

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL080620\
 Data File : VL035346.D
 Acq On : 6 Aug 2020 12:22
 Operator : SY/AP
 Sample : L3557-01DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Manual Integrations
 APPROVED

MMDadoda
 8/7/2020 12:53:35 PM

Quant Time: Aug 07 10:05:34 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL080520AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed Aug 0
 QLast Update : Wed Aug 05 13:04:46 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.64	49	1269919	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.17	114	3167691	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.10	117	2951731	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	2540262	10.32	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.00	85	30229	0.179	ppbv	95
3) Chlorodifluoromethane	2.93	51	52402m	0.361	ppbv	
4) Chloromethane	3.09	50	54762	0.667	ppbv #	82
9) Propene	2.96	41	15693	0.304	ppbv #	15
10) Heptane	8.11	43	29493m	0.224	ppbv	
11) Trichlorofluoromethane	3.91	101	51624m	0.236	ppbv	
13) Ethanol	3.56	45	1849384	103.805	ppbv	97
15) Acetone	3.80	43	2321666m	12.874	ppbv	
19) Isopropyl Alcohol	3.93	45	389690m	3.409	ppbv	
20) Methylene Chloride	4.30	84	253299	3.444	ppbv	97
26) Hexane	5.66	57	305134	2.567	ppbv #	56
27) Carbon Disulfide	4.51	76	53510	0.322	ppbv #	85
34) 2-Butanone	5.22	43	164033	1.052	ppbv	97
35) Carbon Tetrachloride	7.01	117	13556m	0.062	ppbv	
36) Benzene	6.88	78	57581m	0.269	ppbv	
37) 1,2-Dichloroethane	6.28	62	20225m	0.135	ppbv	
38) Trichloroethene	7.83	130	3867	0.039	ppbv #	51
44) 2,2,4-Trimethylpentane	7.86	57	52853m	0.139	ppbv	
50) 4-Methyl-2-Pentanone	8.74	43	32456m	0.136	ppbv	
52) Tetrachloroethene	11.23	164	7459m	0.088	ppbv	
53) Toluene	9.81	91	2329815	10.013	ppbv	100
58) Ethyl Benzene	12.72	91	99850m	0.325	ppbv	
59) m/p-Xylene	12.98	91	200872m	0.702	ppbv	
60) o-Xylene	13.70	91	76735	0.270	ppbv	94
61) Styrene	13.55	104	38987m	0.225	ppbv	
73) 1,3,5-Trimethylbenzene	16.02	105	35621m	0.115	ppbv	
74) 1,2,4-Trimethylbenzene	16.79	105	85087	0.240	ppbv #	62
79) Naphthalene	22.25	128	124984m	0.458	ppbv	
80) Naphthalene,2-methyl-	25.01	142	6902	0.111	ppbv #	91

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

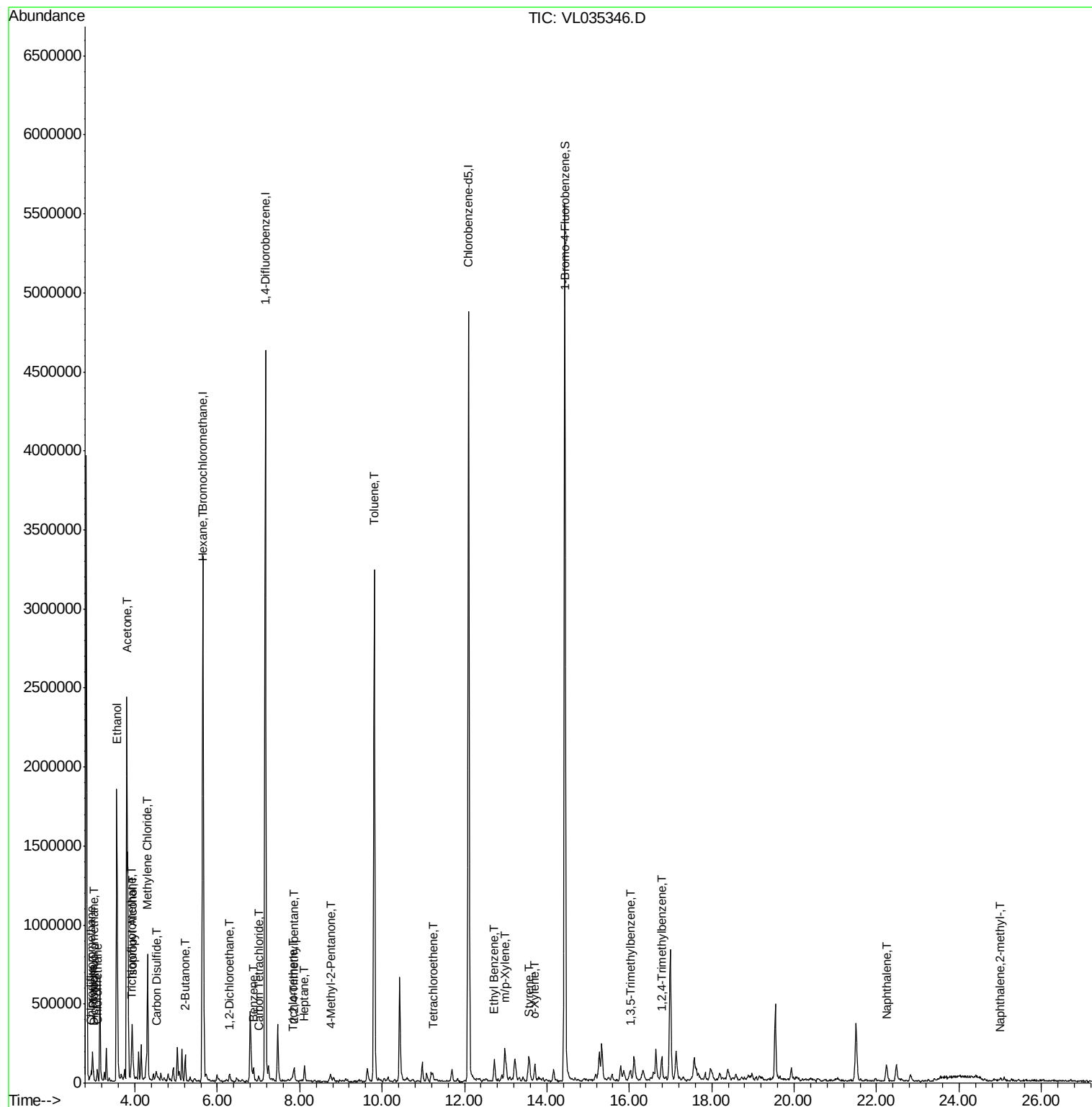
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL080620\
Data File : VL035346.D
Acq On : 6 Aug 2020 12:22
Operator : SY/AP
Sample : L3557-01DUP
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

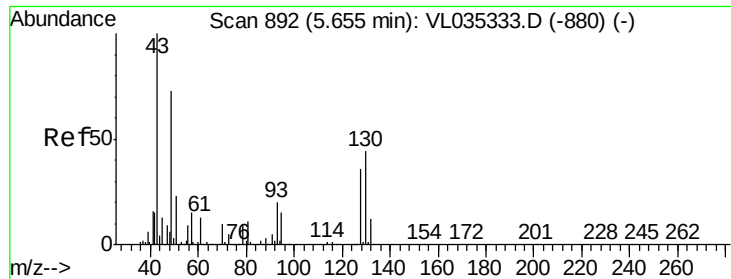
Instrument :
MSVOA_L
ClientSampleId :
IA-1DUP

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM

Quant Time: Aug 07 10:05:34 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL080520AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Aug
QLast Update : Wed Aug 05 13:04:46 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.64 min Scan# 888

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampled :

IA-1DUP

Tot Ion: 49 Resp: 1269919

Ion Ratio Lower Upper

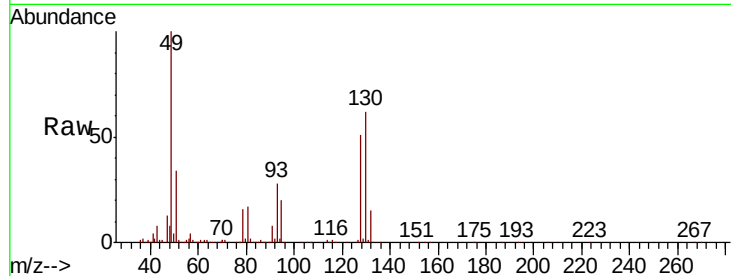
49 100

128 50.8 25.4 76.0

130 64.1 32.1 96.3

Manual Integrations
APPROVED

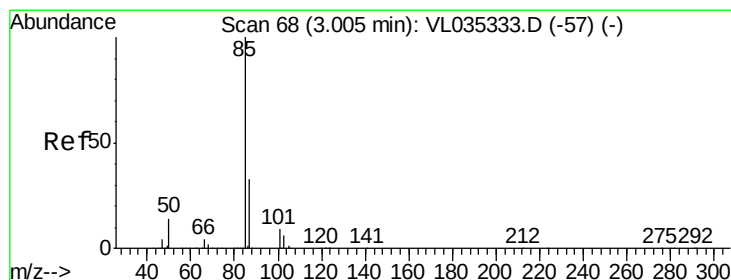
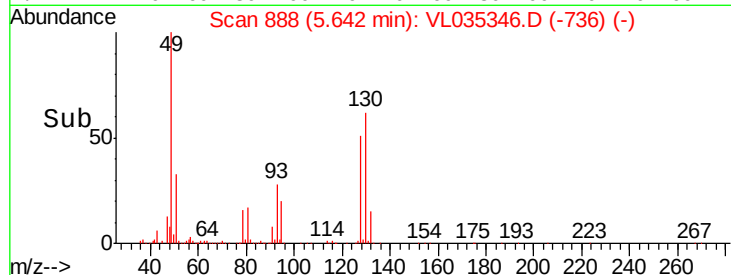
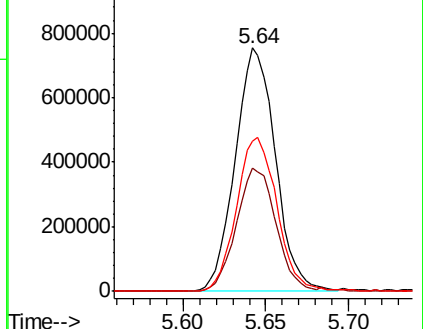
MMDadoda
8/7/2020 12:53:35 PM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.179 ppbv

RT: 3.00 min Scan# 65

Delta R.T. -0.01 min

Lab File: VL035346.D

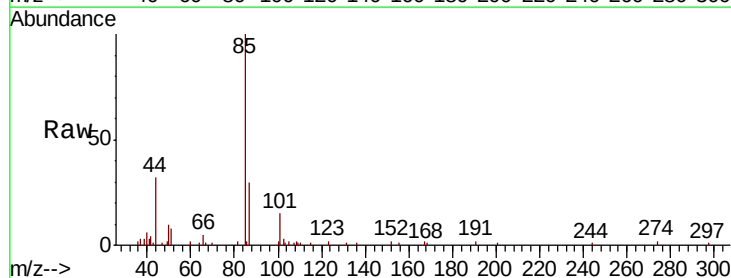
Acq: 6 Aug 2020 12:22

Tgt Ion: 85 Resp: 30229

Ion Ratio Lower Upper

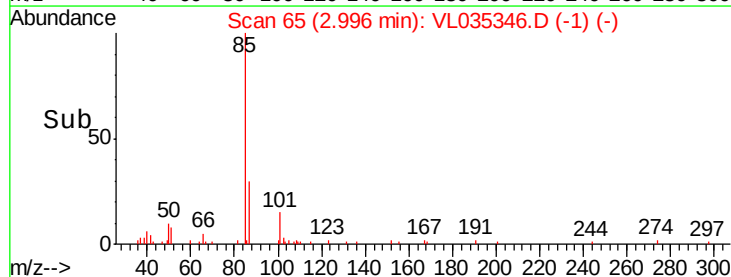
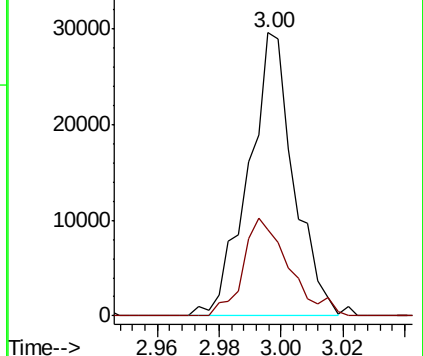
85 100

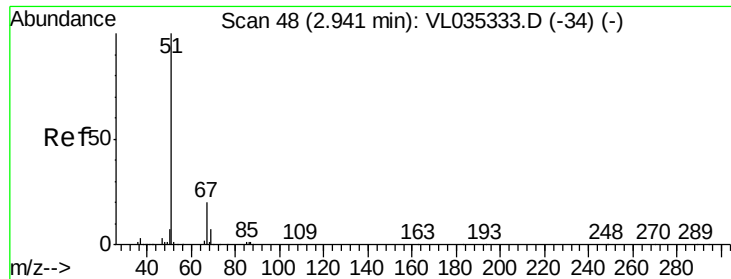
87 30.3 26.7 40.1



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.361 ppbv

RT: 2.93 min Scan# 46

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampleId :

IA-1DUP

Tot Ion: 51 Resp: 52402

Ion Ratio Lower Upper

51 100

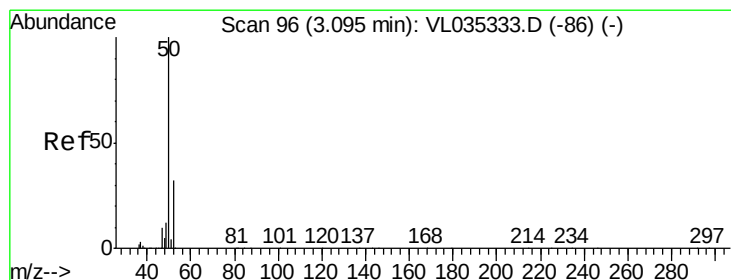
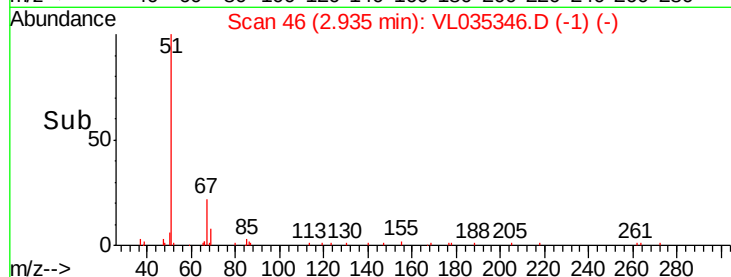
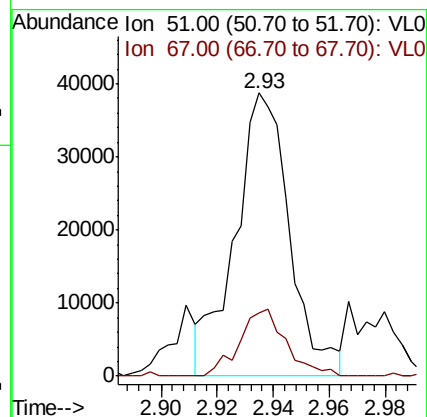
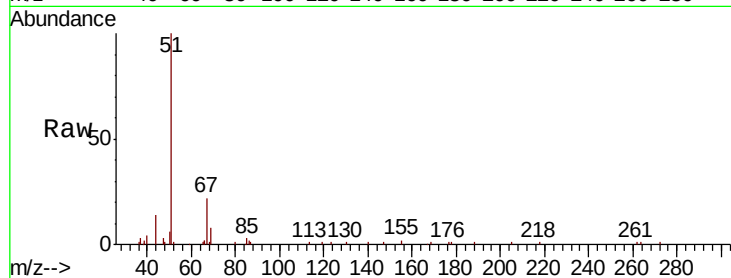
67 20.5 16.6 25.0

Manual Integrations

APPROVED

MMDadoda

8/7/2020 12:53:35 PM



#4

Chloromethane

Concen: 0.667 ppbv

RT: 3.09 min Scan# 95

Delta R.T. -0.00 min

Lab File: VL035346.D

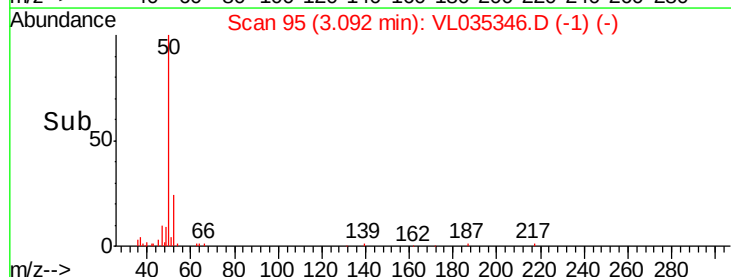
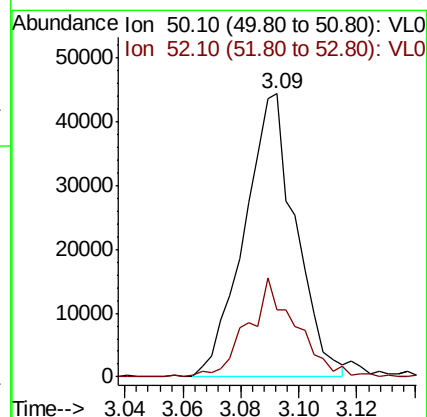
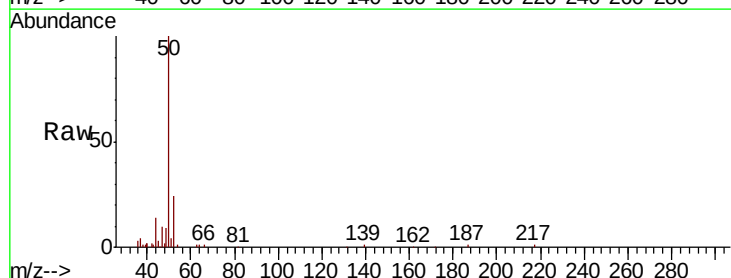
Acq: 6 Aug 2020 12:22

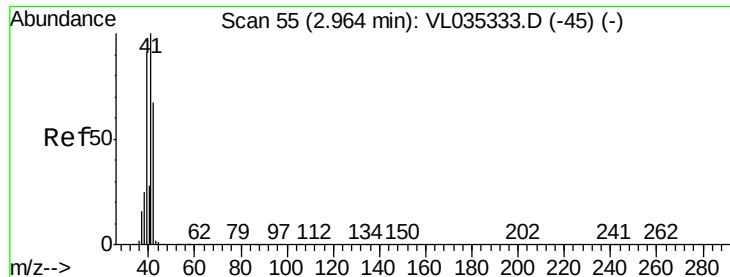
Tgt Ion: 50 Resp: 54762

Ion Ratio Lower Upper

50 100

52 22.2 26.0 39.0#





#9

Propene

Concen: 0.304 ppbv

RT: 2.96 min Scan# 54

Delta R.T. -0.00 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampled :

IA-1DUP

Tot Ion: 41 Resp: 15693

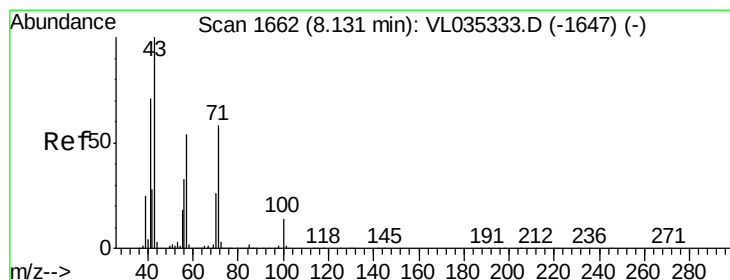
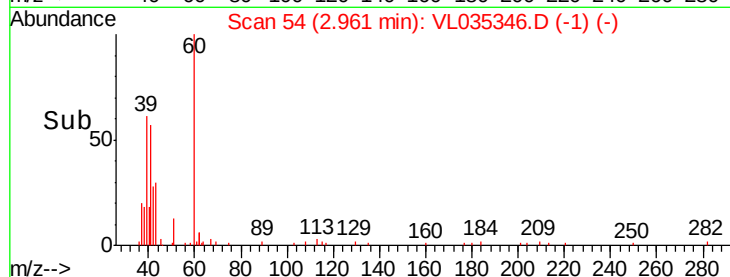
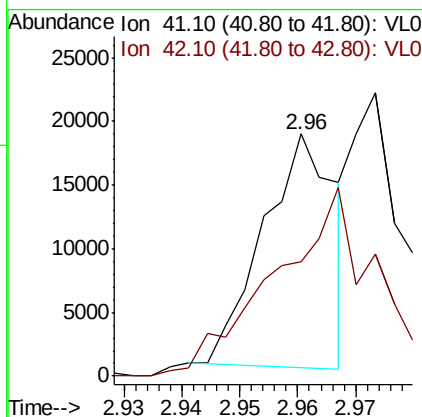
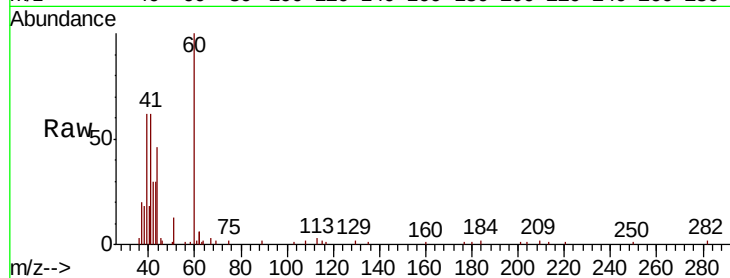
Ion Ratio Lower Upper

41 100

42 0.0 55.3 82.9#

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM



#10

Heptane

Concen: 0.224 ppbv m

RT: 8.11 min Scan# 1657

Delta R.T. -0.02 min

Lab File: VL035346.D

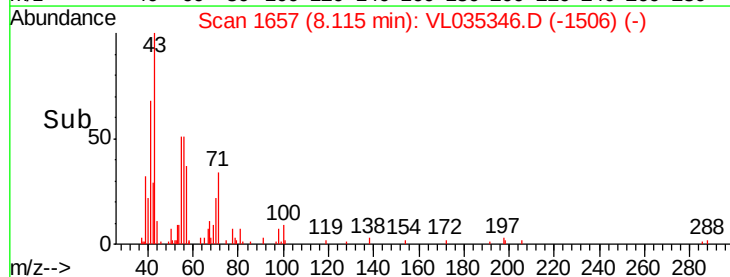
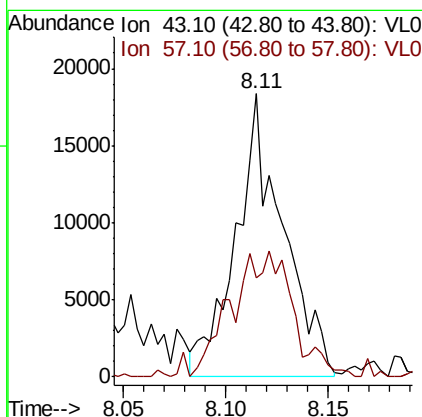
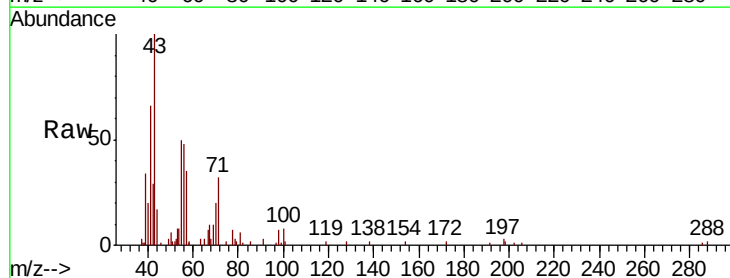
Acq: 6 Aug 2020 12:22

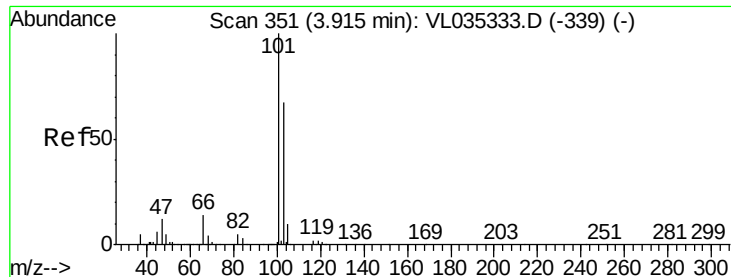
Tgt Ion: 43 Resp: 29493

Ion Ratio Lower Upper

43 100

57 0.0 43.0 64.6#





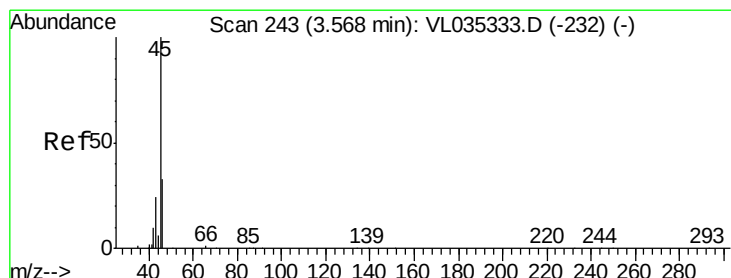
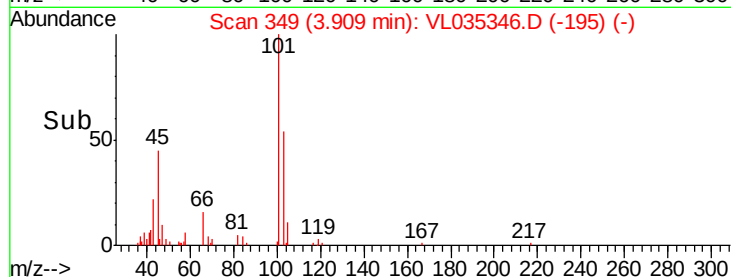
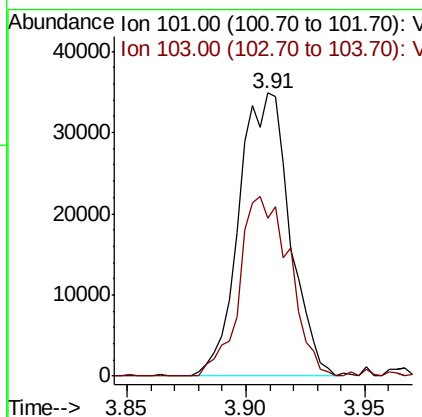
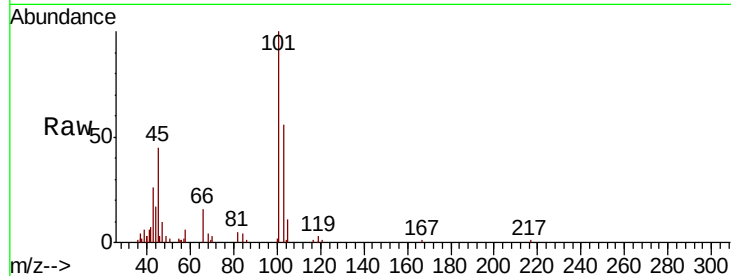
#11
Trichlorofluoromethane
Concen: 0.236 ppbv m
RT: 3.91 min Scan# 349
Delta R.T. -0.01 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Instrument :
MSVOA_L
ClientSampleId :
IA-1DUP

Tot Ion: 101 Resp: 51624
Ion Ratio Lower Upper
101 100
103 55.9 53.8 80.8

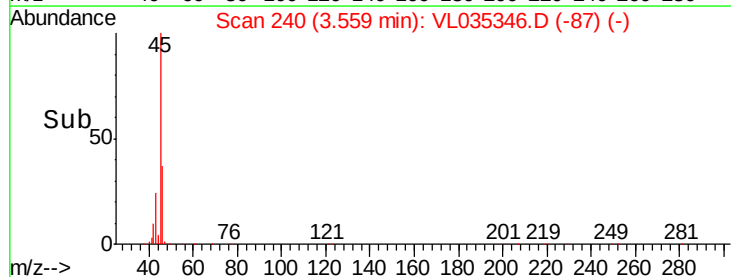
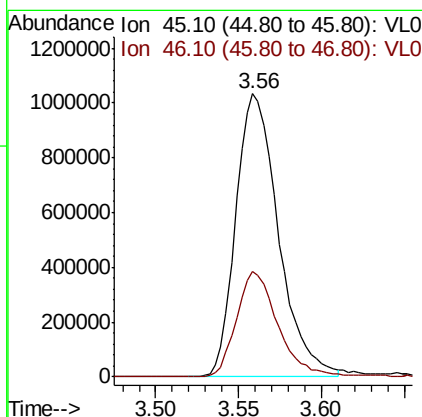
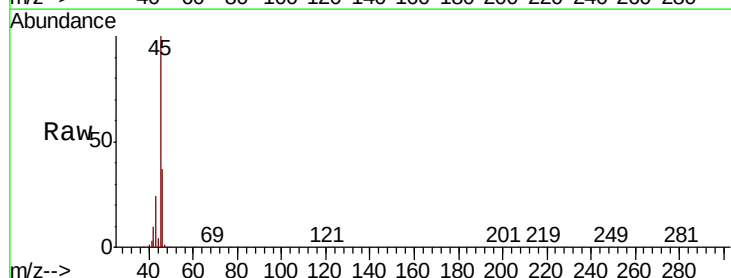
Manual Integrations
APPROVED

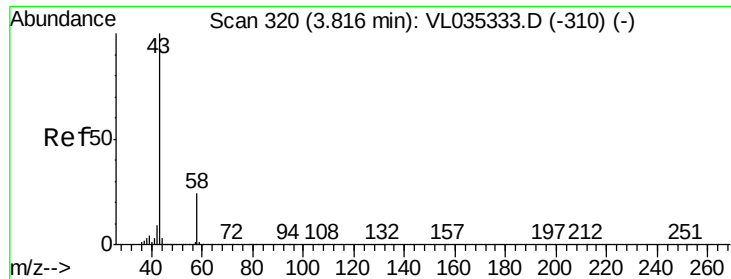
MMDadoda
8/7/2020 12:53:35 PM



#13
Ethanol
Concen: 103.805 ppbv
RT: 3.56 min Scan# 240
Delta R.T. -0.01 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Tgt Ion: 45 Resp: 1849384
Ion Ratio Lower Upper
45 100
46 36.6 15.2 61.0





#15

Acetone

Concen: 12.874 ppbv m

RT: 3.80 min Scan# 316

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampled :

IA-1DUP

Tot Ion: 43 Resp: 2321666

Ion Ratio Lower Upper

43 100

58 29.1

21.0

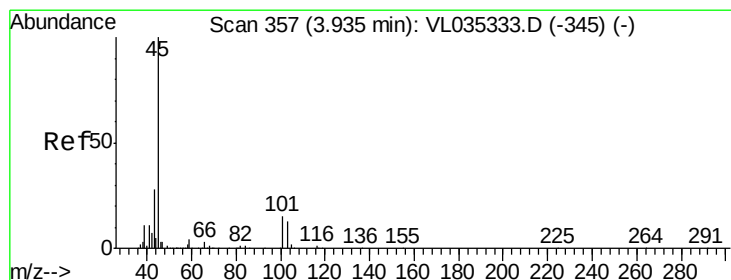
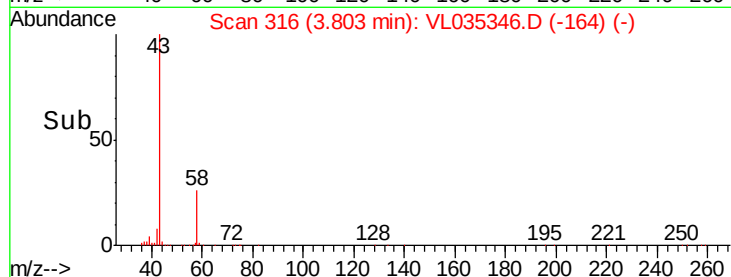
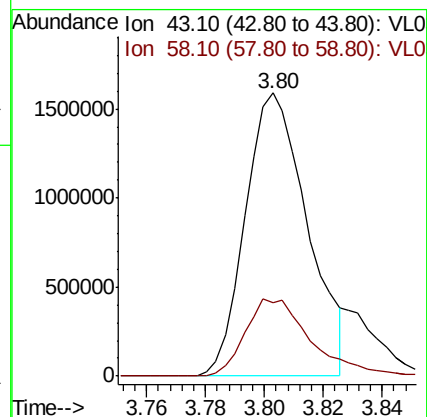
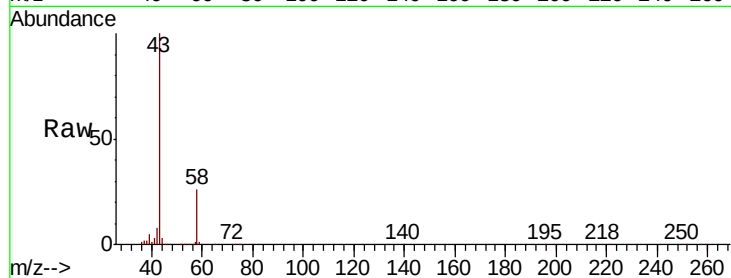
31.4

Manual Integrations

APPROVED

MMDadoda

8/7/2020 12:53:35 PM



#19

Isopropyl Alcohol

Concen: 3.409 ppbv m

RT: 3.93 min Scan# 356

Delta R.T. -0.00 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Tgt Ion: 45 Resp: 389690

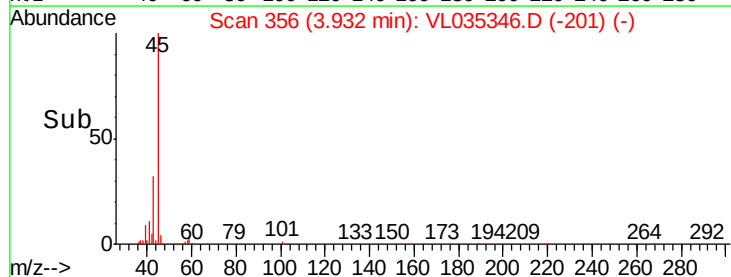
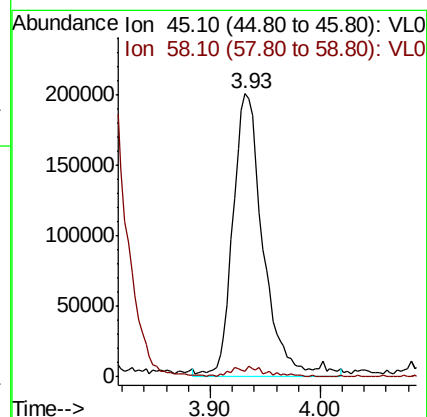
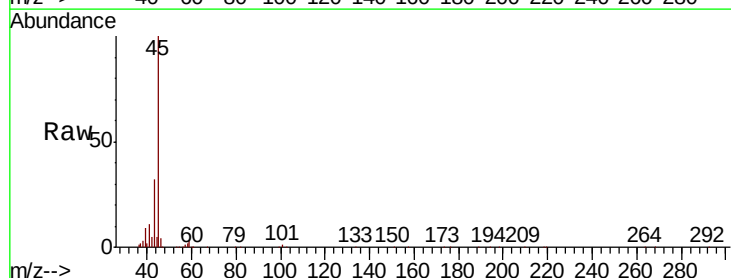
Ion Ratio Lower Upper

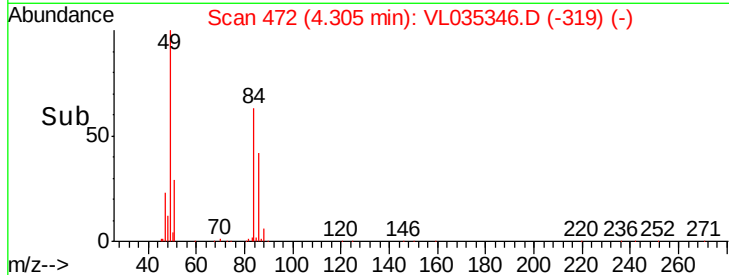
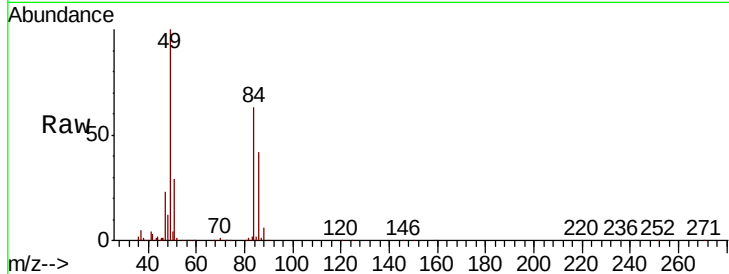
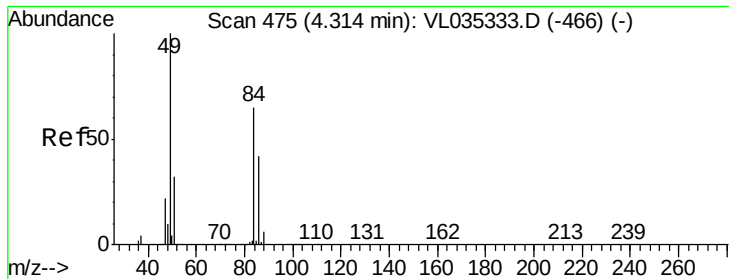
45 100

58 0.0

1.9

2.9#





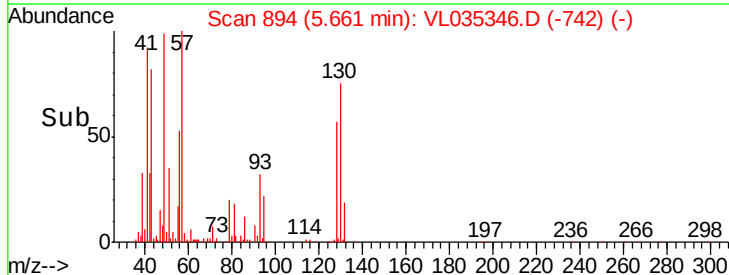
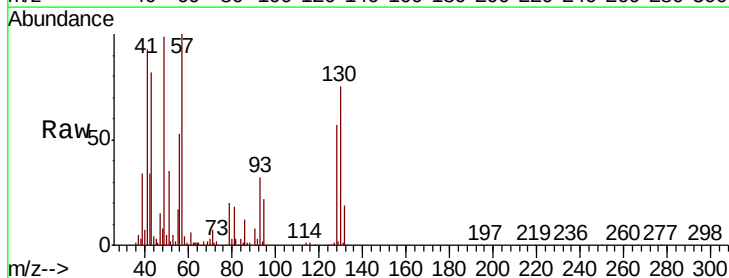
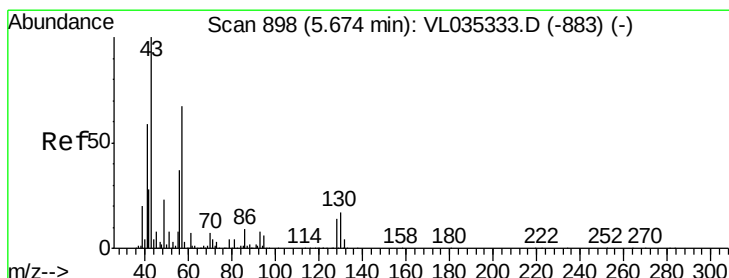
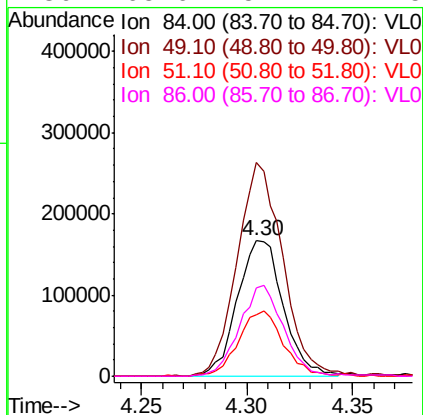
#20
Methvlene Chloride
Concen: 3.444 ppbv
RT: 4.30 min Scan# 472
Delta R.T. -0.01 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Tot Ion	84	Resp	253299
Ion Ratio	Lower	Upper	
84	100		
49	157.2	122.8	184.2
51	45.5	40.1	60.1
86	65.6	51.7	77.5

Instrument :
MSVOA_L
ClientSampleId :
IA-1DUP

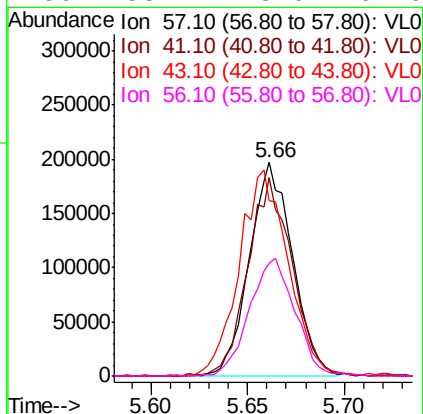
Manual Integrations
APPROVED

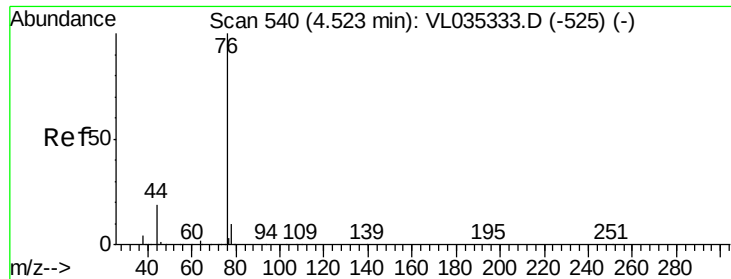
MMDadoda
8/7/2020 12:53:35 PM



#26
Hexane
Concen: 2.567 ppbv
RT: 5.66 min Scan# 894
Delta R.T. -0.01 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Tgt Ion	57	Resp	305134
Ion Ratio	Lower	Upper	
57	100		
41	95.6	75.2	112.8
43	110.6	180.6	270.8#
56	58.2	43.0	64.6





#27

Carbon Disulfide

Concen: 0.322 ppbv

RT: 4.51 min Scan# 537

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

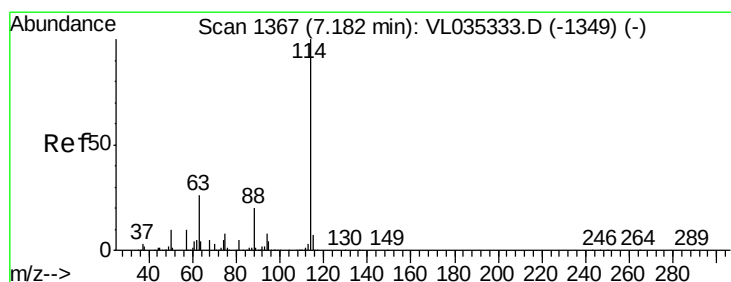
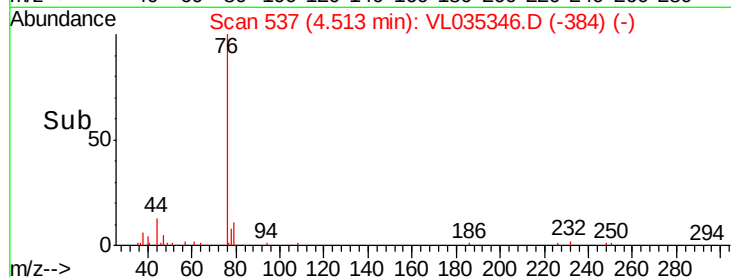
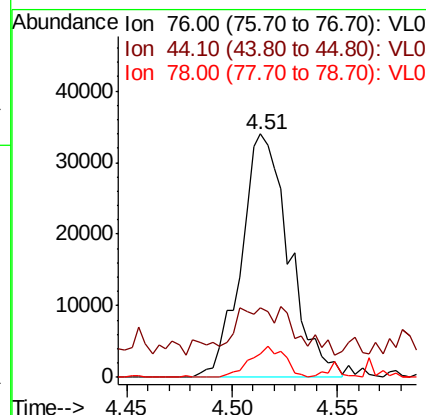
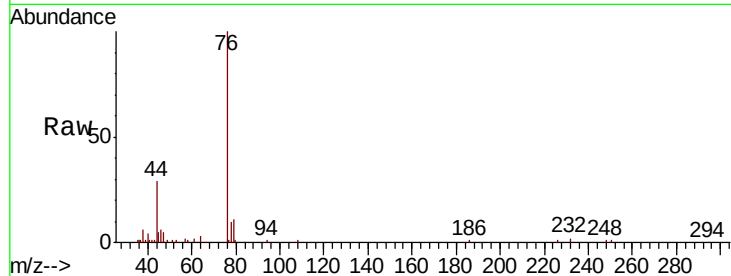
ClientSampleId :

IA-1DUP

Tot Ion:	76	Resp:	53510
Ion	Ratio	Lower	Upper
76	100		
44	28.9	15.4	23.2#
78	10.9	7.7	11.5

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

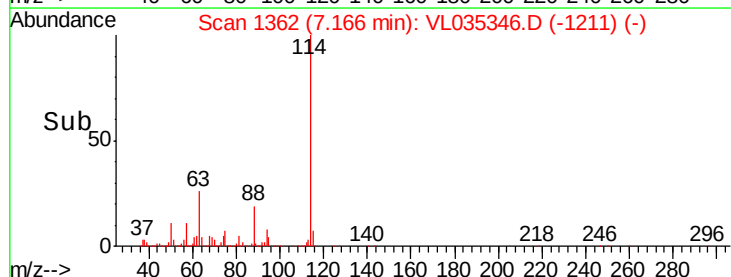
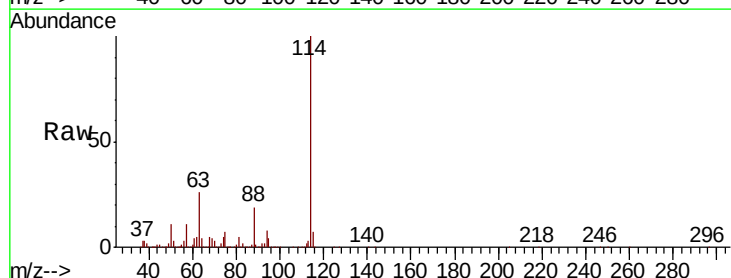
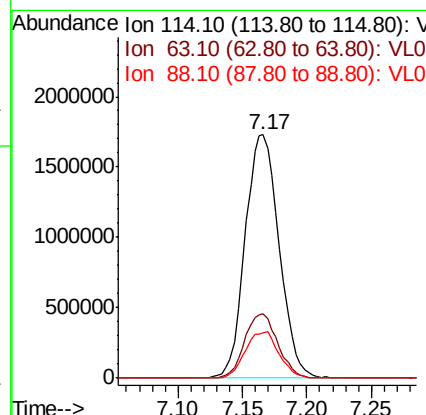
RT: 7.17 min Scan# 1362

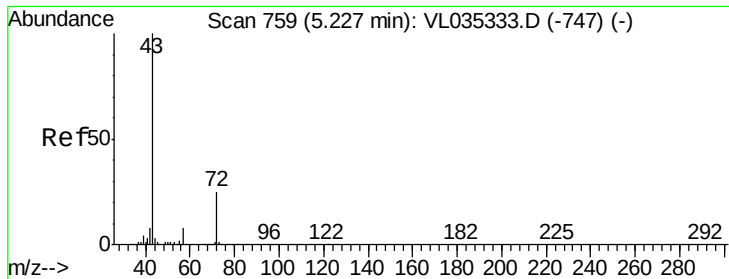
Delta R.T. -0.02 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Tgt Ion:	114	Resp:	3167691
Ion	Ratio	Lower	Upper
114	100		
63	25.9	21.3	31.9
88	18.9	15.3	22.9





#34

2-Butanone

Concen: 1.052 ppbv

RT: 5.22 min Scan# 757

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampleId :

IA-1DUP

Tot Ion: 43 Resp: 164033

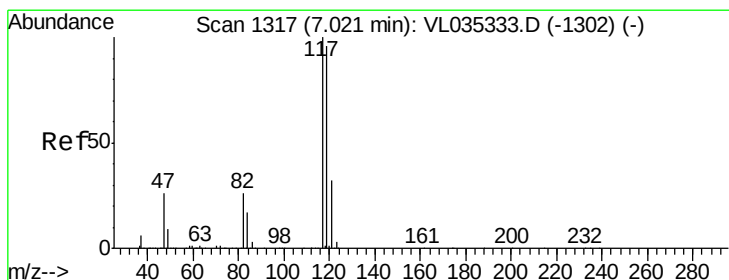
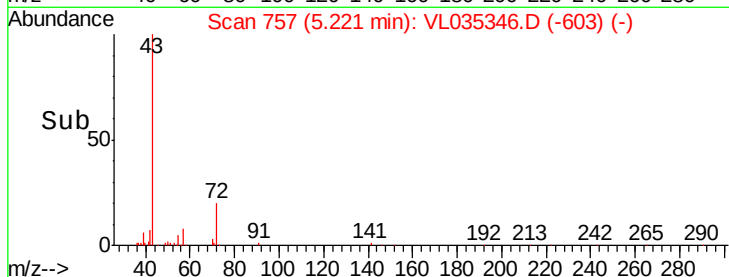
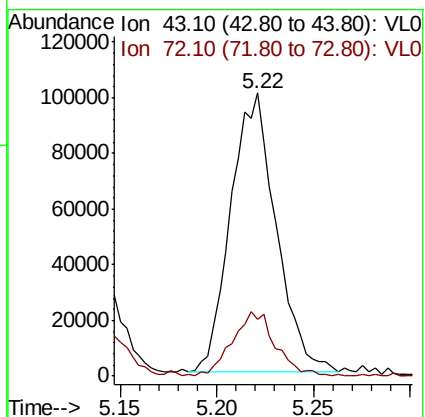
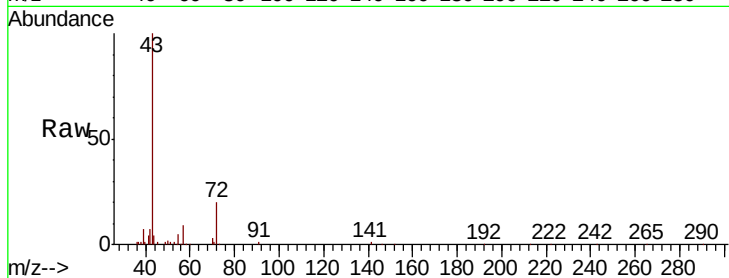
Ion Ratio Lower Upper

43 100

72 22.0 18.9 28.3

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM



#35

Carbon Tetrachloride

Concen: 0.062 ppbv m

RT: 7.01 min Scan# 1314

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

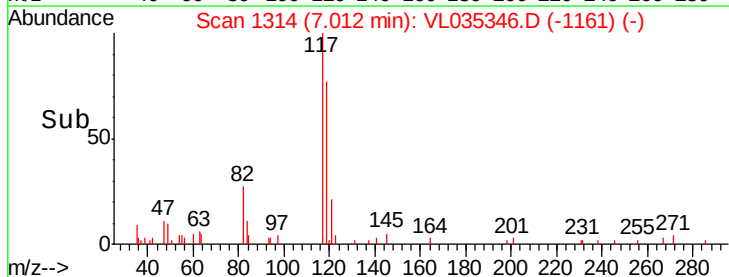
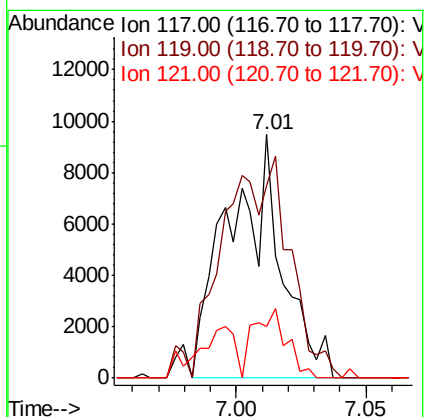
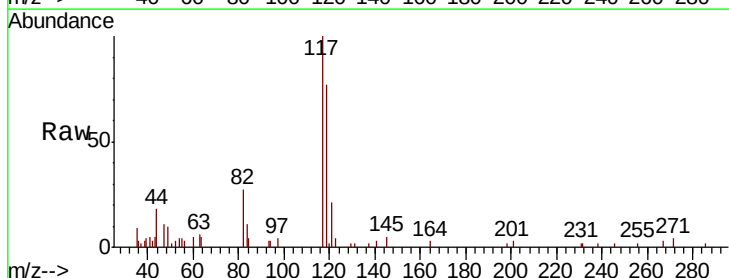
Tgt Ion: 117 Resp: 13556

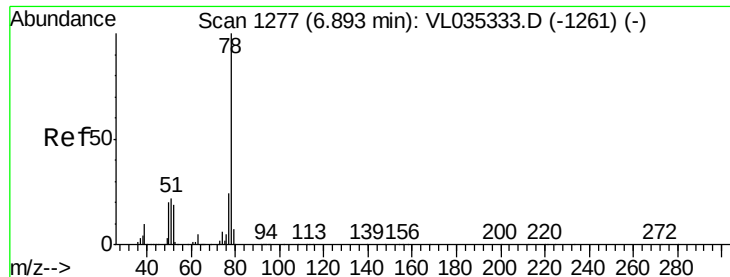
Ion Ratio Lower Upper

117 100

119 77.0 77.0 115.6#

121 21.2 26.0 39.0#





#36

Benzene

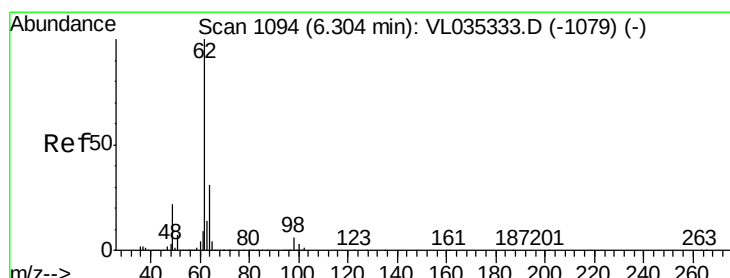
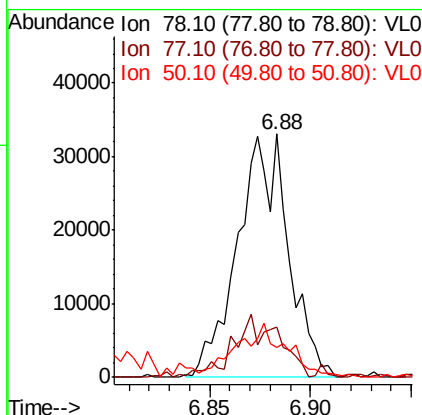
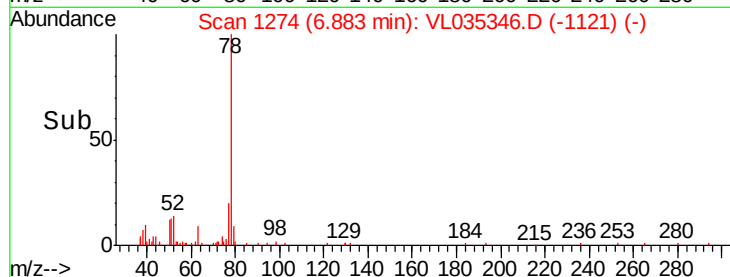
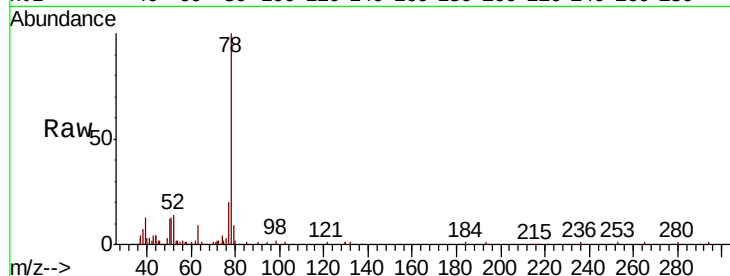
Concen: 0.269 ppbv m
RT: 6.88 min Scan# 1274
Delta R.T. -0.01 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Instrument :
MSVOA_L
ClientSampled :
IA-1DUP

Tot Ion	Ratio	Lower	Upper
78	100		
77	20.5	19.3	28.9
50	12.4	16.3	24.5#

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM

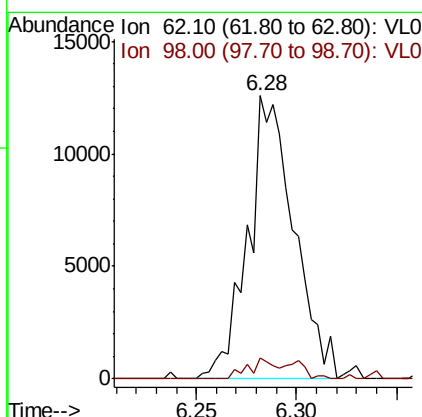
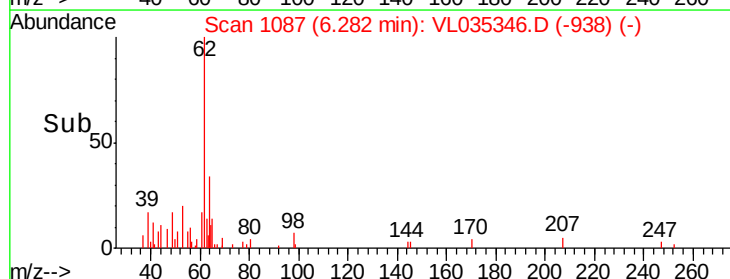
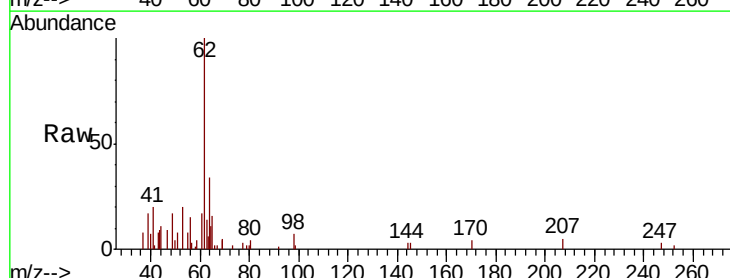


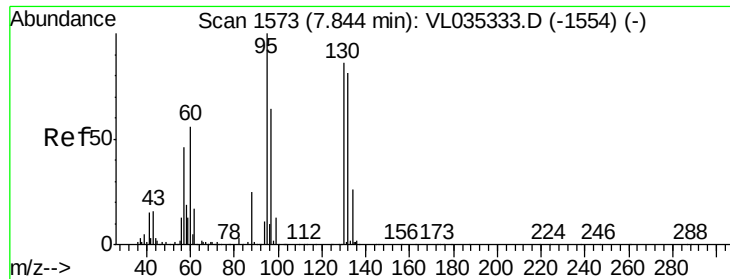
#37

1,2-Dichloroethane

Concen: 0.135 ppbv m
RT: 6.28 min Scan# 1087
Delta R.T. -0.02 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Tgt Ion	Ratio	Lower	Upper
62	100		
98	0.0	4.6	7.0#





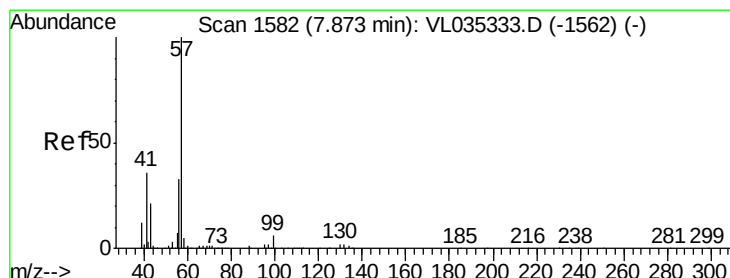
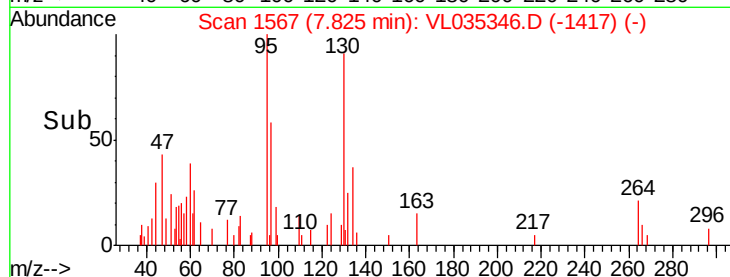
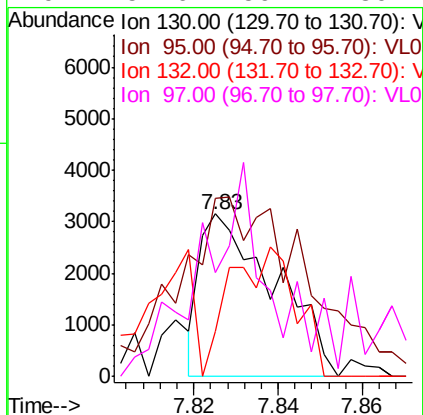
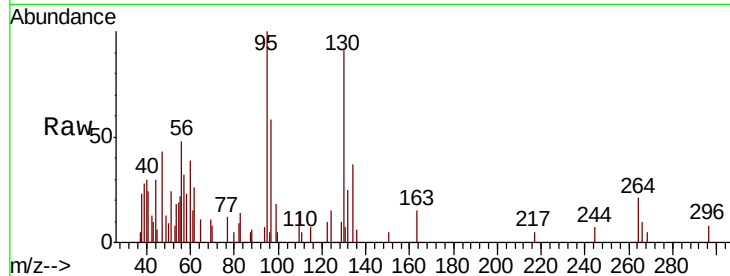
#38
 Trichloroethene
 Concen: 0.039 ppbv
 RT: 7.83 min Scan# 1567
 Delta R.T. -0.02 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Tot Ion	Ratio	Lower	Upper
130	100		
95	64.3	93.4	140.2#
132	25.8	76.1	114.1#
97	54.6	59.4	89.2#

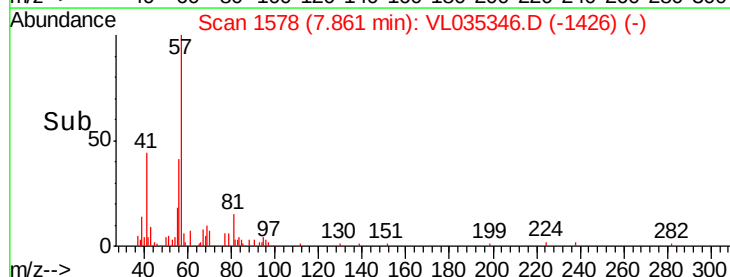
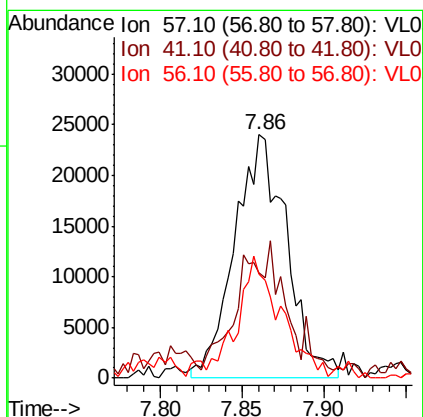
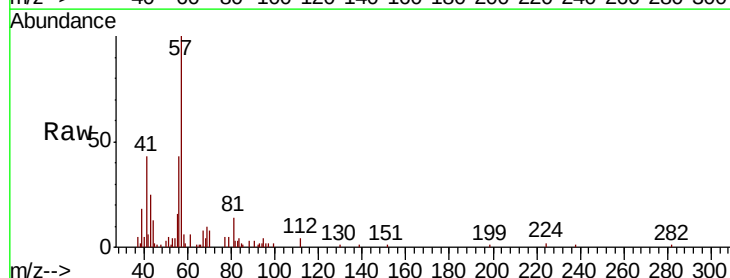
Manual Integrations
 APPROVED

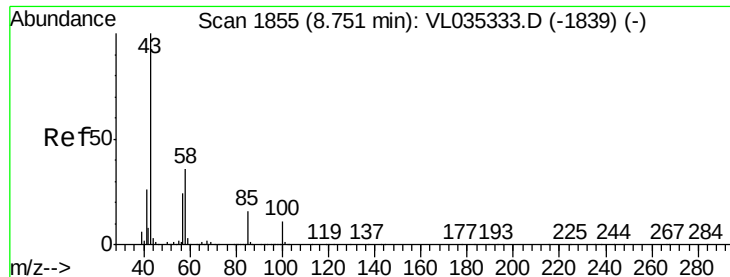
MMDadoda
 8/7/2020 12:53:35 PM



#44
 2,2,4-Trimethylpentane
 Concen: 0.139 ppbv m
 RT: 7.86 min Scan# 1578
 Delta R.T. -0.01 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Tgt Ion	Ratio	Lower	Upper
57	100		
41	0.0	27.9	41.9#
56	44.6	25.4	38.0#





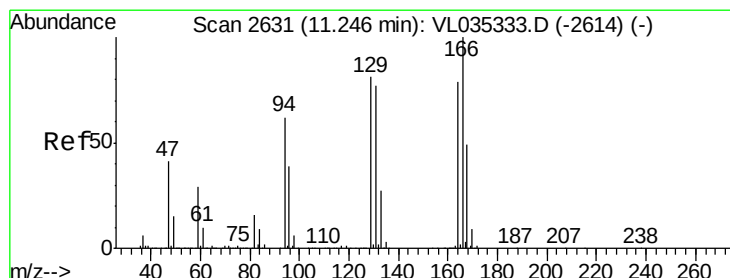
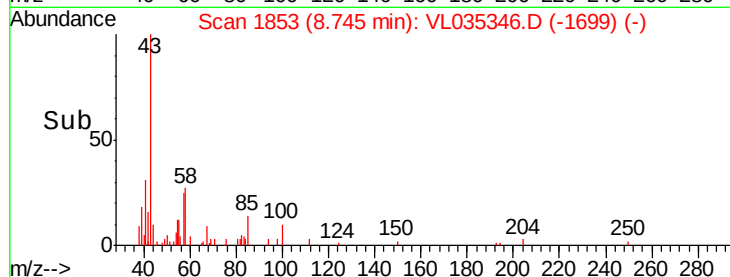
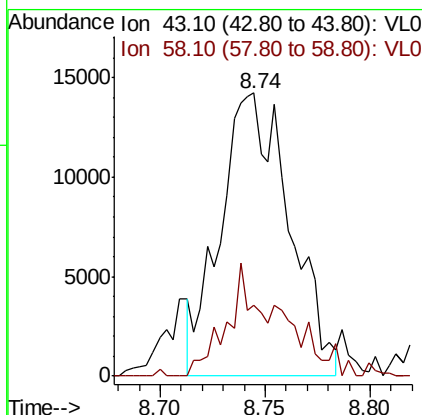
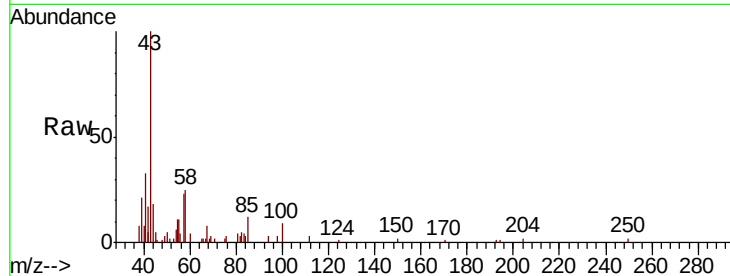
#50
 4-Methyl-2-Pentanone
 Concen: 0.136 ppbv m
 RT: 8.74 min Scan# 1853
 Delta R.T. -0.01 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Tot Ion: 43 Resp: 32456
 Ion Ratio Lower Upper
 43 100
 58 0.0 29.2 43.8#

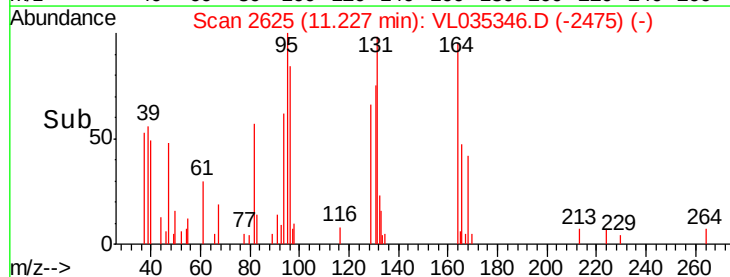
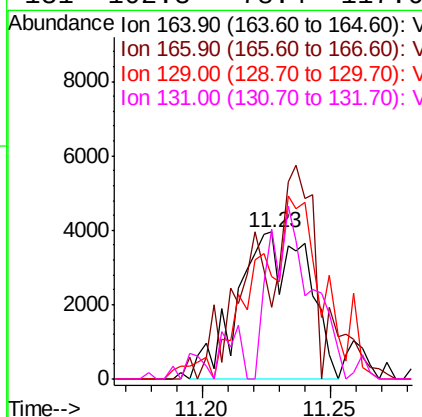
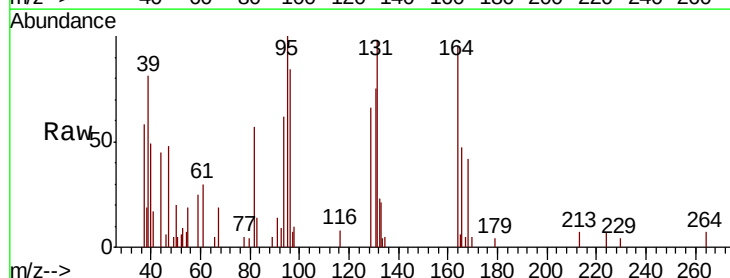
Manual Integrations
 APPROVED

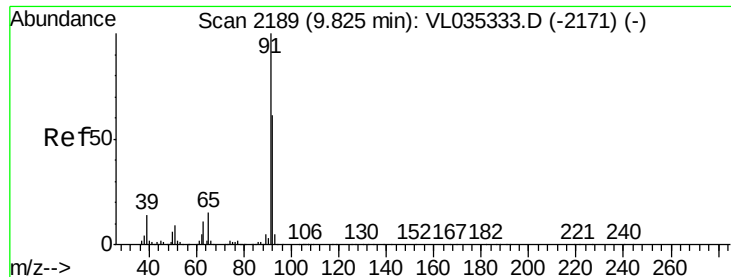
MMDadoda
 8/7/2020 12:53:35 PM



#52
 Tetrachloroethene
 Concen: 0.088 ppbv m
 RT: 11.23 min Scan# 2625
 Delta R.T. -0.02 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Tgt Ion: 164 Resp: 7459
 Ion Ratio Lower Upper
 164 100
 166 49.1 101.4 152.0#
 129 69.6 82.1 123.1#
 131 102.3 78.4 117.6





#53

Toluene

Concen: 10.013 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.02 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampleId :

IA-1DUP

Tot Ion: 91 Resp: 2329815

Ion Ratio Lower Upper

91 100

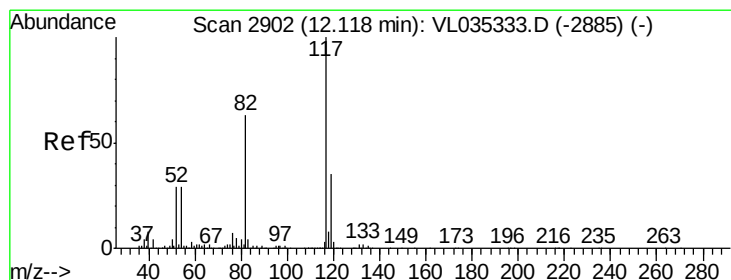
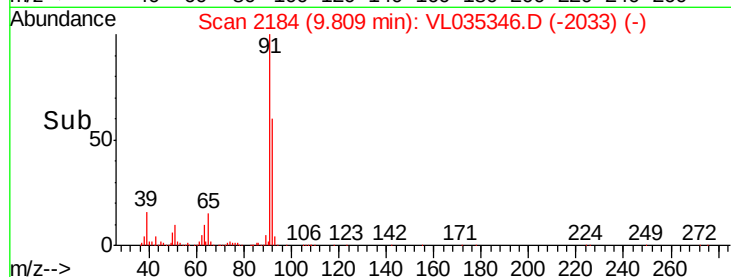
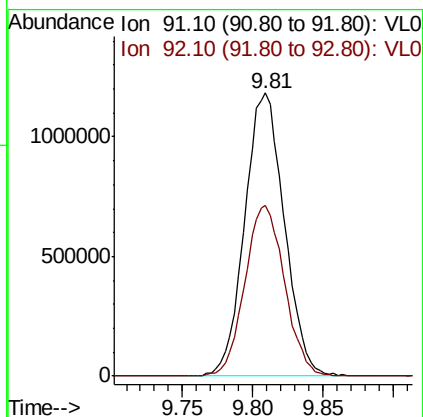
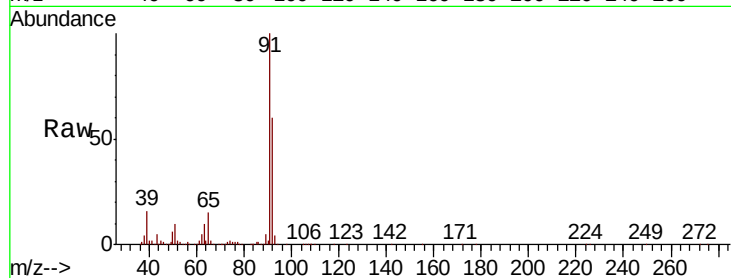
92 60.3 48.5 72.7

Manual Integrations

APPROVED

MMDadoda

8/7/2020 12:53:35 PM



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2895

Delta R.T. -0.02 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

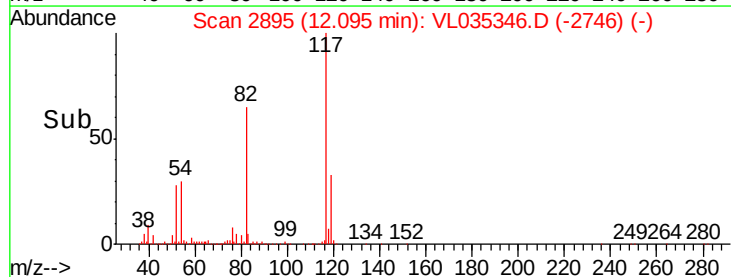
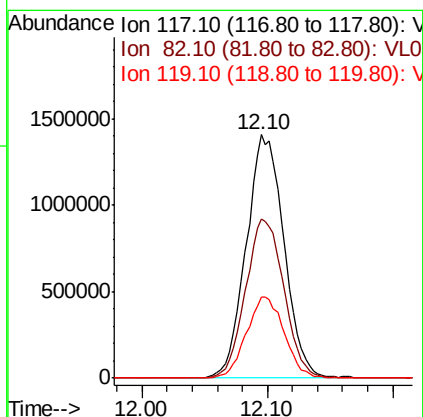
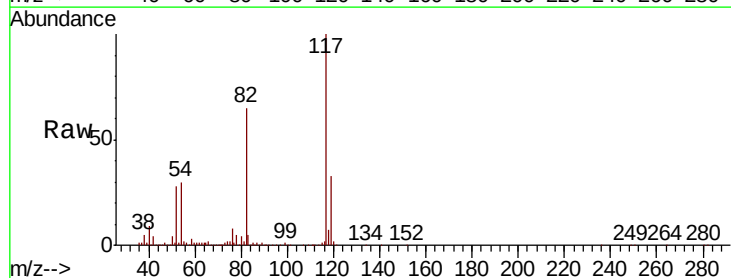
Tgt Ion: 117 Resp: 2951731

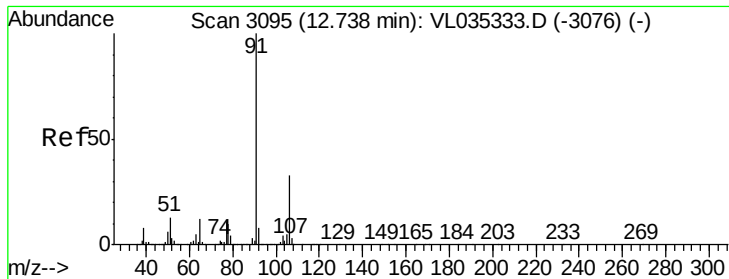
Ion Ratio Lower Upper

117 100

82 66.5 51.0 76.4

119 33.2 24.7 37.1





#58

Ethyl Benzene

Concen: 0.325 ppbv m

RT: 12.72 min Scan# 3089

Delta R.T. -0.02 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampleId :

IA-1DUP

Tot Ion: 91 Resp: 99850

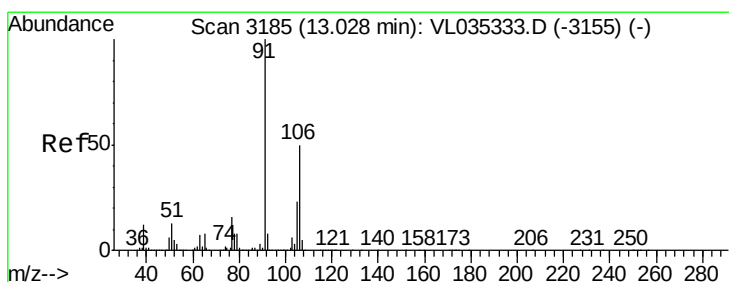
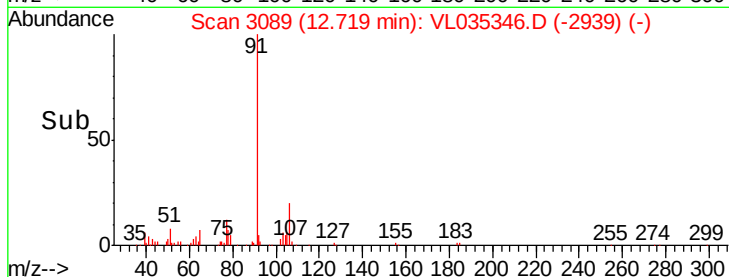
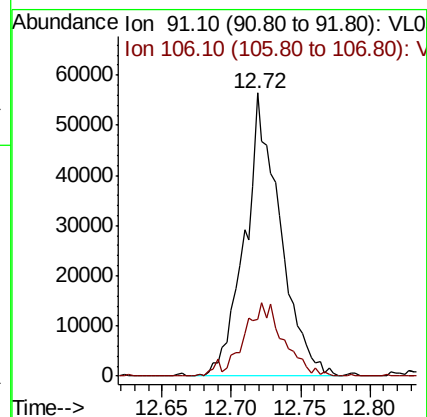
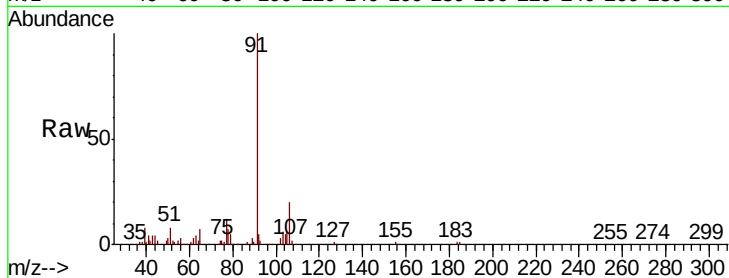
Ion Ratio Lower Upper

91 100

106 20.0 26.8 40.2#

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM



#59

m/p-Xylene

Concen: 0.702 ppbv m

RT: 12.98 min Scan# 3170

Delta R.T. -0.05 min

Lab File: VL035346.D

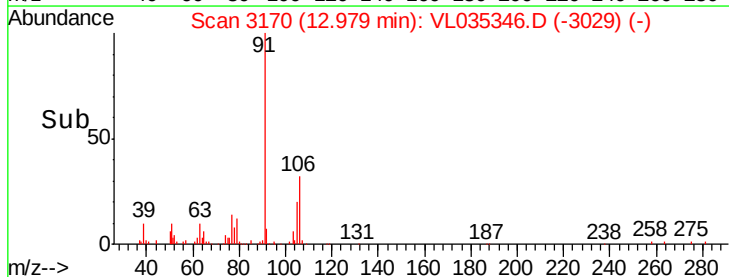
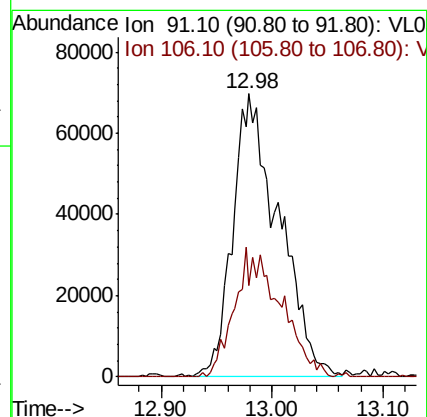
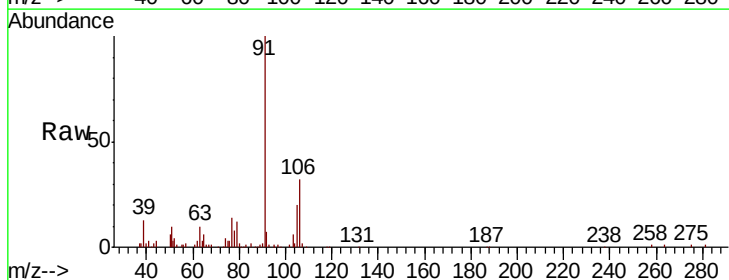
Acq: 6 Aug 2020 12:22

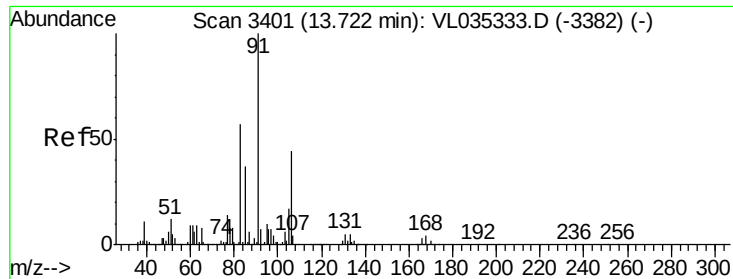
Tgt Ion: 91 Resp: 200872

Ion Ratio Lower Upper

91 100

106 0.0 37.8 56.8#





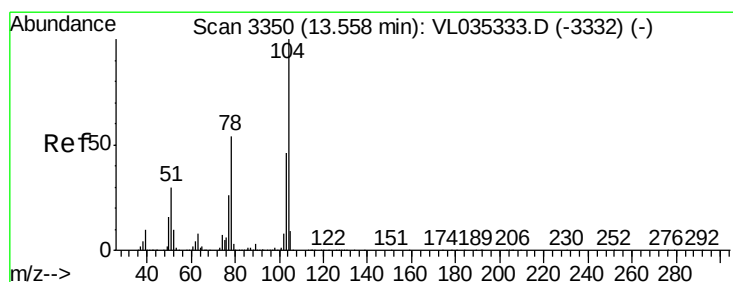
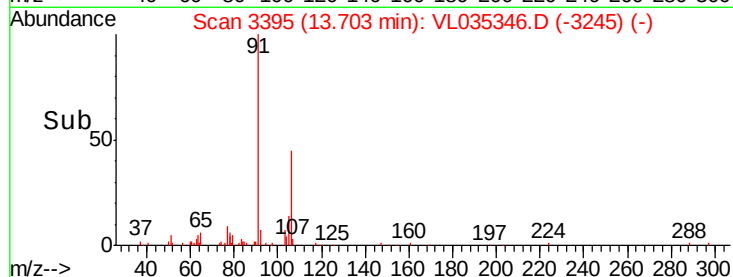
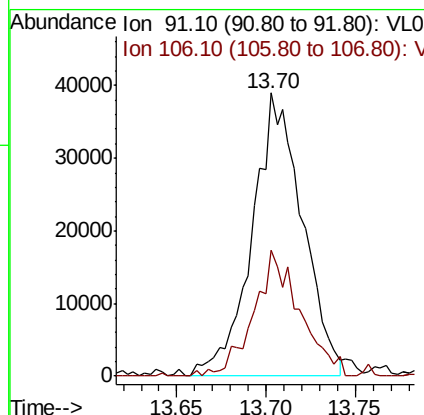
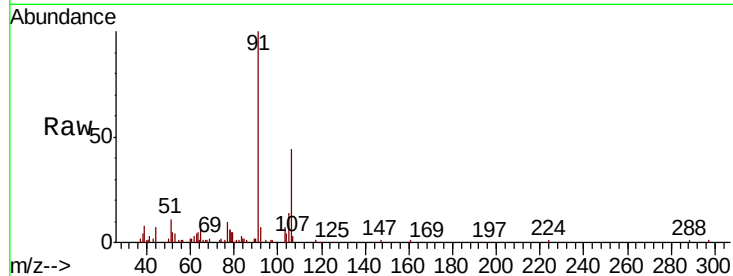
#60
o-Xylene
Concen: 0.270 ppbv
RT: 13.70 min Scan# 3395
Delta R.T. -0.02 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Instrument :
MSVOA_L
ClientSampleId :
IA-1DUP

Tot Ion	Ratio	Lower	Upper
91	100		
106	41.4	22.7	68.0

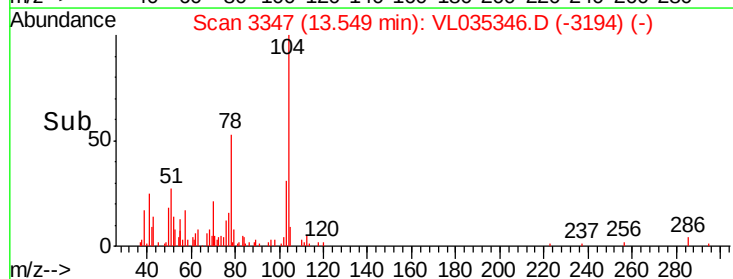
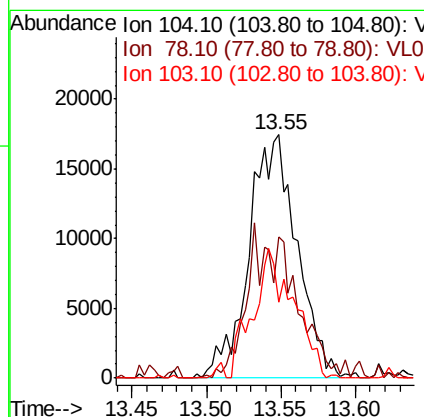
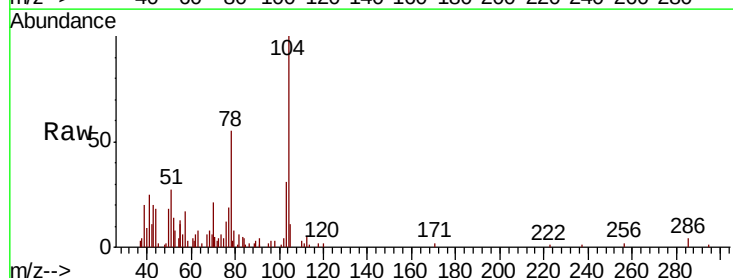
Manual Integrations
APPROVED

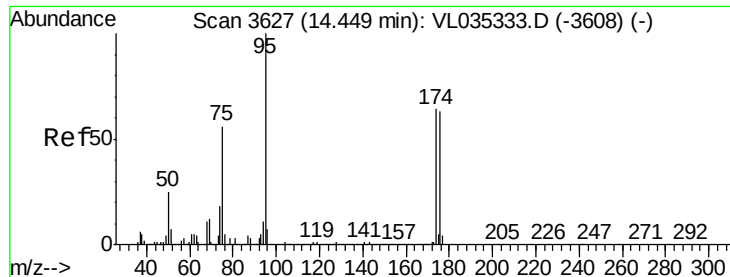
MMDadoda
8/7/2020 12:53:35 PM



#61
Styrene
Concen: 0.225 ppbv m
RT: 13.55 min Scan# 3347
Delta R.T. -0.01 min
Lab File: VL035346.D
Acq: 6 Aug 2020 12:22

Tgt Ion	Ratio	Lower	Upper
104	100		
78	63.7	42.6	63.8
103	46.4	38.1	57.1





#68

1-Bromo-4-Fluorobenzene

Concen: 10.320 ppbv

RT: 14.44 min Scan# 3623

Delta R.T. -0.01 min

Lab File: VL035346.D

Acq: 6 Aug 2020 12:22

Instrument :

MSVOA_L

ClientSampleId :

IA-1DUP

Tot Ion: 95 Resp: 2540262

Ion Ratio Lower Upper

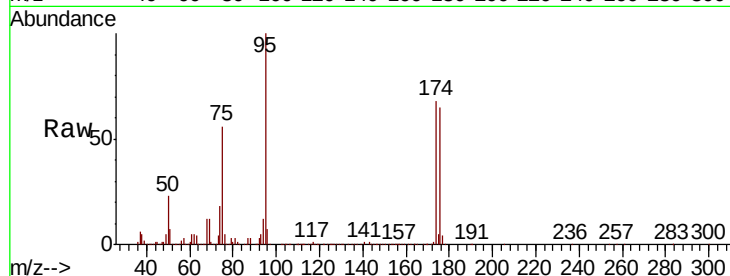
95 100

174 66.8 53.5 80.3

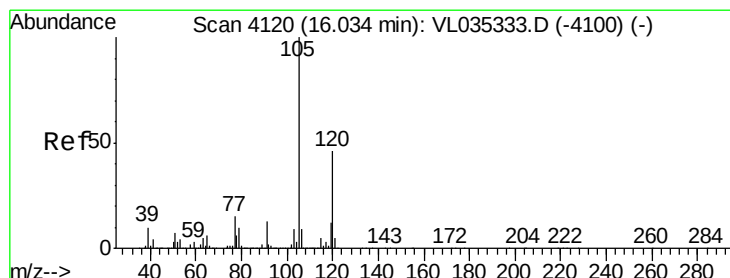
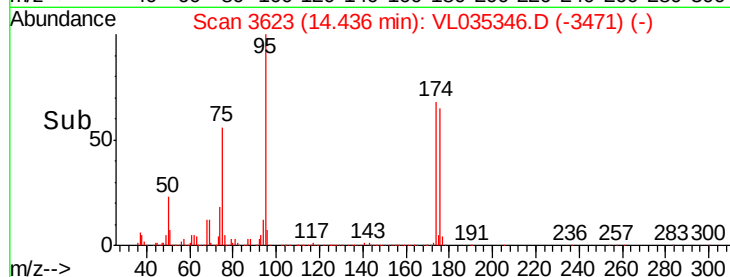
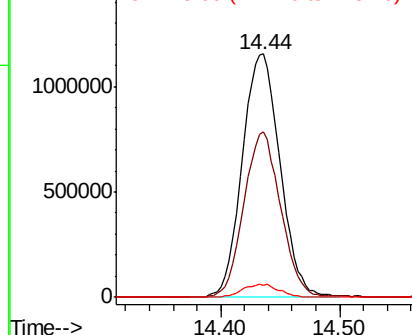
175 5.2 4.2 6.2

Manual Integrations
APPROVED

MMDadoda
8/7/2020 12:53:35 PM



Abundance Ion 95.10 (94.80 to 95.80): VL0
Ion 174.00 (173.70 to 174.70): V
Ion 175.00 (174.70 to 175.70): V



#73

1,3,5-Trimethylbenzene

Concen: 0.115 ppbv m

RT: 16.02 min Scan# 4115

Delta R.T. -0.02 min

Lab File: VL035346.D

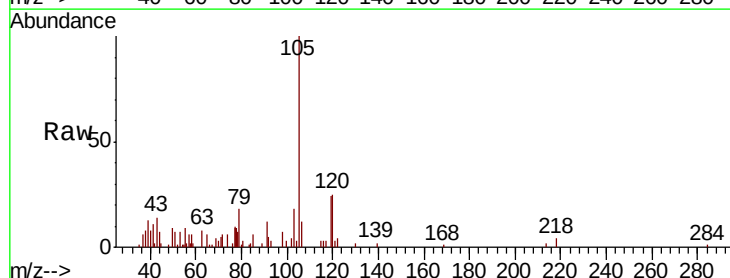
Acq: 6 Aug 2020 12:22

Tgt Ion:105 Resp: 35621

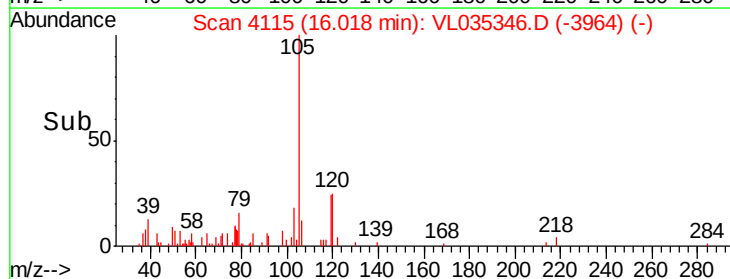
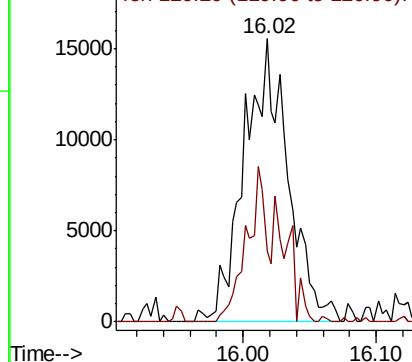
Ion Ratio Lower Upper

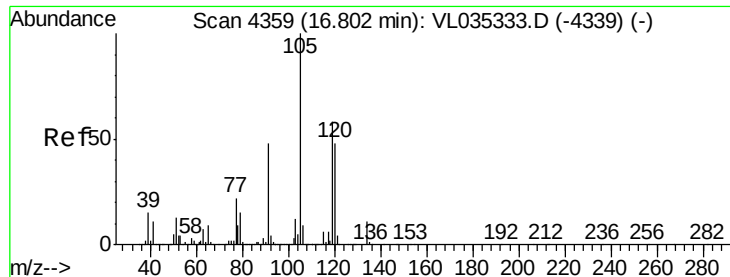
105 100

120 24.8 36.9 55.3#



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





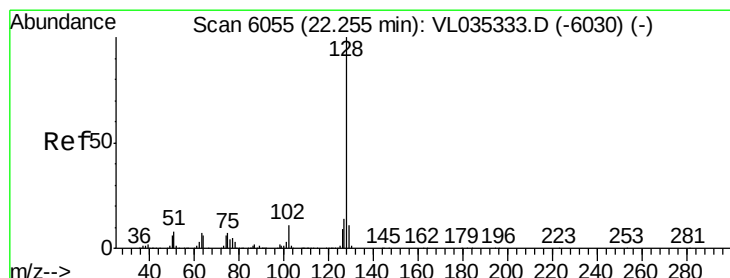
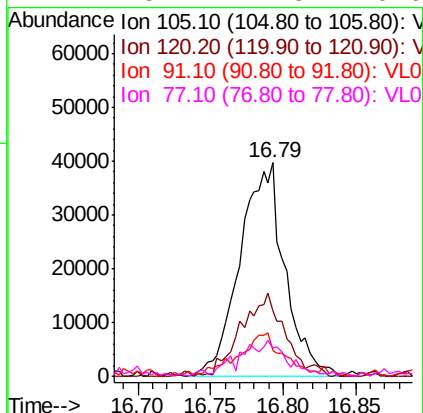
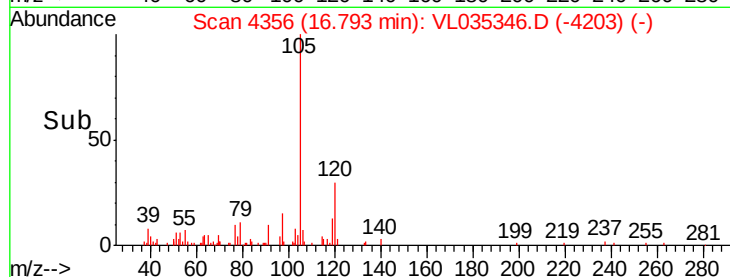
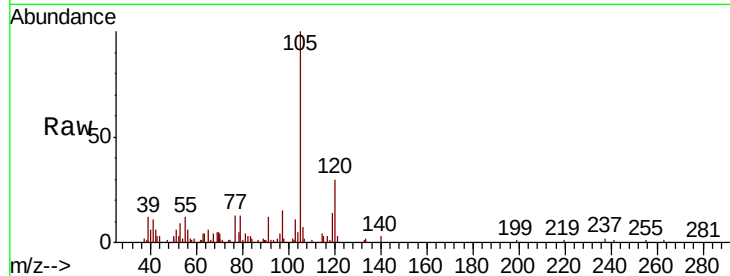
#74
 1,2,4-Trimethylbenzene
 Concen: 0.240 ppbv
 RT: 16.79 min Scan# 4356
 Delta R.T. -0.01 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Tot Ion:	105	Resp:	85087
Ion Ratio	Lower	Upper	
105	100		
120	29.1	38.5	57.7#
91	11.0	39.0	58.6#
77	13.1	17.8	26.6#

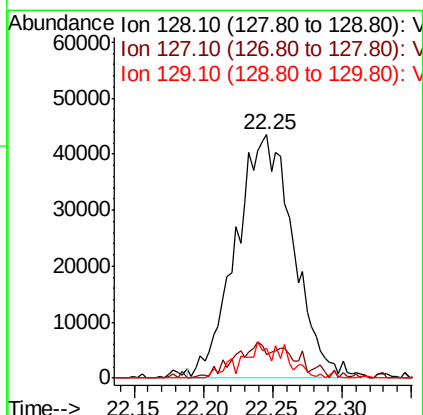
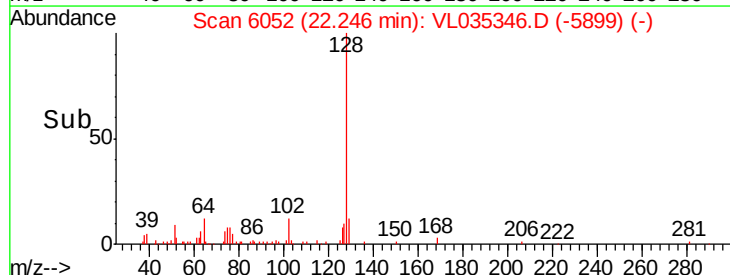
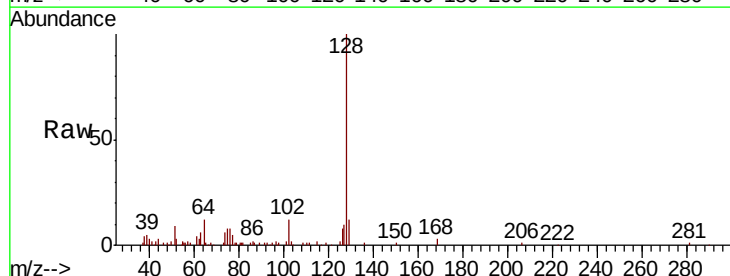
Manual Integrations
 APPROVED

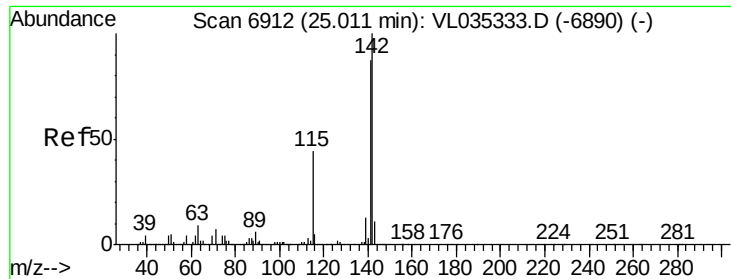
MMDadoda
 8/7/2020 12:53:35 PM



#79
 Naphthalene
 Concen: 0.458 ppbv m
 RT: 22.25 min Scan# 6052
 Delta R.T. -0.01 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Tgt Ion:	128	Resp:	124984
Ion Ratio	Lower	Upper	
128	100		
127	9.6	11.1	16.7#
129	12.3	8.7	13.1





#80
 Naphthalene, 2-methyl-
 Concen: 0.111 ppbv
 RT: 25.01 min Scan# 6912
 Delta R.T. 0.00 min
 Lab File: VL035346.D
 Acq: 6 Aug 2020 12:22

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1DUP

Tot Ion	Ratio	Resp	Lower	Upper
142	100	6902		
141	86.0		69.0	103.6
115	61.1		35.5	53.3

Manual Integrations
 APPROVED

MMDadoda
 8/7/2020 12:53:35 PM

