

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032019\
 Data File : VL033406.D
 Acq On : 21 Mar 2019 1:41
 Operator : SY/AP
 Sample : K1976-04
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OA1

Manual Integrations
 APPROVED

MMDadoda
 3/25/2019 8:27:13 AM

Quant Time: Mar 24 16:21:17 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar 1
 QLast Update : Fri Mar 15 14:52:14 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	1243511	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	1980167	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.24	117	1901954	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.57	95	1426227	10.12	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	75869	0.347	ppbv	99
3) Chlorodifluoromethane	3.02	51	57522m	0.403	ppbv	
4) Chloromethane	3.17	50	30509	0.395	ppbv	95
9) Propene	3.04	41	1958437	30.738	ppbv	98
10) Heptane	8.24	43	349477	2.211	ppbv	98
11) Trichlorofluoromethane	4.00	101	34994	0.161	ppbv	90
13) Ethanol	3.65	45	1192557	39.263	ppbv	97
15) Acetone	3.90	43	2140324m	11.072	ppbv	
19) Isopropyl Alcohol	4.03	45	1214153	13.205	ppbv	100
20) Methylene Chloride	4.41	84	156877	2.488	ppbv	97
26) Hexane	5.78	57	934639	7.440	ppbv #	45
30) Cyclohexane	7.25	84	159142	1.580	ppbv	89
34) 2-Butanone	5.33	43	113619	0.874	ppbv	100
35) Carbon Tetrachloride	7.13	117	8659m	0.062	ppbv	
36) Benzene	7.00	78	4140477	23.364	ppbv	99
44) 2,2,4-Trimethylpentane	7.99	57	896814	3.055	ppbv #	83
52) Tetrachloroethene	11.37	164	131188	1.777	ppbv	98
53) Toluene	9.95	91	5959313	29.594	ppbv	98
58) Ethyl Benzene	12.86	91	959335	3.566	ppbv	97
59) m/p-Xylene	13.12	91	3076055	13.303	ppbv #	100
60) o-Xylene	13.85	91	1061640	4.706	ppbv	100
61) Styrene	13.68	104	297325	1.883	ppbv	98
62) Isopropylbenzene	14.83	105	53393	0.170	ppbv	98
64) n-propylbenzene	15.72	120	48675	0.613	ppbv	98
72) 4-Ethyltoluene	16.00	105	375989	1.468	ppbv	99
73) 1,3,5-Trimethylbenzene	16.15	105	359231	1.439	ppbv	95
74) 1,2,4-Trimethylbenzene	16.92	105	1208001	4.571	ppbv #	70
79) Naphthalene	22.41	128	294203	1.155	ppbv	97

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

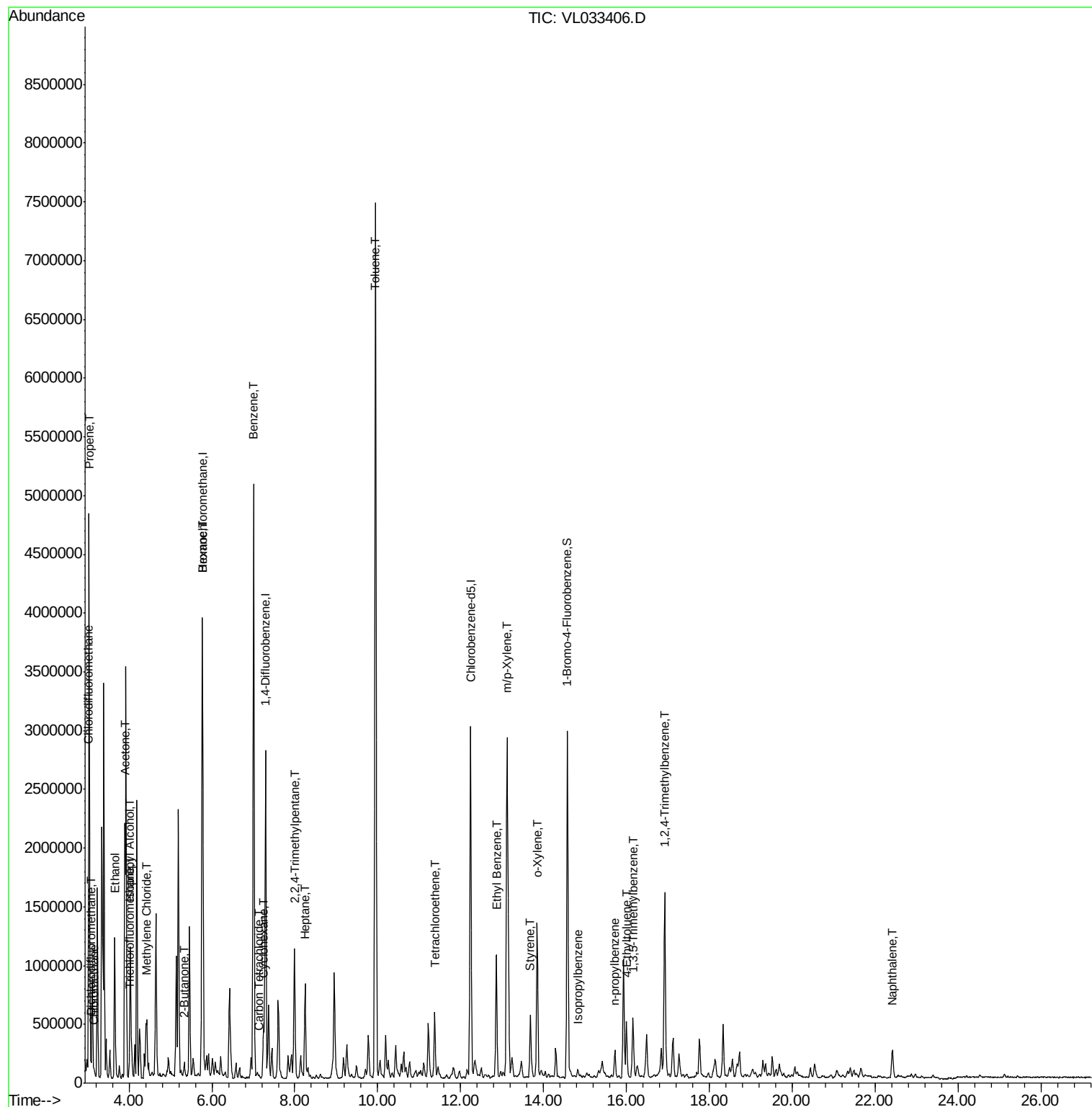
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL032019\
Data File : VL033406.D
Acq On : 21 Mar 2019 1:41
Operator : SY/AP
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Misc : 400ml/MSVOA L
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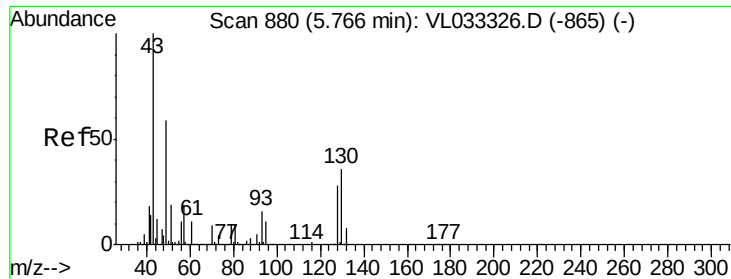
Instrument :
MSVOA_L
ClientSampleId :
OA1

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Quant Time: Mar 24 16:21:17 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar
QLast Update : Fri Mar 15 14:52:14 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 879

Delta R.T. -0.00 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Instrument :

MSVOA_L

ClientSampled :

QA1

Tot Ion: 49 Resp: 1243511

Ion Ratio Lower Upper

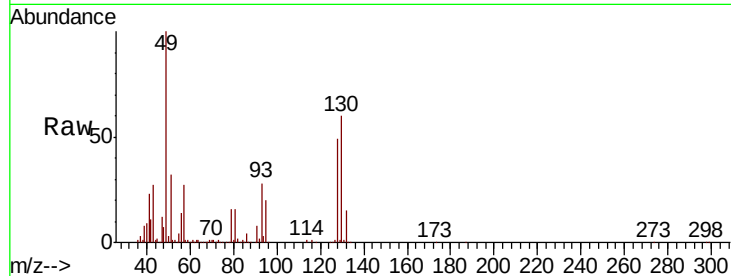
49 100

128 48.3 23.5 70.6

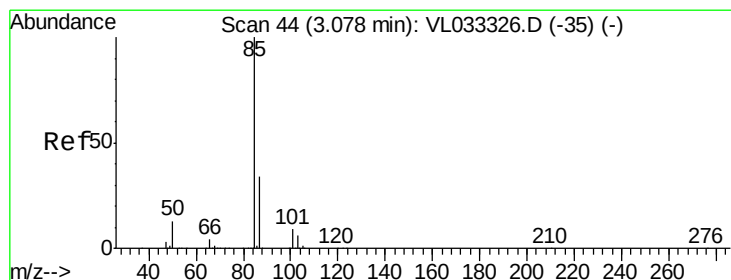
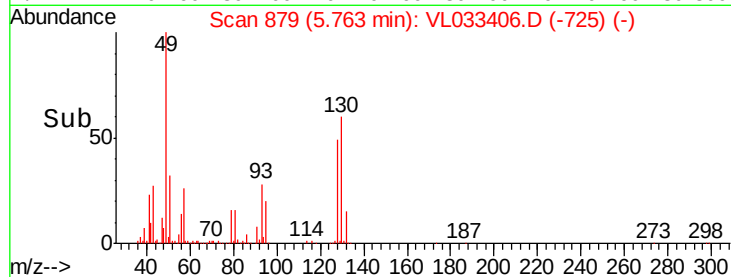
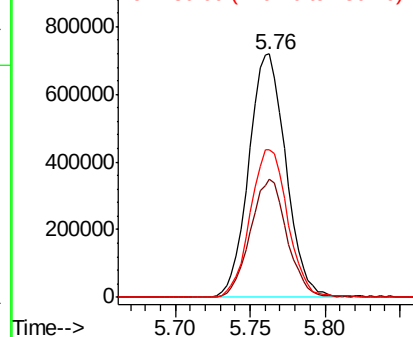
130 61.8 30.1 90.3

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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: 0.347 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL033406.D

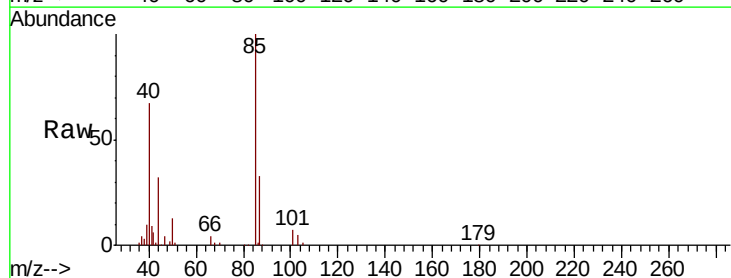
Acq: 21 Mar 2019 1:41

Tgt Ion: 85 Resp: 75869

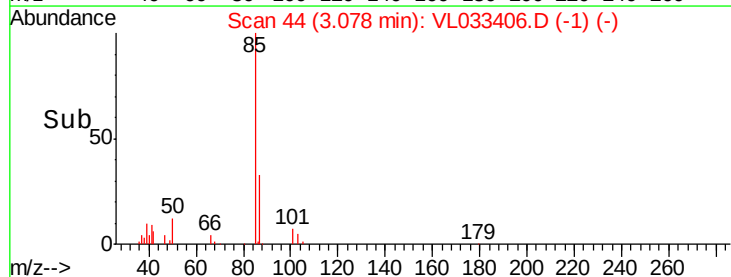
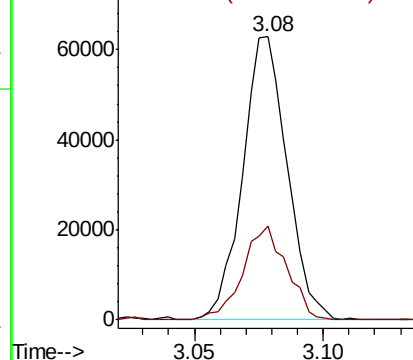
Ion Ratio Lower Upper

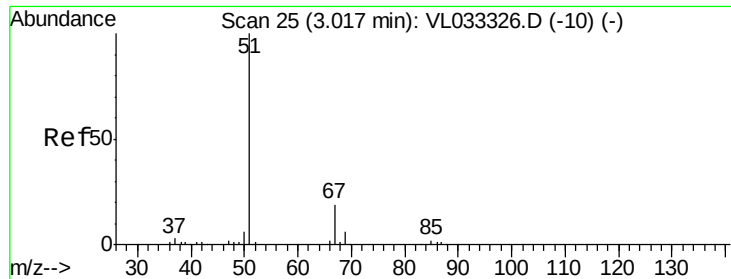
85 100

87 33.0 26.9 40.3



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

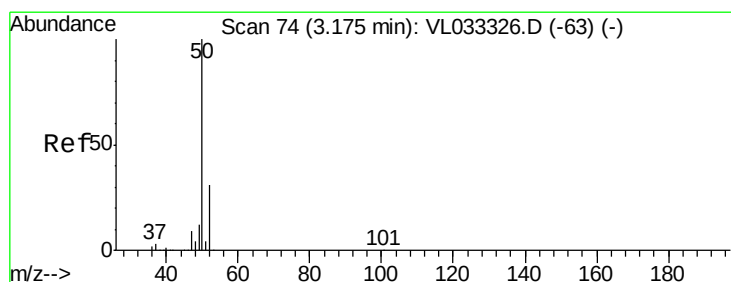
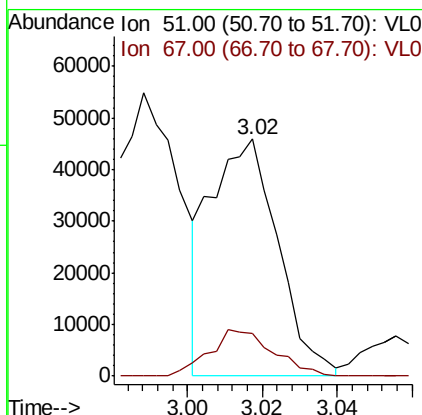
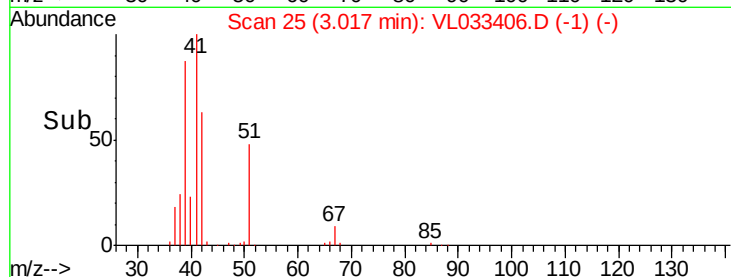
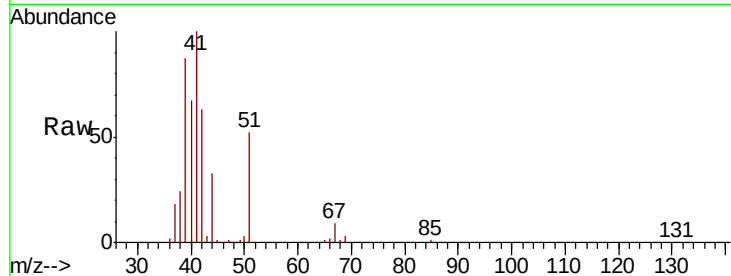
Chlorodifluoromethane
Concen: 0.403 ppbv
RT: 3.02 min Scan# 25
Delta R.T. -0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampleId :
OA1

Tot Ion	Ratio	Lower	Upper
51	100		
67	18.7	14.9	22.3

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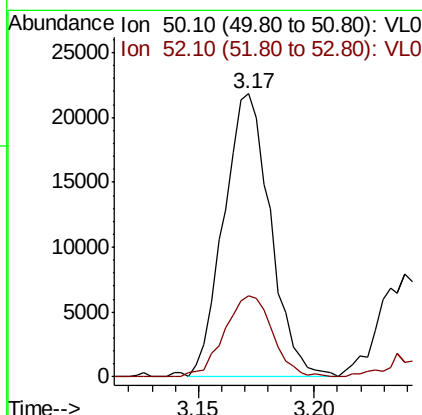
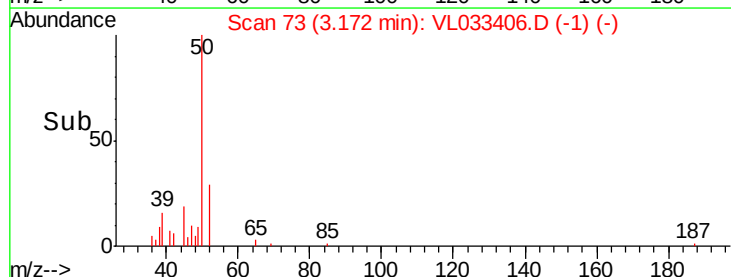
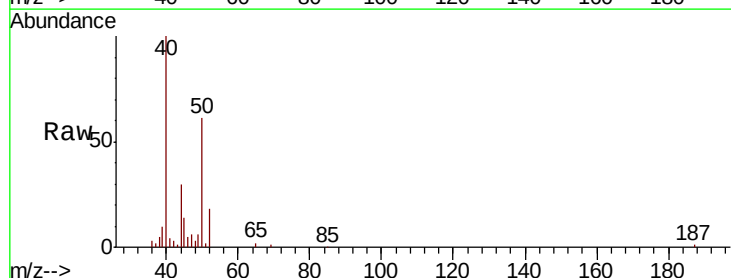
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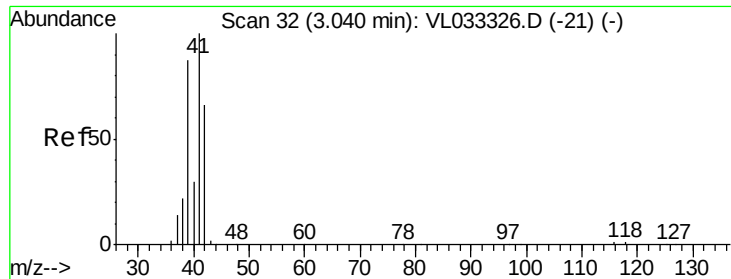


#4

Chloromethane
Concen: 0.395 ppbv
RT: 3.17 min Scan# 73
Delta R.T. -0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion	Ratio	Lower	Upper
50	100		
52	28.7	25.0	37.6





#9

Propene

Concen: 30.738 ppbv

RT: 3.04 min Scan# 31

Delta R.T. -0.00 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Instrument :

MSVOA_L

ClientSampled :

QA1

Tot Ion: 41 Resp: 1958437

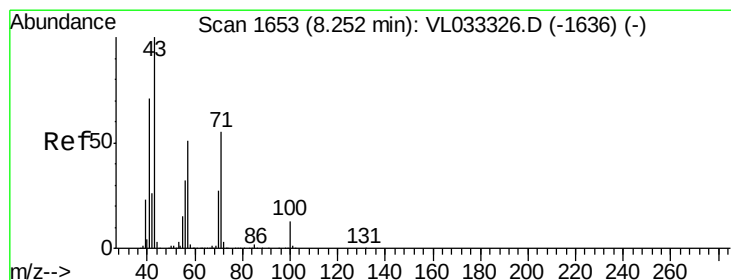
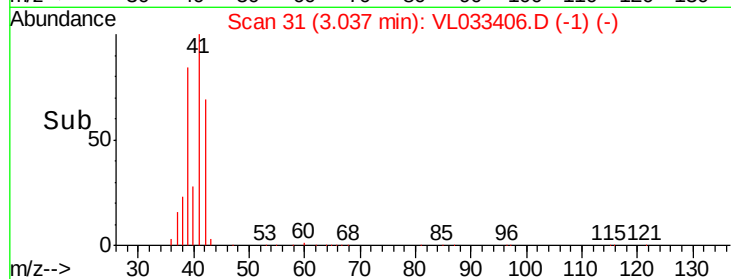
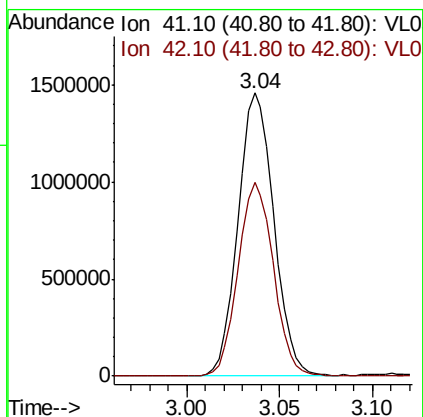
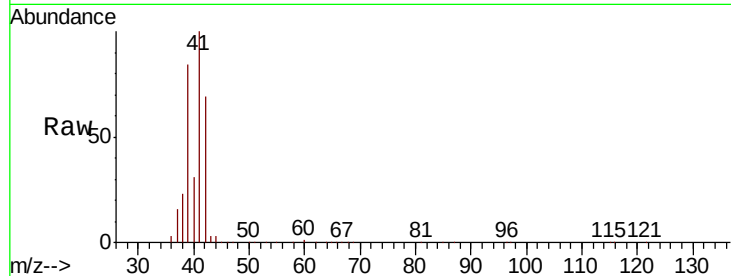
Ion Ratio Lower Upper

41 100

42 67.7 55.2 82.8

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#10

Heptane

Concen: 2.211 ppbv

RT: 8.24 min Scan# 1650

Delta R.T. -0.01 min

Lab File: VL033406.D

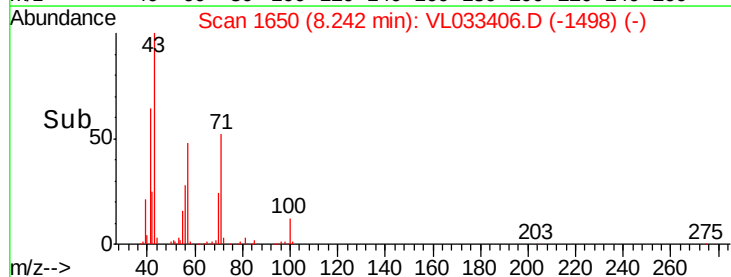
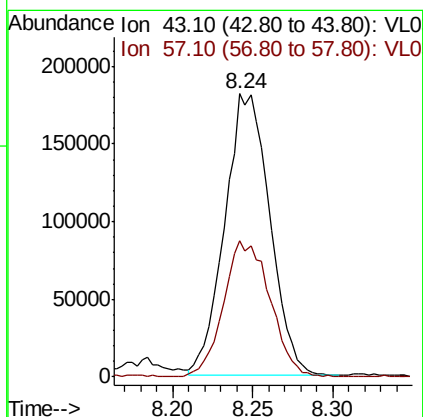
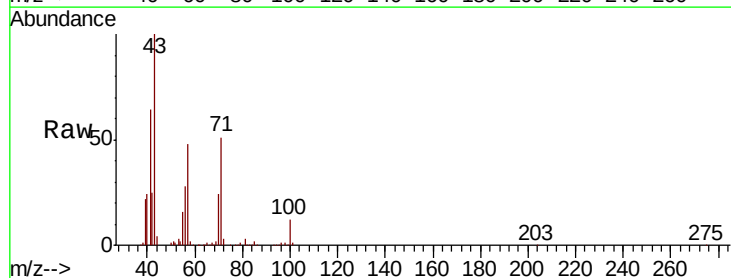
Acq: 21 Mar 2019 1:41

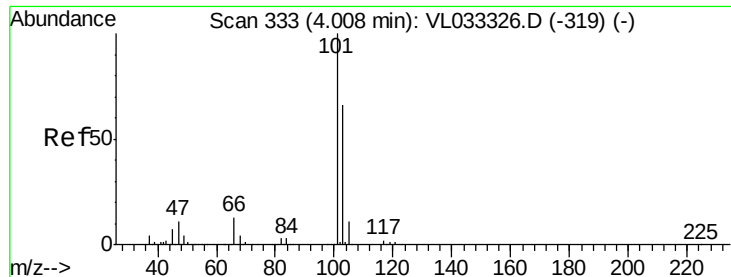
Tgt Ion: 43 Resp: 349477

Ion Ratio Lower Upper

43 100

57 49.1 40.4 60.6





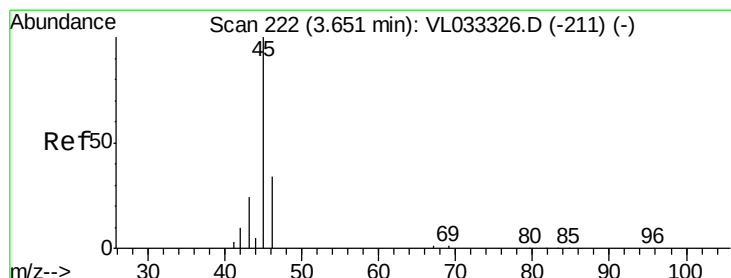
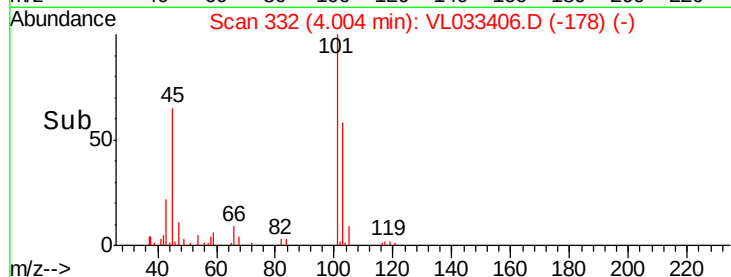
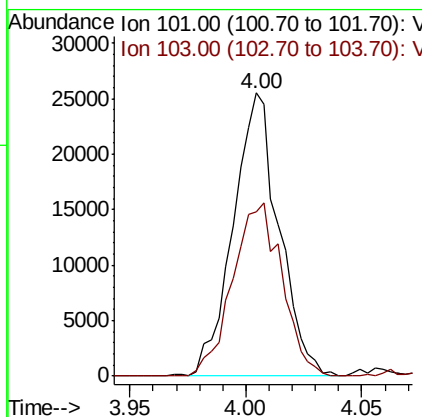
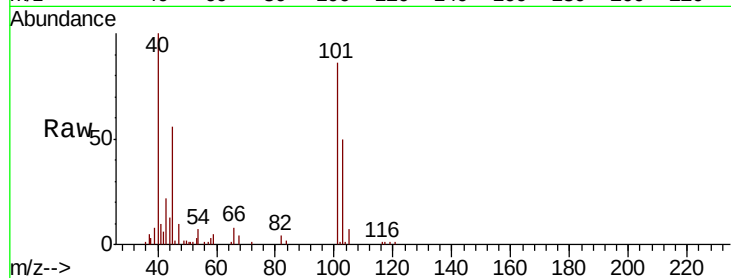
#11
Trichlorofluoromethane
Concen: 0.161 ppbv
RT: 4.00 min Scan# 332
Delta R.T. -0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampled :
OA1

Tot Ion:101 Resp: 34994
Ion Ratio Lower Upper
101 100
103 58.0 52.9 79.3

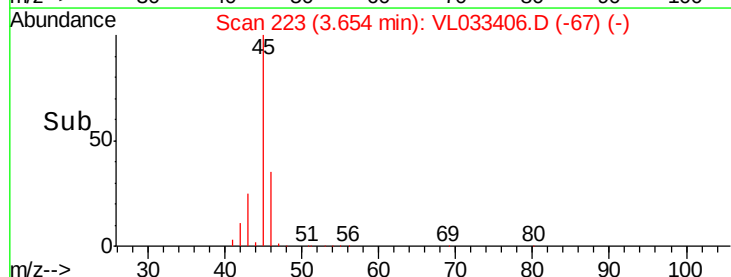
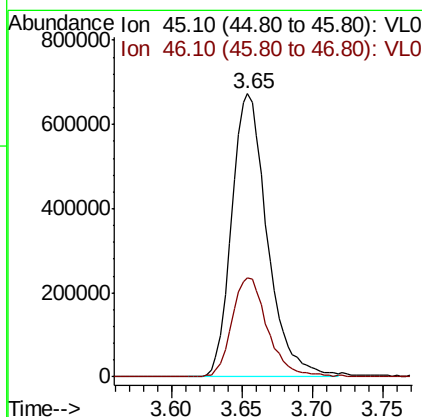
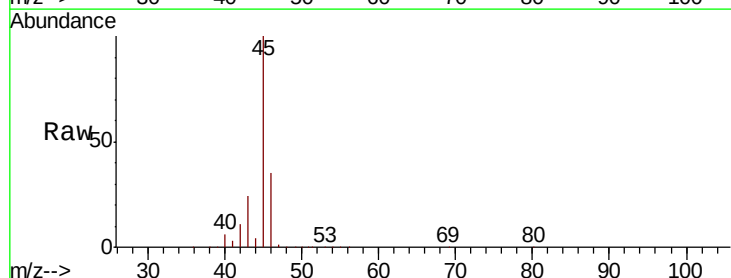
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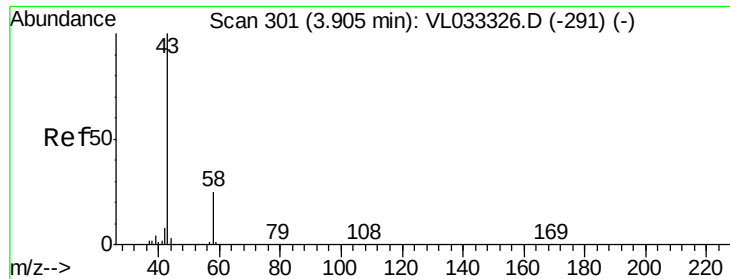
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#13
Ethanol
Concen: 39.263 ppbv
RT: 3.65 min Scan# 223
Delta R.T. 0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion: 45 Resp: 1192557
Ion Ratio Lower Upper
45 100
46 35.5 14.9 59.7





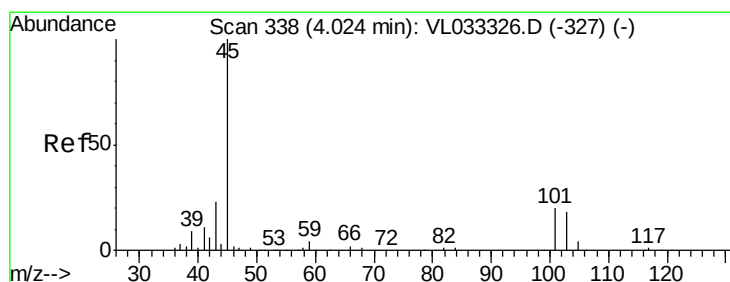
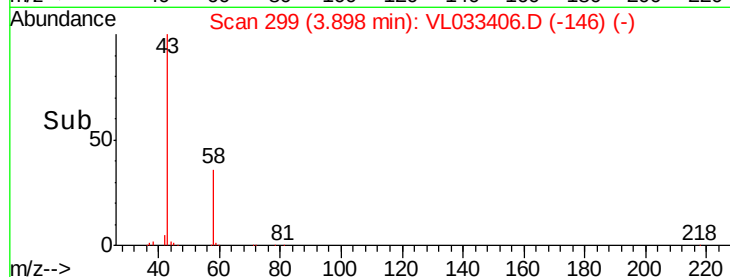
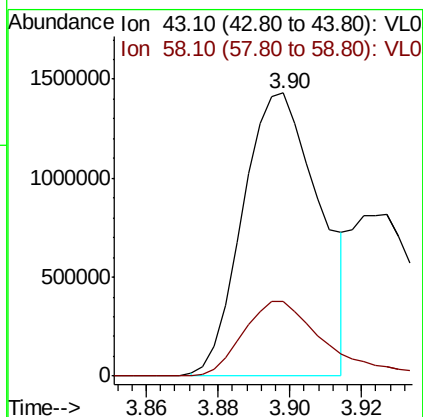
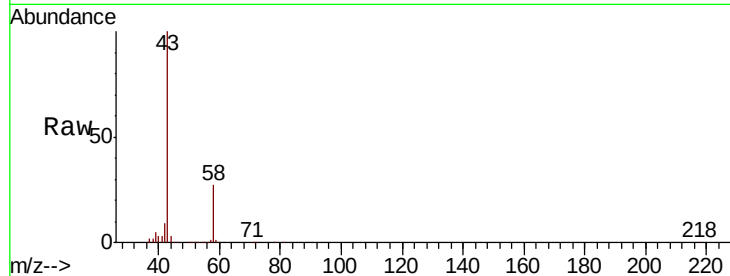
#15
Acetone
Concen: 11.072 ppbv m
RT: 3.90 min Scan# 299
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampled :
OA1

Tot Ion: 43 Resp: 2140324
Ion Ratio Lower Upper
43 100
58 28.2 20.4 30.6

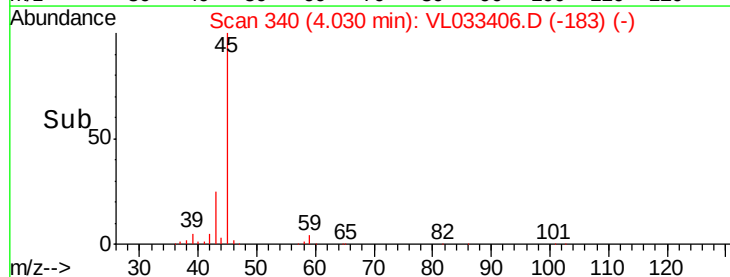
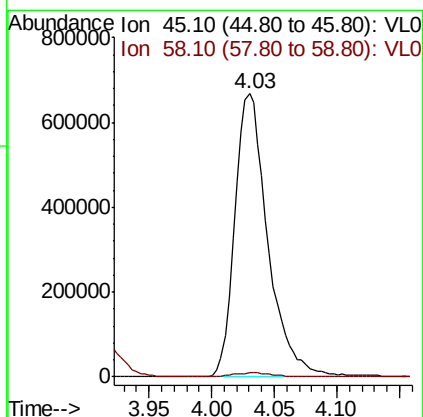
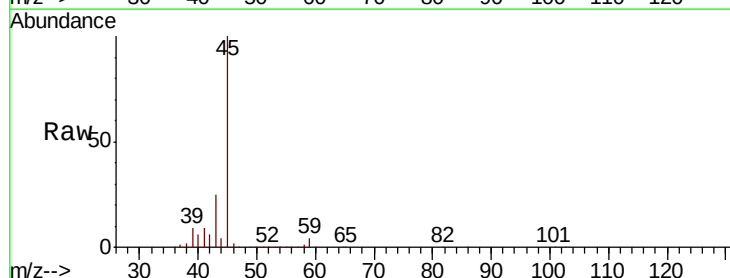
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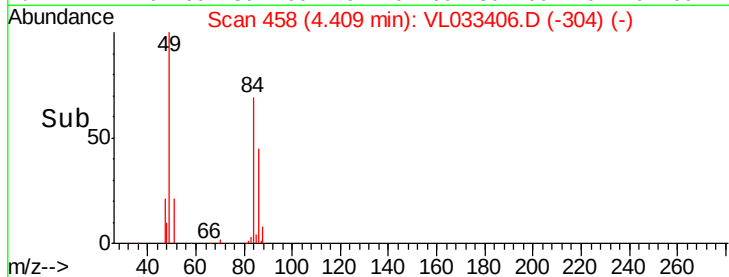
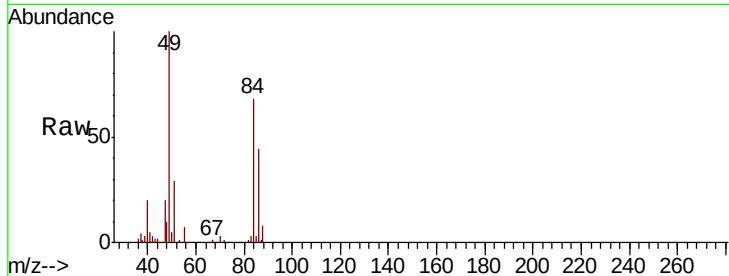
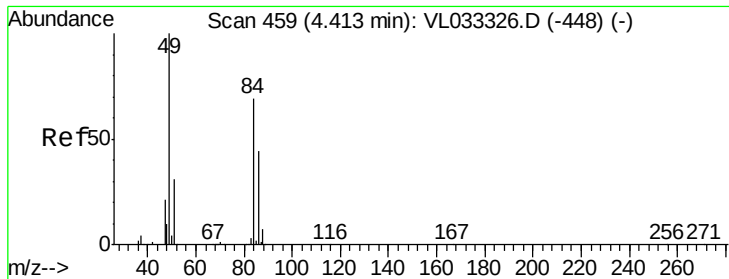
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#19
Isopropyl Alcohol
Concen: 13.205 ppbv
RT: 4.03 min Scan# 340
Delta R.T. 0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion: 45 Resp: 1214153
Ion Ratio Lower Upper
45 100
58 1.8 1.5 2.3





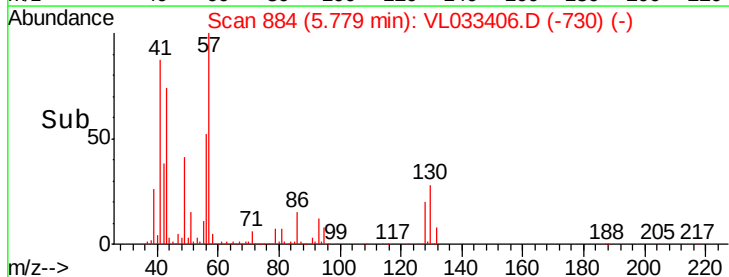
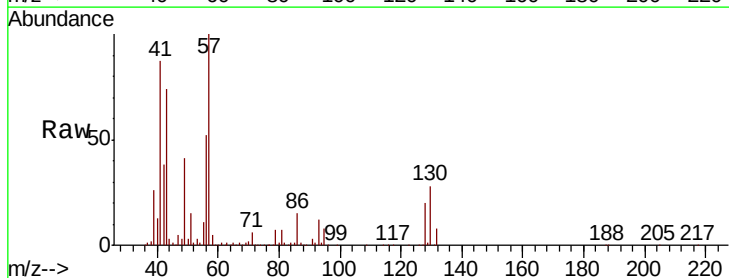
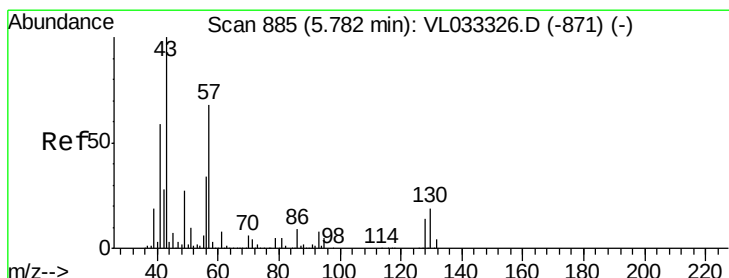
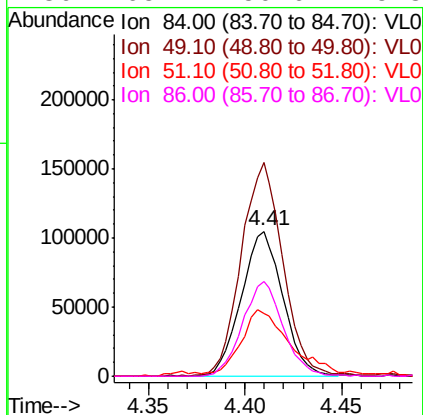
#20
Methylene Chloride
Concen: 2.488 ppbv
RT: 4.41 min Scan# 458
Delta R.T. -0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tot Ion	84	Resp	156877
Ion Ratio	Lower	Upper	
84	100		
49	147.2	115.4	173.0
51	41.5	35.8	53.6
86	65.2	50.6	75.8

Instrument :
MSVOA_L
ClientSampleId :
QA1

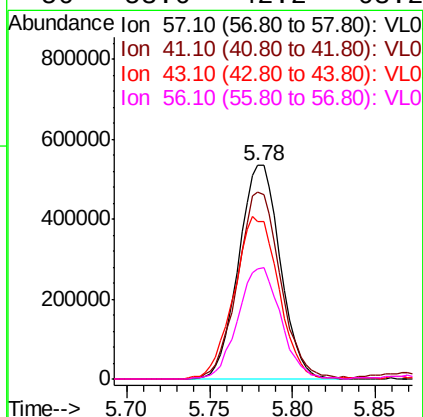
Manual Integrations
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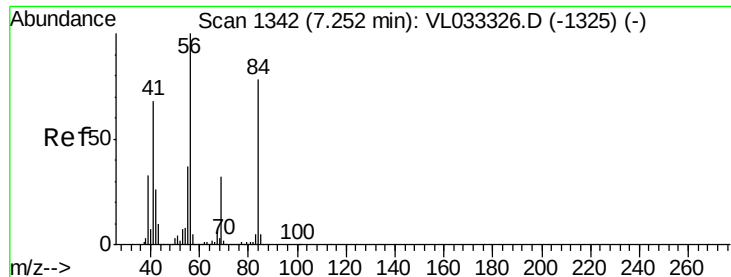
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#26
Hexane
Concen: 7.440 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion	57	Resp	934639
Ion Ratio	Lower	Upper	
57	100		
41	90.2	70.5	105.7
43	81.7	181.8	272.8#
56	53.6	42.2	63.2





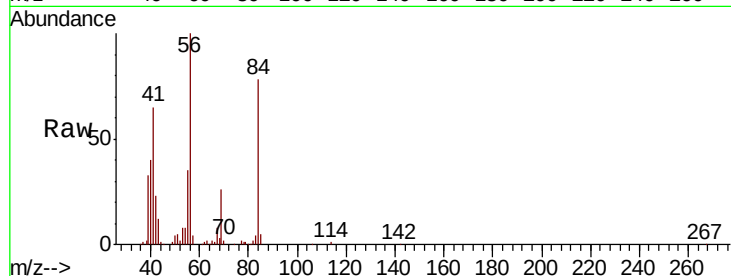
#30
Cyclohexane
Concen: 1.580 ppbv
RT: 7.25 min Scan# 1340
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampled :
QA1

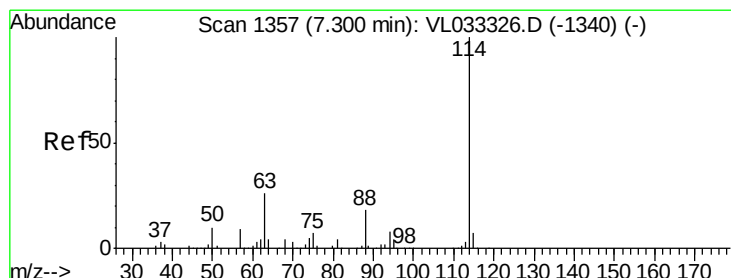
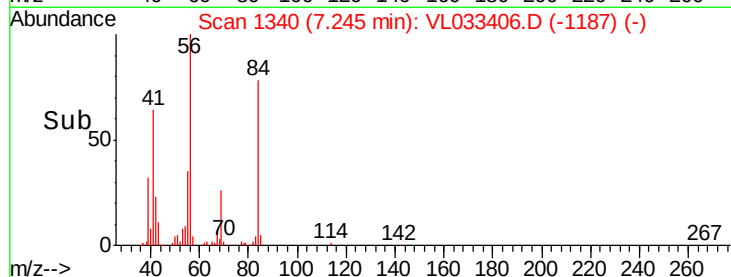
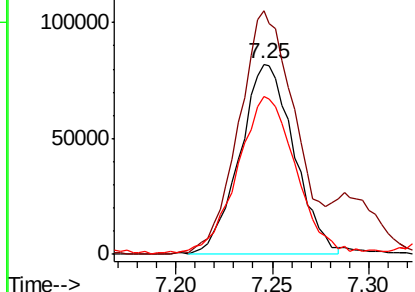
Tot Ion	Ratio	Lower	Upper
84	100		
56	159.5	111.3	166.9
41	88.8	69.6	104.4

Manual Integrations
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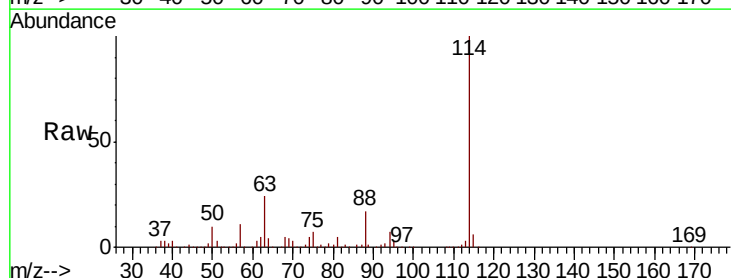


Abundance Ion 84.20 (83.90 to 84.90): VL0
Ion 56.10 (55.80 to 56.80): VL0
Ion 41.10 (40.80 to 41.80): VL0

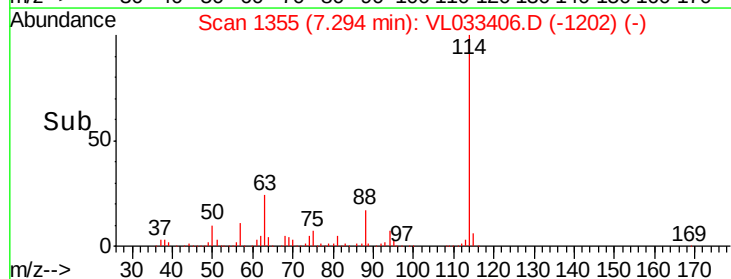
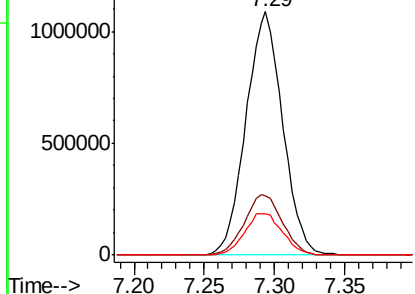


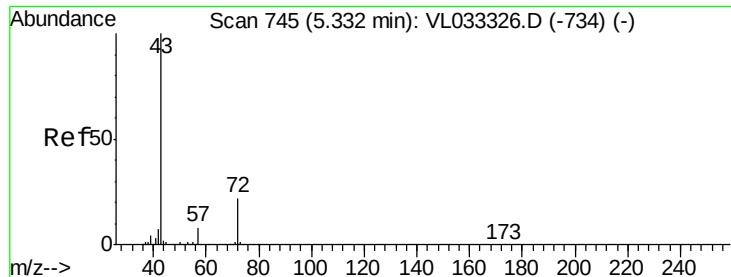
#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1355
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion	Ratio	Lower	Upper
114	100		
63	26.0	21.4	32.2
88	17.9	14.5	21.7



Abundance Ion 114.10 (113.80 to 114.80): V
Ion 63.10 (62.80 to 63.80): VL0
Ion 88.10 (87.80 to 88.80): VL0





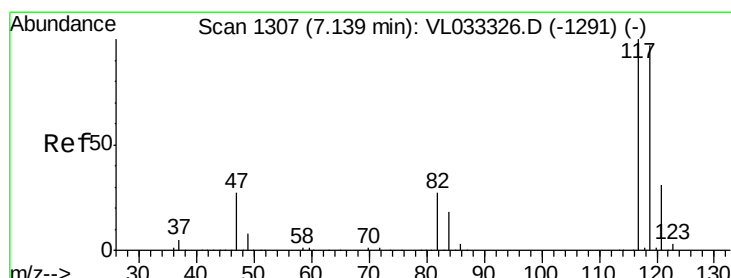
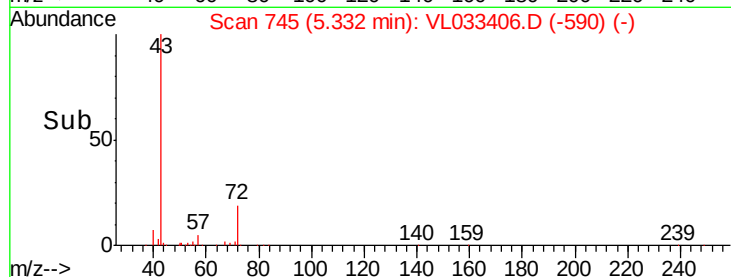
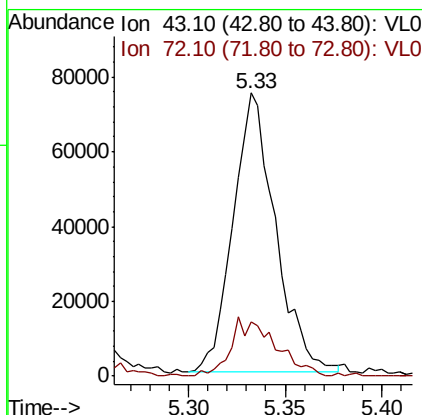
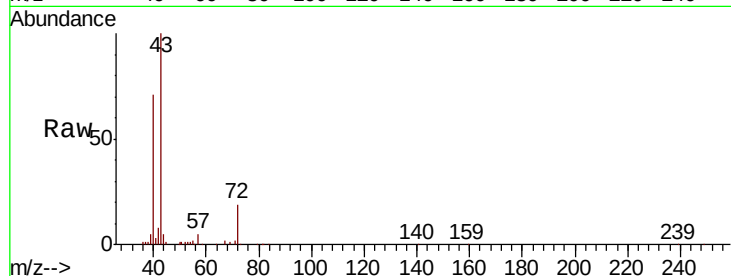
#34
2-Butanone
Concen: 0.874 ppbv
RT: 5.33 min Scan# 745
Delta R.T. -0.00 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampleId :
QA1

Tot Ion: 43 Resp: 113619
Ion Ratio Lower Upper
43 100
72 22.3 17.7 26.5

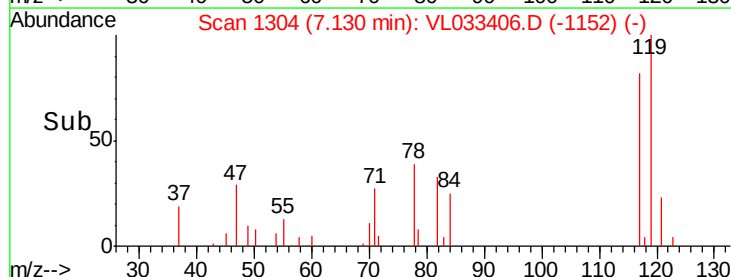
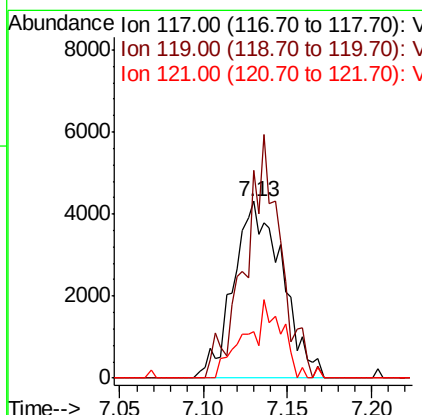
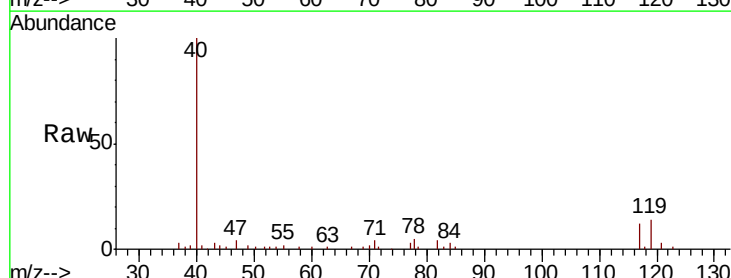
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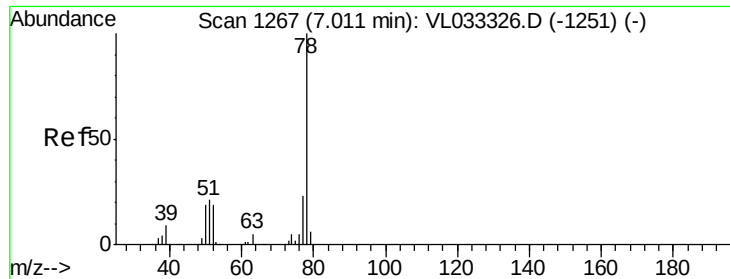
MMDadoda
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#35
Carbon Tetrachloride
Concen: 0.062 ppbv m
RT: 7.13 min Scan# 1304
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion: 117 Resp: 8659
Ion Ratio Lower Upper
117 100
119 117.7 77.4 116.0#
121 26.6 24.9 37.3





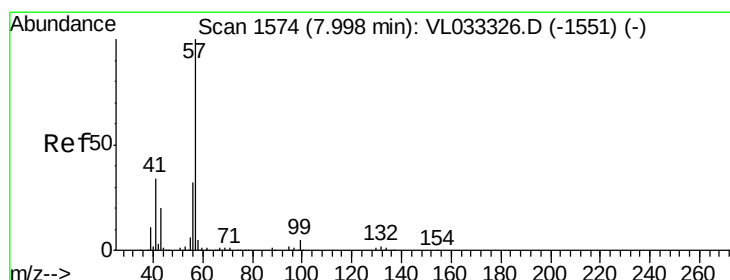
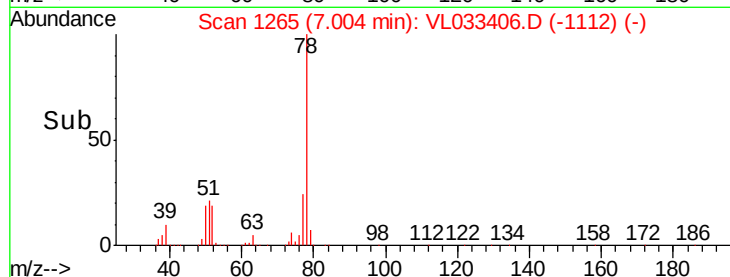
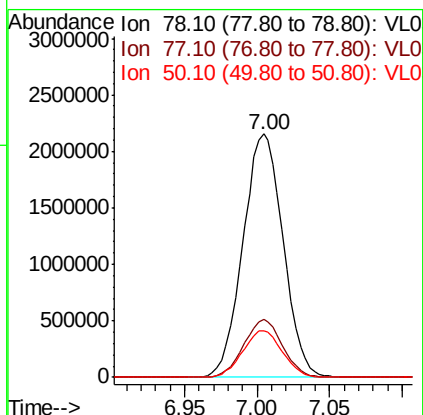
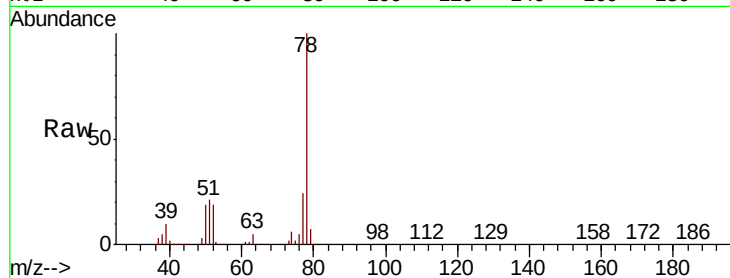
#36
Benzene
Concen: 23.364 ppbv
RT: 7.00 min Scan# 1265
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampleId :
QA1

Tot Ion	Ratio	Lower	Upper
78	100		
77	23.8	18.1	27.1
50	19.1	15.2	22.8

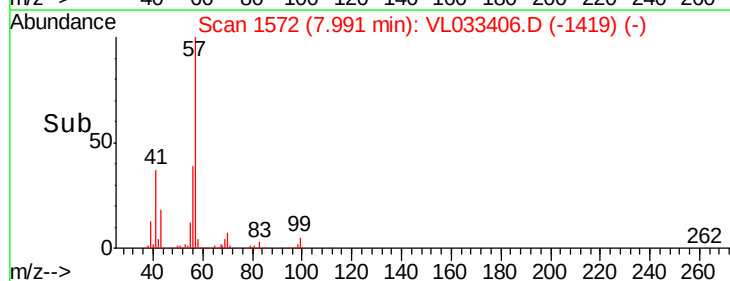
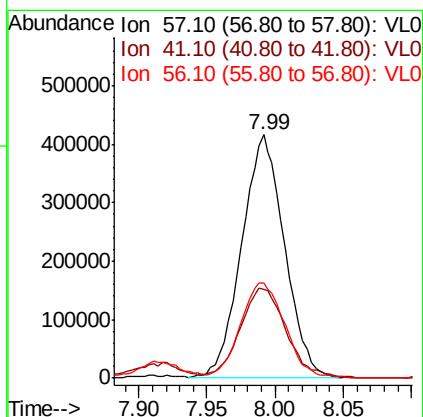
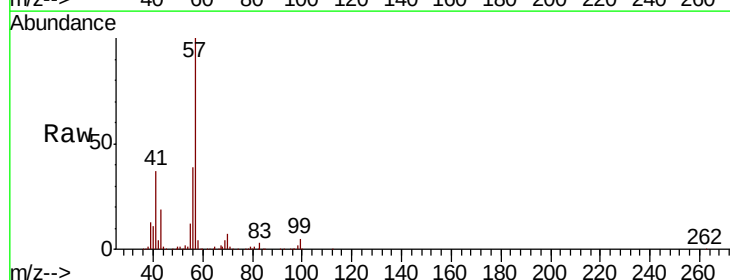
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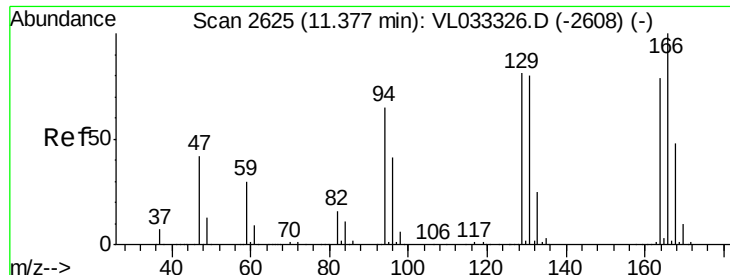
MMDadoda
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#44
2,2,4-Trimethylpentane
Concen: 3.055 ppbv
RT: 7.99 min Scan# 1572
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion	Ratio	Lower	Upper
57	100		
41	40.5	26.0	39.0#
56	41.6	24.6	36.8#





#52

Tetrachloroethene

Concen: 1.777 ppbv

RT: 11.37 min Scan# 2624

Delta R.T. -0.00 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Instrument :

MSVOA_L

ClientSampleId :

QA1

Tot Ion:164 Resp: 131188

Ion Ratio Lower Upper

164 100

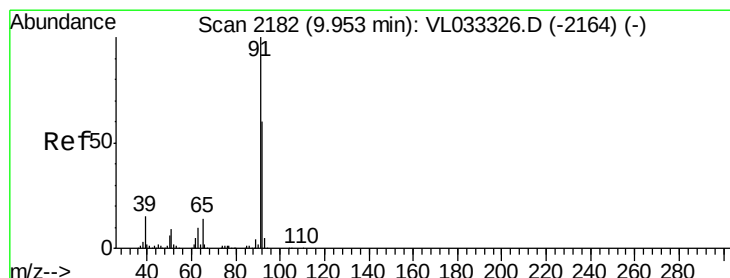
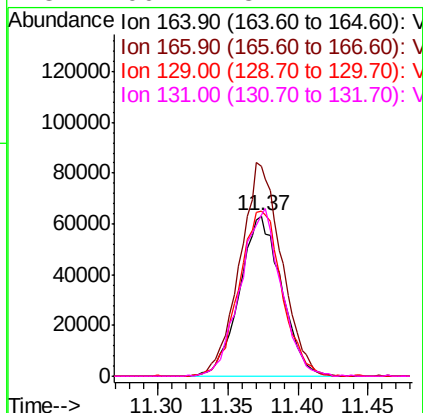
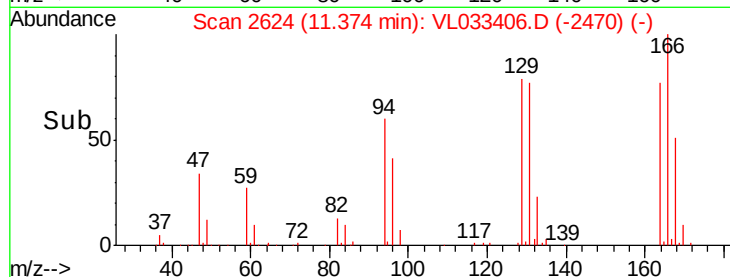
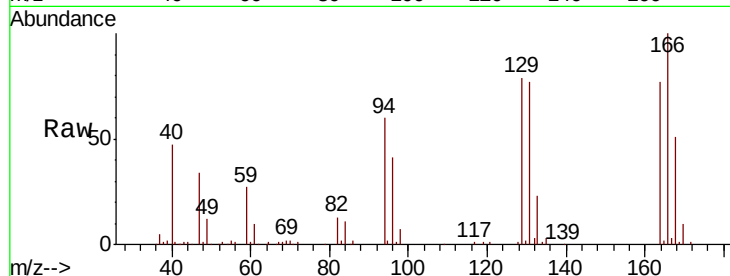
166 130.6 101.5 152.3

129 102.8 82.2 123.2

131 100.1 81.1 121.7

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#53

Toluene

Concen: 29.594 ppbv

RT: 9.95 min Scan# 2180

Delta R.T. -0.01 min

Lab File: VL033406.D

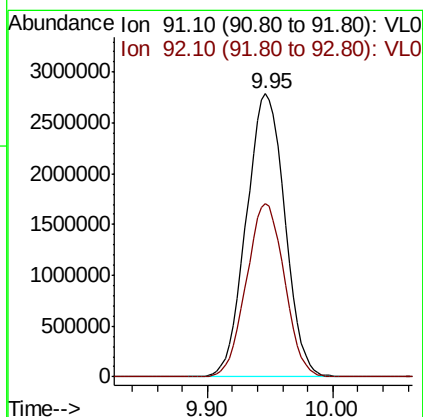
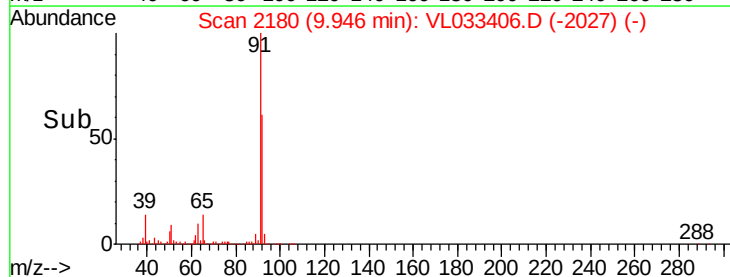
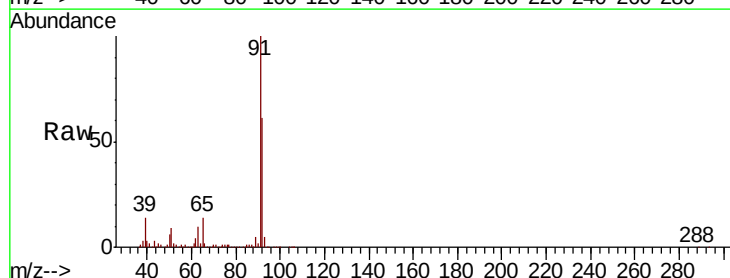
Acq: 21 Mar 2019 1:41

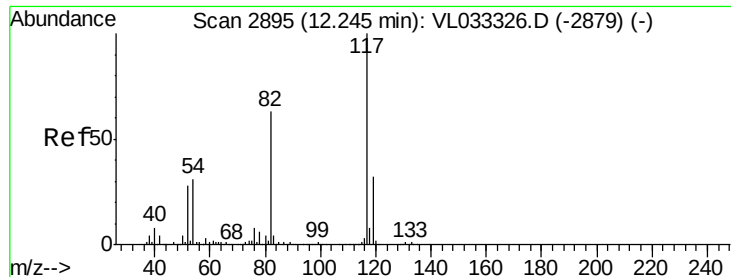
Tgt Ion: 91 Resp: 5959313

Ion Ratio Lower Upper

91 100

92 61.0 47.4 71.0





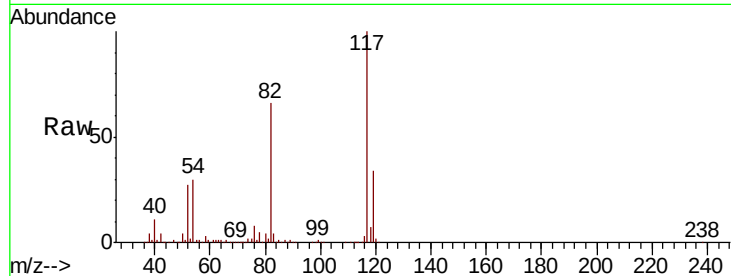
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.24 min Scan# 2893
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampleId :
QA1

Tot Ion	Ratio	Lower	Upper
117	100		
82	65.5	53.4	80.2
119	32.5	27.3	40.9

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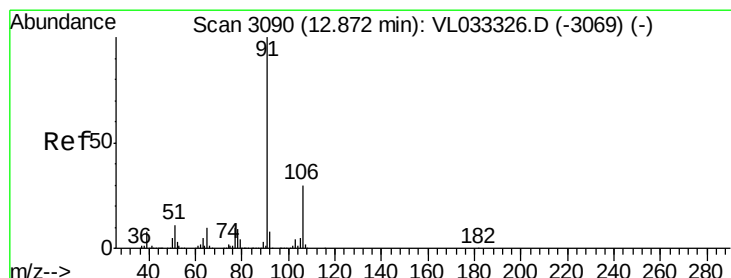
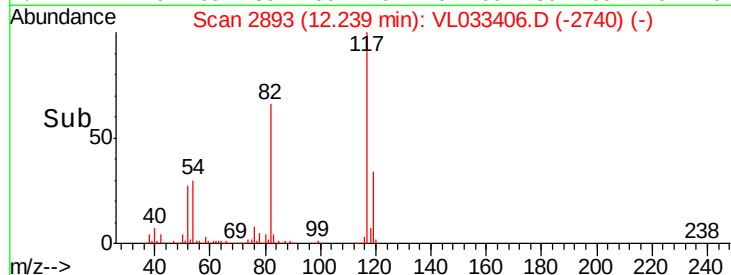
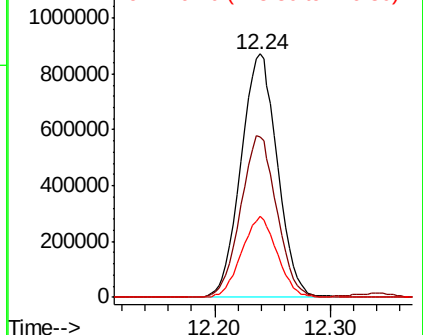


Abundance

Ion 117.10 (116.80 to 117.80): V

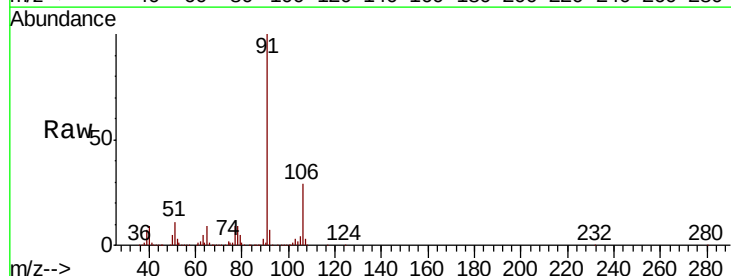
Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#58
Ethyl Benzene
Concen: 3.566 ppbv
RT: 12.86 min Scan# 3087
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

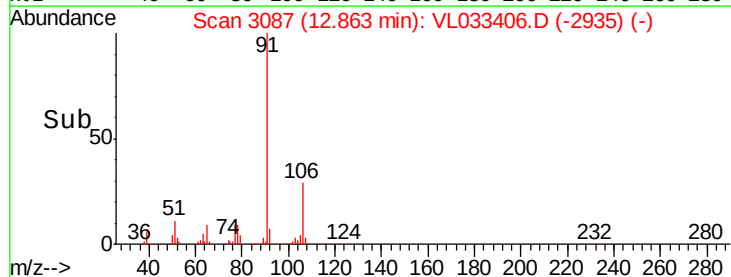
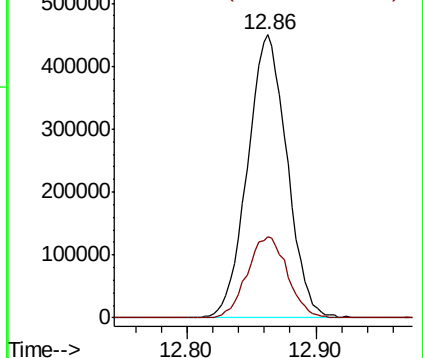
Tgt Ion	Ratio	Lower	Upper
91	100		
106	28.7	24.2	36.2

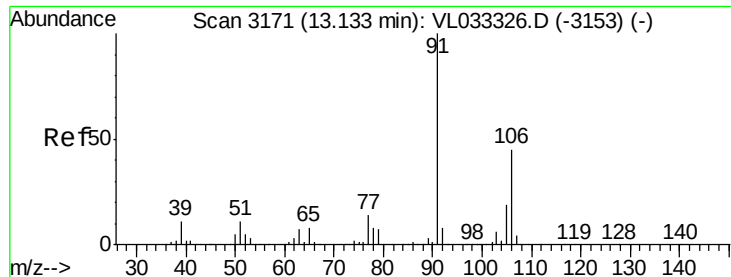


Abundance

Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





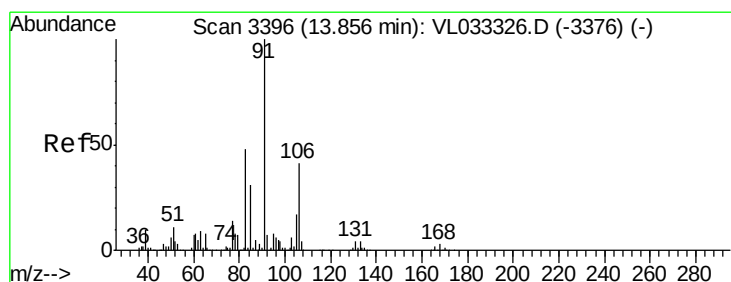
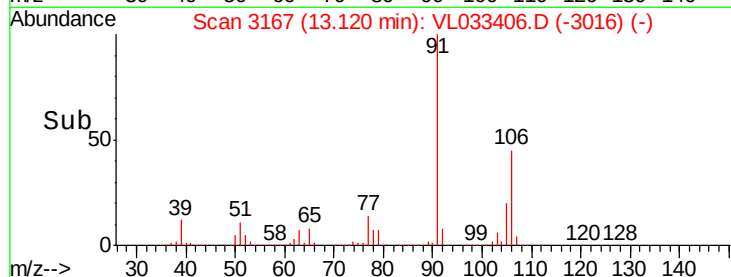
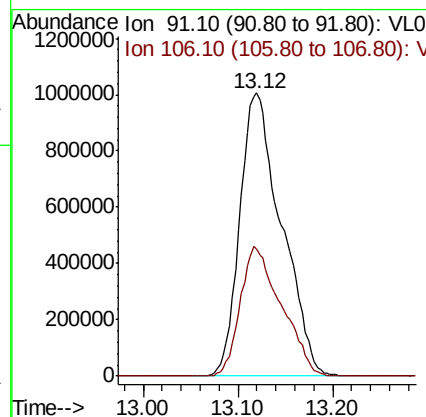
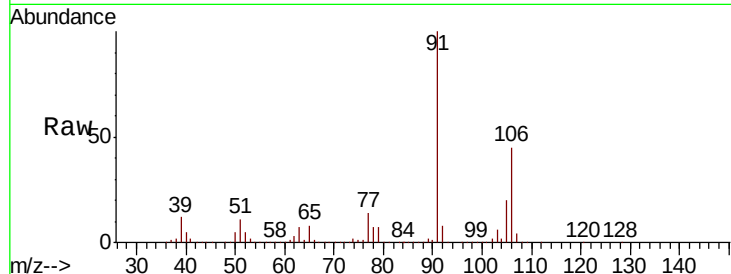
#59
m/p-Xylene
Concen: 13.303 ppbv
RT: 13.12 min Scan# 3167
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Instrument :
MSVOA_L
ClientSampled :
OA1

Tot Ion: 91 Resp: 3076055
Ion Ratio Lower Upper
91 100
106 45.2 0.0 0.0#

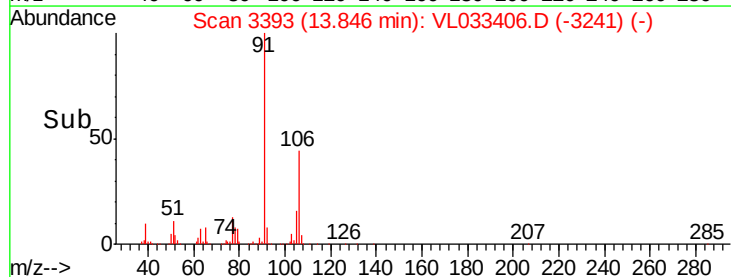
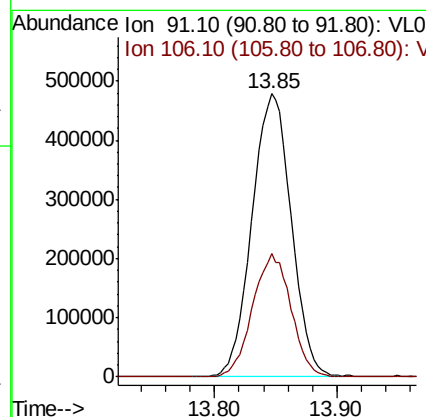
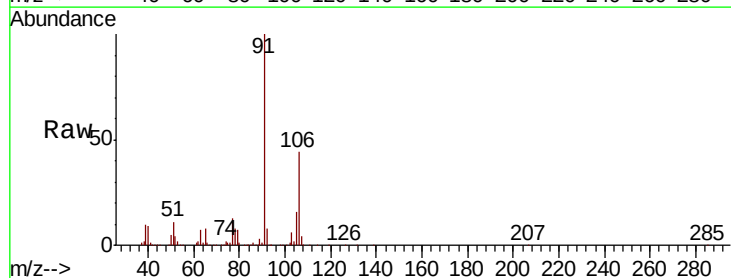
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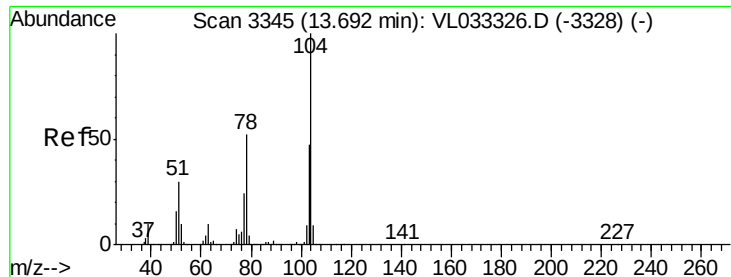
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#60
o-Xylene
Concen: 4.706 ppbv
RT: 13.85 min Scan# 3393
Delta R.T. -0.01 min
Lab File: VL033406.D
Acq: 21 Mar 2019 1:41

Tgt Ion: 91 Resp: 1061640
Ion Ratio Lower Upper
91 100
106 42.6 21.3 63.9





#61

Stvrene

Concen: 1.883 ppbv

RT: 13.68 min Scan# 3342

Delta R.T. -0.01 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Instrument :

MSVOA_L

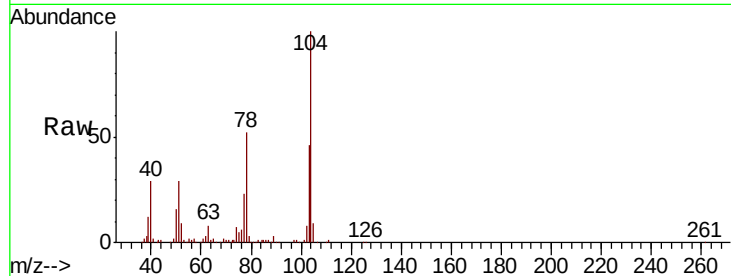
ClientSampled :

QA1

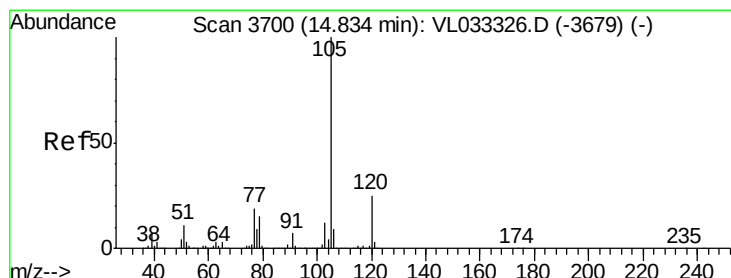
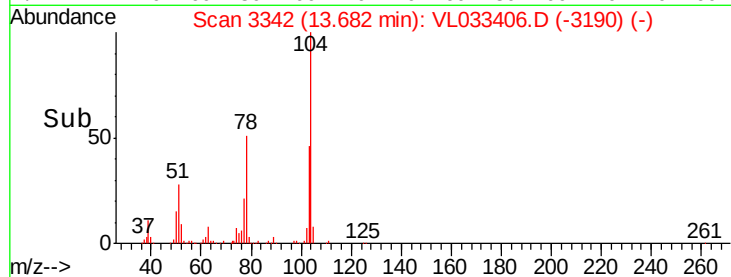
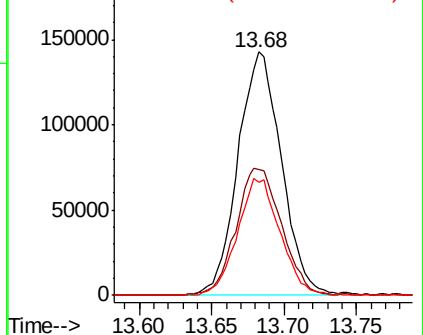
Tot Ion:	104	Resp:	297325
Ion Ratio	Lower	Upper	
104	100		
78	55.2	42.7	64.1
103	47.2	38.0	57.0

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Abundance Ion 104.10 (103.80 to 104.80): V
Ion 78.10 (77.80 to 78.80): VL0
Ion 103.10 (102.80 to 103.80): V



#62

Isopropylbenzene

Concen: 0.170 ppbv

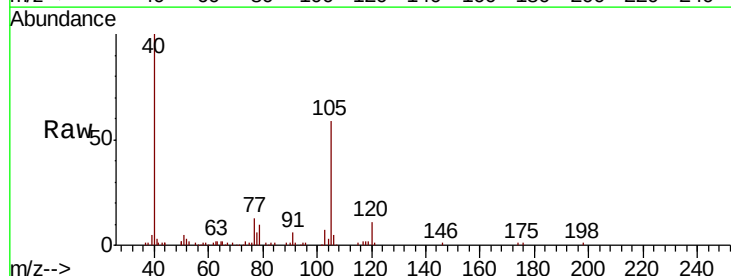
RT: 14.83 min Scan# 3698

Delta R.T. -0.01 min

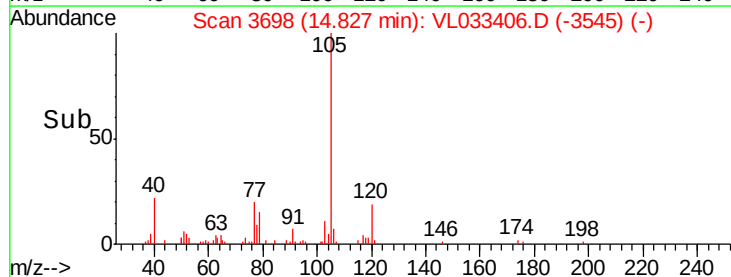
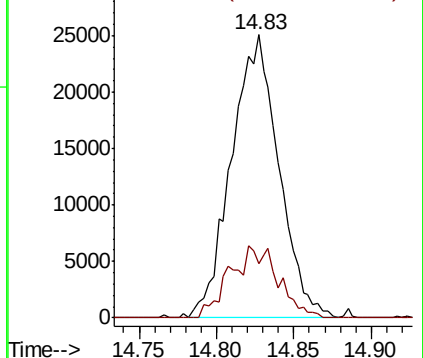
Lab File: VL033406.D

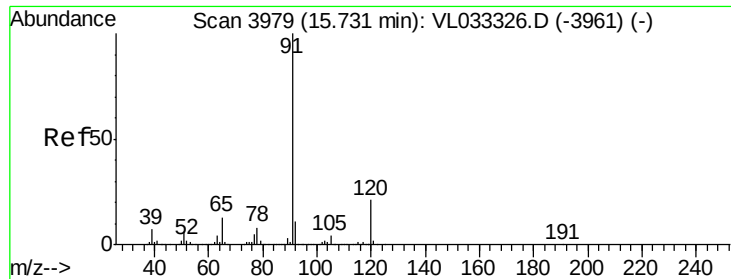
Acq: 21 Mar 2019 1:41

Tgt Ion:	105	Resp:	53393
Ion Ratio	Lower	Upper	
105	100		
120	25.9	19.9	29.9



Abundance Ion 105.10 (104.80 to 105.80): V
Ion 120.20 (119.90 to 120.90): V





#64

n-propylbenzene

Concen: 0.613 ppbv

RT: 15.72 min Scan# 3976

Delta R.T. -0.01 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Instrument :

MSVOA_L

ClientSampleId :

QA1

Tot Ion:120 Resp: 48675

Ion Ratio Lower Upper

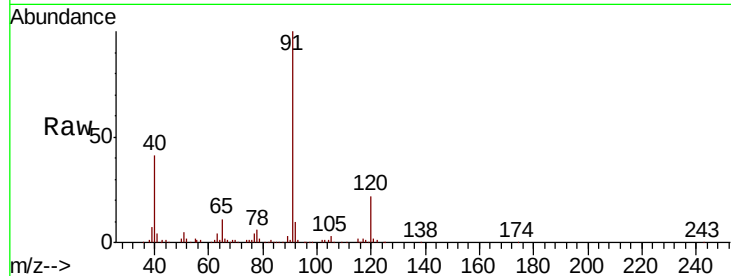
120 100

91 481.6 389.8 584.6

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Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

120000

100000

80000

60000

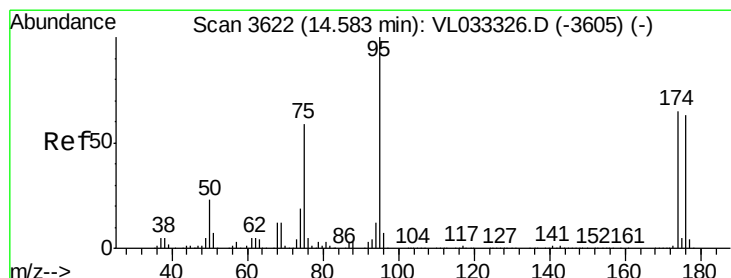
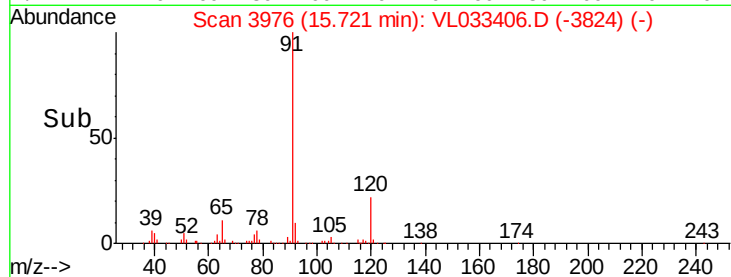
40000

20000

0

15.65 15.70 15.75

Time-->



#68

1-Bromo-4-Fluorobenzene

Concen: 10.120 ppbv

RT: 14.57 min Scan# 3619

Delta R.T. -0.01 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

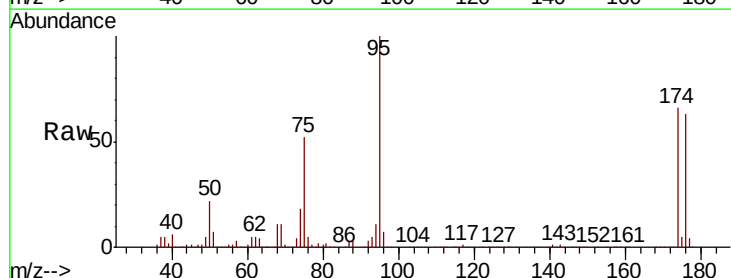
Tgt Ion: 95 Resp: 1426227

Ion Ratio Lower Upper

95 100

174 66.9 51.5 77.3

175 4.9 3.8 5.6



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

800000

600000

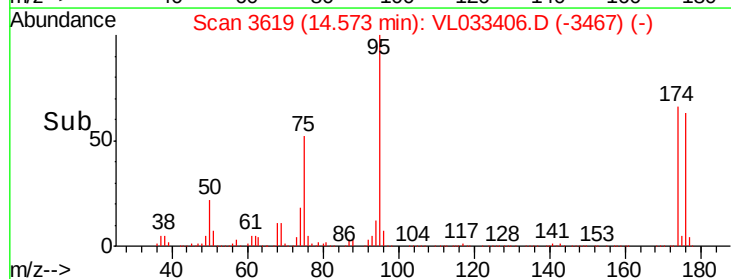
400000

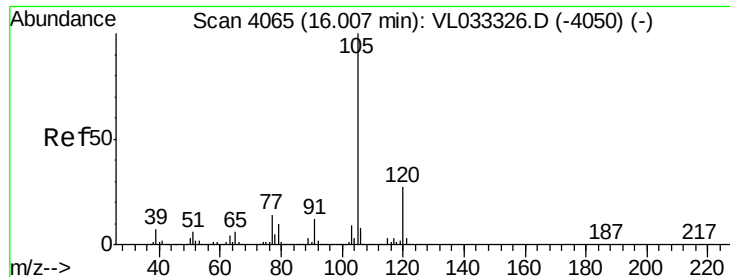
200000

0

14.50 14.55 14.60

Time-->





#72

4-Ethyltoluene

Concen: 1.468 ppbv

RT: 16.00 min Scan# 4062

Delta R.T. -0.01 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Instrument :

MSVOA_L

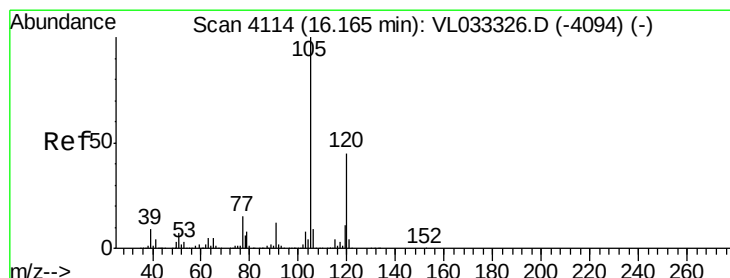
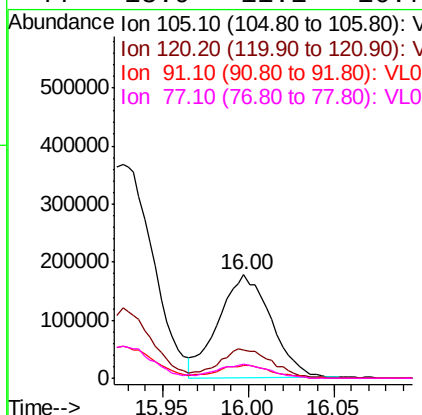
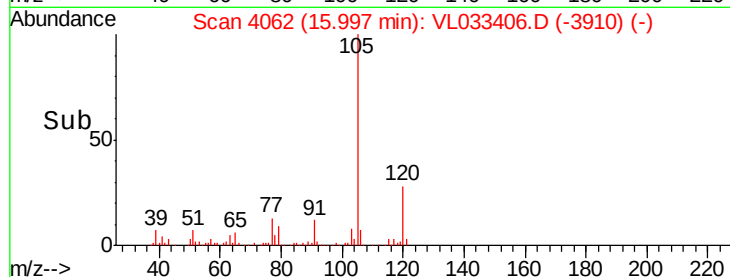
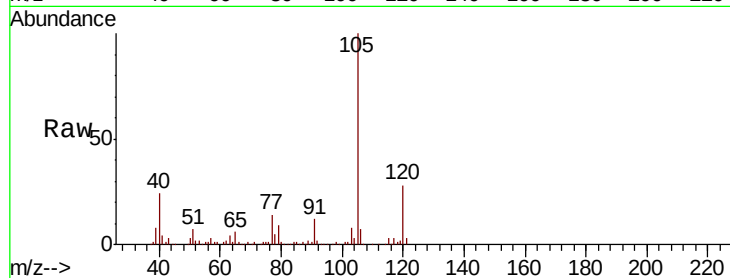
ClientSampled :

QA1

Tot Ion:	105	Resp:	375989
Ion Ratio	Lower	Upper	
105	100		
120	27.9	22.9	34.3
91	13.9	10.2	15.2
77	13.9	11.1	16.7

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#73

1,3,5-Trimethylbenzene

Concen: 1.439 ppbv

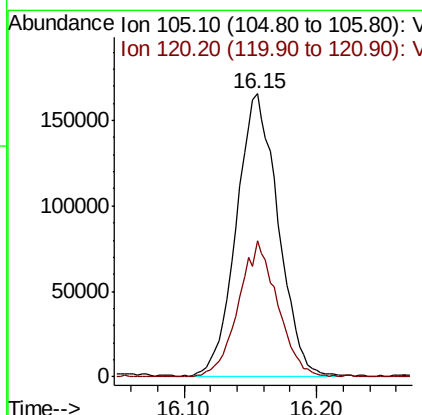
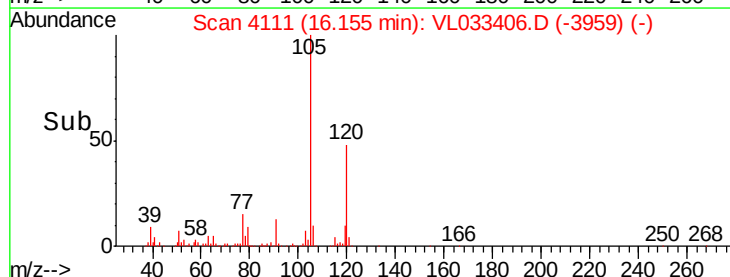
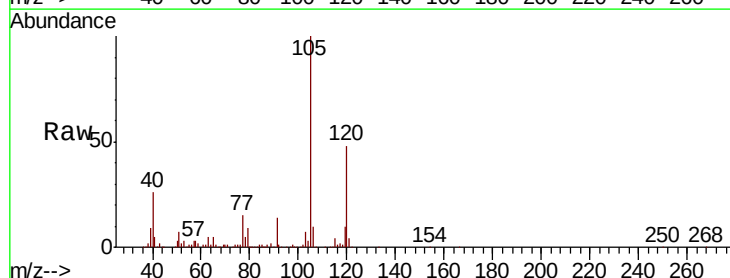
RT: 16.15 min Scan# 4111

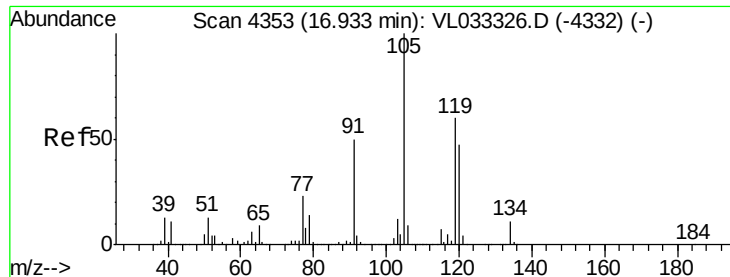
Delta R.T. -0.01 min

Lab File: VL033406.D

Acq: 21 Mar 2019 1:41

Tgt Ion:	105	Resp:	359231
Ion Ratio	Lower	Upper	
105	100		
120	48.3	36.2	54.4





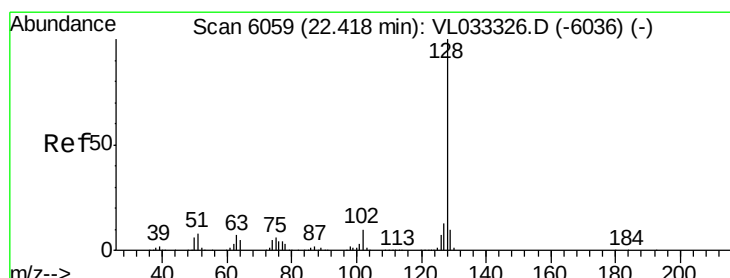
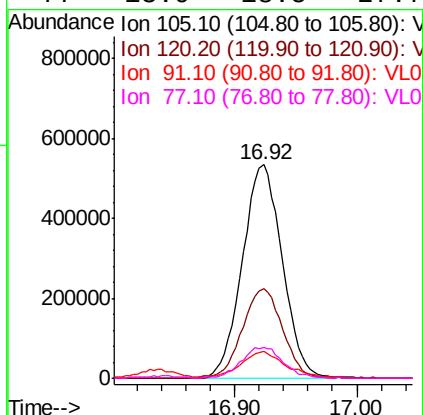
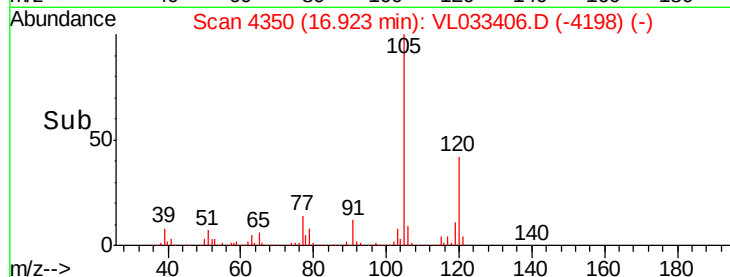
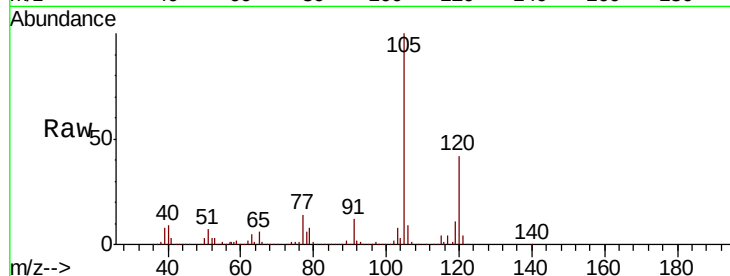
#74
 1,2,4-Trimethylbenzene
 Concen: 4.571 ppbv
 RT: 16.92 min Scan# 4350
 Delta R.T. -0.01 min
 Lab File: VL033406.D
 Acq: 21 Mar 2019 1:41

Instrument :
 MSVOA_L
 ClientSampled :
 OA1

Tot Ion	Ratio	Lower	Upper
105	100		
120	41.9	37.4	56.2
91	12.1	41.0	61.4#
77	13.9	18.5	27.7#

Manual Integrations
 APPROVED

MMDadoda
 3/25/2019 8:27:13 AM



#79
 Naphthalene
 Concen: 1.155 ppbv
 RT: 22.41 min Scan# 6057
 Delta R.T. -0.01 min
 Lab File: VL033406.D
 Acq: 21 Mar 2019 1:41

Tgt Ion	Ratio	Lower	Upper
128	100		
127	11.7	10.1	15.1
129	9.2	8.2	12.2

