

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL020419\
 Data File : VL033164.D
 Acq On : 4 Feb 2019 21:14
 Operator : SY/AP
 Sample : K1267-05DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SSA1DUP

Manual Integrations
 APPROVED

MMDadoda
 2/5/2019 10:28:20 AM

Quant Time: Feb 05 09:33:04 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL020419AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Feb 05 2019
 QLast Update : Mon Feb 04 14:41:39 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.77	49	1263576	10.00	ppbv	0.01
33) 1,4-Difluorobenzene	7.30	114	2856009	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	2779004	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2150091	10.38	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.80%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	68806	0.370	ppbv #	87
3) Chlorodifluoromethane	3.01	51	28191m	0.200	ppbv	
4) Chloromethane	3.18	50	15517m	0.196	ppbv	
9) Propene	3.04	41	68410m	0.967	ppbv	
10) Heptane	8.25	43	120140	0.545	ppbv	97
11) Trichlorofluoromethane	4.01	101	42278	0.235	ppbv	99
13) Ethanol	3.66	45	2232567	80.089	ppbv	98
15) Acetone	3.90	43	14187942	94.309	ppbv #	84
17) tert-Butyl alcohol	4.37	59	308967	9.299	ppbv	98
19) Isopropyl Alcohol	4.04	45	2120747m	19.846	ppbv	
20) Methylene Chloride	4.42	84	140681	2.714	ppbv	96
26) Hexane	5.78	57	247863	1.704	ppbv #	57
34) 2-Butanone	5.33	43	2458387	13.686	ppbv	100
35) Carbon Tetrachloride	7.13	117	9875m	0.054	ppbv	
36) Benzene	7.01	78	241713	0.837	ppbv	97
37) 1,2-Dichloroethane	6.42	62	32554	0.221	ppbv	100
44) 2,2,4-Trimethylpentane	7.99	57	107258	0.221	ppbv #	86
50) 4-Methyl-2-Pentanone	8.87	43	747315	2.298	ppbv	100
51) 2-Hexanone	10.27	43	510640	1.873	ppbv #	99
52) Tetrachloroethene	11.38	164	59492m	0.593	ppbv	
53) Toluene	9.95	91	2410860	7.031	ppbv	99
58) Ethyl Benzene	12.86	91	349659m	0.800	ppbv	
59) m/p-Xylene	13.12	91	968928	2.706	ppbv	98
60) o-Xylene	13.85	91	333748	1.010	ppbv	94
61) Styrene	13.69	104	105679	0.400	ppbv	95
62) Isopropylbenzene	14.83	105	2584027	5.479	ppbv	99
72) 4-Ethyltoluene	16.00	105	101497	0.257	ppbv	97
73) 1,3,5-Trimethylbenzene	16.16	105	74803	0.196	ppbv	93
74) 1,2,4-Trimethylbenzene	16.93	105	255572	0.658	ppbv #	74

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

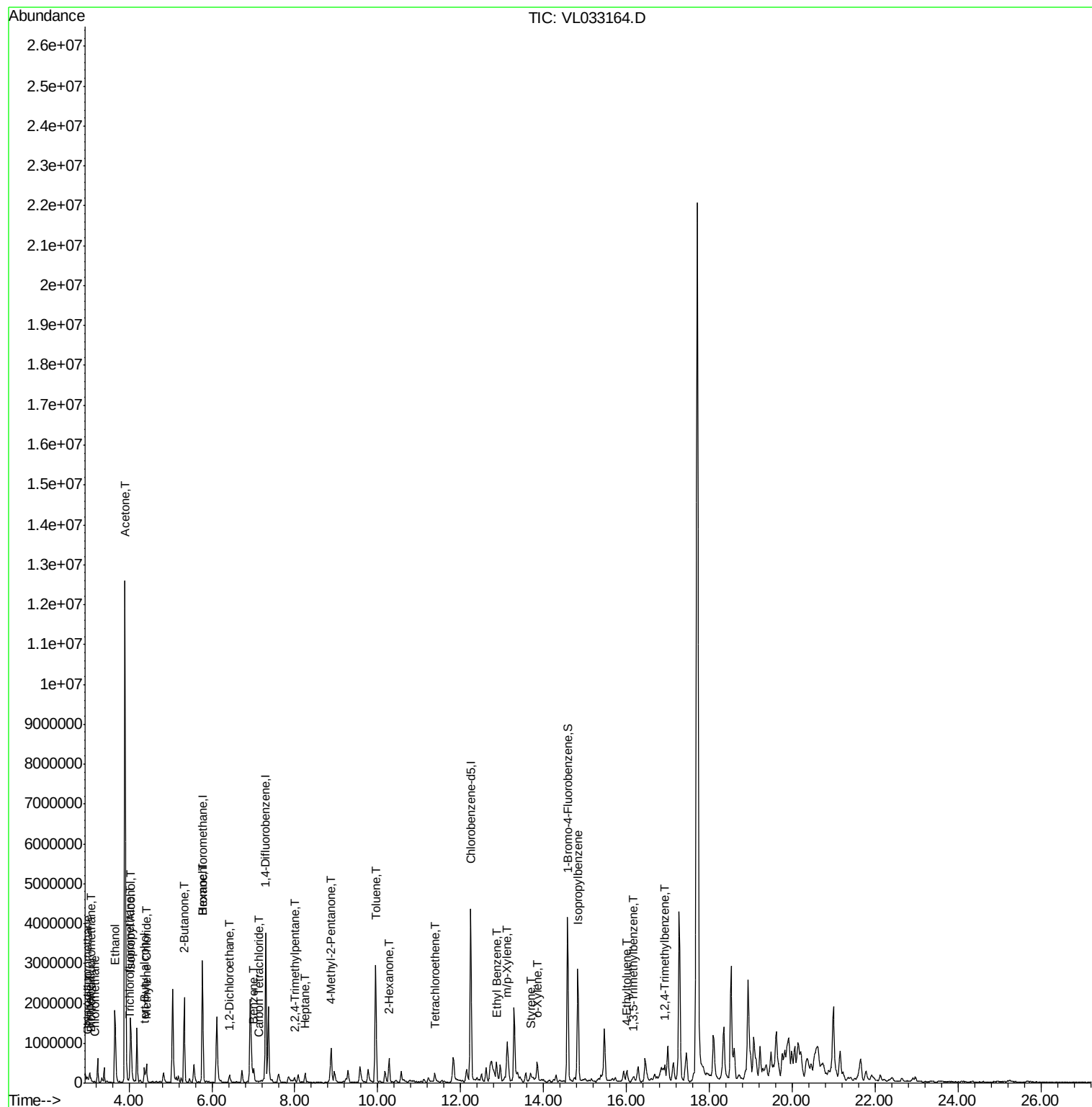
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL020419\
Data File : VL033164.D
Acq On : 4 Feb 2019 21:14
Operator : SY/AP
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Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

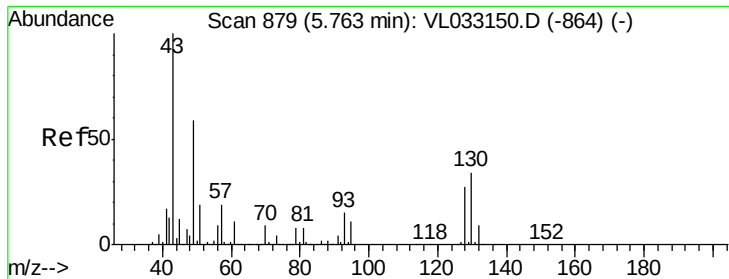
Instrument :
MSVOA_L
ClientSampleId :
SSA1DUP

Manual Integrations
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2/5/2019 10:28:20 AM

Quant Time: Feb 05 09:33:04 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL020419AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Feb
QLast Update : Mon Feb 04 14:41:39 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 881

Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

ClientSampled :

SSA1DUP

Tot Ion: 49 Resp: 1263576

Ion Ratio Lower Upper

49 100

128 45.2 23.2 69.5

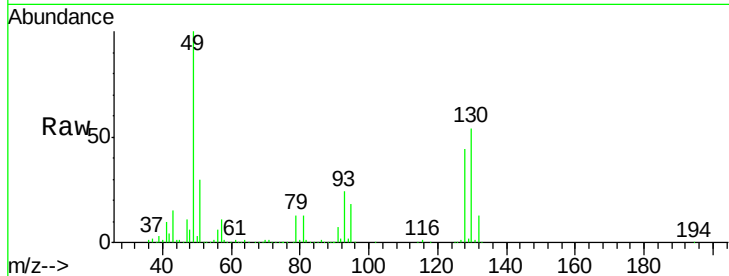
130 58.0 29.5 88.6

Manual Integrations

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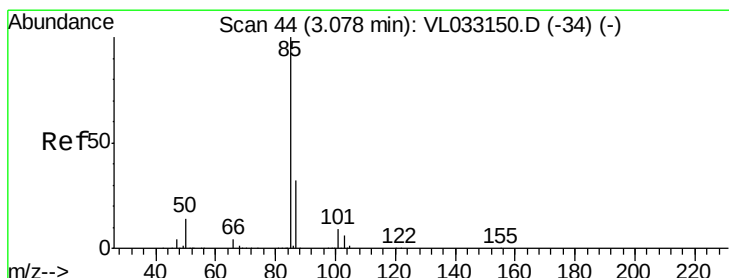
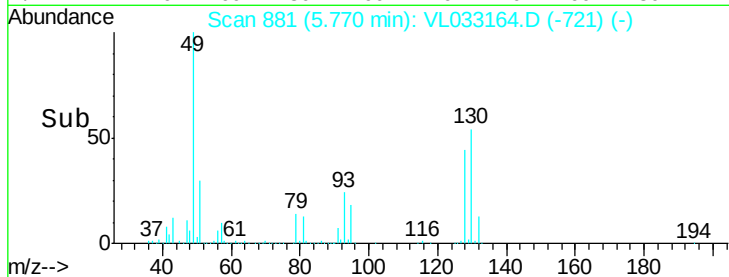
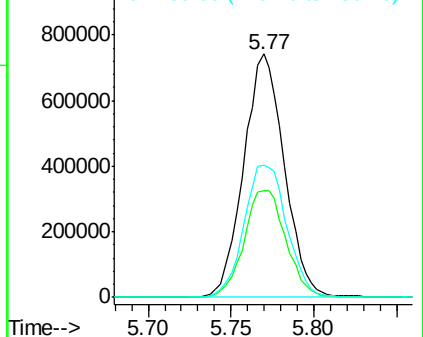
2/5/2019 10:28:20 AM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.370 ppbv

RT: 3.08 min Scan# 45

Delta R.T. 0.01 min

Lab File: VL033164.D

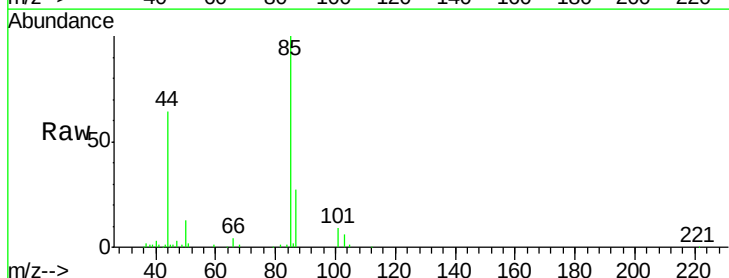
Acq: 4 Feb 2019 21:14

Tgt Ion: 85 Resp: 68806

Ion Ratio Lower Upper

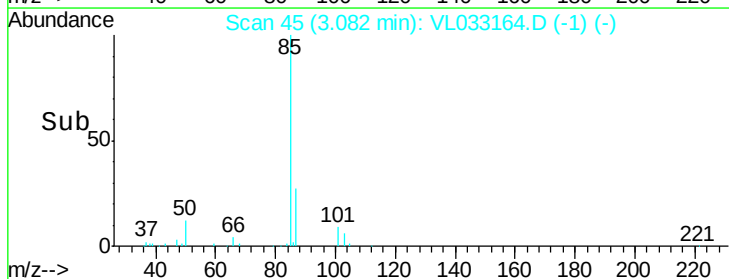
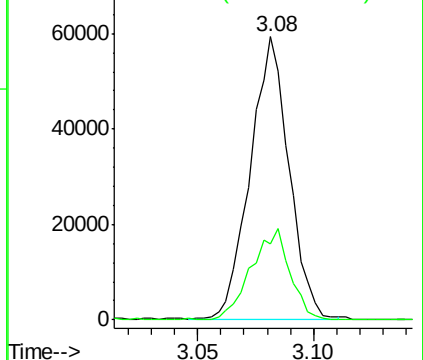
85 100

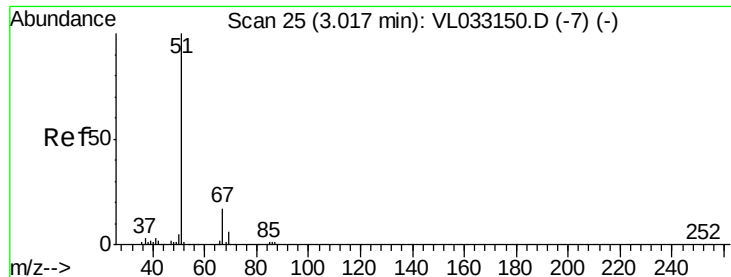
87 26.8 27.4 41.0#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

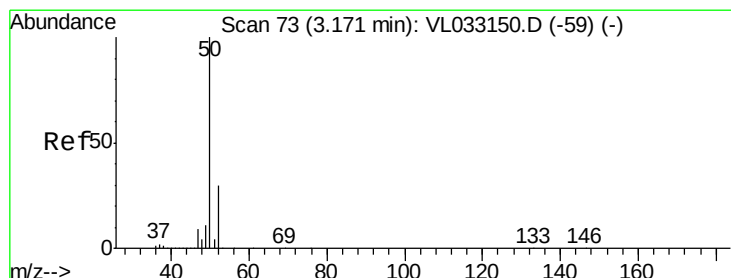
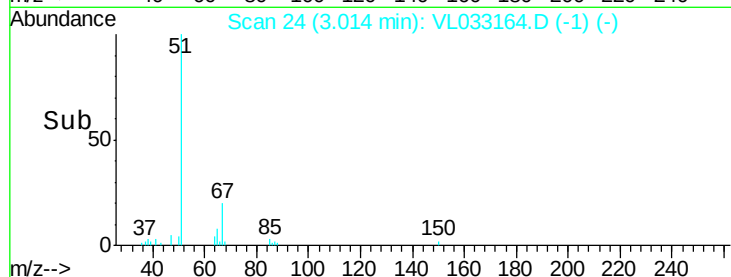
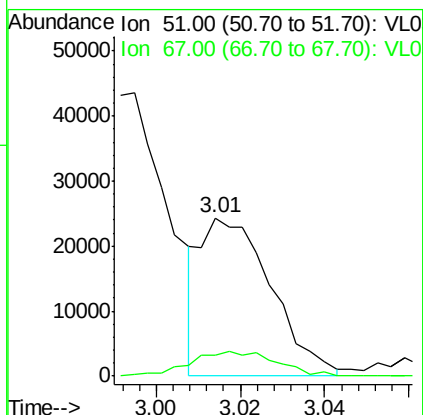
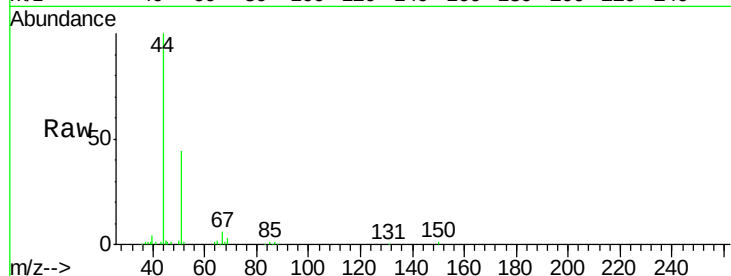
Chlorodifluoromethane
Concen: 0.200 ppbv m
RT: 3.01 min Scan# 24
Delta R.T. 0.00 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Instrument :
MSVOA_L
ClientSampled :
SSA1DUP

Tot Ion	Ratio	Lower	Upper
51	100		
67	19.0	13.4	20.2

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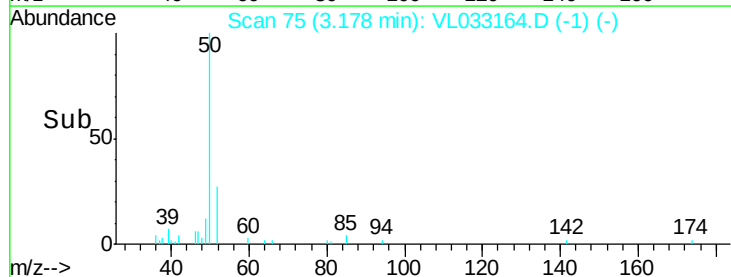
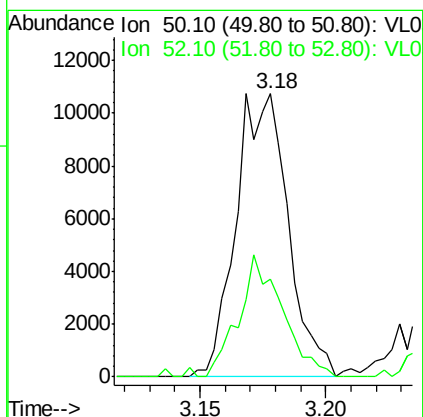
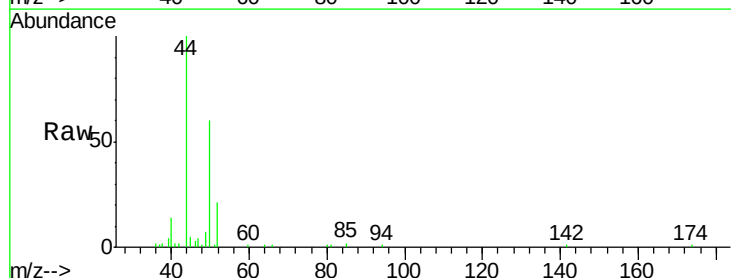
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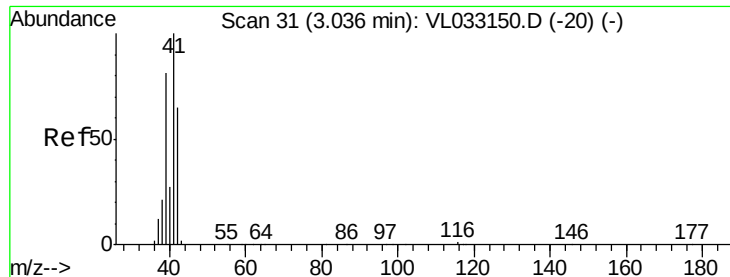


#4

Chloromethane
Concen: 0.196 ppbv m
RT: 3.18 min Scan# 75
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Tgt Ion	Ratio	Lower	Upper
50	100		
52	34.6	25.7	38.5





#9

Propene

Concen: 0.967 ppbv m

RT: 3.04 min Scan# 33

Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

ClientSampleId :

SSA1DUP

Tot Ion: 41 Resp: 68410

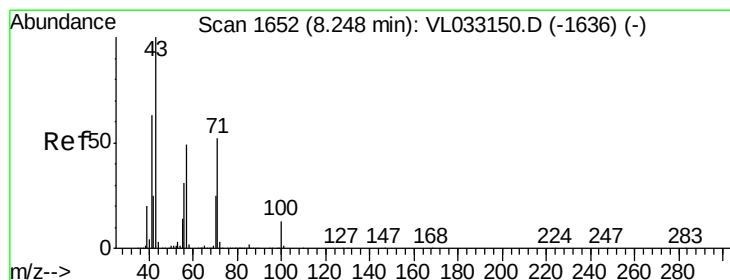
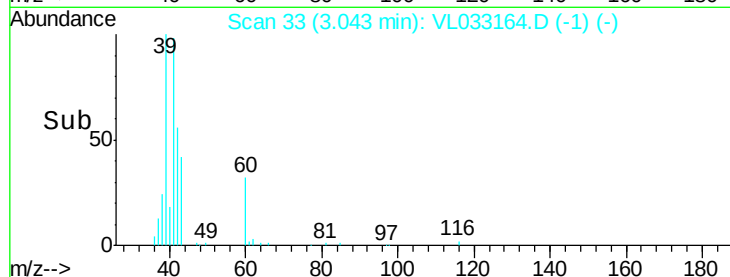
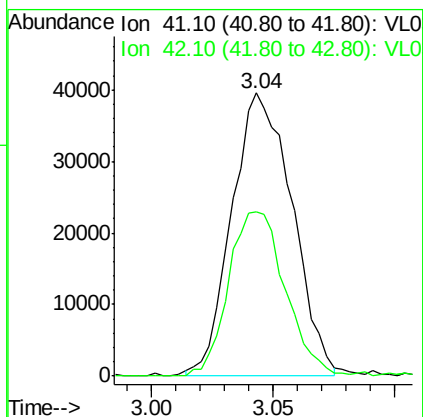
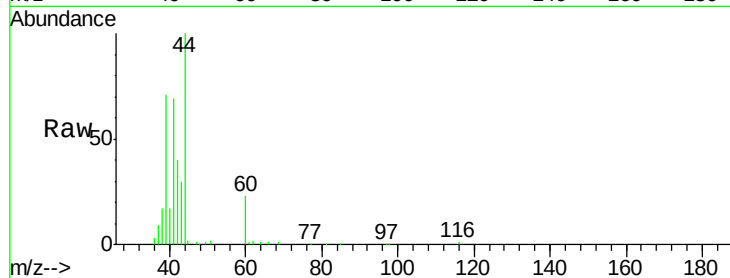
Ion Ratio Lower Upper

41 100

42 154.9 55.1 82.7#

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#10

Heptane

Concen: 0.545 ppbv

RT: 8.25 min Scan# 1653

Delta R.T. 0.01 min

Lab File: VL033164.D

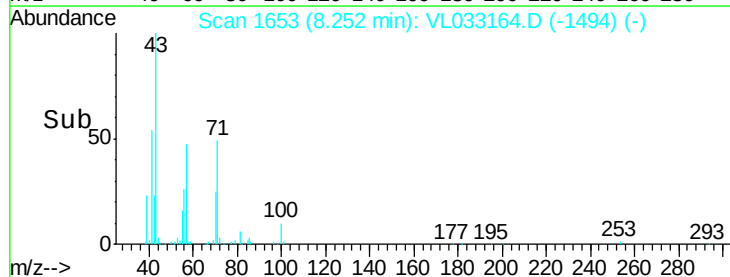
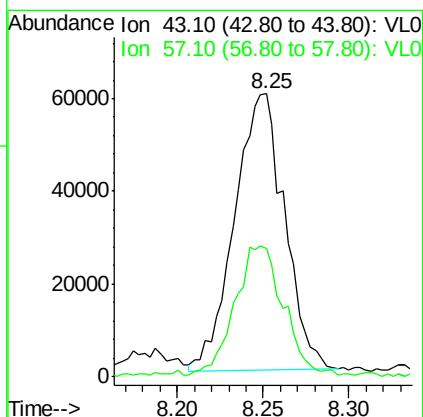
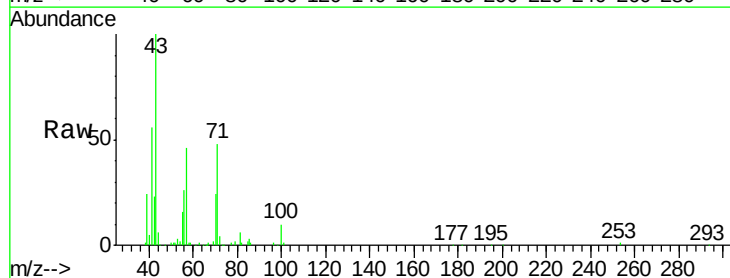
Acq: 4 Feb 2019 21:14

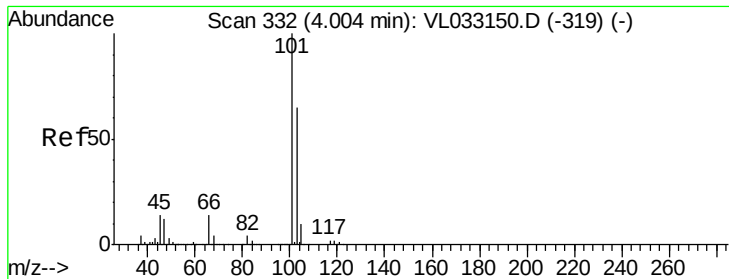
Tgt Ion: 43 Resp: 120140

Ion Ratio Lower Upper

43 100

57 47.3 39.3 58.9





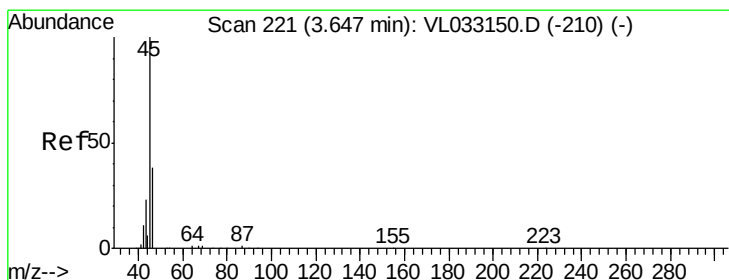
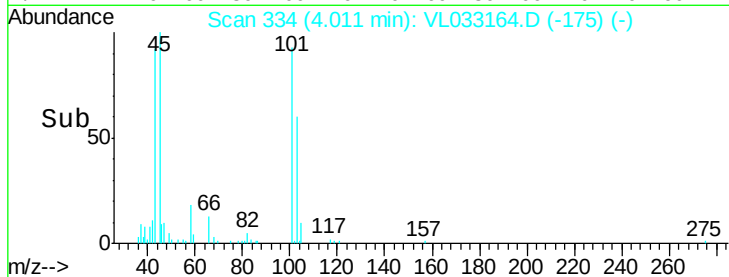
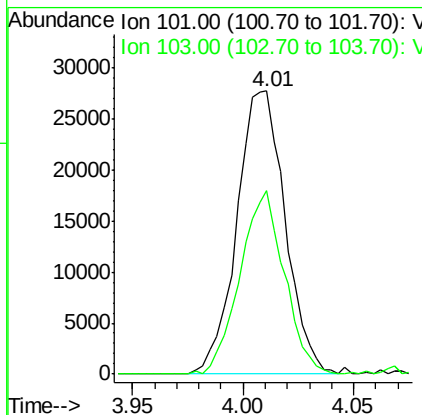
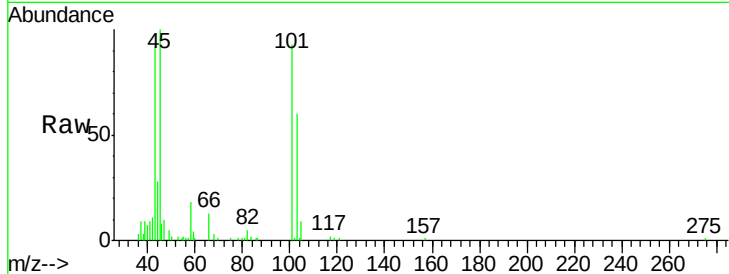
#11
 Trichlorofluoromethane
 Concen: 0.235 ppbv
 RT: 4.01 min Scan# 334
 Delta R.T. 0.01 min
 Lab File: VL033164.D
 Acq: 4 Feb 2019 21:14

Instrument :
 MSVOA_L
 ClientSampleId :
 SSA1DUP

Tot Ion	Ratio	Lower	Upper
101	100		
103	64.8	51.3	76.9

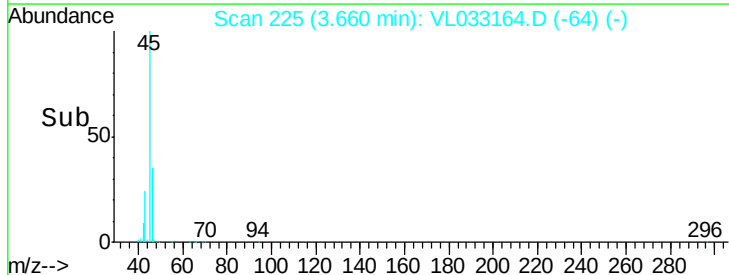
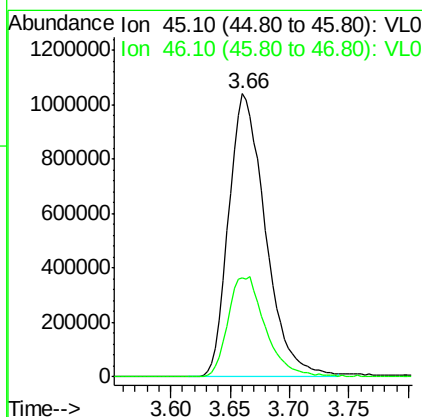
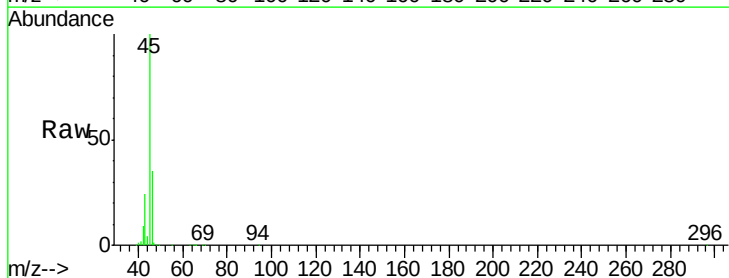
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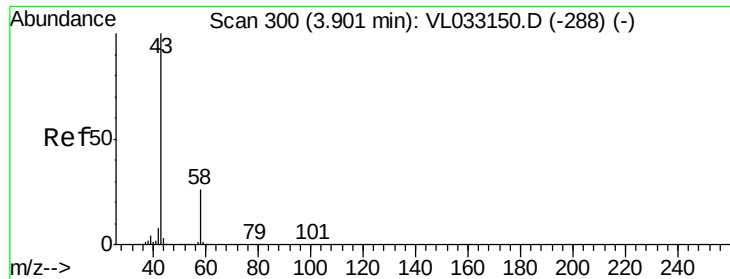
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#13
 Ethanol
 Concen: 80.089 ppbv
 RT: 3.66 min Scan# 225
 Delta R.T. 0.02 min
 Lab File: VL033164.D
 Acq: 4 Feb 2019 21:14

Tgt Ion	Ratio	Lower	Upper
45	100		
46	36.0	14.0	56.2





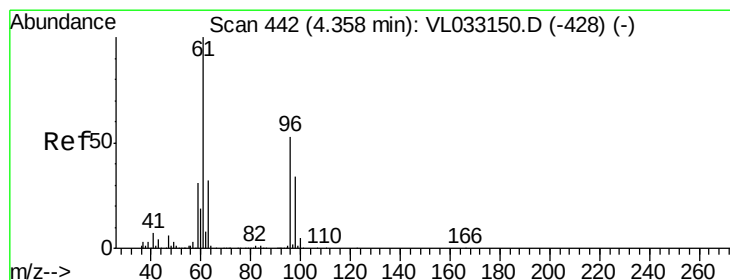
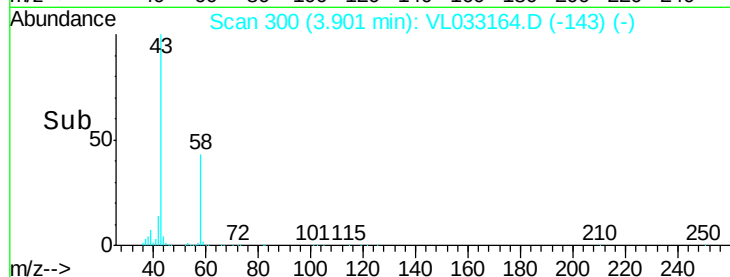
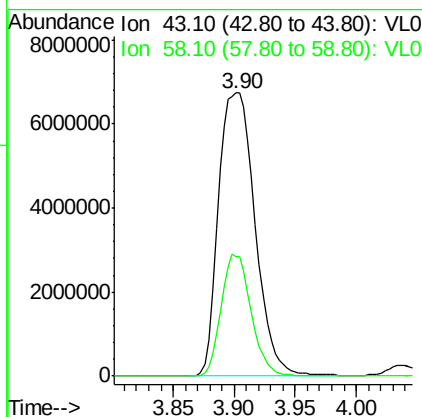
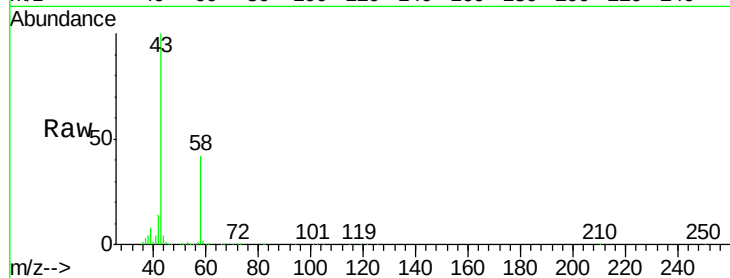
#15
Acetone
Concen: 94.309 ppbv
RT: 3.90 min Scan# 300
Delta R.T. 0.00 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Instrument :
MSVOA_L
ClientSampleId :
SSA1DUP

Tot Ion: 43 Resp:14187942
Ion Ratio Lower Upper
43 100
58 35.4 21.8 32.6#

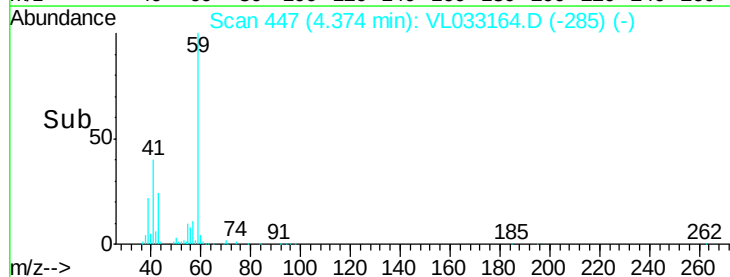
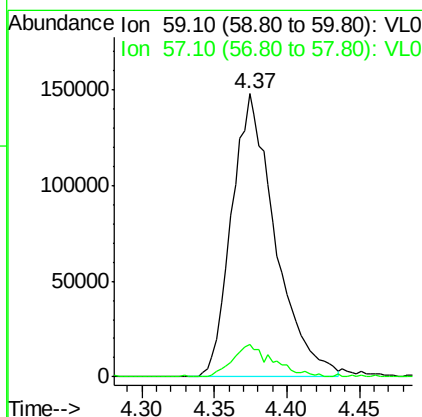
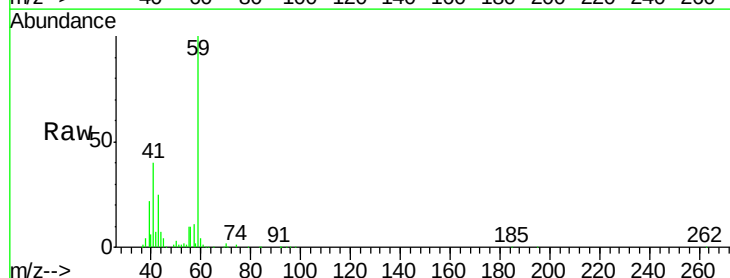
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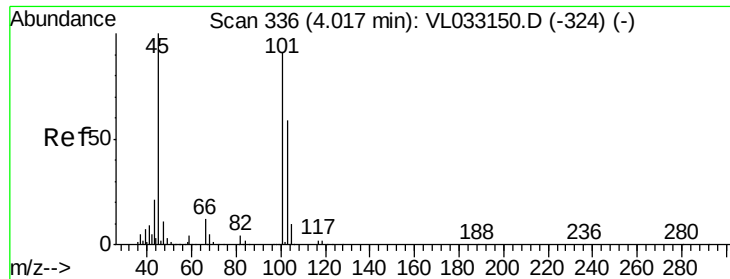
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#17
tert-Butyl alcohol
Concen: 9.299 ppbv
RT: 4.37 min Scan# 447
Delta R.T. 0.02 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Tgt Ion: 59 Resp: 308967
Ion Ratio Lower Upper
59 100
57 10.7 8.0 12.0





#19

Isopropyl Alcohol

Concen: 19.846 ppbv m

RT: 4.04 min Scan# 344

Delta R.T. 0.03 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Tot Ion: 45 Resp: 2120747

Ion Ratio Lower Upper

45 100

58 0.0 25.1 37.7#

Instrument :

MSVOA_L

ClientSampleId :

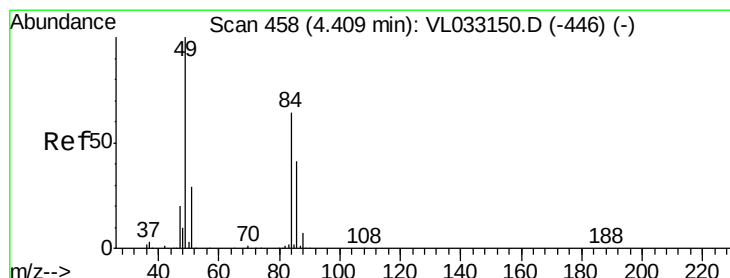
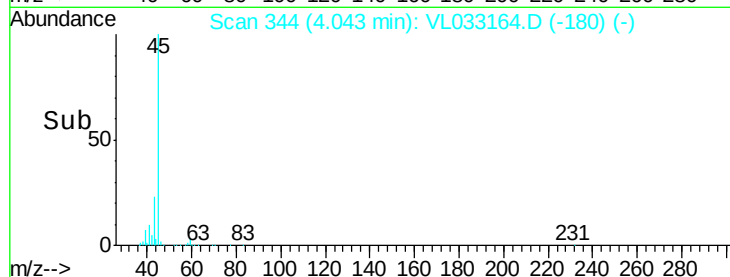
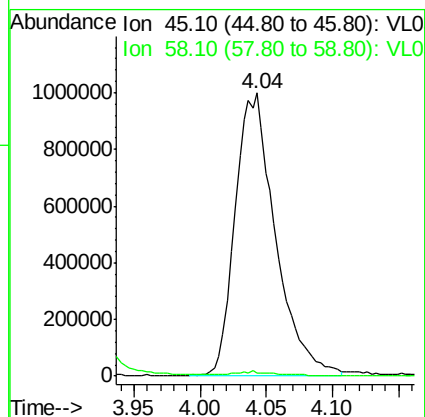
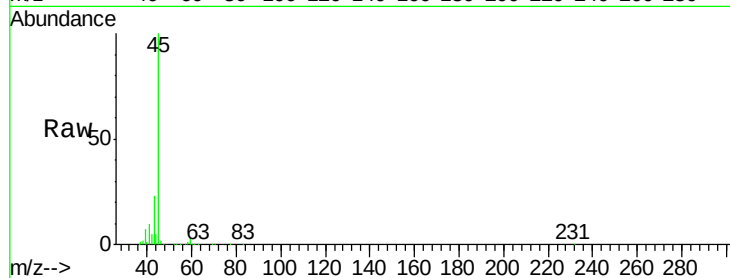
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#20

Methylene Chloride

Concen: 2.714 ppbv

RT: 4.42 min Scan# 461

Delta R.T. 0.02 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Tgt Ion: 84 Resp: 140681

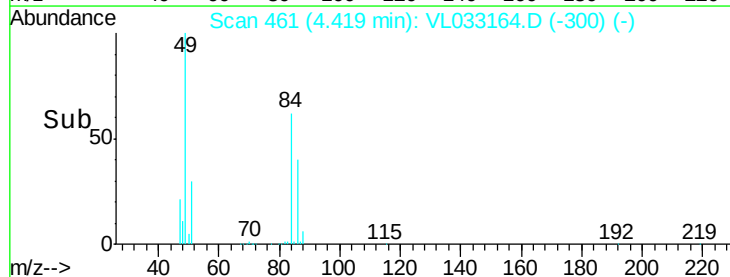
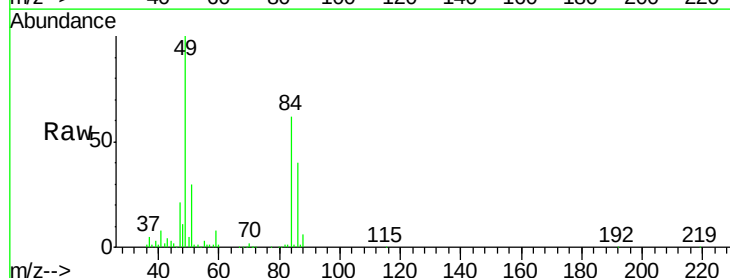
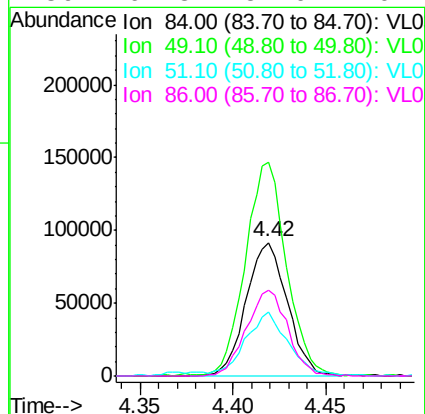
Ion Ratio Lower Upper

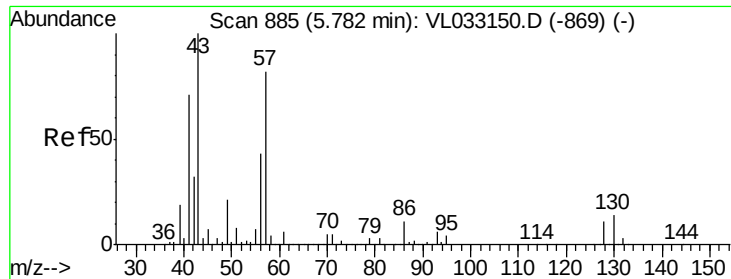
84 100

49 159.7 121.1 181.7

51 47.5 37.5 56.3

86 64.3 51.0 76.4





#26

Hexane

Concen: 1.704 ppbv

RT: 5.78 min Scan# 884

Delta R.T. 0.00 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

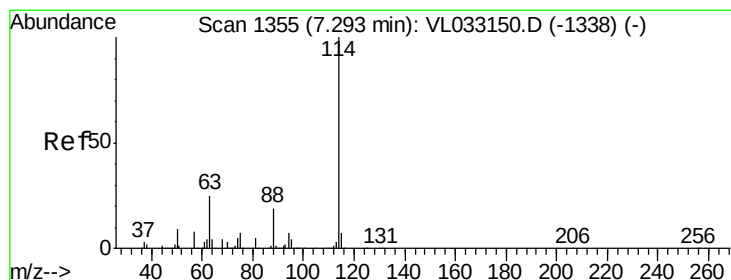
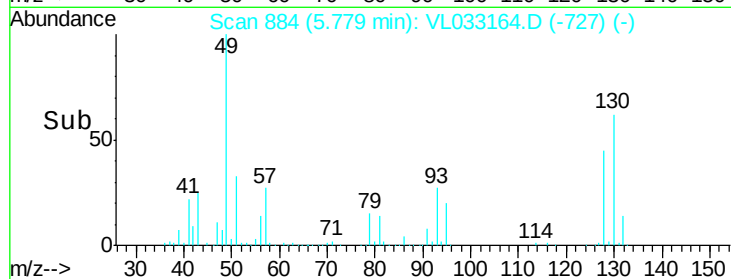
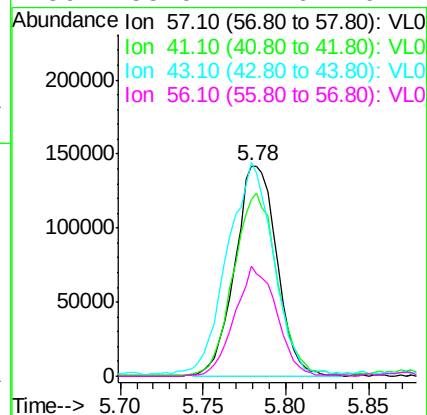
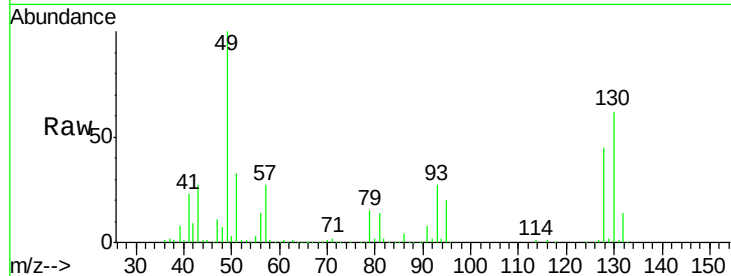
ClientSampleId :

SSA1DUP

Tot Ion	Ion	Ratio	Resp	Lower	Upper
57	100		247863		
41	91.1	69.5	104.3		
43	109.0	175.5	263.3		
56	53.0	41.6	62.4		

Manual Integrations
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#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

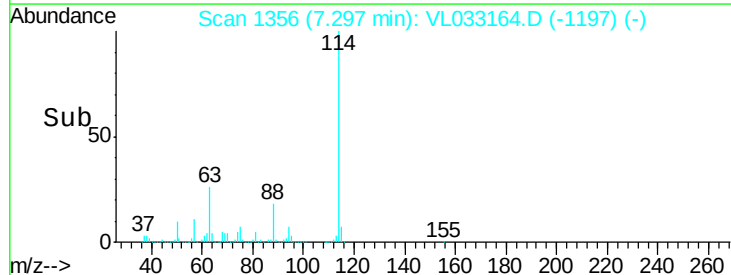
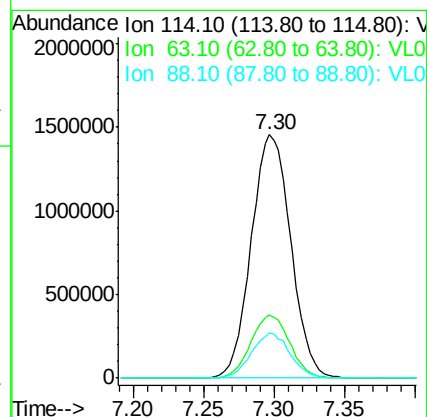
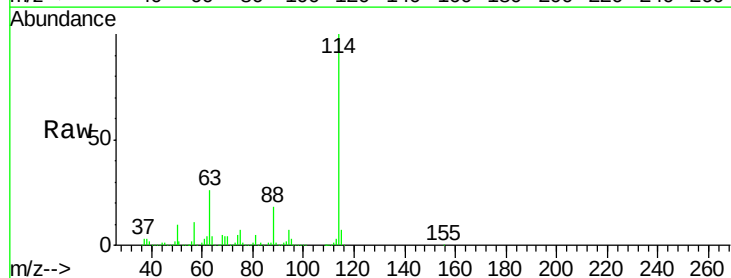
RT: 7.30 min Scan# 1356

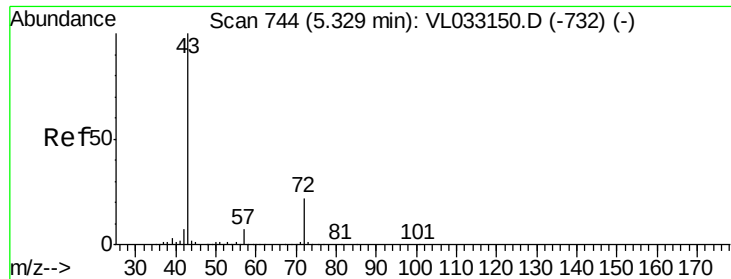
Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
114	100		2856009		
63	25.7	20.0	30.0		
88	18.2	14.4	21.6		





#34

2-Butanone

Concen: 13.686 ppbv

RT: 5.33 min Scan# 745

Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

ClientSampleId :

SSA1DUP

Tot Ion: 43 Resp: 2458387

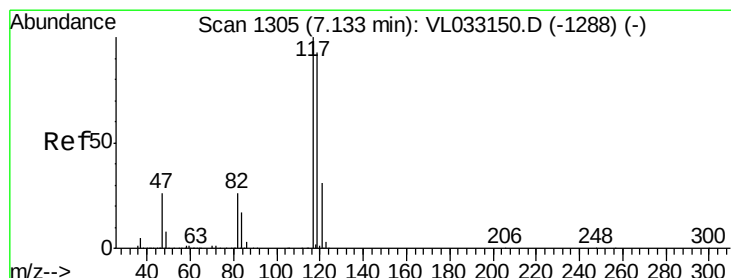
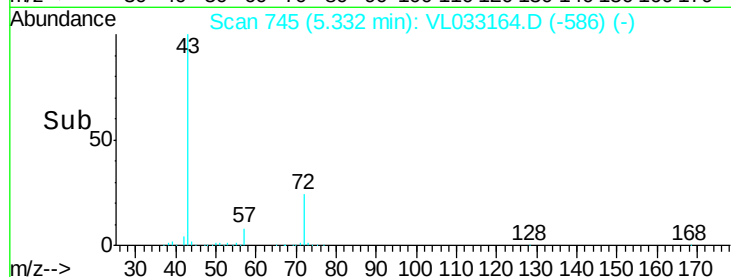
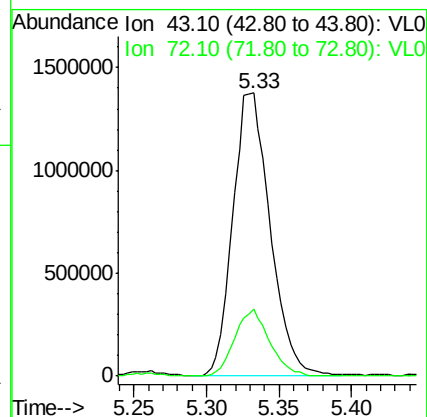
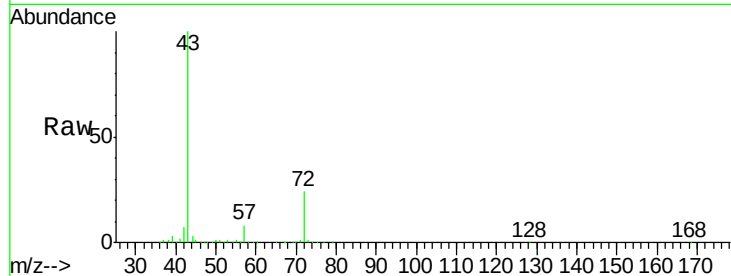
Ion Ratio Lower Upper

43 100

72 22.3 17.9 26.9

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#35

Carbon Tetrachloride

Concen: 0.054 ppbv m

RT: 7.13 min Scan# 1304

Delta R.T. 0.00 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

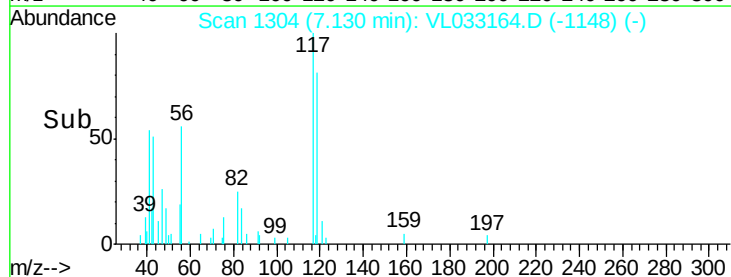
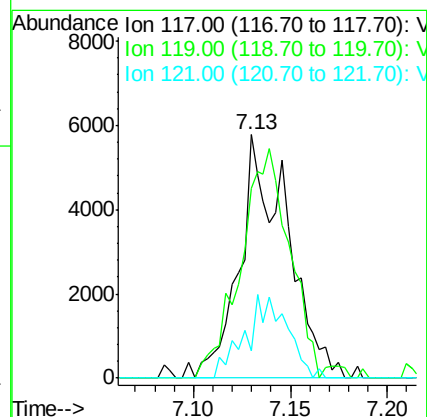
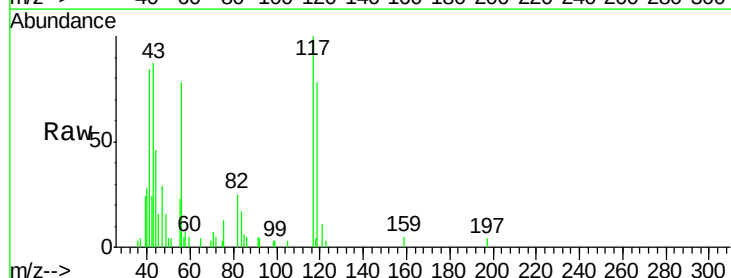
Tgt Ion: 117 Resp: 9875

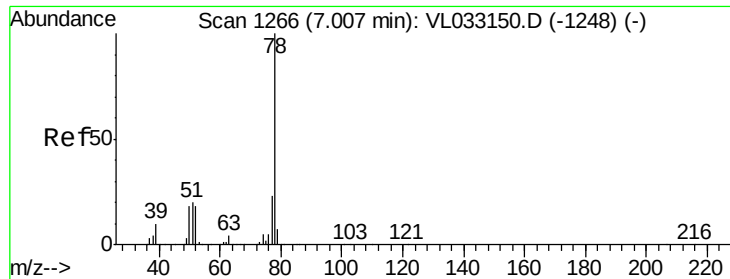
Ion Ratio Lower Upper

117 100

119 78.1 76.6 114.8

121 11.1 25.0 37.4#





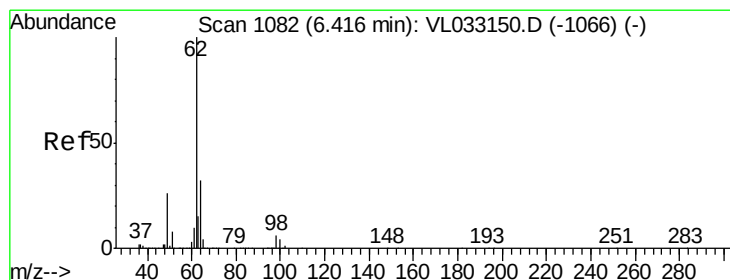
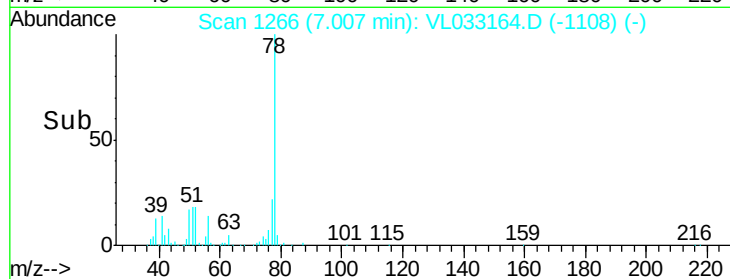
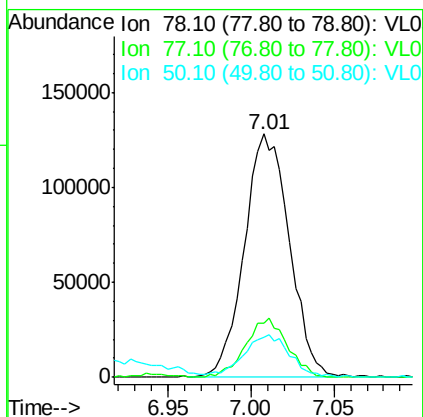
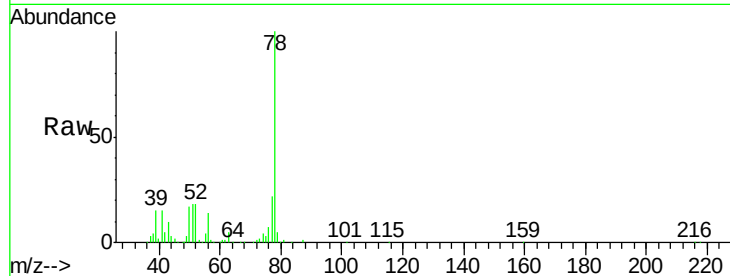
#36
Benzene
Concen: 0.837 ppbv
RT: 7.01 min Scan# 1266
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Instrument :
MSVOA_L
ClientSampleId :
SSA1DUP

Tot Ion	Ratio	Lower	Upper
78	100		
77	22.1	17.8	26.6
50	15.9	14.7	22.1

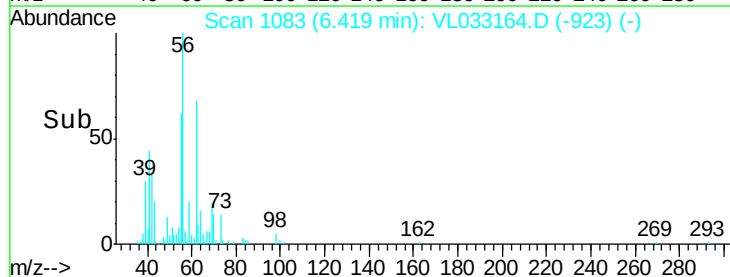
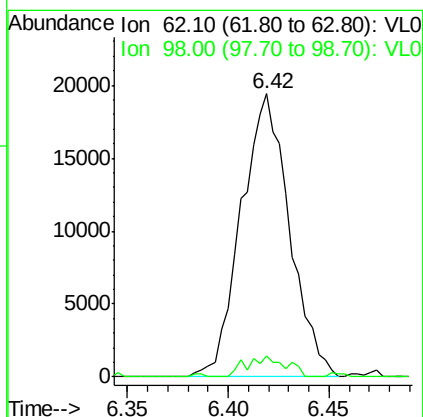
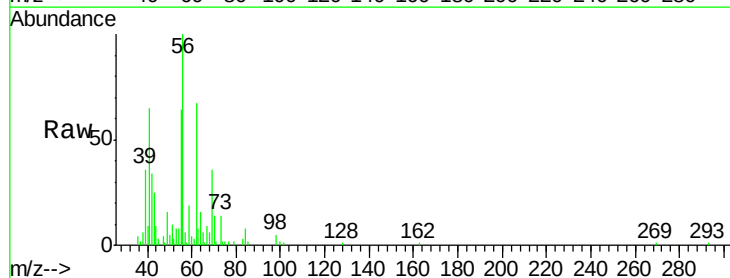
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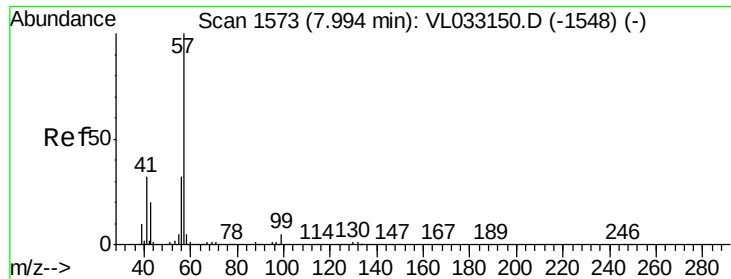
MMDadoda
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#37
1,2-Dichloroethane
Concen: 0.221 ppbv
RT: 6.42 min Scan# 1083
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Tgt Ion	Ratio	Lower	Upper
62	100		
98	6.6	5.3	7.9





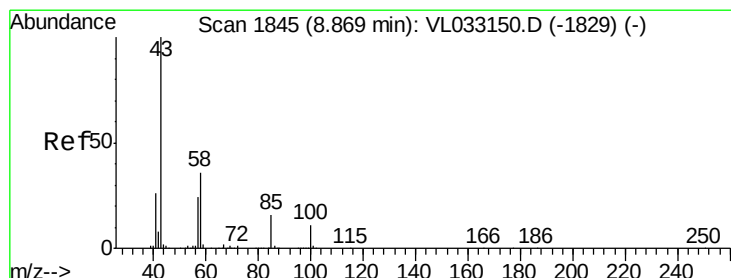
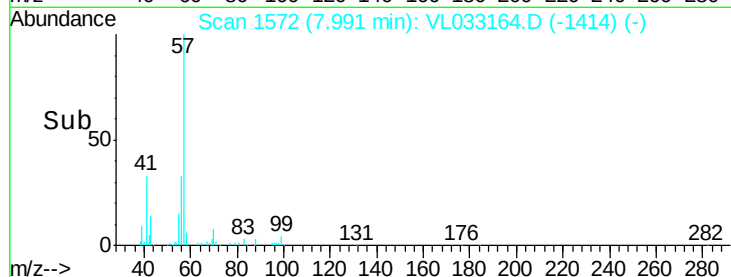
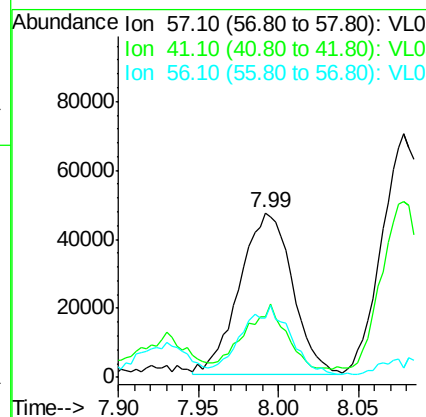
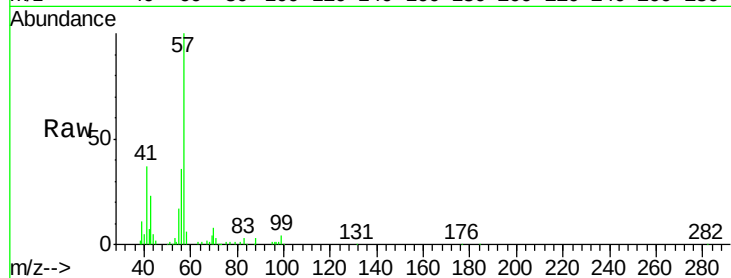
#44
 2,2,4-Trimethylpentane
 Concen: 0.221 ppbv
 RT: 7.99 min Scan# 1572
 Delta R.T. 0.01 min
 Lab File: VL033164.D
 Acq: 4 Feb 2019 21:14

Instrument :
 MSVOA_L
 ClientSampleId :
 SSA1DUP

Tot Ion	Ratio	Lower	Upper
57	100		
41	36.9	24.6	36.8#
56	39.9	24.9	37.3#

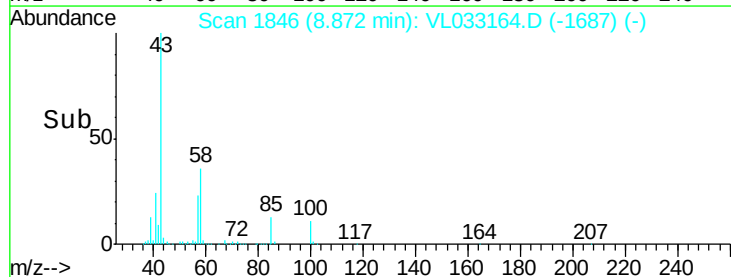
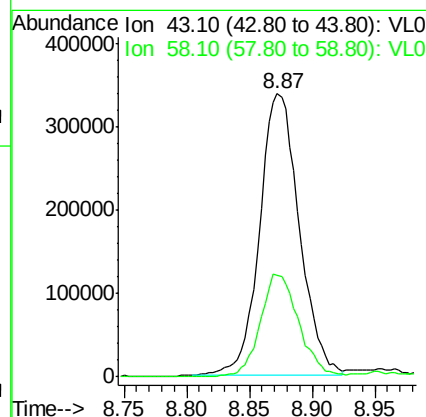
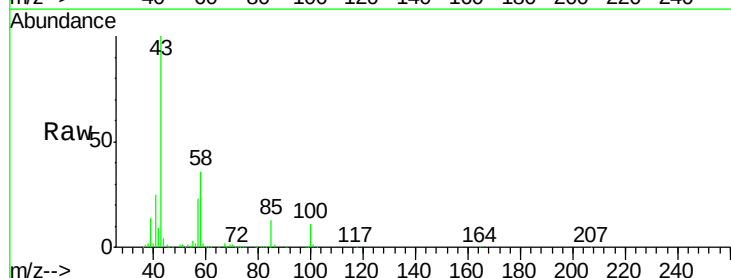
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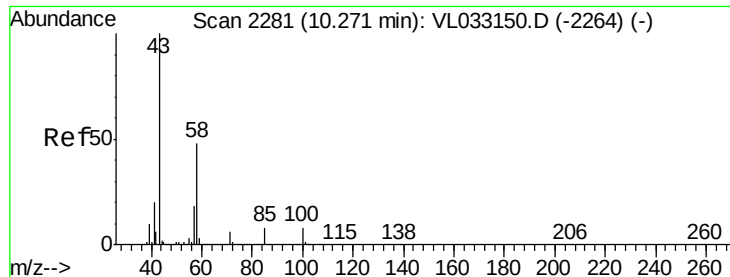
MMDadoda
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#50
 4-Methyl-2-Pentanone
 Concen: 2.298 ppbv
 RT: 8.87 min Scan# 1846
 Delta R.T. 0.01 min
 Lab File: VL033164.D
 Acq: 4 Feb 2019 21:14

Tgt Ion	Ratio	Lower	Upper
43	100		
58	35.6	28.7	43.1





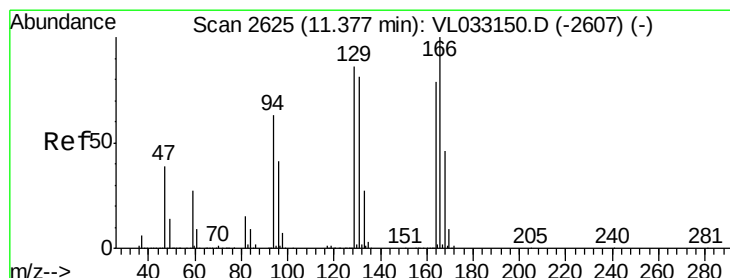
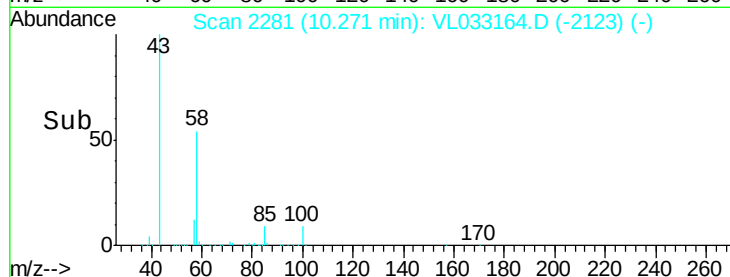
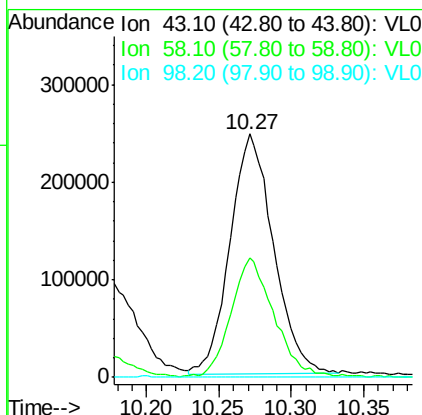
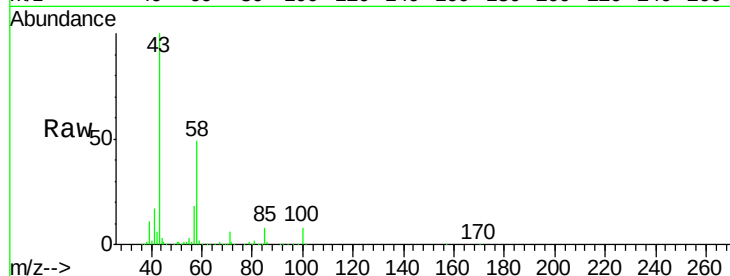
#51
2-Hexanone
Concen: 1.873 ppbv
RT: 10.27 min Scan# 2281
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Instrument :
MSVOA_L
ClientSampleId :
SSA1DUP

Tot Ion	Ratio	Resp	Lower	Upper
43	100	510640		
58	49.8	39.4	59.2	
98	0.2	0.1	0.1#	

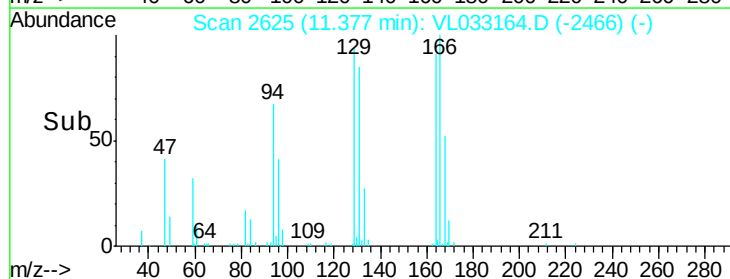
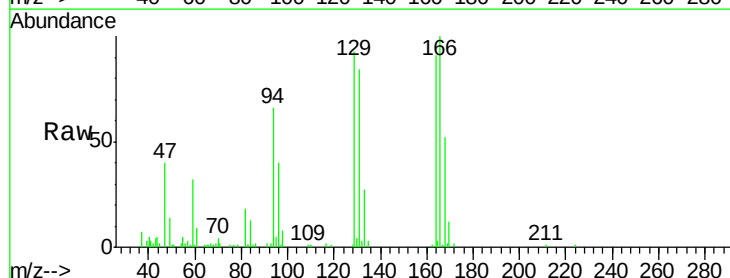
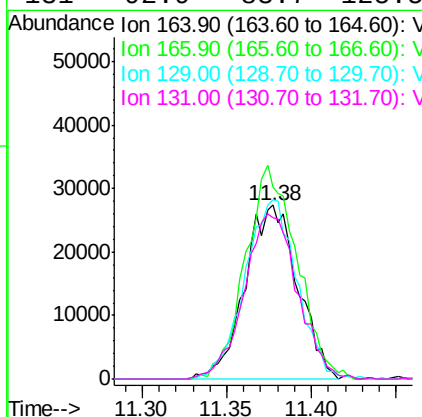
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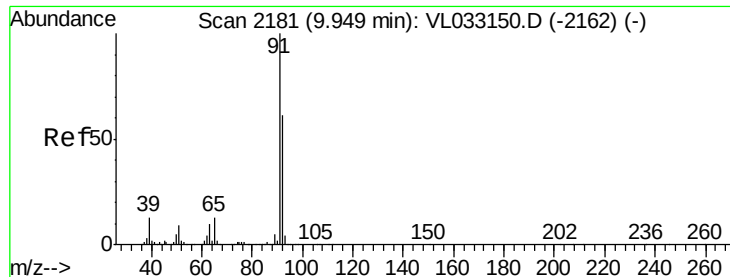
MMDadoda
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#52
Tetrachloroethene
Concen: 0.593 ppbv m
RT: 11.38 min Scan# 2625
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Tgt Ion	Ratio	Resp	Lower	Upper
164	100	59492		
166	110.4	98.6	148.0	
129	103.0	86.3	129.5	
131	92.9	83.7	125.5	





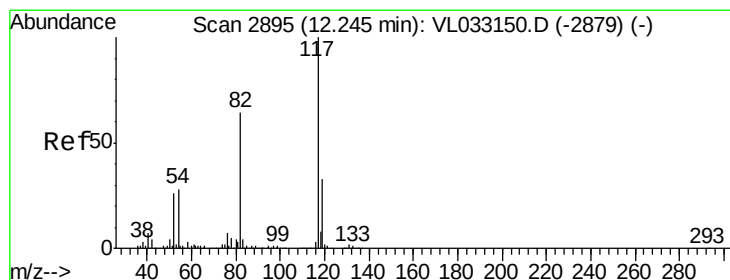
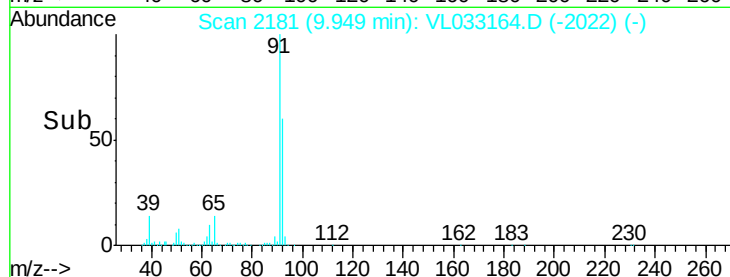
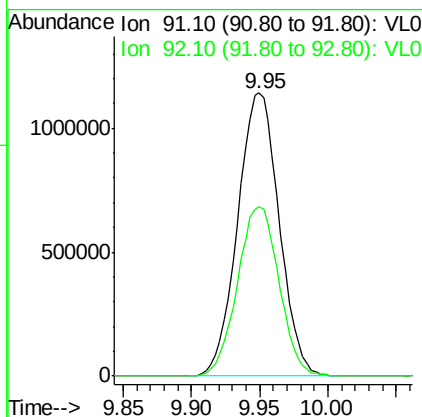
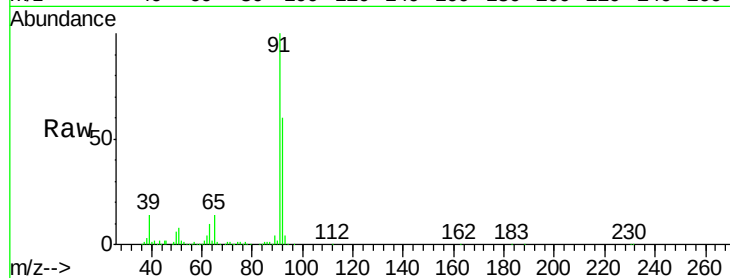
#53
Toluene
Concen: 7.031 ppbv
RT: 9.95 min Scan# 2181
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Instrument :
MSVOA_L
ClientSampleId :
SSA1DUP

Tot Ion: 91 Resp: 2410860
Ion Ratio Lower Upper
91 100
92 60.1 48.9 73.3

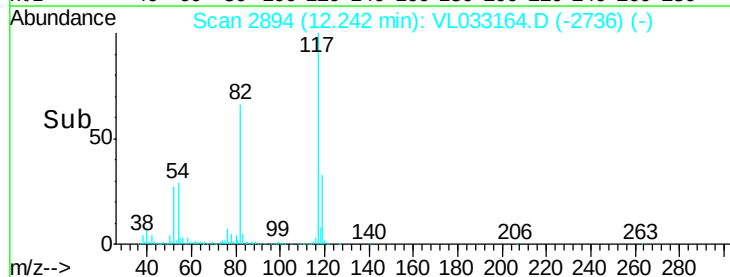
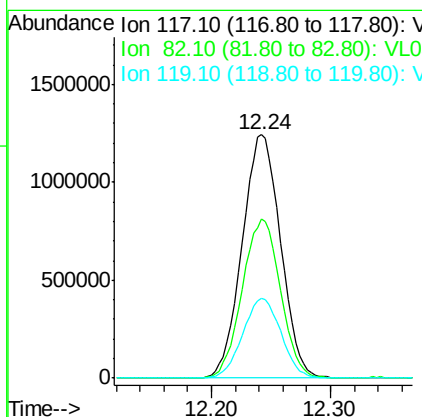
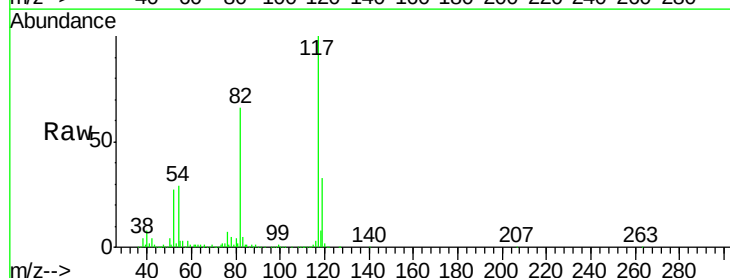
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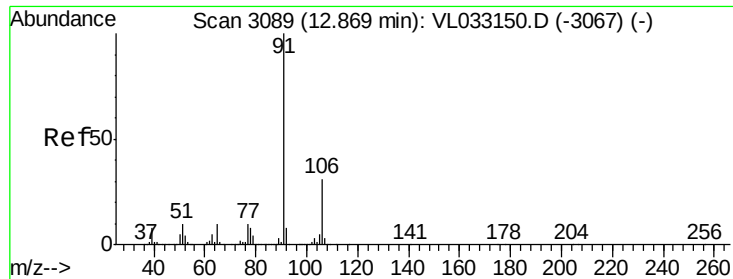
MMDadoda
2/5/2019 10:28:20 AM



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2894
Delta R.T. 0.01 min
Lab File: VL033164.D
Acq: 4 Feb 2019 21:14

Tgt Ion: 117 Resp: 2779004
Ion Ratio Lower Upper
117 100
82 65.0 49.3 73.9
119 32.5 27.1 40.7





#58

Ethyl Benzene

Concen: 0.800 ppbv m

RT: 12.86 min Scan# 3087

Delta R.T. 0.00 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

ClientSampleId :

SSA1DUP

Tot Ion: 91 Resp: 349659

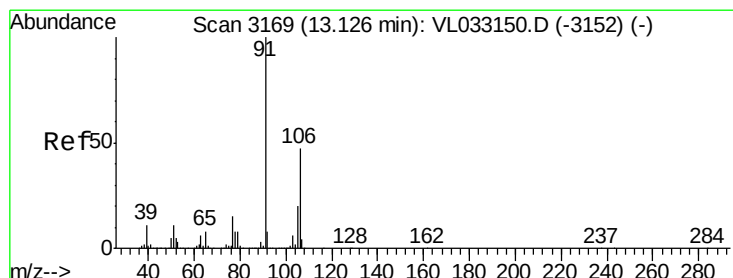
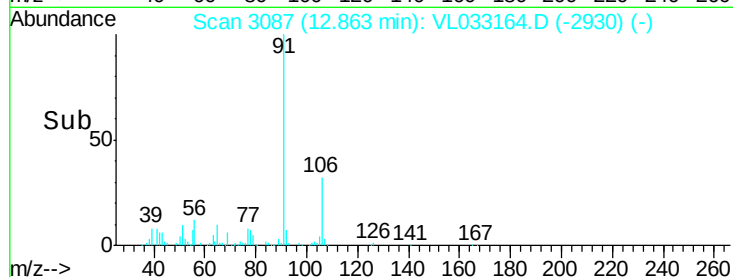
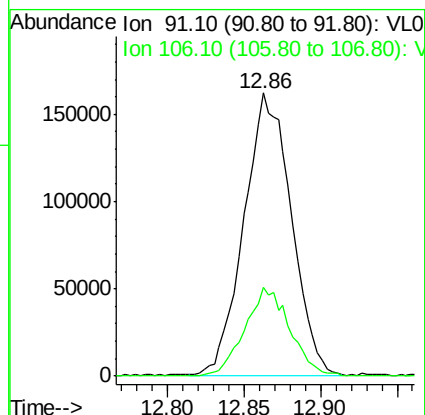
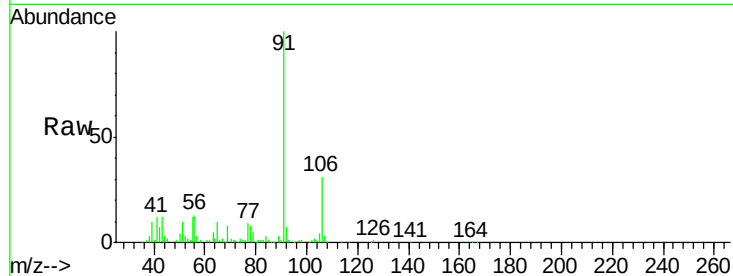
Ion Ratio Lower Upper

91 100

106 31.5 24.7 37.1

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#59

m/p-Xylene

Concen: 2.706 ppbv

RT: 13.12 min Scan# 3168

Delta R.T. 0.00 min

Lab File: VL033164.D

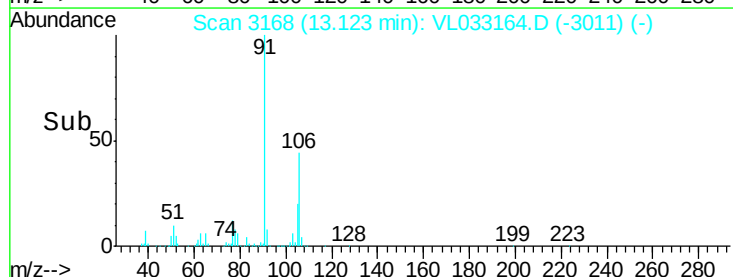
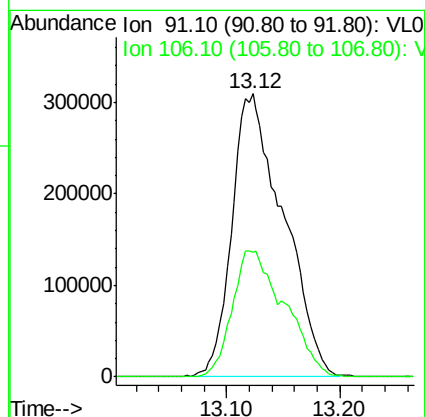
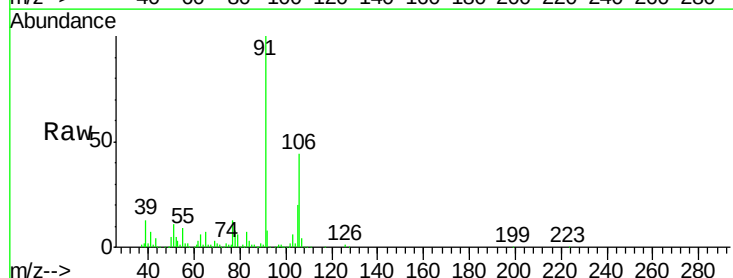
Acq: 4 Feb 2019 21:14

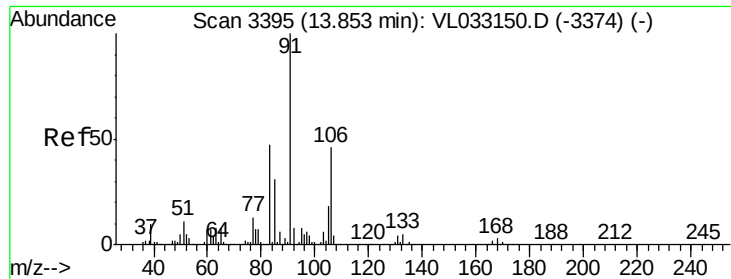
Tgt Ion: 91 Resp: 968928

Ion Ratio Lower Upper

91 100

106 45.8 37.6 56.4





#60

o-Xylene

Concen: 1.010 ppbv

RT: 13.85 min Scan# 3395

Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

ClientSampled :

SSA1DUP

Tot Ion: 91 Resp: 333748

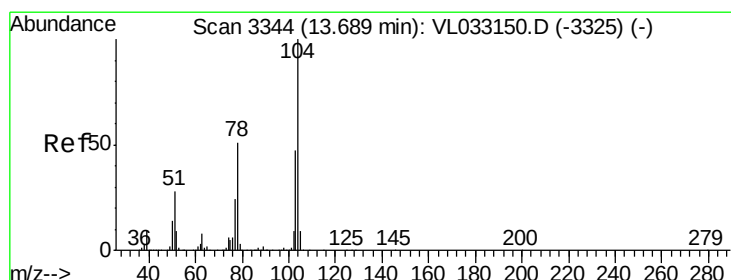
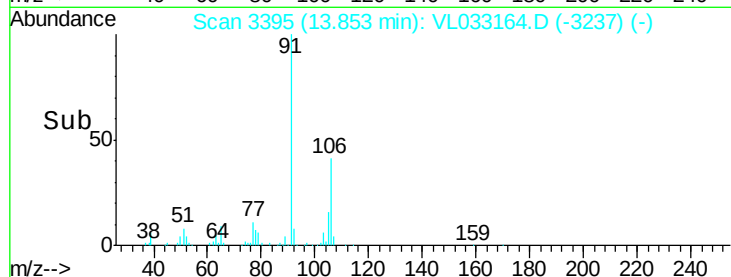
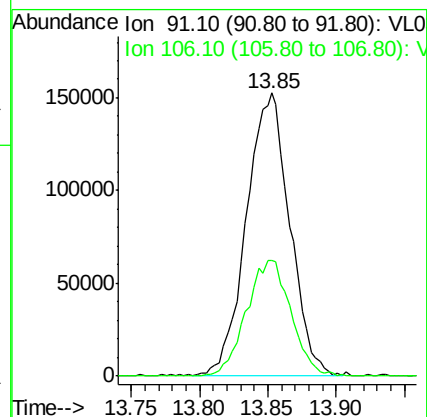
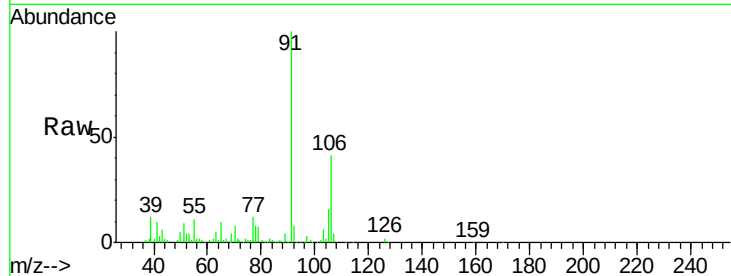
Ion Ratio Lower Upper

91 100

106 42.5 23.2 69.5

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#61

Styrene

Concen: 0.400 ppbv

RT: 13.69 min Scan# 3343

Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

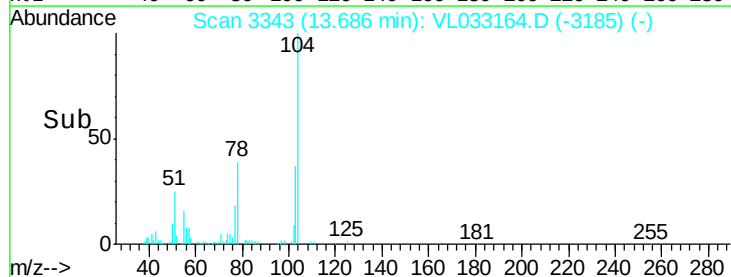
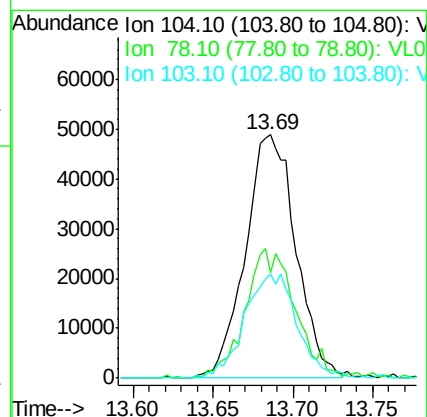
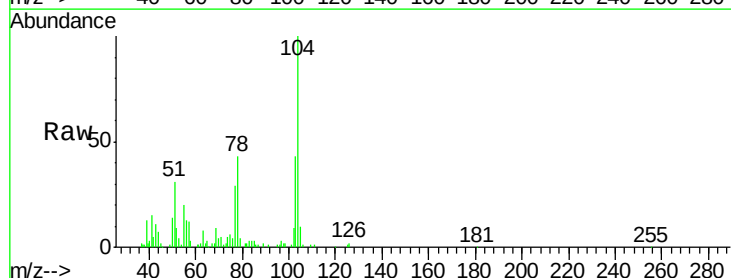
Tgt Ion: 104 Resp: 105679

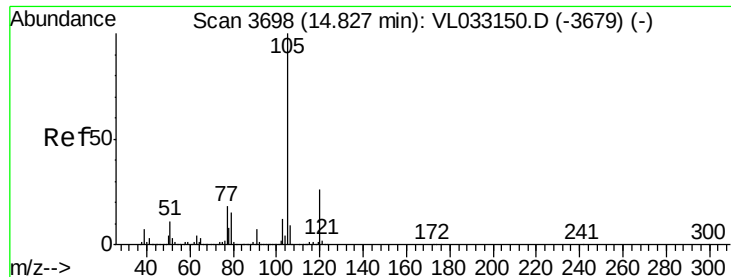
Ion Ratio Lower Upper

104 100

78 54.0 39.7 59.5

103 44.5 37.7 56.5





#62

Isopropylbenzene

Concen: 5.479 ppbv

RT: 14.83 min Scan# 3698

Delta R.T. 0.00 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

ClientSampleId :

SSA1DUP

Tot Ion:105 Resp: 2584027

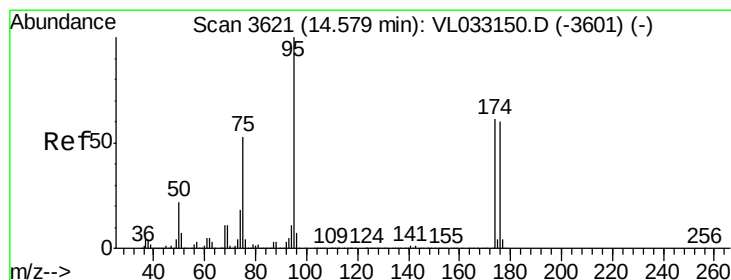
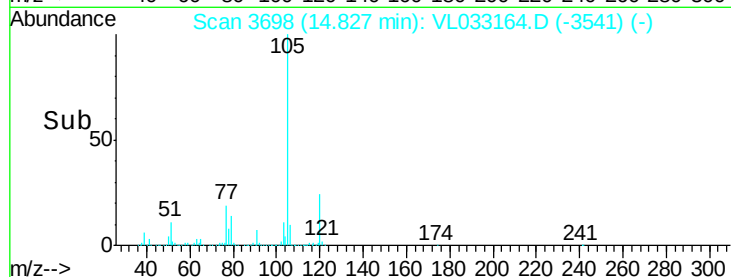
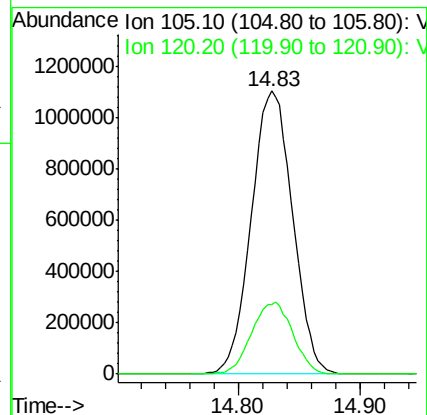
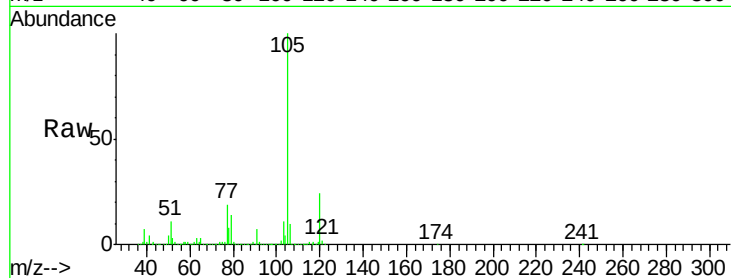
Ion Ratio Lower Upper

105 100

120 25.3 20.8 31.2

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#68

1-Bromo-4-Fluorobenzene

Concen: 10.382 ppbv

RT: 14.58 min Scan# 3621

Delta R.T. 0.01 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

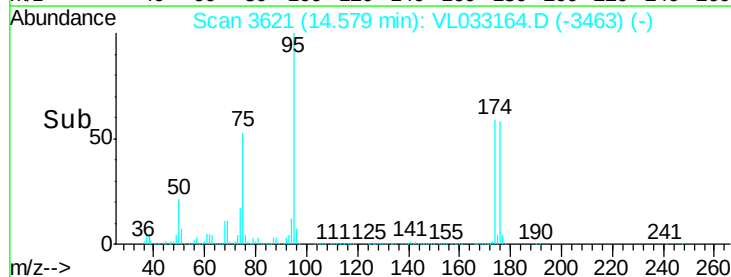
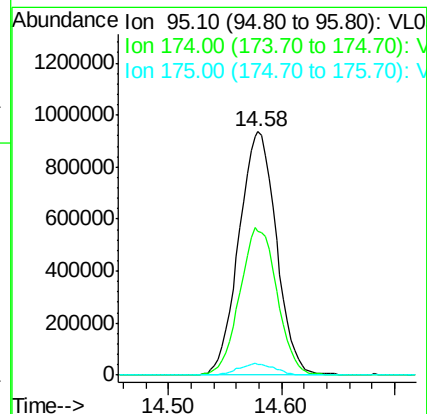
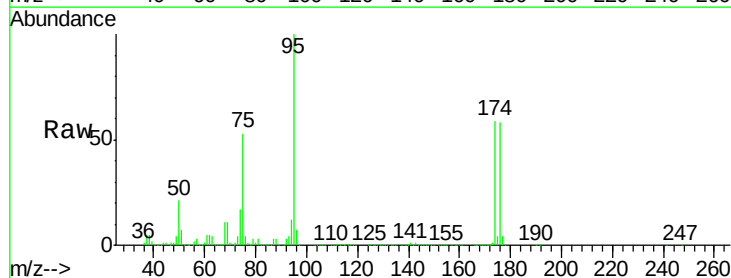
Tgt Ion: 95 Resp: 2150091

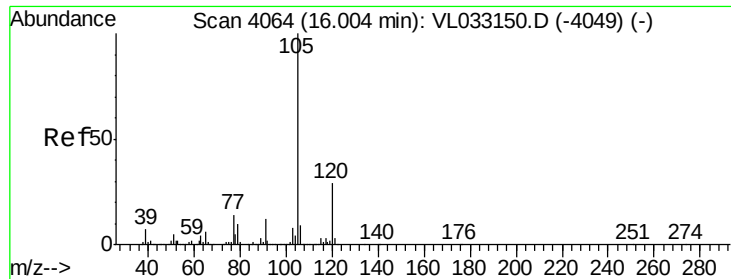
Ion Ratio Lower Upper

95 100

174 60.9 49.2 73.8

175 4.6 3.7 5.5





#72

4-Ethyltoluene

Concen: 0.257 ppbv

RT: 16.00 min Scan# 4063

Delta R.T. 0.00 min

Lab File: VL033164.D

Acq: 4 Feb 2019 21:14

Instrument :

MSVOA_L

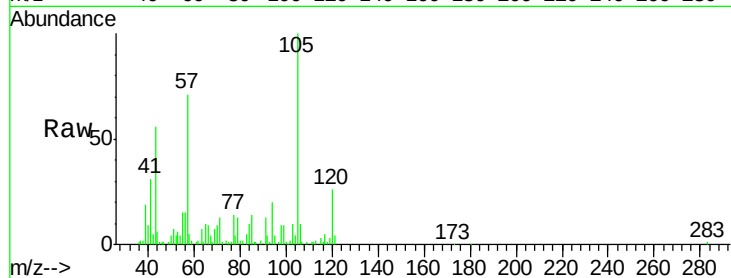
ClientSampleId :

SSA1DUP

Tot Ion:	105	Resp:	101497
Ion Ratio	Lower	Upper	
105	100		
120	28.8	23.2	34.8
91	13.8	9.5	14.3
77	15.0	10.2	15.4

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2/5/2019 10:28:20 AM

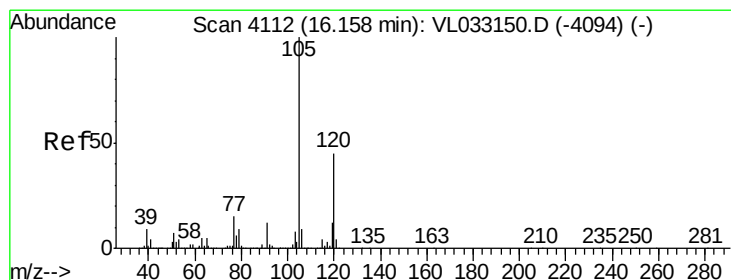
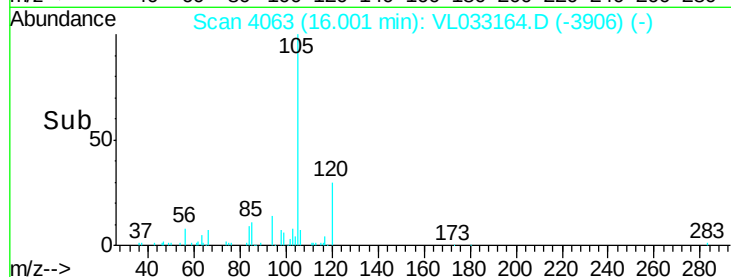
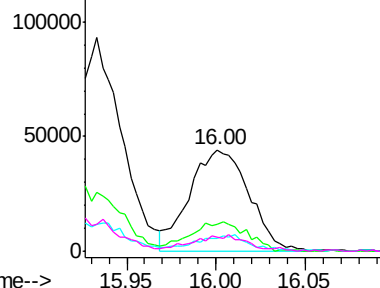


Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#73

1,3,5-Trimethylbenzene

Concen: 0.196 ppbv

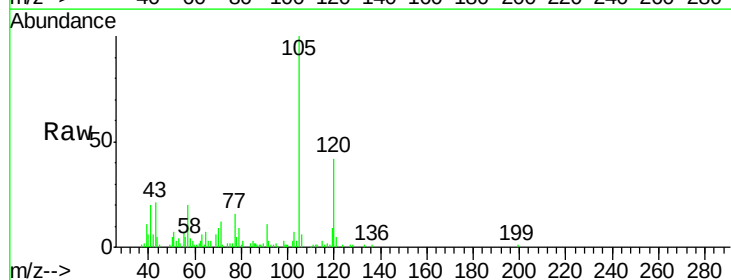
RT: 16.16 min Scan# 4113

Delta R.T. 0.01 min

Lab File: VL033164.D

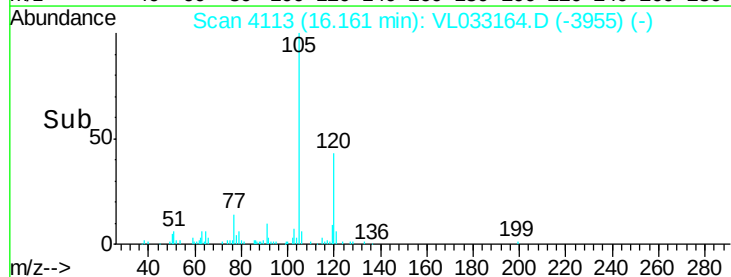
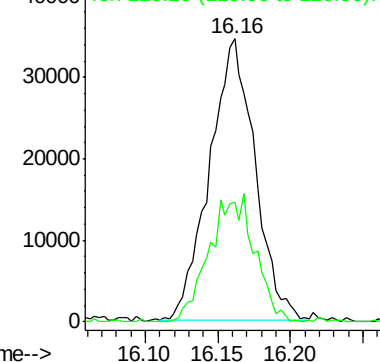
Acq: 4 Feb 2019 21:14

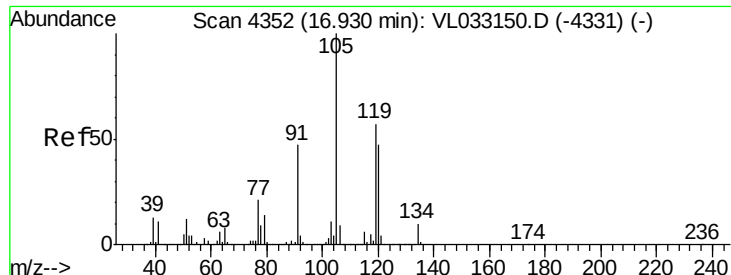
Tgt Ion:	105	Resp:	74803
Ion Ratio	Lower	Upper	
105	100		
120	42.8	38.0	57.0



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.658 ppbv
 RT: 16.93 min Scan# 4351
 Delta R.T. 0.00 min
 Lab File: VL033164.D
 Acq: 4 Feb 2019 21:14

Instrument :
 MSVOA_L
 ClientSampleId :
 SSA1DUP

Tot Ion	Ratio	Resp Lower	Upper
105	100		
120	44.8	38.2	57.4
91	10.3	35.0	52.4#
77	11.2	15.8	23.6#

Manual Integrations
 APPROVED

MMDadoda
 2/5/2019 10:28:20 AM

