

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121718\
 Data File : VL033002.D
 Acq On : 17 Dec 2018 19:15
 Operator : SY/AP
 Sample : J6382-02DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 P0068-IA002-181212-01DUP

Manual Integrations
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MMDadoda
 12/19/2018 2:00:01 PM

Quant Time: Dec 18 01:33:16 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 0
 QLast Update : Fri Dec 07 09:35:17 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1151203	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	2703648	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3096312	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.59	95	2233197	9.76	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	97.60%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	79105	0.515	ppbv	96
4) Chloromethane	3.17	50	63657	1.254	ppbv	100
9) Propene	3.05	41	279614m	8.111	ppbv	
10) Heptane	8.25	43	412666	3.187	ppbv	99
11) Trichlorofluoromethane	4.01	101	48198	0.333	ppbv	99
13) Ethanol	3.67	45	3195517	269.217	ppbv	96
15) Acetone	3.90	43	1526972	15.453	ppbv #	74
19) Isopropyl Alcohol	4.04	45	386713	6.232	ppbv #	1
20) Methylene Chloride	4.42	84	380576	7.880	ppbv	98
22) trans-1,2-Dichloroethene	4.97	96	149277	2.486	ppbv	96
26) Hexane	5.79	57	1355923	12.582	ppbv #	46
30) Cyclohexane	7.25	84	191446	2.143	ppbv #	83
34) 2-Butanone	5.34	43	213218	1.811	ppbv	99
35) Carbon Tetrachloride	7.14	117	13658	0.064	ppbv	97
36) Benzene	7.01	78	1245136	6.261	ppbv	99
44) 2,2,4-Trimethylpentane	8.00	57	2770131	8.206	ppbv	96
50) 4-Methyl-2-Pentanone	8.89	43	59176m	0.314	ppbv	
52) Tetrachloroethene	11.38	164	66874m	0.924	ppbv	
53) Toluene	9.96	91	9302328	44.107	ppbv	96
58) Ethyl Benzene	12.87	91	1308629	3.962	ppbv	98
59) m/p-Xylene	13.13	91	4294302	14.340	ppbv #	100
60) o-Xylene	13.86	91	1354506	4.479	ppbv	100
61) Styrene	13.69	104	39161	0.195	ppbv	97
64) n-propylbenzene	15.73	120	59244	0.541	ppbv	90
72) 4-Ethyltoluene	16.01	105	444304	1.316	ppbv	99
73) 1,3,5-Trimethylbenzene	16.17	105	267253	0.811	ppbv	94
74) 1,2,4-Trimethylbenzene	16.93	105	1245641	3.347	ppbv #	70
79) Naphthalene	22.43	128	51014	0.212	ppbv	99

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

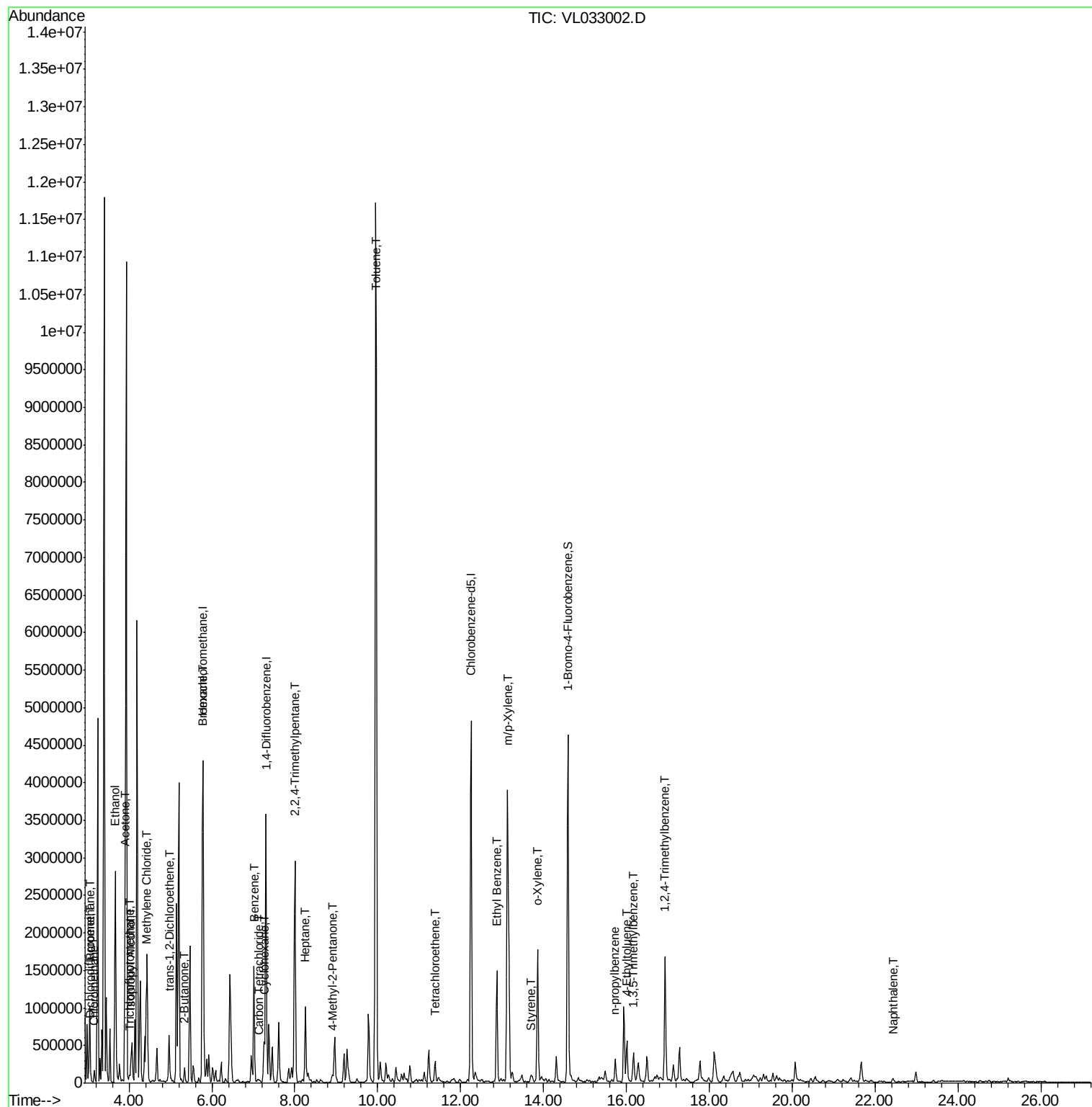
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL121718\
Data File : VL033002.D
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Operator : SY/AP
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Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

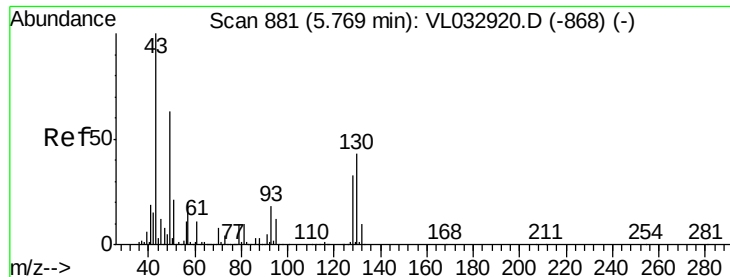
Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Manual Integrations
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12/19/2018 2:00:01 PM

Quant Time: Dec 18 01:33:16 2018
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec
QLast Update : Fri Dec 07 09:35:17 2018
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion: 49 Resp: 1151203

Ion Ratio Lower Upper

49 100

128 52.4 26.3 78.8

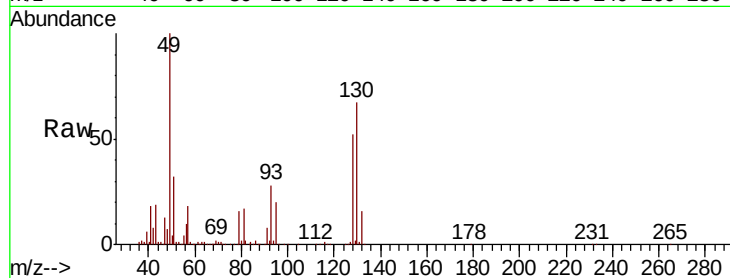
130 67.5 33.9 101.7

Manual Integrations

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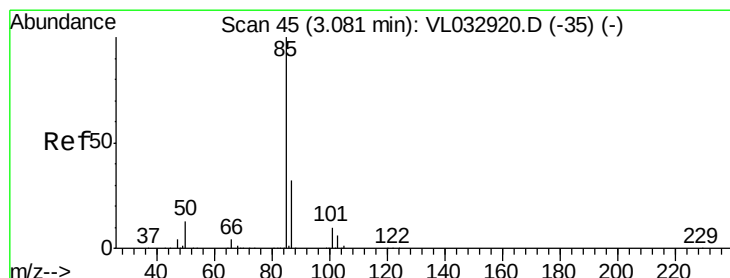
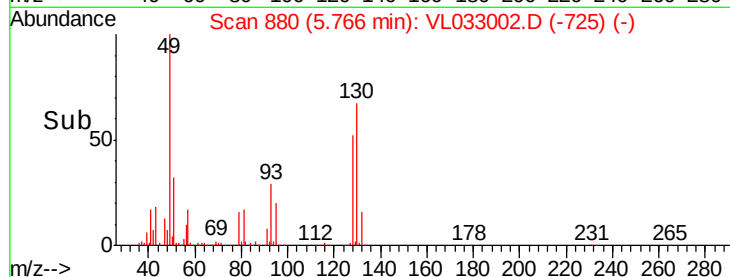
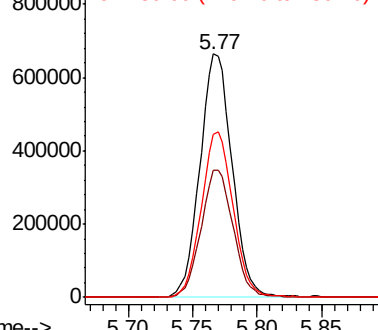
12/19/2018 2:00:01 PM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.515 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL033002.D

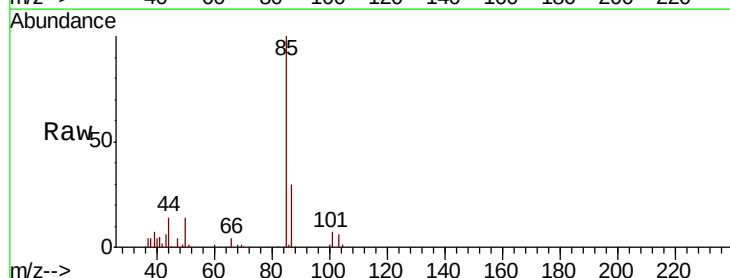
Acq: 17 Dec 2018 19:15

Tgt Ion: 85 Resp: 79105

Ion Ratio Lower Upper

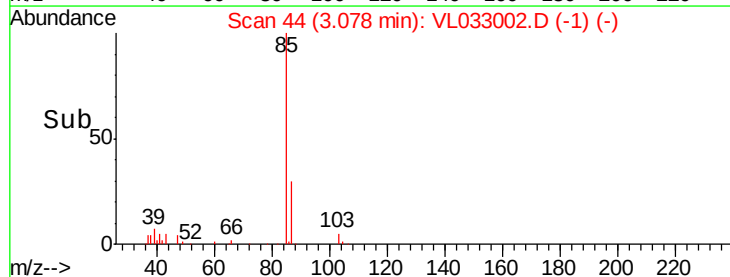
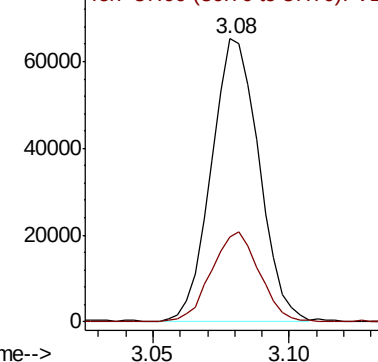
85 100

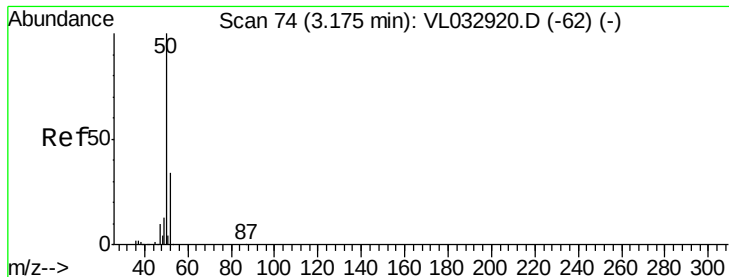
87 29.9 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 1.254 ppbv

RT: 3.17 min Scan# 73

Delta R.T. -0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion: 50 Resp: 63657

Ion Ratio Lower Upper

50 100

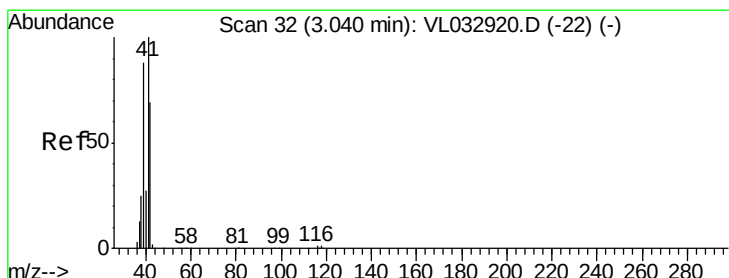
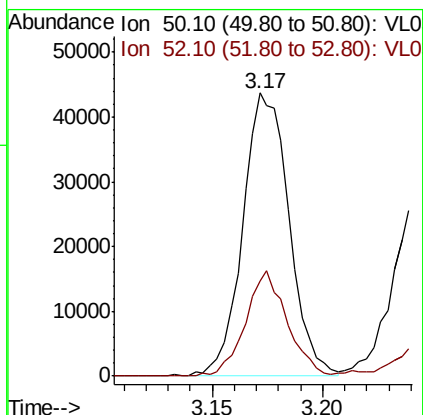
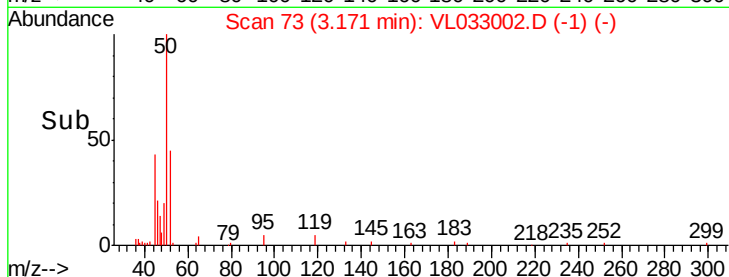
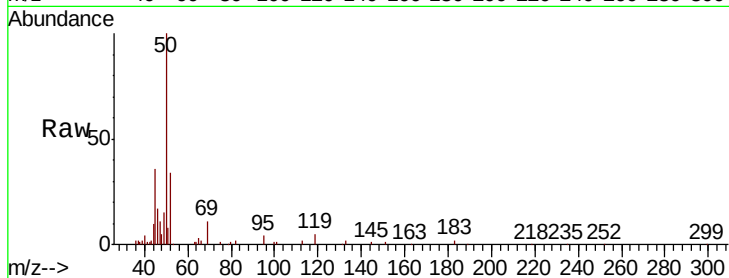
52 33.9 27.3 40.9

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#9

Propene

Concen: 8.111 ppbv m

RT: 3.05 min Scan# 35

Delta R.T. 0.01 min

Lab File: VL033002.D

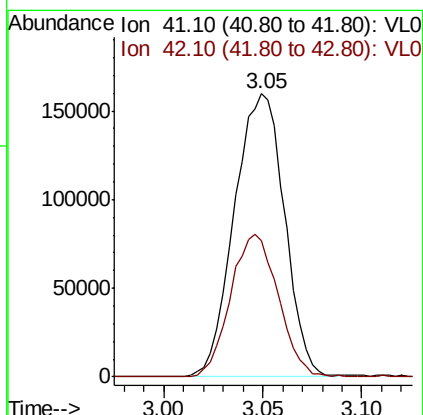
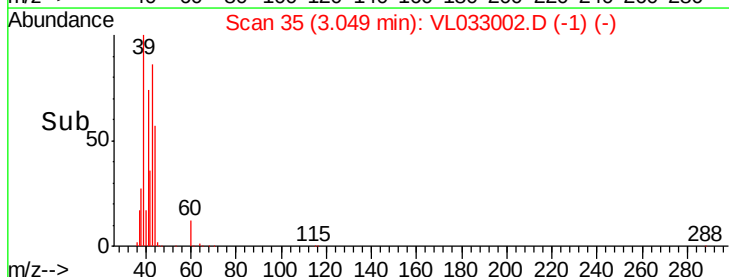
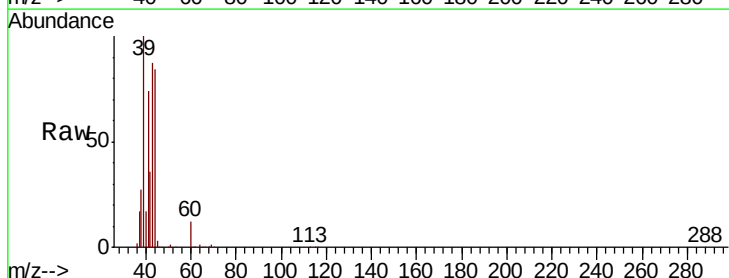
Acq: 17 Dec 2018 19:15

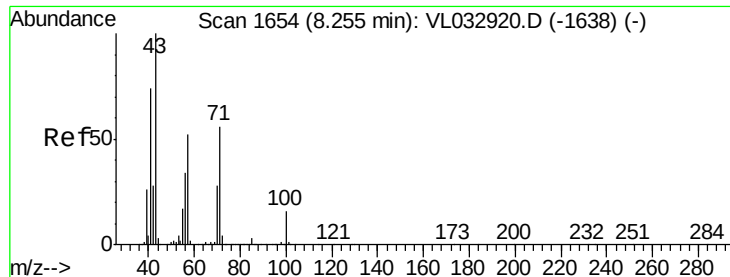
Tgt Ion: 41 Resp: 279614

Ion Ratio Lower Upper

41 100

42 313.6 56.2 84.2#





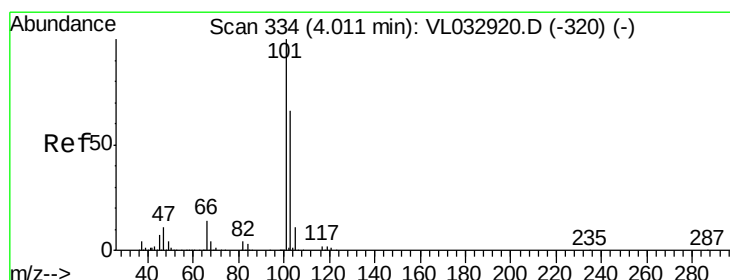
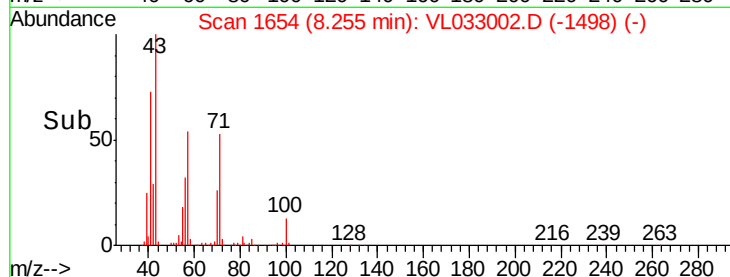
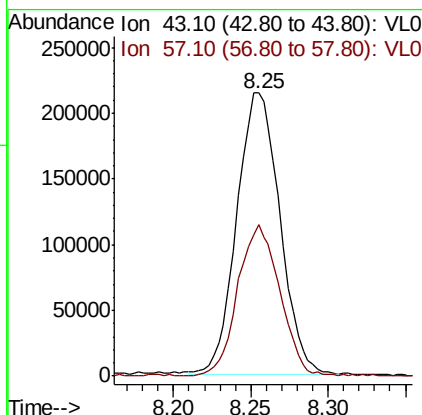
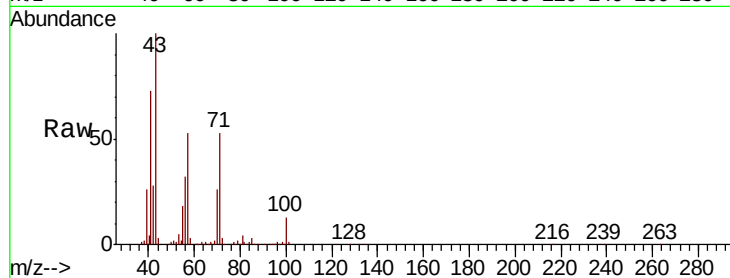
#10
 Heptane
 Concen: 3.187 ppbv
 RT: 8.25 min Scan# 1654
 Delta R.T. 0.00 min
 Lab File: VL033002.D
 Acq: 17 Dec 2018 19:15

Instrument :
 MSVOA_L
 ClientSampleId :
 P0068-IA002-181212-01DUP

Tot Ion: 43 Resp: 412666
 Ion Ratio Lower Upper
 43 100
 57 52.6 41.8 62.6

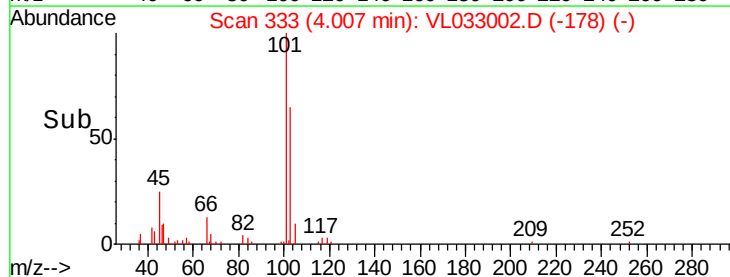
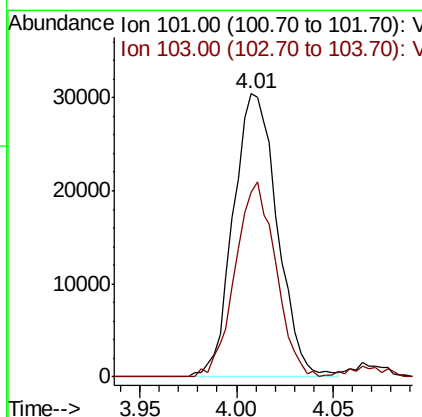
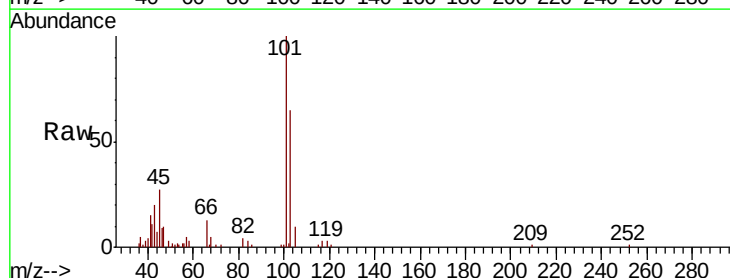
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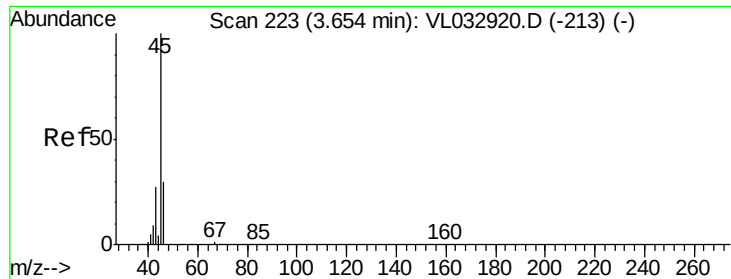
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 12/19/2018 2:00:01 PM



#11
 Trichlorofluoromethane
 Concen: 0.333 ppbv
 RT: 4.01 min Scan# 333
 Delta R.T. -0.00 min
 Lab File: VL033002.D
 Acq: 17 Dec 2018 19:15

Tgt Ion: 101 Resp: 48198
 Ion Ratio Lower Upper
 101 100
 103 65.2 52.7 79.1





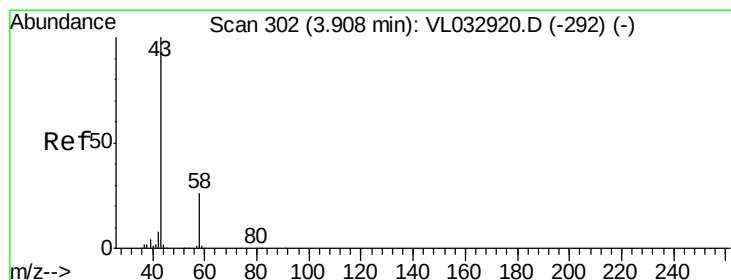
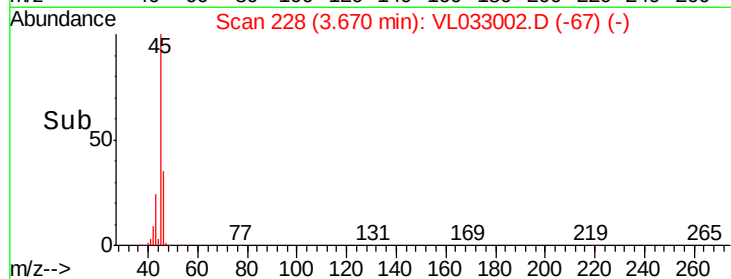
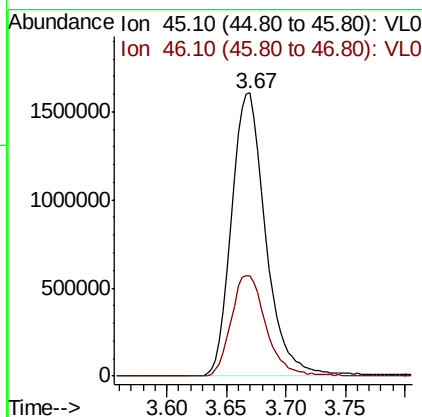
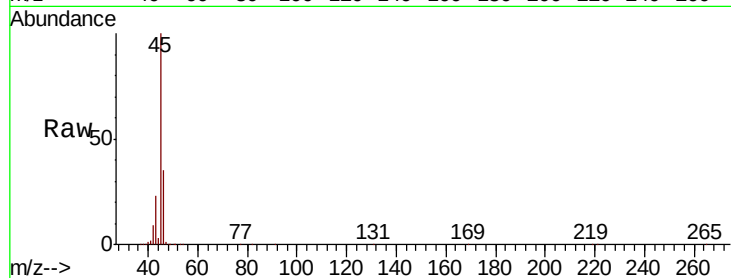
#13
Ethanol
Concen: 269.217 ppbv
RT: 3.67 min Scan# 228
Delta R.T. 0.02 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Tot Ion: 45 Resp: 3195517
Ion Ratio Lower Upper
45 100
46 36.9 13.8 55.4

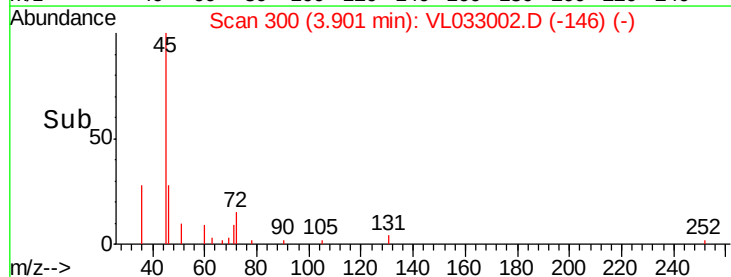
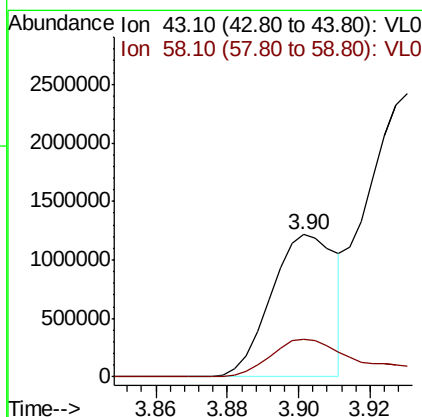
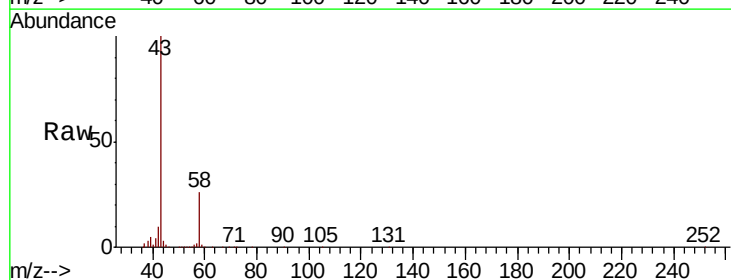
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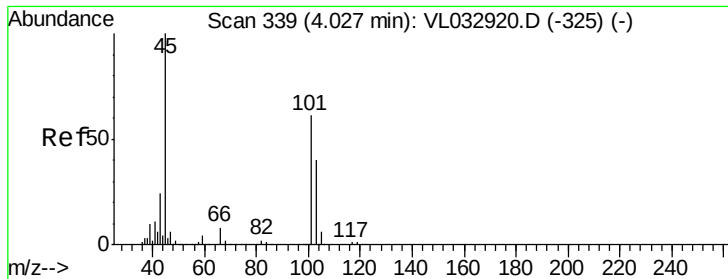
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#15
Acetone
Concen: 15.453 ppbv
RT: 3.90 min Scan# 300
Delta R.T. -0.01 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Tgt Ion: 43 Resp: 1526972
Ion Ratio Lower Upper
43 100
58 38.7 20.6 30.8#





#19

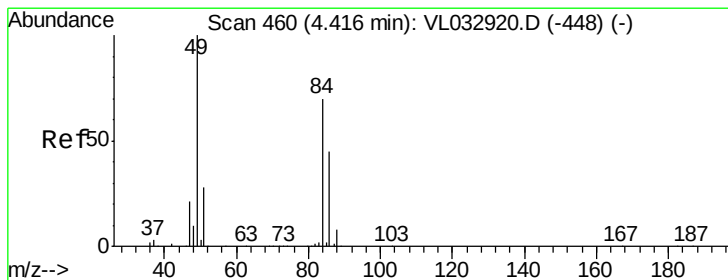
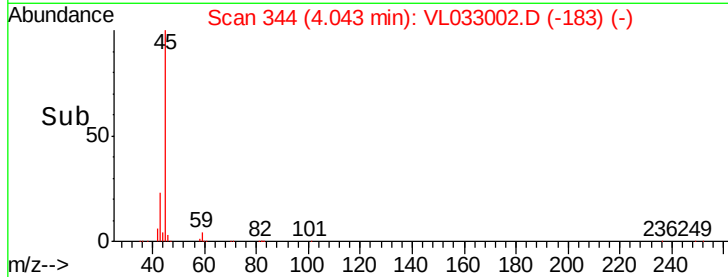
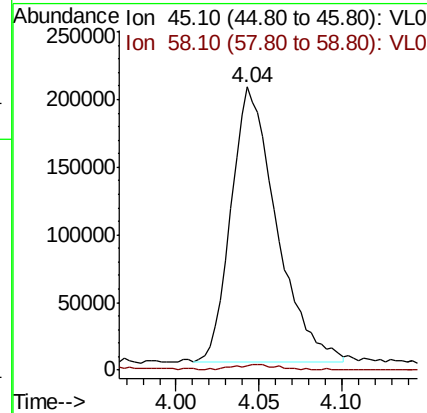
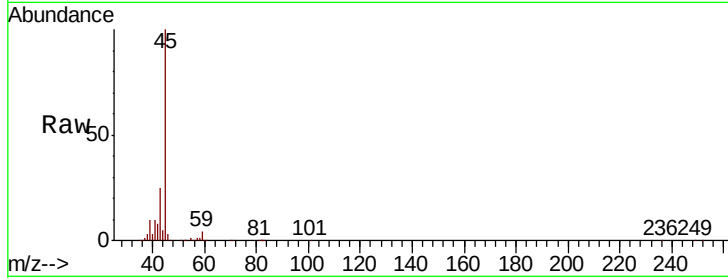
Isopropyl Alcohol
 Concen: 6.232 ppbv
 RT: 4.04 min Scan# 344
 Delta R.T. 0.02 min
 Lab File: VL033002.D
 Acq: 17 Dec 2018 19:15

Instrument :
 MSVOA_L
 ClientSampleId :
 P0068-IA002-181212-01DUP

Tot Ion: 45 Resp: 386713
 Ion Ratio Lower Upper
 45 100
 58 152.8 1.4 2.2#

Manual Integrations
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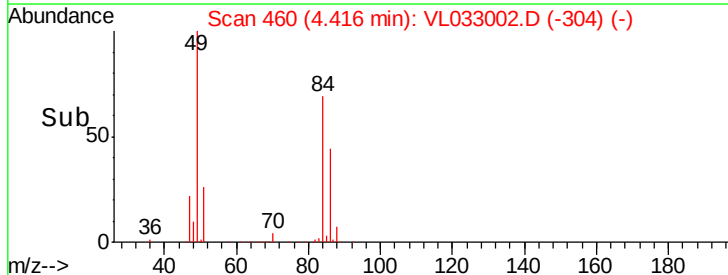
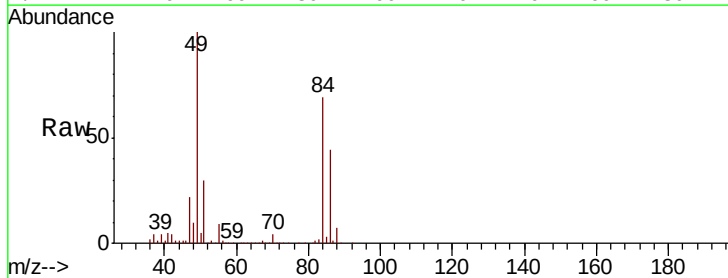
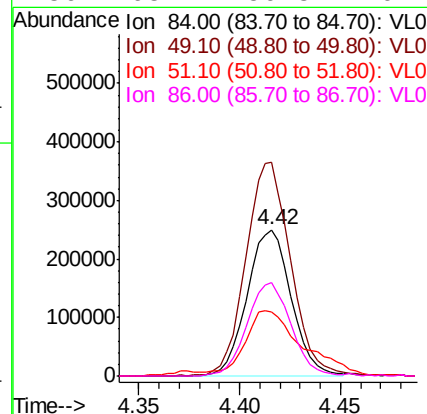
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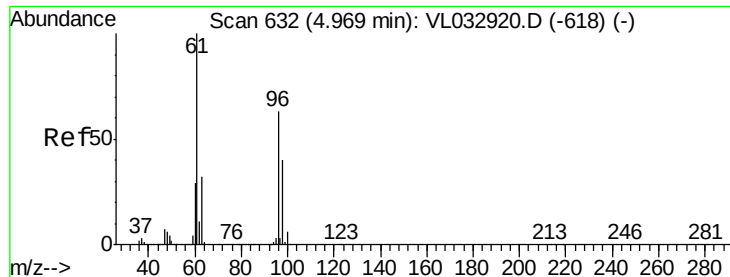


#20

Methylene Chloride
 Concen: 7.880 ppbv
 RT: 4.42 min Scan# 460
 Delta R.T. 0.00 min
 Lab File: VL033002.D
 Acq: 17 Dec 2018 19:15

Tgt Ion: 84 Resp: 380576
 Ion Ratio Lower Upper
 84 100
 49 145.6 113.8 170.8
 51 41.1 31.8 47.8
 86 63.7 50.8 76.2





#22

trans-1,2-Dichloroethene

Concen: 2.486 ppbv

RT: 4.97 min Scan# 632

Delta R.T. 0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

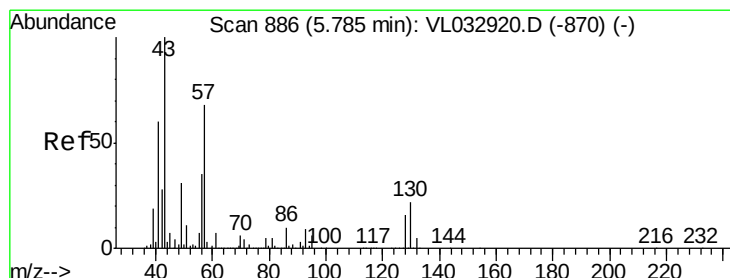
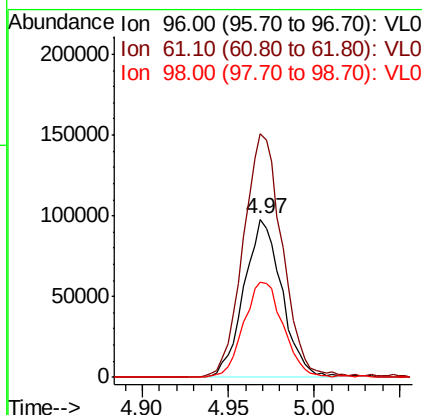
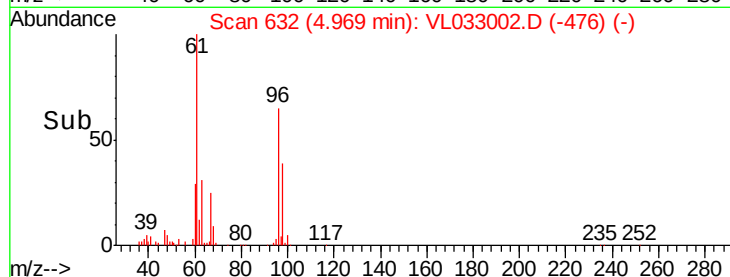
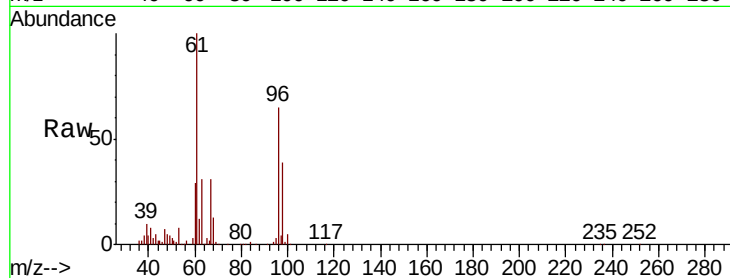
ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion:	96	Resp:	149277
Ion	Ratio	Lower	Upper
96	100		
61	154.0	127.1	190.7
98	59.8	51.3	76.9

Manual Integrations
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#26

Hexane

Concen: 12.582 ppbv

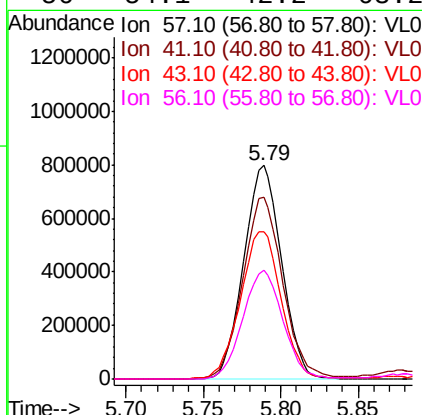
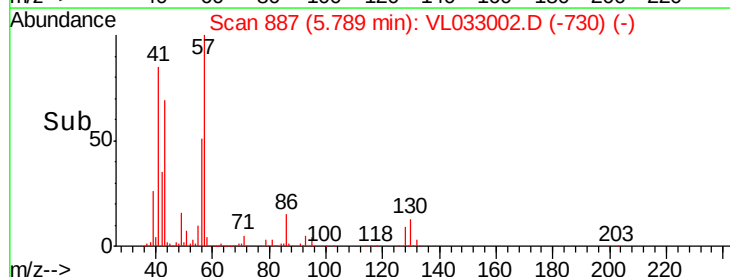
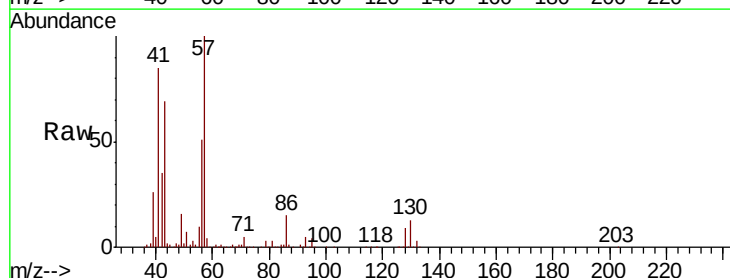
RT: 5.79 min Scan# 887

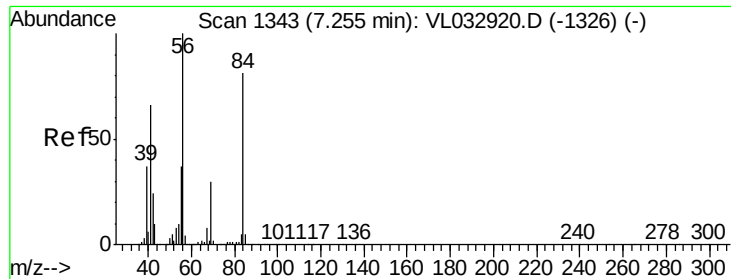
Delta R.T. 0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Tgt Ion:	57	Resp:	1355923
Ion	Ratio	Lower	Upper
57	100		
41	90.8	72.2	108.2
43	74.9	171.9	257.9#
56	54.1	42.2	63.2





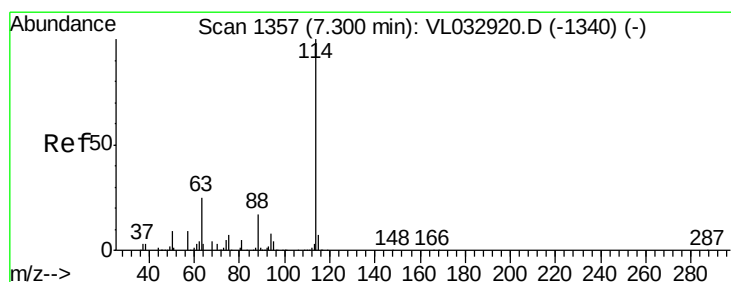
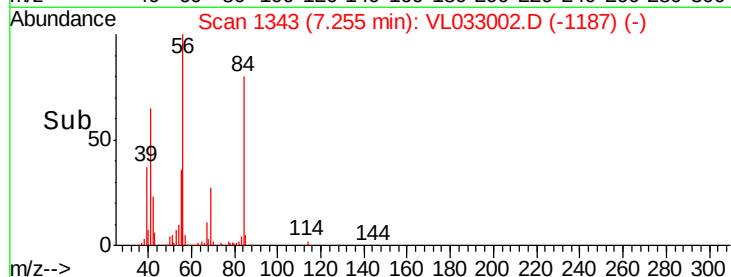
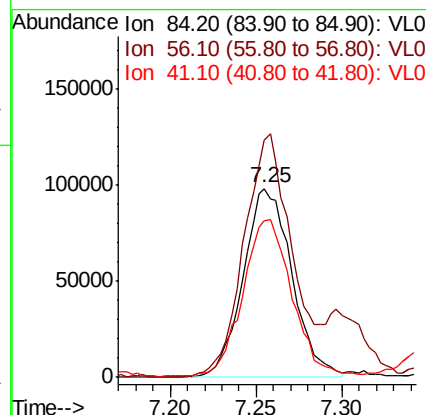
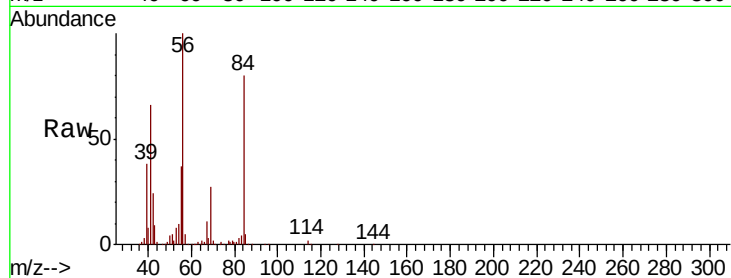
#30
Cyclohexane
Concen: 2.143 ppbv
RT: 7.25 min Scan# 1343
Delta R.T. 0.00 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Tot Ion	Ratio	Lower	Upper
84	100		
56	156.3	102.5	153.7#
41	85.0	64.1	96.1

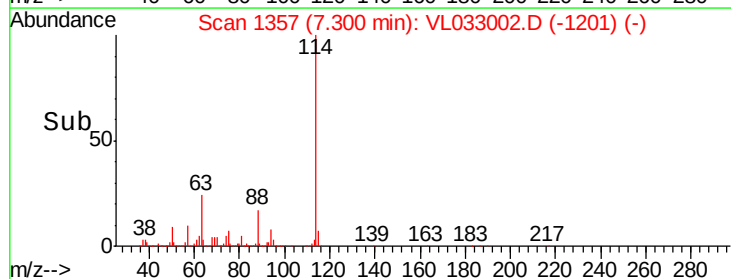
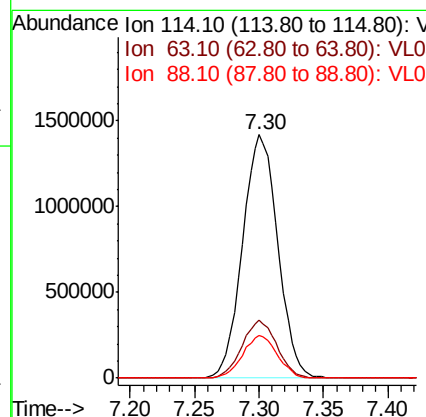
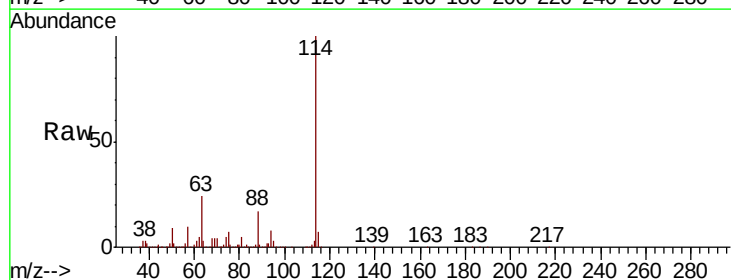
Manual Integrations
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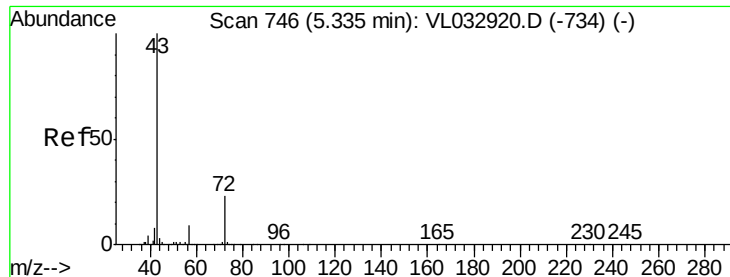
MMDadoda
12/19/2018 2:00:01 PM



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.30 min Scan# 1357
Delta R.T. 0.00 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Tgt Ion	Ratio	Lower	Upper
114	100		
63	23.5	20.1	30.1
88	17.3	14.2	21.4





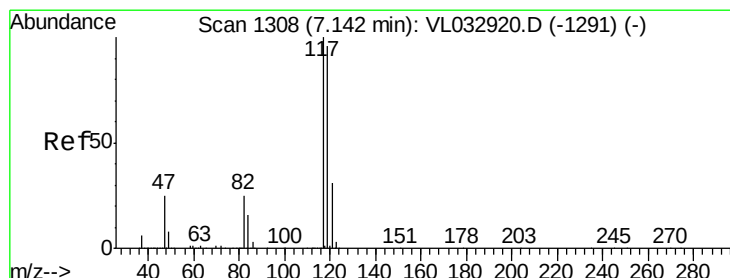
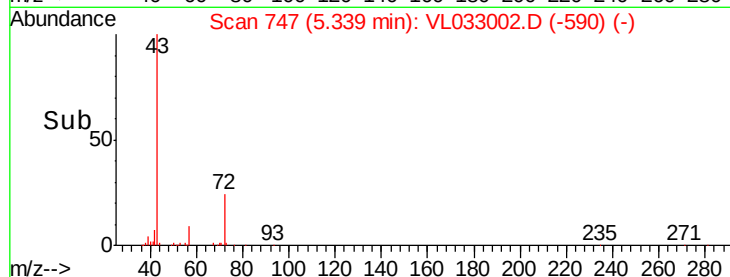
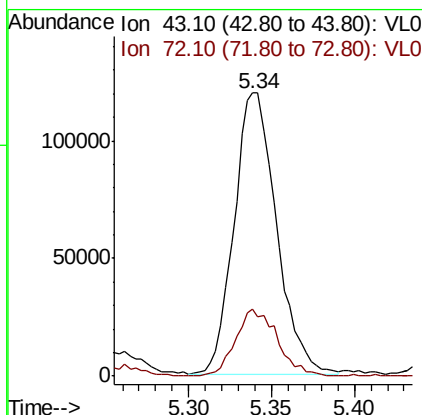
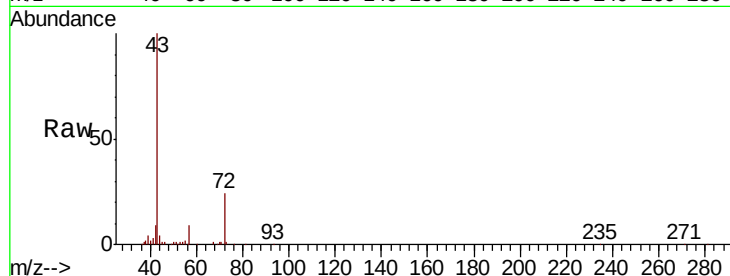
#34
2-Butanone
Concen: 1.811 ppbv
RT: 5.34 min Scan# 747
Delta R.T. 0.00 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Tot Ion	43	Resp	213218
Ion Ratio	100	Lower	Upper
72	23.1	18.8	28.2

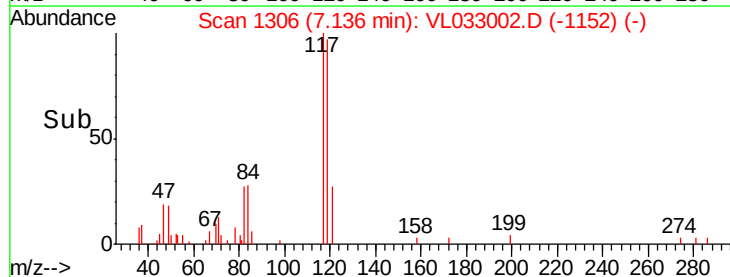
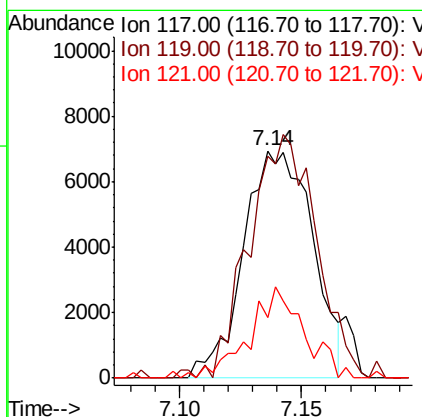
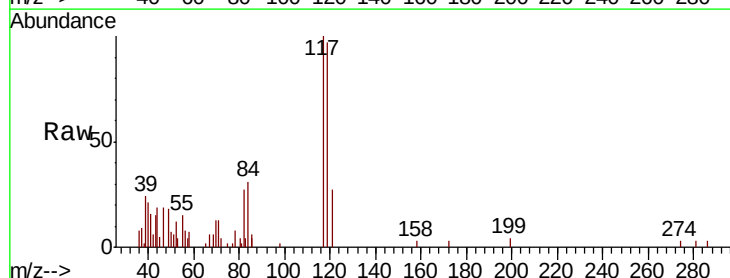
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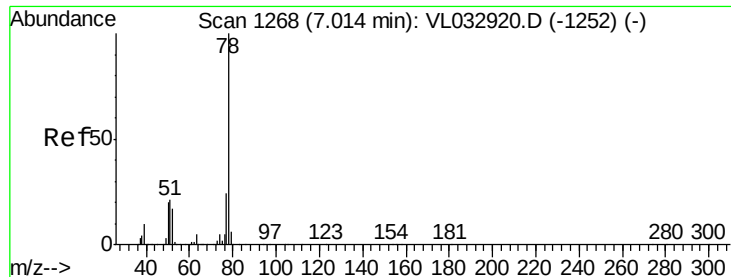
MMDadoda
12/19/2018 2:00:01 PM



#35
Carbon Tetrachloride
Concen: 0.064 ppbv
RT: 7.14 min Scan# 1306
Delta R.T. -0.01 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Tgt Ion	117	Resp	13658
Ion Ratio	100	Lower	Upper
119	93.8	76.5	114.7
121	26.5	24.5	36.7





#36

Benzene

Concen: 6.261 ppbv

RT: 7.01 min Scan# 1267

Delta R.T. -0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion: 78 Resp: 1245136

Ion Ratio Lower Upper

78 100

77 23.6 18.9 28.3

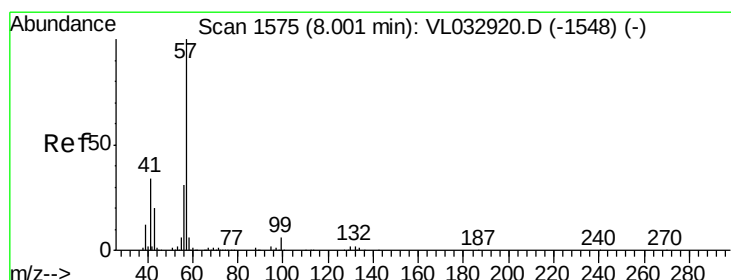
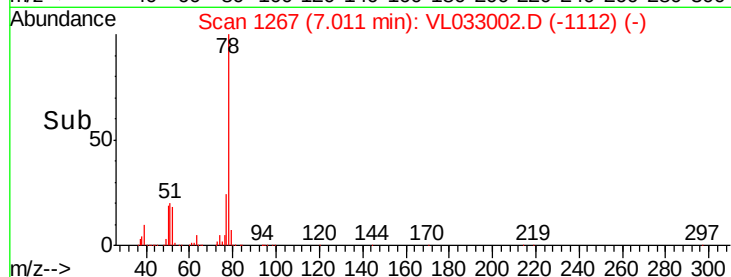
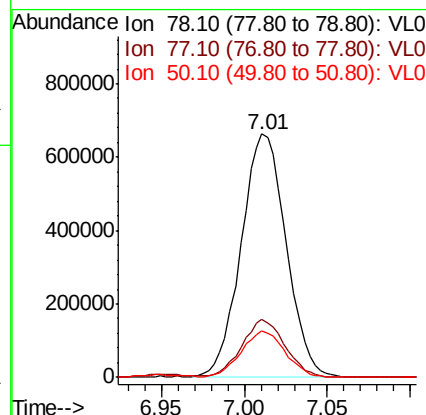
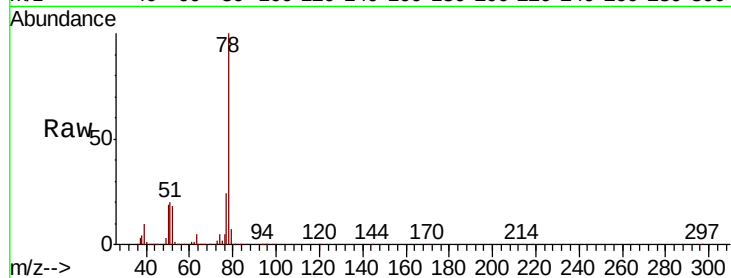
50 18.8 16.1 24.1

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#44

2,2,4-Trimethylpentane

Concen: 8.206 ppbv

RT: 8.00 min Scan# 1574

Delta R.T. -0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

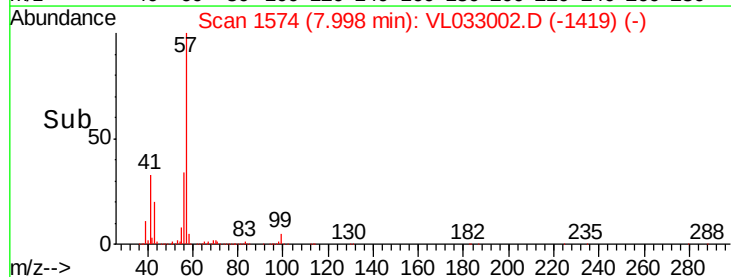
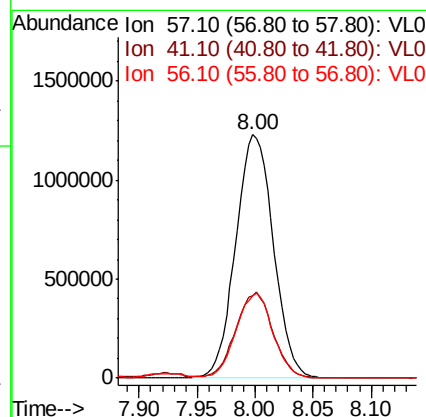
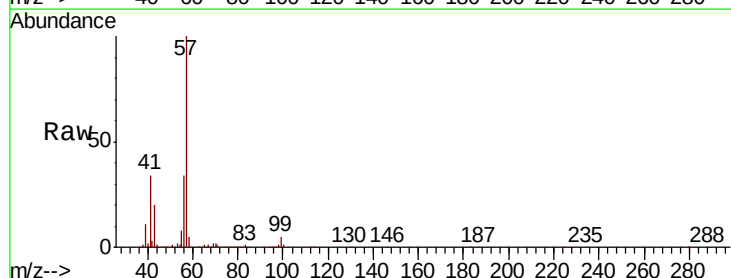
Tgt Ion: 57 Resp: 2770131

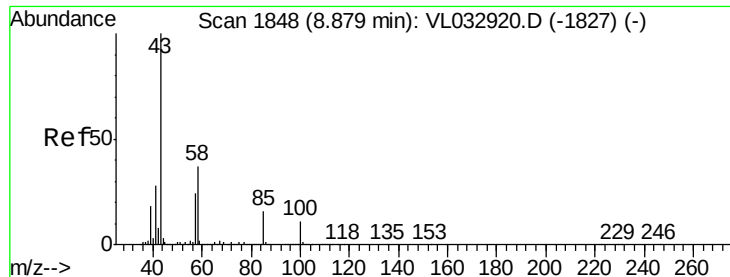
Ion Ratio Lower Upper

57 100

41 34.9 27.0 40.4

56 34.3 24.6 37.0





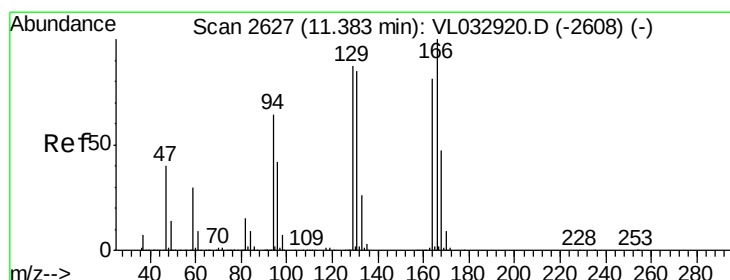
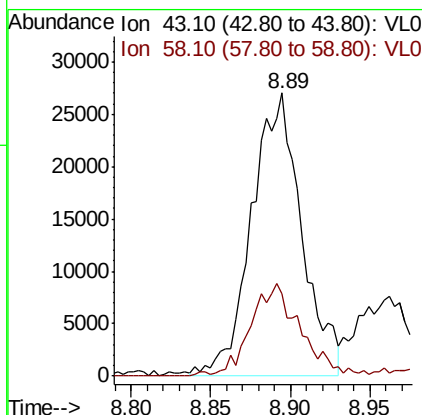
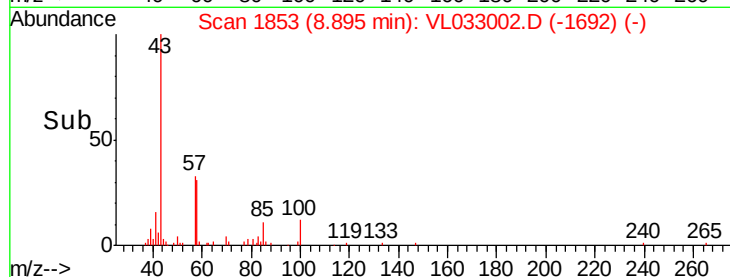
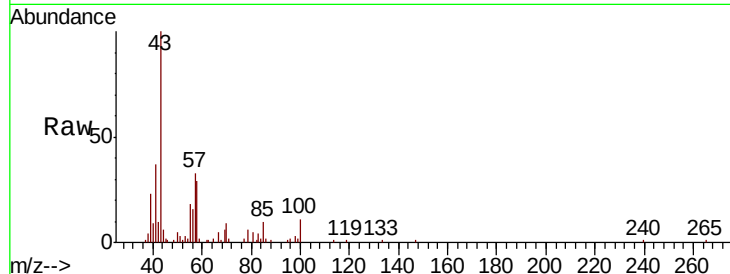
#50
4-Methyl-2-Pentanone
Concen: 0.314 ppbv m
RT: 8.89 min Scan# 1853
Delta R.T. 0.02 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Tot Ion: 43 Resp: 59176
Ion Ratio Lower Upper
43 100
58 0.0 29.0 43.4#

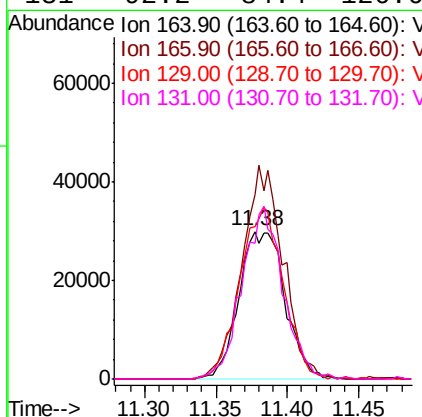
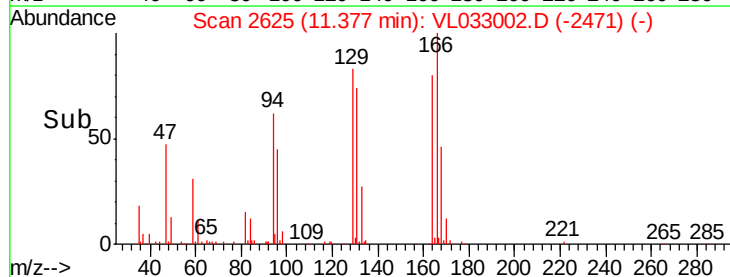
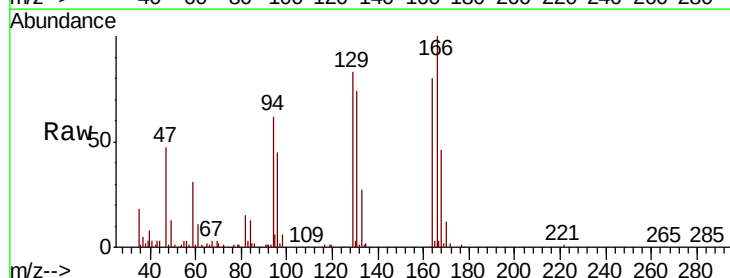
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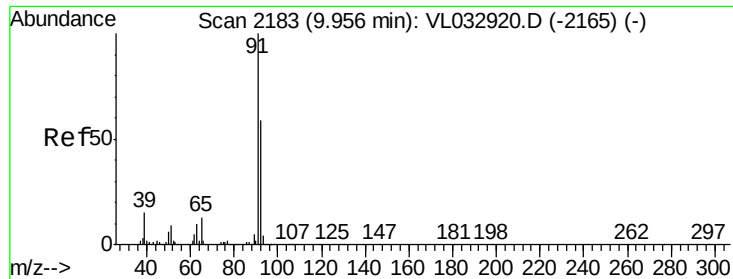
MMDadoda
12/19/2018 2:00:01 PM



#52
Tetrachloroethene
Concen: 0.924 ppbv m
RT: 11.38 min Scan# 2625
Delta R.T. -0.01 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Tgt Ion: 164 Resp: 66874
Ion Ratio Lower Upper
164 100
166 124.6 98.8 148.2
129 103.6 85.5 128.3
131 92.2 84.4 126.6





#53

Toluene

Concen: 44.107 ppbv

RT: 9.96 min Scan# 2183

Delta R.T. 0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion: 91 Resp: 9302328

Ion Ratio Lower Upper

91 100

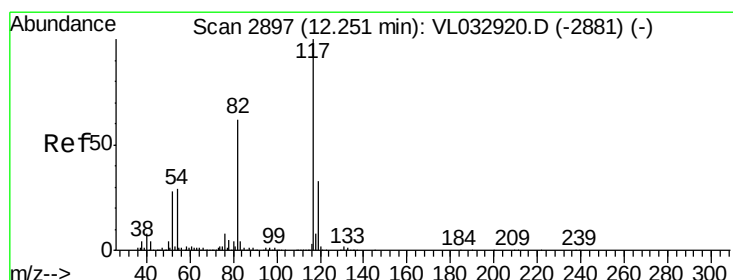
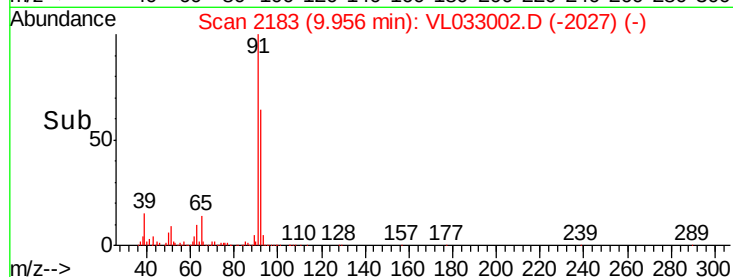
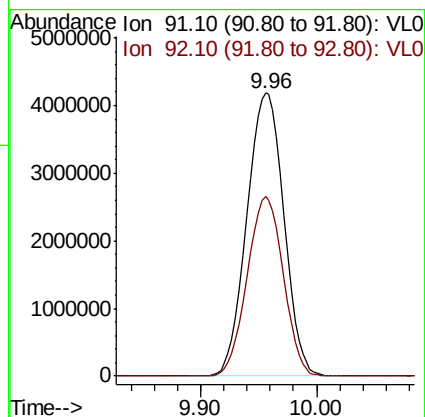
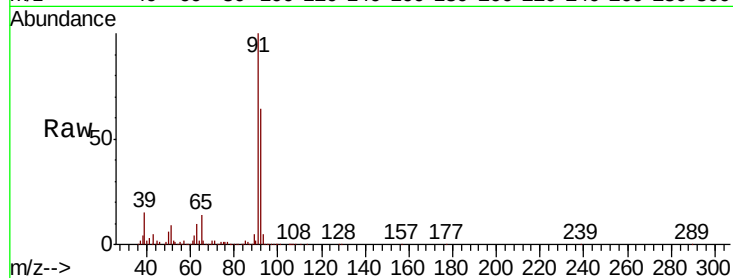
92 62.0 47.4 71.0

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2896

Delta R.T. -0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

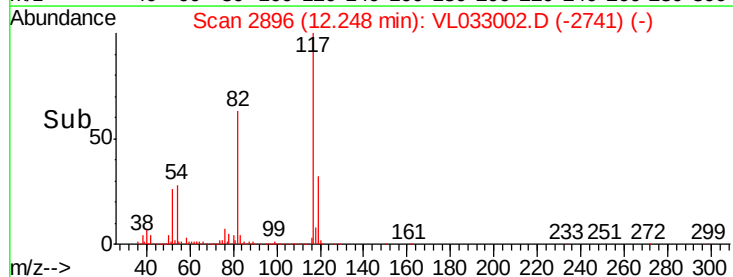
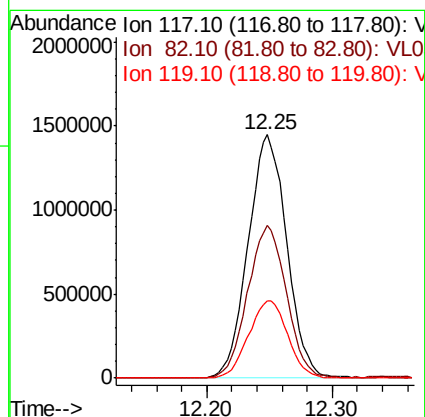
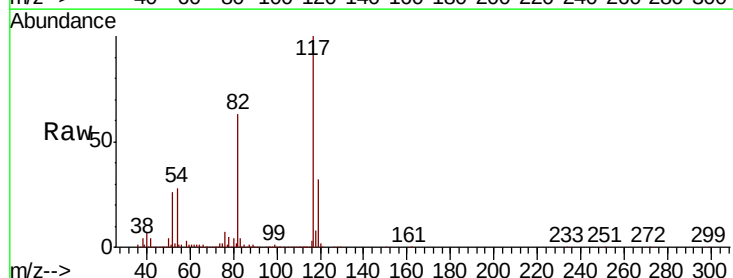
Tgt Ion: 117 Resp: 3096312

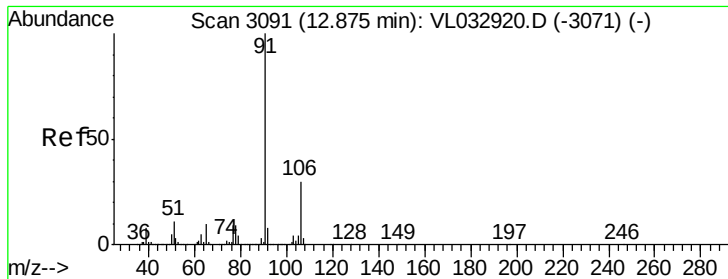
Ion Ratio Lower Upper

117 100

82 63.1 47.8 71.8

119 32.4 43.1 64.7#





#58

Ethyl Benzene

Concen: 3.962 ppbv

RT: 12.87 min Scan# 3090

Delta R.T. -0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion: 91 Resp: 1308629

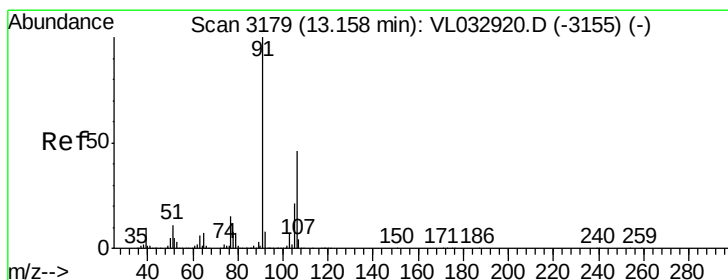
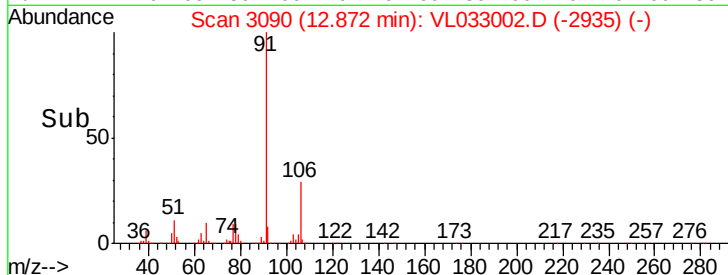
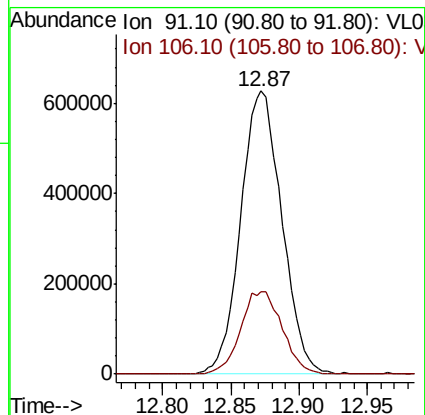
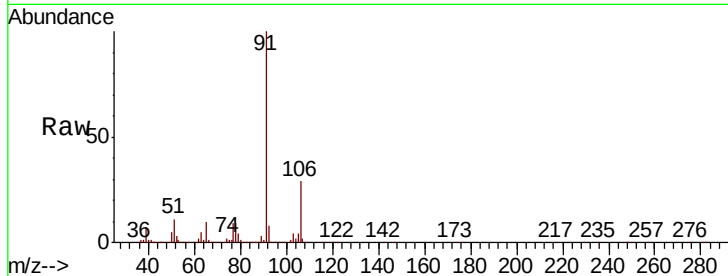
Ion Ratio Lower Upper

91 100

106 29.0 23.9 35.9

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#59

m/p-Xylene

Concen: 14.340 ppbv

RT: 13.13 min Scan# 3169

Delta R.T. -0.03 min

Lab File: VL033002.D

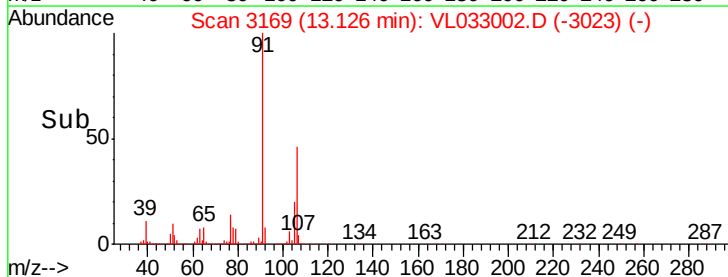
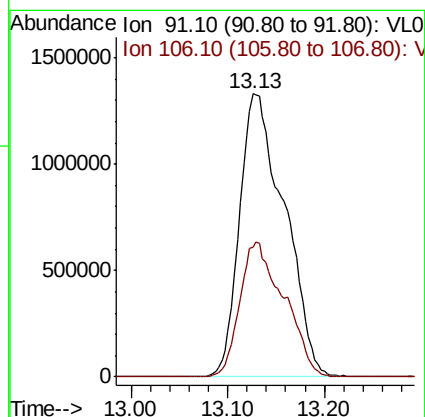
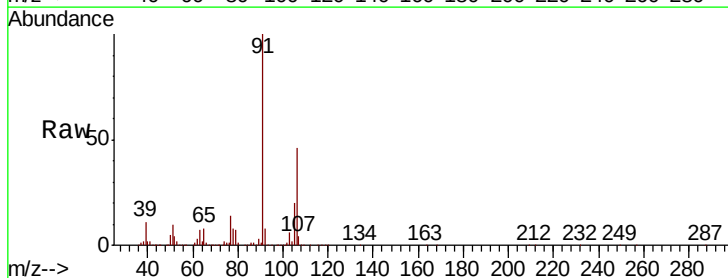
Acq: 17 Dec 2018 19:15

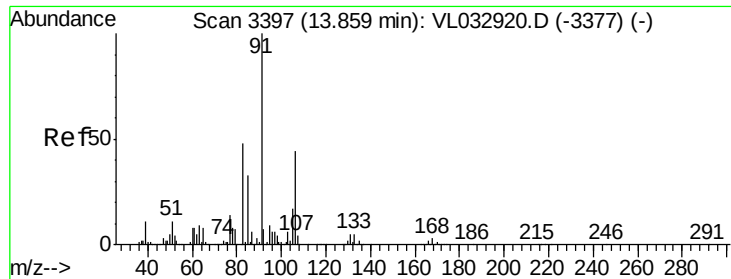
Tgt Ion: 91 Resp: 4294302

Ion Ratio Lower Upper

91 100

106 47.0 0.0 0.0#





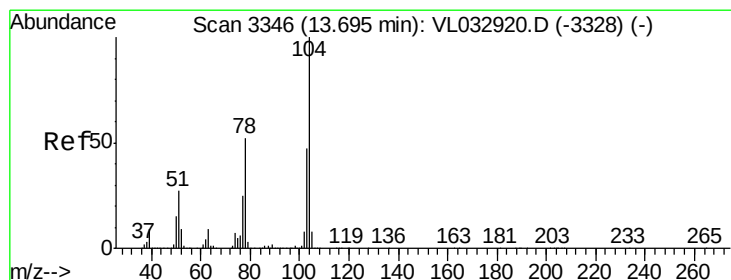
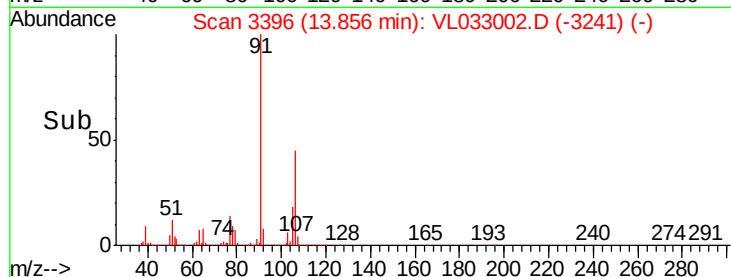
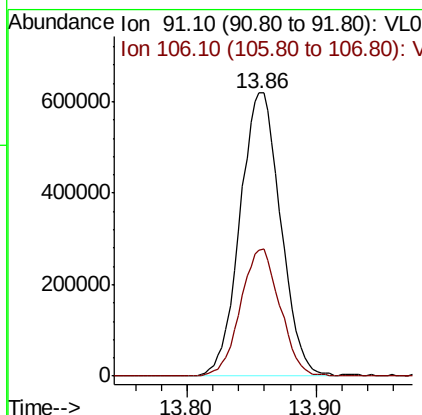
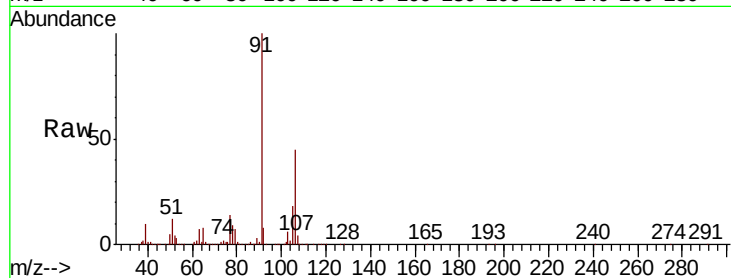
#60
o-Xylene
Concen: 4.479 ppbv
RT: 13.86 min Scan# 3396
Delta R.T. -0.00 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Tot Ion: 91 Resp: 1354506
Ion Ratio Lower Upper
91 100
106 43.7 21.9 65.8

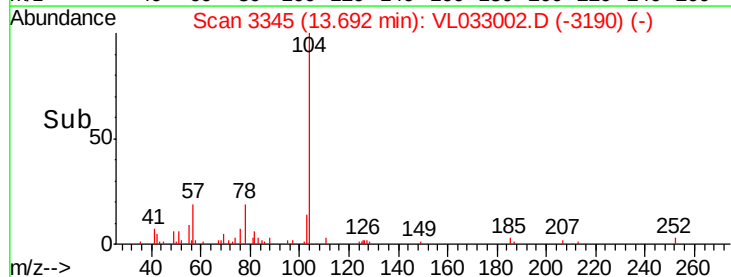
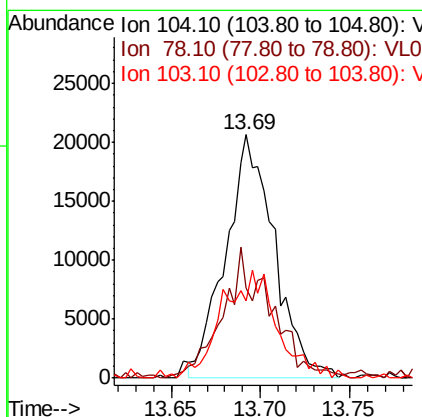
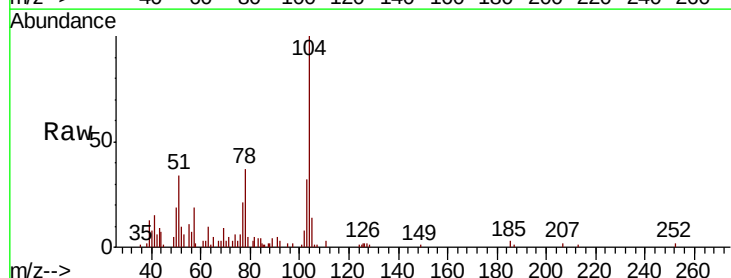
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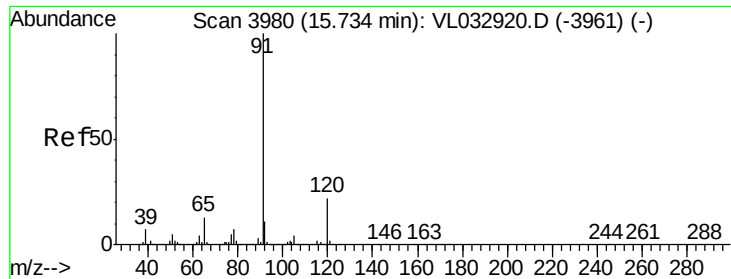
MMDadoda
12/19/2018 2:00:01 PM



#61
Styrene
Concen: 0.195 ppbv
RT: 13.69 min Scan# 3345
Delta R.T. -0.00 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Tgt Ion: 104 Resp: 39161
Ion Ratio Lower Upper
104 100
78 54.0 42.0 63.0
103 50.9 38.3 57.5





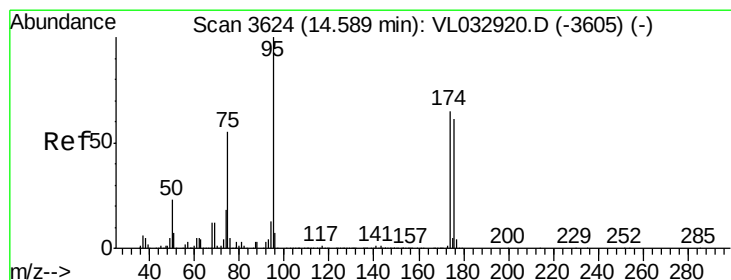
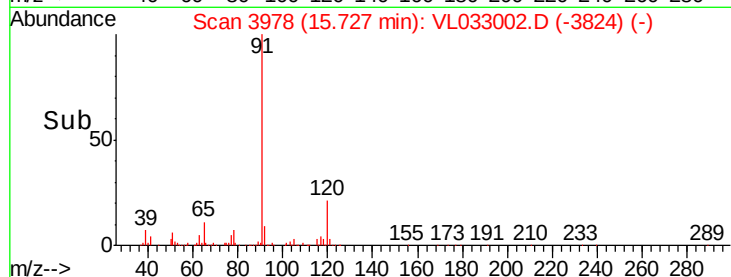
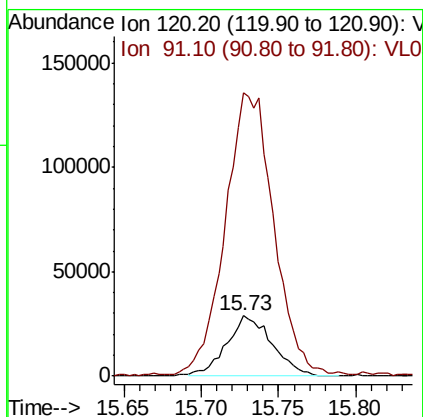
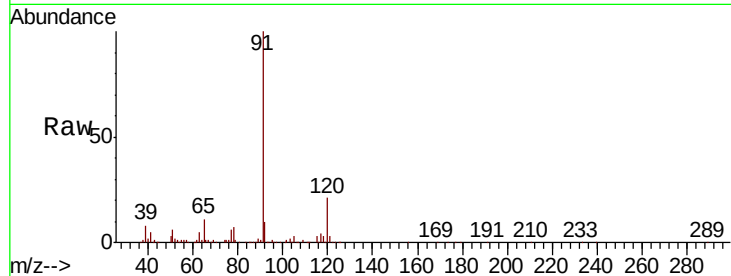
#64
n-propylbenzene
Concen: 0.541 ppbv
RT: 15.73 min Scan# 3978
Delta R.T. -0.01 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Instrument :
MSVOA_L
ClientSampleId :
P0068-IA002-181212-01DUP

Tot Ion:120 Resp: 59244
Ion Ratio Lower Upper
120 100
91 502.8 380.4 570.6

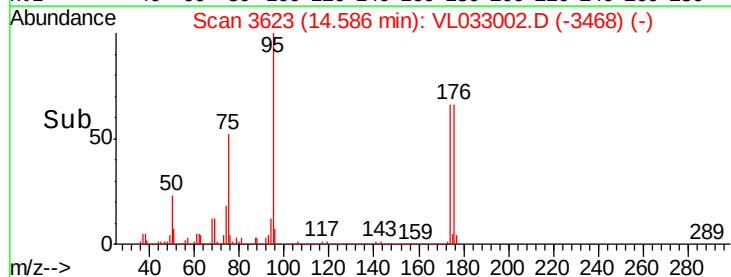
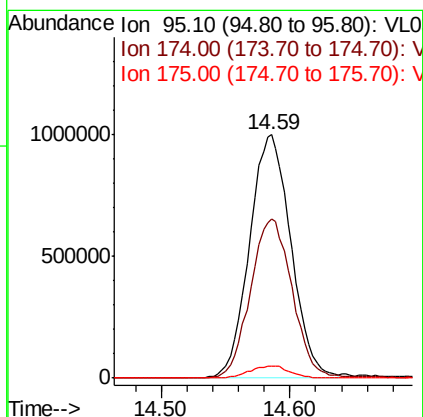
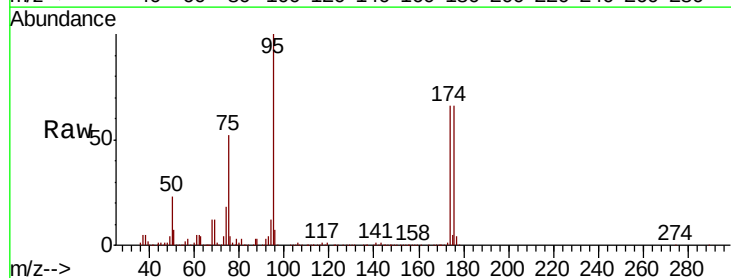
Manual Integrations
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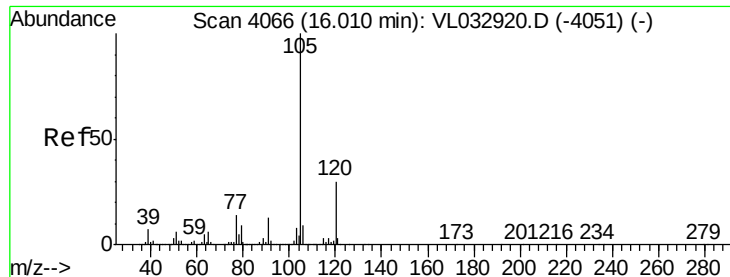
MMDadoda
12/19/2018 2:00:01 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 9.763 ppbv
RT: 14.59 min Scan# 3623
Delta R.T. -0.00 min
Lab File: VL033002.D
Acq: 17 Dec 2018 19:15

Tgt Ion: 95 Resp: 2233197
Ion Ratio Lower Upper
95 100
174 66.9 51.4 77.0
175 4.9 3.8 5.6





#72

4-Ethyltoluene

Concen: 1.316 ppbv

RT: 16.01 min Scan# 4066

Delta R.T. 0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

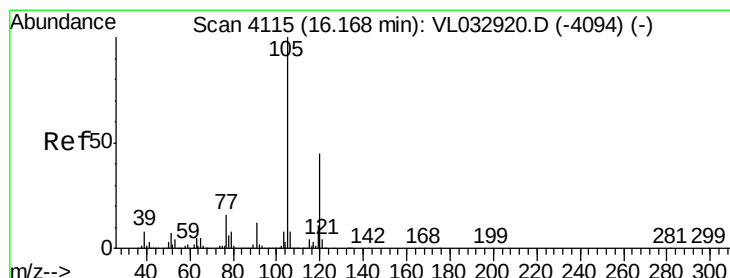
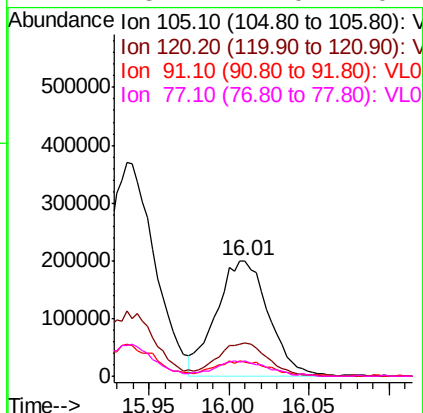
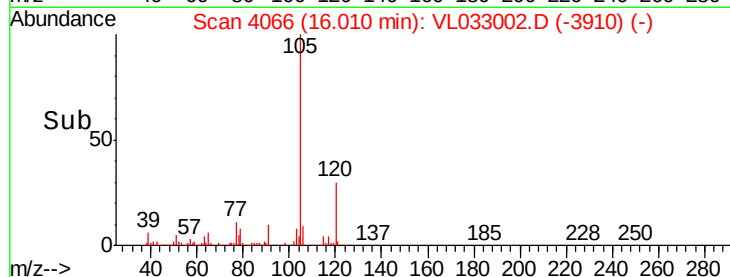
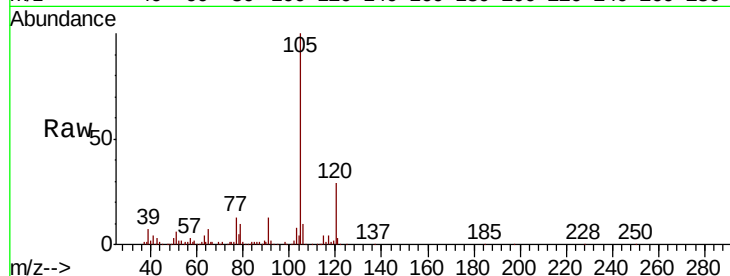
ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion:	105	Resp:	444304
Ion Ratio	Lower	Upper	
105	100		
120	28.1	23.0	34.4
91	13.5	10.4	15.6
77	13.2	11.0	16.4

Manual Integrations
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12/19/2018 2:00:01 PM



#73

1,3,5-Trimethylbenzene

Concen: 0.811 ppbv

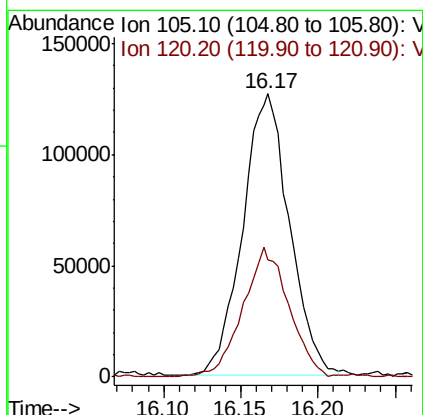
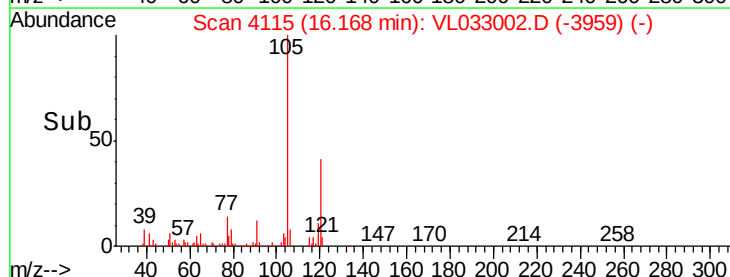
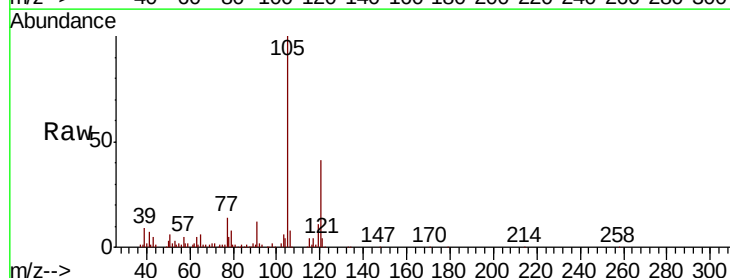
RT: 16.17 min Scan# 4115

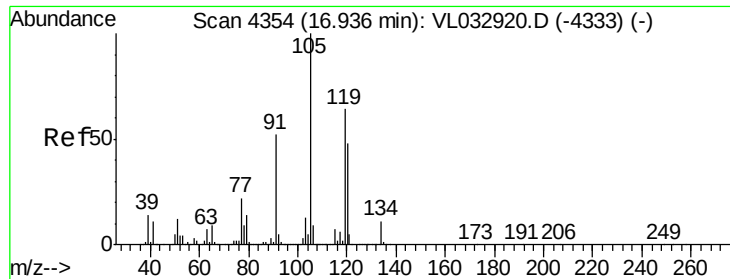
Delta R.T. 0.00 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Tgt Ion:	105	Resp:	267253
Ion Ratio	Lower	Upper	
105	100		
120	41.0	36.0	54.0





#74

1,2,4-Trimethylbenzene

Concen: 3.347 ppbv

RT: 16.93 min Scan# 4352

Delta R.T. -0.01 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Instrument :

MSVOA_L

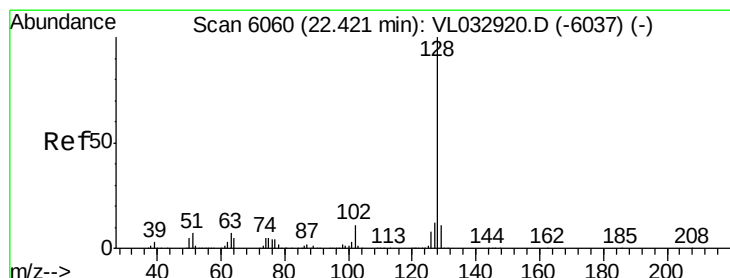
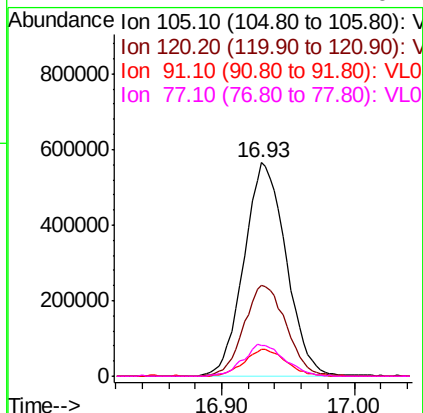
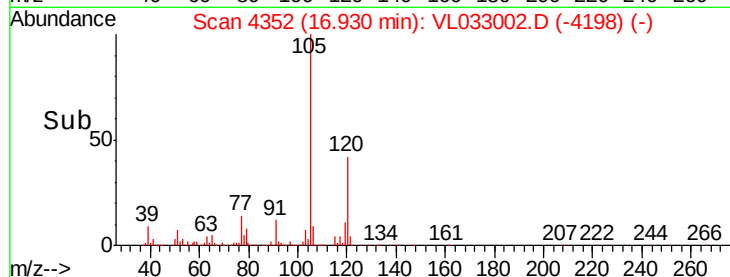
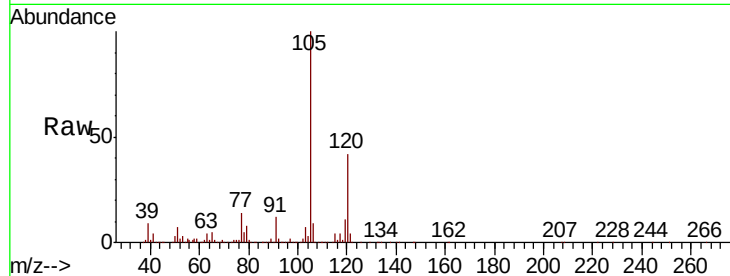
ClientSampleId :

P0068-IA002-181212-01DUP

Tot Ion:	105	Resp:	1245641
Ion Ratio	Lower	Upper	
105	100		
120	42.5	38.6	58.0
91	12.2	41.7	62.5#
77	14.4	17.4	26.2#

Manual Integrations
APPROVED

MMDadoda
12/19/2018 2:00:01 PM



#79

Naphthalene

Concen: 0.212 ppbv

RT: 22.43 min Scan# 6062

Delta R.T. 0.01 min

Lab File: VL033002.D

Acq: 17 Dec 2018 19:15

Tgt Ion:	128	Resp:	51014
Ion Ratio	Lower	Upper	
128	100		
127	12.2	9.9	14.9
129	10.3	8.6	13.0

