

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032019\
 Data File : VL033398.D
 Acq On : 20 Mar 2019 20:28
 Operator : SY/AP
 Sample : K1975-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Manual Integrations
 APPROVED

MMDadoda
 3/25/2019 8:26:30 AM

Quant Time: Mar 22 05:33:09 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar 1
 QLast Update : Fri Mar 15 14:52:14 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	828785	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	1953540	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	1968450	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	1526570	10.47	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.70%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	70767	0.486	ppbv	96
3) Chlorodifluoromethane	3.01	51	57420m	0.604	ppbv	
4) Chloromethane	3.17	50	159912	3.104	ppbv	97
9) Propene	3.05	41	65178m	1.535	ppbv	
10) Heptane	8.25	43	904479	8.587	ppbv	99
11) Trichlorofluoromethane	4.00	101	124088	0.855	ppbv	99
13) Ethanol	3.66	45	1917213	94.706	ppbv	98
15) Acetone	3.90	43	17271998	134.065	ppbv #	83
19) Isopropyl Alcohol	4.04	45	143574	2.343	ppbv #	95
20) Methylene Chloride	4.42	84	118769	2.827	ppbv	96
26) Hexane	5.78	57	1131865	13.519	ppbv #	42
30) Cyclohexane	7.25	84	231023	3.442	ppbv	93
34) 2-Butanone	5.33	43	1098312	8.561	ppbv	99
36) Benzene	7.01	78	601993	3.443	ppbv	98
38) Trichloroethene	7.97	130	22968	0.347	ppbv #	85
44) 2,2,4-Trimethylpentane	7.99	57	1341160	4.631	ppbv #	77
50) 4-Methyl-2-Pentanone	8.89	43	60562	0.334	ppbv	95
52) Tetrachloroethene	11.41	164	18579231	255.085	ppbv	88
53) Toluene	9.96	91	15739540	79.229	ppbv	91
58) Ethyl Benzene	12.87	91	1031249	3.703	ppbv	100
59) m/p-Xylene	13.13	91	3096481	12.939	ppbv #	100
60) o-Xylene	13.85	91	1217574	5.215	ppbv	99
62) Isopropylbenzene	14.83	105	117830m	0.363	ppbv	
64) n-propylbenzene	15.72	120	107984	1.315	ppbv	96
67) sec-Butylbenzene	17.46	105	55768m	0.135	ppbv	
72) 4-Ethyltoluene	16.00	105	613868	2.315	ppbv	99
73) 1,3,5-Trimethylbenzene	16.16	105	502474	1.945	ppbv	99
74) 1,2,4-Trimethylbenzene	16.93	105	1864833	6.817	ppbv #	69
79) Naphthalene	22.42	128	294052m	1.116	ppbv	
80) Naphthalene,2-methyl-	25.12	142	69222	0.554	ppbv #	80

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

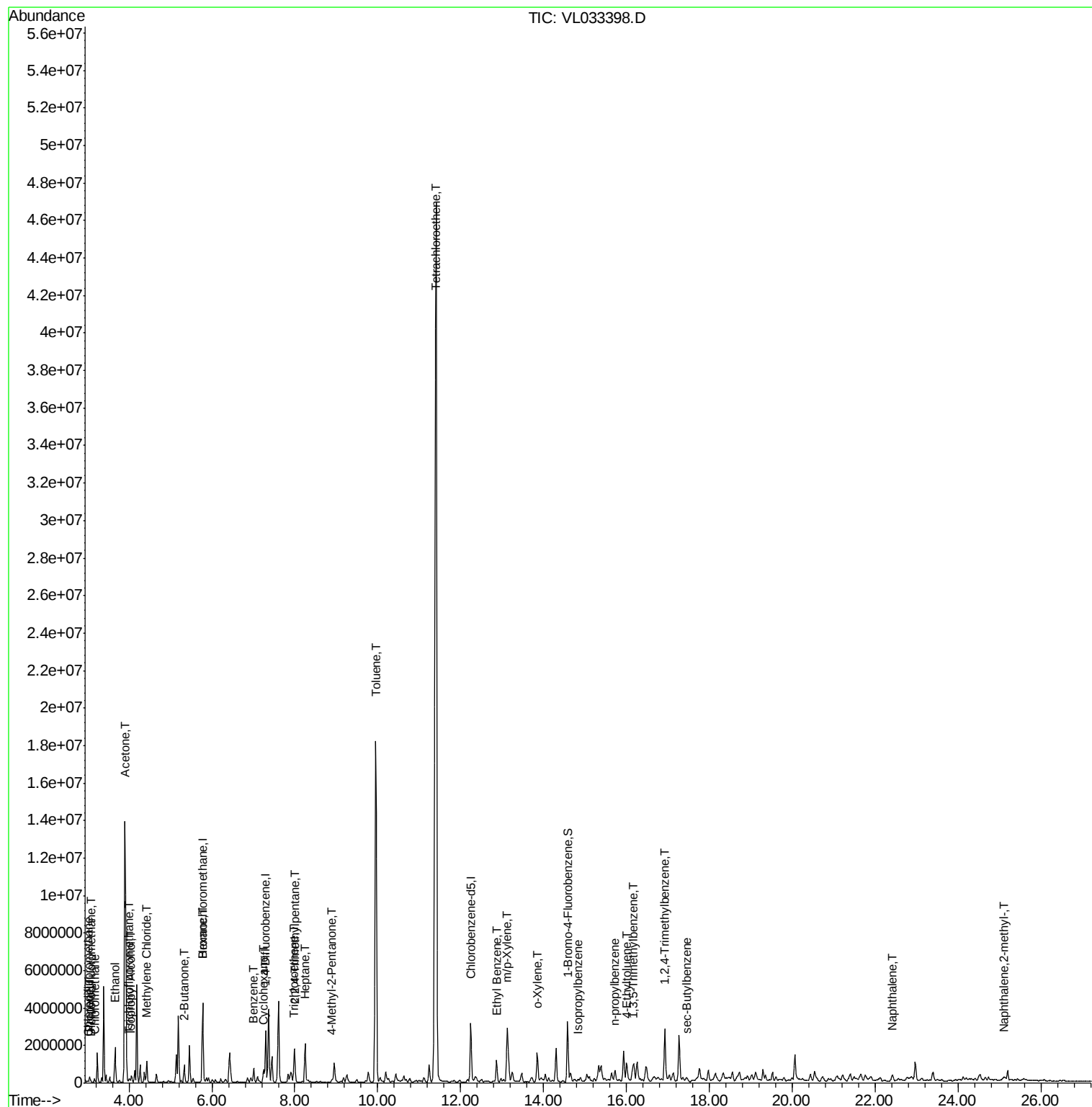
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL032019\
Data File : VL033398.D
Acq On : 20 Mar 2019 20:28
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Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

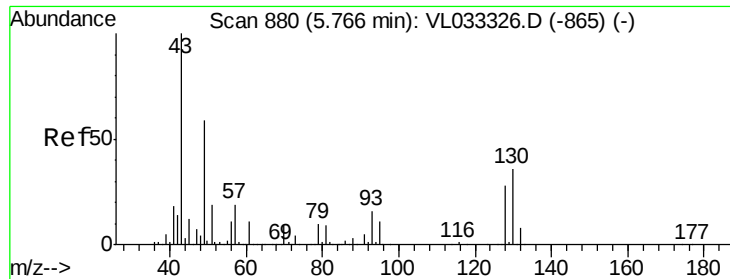
Instrument :
MSVOA_L
ClientSampled :
IA1

Manual Integrations
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3/25/2019 8:26:30 AM

Quant Time: Mar 22 05:33:09 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar
QLast Update : Fri Mar 15 14:52:14 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 881

Delta R.T. 0.00 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

Instrument :

MSVOA_L

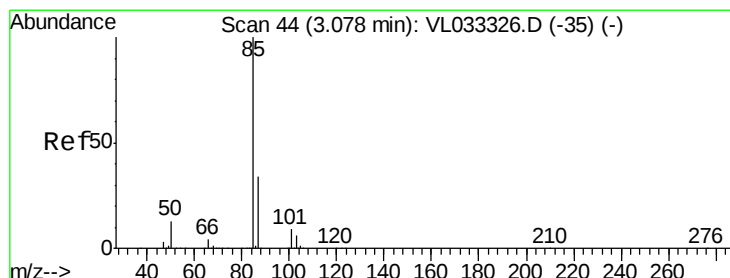
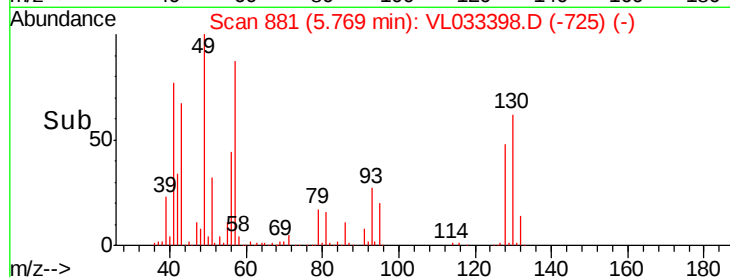
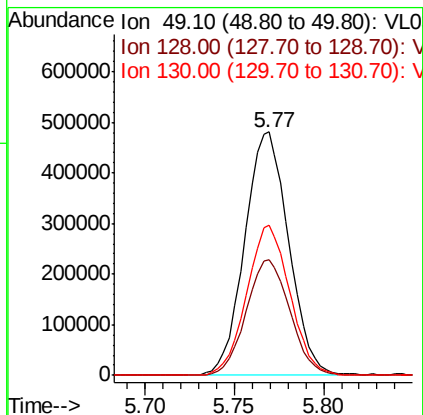
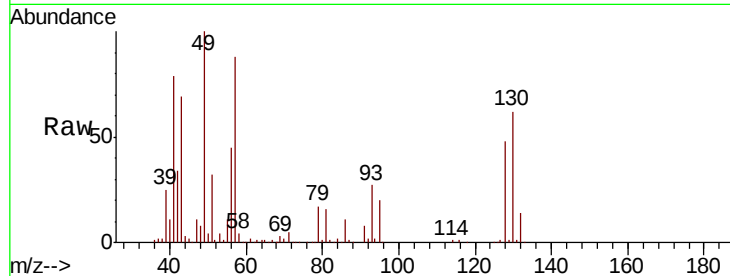
ClientSampled :

IA1

Tot Ion	49	Resp	828785
Ion Ratio	Lower	Upper	
49	100		
128	47.5	23.5	70.6
130	61.2	30.1	90.3

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#2

Dichlorodifluoromethane

Concen: 0.486 ppbv

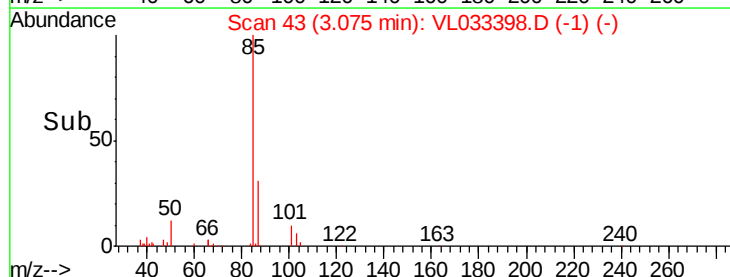
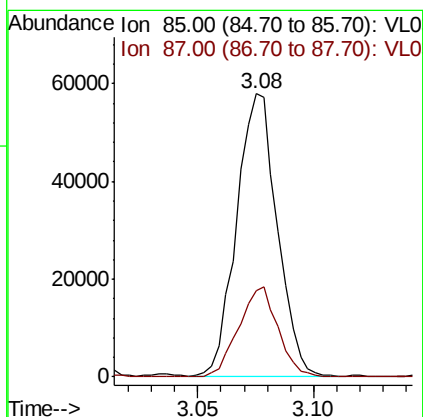
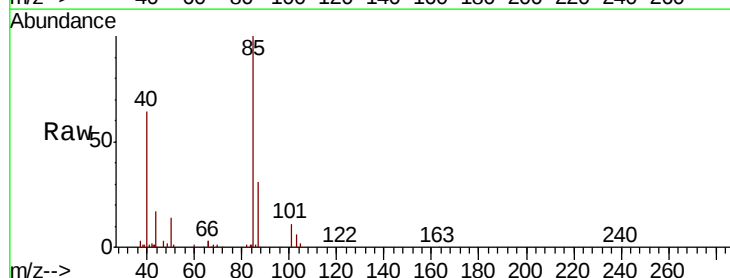
RT: 3.08 min Scan# 43

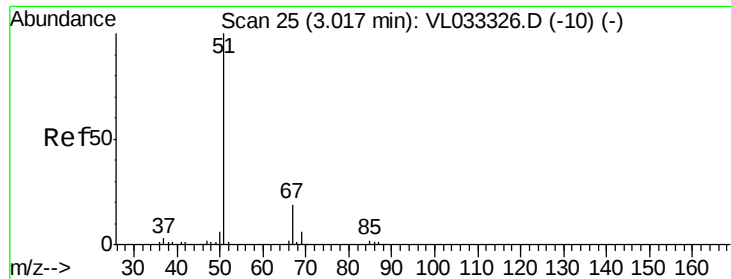
Delta R.T. -0.00 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

Tgt Ion	85	Resp	70767
Ion Ratio	Lower	Upper	
85	100		
87	31.1	26.9	40.3





#3

Chlorodifluoromethane

Concen: 0.604 ppbv

RT: 3.01 min Scan# 23

Delta R.T. -0.01 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

Instrument :

MSVOA_L

ClientSampled :

IA1

Tot Ion: 51 Resp: 57420

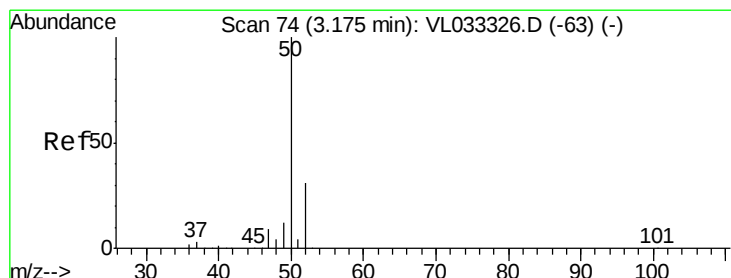
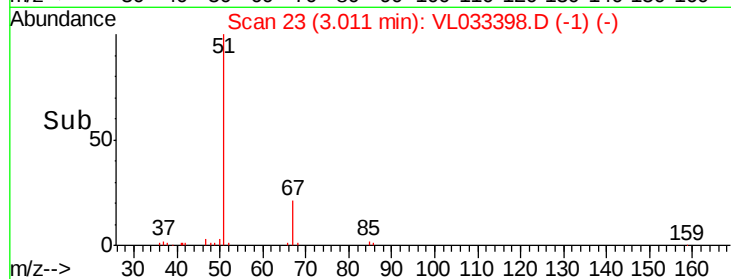
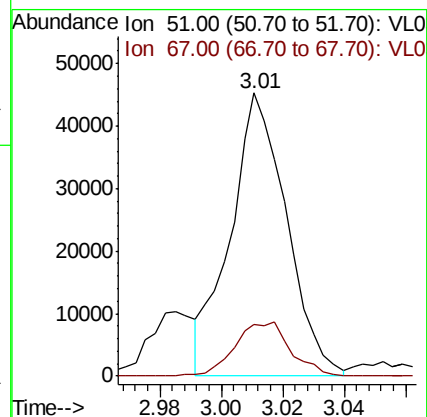
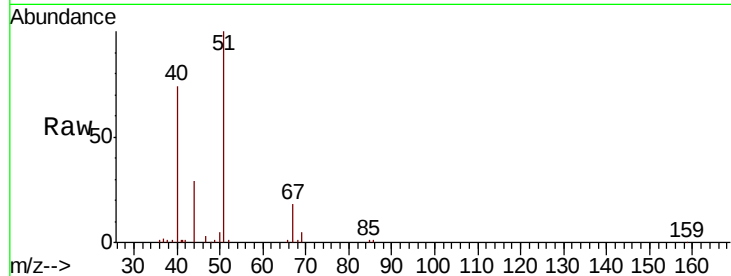
Ion Ratio Lower Upper

51 100

67 18.8 14.9 22.3

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#4

Chloromethane

Concen: 3.104 ppbv

RT: 3.17 min Scan# 73

Delta R.T. -0.00 min

Lab File: VL033398.D

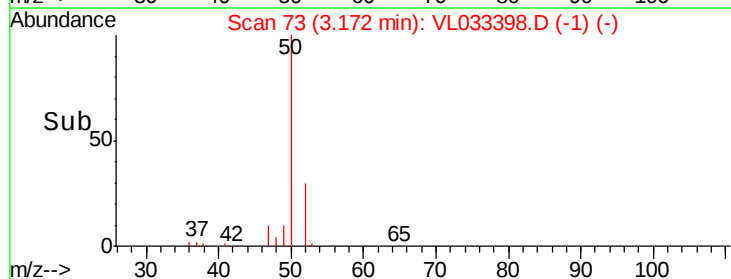
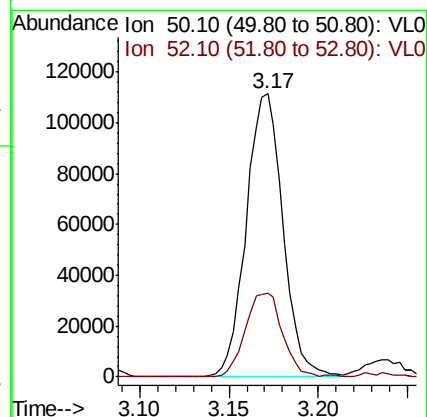
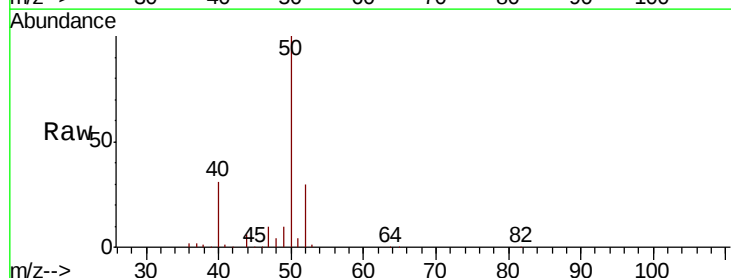
Acq: 20 Mar 2019 20:28

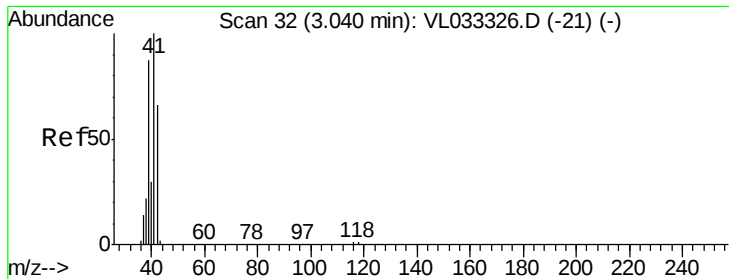
Tgt Ion: 50 Resp: 159912

Ion Ratio Lower Upper

50 100

52 29.6 25.0 37.6





#9

Propene

Concen: 1.535 ppbv m

RT: 3.05 min Scan# 34

Delta R.T. 0.01 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

Instrument :

MSVOA_L

ClientSampled :

IA1

Tot Ion: 41 Resp: 65178

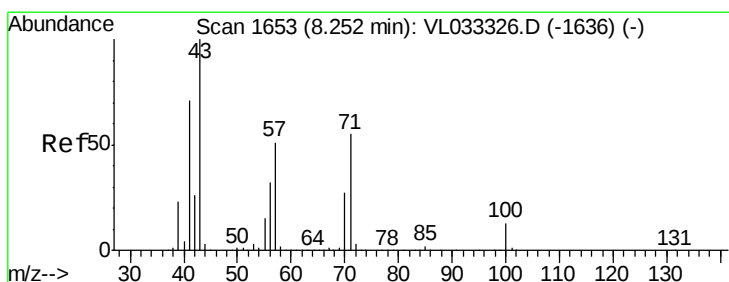
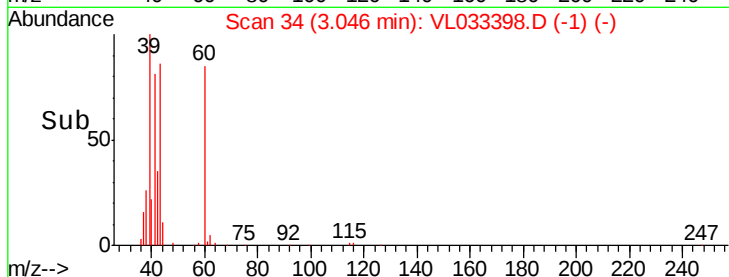
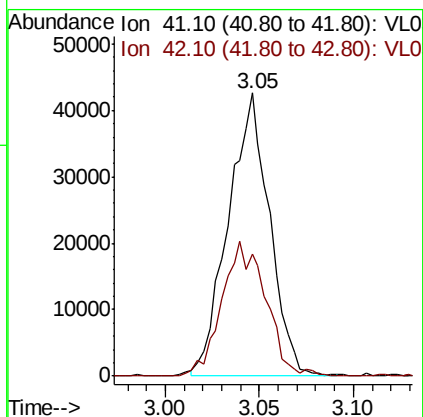
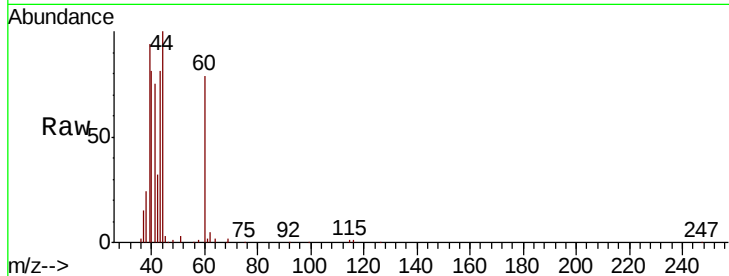
Ion Ratio Lower Upper

41 100

42 427.1 55.2 82.8#

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#10

Heptane

Concen: 8.587 ppbv

RT: 8.25 min Scan# 1652

Delta R.T. -0.00 min

Lab File: VL033398.D

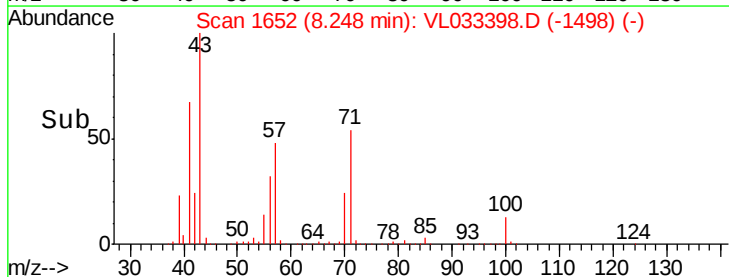
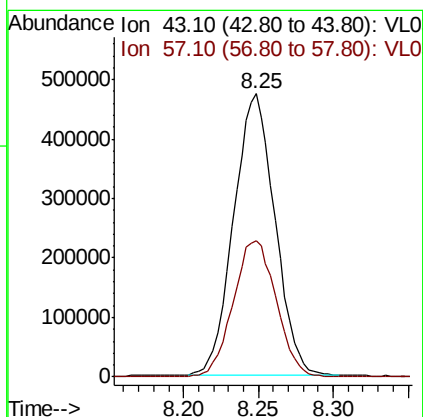
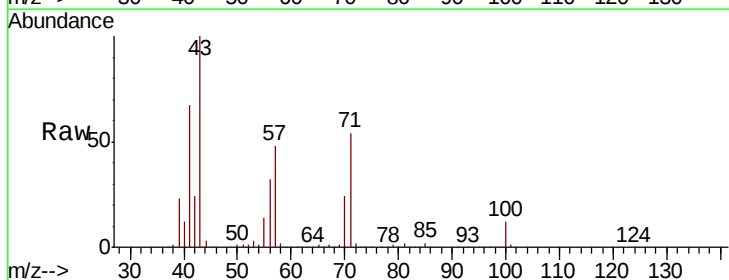
Acq: 20 Mar 2019 20:28

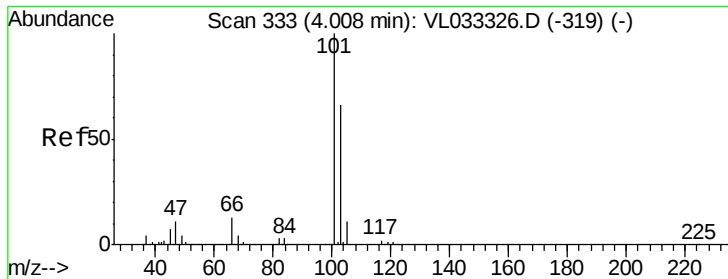
Tgt Ion: 43 Resp: 904479

Ion Ratio Lower Upper

43 100

57 50.9 40.4 60.6





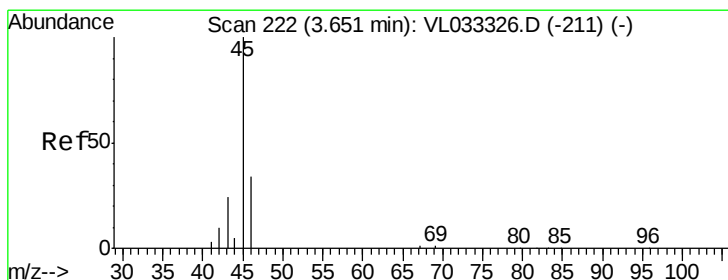
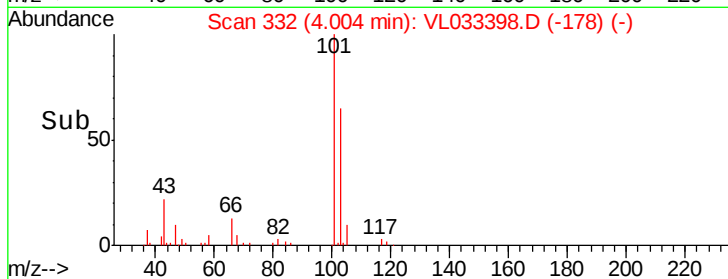
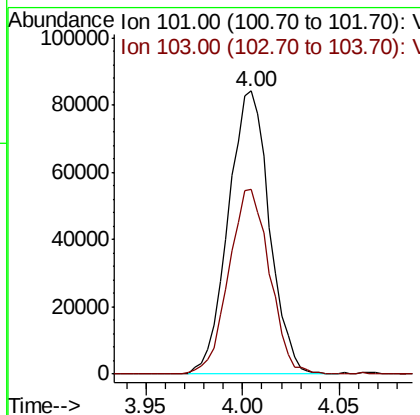
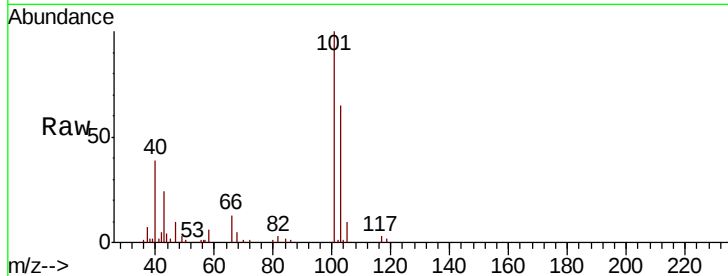
#11
Trichlorofluoromethane
Concen: 0.855 ppbv
RT: 4.00 min Scan# 332
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampleId :
IA1

Tot Ion	Ratio	Lower	Upper
101	100		
103	65.0	52.9	79.3

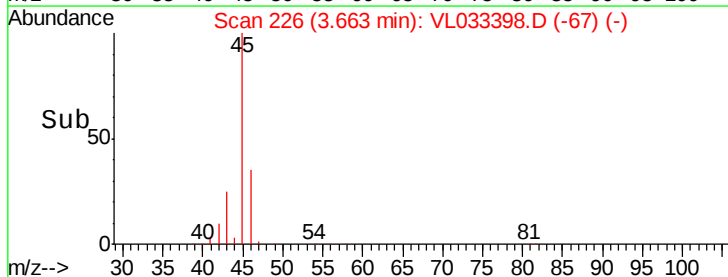
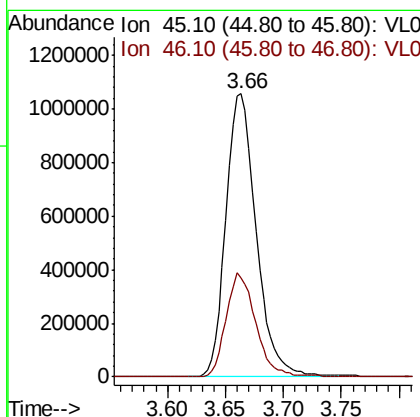
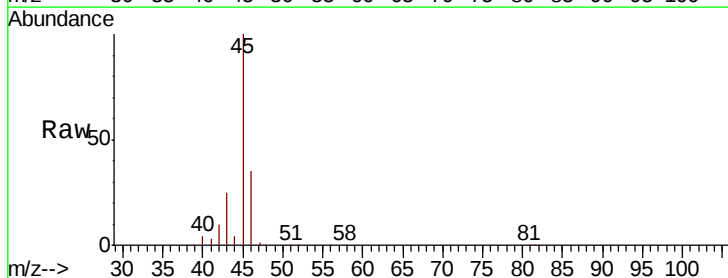
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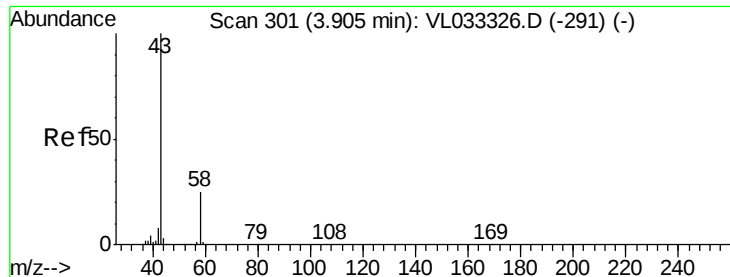
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#13
Ethanol
Concen: 94.706 ppbv
RT: 3.66 min Scan# 226
Delta R.T. 0.01 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion	Ratio	Lower	Upper
45	100		
46	36.0	14.9	59.7





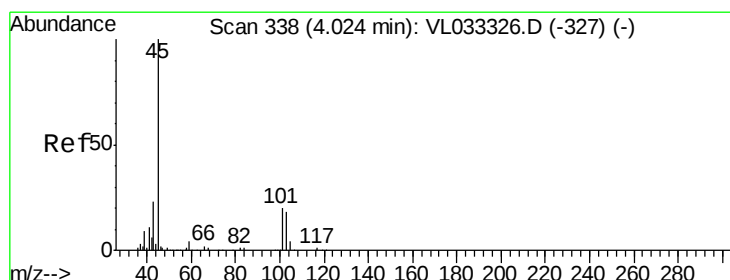
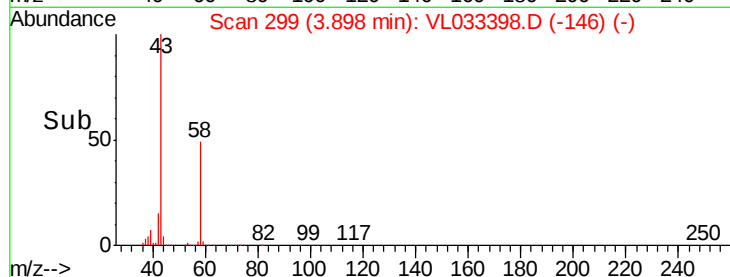
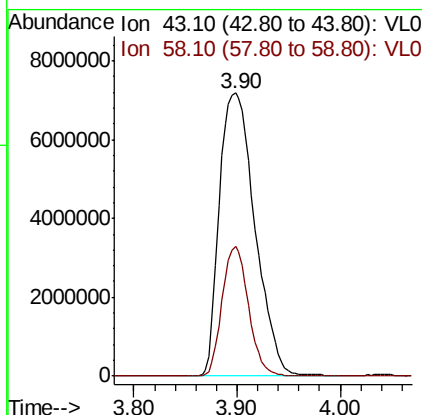
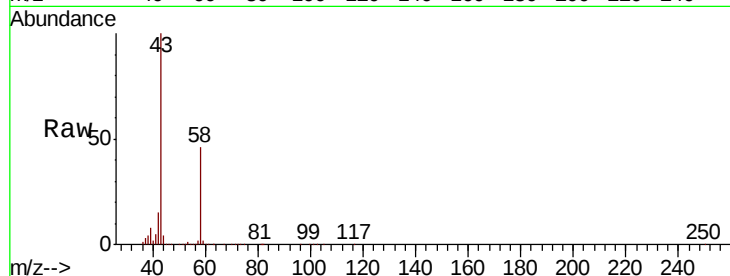
#15
Acetone
Concen: 134.065 ppbv
RT: 3.90 min Scan# 299
Delta R.T. -0.01 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampleId :
IA1

Tot Ion: 43 Resp:17271998
Ion Ratio Lower Upper
43 100
58 34.2 20.4 30.6#

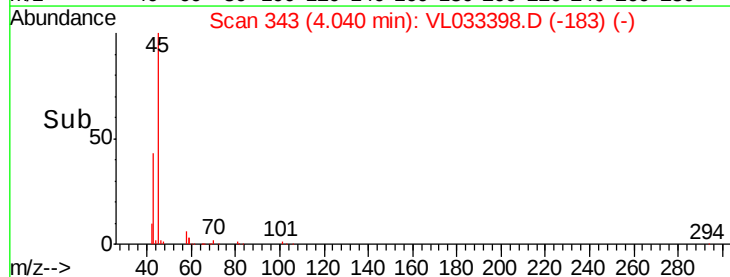
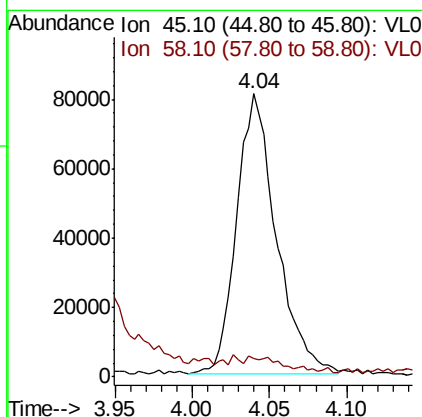
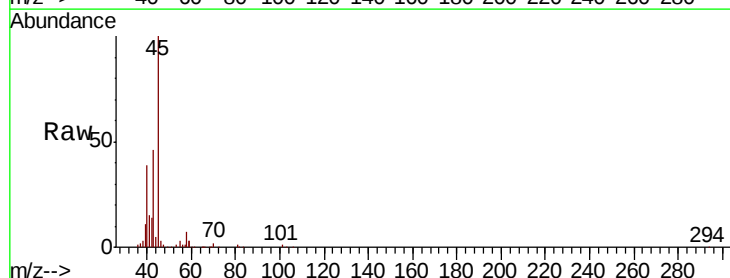
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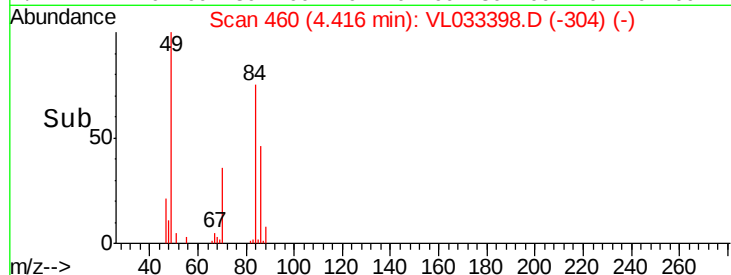
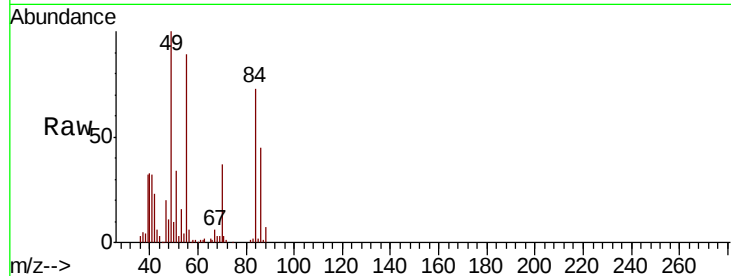
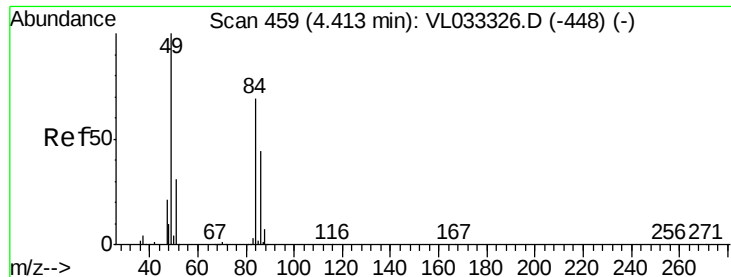
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#19
Isopropyl Alcohol
Concen: 2.343 ppbv
RT: 4.04 min Scan# 343
Delta R.T. 0.02 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion: 45 Resp: 143574
Ion Ratio Lower Upper
45 100
58 0.0 1.5 2.3#





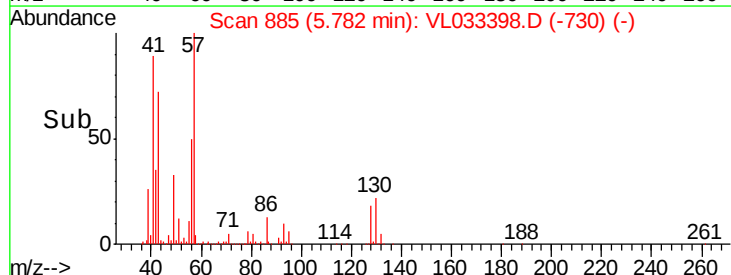
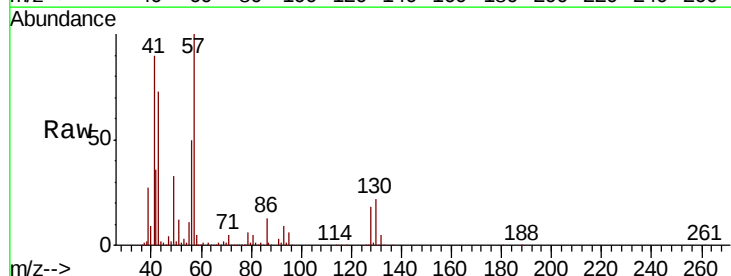
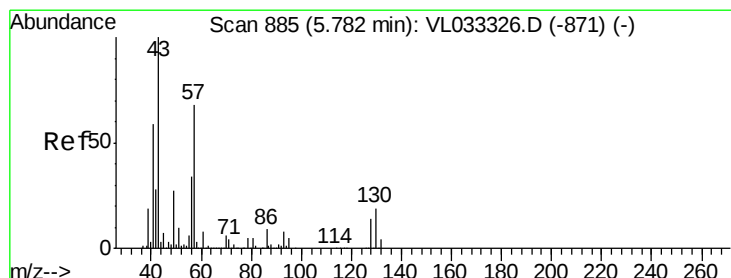
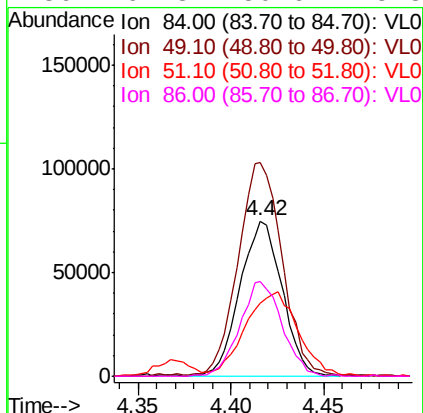
#20
Methvlene Chloride
Concen: 2.827 ppbv
RT: 4.42 min Scan# 460
Delta R.T. 0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tot Ion	Ion	Ratio	Lower	Upper
84	100			
49	136.8	115.4	173.0	
51	44.8	35.8	53.6	
86	61.3	50.6	75.8	

Instrument :
MSVOA_L
ClientSampled :
IA1

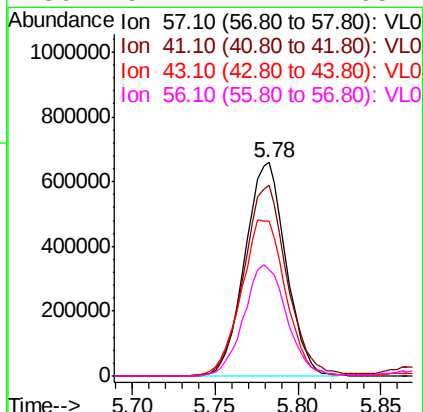
Manual Integrations
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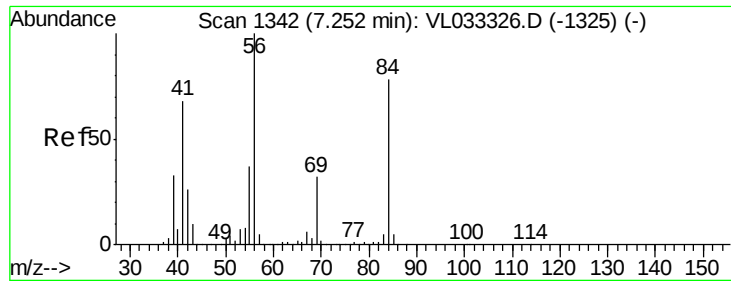
MMDadoda
3/25/2019 8:26:30 AM



#26
Hexane
Concen: 13.519 ppbv
RT: 5.78 min Scan# 885
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion	Ion	Ratio	Lower	Upper
57	100			
41	94.2	70.5	105.7	
43	79.0	181.8	272.8#	
56	54.7	42.2	63.2	





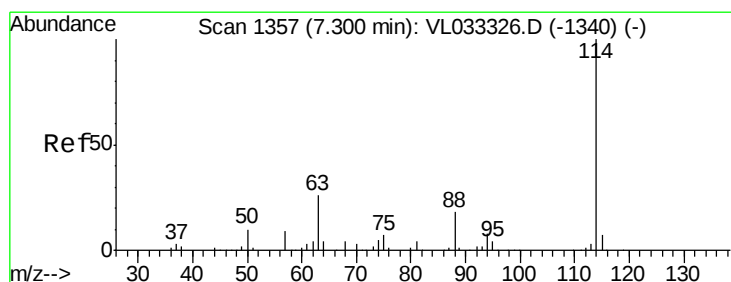
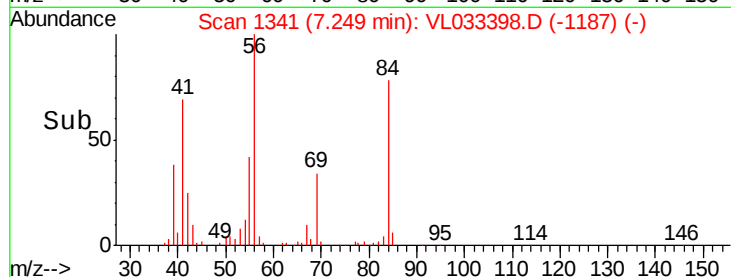
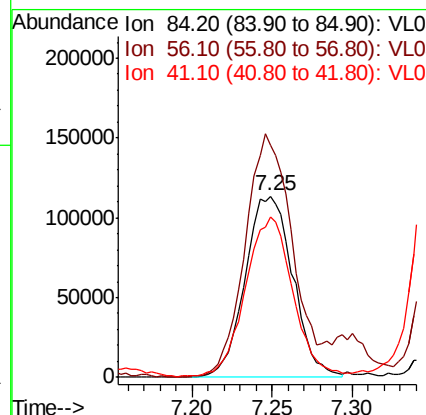
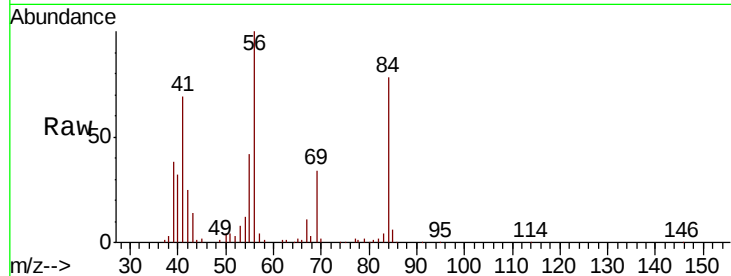
#30
Cyclohexane
Concen: 3.442 ppbv
RT: 7.25 min Scan# 1341
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampleId :
IA1

Tot Ion	Ratio	Lower	Upper
84	100		
56	152.5	111.3	166.9
41	87.5	69.6	104.4

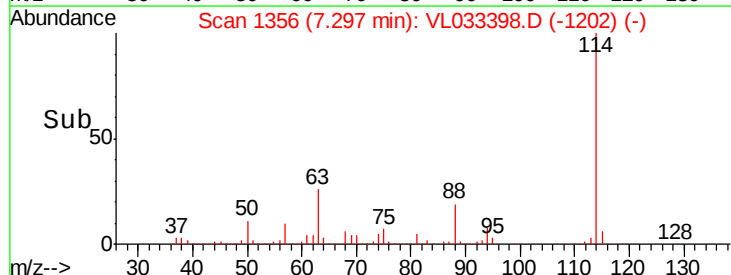
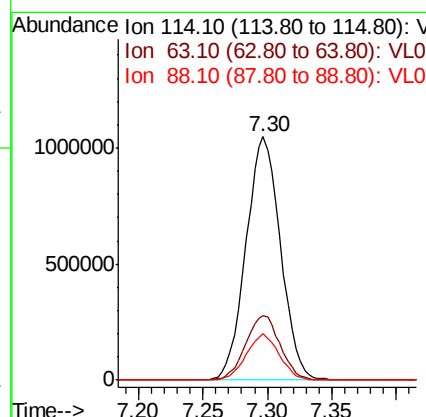
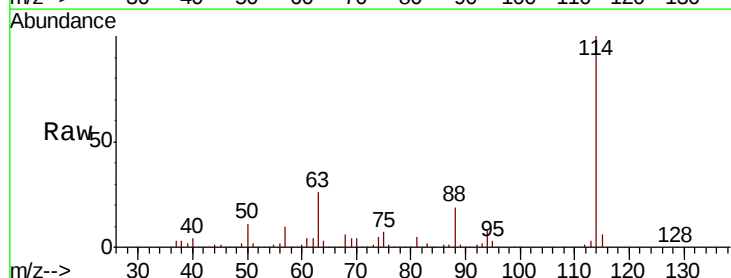
Manual Integrations
APPROVED

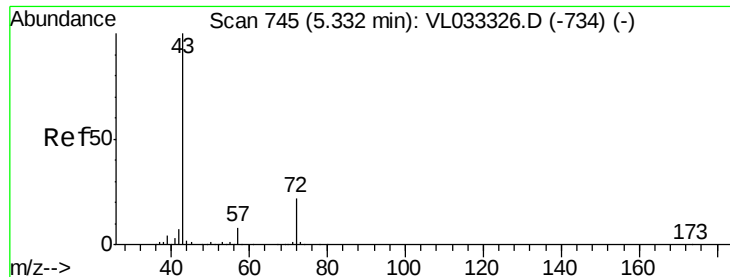
MMDadoda
3/25/2019 8:26:30 AM



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.30 min Scan# 1356
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion	Ratio	Lower	Upper
114	100		
63	26.7	21.4	32.2
88	18.3	14.5	21.7





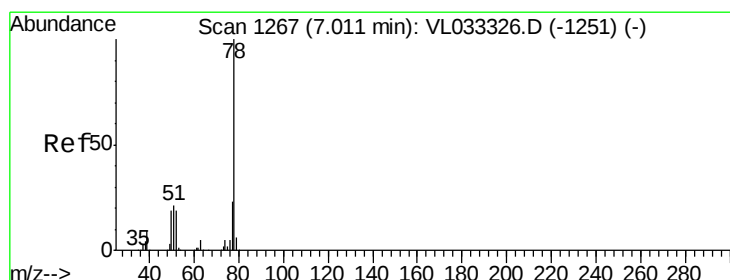
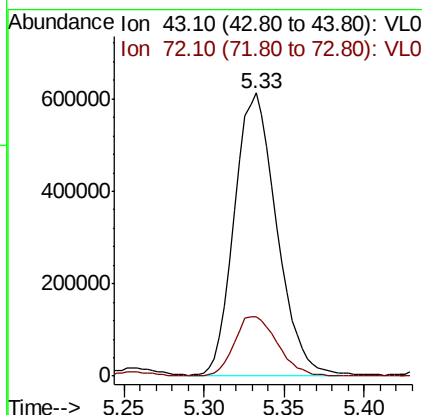
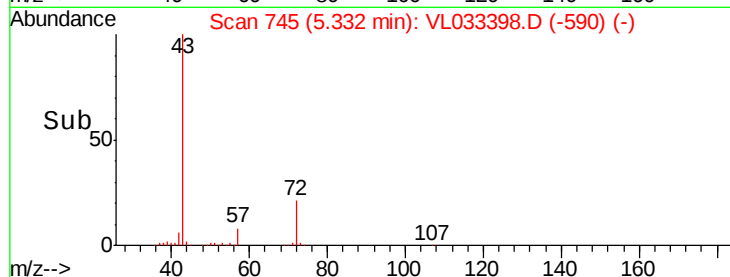
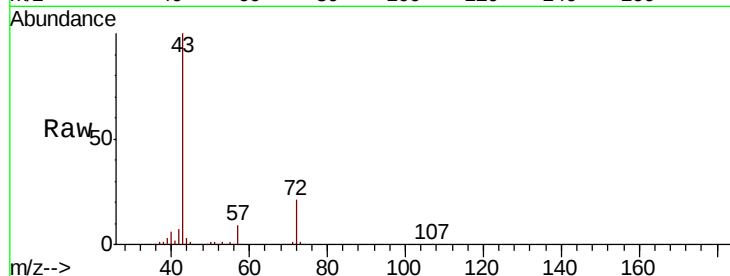
#34
2-Butanone
Concen: 8.561 ppbv
RT: 5.33 min Scan# 745
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampleId :
IA1

Tot Ion: 43 Resp: 1098312
Ion Ratio Lower Upper
43 100
72 21.7 17.7 26.5

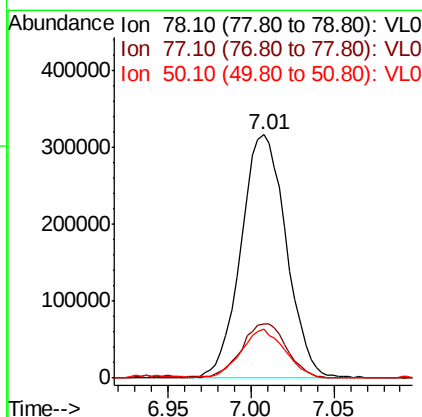
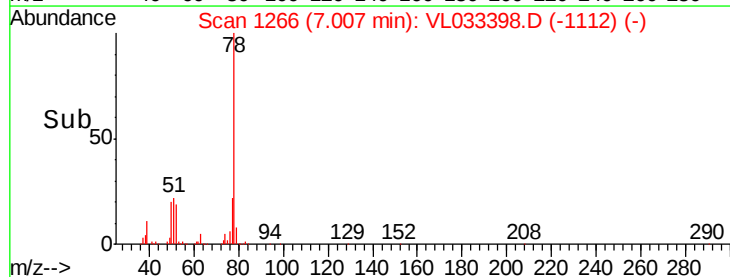
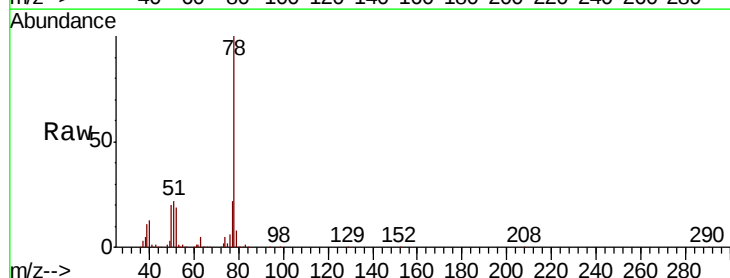
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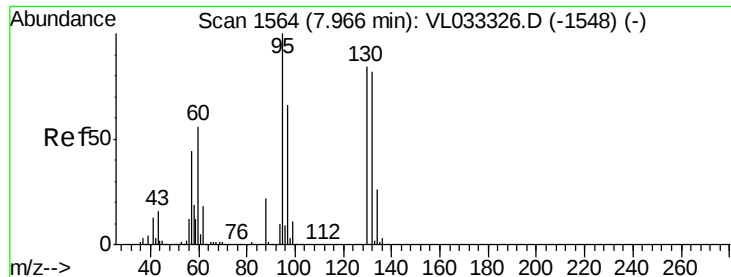
MMDadoda
3/25/2019 8:26:30 AM



#36
Benzene
Concen: 3.443 ppbv
RT: 7.01 min Scan# 1266
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion: 78 Resp: 601993
Ion Ratio Lower Upper
78 100
77 22.1 18.1 27.1
50 20.3 15.2 22.8





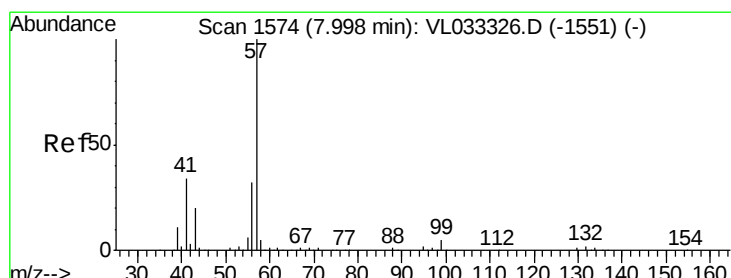
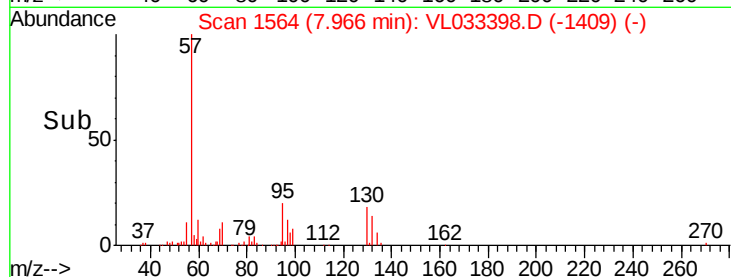
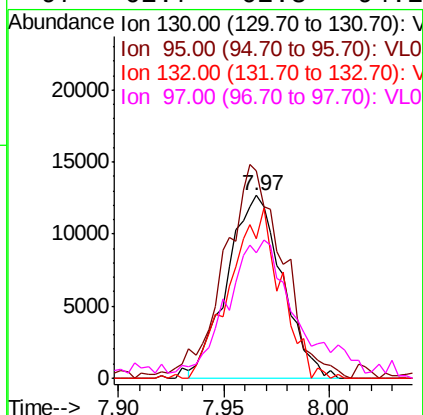
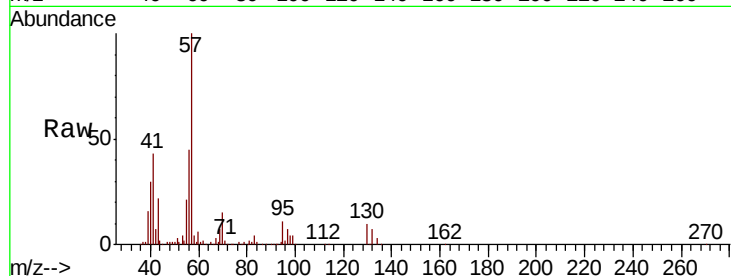
#38
 Trichloroethene
 Concen: 0.347 ppbv
 RT: 7.97 min Scan# 1564
 Delta R.T. -0.00 min
 Lab File: VL033398.D
 Acq: 20 Mar 2019 20:28

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Tot Ion	Ratio	Lower	Upper
130	100		
95	109.3	95.2	142.8
132	76.1	77.7	116.5#
97	62.7	62.8	94.2#

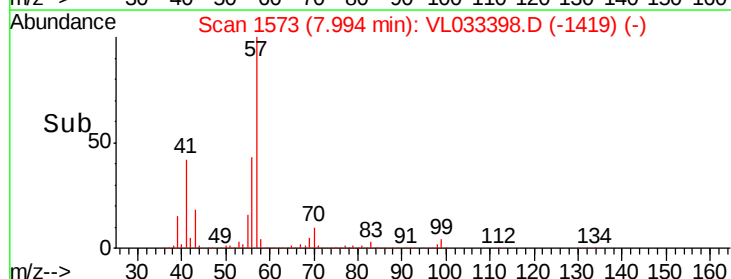
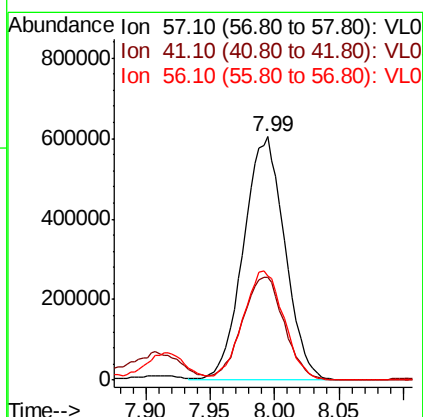
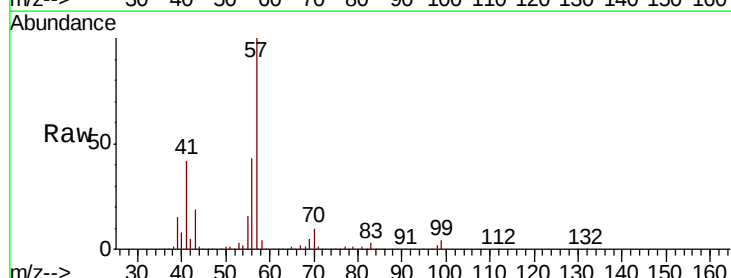
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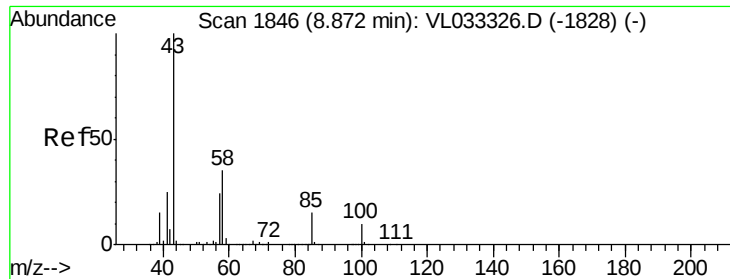
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 3/25/2019 8:26:30 AM



#44
 2,2,4-Trimethylpentane
 Concen: 4.631 ppbv
 RT: 7.99 min Scan# 1573
 Delta R.T. -0.00 min
 Lab File: VL033398.D
 Acq: 20 Mar 2019 20:28

Tgt Ion	Ratio	Lower	Upper
57	100		
41	43.3	26.0	39.0#
56	45.2	24.6	36.8#





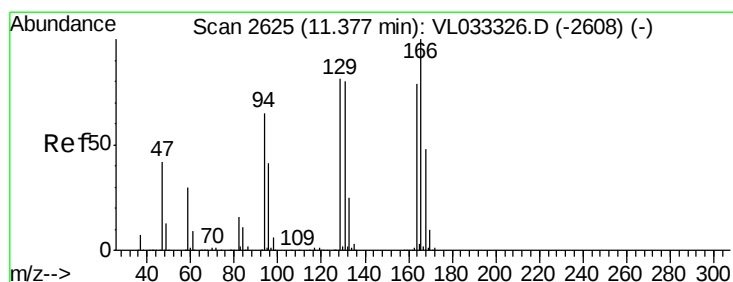
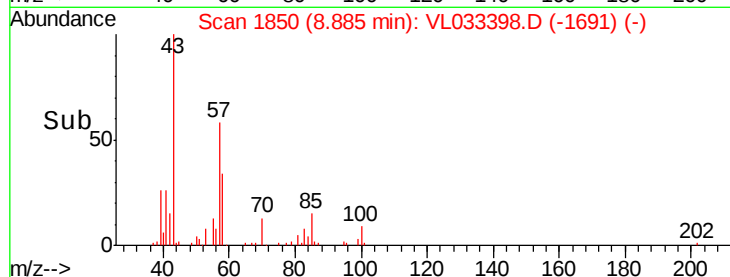
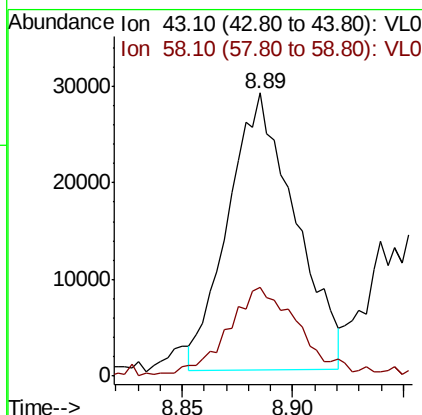
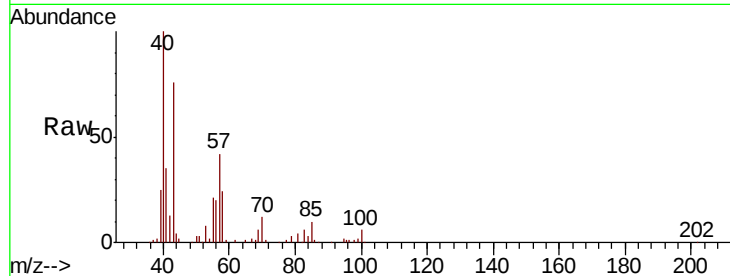
#50
4-Methyl-2-Pentanone
Concen: 0.334 ppbv
RT: 8.89 min Scan# 1850
Delta R.T. 0.01 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampled :
IA1

Tot Ion: 43 Resp: 60562
Ion Ratio Lower Upper
43 100
58 32.8 28.4 42.6

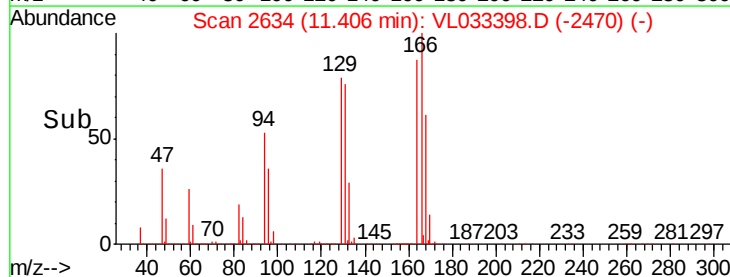
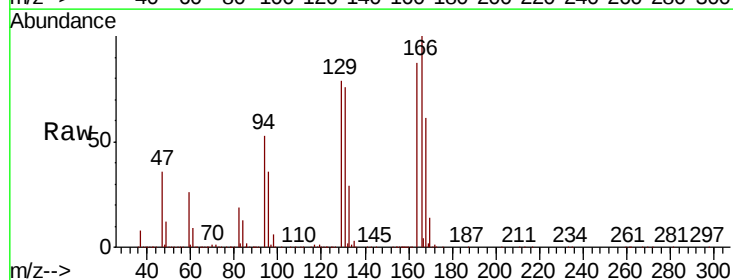
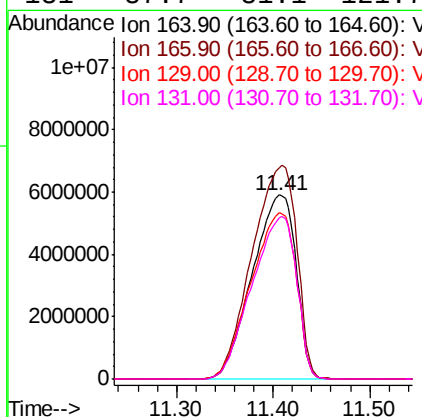
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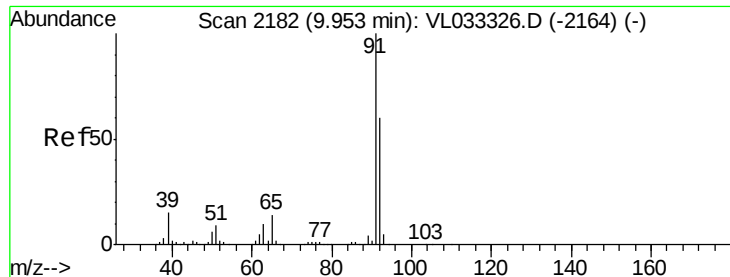
MMDadoda
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#52
Tetrachloroethene
Concen: 255.085 ppbv
RT: 11.41 min Scan# 2634
Delta R.T. 0.03 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion: 164 Resp: 18579231
Ion Ratio Lower Upper
164 100
166 114.9 101.5 152.3
129 90.2 82.2 123.2
131 87.7 81.1 121.7





#53

Toluene

Concen: 79.229 ppbv

RT: 9.96 min Scan# 2183

Delta R.T. 0.00 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

Instrument :

MSVOA_L

ClientSampled :

IA1

Tot Ion: 91 Resp:15739540

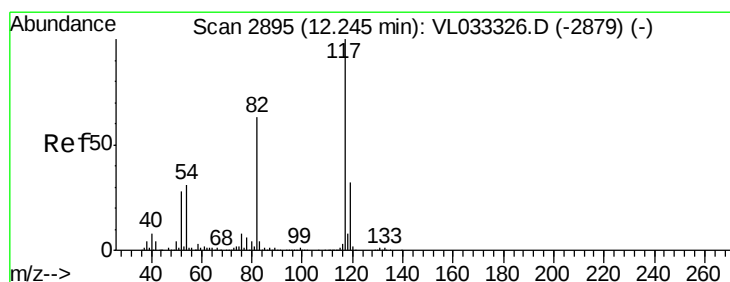
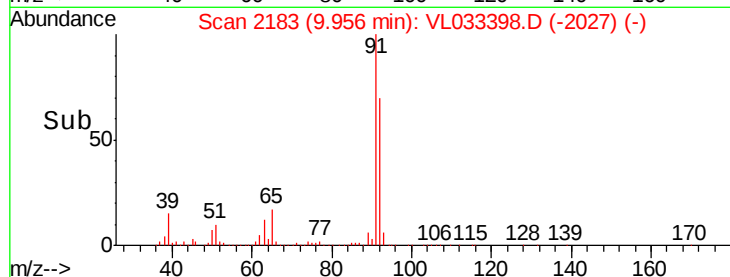
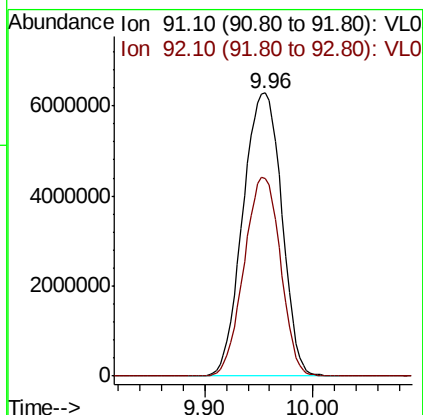
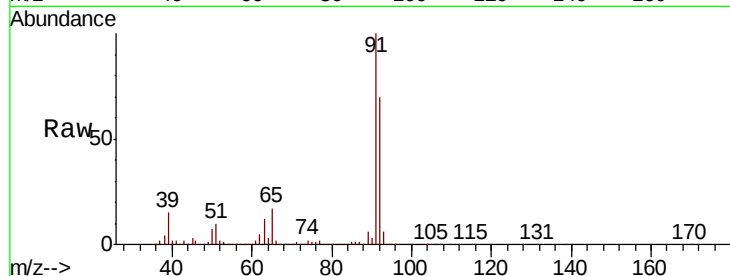
Ion Ratio Lower Upper

91 100

92 66.3 47.4 71.0

Manual Integrations
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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2895

Delta R.T. -0.00 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

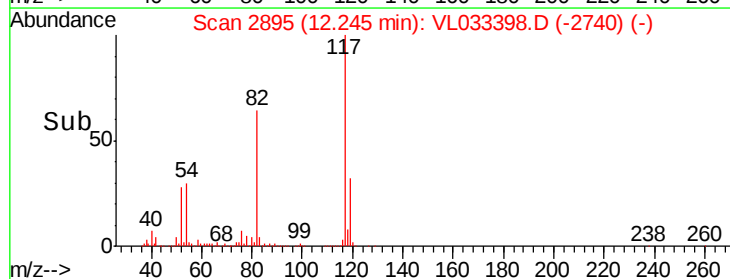
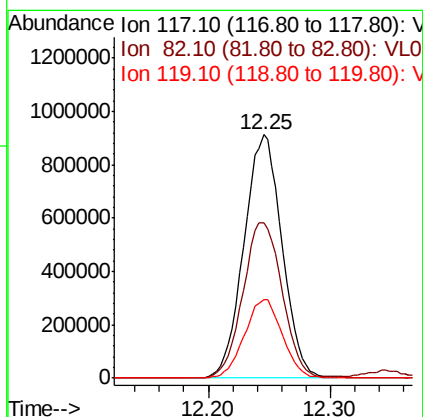
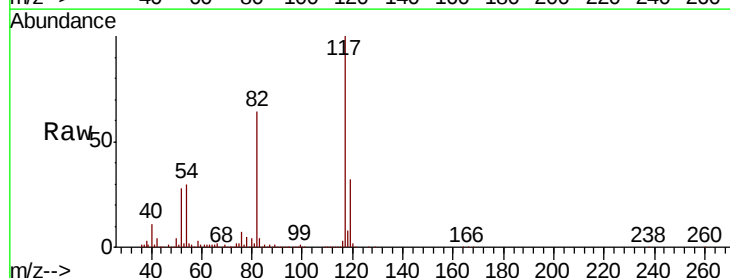
Tgt Ion:117 Resp: 1968450

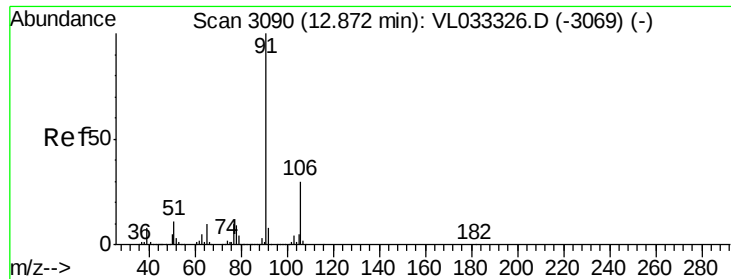
Ion Ratio Lower Upper

117 100

82 65.7 53.4 80.2

119 32.2 27.3 40.9





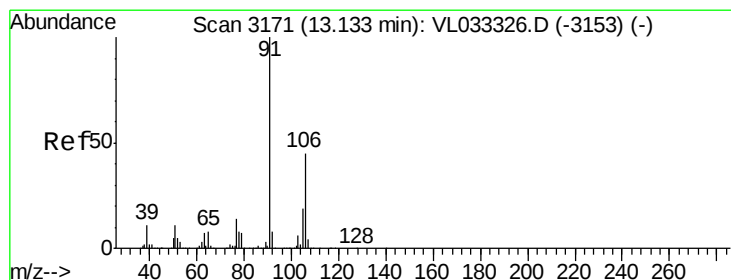
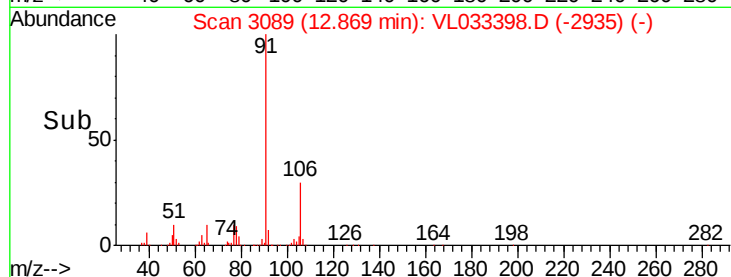
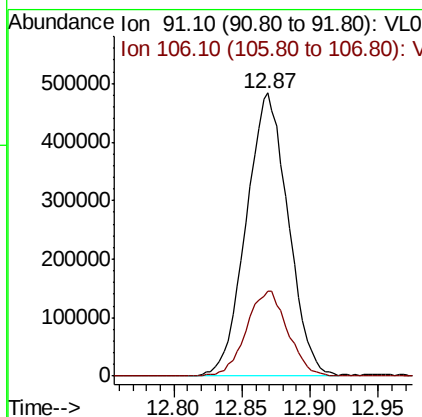
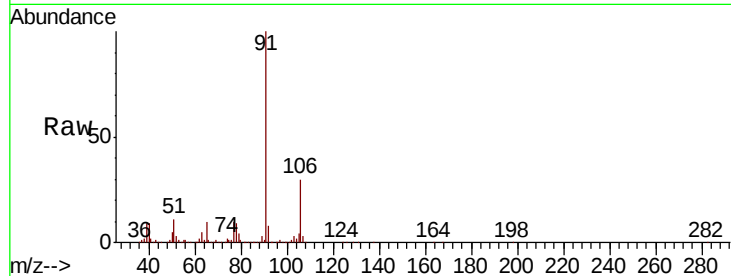
#58
Ethyl Benzene
Concen: 3.703 ppbv
RT: 12.87 min Scan# 3089
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampled :
IA1

Tot Ion: 91 Resp: 1031249
Ion Ratio Lower Upper
91 100
106 30.2 24.2 36.2

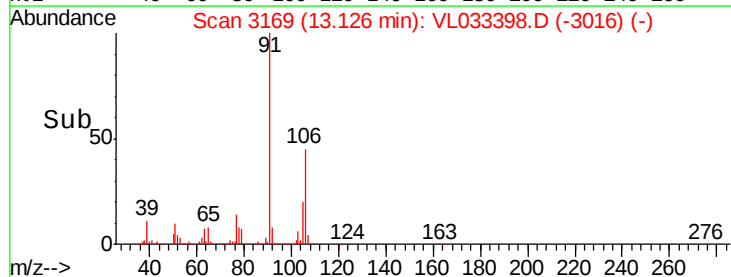
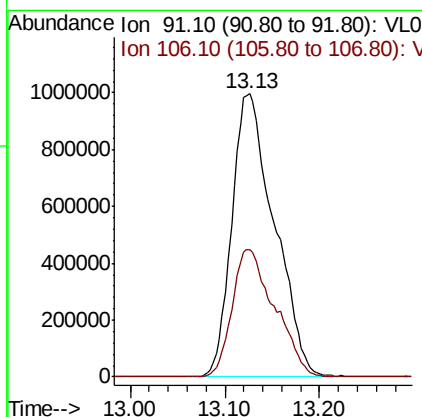
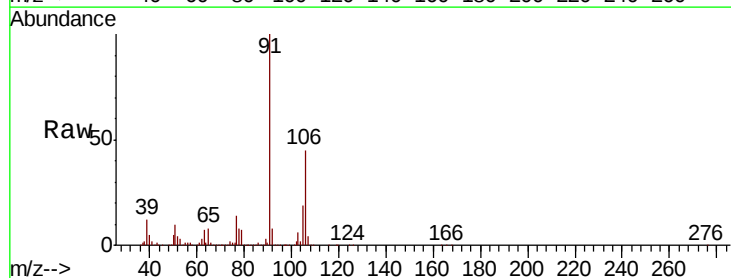
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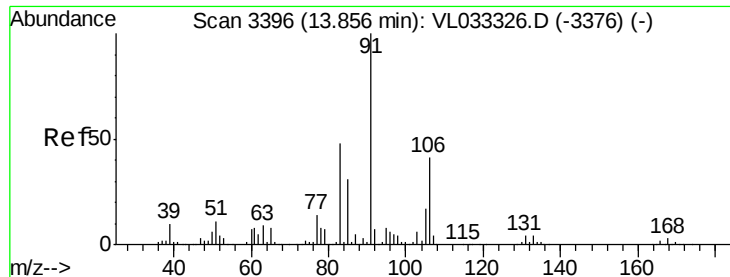
MMDadoda
3/25/2019 8:26:30 AM



#59
m/p-Xylene
Concen: 12.939 ppbv
RT: 13.13 min Scan# 3169
Delta R.T. -0.01 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion: 91 Resp: 3096481
Ion Ratio Lower Upper
91 100
106 45.4 0.0 0.0#





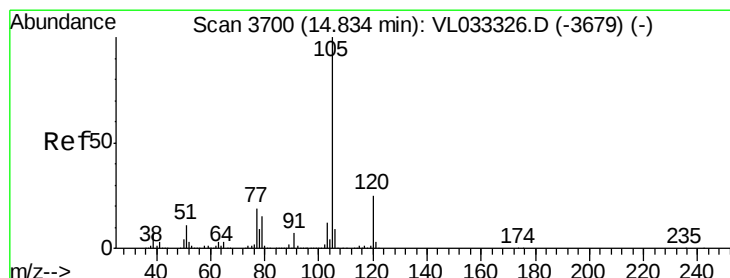
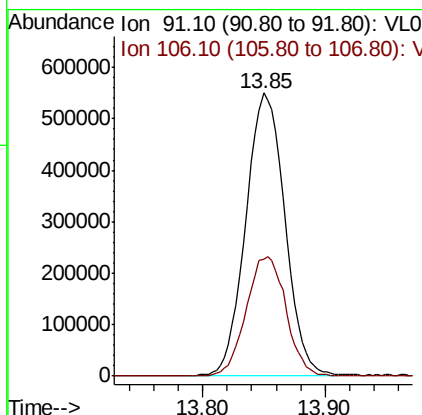
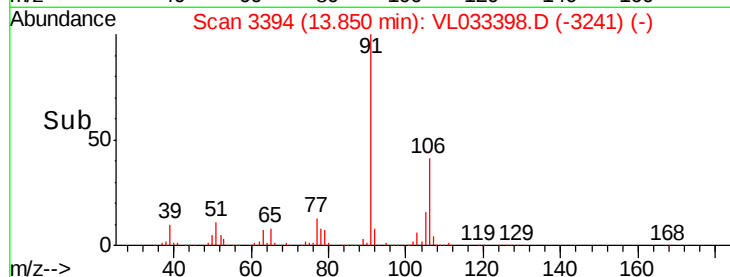
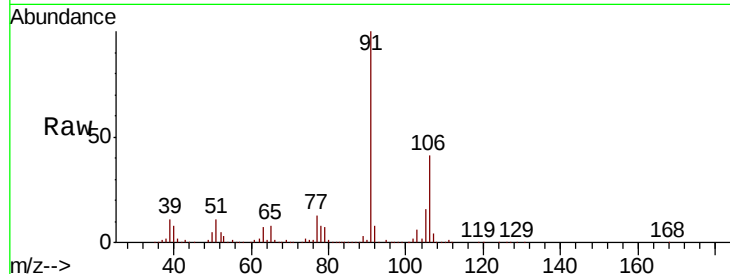
#60
o-Xylene
Concen: 5.215 ppbv
RT: 13.85 min Scan# 3394
Delta R.T. -0.01 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampled :
IA1

Tot Ion: 91 Resp: 1217574
Ion Ratio Lower Upper
91 100
106 43.1 21.3 63.9

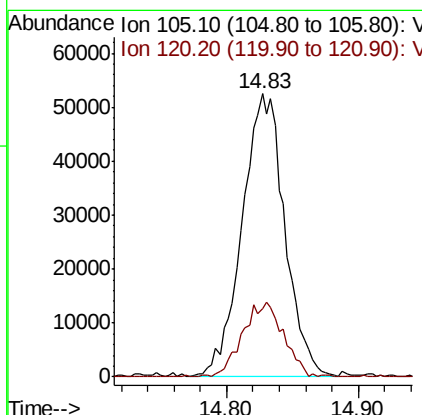
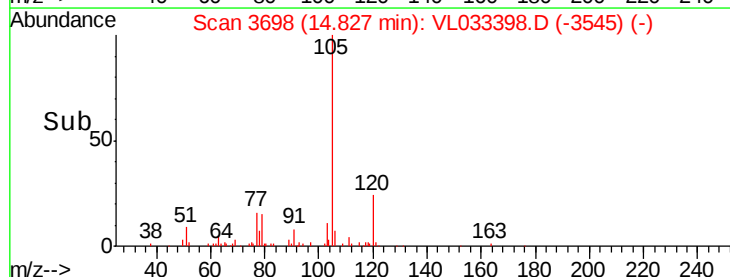
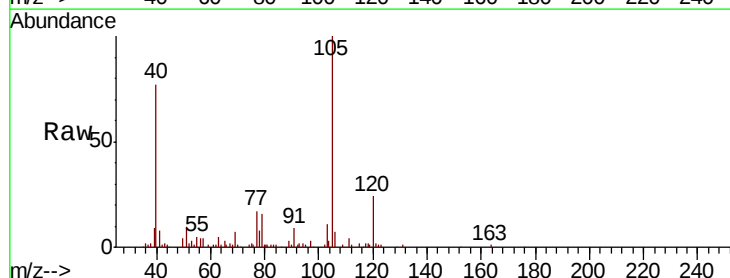
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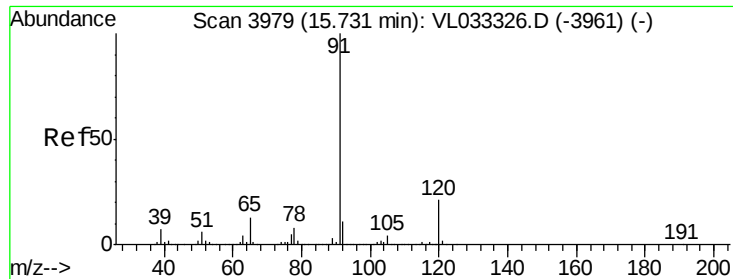
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#62
Isopropylbenzene
Concen: 0.363 ppbv m
RT: 14.83 min Scan# 3698
Delta R.T. -0.01 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion: 105 Resp: 117830
Ion Ratio Lower Upper
105 100
120 25.5 19.9 29.9





#64

n-propylbenzene

Concen: 1.315 ppbv

RT: 15.72 min Scan# 3977

Delta R.T. -0.01 min

Lab File: VL033398.D

Acq: 20 Mar 2019 20:28

Instrument :

MSVOA_L

ClientSampleId :

IA1

Tot Ion:120 Resp: 107984

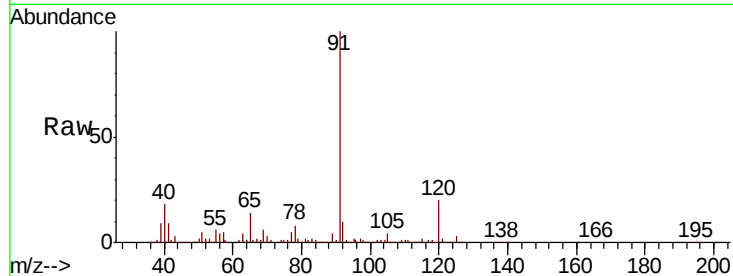
Ion Ratio Lower Upper

120 100

91 498.1 389.8 584.6

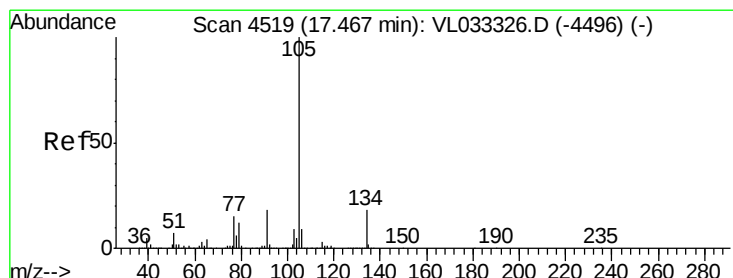
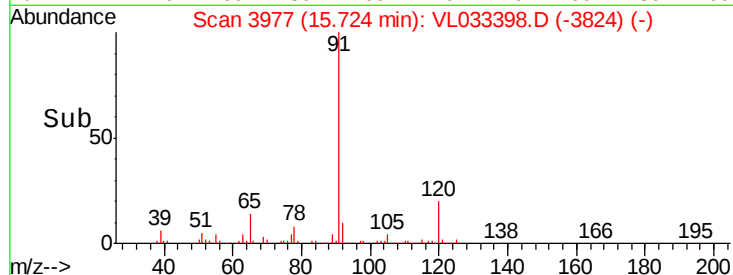
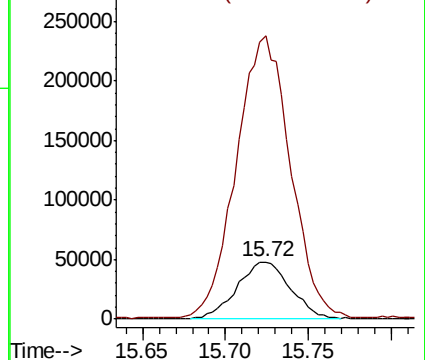
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3/25/2019 8:26:30 AM



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0



#67

sec-Butylbenzene

Concen: 0.135 ppbv m

RT: 17.46 min Scan# 4516

Delta R.T. -0.01 min

Lab File: VL033398.D

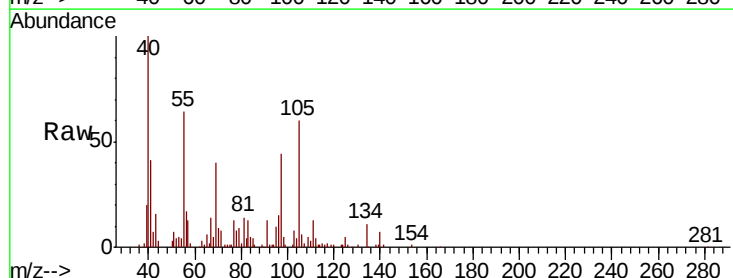
Acq: 20 Mar 2019 20:28

Tgt Ion:105 Resp: 55768

Ion Ratio Lower Upper

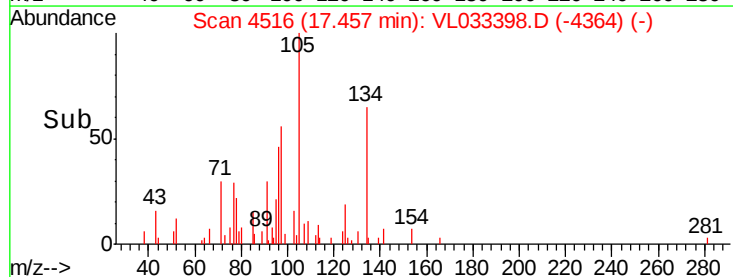
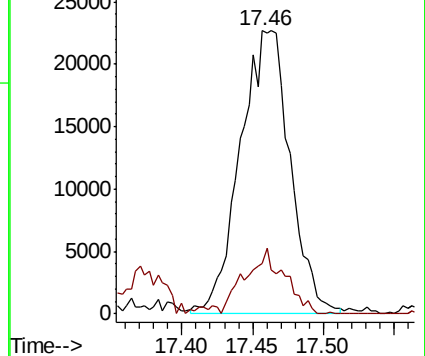
105 100

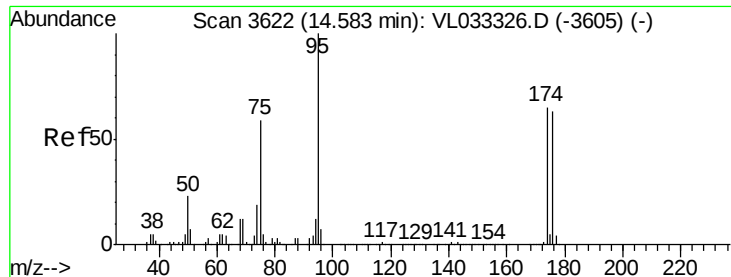
134 19.1 14.2 21.4



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V





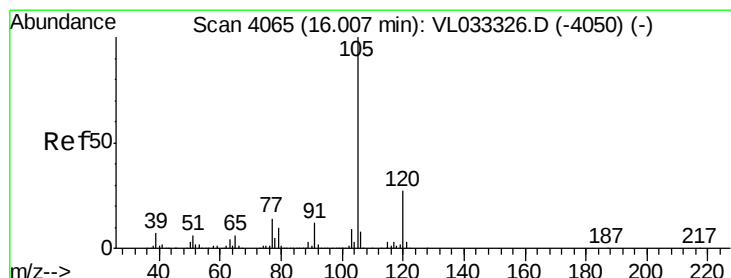
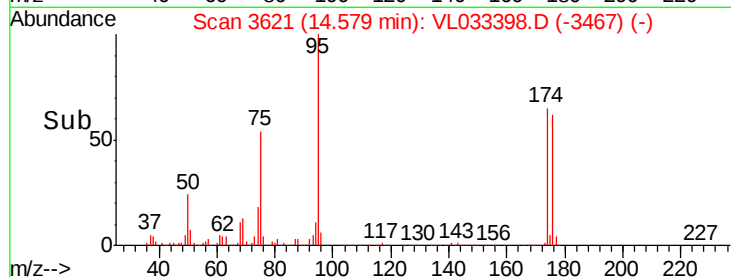
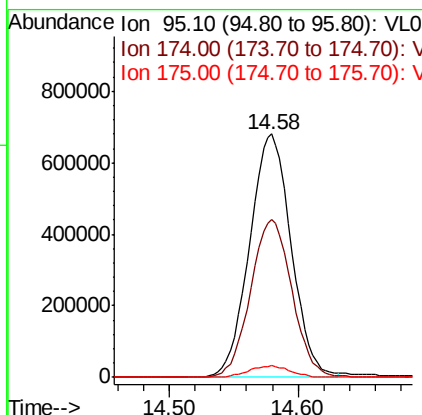
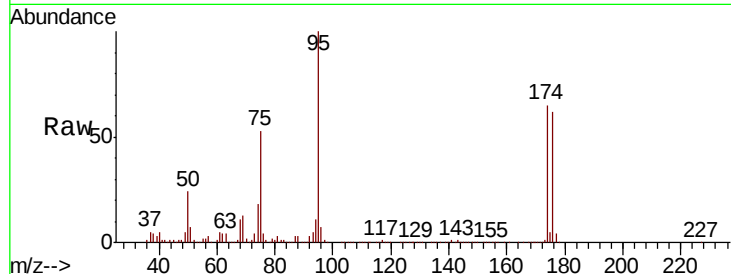
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.466 ppbv
 RT: 14.58 min Scan# 3621
 Delta R.T. -0.00 min
 Lab File: VL033398.D
 Acq: 20 Mar 2019 20:28

Instrument :
 MSVOA_L
 ClientSampled :
 IA1

Tot Ion: 95 Resp: 1526570
 Ion Ratio Lower Upper
 95 100
 174 64.8 51.5 77.3
 175 4.7 3.8 5.6

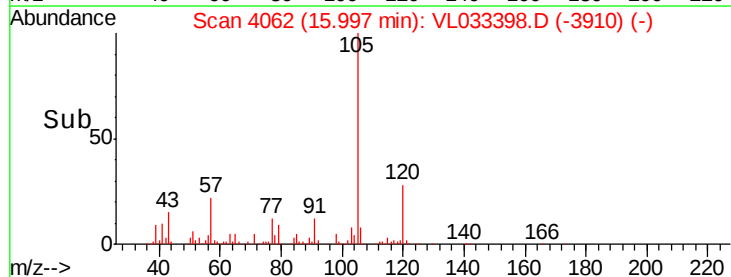
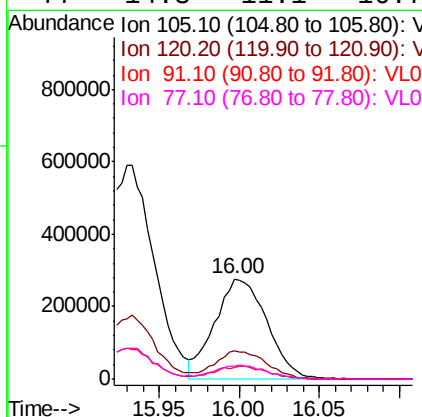
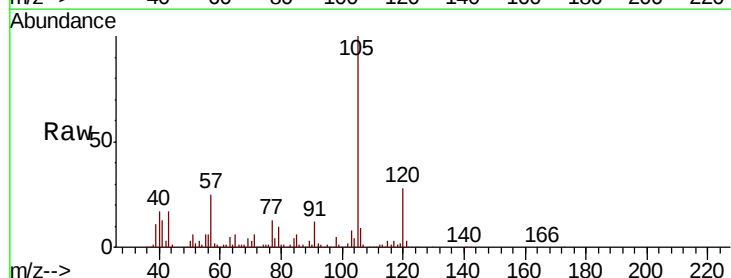
Manual Integrations
 APPROVED

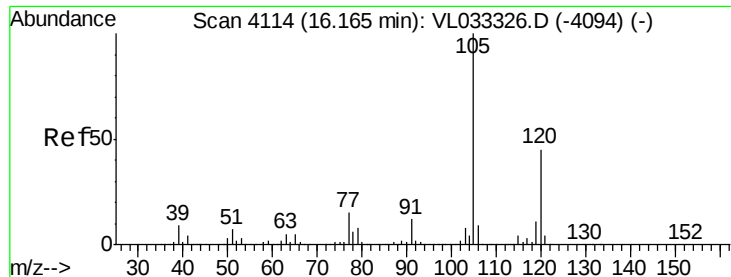
MMDadoda
 3/25/2019 8:26:30 AM



#72
 4-Ethyltoluene
 Concen: 2.315 ppbv
 RT: 16.00 min Scan# 4062
 Delta R.T. -0.01 min
 Lab File: VL033398.D
 Acq: 20 Mar 2019 20:28

Tgt Ion: 105 Resp: 613868
 Ion Ratio Lower Upper
 105 100
 120 28.0 22.9 34.3
 91 12.5 10.2 15.2
 77 14.3 11.1 16.7





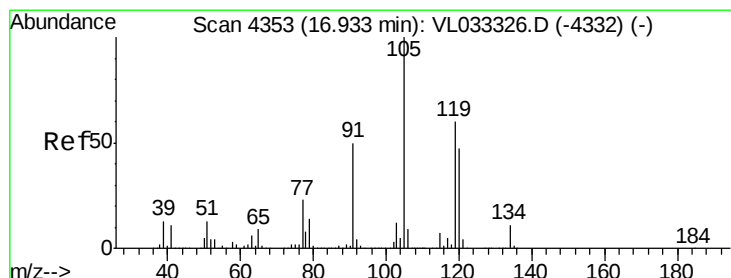
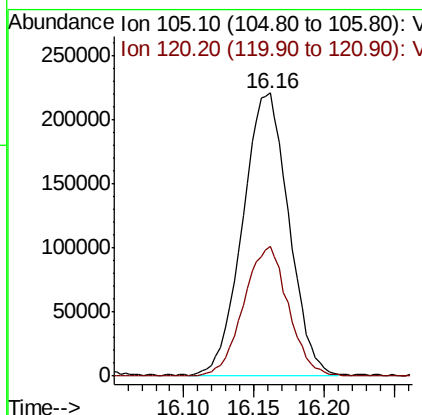
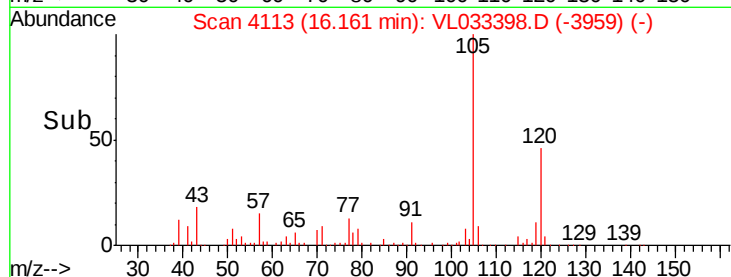
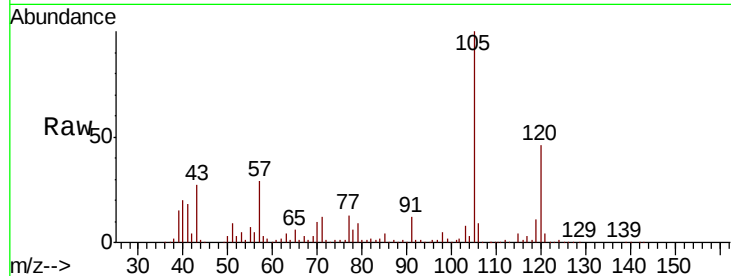
#73
 1,3,5-Trimethylbenzene
 Concen: 1.945 ppbv
 RT: 16.16 min Scan# 4113
 Delta R.T. -0.00 min
 Lab File: VL033398.D
 Acq: 20 Mar 2019 20:28

Instrument :
 MSVOA_L
 ClientSampled :
 IA1

Tot Ion:105 Resp: 502474
 Ion Ratio Lower Upper
 105 100
 120 45.7 36.2 54.4

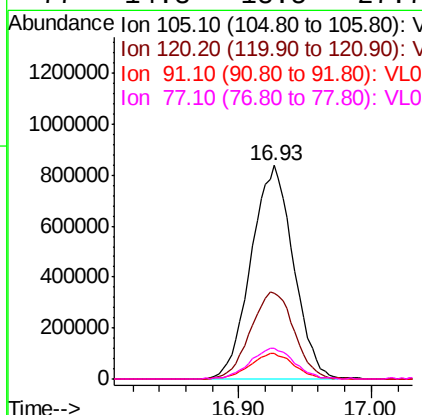
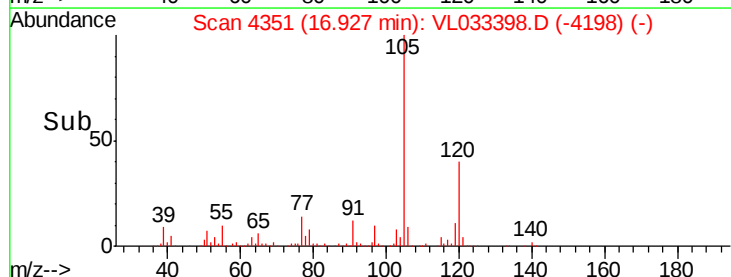
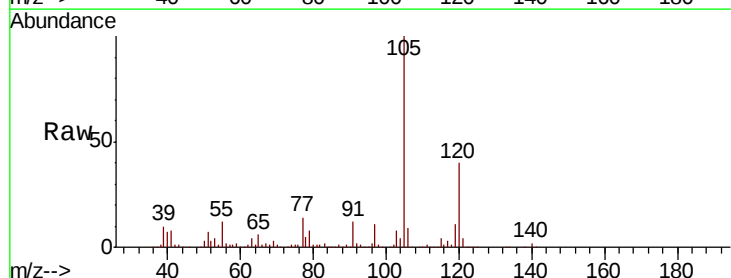
Manual Integrations
 APPROVED

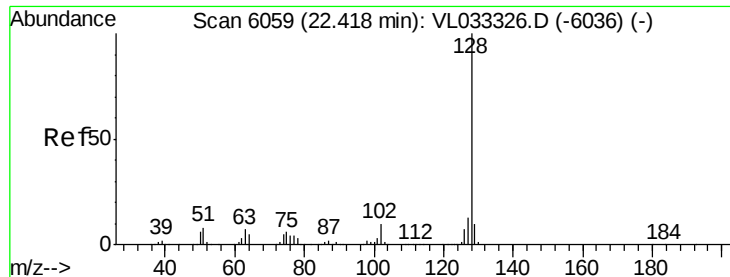
MMDadoda
 3/25/2019 8:26:30 AM



#74
 1,2,4-Trimethylbenzene
 Concen: 6.817 ppbv
 RT: 16.93 min Scan# 4351
 Delta R.T. -0.01 min
 Lab File: VL033398.D
 Acq: 20 Mar 2019 20:28

Tgt Ion:105 Resp: 1864833
 Ion Ratio Lower Upper
 105 100
 120 40.2 37.4 56.2
 91 11.6 41.0 61.4#
 77 14.3 18.5 27.7#





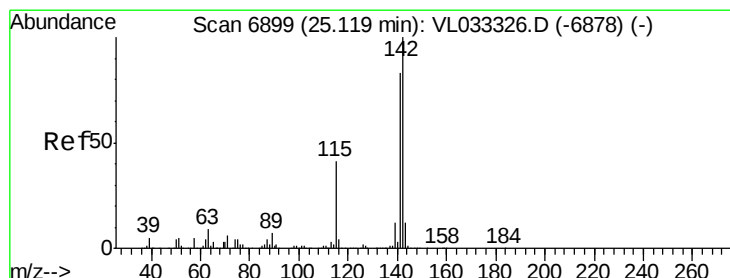
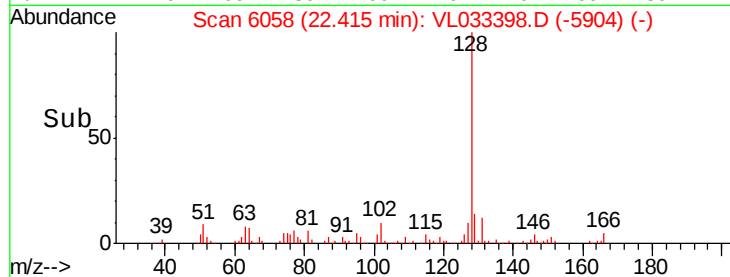
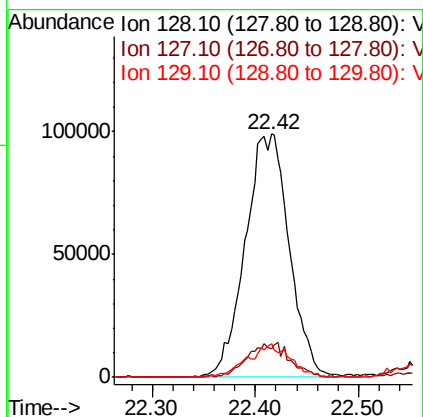
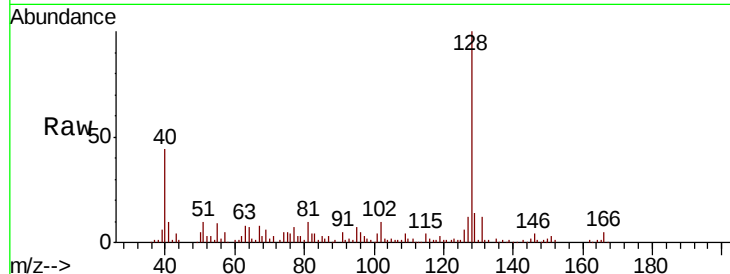
#79
Naphthalene
Concen: 1.116 ppbv m
RT: 22.42 min Scan# 6058
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Instrument :
MSVOA_L
ClientSampled :
IA1

Tot Ion	Ratio	Resp	Lower	Upper
128	100	294052		
127	11.6	10.1	15.1	
129	13.7	8.2	12.2#	

Manual Integrations
APPROVED

MMDadoda
3/25/2019 8:26:30 AM



#80
Naphthalene, 2-methyl-
Concen: 0.554 ppbv
RT: 25.12 min Scan# 6898
Delta R.T. -0.00 min
Lab File: VL033398.D
Acq: 20 Mar 2019 20:28

Tgt Ion	Ratio	Resp	Lower	Upper
142	100	69222		
141	87.5	67.1	100.7	
115	75.6	33.8	50.6#	

