

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL061319\
 Data File : VL033915.D
 Acq On : 14 Jun 2019 2:50
 Operator : SY/AP
 Sample : K3367-01DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1-BSMNTDUP

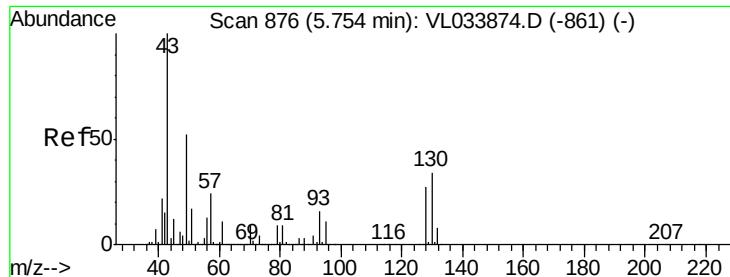
Manual Integrations
 APPROVED

MMDadoda
 6/20/2019 8:59:23 AM

Quant Time: Jun 16 18:14:58 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 0
 QLast Update : Fri Jun 07 08:53:27 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.75	49	851917	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.27	114	2043834	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.22	117	2081321	10.00	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.56	95	1569257	9.18	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	91.80%
Target Compounds						
					Ovalue	
2) Dichlorodifluoromethane	3.07	85	35899	0.260	ppbv	92
3) Chlorodifluoromethane	3.00	51	96880m	0.966	ppbv	
4) Chloromethane	3.16	50	32719	0.572	ppbv	94
9) Propene	3.04	41	104703m	2.790	ppbv	
10) Heptane	8.23	43	32781	0.346	ppbv	97
11) Trichlorofluoromethane	4.00	101	41386m	0.232	ppbv	
12) 1,1,2-Trichlorotrifluoroet	4.53	101	8975m	0.074	ppbv	
13) Ethanol	3.64	45	1781821	145.937	ppbv	96
15) Acetone	3.89	43	912357	7.343	ppbv	97
19) Isopropyl Alcohol	4.02	45	142892	2.013	ppbv #	92
20) Methylene Chloride	4.40	84	33223	0.686	ppbv #	91
26) Hexane	5.77	57	89235	1.036	ppbv #	62
29) Chloroform	5.83	83	155253	1.052	ppbv	98
30) Cyclohexane	7.23	84	17423m	0.286	ppbv	
34) 2-Butanone	5.32	43	46274	0.401	ppbv	99
35) Carbon Tetrachloride	7.11	117	13967m	0.088	ppbv	
36) Benzene	6.98	78	117666	0.754	ppbv	98
38) Trichloroethene	7.95	130	2971m	0.049	ppbv	
44) 2,2,4-Trimethylpentane	7.98	57	171012	0.616	ppbv #	80
52) Tetrachloroethene	11.36	164	1225431	22.307	ppbv	97
53) Toluene	9.93	91	457523	2.648	ppbv	99
58) Ethyl Benzene	12.84	91	48969m	0.209	ppbv	
59) m/p-Xylene	13.10	91	166715m	0.781	ppbv	
60) o-Xylene	13.83	91	61937m	0.281	ppbv	
73) 1,3,5-Trimethylbenzene	16.14	105	41869m	0.170	ppbv	
74) 1,2,4-Trimethylbenzene	16.90	105	140136	0.492	ppbv #	75

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.75 min Scan# 874

Delta R.T. -0.01 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Instrument :

MSVOA_L

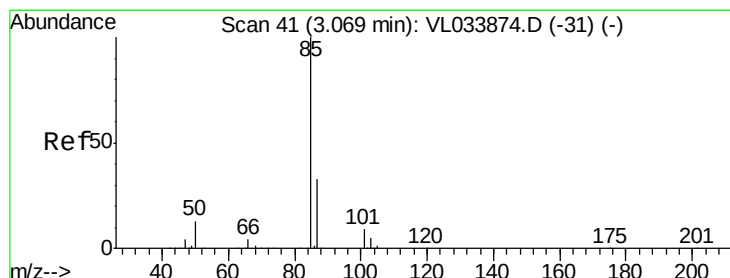
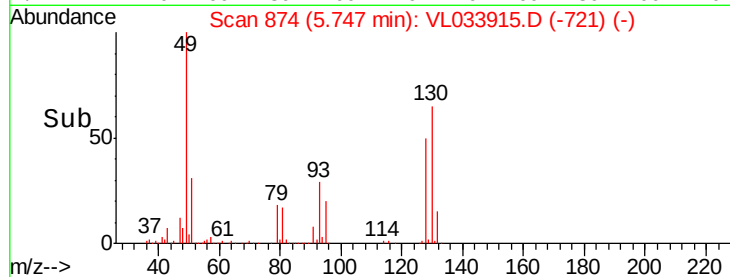
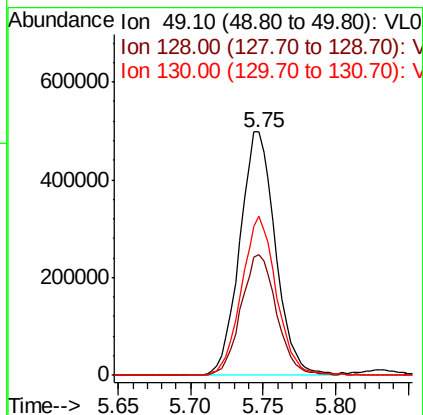
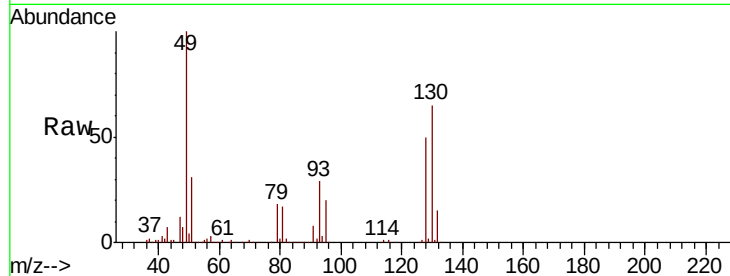
ClientSampleId :

IA1-BSMNTDUP

Tot Ion:	49	Resp:	851917
Ion	Ratio	Lower	Upper
49	100		
128	49.9	25.5	76.5
130	63.9	32.5	97.4

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#2

Dichlorodifluoromethane

Concen: 0.260 ppbv

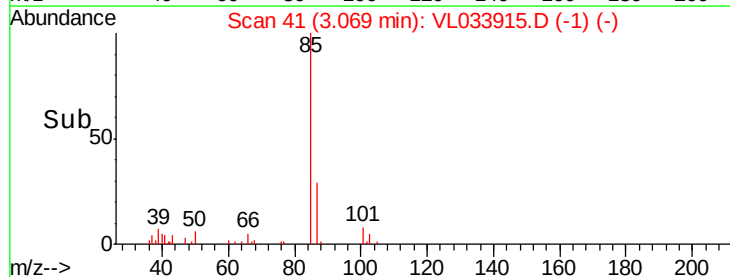
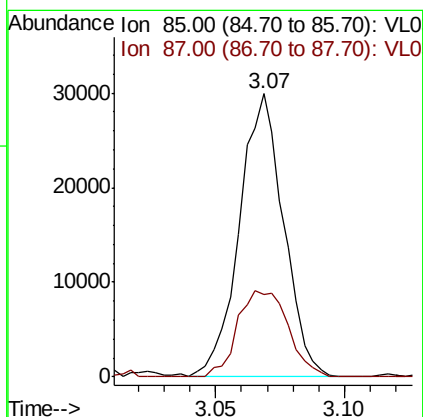
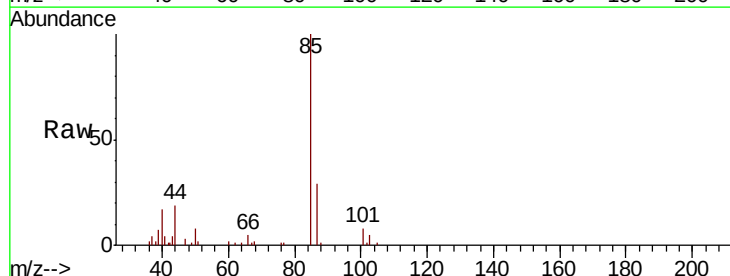
RT: 3.07 min Scan# 41

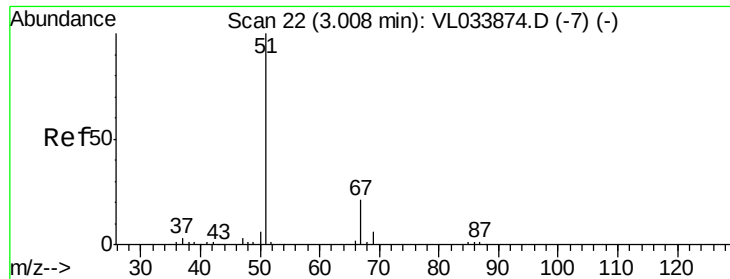
Delta R.T. -0.00 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Tgt Ion:	85	Resp:	35899
Ion	Ratio	Lower	Upper
85	100		
87	29.0	26.6	40.0





#3

Chlorodifluoromethane

Concen: 0.966 ppbv

RT: 3.00 min Scan# 21

Delta R.T. -0.00 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Tot Ion: 51 Resp: 96880

Ion Ratio Lower Upper

51 100

67 20.1 16.4 24.6

Instrument :

MSVOA_L

ClientSampleId :

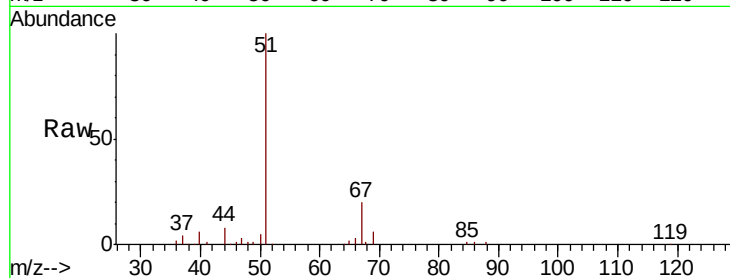
IA1-BSMNTDUP

Manual Integrations

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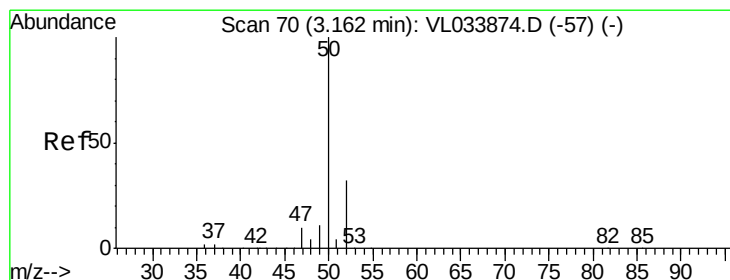
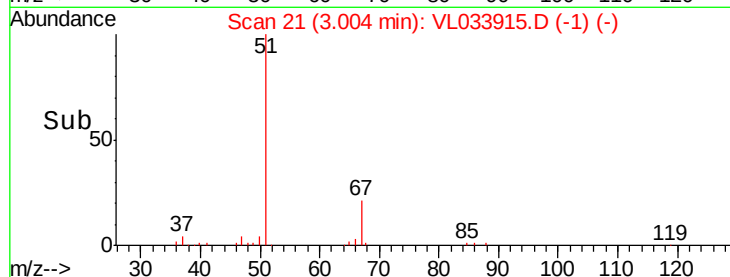
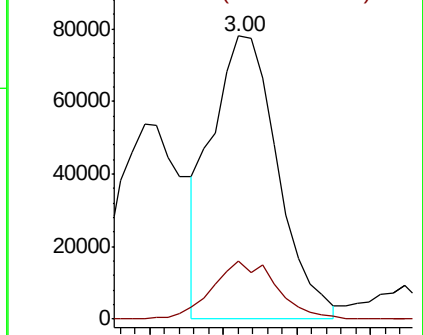
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.572 ppbv

RT: 3.16 min Scan# 71

Delta R.T. 0.00 min

Lab File: VL033915.D

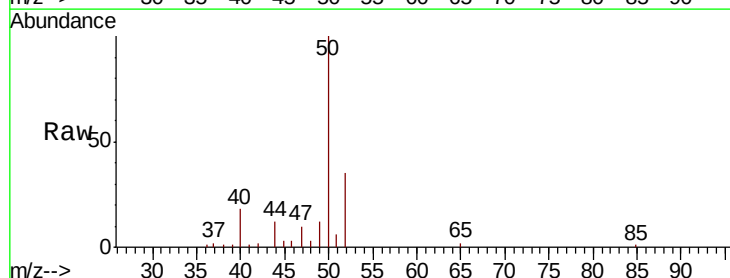
Acq: 14 Jun 2019 2:50

Tgt Ion: 50 Resp: 32719

Ion Ratio Lower Upper

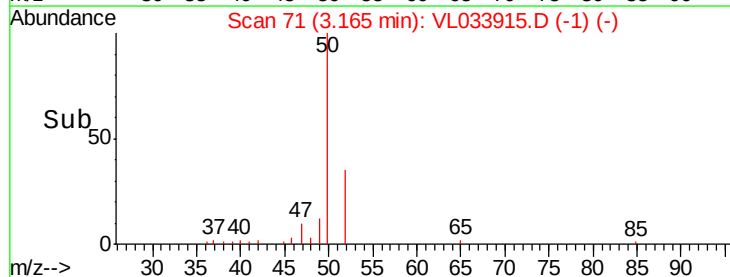
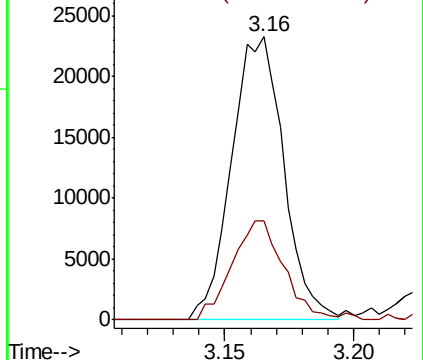
50 100

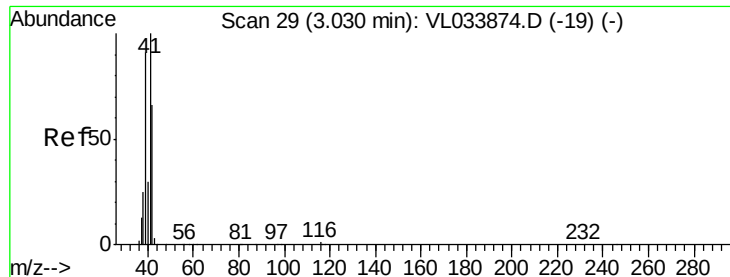
52 35.0 25.4 38.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 2.790 ppbv m

RT: 3.04 min Scan# 31

Delta R.T. 0.01 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Instrument :

MSVOA_L

ClientSampleId :

IA1-BSMNTDUP

Tot Ion: 41 Resp: 104703

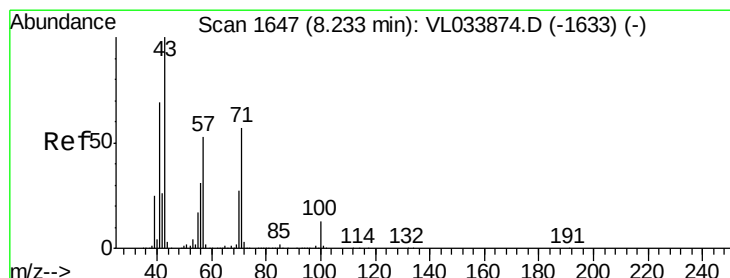
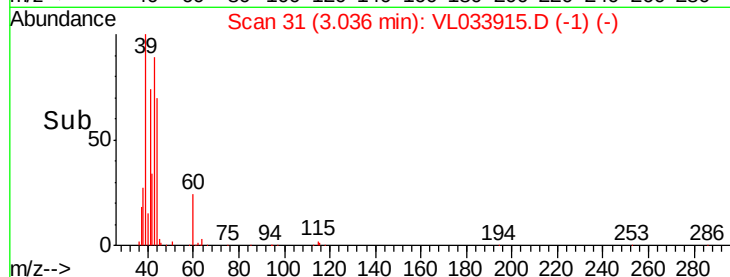
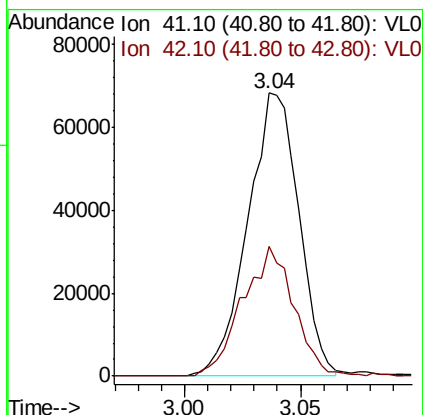
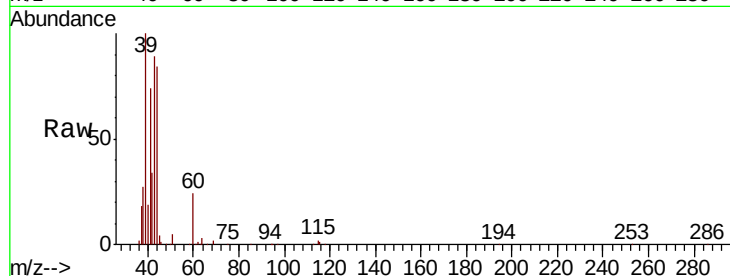
Ion Ratio Lower Upper

41 100

42 81.9 56.3 84.5

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#10

Heptane

Concen: 0.346 ppbv

RT: 8.23 min Scan# 1646

Delta R.T. -0.00 min

Lab File: VL033915.D

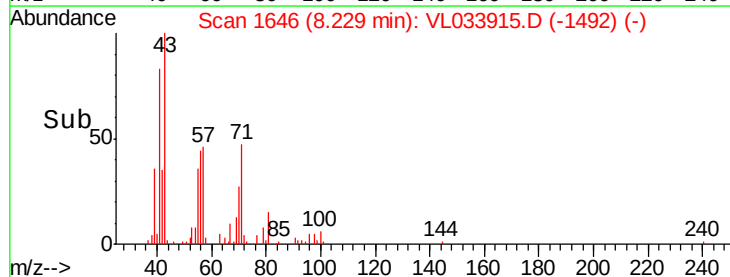
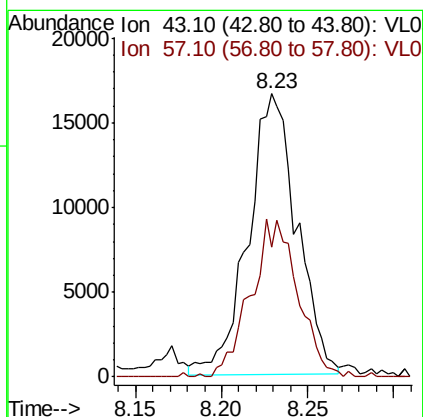
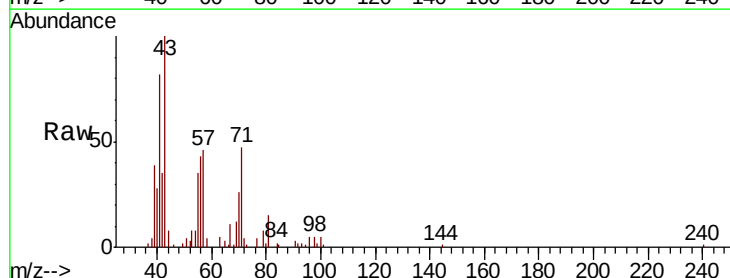
Acq: 14 Jun 2019 2:50

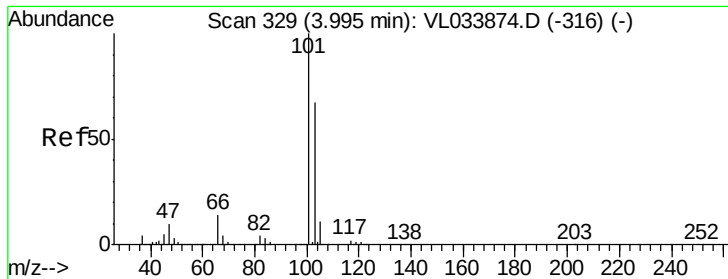
Tgt Ion: 43 Resp: 32781

Ion Ratio Lower Upper

43 100

57 53.9 41.7 62.5





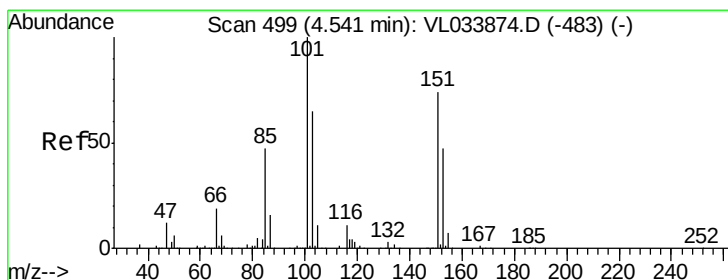
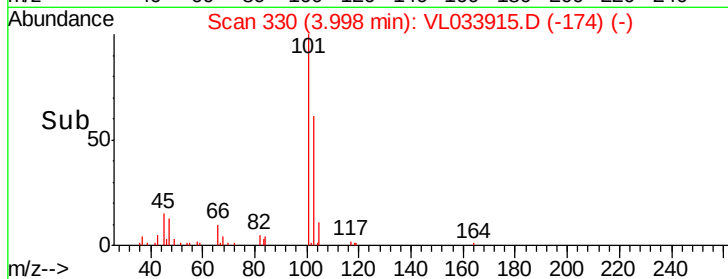
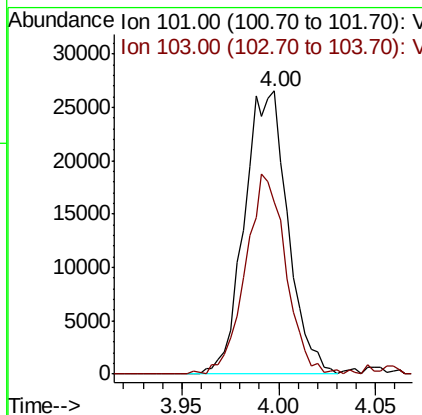
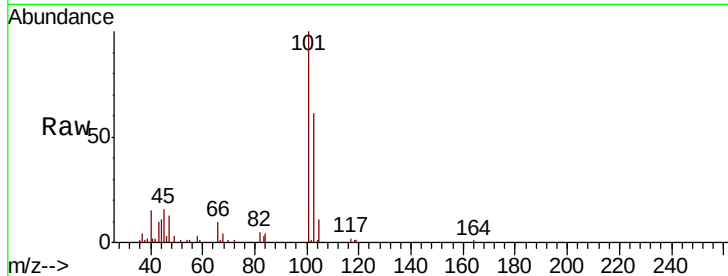
#11
 Trichlorofluoromethane
 Concen: 0.232 ppbv m
 RT: 4.00 min Scan# 330
 Delta R.T. 0.00 min
 Lab File: VL033915.D
 Acq: 14 Jun 2019 2:50

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1-BSMNTDUP

Tot Ion	Ratio	Lower	Upper
101	100		
103	60.6	53.6	80.4

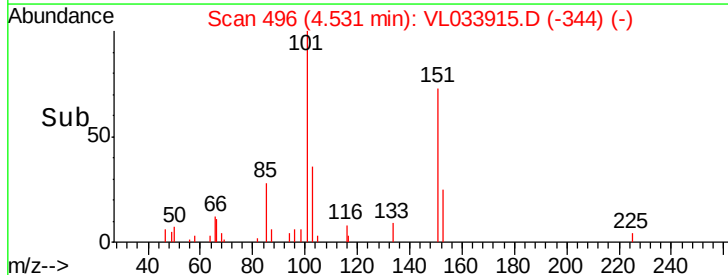
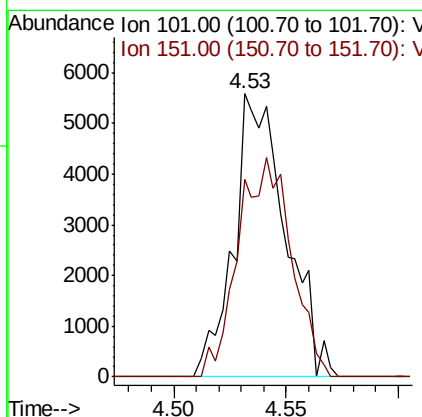
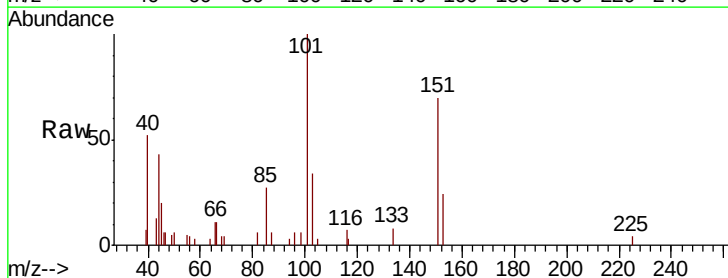
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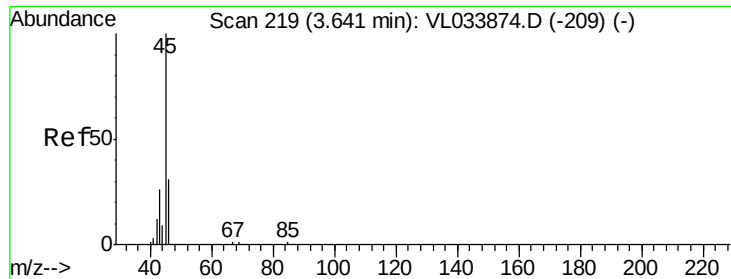
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#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.074 ppbv m
 RT: 4.53 min Scan# 496
 Delta R.T. -0.01 min
 Lab File: VL033915.D
 Acq: 14 Jun 2019 2:50

Tgt Ion	Ratio	Lower	Upper
101	100		
151	0.0	58.6	87.8#





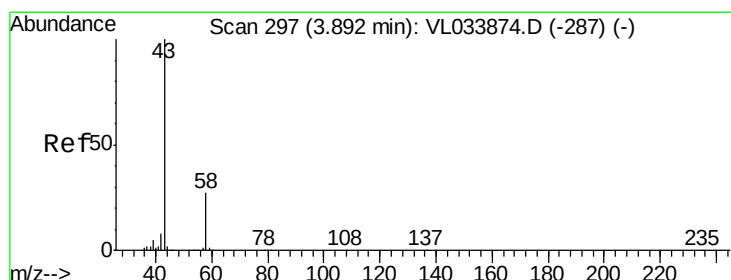
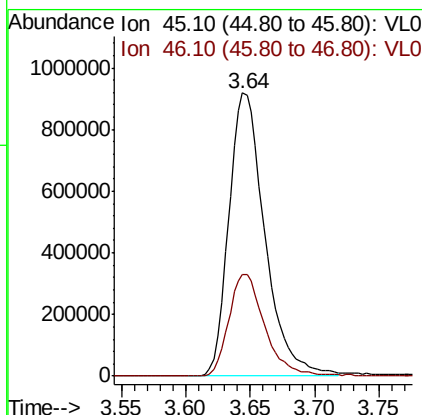
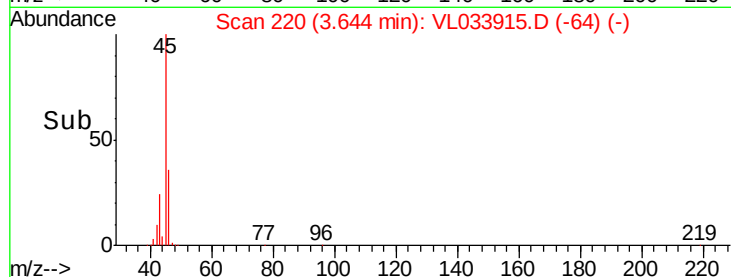
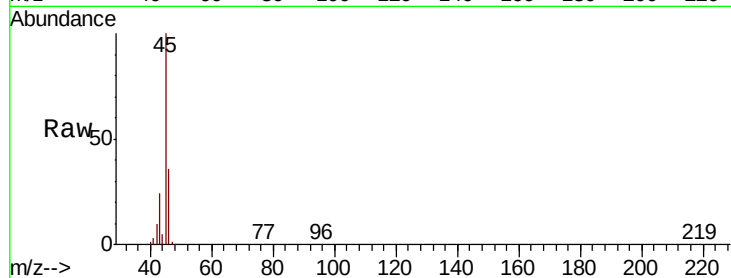
#13
Ethanol
Concen: 145.937 ppbv
RT: 3.64 min Scan# 220
Delta R.T. 0.00 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Instrument :
MSVOA_L
ClientSampleId :
IA1-BSMNTDUP

Tot Ion: 45 Resp: 1781821
Ion Ratio Lower Upper
45 100
46 36.1 15.3 61.1

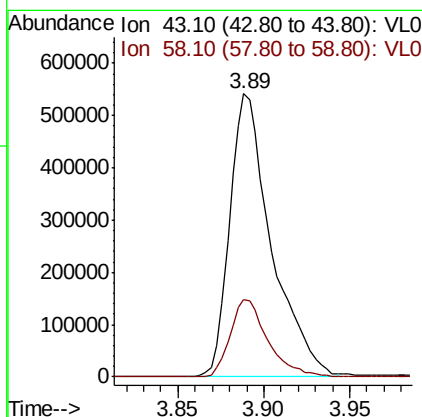
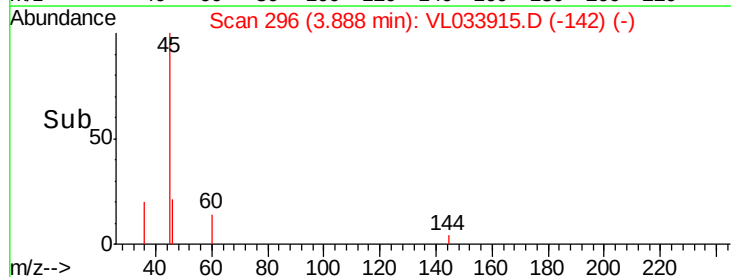
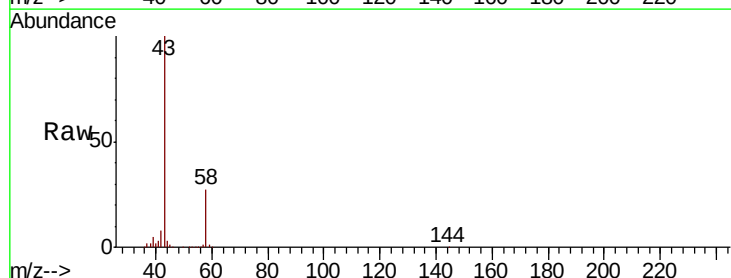
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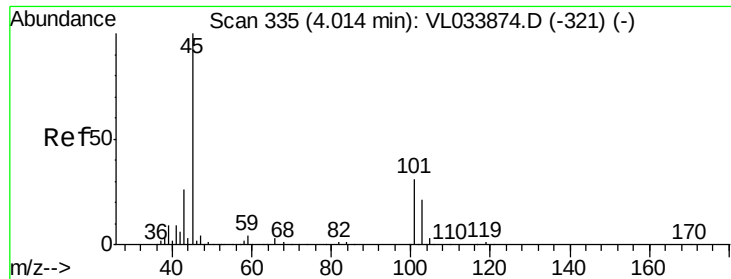
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#15
Acetone
Concen: 7.343 ppbv
RT: 3.89 min Scan# 296
Delta R.T. -0.00 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Tgt Ion: 43 Resp: 912357
Ion Ratio Lower Upper
43 100
58 25.1 21.3 31.9





#19

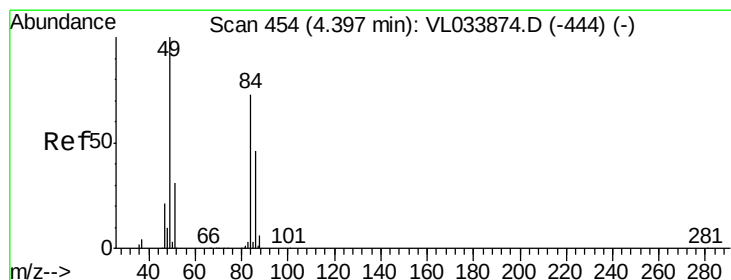
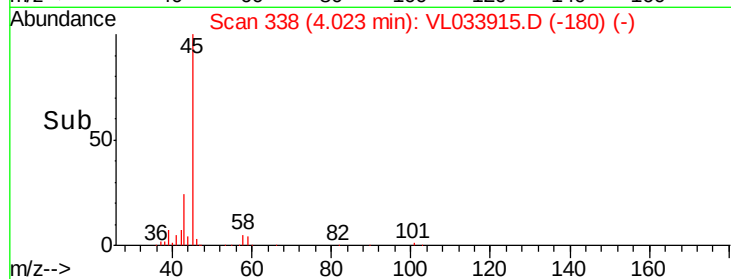
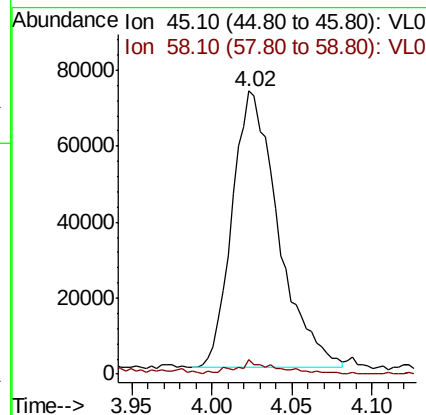
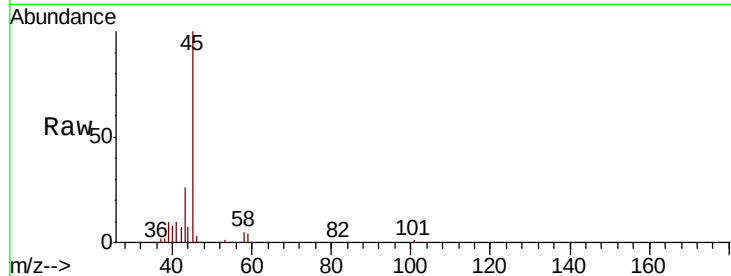
Isopropyl Alcohol
 Concen: 2.013 ppbv
 RT: 4.02 min Scan# 338
 Delta R.T. 0.01 min
 Lab File: VL033915.D
 Acq: 14 Jun 2019 2:50

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1-BSMNTDUP

Tot Ion: 45 Resp: 142892
 Ion Ratio Lower Upper
 45 100
 58 5.0 1.8 2.6#

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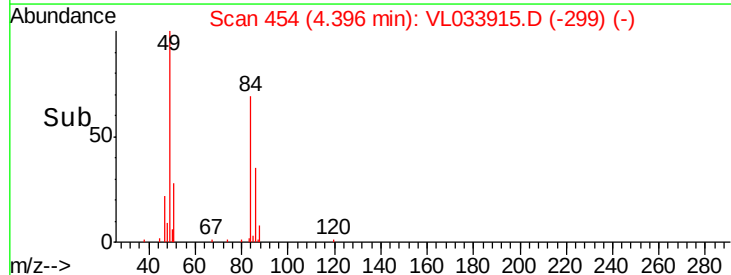
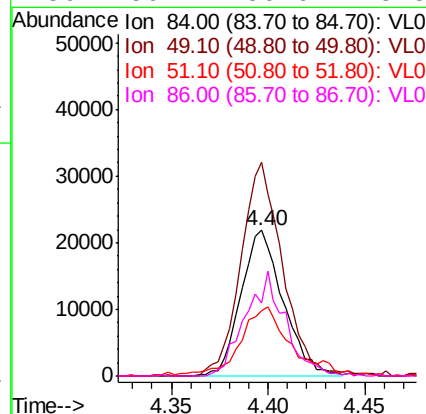
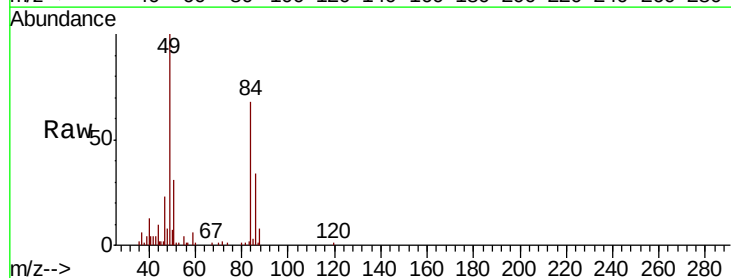
MMDadoda
 6/20/2019 8:59:23 AM

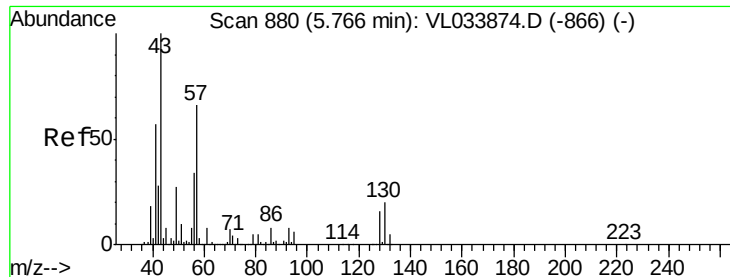


#20

Methylene Chloride
 Concen: 0.686 ppbv
 RT: 4.40 min Scan# 454
 Delta R.T. -0.00 min
 Lab File: VL033915.D
 Acq: 14 Jun 2019 2:50

Tgt Ion: 84 Resp: 33223
 Ion Ratio Lower Upper
 84 100
 49 146.6 110.0 165.0
 51 42.4 34.6 51.8
 86 50.2 50.6 75.8#





#26

Hexane

Concen: 1.036 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Instrument :

MSVOA_L

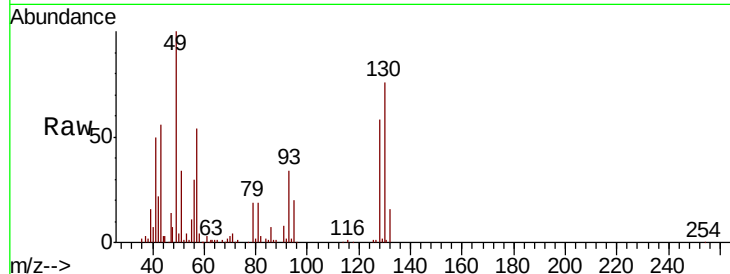
ClientSampled :

IA1-BSMNTDUP

Tot Ion:	57	Resp:	89235
Ion Ratio	Lower	Upper	
57	100		
41	103.9	71.4	107.2
43	141.2	183.7	275.5#
56	58.7	42.7	64.1

Manual Integrations
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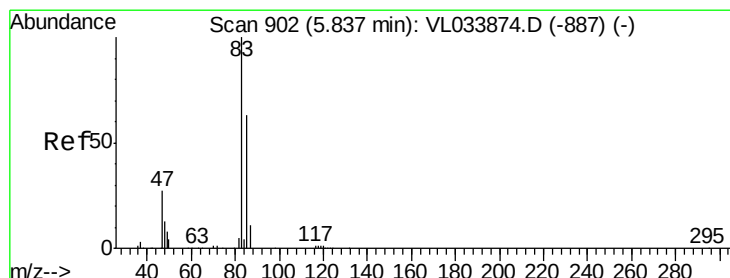
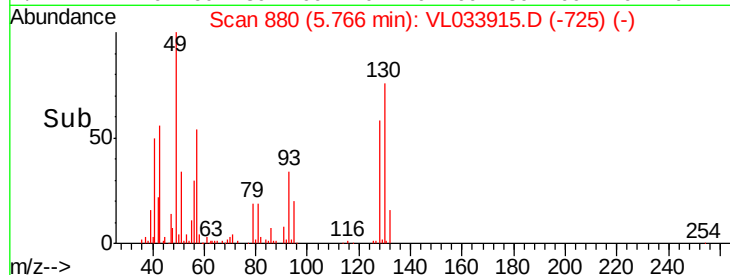
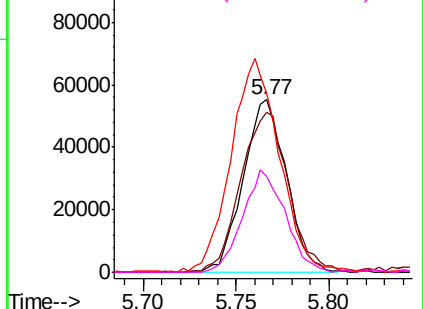
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#29

Chloroform

Concen: 1.052 ppbv

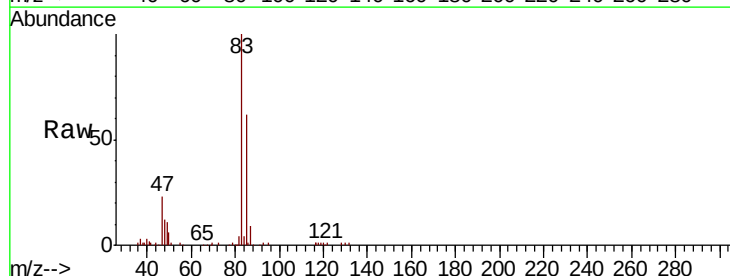
RT: 5.83 min Scan# 901

Delta R.T. -0.00 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

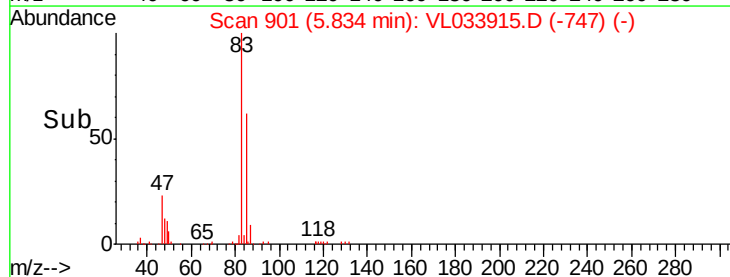
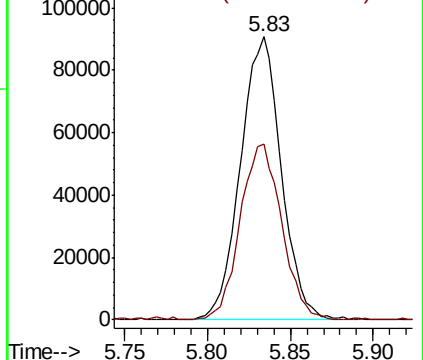
Tgt Ion:	83	Resp:	155253
Ion Ratio	Lower	Upper	
83	100		
85	61.8	50.5	75.7

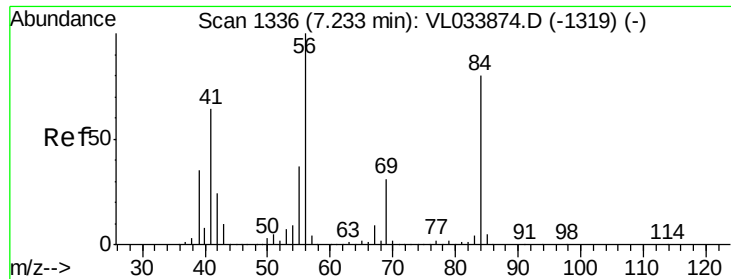


Abundance

Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0





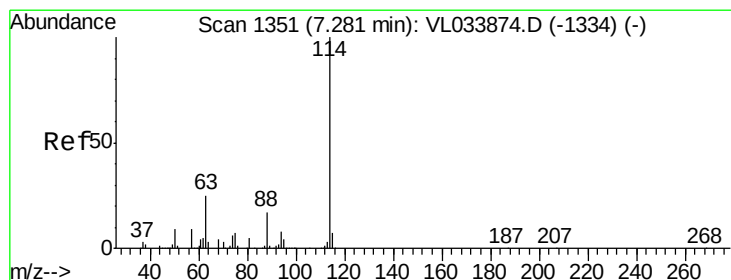
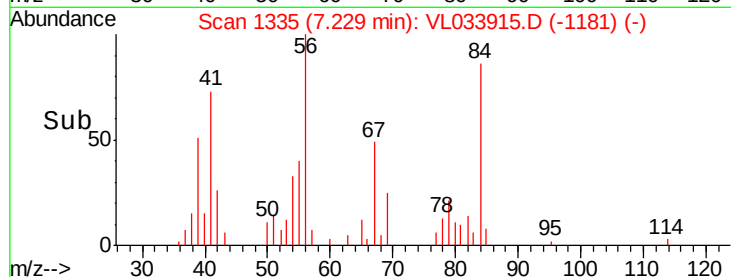
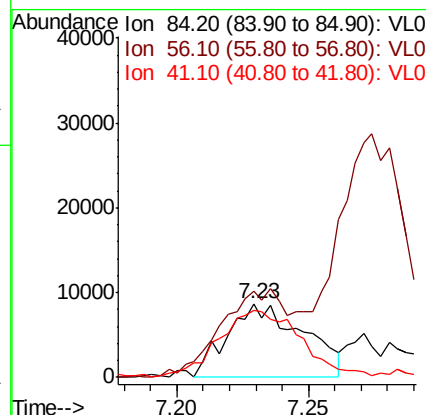
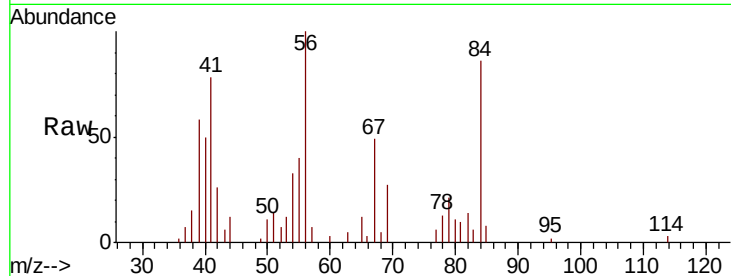
#30
Cyclohexane
Concen: 0.286 ppbv m
RT: 7.23 min Scan# 1335
Delta R.T. -0.00 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Instrument :
MSVOA_L
ClientSampleId :
IA1-BSMNTDUP

Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	105.8	158.8#
41	100.1	65.7	98.5#

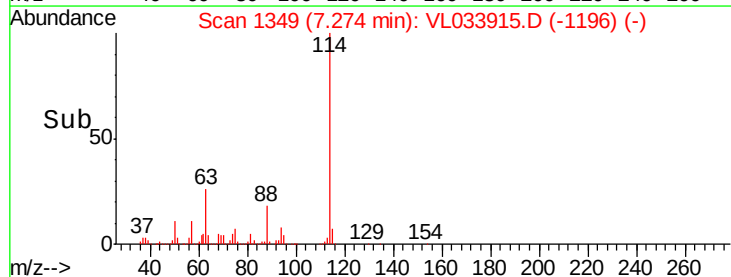
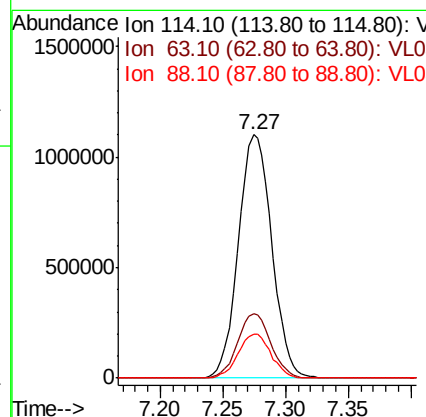
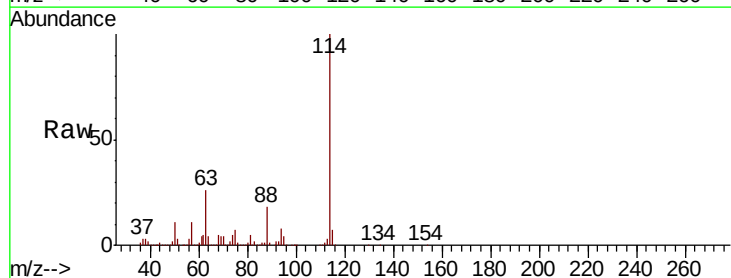
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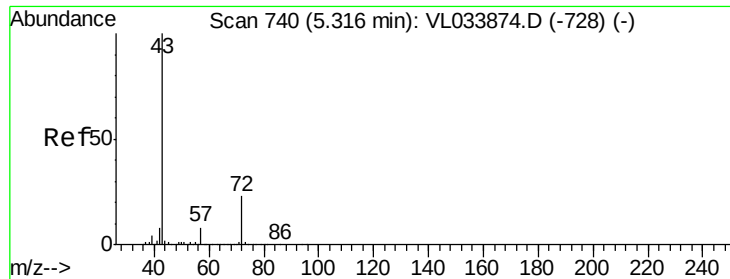
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#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.27 min Scan# 1349
Delta R.T. -0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Tgt Ion	Ratio	Lower	Upper
114	100		
63	26.4	21.1	31.7
88	17.8	14.2	21.4





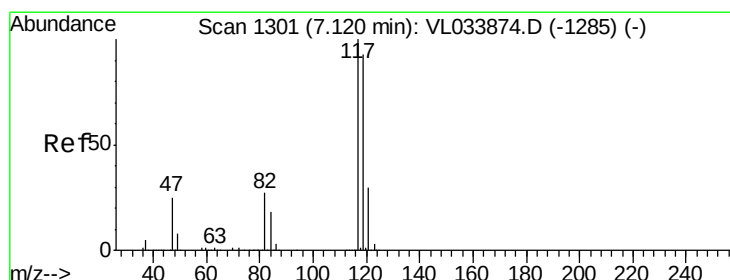
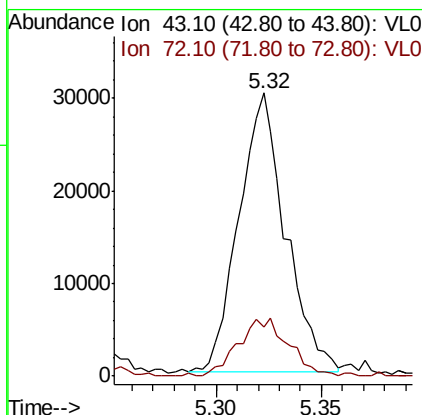
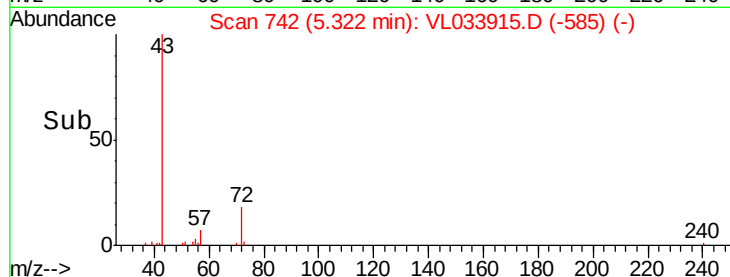
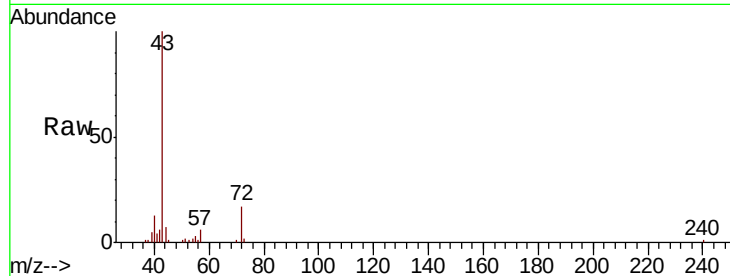
#34
2-Butanone
Concen: 0.401 ppbv
RT: 5.32 min Scan# 742
Delta R.T. 0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Instrument :
MSVOA_L
ClientSampleId :
IA1-BSMNTDUP

Tot Ion: 43 Resp: 46274
Ion Ratio Lower Upper
43 100
72 22.7 17.9 26.9

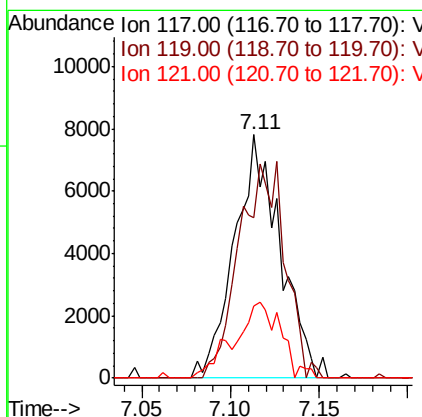
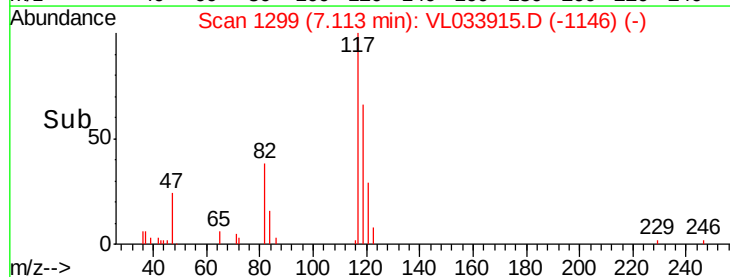
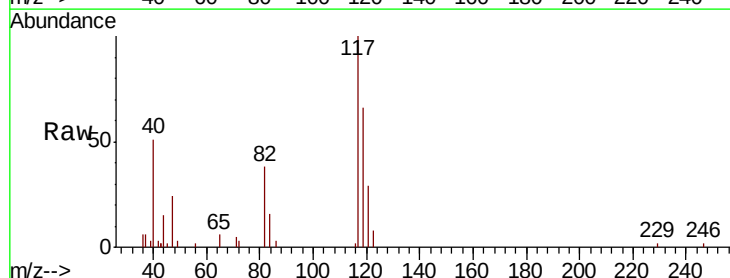
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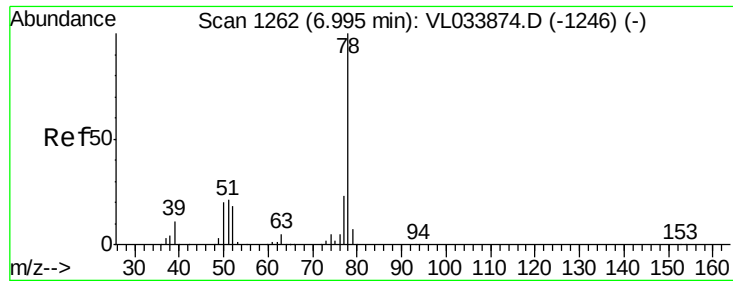
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#35
Carbon Tetrachloride
Concen: 0.088 ppbv m
RT: 7.11 min Scan# 1299
Delta R.T. -0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Tgt Ion: 117 Resp: 13967
Ion Ratio Lower Upper
117 100
119 65.9 74.6 111.8#
121 29.5 24.0 36.0





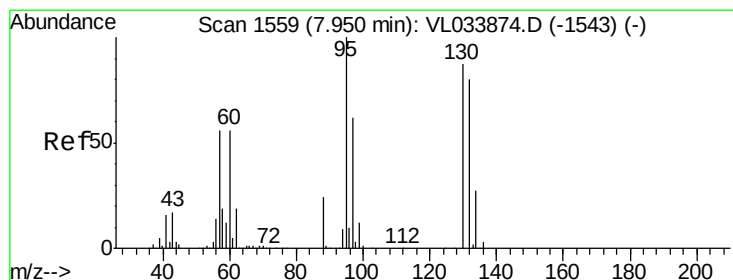
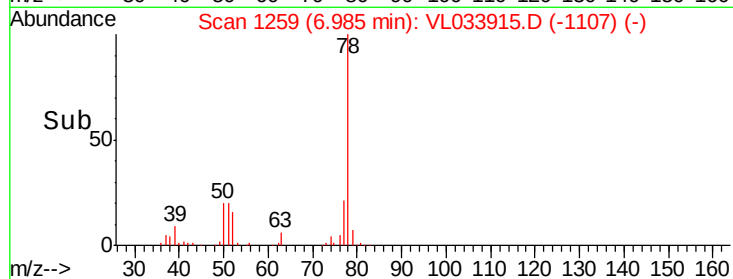
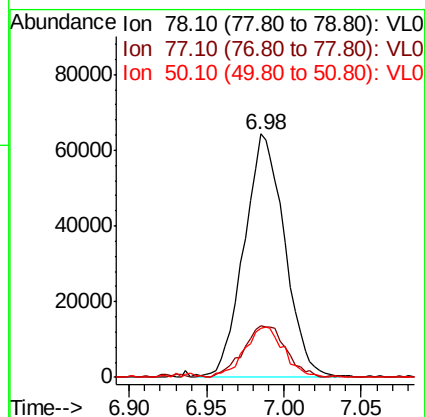
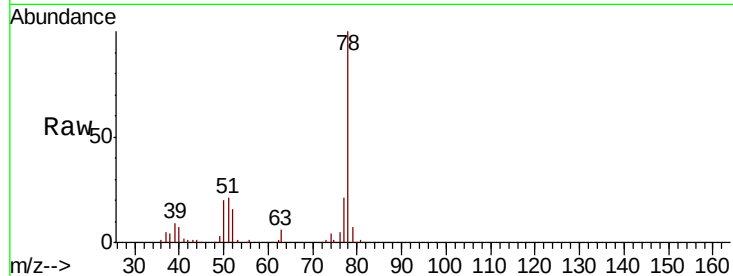
#36
Benzene
Concen: 0.754 ppbv
RT: 6.98 min Scan# 1259
Delta R.T. -0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Instrument :
MSVOA_L
ClientSampleId :
IA1-BSMNTDUP

Tot Ion	Ratio	Lower	Upper
78	100		
77	20.6	18.2	27.2
50	20.0	15.9	23.9

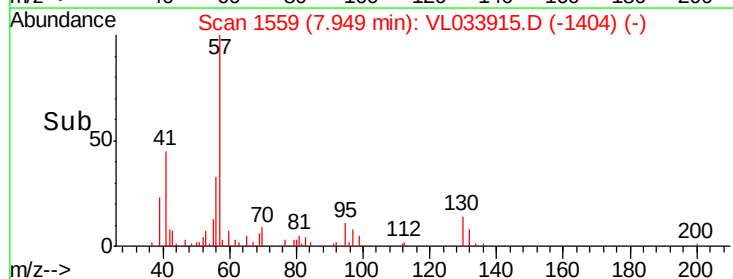
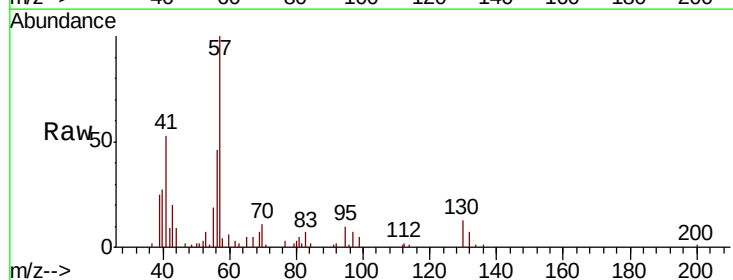
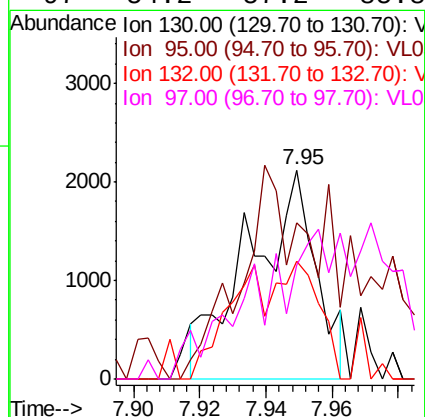
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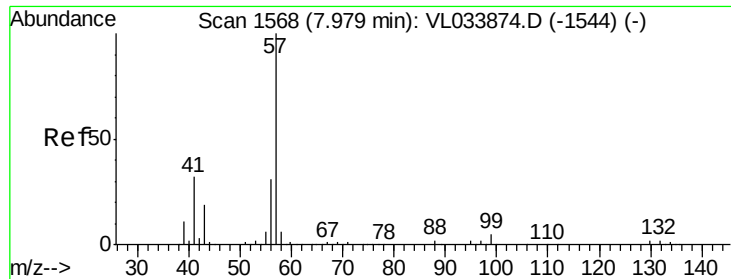
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#38
Trichloroethene
Concen: 0.049 ppbv m
RT: 7.95 min Scan# 1559
Delta R.T. -0.00 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Tgt Ion	Ratio	Lower	Upper
130	100		
95	74.9	92.0	138.0#
132	56.1	73.8	110.8#
97	54.2	57.2	85.8#





#44

2,2,4-Trimethylpentane

Concen: 0.616 ppbv

RT: 7.98 min Scan# 1568

Delta R.T. -0.00 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Instrument :

MSVOA_L

ClientSampleId :

IA1-BSMNTDUP

Tot Ion: 57 Resp: 171012

Ion Ratio Lower Upper

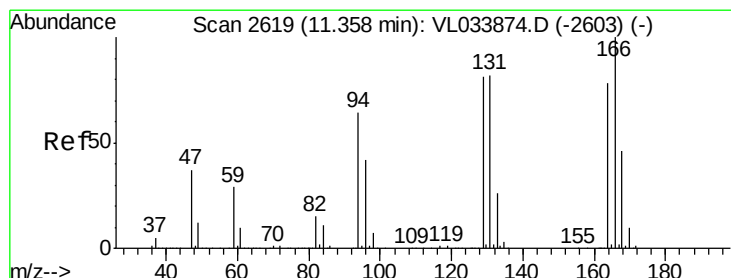
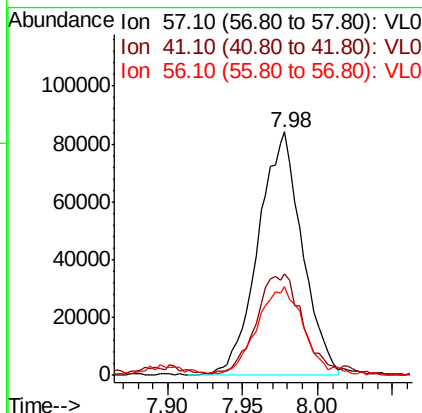
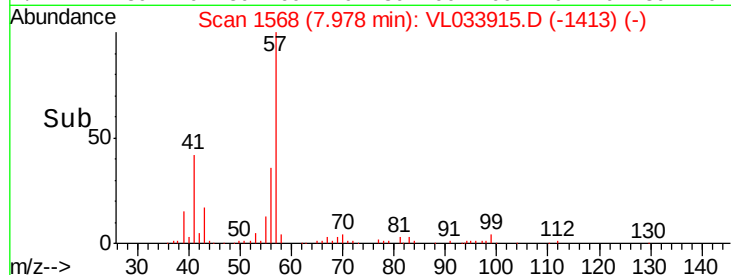
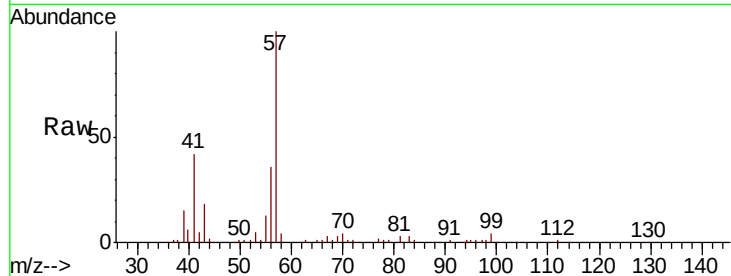
57 100

41 45.8 26.1 39.1#

56 39.5 24.6 36.8#

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#52

Tetrachloroethene

Concen: 22.307 ppbv

RT: 11.36 min Scan# 2619

Delta R.T. -0.00 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Tgt Ion: 164 Resp: 1225431

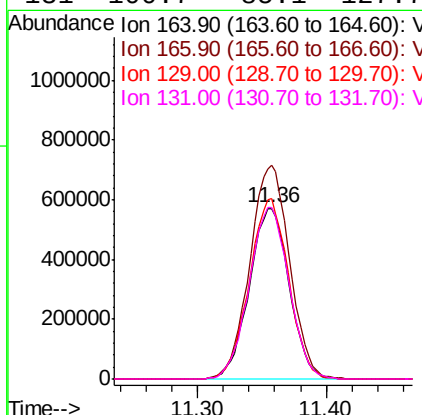
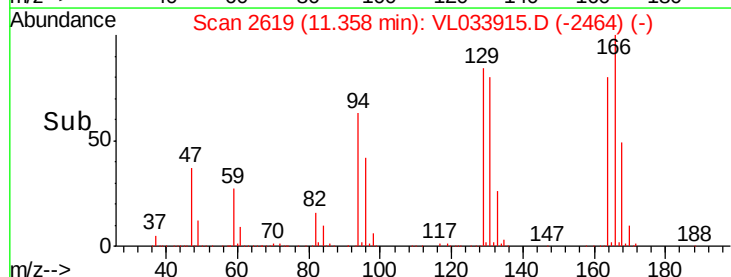
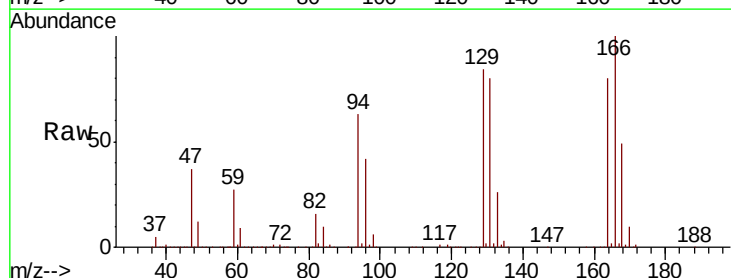
Ion Ratio Lower Upper

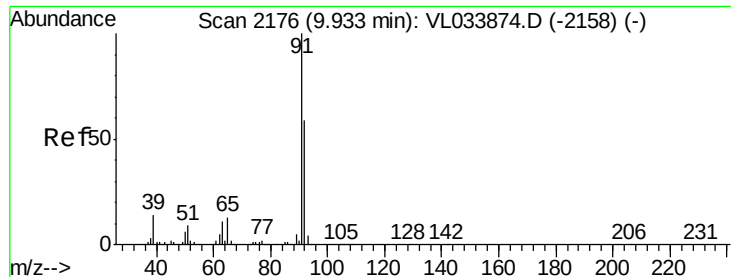
164 100

166 125.1 103.1 154.7

129 105.4 83.9 125.9

131 100.7 85.1 127.7





#53

Toluene

Concen: 2.648 ppbv

RT: 9.93 min Scan# 2174

Delta R.T. -0.01 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Instrument :

MSVOA_L

ClientSampleId :

IA1-BSMNTDUP

Tot Ion: 91 Resp: 457523

Ion Ratio Lower Upper

91 100

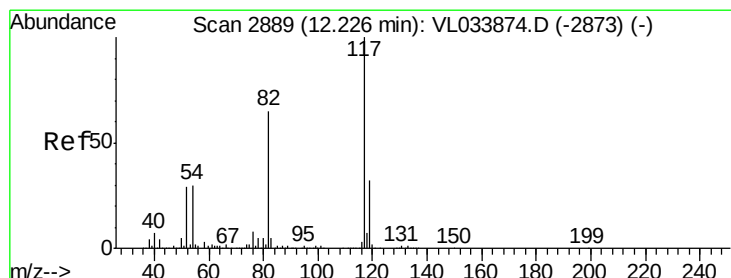
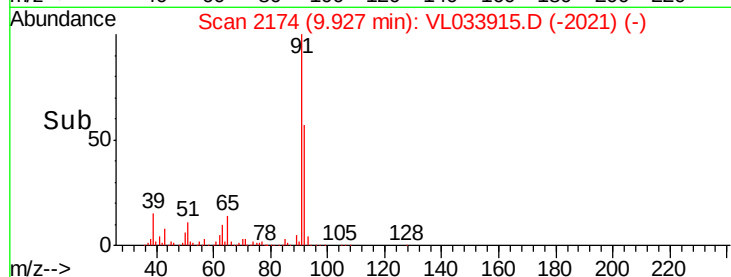
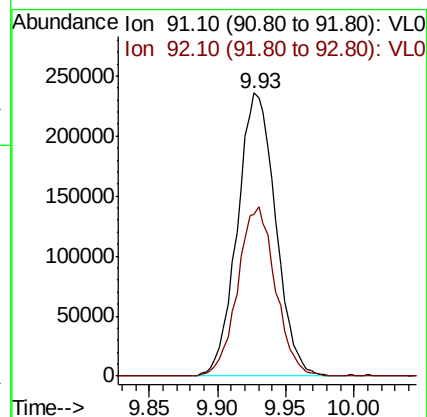
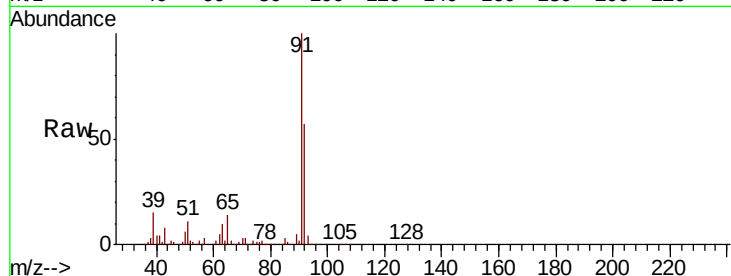
92 59.4 47.0 70.6

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.22 min Scan# 2887

Delta R.T. -0.01 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

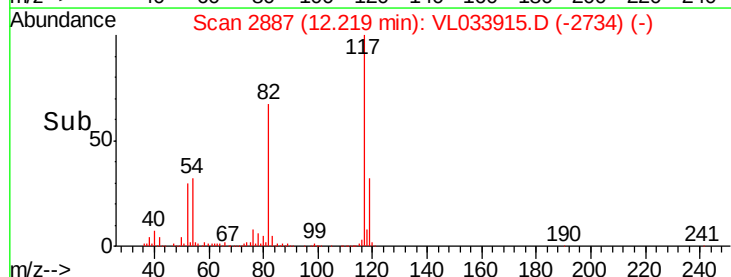
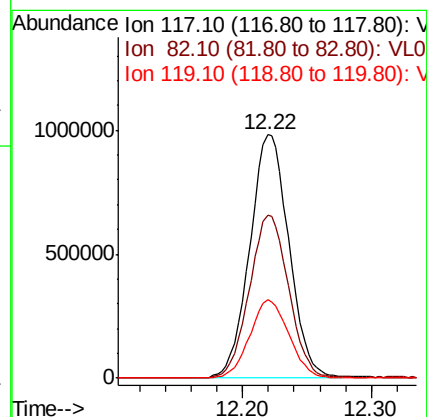
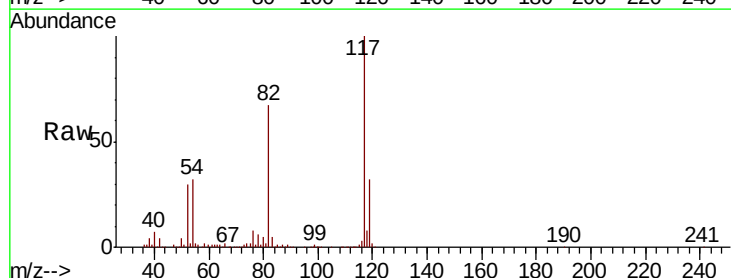
Tgt Ion: 117 Resp: 2081321

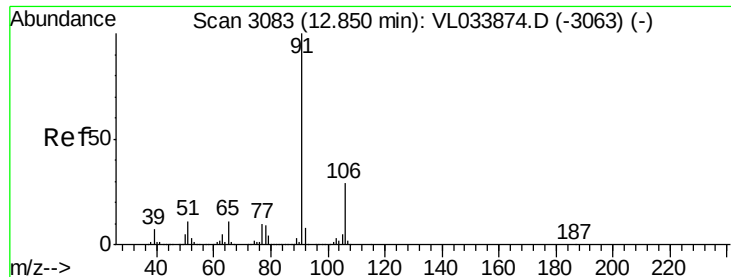
Ion Ratio Lower Upper

117 100

82 67.2 50.2 75.2

119 32.2 24.8 37.2





#58

Ethyl Benzene

Concen: 0.209 ppbv m

RT: 12.84 min Scan# 3081

Delta R.T. -0.01 min

Lab File: VL033915.D

Acq: 14 Jun 2019 2:50

Instrument :

MSVOA_L

ClientSampleId :

IA1-BSMNTDUP

Tot Ion: 91 Resp: 48969

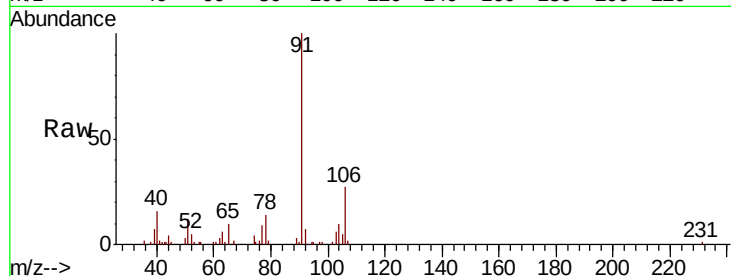
Ion Ratio Lower Upper

91 100

106 26.8 23.0 34.6

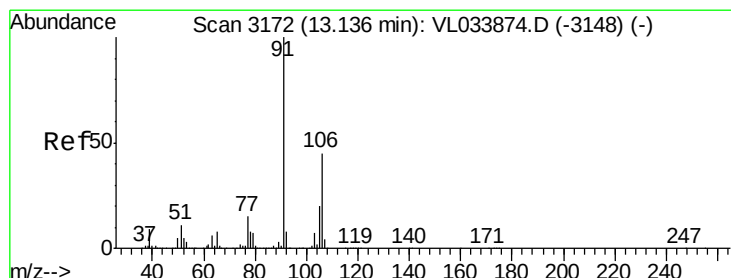
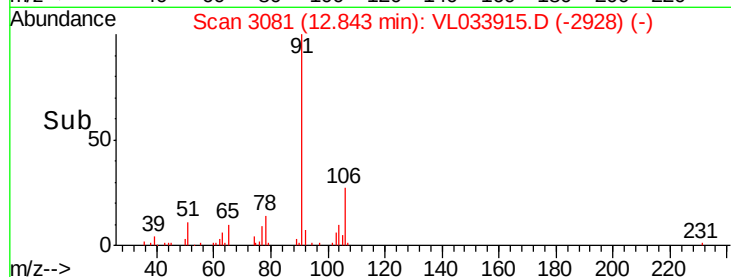
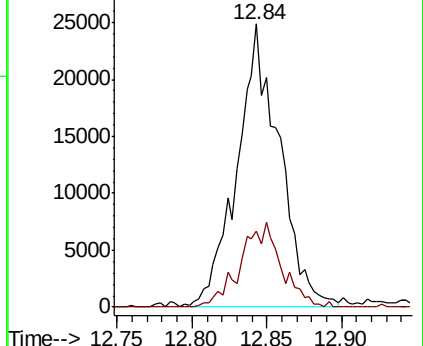
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.781 ppbv m

RT: 13.10 min Scan# 3161

Delta R.T. -0.04 min

Lab File: VL033915.D

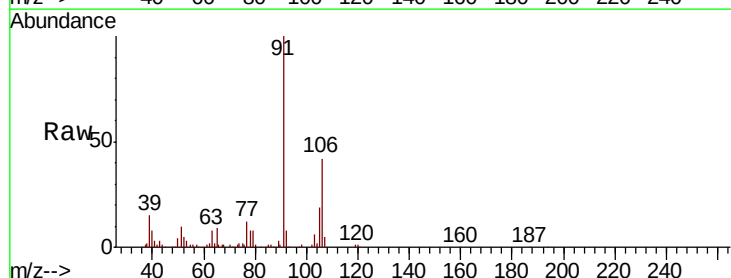
Acq: 14 Jun 2019 2:50

Tgt Ion: 91 Resp: 166715

Ion Ratio Lower Upper

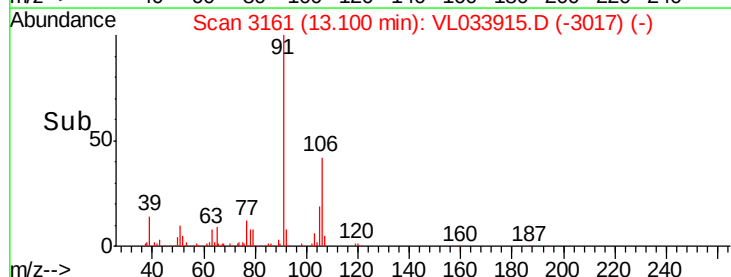
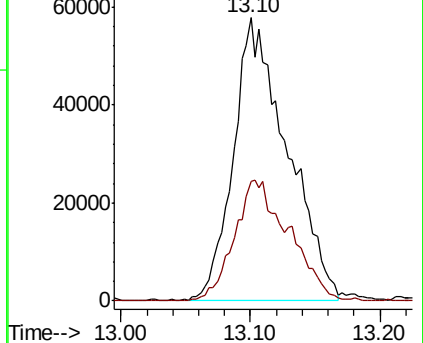
91 100

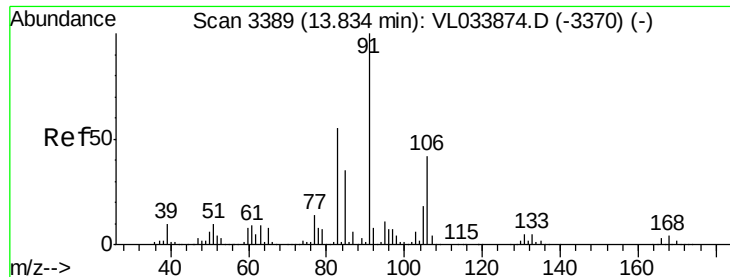
106 43.6 35.8 53.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





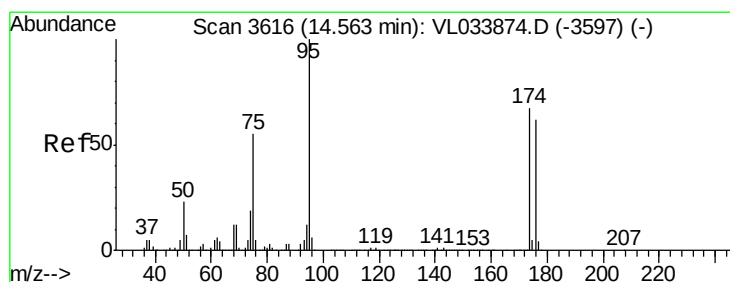
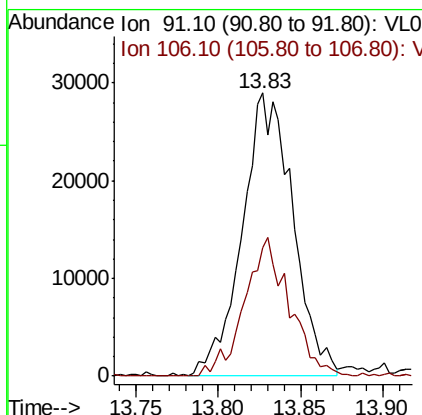
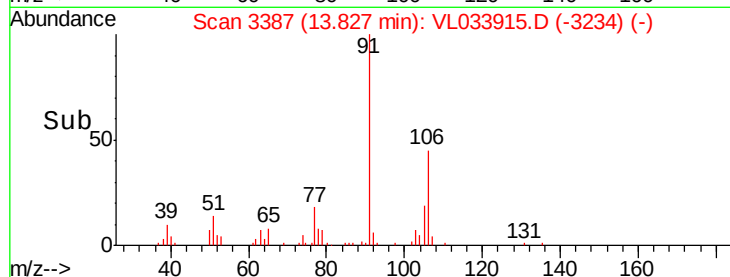
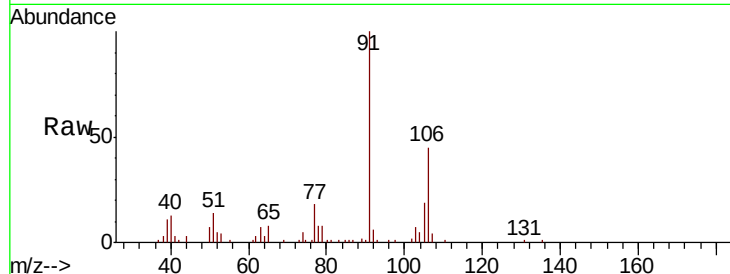
#60
o-Xylene
Concen: 0.281 ppbv m
RT: 13.83 min Scan# 3387
Delta R.T. -0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Instrument :
MSVOA_L
ClientSampleId :
IA1-BSMNTDUP

Tot Ion: 91 Resp: 61937
Ion Ratio Lower Upper
91 100
106 0.0 21.7 65.1#

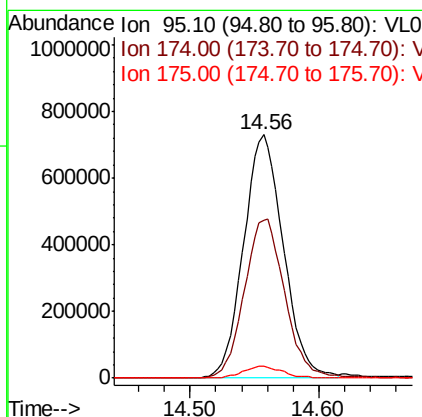
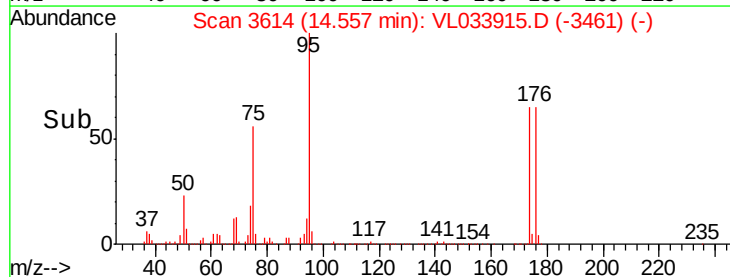
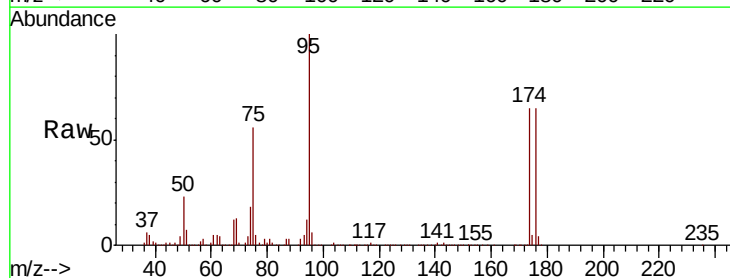
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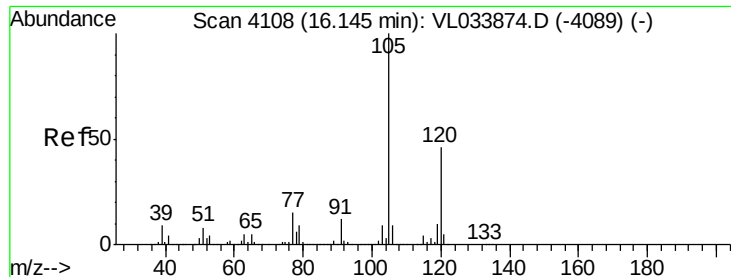
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#68
1-Bromo-4-Fluorobenzene
Concen: 9.179 ppbv
RT: 14.56 min Scan# 3614
Delta R.T. -0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Tgt Ion: 95 Resp: 1569257
Ion Ratio Lower Upper
95 100
174 66.8 54.0 81.0
175 4.8 3.8 5.8





#73

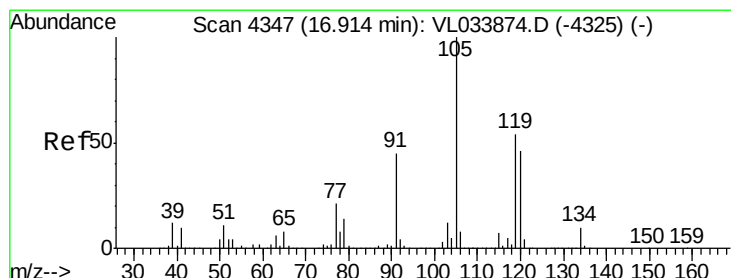
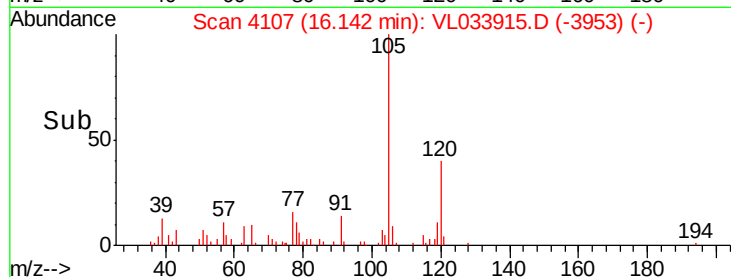
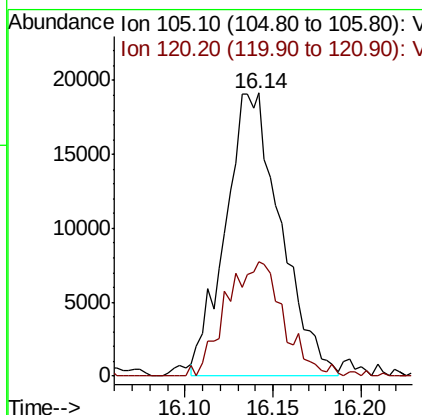
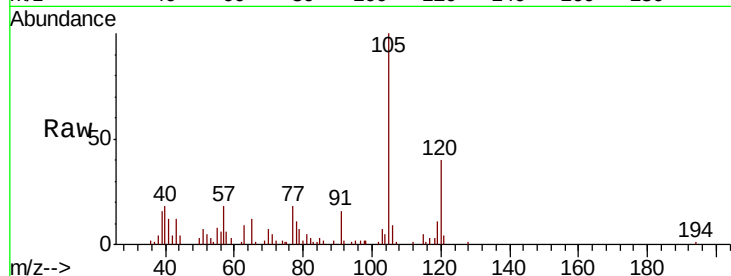
1,3,5-Trimethylbenzene
Concen: 0.170 ppbv m
RT: 16.14 min Scan# 4107
Delta R.T. -0.00 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Instrument :
MSVOA_L
ClientSampleId :
IA1-BSMNTDUP

Tot Ion	Ratio	Lower	Upper
105	100		
120	40.2	37.1	55.7

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#74

1,2,4-Trimethylbenzene
Concen: 0.492 ppbv
RT: 16.90 min Scan# 4344
Delta R.T. -0.01 min
Lab File: VL033915.D
Acq: 14 Jun 2019 2:50

Tgt Ion	Ratio	Lower	Upper
105	100		
120	40.7	36.7	55.1
91	12.6	35.8	53.8#
77	15.8	16.9	25.3#

