

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062220\
 Data File : VL035107.D
 Acq On : 22 Jun 2020 12:14
 Operator : SY/AP
 Sample : L3075-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 CARBON-01

Manual Integrations
 APPROVED

MMDadoda
 6/23/2020 10:59:10 AM

Quant Time: Jun 22 12:51:57 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL061920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Sat Jun 20 2020
 QLast Update : Sat Jun 20 02:10:36 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1210765	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	2803049	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.11	117	2724455	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.45	95	2311926	10.22	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.01	85	23370	0.143	ppbv	95
3) Chlorodifluoromethane	2.94	51	50156	0.375	ppbv	94
4) Chloromethane	3.10	50	42231	0.563	ppbv	95
9) Propene	2.97	41	58604	1.107	ppbv	87
11) Trichlorofluoromethane	3.92	101	43364	0.248	ppbv	93
13) Ethanol	3.57	45	617492	30.862	ppbv	100
15) Acetone	3.82	43	2376595	16.235	ppbv	98
17) tert-Butyl alcohol	4.27	59	155016	1.195	ppbv	96
19) Isopropyl Alcohol	3.94	45	1457350	15.333	ppbv	100
20) Methylene Chloride	4.32	84	1021712	17.245	ppbv	91
26) Hexane	5.68	57	197188	1.656	ppbv #	46
27) Carbon Disulfide	4.53	76	16452736	133.478	ppbv #	49
34) 2-Butanone	5.23	43	86243	0.536	ppbv	97
36) Benzene	6.89	78	79193	0.365	ppbv #	90
41) Tetrahydrofuran	6.06	42	22806m	0.277	ppbv	
53) Toluene	9.82	91	97028m	0.419	ppbv	
58) Ethyl Benzene	12.73	91	125194	0.409	ppbv	90
59) m/p-Xylene	12.99	91	726749	2.679	ppbv	99
60) o-Xylene	13.72	91	706615	2.616	ppbv	97
61) Styrene	13.56	104	152104	0.895	ppbv	96
72) 4-Ethyltoluene	16.03	105	37500m	0.125	ppbv	
73) 1,3,5-Trimethylbenzene	16.03	105	37736m	0.133	ppbv	
74) 1,2,4-Trimethylbenzene	16.80	105	106819	0.337	ppbv #	64
79) Naphthalene	22.26	128	31900m	0.115	ppbv	
80) Naphthalene,2-methyl-	25.02	142	10864	0.102	ppbv #	80

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

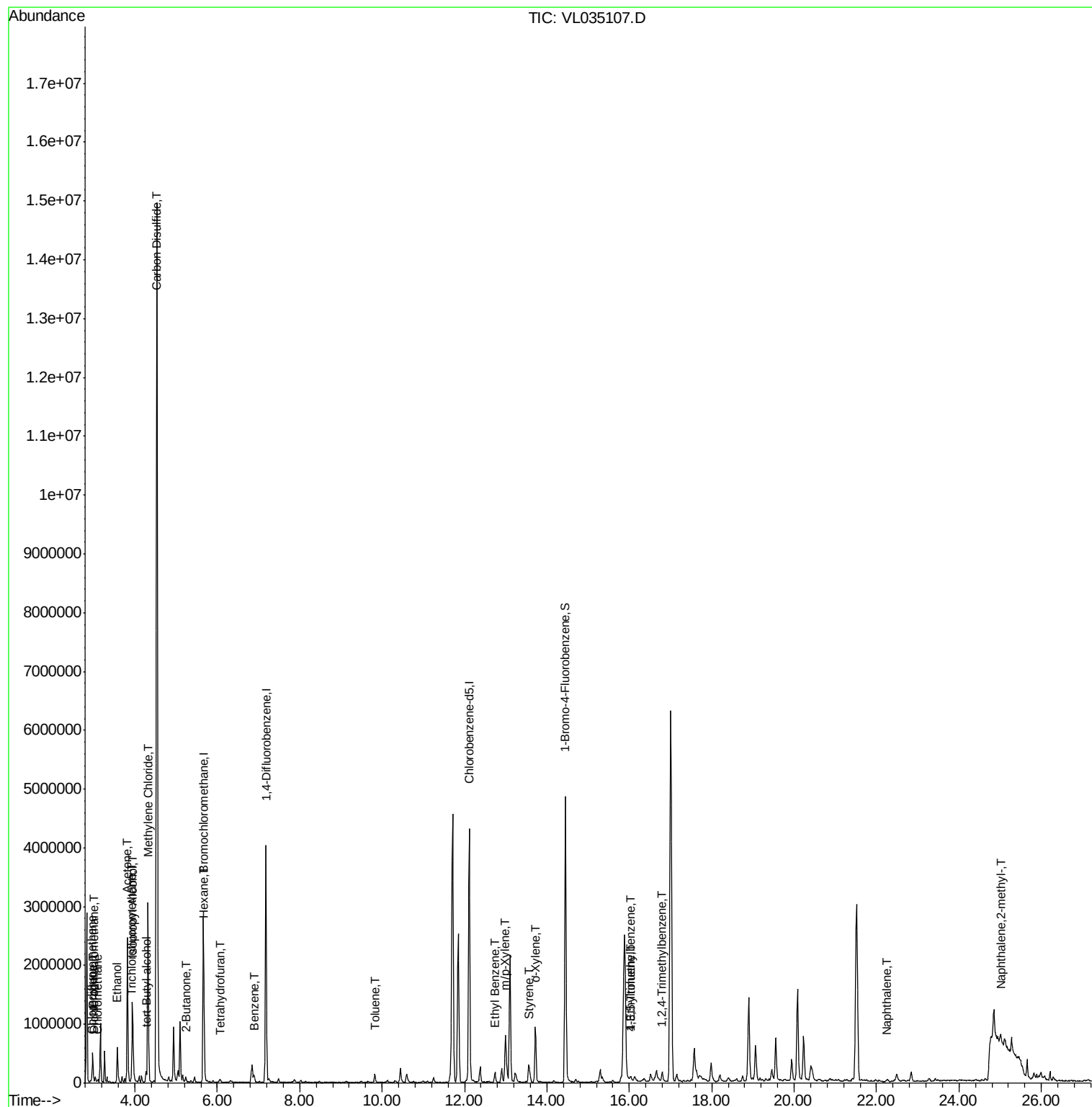
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL062220\
Data File : VL035107.D
Acq On : 22 Jun 2020 12:14
Operator : SY/AP
Sample : L3075-01
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

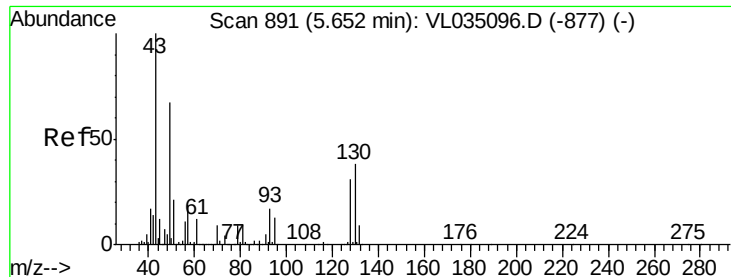
Instrument :
MSVOA_L
ClientSampleId :
CARBON-01

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM

Quant Time: Jun 22 12:51:57 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL061920AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Sat Jun
QLast Update : Sat Jun 20 02:10:36 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 893

Delta R.T. 0.01 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

ClientSampleId :

CARBON-01

Tot Ion: 49 Resp: 1210765

Ion Ratio Lower Upper

49 100

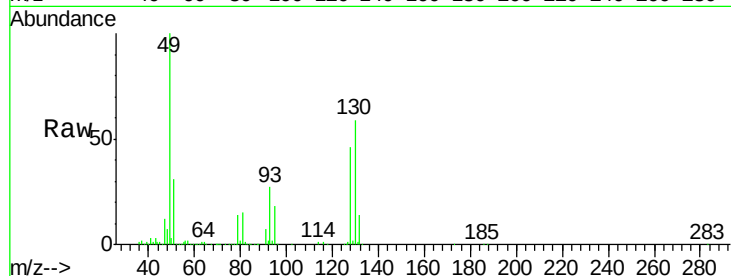
128 47.0 22.9 68.5

130 59.7 29.0 87.0

Manual Integrations
APPROVED

MMDadoda

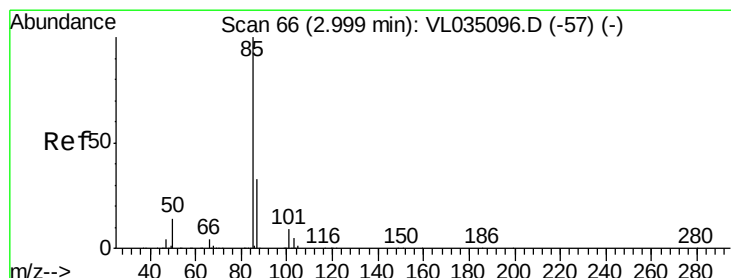
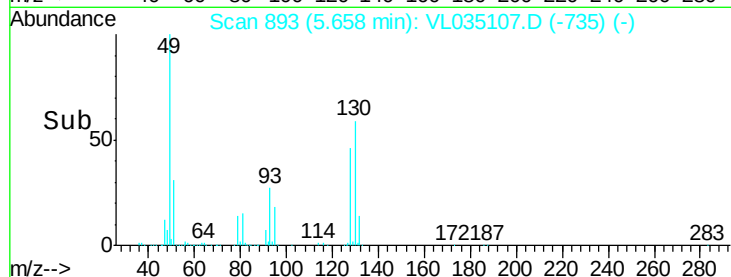
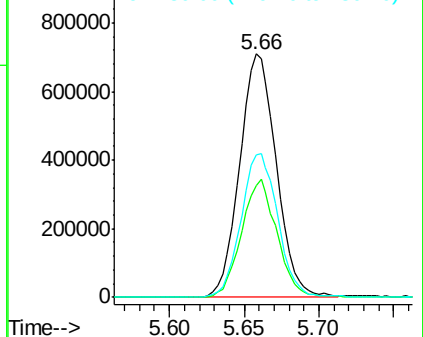
6/23/2020 10:59:10 AM



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: 0.143 ppbv

RT: 3.01 min Scan# 68

Delta R.T. 0.01 min

Lab File: VL035107.D

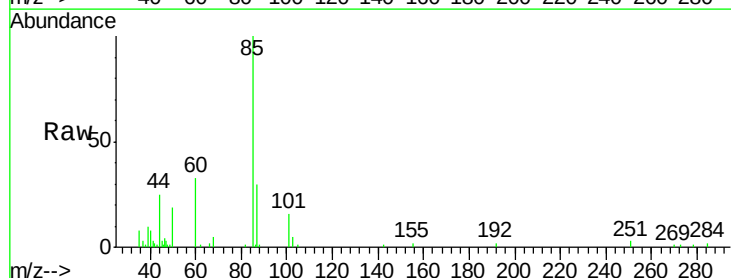
Acq: 22 Jun 2020 12:14

Tgt Ion: 85 Resp: 23370

Ion Ratio Lower Upper

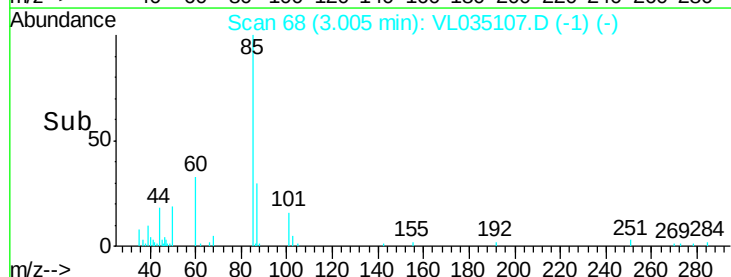
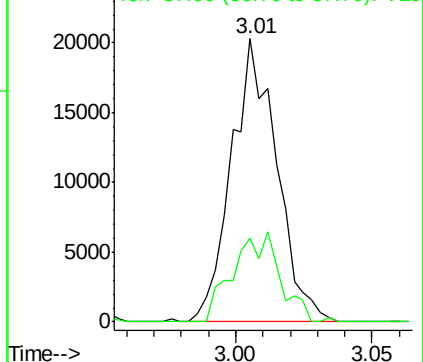
85 100

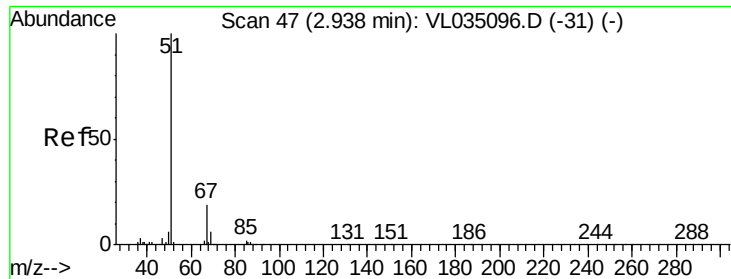
87 29.7 26.1 39.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.375 ppbv

RT: 2.94 min Scan# 49

Delta R.T. 0.01 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Tot Ion: 51 Resp: 50156

Ion Ratio Lower Upper

51 100

67 16.5 15.2 22.8

Instrument :

MSVOA_L

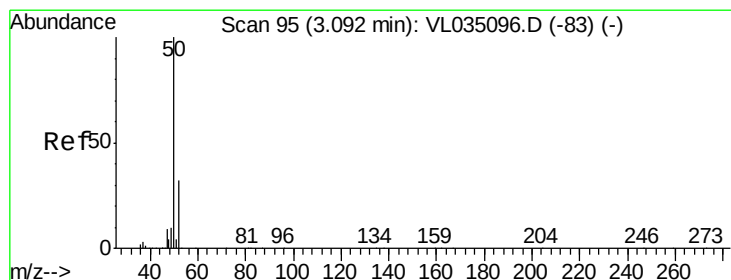
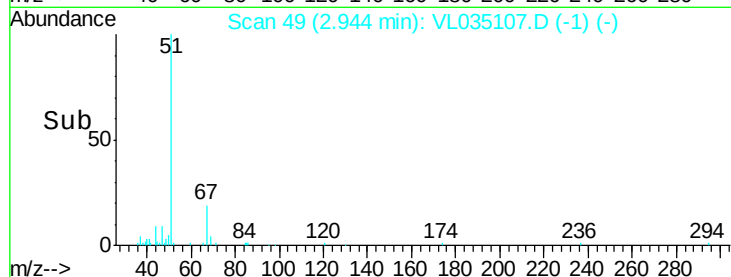
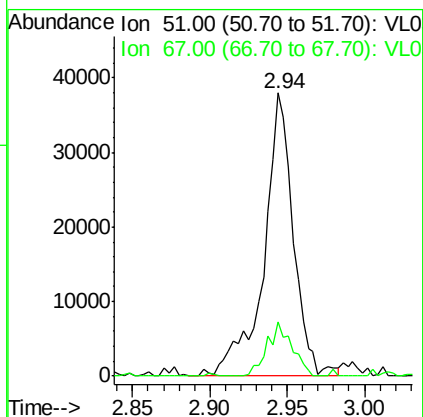
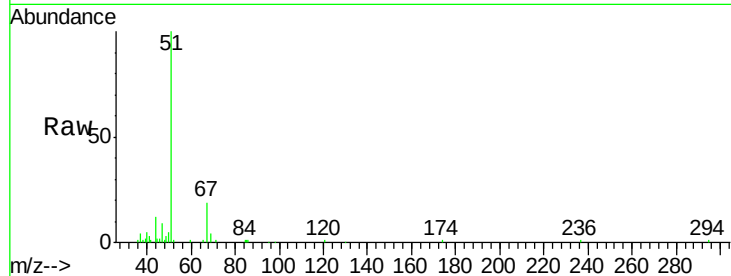
ClientSampleId :

CARBON-01

Manual Integrations
APPROVED

MMDadoda

6/23/2020 10:59:10 AM



#4

Chloromethane

Concen: 0.563 ppbv

RT: 3.10 min Scan# 98

Delta R.T. 0.01 min

Lab File: VL035107.D

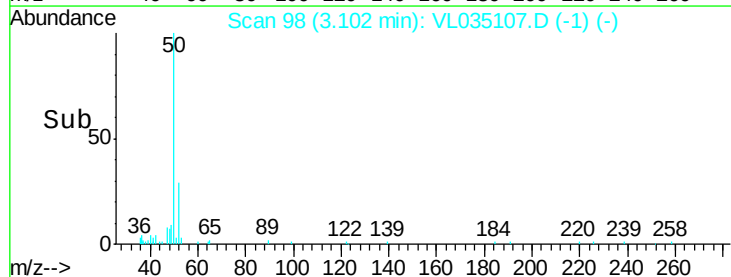
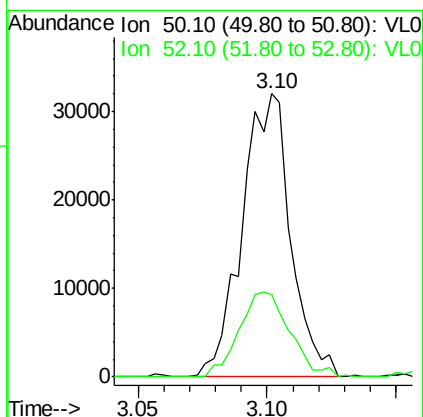
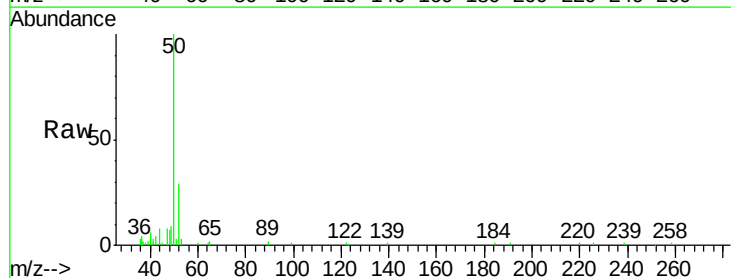
Acq: 22 Jun 2020 12:14

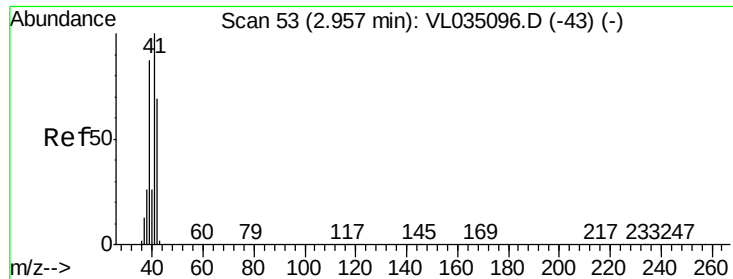
Tgt Ion: 50 Resp: 42231

Ion Ratio Lower Upper

50 100

52 29.0 25.4 38.0





#9

Propene

Concen: 1.107 ppbv

RT: 2.97 min Scan# 58

Delta R.T. 0.02 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

ClientSampleId :

CARBON-01

Tot Ion: 41 Resp: 58604

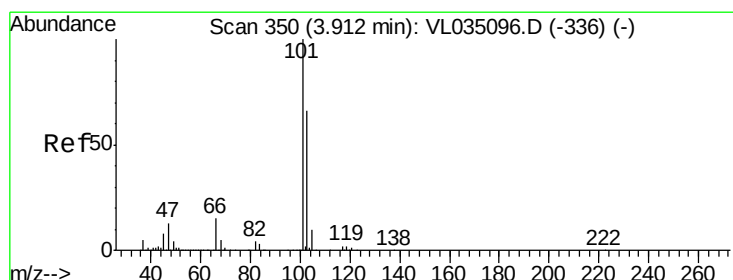
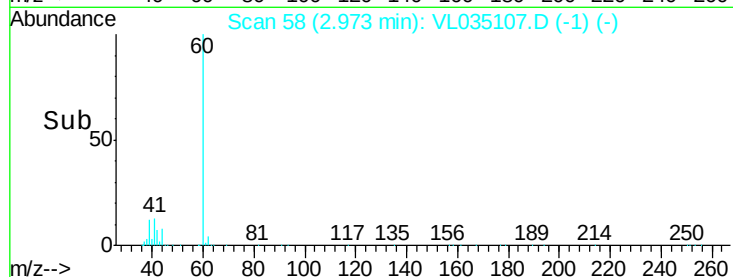
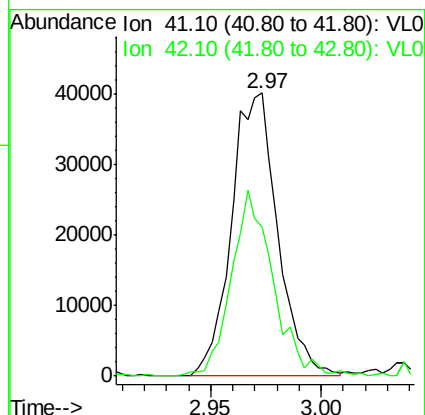
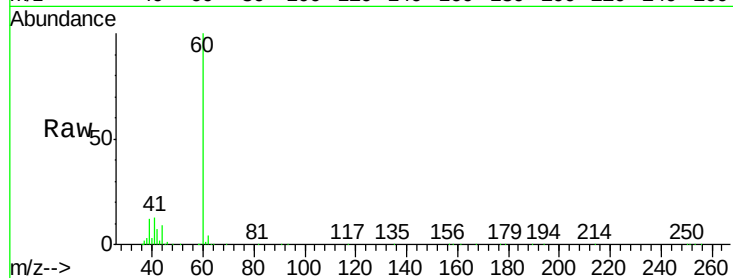
Ion Ratio Lower Upper

41 100

42 59.2 55.8 83.6

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM



#11

Trichlorofluoromethane

Concen: 0.248 ppbv

RT: 3.92 min Scan# 352

Delta R.T. 0.01 min

Lab File: VL035107.D

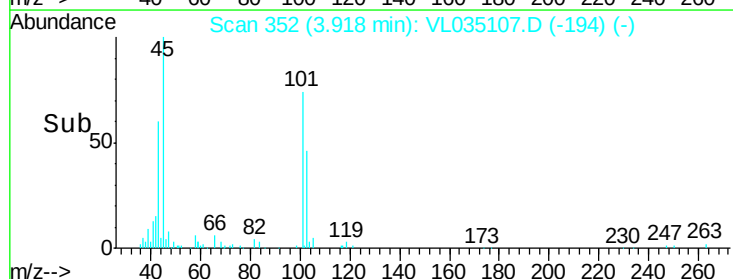
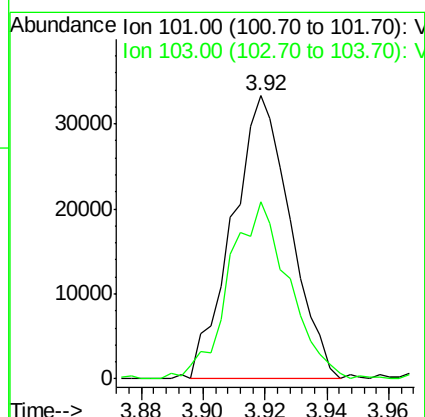
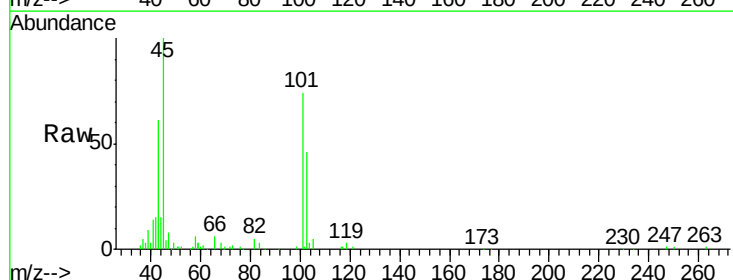
Acq: 22 Jun 2020 12:14

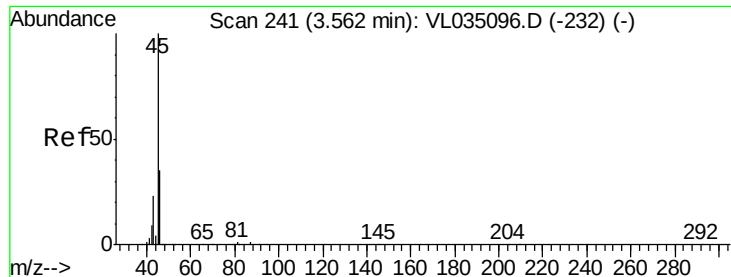
Tgt Ion: 101 Resp: 43364

Ion Ratio Lower Upper

101 100

103 60.3 52.6 79.0





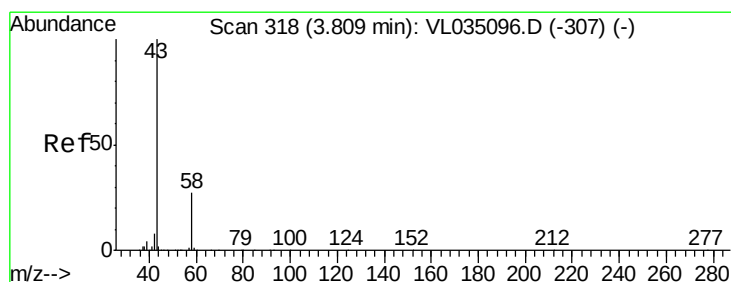
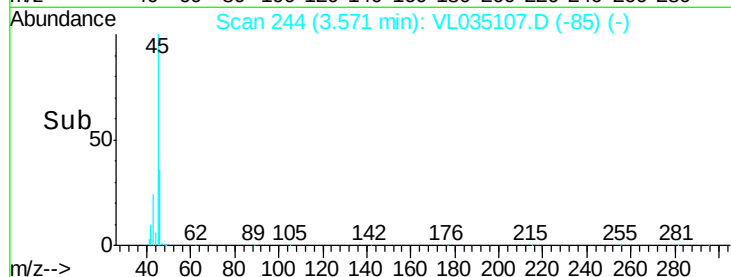
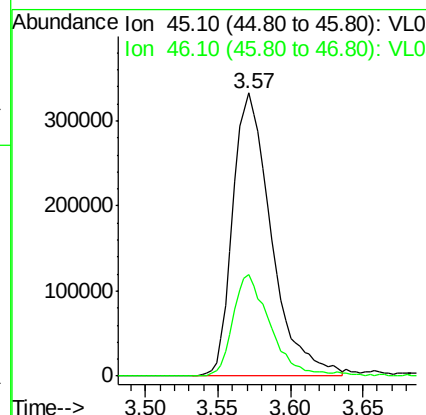
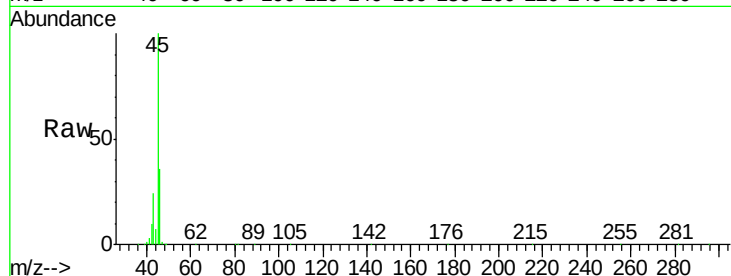
#13
Ethanol
Concen: 30.862 ppbv
RT: 3.57 min Scan# 244
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Instrument :
MSVOA_L
ClientSampleId :
CARBON-01

Tot Ion: 45 Resp: 617492
Ion Ratio Lower Upper
45 100
46 35.6 14.2 57.0

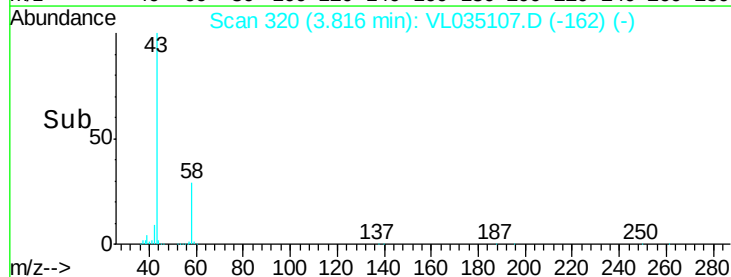
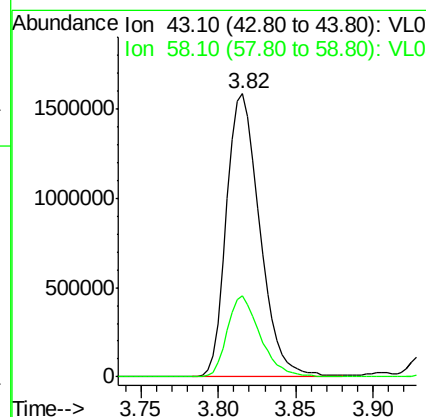
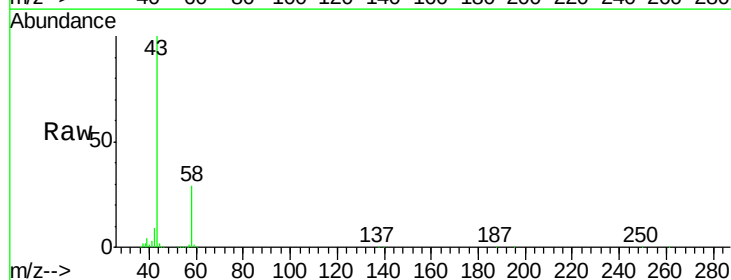
Manual Integrations
APPROVED

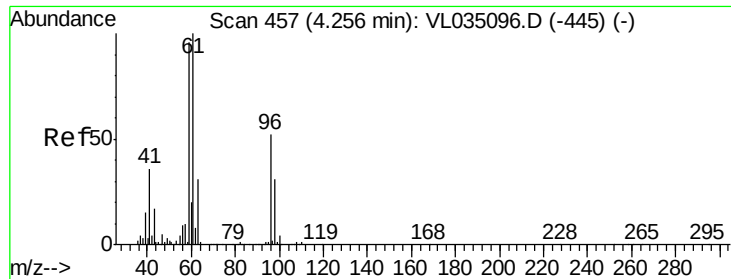
MMDadoda
6/23/2020 10:59:10 AM



#15
Acetone
Concen: 16.235 ppbv
RT: 3.82 min Scan# 320
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Tgt Ion: 43 Resp: 2376595
Ion Ratio Lower Upper
43 100
58 28.3 21.8 32.6





#17

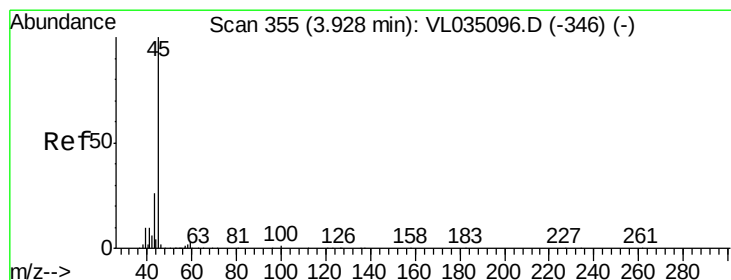
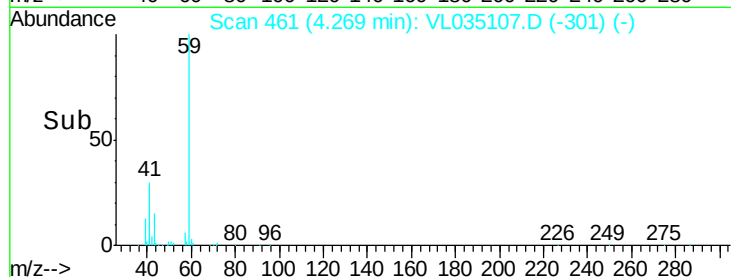
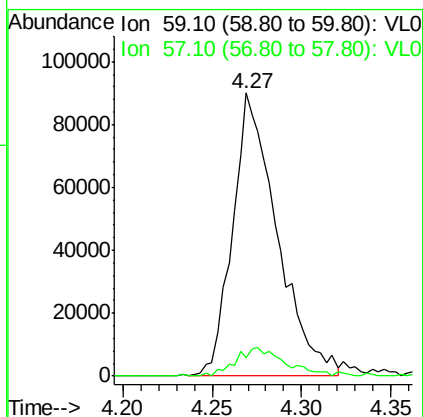
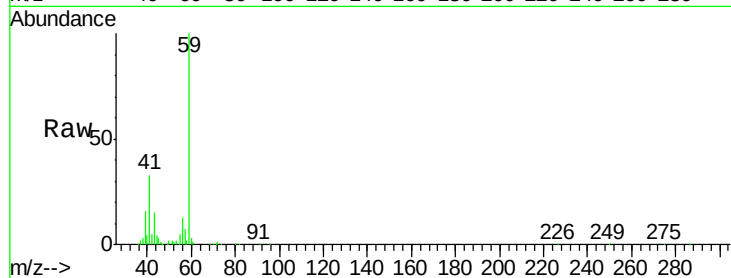
tert-Butyl alcohol
Concen: 1.195 ppbv
RT: 4.27 min Scan# 461
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Instrument :
MSVOA_L
ClientSampleId :
CARBON-01

Tot Ion	Ratio	Lower	Upper
59	100		
57	12.1	8.6	12.8

Manual Integrations
APPROVED

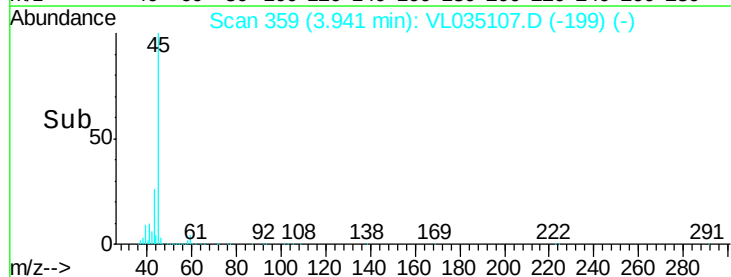
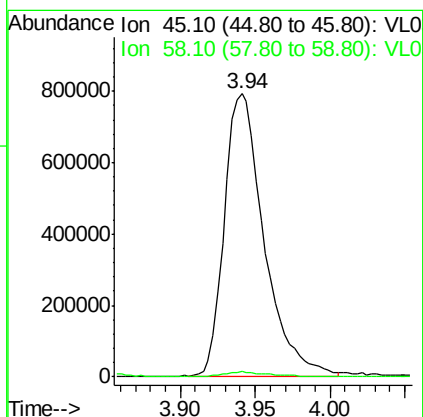
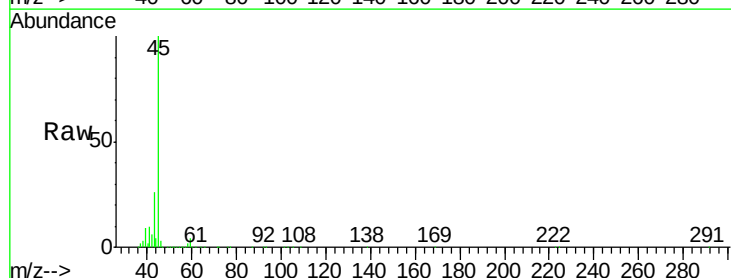
MMDadoda
6/23/2020 10:59:10 AM

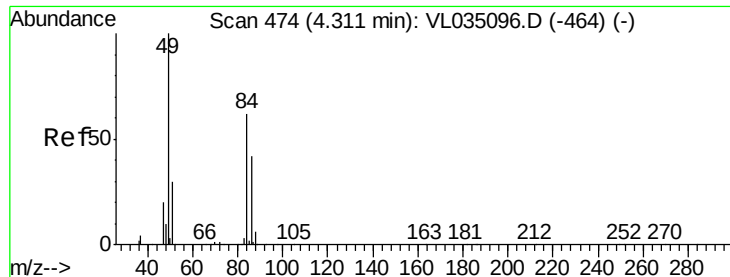


#19

Isopropyl Alcohol
Concen: 15.333 ppbv
RT: 3.94 min Scan# 359
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Tgt Ion	Ratio	Lower	Upper
45	100		
58	2.3	1.8	2.8





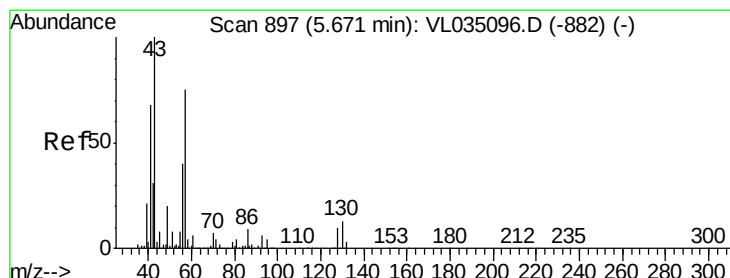
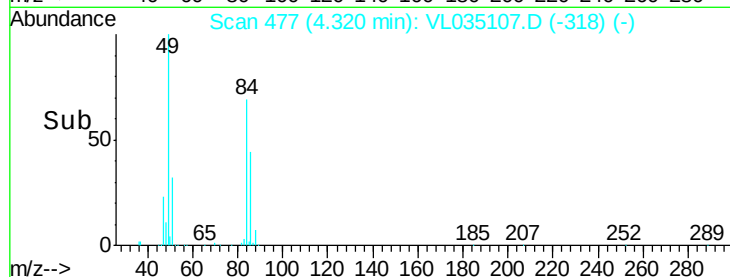
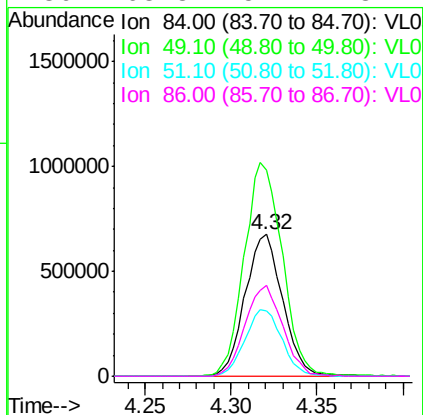
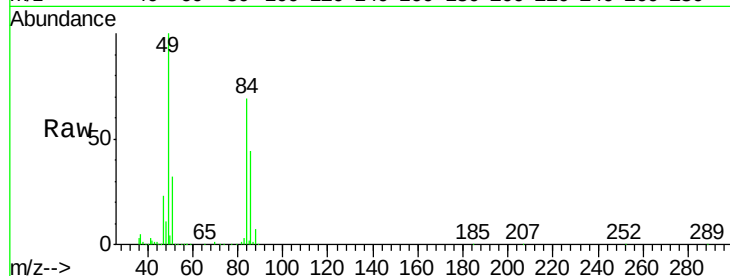
#20
Methvlene Chloride
Concen: 17.245 ppbv
RT: 4.32 min Scan# 477
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Instrument :
MSVOA_L
ClientSampleId :
CARBON-01

Tot Ion: 84 Resp: 1021712
Ion Ratio Lower Upper
84 100
49 145.5 128.8 193.2
51 46.1 38.7 58.1
86 63.8 54.1 81.1

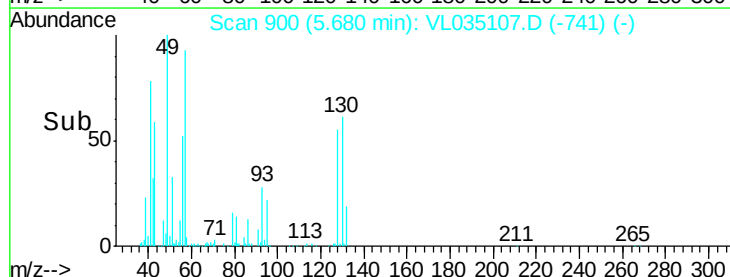
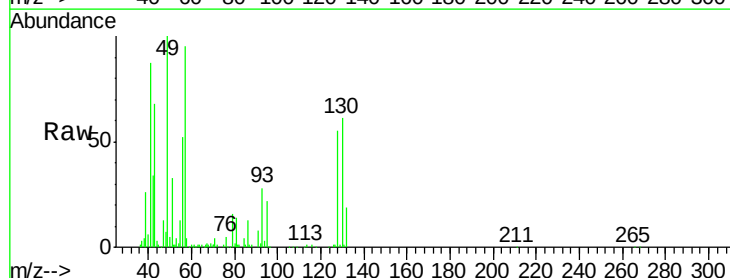
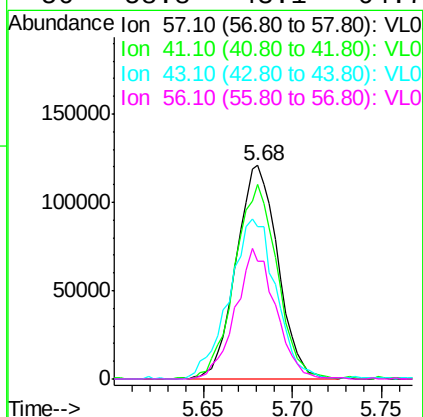
Manual Integrations
APPROVED

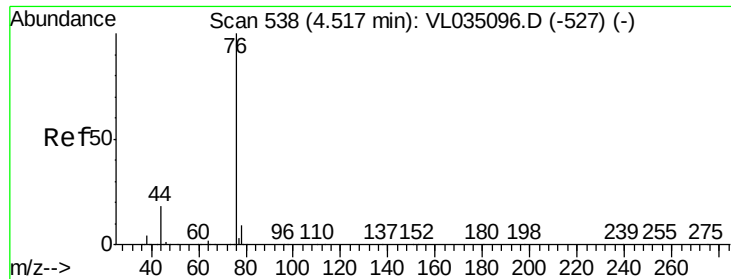
MMDadoda
6/23/2020 10:59:10 AM



#26
Hexane
Concen: 1.656 ppbv
RT: 5.68 min Scan# 900
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Tgt Ion: 57 Resp: 197188
Ion Ratio Lower Upper
57 100
41 92.9 72.9 109.3
43 85.8 181.3 271.9#
56 58.8 43.1 64.7





#27

Carbon Disulfide

Concen: 133.478 ppbv

RT: 4.53 min Scan# 542

Delta R.T. 0.01 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

ClientSampleId :

CARBON-01

Tot Ion: 76 Resp:16452736

Ion Ratio Lower Upper

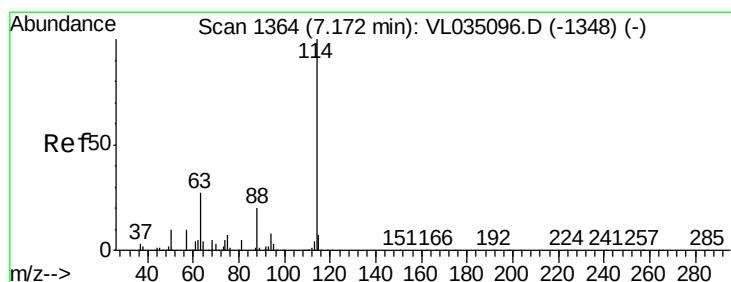
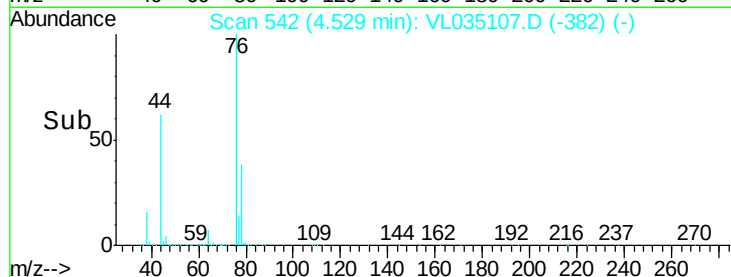
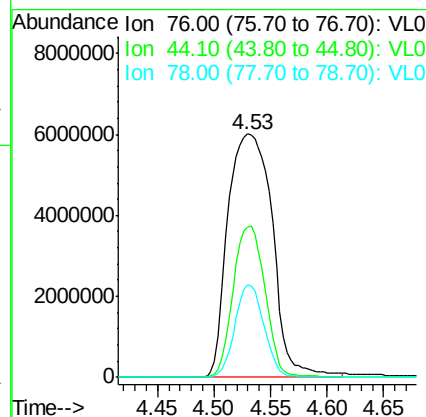
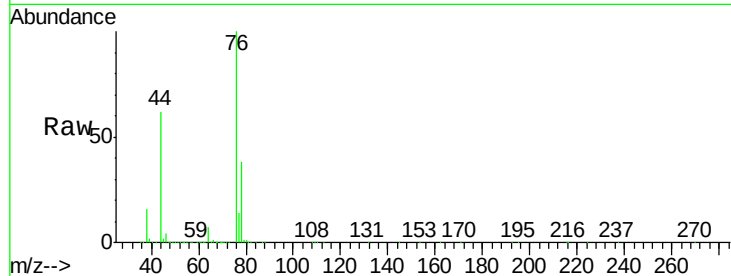
76 100

44 45.1 15.8 23.8#

78 25.1 7.6 11.4#

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.18 min Scan# 1366

Delta R.T. 0.01 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

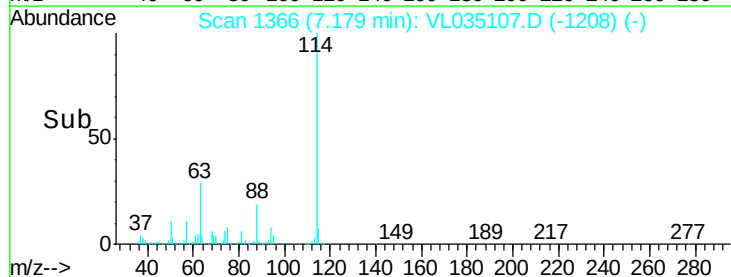
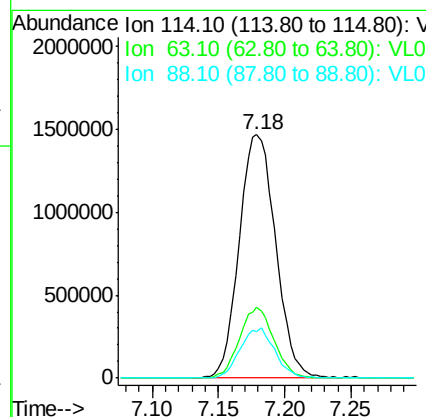
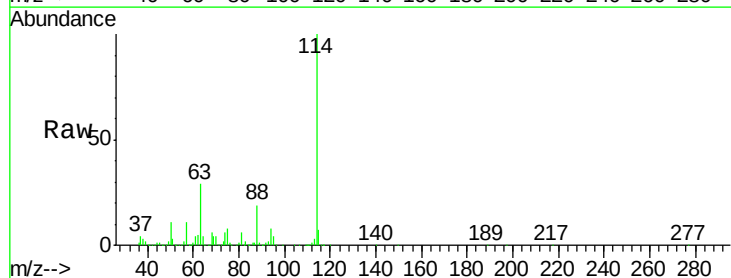
Tgt Ion:114 Resp: 2803049

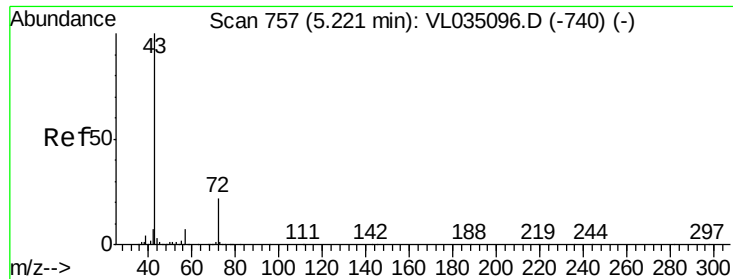
Ion Ratio Lower Upper

114 100

63 27.6 21.9 32.9

88 19.6 15.6 23.4





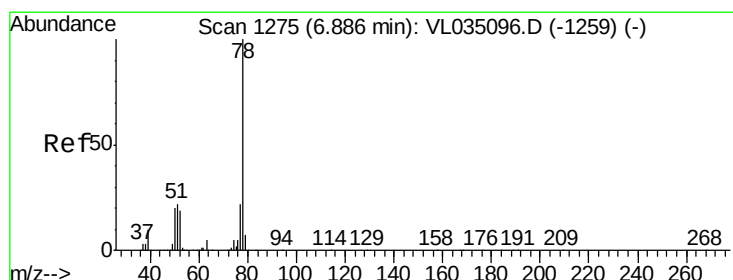
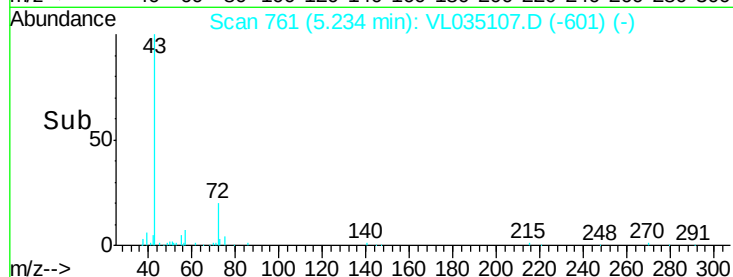
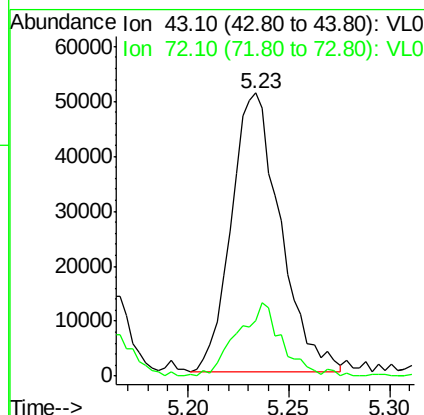
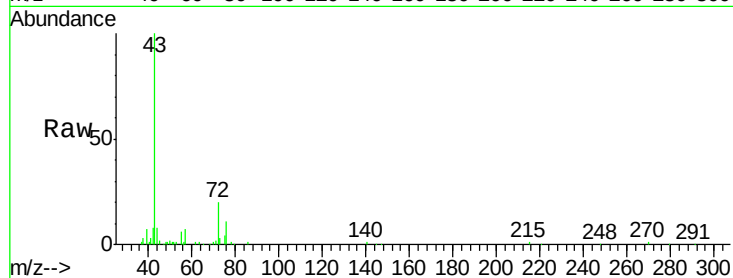
#34
2-Butanone
Concen: 0.536 ppbv
RT: 5.23 min Scan# 761
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Instrument :
MSVOA_L
ClientSampled :
CARBON-01

Tot Ion	43	Resp	86243
Ion Ratio	100	Lower	Upper
72	24.1	18.3	27.5

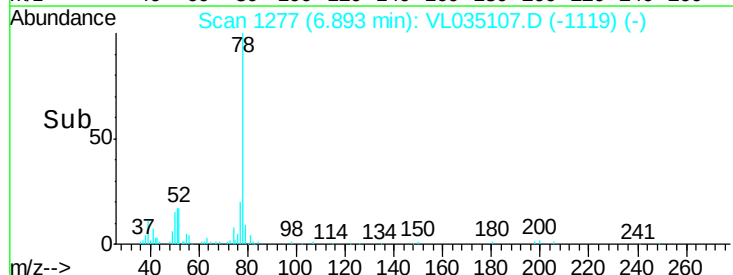
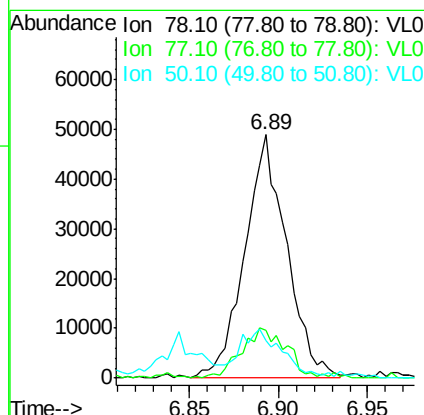
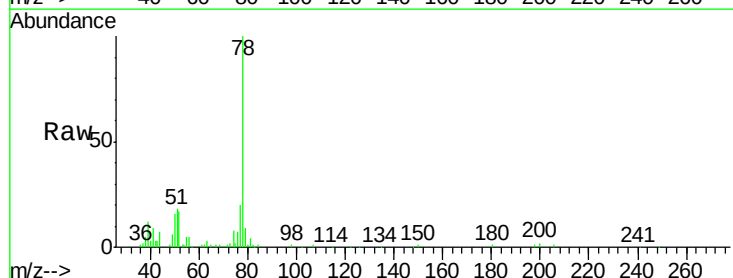
Manual Integrations
APPROVED

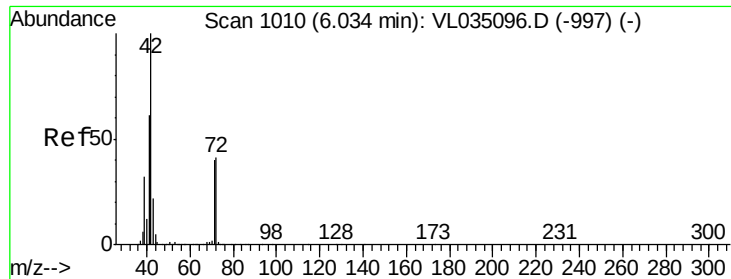
MMDadoda
6/23/2020 10:59:10 AM



#36
Benzene
Concen: 0.365 ppbv
RT: 6.89 min Scan# 1277
Delta R.T. 0.01 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Tgt Ion	78	Resp	79193
Ion Ratio	100	Lower	Upper
77	19.8	17.8	26.6
50	13.0	16.2	24.2#





#41

Tetrahydrofuran

Concen: 0.277 ppbv m

RT: 6.06 min Scan# 1017

Delta R.T. 0.02 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

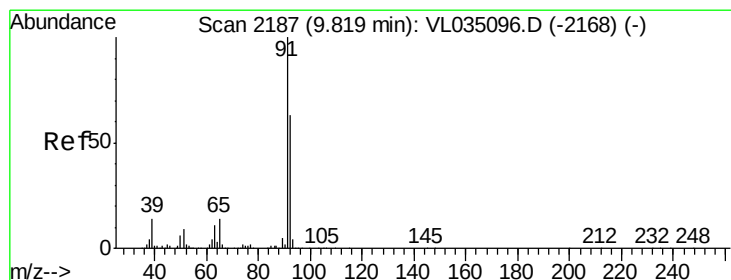
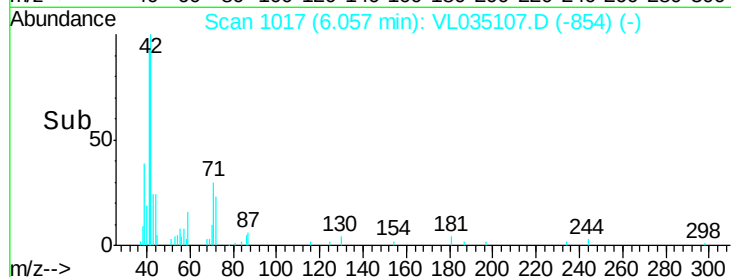
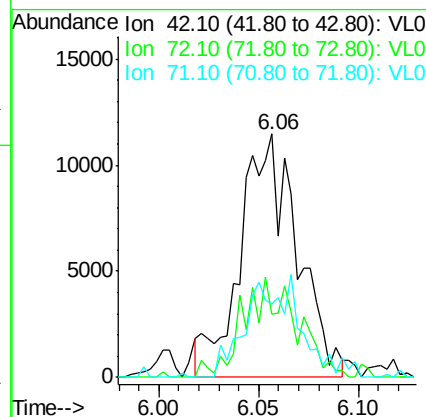
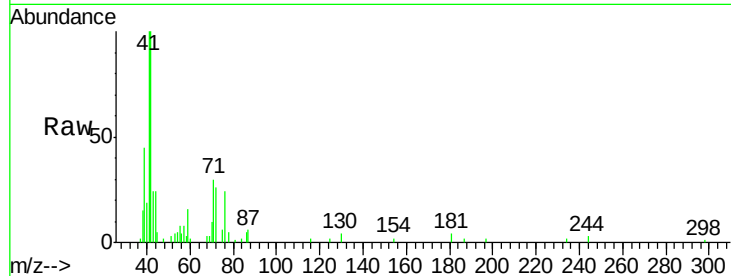
ClientSampleId :

CARBON-01

Tot Ion:	42	Resp:	22806
Ion	Ratio	Lower	Upper
42	100		
72	0.0	33.4	50.2#
71	0.0	31.8	47.6#

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM



#53

Toluene

Concen: 0.419 ppbv m

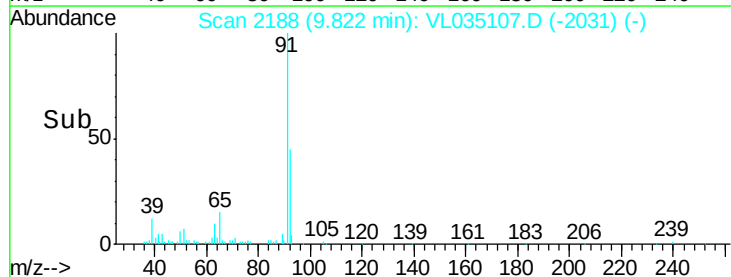
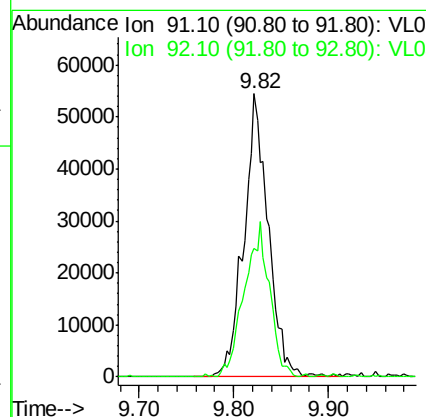
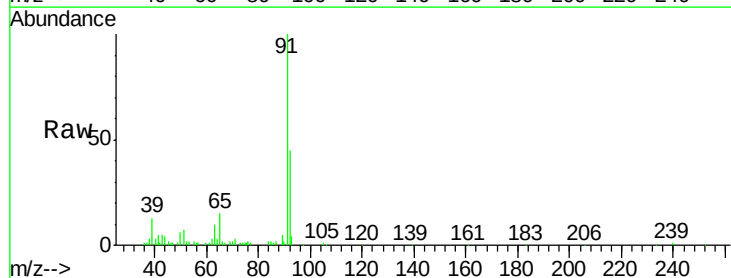
RT: 9.82 min Scan# 2188

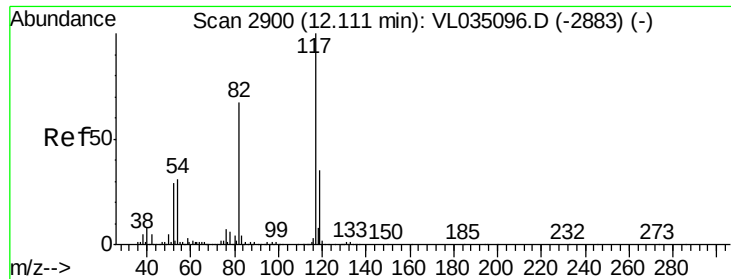
Delta R.T. 0.00 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Tgt Ion:	91	Resp:	97028
Ion	Ratio	Lower	Upper
91	100		
92	57.0	49.0	73.6





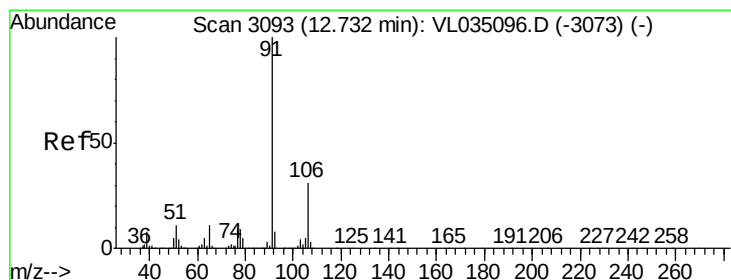
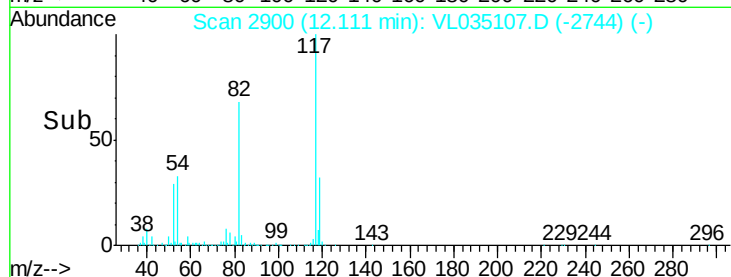
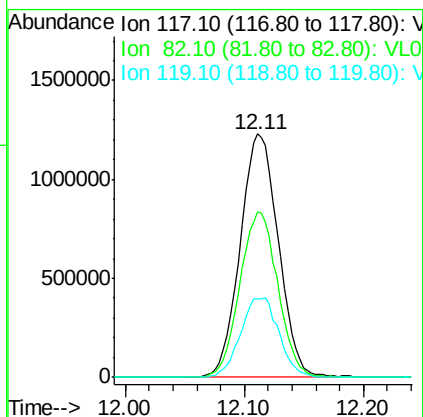
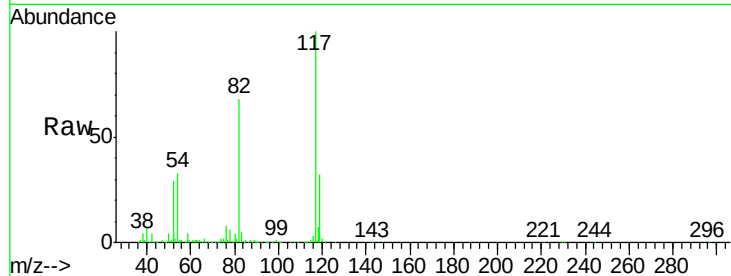
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.11 min Scan# 2900
Delta R.T. 0.00 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Instrument :
MSVOA_L
ClientSampleId :
CARBON-01

Tot Ion	Ratio	Lower	Upper
117	100		
82	68.1	50.4	75.6
119	33.2	25.4	38.0

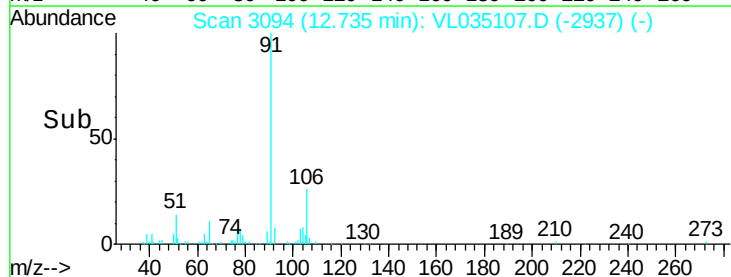
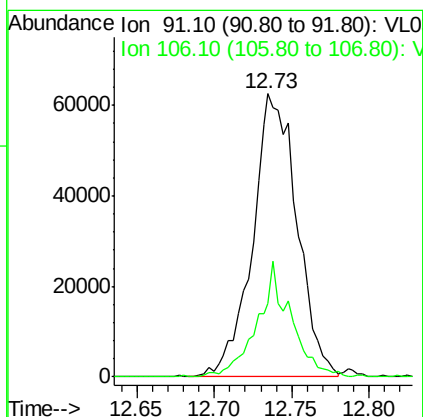
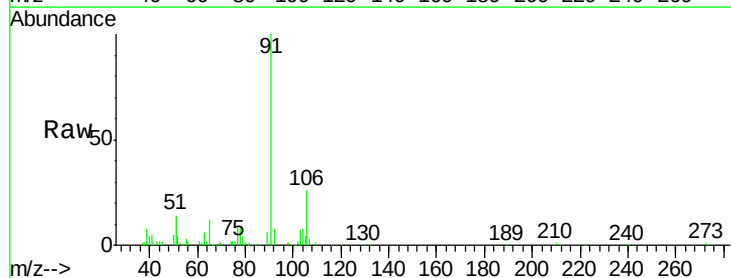
Manual Integrations
APPROVED

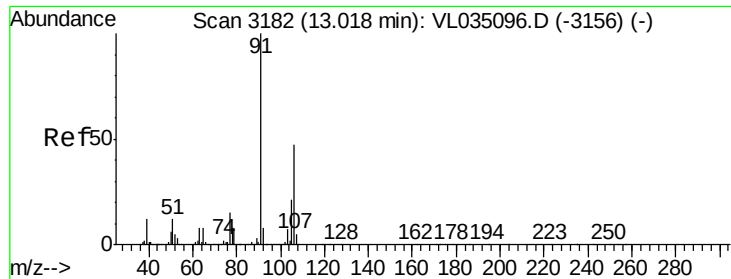
MMDadoda
6/23/2020 10:59:10 AM



#58
Ethyl Benzene
Concen: 0.409 ppbv
RT: 12.73 min Scan# 3094
Delta R.T. 0.00 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Tgt Ion	Ratio	Lower	Upper
91	100		
106	25.9	25.0	37.6





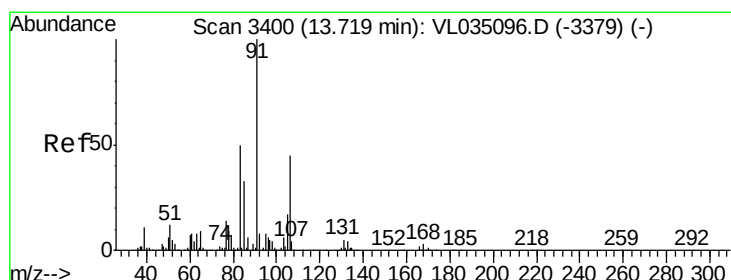
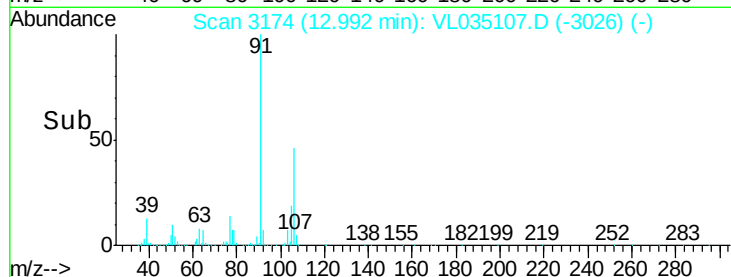
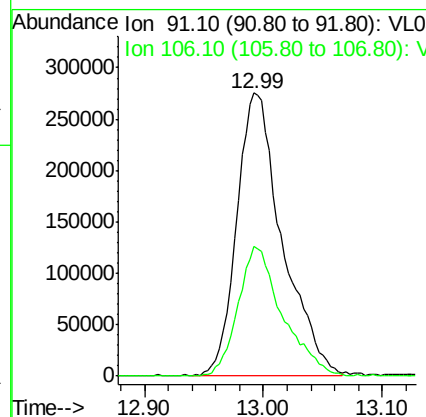
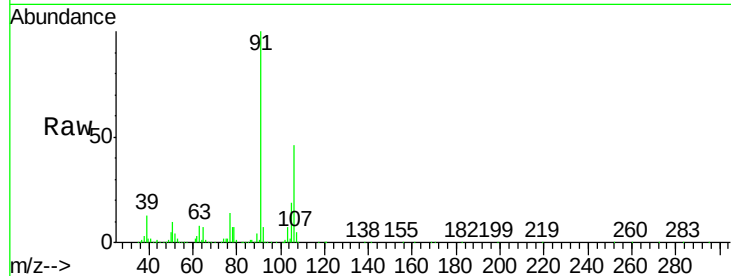
#59
m/p-Xylene
Concen: 2.679 ppbv
RT: 12.99 min Scan# 3174
Delta R.T. -0.03 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Instrument :
MSVOA_L
ClientSampleId :
CARBON-01

Tot Ion: 91 Resp: 726749
Ion Ratio Lower Upper
91 100
106 45.1 36.5 54.7

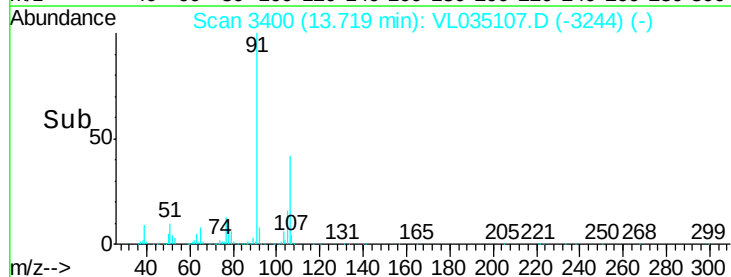
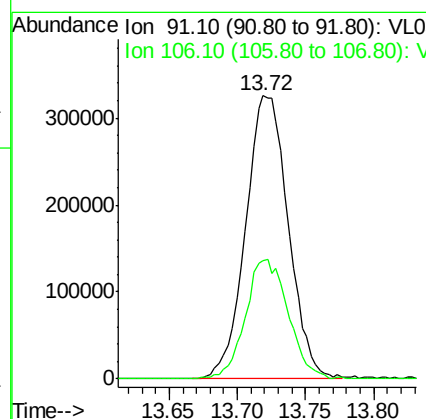
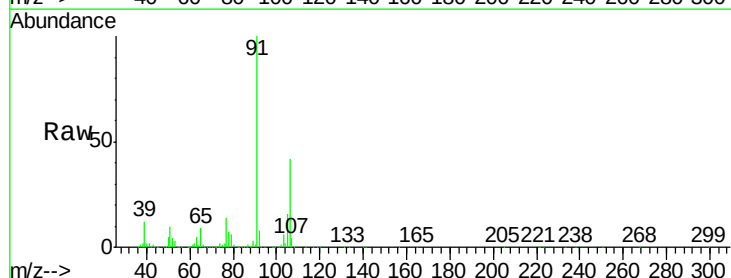
Manual Integrations
APPROVED

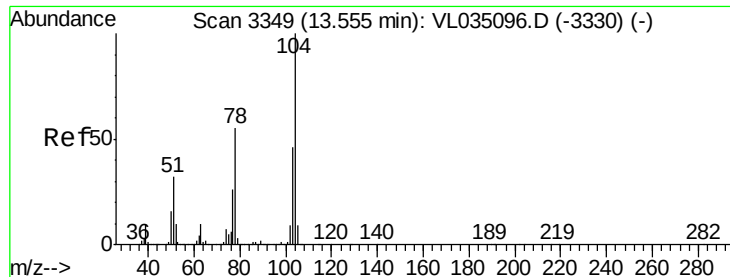
MMDadoda
6/23/2020 10:59:10 AM



#60
o-Xylene
Concen: 2.616 ppbv
RT: 13.72 min Scan# 3400
Delta R.T. 0.00 min
Lab File: VL035107.D
Acq: 22 Jun 2020 12:14

Tgt Ion: 91 Resp: 706615
Ion Ratio Lower Upper
91 100
106 42.3 22.1 66.5





#61

Stvrene

Concen: 0.895 ppbv

RT: 13.56 min Scan# 3351

Delta R.T. 0.01 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

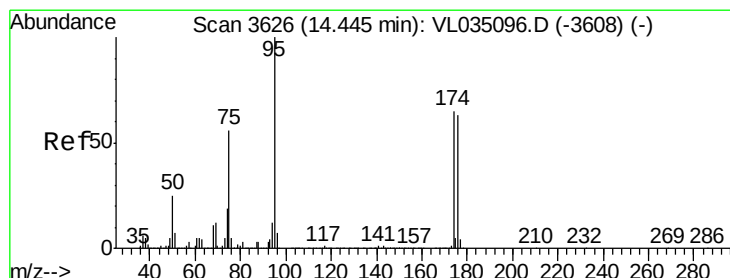
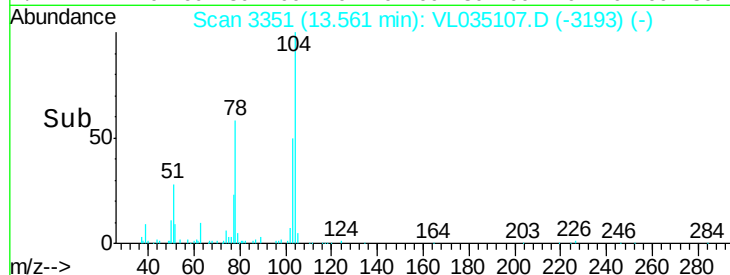
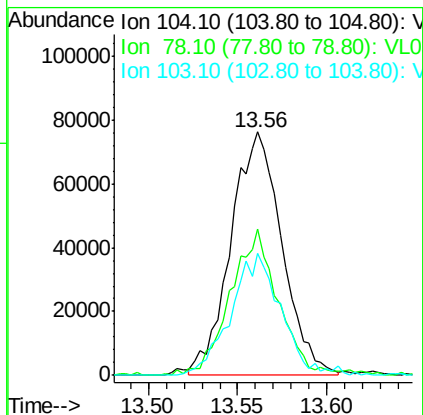
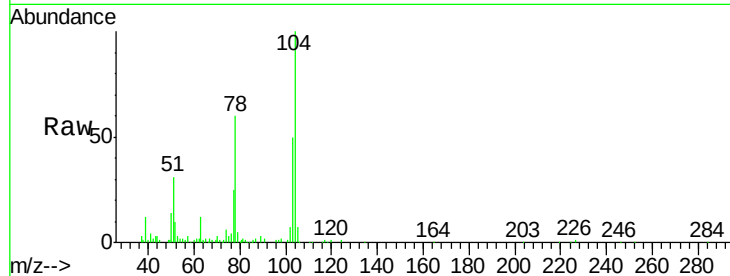
ClientSampleId :

CARBON-01

Tot Ion:	104	Resp:	152104
Ion Ratio	Lower	Upper	
104	100		
78	57.7	43.4	65.0
103	49.5	38.3	57.5

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM



#68

1-Bromo-4-Fluorobenzene

Concen: 10.215 ppbv

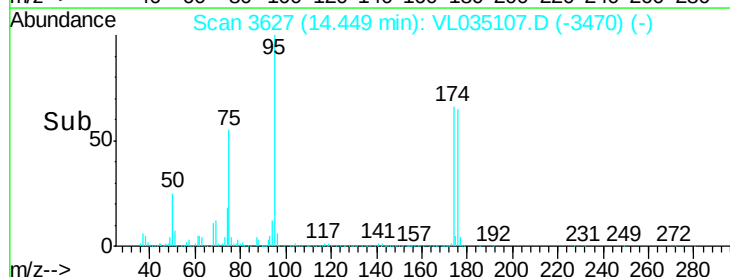
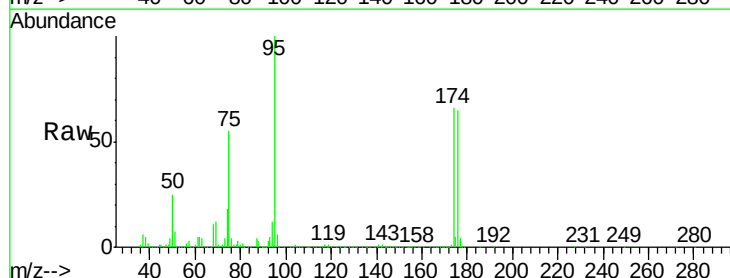
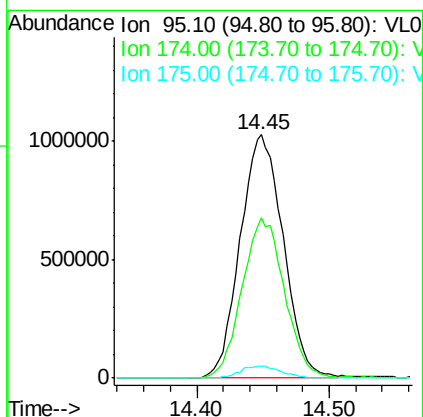
RT: 14.45 min Scan# 3627

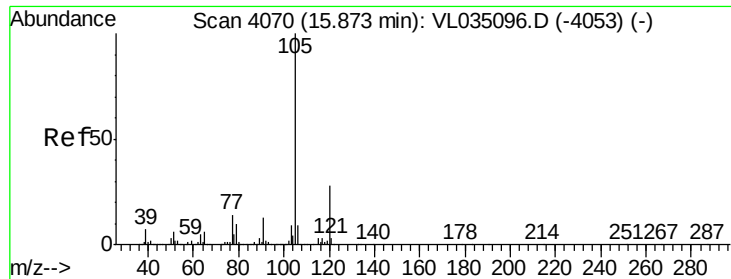
Delta R.T. 0.00 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Tgt Ion:	95	Resp:	2311926
Ion Ratio	Lower	Upper	
95	100		
174	65.5	52.2	78.2
175	4.8	4.0	6.0





#72

4-Ethyltoluene

Concen: 0.125 ppbv m

RT: 16.03 min Scan# 4119

Delta R.T. 0.16 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

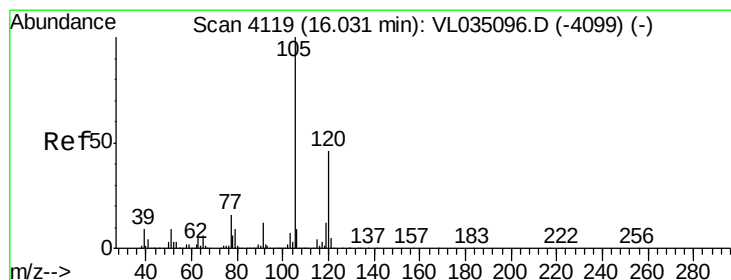
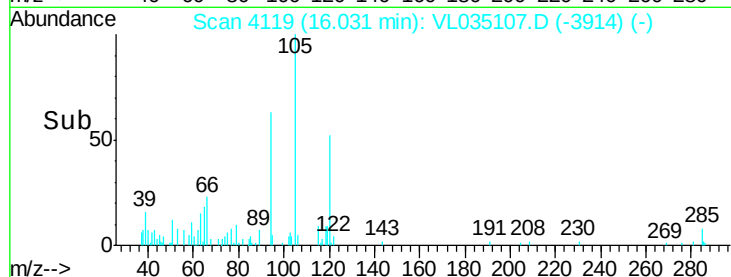
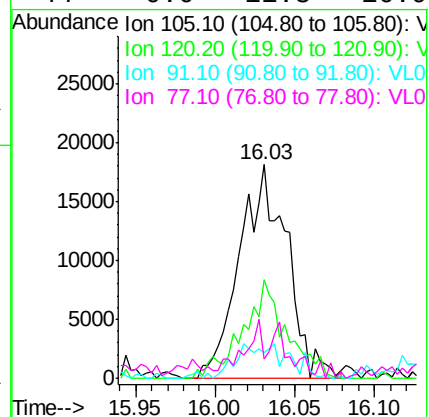
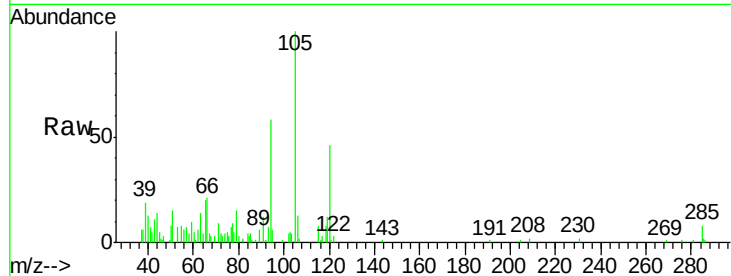
ClientSampleId :

CARBON-01

Tot Ion	Ratio	Resp	Lower	Upper
105	100	37500		
120	0.0	23.4	35.0#	
91	0.0	10.6	16.0#	
77	0.0	11.3	16.9#	

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM



#73

1,3,5-Trimethylbenzene

Concen: 0.133 ppbv m

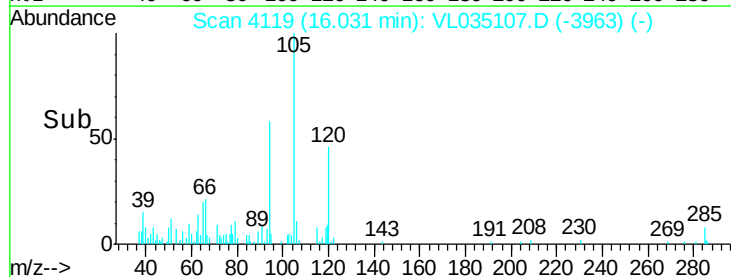
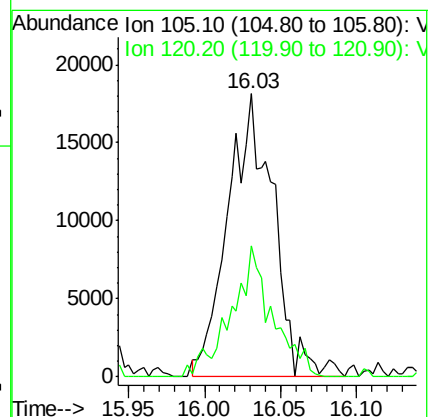
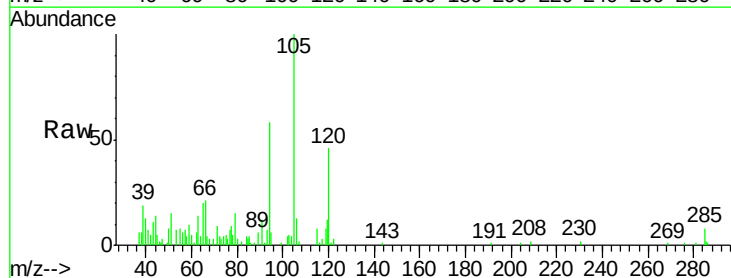
RT: 16.03 min Scan# 4119

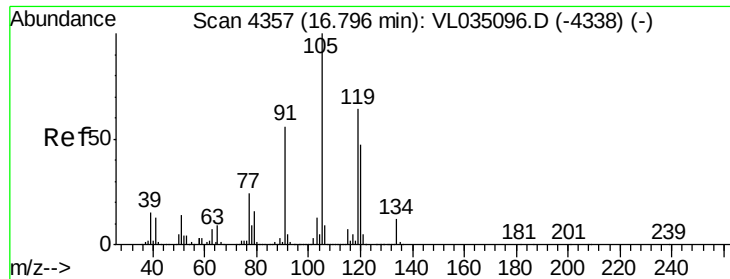
Delta R.T. 0.00 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	37736		
120	46.4	37.0	55.6	





#74

1,2,4-Trimethylbenzene

Concen: 0.337 ppbv

RT: 16.80 min Scan# 4358

Delta R.T. 0.00 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

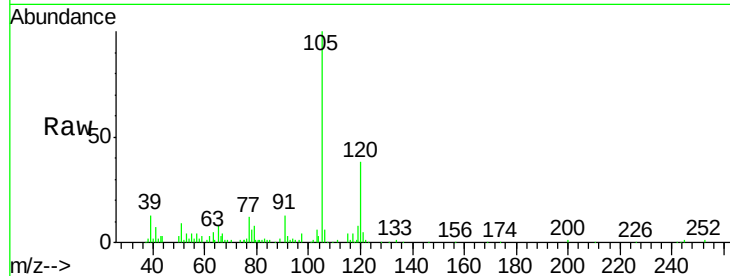
ClientSampleId :

CARBON-01

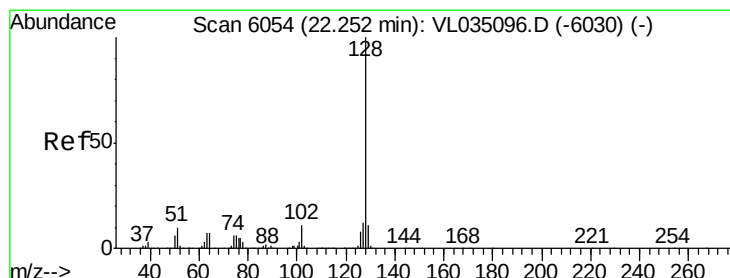
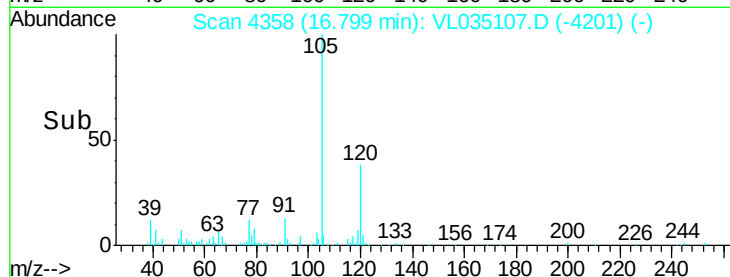
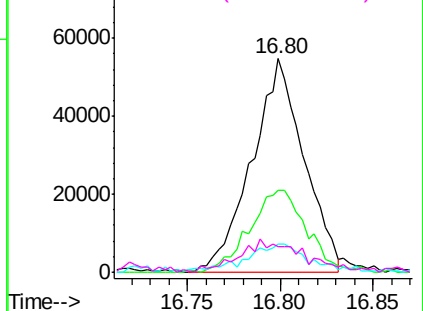
Tot Ion	Ratio	Resp	Lower	Upper
105	100	106819		
120	37.0		37.9	56.9#
91	15.2		46.0	69.0#
77	10.5		19.4	29.2#

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 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



#79

Naphthalene

Concen: 0.115 ppbv m

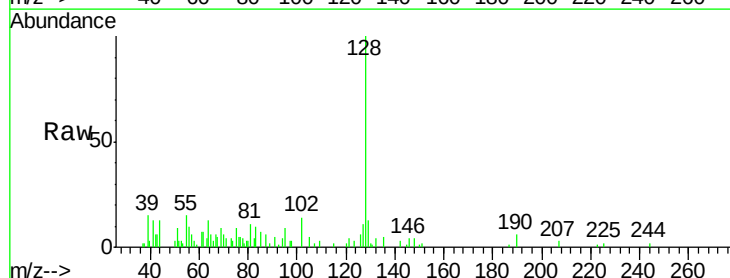
RT: 22.26 min Scan# 6055

Delta R.T. 0.00 min

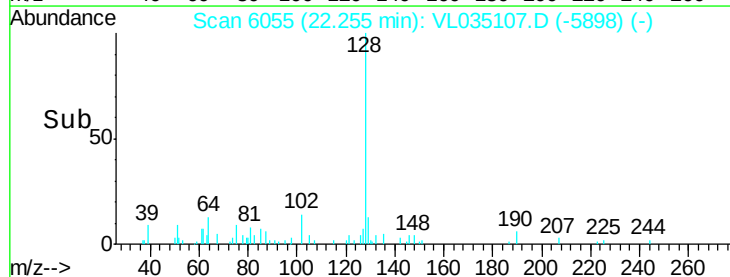
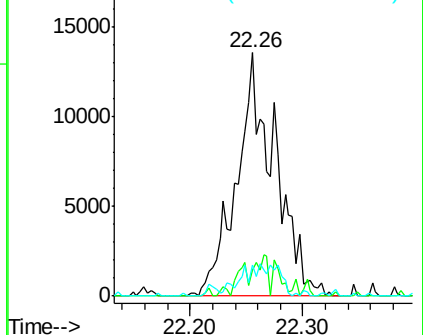
Lab File: VL035107.D

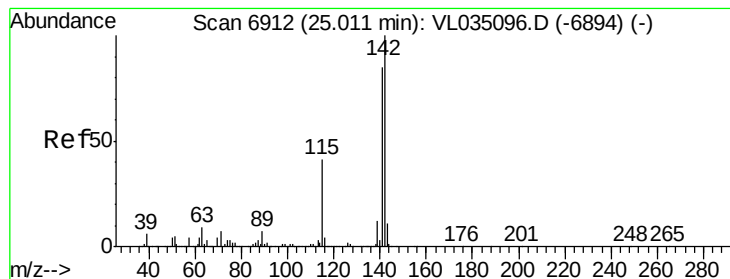
Acq: 22 Jun 2020 12:14

Tgt Ion	Ratio	Resp	Lower	Upper
128	100	31900		
127	10.8		9.9	14.9
129	12.7		9.0	13.4



Abundance Ion 128.10 (127.80 to 128.80): V
Ion 127.10 (126.80 to 127.80): V
Ion 129.10 (128.80 to 129.80): V





#80

Naphthalene, 2-methyl-

Concen: 0.102 ppbv

RT: 25.02 min Scan# 6915

Delta R.T. 0.01 min

Lab File: VL035107.D

Acq: 22 Jun 2020 12:14

Instrument :

MSVOA_L

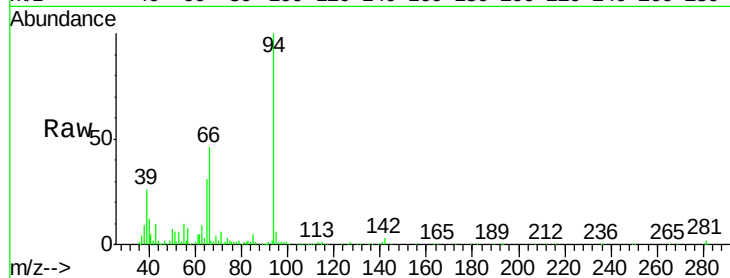
ClientSampleId :

CARBON-01

Tot Ion	Ratio	Lower	Upper
142	100		
141	95.1	67.5	101.3
115	65.8	33.8	50.8

Manual Integrations
APPROVED

MMDadoda
6/23/2020 10:59:10 AM



Abundance

Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

