

Data Path : W:\HPCHEM1\MSVOA L\DATA\VL121317\
 Data File : VL031230.D
 Acq On : 14 Dec 2017 13:54
 Operator : SY/AP
 Sample : I6907-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MID

Manual Integrations
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 12/15/2017 4:07:11 PM

Quant Time: Dec 15 06:34:39 2017
 Quant Method : W:\HPCHEM1\MSVOA L\METHODS\VL121317AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Dec 14 2017
 QLast Update : Thu Dec 14 04:29:58 2017
 Response via : Initial Calibration

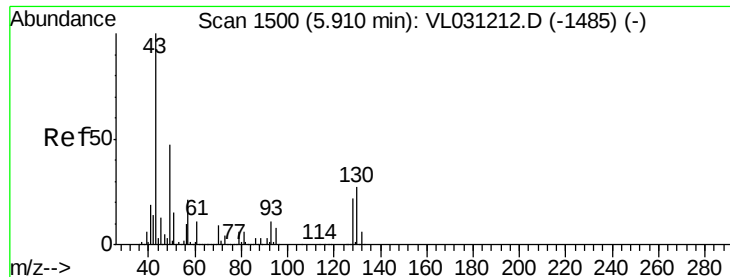
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.91	49	1417579	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.45	114	3489685	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.41	117	3084733	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.75	95	2495519	11.37	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	113.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.18	85	48535	0.41	ppbv	94
3) Chlorodifluoromethane	3.12	51	42529m	0.26	ppbv	
4) Chloromethane	3.28	50	10847	0.12	ppbv	92
7) Chloroethane	3.72	64	147608	4.43	ppbv	95
9) Propene	3.15	41	250068m	3.16	ppbv	
10) Heptane	8.41	43	39004m	0.16	ppbv	
11) Trichlorofluoromethane	4.13	101	260760	1.32	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.69	101	1023586	7.42	ppbv	98
13) Ethanol	3.77	45	316625	13.88	ppbv	98
15) Acetone	4.04	43	656701	3.51	ppbv #	86
18) 1,1-Dichloroethene	4.48	96	375083	6.07	ppbv	91
19) Isopropyl Alcohol	4.16	45	91285	0.77	ppbv #	1
20) Methylene Chloride	4.54	84	63398	1.02	ppbv	98
22) trans-1,2-Dichloroethene	5.11	96	25570	0.34	ppbv	94
24) 1,1-Dichloroethane	5.23	63	5376527	24.56	ppbv	99
26) Hexane	5.93	57	106846	0.59	ppbv #	45
29) Chloroform	6.00	83	28517	0.12	ppbv	88
31) cis-1,2-Dichloroethene	5.79	61	25847	0.16	ppbv	95
32) 1,1,1-Trichloroethane	6.78	97	17454710	66.70	ppbv #	86
34) 2-Butanone	5.49	43	43361	0.18	ppbv	97
35) Carbon Tetrachloride	7.30	117	11054	0.04	ppbv #	96
36) Benzene	7.17	78	73847	0.20	ppbv	97
38) Trichloroethene	8.13	130	26945	0.19	ppbv	85
44) 2,2,4-Trimethylpentane	8.15	57	247373	0.44	ppbv	93
52) Tetrachloroethene	11.54	164	9883m	0.07	ppbv	
53) Toluene	10.12	91	228901	0.57	ppbv	99
58) Ethyl Benzene	13.03	91	41074	0.08	ppbv	99
59) m/p-Xylene	13.29	91	104066m	0.26	ppbv	
74) 1,2,4-Trimethylbenzene	17.10	105	48761	0.12	ppbv #	81

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



#1

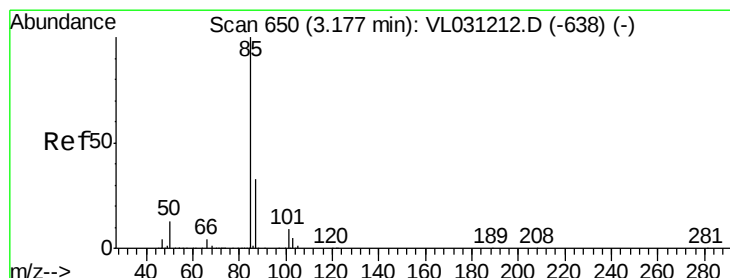
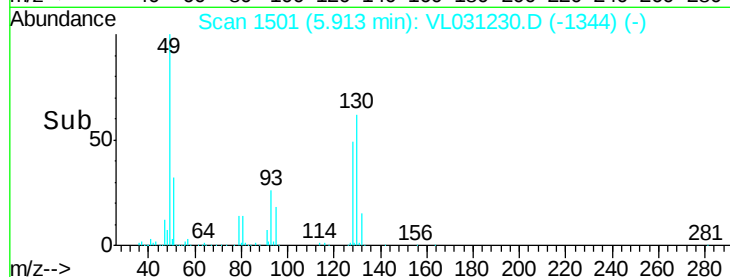
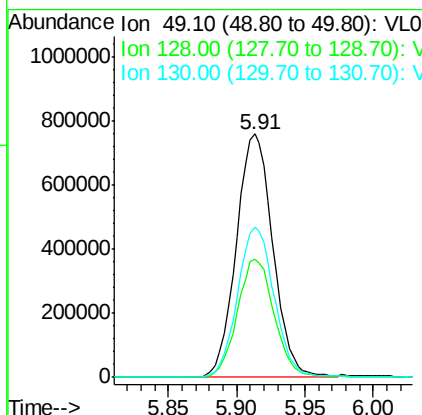
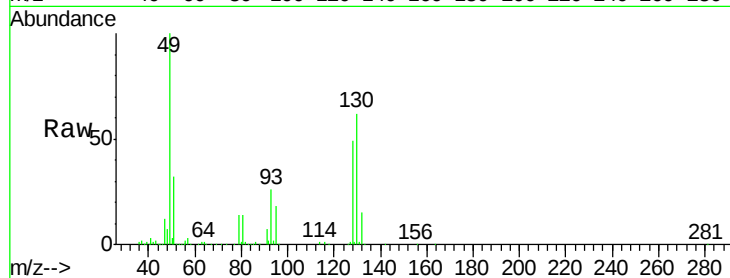
Bromochloromethane
 Concen: 10.00 ppbv
 RT: 5.91 min Scan# 1501
 Delta R.T. 0.00 min
 Lab File: VL031230.D
 Acq: 14 Dec 2017 13:54

Instrument :
 MSVOA_L
 ClientSampleId :
 MID

Tot Ion: 49 Resp: 1417579
 Ion Ratio Lower Upper
 49 100
 128 49.0 23.2 69.5
 130 62.5 29.6 88.8

Manual Integrations
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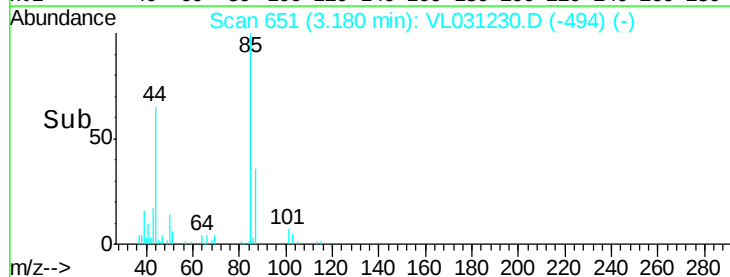
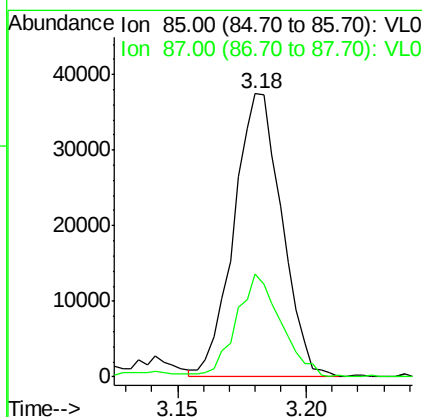
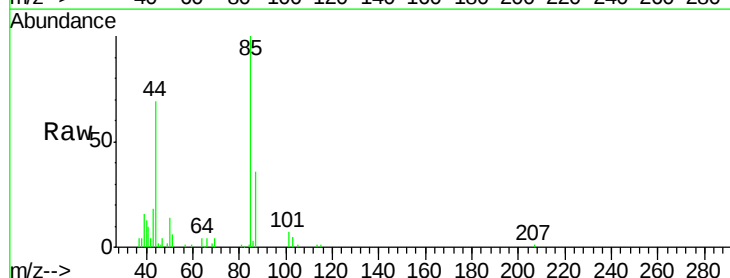
MM Dadoda
 12/15/2017 4:07:11 PM

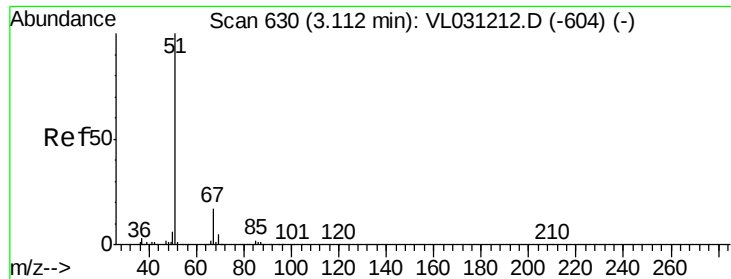


#2

Dichlorodifluoromethane
 Concen: 0.41 ppbv
 RT: 3.18 min Scan# 651
 Delta R.T. 0.00 min
 Lab File: VL031230.D
 Acq: 14 Dec 2017 13:54

Tgt Ion: 85 Resp: 48535
 Ion Ratio Lower Upper
 85 100
 87 36.0 26.2 39.2





#3

Chlorodifluoromethane

Concen: 0.26 ppbv m

RT: 3.12 min Scan# 632

Delta R.T. 0.01 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampleId :

MID

Tot Ion: 51 Resp: 42529

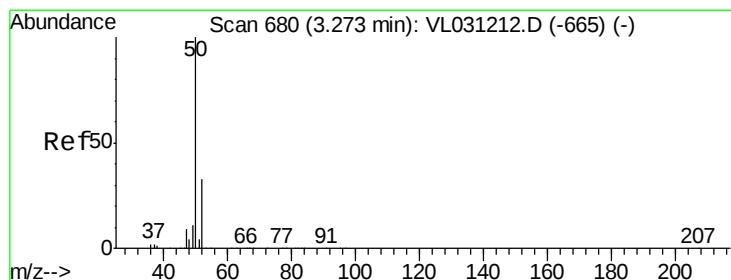
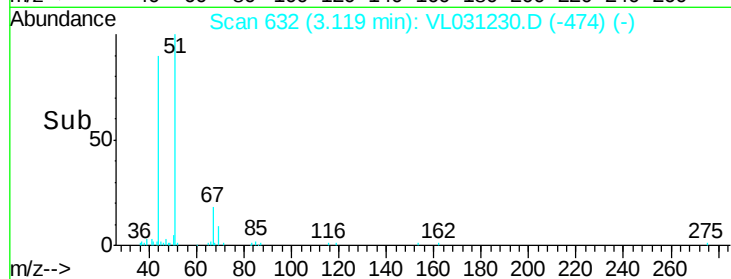
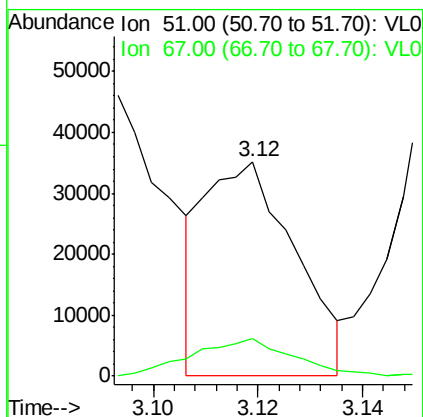
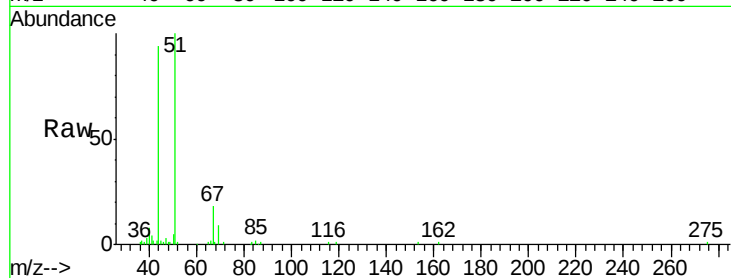
Ion Ratio Lower Upper

51 100

67 19.5 13.8 20.6

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#4

Chloromethane

Concen: 0.12 ppbv

RT: 3.28 min Scan# 681

Delta R.T. 0.00 min

Lab File: VL031230.D

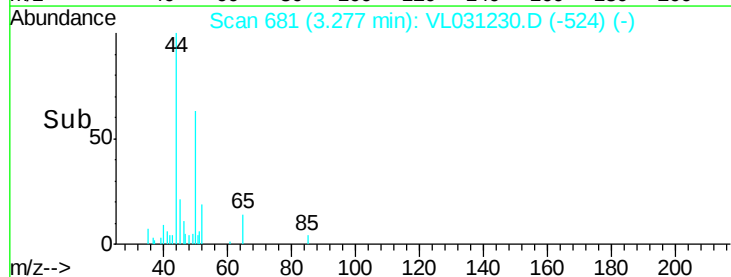
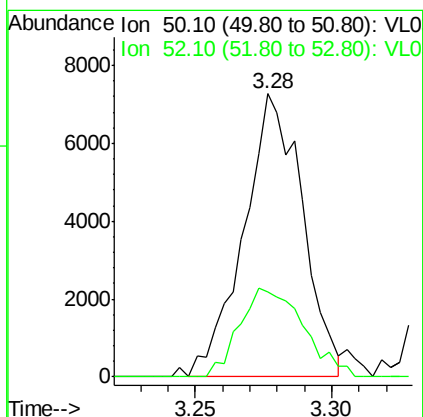
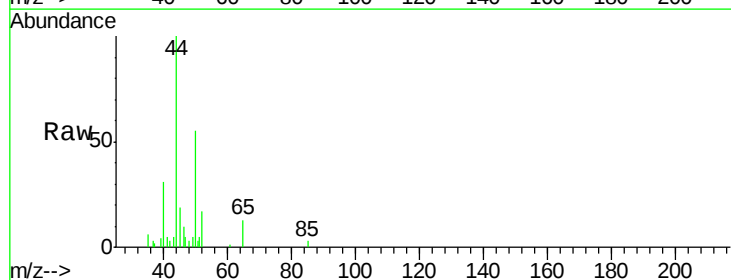
Acq: 14 Dec 2017 13:54

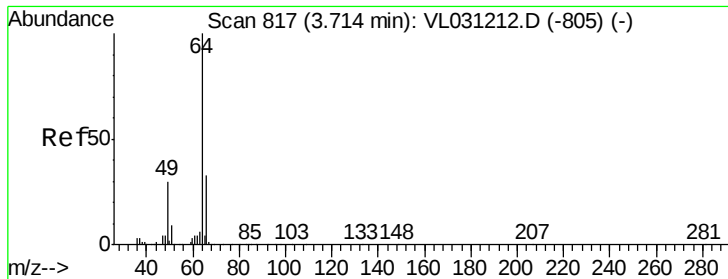
Tgt Ion: 50 Resp: 10847

Ion Ratio Lower Upper

50 100

52 28.4 26.5 39.7





#7

Chloroethane

Concen: 4.43 ppbv

RT: 3.72 min Scan# 818

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampled :

MID

Tot Ion: 64 Resp: 147608

Ion Ratio Lower Upper

64 100

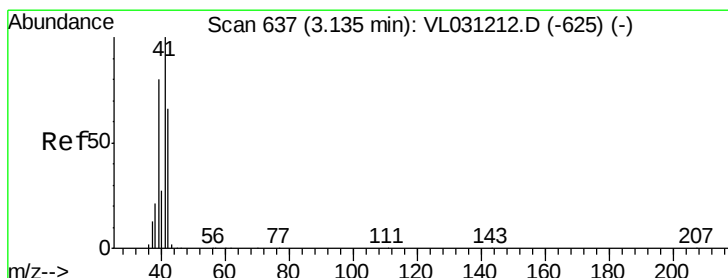
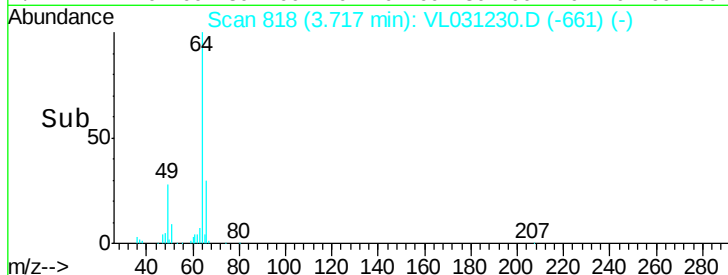
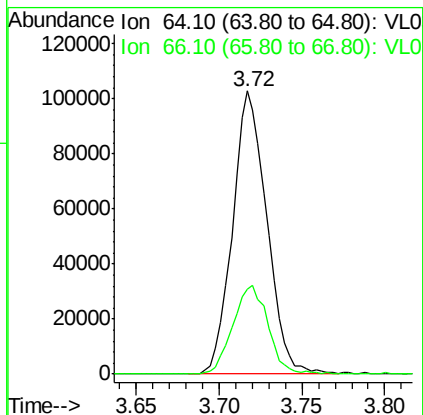
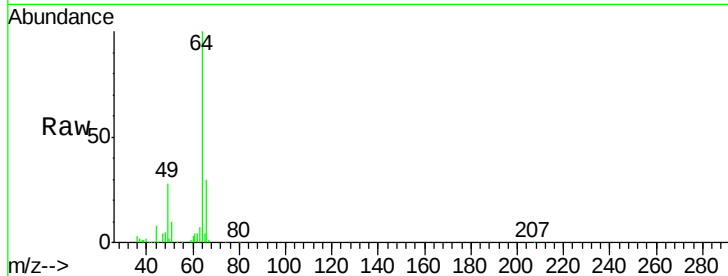
66 30.1 26.2 39.2

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#9

Propene

Concen: 3.16 ppbv m

RT: 3.15 min Scan# 643

Delta R.T. 0.02 min

Lab File: VL031230.D

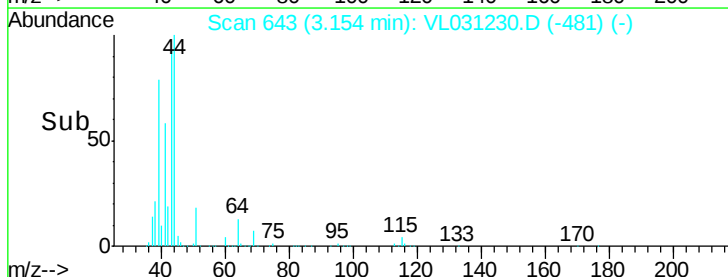
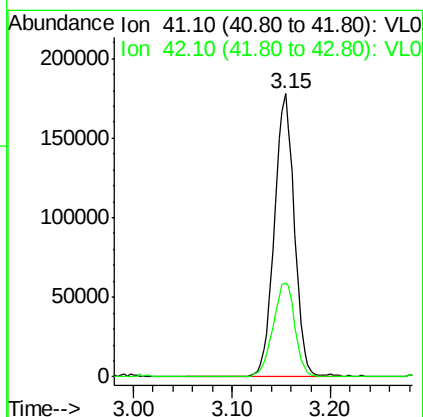
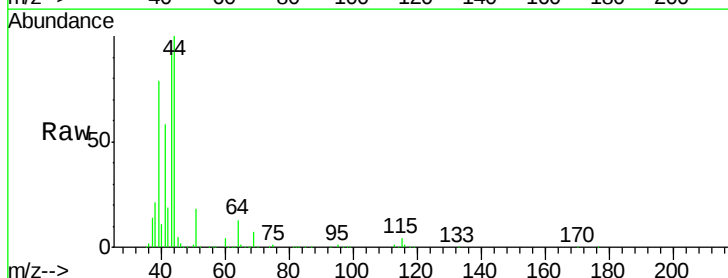
Acq: 14 Dec 2017 13:54

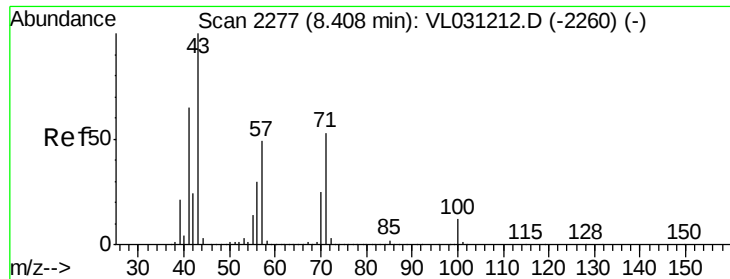
Tgt Ion: 41 Resp: 250068

Ion Ratio Lower Upper

41 100

42 19.3 54.3 81.5#





#10

Heptane

Concen: 0.16 ppbv m

RT: 8.41 min Scan# 2279

Delta R.T. 0.01 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampleId :

MID

Tot Ion: 43 Resp: 39004

Ion Ratio Lower Upper

43 100

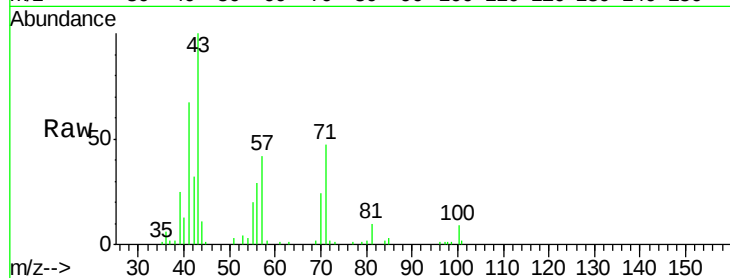
57 50.6 39.8 59.8

Manual Integrations

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

20000

15000

10000

5000

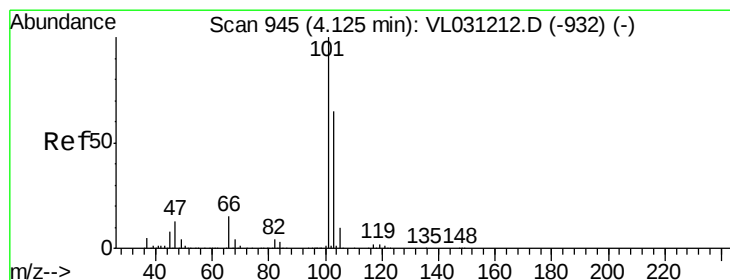
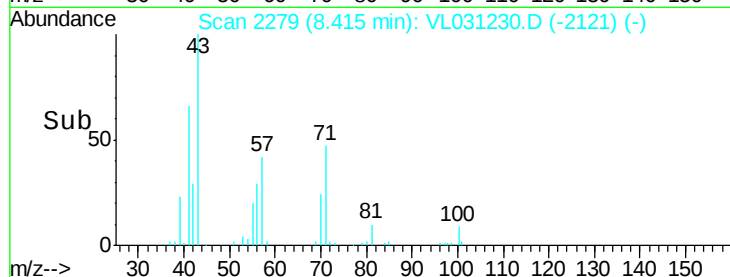
0

8.35

8.40

8.45

Time-->



#11

Trichlorofluoromethane

Concen: 1.32 ppbv

RT: 4.13 min Scan# 946

Delta R.T. 0.00 min

Lab File: VL031230.D

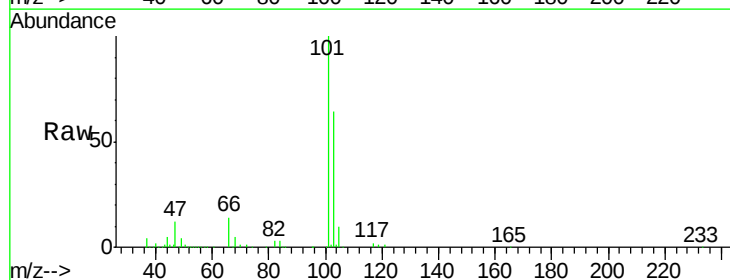
Acq: 14 Dec 2017 13:54

Tgt Ion:101 Resp: 260760

Ion Ratio Lower Upper

101 100

103 64.3 51.8 77.8



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

200000

150000

100000

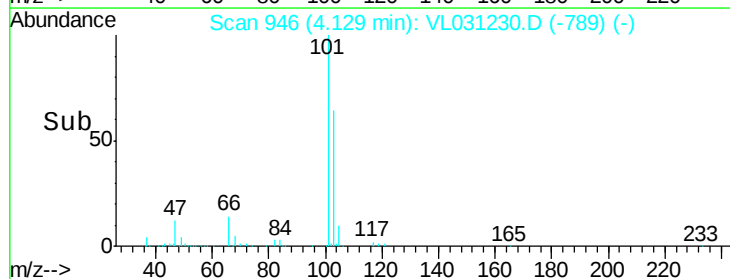
50000

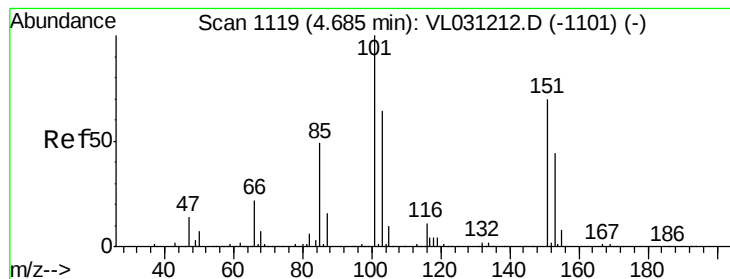
0

4.10

4.15

Time-->





#12

1,1,2-Trichlorotrifluoroethane

Concen: 7.42 ppbv

RT: 4.69 min Scan# 1120

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampled :

MID

Tot Ion:101 Resp: 1023586

Ion Ratio Lower Upper

101 100

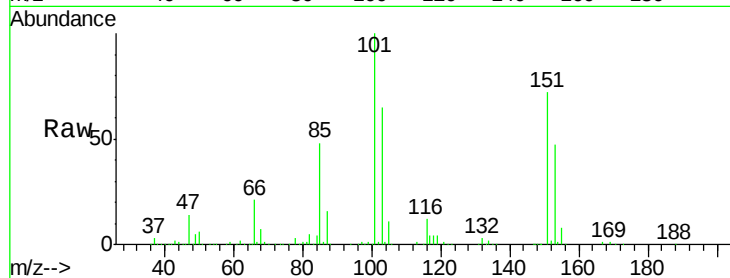
151 72.5 56.5 84.7

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Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

600000

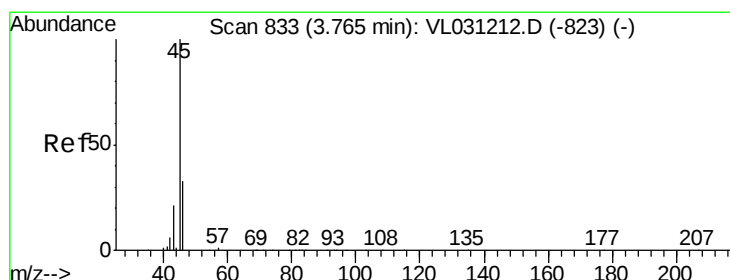
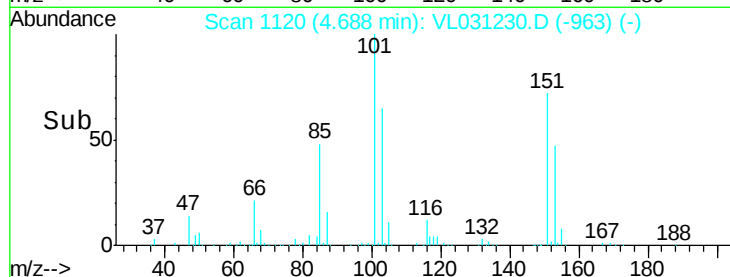
400000

200000

0

4.60 4.65 4.70 4.75

Time-->



#13

Ethanol

Concen: 13.88 ppbv

RT: 3.77 min Scan# 835

Delta R.T. 0.01 min

Lab File: VL031230.D

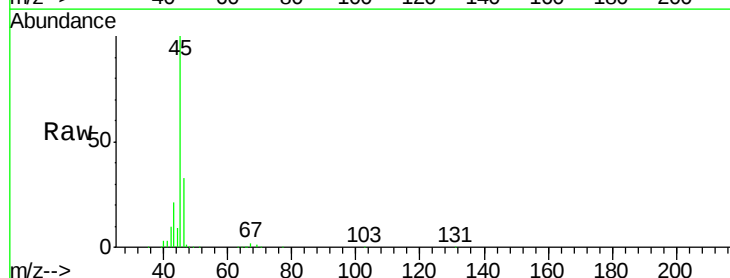
Acq: 14 Dec 2017 13:54

Tgt Ion: 45 Resp: 316625

Ion Ratio Lower Upper

45 100

46 35.3 14.6 58.4



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0

150000

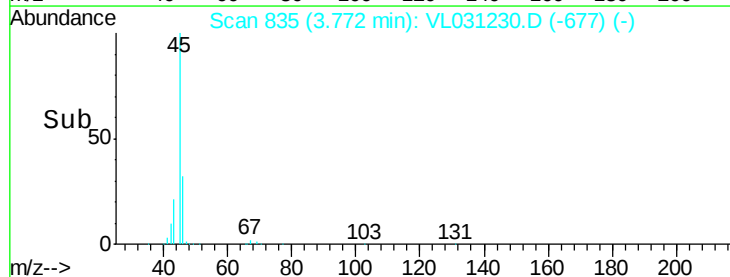
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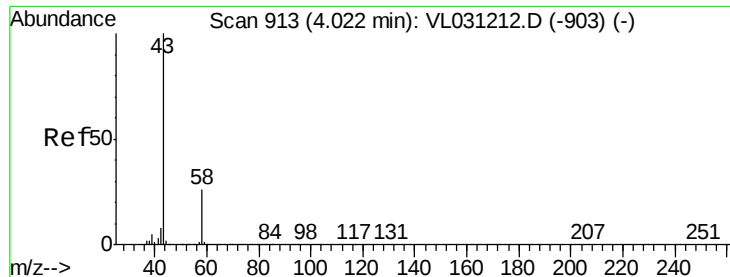
50000

0

3.70 3.75 3.80 3.85 3.90

Time-->





#15

Acetone

Concen: 3.51 ppbv

RT: 4.04 min Scan# 917

Delta R.T. 0.01 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampleId :

MID

Tot Ion: 43 Resp: 656701

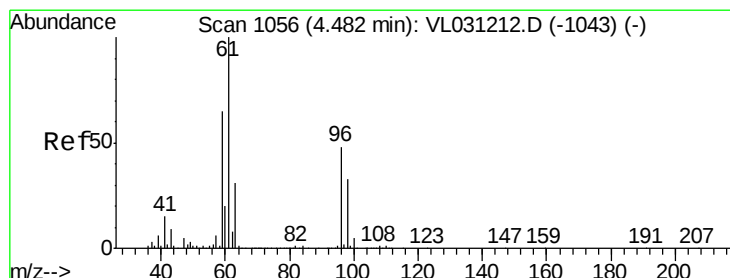
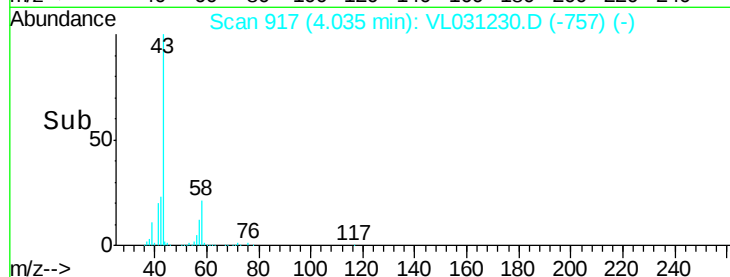
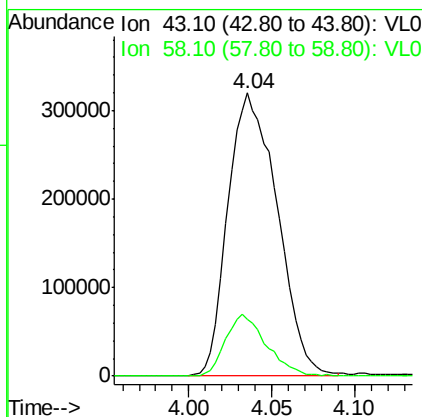
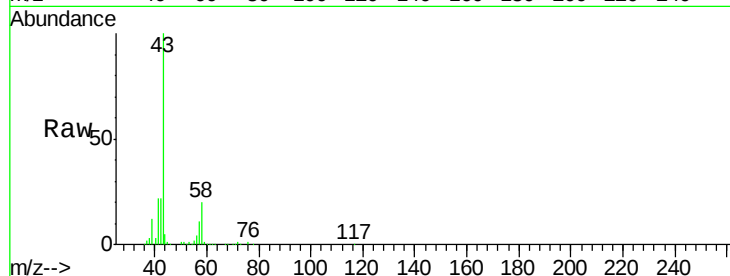
Ion Ratio Lower Upper

43 100

58 18.5 20.3 30.5#

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#18

1,1-Dichloroethene

Concen: 6.07 ppbv

RT: 4.48 min Scan# 1056

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

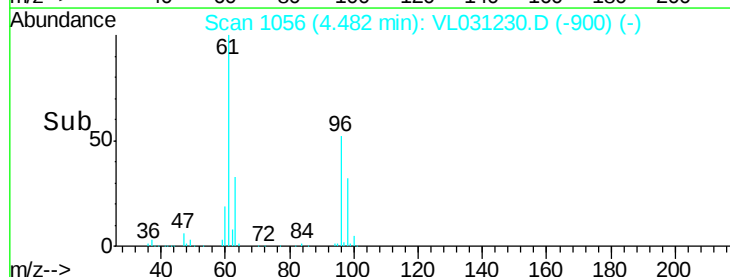
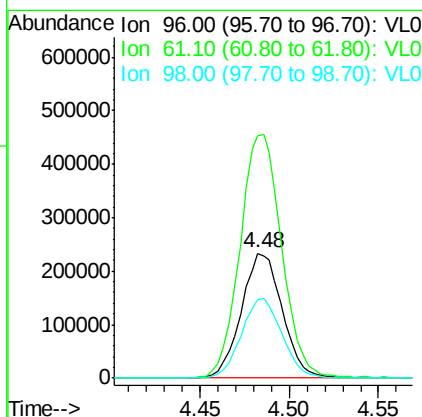
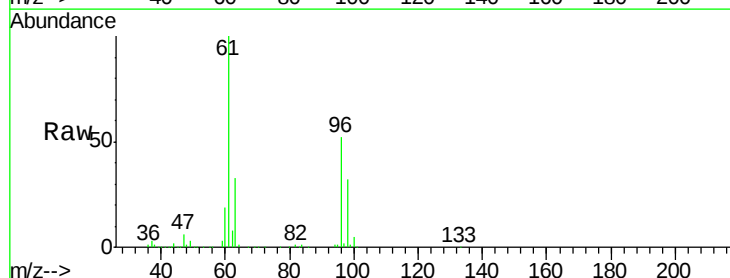
Tgt Ion: 96 Resp: 375083

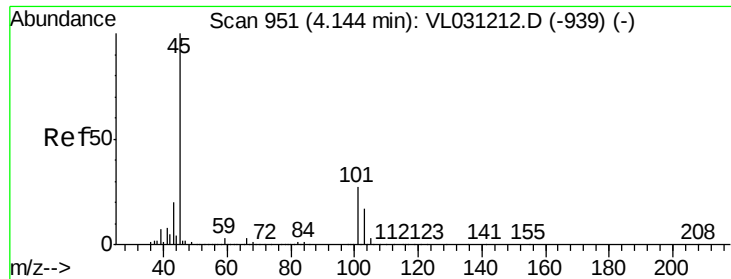
Ion Ratio Lower Upper

96 100

61 193.8 166.8 250.2

98 62.7 55.0 82.6





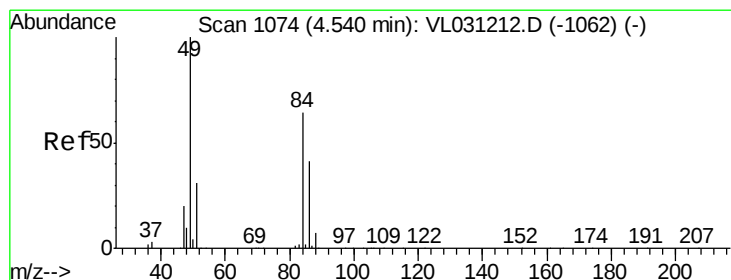
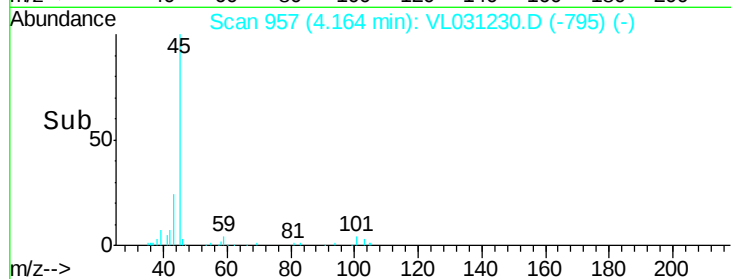
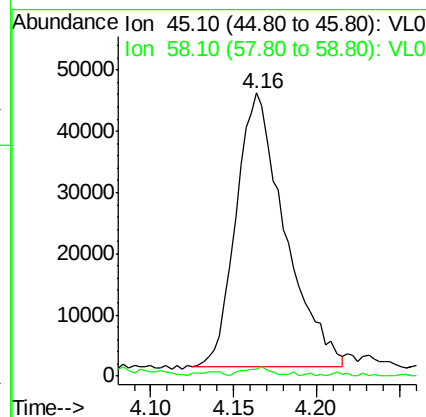
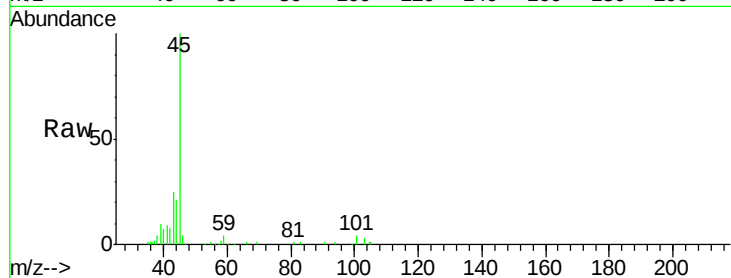
#19
Isopropyl Alcohol
Concen: 0.77 ppbv
RT: 4.16 min Scan# 957
Delta R.T. 0.02 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Instrument :
MSVOA_L
ClientSampled :
MID

Tot Ion: 45 Resp: 91285
Ion Ratio Lower Upper
45 100
58 134.0 27.2 40.8#

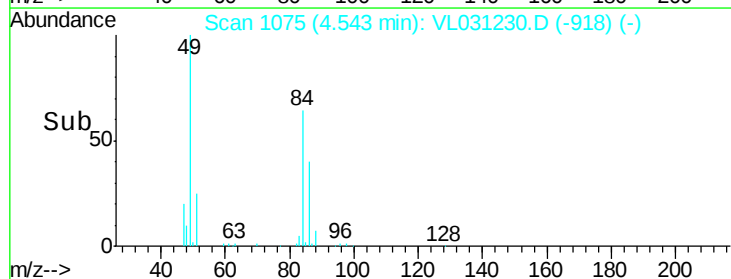
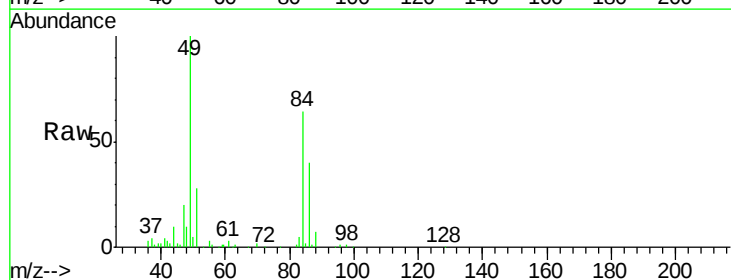
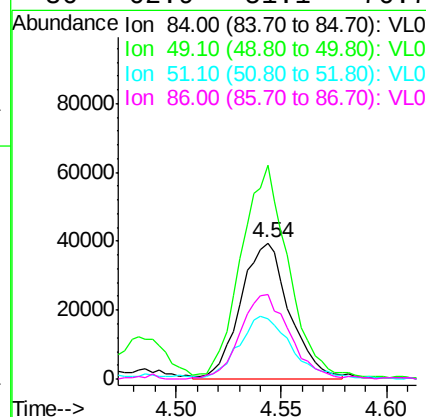
Manual Integrations
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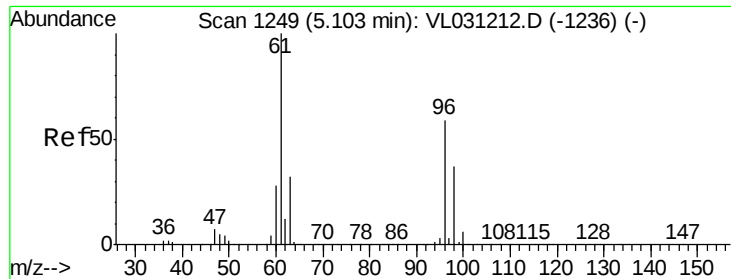
MMDadoda
12/15/2017 4:07:11 PM



#20
Methylene Chloride
Concen: 1.02 ppbv
RT: 4.54 min Scan# 1075
Delta R.T. 0.00 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Tgt Ion: 84 Resp: 63398
Ion Ratio Lower Upper
84 100
49 157.3 125.8 188.6
51 43.4 39.3 58.9
86 62.9 51.1 76.7





#22

trans-1,2-Dichloroethene

Concen: 0.34 ppbv

RT: 5.11 min Scan# 1250

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

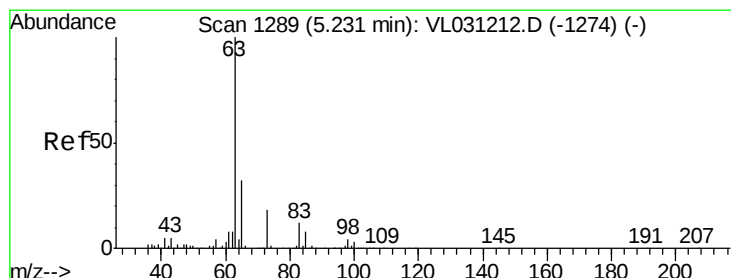
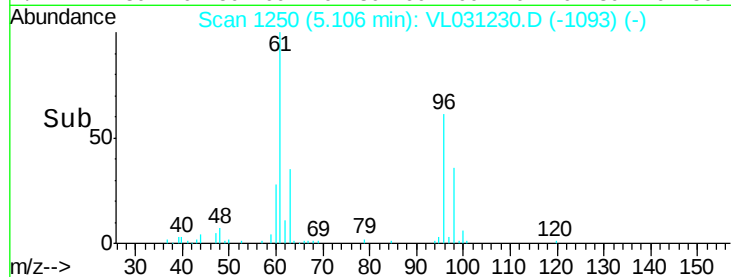
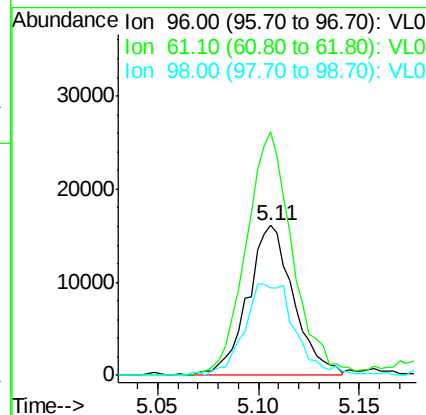
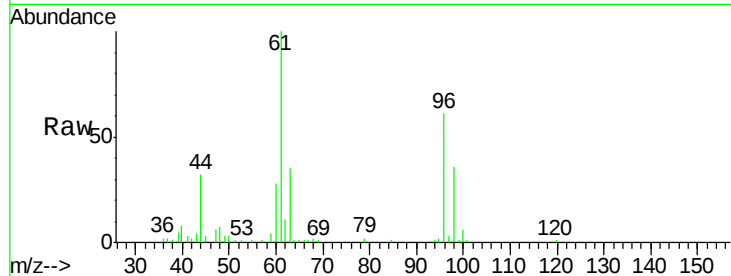
ClientSampleId :

MID

Tot Ion:	96	Resp:	25570
Ion	Ratio	Lower	Upper
96	100		
61	162.7	135.0	202.4
98	56.4	50.5	75.7

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#24

1,1-Dichloroethane

Concen: 24.56 ppbv

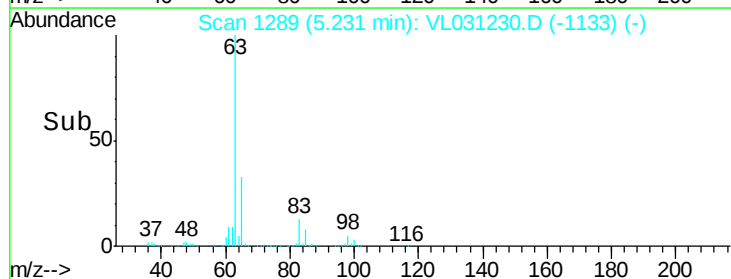
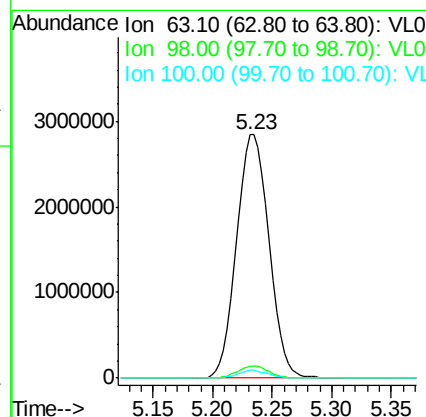
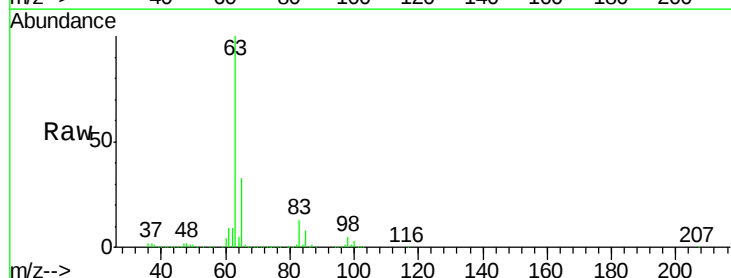
RT: 5.23 min Scan# 1289

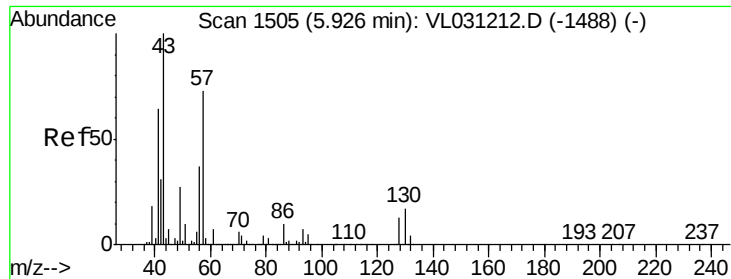
Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Tgt Ion:	63	Resp:	5376527
Ion	Ratio	Lower	Upper
63	100		
98	4.8	2.3	6.8
100	3.1	1.4	4.2





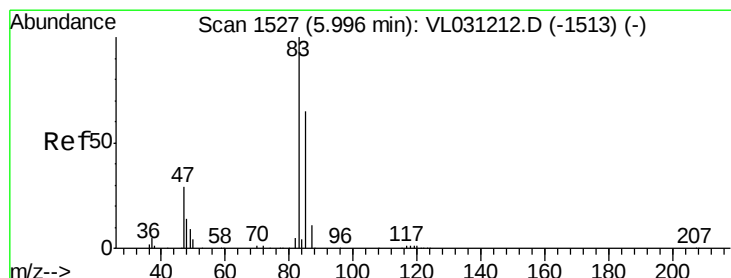
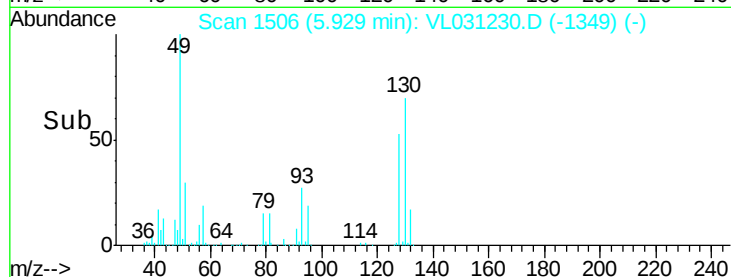
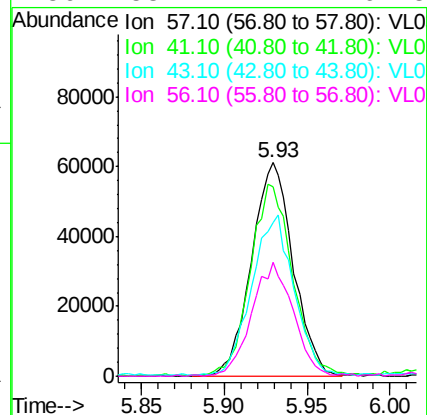
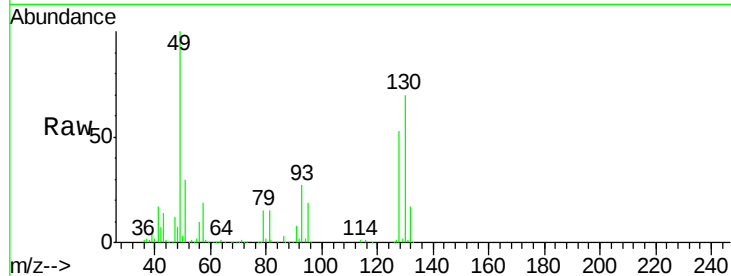
#26
Hexane
Concen: 0.59 ppbv
RT: 5.93 min Scan# 1506
Delta R.T. 0.00 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Instrument :
MSVOA_L
ClientSampleId :
MID

Tot Ion	Ratio	Lower	Upper
57	100		
41	92.7	70.3	105.5
43	76.1	173.8	260.8#
56	53.4	41.7	62.5

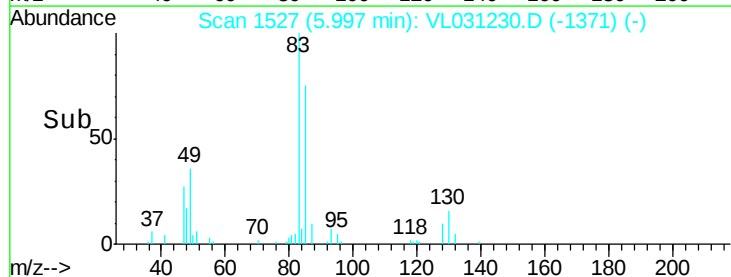
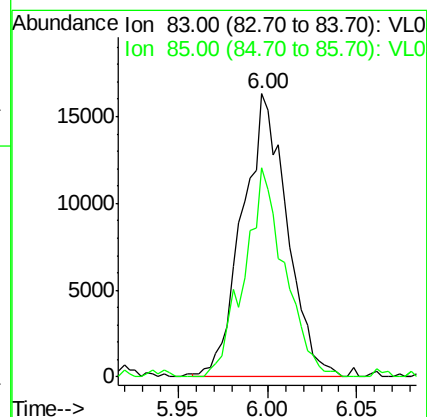
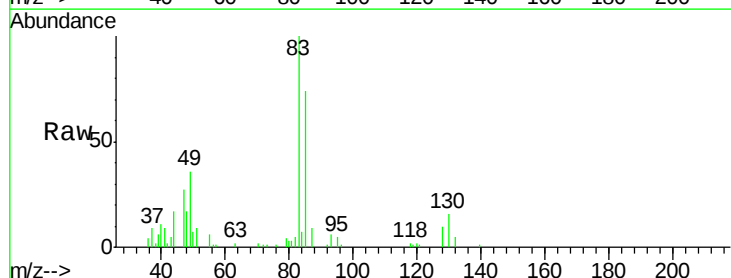
Manual Integrations
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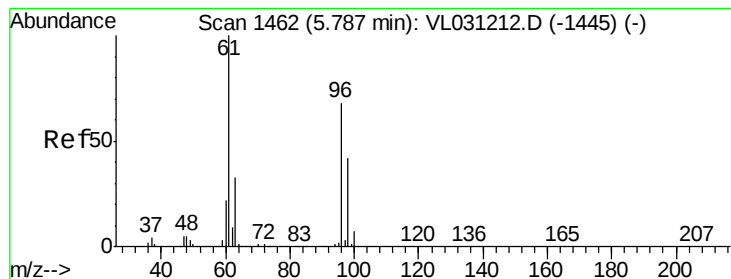
MMMadoda
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#29
Chloroform
Concen: 0.12 ppbv
RT: 6.00 min Scan# 1527
Delta R.T. 0.00 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Tgt Ion	Ratio	Lower	Upper
83	100		
85	74.0	51.8	77.6





#31

cis-1,2-Dichloroethene

Concen: 0.16 ppbv

RT: 5.79 min Scan# 1462

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

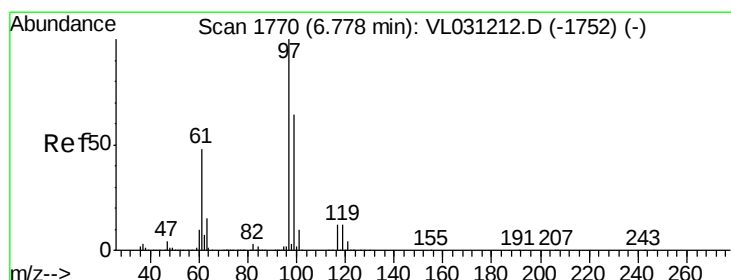
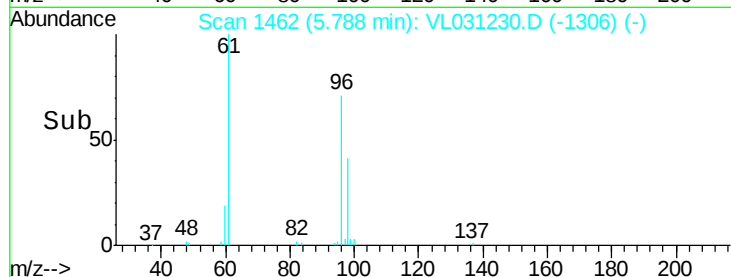
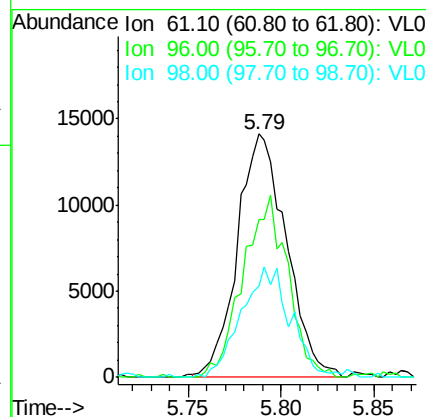
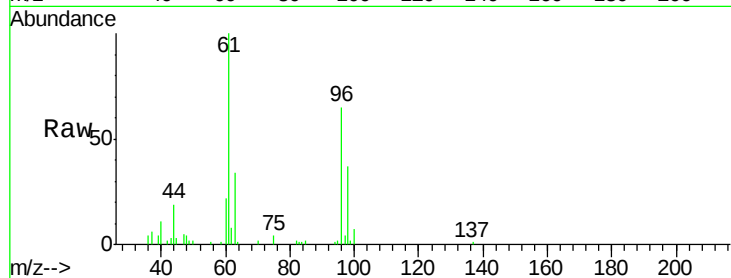
ClientSampleId :

MID

Tot Ion:	61	Resp:	25847
Ion	Ratio	Lower	Upper
61	100		
96	65.0	54.4	81.6
98	37.4	33.6	50.4

Manual Integrations
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#32

1,1,1-Trichloroethane

Concen: 66.70 ppbv

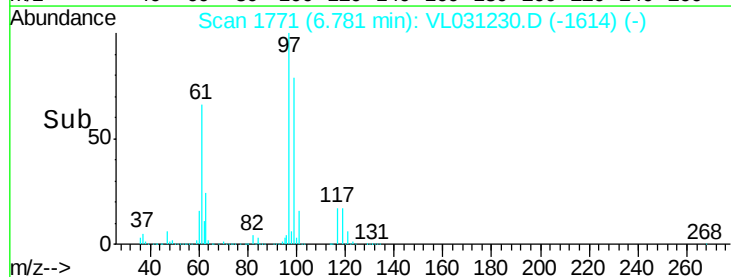
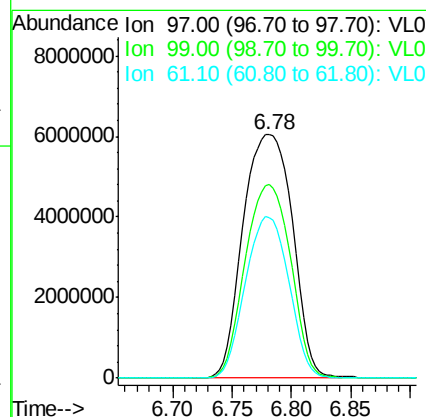
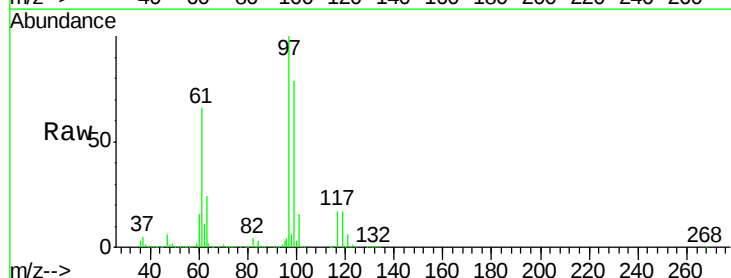
RT: 6.78 min Scan# 1771

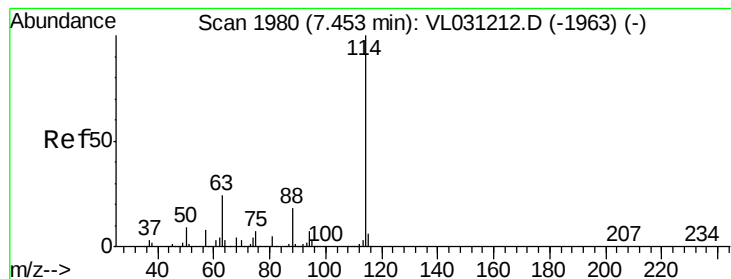
Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Tgt Ion:	97	Resp:	17454710
Ion	Ratio	Lower	Upper
97	100		
99	73.5	51.4	77.0
61	58.6	38.4	57.6#





#33

1,4-Difluorobenzene

Concen: 10.00 ppbv

RT: 7.45 min Scan# 1980

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampled :

MID

Tot Ion:114 Resp: 3489685

Ion Ratio Lower Upper

114 100

63 24.2 19.8 29.8

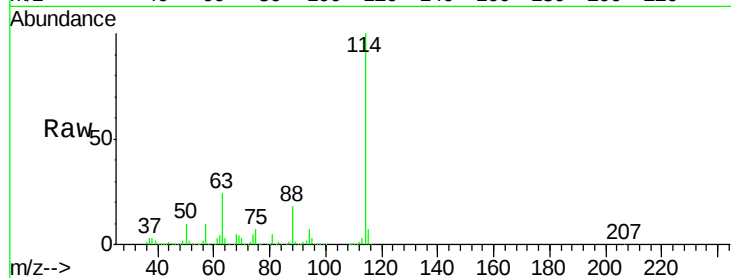
88 17.4 14.2 21.4

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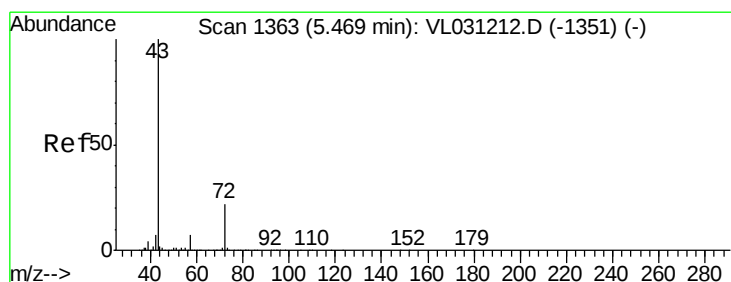
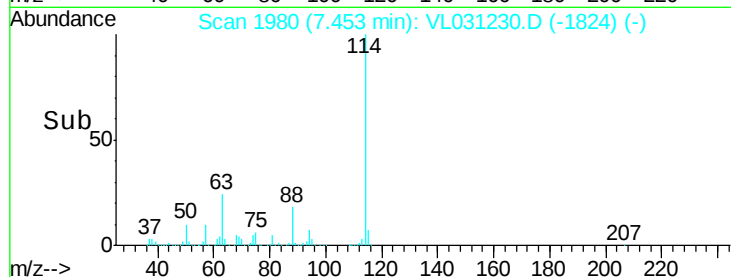
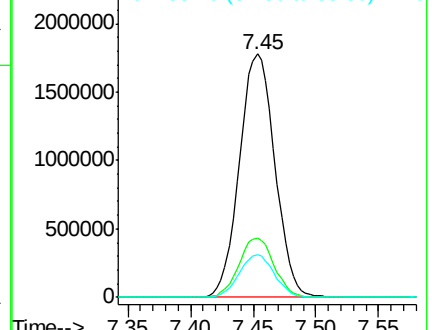
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Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.18 ppbv

RT: 5.49 min Scan# 1370

Delta R.T. 0.02 min

Lab File: VL031230.D

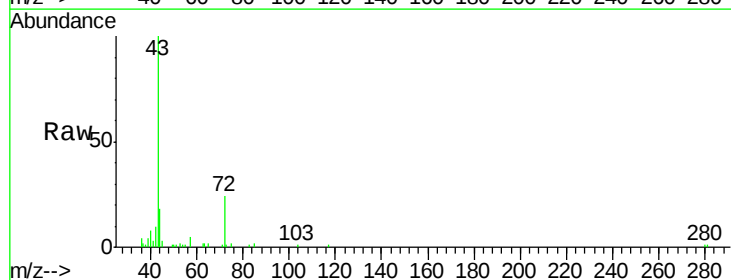
Acq: 14 Dec 2017 13:54

Tgt Ion: 43 Resp: 43361

Ion Ratio Lower Upper

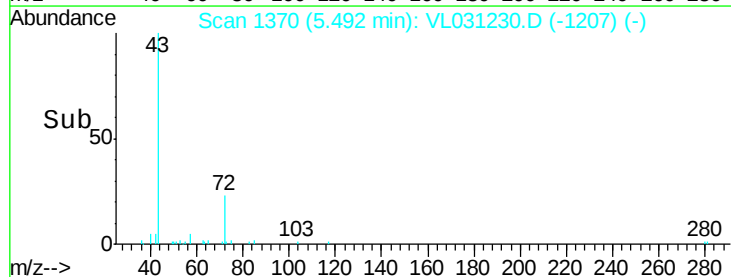
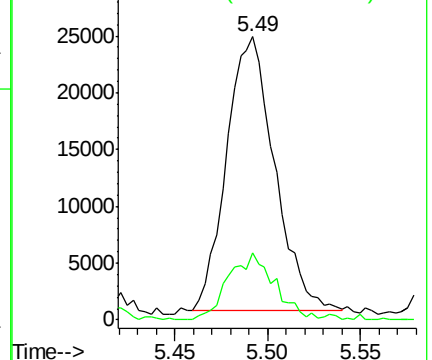
43 100

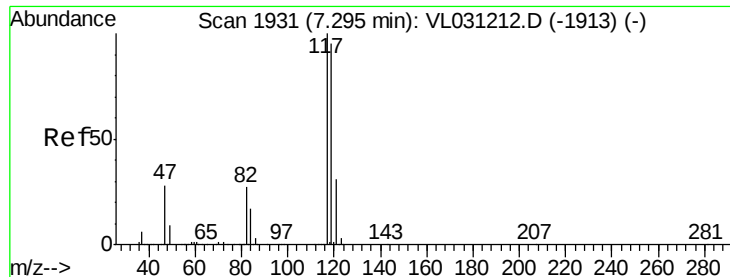
72 24.2 18.1 27.1



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.04 ppbv

RT: 7.30 min Scan# 1931

Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

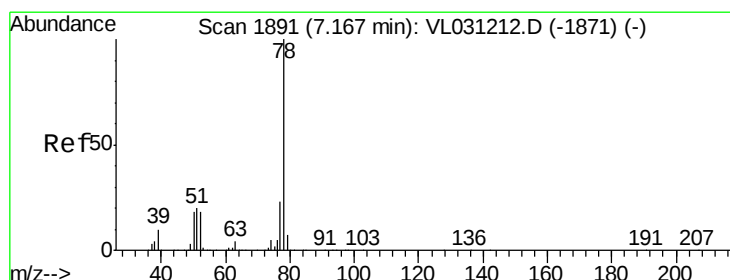
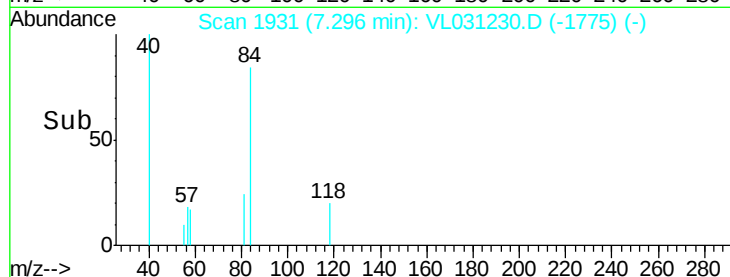
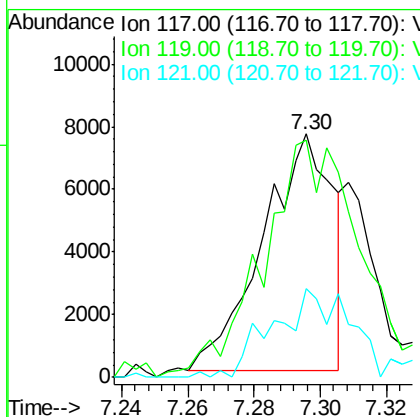
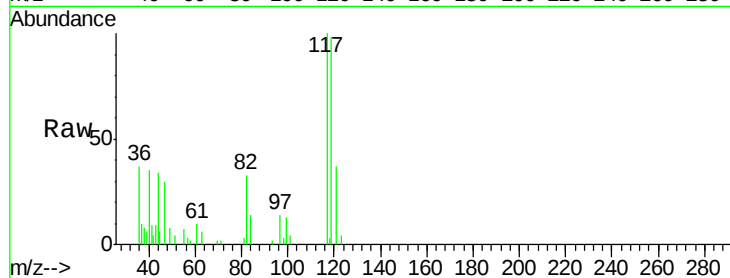
ClientSampled :

MID

Tot Ion:	117	Resp:	11054
Ion	Ratio	Lower	Upper
117	100		
119	96.4	75.9	113.9
121	37.9	24.6	37.0#

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#36

Benzene

Concen: 0.20 ppbv

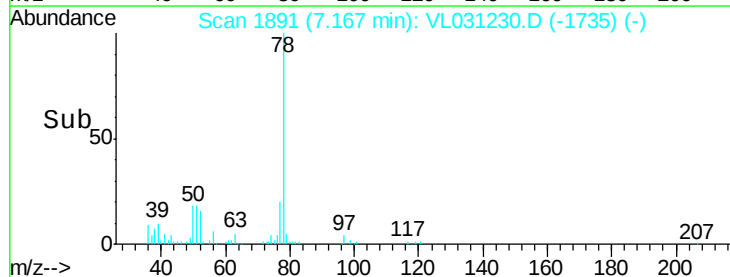
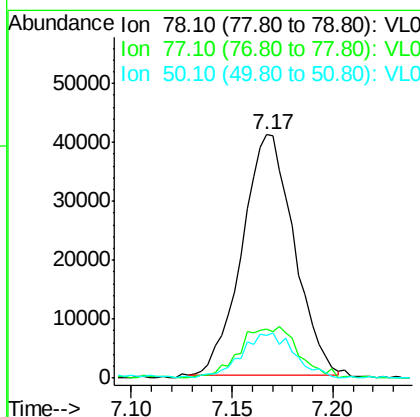
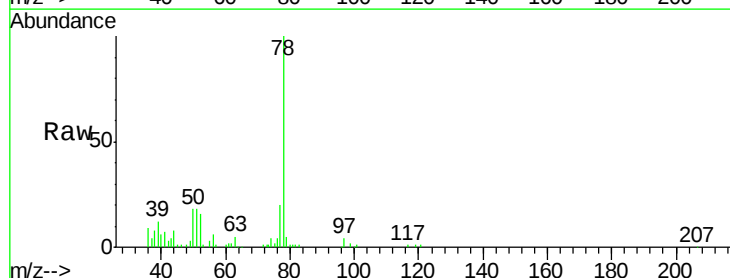
RT: 7.17 min Scan# 1891

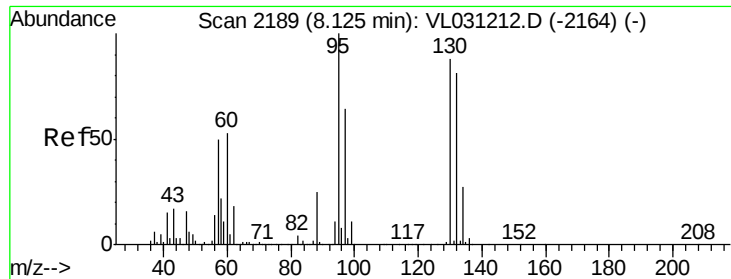
Delta R.T. 0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Tgt Ion:	78	Resp:	73847
Ion	Ratio	Lower	Upper
78	100		
77	20.3	18.1	27.1
50	17.8	14.6	21.8





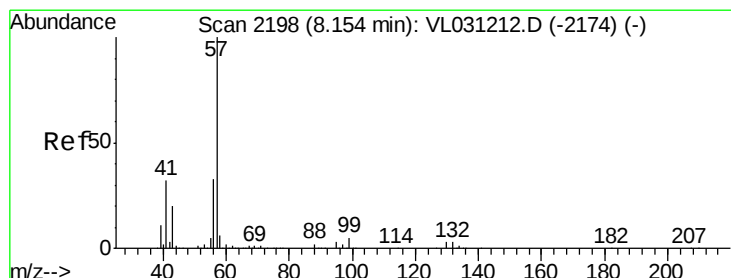
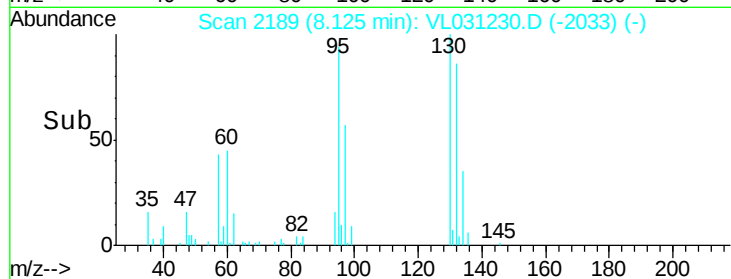
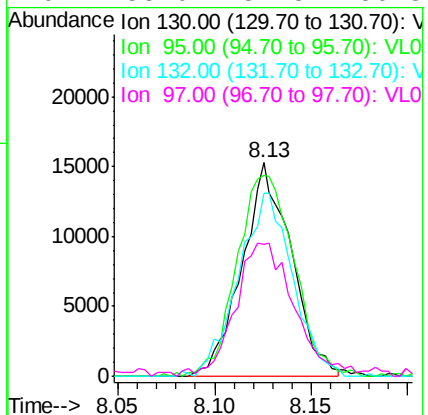
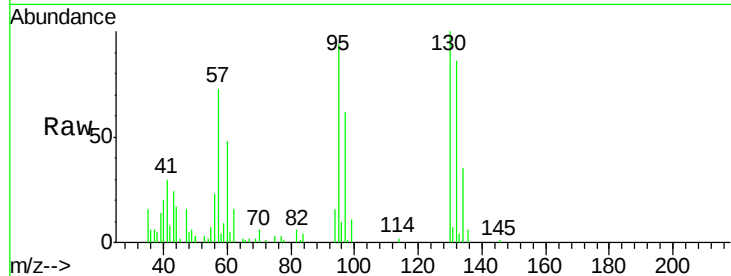
#38
 Trichloroethene
 Concen: 0.19 ppbv
 RT: 8.13 min Scan# 2189
 Delta R.T. 0.00 min
 Lab File: VL031230.D
 Acq: 14 Dec 2017 13:54

Instrument :
 MSVOA_L
 ClientSampleId :
 MID

Tot Ion	Ion	Ratio	Resp	Lower	Upper
130	100		26945		
95	92.3		90.6	135.8	
132	84.6		73.5	110.3	
97	58.0		57.8	86.8	

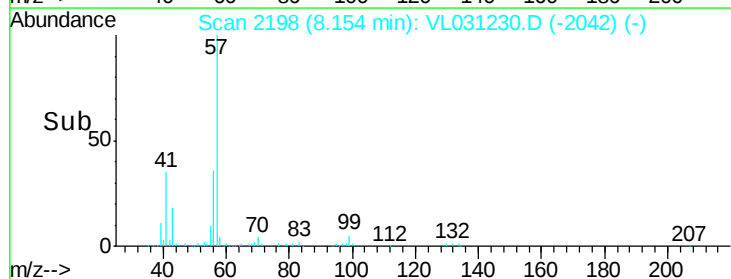
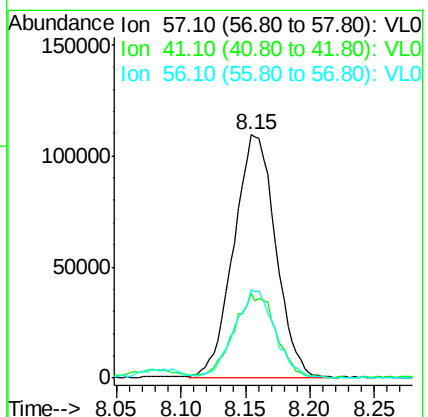
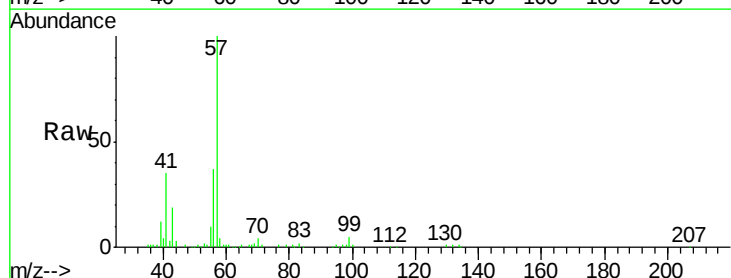
Manual Integrations
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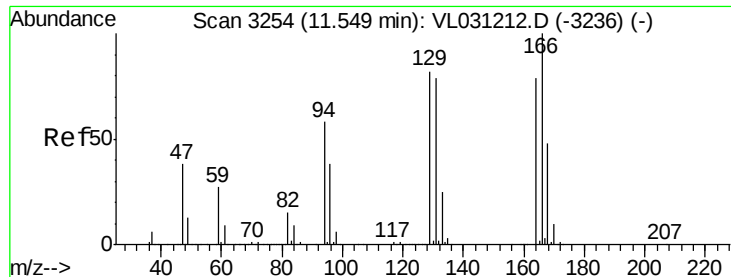
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#44
 2,2,4-Trimethylpentane
 Concen: 0.44 ppbv
 RT: 8.15 min Scan# 2198
 Delta R.T. 0.00 min
 Lab File: VL031230.D
 Acq: 14 Dec 2017 13:54

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
57	100		247373		
41	35.3		25.5	38.3	
56	35.2		25.0	37.6	





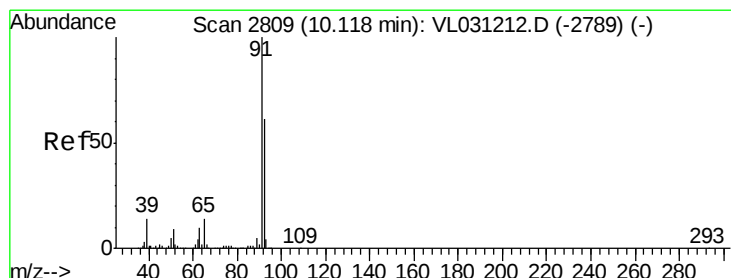
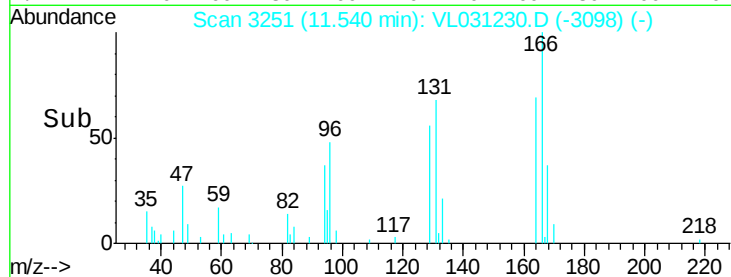
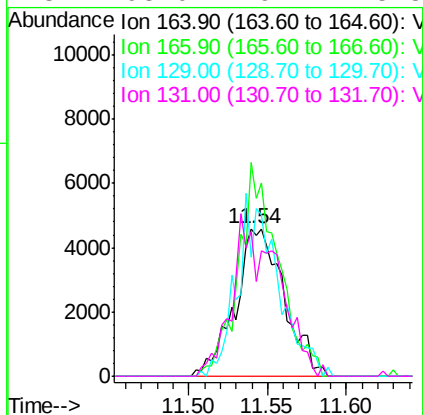
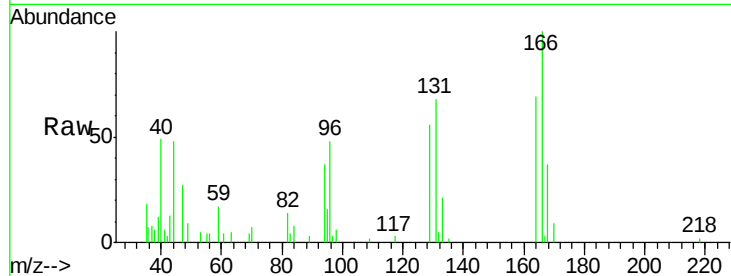
#52
Tetrachloroethene
Concen: 0.07 ppbv m
RT: 11.54 min Scan# 3251
Delta R.T. -0.01 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Instrument :
MSVOA_L
ClientSampleId :
MID

Tot Ion	Ratio	Lower	Upper
164	100		
166	144.5	100.6	151.0
129	80.7	82.9	124.3
131	98.0	79.2	118.8

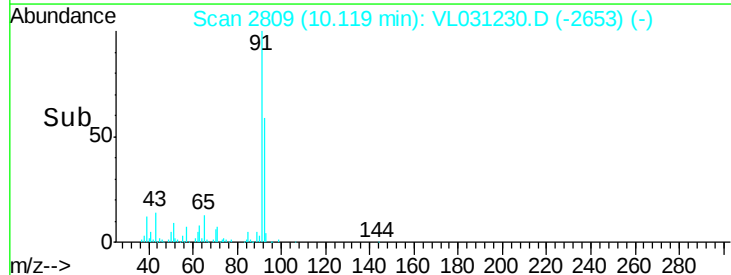
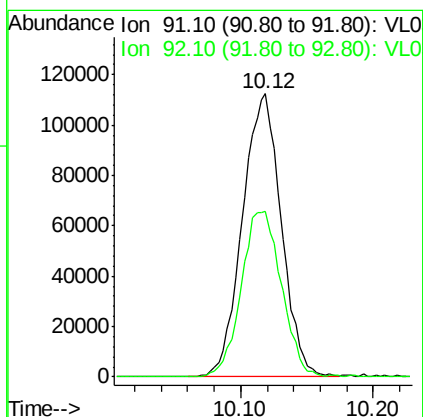
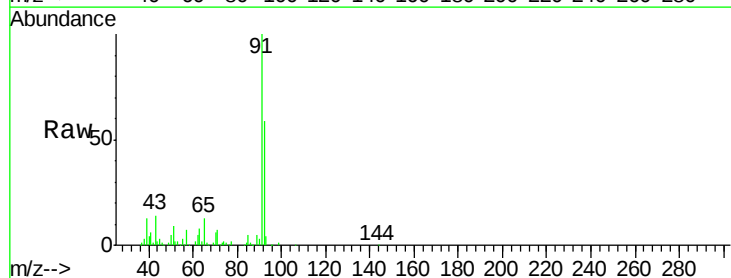
Manual Integrations
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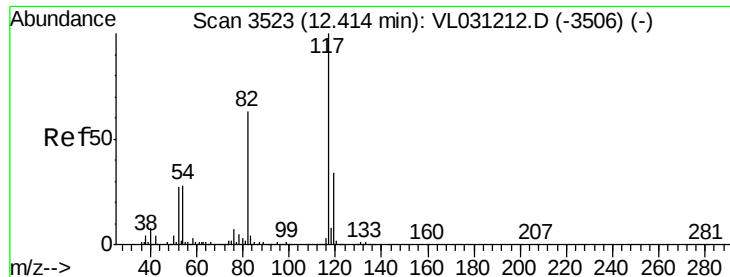
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#53
Toluene
Concen: 0.57 ppbv
RT: 10.12 min Scan# 2809
Delta R.T. 0.00 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Tgt Ion	Ratio	Lower	Upper
91	100		
92	60.6	49.1	73.7





#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.41 min Scan# 3522

Delta R.T. -0.00 min

Lab File: VL031230.D

Acq: 14 Dec 2017 13:54

Instrument :

MSVOA_L

ClientSampled :

MID

Tot Ion:117 Resp: 3084733

Ion Ratio Lower Upper

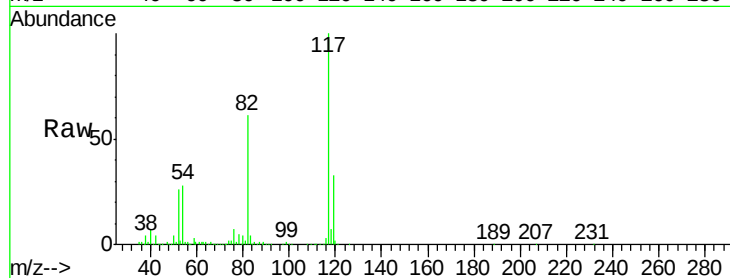
117 100

82 62.3 48.1 72.1

119 32.5 23.1 34.7

Manual Integrations
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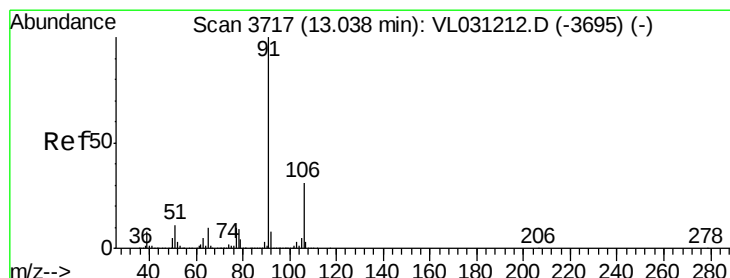
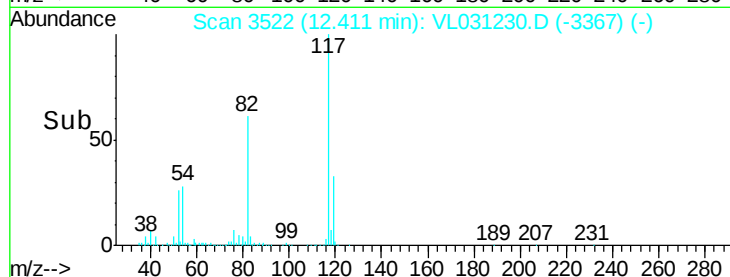
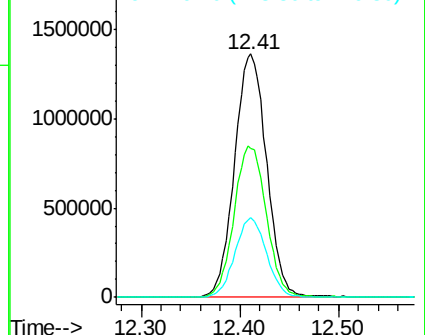
MMDadoda
12/15/2017 4:07:11 PM



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: 0.08 ppbv

RT: 13.03 min Scan# 3715

Delta R.T. -0.01 min

Lab File: VL031230.D

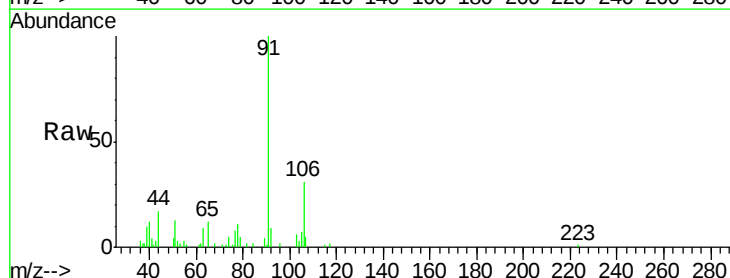
Acq: 14 Dec 2017 13:54

Tgt Ion: 91 Resp: 41074

Ion Ratio Lower Upper

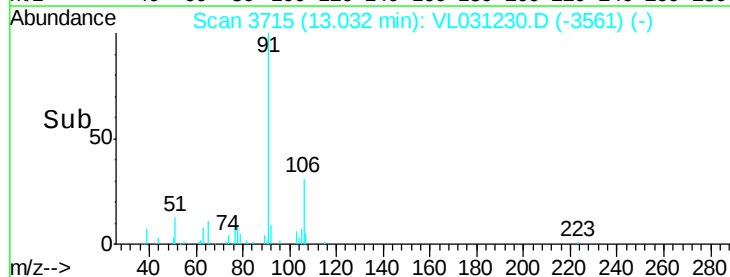
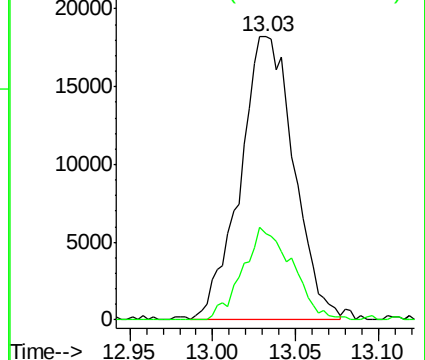
91 100

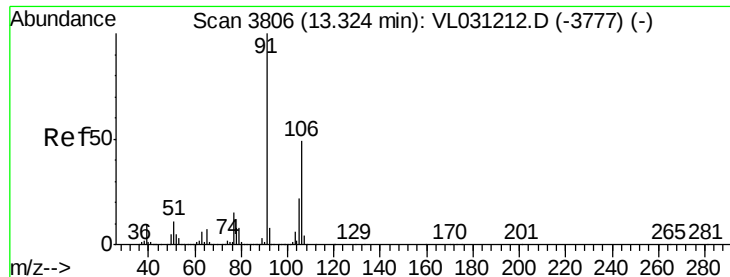
106 30.6 25.1 37.7



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





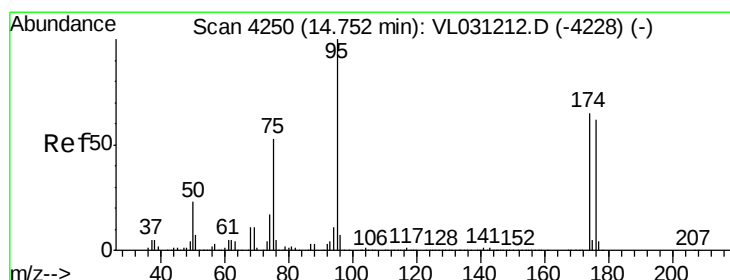
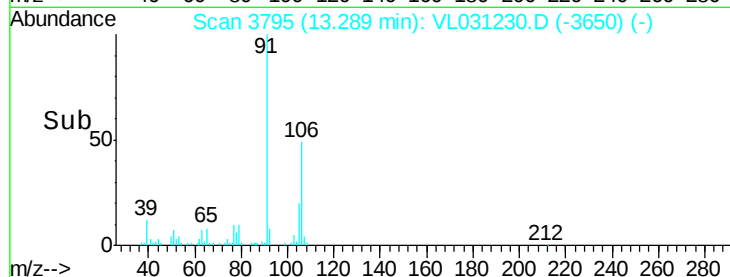
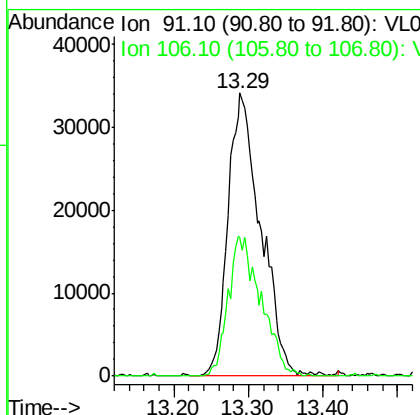
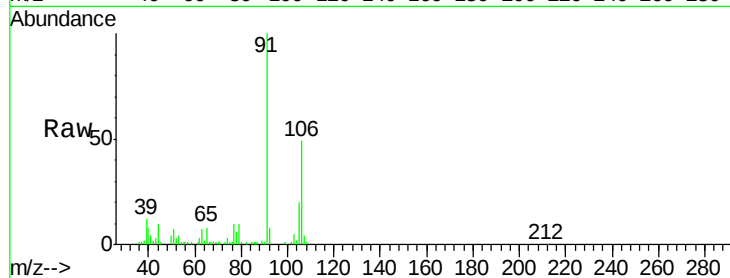
#59
m/p-Xylene
Concen: 0.26 ppbv m
RT: 13.29 min Scan# 3795
Delta R.T. -0.04 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Instrument :
MSVOA_L
ClientSampleId :
MID

Tot Ion: 91 Resp: 104066
Ion Ratio Lower Upper
91 100
106 0.0 38.5 57.7#

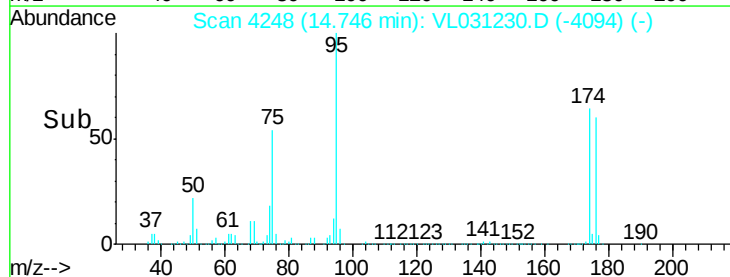
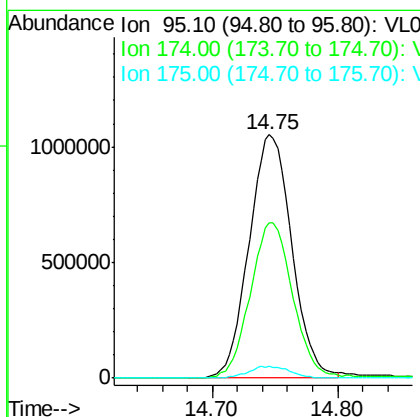
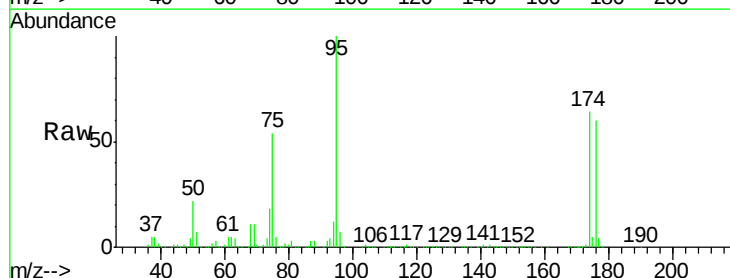
Manual Integrations
APPROVED

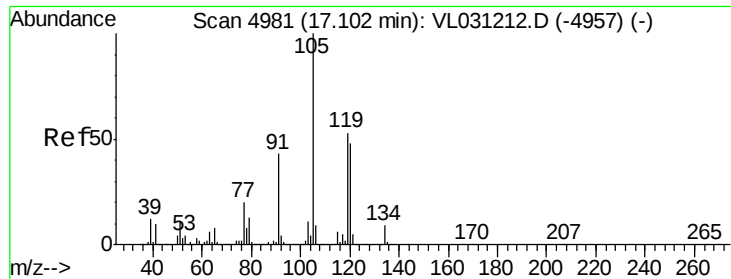
MMDadoda
12/15/2017 4:07:11 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 11.37 ppbv
RT: 14.75 min Scan# 4248
Delta R.T. -0.01 min
Lab File: VL031230.D
Acq: 14 Dec 2017 13:54

Tgt Ion: 95 Resp: 2495519
Ion Ratio Lower Upper
95 100
174 64.7 52.5 78.7
175 4.8 4.1 6.1





#74
 1,2,4-Trimethylbenzene
 Concen: 0.12 ppbv
 RT: 17.10 min Scan# 4979
 Delta R.T. -0.01 min
 Lab File: VL031230.D
 Acq: 14 Dec 2017 13:54

Instrument :
 MSVOA_L
 ClientSampleId :
 MID

Tot Ion	Ratio	Resp	Lower	Upper
105	100	48761		
120	44.4		38.6	58.0
91	17.5		34.2	51.4#
77	15.8		16.1	24.1#

Manual Integrations
 APPROVED

MMDadoda
 12/15/2017 4:07:11 PM

