

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL072920\
 Data File : VL035250.D
 Acq On : 29 Jul 2020 17:31
 Operator : SY/AP
 Sample : L3474-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SINK

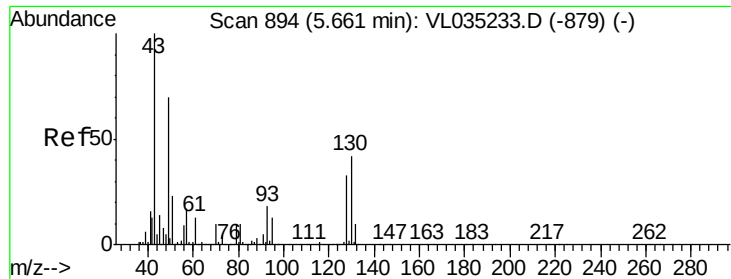
Manual Integrations
 APPROVED

MMDadoda
 7/30/2020 6:11:15 PM

Quant Time: Jul 30 04:29:26 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL072920AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Jul 29 2020
 QLast Update : Wed Jul 29 07:14:29 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.69	49	976564	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.20	114	2752752	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.12	117	2566982	10.00	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.46	95	2158227	10.52	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.20%
Target Compounds						Ovalue
2) Dichlorodifluoromethane	3.01	85	36312	0.311	ppbv	92
3) Chlorodifluoromethane	2.94	51	112309m	1.039	ppbv	
4) Chloromethane	3.10	50	41005	0.674	ppbv	89
9) Propene	2.99	41	87475m	2.321	ppbv	
11) Trichlorofluoromethane	3.92	101	105266	0.671	ppbv	99
12) 1,1,2-Trichlorotrifluoroet	4.47	101	112944	1.015	ppbv	99
13) Ethanol	3.61	45	17923171m	1168.667	ppbv	
15) Acetone	3.84	43	28438877	218.322	ppbv	# 25
19) Isopropyl Alcohol	4.04	45	58830944m	684.794	ppbv	
20) Methylene Chloride	4.35	84	3269233	55.135	ppbv	97
26) Hexane	5.69	57	12129281	132.173	ppbv	# 45
27) Carbon Disulfide	4.54	76	13909m	0.112	ppbv	
28) Methyl tert-Butyl Ether	5.02	73	3955928	30.155	ppbv	100
29) Chloroform	5.77	83	6218749	40.405	ppbv	91
30) Cyclohexane	7.15	84	21251m	0.324	ppbv	
32) 1,1,1-Trichloroethane	6.53	97	14636m	0.093	ppbv	
34) 2-Butanone	5.25	43	161911	1.156	ppbv	94
35) Carbon Tetrachloride	7.04	117	12966m	0.070	ppbv	
36) Benzene	6.91	78	35807m	0.187	ppbv	
38) Trichloroethene	7.88	130	3159m	0.040	ppbv	
44) 2,2,4-Trimethylpentane	7.89	57	102696	0.305	ppbv	# 71
52) Tetrachloroethene	11.26	164	4469m	0.061	ppbv	
53) Toluene	9.84	91	1211863	5.960	ppbv	98
58) Ethyl Benzene	12.75	91	359229	1.321	ppbv	# 85
59) m/p-Xylene	13.01	91	1583740	6.257	ppbv	98
60) o-Xylene	13.73	91	354979	1.406	ppbv	98
73) 1,3,5-Trimethylbenzene	16.04	105	26682m	0.096	ppbv	
74) 1,2,4-Trimethylbenzene	16.81	105	95302m	0.295	ppbv	
80) Naphthalene,2-methyl-	25.02	142	3394	0.041	ppbv	92

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.03 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

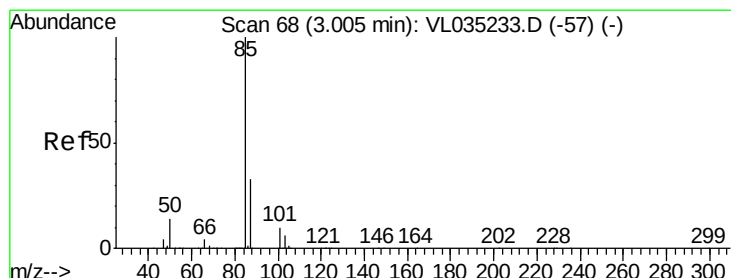
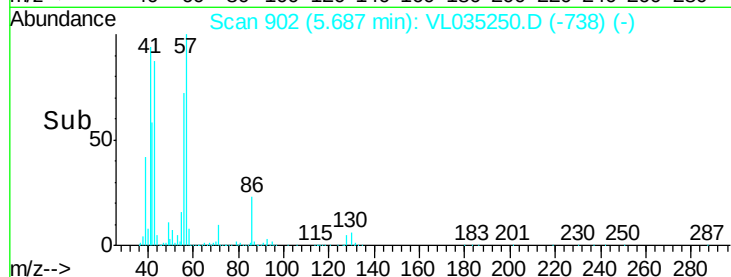
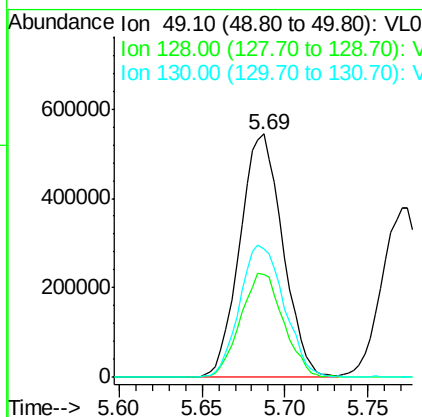
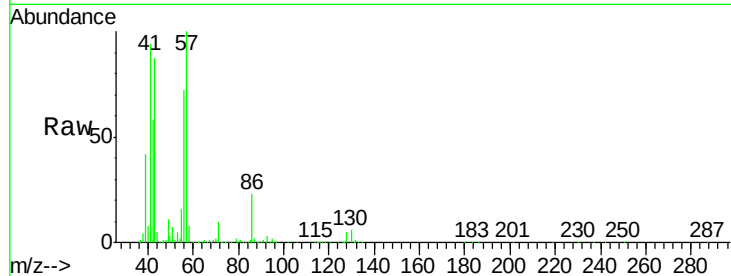
ClientSampled :

SINK

Tot Ion	Ratio	Lower	Upper
49	100		
128	43.0	24.0	72.0
130	56.6	30.7	92.1

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:11:15 PM



#2

Dichlorodifluoromethane

Concen: 0.311 ppbv

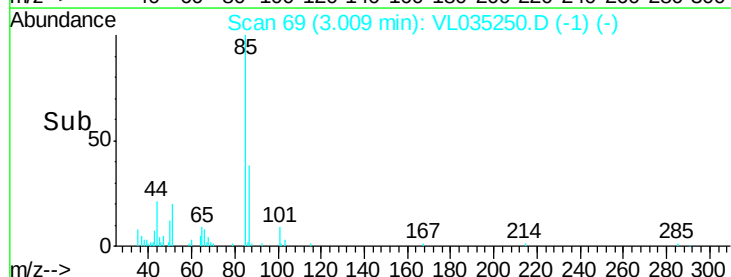
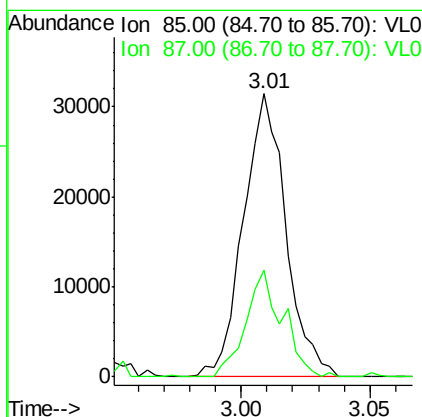
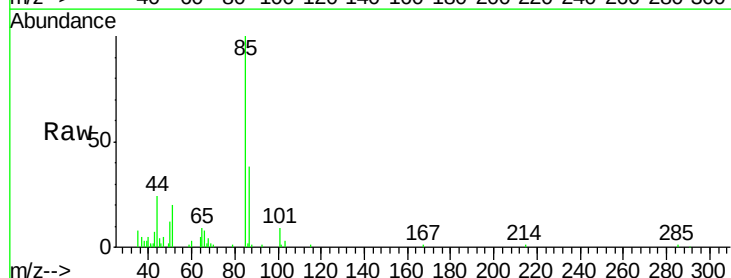
RT: 3.01 min Scan# 69

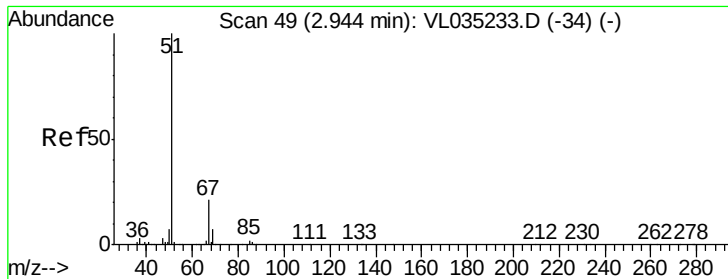
Delta R.T. 0.00 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Tgt Ion	Ratio	Lower	Upper
85	100		
87	37.8	26.7	40.1





#3

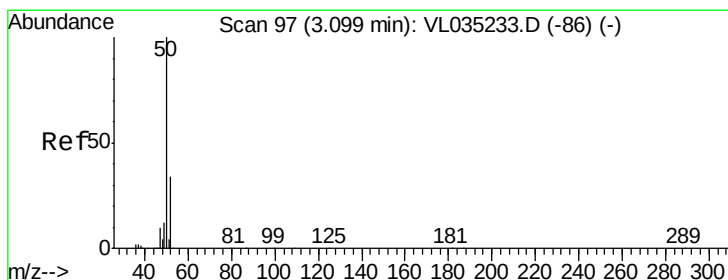
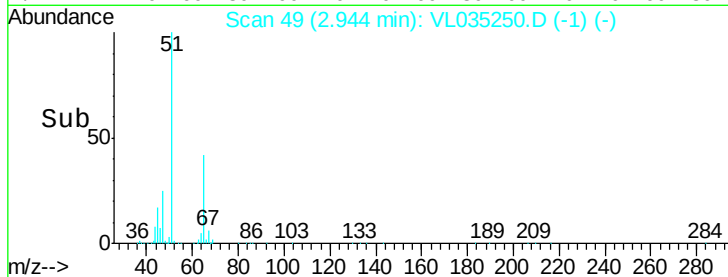
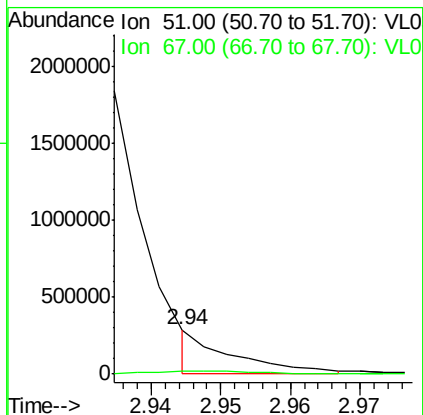
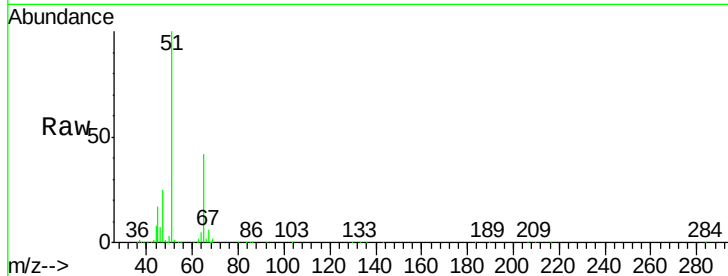
Chlorodifluoromethane
Concen: 1.039 ppbv
RT: 2.94 min Scan# 49
Delta R.T. 0.00 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Instrument :
MSVOA_L
ClientSampleId :
SINK

Tot Ion	Ratio	Lower	Upper
51	100		
67	21.4	16.6	25.0

Manual Integrations
APPROVED

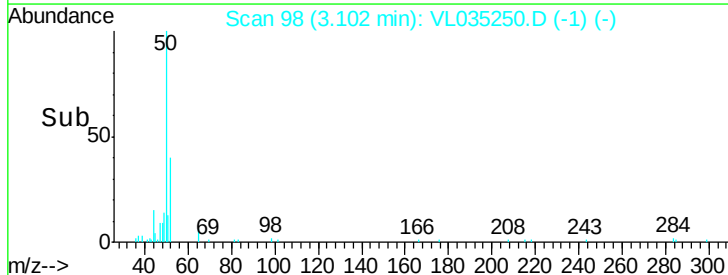
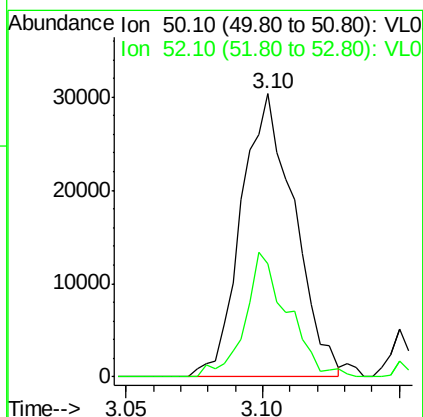
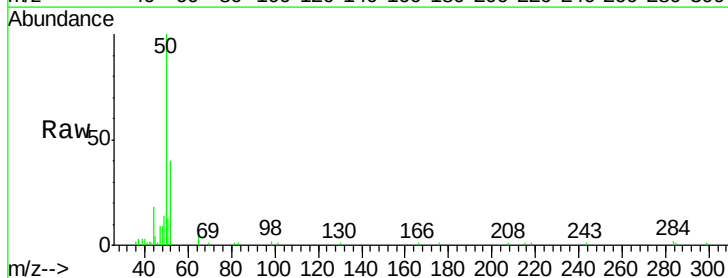
MMDadoda
7/30/2020 6:11:15 PM

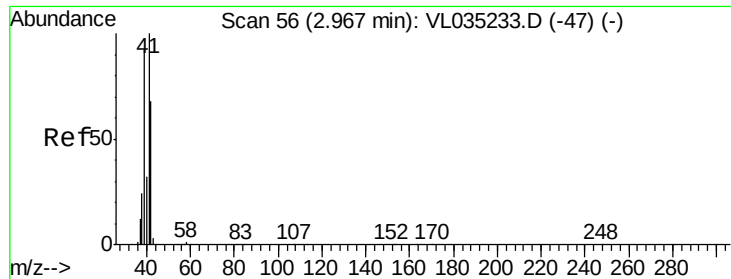


#4

Chloromethane
Concen: 0.674 ppbv
RT: 3.10 min Scan# 98
Delta R.T. 0.00 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tgt Ion	Ratio	Lower	Upper
50	100		
52	40.0	27.1	40.7





#9

Propene

Concen: 2.321 ppbv m

RT: 2.99 min Scan# 62

Delta R.T. 0.02 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

ClientSampled :

SINK

Tot Ion: 41 Resp: 87475

Ion Ratio Lower Upper

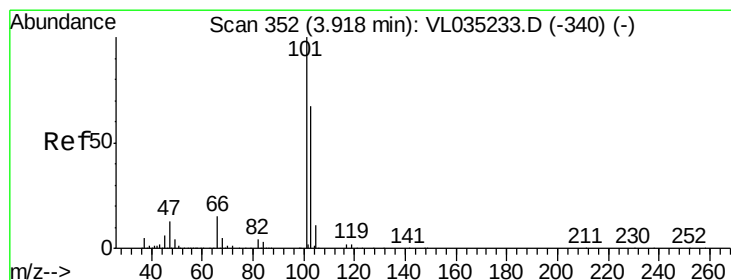
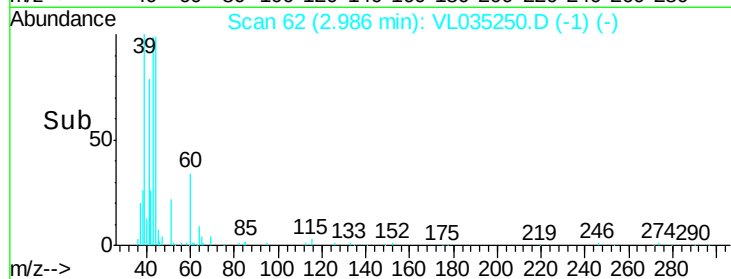
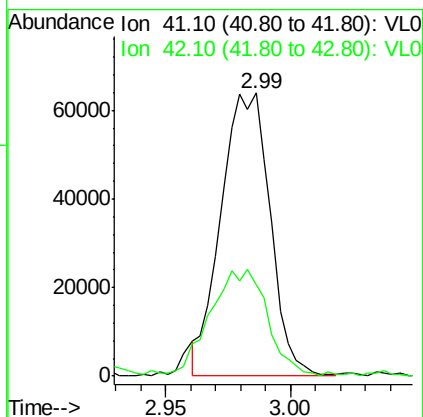
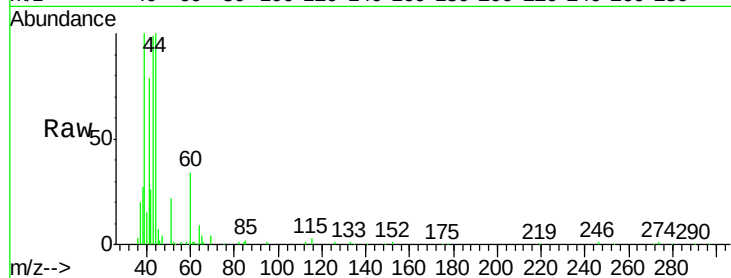
41 100

42 435.5 55.0 82.6#

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:11:15 PM



#11

Trichlorofluoromethane

Concen: 0.671 ppbv

RT: 3.92 min Scan# 353

Delta R.T. 0.00 min

Lab File: VL035250.D

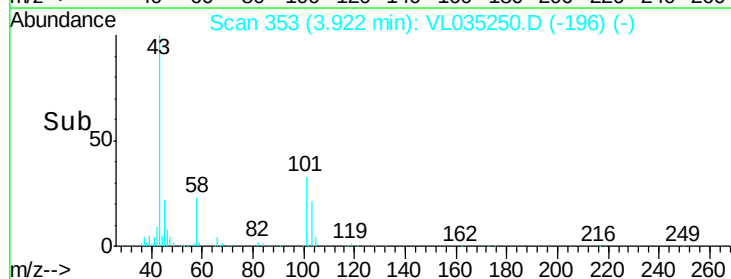
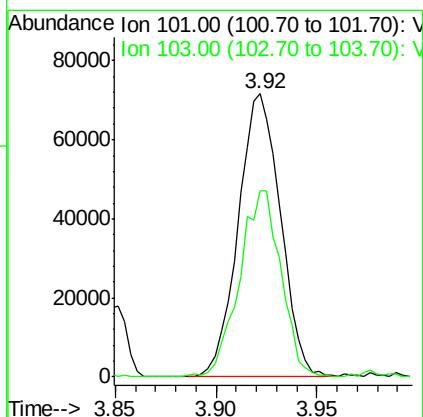
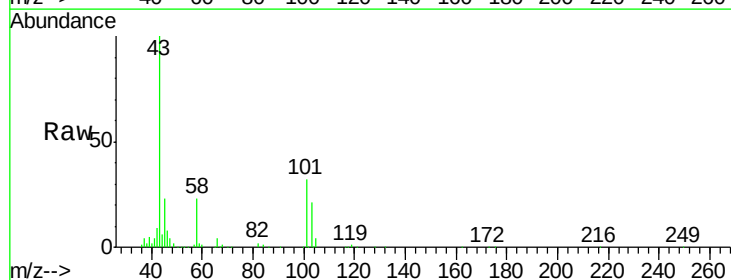
Acq: 29 Jul 2020 17:31

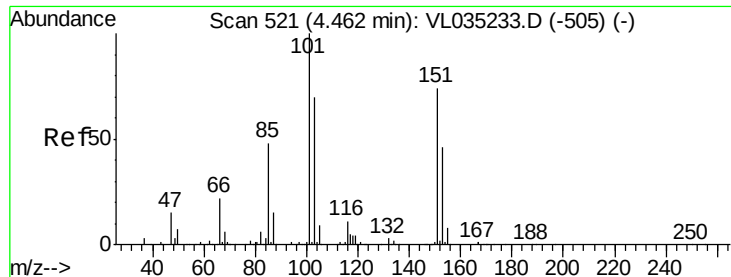
Tgt Ion: 101 Resp: 105266

Ion Ratio Lower Upper

101 100

103 65.6 53.4 80.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 1.015 ppbv

RT: 4.47 min Scan# 523

Delta R.T. 0.01 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

ClientSampleId :

SINK

Tot Ion:101 Resp: 112944

Ion Ratio Lower Upper

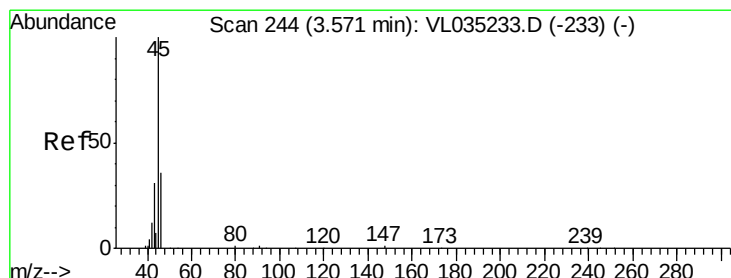
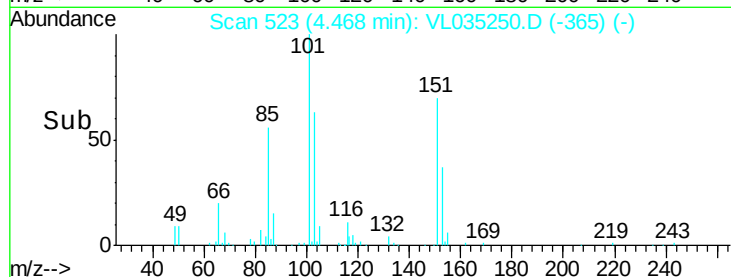
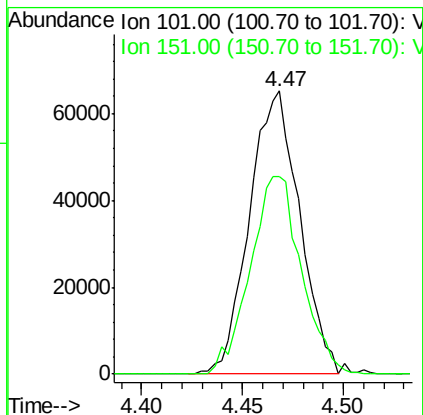
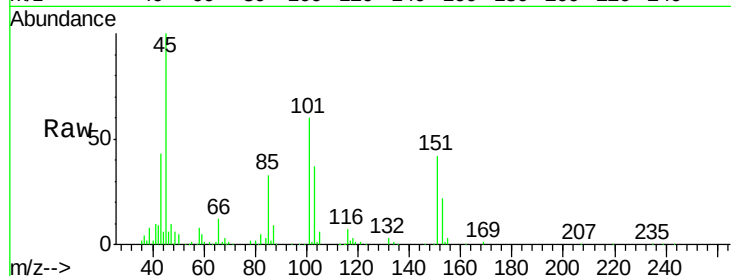
101 100

151 71.5 56.6 85.0

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:11:15 PM



#13

Ethanol

Concen: 1168.667 ppbv m

RT: 3.61 min Scan# 257

Delta R.T. 0.04 min

Lab File: VL035250.D

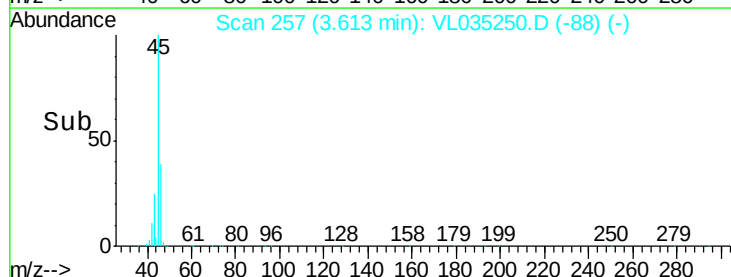
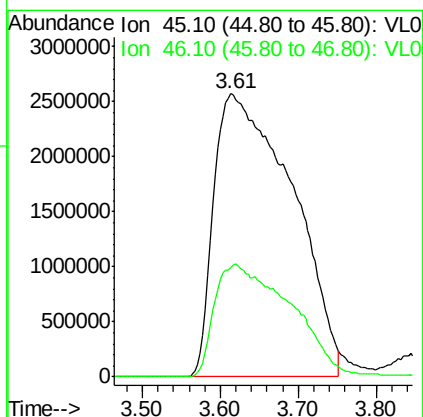
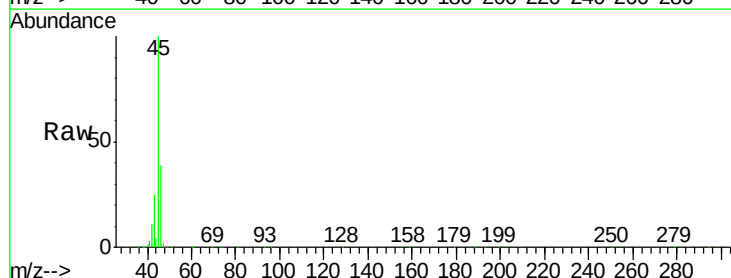
Acq: 29 Jul 2020 17:31

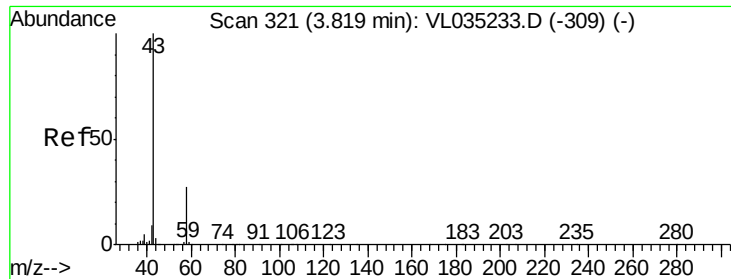
Tgt Ion: 45 Resp:17923171

Ion Ratio Lower Upper

45 100

46 39.1 15.8 63.4





#15

Acetone

Concen: 218.322 ppbv

RT: 3.84 min Scan# 329

Delta R.T. 0.03 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

ClientSampleId :

SINK

Tot Ion: 43 Resp:28438877

Ion Ratio Lower Upper

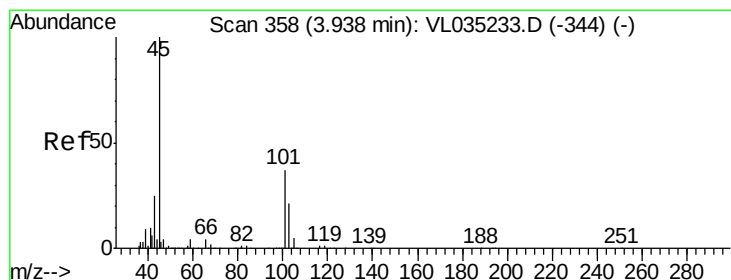
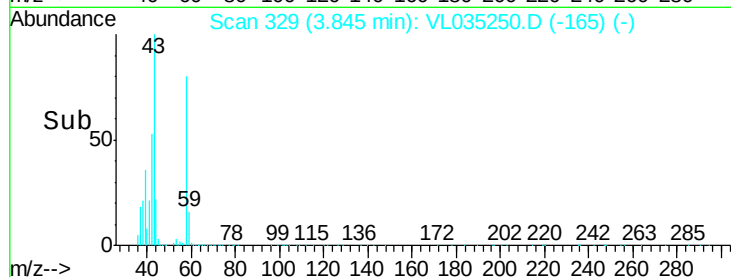
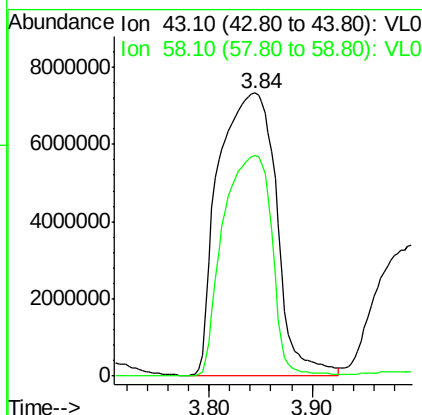
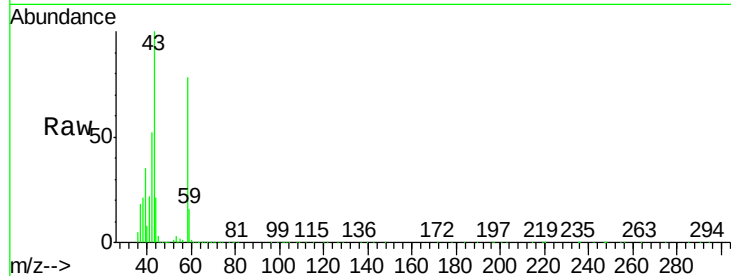
43 100

58 65.9 21.8 32.6#

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:11:15 PM



#19

Isopropyl Alcohol

Concen: 684.794 ppbv m

RT: 4.04 min Scan# 390

Delta R.T. 0.10 min

Lab File: VL035250.D

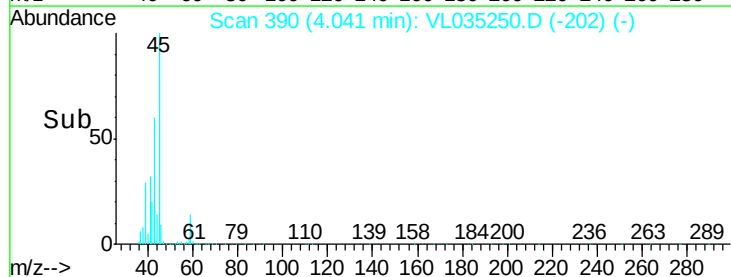
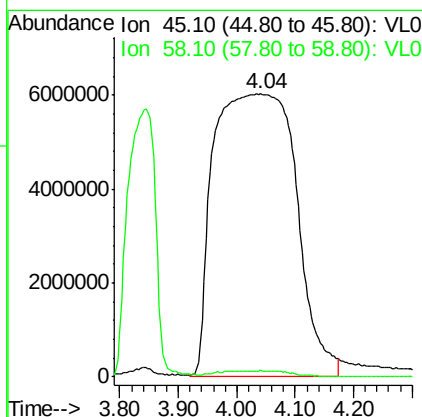
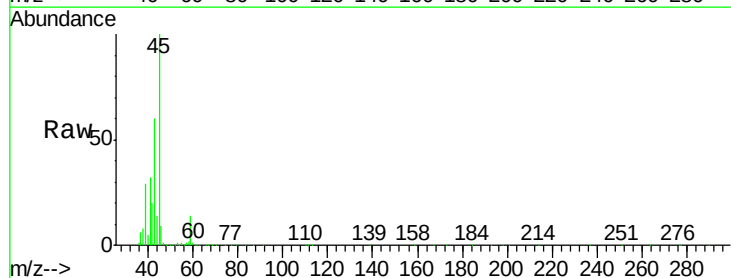
Acq: 29 Jul 2020 17:31

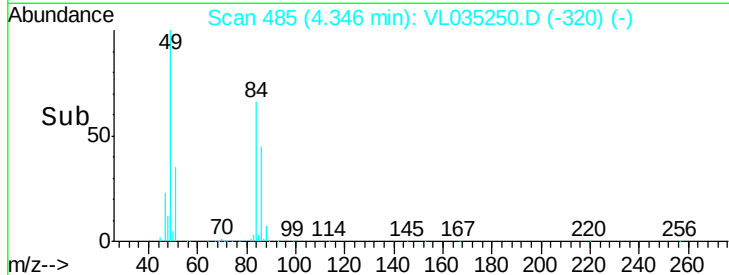
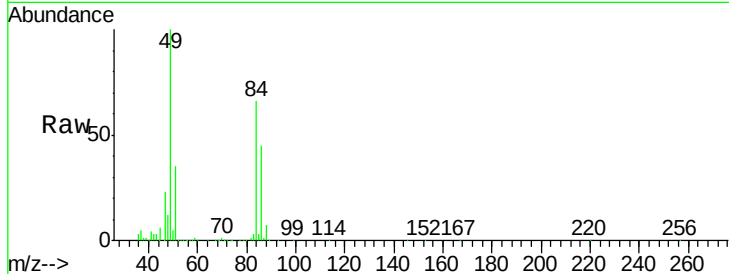
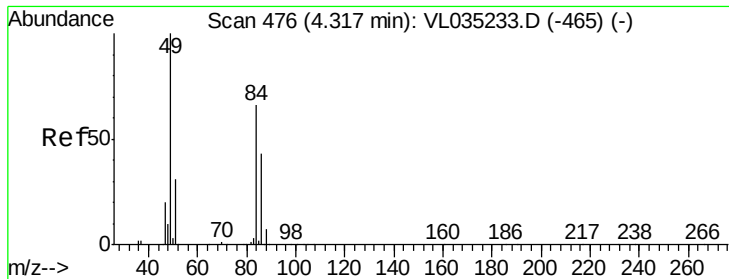
Tgt Ion: 45 Resp:58830944

Ion Ratio Lower Upper

45 100

58 0.0 1.9 2.9#





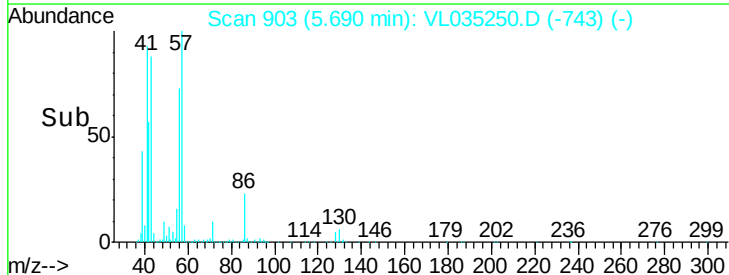
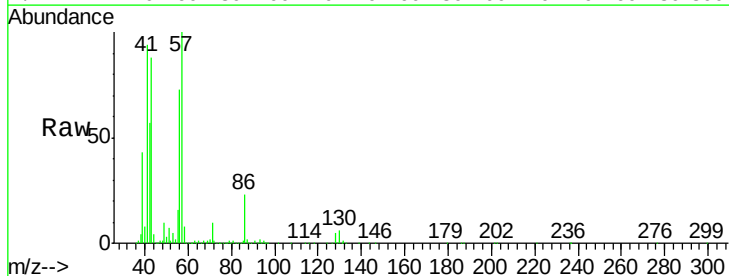
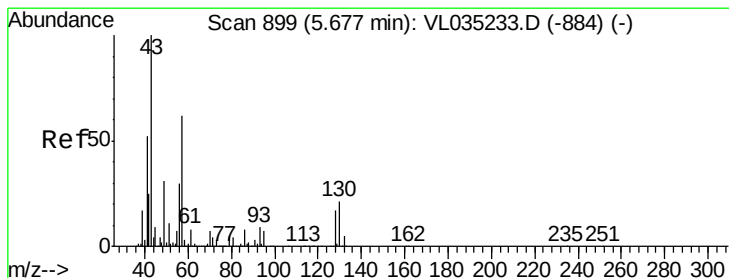
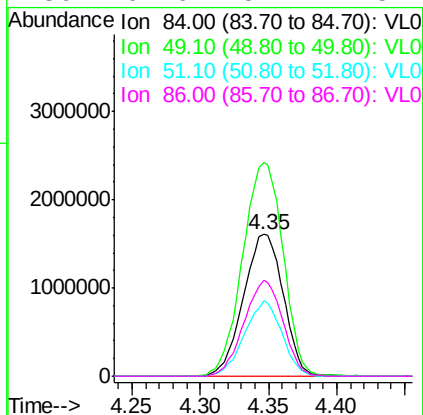
#20
Methylene Chloride
Concen: 55.135 ppbv
RT: 4.35 min Scan# 485
Delta R.T. 0.03 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tot Ion: 84 Resp: 3269233
Ion Ratio Lower Upper
84 100
49 150.6 121.0 181.4
51 53.0 37.7 56.5
86 67.6 52.2 78.4

Instrument :
MSVOA_L
ClientSampled :
SINK

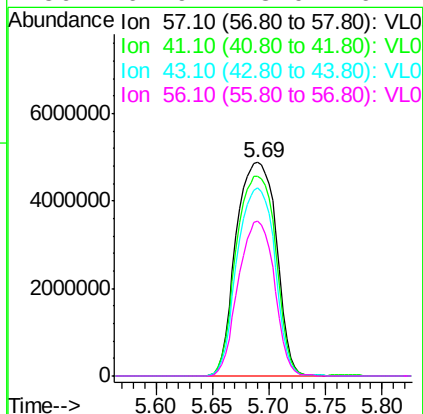
Manual Integrations
APPROVED

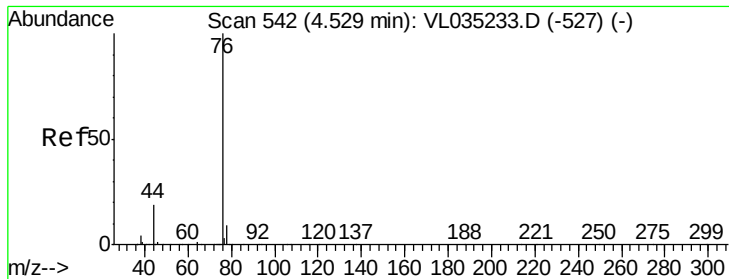
MMDadoda
7/30/2020 6:11:15 PM



#26
Hexane
Concen: 132.173 ppbv
RT: 5.69 min Scan# 903
Delta R.T. 0.01 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tgt Ion: 57 Resp: 12129281
Ion Ratio Lower Upper
57 100
41 91.7 73.9 110.9
43 82.1 177.6 266.4#
56 64.9 43.0 64.4#





#27

Carbon Disulfide

Concen: 0.112 ppbv m

RT: 4.54 min Scan# 545

Delta R.T. 0.01 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

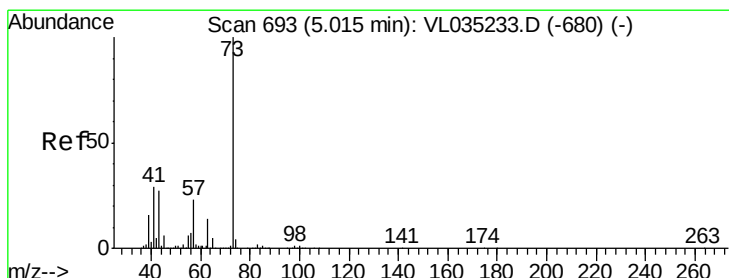
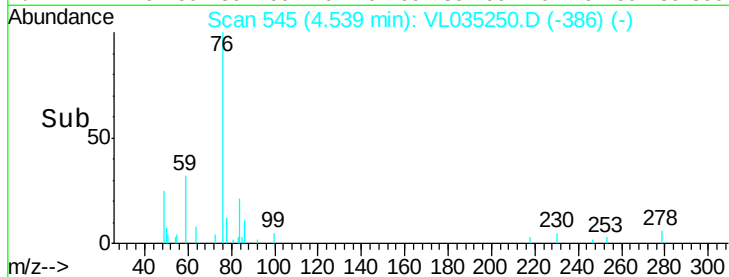
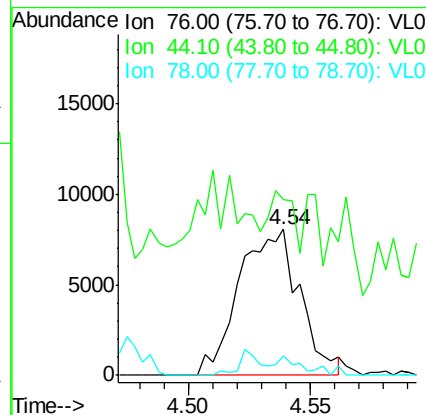
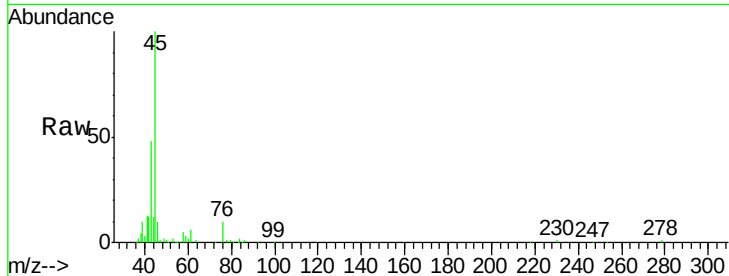
ClientSampled :

SINK

Tot Ion:	76	Resp:	13909
Ion Ratio	Lower	Upper	
76	100		
44	0.0	14.7	22.1#
78	0.0	7.6	11.4#

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:11:15 PM



#28

Methyl tert-Butyl Ether

Concen: 30.155 ppbv

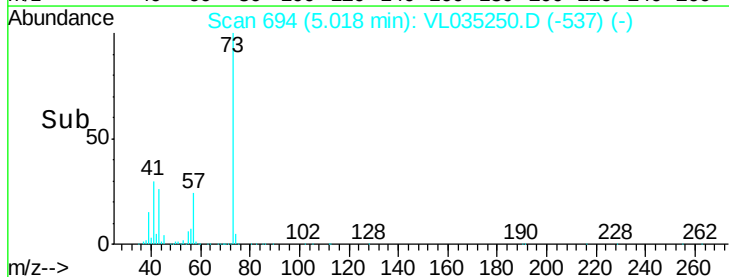
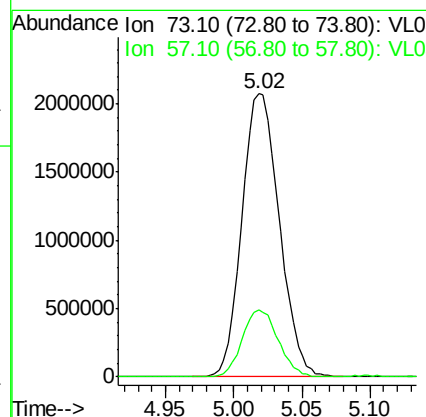
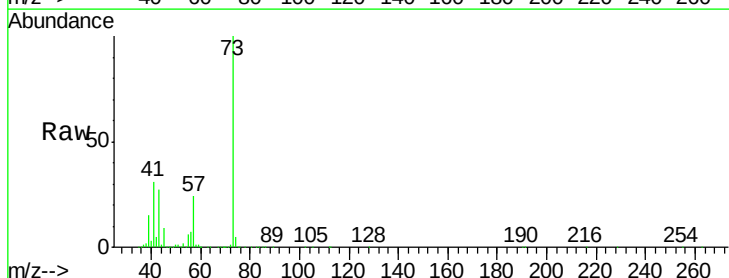
RT: 5.02 min Scan# 694

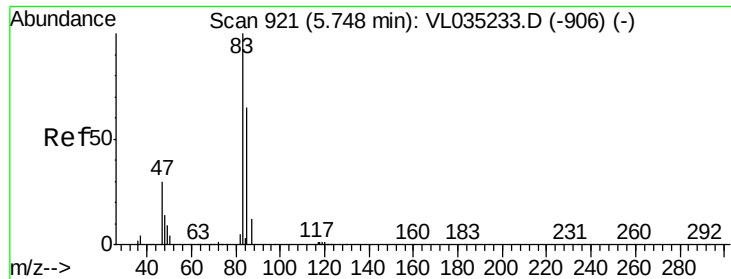
Delta R.T. 0.00 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Tgt Ion:	73	Resp:	3955928
Ion Ratio	Lower	Upper	
73	100		
57	22.8	18.2	27.4





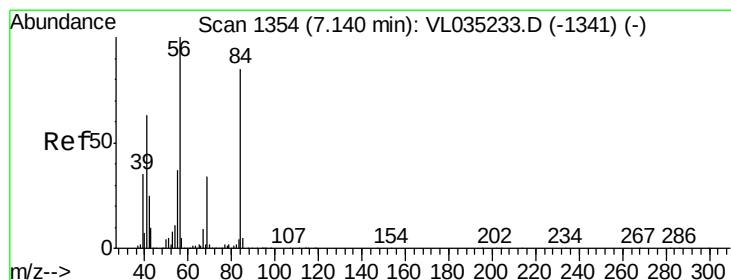
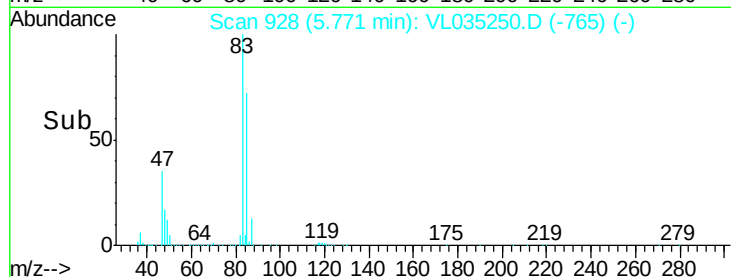
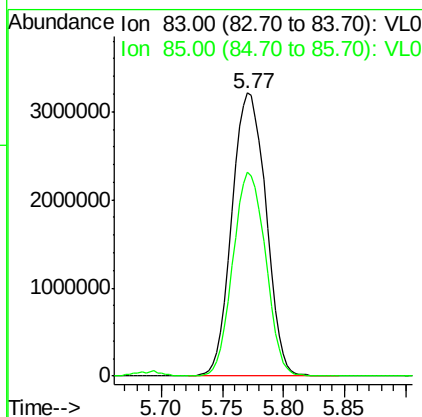
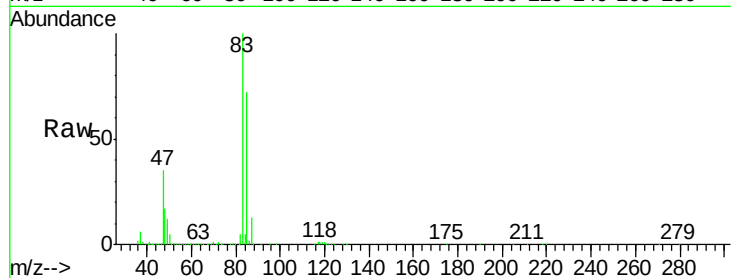
#29
Chloroform
Concen: 40.405 ppbv
RT: 5.77 min Scan# 928
Delta R.T. 0.02 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Instrument :
MSVOA_L
ClientSampled :
SINK

Tot Ion: 83 Resp: 6218749
Ion Ratio Lower Upper
83 100
85 72.0 51.7 77.5

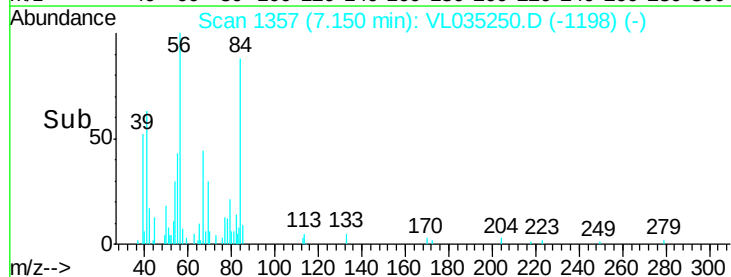
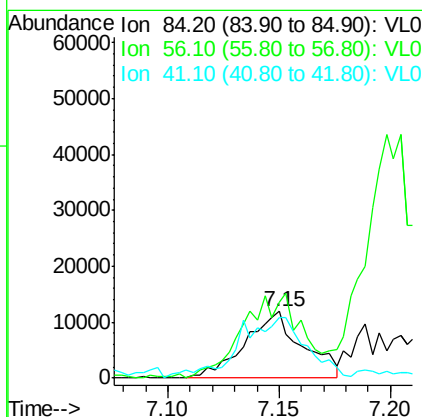
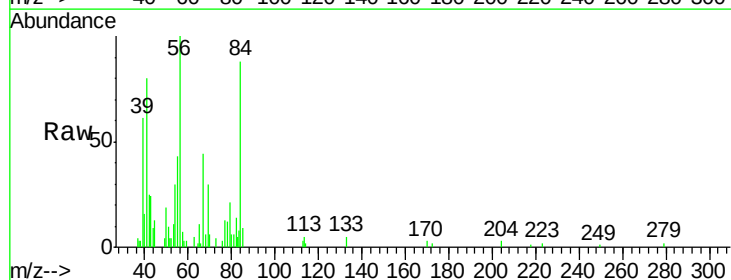
Manual Integrations
APPROVED

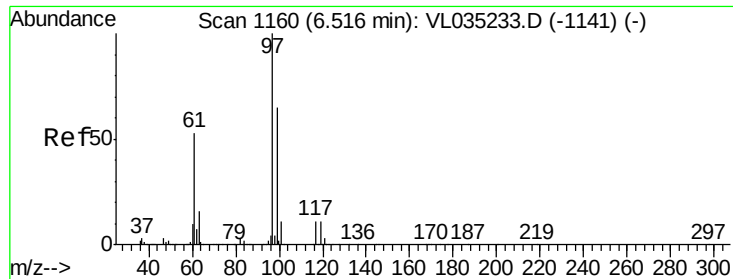
MMDadoda
7/30/2020 6:11:15 PM



#30
Cyclohexane
Concen: 0.324 ppbv m
RT: 7.15 min Scan# 1357
Delta R.T. 0.01 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tgt Ion: 84 Resp: 21251
Ion Ratio Lower Upper
84 100
56 0.0 104.2 156.2#
41 0.0 63.7 95.5#





#32

1,1,1-Trichloroethane

Concen: 0.093 ppbv m

RT: 6.53 min Scan# 1164

Delta R.T. 0.01 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

ClientSampled :

SINK

Tot Ion: 97 Resp: 14636

Ion Ratio Lower Upper

97 100

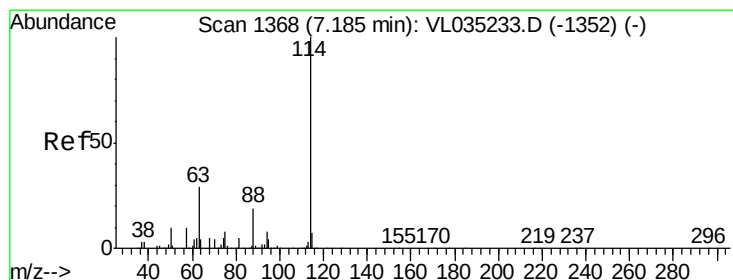
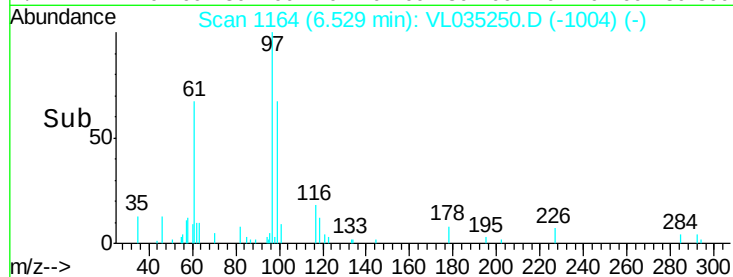
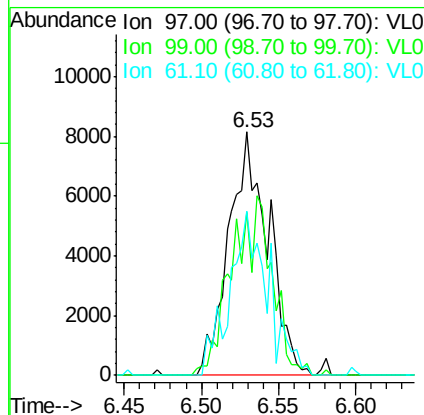
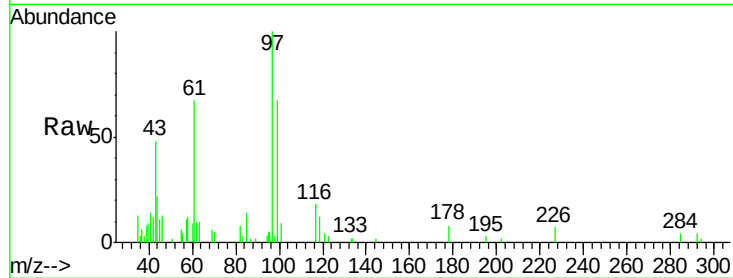
99 0.0 51.4 77.0#

61 0.0 40.4 60.6#

Manual Integrations
APPROVED

MMDadoda

7/30/2020 6:11:15 PM



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.20 min Scan# 1373

Delta R.T. 0.02 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

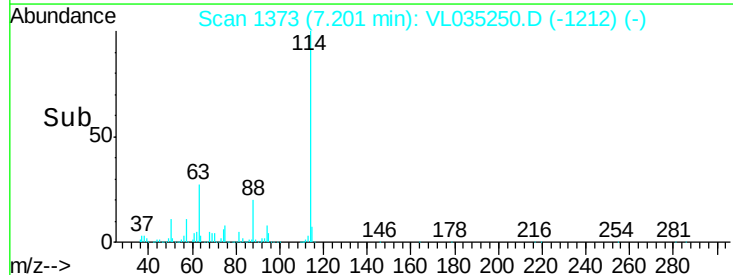
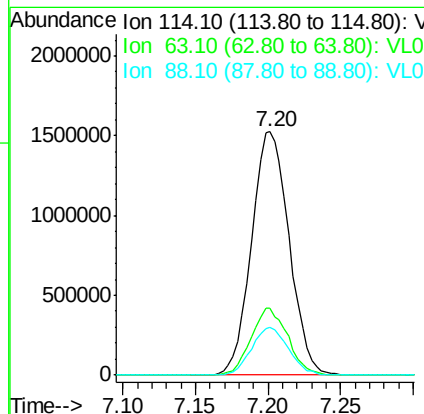
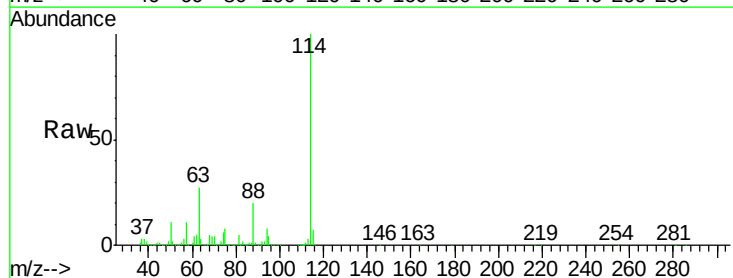
Tgt Ion: 114 Resp: 2752752

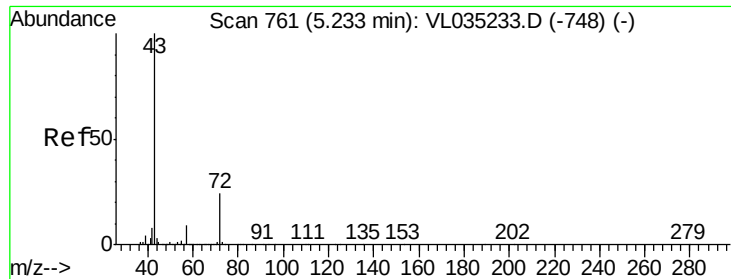
Ion Ratio Lower Upper

114 100

63 27.0 22.2 33.2

88 19.2 15.4 23.0





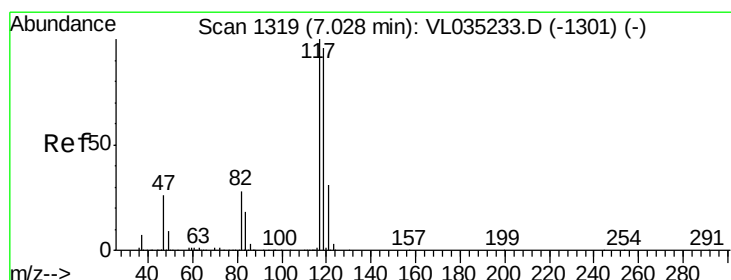
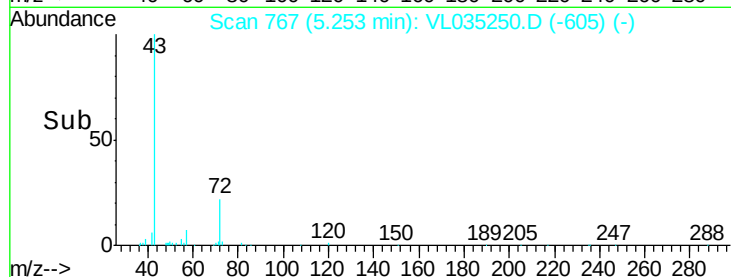
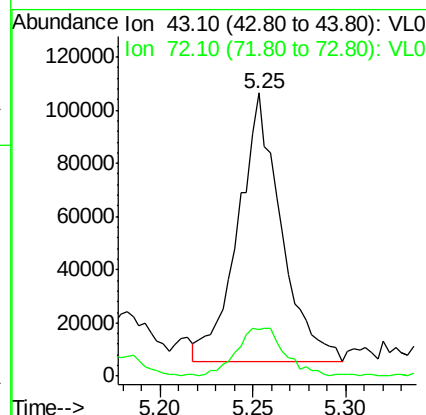
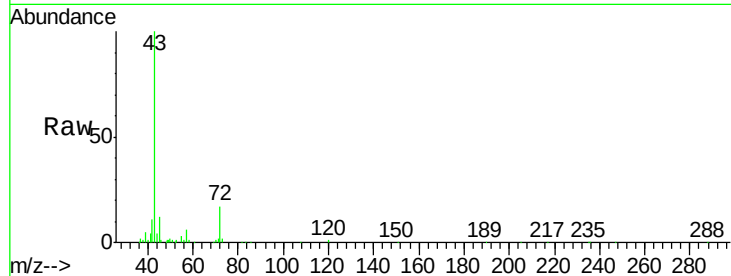
#34
2-Butanone
Concen: 1.156 ppbv
RT: 5.25 min Scan# 767
Delta R.T. 0.02 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Instrument :
MSVOA_L
ClientSampleId :
SINK

Tot Ion	43	Resp	161911
Ion Ratio	Lower	Upper	
43	100		
72	20.8	19.2	28.8

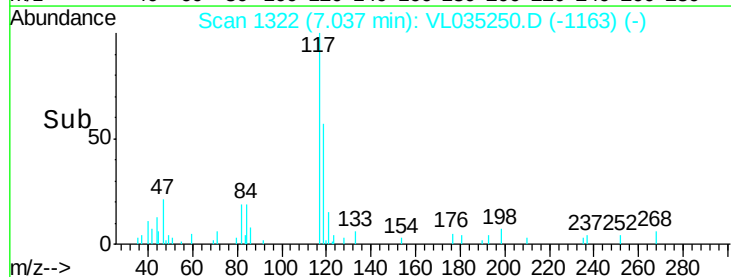
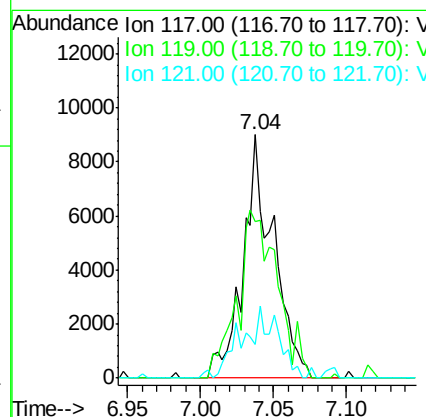
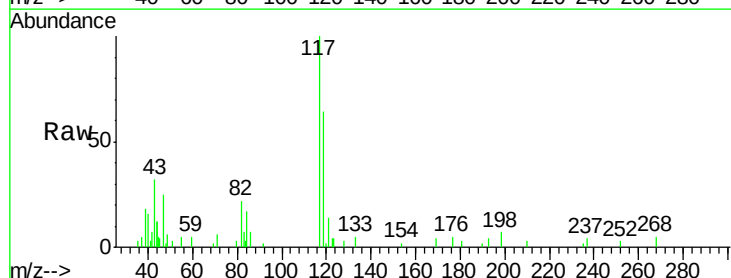
Manual Integrations
APPROVED

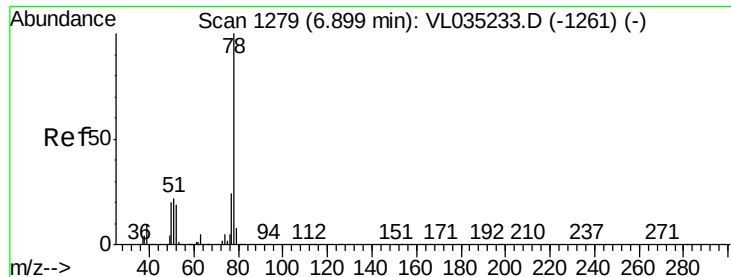
MMDadoda
7/30/2020 6:11:15 PM



#35
Carbon Tetrachloride
Concen: 0.070 ppbv m
RT: 7.04 min Scan# 1322
Delta R.T. 0.01 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tgt Ion	117	Resp	12966
Ion Ratio	Lower	Upper	
117	100		
119	64.2	76.8	115.2#
121	13.7	24.5	36.7#





#36

Benzene

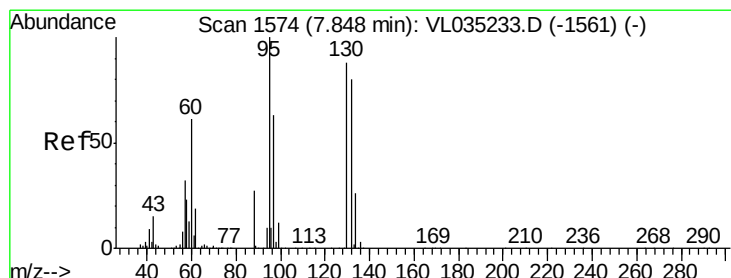
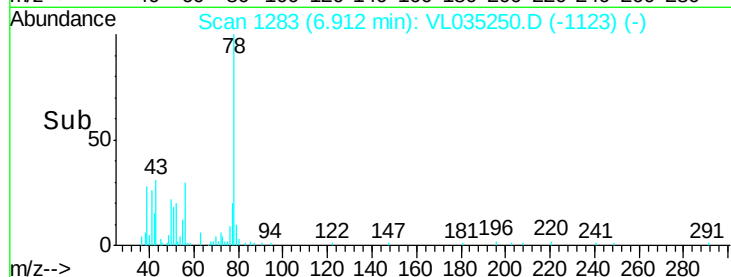
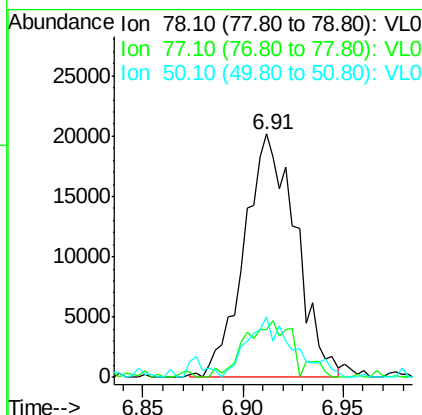
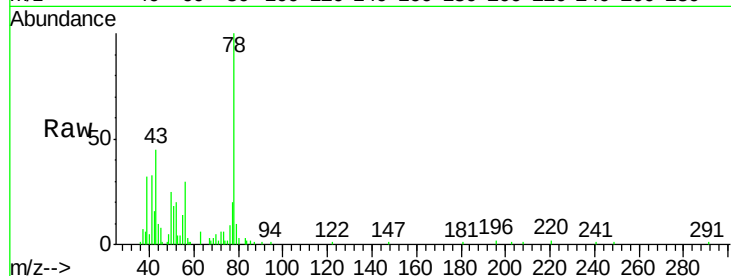
Concen: 0.187 ppbv m
RT: 6.91 min Scan# 1283
Delta R.T. 0.01 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Instrument :
MSVOA_L
ClientSampled :
SINK

Tot Ion	Ratio	Lower	Upper
78	100		
77	19.7	18.9	28.3
50	24.7	16.1	24.1#

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:11:15 PM

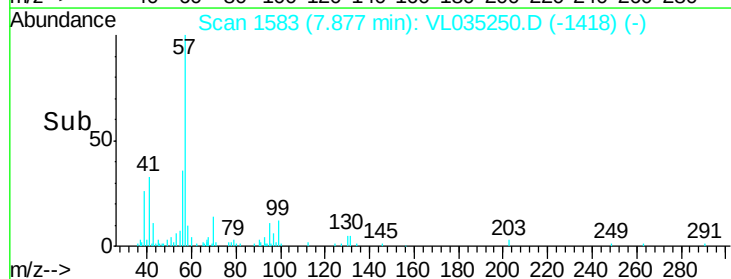
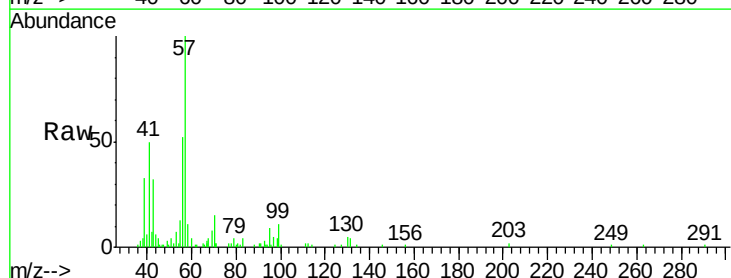
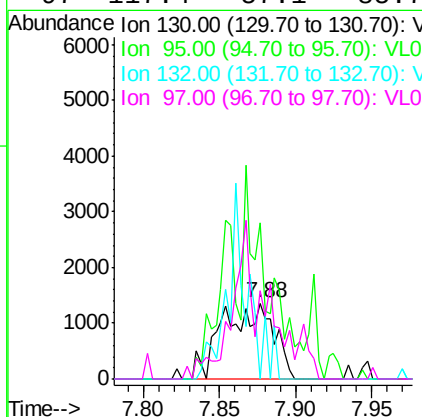


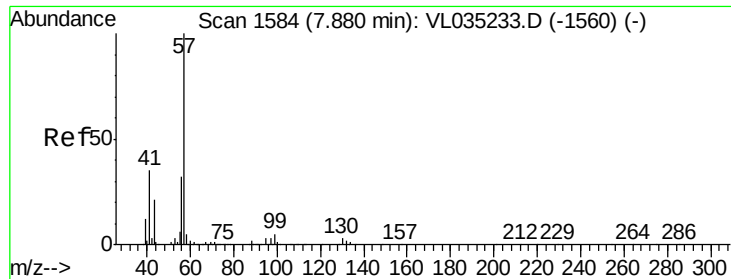
#38

Trichloroethene

Concen: 0.040 ppbv m
RT: 7.88 min Scan# 1583
Delta R.T. 0.03 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tgt Ion	Ratio	Lower	Upper
130	100		
95	206.6	90.7	136.1#
132	0.0	72.9	109.3#
97	117.4	57.1	85.7#





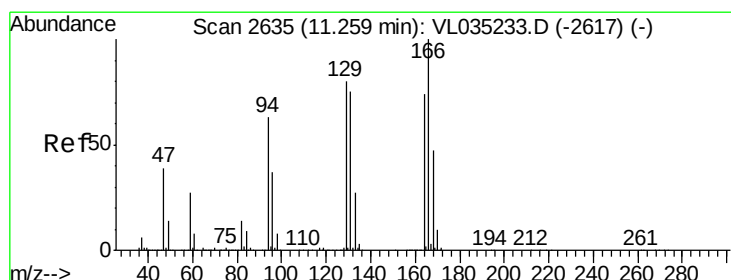
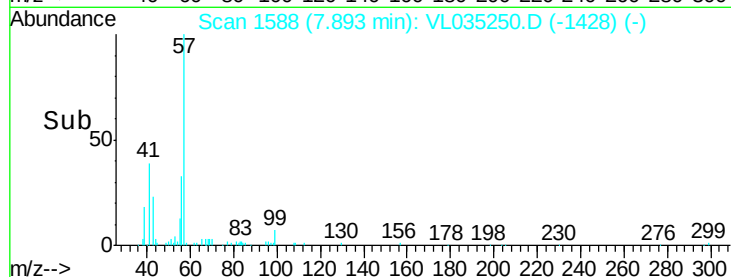
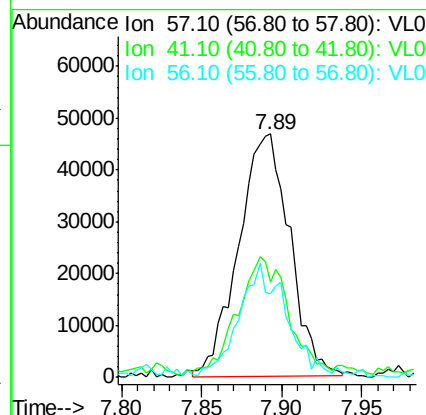
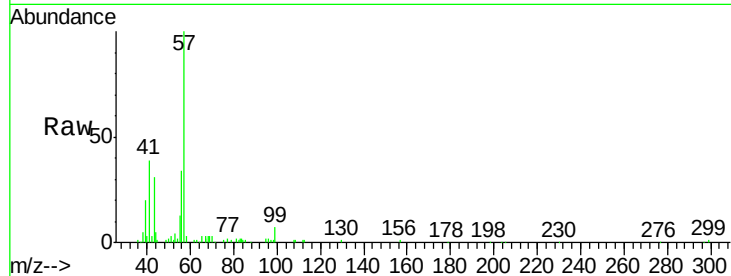
#44
 2,2,4-Trimethylpentane
 Concen: 0.305 ppbv
 RT: 7.89 min Scan# 1588
 Delta R.T. 0.01 min
 Lab File: VL035250.D
 Acq: 29 Jul 2020 17:31

Instrument :
 MSVOA_L
 ClientSampled :
 SINK

Tot Ion	Ratio	Lower	Upper
57	100		
41	52.0	27.0	40.4#
56	46.3	25.6	38.4#

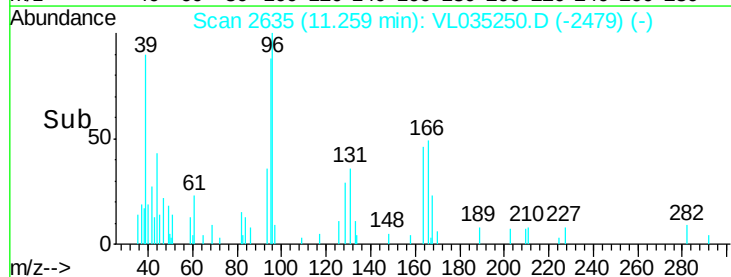
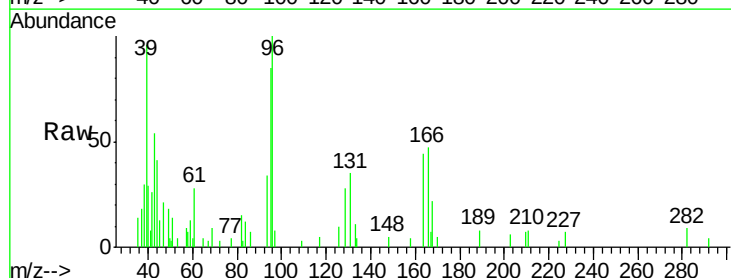
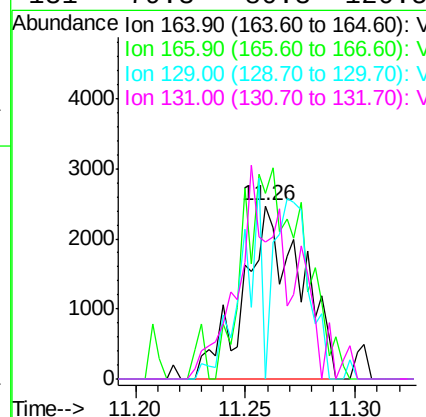
Manual Integrations
 APPROVED

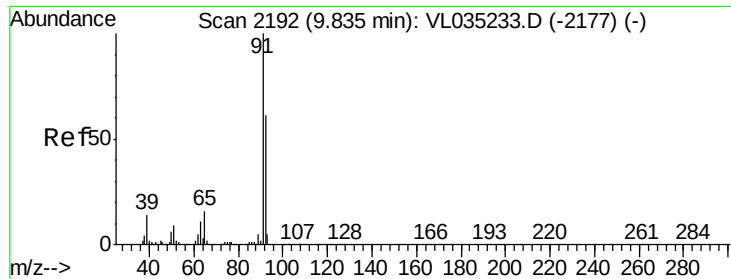
MMDadoda
 7/30/2020 6:11:15 PM



#52
 Tetrachloroethene
 Concen: 0.061 ppbv m
 RT: 11.26 min Scan# 2635
 Delta R.T. 0.00 min
 Lab File: VL035250.D
 Acq: 29 Jul 2020 17:31

Tgt Ion	Ratio	Lower	Upper
164	100		
166	107.4	107.5	161.3#
129	0.0	86.0	129.0#
131	79.3	80.3	120.5#





#53

Toluene

Concen: 5.960 ppbv

RT: 9.84 min Scan# 2193

Delta R.T. 0.00 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

ClientSampleId :

SINK

Tot Ion: 91 Resp: 1211863

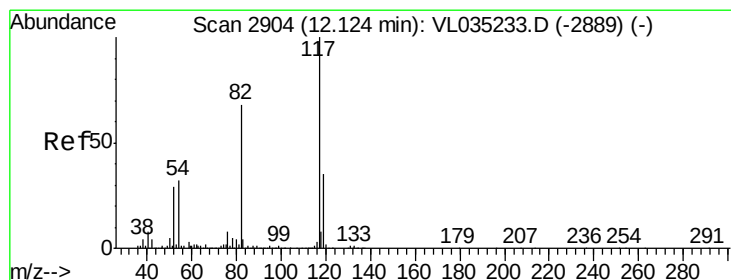
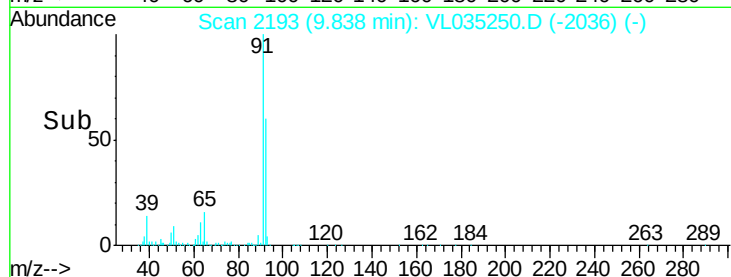
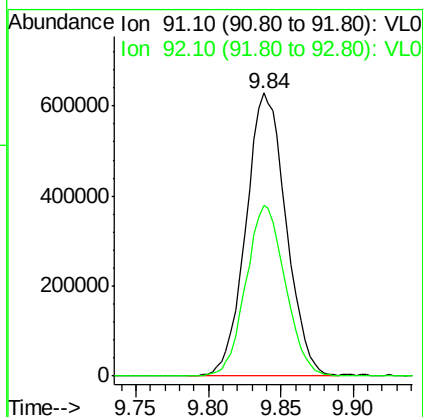
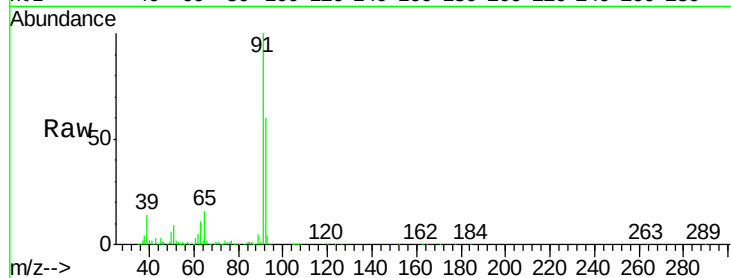
Ion Ratio Lower Upper

91 100

92 59.3 48.5 72.7

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:11:15 PM



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.12 min Scan# 2904

Delta R.T. 0.00 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

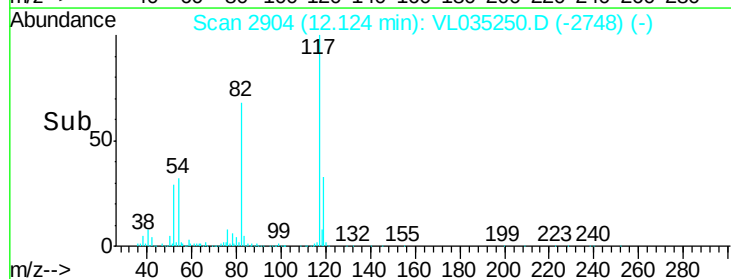
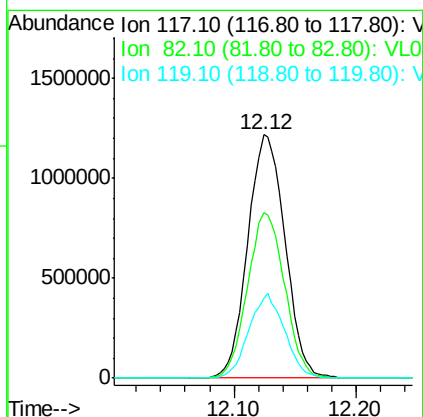
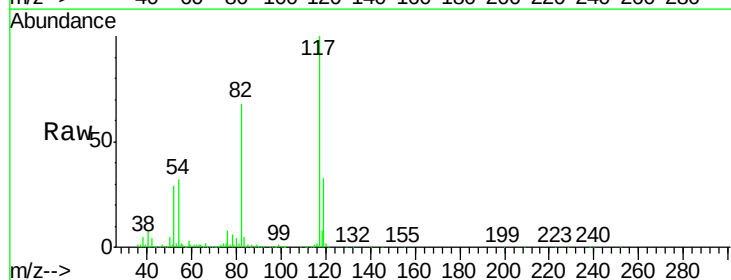
Tgt Ion: 117 Resp: 2566982

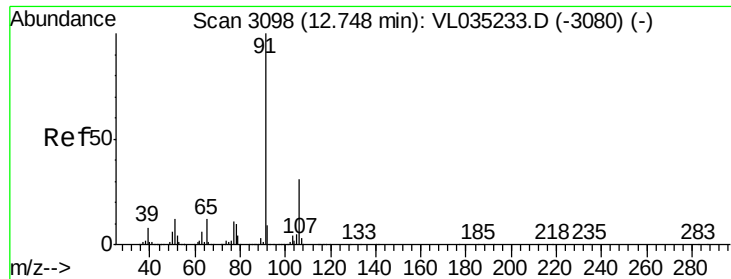
Ion Ratio Lower Upper

117 100

82 67.5 52.4 78.6

119 33.2 24.6 36.8





#58

Ethyl Benzene

Concen: 1.321 ppbv

RT: 12.75 min Scan# 3100

Delta R.T. 0.01 min

Lab File: VL035250.D

Acq: 29 Jul 2020 17:31

Instrument :

MSVOA_L

ClientSampled :

SINK

Tot Ion: 91 Resp: 359229

Ion Ratio Lower Upper

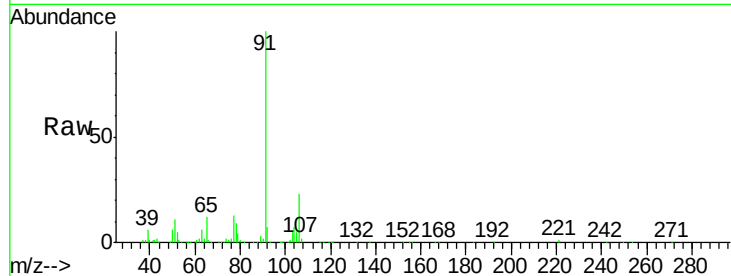
91 100

106 23.0 25.0 37.6#

Manual Integrations
APPROVED

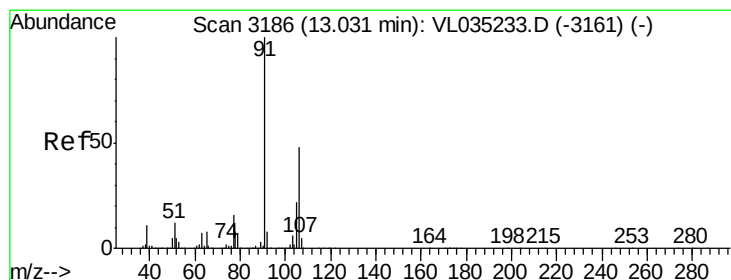
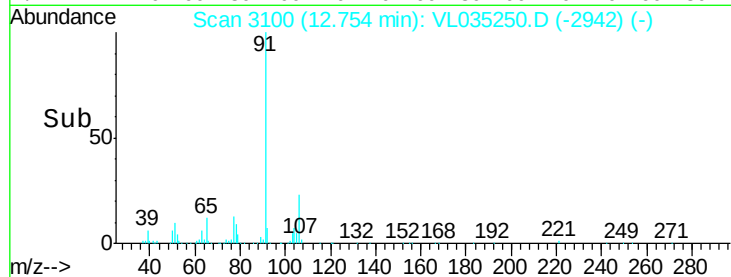
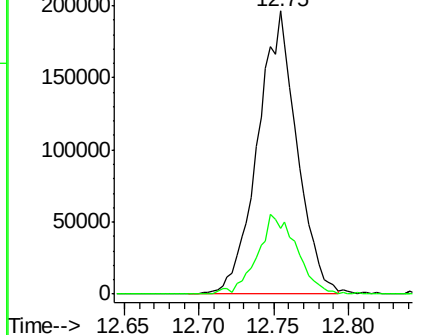
MMDadoda

7/30/2020 6:11:15 PM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 6.257 ppbv

RT: 13.01 min Scan# 3178

Delta R.T. -0.03 min

Lab File: VL035250.D

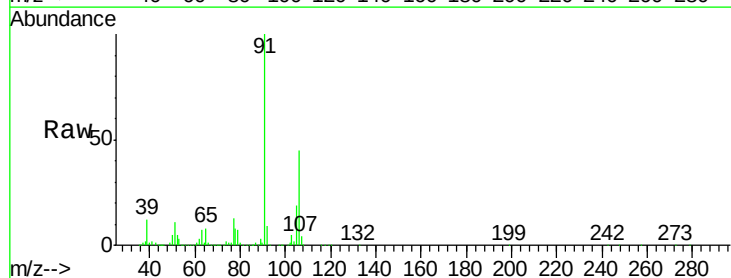
Acq: 29 Jul 2020 17:31

Tgt Ion: 91 Resp: 1583740

Ion Ratio Lower Upper

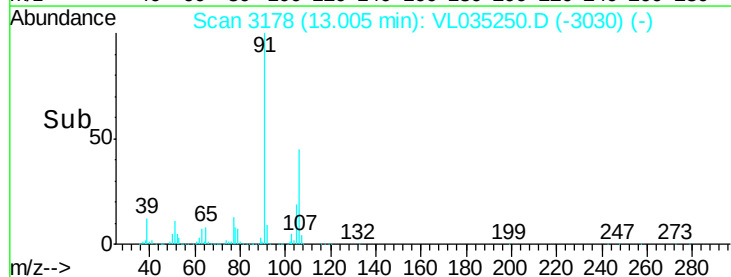
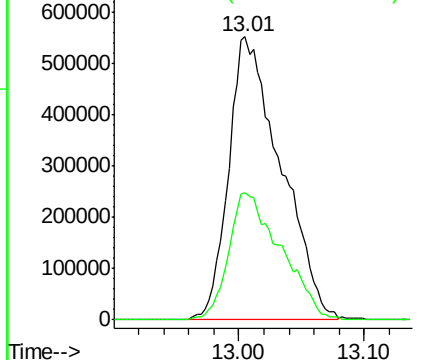
91 100

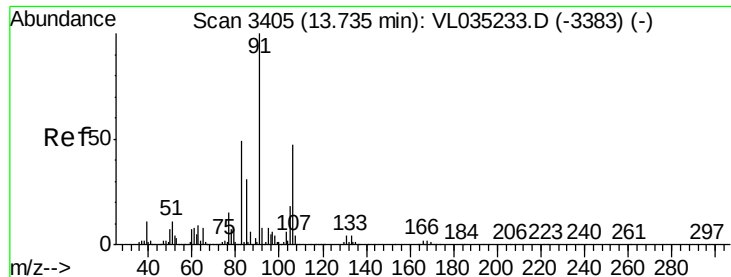
106 45.3 37.2 55.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





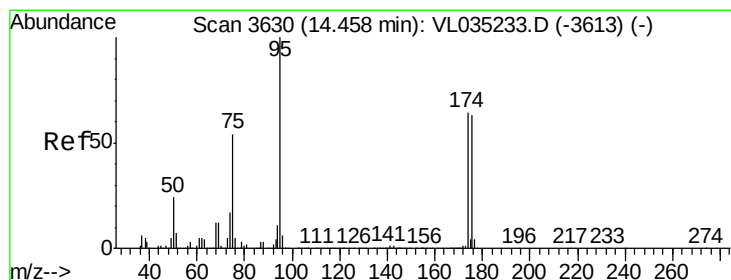
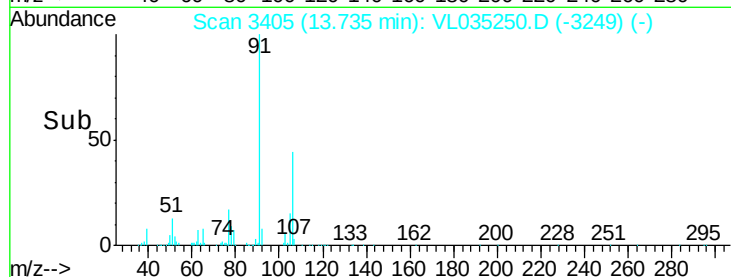
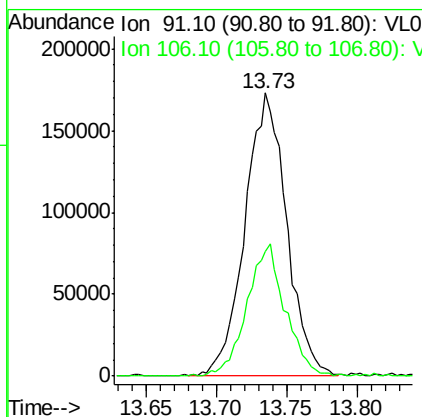
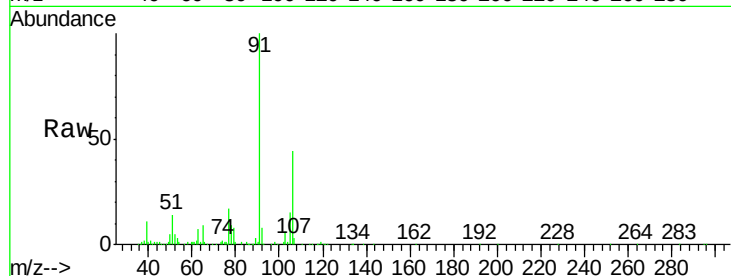
#60
o-Xylene
Concen: 1.406 ppbv
RT: 13.73 min Scan# 3405
Delta R.T. 0.00 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Instrument :
MSVOA_L
ClientSampled :
SINK

Tot Ion	Ratio	Lower	Upper
91	100		
106	43.4	22.4	67.0

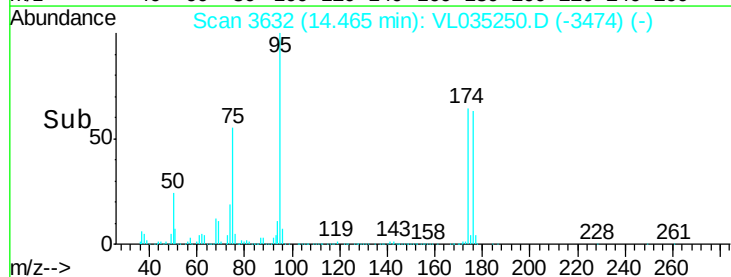
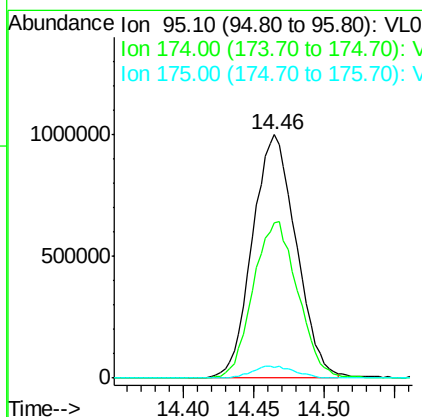
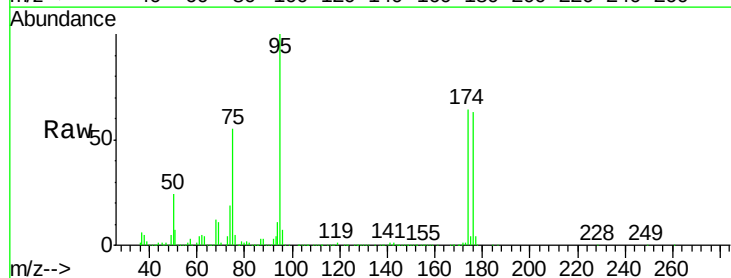
Manual Integrations
APPROVED

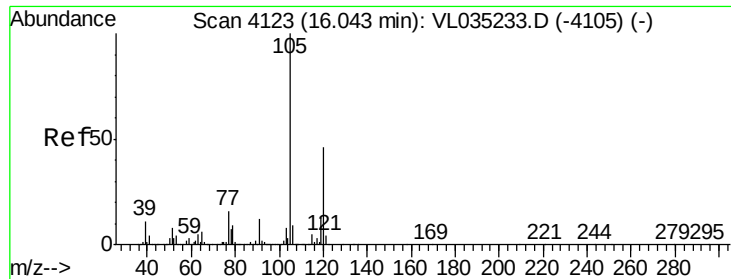
MMDadoda
7/30/2020 6:11:15 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 10.522 ppbv
RT: 14.46 min Scan# 3632
Delta R.T. 0.01 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Tgt Ion	Ratio	Lower	Upper
95	100		
174	66.3	52.7	79.1
175	4.9	3.9	5.9





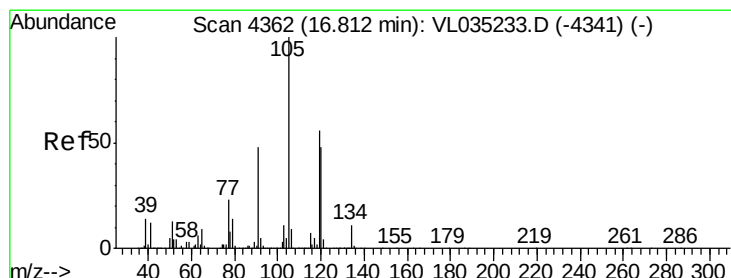
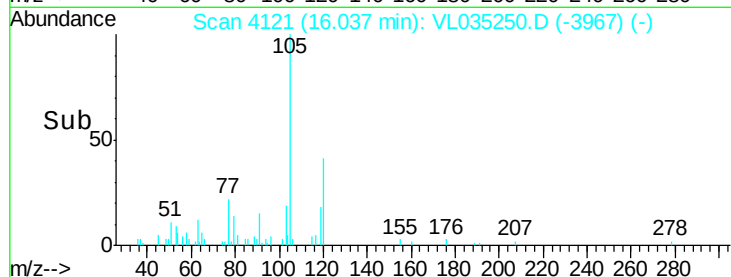
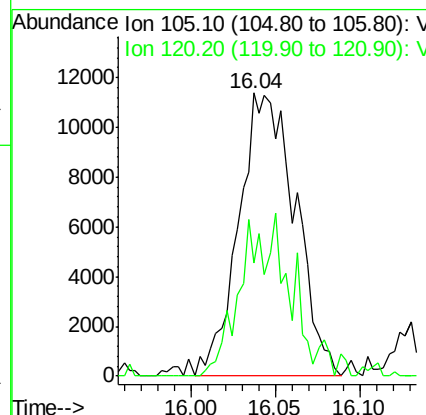
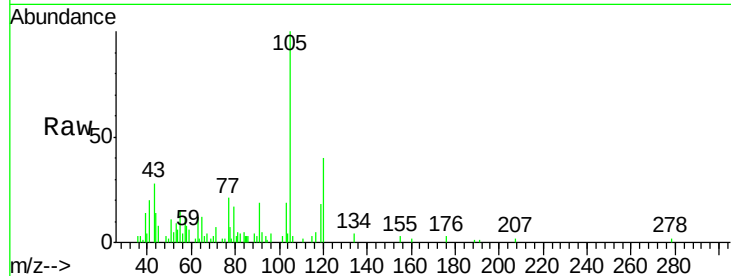
#73
 1,3,5-Trimethylbenzene
 Concen: 0.096 ppbv m
 RT: 16.04 min Scan# 4121
 Delta R.T. -0.01 min
 Lab File: VL035250.D
 Acq: 29 Jul 2020 17:31

Instrument :
 MSVOA_L
 ClientSampled :
 SINK

Tot Ion	Ratio	Lower	Upper
105	100		
120	39.9	36.8	55.2

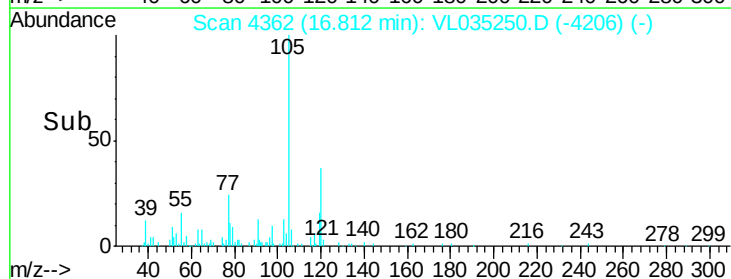
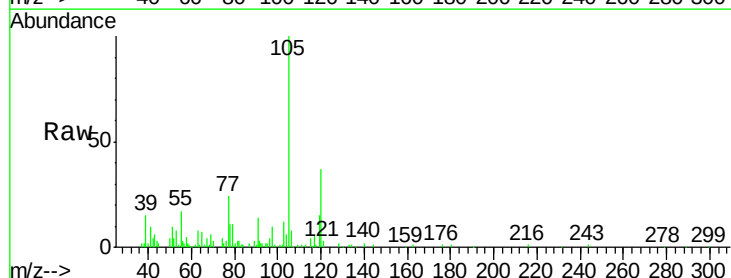
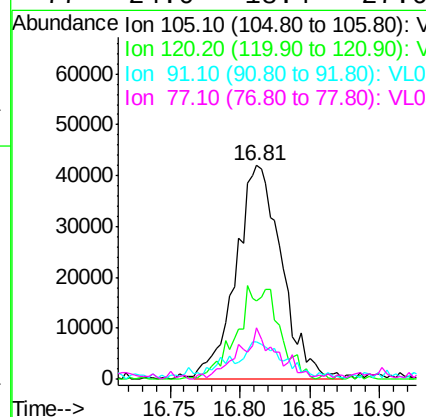
Manual Integrations
 APPROVED

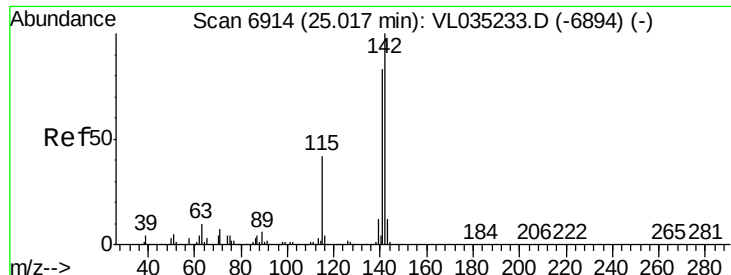
MMDadoda
 7/30/2020 6:11:15 PM



#74
 1,2,4-Trimethylbenzene
 Concen: 0.295 ppbv m
 RT: 16.81 min Scan# 4362
 Delta R.T. 0.00 min
 Lab File: VL035250.D
 Acq: 29 Jul 2020 17:31

Tgt Ion	Ratio	Lower	Upper
105	100		
120	36.8	38.8	58.2#
91	14.2	38.9	58.3#
77	24.0	18.4	27.6





#80
Naphthalene, 2-methyl-
Concen: 0.041 ppbv
RT: 25.02 min Scan# 6914
Delta R.T. 0.00 min
Lab File: VL035250.D
Acq: 29 Jul 2020 17:31

Instrument :
MSVOA_L
ClientSampleId :
SINK

Tot Ion	Ratio	Lower	Upper
142	100		
141	75.3	68.6	103.0
115	44.0	34.5	51.7

Manual Integrations
APPROVED

MMDadoda
7/30/2020 6:11:15 PM

