

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_D\DATA\VD040919\
 Data File : VD061691.D
 Acq On : 9 Apr 2019 22:48
 Operator : VA/AP
 Sample : K2316-08
 Misc : 5.10g/5ml/MSVOA_D/SOIL
 ALS Vial : 23 Sample Multiplier: 1

Instrument :
 MSVOA_D
 ClientSampleId :
 20190176-AMND-COMP-CS-3

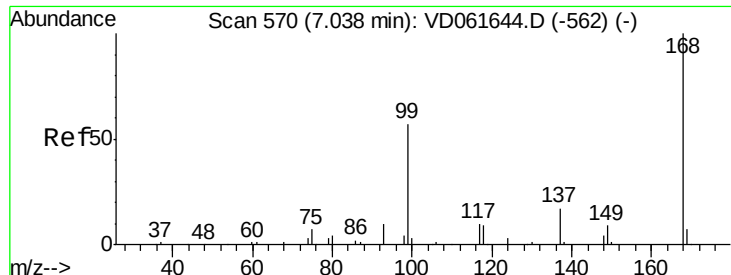
Manual Integrations
 APPROVED

MMDadoda
 4/11/2019 3:00:05 AM

Quant Time: Apr 10 09:28:31 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_D\METHOD\82D040619S.M
 Quant Title : SW846 8260
 QLast Update : Mon Apr 08 10:04:03 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	7.08	168	441470	50.00	ug/l	0.04
34) 1,4-Difluorobenzene	8.25	114	768303	50.00	ug/l	0.04
63) Chlorobenzene-d5	12.39	117	518637	50.00	ug/l	0.02
72) 1,4-Dichlorobenzene-d4	14.53	152	138184	50.00	ug/l	0.01
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	7.49	65	199031	59.48	ug/l	0.03
Spiked Amount 50.000			Recovery	=	118.96%	
35) Dibromofluoromethane	0.00	113	0d	0.00	ug/l	
Spiked Amount 50.000			Recovery	=	0.00%	
50) Toluene-d8	10.44	98	684404	51.18	ug/l	0.03
Spiked Amount 50.000			Recovery	=	102.36%	
62) 4-Bromofluorobenzene	13.57	95	215579m	44.89	ug/l	0.02
Spiked Amount 50.000			Recovery	=	89.78%	
Target Compounds						
					Qvalue	
16) Acetone	3.25	43	78614	78.588	ug/l	92
17) Carbon Disulfide	3.41	76	183143	12.247	ug/l	97
20) Methylene Chloride	3.85	84	24803	4.369	ug/l	97
31) Cyclohexane	6.99	56	7660	1.216	ug/l #	85
40) Benzene	7.50	78	1350778	83.270	ug/l	99
52) Toluene	10.54	92	135304	13.357	ug/l	97
65) Chlorobenzene	12.42	112	227446	22.114	ug/l	97
67) Ethyl Benzene	12.54	91	218152	13.929	ug/l	97
68) m/p-Xylenes	12.68	106	175297	29.032	ug/l	94
69) o-Xylene	13.07	106	88925	15.257	ug/l	90
73) Isopropylbenzene	13.42	105	525306	57.053	ug/l	98
78) n-propylbenzene	13.79	91	40542	3.681	ug/l	86
79) 2-Chlorotoluene	13.85	91	169313	26.882	ug/l	95
80) 1,3,5-Trimethylbenzene	13.94	105	53387	7.305	ug/l	99
83) tert-Butylbenzene	14.20	119	61301	6.957	ug/l	99
84) 1,2,4-Trimethylbenzene	14.25	105	136697	18.534	ug/l	99
85) sec-Butylbenzene	14.38	105	16487	1.732	ug/l	97
86) p-Isopropyltoluene	14.50	119	62539	7.573	ug/l	95
87) 1,3-Dichlorobenzene	14.46	146	7570m	1.646	ug/l	
88) 1,4-Dichlorobenzene	14.54	146	11921	2.569	ug/l #	84
89) n-Butylbenzene	14.81	91	8961m	1.248	ug/l	
95) Naphthalene	16.14	128	35349	11.568	ug/l	98

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



#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.08 min Scan# 575

Delta R.T. 0.04 min

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Tgt Ion:168 Resp: 441470

Ion Ratio Lower Upper

168 100

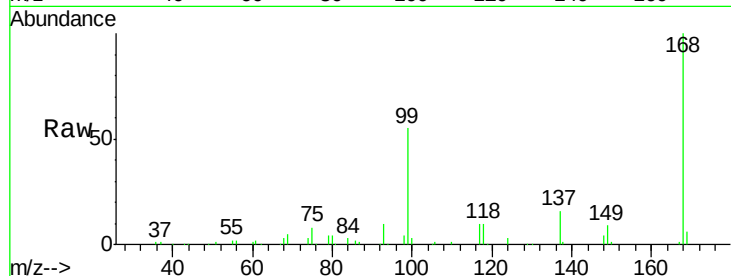
99 54.9 46.8 70.2

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Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.95 (98.65 to 99.65): VDC

7.08

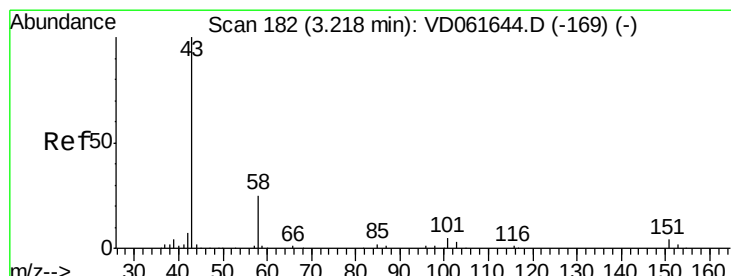
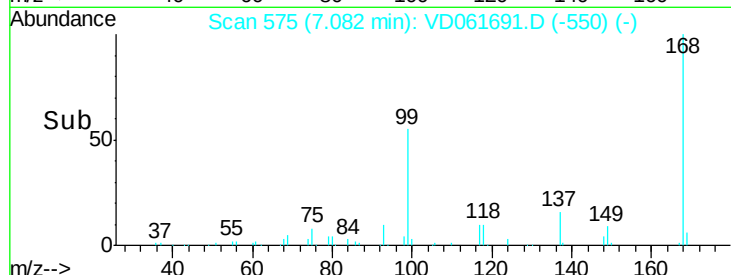
150000

100000

50000

0

Time-->



#16

Acetone

Concen: 78.588 ug/l

RT: 3.25 min Scan# 186

Delta R.T. 0.03 min

Lab File: VD061691.D

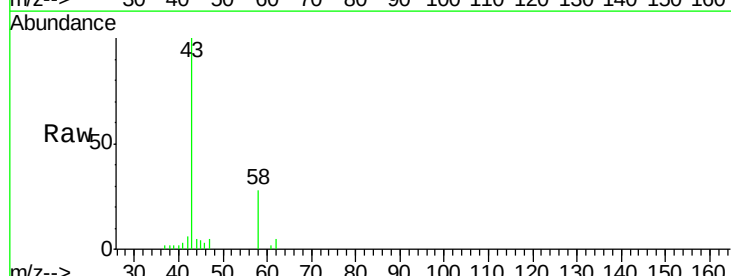
Acq: 9 Apr 2019 22:48

Tgt Ion: 43 Resp: 78614

Ion Ratio Lower Upper

43 100

58 28.5 19.7 29.5



Abundance Ion 42.95 (42.65 to 43.65): VDC

Ion 57.95 (57.65 to 58.65): VDC

3.25

30000

25000

20000

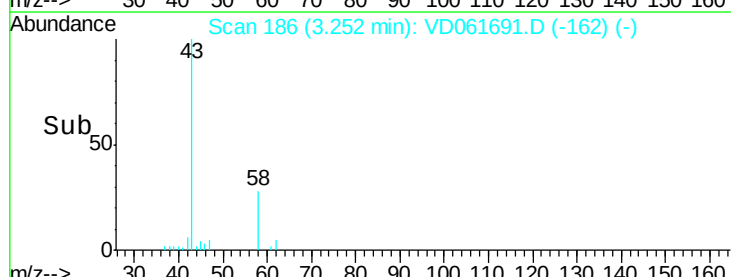
15000

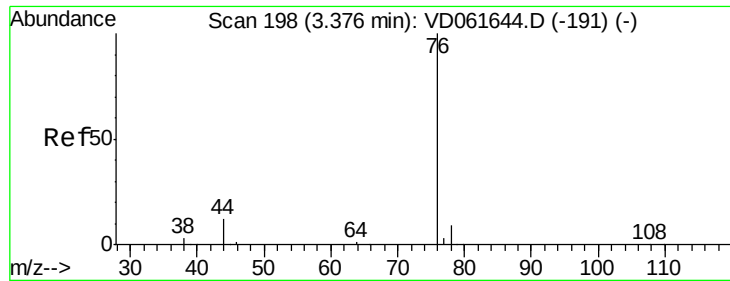
10000

5000

0

Time-->





#17

Carbon Disulfide

Concen: 12.247 ug/l

RT: 3.41 min Scan# 202

Delta R.T. 0.03 min

Lab File: VD061691.D

Acq: 9 Apr 2019 22:48

Instrument :

MSVOA_D

ClientSampleId :

20190176-AMND-COMP-CS-3

Tgt Ion: 76 Resp: 183143

Ion Ratio Lower Upper

76 100

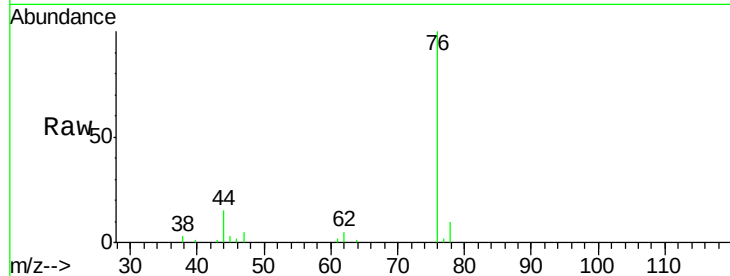
78 10.2 7.4 11.2

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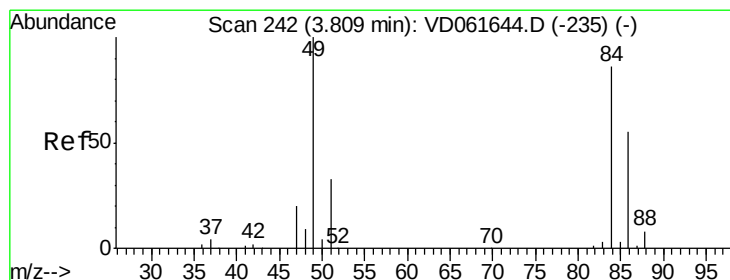
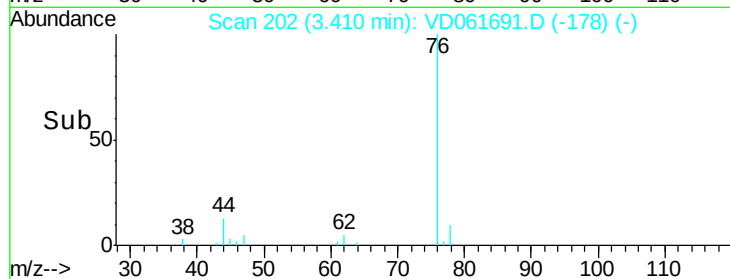
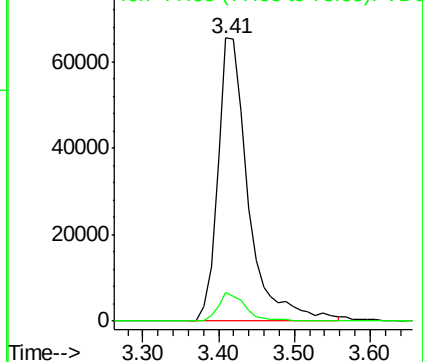
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Abundance Ion 75.85 (75.55 to 76.55): VDC

Ion 77.85 (77.55 to 78.55): VDC



#20

Methylene Chloride

Concen: 4.369 ug/l

RT: 3.85 min Scan# 247

Delta R.T. 0.04 min

Lab File: VD061691.D

Acq: 9 Apr 2019 22:48

Tgt Ion: 84 Resp: 24803

Ion Ratio Lower Upper

84 100

49 115.1 93.0 139.4

51 31.2 30.4 45.6

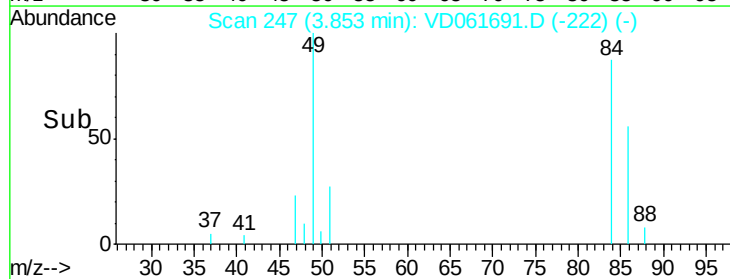
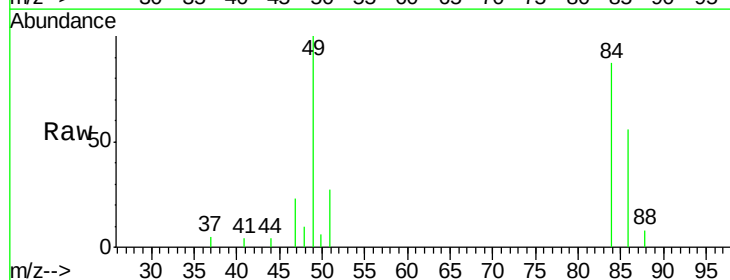
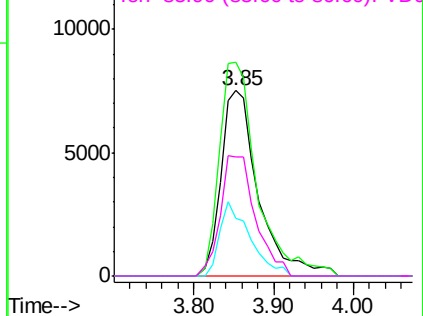
86 64.5 51.0 76.4

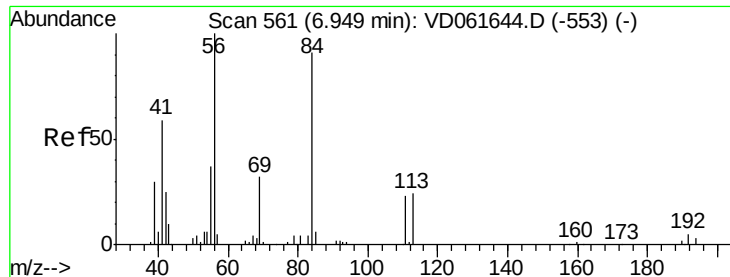
Abundance Ion 83.95 (83.65 to 84.65): VDC

Ion 48.90 (48.60 to 49.60): VDC

Ion 50.90 (50.60 to 51.60): VDC

Ion 85.90 (85.60 to 86.60): VDC





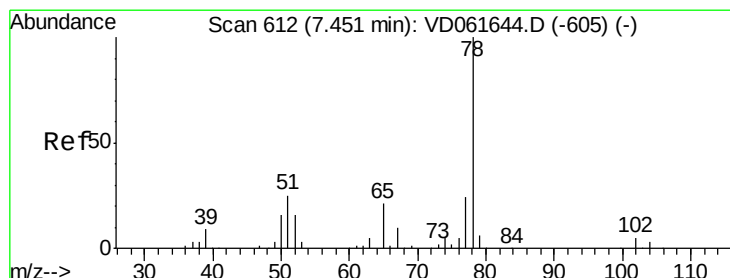
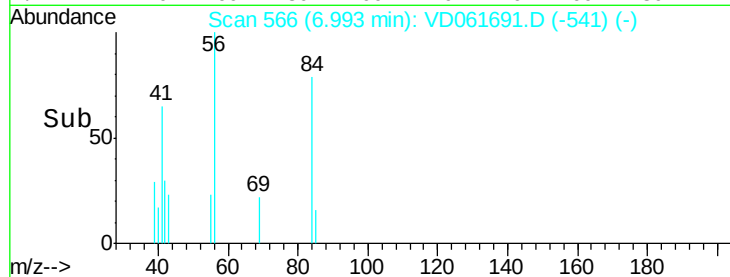
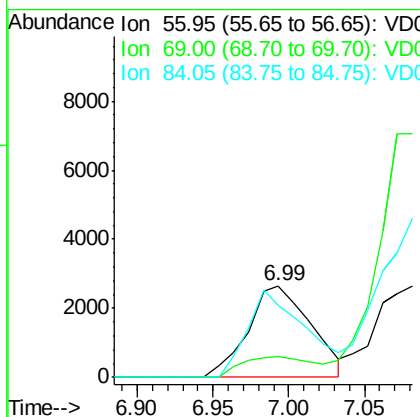
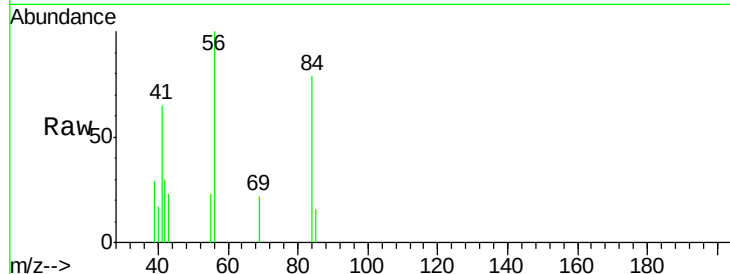
#31
Cyclohexane
Concen: 1.216 ug/l
RT: 6.99 min Scan# 566
Delta R.T. 0.04 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Instrument :
MSVOA_D
ClientSampleId :
20190176-AMND-COMP-CS-3

Tgt Ion: 56 Resp: 7660
Ion Ratio Lower Upper
56 100
69 22.3 25.8 38.6#
84 79.3 74.2 111.2

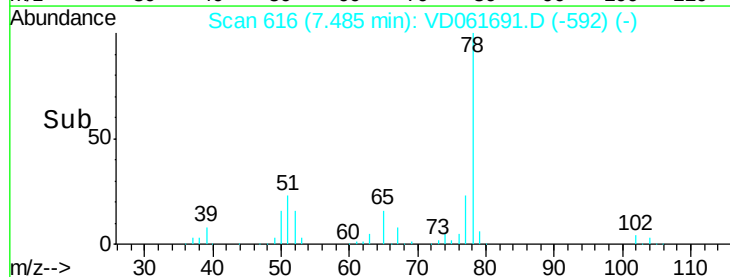
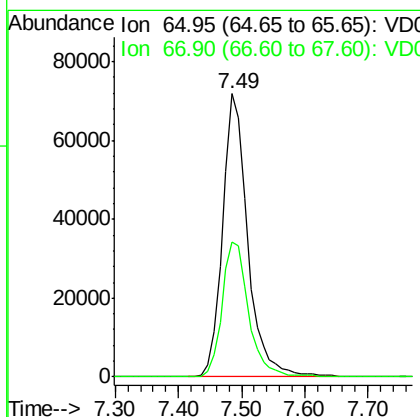
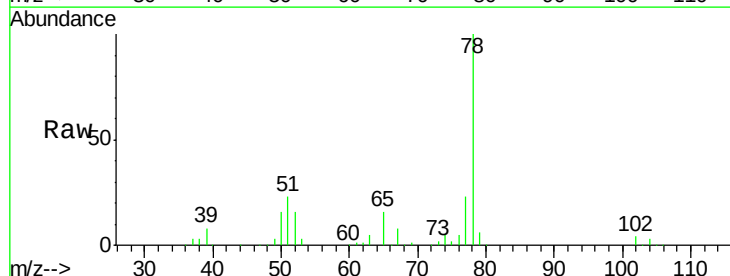
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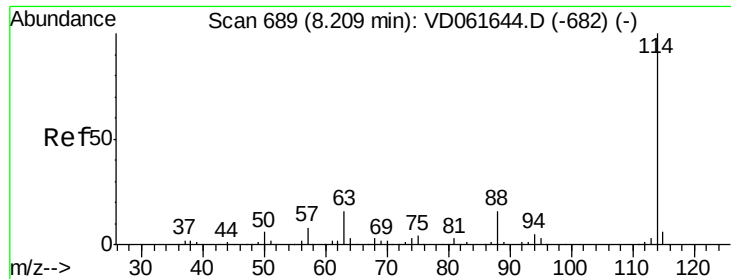
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#33
1,2-Dichloroethane-d4
Concen: 59.478 ug/l
RT: 7.49 min Scan# 616
Delta R.T. 0.03 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Tgt Ion: 65 Resp: 199031
Ion Ratio Lower Upper
65 100
67 47.7 0.0 99.4





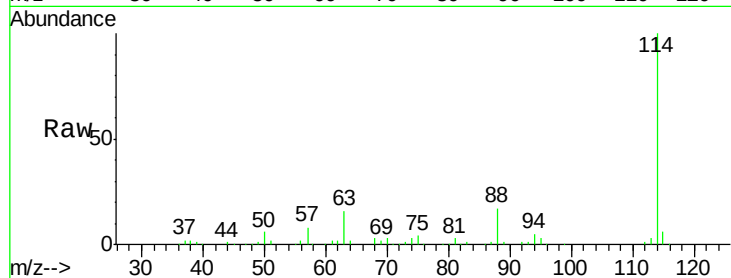
#34
 1,4-Difluorobenzene
 Concen: 50.000 ug/l
 RT: 8.25 min Scan# 694
 Delta R.T. 0.04 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Instrument :
 MSVOA_D
 ClientSampleId :
 20190176-AMND-COMP-CS-3

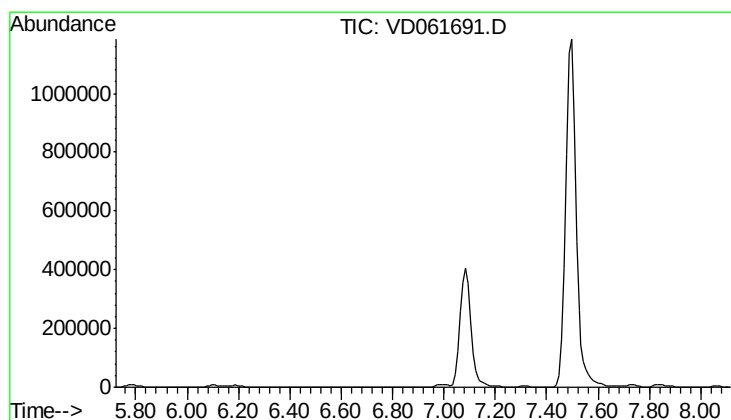
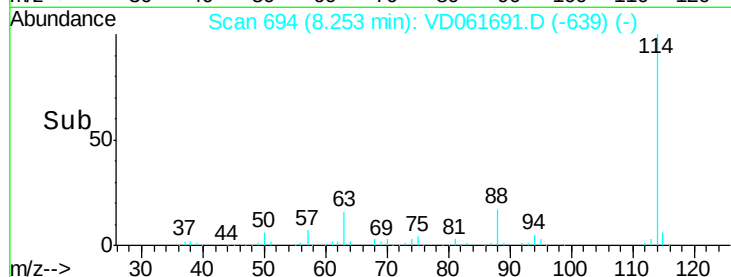
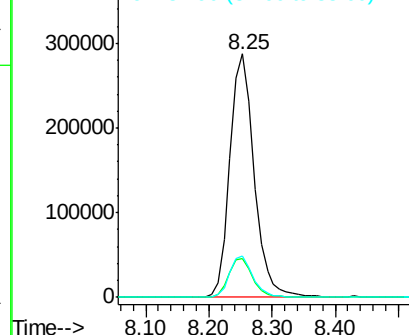
Tgt Ion	Ratio	Resp Lower	Resp Upper
114	100		
63	15.9	0.0	31.2
88	17.0	0.0	31.8

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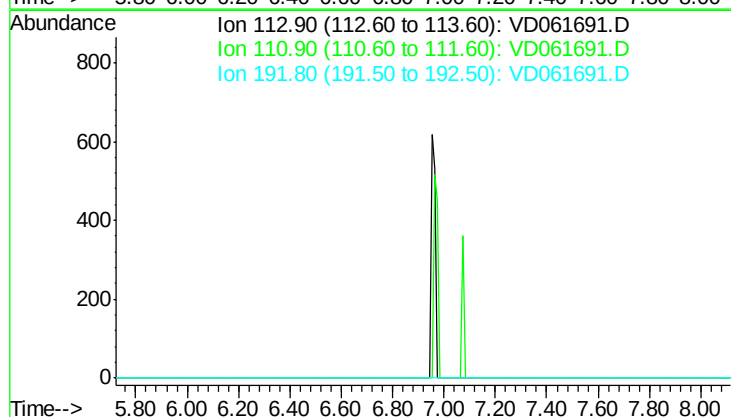


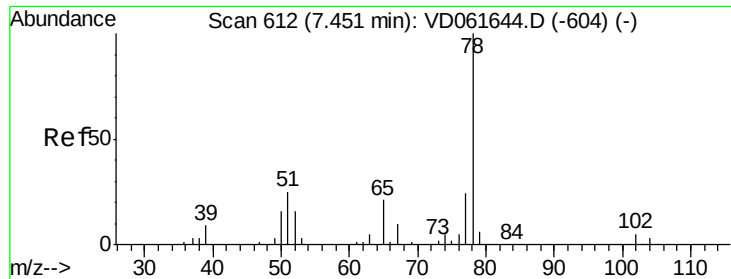
Abundance Ion 114.00 (113.70 to 114.70): V
 Ion 62.95 (62.65 to 63.65): VDC
 Ion 87.90 (87.60 to 88.60): VDC



#35
 Dibromofluoromethane
 Concen: 0.000 ug/l
 Expected RT: 6.92 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Tgt Ion	Sig	Exp Ratio
113	100	
111	99.1	
192	15.4	





#40

Benzene

Concen: 83.270 ug/l

RT: 7.50 min Scan# 617

Delta R.T. 0.04 min

Lab File: VD061691.D

Acq: 9 Apr 2019 22:48

Instrument :

MSVOA_D

ClientSampleId :

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Tgt Ion: 78 Resp: 1350778

Ion Ratio Lower Upper

78 100

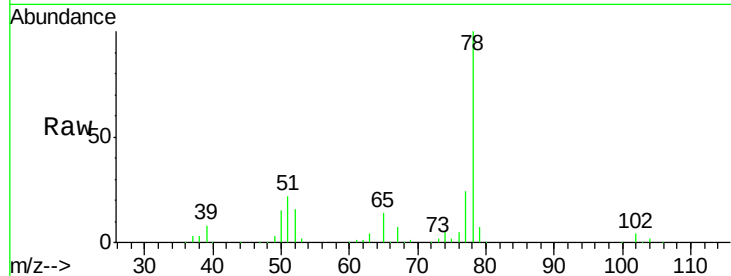
77 23.9 19.5 29.3

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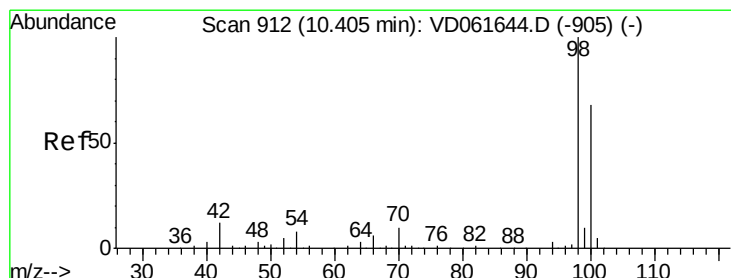
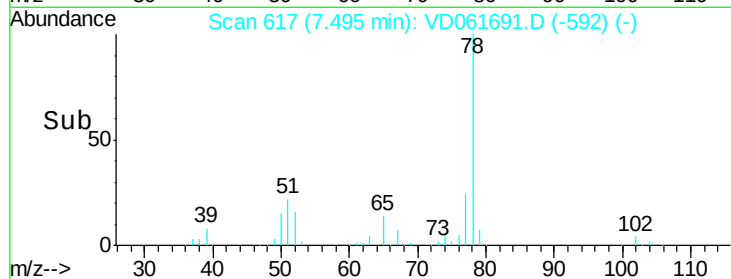
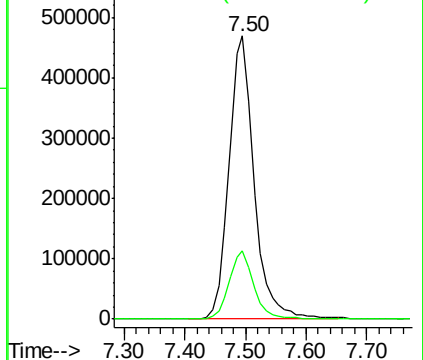
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Abundance Ion 77.95 (77.65 to 78.65): VDC

Ion 76.95 (76.65 to 77.65): VDC



#50

Toluene-d8

Concen: 51.180 ug/l

RT: 10.44 min Scan# 916

Delta R.T. 0.03 min

Lab File: VD061691.D

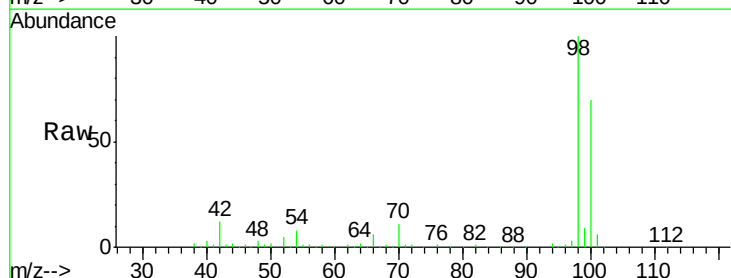
Acq: 9 Apr 2019 22:48

Tgt Ion: 98 Resp: 684404

Ion Ratio Lower Upper

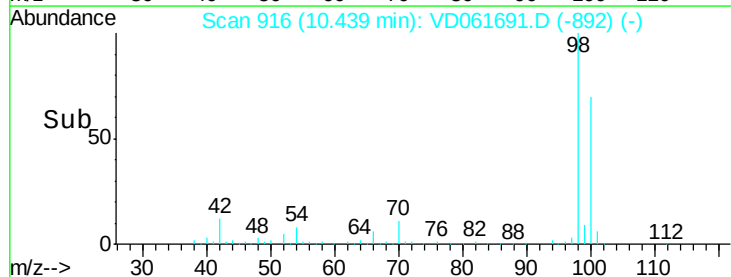
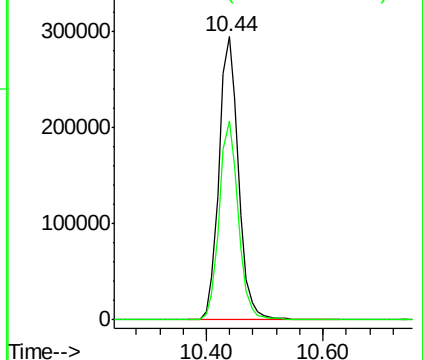
98 100

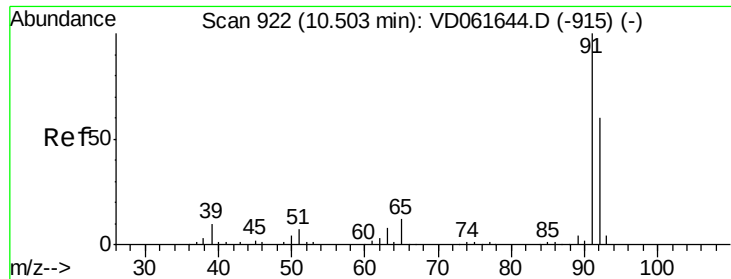
100 70.1 55.4 83.0



Abundance Ion 98.05 (97.75 to 98.75): VDC

Ion 100.05 (99.75 to 100.75): VDC





#52

Toluene

Concen: 13.357 ug/l

RT: 10.54 min Scan# 926

Delta R.T. 0.03 min

Lab File: VD061691.D

Acq: 9 Apr 2019 22:48

Instrument :

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Tgt Ion: 92 Resp: 135304

Ion Ratio Lower Upper

92 100

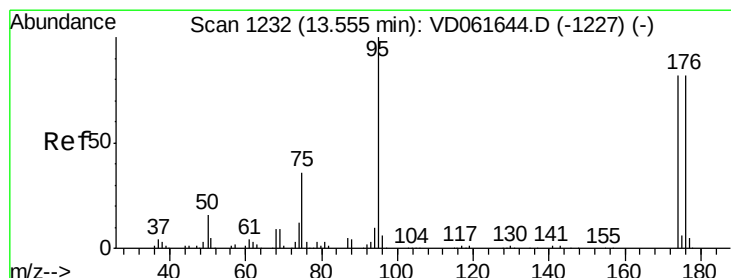
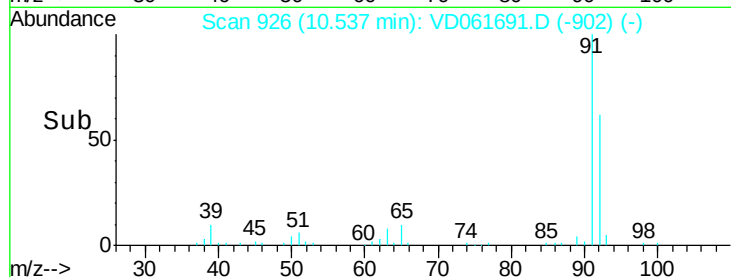
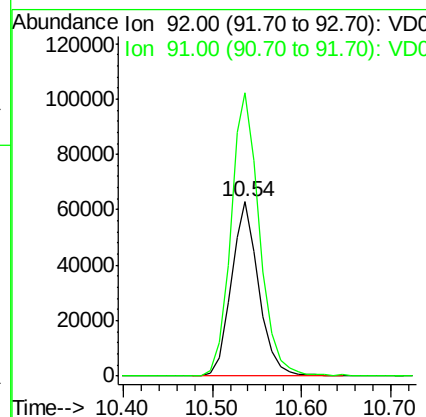
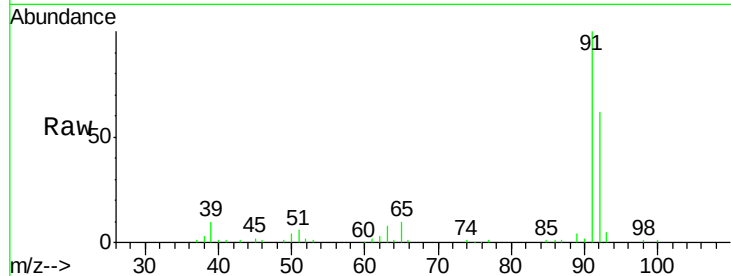
91 162.2 133.0 199.4

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#62

4-Bromofluorobenzene

Concen: 44.888 ug/l m

RT: 13.57 min Scan# 1234

Delta R.T. 0.02 min

Lab File: VD061691.D

Acq: 9 Apr 2019 22:48

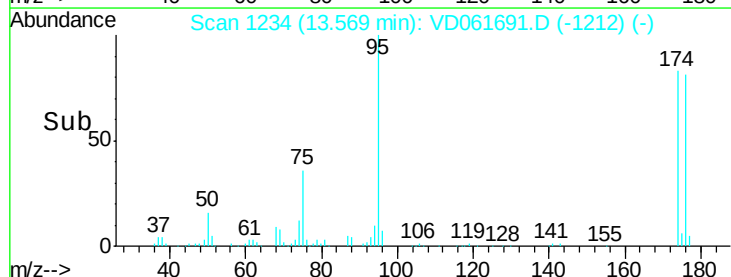
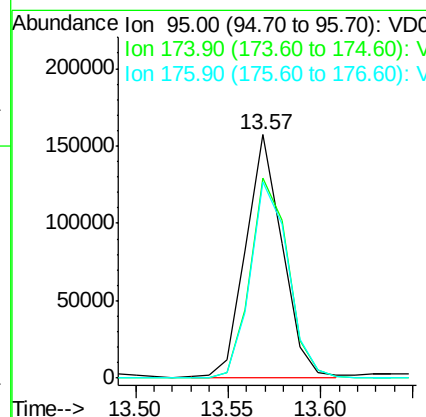
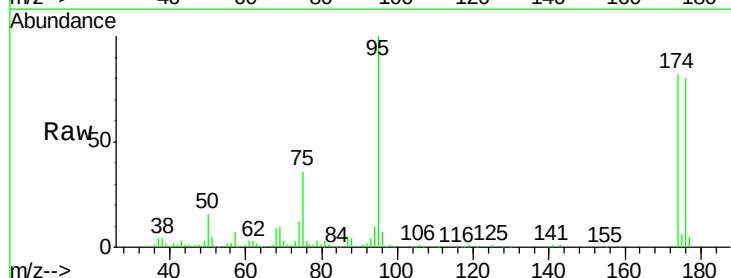
Tgt Ion: 95 Resp: 215579

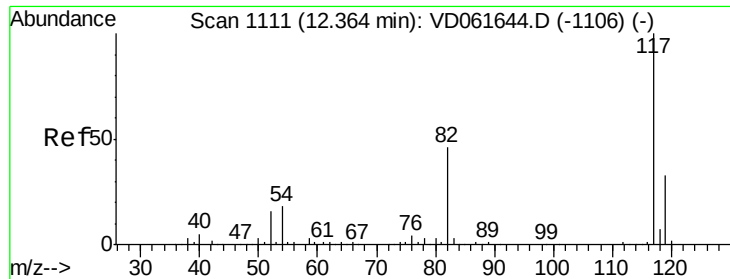
Ion Ratio Lower Upper

95 100

174 82.4 0.0 164.6

176 80.4 0.0 165.0





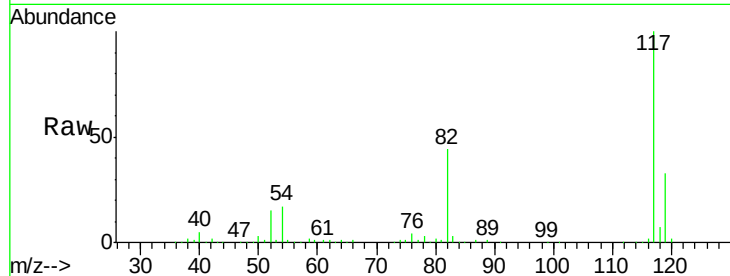
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 12.39 min Scan# 1114
Delta R.T. 0.02 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Instrument :
MSVOA_D
ClientSampleId :
20190176-AMND-COMP-CS-3

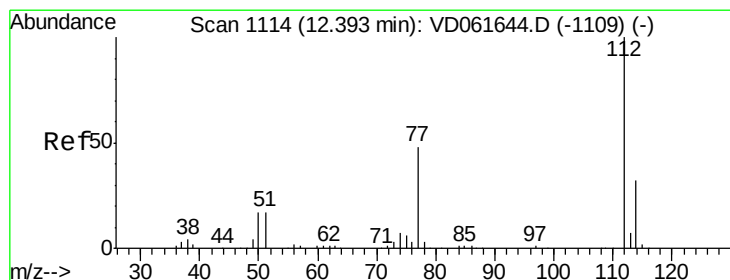
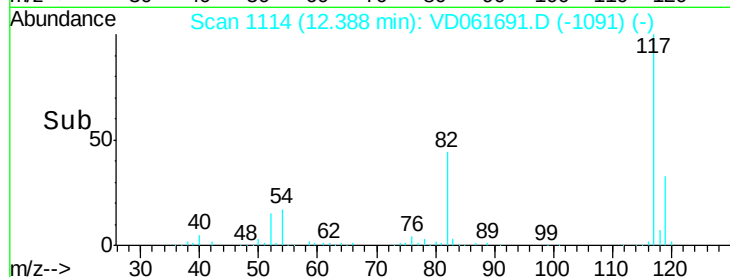
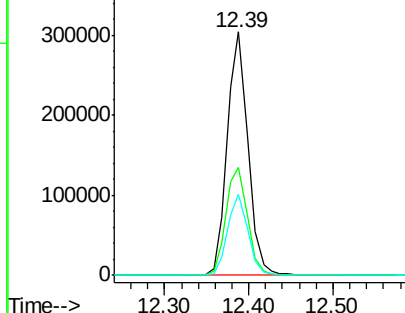
Tgt Ion	Ratio	Resp	Lower	Upper
117	100	518637		
82	44.3	36.8	55.2	
119	33.1	26.1	39.1	

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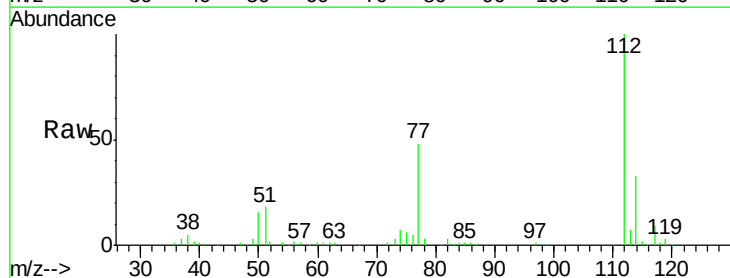


Abundance Ion 116.95 (116.65 to 117.65): V
Ion 82.05 (81.75 to 82.75): VD
Ion 118.95 (118.65 to 119.65): V

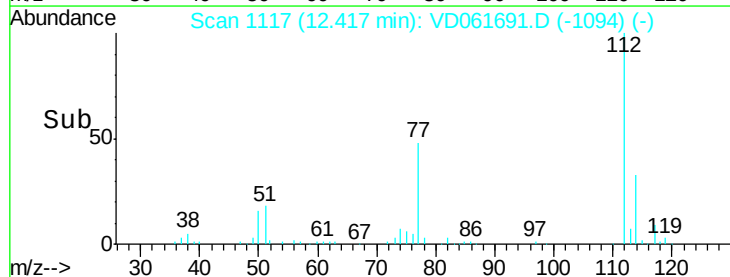
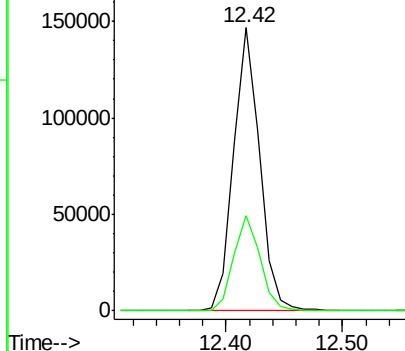


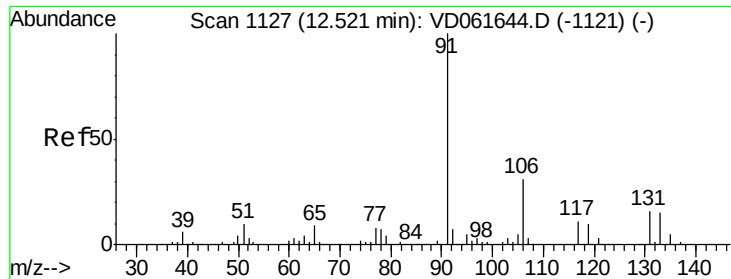
#65
Chlorobenzene
Concen: 22.114 ug/l
RT: 12.42 min Scan# 1117
Delta R.T. 0.02 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Tgt Ion	Ratio	Resp	Lower	Upper
112	100	227446		
114	33.5	25.6	38.4	



Abundance Ion 111.90 (111.60 to 112.60): V
Ion 114.00 (113.70 to 114.70): V





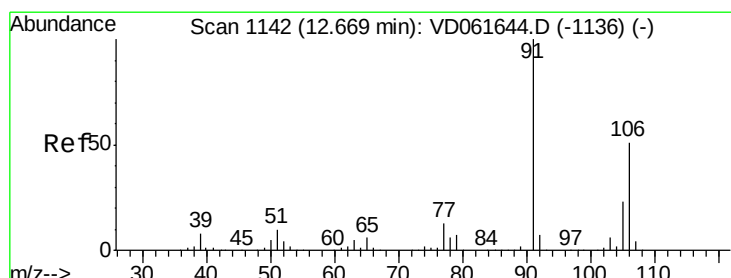
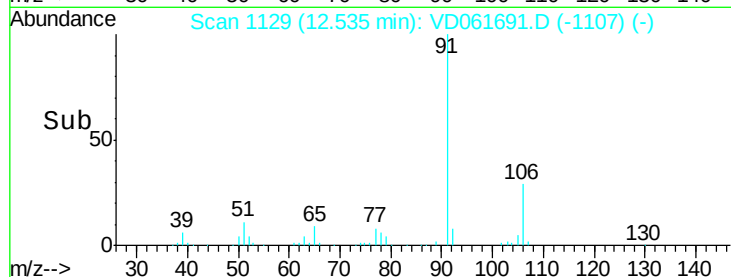
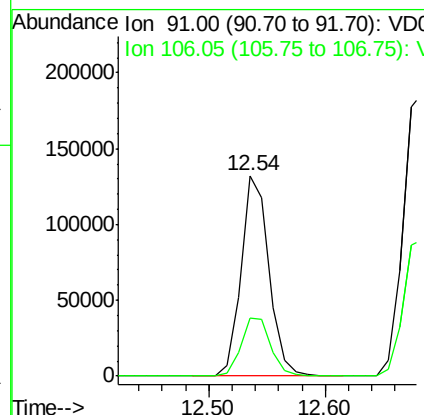
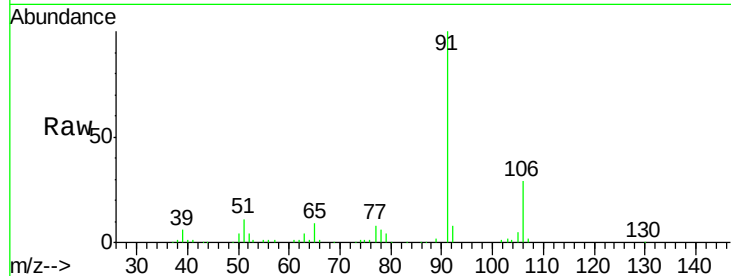
#67
Ethyl Benzene
Concen: 13.929 ug/l
RT: 12.54 min Scan# 1129
Delta R.T. 0.01 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Instrument :
MSVOA_D
ClientSampleId :
20190176-AMND-COMP-CS-3

Tgt Ion: 91 Resp: 218152
Ion Ratio Lower Upper
91 100
106 29.3 24.6 37.0

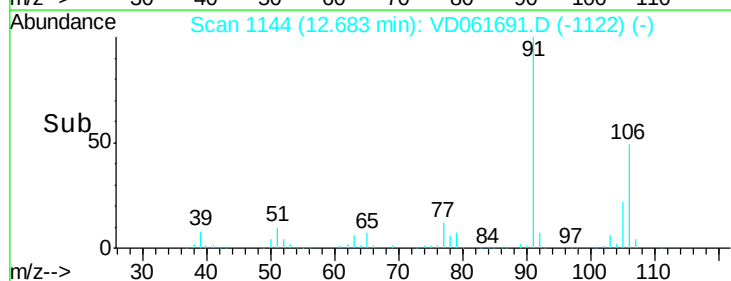
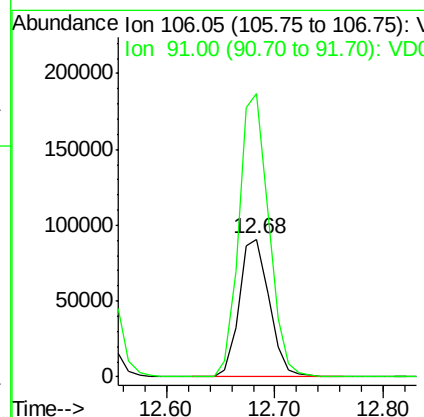
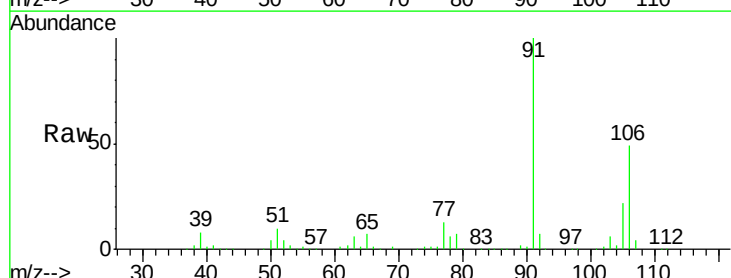
Manual Integrations
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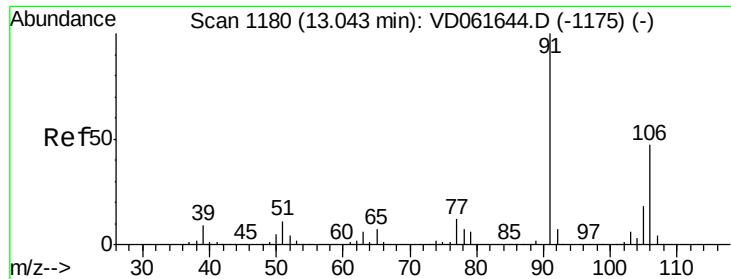
MMDadoda
4/11/2019 3:00:05 AM



#68
m/p-Xylenes
Concen: 29.032 ug/l
RT: 12.68 min Scan# 1144
Delta R.T. 0.01 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Tgt Ion: 106 Resp: 175297
Ion Ratio Lower Upper
106 100
91 205.6 156.7 235.1





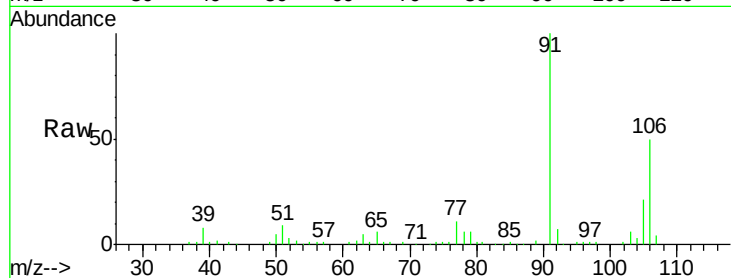
#69
o-Xylene
Concen: 15.257 ug/l
RT: 13.07 min Scan# 1183
Delta R.T. 0.02 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Instrument :
MSVOA_D
ClientSampleId :
20190176-AMND-COMP-CS-3

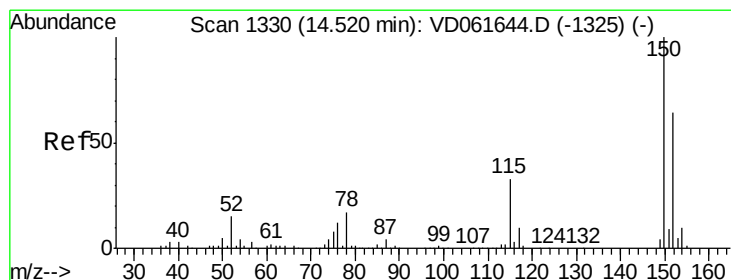
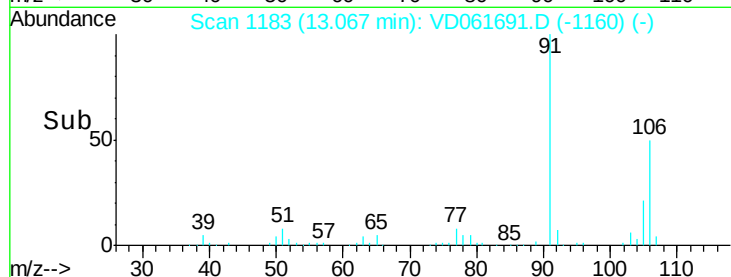
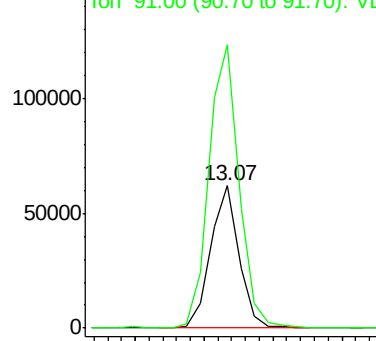
Tgt Ion:106 Resp: 88925
Ion Ratio Lower Upper
106 100
91 199.1 107.3 321.9

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4/11/2019 3:00:05 AM

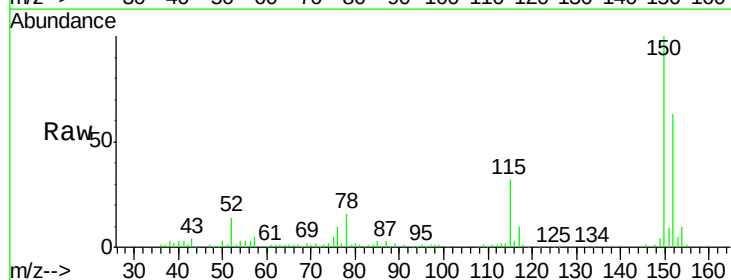


Abundance Ion 106.05 (105.75 to 106.75): V
Ion 91.00 (90.70 to 91.70): V

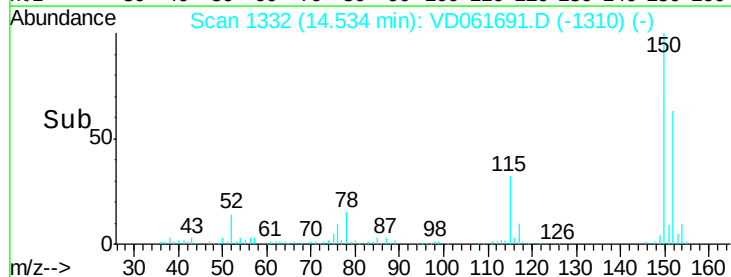
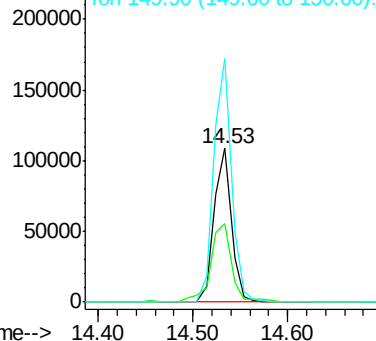


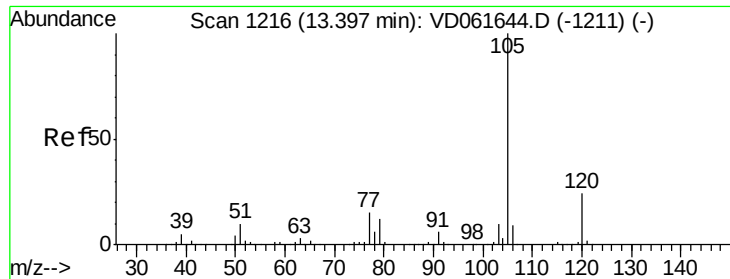
#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 14.53 min Scan# 1332
Delta R.T. 0.01 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Tgt Ion:152 Resp: 138184
Ion Ratio Lower Upper
152 100
115 51.3 26.4 79.2
150 158.5 0.0 320.6



Abundance Ion 151.90 (151.60 to 152.60): V
Ion 115.00 (114.70 to 115.70): V
Ion 149.90 (149.60 to 150.60): V





#73

Isopropylbenzene

Concen: 57.053 ug/l

RT: 13.42 min Scan# 1219

Delta R.T. 0.02 min

Lab File: VD061691.D

Acq: 9 Apr 2019 22:48

Instrument :

MSVOA_D

ClientSampleId :

20190176-AMND-COMP-CS-3

Tgt Ion: 105 Resp: 525306

Ion Ratio Lower Upper

105 100

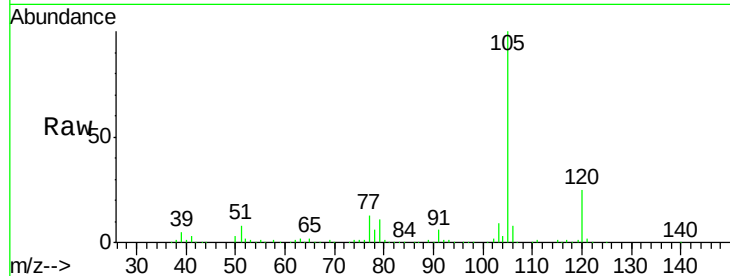
120 25.4 12.2 36.4

Manual Integrations

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4/11/2019 3:00:05 AM



Abundance Ion 105.05 (104.75 to 105.75): V

Ion 120.05 (119.75 to 120.75): V

400000

300000

200000

100000

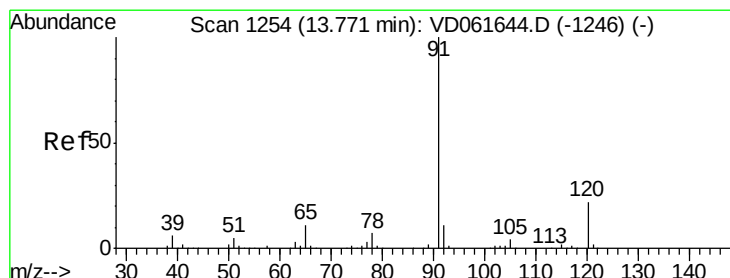
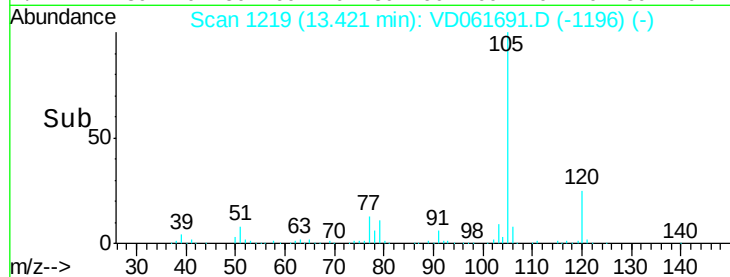
0

13.40

13.42

13.50

Time-->



#78

n-propylbenzene

Concen: 3.681 ug/l

RT: 13.79 min Scan# 1256

Delta R.T. 0.01 min

Lab File: VD061691.D

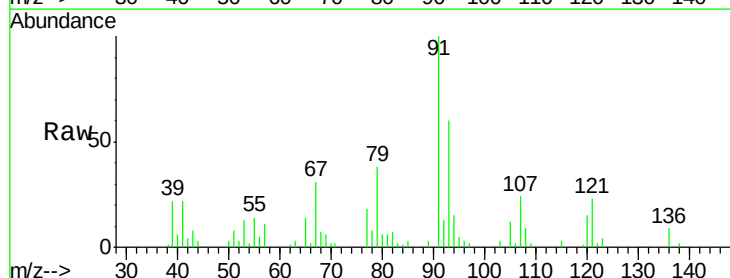
Acq: 9 Apr 2019 22:48

Tgt Ion: 91 Resp: 40542

Ion Ratio Lower Upper

91 100

120 14.8 10.8 32.4



Abundance Ion 91.00 (90.70 to 91.70): V

Ion 120.05 (119.75 to 120.75): V

150000

100000

50000

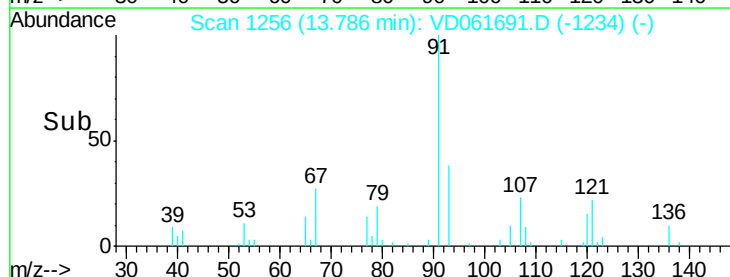
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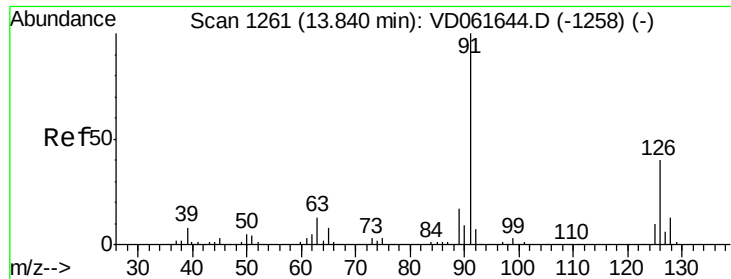
13.70

13.75

13.80

Time-->





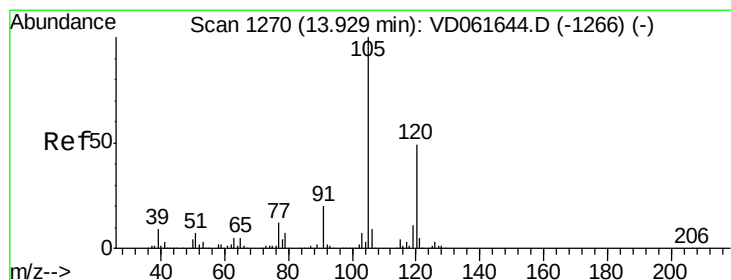
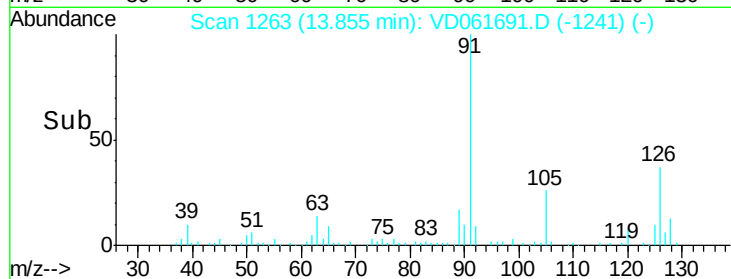
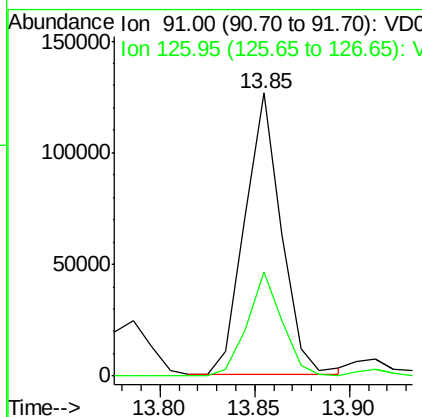
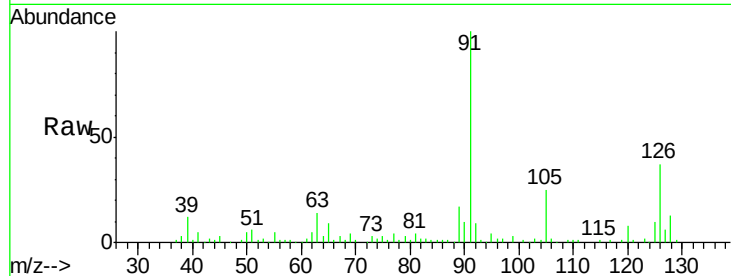
#79
 2-Chlorotoluene
 Concen: 26.882 ug/l
 RT: 13.85 min Scan# 1263
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Instrument :
 MSVOA_D
 ClientSampleId :
 20190176-AMND-COMP-CS-3

Tgt Ion: 91 Resp: 169313
 Ion Ratio Lower Upper
 91 100
 126 36.8 20.0 59.9

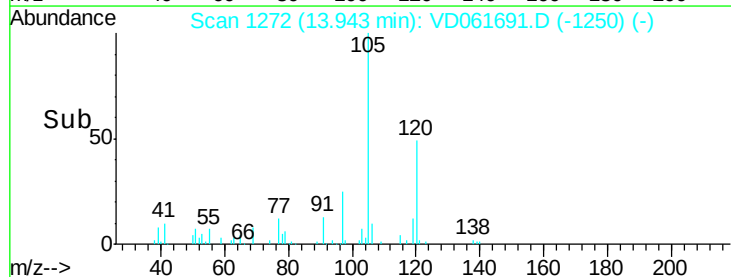
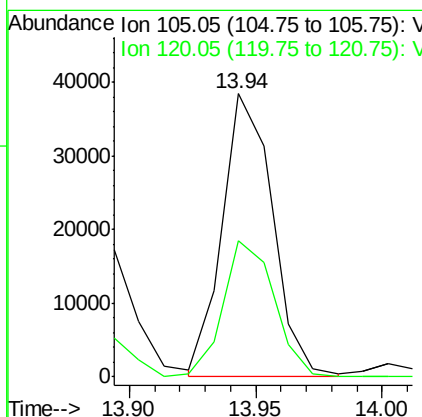
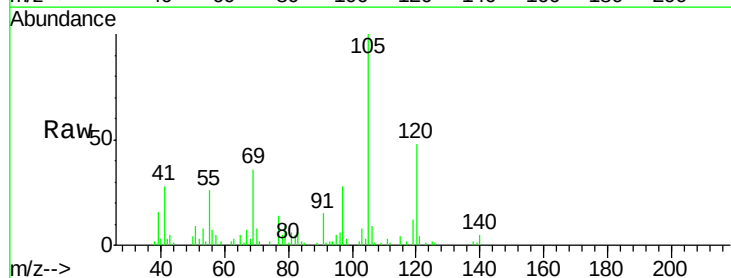
Manual Integrations
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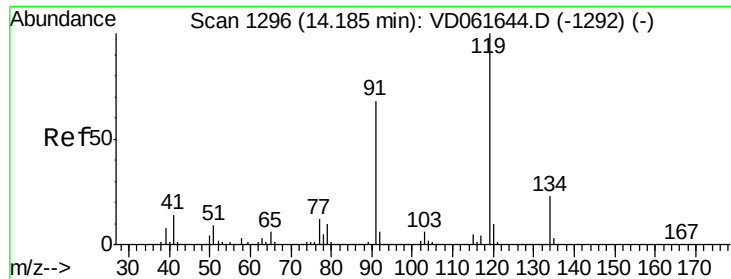
MMDadoda
 4/11/2019 3:00:05 AM



#80
 1,3,5-Trimethylbenzene
 Concen: 7.305 ug/l
 RT: 13.94 min Scan# 1272
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Tgt Ion: 105 Resp: 53387
 Ion Ratio Lower Upper
 105 100
 120 48.3 24.4 73.2





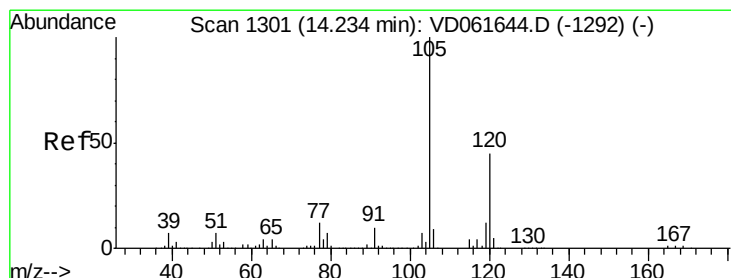
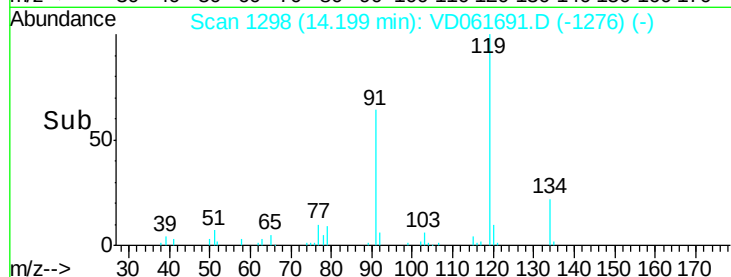
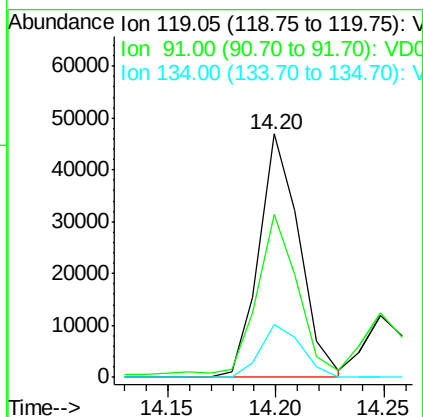
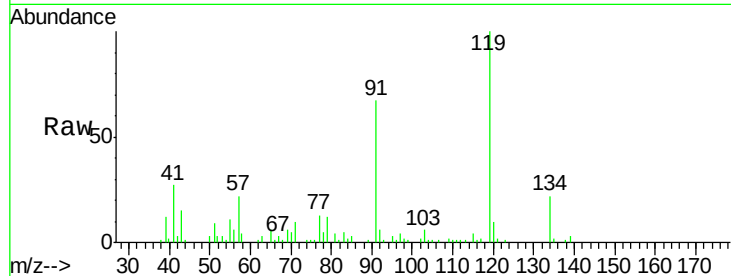
#83
 tert-Butylbenzene
 Concen: 6.957 ug/l
 RT: 14.20 min Scan# 1298
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Instrument :
 MSVOA_D
 ClientSampleId :
 20190176-AMND-COMP-CS-3

Tgt Ion	Ratio	Resp	Lower	Upper
119	100	61301		
91	67.1	33.9	101.6	
134	21.9	11.6	34.8	

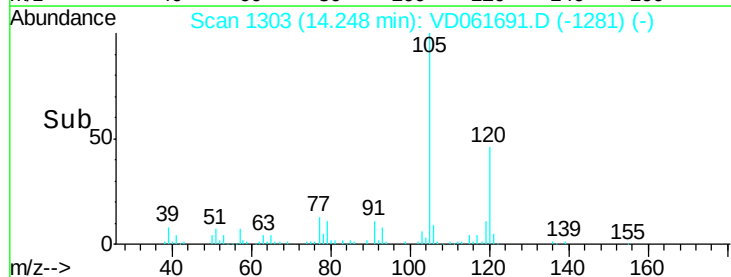
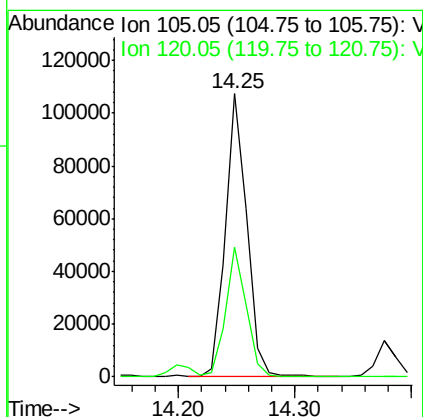
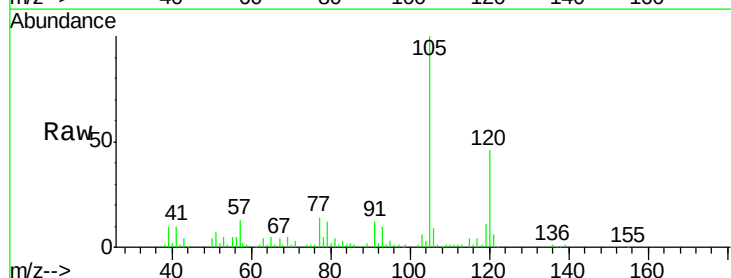
Manual Integrations
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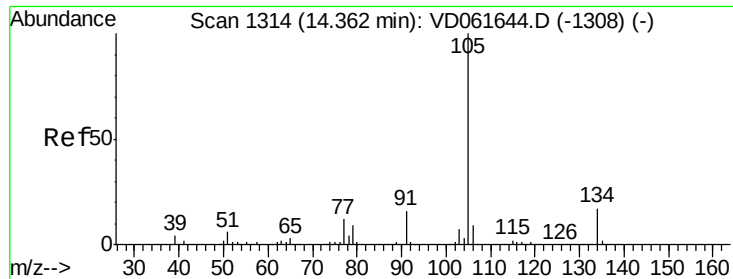
MMDadoda
 4/11/2019 3:00:05 AM



#84
 1,2,4-Trimethylbenzene
 Concen: 18.534 ug/l
 RT: 14.25 min Scan# 1303
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	136697		
120	45.7	22.6	67.8	





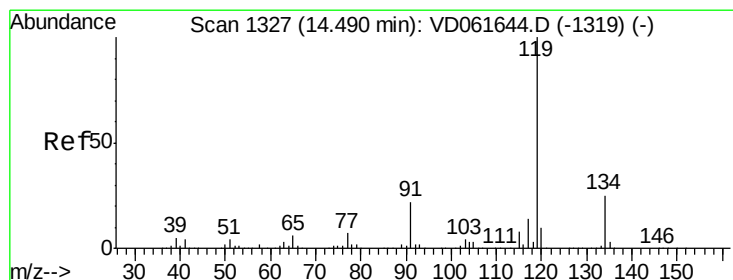
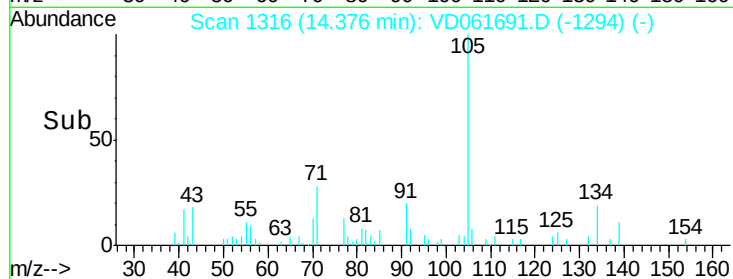
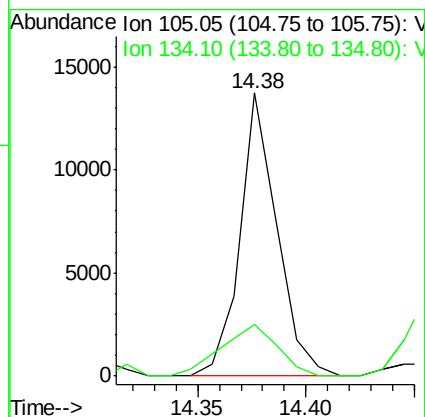
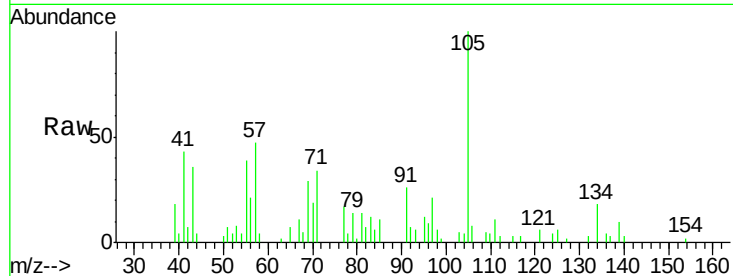
#85
 sec-Butylbenzene
 Concen: 1.732 ug/l
 RT: 14.38 min Scan# 1316
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Instrument :
 MSVOA_D
 ClientSampleId :
 20190176-AMND-COMP-CS-3

Tgt Ion:105 Resp: 16487
 Ion Ratio Lower Upper
 105 100
 134 18.3 8.6 25.7

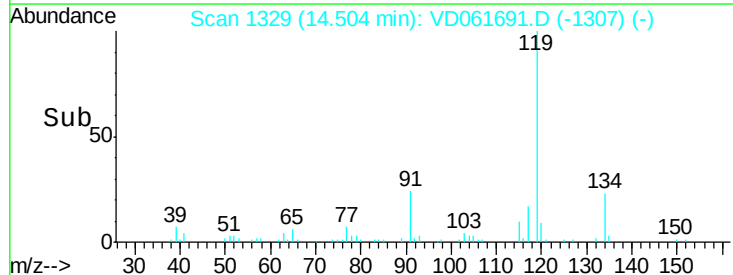
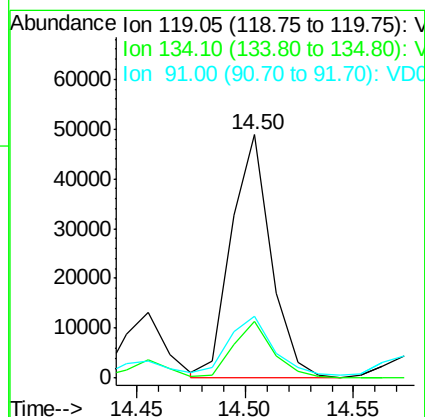
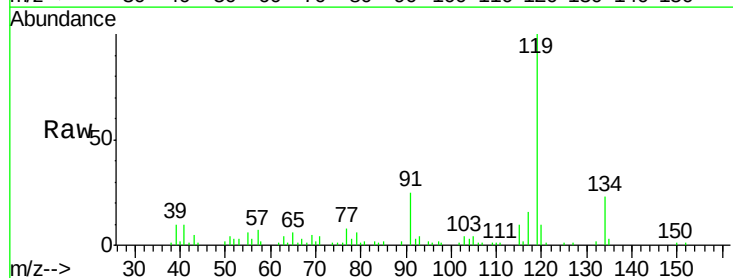
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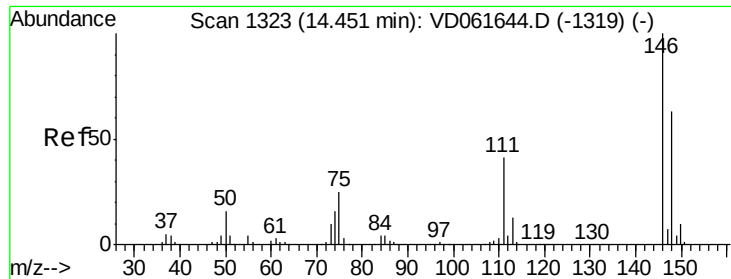
MMDadoda
 4/11/2019 3:00:05 AM



#86
 p-Isopropyltoluene
 Concen: 7.573 ug/l
 RT: 14.50 min Scan# 1329
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Tgt Ion:119 Resp: 62539
 Ion Ratio Lower Upper
 119 100
 134 23.1 12.5 37.5
 91 25.3 11.0 33.0





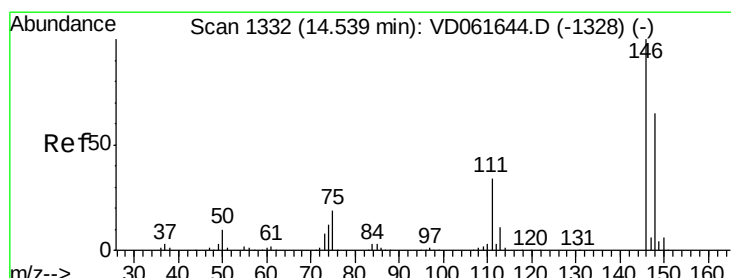
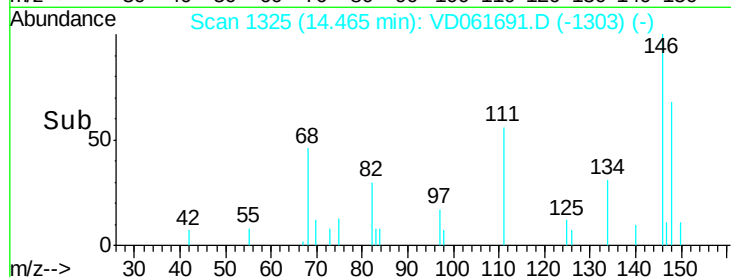
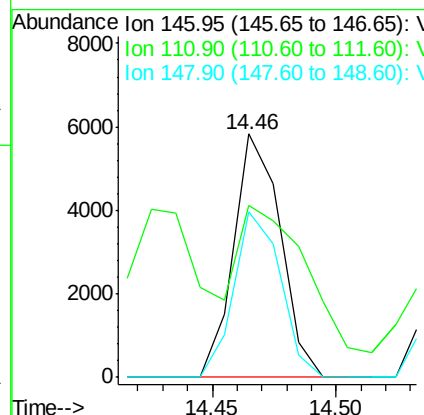
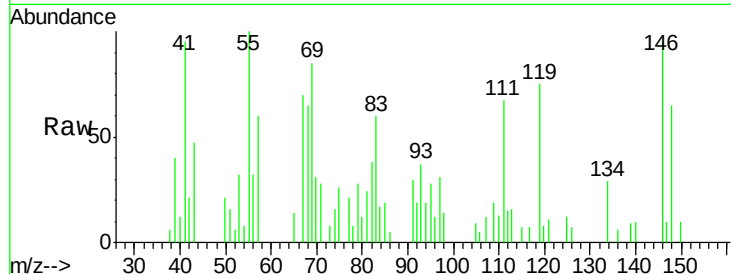
#87
 1,3-Dichlorobenzene
 Concen: 1.646 ug/l m
 RT: 14.46 min Scan# 1325
 Delta R.T. 0.01 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Instrument :
 MSVOA_D
 ClientSampleId :
 20190176-AMND-COMP-CS-3

Tgt Ion	Ratio	Lower	Upper
146	100		
111	70.5	20.3	61.0#
148	68.1	31.7	95.1

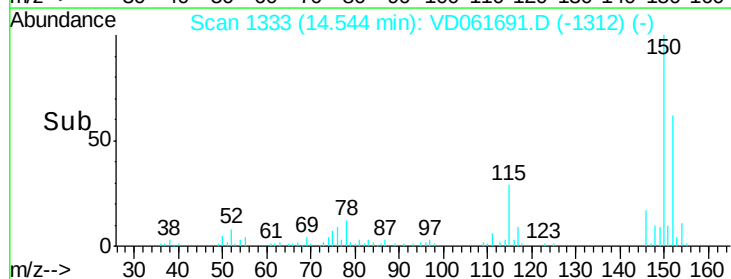
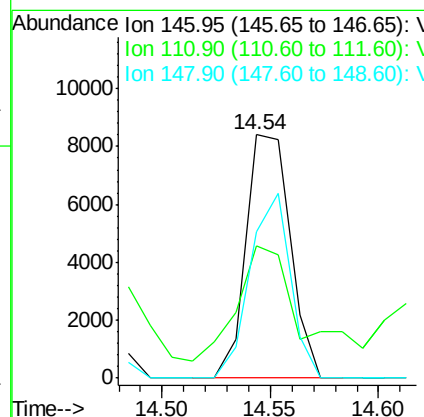
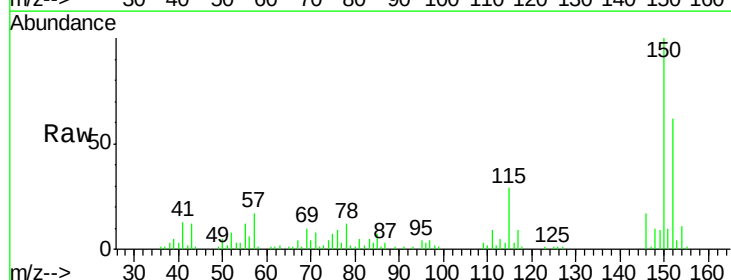
Manual Integrations
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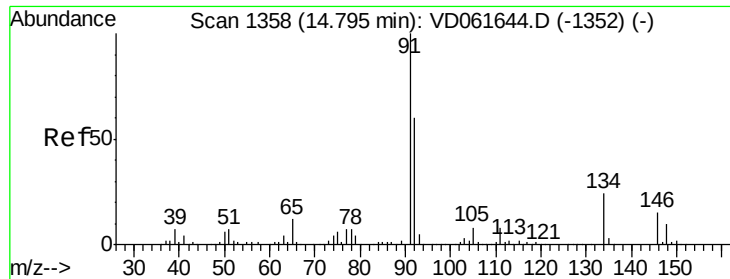
MMDadoda
 4/11/2019 3:00:05 AM



#88
 1,4-Dichlorobenzene
 Concen: 2.569 ug/l
 RT: 14.54 min Scan# 1333
 Delta R.T. 0.00 min
 Lab File: VD061691.D
 Acq: 9 Apr 2019 22:48

Tgt Ion	Ratio	Lower	Upper
146	100		
111	54.3	17.1	51.2#
148	60.0	32.6	97.7





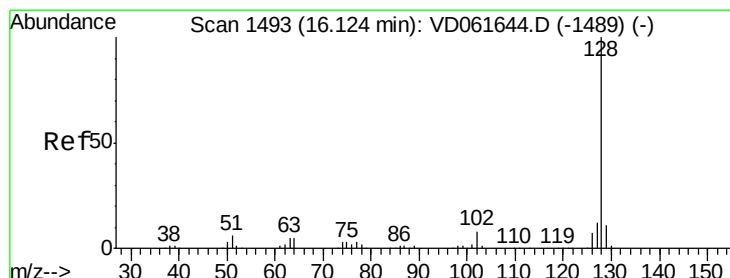
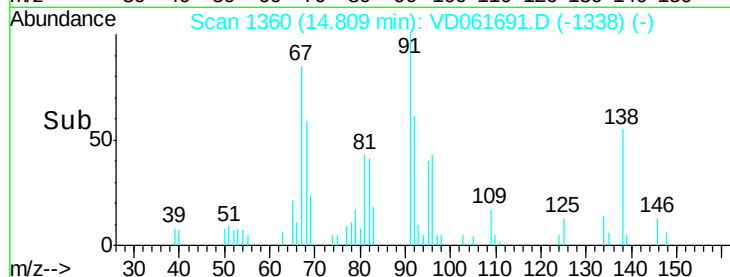
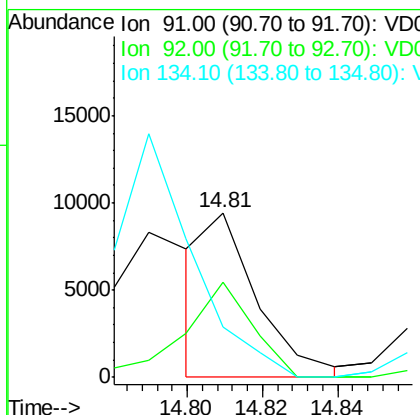
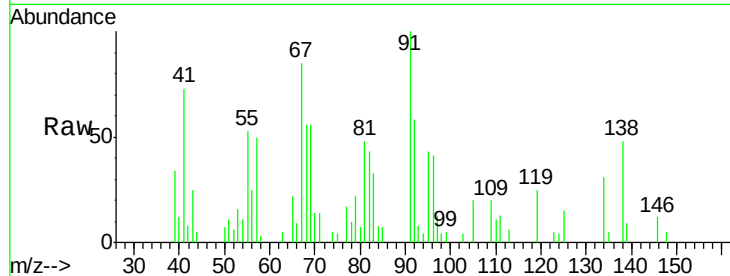
#89
n-Butylbenzene
Concen: 1.248 ug/l m
RT: 14.81 min Scan# 1360
Delta R.T. 0.01 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Instrument :
MSVOA_D
ClientSampleId :
20190176-AMND-COMP-CS-3

Tgt Ion	Ratio	Lower	Upper
91	100		
92	57.6	29.8	89.4
134	30.6	12.2	36.4

Manual Integrations
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4/11/2019 3:00:05 AM



#95
Naphthalene
Concen: 11.568 ug/l
RT: 16.14 min Scan# 1495
Delta R.T. 0.01 min
Lab File: VD061691.D
Acq: 9 Apr 2019 22:48

Tgt Ion	Ratio	Lower	Upper
128	100		
127	12.5	9.4	14.2
129	10.3	8.8	13.2

