

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL120720\
 Data File : VL036091.D
 Acq On : 8 Dec 2020 8:21
 Operator : SY/AP
 Sample : L4948-07
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-4B

Manual Integrations
 APPROVED

MMDadoda
 12/11/2020 5:45:30 PM

Quant Time: Dec 08 21:36:45 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120720AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 0
 QLast Update : Mon Dec 07 16:56:49 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1157506	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2525195	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.10	117	2264201	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	1924749	10.71	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	107.10%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	40392	0.299	ppbv	92
3) Chlorodifluoromethane	2.99	51	65414	0.495	ppbv #	92
4) Chloromethane	3.14	50	35522m	0.548	ppbv	
9) Propene	3.02	41	187932m	2.841	ppbv	
10) Heptane	8.14	43	274917	1.627	ppbv	94
11) Trichlorofluoromethane	3.96	101	69228m	0.436	ppbv	
13) Ethanol	3.61	45	1493588m	163.768	ppbv	
15) Acetone	3.85	43	2801652	20.139	ppbv	97
17) tert-Butyl alcohol	4.32	59	44435	0.330	ppbv #	71
19) Isopropyl Alcohol	3.98	45	164687m	1.937	ppbv	
20) Methylene Chloride	4.35	84	315167	5.529	ppbv	96
26) Hexane	5.70	57	634859	5.076	ppbv #	41
30) Cyclohexane	7.14	84	715529	7.788	ppbv	98
34) 2-Butanone	5.26	43	90417	0.540	ppbv	94
35) Carbon Tetrachloride	7.02	117	10550m	0.072	ppbv	
36) Benzene	6.91	78	76258	0.356	ppbv #	90
44) 2,2,4-Trimethylpentane	7.88	57	144874	0.374	ppbv #	49
52) Tetrachloroethene	11.25	164	8317m	0.107	ppbv	
53) Toluene	9.82	91	1189135	4.948	ppbv	99
58) Ethyl Benzene	12.73	91	654221	2.108	ppbv	99
59) m/p-Xylene	12.99	91	2623947	10.040	ppbv	98
60) o-Xylene	13.71	91	992246	4.030	ppbv	98
72) 4-Ethyltoluene	15.87	105	66130m	0.248	ppbv	
73) 1,3,5-Trimethylbenzene	16.02	105	54233m	0.213	ppbv	
74) 1,2,4-Trimethylbenzene	16.79	105	226093m	0.884	ppbv	
79) Naphthalene	22.24	128	44450m	0.342	ppbv	

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

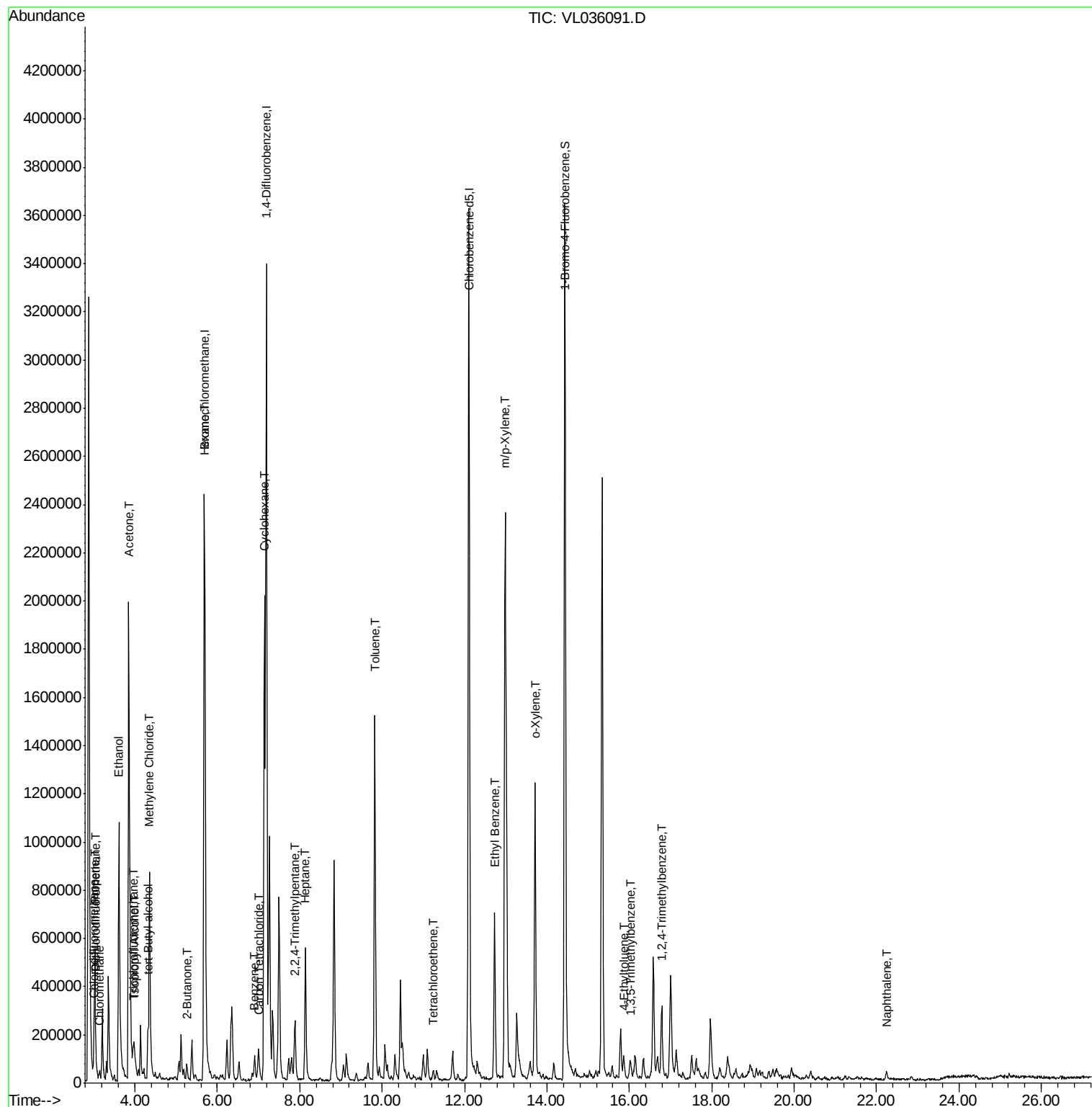
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL120720\
Data File : VL036091.D
Acq On : 8 Dec 2020 8:21
Operator : SY/AP
Sample : L4948-07
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

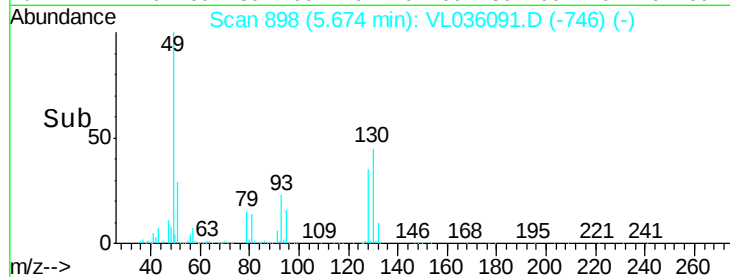
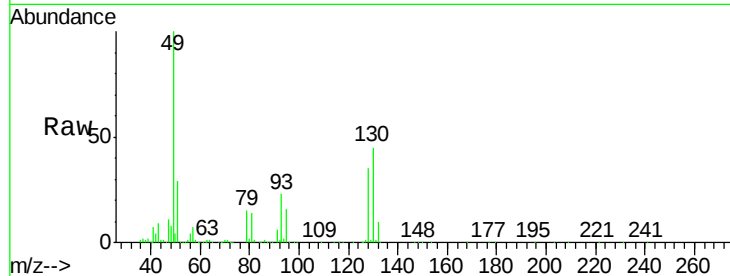
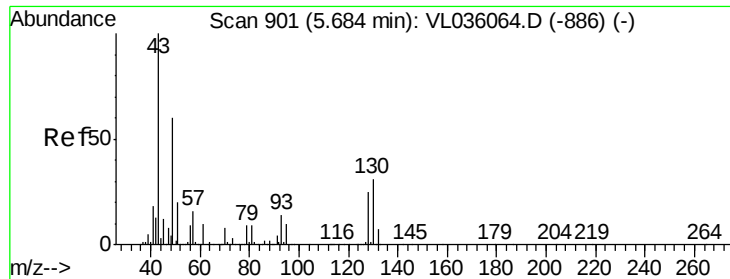
Instrument :
MSVOA_L
ClientSampleId :
IA-4B

Manual Integrations
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MMDadoda
12/11/2020 5:45:30 PM

Quant Time: Dec 08 21:36:45 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL120720AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec
QLast Update : Mon Dec 07 16:56:49 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tot Ion: 49 Resp: 1157506

Ion Ratio Lower Upper

49 100

128 37.7 21.1 63.1

130 47.9 27.1 81.3

Instrument :

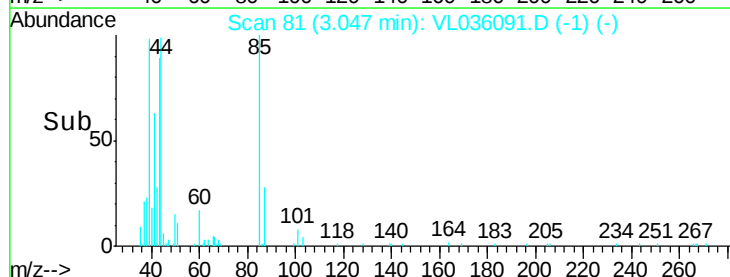
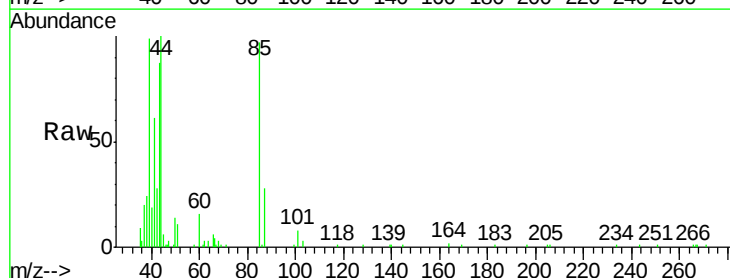
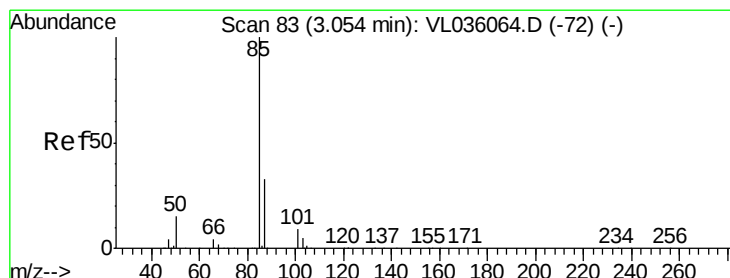
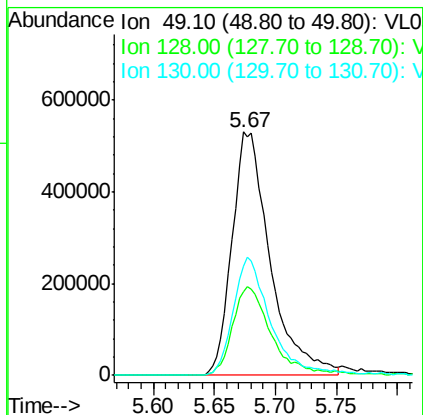
MSVOA_L

ClientSampled :

IA-4B

Manual Integrations
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12/11/2020 5:45:30 PM



#2

Dichlorodifluoromethane

Concen: 0.299 ppbv

RT: 3.05 min Scan# 81

Delta R.T. -0.01 min

Lab File: VL036091.D

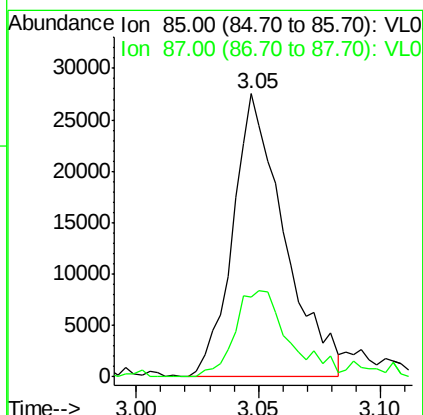
Acq: 8 Dec 2020 8:21

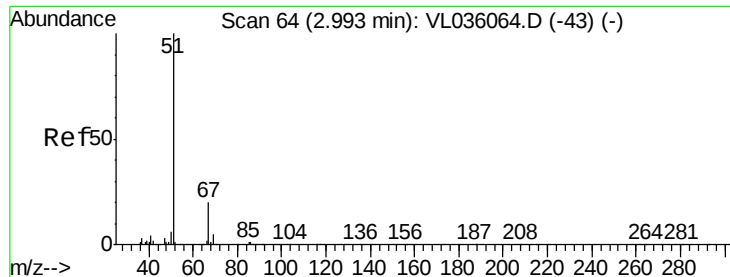
Tgt Ion: 85 Resp: 40392

Ion Ratio Lower Upper

85 100

87 28.4 26.5 39.7





#3

Chlorodifluoromethane

Concen: 0.495 ppbv

RT: 2.99 min Scan# 64

Delta R.T. -0.00 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

ClientSampled :

IA-4B

Tot Ion: 51 Resp: 65414

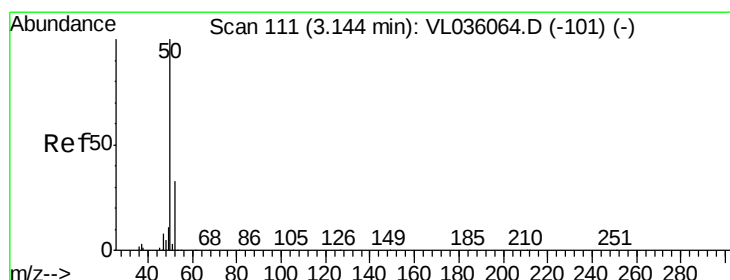
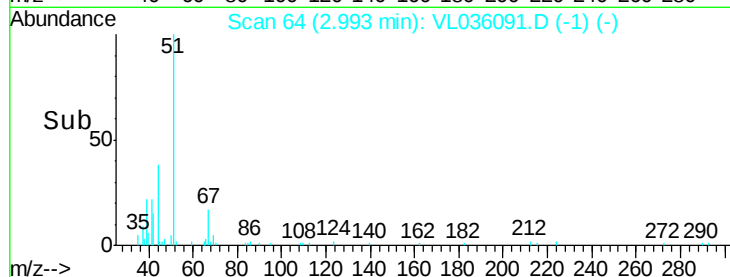
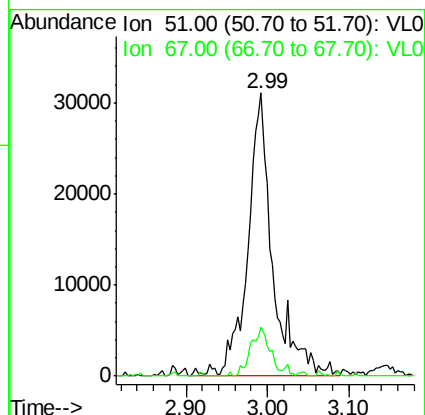
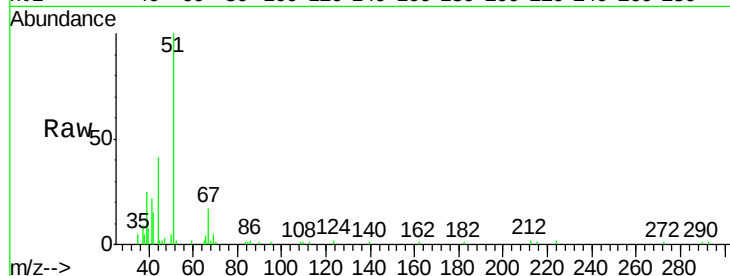
Ion Ratio Lower Upper

51 100

67 14.2 14.3 21.5#

Manual Integrations
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#4

Chloromethane

Concen: 0.548 ppbv m

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL036091.D

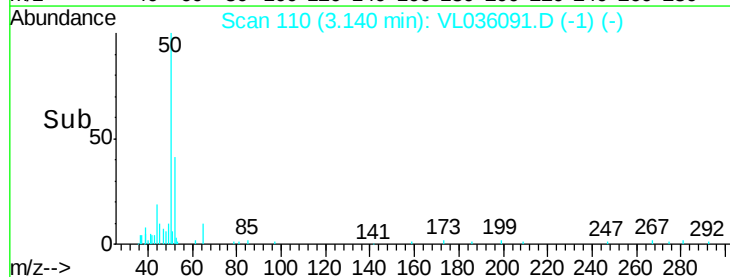
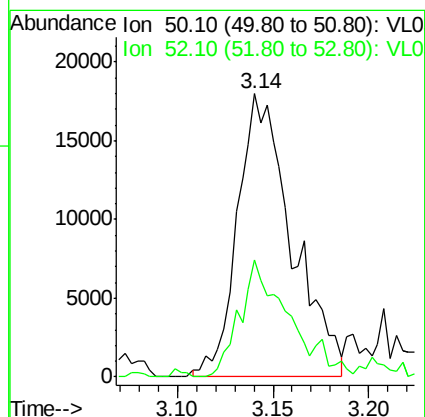
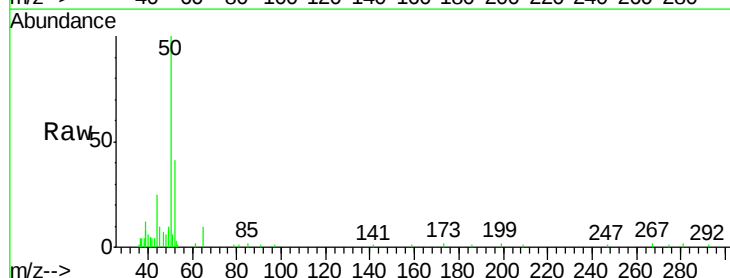
Acq: 8 Dec 2020 8:21

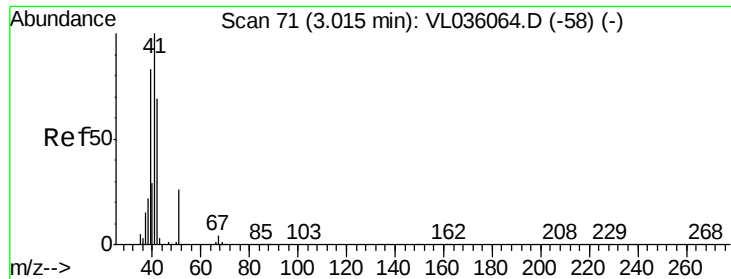
Tgt Ion: 50 Resp: 35522

Ion Ratio Lower Upper

50 100

52 41.1 26.1 39.1#





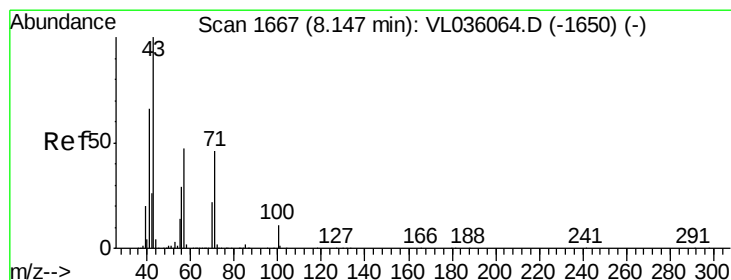
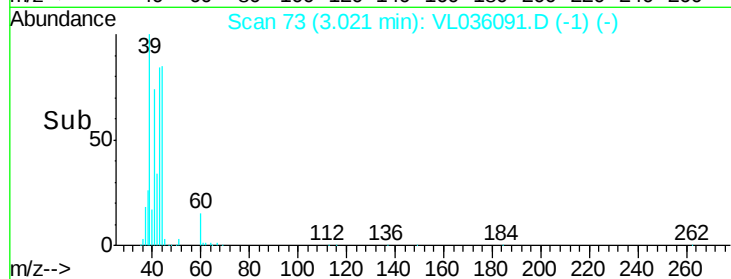
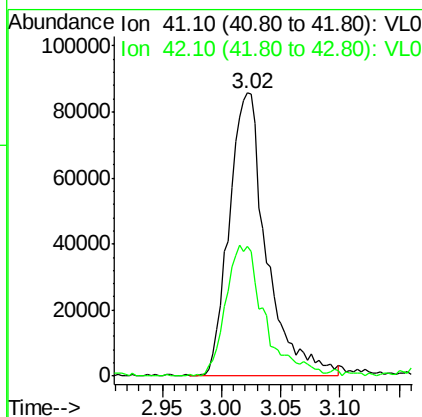
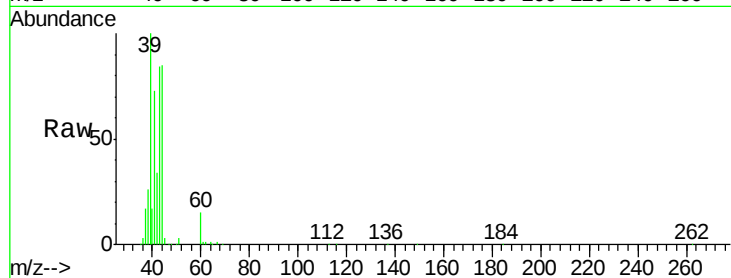
#9
 Propene
 Concen: 2.841 ppbv m
 RT: 3.02 min Scan# 73
 Delta R.T. 0.01 min
 Lab File: VL036091.D
 Acq: 8 Dec 2020 8:21

Instrument :
 MSVOA_L
 ClientSampled :
 IA-4B

Tot Ion: 41 Resp: 187932
 Ion Ratio Lower Upper
 41 100
 42 36.0 57.0 85.6#

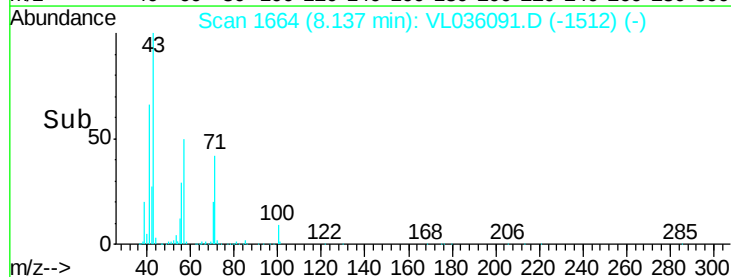
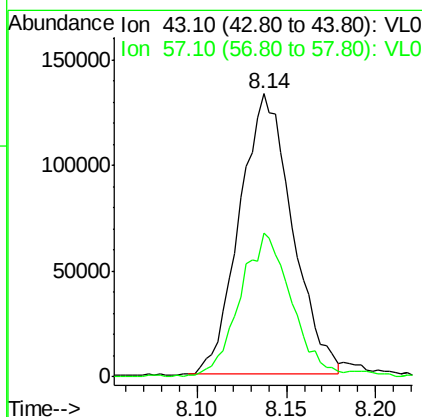
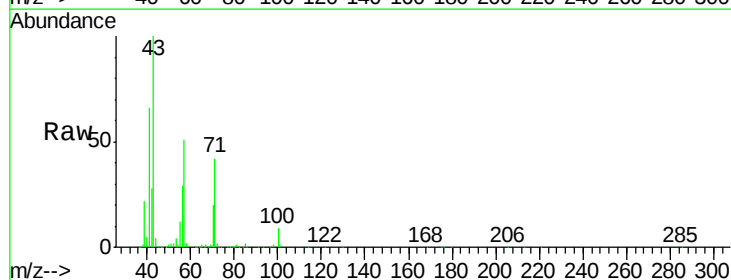
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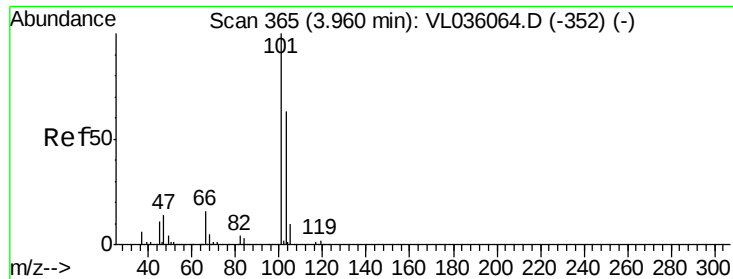
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 12/11/2020 5:45:30 PM



#10
 Heptane
 Concen: 1.627 ppbv
 RT: 8.14 min Scan# 1664
 Delta R.T. -0.01 min
 Lab File: VL036091.D
 Acq: 8 Dec 2020 8:21

Tgt Ion: 43 Resp: 274917
 Ion Ratio Lower Upper
 43 100
 57 51.4 37.9 56.9





#11

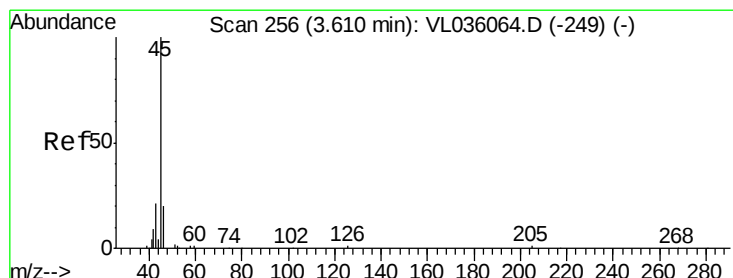
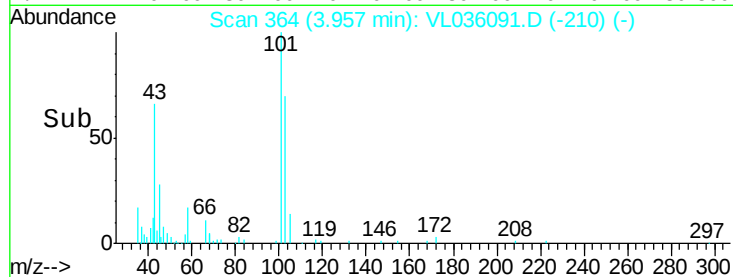
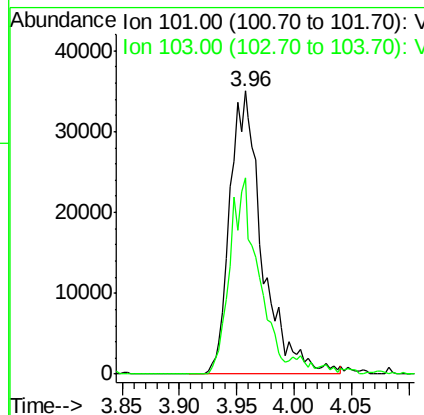
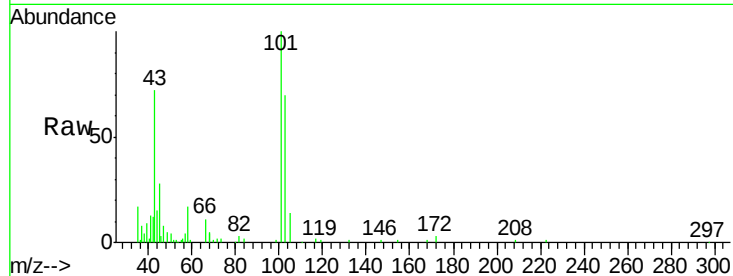
Trichlorofluoromethane
Concen: 0.436 ppbv m
RT: 3.96 min Scan# 364
Delta R.T. -0.00 min
Lab File: VL036091.D
Acq: 8 Dec 2020 8:21

Instrument :
MSVOA_L
ClientSampled :
IA-4B

Tot Ion	Ion	Ratio	Resp	Lower	Upper
101	100		69228		
103	69.6	50.3		75.5	

Manual Integrations
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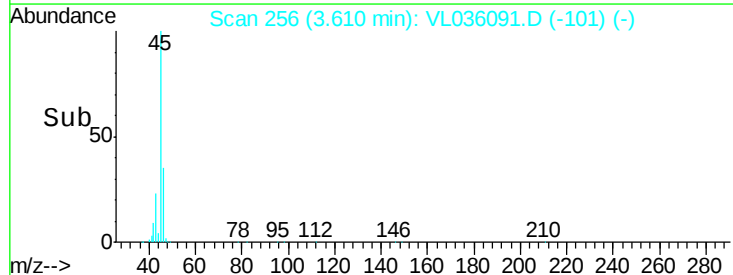
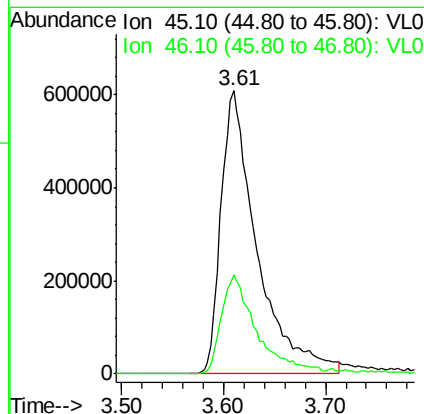
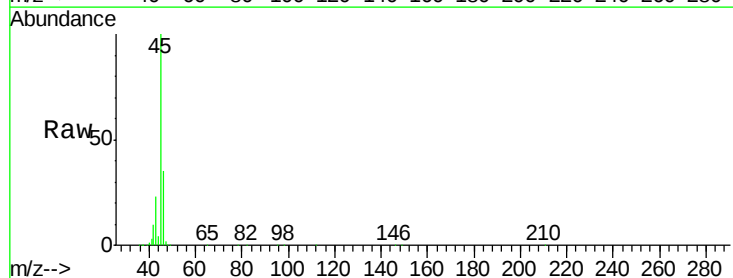
MMDadoda
12/11/2020 5:45:30 PM

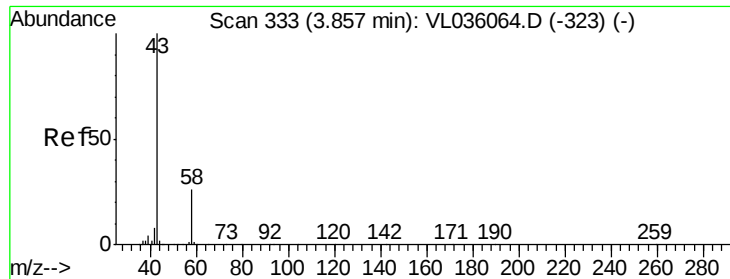


#13

Ethanol
Concen: 163.768 ppbv m
RT: 3.61 min Scan# 256
Delta R.T. -0.00 min
Lab File: VL036091.D
Acq: 8 Dec 2020 8:21

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
45	100		1493588		
46	36.7	19.0		75.8	





#15

Acetone

Concen: 20.139 ppbv

RT: 3.85 min Scan# 331

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

ClientSampled :

IA-4B

Tot Ion: 43 Resp: 2801652

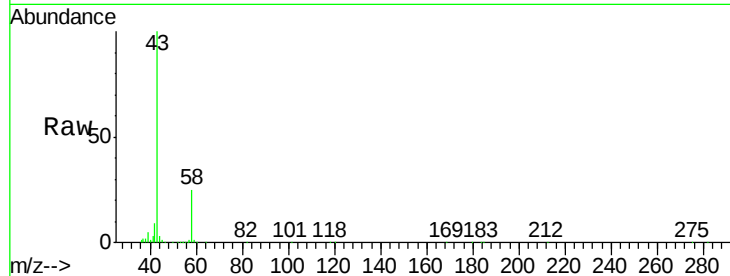
Ion Ratio Lower Upper

43 100

58 24.6 20.9 31.3

Manual Integrations
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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

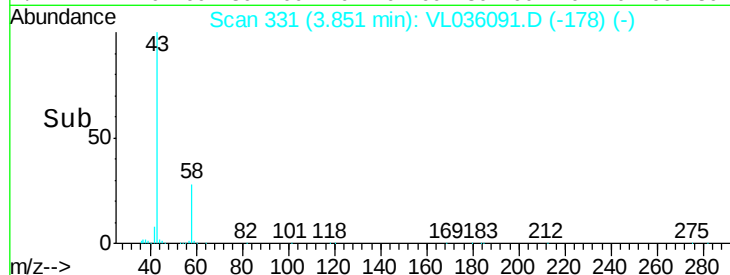
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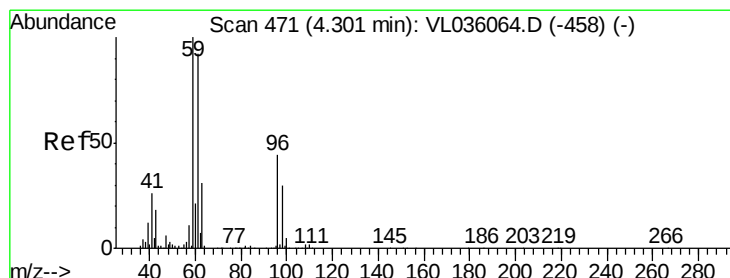
500000

0

Time-->



Time-->



#17

tert-Butyl alcohol

Concen: 0.330 ppbv

RT: 4.32 min Scan# 476

Delta R.T. 0.02 min

Lab File: VL036091.D

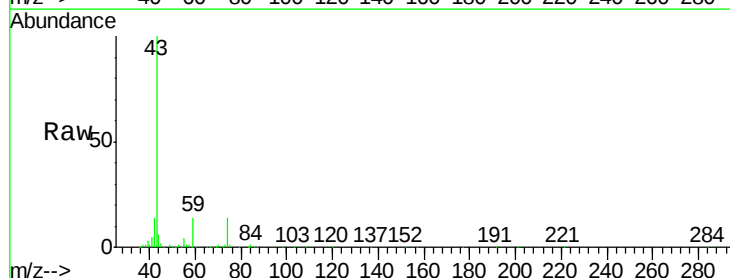
Acq: 8 Dec 2020 8:21

Tgt Ion: 59 Resp: 44435

Ion Ratio Lower Upper

59 100

57 0.0 8.7 13.1#



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0

25000

20000

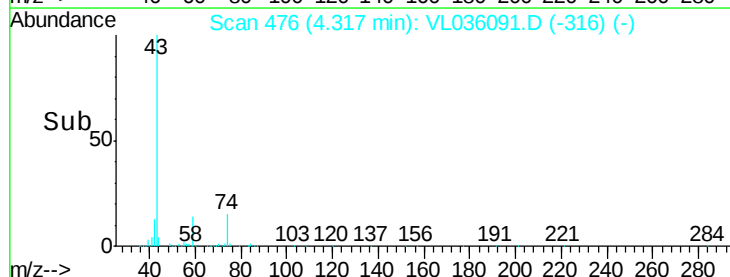
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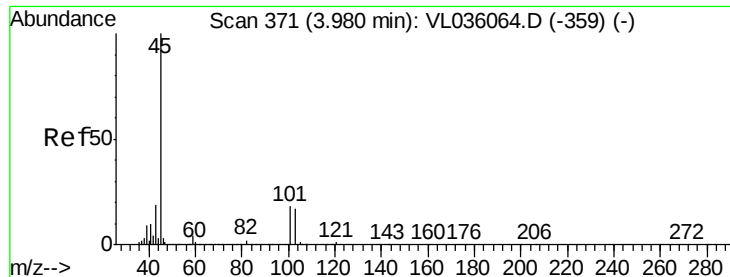
10000

5000

0

Time-->





#19

Isopropyl Alcohol

Concen: 1.937 ppbv m

RT: 3.98 min Scan# 370

Delta R.T. -0.00 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tot Ion: 45 Resp: 164687

Ion Ratio Lower Upper

45 100

58 0.0 0.0 0.0

Instrument :

MSVOA_L

ClientSampled :

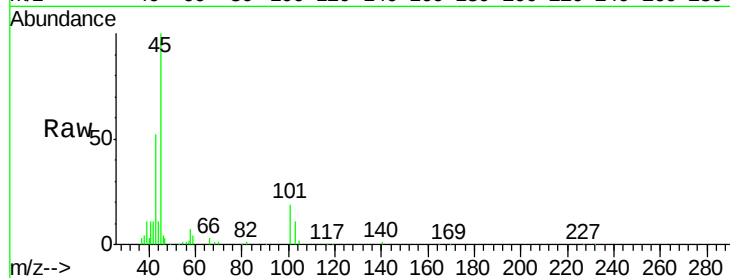
IA-4B

Manual Integrations

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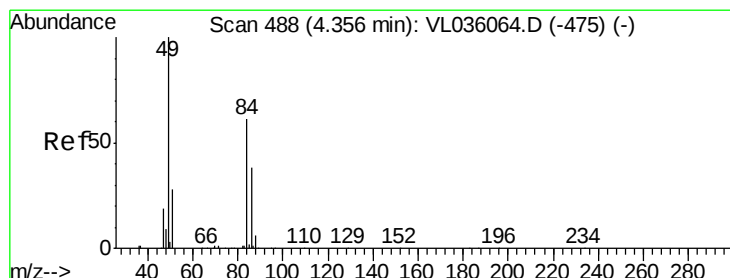
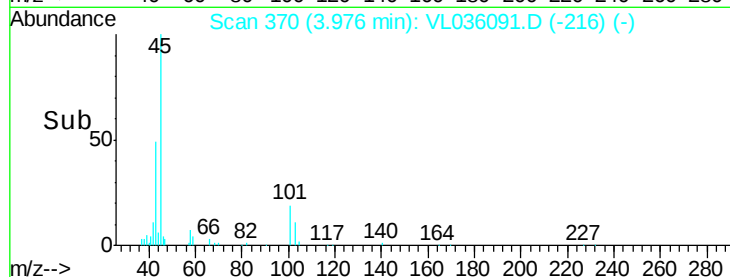
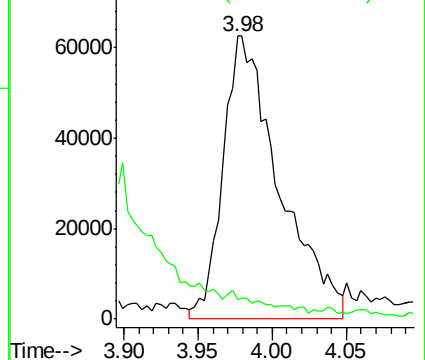
MMDadoda

12/11/2020 5:45:30 PM



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 5.529 ppbv

RT: 4.35 min Scan# 487

Delta R.T. -0.00 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tgt Ion: 84 Resp: 315167

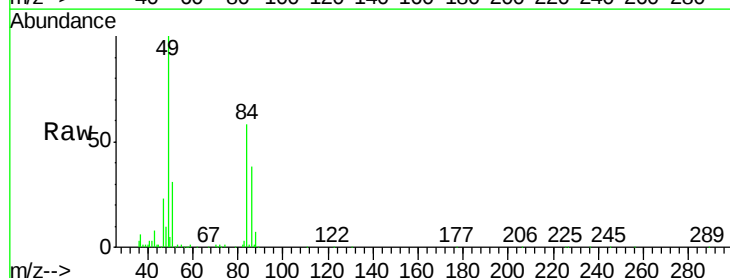
Ion Ratio Lower Upper

84 100

49 171.1 133.0 199.4

51 51.4 38.9 58.3

86 64.3 48.8 73.2

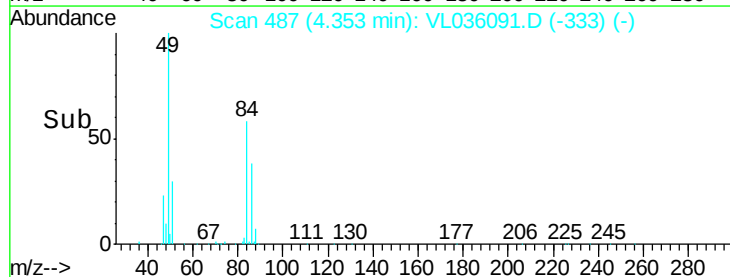
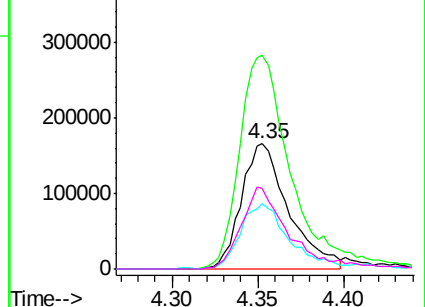


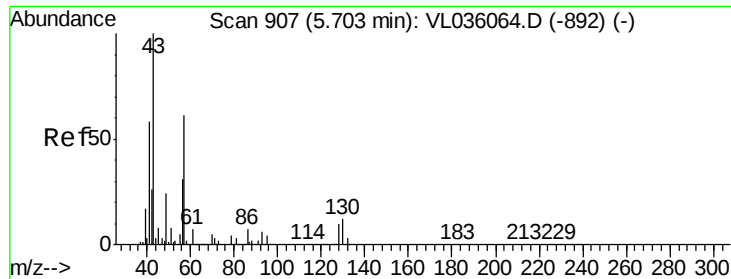
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0





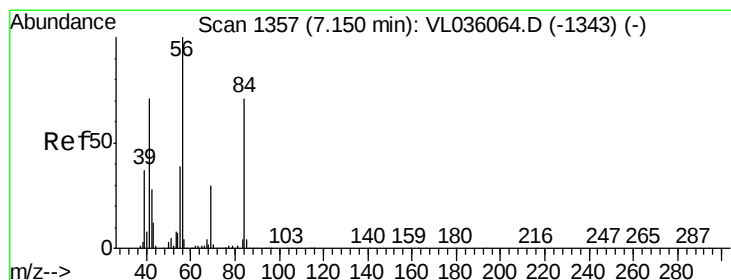
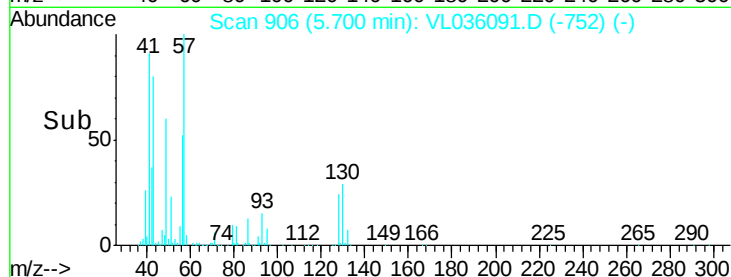
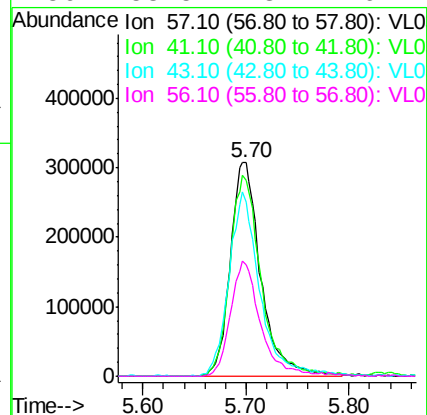
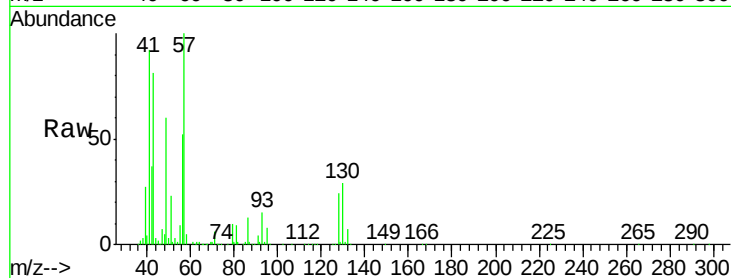
#26
Hexane
Concen: 5.076 ppbv
RT: 5.70 min Scan# 906
Delta R.T. -0.00 min
Lab File: VL036091.D
Acq: 8 Dec 2020 8:21

Instrument :
MSVOA_L
ClientSampleId :
IA-4B

Tot Ion	Ratio	Lower	Upper
57	100		
41	96.7	82.9	124.3
43	87.4	199.9	299.9#
56	53.5	43.1	64.7

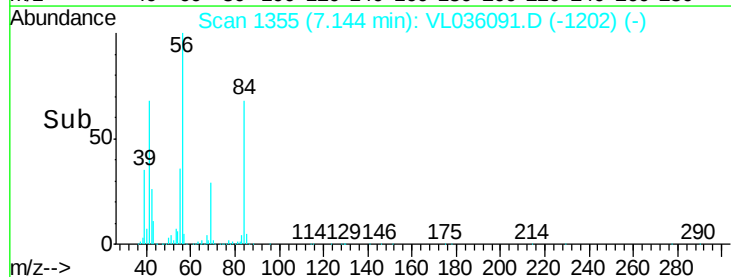
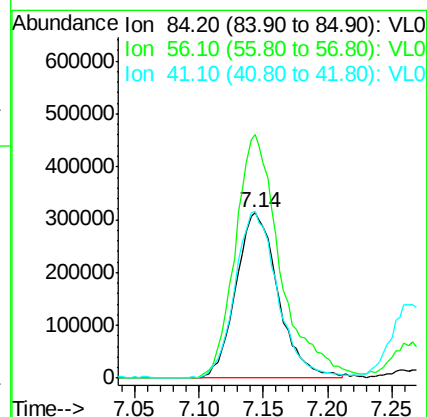
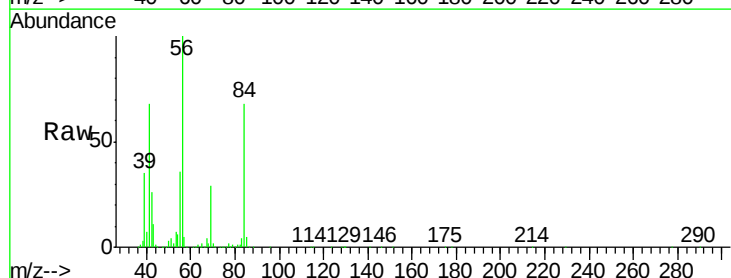
Manual Integrations
APPROVED

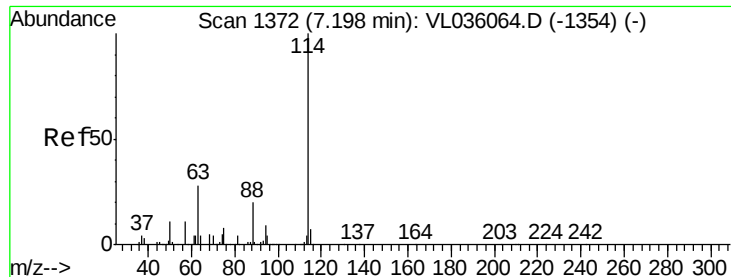
MMDadoda
12/11/2020 5:45:30 PM



#30
Cyclohexane
Concen: 7.788 ppbv
RT: 7.14 min Scan# 1355
Delta R.T. -0.01 min
Lab File: VL036091.D
Acq: 8 Dec 2020 8:21

Tgt Ion	Ratio	Lower	Upper
84	100		
56	156.4	128.0	192.0
41	100.9	81.3	121.9





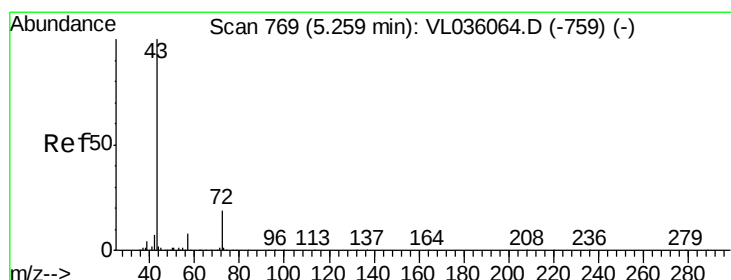
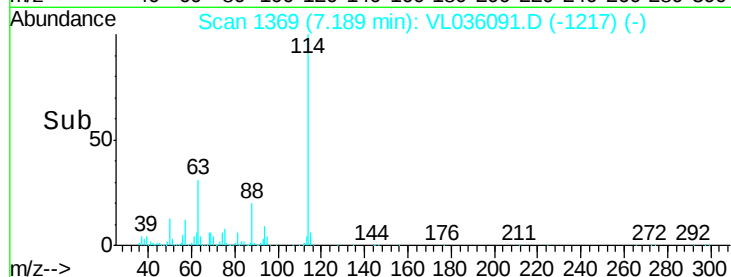
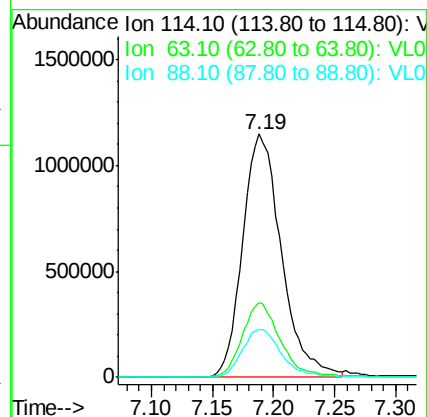
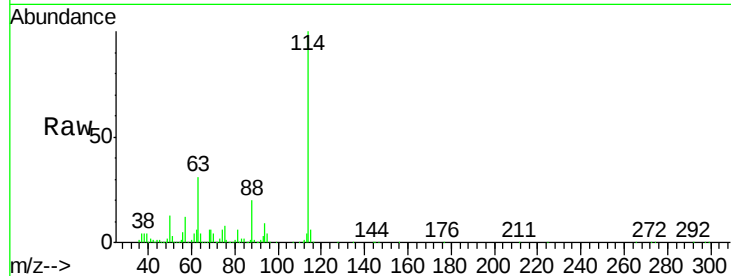
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.19 min Scan# 1369
 Delta R.T. -0.01 min
 Lab File: VL036091.D
 Acq: 8 Dec 2020 8:21

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-4B

Tot Ion	Ratio	Lower	Upper
114	100		
63	30.9	23.6	35.4
88	20.3	15.8	23.6

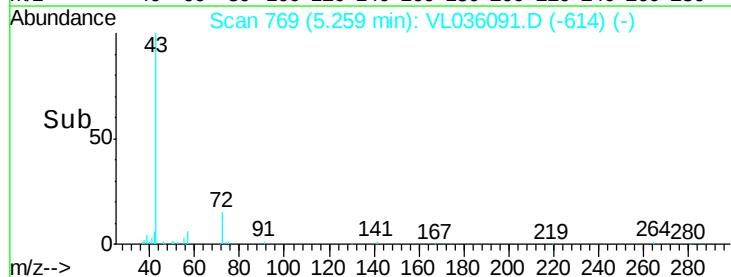
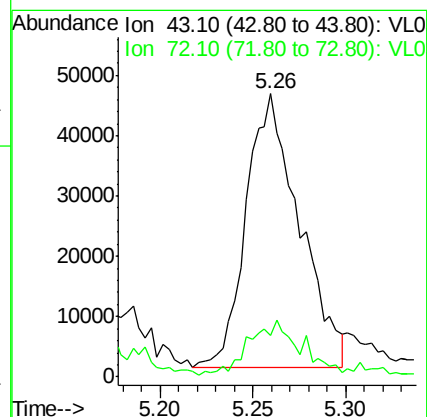
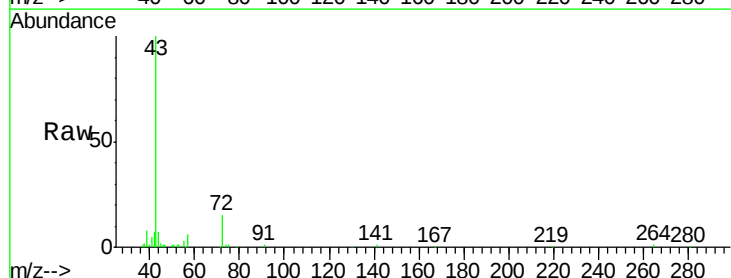
Manual Integrations
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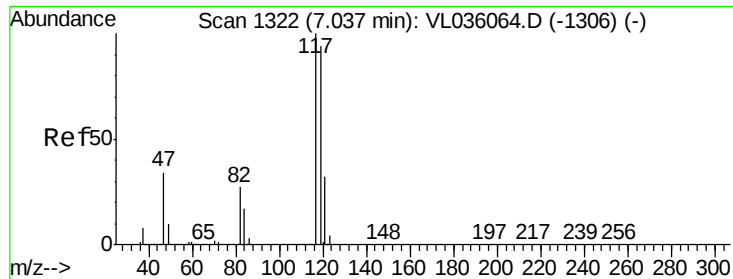
MMDadoda
 12/11/2020 5:45:30 PM



#34
 2-Butanone
 Concen: 0.540 ppbv
 RT: 5.26 min Scan# 769
 Delta R.T. -0.00 min
 Lab File: VL036091.D
 Acq: 8 Dec 2020 8:21

Tgt Ion	Ratio	Lower	Upper
43	100		
72	23.4	16.5	24.7





#35

Carbon Tetrachloride

Concen: 0.072 ppbv m

RT: 7.02 min Scan# 1318

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

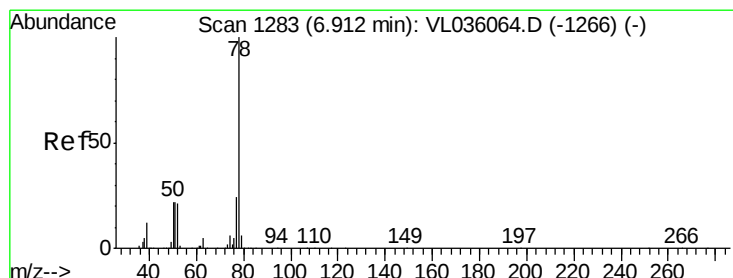
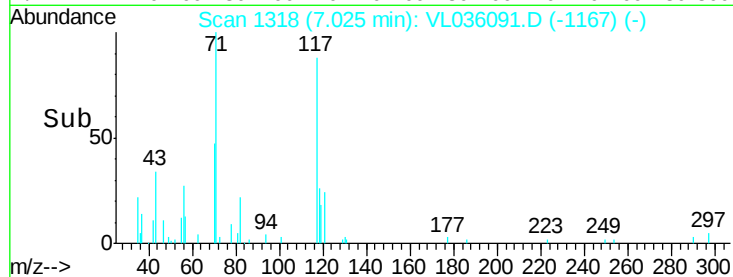
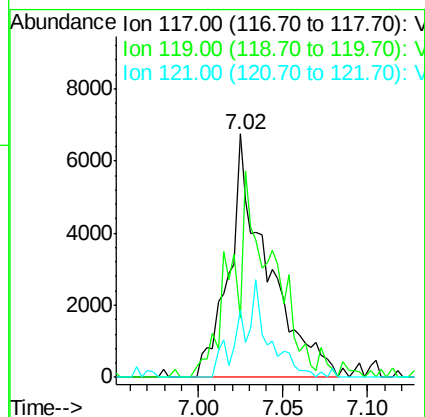
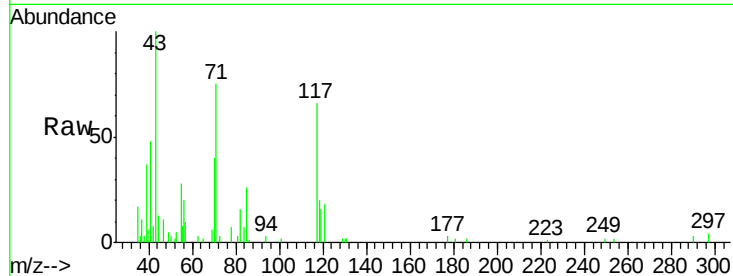
ClientSampled :

IA-4B

Tot Ion	Ratio	Lower	Upper
117	100		
119	24.4	75.1	112.7#
121	27.3	25.6	38.4

Manual Integrations
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#36

Benzene

Concen: 0.356 ppbv

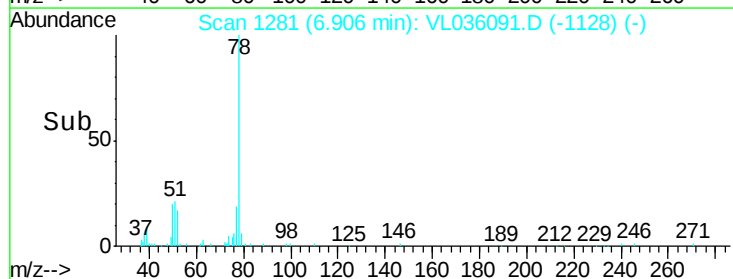
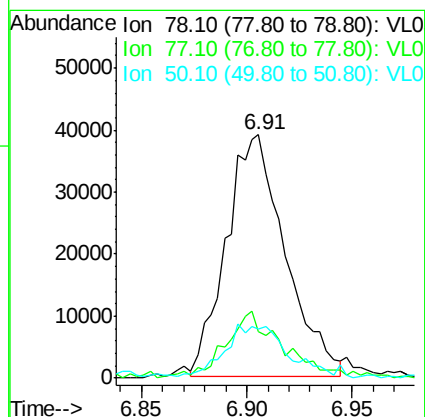
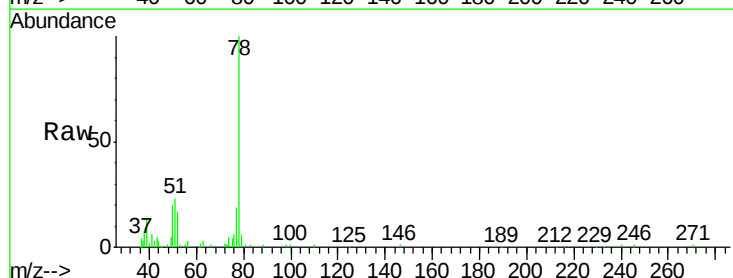
RT: 6.91 min Scan# 1281

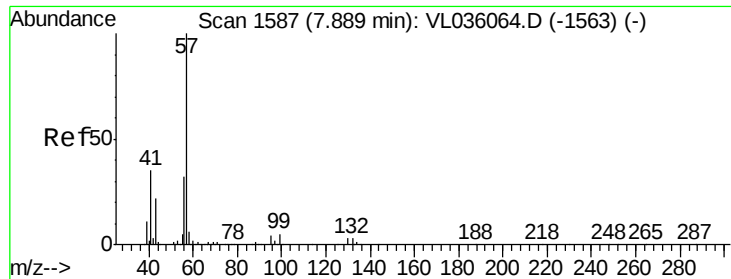
Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tgt Ion	Ratio	Lower	Upper
78	100		
77	18.2	19.4	29.2#
50	19.0	17.8	26.8





#44

2,2,4-Trimethylpentane

Concen: 0.374 ppbv

RT: 7.88 min Scan# 1585

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

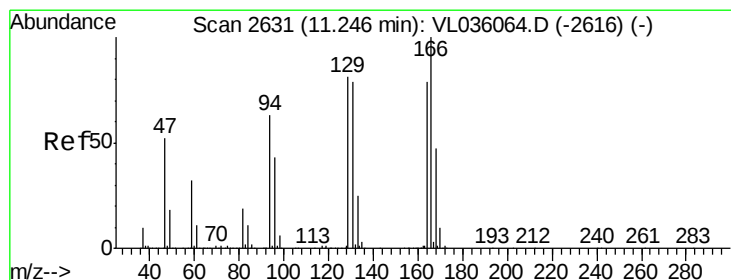
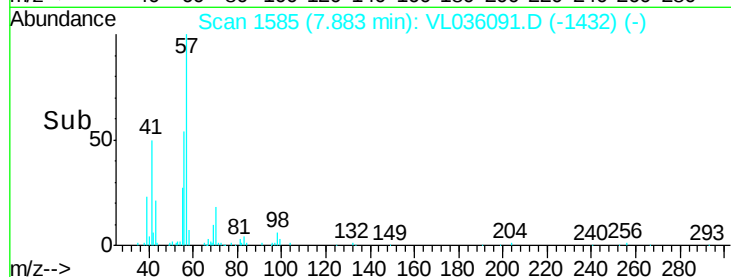
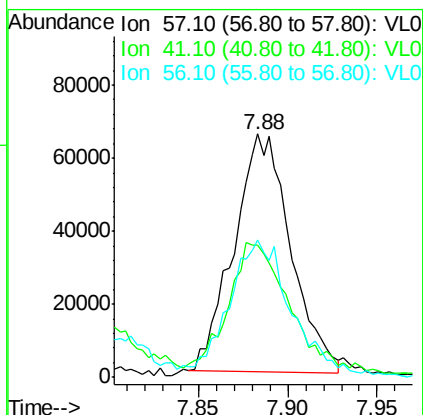
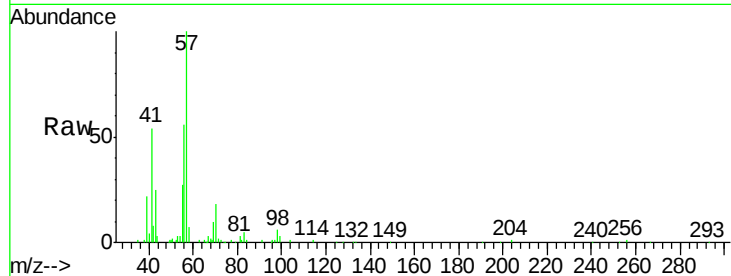
ClientSampled :

IA-4B

Tot Ion	Ratio	Lower	Upper
57	100		
41	61.4	28.9	43.3#
56	64.7	25.3	37.9#

Manual Integrations
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#52

Tetrachloroethene

Concen: 0.107 ppbv m

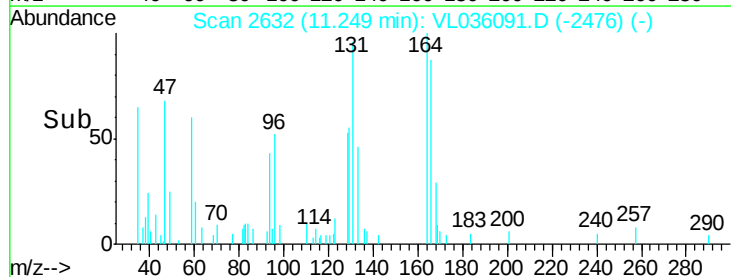
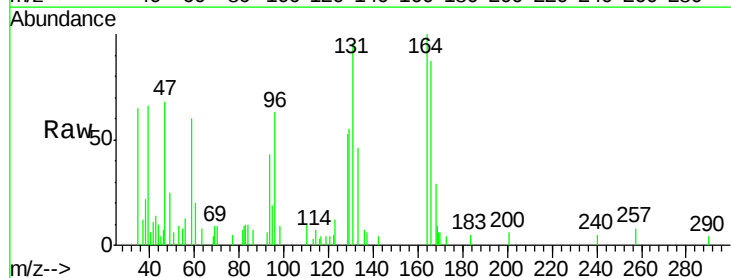
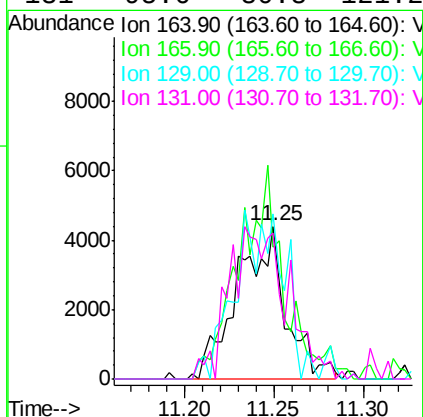
RT: 11.25 min Scan# 2632

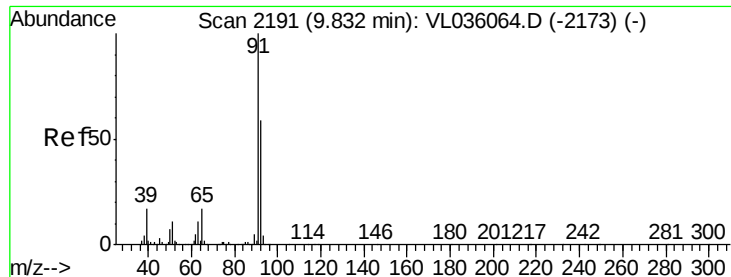
Delta R.T. 0.00 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tgt Ion	Ratio	Lower	Upper
164	100		
166	86.6	101.9	152.9#
129	55.2	82.1	123.1#
131	95.6	80.8	121.2





#53

Toluene

Concen: 4.948 ppbv

RT: 9.82 min Scan# 2188

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

ClientSampleId :

IA-4B

Tot Ion: 91 Resp: 1189135

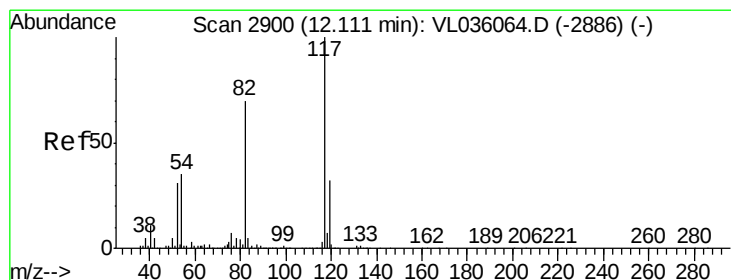
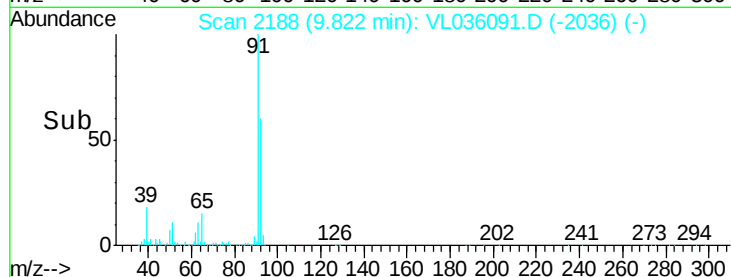
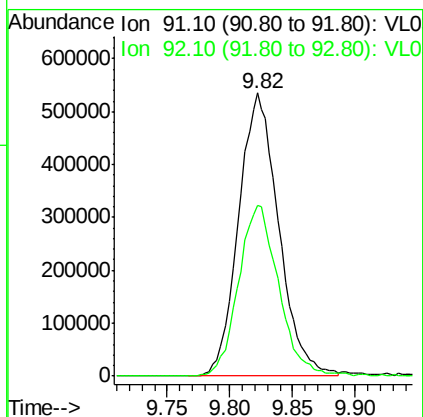
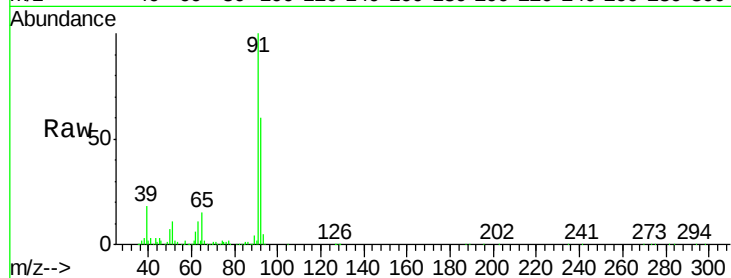
Ion Ratio Lower Upper

91 100

92 60.9 48.2 72.2

Manual Integrations
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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2898

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

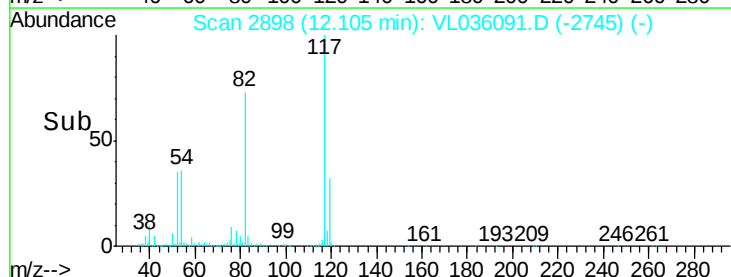
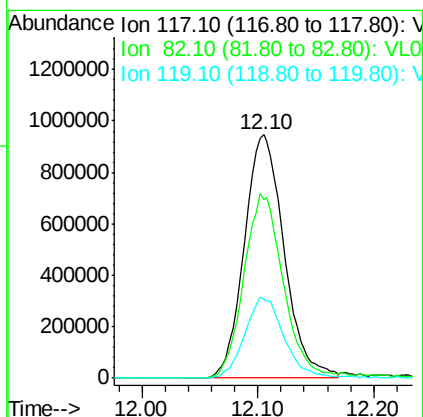
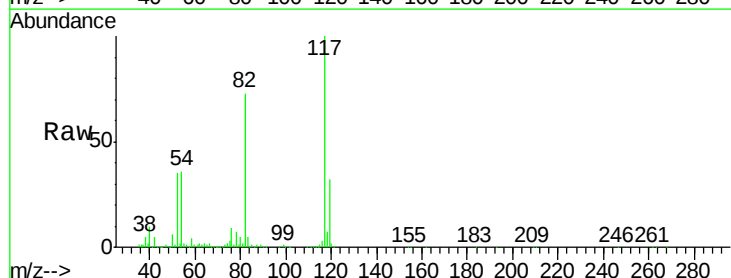
Tgt Ion: 117 Resp: 2264201

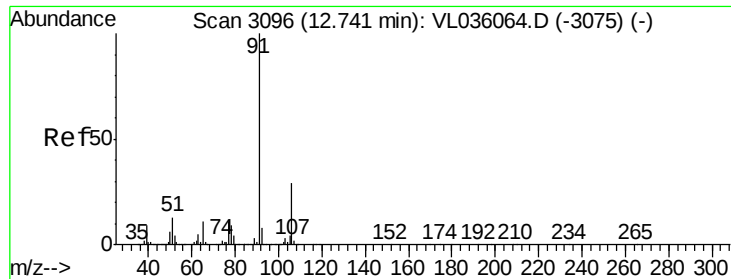
Ion Ratio Lower Upper

117 100

82 77.0 0.0 0.0#

119 33.4 0.0 0.0#





#58

Ethyl Benzene

Concen: 2.108 ppbv

RT: 12.73 min Scan# 3092

Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

ClientSampled :

IA-4B

Tot Ion: 91 Resp: 654221

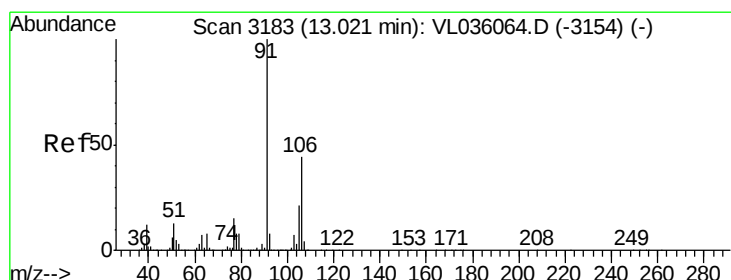
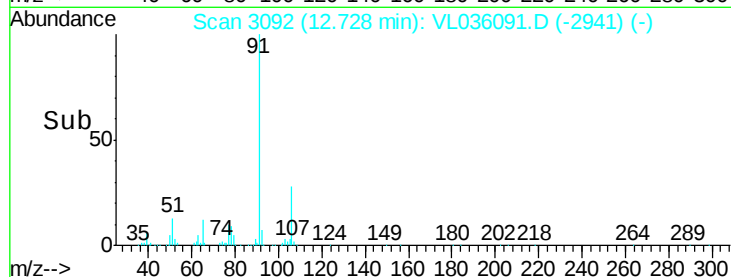
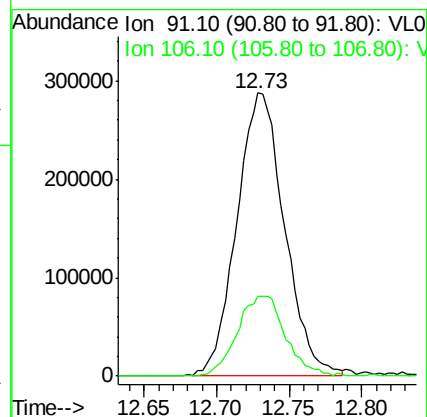
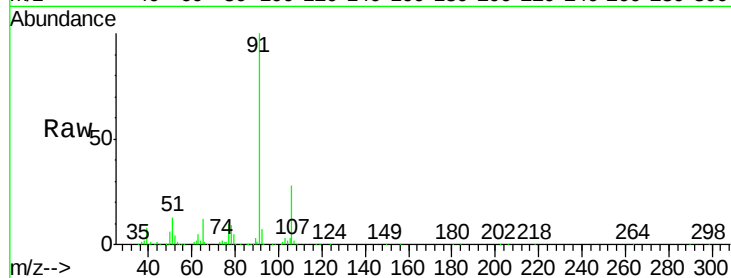
Ion Ratio Lower Upper

91 100

106 28.1 23.0 34.4

Manual Integrations
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#59

m/p-Xylene

Concen: 10.040 ppbv

RT: 12.99 min Scan# 3173

Delta R.T. -0.03 min

Lab File: VL036091.D

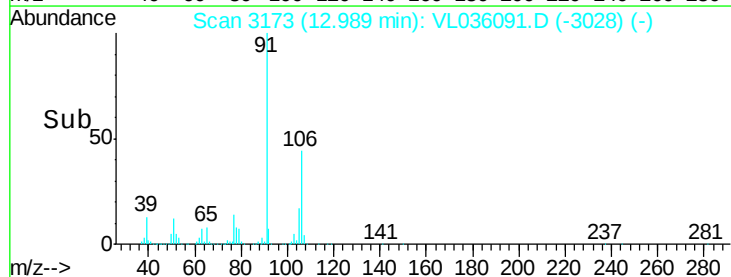
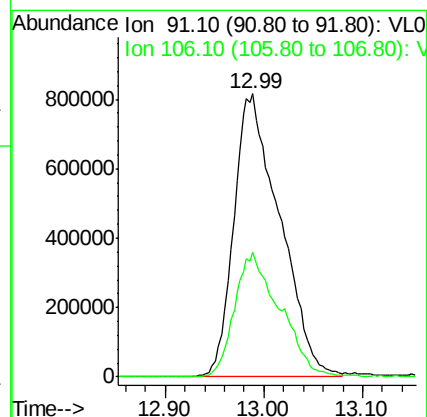
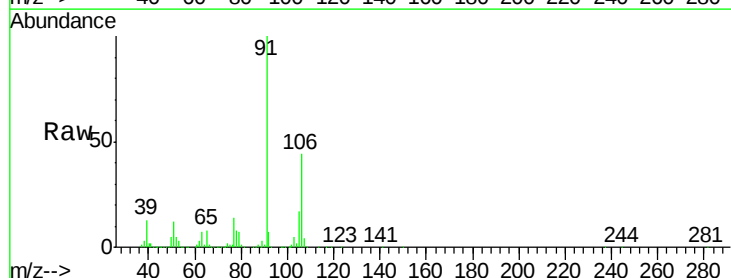
Acq: 8 Dec 2020 8:21

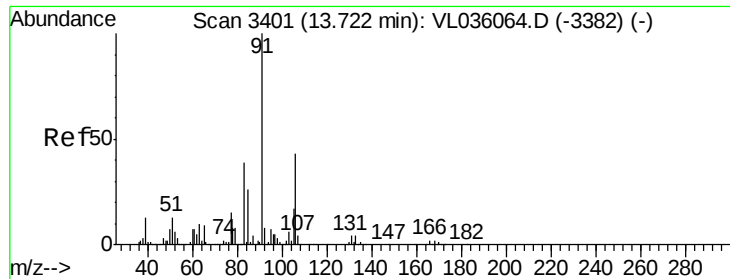
Tgt Ion: 91 Resp: 2623947

Ion Ratio Lower Upper

91 100

106 43.5 33.6 50.4





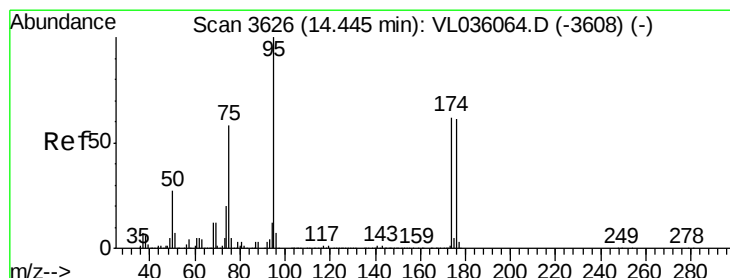
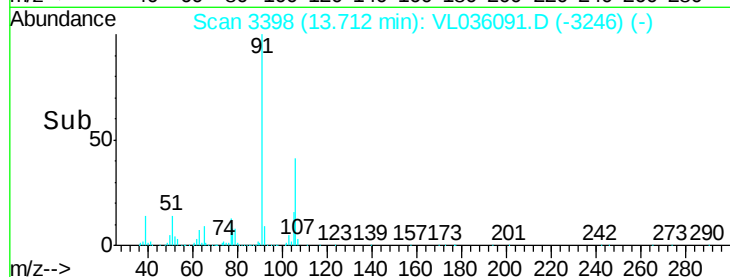
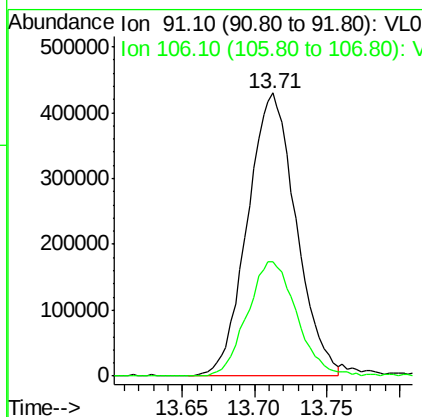
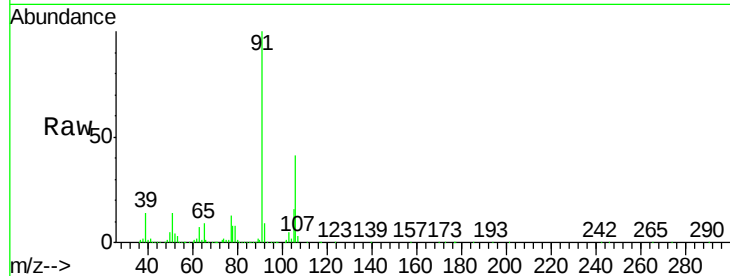
#60
o-Xylene
Concen: 4.030 ppbv
RT: 13.71 min Scan# 3398
Delta R.T. -0.01 min
Lab File: VL036091.D
Acq: 8 Dec 2020 8:21

Instrument :
MSVOA_L
ClientSampleID :
IA-4B

Tot Ion: 91 Resp: 992246
Ion Ratio Lower Upper
91 100
106 42.1 21.6 64.6

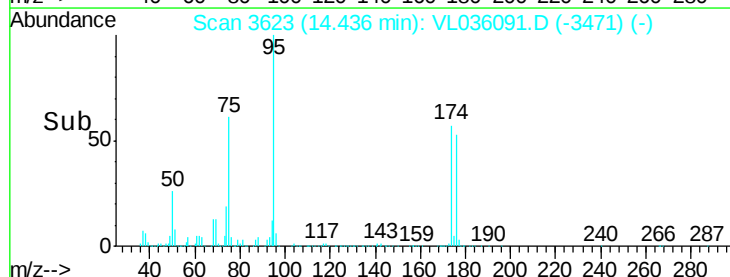
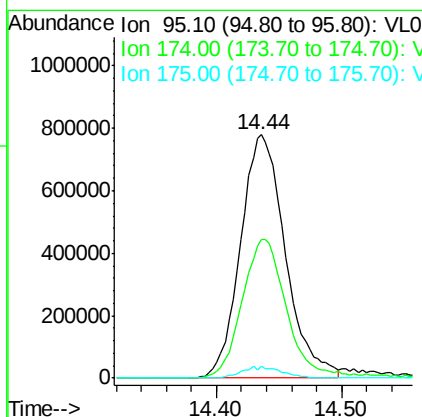
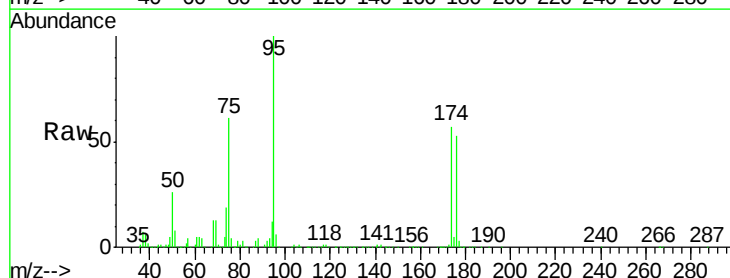
Manual Integrations
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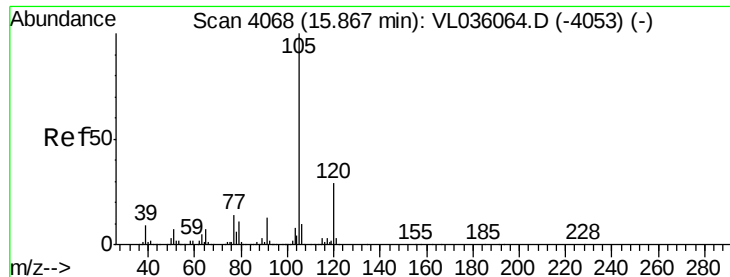
MMDadoda
12/11/2020 5:45:30 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 10.706 ppbv
RT: 14.44 min Scan# 3623
Delta R.T. -0.01 min
Lab File: VL036091.D
Acq: 8 Dec 2020 8:21

Tgt Ion: 95 Resp: 1924749
Ion Ratio Lower Upper
95 100
174 57.6 50.7 76.1
175 4.4 4.0 6.0





#72

4-Ethyltoluene

Concen: 0.248 ppbv m

RT: 15.87 min Scan# 4068

Delta R.T. -0.00 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

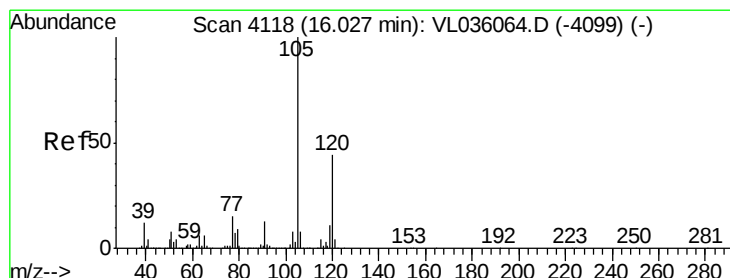
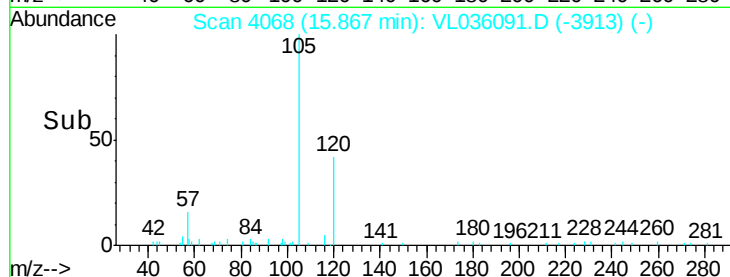
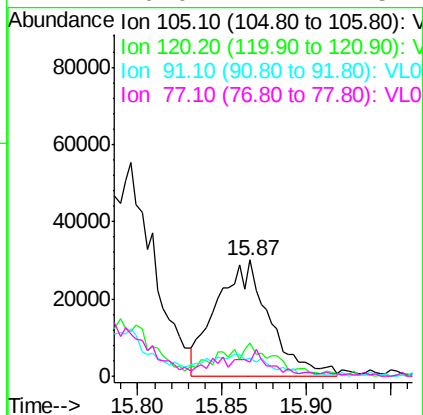
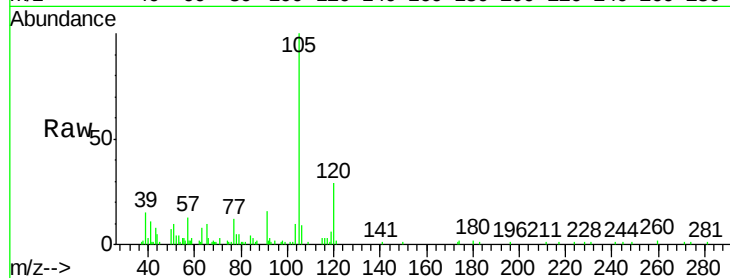
ClientSampleId :

IA-4B

Tot Ion:	105	Resp:	66130
Ion Ratio	Lower	Upper	
105	100		
120	0.0	23.6	35.4#
91	20.1	11.4	17.0#
77	0.0	12.1	18.1#

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#73

1,3,5-Trimethylbenzene

Concen: 0.213 ppbv m

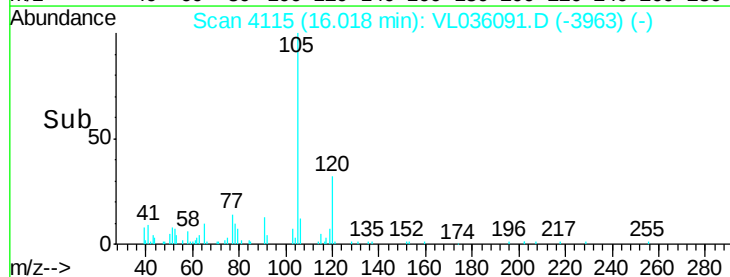
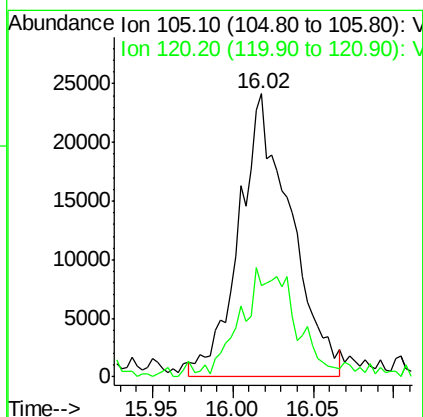
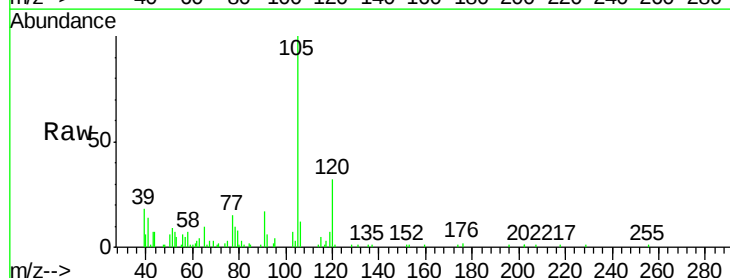
RT: 16.02 min Scan# 4115

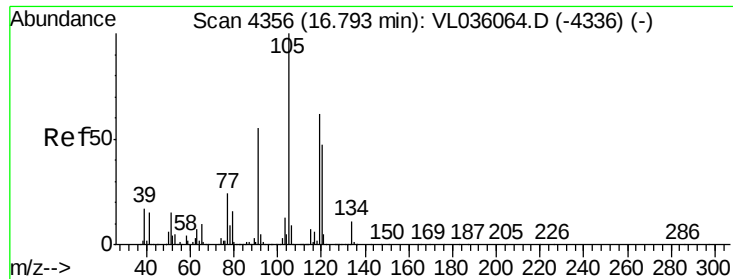
Delta R.T. -0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tgt Ion:	105	Resp:	54233
Ion Ratio	Lower	Upper	
105	100		
120	32.3	35.4	53.2#





#74

1,2,4-Trimethylbenzene

Concen: 0.884 ppbv m

RT: 16.79 min Scan# 4356

Delta R.T. -0.00 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Instrument :

MSVOA_L

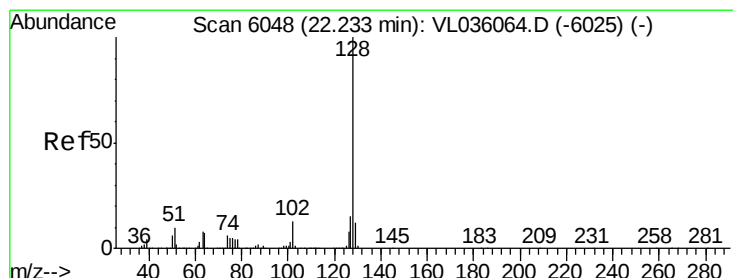
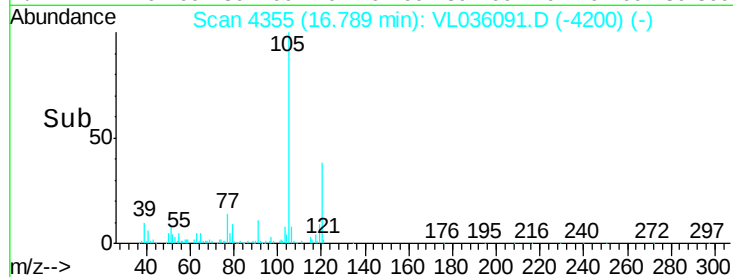
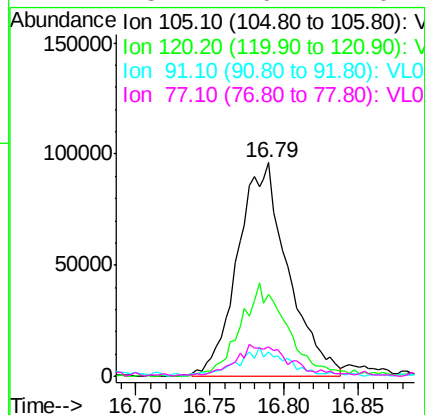
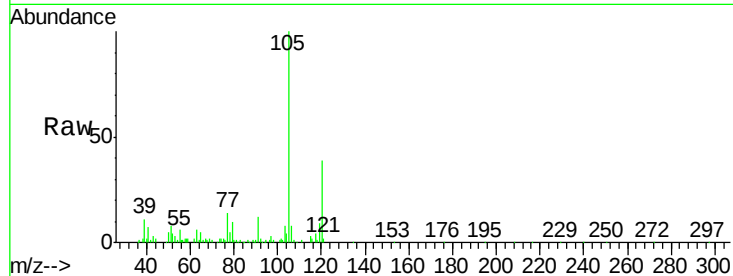
ClientSampled :

IA-4B

Tot Ion:	105	Resp:	226093
Ion Ratio		Lower	Upper
105	100		
120	38.6	37.4	56.0
91	11.6	45.6	68.4#
77	13.7	19.4	29.2#

Manual Integrations
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12/11/2020 5:45:30 PM



#79

Naphthalene

Concen: 0.342 ppbv m

RT: 22.24 min Scan# 6051

Delta R.T. 0.01 min

Lab File: VL036091.D

Acq: 8 Dec 2020 8:21

Tgt Ion:	128	Resp:	44450
Ion Ratio		Lower	Upper
128	100		
127	18.6	11.7	17.5#
129	8.0	9.3	13.9#

