

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL011321\
 Data File : VL036228.D
 Acq On : 13 Jan 2021 16:46
 Operator : SY/AP
 Sample : M1066-02 1.2X
 Misc : 400ml/MSVOA L
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS2

Manual Integrations
 APPROVED

MMDadoda
 1/18/2021 3:49:34 PM

Quant Time: Jan 16 21:57:20 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL011321AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Jan 14 16:13:38 2021
 QLast Update : Thu Jan 14 16:13:38 2021
 Response via : Initial Calibration

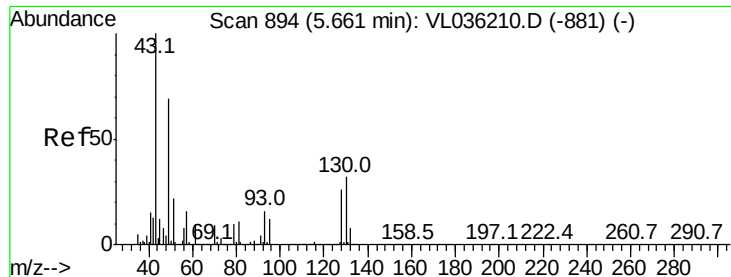
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1485192	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3092197	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2870754	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	2433874	10.24	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.04	85	29988	0.151	ppbv	90
4) Chloromethane	3.14	50	34465	0.382	ppbv #	81
9) Propene	3.02	41	860501	9.907	ppbv #	80
10) Heptane	8.12	43	121960	0.566	ppbv	91
11) Trichlorofluoromethane	3.95	101	33455m	0.165	ppbv	
13) Ethanol	3.62	45	9714596	712.264	ppbv	85
15) Acetone	3.84	43	7087227	38.963	ppbv	98
17) tert-Butyl alcohol	4.32	59	2565466	17.092	ppbv	99
19) Isopropyl Alcohol	3.99	45	460637	4.201	ppbv #	1
20) Methylene Chloride	4.35	84	103069	1.775	ppbv	88
26) Hexane	5.69	57	444383	2.923	ppbv #	43
27) Carbon Disulfide	4.55	76	33845	0.278	ppbv #	38
29) Chloroform	5.75	83	25103m	0.115	ppbv	
30) Cyclohexane	7.13	84	37475m	0.323	ppbv	
34) 2-Butanone	5.24	43	861070	3.781	ppbv	99
35) Carbon Tetrachloride	7.02	117	26799m	0.137	ppbv	
36) Benzene	6.90	78	117812m	0.416	ppbv	
44) 2,2,4-Trimethylpentane	7.87	57	176081m	0.338	ppbv	
50) 4-Methyl-2-Pentanone	8.75	43	54979m	0.162	ppbv	
53) Toluene	9.81	91	771242	2.433	ppbv	100
58) Ethyl Benzene	12.72	91	233547	0.548	ppbv #	85
59) m/p-Xylene	12.97	91	642142	1.754	ppbv	97
60) o-Xylene	13.70	91	230114	0.652	ppbv	97
61) Styrene	13.53	104	38000	0.171	ppbv #	86
69) p-Isopropyltoluene	17.66	119	61929	0.118	ppbv #	91
72) 4-Ethyltoluene	15.84	105	138491m	0.348	ppbv	
73) 1,3,5-Trimethylbenzene	16.01	105	110936m	0.292	ppbv	
74) 1,2,4-Trimethylbenzene	16.76	105	402805	1.035	ppbv #	66
79) Naphthalene	22.21	128	37211m	0.164	ppbv	

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 897

Delta R.T. 0.01 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampleId :

0121-SS2

Tot Ion: 49 Resp: 1485192

Ion Ratio Lower Upper

49 100

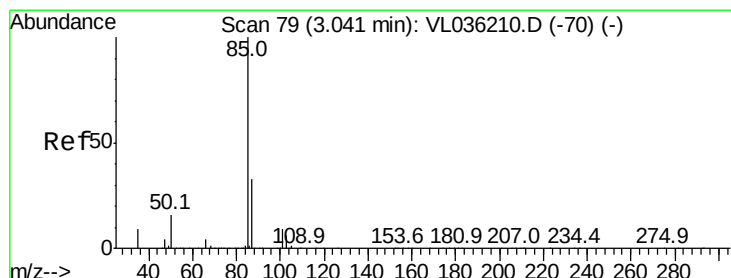
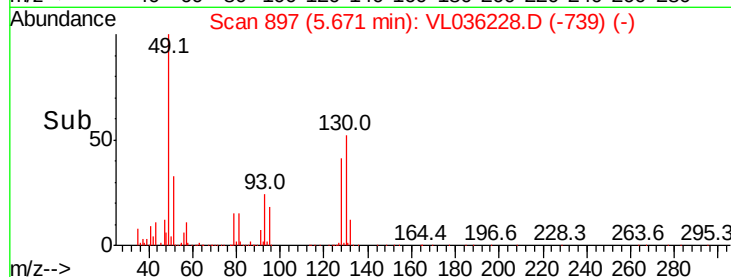
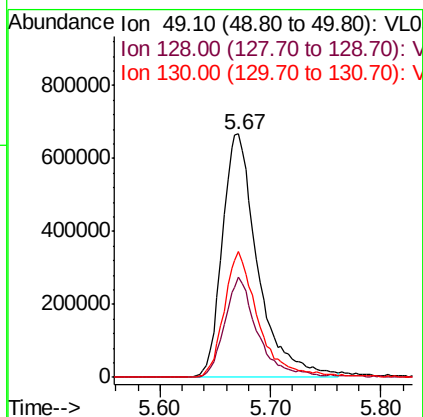
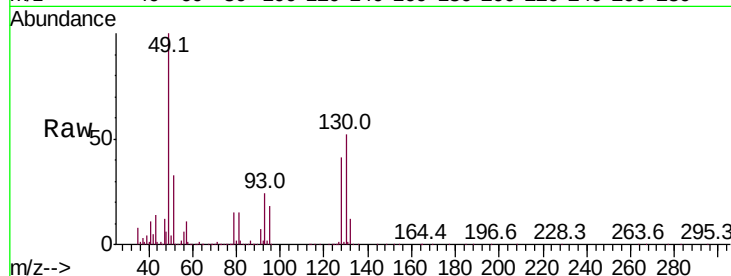
128 39.3 20.1 60.2

130 50.5 25.3 75.9

Manual Integrations
APPROVED

MMDadoda

1/18/2021 3:49:34 PM



#2

Dichlorodifluoromethane

Concen: 0.151 ppbv

RT: 3.04 min Scan# 80

Delta R.T. 0.00 min

Lab File: VL036228.D

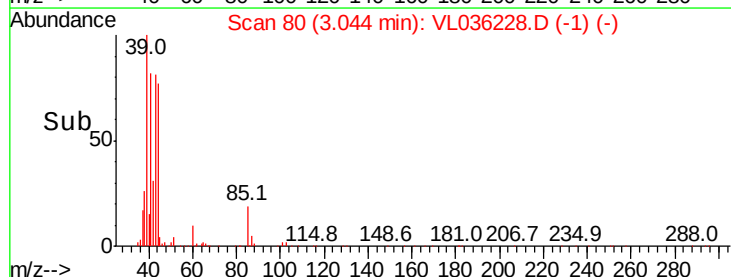
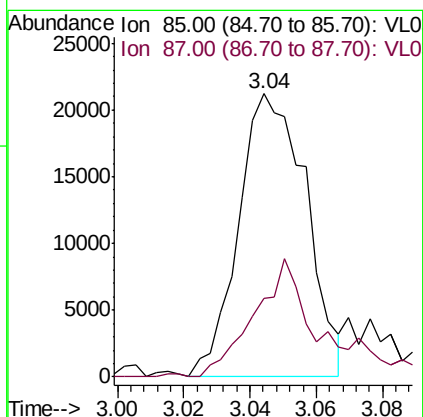
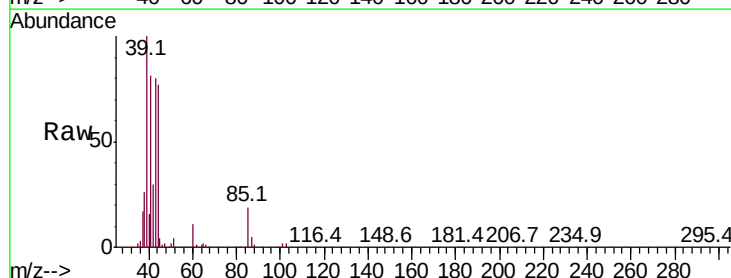
Acq: 13 Jan 2021 16:46

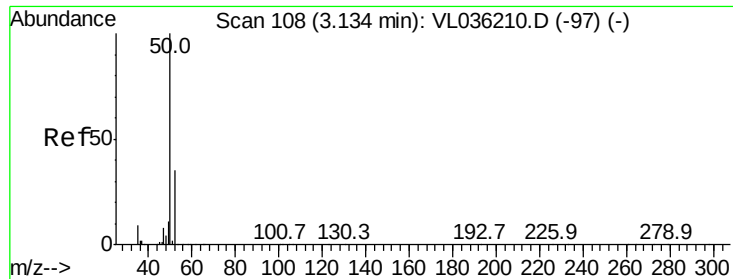
Tgt Ion: 85 Resp: 29988

Ion Ratio Lower Upper

85 100

87 27.2 26.4 39.6





#4

Chloromethane

Concen: 0.382 ppbv

RT: 3.14 min Scan# 110

Delta R.T. 0.01 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampled :

0121-SS2

Tot Ion: 50 Resp: 34465

Ion Ratio Lower Upper

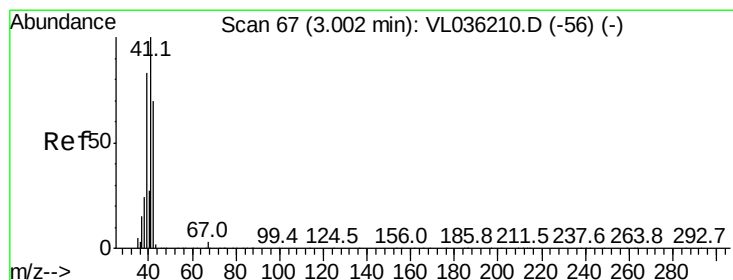
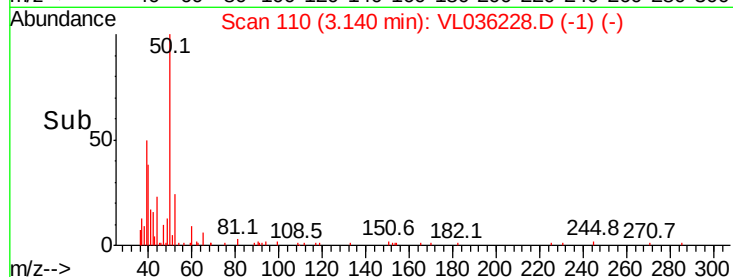
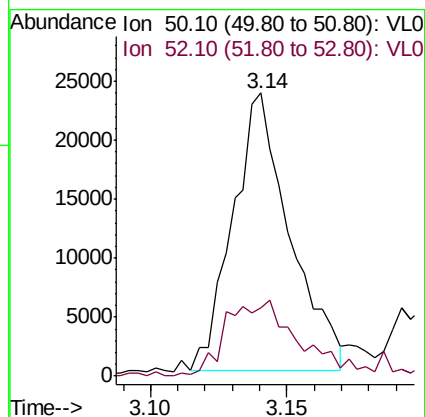
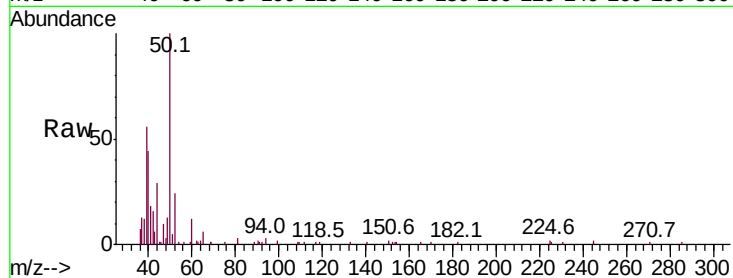
50 100

52 23.7 27.8 41.8#

Manual Integrations
APPROVED

MMDadoda

1/18/2021 3:49:34 PM



#9

Propene

Concen: 9.907 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL036228.D

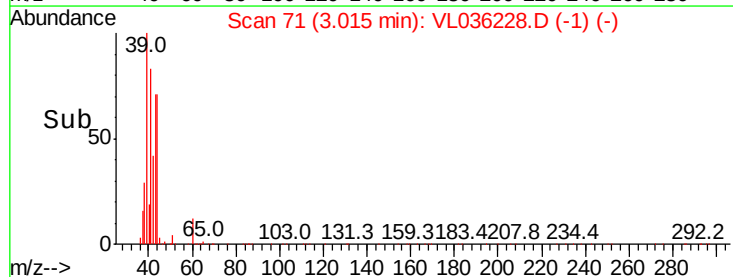
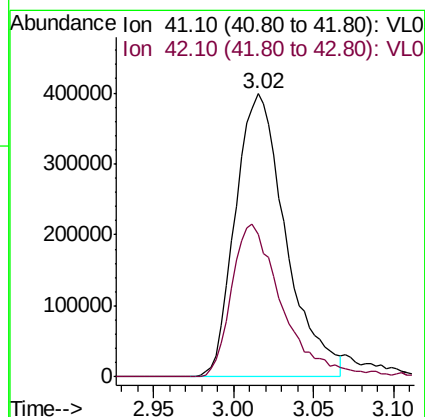
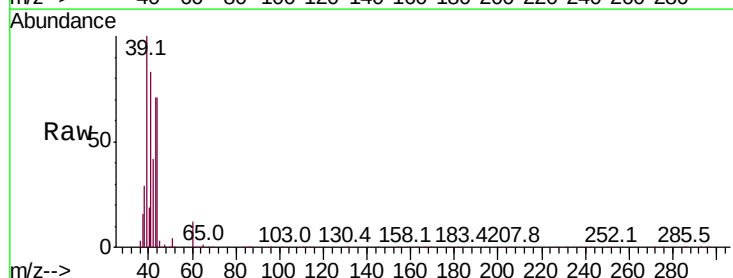
Acq: 13 Jan 2021 16:46

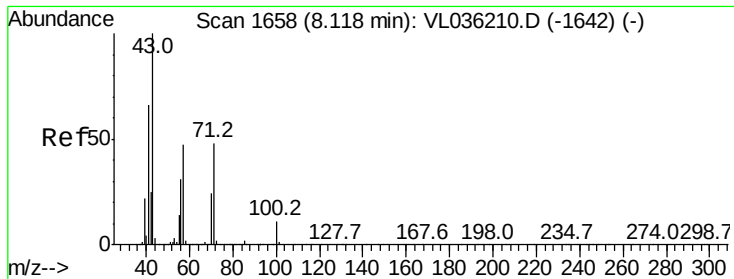
Tgt Ion: 41 Resp: 860501

Ion Ratio Lower Upper

41 100

42 54.8 57.1 85.7#





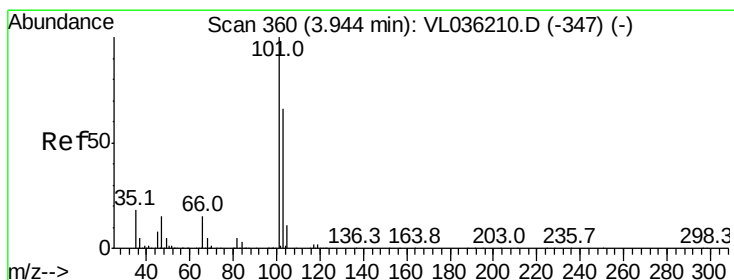
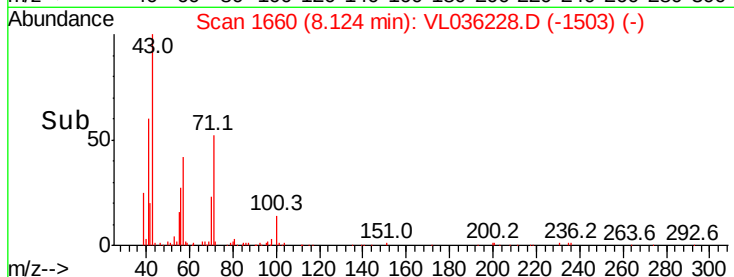
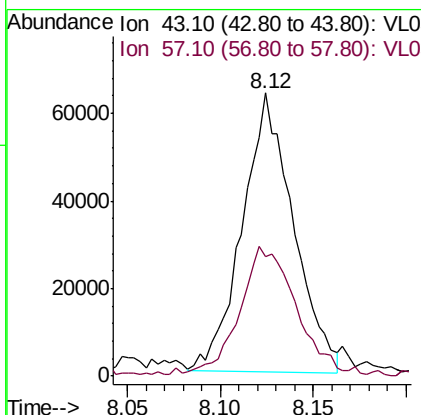
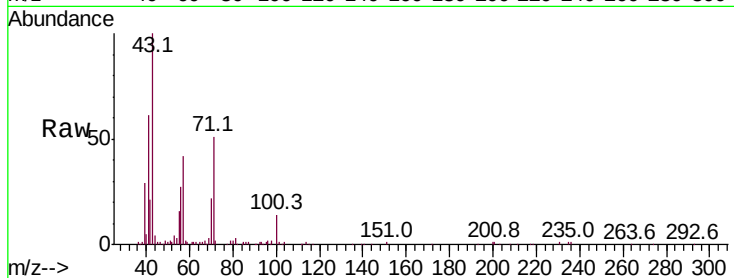
#10
 Heptane
 Concen: 0.566 ppbv
 RT: 8.12 min Scan# 1660
 Delta R.T. 0.01 min
 Lab File: VL036228.D
 Acq: 13 Jan 2021 16:46

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS2

Tot Ion	43	Resp	121960
Ion Ratio	100	Lower	Upper
57	53.4	38.1	57.1

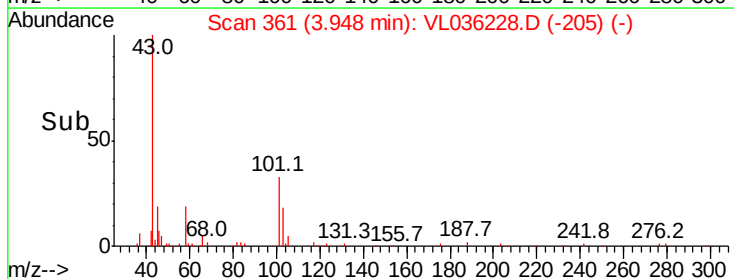
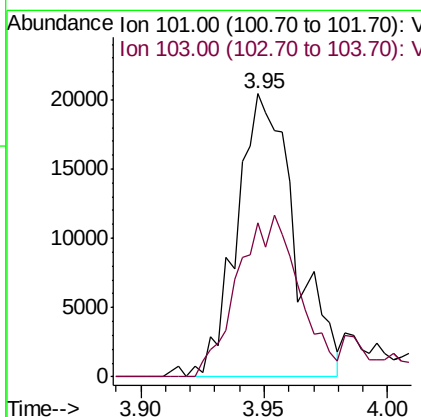
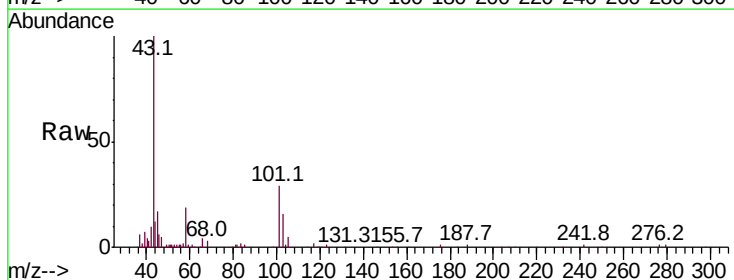
Manual Integrations
 APPROVED

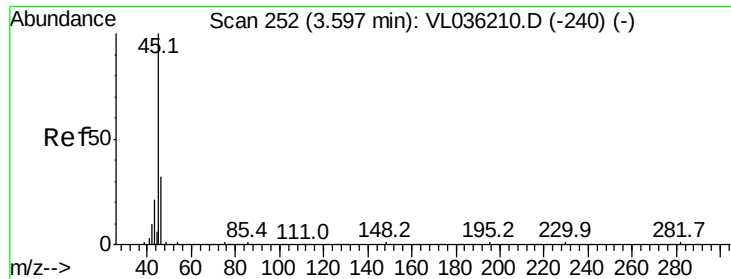
MMDadoda
 1/18/2021 3:49:34 PM



#11
 Trichlorofluoromethane
 Concen: 0.165 ppbv m
 RT: 3.95 min Scan# 361
 Delta R.T. 0.00 min
 Lab File: VL036228.D
 Acq: 13 Jan 2021 16:46

Tgt Ion	101	Resp	33455
Ion Ratio	100	Lower	Upper
103	54.5	52.6	78.8





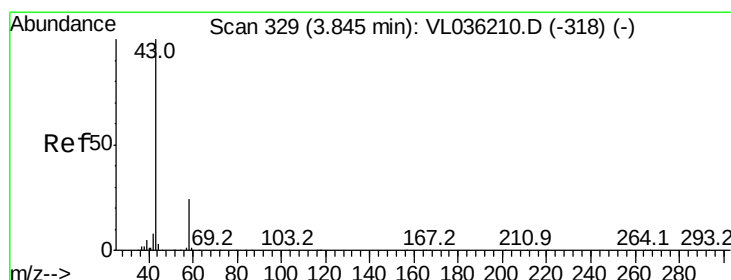
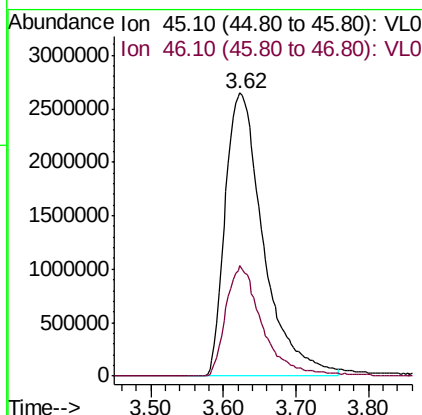
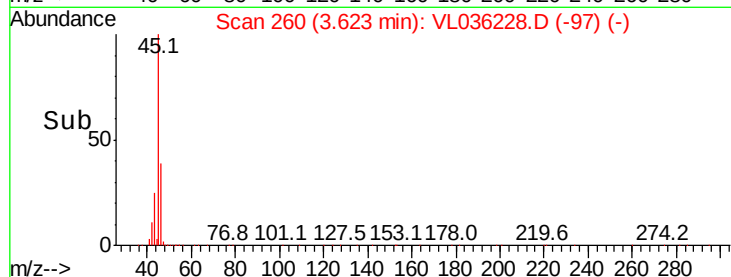
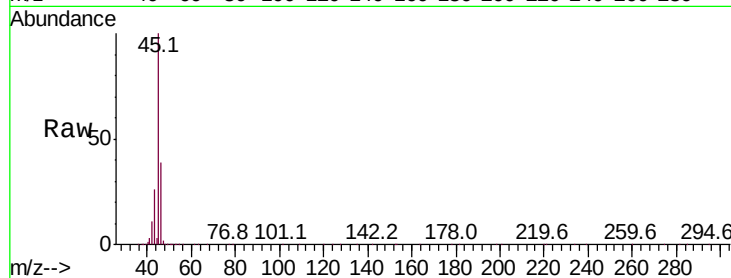
#13
Ethanol
Concen: 712.264 ppbv
RT: 3.62 min Scan# 260
Delta R.T. 0.03 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion: 45 Resp: 9714596
Ion Ratio Lower Upper
45 100
46 37.7 19.2 77.0

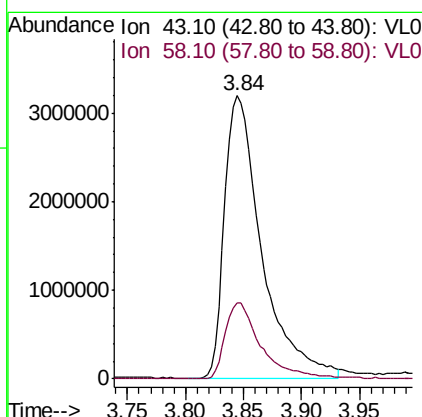
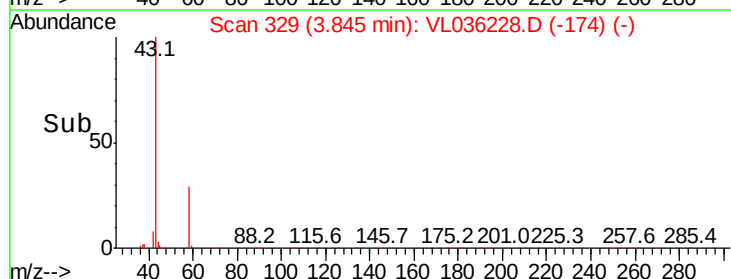
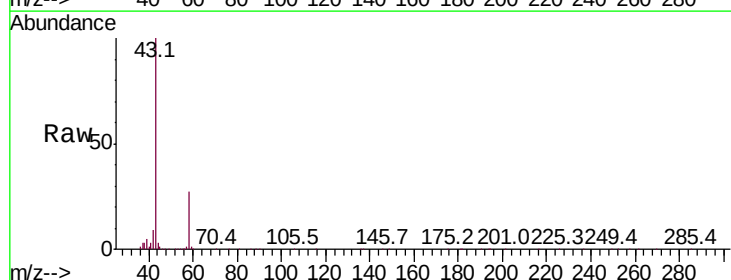
Manual Integrations
APPROVED

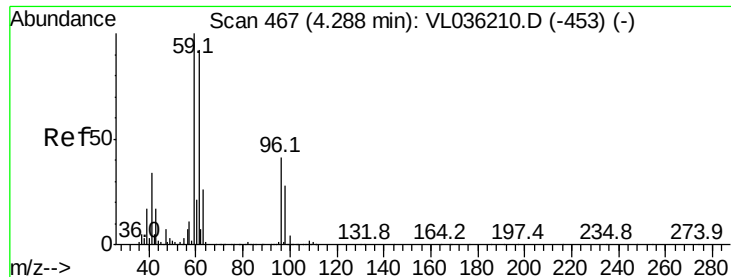
MMDadoda
1/18/2021 3:49:34 PM



#15
Acetone
Concen: 38.963 ppbv
RT: 3.84 min Scan# 329
Delta R.T. -0.00 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion: 43 Resp: 7087227
Ion Ratio Lower Upper
43 100
58 26.9 20.9 31.3





#17

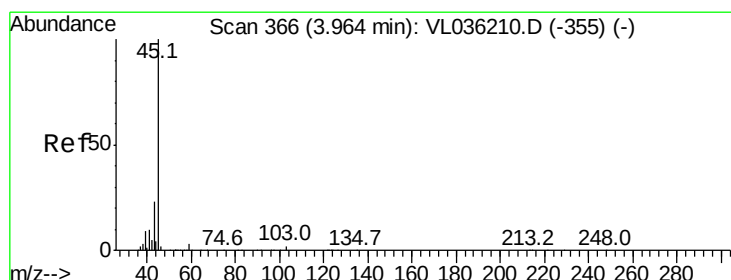
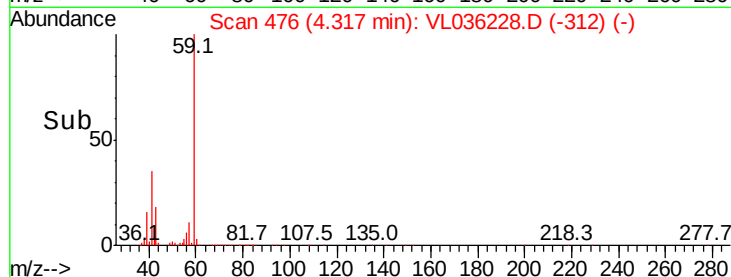
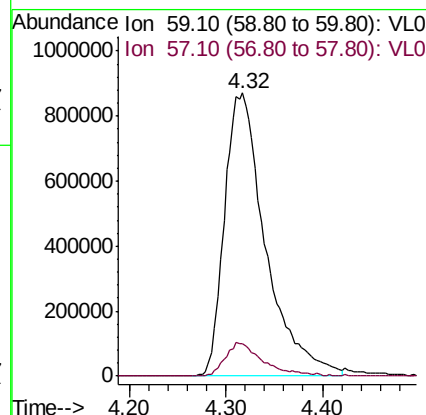
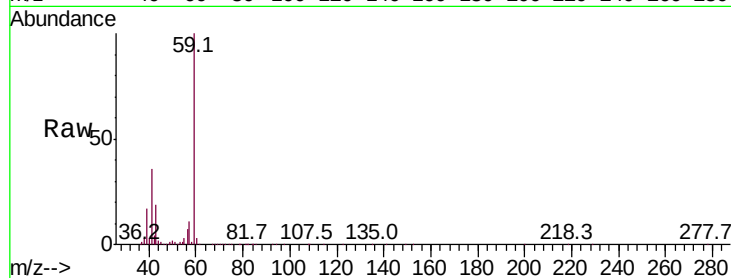
tert-Butyl alcohol
Concen: 17.092 ppbv
RT: 4.32 min Scan# 476
Delta R.T. 0.03 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampled :
0121-SS2

Tot Ion: 59 Resp: 2565466
Ion Ratio Lower Upper
59 100
57 11.2 9.2 13.8

Manual Integrations
APPROVED

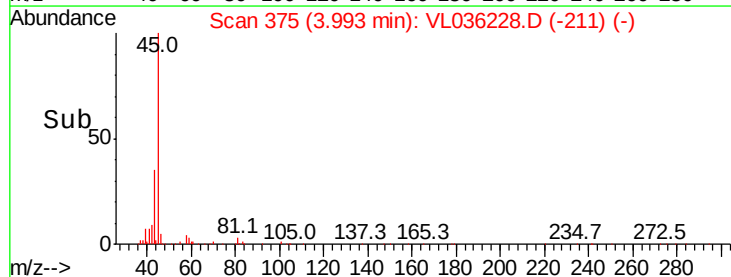
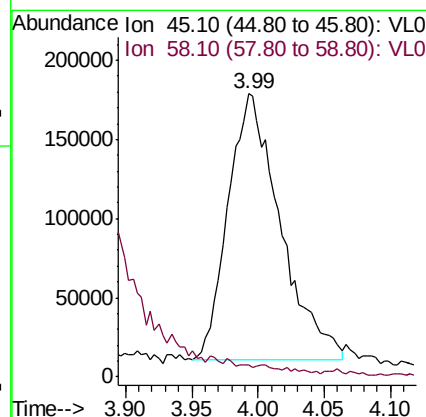
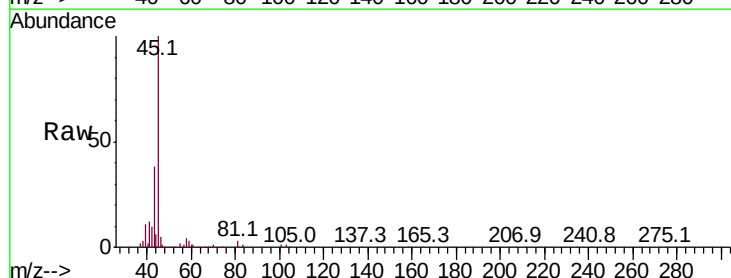
MMDadoda
1/18/2021 3:49:34 PM

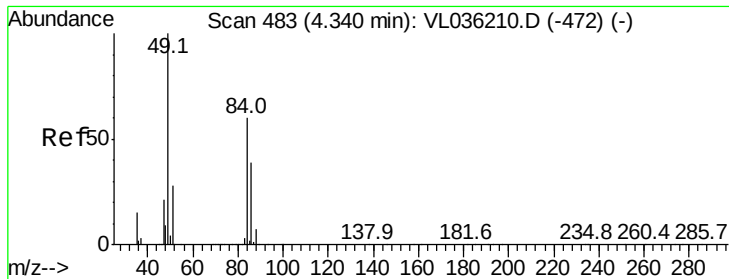


#19

Isopropyl Alcohol
Concen: 4.201 ppbv
RT: 3.99 min Scan# 375
Delta R.T. 0.03 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion: 45 Resp: 460637
Ion Ratio Lower Upper
45 100
58 411.8 1.9 2.9#





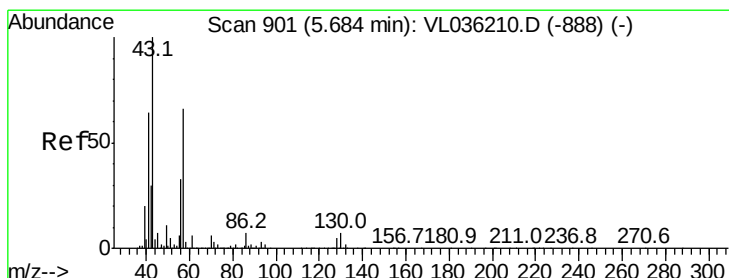
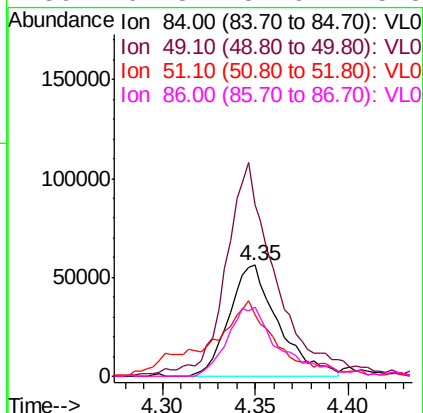
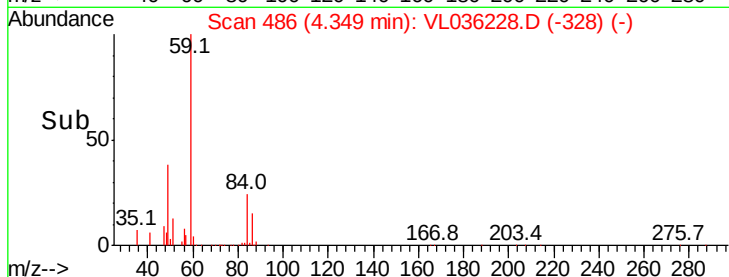
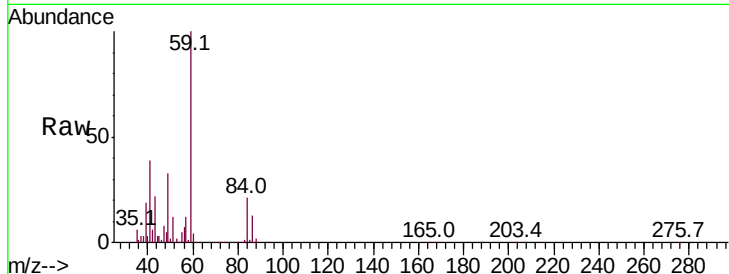
#20
Methvlene Chloride
Concen: 1.775 ppbv
RT: 4.35 min Scan# 486
Delta R.T. 0.01 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion	Ion	Ratio	Resp	Lower	Upper
84	100				
49	144.7	134.1	201.1		
51	49.6	37.4	56.0		
86	61.8	52.6	78.8		

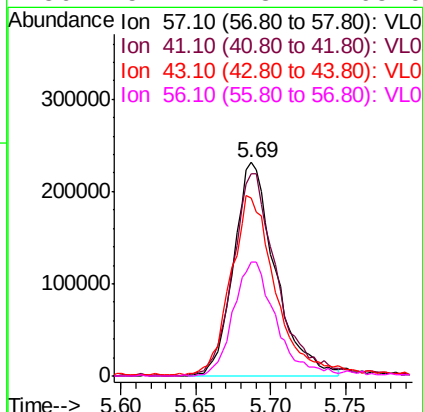
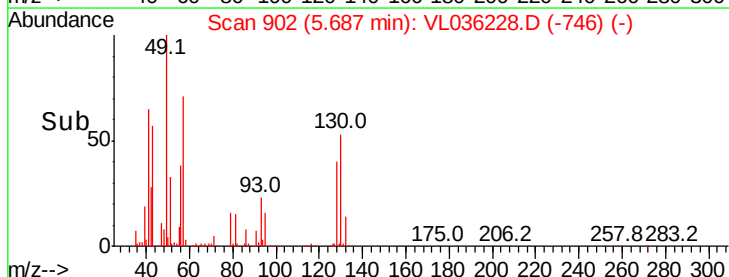
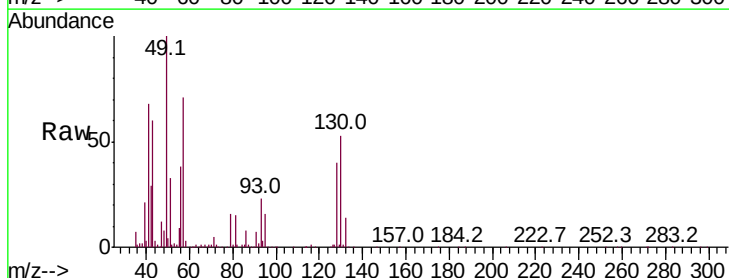
Manual Integrations
APPROVED

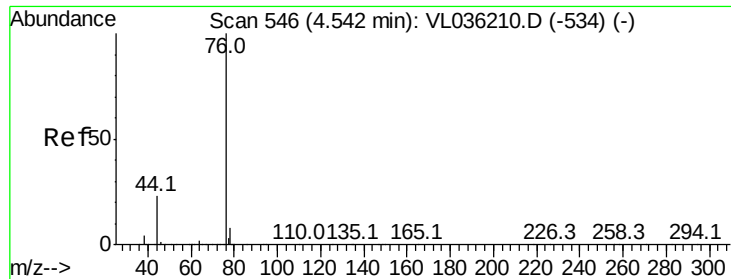
MMDadoda
1/18/2021 3:49:34 PM



#26
Hexane
Concen: 2.923 ppbv
RT: 5.69 min Scan# 902
Delta R.T. 0.00 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
57	100				
41	103.4	83.0	124.6		
43	93.1	202.4	303.6		
56	57.2	43.4	65.0		





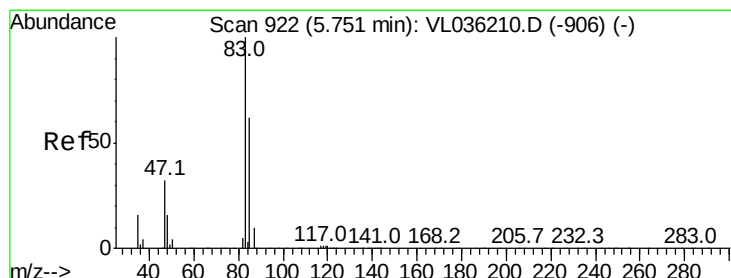
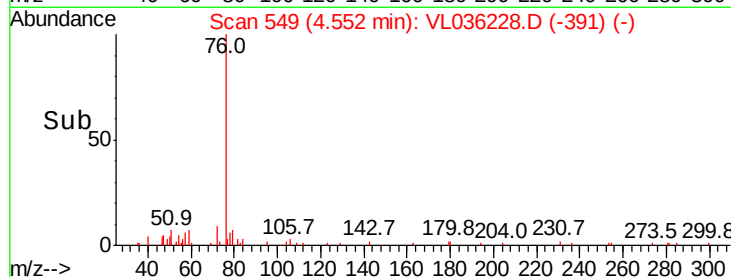
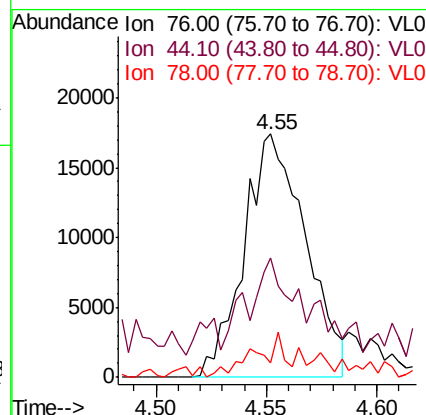
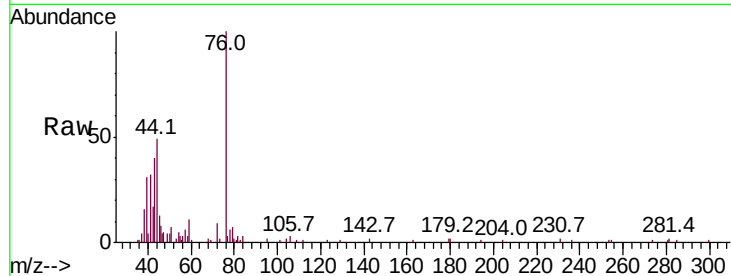
#27
Carbon Disulfide
Concen: 0.278 ppbv
RT: 4.55 min Scan# 549
Delta R.T. 0.01 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion	Ratio	Lower	Upper
76	100		
44	62.4	19.0	28.6#
78	18.1	8.0	12.0#

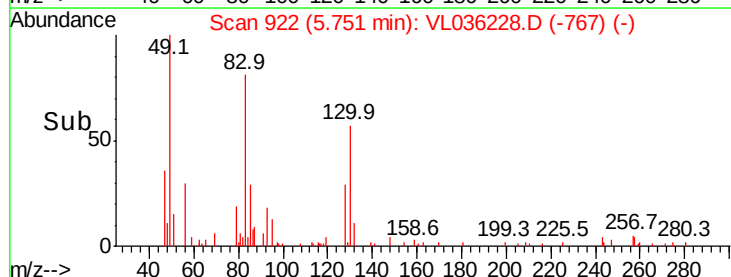
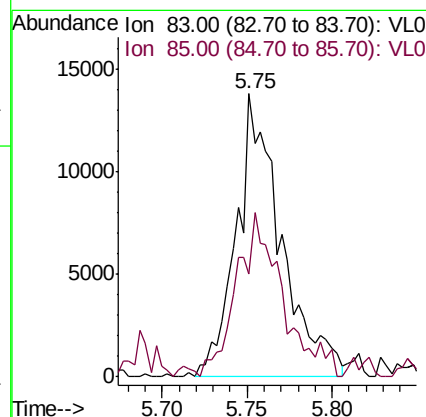
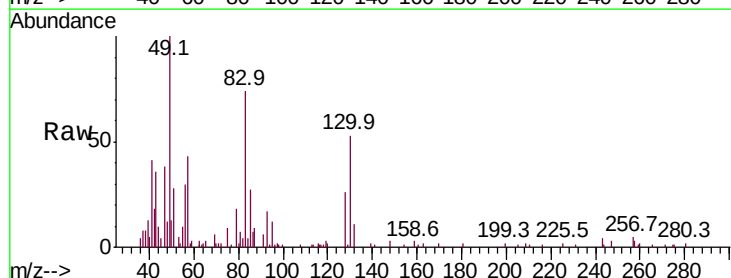
Manual Integrations
APPROVED

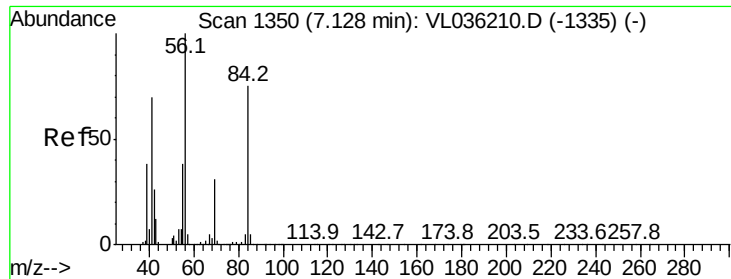
MMDadoda
1/18/2021 3:49:34 PM



#29
Chloroform
Concen: 0.115 ppbv m
RT: 5.75 min Scan# 922
Delta R.T. -0.00 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion	Ratio	Lower	Upper
83	100		
85	36.2	49.3	73.9#





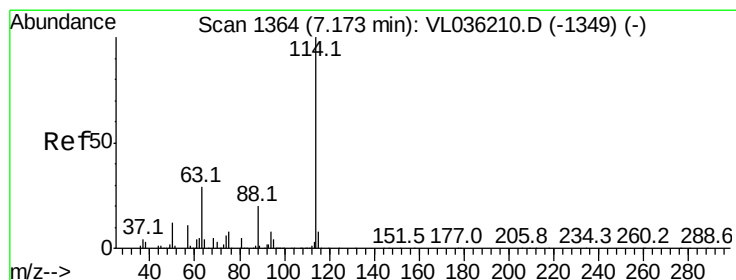
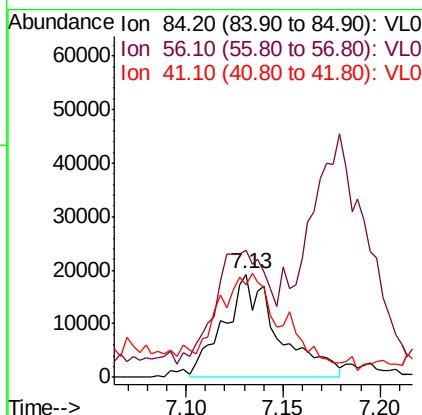
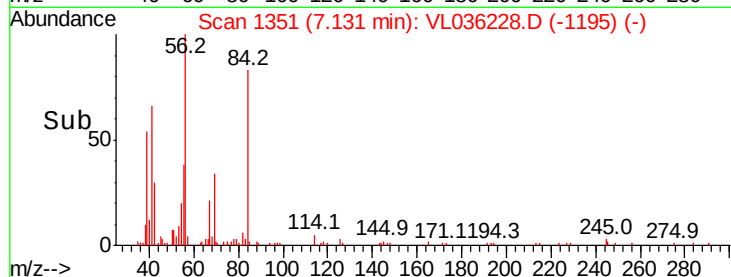
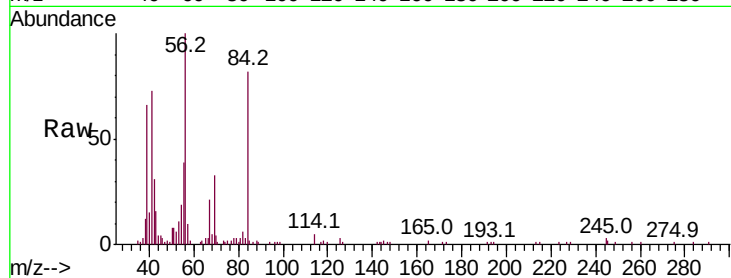
#30
Cyclohexane
Concen: 0.323 ppbv m
RT: 7.13 min Scan# 1351
Delta R.T. 0.00 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion	Ratio	Lower	Upper
84	100		
56	0.0	119.4	179.0#
41	0.0	79.4	119.0#

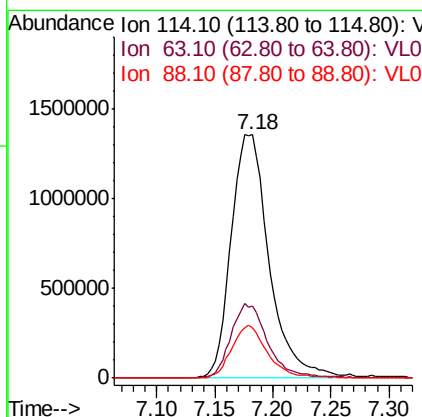
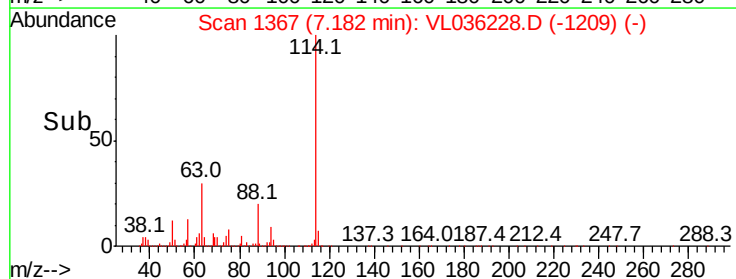
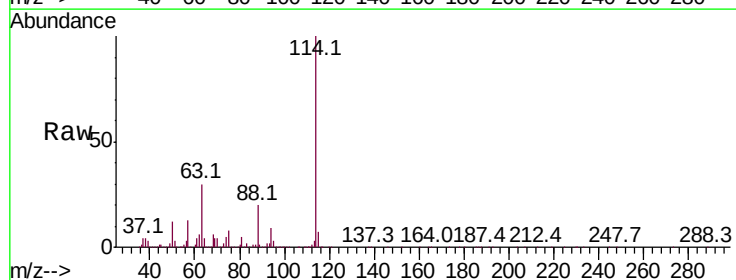
Manual Integrations
APPROVED

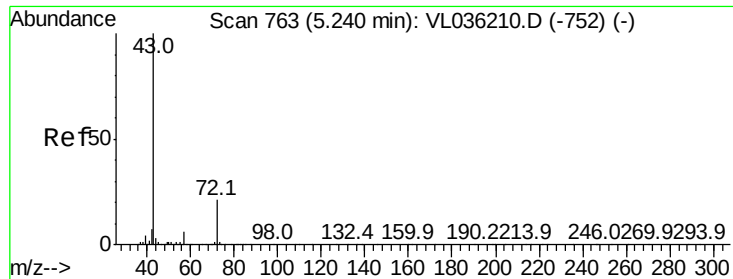
MMDadoda
1/18/2021 3:49:34 PM



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1367
Delta R.T. 0.01 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion	Ratio	Lower	Upper
114	100		
63	30.1	24.7	37.1
88	20.6	16.6	24.8





#34

2-Butanone

Concen: 3.781 ppbv

RT: 5.24 min Scan# 764

Delta R.T. 0.00 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampleId :

0121-SS2

Tot Ion: 43 Resp: 861070

Ion Ratio Lower Upper

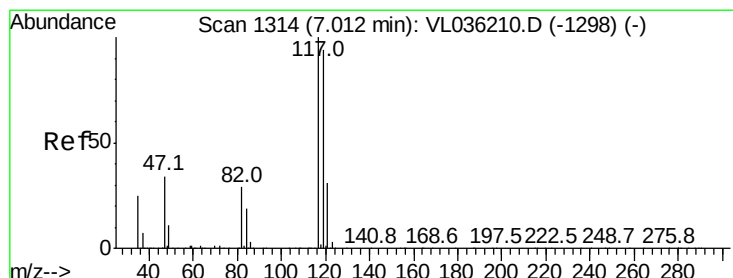
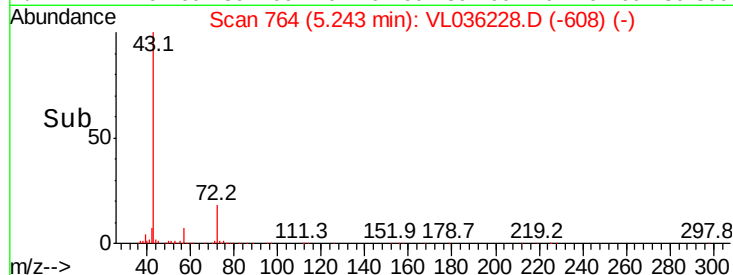
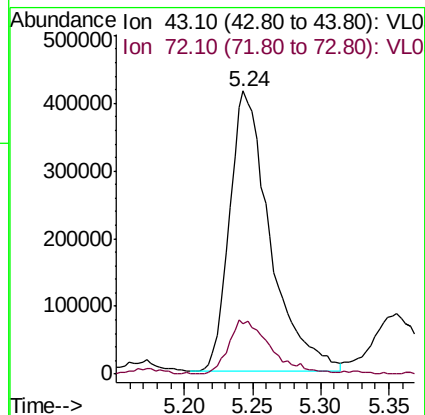
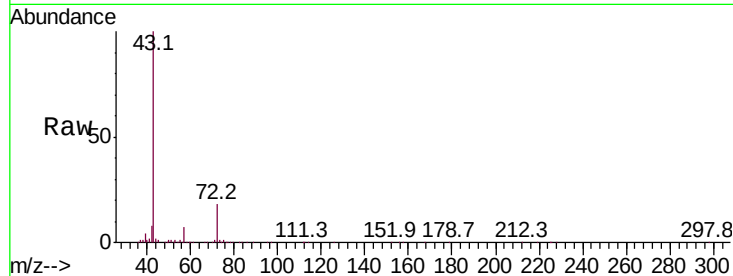
43 100

72 19.8 16.1 24.1

Manual Integrations
APPROVED

MMDadoda

1/18/2021 3:49:34 PM



#35

Carbon Tetrachloride

Concen: 0.137 ppbv m

RT: 7.02 min Scan# 1316

Delta R.T. 0.01 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

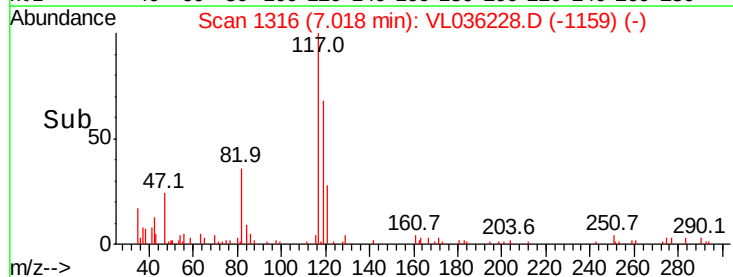
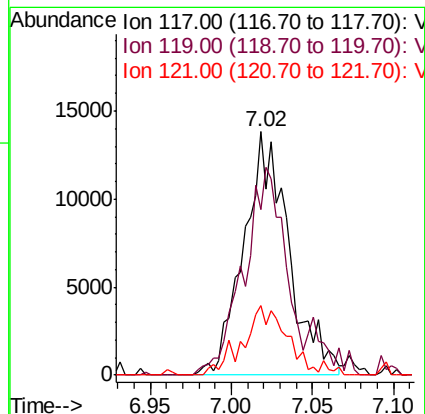
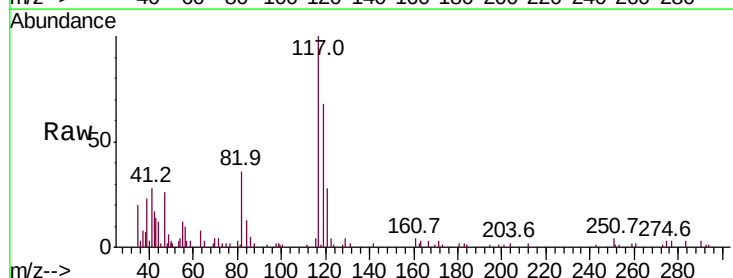
Tgt Ion: 117 Resp: 26799

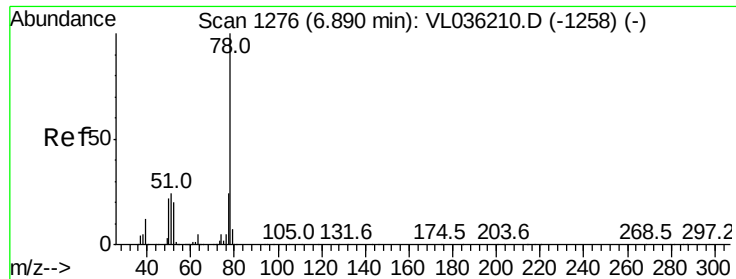
Ion Ratio Lower Upper

117 100

119 67.9 74.9 112.3#

121 28.4 25.0 37.6





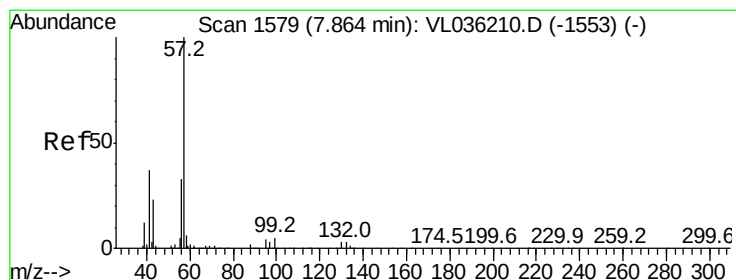
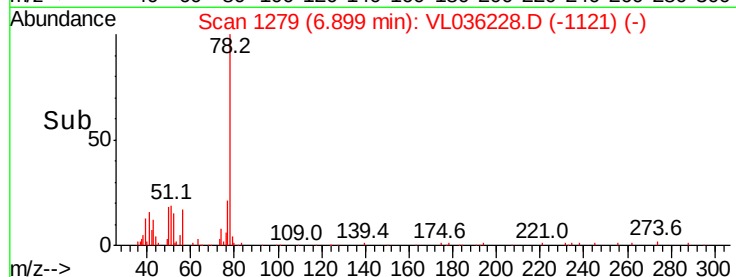
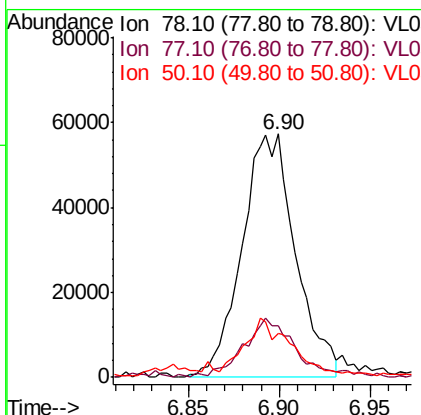
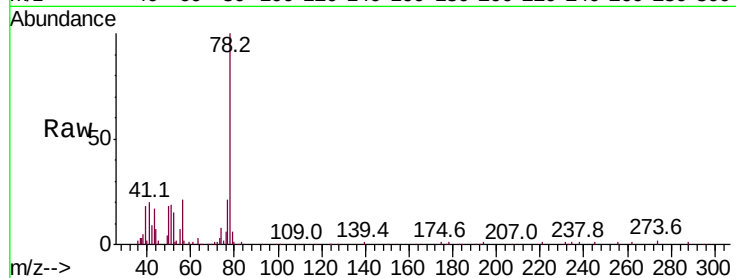
#36
Benzene
Concen: 0.416 ppbv m
RT: 6.90 min Scan# 1279
Delta R.T. 0.01 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion	Ratio	Lower	Upper
78	100		
77	21.4	19.4	29.0
50	17.9	17.4	26.2

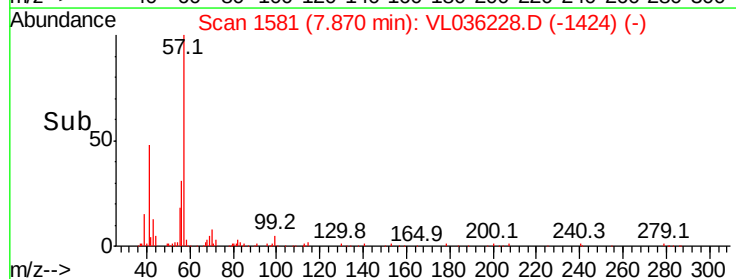
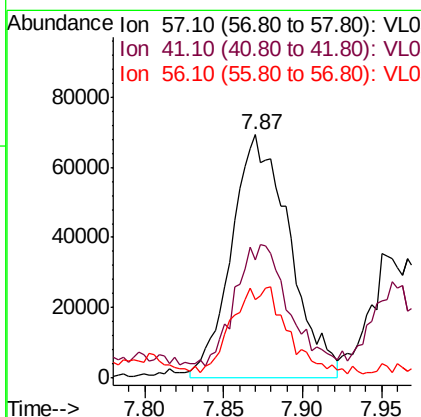
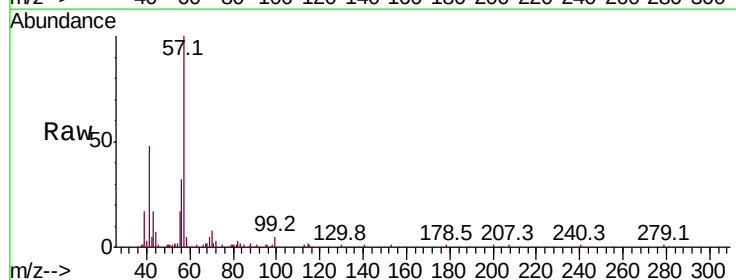
Manual Integrations
APPROVED

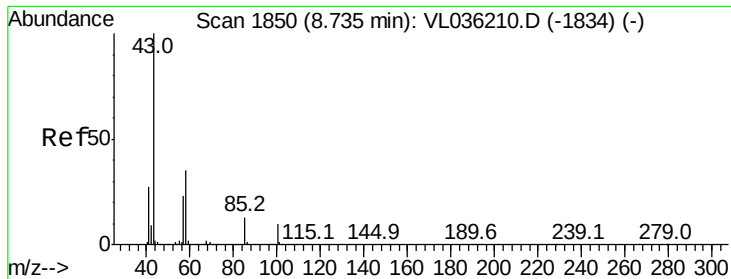
MMDadoda
1/18/2021 3:49:34 PM



#44
2,2,4-Trimethylpentane
Concen: 0.338 ppbv m
RT: 7.87 min Scan# 1581
Delta R.T. 0.01 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion	Ratio	Lower	Upper
57	100		
41	51.6	28.5	42.7#
56	0.0	25.5	38.3#





#50

4-Methyl-2-Pentanone

Concen: 0.162 ppbv m

RT: 8.75 min Scan# 1855

Delta R.T. 0.02 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampleId :

0121-SS2

Tot Ion: 43 Resp: 54979

Ion Ratio Lower Upper

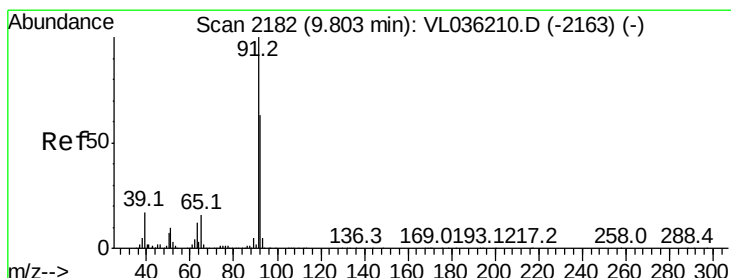
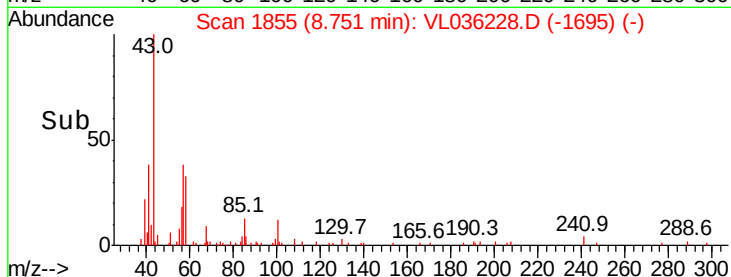
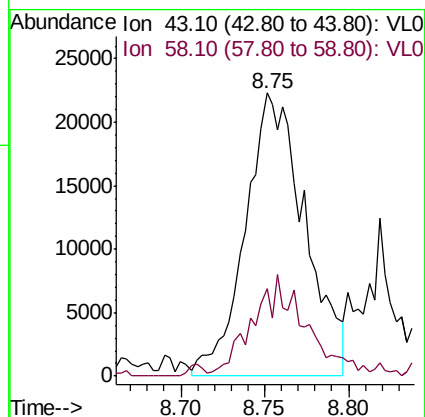
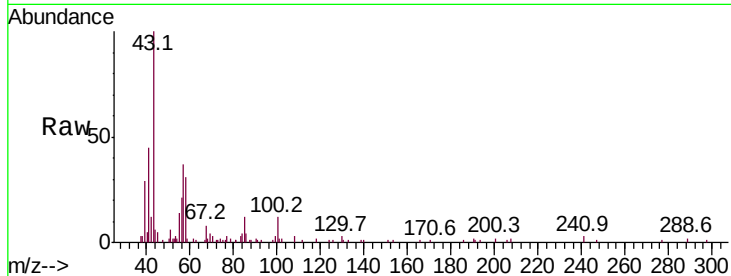
43 100

58 0.0 27.6 41.4#

Manual Integrations
APPROVED

MMDadoda

1/18/2021 3:49:34 PM



#53

Toluene

Concen: 2.433 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. 0.01 min

Lab File: VL036228.D

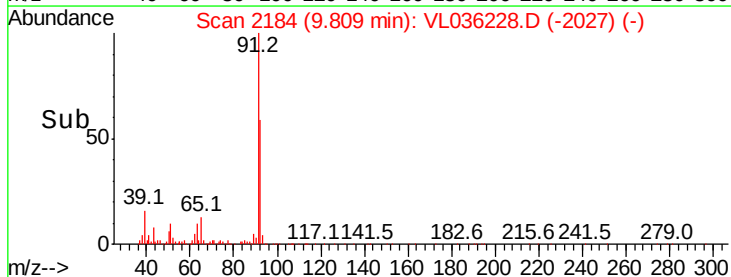
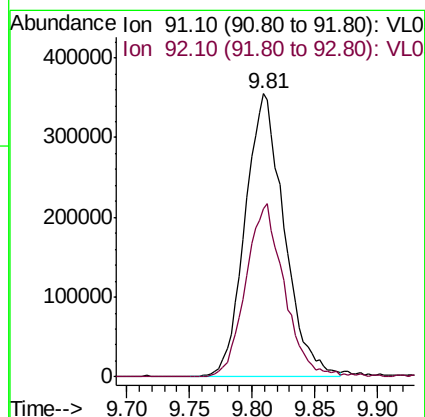
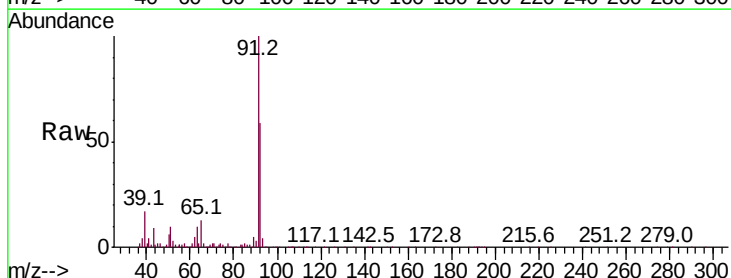
Acq: 13 Jan 2021 16:46

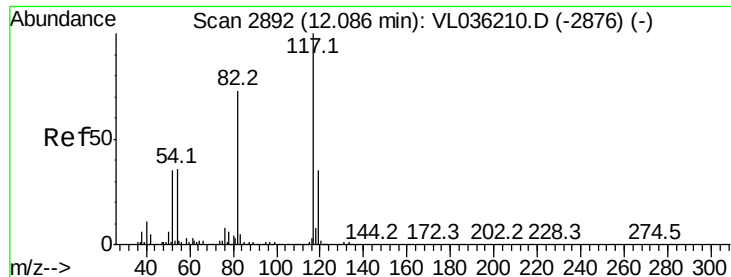
Tgt Ion: 91 Resp: 771242

Ion Ratio Lower Upper

91 100

92 60.8 48.5 72.7





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2894

Delta R.T. 0.01 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampleId :

0121-SS2

Tot Ion:117 Resp: 2870754

Ion Ratio Lower Upper

117 100

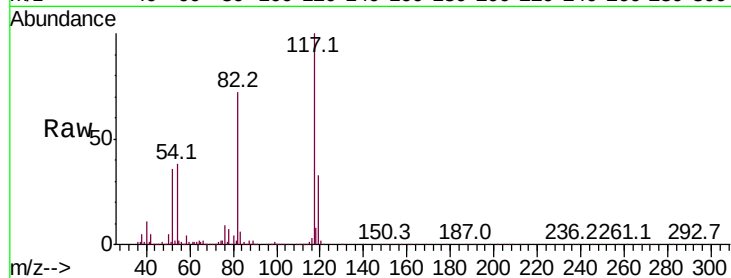
82 73.4 59.7 89.5

119 33.7 28.6 43.0

Manual Integrations
APPROVED

MMDadoda

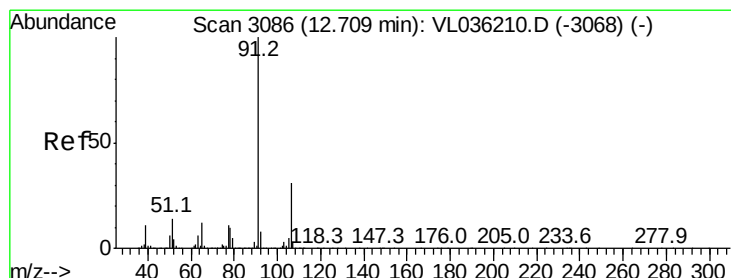
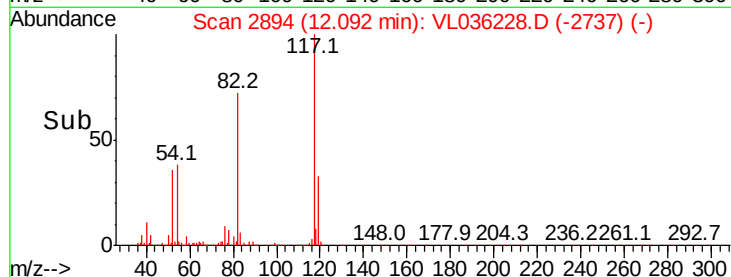
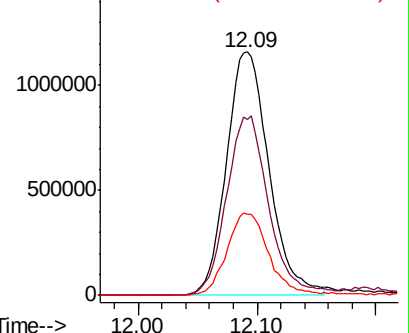
1/18/2021 3:49:34 PM



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#58

Ethyl Benzene

Concen: 0.548 ppbv

RT: 12.72 min Scan# 3088

Delta R.T. 0.01 min

Lab File: VL036228.D

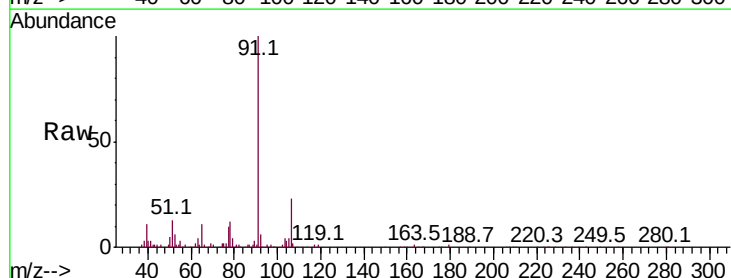
Acq: 13 Jan 2021 16:46

Tgt Ion: 91 Resp: 233547

Ion Ratio Lower Upper

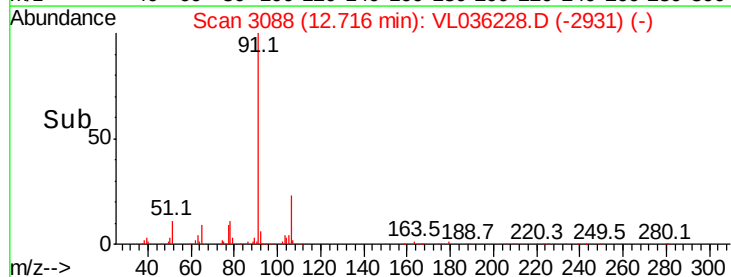
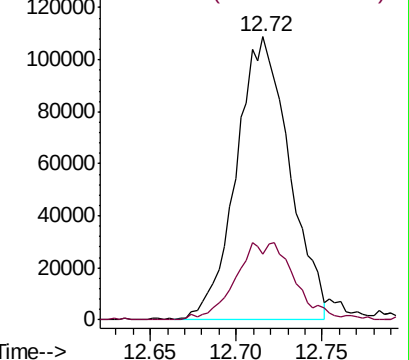
91 100

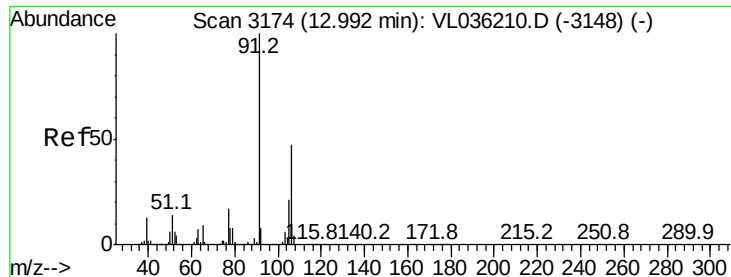
106 22.9 24.8 37.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





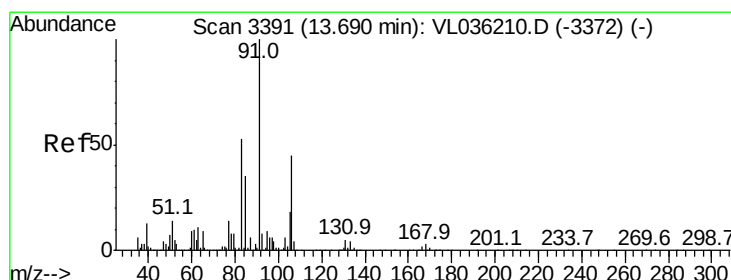
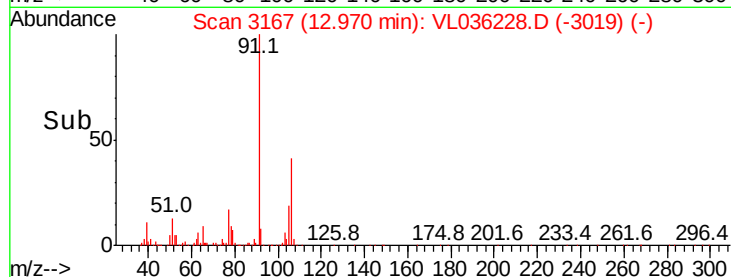
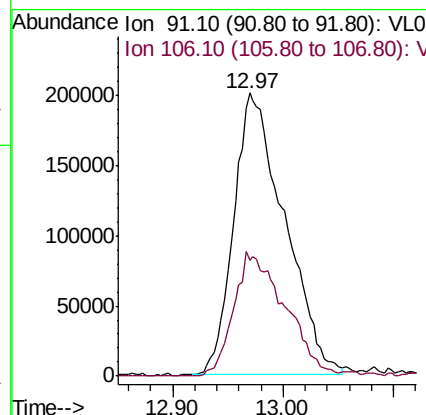
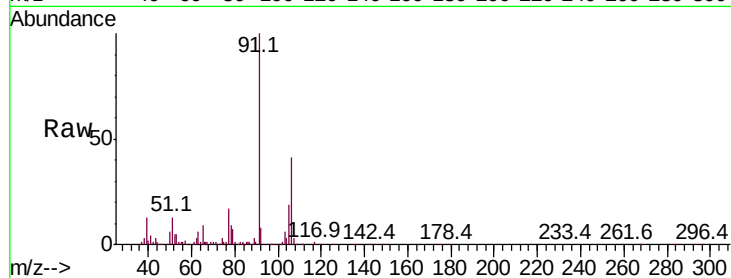
#59
m/p-Xylene
Concen: 1.754 ppbv
RT: 12.97 min Scan# 3167
Delta R.T. -0.02 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion	Ratio	Lower	Upper
91	100		
106	45.1	34.6	51.8

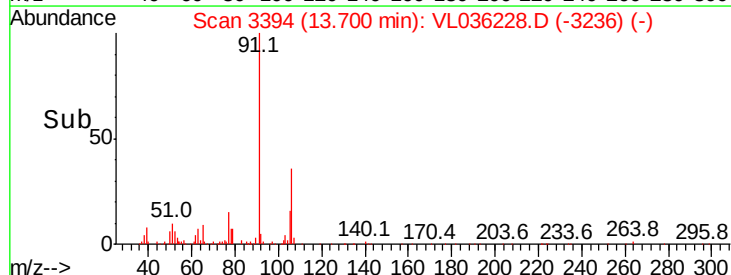
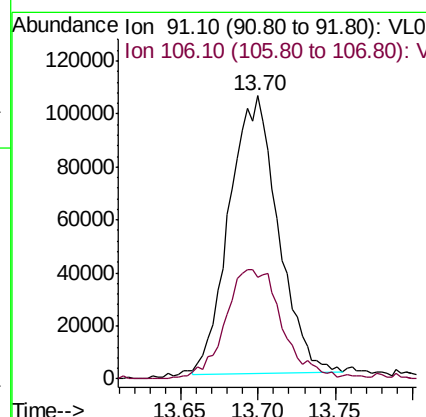
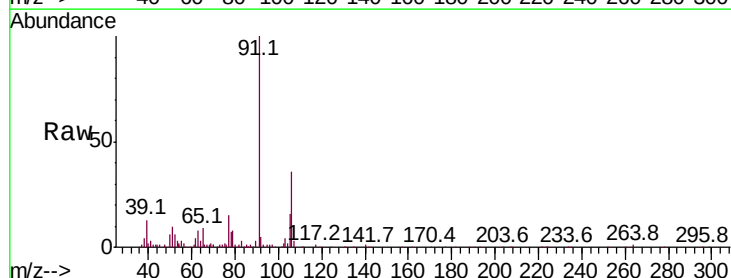
Manual Integrations
APPROVED

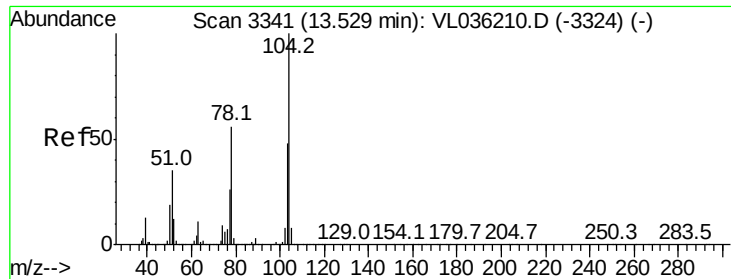
MMDadoda
1/18/2021 3:49:34 PM



#60
o-Xylene
Concen: 0.652 ppbv
RT: 13.70 min Scan# 3394
Delta R.T. 0.01 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion	Ratio	Lower	Upper
91	100		
106	45.9	21.9	65.8





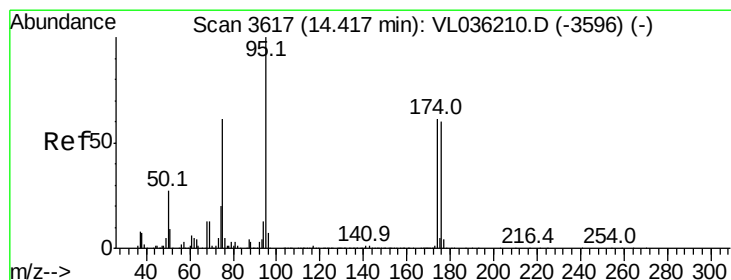
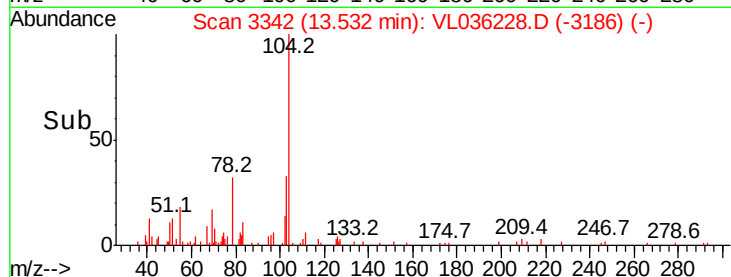
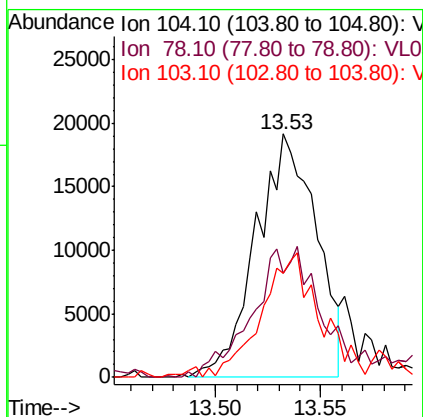
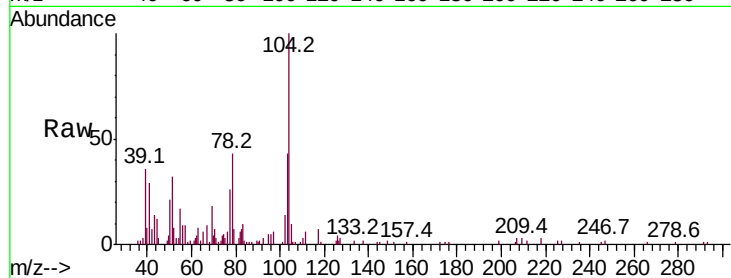
#61
Stvrene
Concen: 0.171 ppbv
RT: 13.53 min Scan# 3342
Delta R.T. 0.00 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Instrument :
MSVOA_L
ClientSampleId :
0121-SS2

Tot Ion	Ratio	Lower	Upper
104	100		
78	70.9	46.8	70.2#
103	55.7	38.4	57.6

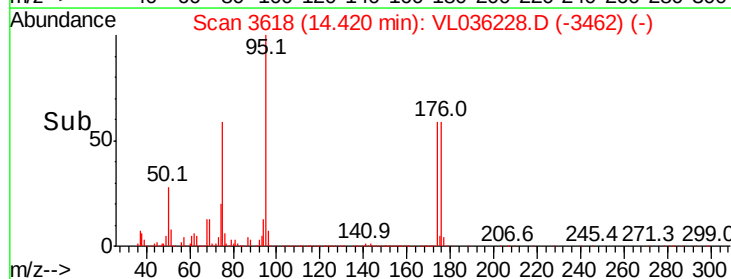
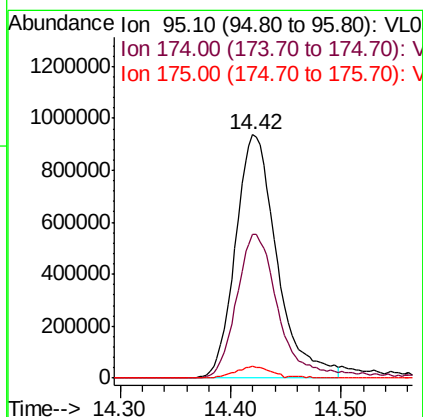
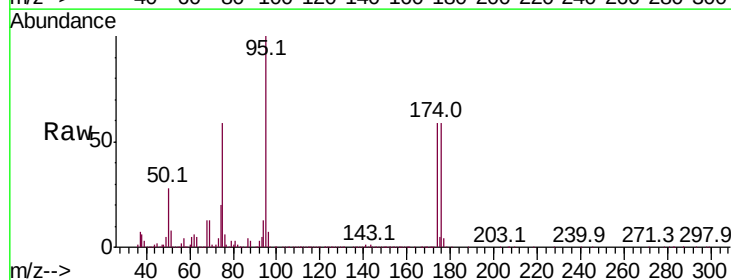
Manual Integrations
APPROVED

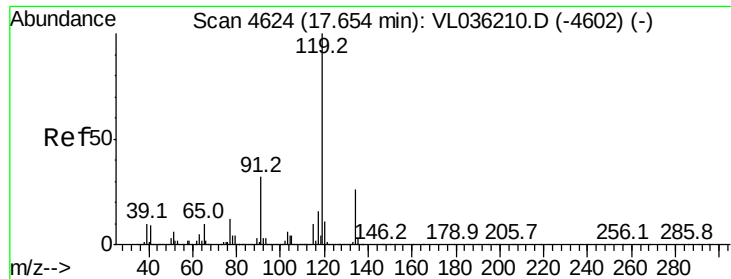
MMDadoda
1/18/2021 3:49:34 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 10.243 ppbv
RT: 14.42 min Scan# 3618
Delta R.T. 0.00 min
Lab File: VL036228.D
Acq: 13 Jan 2021 16:46

Tgt Ion	Ratio	Lower	Upper
95	100		
174	62.1	49.4	74.0
175	4.7	3.8	5.8





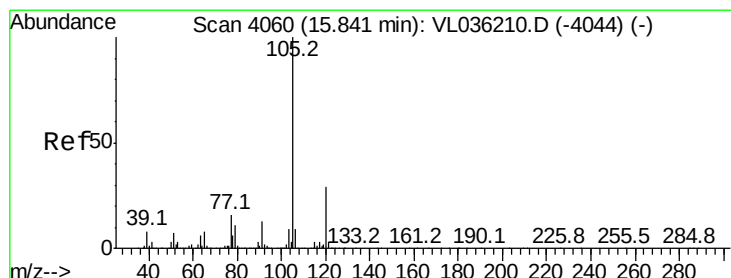
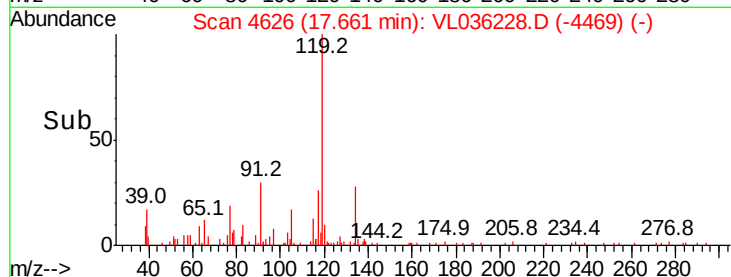
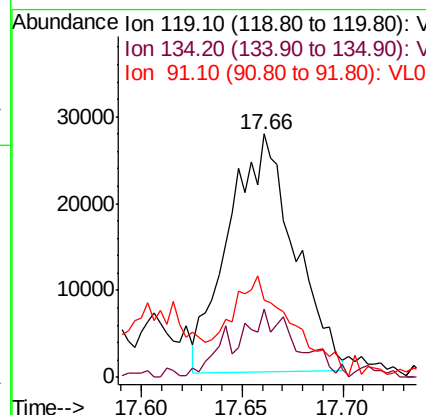
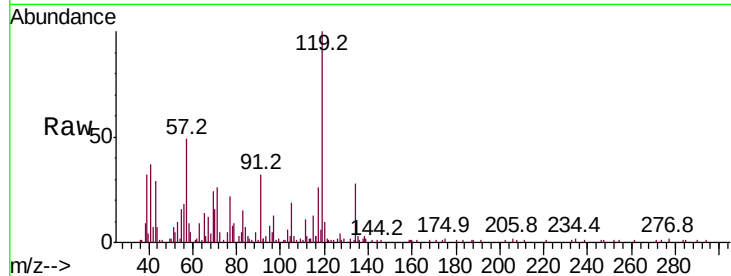
#69
 p-Isopropyltoluene
 Concen: 0.118 ppbv
 RT: 17.66 min Scan# 4626
 Delta R.T. 0.01 min
 Lab File: VL036228.D
 Acq: 13 Jan 2021 16:46

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS2

Tot Ion	Ratio	Resp	Lower	Upper
119	100	61929		
134	28.0		20.2	30.4
91	39.1		26.0	39.0#

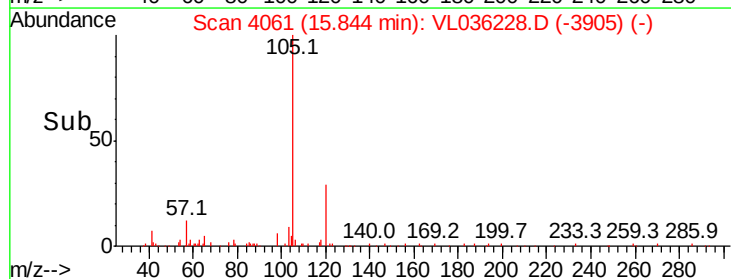
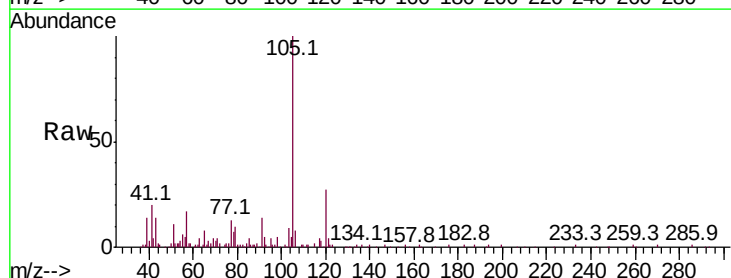
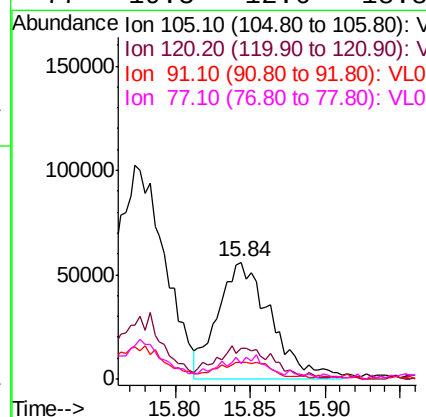
Manual Integrations
 APPROVED

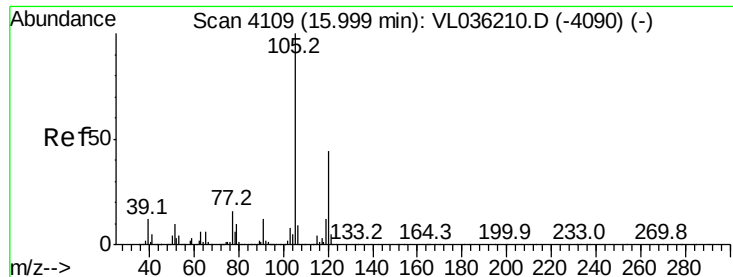
MMDadoda
 1/18/2021 3:49:34 PM



#72
 4-Ethyltoluene
 Concen: 0.348 ppbv m
 RT: 15.84 min Scan# 4061
 Delta R.T. 0.00 min
 Lab File: VL036228.D
 Acq: 13 Jan 2021 16:46

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	138491		
120	0.0		23.7	35.5#
91	13.8		11.9	17.9
77	19.3		12.6	18.8#





#73

1,3,5-Trimethylbenzene

Concen: 0.292 ppbv m

RT: 16.01 min Scan# 4112

Delta R.T. 0.01 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampleId :

0121-SS2

Tot Ion:105 Resp: 110936

Ion Ratio Lower Upper

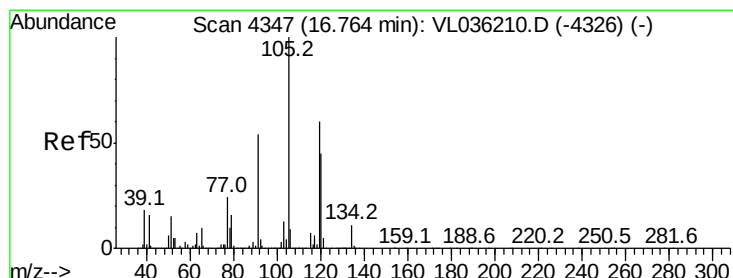
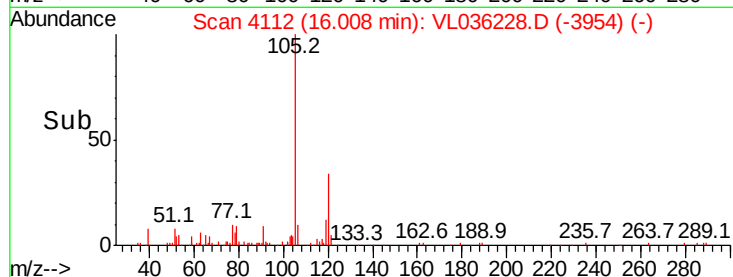
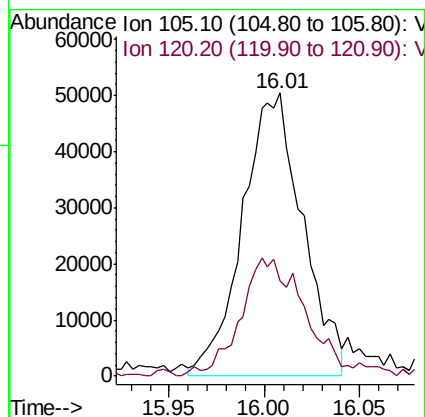
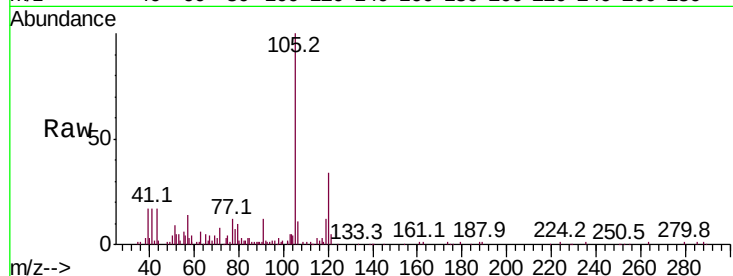
105 100

120 33.6 35.5 53.3#

Manual Integrations
APPROVED

MMDadoda

1/18/2021 3:49:34 PM



#74

1,2,4-Trimethylbenzene

Concen: 1.035 ppbv

RT: 16.76 min Scan# 4347

Delta R.T. -0.00 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Tgt Ion:105 Resp: 402805

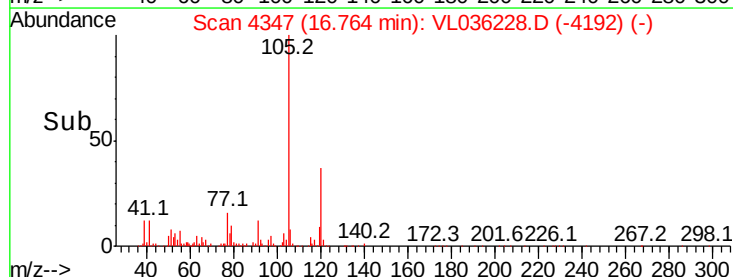
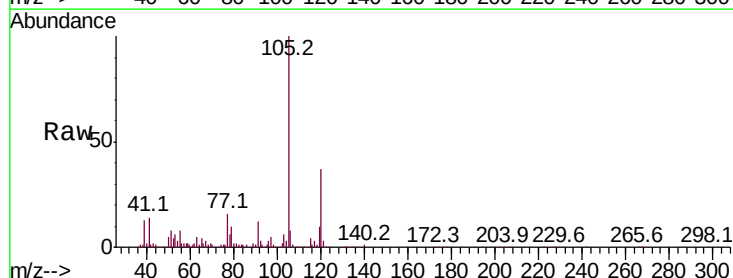
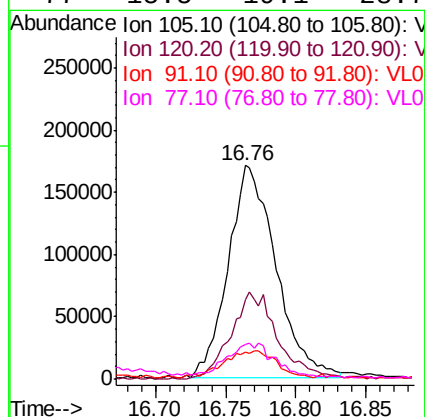
Ion Ratio Lower Upper

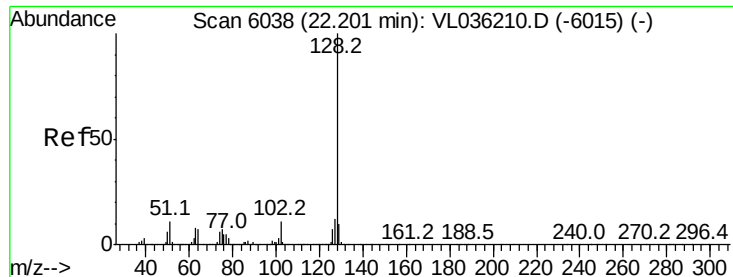
105 100

120 36.8 36.2 54.2

91 11.1 43.3 64.9#

77 15.5 19.1 28.7#





#79

Naphthalene

Concen: 0.164 ppbv m

RT: 22.21 min Scan# 6040

Delta R.T. 0.01 min

Lab File: VL036228.D

Acq: 13 Jan 2021 16:46

Instrument :

MSVOA_L

ClientSampleId :

0121-SS2

Tot Ion:	128	Resp:	37211
Ion Ratio	Lower	Upper	
128	100		
127	12.3	9.9	14.9
129	15.2	8.4	12.6#

Manual Integrations
APPROVED

MMDadoda
1/18/2021 3:49:34 PM

