

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL011321\
 Data File : VL036230.D
 Acq On : 13 Jan 2021 18:11
 Operator : SY/AP
 Sample : M1066-04
 Misc : 400ml/MSVOA L
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS4

Manual Integrations
 APPROVED

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 1/18/2021 3:49:40 PM

Quant Time: Jan 15 07:54:24 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	1563869	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.18	114	3387855	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	2960186	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	2412155	9.84	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.40%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	25130m	0.120	ppbv	
4) Chloromethane	3.14	50	36631	0.386	ppbv #	79
7) Chloroethane	3.56	64	8461m	0.274	ppbv	
9) Propene	3.01	41	1802440	19.707	ppbv	88
10) Heptane	8.13	43	75526	0.333	ppbv #	86
11) Trichlorofluoromethane	3.95	101	41673	0.196	ppbv	99
13) Ethanol	3.62	45	1327169	92.411	ppbv	85
15) Acetone	3.85	43	5159267	26.937	ppbv	99
17) tert-Butyl alcohol	4.32	59	445156	2.817	ppbv	98
20) Methylene Chloride	4.35	84	972739	15.913	ppbv	94
26) Hexane	5.69	57	1420558	8.873	ppbv #	37
27) Carbon Disulfide	4.56	76	213992	1.672	ppbv	95
29) Chloroform	5.76	83	633765	2.765	ppbv	99
30) Cyclohexane	7.13	84	38642	0.316	ppbv	84
34) 2-Butanone	5.25	43	437015	1.752	ppbv	95
35) Carbon Tetrachloride	7.03	117	10224m	0.048	ppbv	
36) Benzene	6.89	78	144856	0.467	ppbv #	90
38) Trichloroethene	7.84	130	66183m	0.576	ppbv	
44) 2,2,4-Trimethylpentane	7.87	57	75180m	0.132	ppbv	
52) Tetrachloroethene	11.23	164	49125m	0.429	ppbv	
53) Toluene	9.82	91	351816m	1.013	ppbv	
58) Ethyl Benzene	12.72	91	97767m	0.223	ppbv	
59) m/p-Xylene	12.97	91	275206m	0.729	ppbv	
60) o-Xylene	13.70	91	109720	0.302	ppbv	99
72) 4-Ethyltoluene	15.84	105	52861m	0.129	ppbv	
73) 1,3,5-Trimethylbenzene	16.01	105	45407	0.116	ppbv	98
74) 1,2,4-Trimethylbenzene	16.77	105	169470m	0.422	ppbv	

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

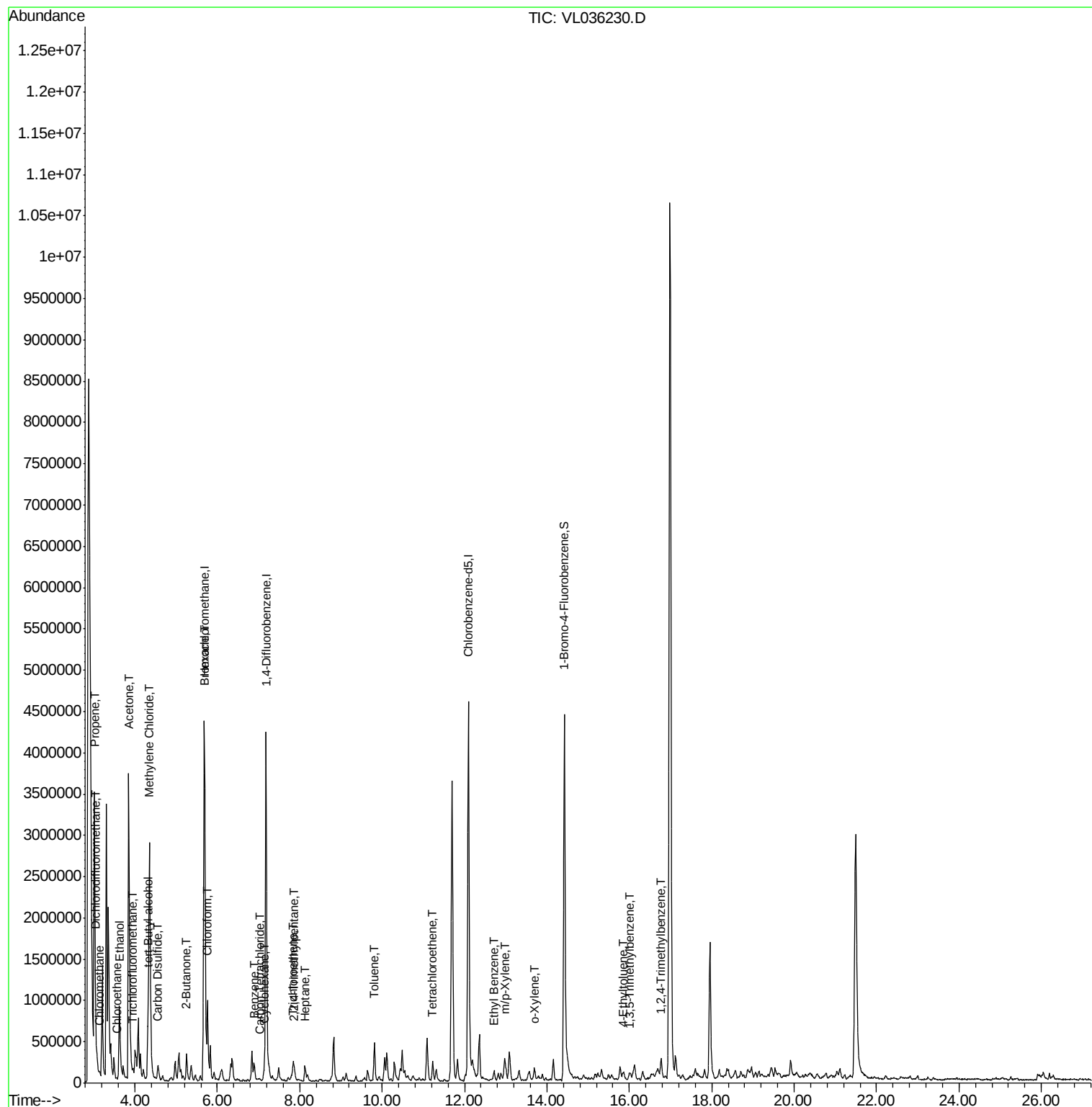
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL011321\
Data File : VL036230.D
Acq On : 13 Jan 2021 18:11
Operator : SY/AP
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Misc : 400ml/MSVOA L
ALS Vial : 11 Sample Multiplier: 1

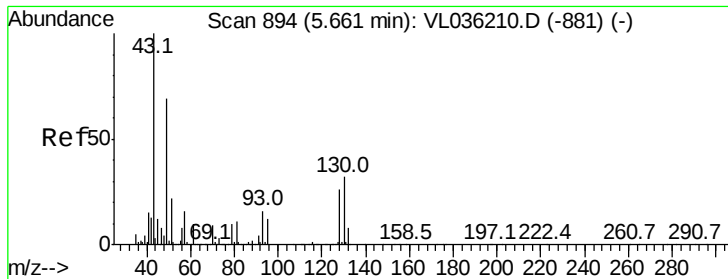
Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Manual Integrations
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1/18/2021 3:49:40 PM

Quant Time: Jan 15 07:54:24 2021
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL011321AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Jan
QLast Update : Thu Jan 14 16:13:38 2021
Response via : Initial Calibration





#1

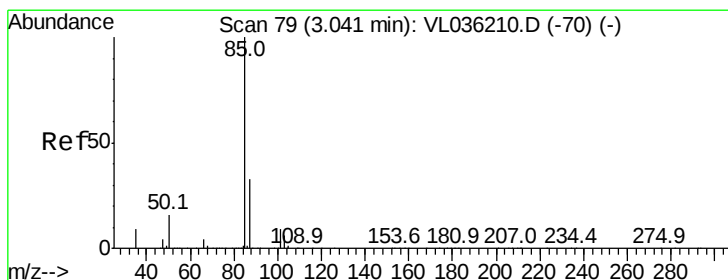
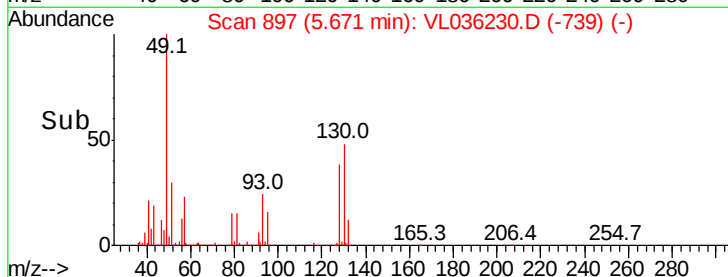
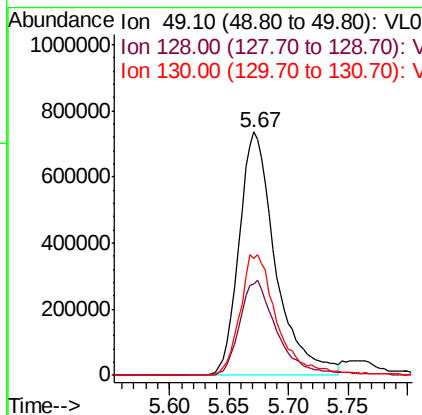
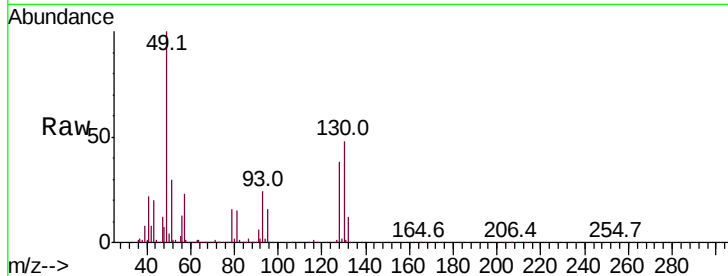
Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.67 min Scan# 897
 Delta R.T. 0.01 min
 Lab File: VL036230.D
 Acq: 13 Jan 2021 18:11

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS4

Tot Ion	Ratio	Lower	Upper
49	100		
128	40.3	20.1	60.2
130	51.3	25.3	75.9

Manual Integrations
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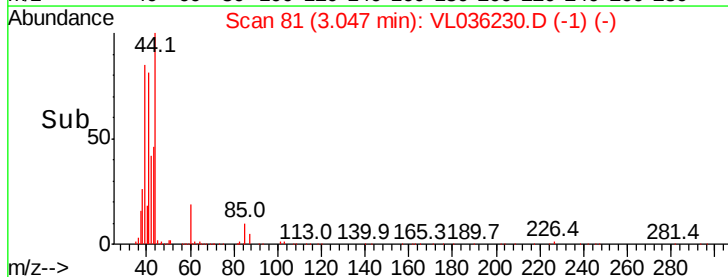
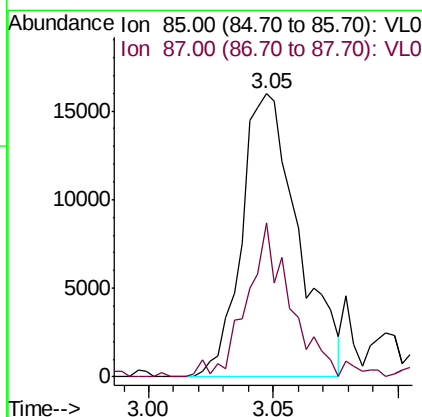
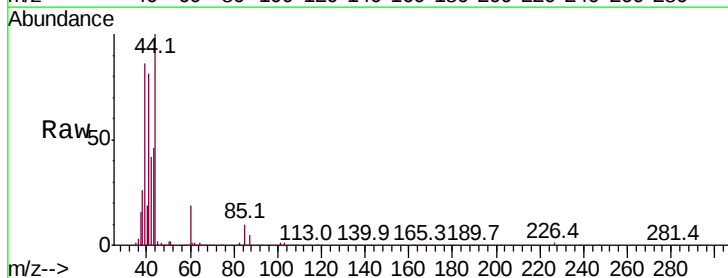
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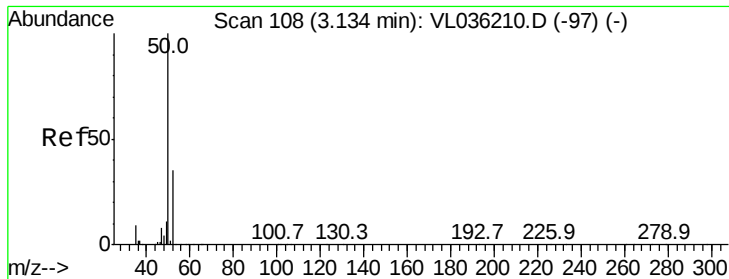


#2

Dichlorodifluoromethane
 Concen: 0.120 ppbv m
 RT: 3.05 min Scan# 81
 Delta R.T. 0.01 min
 Lab File: VL036230.D
 Acq: 13 Jan 2021 18:11

Tgt Ion	Ratio	Lower	Upper
85	100		
87	54.5	26.4	39.6





#4

Chloromethane

Concen: 0.386 ppbv

RT: 3.14 min Scan# 111

Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

ClientSampleId :

0121-SS4

Tot Ion: 50 Resp: 36631

Ion Ratio Lower Upper

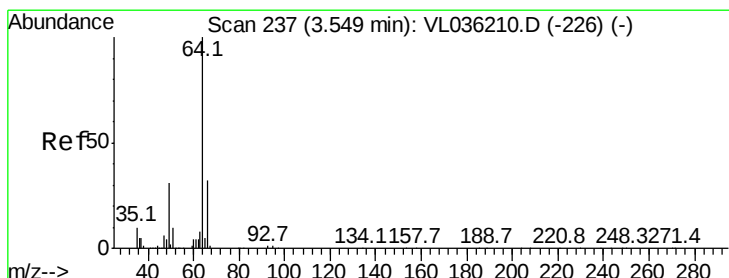
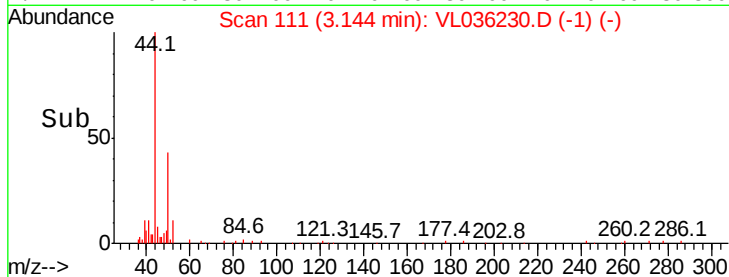
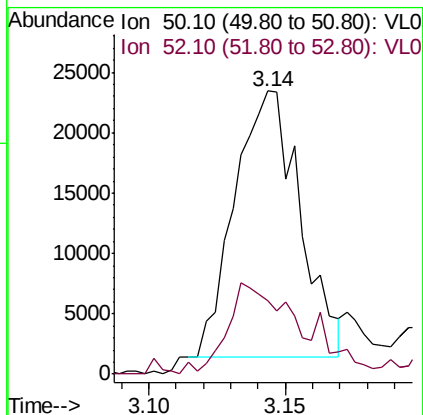
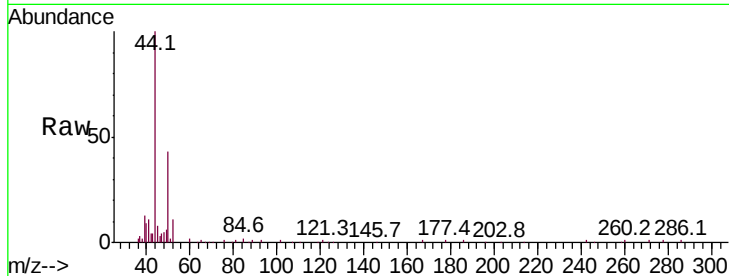
50 100

52 22.8 27.8 41.8#

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#7

Chloroethane

Concen: 0.274 ppbv m

RT: 3.56 min Scan# 240

Delta R.T. 0.01 min

Lab File: VL036230.D

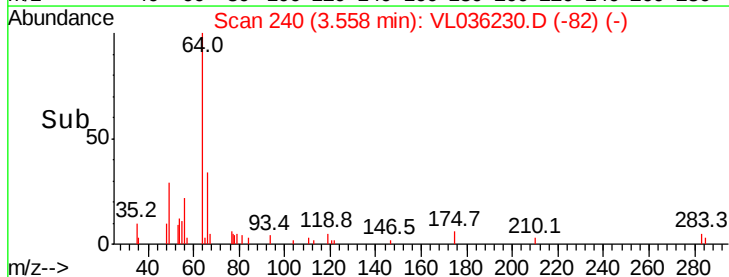
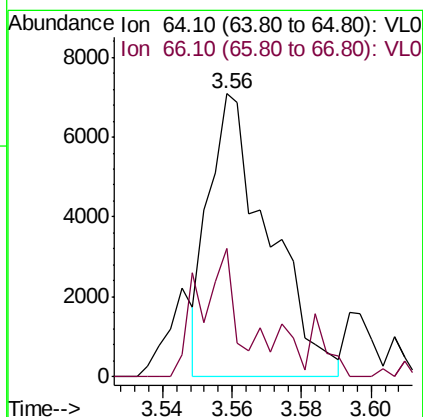
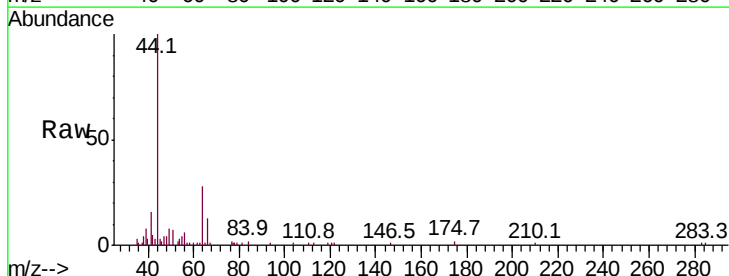
Acq: 13 Jan 2021 18:11

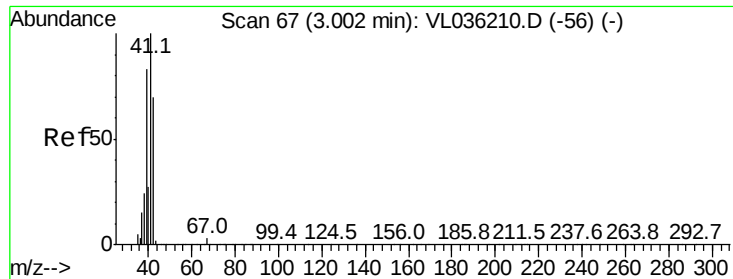
Tgt Ion: 64 Resp: 8461

Ion Ratio Lower Upper

64 100

66 45.6 25.2 37.8#





#9

Propene

Concen: 19.707 ppbv

RT: 3.01 min Scan# 69

Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

ClientSampleId :

0121-SS4

Tot Ion: 41 Resp: 1802440

Ion Ratio Lower Upper

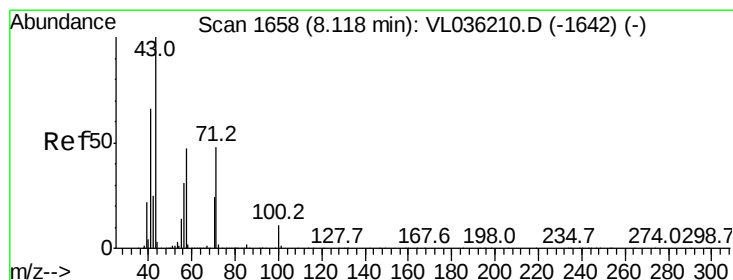
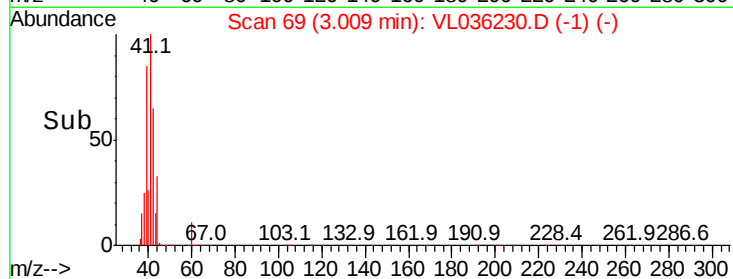
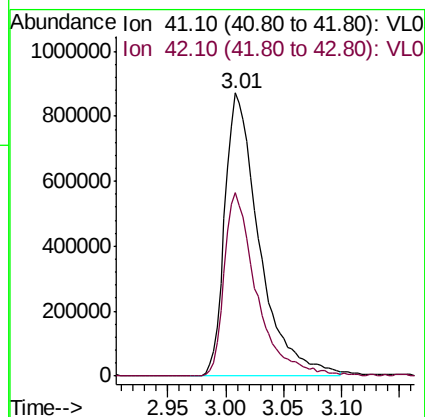
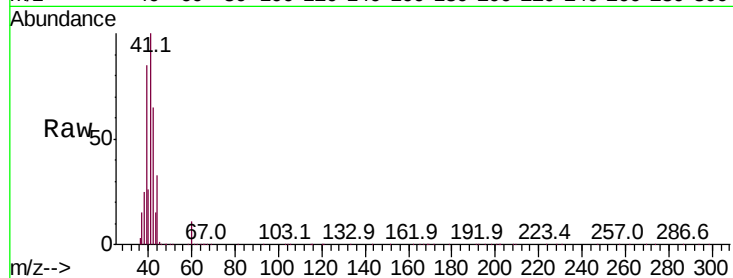
41 100

42 61.3 57.1 85.7

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#10

Heptane

Concen: 0.333 ppbv

RT: 8.13 min Scan# 1661

Delta R.T. 0.01 min

Lab File: VL036230.D

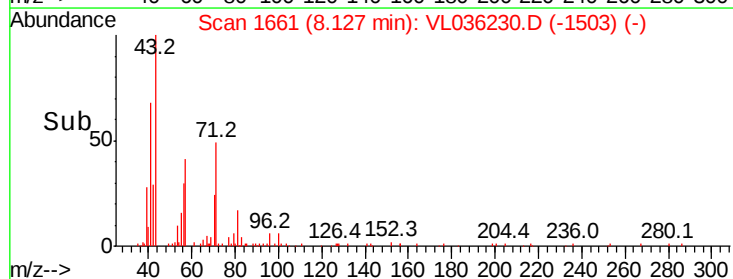
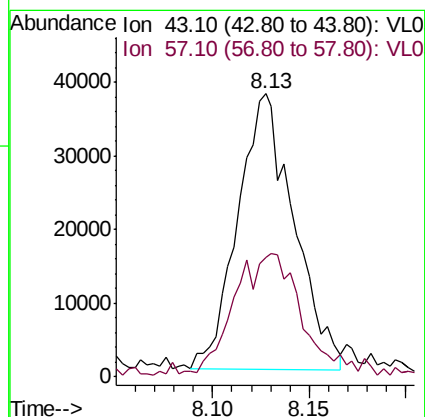
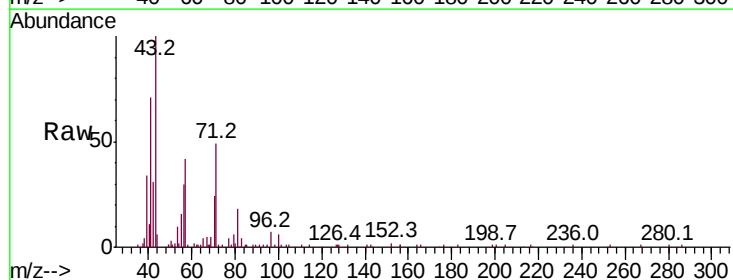
Acq: 13 Jan 2021 18:11

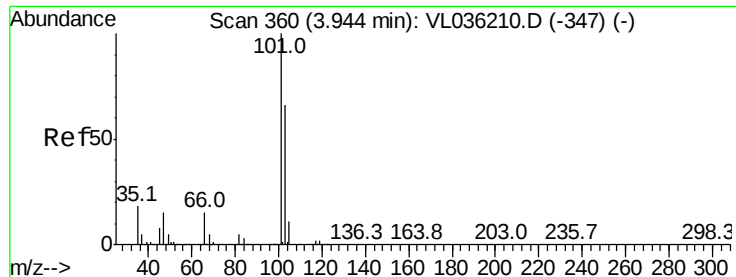
Tgt Ion: 43 Resp: 75526

Ion Ratio Lower Upper

43 100

57 57.2 38.1 57.1#





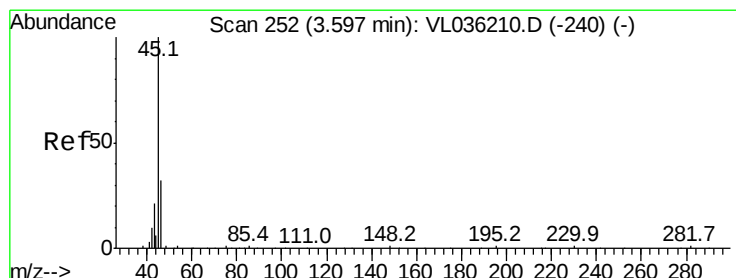
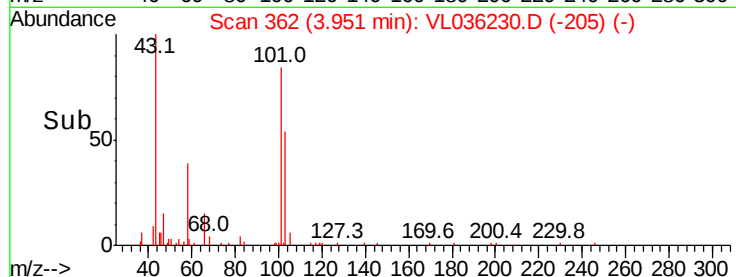
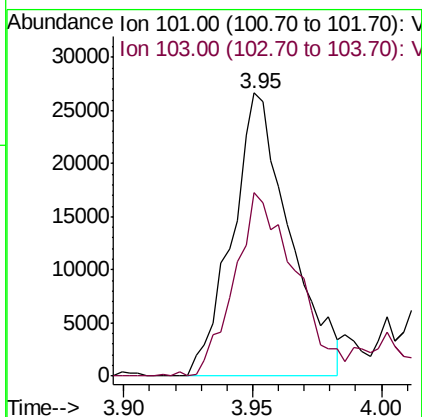
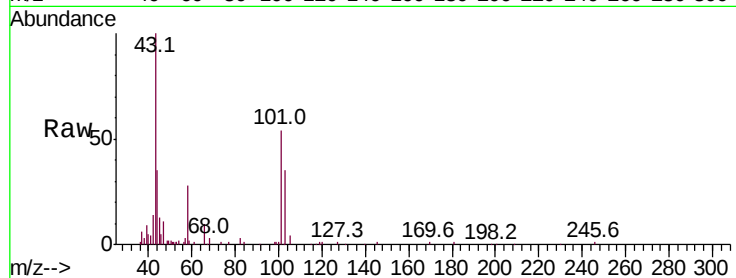
#11
Trichlorofluoromethane
Concen: 0.196 ppbv
RT: 3.95 min Scan# 362
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Tot Ion:101 Resp: 41673
Ion Ratio Lower Upper
101 100
103 64.8 52.6 78.8

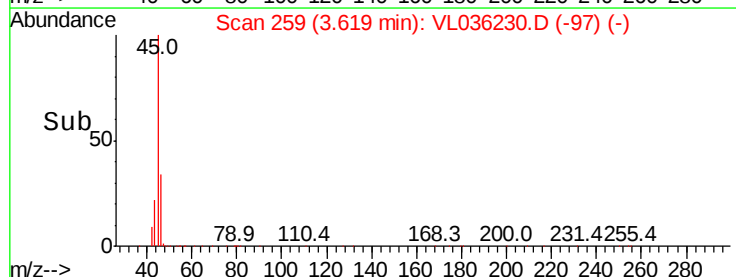
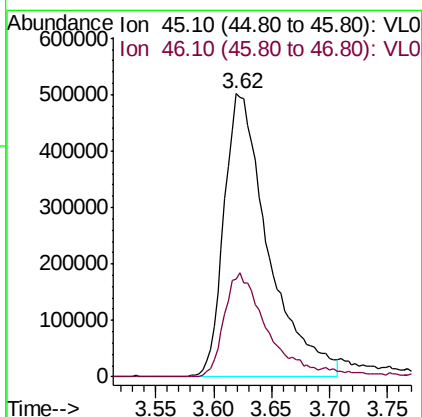
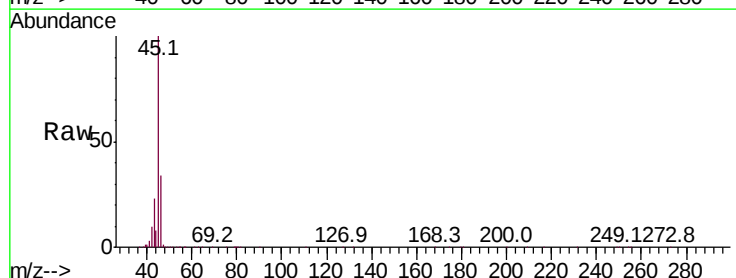
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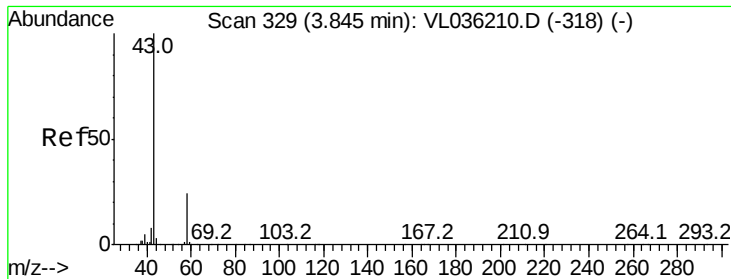
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#13
Ethanol
Concen: 92.411 ppbv
RT: 3.62 min Scan# 259
Delta R.T. 0.02 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion: 45 Resp: 1327169
Ion Ratio Lower Upper
45 100
46 38.1 19.2 77.0





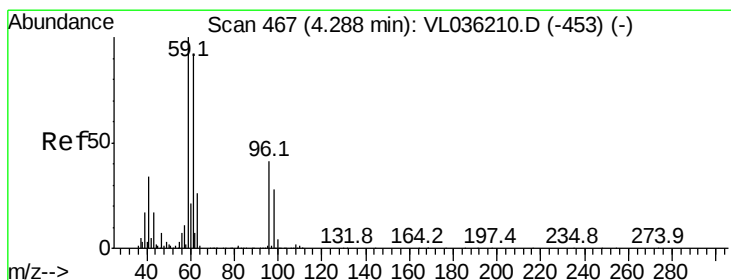
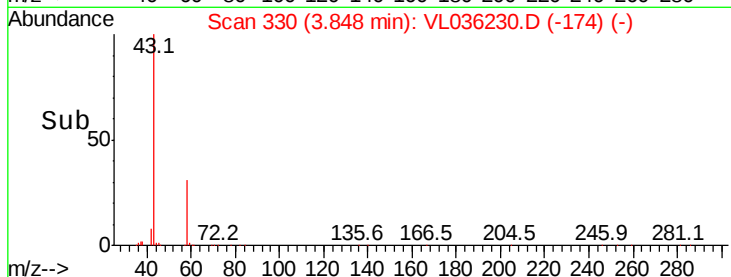
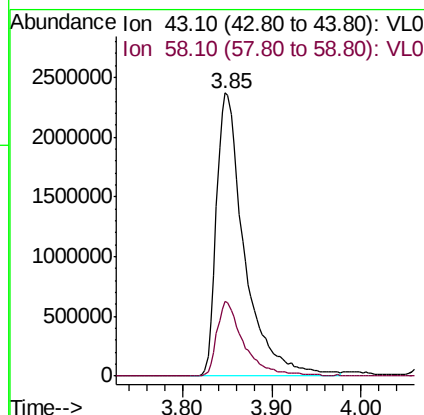
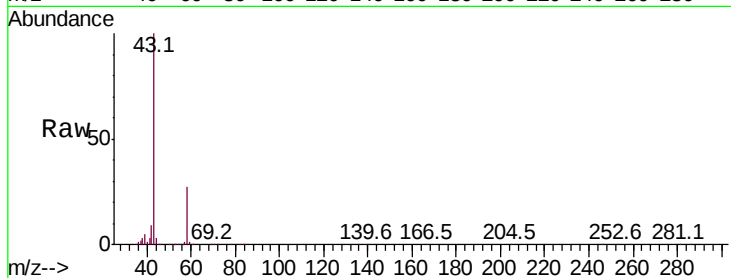
#15
Acetone
Concen: 26.937 ppbv
RT: 3.85 min Scan# 330
Delta R.T. 0.00 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Tot Ion: 43 Resp: 5159267
Ion Ratio Lower Upper
43 100
58 25.7 20.9 31.3

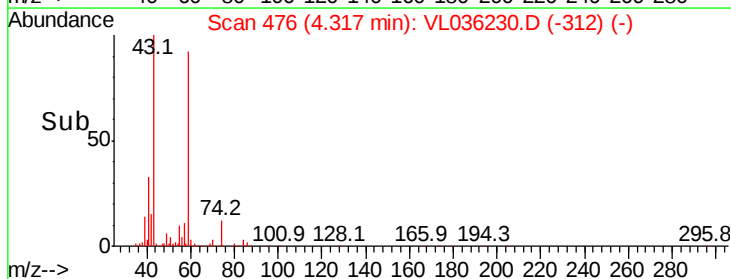
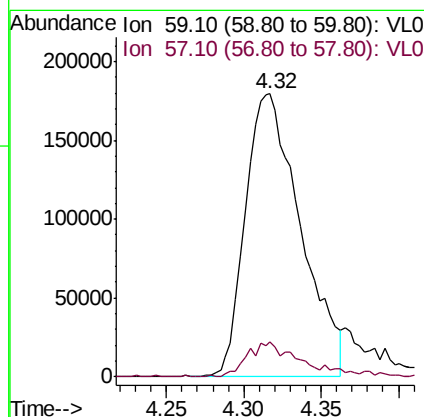
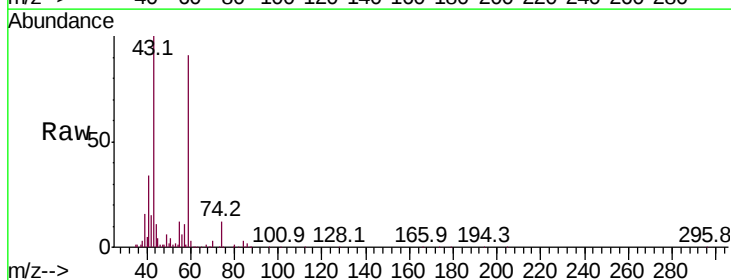
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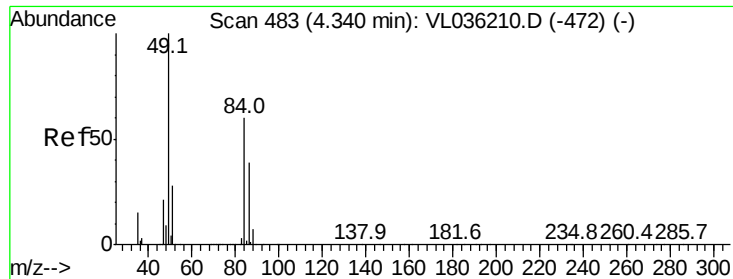
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#17
tert-Butyl alcohol
Concen: 2.817 ppbv
RT: 4.32 min Scan# 476
Delta R.T. 0.03 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion: 59 Resp: 445156
Ion Ratio Lower Upper
59 100
57 12.2 9.2 13.8





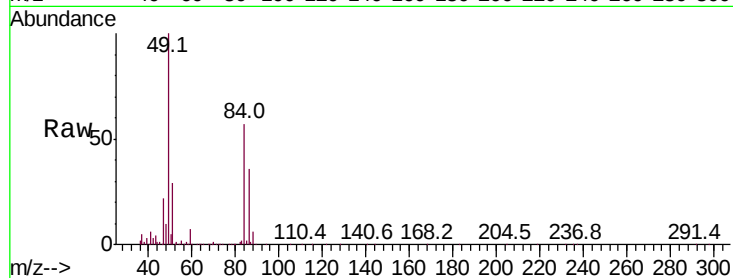
#20
Methvlene Chloride
Concen: 15.913 ppbv
RT: 4.35 min Scan# 485
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Tot Ion	Ratio	Lower	Upper
84	100		
49	176.5	134.1	201.1
51	50.8	37.4	56.0
86	63.4	52.6	78.8

Manual Integrations
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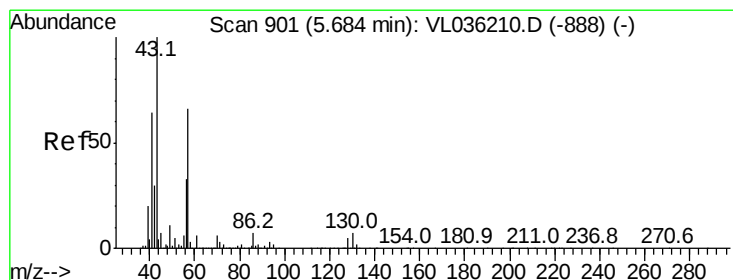
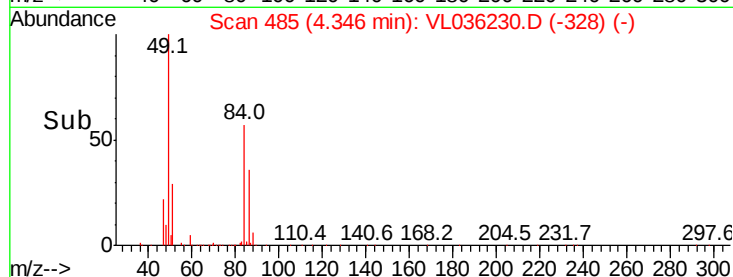
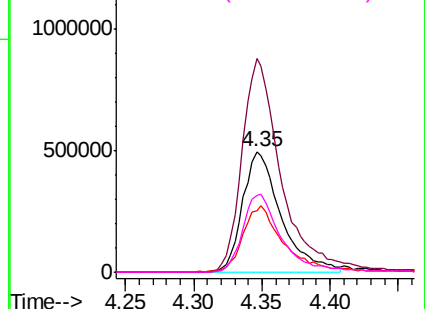
Abundance

Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0



#26
Hexane
Concen: 8.873 ppbv
RT: 5.69 min Scan# 904
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion	Ratio	Lower	Upper
57	100		
41	96.5	83.0	124.6
43	78.2	202.4	303.6#
56	54.2	43.4	65.0

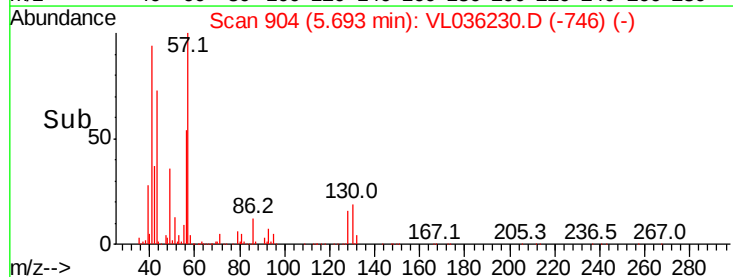
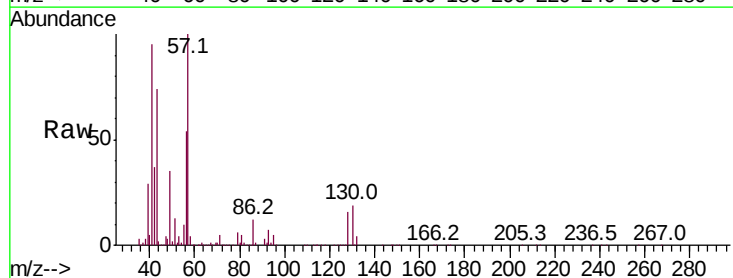
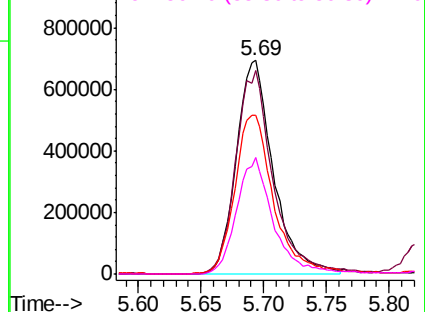
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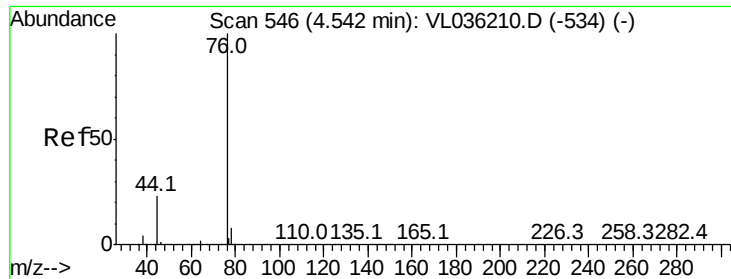
Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0





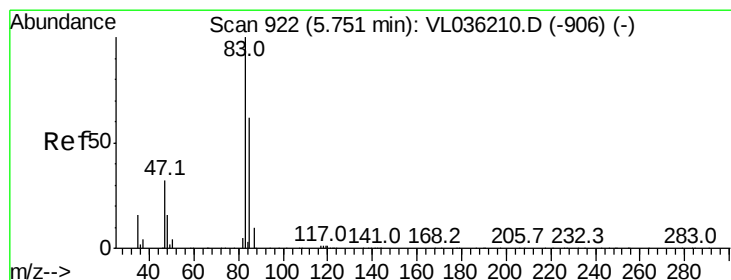
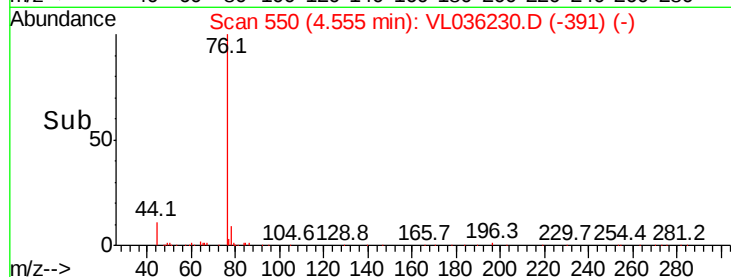
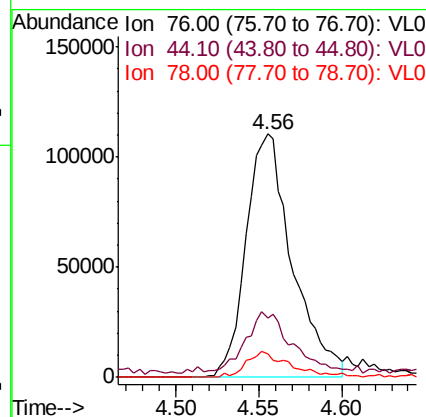
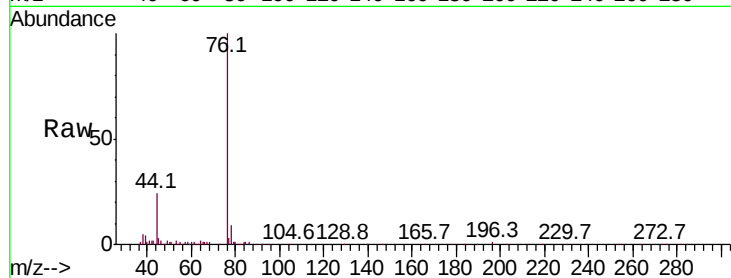
#27
Carbon Disulfide
Concen: 1.672 ppbv
RT: 4.56 min Scan# 550
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Tot Ion:	76	Resp:	213992
Ion Ratio	Lower	Upper	
76	100		
44	26.7	19.0	28.6
78	10.8	8.0	12.0

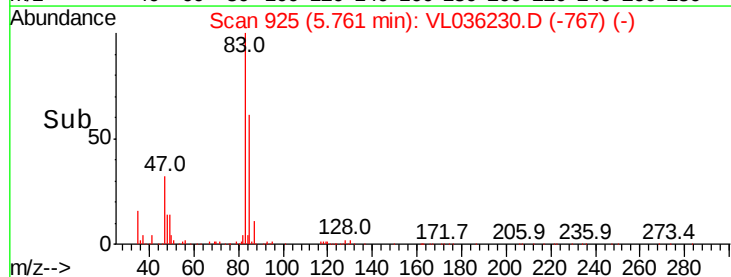
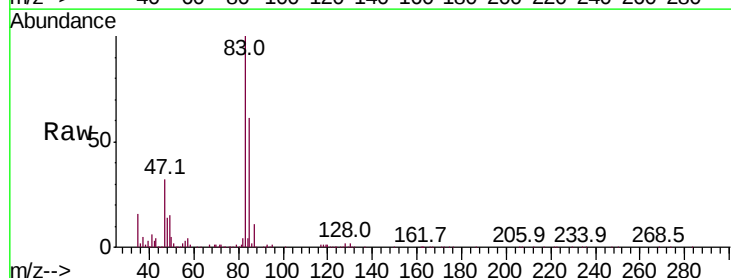
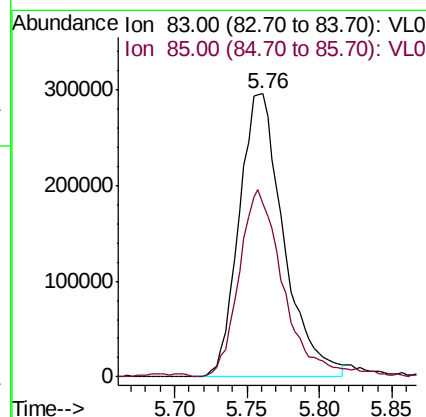
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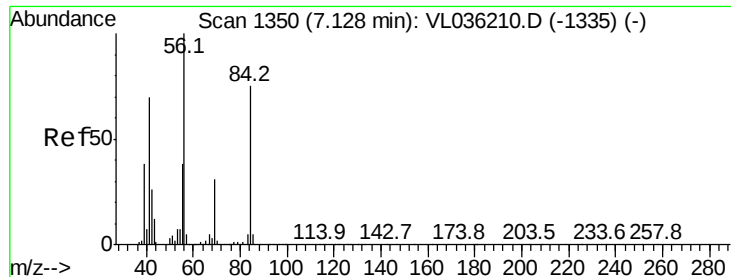
MMDadoda
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#29
Chloroform
Concen: 2.765 ppbv
RT: 5.76 min Scan# 925
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion:	83	Resp:	633765
Ion Ratio	Lower	Upper	
83	100		
85	61.1	49.3	73.9





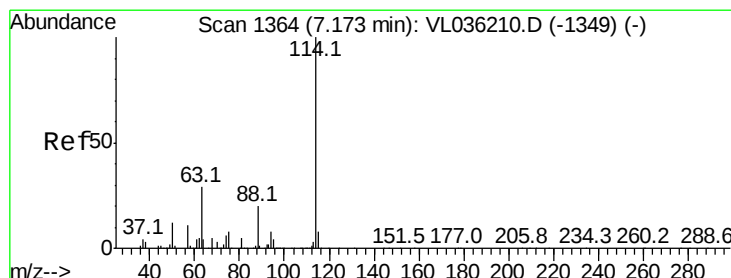
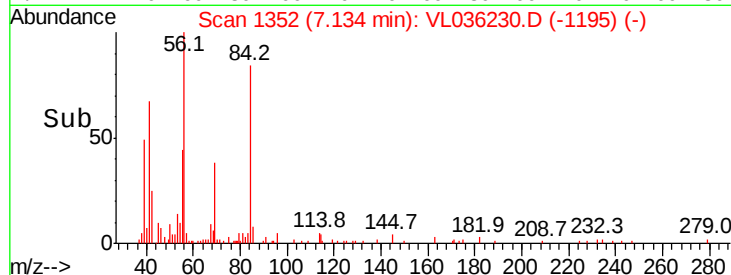
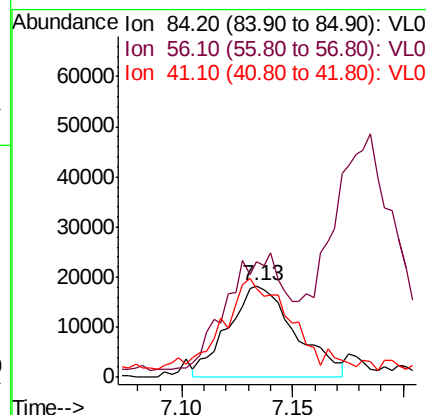
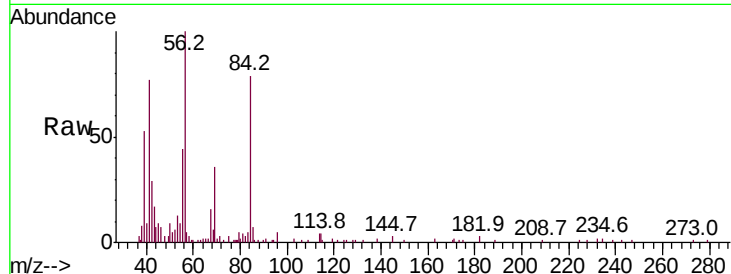
#30
Cvclohexane
Concen: 0.316 ppbv
RT: 7.13 min Scan# 1352
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Tot Ion	Ratio	Lower	Upper
84	100		
56	124.4	119.4	179.0
41	108.6	79.4	119.0

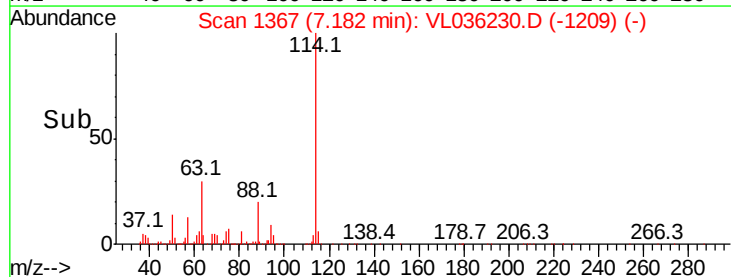
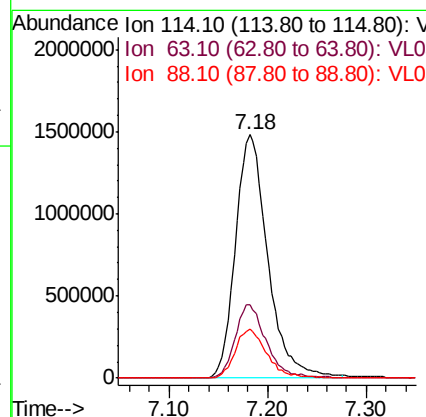
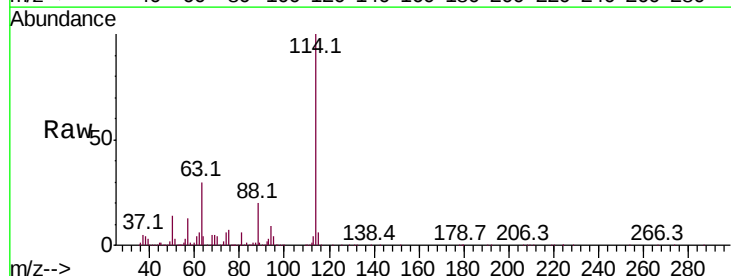
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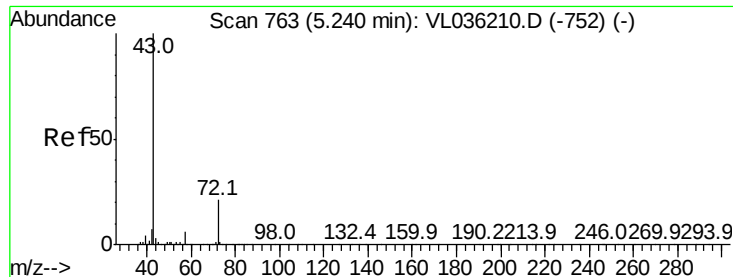
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#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.18 min Scan# 1367
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion	Ratio	Lower	Upper
114	100		
63	29.6	24.7	37.1
88	19.9	16.6	24.8





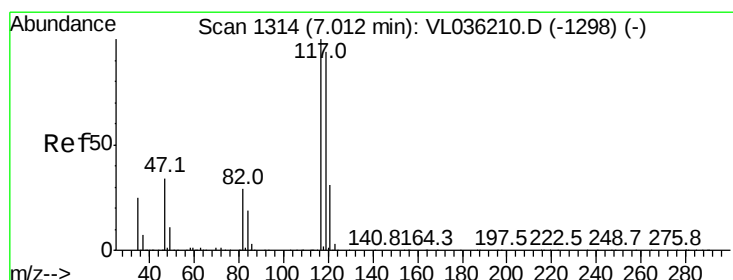
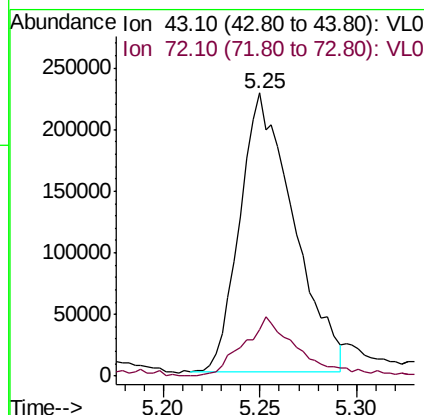
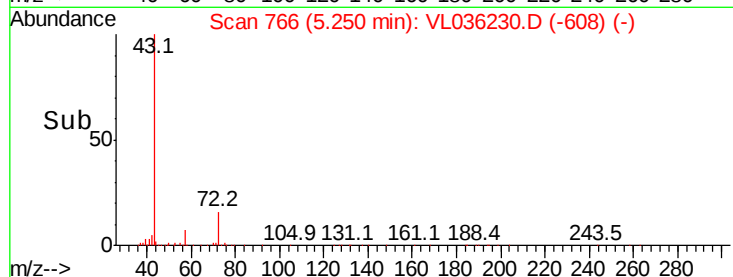
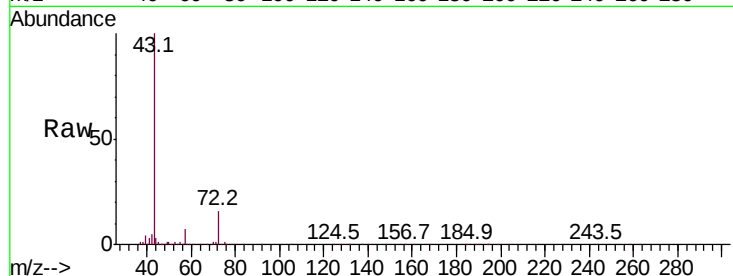
#34
2-Butanone
Concen: 1.752 ppbv
RT: 5.25 min Scan# 766
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampled :
0121-SS4

Tot Ion: 43 Resp: 437015
Ion Ratio Lower Upper
43 100
72 22.5 16.1 24.1

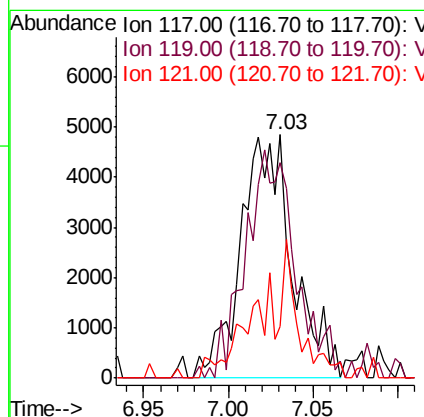
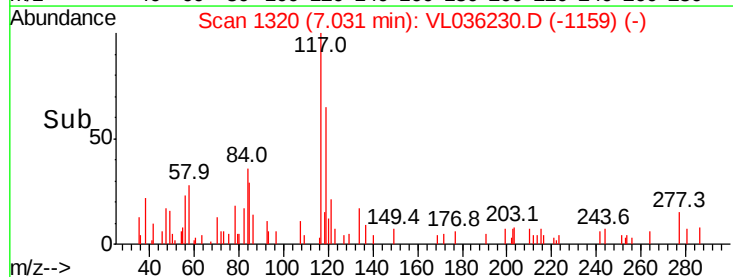
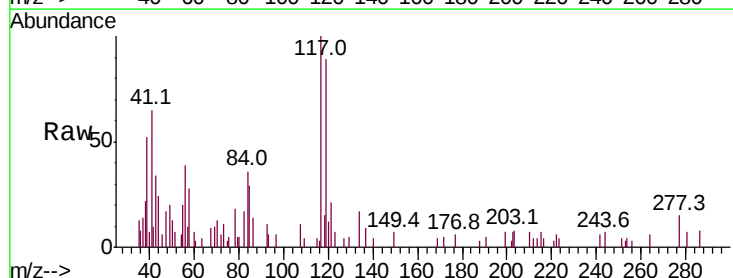
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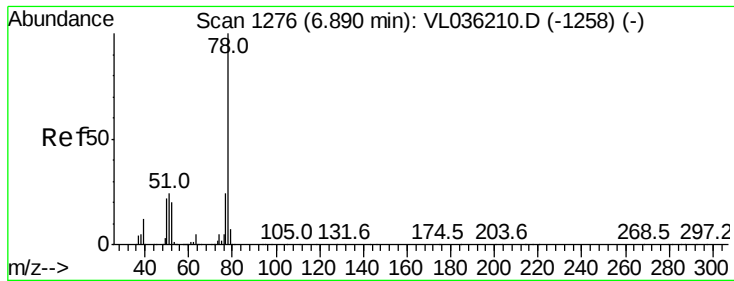
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#35
Carbon Tetrachloride
Concen: 0.048 ppbv m
RT: 7.03 min Scan# 1320
Delta R.T. 0.02 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion: 117 Resp: 10224
Ion Ratio Lower Upper
117 100
119 88.7 74.9 112.3
121 21.1 25.0 37.6#





#36

Benzene

Concen: 0.467 ppbv

RT: 6.89 min Scan# 1277

Delta R.T. 0.00 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

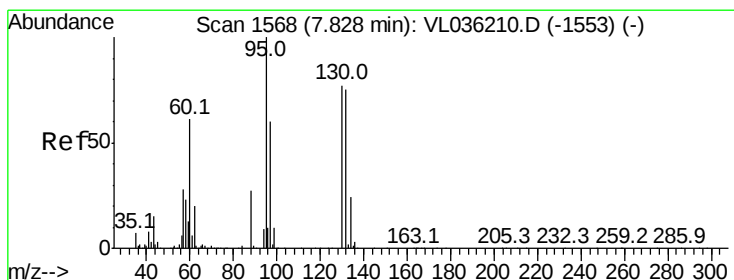
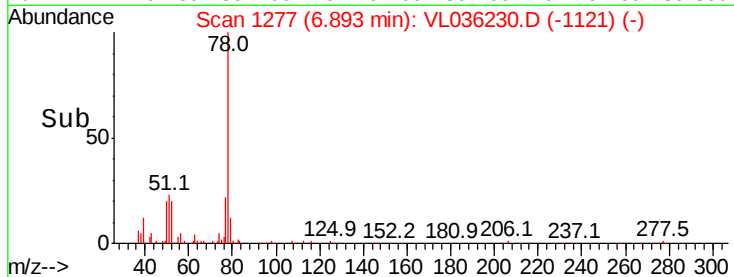
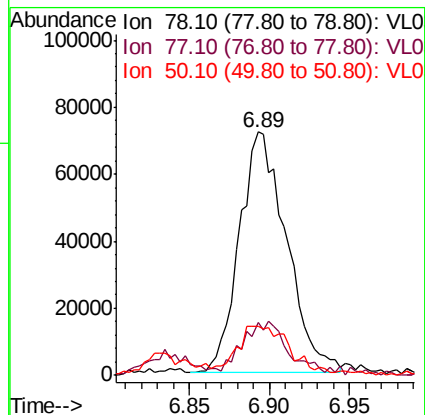
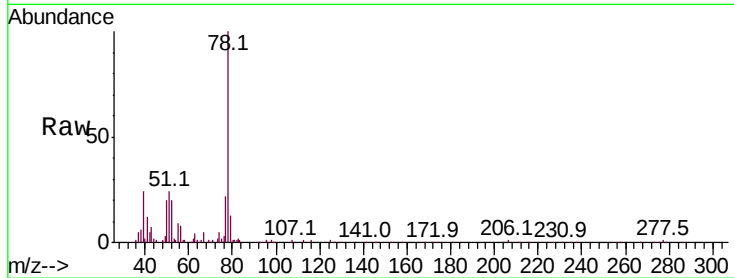
ClientSampleId :

0121-SS4

Tot Ion:	78	Resp:	144856
Ion Ratio	Lower	Upper	
78	100		
77	17.7	19.4	29.0#
50	18.8	17.4	26.2

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#38

Trichloroethene

Concen: 0.576 ppbv m

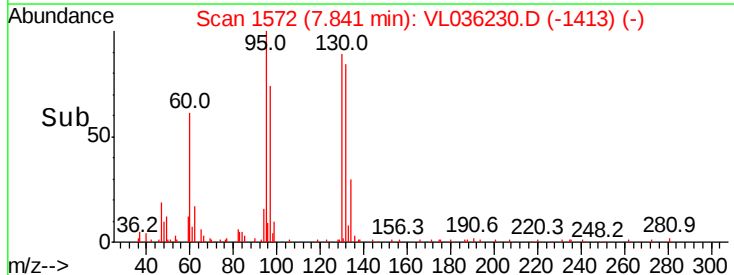
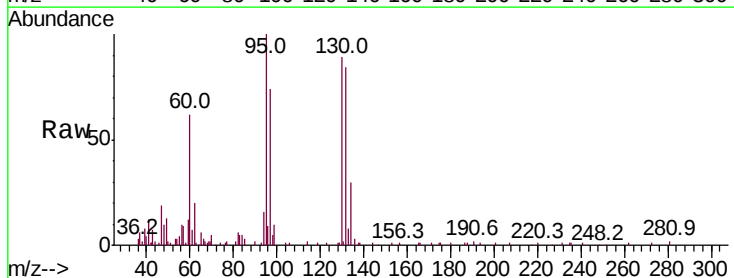
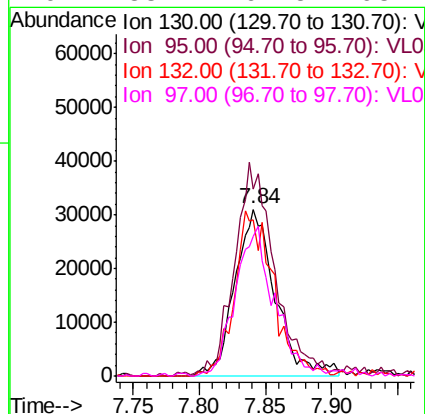
RT: 7.84 min Scan# 1572

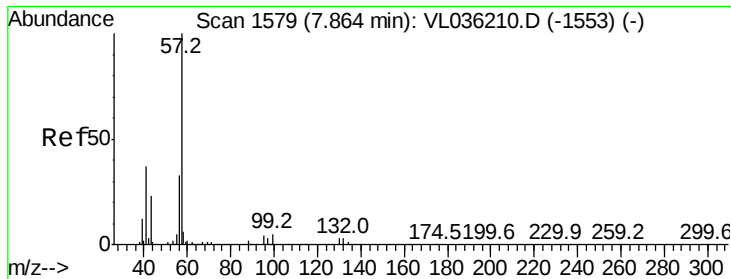
Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Tgt Ion:	130	Resp:	66183
Ion Ratio	Lower	Upper	
130	100		
95	112.6	103.9	155.9
132	94.1	77.4	116.2
97	83.7	62.5	93.7





#44

2,2,4-Trimethylpentane

Concen: 0.132 ppbv m

RT: 7.87 min Scan# 1581

Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

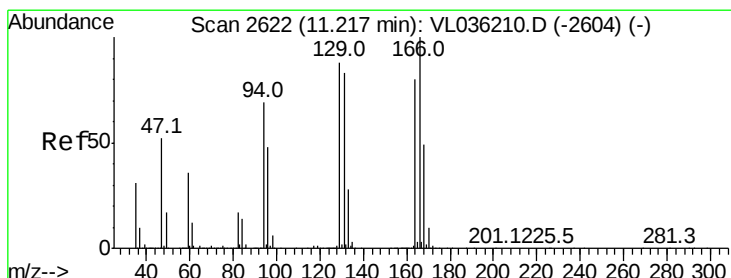
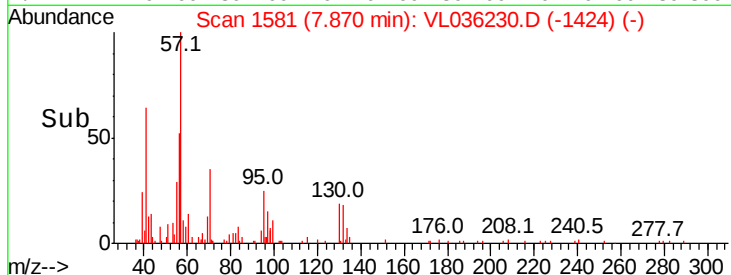
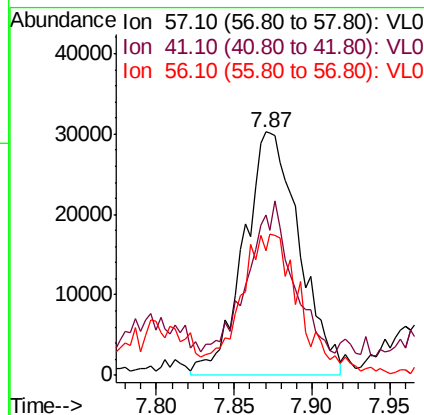
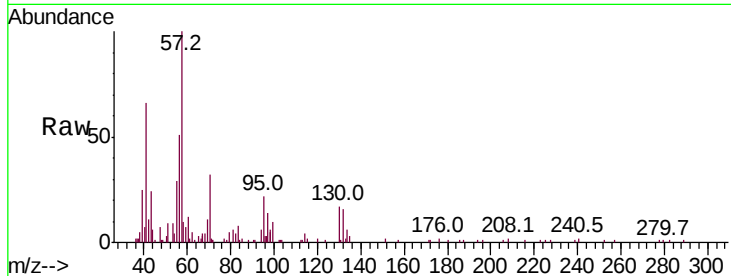
ClientSampleId :

0121-SS4

Tot Ion	57	Resp	75180
Ion Ratio	Lower	Upper	
57	100		
41	64.3	28.5	42.7#
56	61.8	25.5	38.3#

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#52

Tetrachloroethene

Concen: 0.429 ppbv m

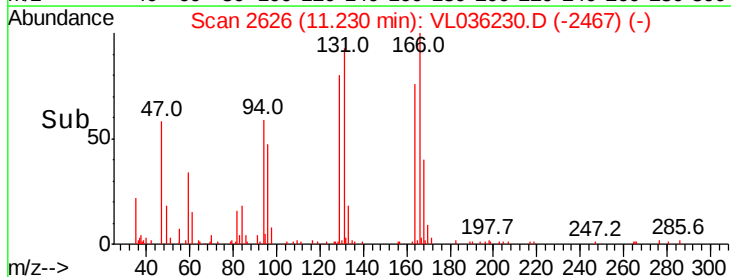
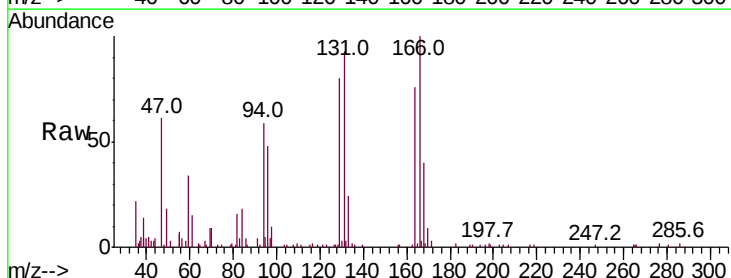
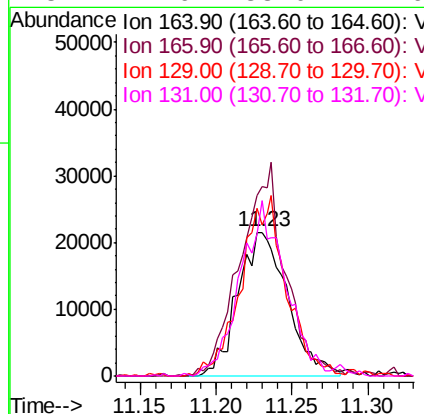
RT: 11.23 min Scan# 2626

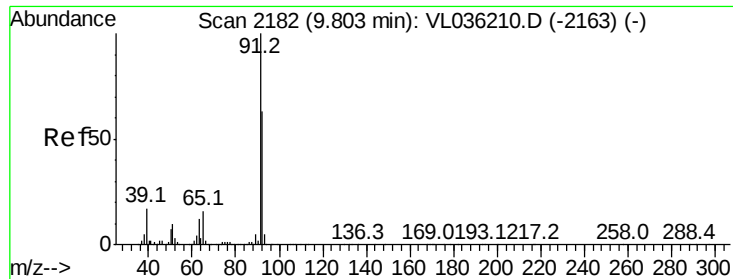
Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Tgt Ion	164	Resp	49125
Ion Ratio	Lower	Upper	
164	100		
166	131.2	99.9	149.9
129	104.8	88.2	132.4
131	121.6	83.0	124.6





#53

Toluene

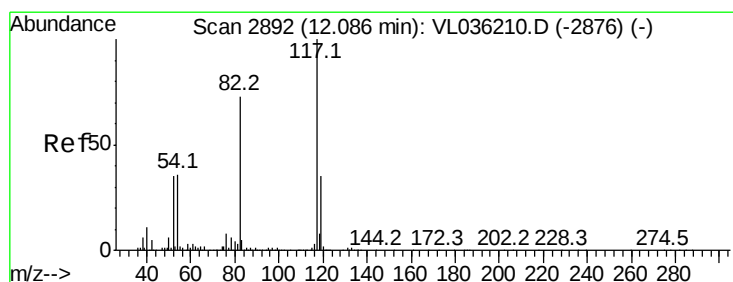
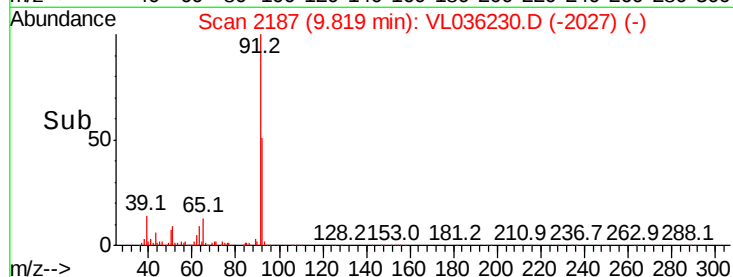
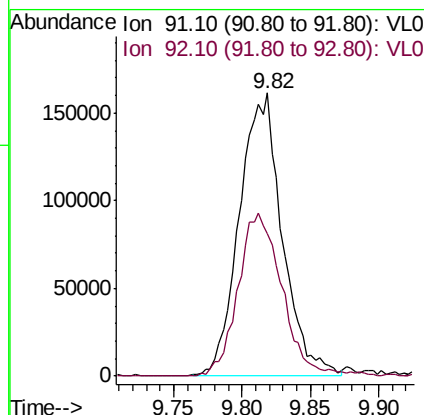
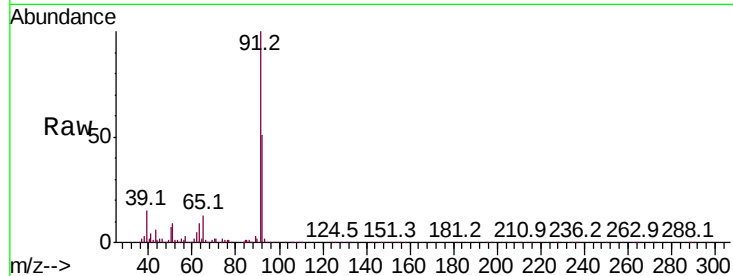
Concen: 1.013 ppbv m
RT: 9.82 min Scan# 2187
Delta R.T. 0.02 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Instrument :
MSVOA_L
ClientSampleId :
0121-SS4

Tot Ion	Ratio	Lower	Upper
91	100		
92	0.0	48.5	72.7#

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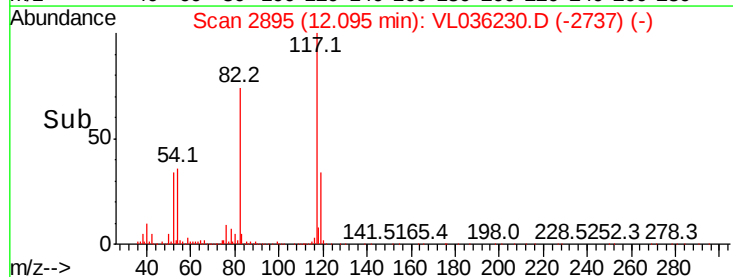
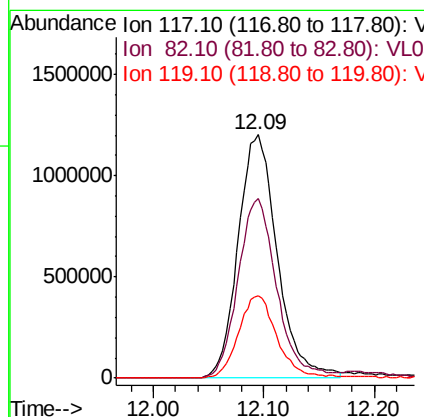
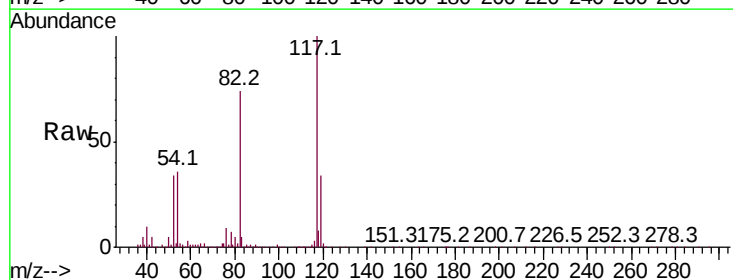


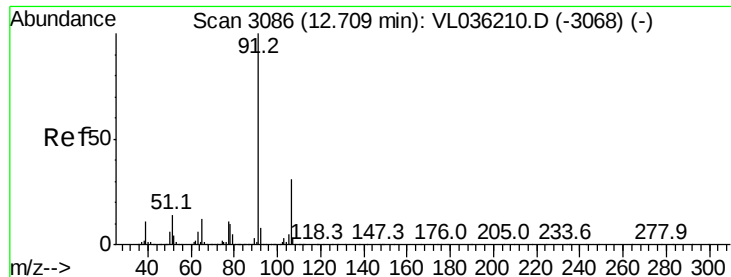
#55

Chlorobenzene-d5

Concen: 10.000 ppbv
RT: 12.09 min Scan# 2895
Delta R.T. 0.01 min
Lab File: VL036230.D
Acq: 13 Jan 2021 18:11

Tgt Ion	Ratio	Lower	Upper
117	100		
82	73.0	59.7	89.5
119	33.9	28.6	43.0





#58

Ethyl Benzene

Concen: 0.223 ppbv m

RT: 12.72 min Scan# 3088

Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

ClientSampleId :

0121-SS4

Tot Ion: 91 Resp: 97767

Ion Ratio Lower Upper

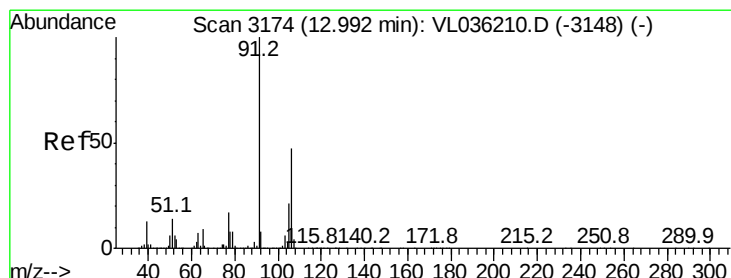
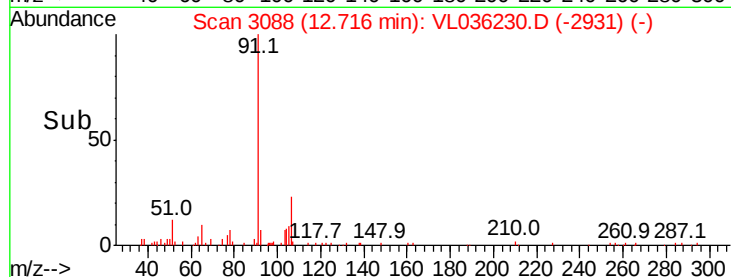
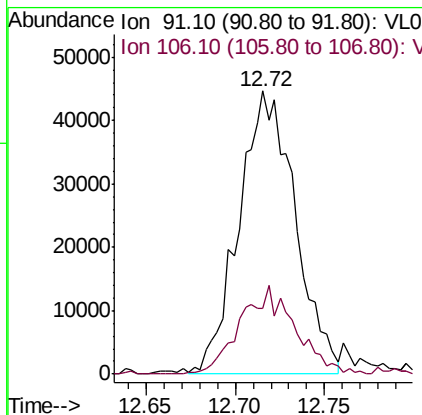
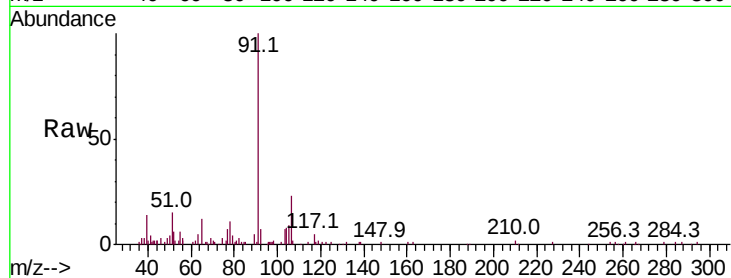
91 100

106 23.0 24.8 37.2#

Manual Integrations
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#59

m/p-Xylene

Concen: 0.729 ppbv m

RT: 12.97 min Scan# 3168

Delta R.T. -0.02 min

Lab File: VL036230.D

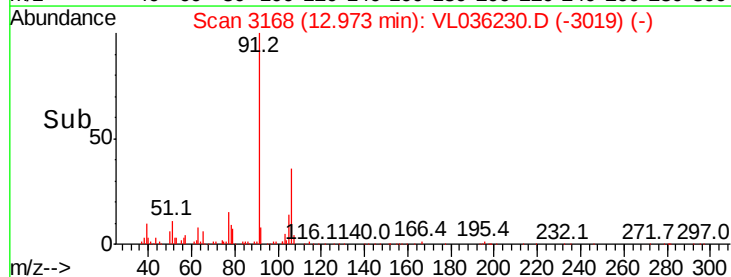
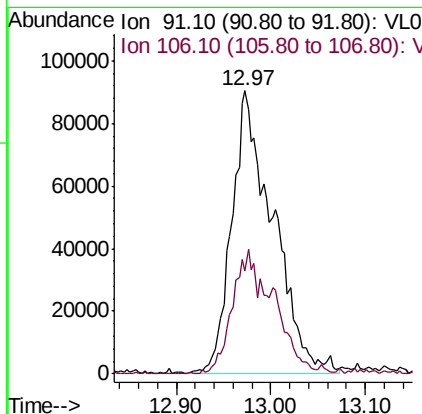
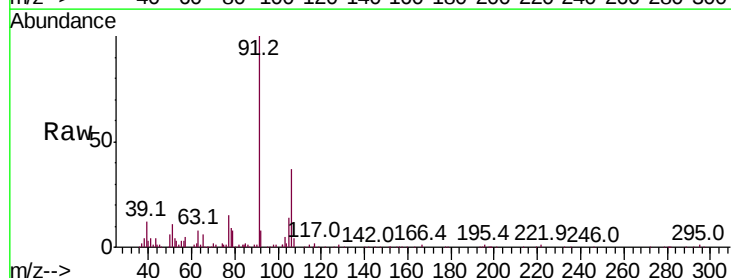
Acq: 13 Jan 2021 18:11

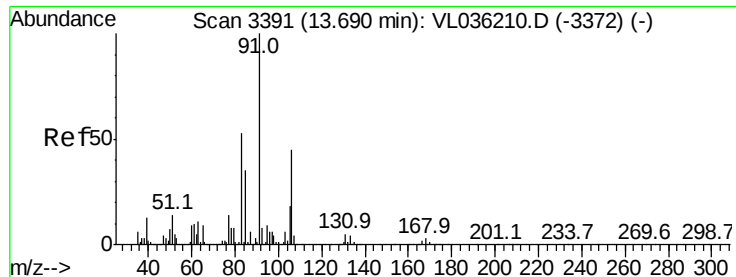
Tgt Ion: 91 Resp: 275206

Ion Ratio Lower Upper

91 100

106 0.0 34.6 51.8#





#60

o-Xylene

Concen: 0.302 ppbv

RT: 13.70 min Scan# 3394

Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

ClientSampleId :

0121-SS4

Tot Ion: 91 Resp: 109720

Ion Ratio Lower Upper

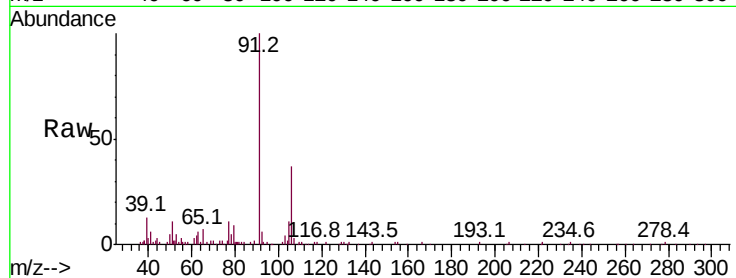
91 100

106 44.7 21.9 65.8

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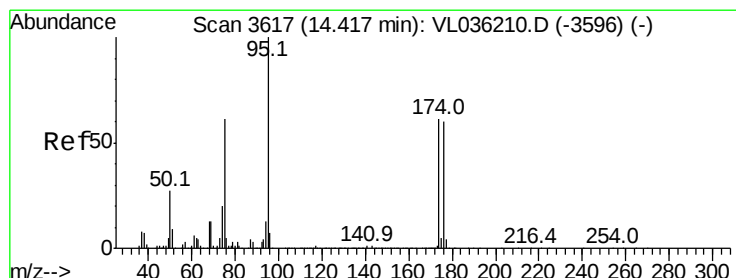
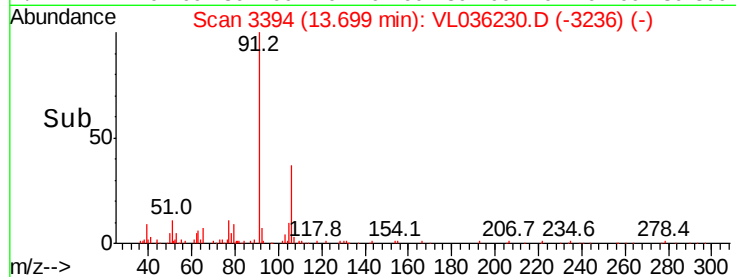
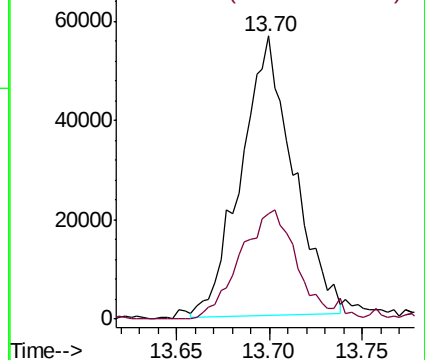
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 9.845 ppbv

RT: 14.43 min Scan# 3620

Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

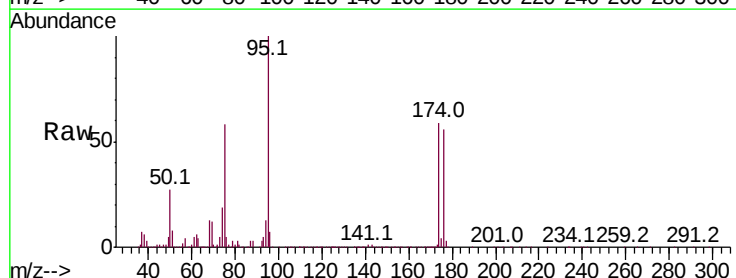
Tgt Ion: 95 Resp: 2412155

Ion Ratio Lower Upper

95 100

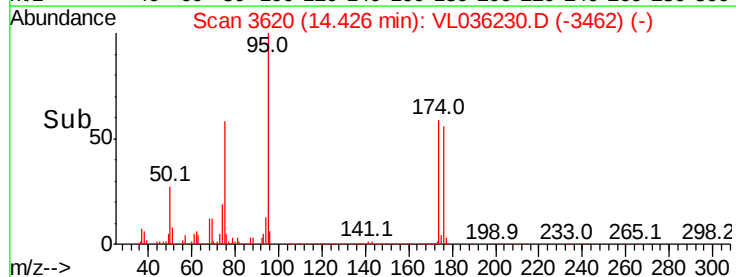
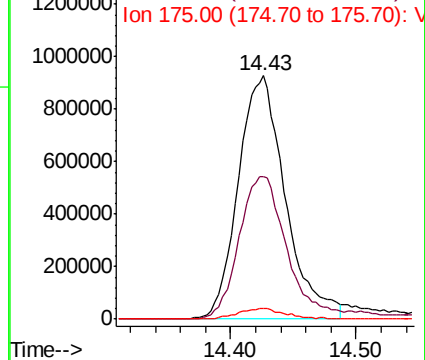
174 64.2 49.4 74.0

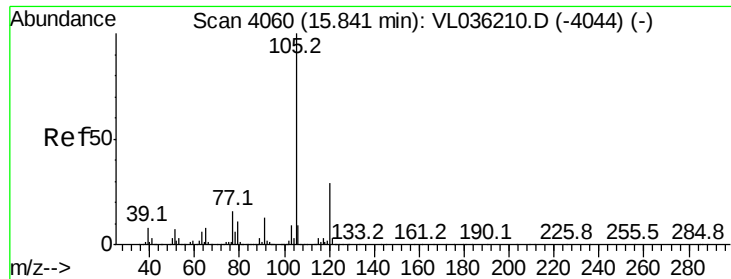
175 4.8 3.8 5.8



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V





#72

4-Ethyltoluene

Concen: 0.129 ppbv m

RT: 15.84 min Scan# 4061

Delta R.T. 0.00 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Instrument :

MSVOA_L

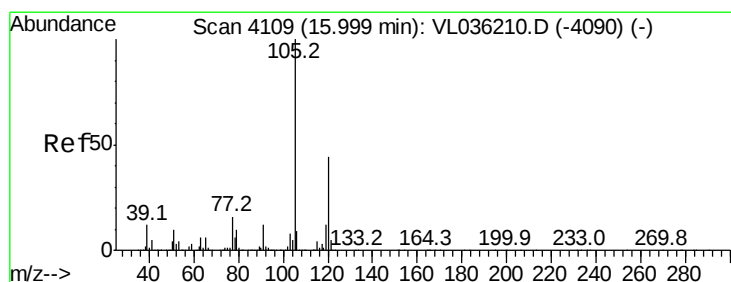
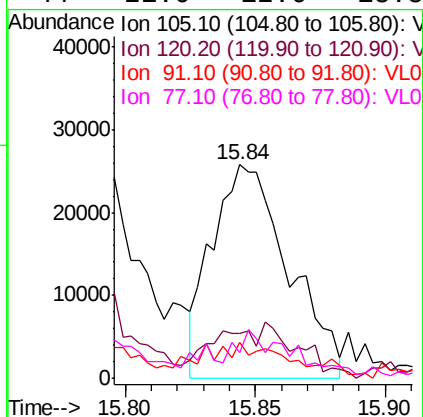
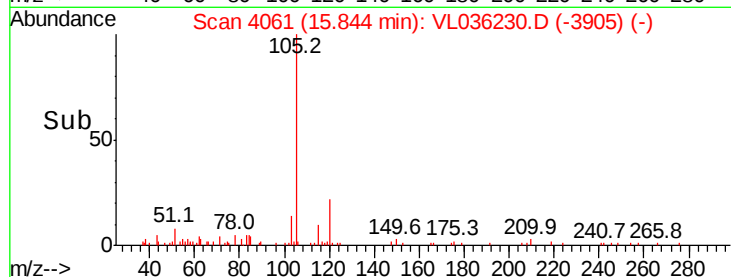
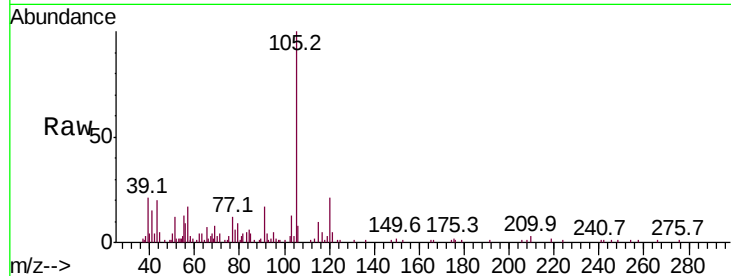
ClientSampleId :

0121-SS4

Tot Ion	Ratio	Resp	Lower	Upper
105	100	52861		
120	27.0	23.7	35.5	
91	18.7	11.9	17.9#	
77	21.0	12.6	18.8#	

Manual Integrations
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#73

1,3,5-Trimethylbenzene

Concen: 0.116 ppbv

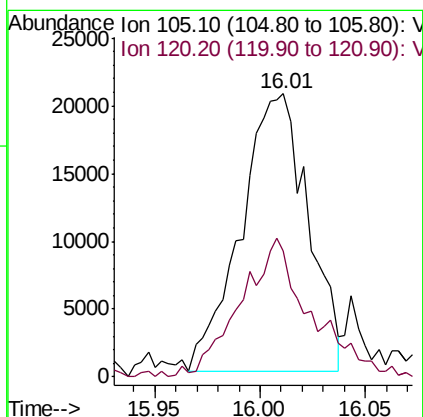
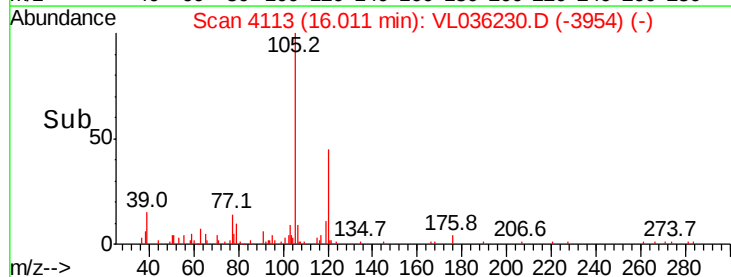
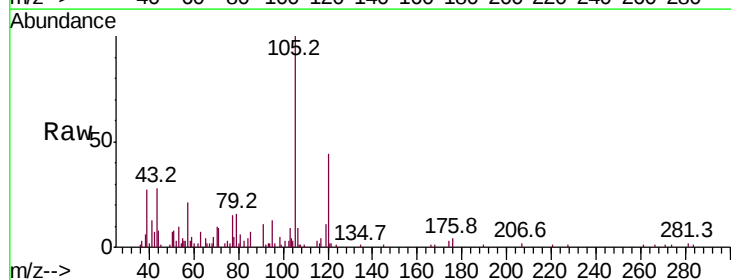
RT: 16.01 min Scan# 4113

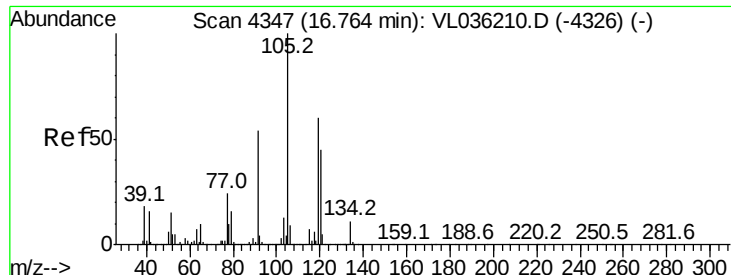
Delta R.T. 0.01 min

Lab File: VL036230.D

Acq: 13 Jan 2021 18:11

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	45407		
120	45.8	35.5	53.3	





#74
 1,2,4-Trimethylbenzene
 Concen: 0.422 ppbv m
 RT: 16.77 min Scan# 4350
 Delta R.T. 0.01 min
 Lab File: VL036230.D
 Acq: 13 Jan 2021 18:11

Instrument :
 MSVOA_L
 ClientSampleId :
 0121-SS4

Tot Ion	Ion	Ratio	Resp Lower	Upper
105	100			
120	35.2	36.2	54.2#	
91	11.1	43.3	64.9#	
77	13.4	19.1	28.7#	

Manual Integrations
 APPROVED

MMDadoda
 1/18/2021 3:49:40 PM

