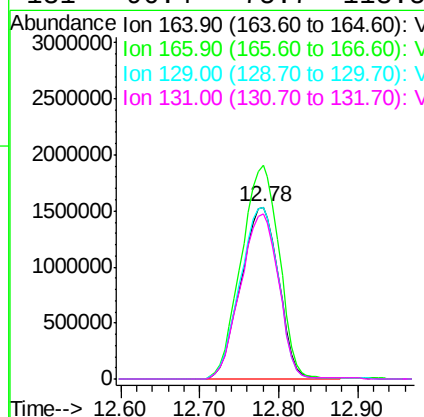
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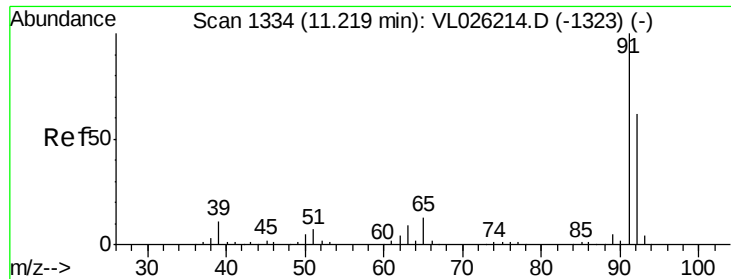
MMDadoda
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#52
Tetrachloroethene
Concen: 55.31 ppbv
RT: 12.78 min Scan# 1590
Delta R.T. 0.01 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tgt Ion: 164 Resp: 5127865
Ion Ratio Lower Upper
164 100
166 124.5 102.3 153.5
129 100.2 78.2 117.4
131 96.4 75.7 113.5





#53

Toluene

Concen: 1.40 ppbv

RT: 11.21 min Scan# 1332

Delta R.T. -0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239

Tot Ion: 91 Resp: 308864

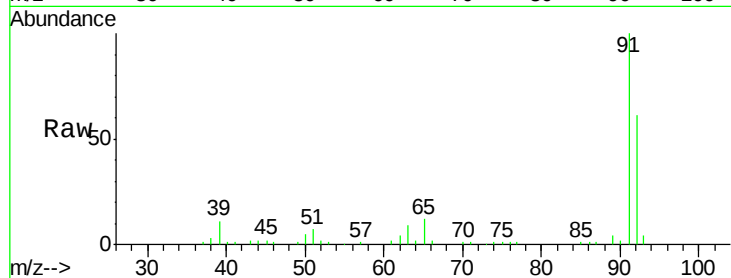
Ion Ratio Lower Upper

91 100

92 60.3 49.2 73.8

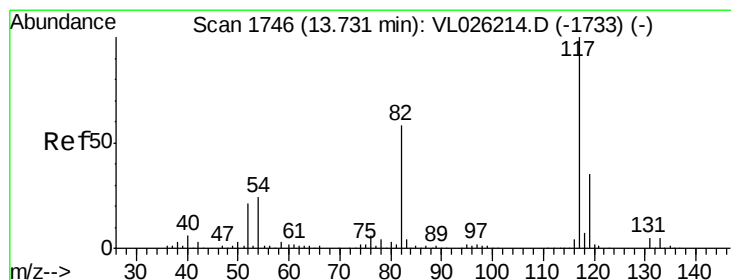
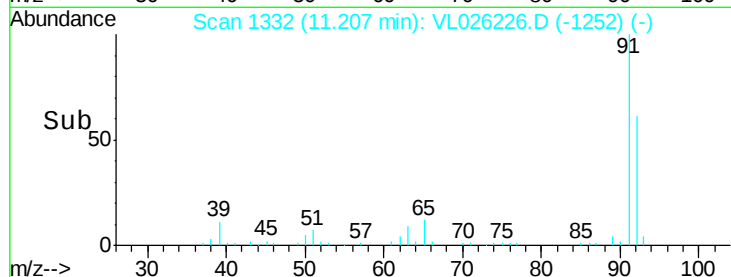
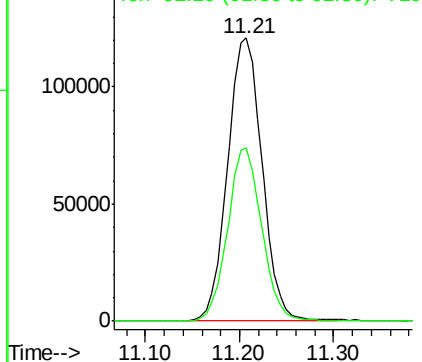
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 13.72 min Scan# 1744

Delta R.T. -0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

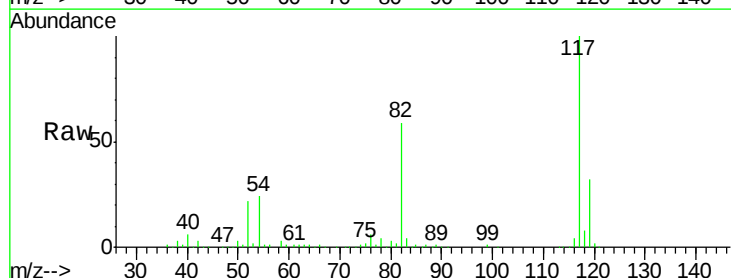
Tgt Ion: 117 Resp: 1889477

Ion Ratio Lower Upper

117 100

82 60.2 45.8 68.8

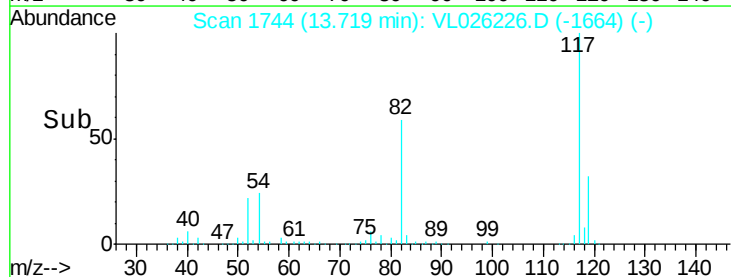
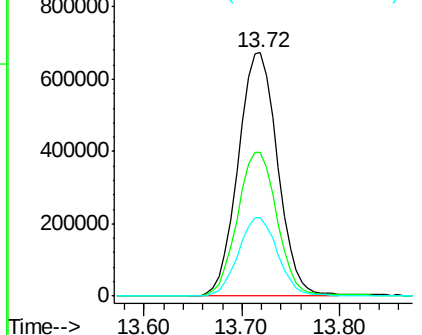
119 32.6 45.0 67.4#

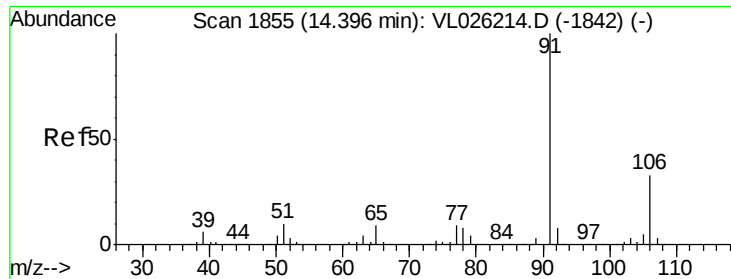


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#58

Ethyl Benzene

Concen: 0.13 ppbv

RT: 14.38 min Scan# 1853

Delta R.T. -0.01 min

Lab File: VL026226.D

Acq: 21 Oct 2015 4:17

Instrument :

MSVOA_L

ClientSampleId :

INDOOR-239

Tot Ion: 91 Resp: 38395

Ion Ratio Lower Upper

91 100

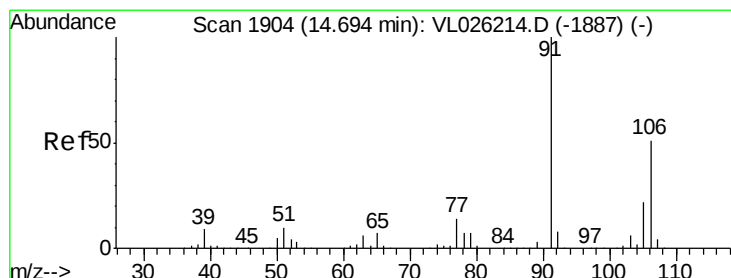
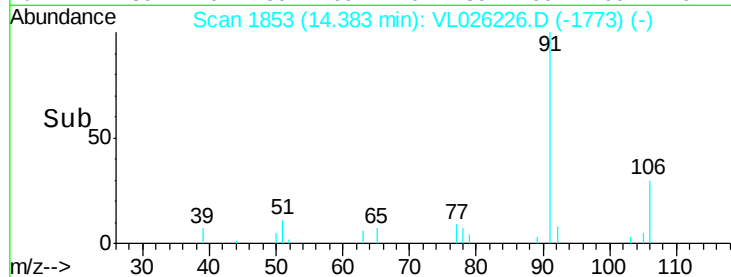
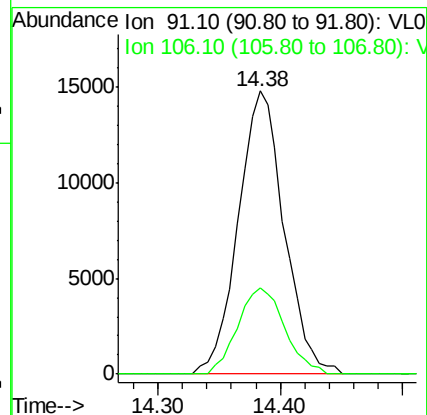
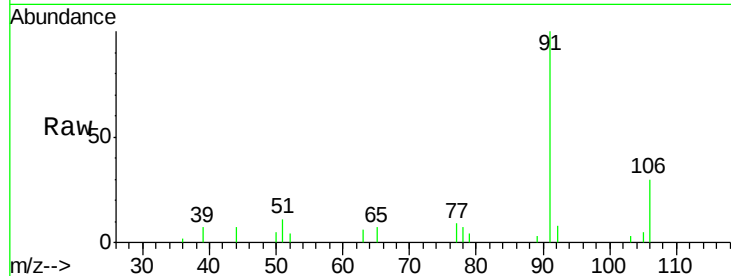
106 30.4 26.1 39.1

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#59

m/p-Xylene

Concen: 0.40 ppbv

RT: 14.66 min Scan# 1898

Delta R.T. -0.04 min

Lab File: VL026226.D

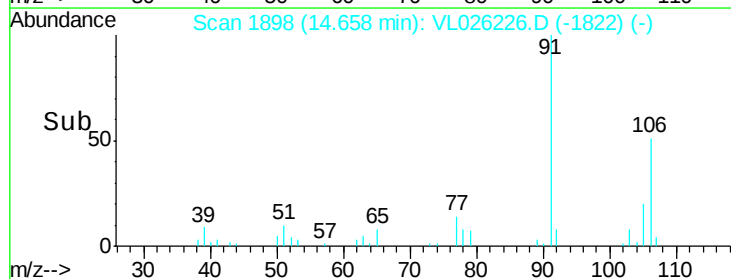
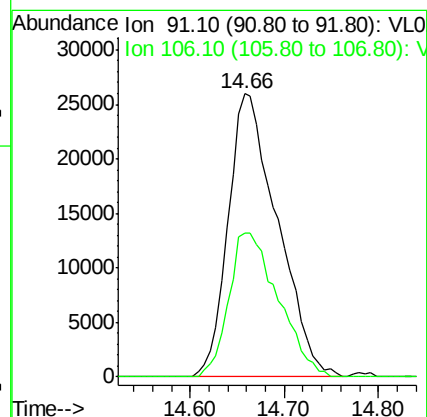
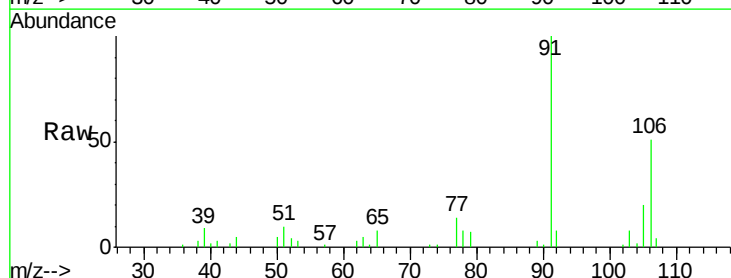
Acq: 21 Oct 2015 4:17

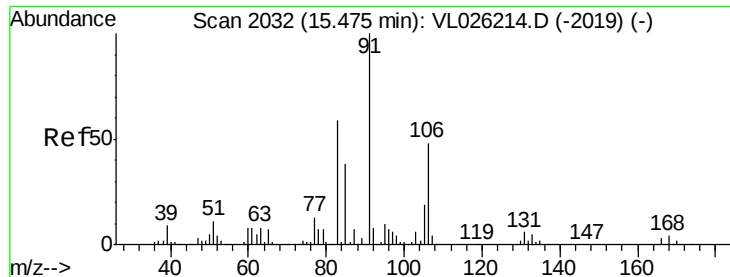
Tgt Ion: 91 Resp: 94710

Ion Ratio Lower Upper

91 100

106 50.9 40.6 61.0





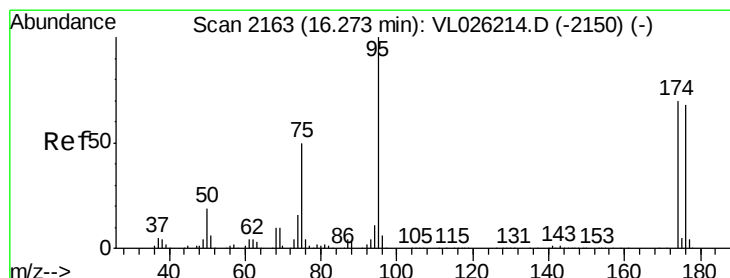
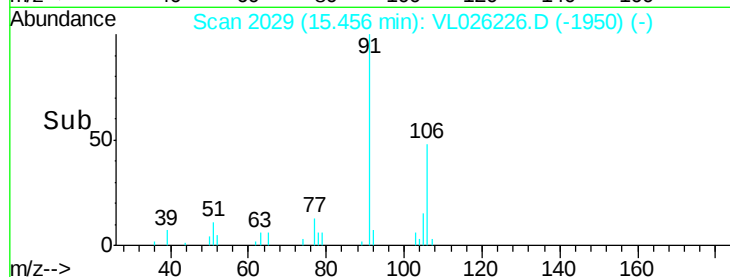
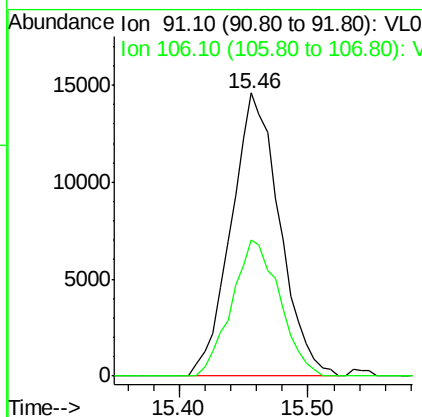
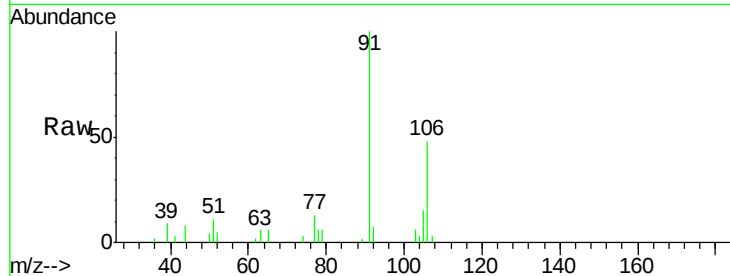
#60
o-Xylene
Concen: 0.15 ppbv
RT: 15.46 min Scan# 2029
Delta R.T. -0.02 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239

Tot Ion: 91 Resp: 38153
Ion Ratio Lower Upper
91 100
106 47.3 23.8 71.5

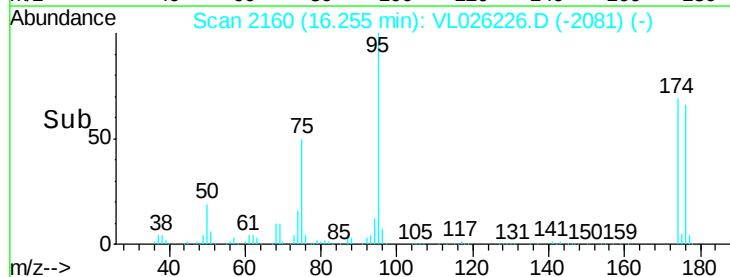
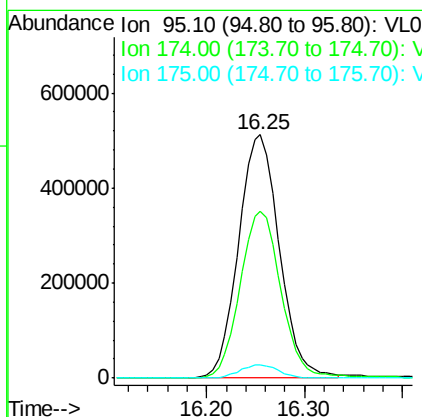
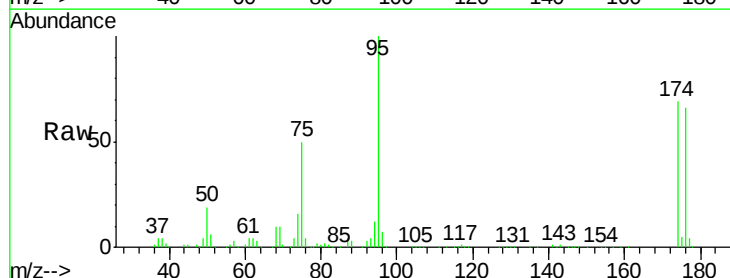
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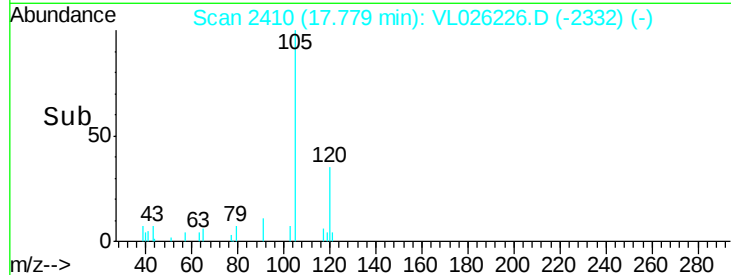
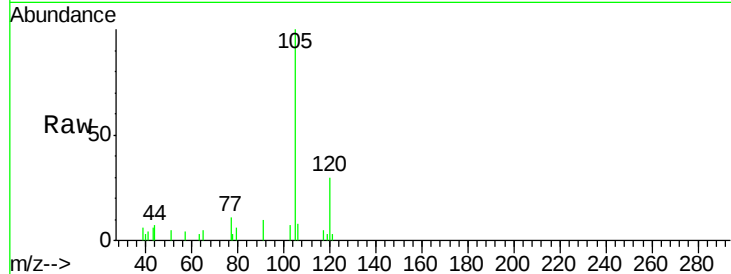
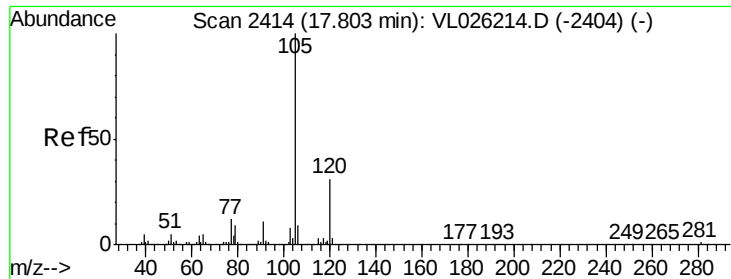
MMDadoda
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#68
1-Bromo-4-Fluorobenzene
Concen: 10.18 ppbv
RT: 16.25 min Scan# 2160
Delta R.T. -0.02 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tgt Ion: 95 Resp: 1483273
Ion Ratio Lower Upper
95 100
174 69.7 55.8 83.8
175 5.4 4.3 6.5





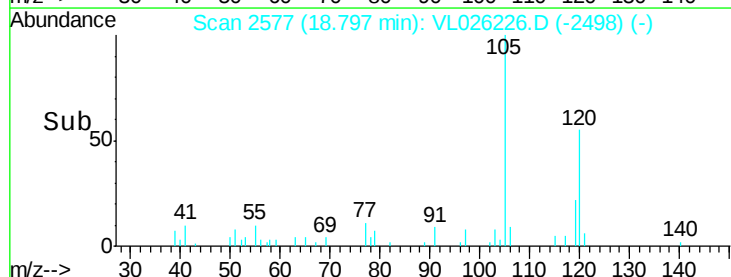
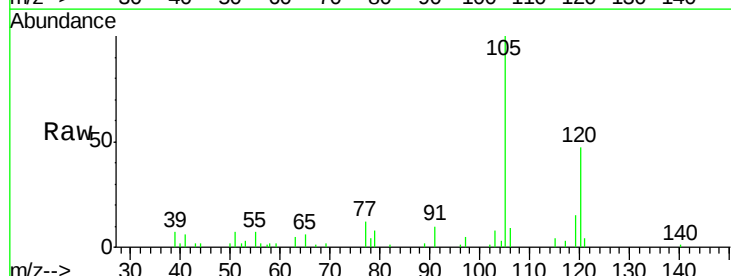
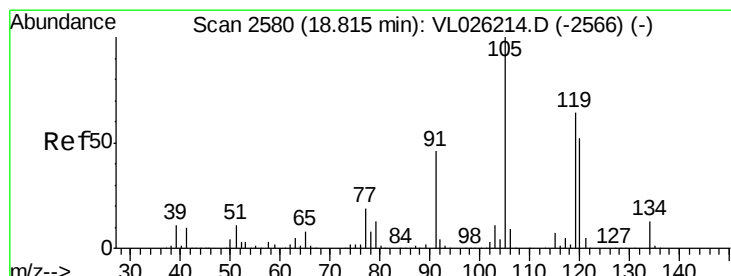
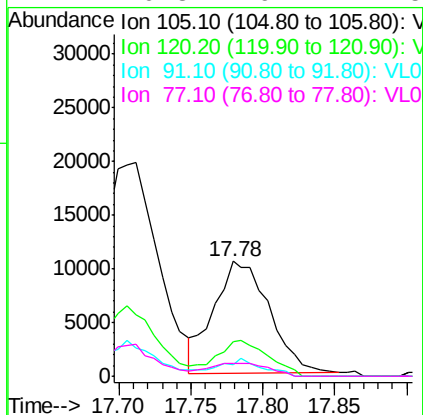
#72
4-Ethyltoluene
Concen: 0.10 ppbv
RT: 17.78 min Scan# 2410
Delta R.T. -0.02 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tot Ion	Ratio	Resp	Lower	Upper
105	100	28198		
120	27.0		25.2	37.8
91	11.0		9.0	13.6
77	10.8		9.7	14.5

Instrument :
MSVOA_L
ClientSampleId :
INDOOR-239

Manual Integrations
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#74
1,2,4-Trimethylbenzene
Concen: 0.25 ppbv
RT: 18.80 min Scan# 2577
Delta R.T. -0.02 min
Lab File: VL026226.D
Acq: 21 Oct 2015 4:17

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	69462		
120	47.0		41.2	61.8
91	9.6		37.2	55.8#
77	12.4		15.6	23.4#

