

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL051420\
 Data File : VL035023.D
 Acq On : 14 May 2020 17:05
 Operator : SY/AP
 Sample : L2566-01 4X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-6

Manual Integrations
 APPROVED

MMDadoda
 5/18/2020 1:34:50 PM

Quant Time: May 18 09:03:07 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050620AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 0
 QLast Update : Wed May 06 14:49:39 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1063638	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.17	114	2446904	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.10	117	2385864	10.00	ppbv	-0.02

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.44	95	2055083	10.64	ppbv	-0.02	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.40%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.00	85	17280	0.114	ppbv #	87
4) Chloromethane	3.09	50	10443	0.150	ppbv #	65
9) Propene	2.96	41	118427	2.247	ppbv	84
10) Heptane	8.12	43	372274	2.820	ppbv	100
13) Ethanol	3.56	45	817010	46.985	ppbv	98
15) Acetone	3.81	43	900863	6.406	ppbv	90
19) Isopropyl Alcohol	3.93	45	2325180	24.795	ppbv	99
20) Methylene Chloride	4.31	84	68908m	1.480	ppbv	
26) Hexane	5.66	57	569673	5.563	ppbv #	75
29) Chloroform	5.73	83	34881m	0.208	ppbv	
30) Cyclohexane	7.12	84	295712	3.742	ppbv	93
31) cis-1,2-Dichloroethene	5.53	61	838404	8.391	ppbv	95
32) 1,1,1-Trichloroethane	6.50	97	15875m	0.105	ppbv	
34) 2-Butanone	5.22	43	141409	0.930	ppbv	97
36) Benzene	6.88	78	213623	1.059	ppbv	95
38) Trichloroethene	7.83	130	1172352	15.000	ppbv	96
41) Tetrahydrofuran	6.04	42	59073	0.738	ppbv	99
44) 2,2,4-Trimethylpentane	7.86	57	4066107	11.337	ppbv	95
52) Tetrachloroethene	11.24	164	2711300	37.797	ppbv	99
53) Toluene	9.82	91	6569594	30.720	ppbv	96
58) Ethyl Benzene	12.73	91	694927	2.355	ppbv	98
59) m/p-Xylene	12.99	91	1866815	7.192	ppbv #	59
60) o-Xylene	13.71	91	619071	2.417	ppbv	98
61) Styrene	13.55	104	281464	1.736	ppbv	99
62) Isopropylbenzene	14.69	105	175174	0.458	ppbv	98
64) n-propylbenzene	15.58	120	13744m	0.140	ppbv	
72) 4-Ethyltoluene	15.86	105	80201m	0.281	ppbv	
73) 1,3,5-Trimethylbenzene	16.02	105	65517	0.236	ppbv	98
74) 1,2,4-Trimethylbenzene	16.79	105	245653	0.809	ppbv #	75

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

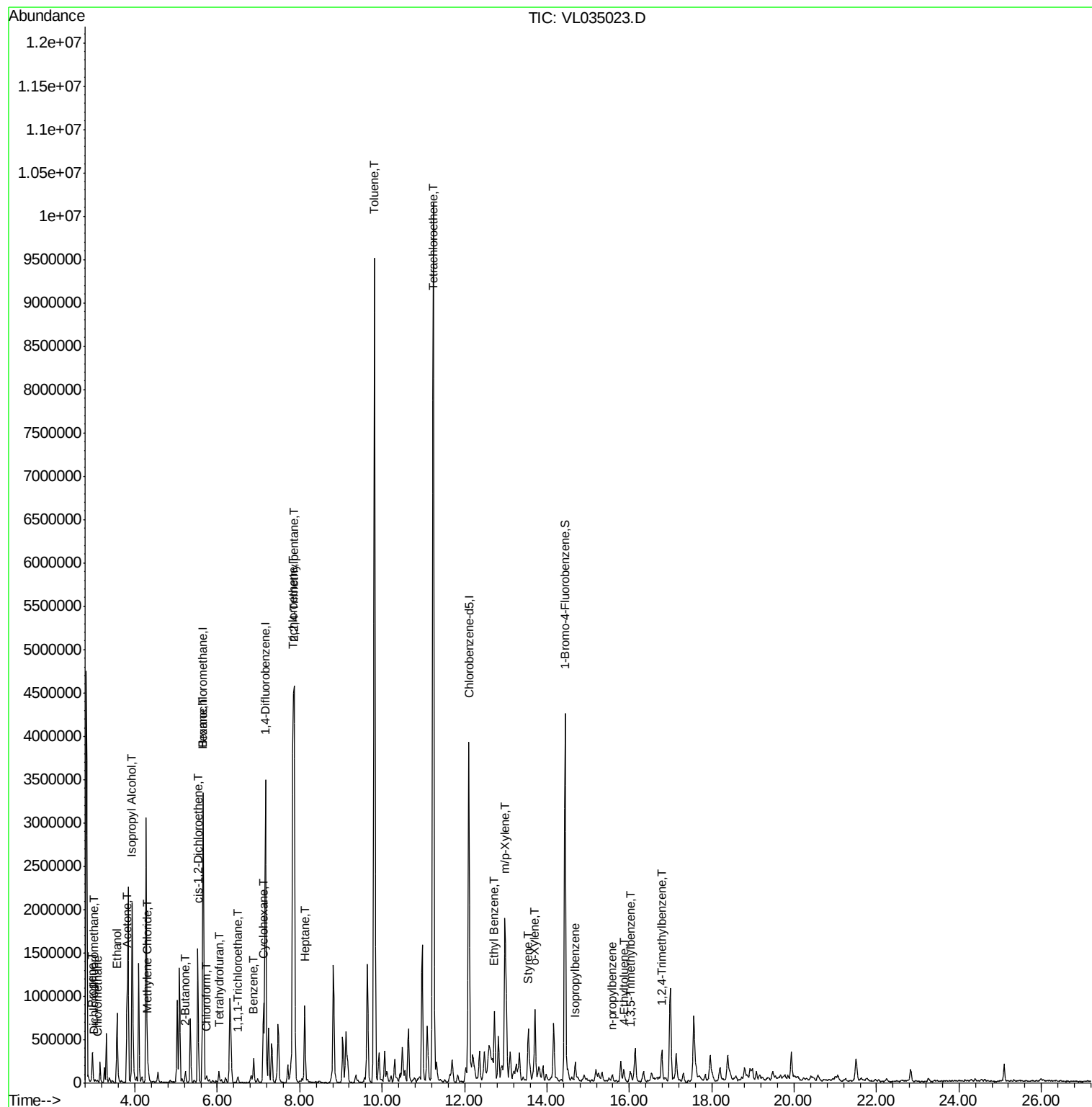
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL051420\
Data File : VL035023.D
Acq On : 14 May 2020 17:05
Operator : SY/AP
Sample : L2566-01 4X
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

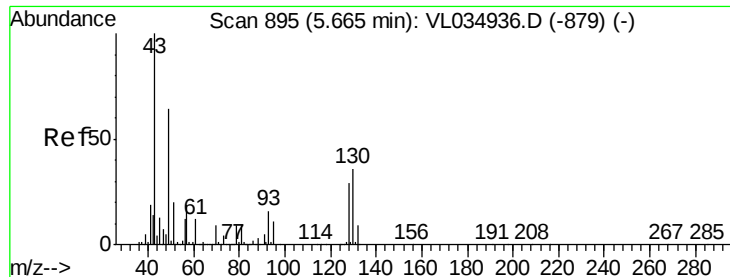
Instrument :
MSVOA_L
ClientSampleId :
SG-6

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM

Quant Time: May 18 09:03:07 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL050620AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed May
QLast Update : Wed May 06 14:49:39 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

ClientSampled :

SG-6

Tot Ion: 49 Resp: 1063638

Ion Ratio Lower Upper

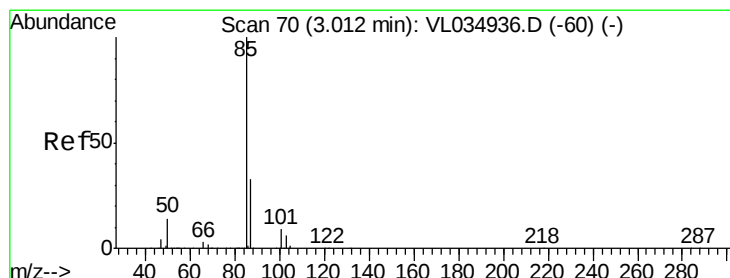
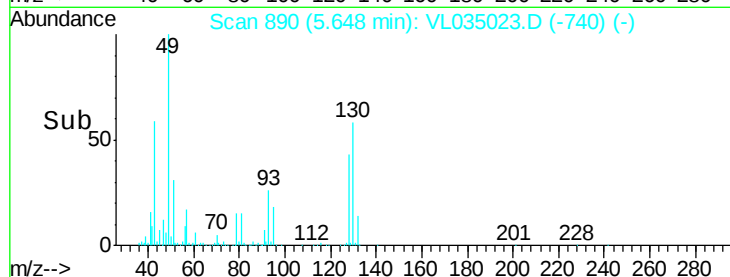
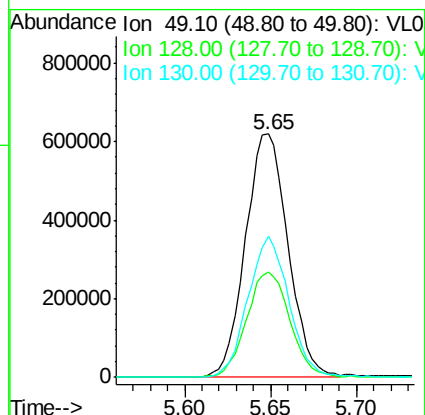
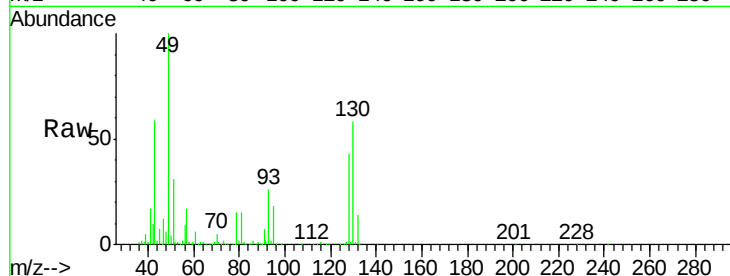
49 100

128 44.2 22.1 66.5

130 56.0 29.1 87.3

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM



#2

Dichlorodifluoromethane

Concen: 0.114 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL035023.D

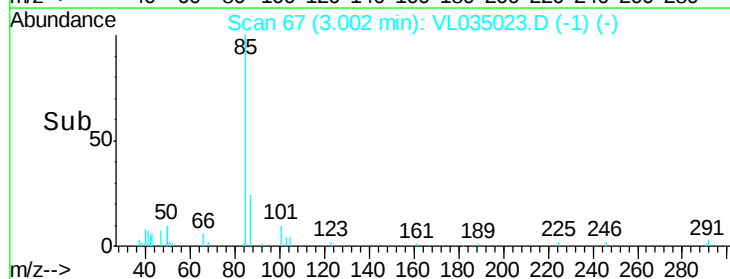
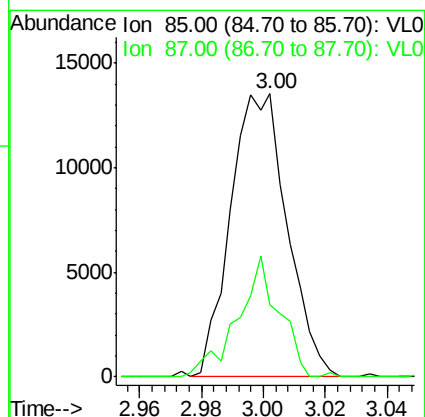
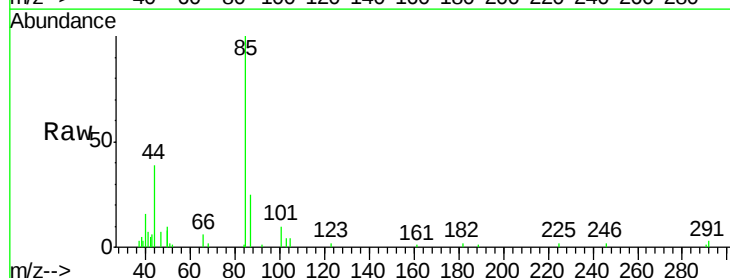
Acq: 14 May 2020 17:05

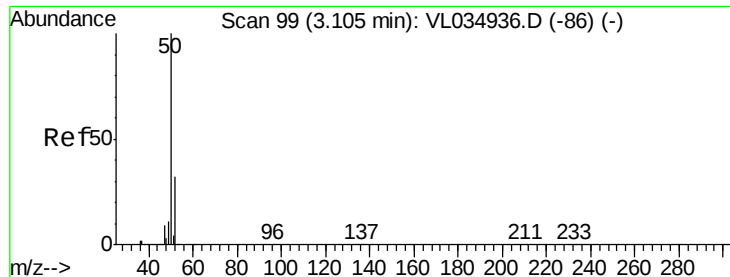
Tgt Ion: 85 Resp: 17280

Ion Ratio Lower Upper

85 100

87 25.4 26.2 39.2#





#4

Chloromethane

Concen: 0.150 ppbv

RT: 3.09 min Scan# 95

Delta R.T. -0.01 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

ClientSampleId :

SG-6

Tot Ion: 50 Resp: 10443

Ion Ratio Lower Upper

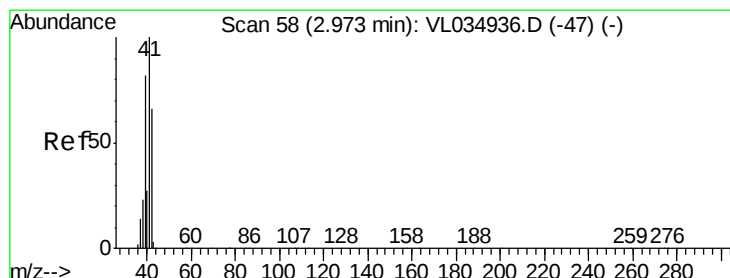
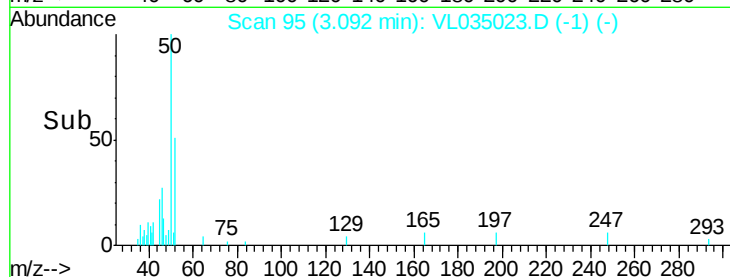
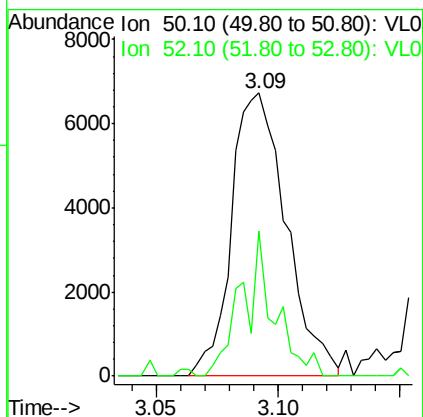
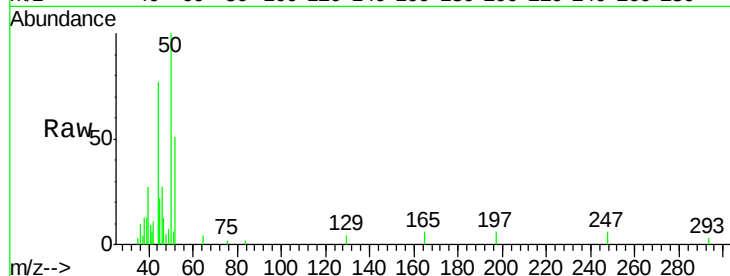
50 100

52 51.4 25.4 38.2#

Manual Integrations
APPROVED

MMDadoda

5/18/2020 1:34:50 PM



#9

Propene

Concen: 2.247 ppbv

RT: 2.96 min Scan# 55

Delta R.T. -0.01 min

Lab File: VL035023.D

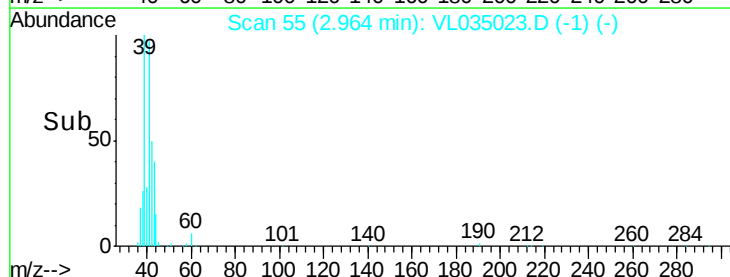
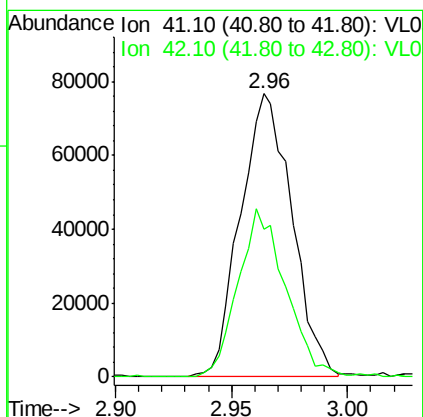
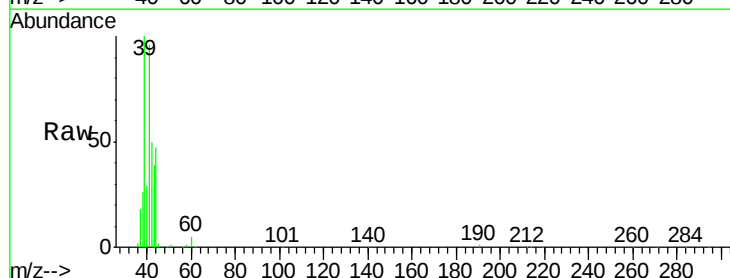
Acq: 14 May 2020 17:05

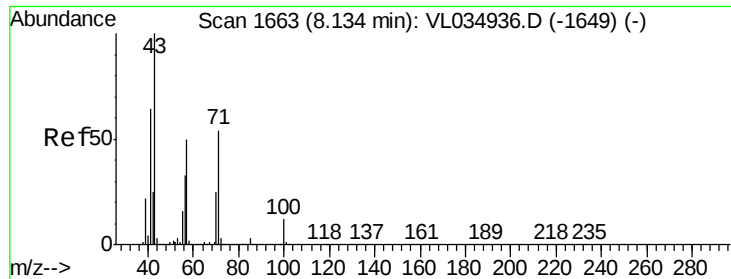
Tgt Ion: 41 Resp: 118427

Ion Ratio Lower Upper

41 100

42 55.4 54.5 81.7





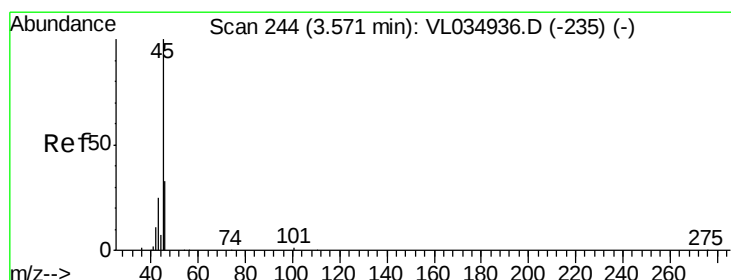
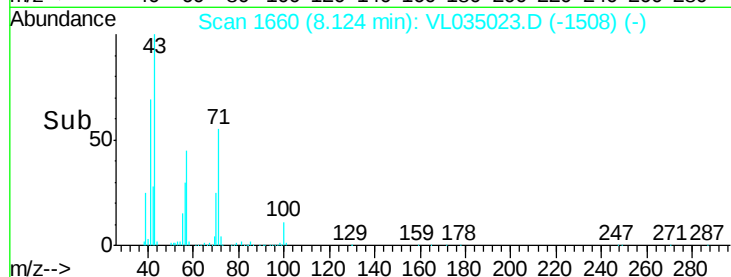
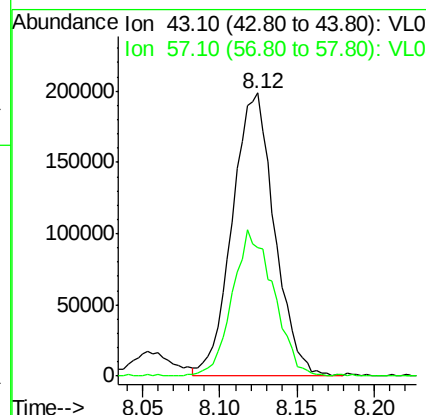
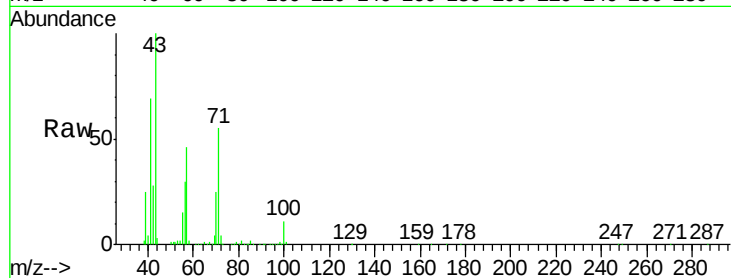
#10
Heptane
Concen: 2.820 ppbv
RT: 8.12 min Scan# 1660
Delta R.T. -0.01 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampleId :
SG-6

Tot Ion: 43 Resp: 372274
Ion Ratio Lower Upper
43 100
57 51.2 41.1 61.7

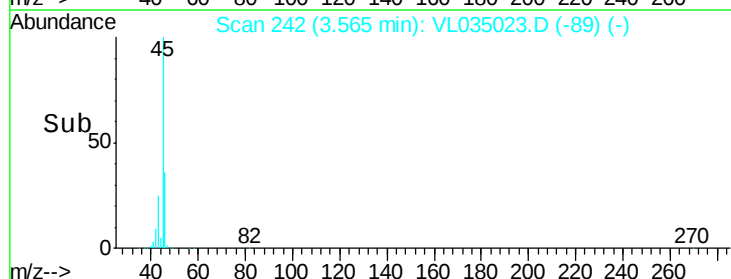
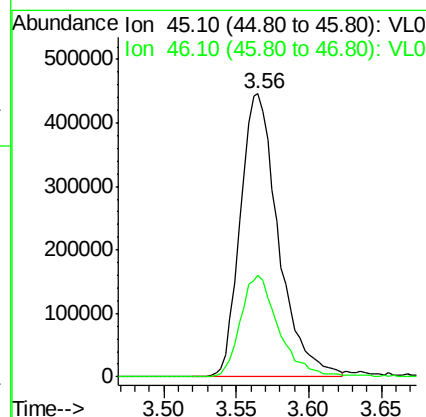
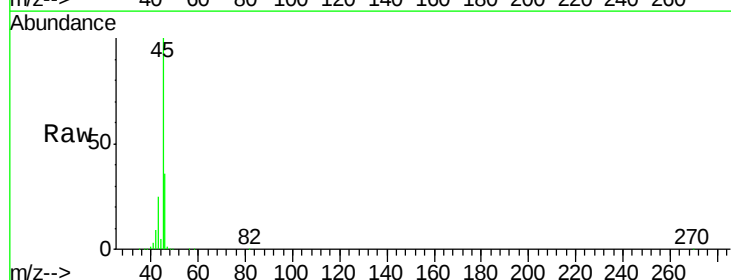
Manual Integrations
APPROVED

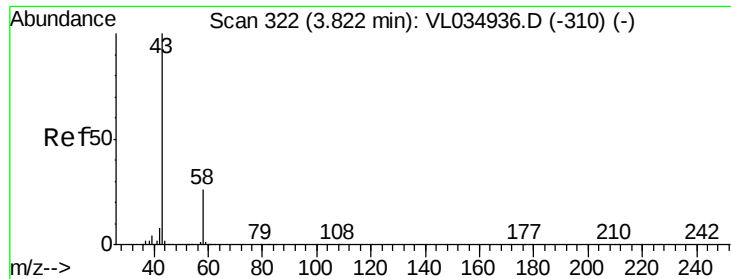
MMDadoda
5/18/2020 1:34:50 PM



#13
Ethanol
Concen: 46.985 ppbv
RT: 3.56 min Scan# 242
Delta R.T. -0.01 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion: 45 Resp: 817010
Ion Ratio Lower Upper
45 100
46 36.7 14.3 57.3





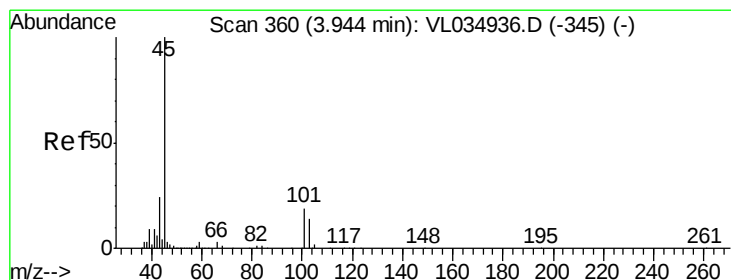
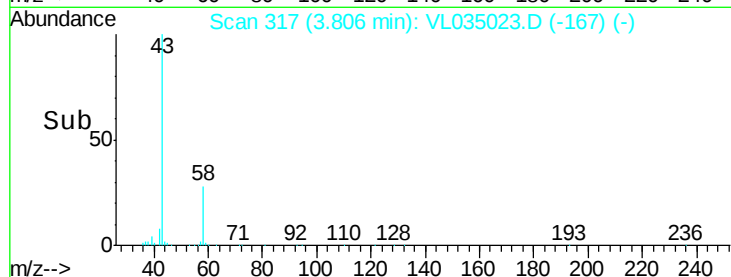
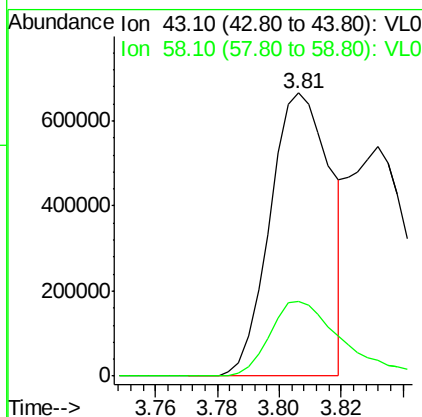
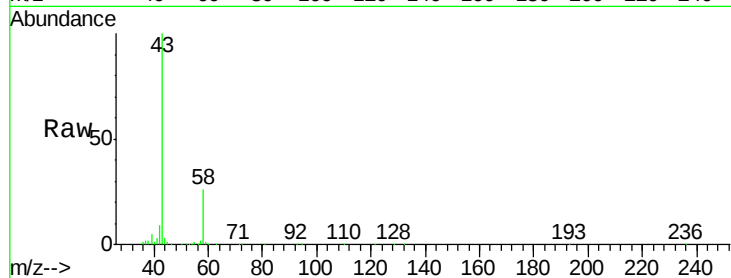
#15
Acetone
Concen: 6.406 ppbv
RT: 3.81 min Scan# 317
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampleId :
SG-6

Tot Ion: 43 Resp: 900863
Ion Ratio Lower Upper
43 100
58 32.1 21.7 32.5

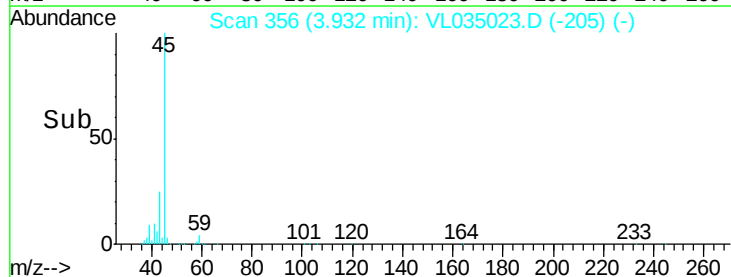
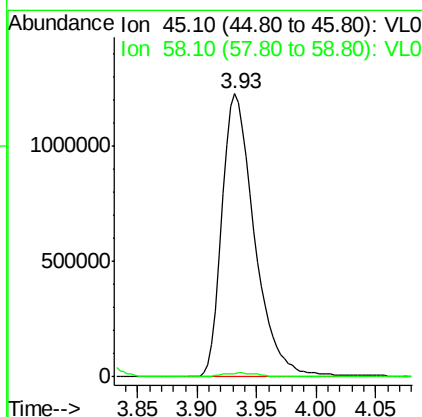
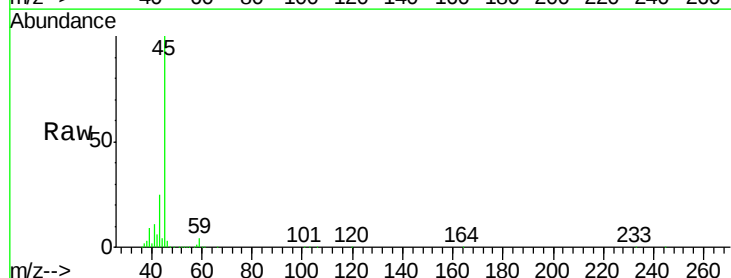
Manual Integrations
APPROVED

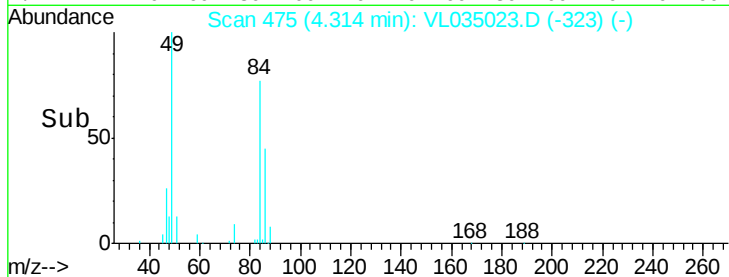
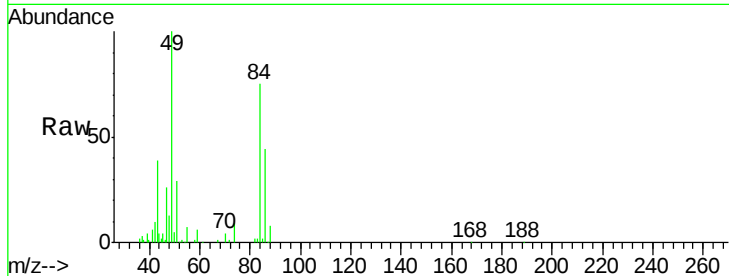
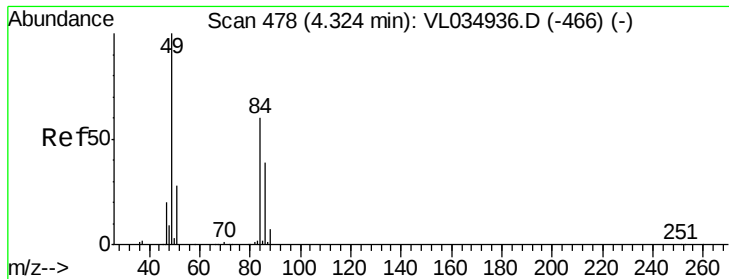
MMDadoda
5/18/2020 1:34:50 PM



#19
Isopropyl Alcohol
Concen: 24.795 ppbv
RT: 3.93 min Scan# 356
Delta R.T. -0.01 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion: 45 Resp: 2325180
Ion Ratio Lower Upper
45 100
58 1.7 1.7 2.5





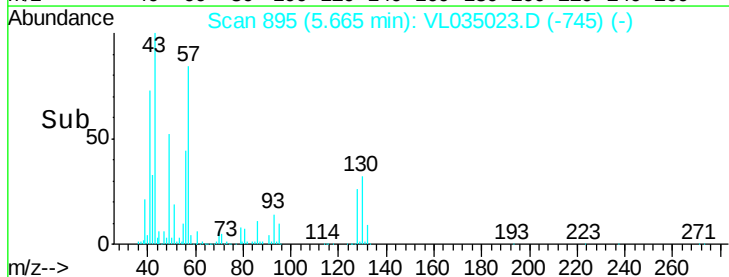
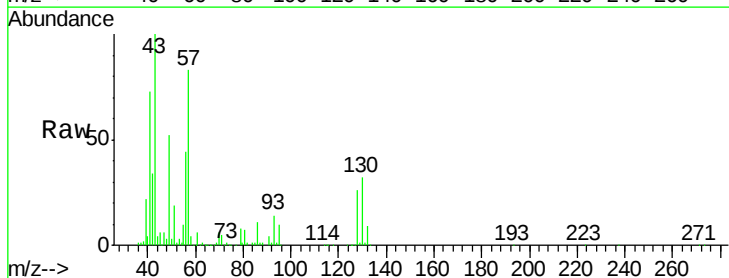
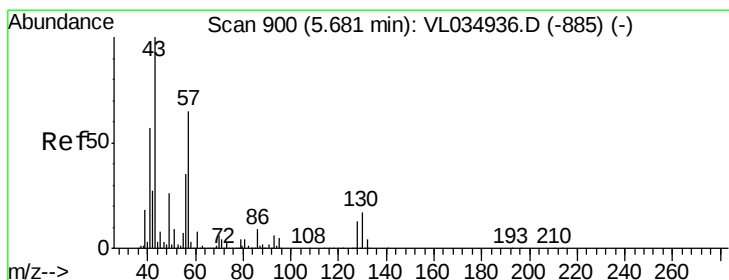
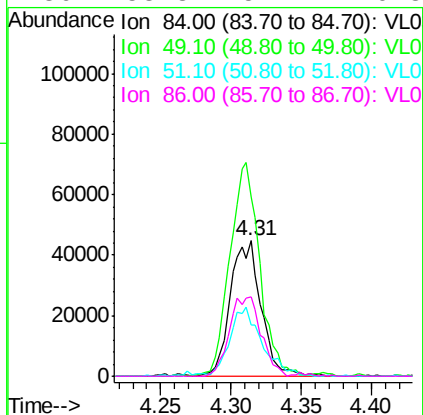
#20
Methvlene Chloride
Concen: 1.480 ppbv m
RT: 4.31 min Scan# 475
Delta R.T. -0.01 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tot Ion	Ratio	Lower	Upper
84	100		
49	132.8	132.5	198.7
51	37.9	38.4	57.6#
86	58.3	51.2	76.8

Instrument :
MSVOA_L
ClientSampleId :
SG-6

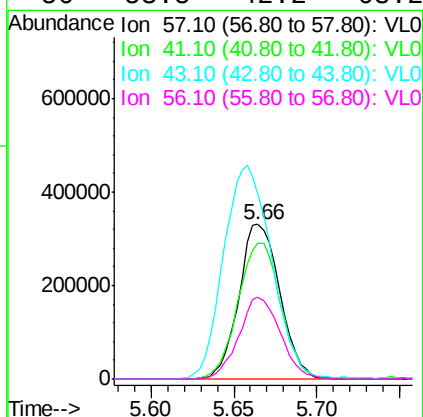
Manual Integrations
APPROVED

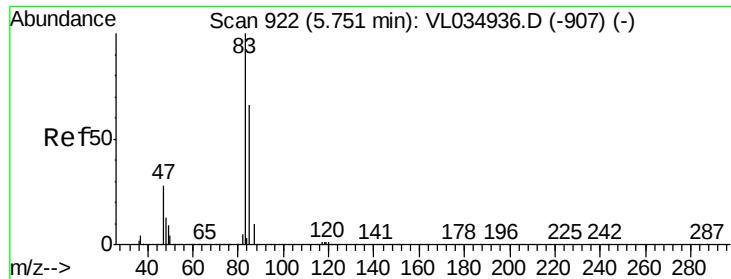
MMDadoda
5/18/2020 1:34:50 PM



#26
Hexane
Concen: 5.563 ppbv
RT: 5.66 min Scan# 895
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion	Ratio	Lower	Upper
57	100		
41	91.6	72.7	109.1
43	161.8	182.1	273.1#
56	53.5	42.2	63.2





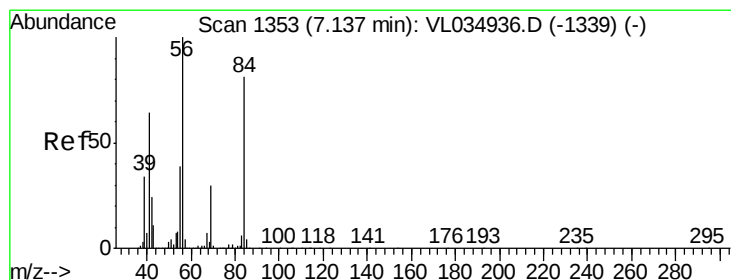
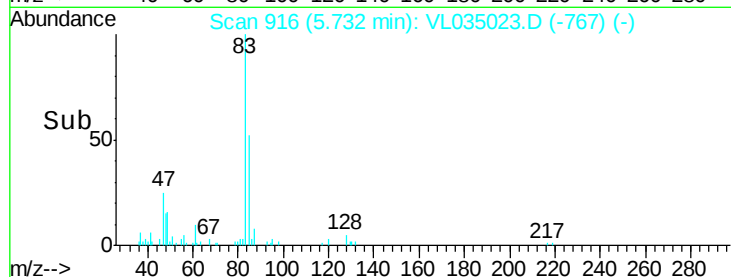
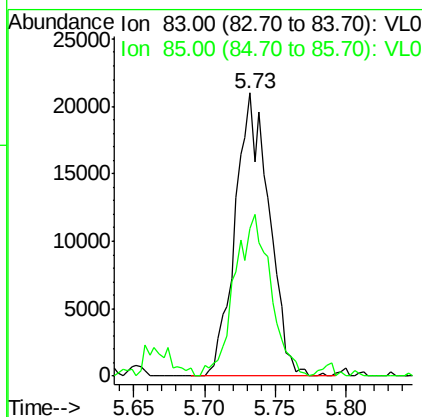
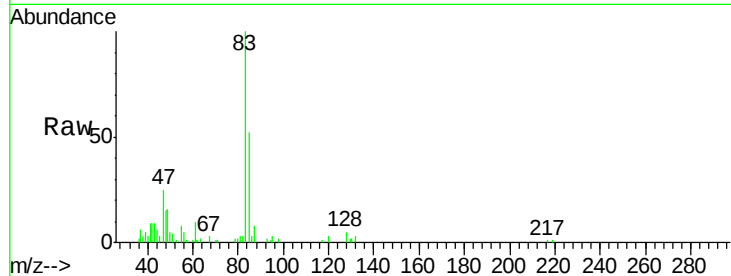
#29
Chloroform
Concen: 0.208 ppbv m
RT: 5.73 min Scan# 916
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampleId :
SG-6

Tot Ion	83	Resp	34881
Ion Ratio	100	Lower	Upper
83	100		
85	52.0	53.0	79.6#

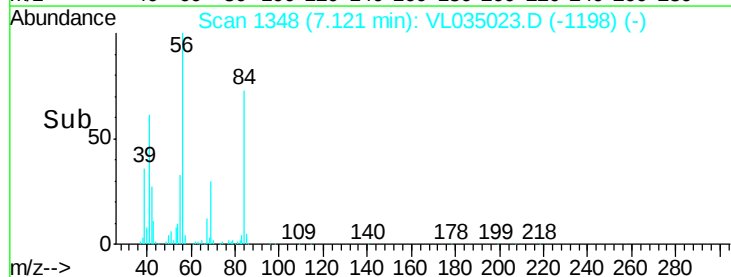
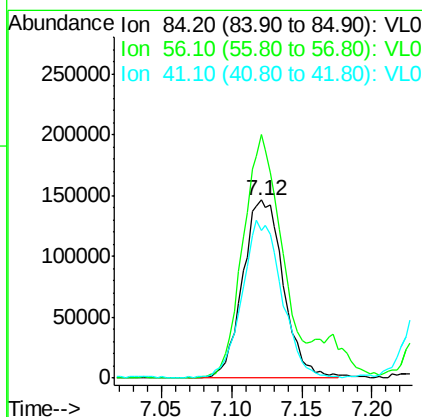
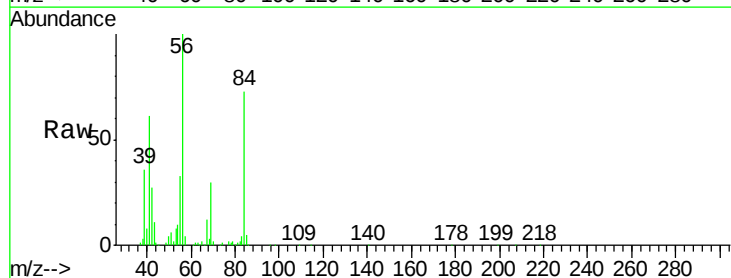
Manual Integrations
APPROVED

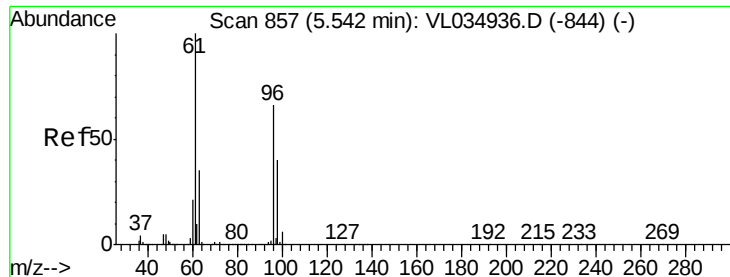
MMDadoda
5/18/2020 1:34:50 PM



#30
Cyclohexane
Concen: 3.742 ppbv
RT: 7.12 min Scan# 1348
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion	84	Resp	295712
Ion Ratio	100	Lower	Upper
84	100		
56	149.6	111.4	167.2
41	86.9	66.7	100.1





#31

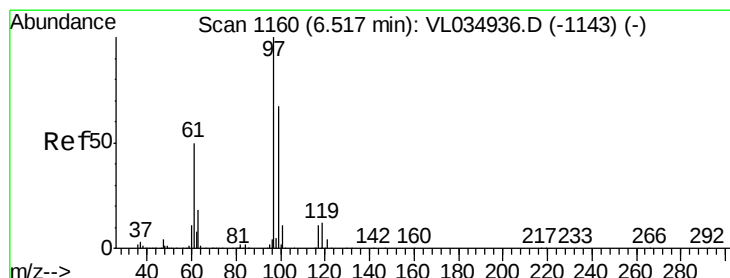
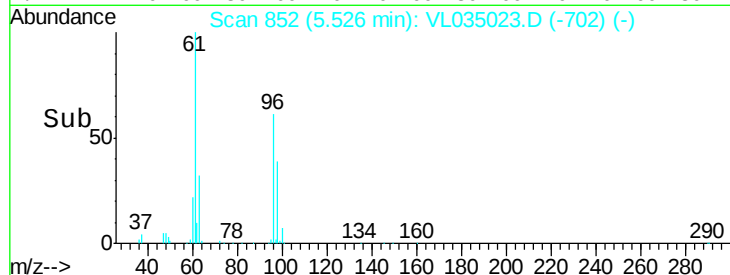
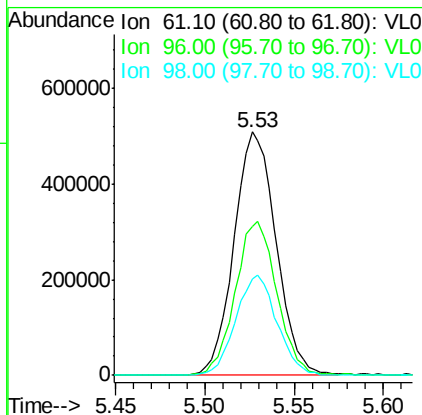
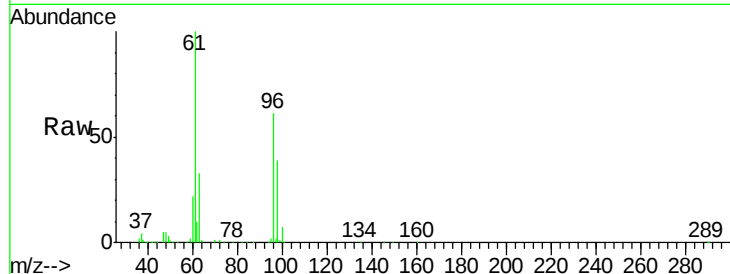
cis-1,2-Dichloroethene
Concen: 8.391 ppbv
RT: 5.53 min Scan# 852
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampleId :
SG-6

Tot Ion	Ratio	Resp	Lower	Upper
61	100	838404		
96	61.2	53.0	79.6	
98	39.3	32.2	48.2	

Manual Integrations
APPROVED

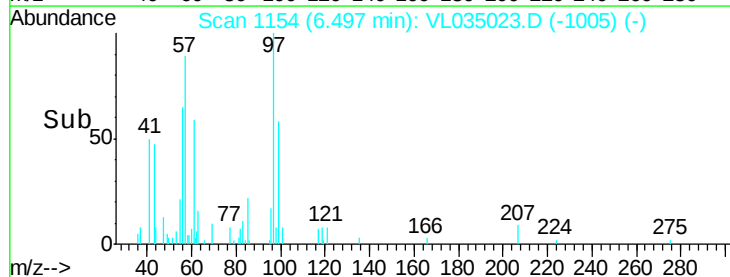
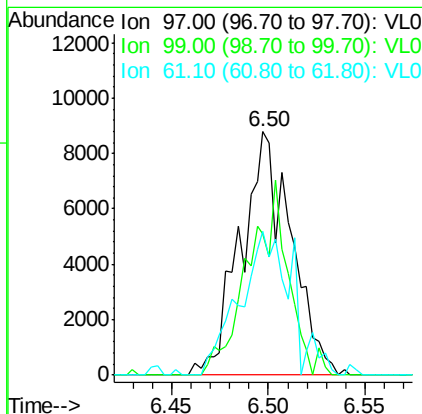
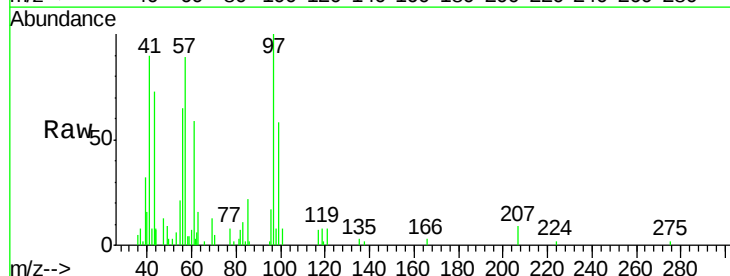
MMDadoda
5/18/2020 1:34:50 PM

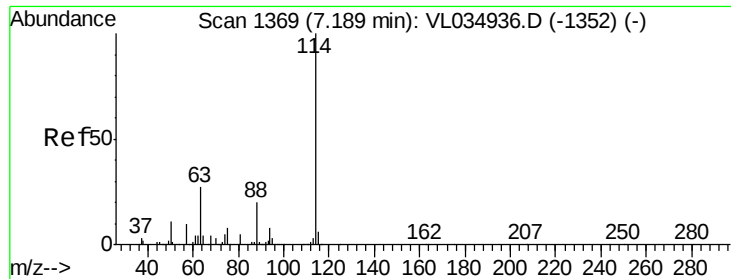


#32

1,1,1-Trichloroethane
Concen: 0.105 ppbv m
RT: 6.50 min Scan# 1154
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion	Ratio	Resp	Lower	Upper
97	100	15875		
99	0.0	52.1	78.1#	
61	62.9	41.8	62.8#	





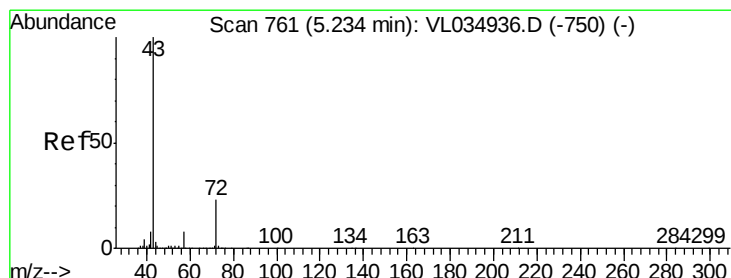
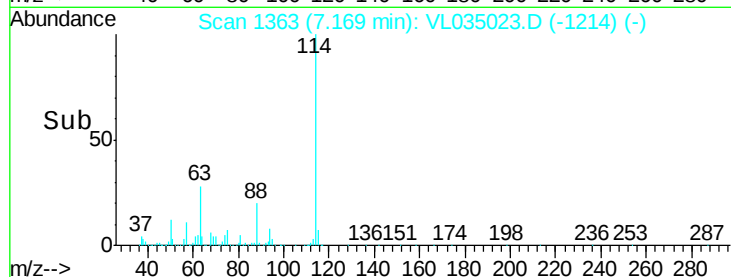
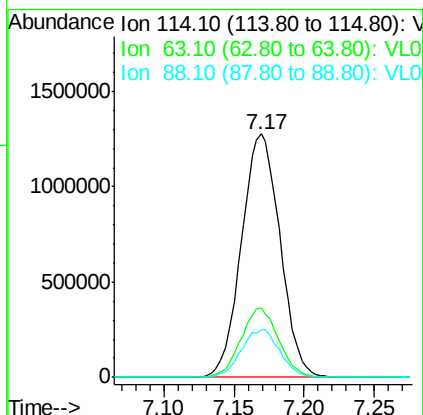
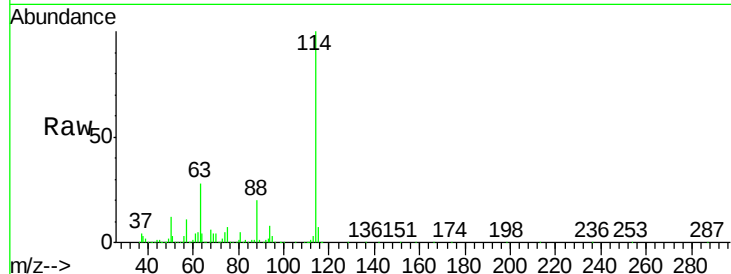
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.02 min
 Lab File: VL035023.D
 Acq: 14 May 2020 17:05

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-6

Tot Ion	Ratio	Lower	Upper
114	100		
63	28.1	22.2	33.4
88	19.7	15.5	23.3

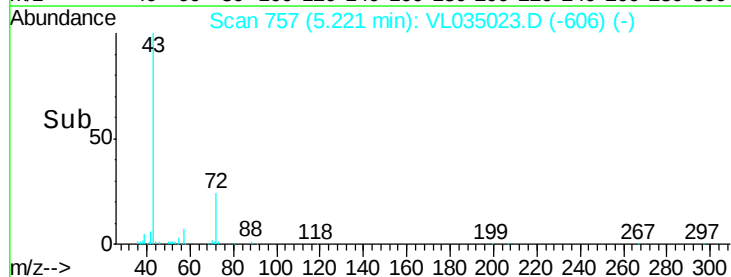
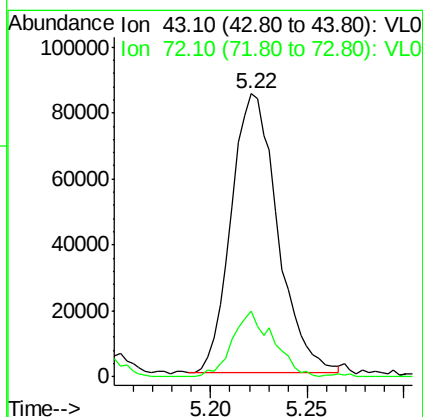
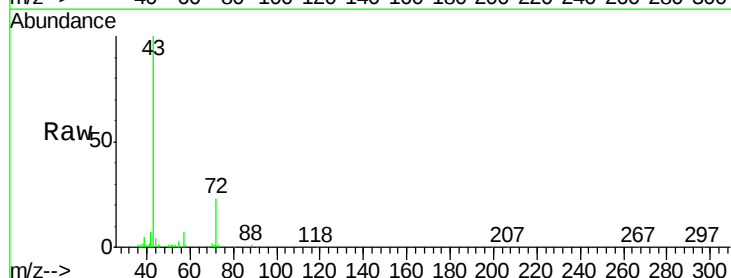
Manual Integrations
 APPROVED

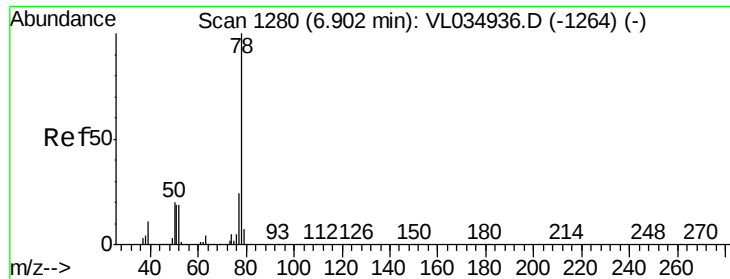
MMDadoda
 5/18/2020 1:34:50 PM



#34
 2-Butanone
 Concen: 0.930 ppbv
 RT: 5.22 min Scan# 757
 Delta R.T. -0.01 min
 Lab File: VL035023.D
 Acq: 14 May 2020 17:05

Tgt Ion	Ratio	Lower	Upper
43	100		
72	21.3	18.0	27.0





#36

Benzene

Concen: 1.059 ppbv

RT: 6.88 min Scan# 1273

Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

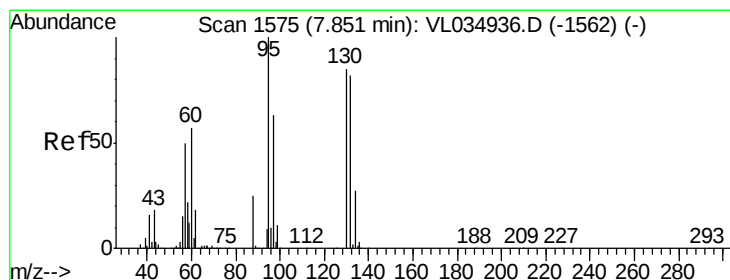
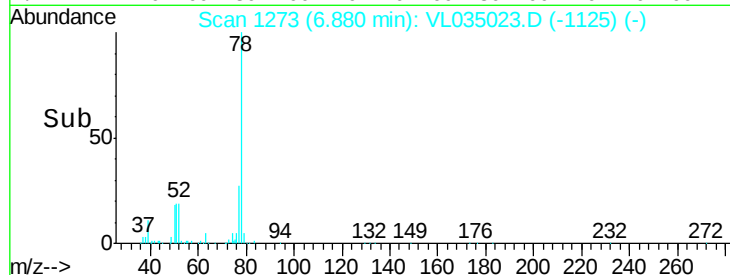
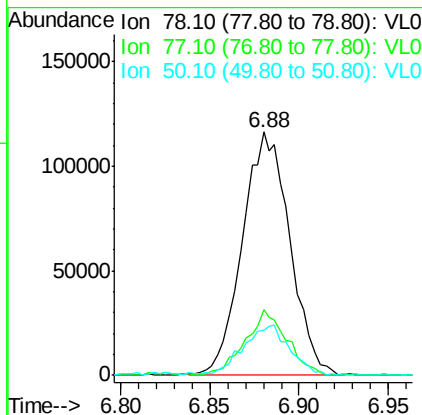
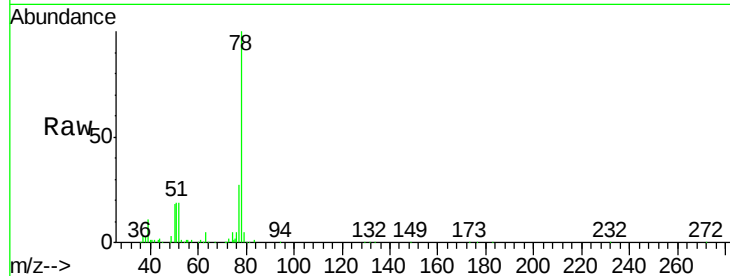
ClientSampleId :

SG-6

Tot Ion:	78	Resp:	213623
Ion	Ratio	Lower	Upper
78	100		
77	26.5	19.0	28.6
50	18.2	15.8	23.8

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM



#38

Trichloroethene

Concen: 15.000 ppbv

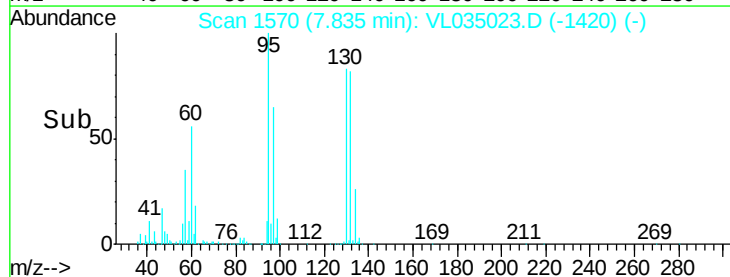
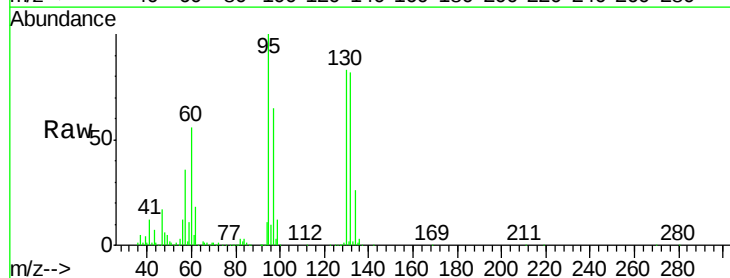
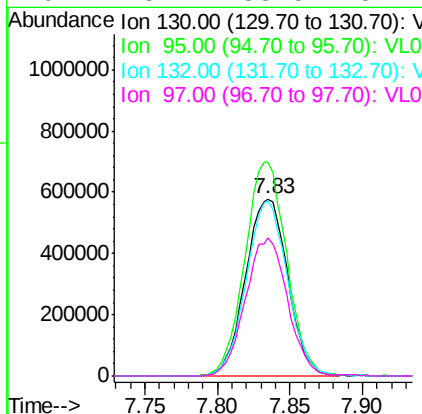
RT: 7.83 min Scan# 1570

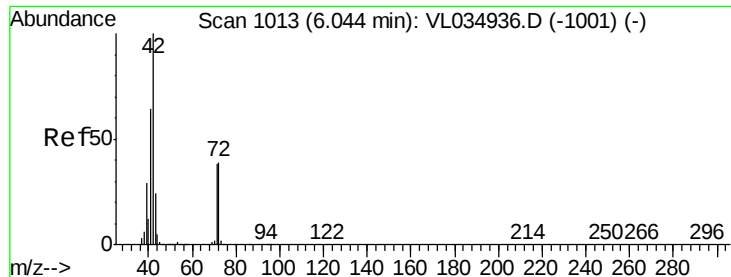
Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Tgt Ion:	130	Resp:	1172352
Ion	Ratio	Lower	Upper
130	100		
95	120.7	93.4	140.0
132	99.0	76.4	114.6
97	78.4	58.5	87.7





#41

Tetrahydrofuran

Concen: 0.738 ppbv

RT: 6.04 min Scan# 1011

Delta R.T. -0.01 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

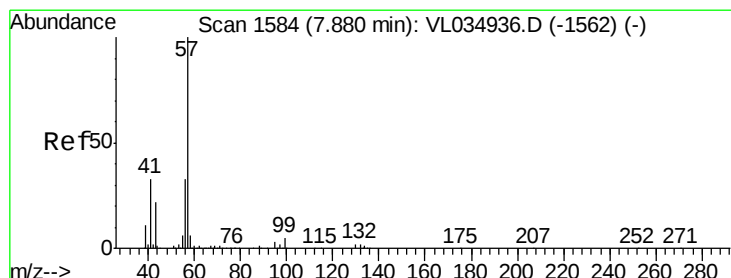
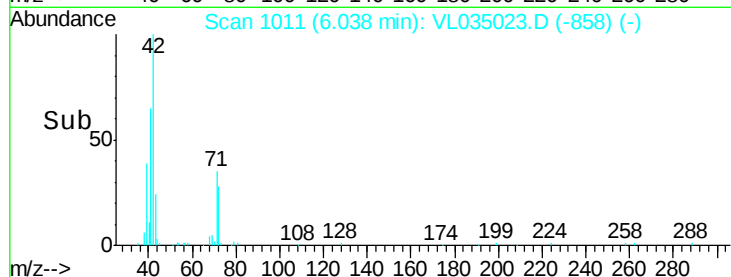
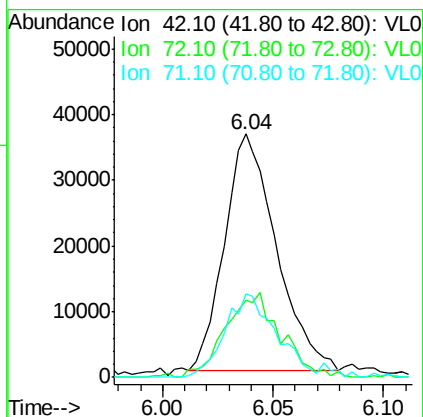
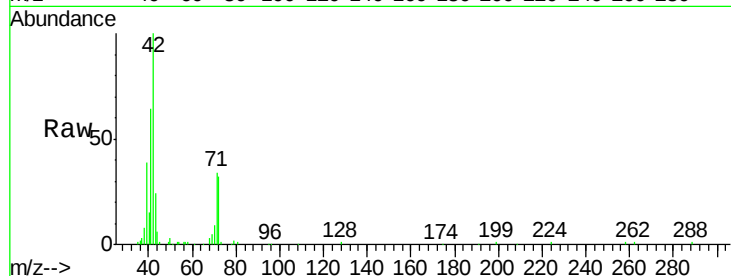
ClientSampleId :

SG-6

Tot Ion:	42	Resp:	59073
Ion Ratio	Lower	Upper	
42	100		
72	38.5	31.4	47.0
71	37.2	29.8	44.8

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM



#44

2,2,4-Trimethylpentane

Concen: 11.337 ppbv

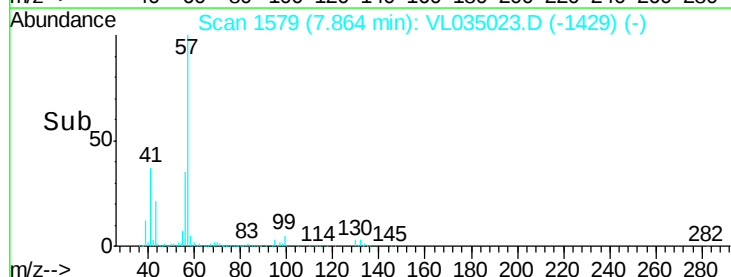
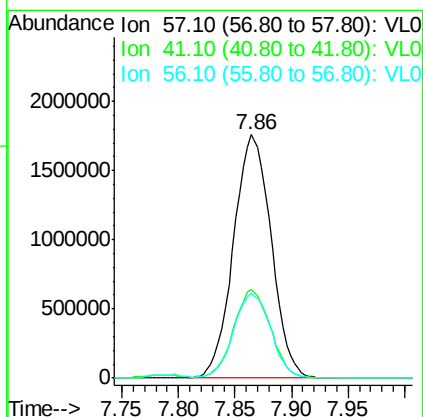
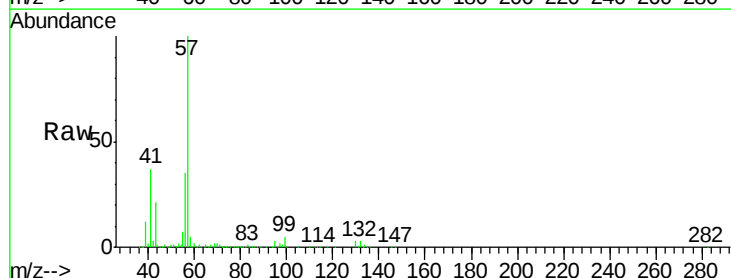
RT: 7.86 min Scan# 1579

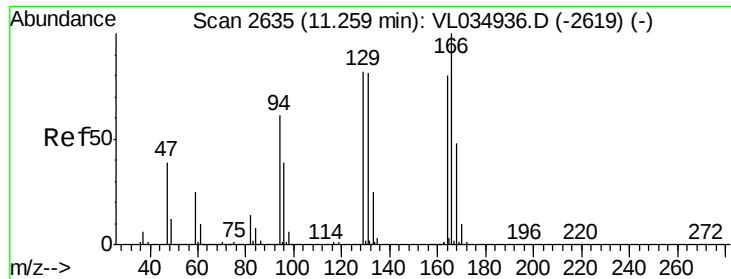
Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Tgt Ion:	57	Resp:	4066107
Ion Ratio	Lower	Upper	
57	100		
41	35.7	26.4	39.6
56	34.7	25.5	38.3





#52

Tetrachloroethene

Concen: 37.797 ppbv

RT: 11.24 min Scan# 2629

Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

ClientSampleId :

SG-6

Tot Ion:164 Resp: 2711300

Ion Ratio Lower Upper

164 100

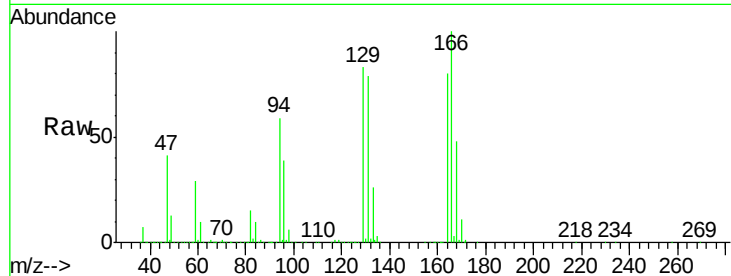
166 125.0 100.7 151.1

129 103.5 83.0 124.4

131 99.3 81.0 121.4

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM

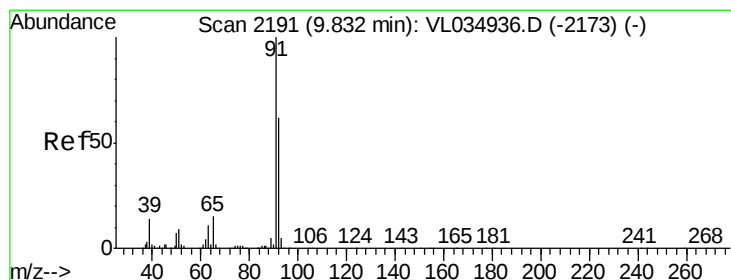
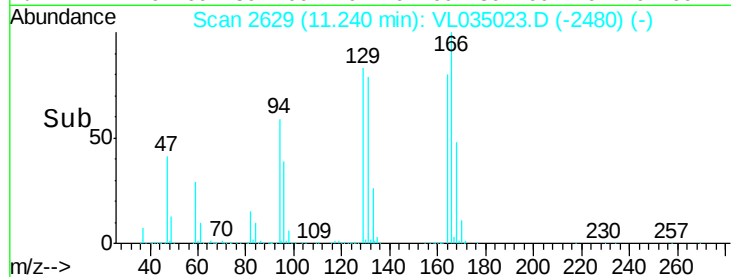
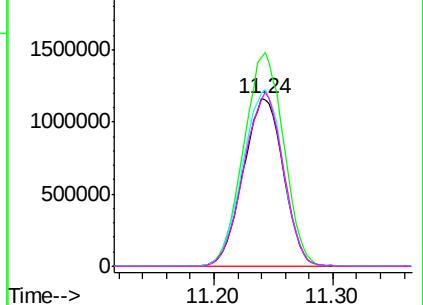


Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 30.720 ppbv

RT: 9.82 min Scan# 2186

Delta R.T. -0.02 min

Lab File: VL035023.D

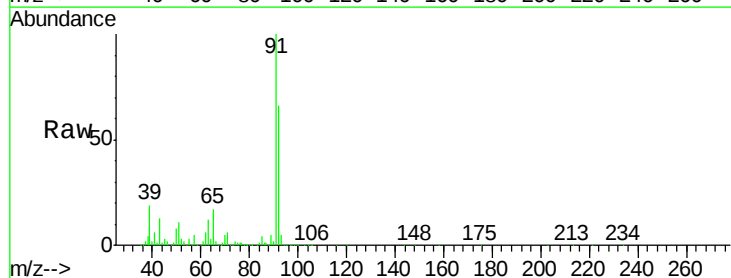
Acq: 14 May 2020 17:05

Tgt Ion: 91 Resp: 6569594

Ion Ratio Lower Upper

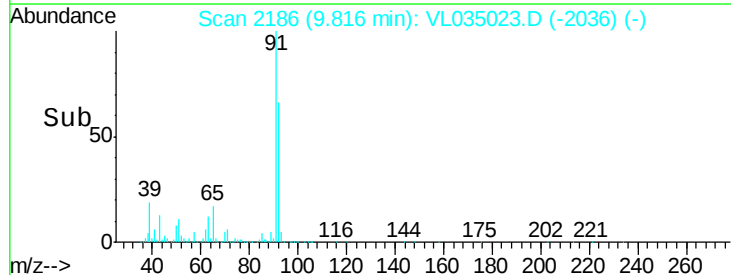
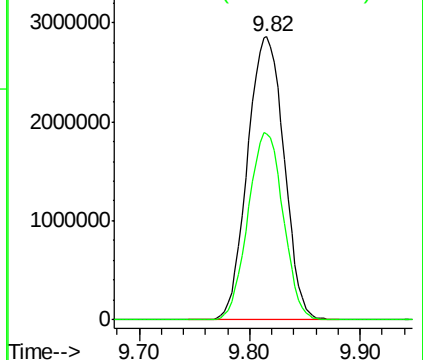
91 100

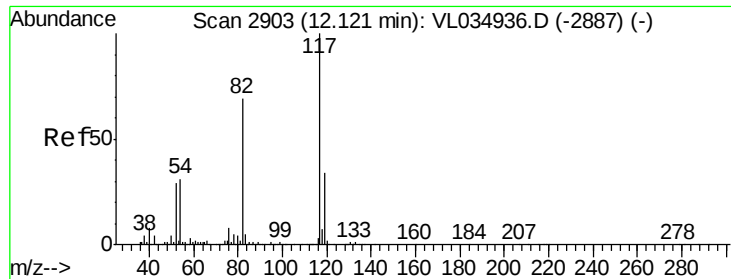
92 63.8 48.6 73.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0





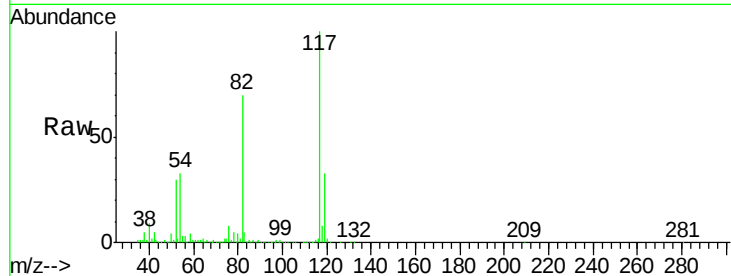
#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.10 min Scan# 2897
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampled :
SG-6

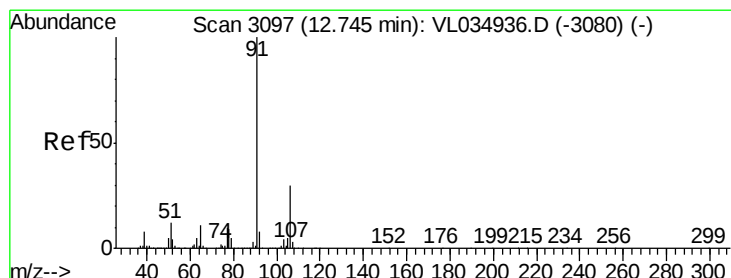
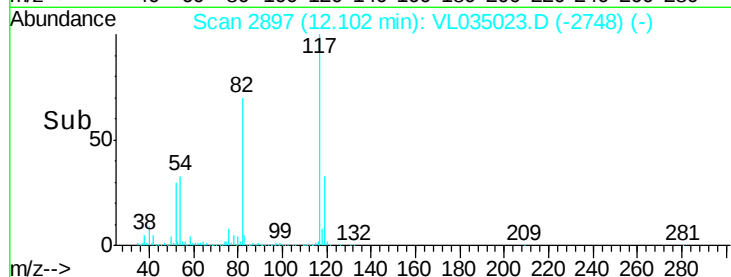
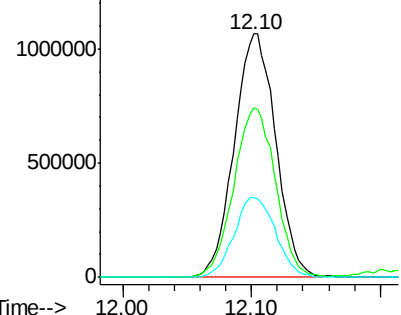
Tot Ion	Ratio	Lower	Upper
117	100		
82	69.9	53.1	79.7
119	33.0	26.7	40.1

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM

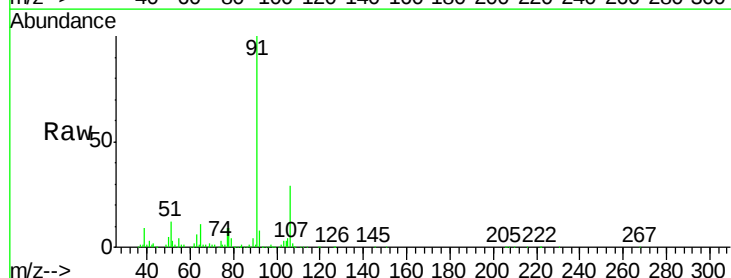


Abundance Ion 117.10 (116.80 to 117.80): V
Ion 82.10 (81.80 to 82.80): VL0
Ion 119.10 (118.80 to 119.80): V

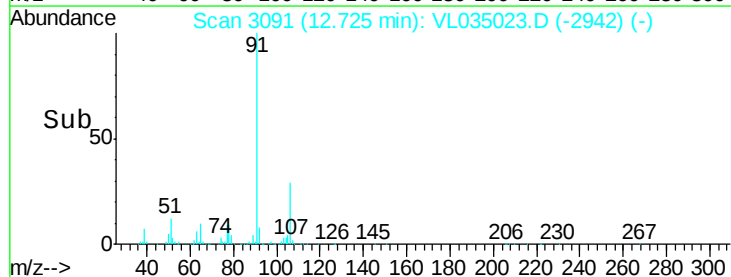
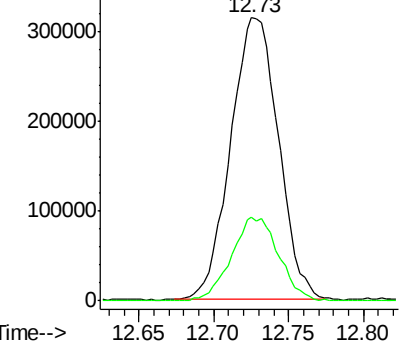


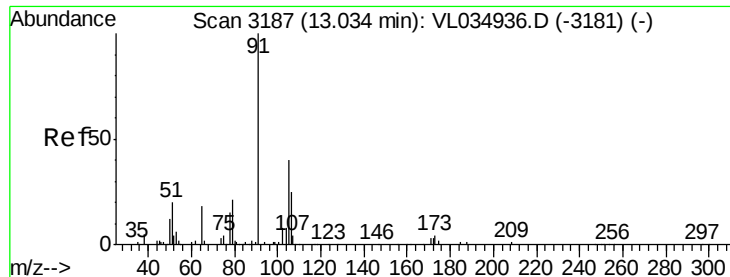
#58
Ethyl Benzene
Concen: 2.355 ppbv
RT: 12.73 min Scan# 3091
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion	Ratio	Lower	Upper
91	100		
106	29.4	24.2	36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 106.10 (105.80 to 106.80): V





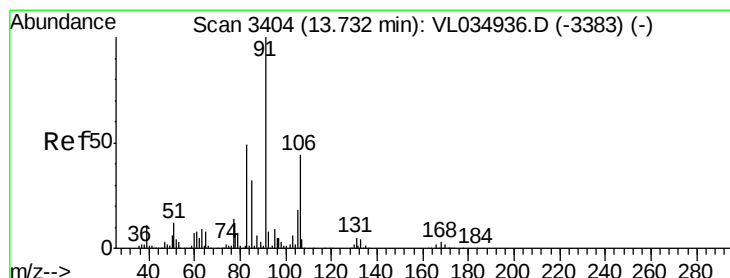
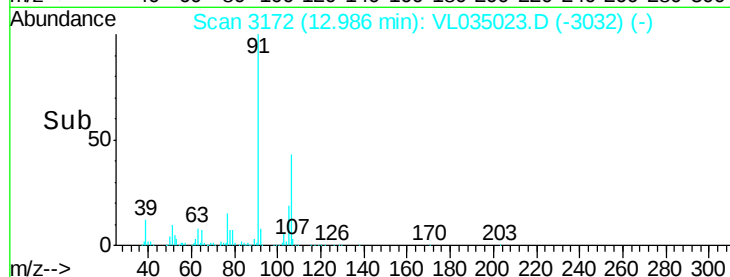
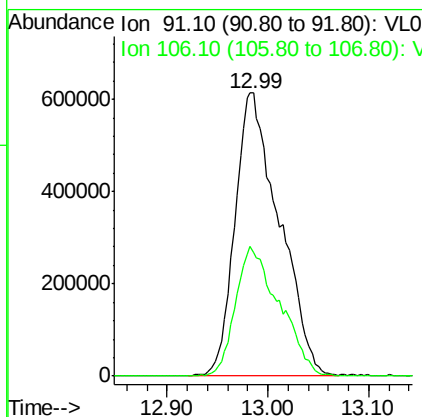
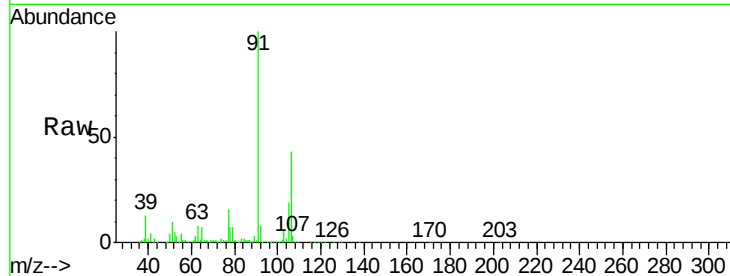
#59
m/p-Xylene
Concen: 7.192 ppbv
RT: 12.99 min Scan# 3172
Delta R.T. -0.05 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampleId :
SG-6

Tot Ion: 91 Resp: 1866815
Ion Ratio Lower Upper
91 100
106 45.5 66.0 99.0#

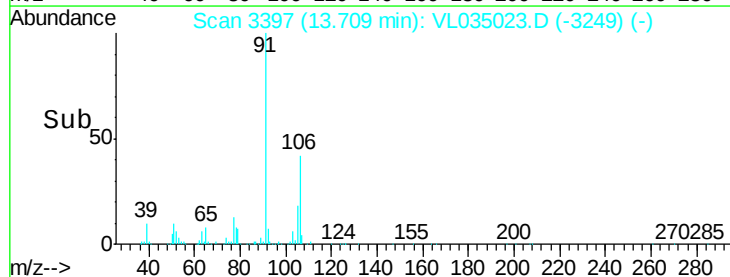
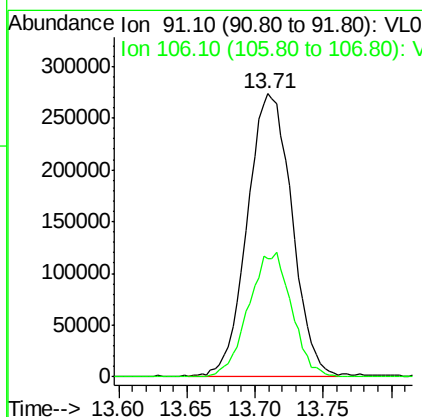
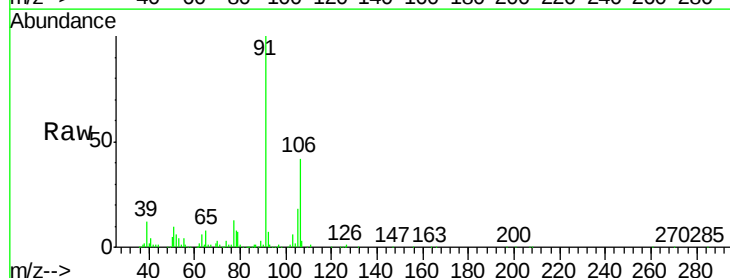
Manual Integrations
APPROVED

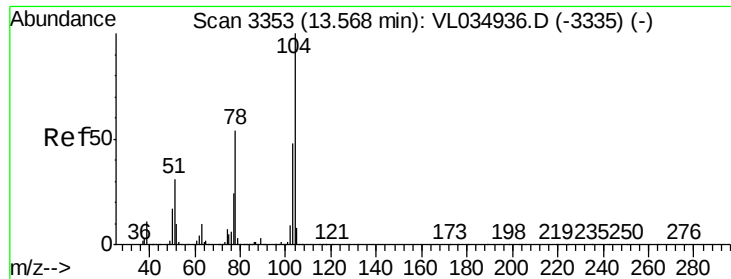
MMDadoda
5/18/2020 1:34:50 PM



#60
o-Xylene
Concen: 2.417 ppbv
RT: 13.71 min Scan# 3397
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion: 91 Resp: 619071
Ion Ratio Lower Upper
91 100
106 42.7 21.9 65.5





#61

Stvrene

Concen: 1.736 ppbv

RT: 13.55 min Scan# 3346

Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

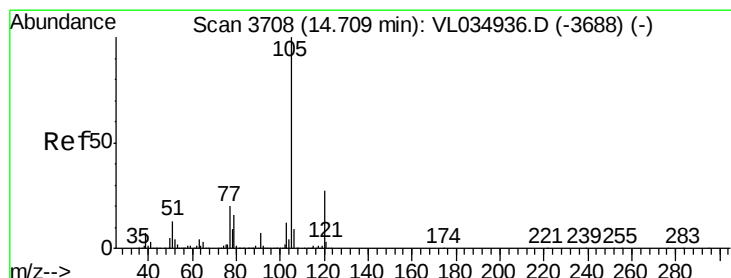
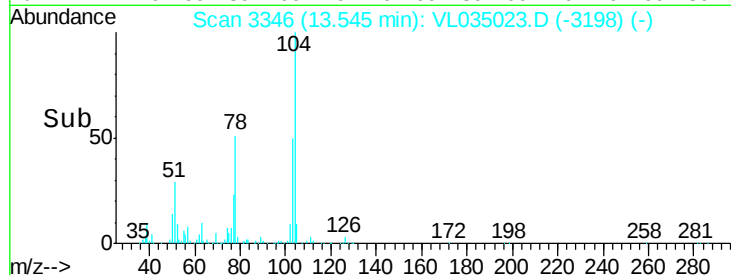
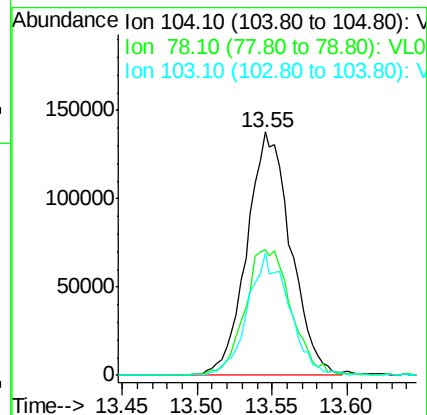
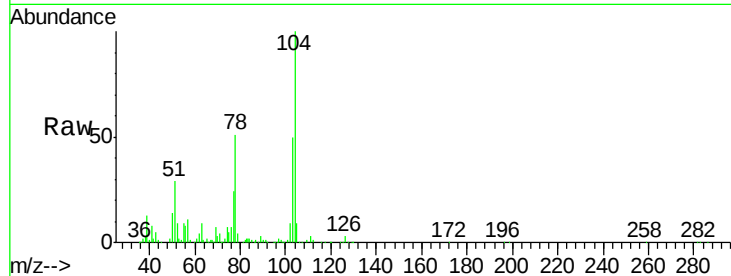
ClientSampleId :

SG-6

Tot Ion:	104	Resp:	281464
Ion Ratio	Lower	Upper	
104	100		
78	55.1	43.7	65.5
103	47.5	38.8	58.2

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM



#62

Isopropylbenzene

Concen: 0.458 ppbv

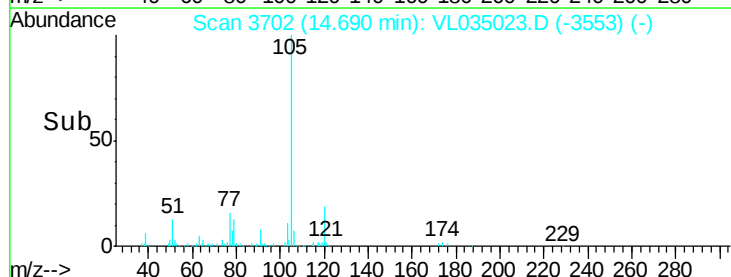
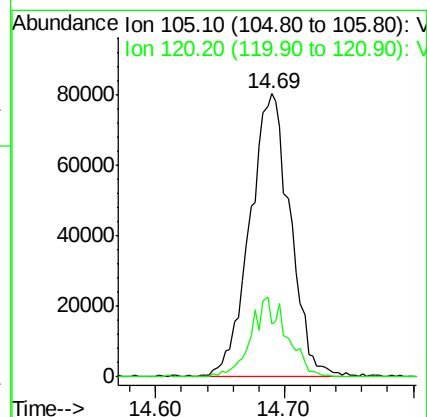
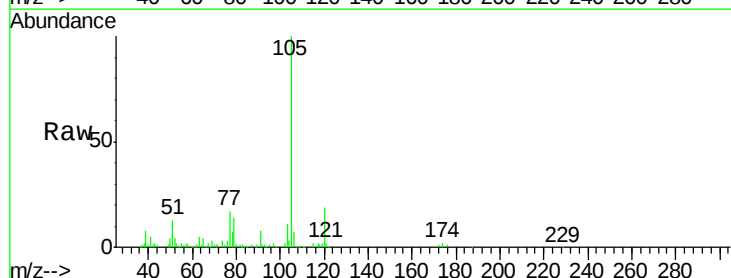
RT: 14.69 min Scan# 3702

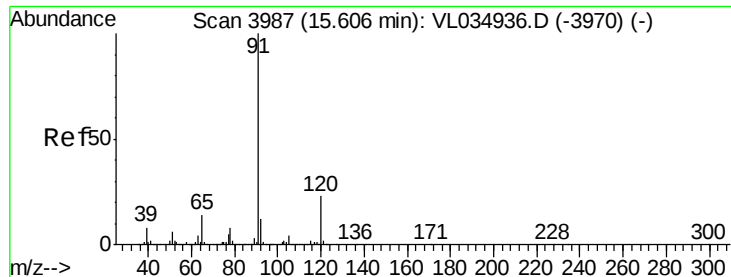
Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Tgt Ion:	105	Resp:	175174
Ion Ratio	Lower	Upper	
105	100		
120	24.6	20.6	31.0





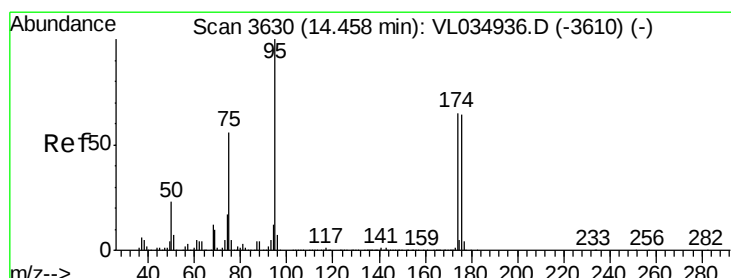
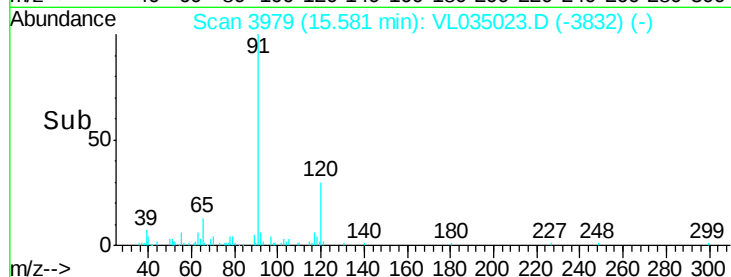
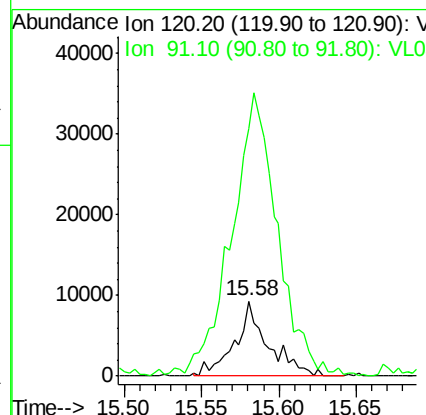
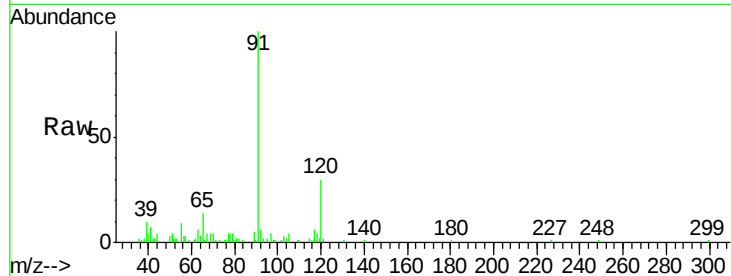
#64
n-propylbenzene
Concen: 0.140 ppbv m
RT: 15.58 min Scan# 3979
Delta R.T. -0.03 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Instrument :
MSVOA_L
ClientSampleId :
SG-6

Tot Ion:120 Resp: 13744
Ion Ratio Lower Upper
120 100
91 213.9 373.5 560.3#

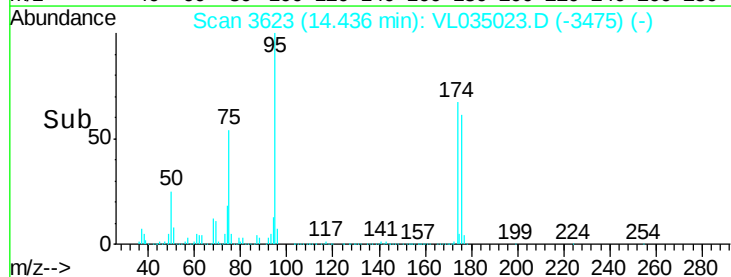
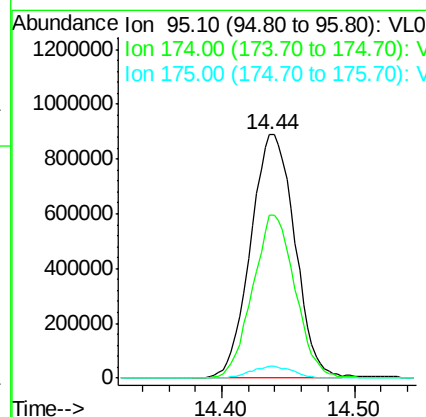
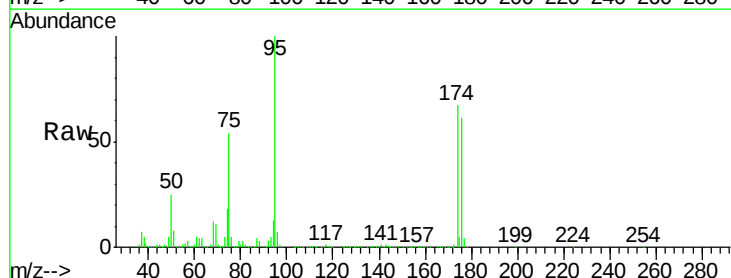
Manual Integrations
APPROVED

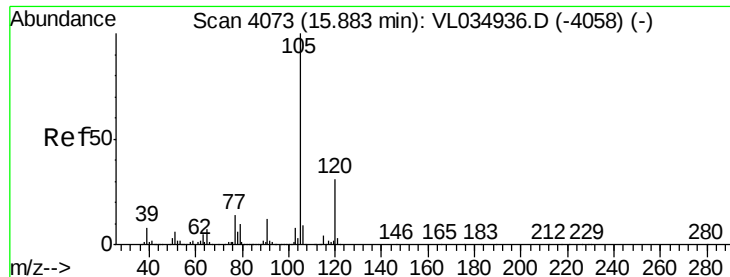
MMDadoda
5/18/2020 1:34:50 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 10.641 ppbv
RT: 14.44 min Scan# 3623
Delta R.T. -0.02 min
Lab File: VL035023.D
Acq: 14 May 2020 17:05

Tgt Ion: 95 Resp: 2055083
Ion Ratio Lower Upper
95 100
174 64.8 51.5 77.3
175 4.7 3.8 5.8





#72

4-Ethyltoluene

Concen: 0.281 ppbv m

RT: 15.86 min Scan# 4065

Delta R.T. -0.03 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Instrument :

MSVOA_L

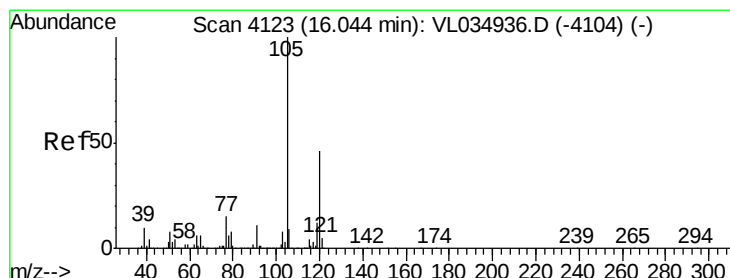
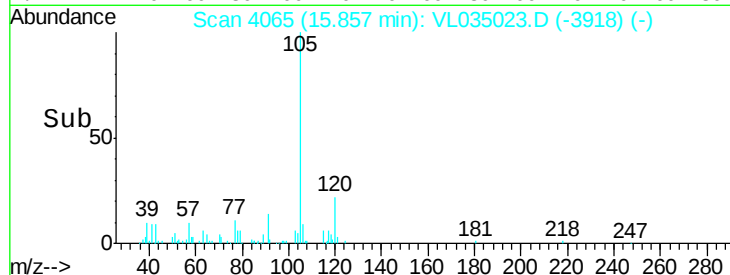
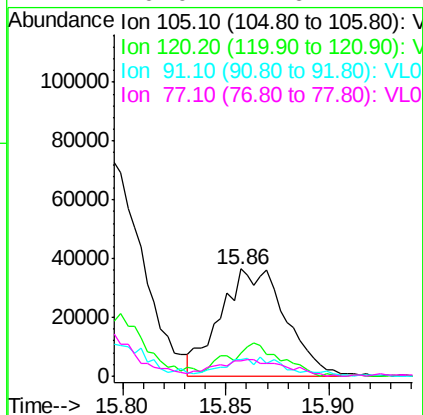
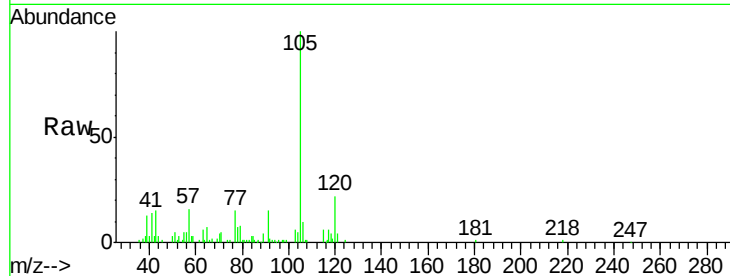
ClientSampled :

SG-6

Tot Ion	Ratio	Lower	Upper
105	100		
120	0.0	23.8	35.8#
91	0.0	10.6	15.8#
77	0.0	11.6	17.4#

Manual Integrations
APPROVED

MMDadoda
5/18/2020 1:34:50 PM



#73

1,3,5-Trimethylbenzene

Concen: 0.236 ppbv

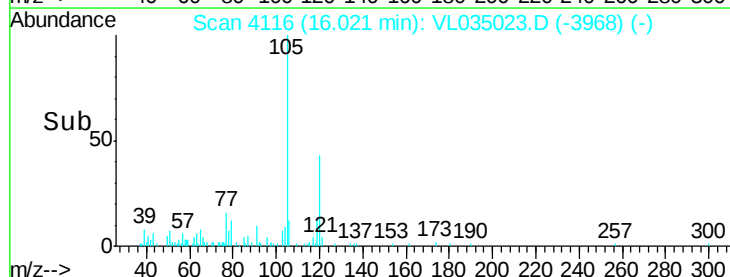
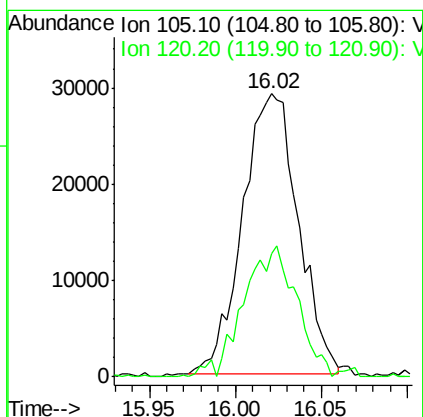
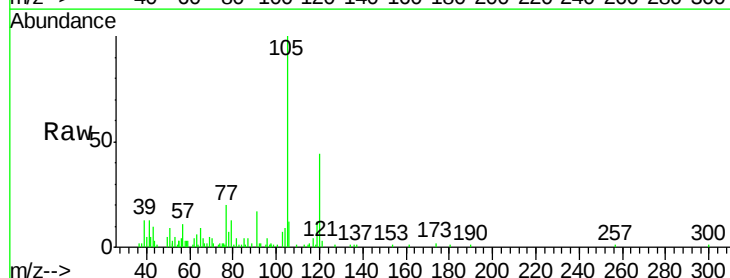
RT: 16.02 min Scan# 4116

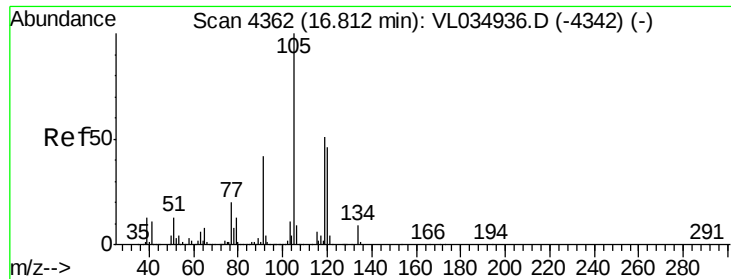
Delta R.T. -0.02 min

Lab File: VL035023.D

Acq: 14 May 2020 17:05

Tgt Ion	Ratio	Lower	Upper
105	100		
120	44.2	36.4	54.6





#74
 1,2,4-Trimethylbenzene
 Concen: 0.809 ppbv
 RT: 16.79 min Scan# 4355
 Delta R.T. -0.02 min
 Lab File: VL035023.D
 Acq: 14 May 2020 17:05

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-6

Tot Ion	Ratio	Resp Lower	Upper
105	100		
120	39.9	36.8	55.2
91	13.8	35.4	53.0#
77	13.3	16.2	24.2#

Manual Integrations
 APPROVED

MMDadoda
 5/18/2020 1:34:50 PM

