

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040621\
 Data File : VL036708.D
 Acq On : 6 Apr 2021 21:46
 Operator : SY/AP
 Sample : M1877-11 2X
 Misc : 400mL/MSVOA L
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 UP-SG-8(2021)

Manual Integrations
 APPROVED

MMDadoda
 4/12/2021 11:11:15 AM

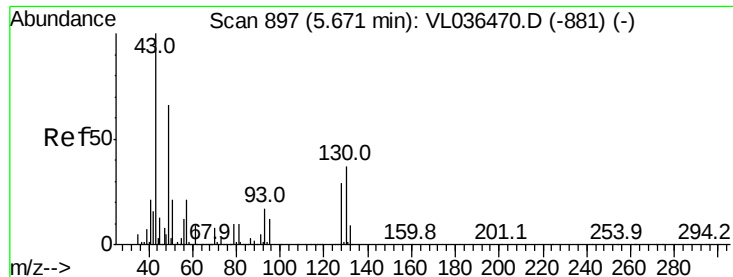
Quant Time: Apr 07 06:15:30 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 25 2021
 QLast Update : Thu Mar 25 09:42:40 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1292326	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3181106	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2944403	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.42	95	2234664	9.52	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	38846	0.184	ppbv	98
4) Chloromethane	3.14	50	19051m	0.223	ppbv	
9) Propene	3.02	41	44839m	0.583	ppbv	
11) Trichlorofluoromethane	3.95	101	40131	0.187	ppbv	93
13) Ethanol	3.61	45	3074363	335.395	ppbv	92
15) Acetone	3.84	43	6757184	53.125	ppbv	100
17) tert-Butyl alcohol	4.30	59	49466m	0.447	ppbv	
19) Isopropyl Alcohol	3.98	45	5843784	83.519	ppbv #	93
20) Methylene Chloride	4.34	84	713411	11.979	ppbv	95
26) Hexane	5.69	57	347497	2.476	ppbv #	47
34) 2-Butanone	5.26	43	115506m	0.744	ppbv	
35) Carbon Tetrachloride	7.01	117	7465m	0.031	ppbv	
36) Benzene	6.89	78	73837m	0.252	ppbv	
50) 4-Methyl-2-Pentanone	8.75	43	27757m	0.124	ppbv	
53) Toluene	9.82	91	129282m	0.414	ppbv	
58) Ethyl Benzene	12.71	91	87433	0.204	ppbv	94
59) m/p-Xylene	12.97	91	306058m	0.819	ppbv	
60) o-Xylene	13.69	91	128994	0.357	ppbv	98
69) p-Isopropyltoluene	17.66	119	57005	0.123	ppbv #	77
72) 4-Ethyltoluene	15.84	105	40424m	0.102	ppbv	
73) 1,3,5-Trimethylbenzene	16.00	105	50710m	0.137	ppbv	
74) 1,2,4-Trimethylbenzene	16.77	105	112788m	0.285	ppbv	

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.00 min

Lab File: VL036708.D

Acq: 6 Apr 2021 21:46

Instrument :

MSVOA_L

ClientSampleId :

UP-SG-8(2021)

Tot Ion: 49 Resp: 1292326

Ion Ratio Lower Upper

49 100

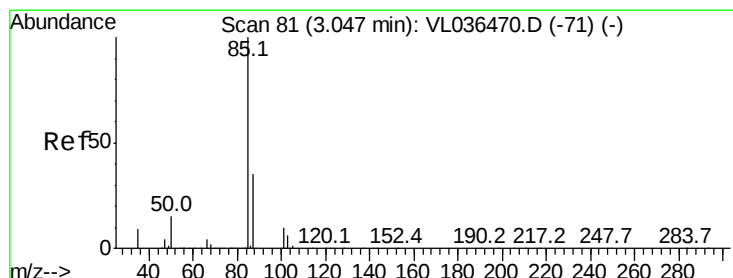
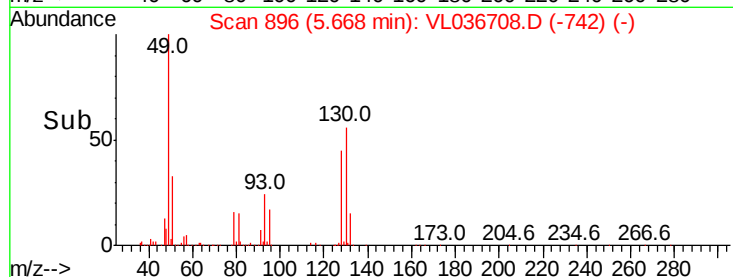
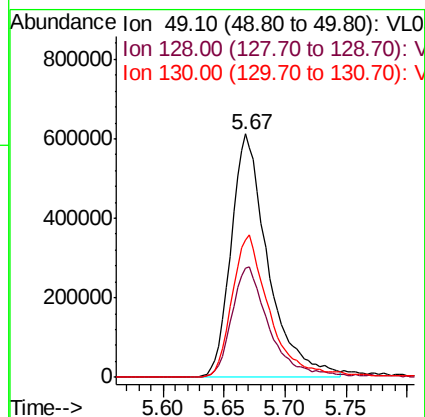
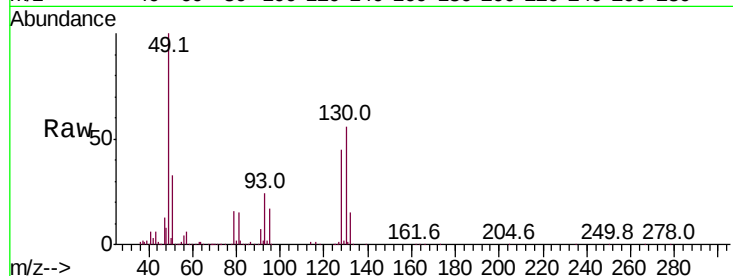
128 46.8 23.5 70.6

130 60.4 29.1 87.4

Manual Integrations
APPROVED

MMDadoda

4/12/2021 11:11:15 AM



#2

Dichlorodifluoromethane

Concen: 0.184 ppbv

RT: 3.05 min Scan# 82

Delta R.T. 0.00 min

Lab File: VL036708.D

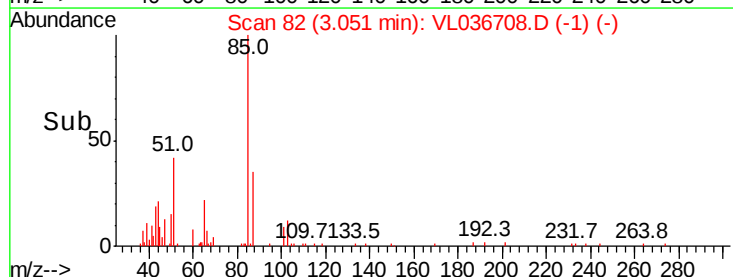
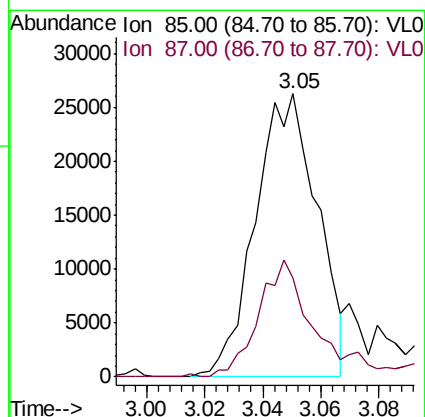
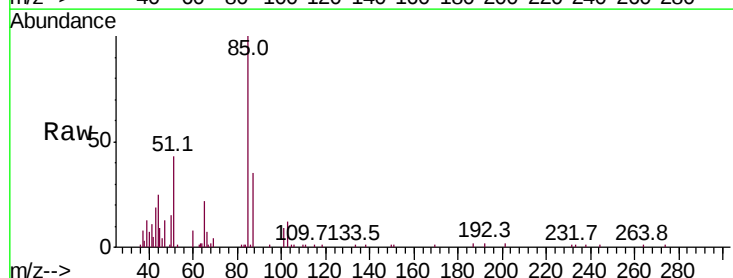
Acq: 6 Apr 2021 21:46

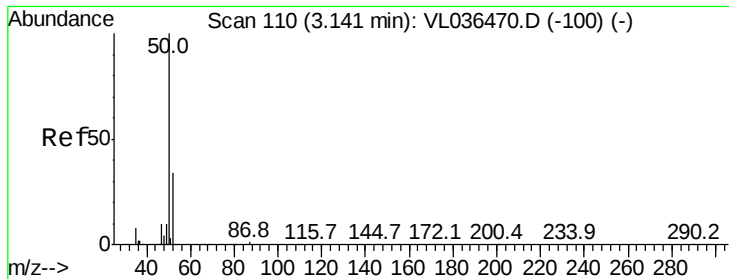
Tgt Ion: 85 Resp: 38846

Ion Ratio Lower Upper

85 100

87 33.9 27.8 41.8





#4

Chloromethane

Concen: 0.223 ppbv m

RT: 3.14 min Scan# 111

Delta R.T. 0.00 min

Lab File: VL036708.D

Acq: 6 Apr 2021 21:46

Instrument :

MSVOA_L

ClientSampleId :

UP-SG-8(2021)

Tot Ion: 50 Resp: 19051

Ion Ratio Lower Upper

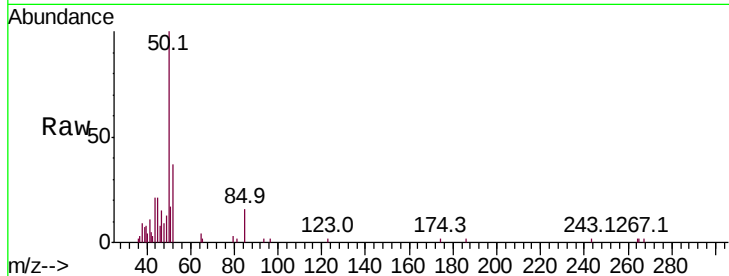
50 100

52 36.9 27.0 40.6

Manual Integrations
APPROVED

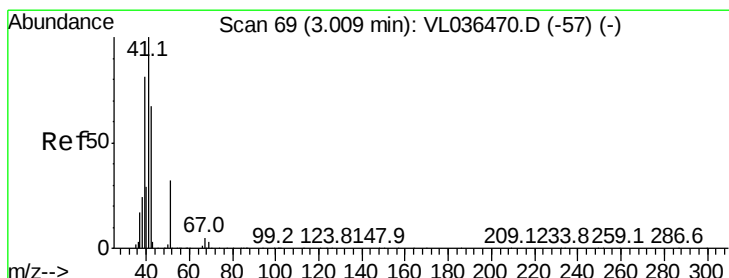
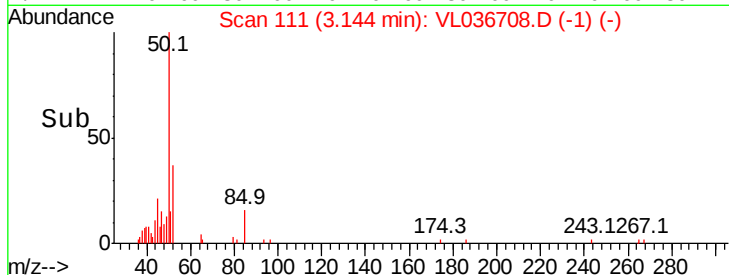
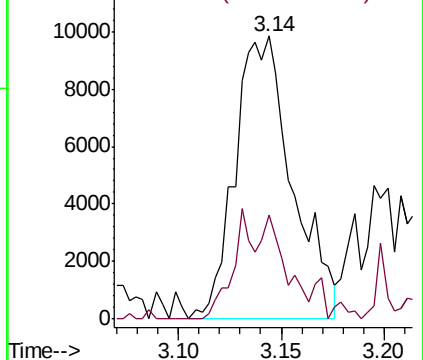
MMDadoda

4/12/2021 11:11:15 AM



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.583 ppbv m

RT: 3.02 min Scan# 74

Delta R.T. 0.02 min

Lab File: VL036708.D

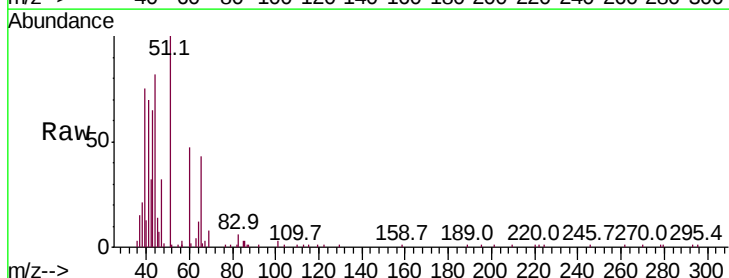
Acq: 6 Apr 2021 21:46

Tgt Ion: 41 Resp: 44839

Ion Ratio Lower Upper

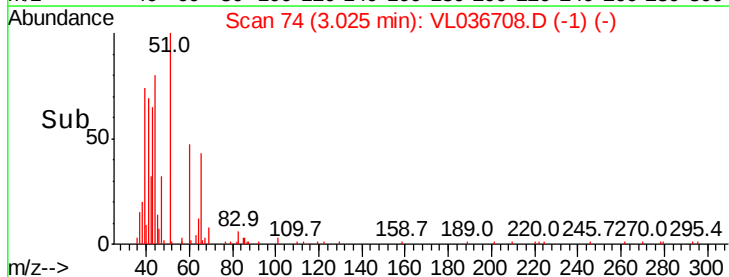
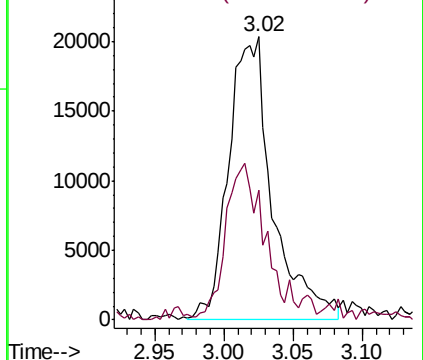
41 100

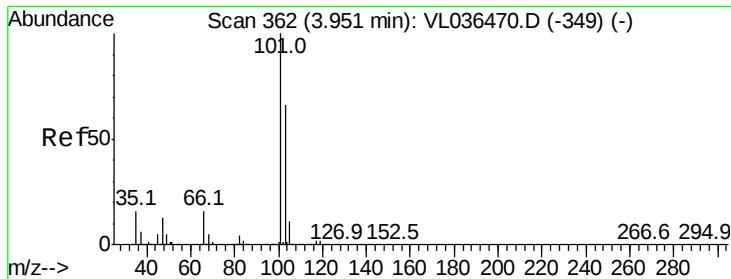
42 441.8 57.0 85.4#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





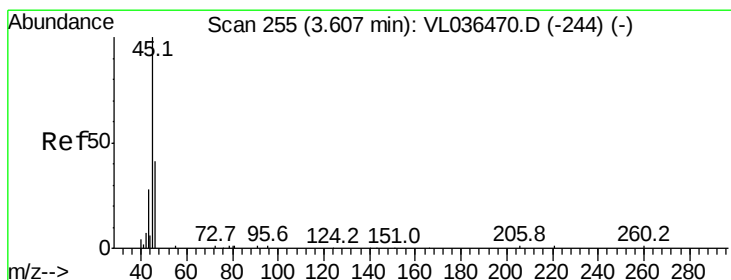
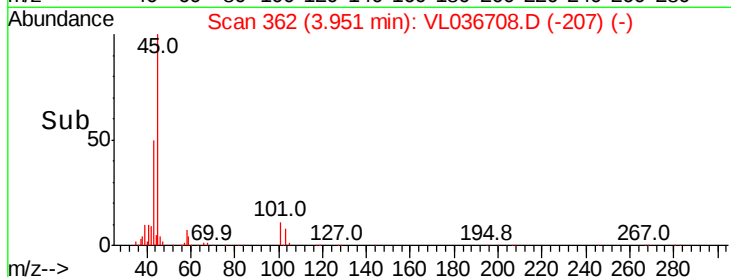
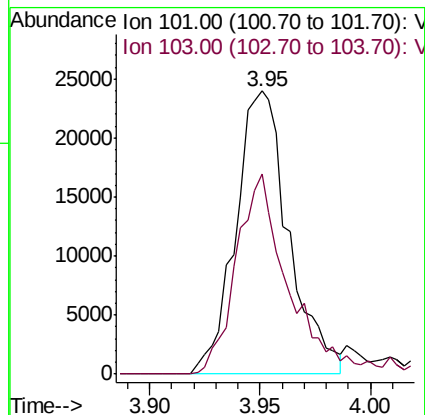
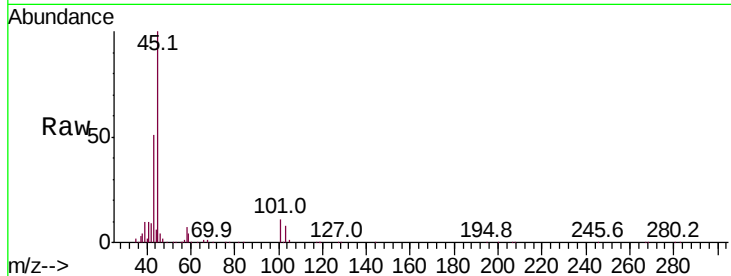
#11
Trichlorofluoromethane
Concen: 0.187 ppbv
RT: 3.95 min Scan# 362
Delta R.T. -0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion	Ion	Ratio	Lower	Upper
40131	101	100		
	103	70.9	52.5	78.7

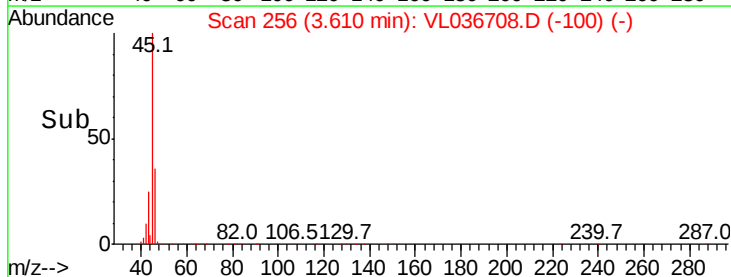
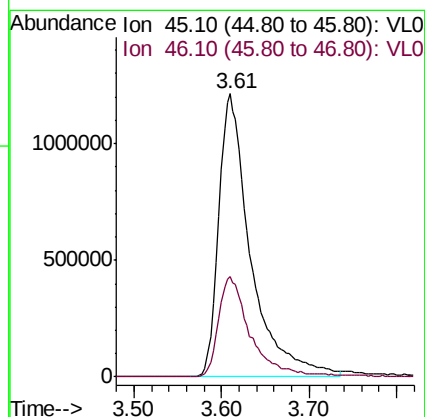
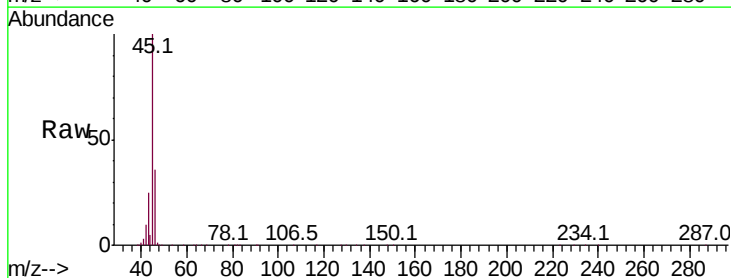
Manual Integrations
APPROVED

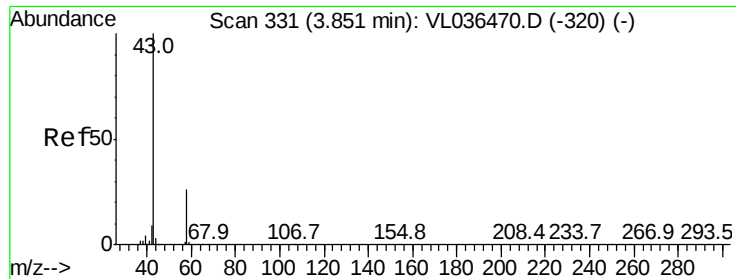
MMDadoda
4/12/2021 11:11:15 AM



#13
Ethanol
Concen: 335.395 ppbv
RT: 3.61 min Scan# 256
Delta R.T. 0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion	Ion	Ratio	Lower	Upper
3074363	45	100		
	46	36.6	16.6	66.2





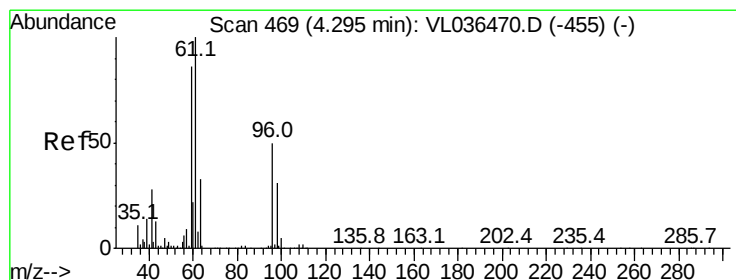
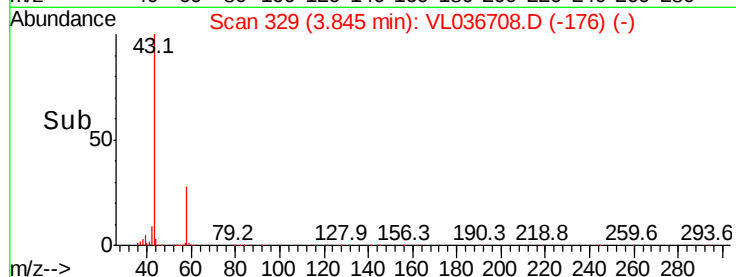
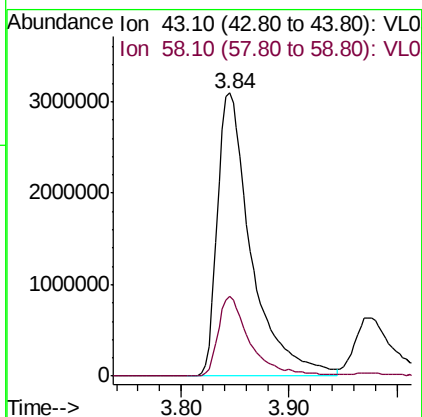
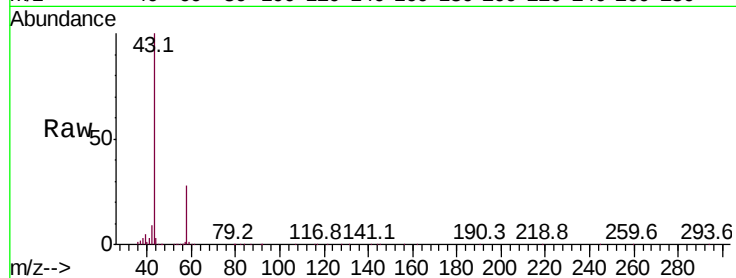
#15
Acetone
Concen: 53.125 ppbv
RT: 3.84 min Scan# 329
Delta R.T. -0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion: 43 Resp: 6757184
Ion Ratio Lower Upper
43 100
58 26.5 21.2 31.8

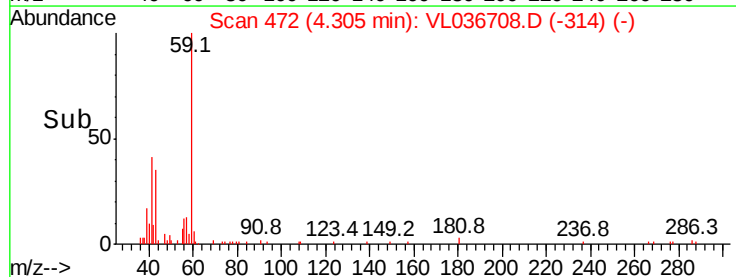
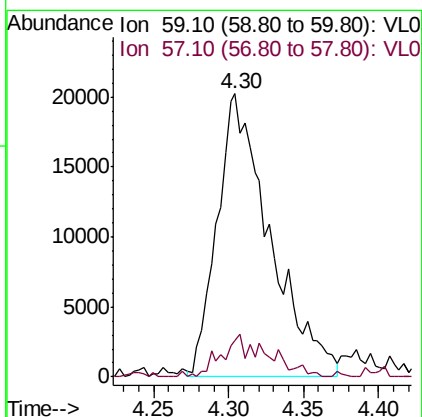
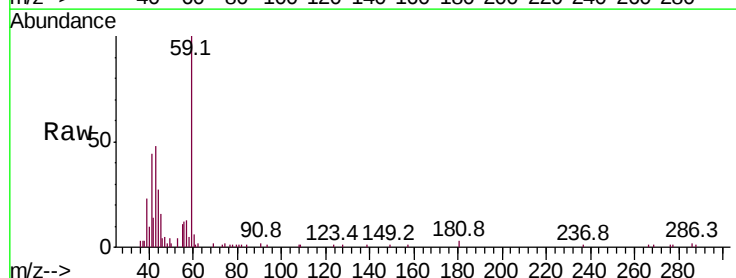
Manual Integrations
APPROVED

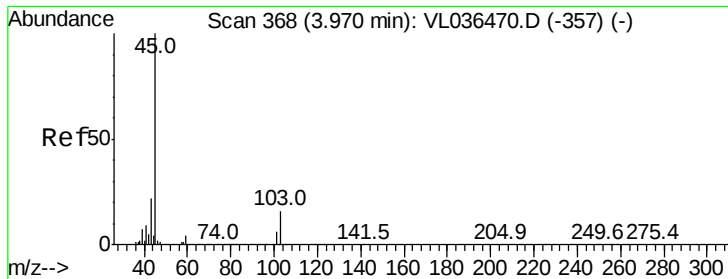
MMDadoda
4/12/2021 11:11:15 AM



#17
tert-Butyl alcohol
Concen: 0.447 ppbv m
RT: 4.30 min Scan# 472
Delta R.T. 0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion: 59 Resp: 49466
Ion Ratio Lower Upper
59 100
57 37.9 8.6 12.8#





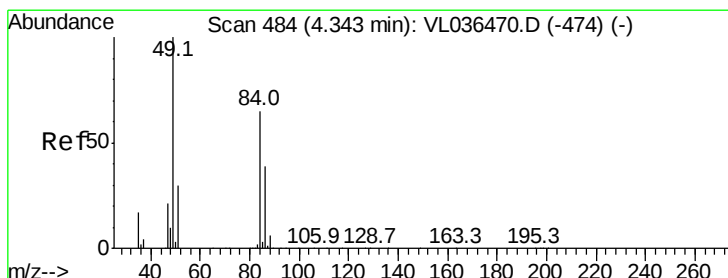
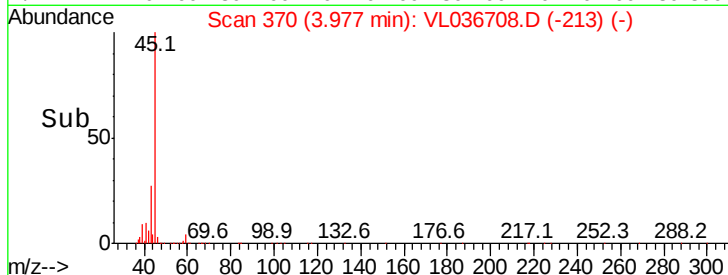
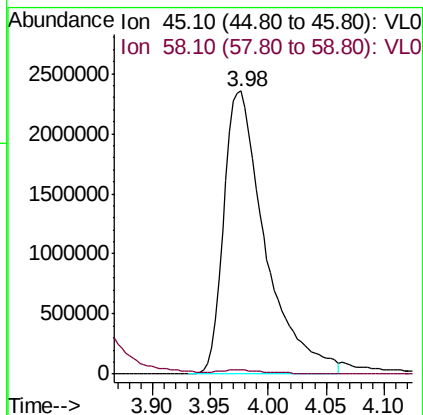
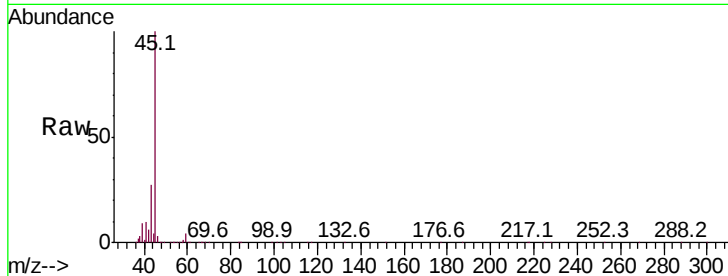
#19
Isopropyl Alcohol
Concen: 83.519 ppbv
RT: 3.98 min Scan# 370
Delta R.T. 0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion: 45 Resp: 5843784
Ion Ratio Lower Upper
45 100
58 1.4 2.9 4.3#

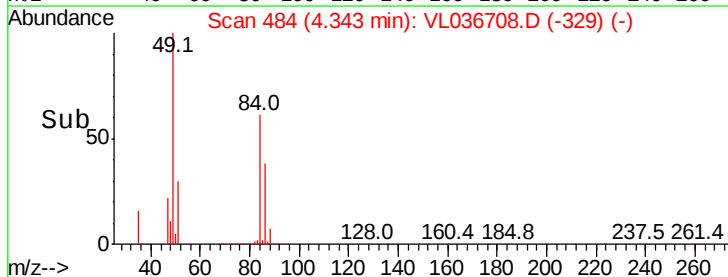
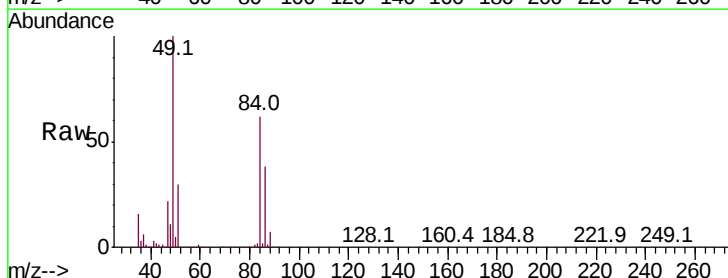
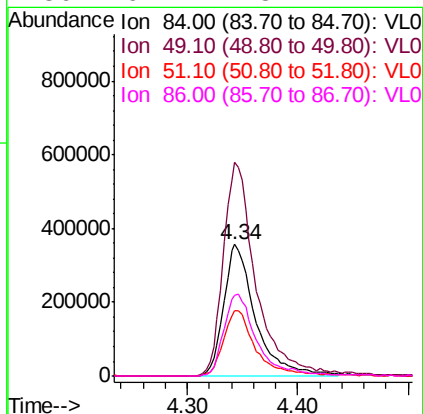
Manual Integrations
APPROVED

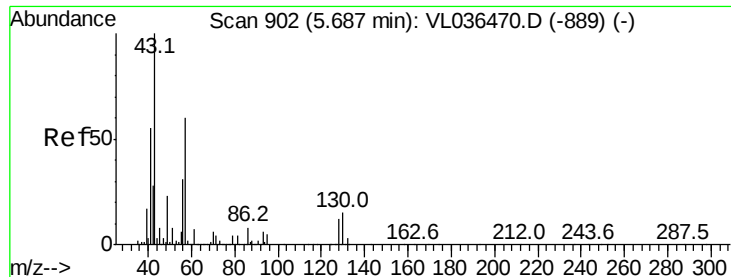
MMDadoda
4/12/2021 11:11:15 AM



#20
Methylene Chloride
Concen: 11.979 ppbv
RT: 4.34 min Scan# 484
Delta R.T. -0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion: 84 Resp: 713411
Ion Ratio Lower Upper
84 100
49 162.2 122.9 184.3
51 49.1 36.9 55.3
86 61.2 48.2 72.4





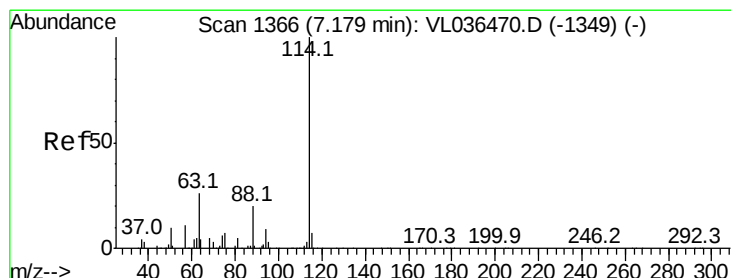
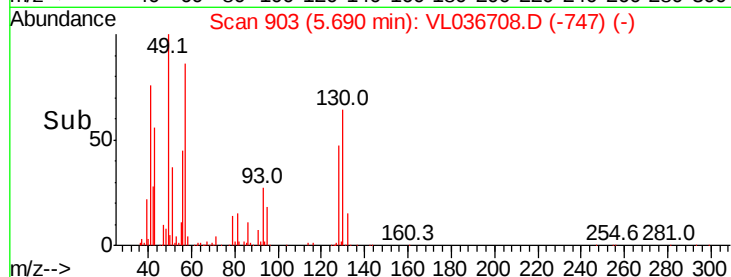
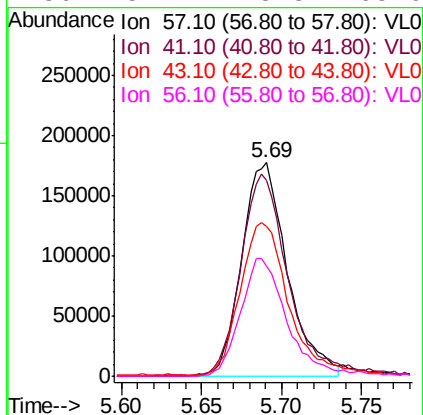
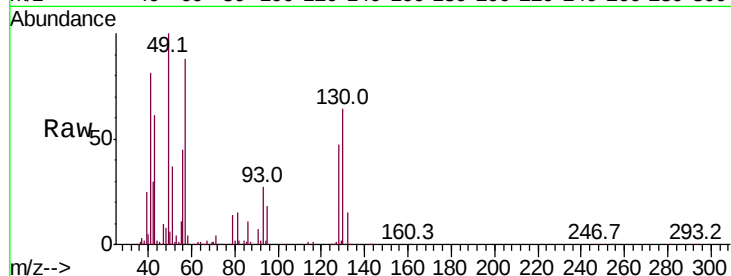
#26
Hexane
Concen: 2.476 ppbv
RT: 5.69 min Scan# 903
Delta R.T. 0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion	Ratio	Lower	Upper
57	100		
41	100.5	77.2	115.8
43	77.1	173.8	260.6#
56	57.2	43.8	65.6

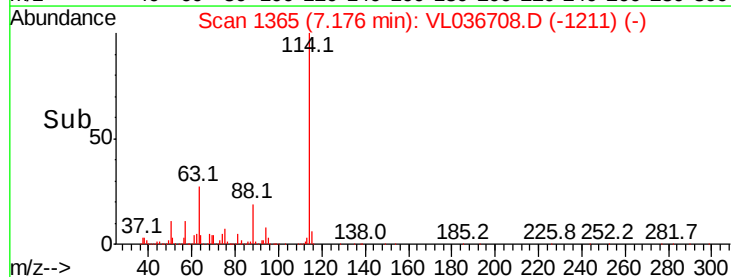
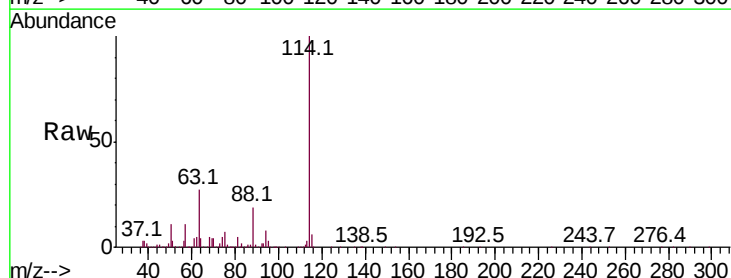
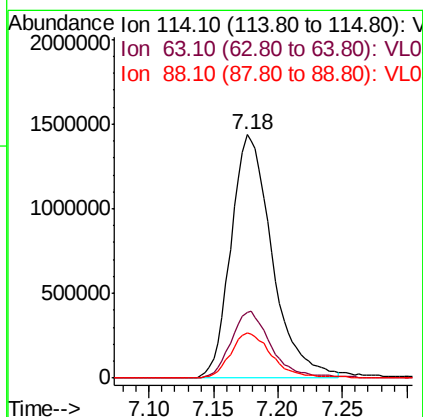
Manual Integrations
APPROVED

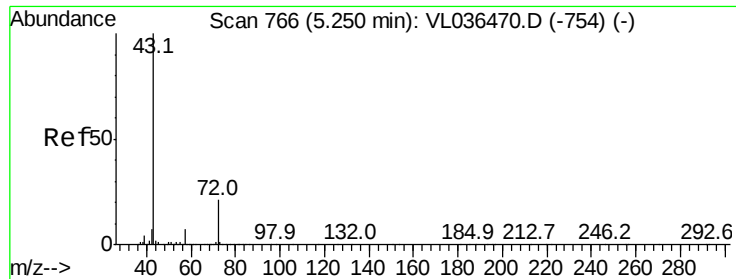
MMDadoda
4/12/2021 11:11:15 AM



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1365
Delta R.T. -0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion	Ratio	Lower	Upper
114	100		
63	27.3	22.4	33.6
88	18.9	15.4	23.0





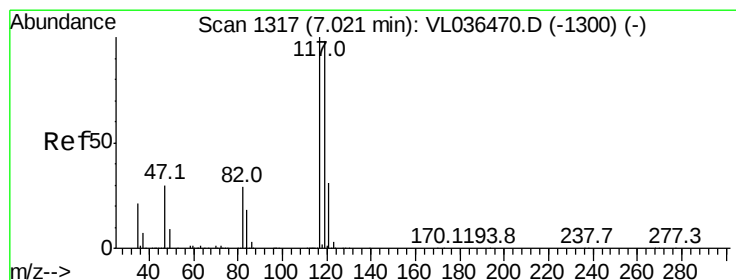
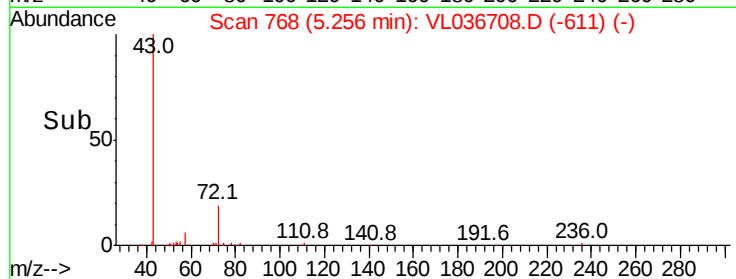
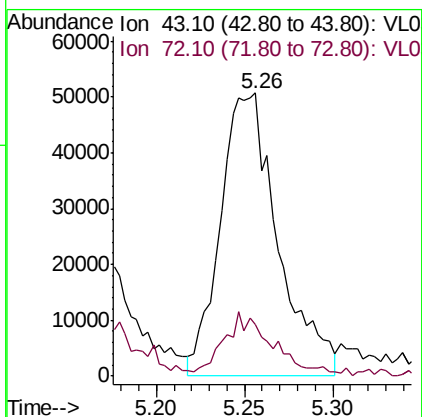
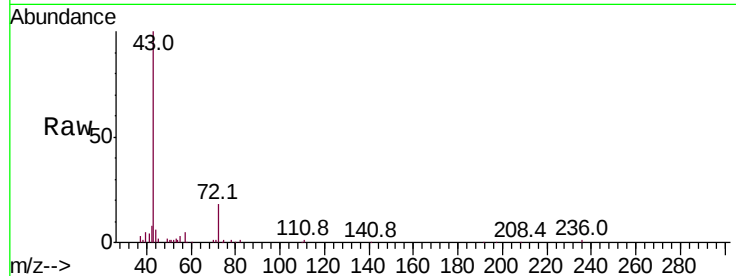
#34
2-Butanone
Concen: 0.744 ppbv m
RT: 5.26 min Scan# 768
Delta R.T. 0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion: 43 Resp: 115506
Ion Ratio Lower Upper
43 100
72 19.1 17.0 25.6

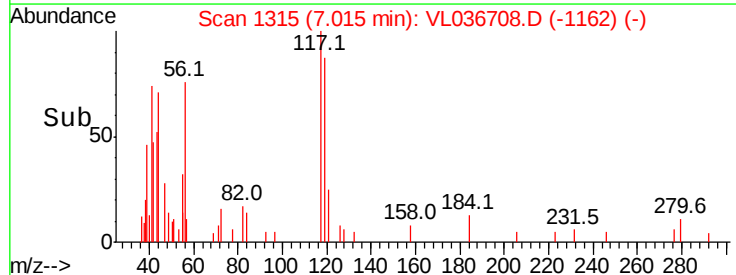
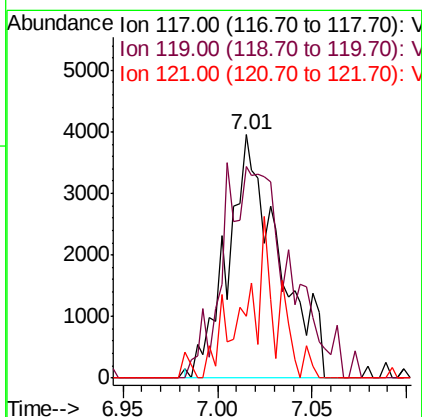
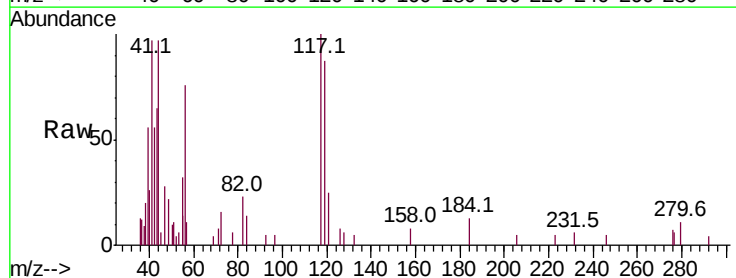
Manual Integrations
APPROVED

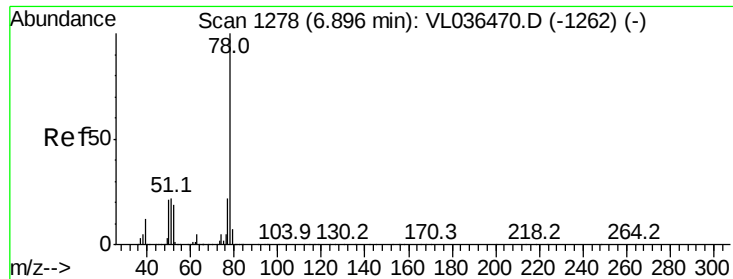
MMDadoda
4/12/2021 11:11:15 AM



#35
Carbon Tetrachloride
Concen: 0.031 ppbv m
RT: 7.01 min Scan# 1315
Delta R.T. -0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion: 117 Resp: 7465
Ion Ratio Lower Upper
117 100
119 86.9 78.2 117.2
121 25.2 24.5 36.7





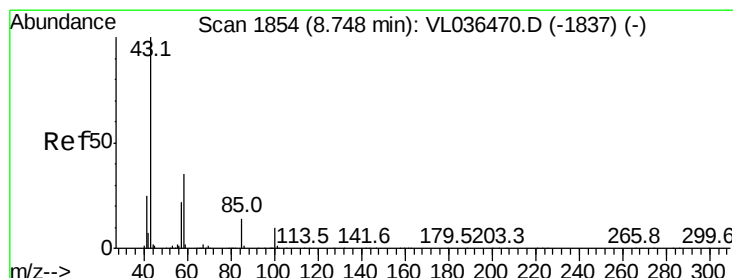
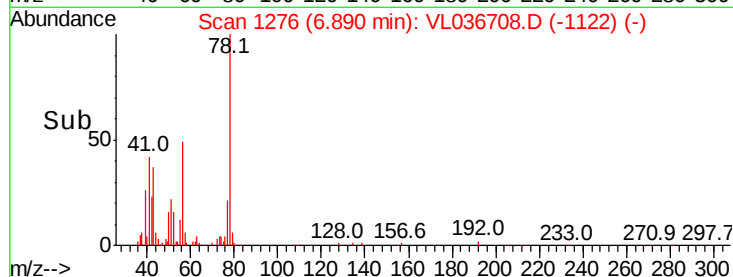
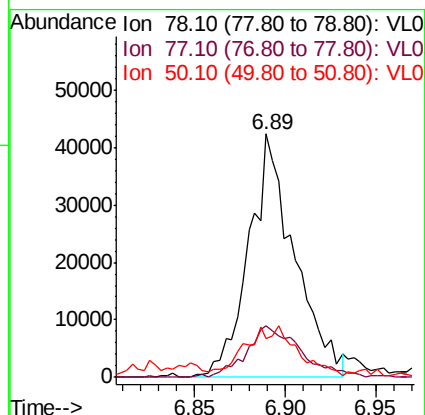
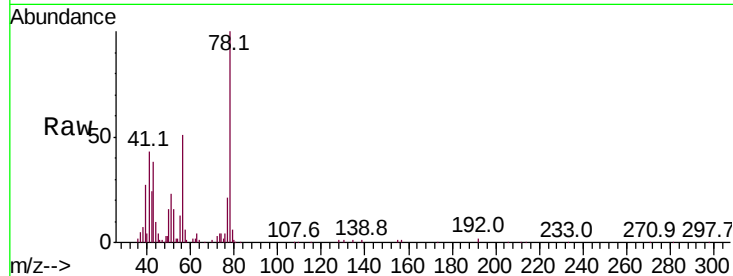
#36
Benzene
Concen: 0.252 ppbv m
RT: 6.89 min Scan# 1276
Delta R.T. -0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion	Ratio	Lower	Upper
78	100		
77	21.4	18.0	27.0
50	16.0	16.5	24.7#

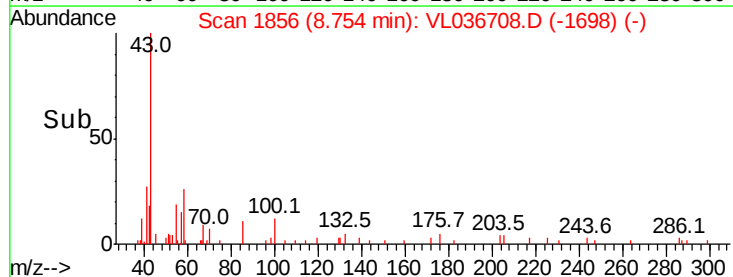
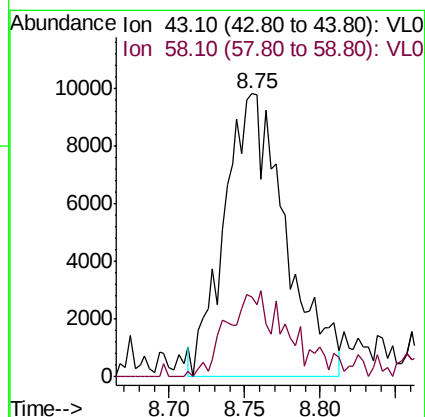
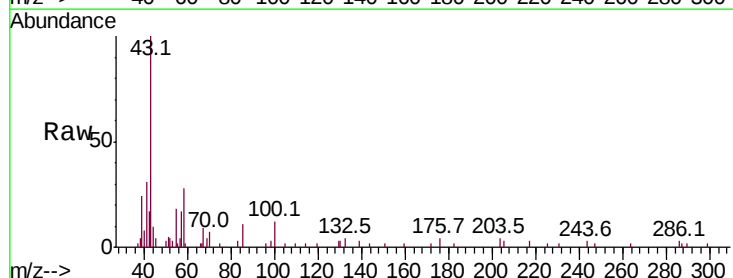
Manual Integrations
APPROVED

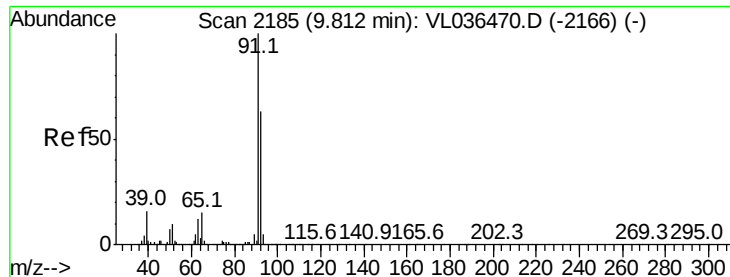
MMDadoda
4/12/2021 11:11:15 AM



#50
4-Methyl-2-Pentanone
Concen: 0.124 ppbv m
RT: 8.75 min Scan# 1856
Delta R.T. 0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion	Ratio	Lower	Upper
43	100		
58	0.0	28.2	42.2#





#53

Toluene

Concen: 0.414 ppbv m

RT: 9.82 min Scan# 2186

Delta R.T. 0.00 min

Lab File: VL036708.D

Acq: 6 Apr 2021 21:46

Instrument :

MSVOA_L

ClientSampleId :

UP-SG-8(2021)

Tot Ion: 91 Resp: 129282

Ion Ratio Lower Upper

91 100

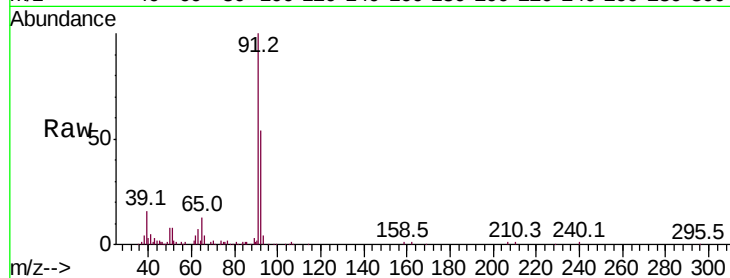
92 0.0 48.8 73.2#

Manual Integrations

APPROVED

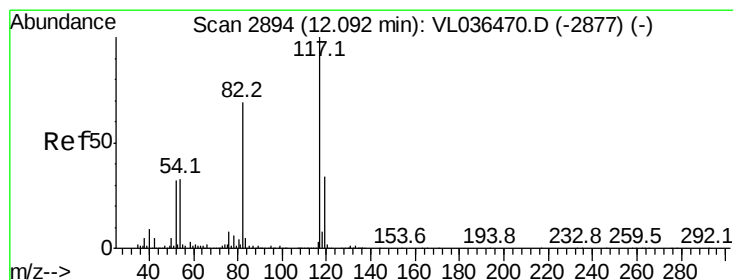
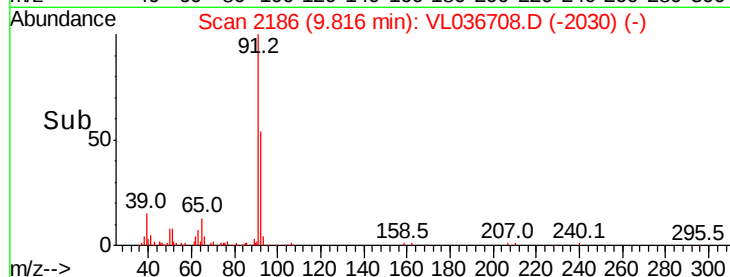
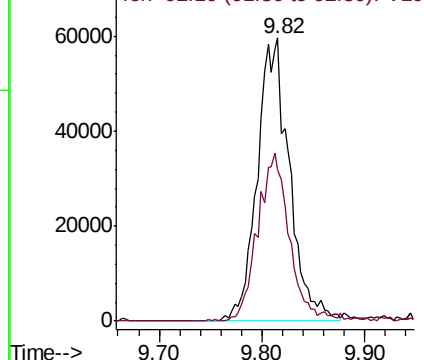
MMDadoda

4/12/2021 11:11:15 AM



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: 12.09 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL036708.D

Acq: 6 Apr 2021 21:46

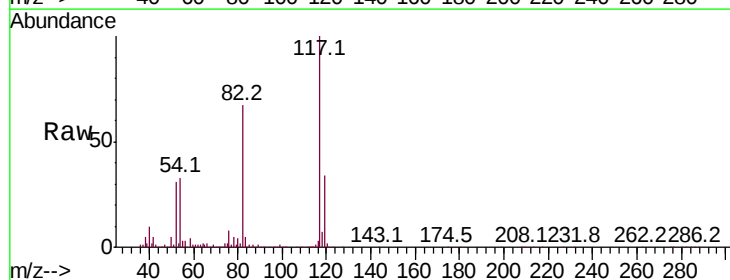
Tgt Ion: 117 Resp: 2944403

Ion Ratio Lower Upper

117 100

82 68.2 57.4 86.0

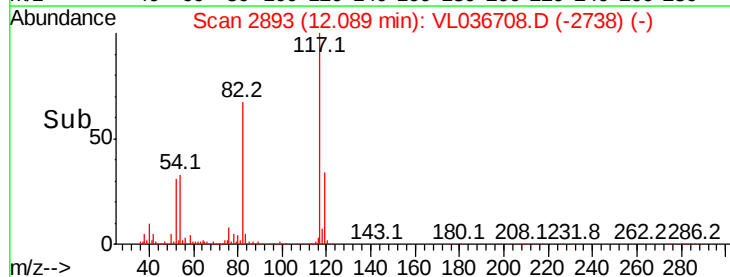
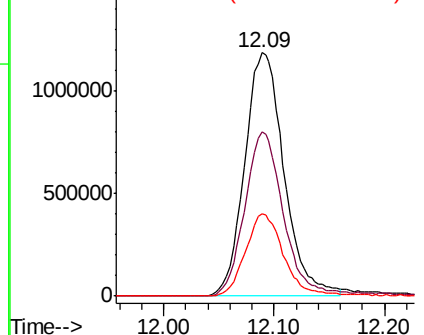
119 33.6 47.4 71.0#

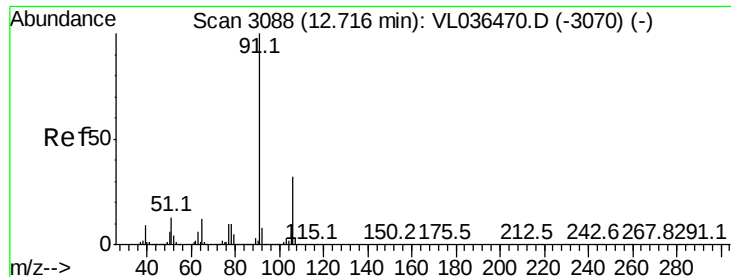


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





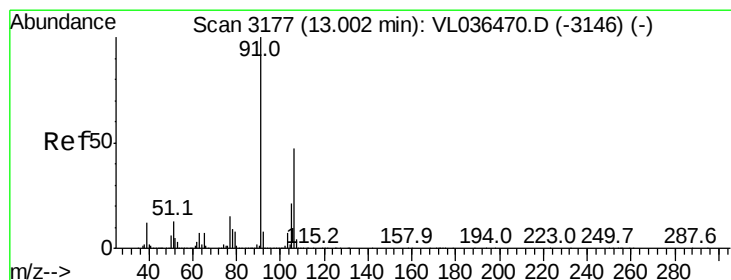
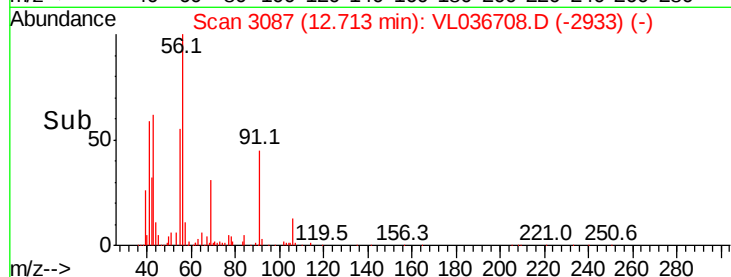
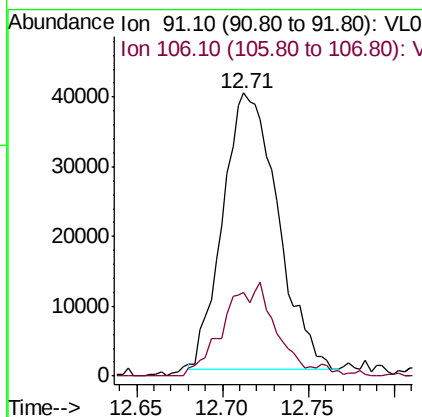
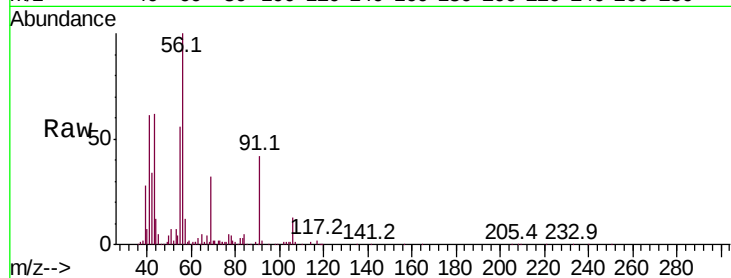
#58
Ethyl Benzene
Concen: 0.204 ppbv
RT: 12.71 min Scan# 3087
Delta R.T. -0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion: 91 Resp: 87433
Ion Ratio Lower Upper
91 100
106 28.2 25.3 37.9

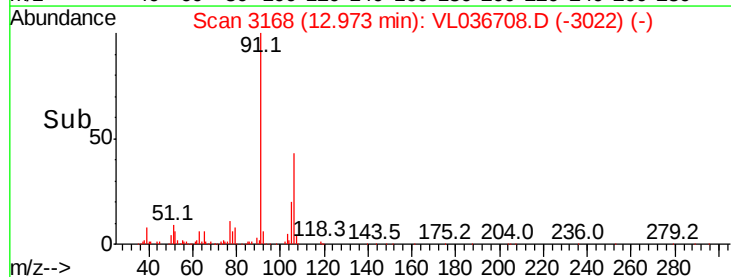
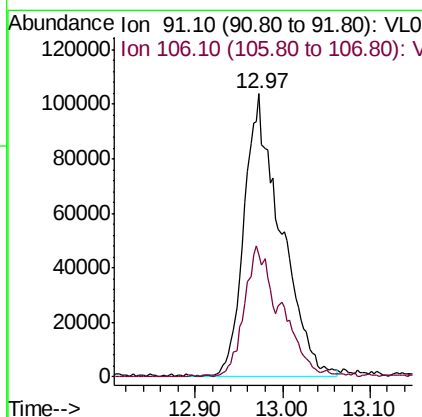
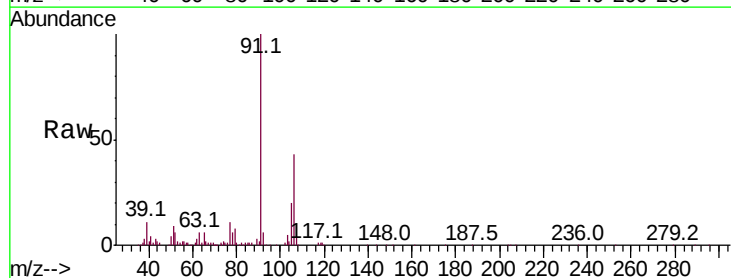
Manual Integrations
APPROVED

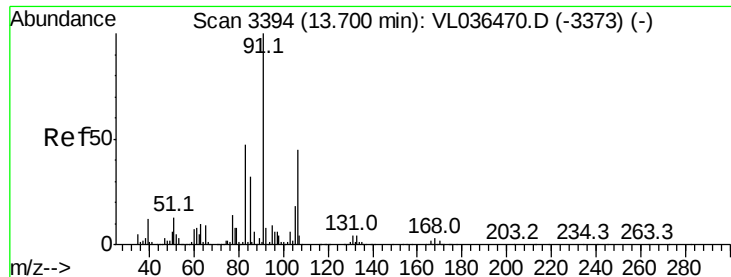
MMDadoda
4/12/2021 11:11:15 AM



#59
m/p-Xylene
Concen: 0.819 ppbv m
RT: 12.97 min Scan# 3168
Delta R.T. -0.03 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion: 91 Resp: 306058
Ion Ratio Lower Upper
91 100
106 46.4 35.3 52.9





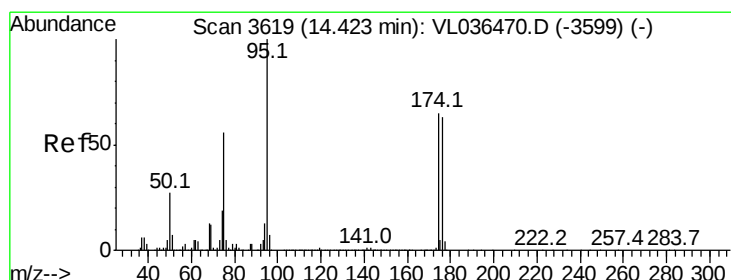
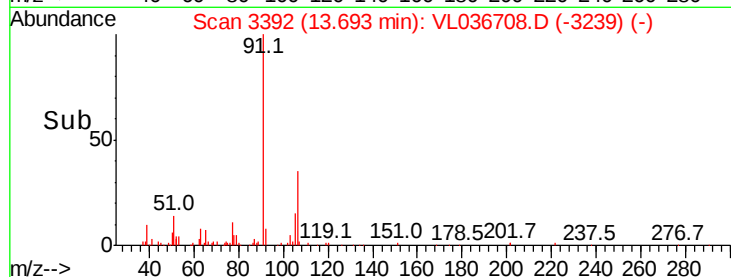
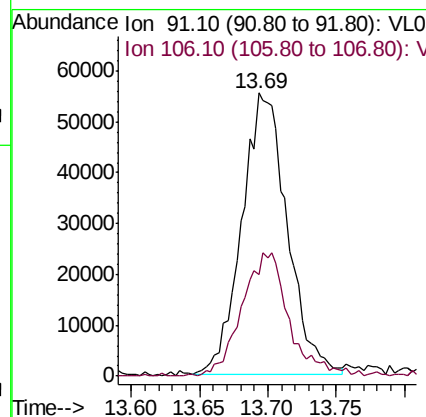
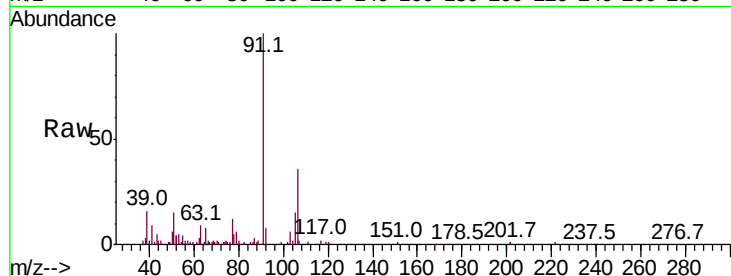
#60
o-Xylene
Concen: 0.357 ppbv
RT: 13.69 min Scan# 3392
Delta R.T. -0.01 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion	Ratio	Lower	Upper
91	100		
106	45.7	22.3	66.9

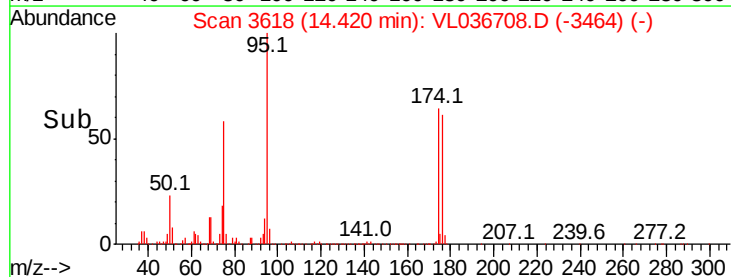
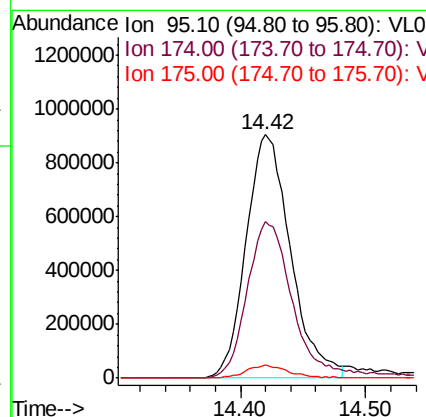
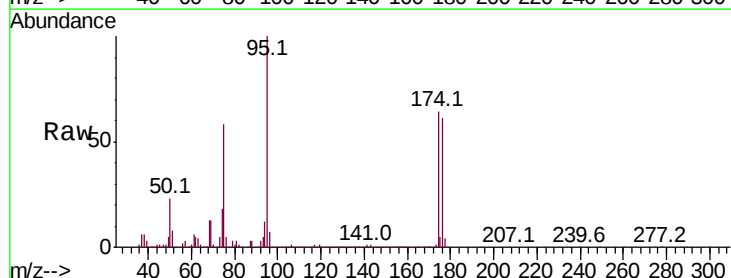
Manual Integrations
APPROVED

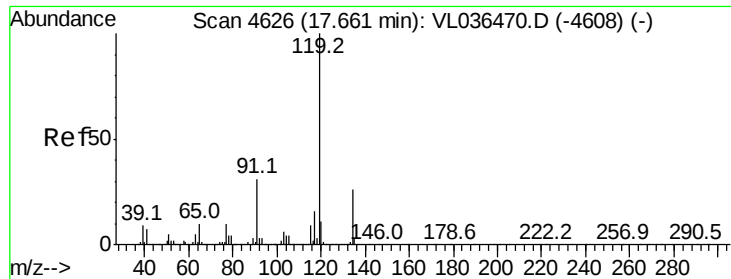
MMDadoda
4/12/2021 11:11:15 AM



#68
1-Bromo-4-Fluorobenzene
Concen: 9.523 ppbv
RT: 14.42 min Scan# 3618
Delta R.T. -0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion	Ratio	Lower	Upper
95	100		
174	67.7	51.0	76.6
175	5.1	3.9	5.9





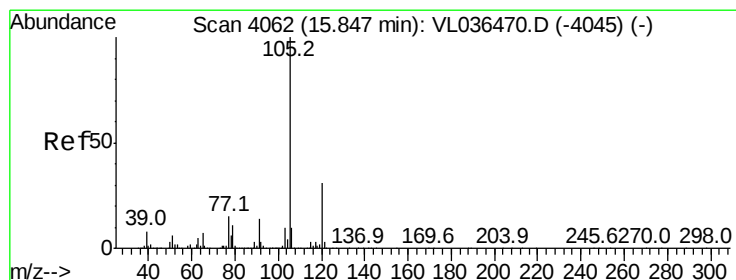
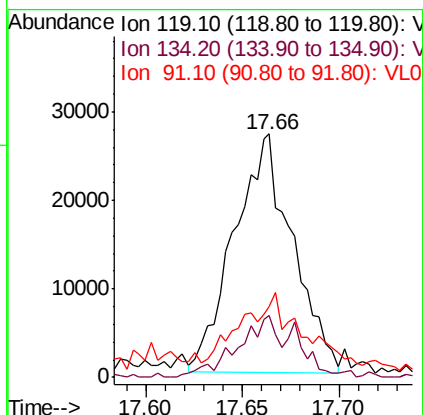
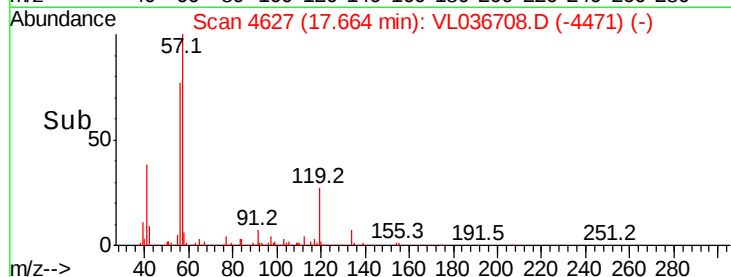
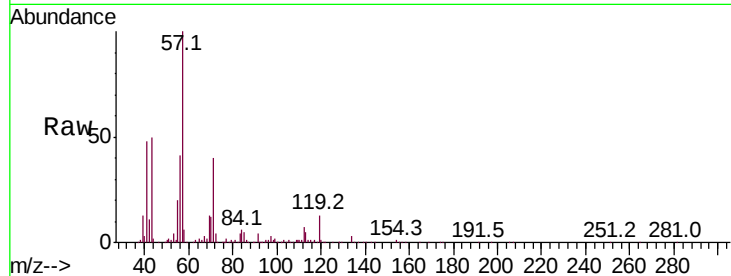
#69
p-Isopropyltoluene
Concen: 0.123 ppbv
RT: 17.66 min Scan# 4627
Delta R.T. 0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Instrument :
MSVOA_L
ClientSampleId :
UP-SG-8(2021)

Tot Ion	Ratio	Resp	Lower	Upper
119	100	57005		
134	26.0		20.6	30.8
91	54.2		25.0	37.6#

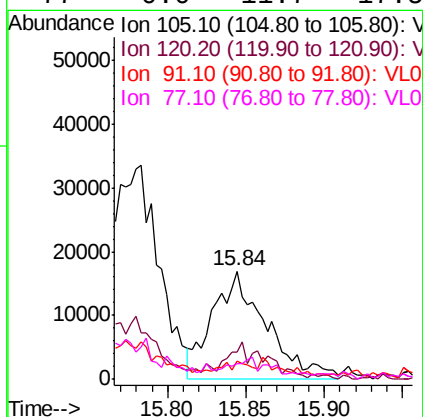
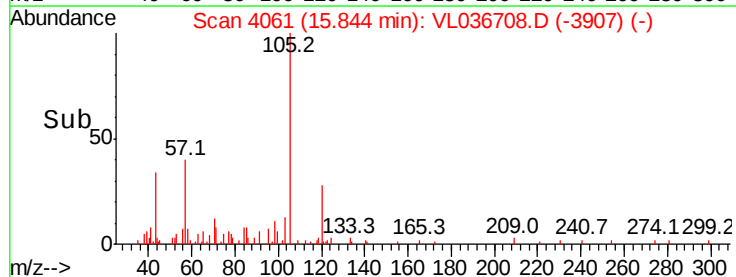
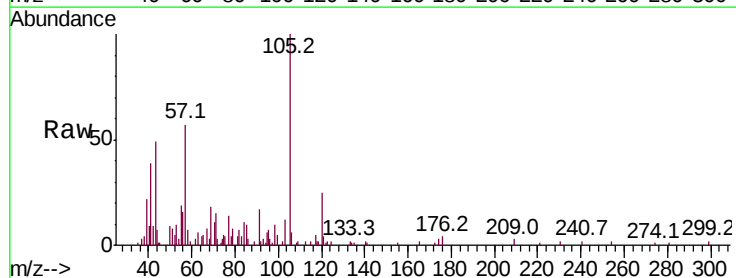
Manual Integrations
APPROVED

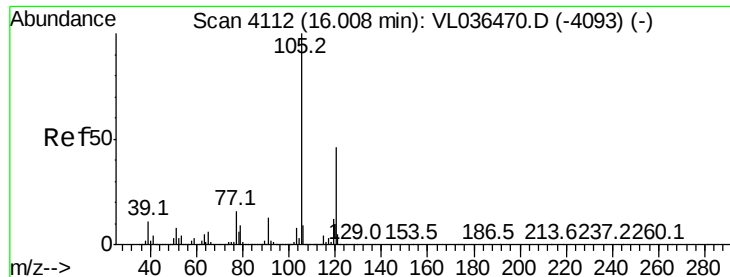
MMDadoda
4/12/2021 11:11:15 AM



#72
4-Ethyltoluene
Concen: 0.102 ppbv m
RT: 15.84 min Scan# 4061
Delta R.T. -0.00 min
Lab File: VL036708.D
Acq: 6 Apr 2021 21:46

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	40424		
120	29.0		24.0	36.0
91	0.0		11.0	16.4#
77	0.0		11.7	17.5#





#73

1,3,5-Trimethylbenzene

Concen: 0.137 ppbv m

RT: 16.00 min Scan# 4111

Delta R.T. -0.00 min

Lab File: VL036708.D

Acq: 6 Apr 2021 21:46

Instrument :

MSVOA_L

ClientSampleId :

UP-SG-8(2021)

Tot Ion:105 Resp: 50710

Ion Ratio Lower Upper

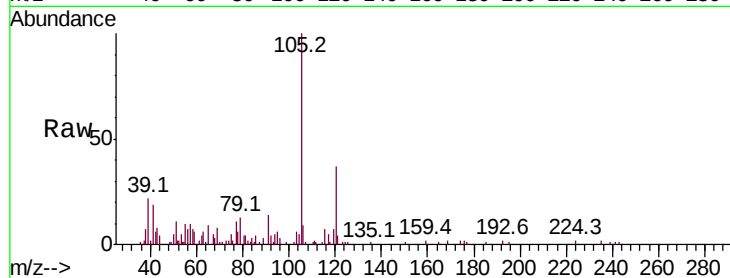
105 100

120 37.0 36.6 54.8

Manual Integrations
APPROVED

MMDadoda

4/12/2021 11:11:15 AM



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

16.00

25000

20000

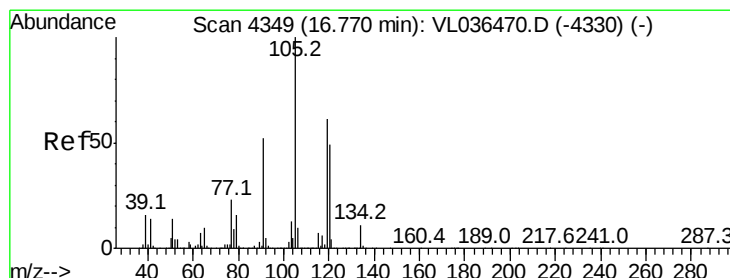
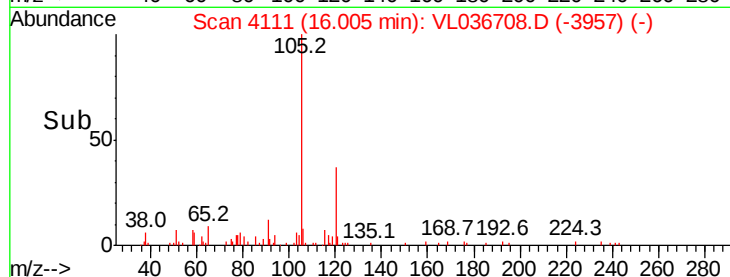
15000

10000

5000

0

Time-->



#74

1,2,4-Trimethylbenzene

Concen: 0.285 ppbv m

RT: 16.77 min Scan# 4350

Delta R.T. 0.00 min

Lab File: VL036708.D

Acq: 6 Apr 2021 21:46

Tgt Ion:105 Resp: 112788

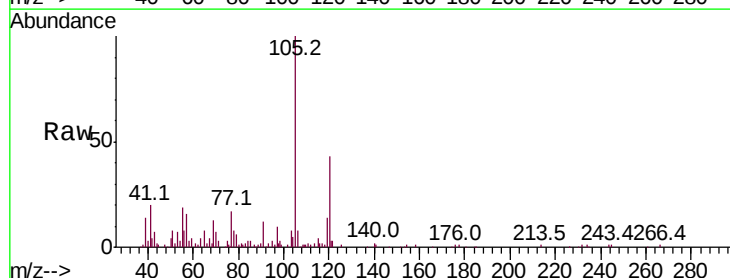
Ion Ratio Lower Upper

105 100

120 43.4 39.2 58.8

91 11.9 42.6 64.0#

77 17.5 18.6 28.0#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

60000

40000

20000

0

Time-->

