

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL081121\
 Data File : VL037403.D
 Acq On : 11 Aug 2021 23:55
 Operator : SY/AP
 Sample : M3121-01RE
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-PLAY-ROOM-1RE

Manual Integrations
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 8/12/2021 10:17:26 AM

Quant Time: Aug 12 06:09:52 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL081121AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Aug 11 2021
 QLast Update : Wed Aug 11 09:01:07 2021
 Response via : Initial Calibration

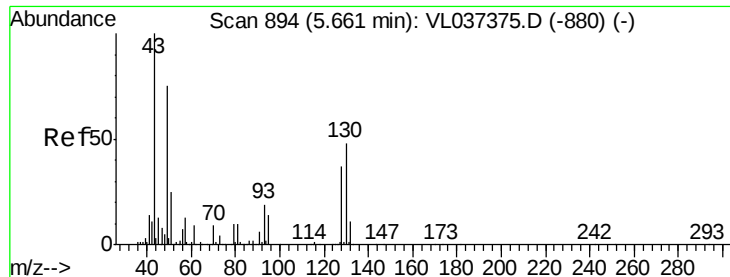
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1193422	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	3571206	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.08	117	3113340	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	2139865	9.22	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	92.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.05	85	40806m	0.189	ppbv	
3) Chlorodifluoromethane	2.99	51	362419	1.633	ppbv	95
4) Chloromethane	3.14	50	47689m	0.584	ppbv	
5) Vinyl Chloride	3.26	62	6743	0.081	ppbv #	68
9) Propene	3.01	41	45089m	0.597	ppbv	
10) Heptane	8.13	43	26065m	0.146	ppbv	
11) Trichlorofluoromethane	3.95	101	55569m	0.306	ppbv	
12) 1,1,2-Trichlorotrifluoroet	4.49	101	19869m	0.154	ppbv	
13) Ethanol	3.62	45	236708	25.958	ppbv	98
15) Acetone	3.85	43	779800	6.858	ppbv	97
19) Isopropyl Alcohol	3.98	45	235328m	3.595	ppbv	
20) Methylene Chloride	4.34	84	965733	15.641	ppbv	94
26) Hexane	5.69	57	838299	5.686	ppbv #	46
29) Chloroform	5.75	83	32233m	0.152	ppbv	
30) Cyclohexane	7.13	84	29107m	0.239	ppbv	
32) 1,1,1-Trichloroethane	6.51	97	14766m	0.072	ppbv	
34) 2-Butanone	5.25	43	61335	0.452	ppbv #	75
35) Carbon Tetrachloride	7.01	117	24802m	0.125	ppbv	
36) Benzene	6.89	78	63301m	0.223	ppbv	
38) Trichloroethene	7.84	130	11112m	0.092	ppbv	
44) 2,2,4-Trimethylpentane	7.87	57	108119m	0.229	ppbv	
52) Tetrachloroethene	11.22	164	14963m	0.130	ppbv	
53) Toluene	9.81	91	710063	2.160	ppbv	100
59) m/p-Xylene	12.97	91	94358m	0.264	ppbv	
60) o-Xylene	13.68	91	43103m	0.130	ppbv	
63) 1,1,2,2-Tetrachloroethane	13.69	83	17725m	0.071	ppbv	
72) 4-Ethyltoluene	15.83	105	41072m	0.106	ppbv	
73) 1,3,5-Trimethylbenzene	16.00	105	37493m	0.104	ppbv	
74) 1,2,4-Trimethylbenzene	16.76	105	72728m	0.199	ppbv	

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.66 min Scan# 895

Delta R.T. 0.00 min

Lab File: VL037403.D

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Instrument :

MSVOA_L

ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion: 49 Resp: 1193422

Ion Ratio Lower Upper

49 100

128 54.7 28.1 84.4

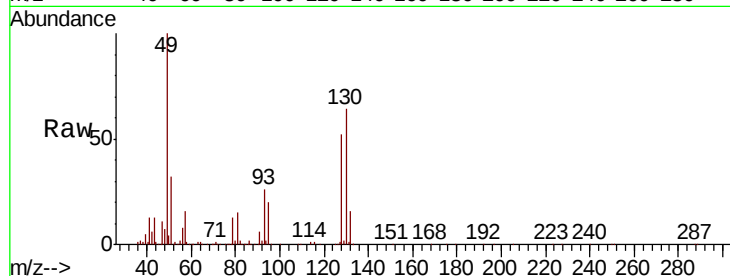
130 67.7 34.3 102.8

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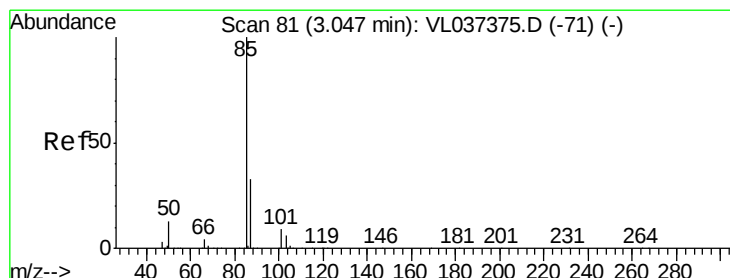
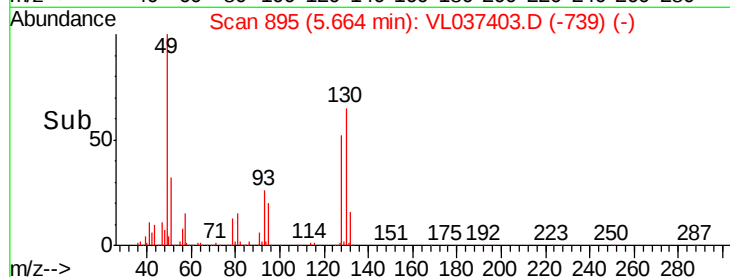
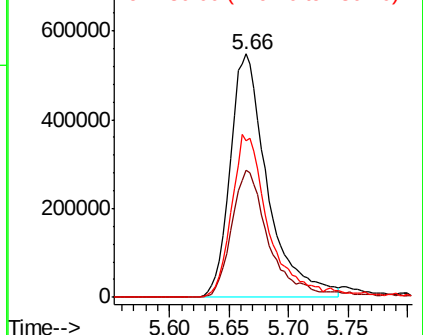
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Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.189 ppbv m

RT: 3.05 min Scan# 81

Delta R.T. -0.00 min

Lab File: VL037403.D

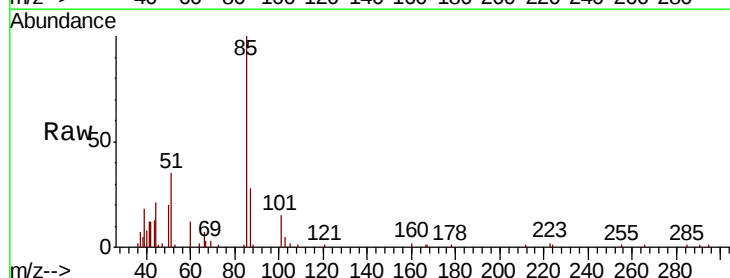
Acq: 11 Aug 2021 23:55

Tgt Ion: 85 Resp: 40806

Ion Ratio Lower Upper

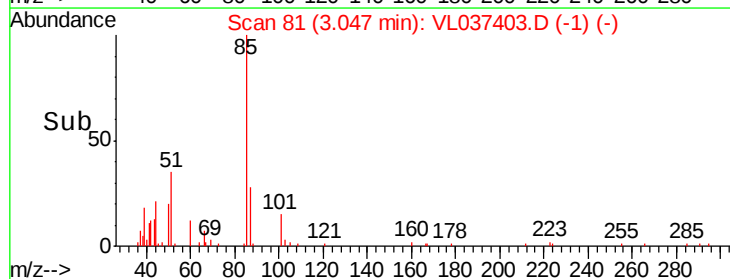
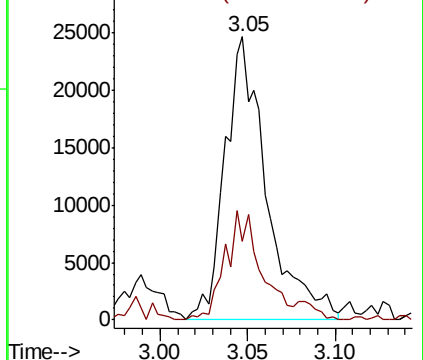
85 100

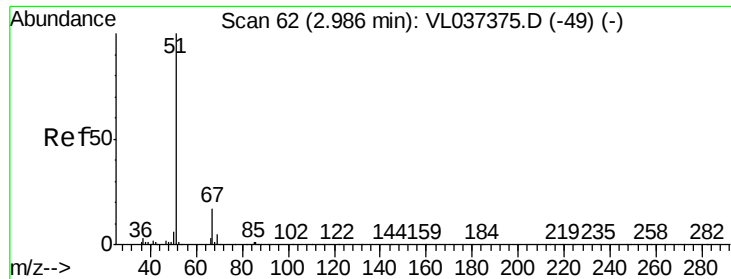
87 27.7 26.6 39.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





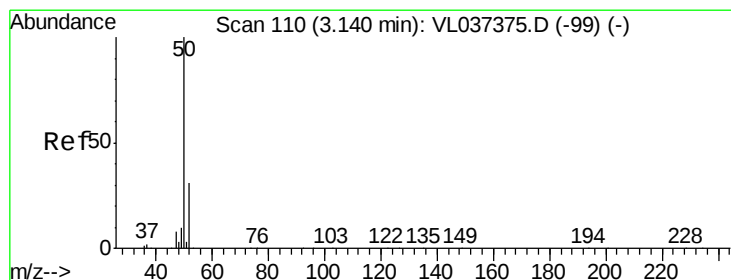
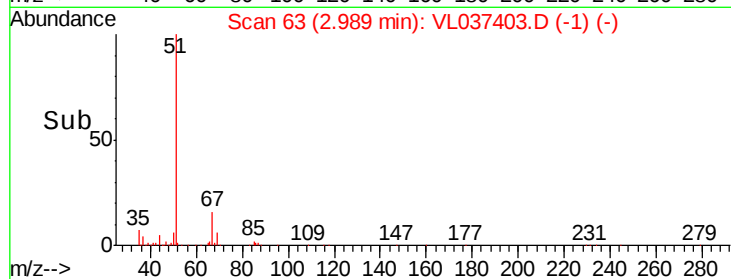
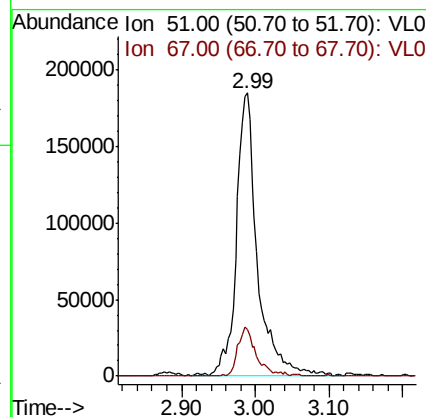
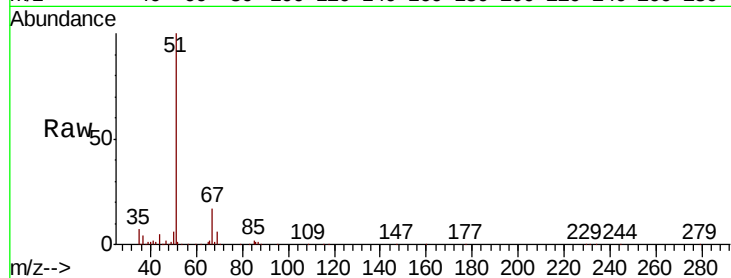
#3
Chlorodifluoromethane
Concen: 1.633 ppbv
RT: 2.99 min Scan# 63
Delta R.T. 0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Instrument :
MSVOA_L
ClientSampleId :
IA-PLAY-ROOM-1RE

Tot Ion	Ratio	Lower	Upper
51	100		
67	15.9	14.3	21.5

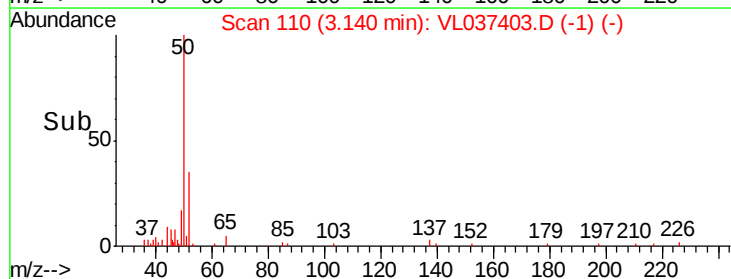
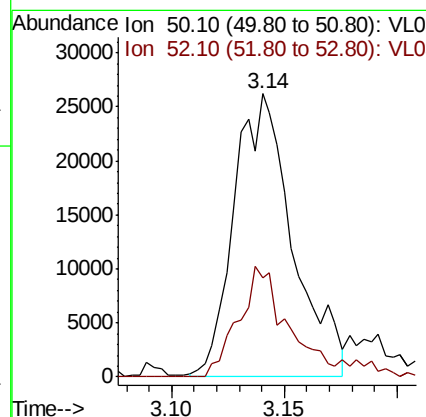
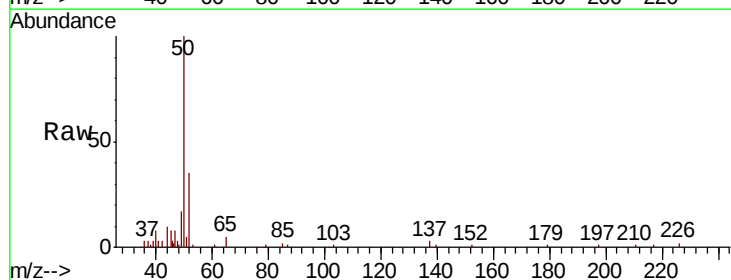
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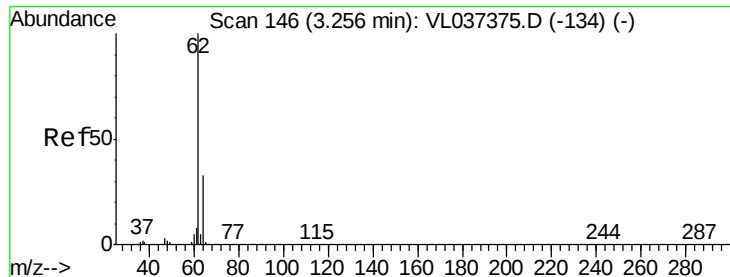
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#4
Chloromethane
Concen: 0.584 ppbv m
RT: 3.14 min Scan# 110
Delta R.T. -0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Tgt Ion	Ratio	Lower	Upper
50	100		
52	35.2	25.0	37.4





#5

Vinyl Chloride

Concen: 0.081 ppbv

RT: 3.26 min Scan# 148

Delta R.T. 0.01 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion: 62 Resp: 6743

Ion Ratio Lower Upper

62 100

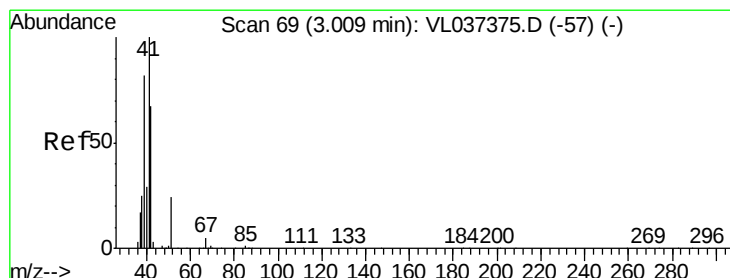
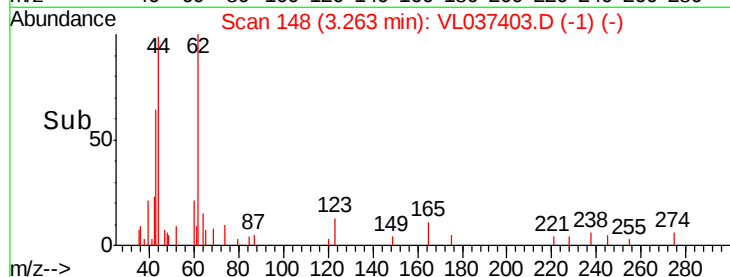
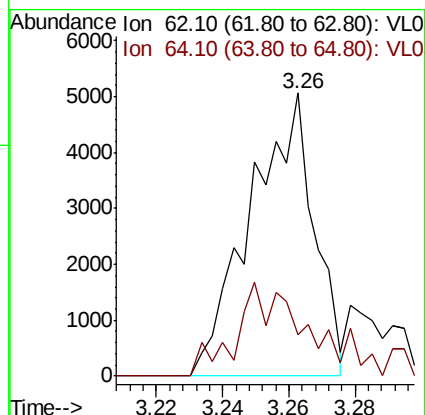
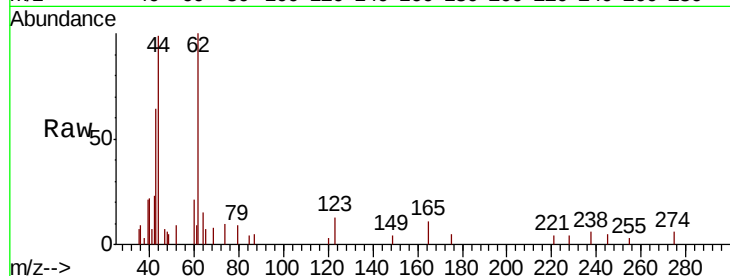
64 14.7 26.2 39.4#

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#9

Propene

Concen: 0.597 ppbv m

RT: 3.01 min Scan# 71

Delta R.T. 0.01 min

Lab File: VL037403.D

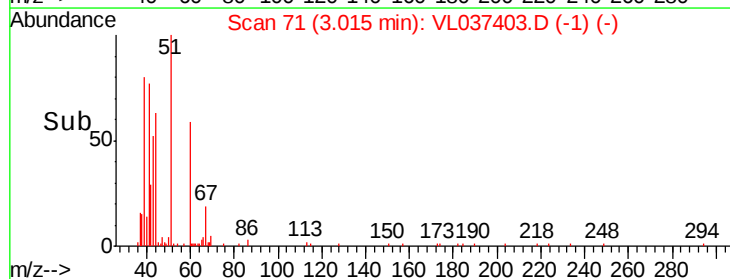
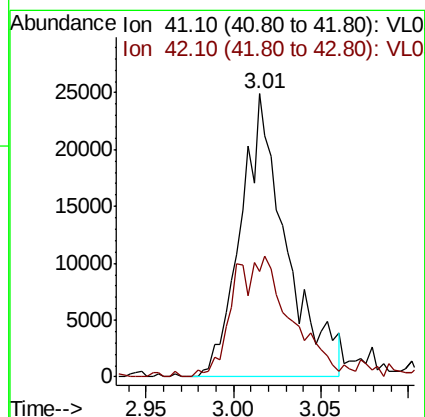
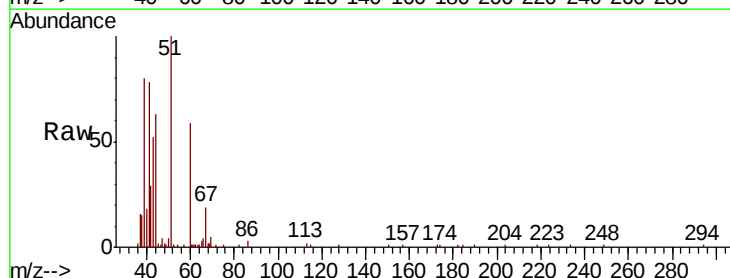
Acq: 11 Aug 2021 23:55

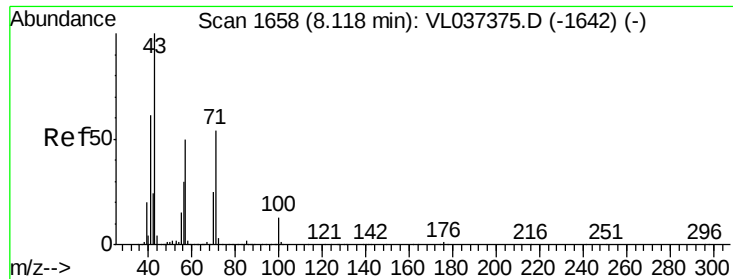
Tgt Ion: 41 Resp: 45089

Ion Ratio Lower Upper

41 100

42 54.4 55.5 83.3#





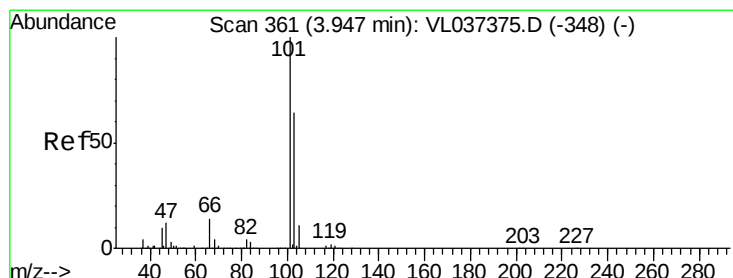
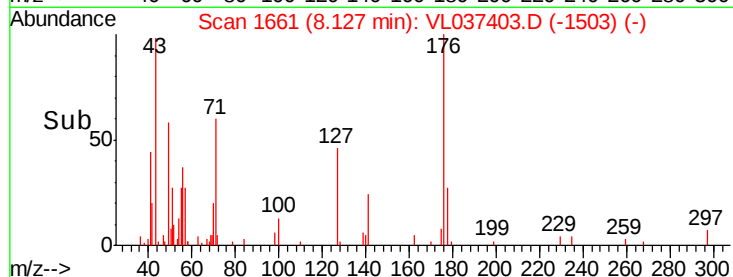
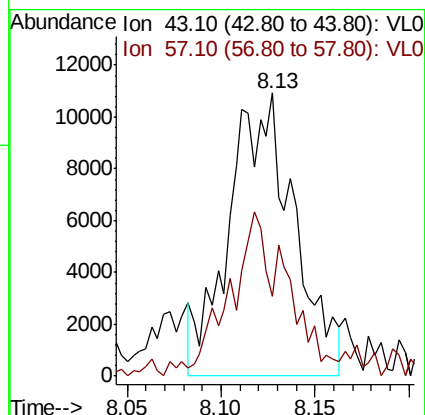
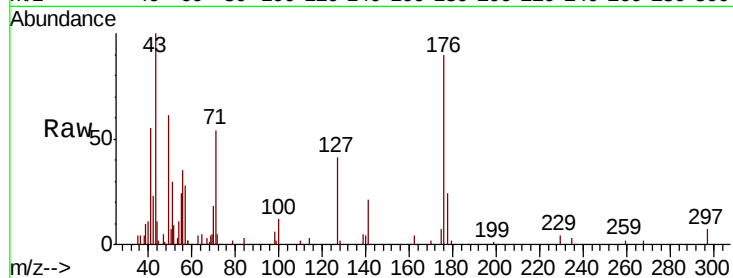
#10
 Heptane
 Concen: 0.146 ppbv m
 RT: 8.13 min Scan# 1661
 Delta R.T. 0.01 min
 Lab File: VL037403.D
 Acq: 11 Aug 2021 23:55

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-PLAY-ROOM-1RE

Tot Ion: 43 Resp: 26065
 Ion Ratio Lower Upper
 43 100
 57 0.0 40.2 60.2#

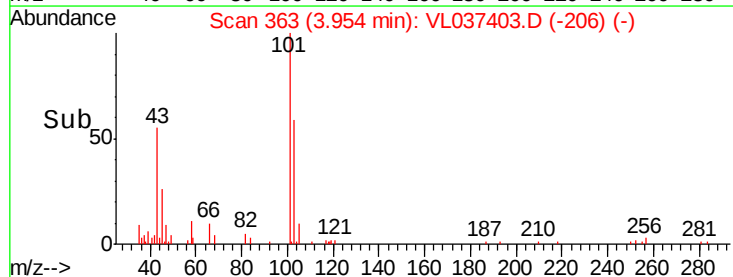
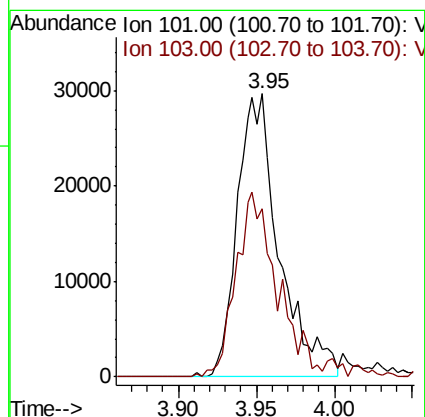
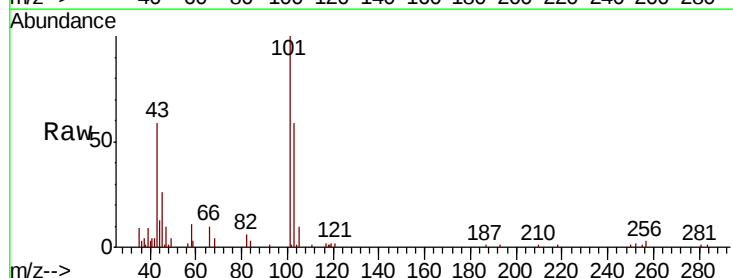
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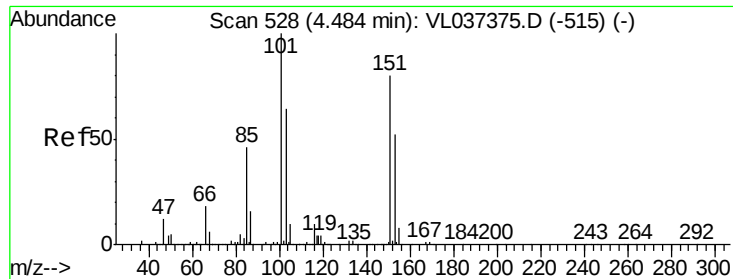
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#11
 Trichlorofluoromethane
 Concen: 0.306 ppbv m
 RT: 3.95 min Scan# 363
 Delta R.T. 0.01 min
 Lab File: VL037403.D
 Acq: 11 Aug 2021 23:55

Tgt Ion: 101 Resp: 55569
 Ion Ratio Lower Upper
 101 100
 103 59.4 51.2 76.8





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.154 ppbv m

RT: 4.49 min Scan# 529

Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion:101 Resp: 19869

Ion Ratio Lower Upper

101 100

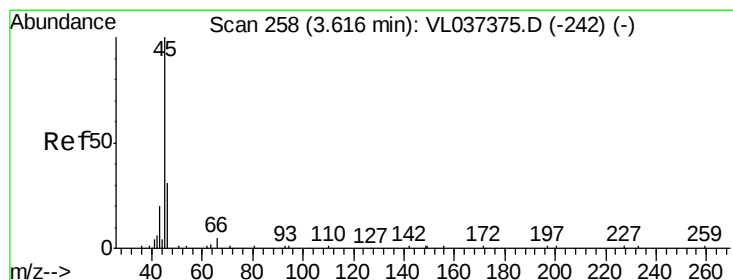
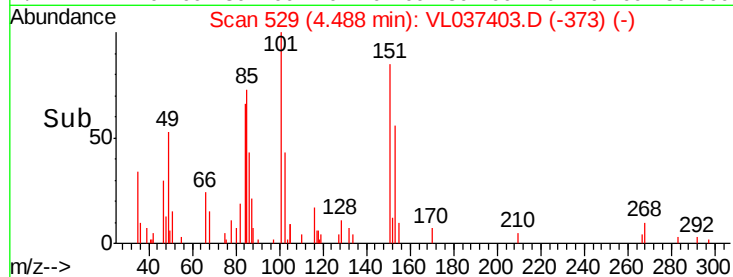
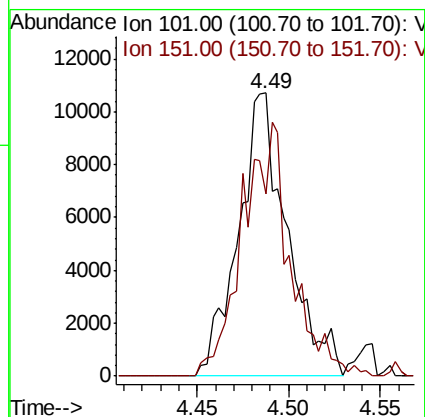
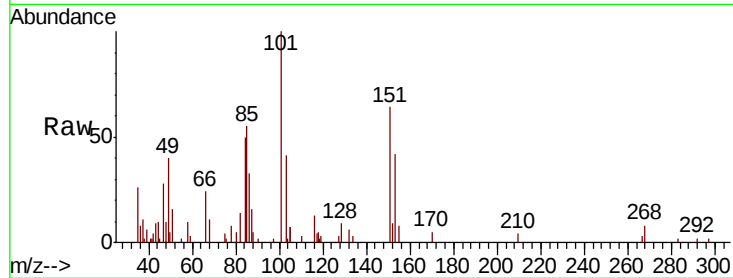
151 88.8 64.9 97.3

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#13

Ethanol

Concen: 25.958 ppbv

RT: 3.62 min Scan# 258

Delta R.T. -0.00 min

Lab File: VL037403.D

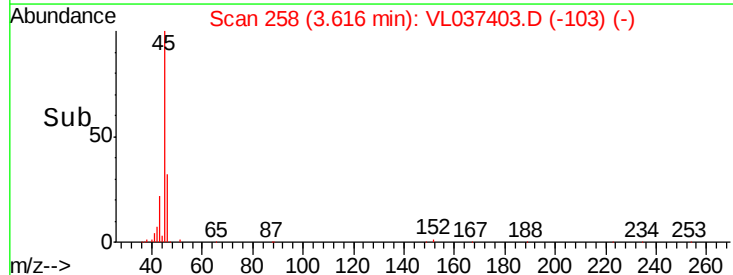
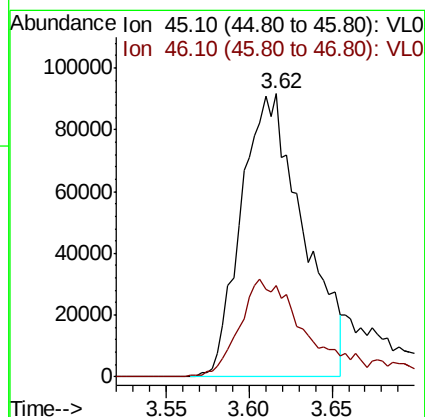
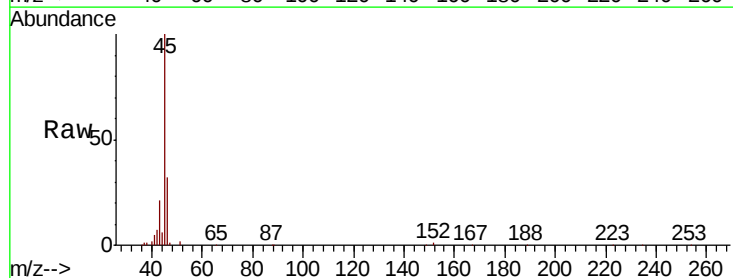
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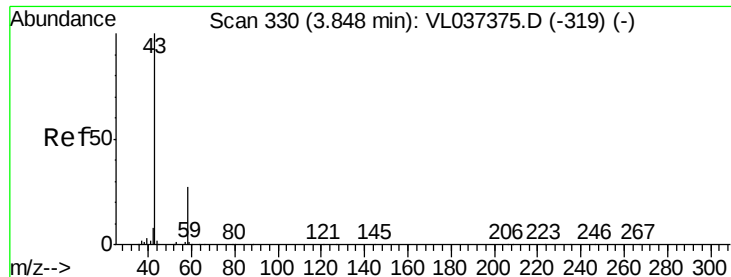
Tgt Ion: 45 Resp: 236708

Ion Ratio Lower Upper

45 100

46 40.6 15.8 63.4





#15

Acetone

Concen: 6.858 ppbv

RT: 3.85 min Scan# 330

Delta R.T. -0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion: 43 Resp: 779800

Ion Ratio Lower Upper

43 100

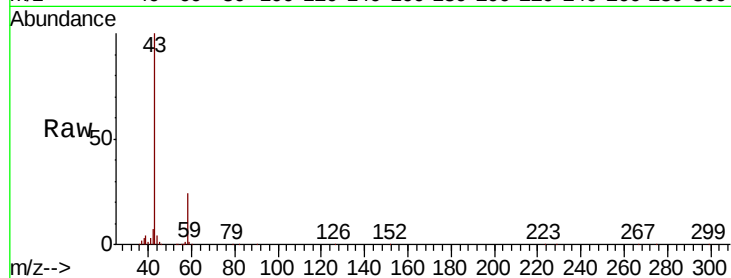
58 29.4 24.6 37.0

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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.85

400000

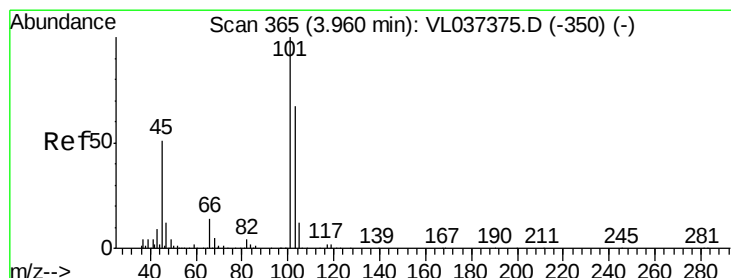
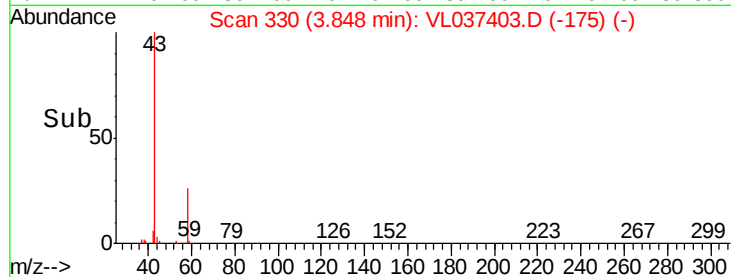
300000

200000

100000

0

Time-->



#19

Isopropyl Alcohol

Concen: 3.595 ppbv m

RT: 3.98 min Scan# 372

Delta R.T. 0.02 min

Lab File: VL037403.D

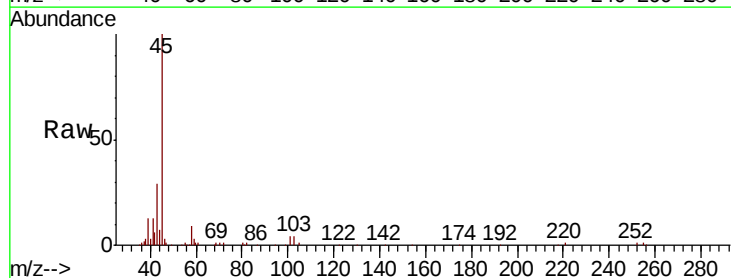
Acq: 11 Aug 2021 23:55

Tgt Ion: 45 Resp: 235328

Ion Ratio Lower Upper

45 100

58 3.6 38.7 58.1#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.98

80000

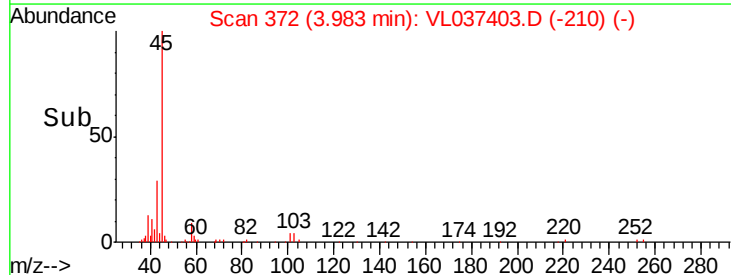
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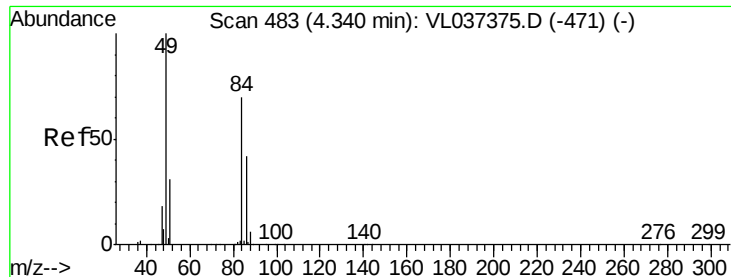
40000

20000

0

Time-->





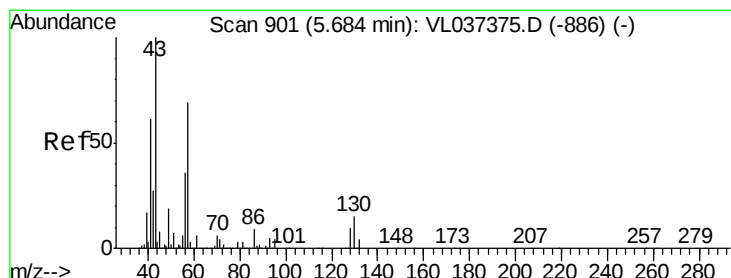
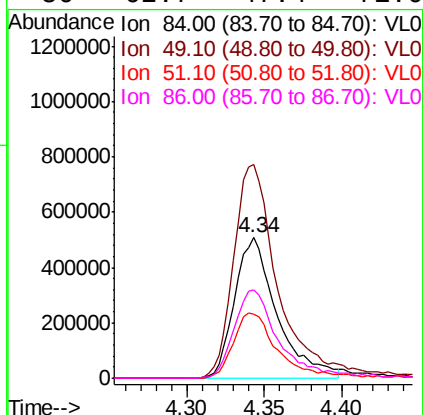
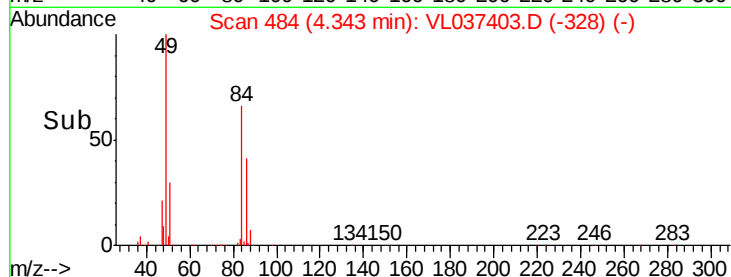
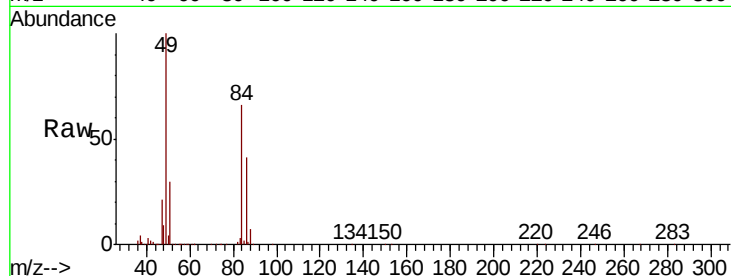
#20
Methvlene Chloride
Concen: 15.641 ppbv
RT: 4.34 min Scan# 484
Delta R.T. 0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Instrument :
MSVOA_L
ClientSampleId :
IA-PLAY-ROOM-1RE

Tot Ion:	84	Resp:	965733
Ion	Ratio	Lower	Upper
84	100		
49	151.7	113.8	170.6
51	45.5	34.7	52.1
86	62.7	47.4	71.0

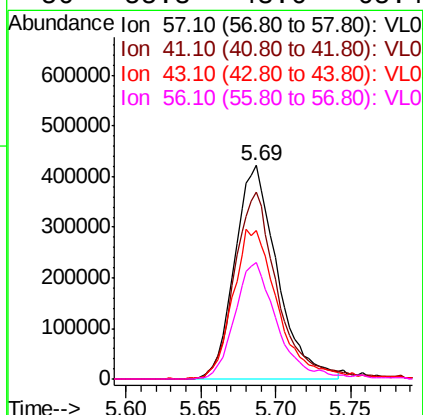
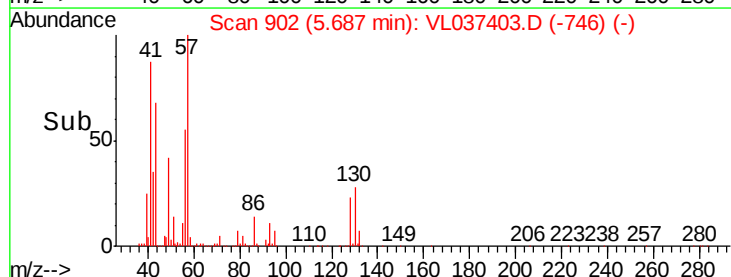
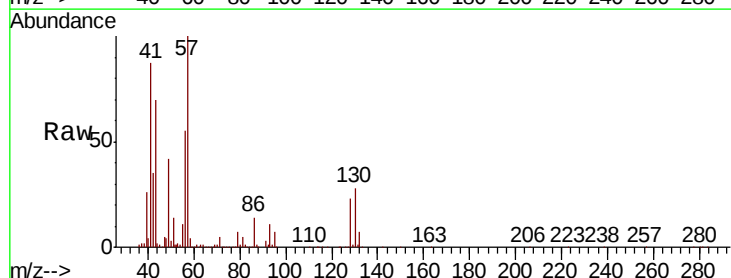
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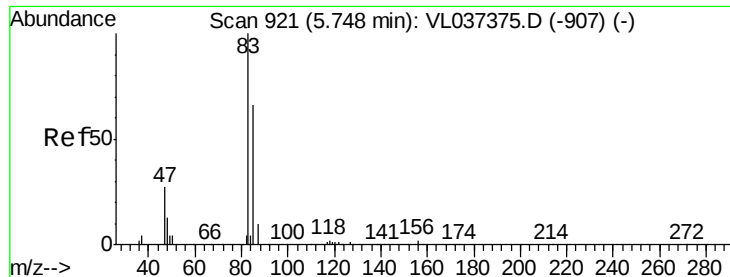
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#26
Hexane
Concen: 5.686 ppbv
RT: 5.69 min Scan# 902
Delta R.T. 0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Tgt Ion:	57	Resp:	838299
Ion	Ratio	Lower	Upper
57	100		
41	89.8	73.4	110.0
43	75.6	174.4	261.6#
56	55.3	43.6	65.4





#29

Chloroform

Concen: 0.152 ppbv m

RT: 5.75 min Scan# 922

Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Tot Ion: 83 Resp: 32233

Ion Ratio Lower Upper

83 100

85 69.0 52.8 79.2

Instrument :

MSVOA_L

ClientSampleId :

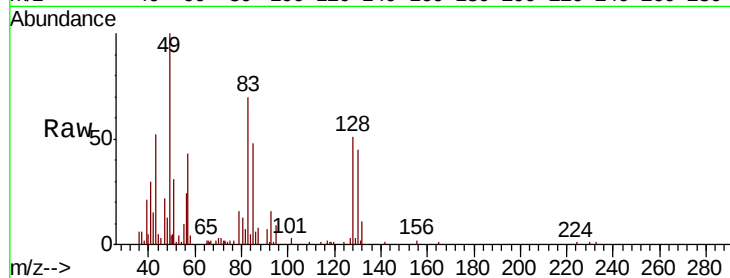
IA-PLAY-ROOM-1RE

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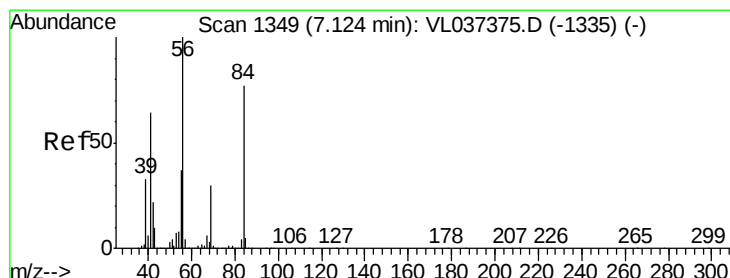
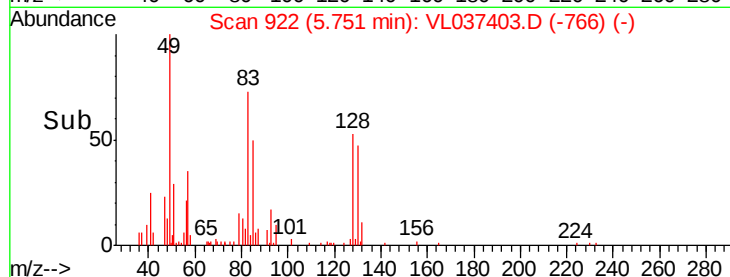
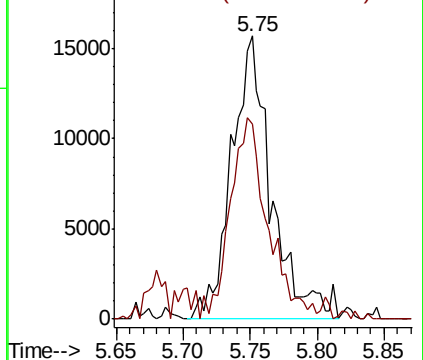
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Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#30

Cyclohexane

Concen: 0.239 ppbv m

RT: 7.13 min Scan# 1351

Delta R.T. 0.01 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

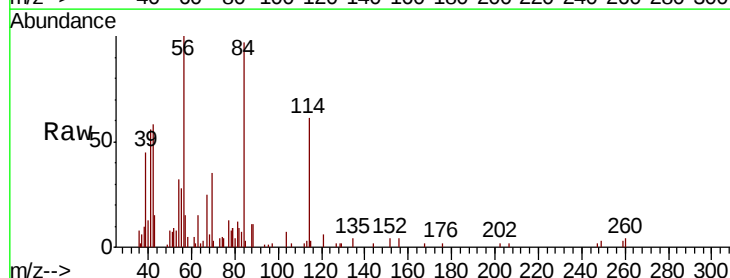
Tgt Ion: 84 Resp: 29107

Ion Ratio Lower Upper

84 100

56 0.0 109.4 164.0#

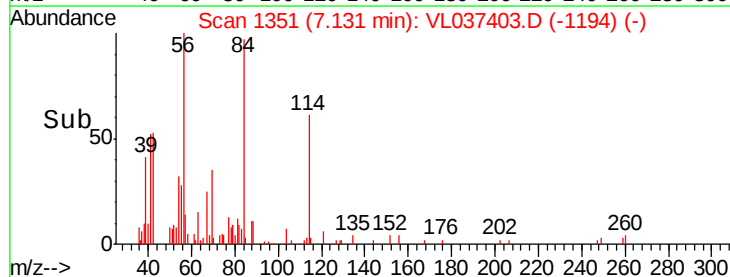
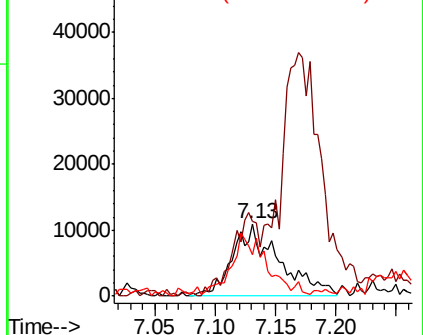
41 0.0 66.2 99.2#

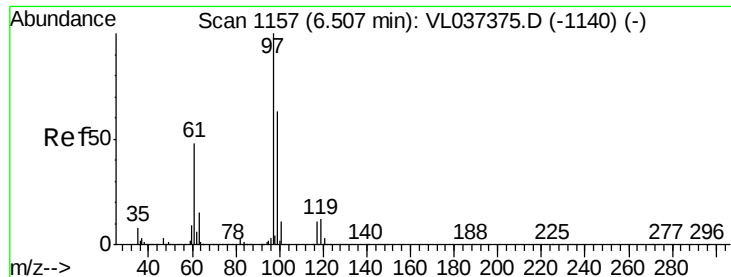


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0





#32

1,1,1-Trichloroethane

Concen: 0.072 ppbv m

RT: 6.51 min Scan# 1159

Delta R.T. 0.01 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

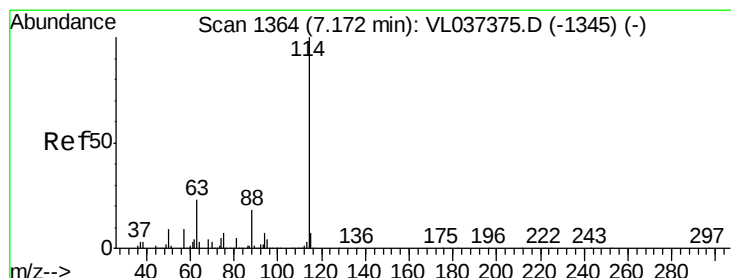
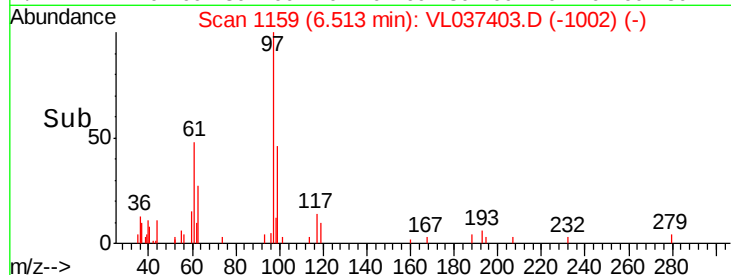
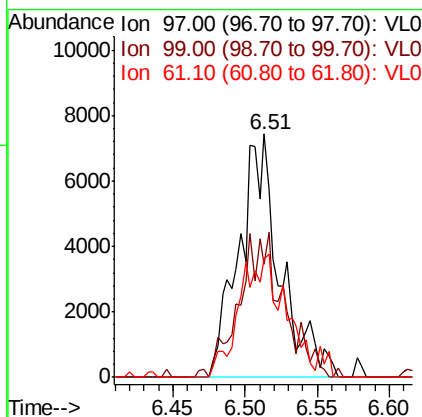
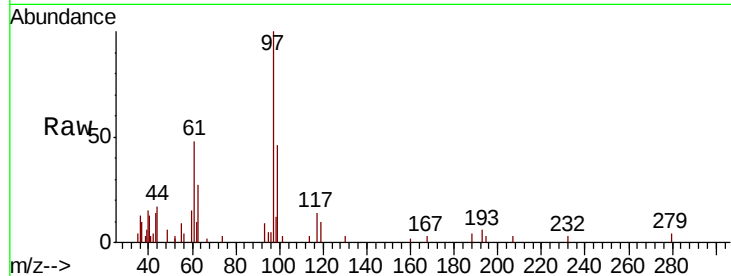
ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion:	97	Resp:	14766
Ion	Ratio	Lower	Upper
97	100		
99	63.6	52.7	79.1
61	58.6	39.9	59.9

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#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

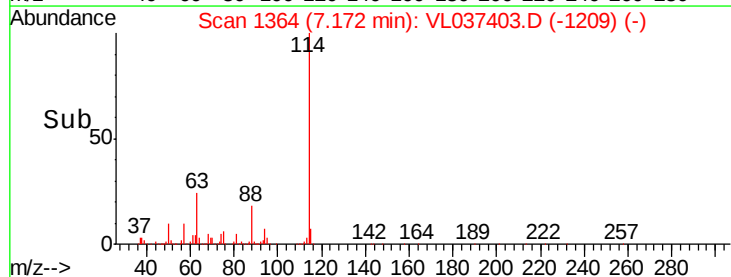
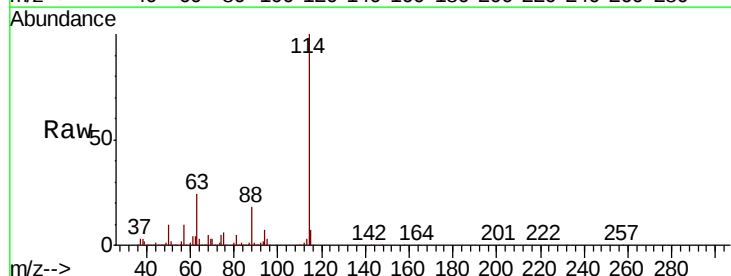
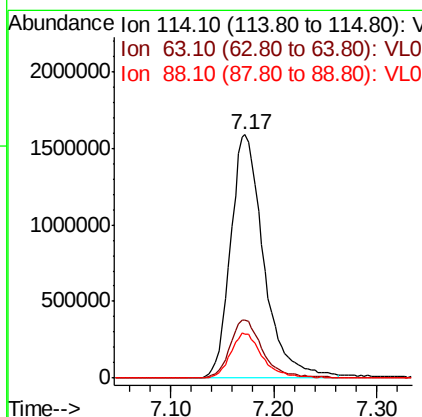
RT: 7.17 min Scan# 1364

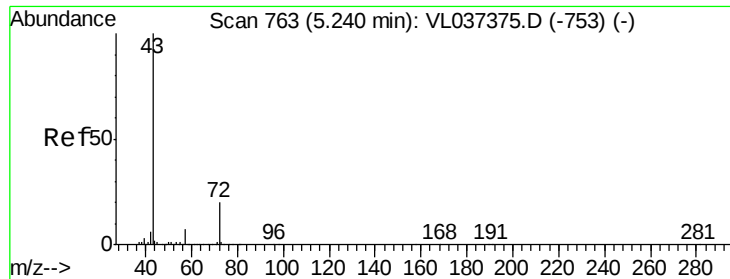
Delta R.T. -0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Tgt Ion:	114	Resp:	3571206
Ion	Ratio	Lower	Upper
114	100		
63	23.9	19.5	29.3
88	18.1	14.3	21.5





#34

2-Butanone

Concen: 0.452 ppbv

RT: 5.25 min Scan# 767

Delta R.T. 0.01 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

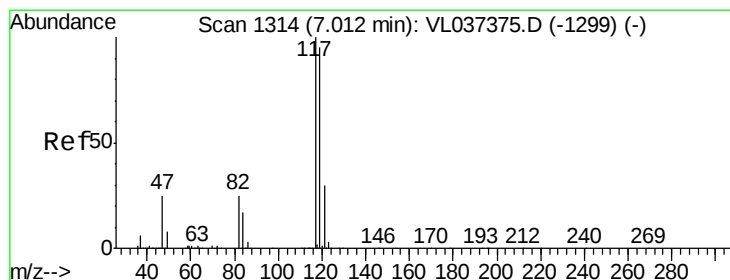
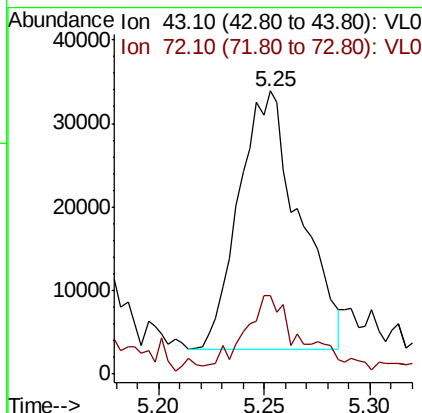
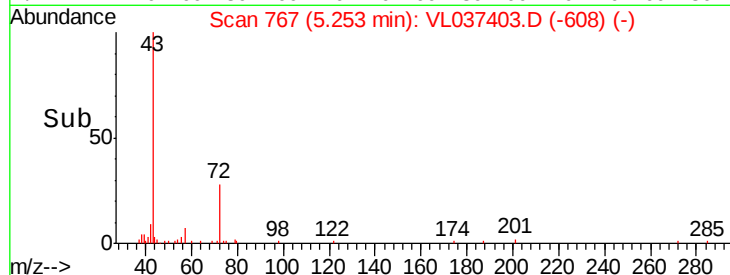
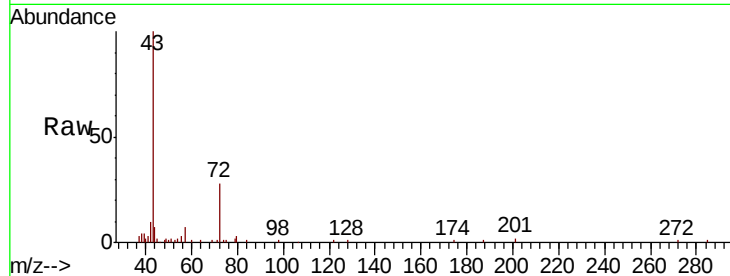
ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion	Ratio	Lower	Upper
43	100		
72	36.7	19.6	29.4#

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#35

Carbon Tetrachloride

Concen: 0.125 ppbv m

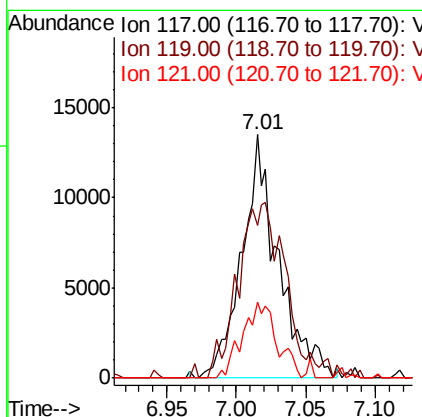
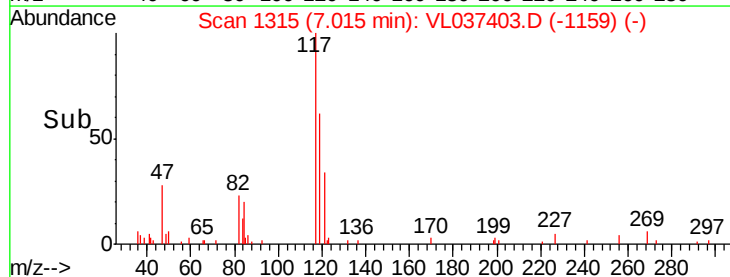
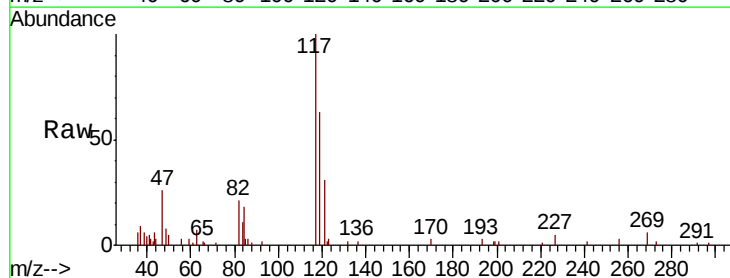
RT: 7.01 min Scan# 1315

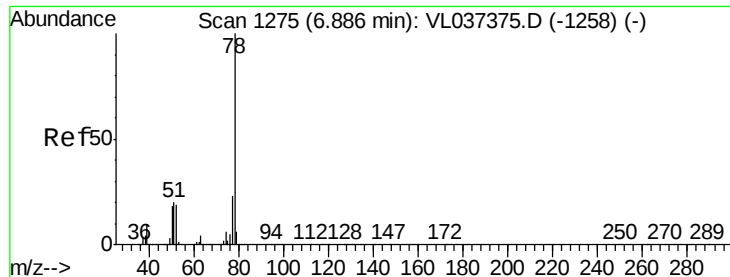
Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Tgt Ion	Ratio	Lower	Upper
117	100		
119	62.8	76.1	114.1#
121	31.1	24.4	36.6





#36

Benzene

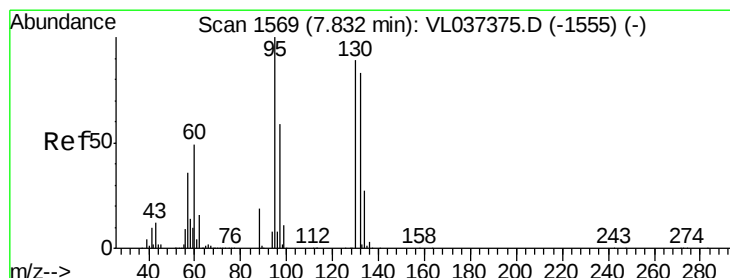
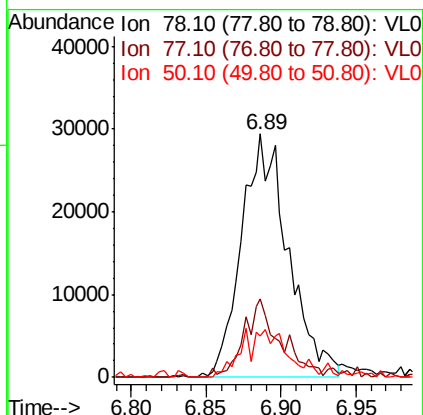
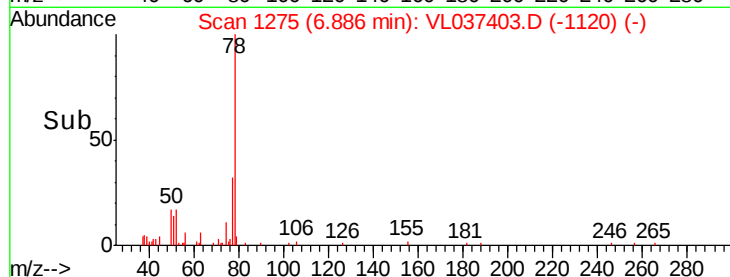
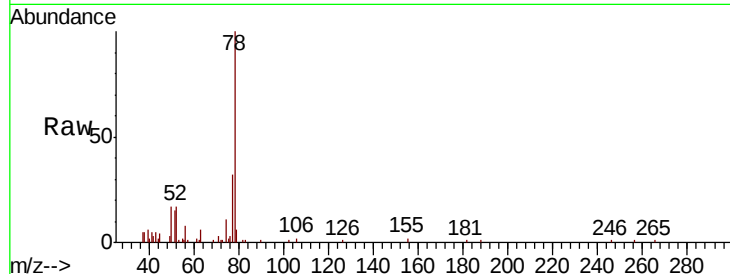
Concen: 0.223 ppbv m
RT: 6.89 min Scan# 1275
Delta R.T. -0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Instrument :
MSVOA_L
ClientSampleId :
IA-PLAY-ROOM-1RE

Tot Ion	Ratio	Lower	Upper
78	100		
77	32.0	18.6	28.0#
50	16.8	14.3	21.5

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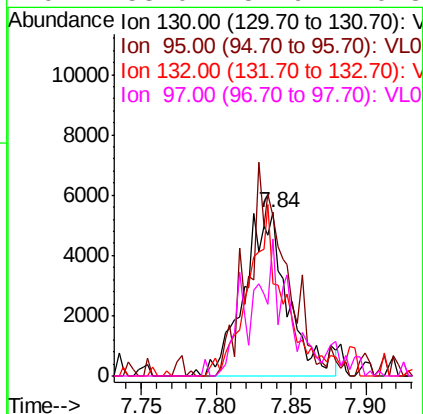
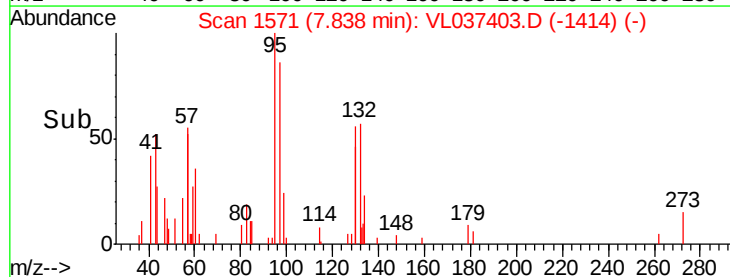
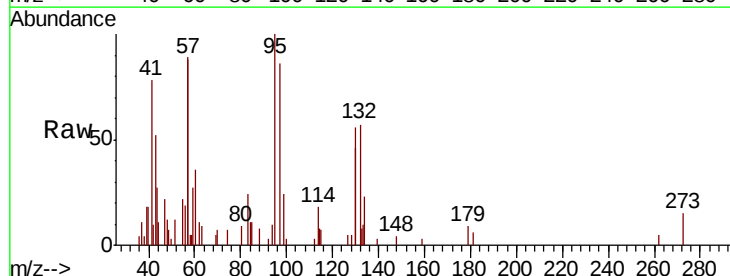


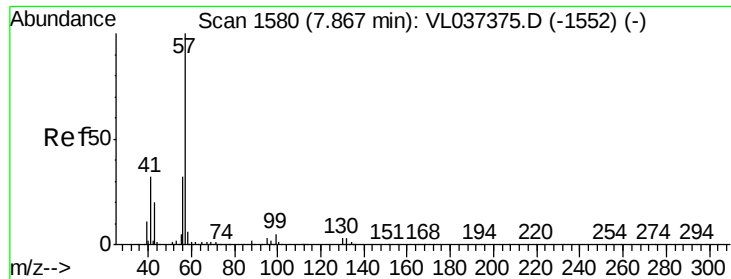
#38

Trichloroethene

Concen: 0.092 ppbv m
RT: 7.84 min Scan# 1571
Delta R.T. 0.01 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Tgt Ion	Ratio	Lower	Upper
130	100		
95	178.4	89.5	134.3#
132	102.3	74.2	111.4
97	153.0	52.9	79.3#





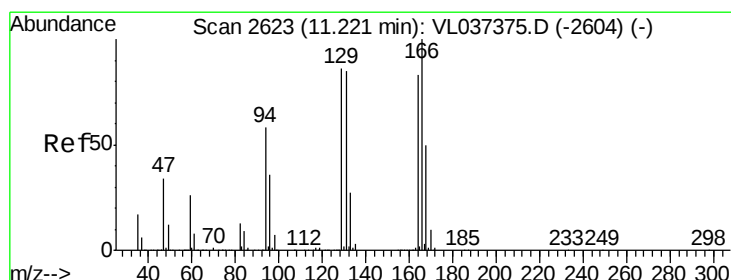
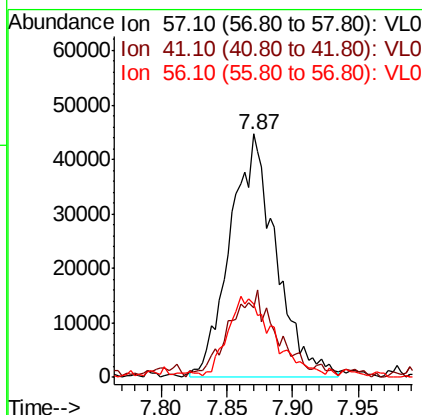
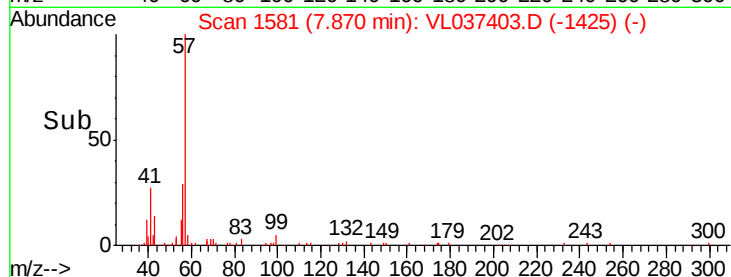
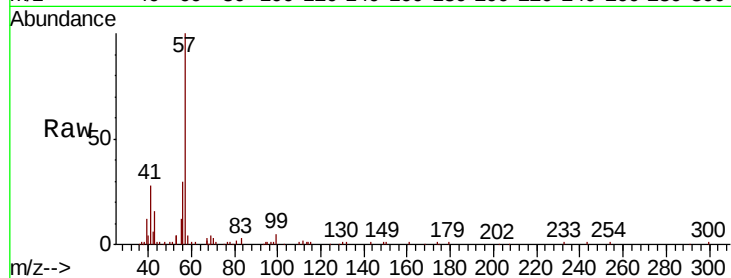
#44
2,2,4-Trimethylpentane
Concen: 0.229 ppbv m
RT: 7.87 min Scan# 1581
Delta R.T. 0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Instrument :
MSVOA_L
ClientSampleId :
IA-PLAY-ROOM-1RE

Tot Ion	Ratio	Lower	Upper
57	100		
41	0.0	26.1	39.1#
56	34.9	25.1	37.7

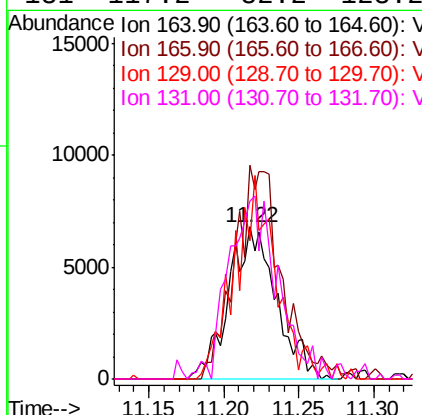
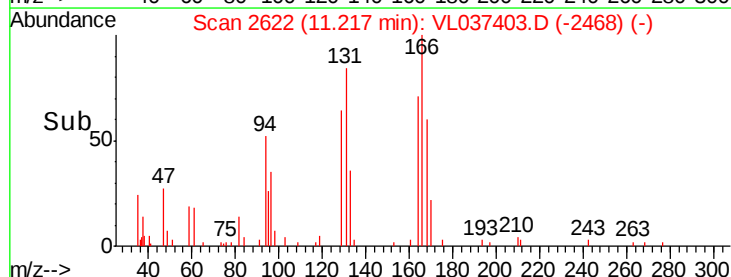
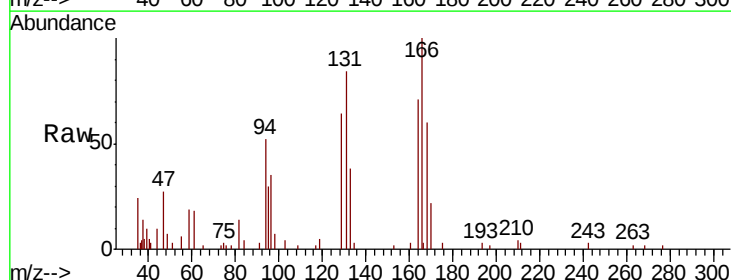
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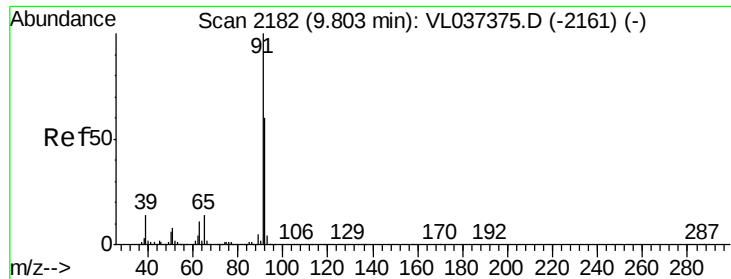
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#52
Tetrachloroethene
Concen: 0.130 ppbv m
RT: 11.22 min Scan# 2622
Delta R.T. -0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Tgt Ion	Ratio	Lower	Upper
164	100		
166	140.3	96.5	144.7
129	90.5	83.2	124.8
131	117.2	82.2	123.2





#53

Toluene

Concen: 2.160 ppbv

RT: 9.81 min Scan# 2183

Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion: 91 Resp: 710063

Ion Ratio Lower Upper

91 100

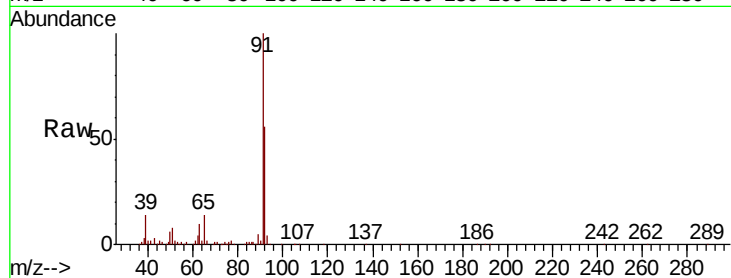
92 60.1 48.1 72.1

Manual Integrations

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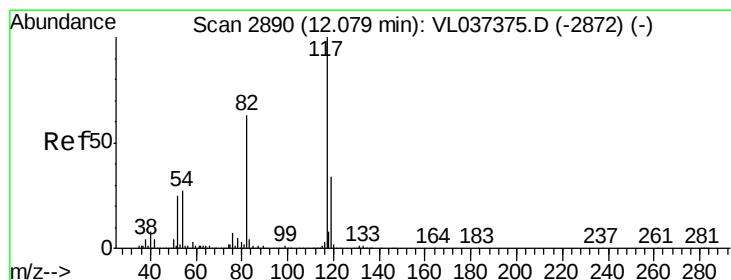
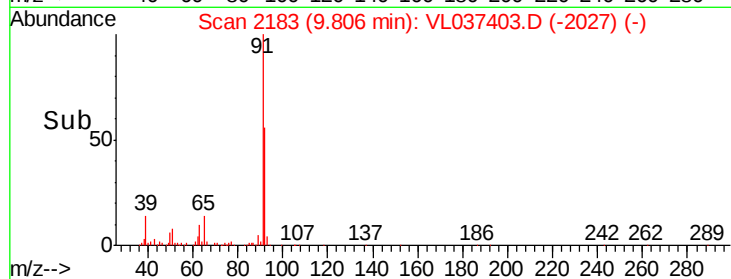
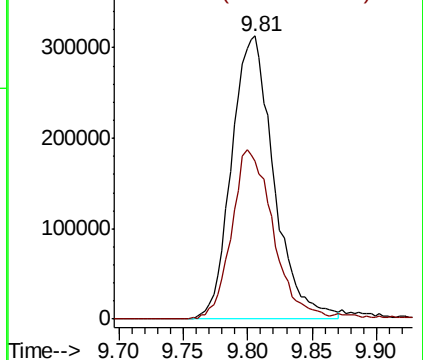
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Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2891

Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

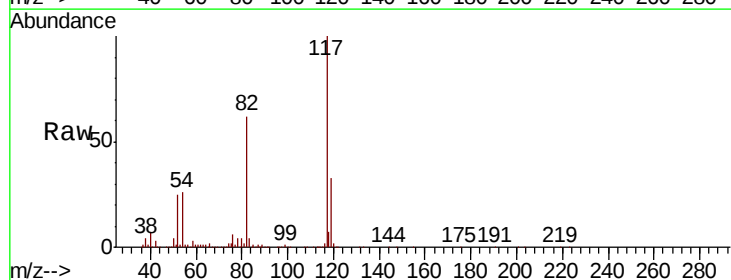
Tgt Ion: 117 Resp: 3113340

Ion Ratio Lower Upper

117 100

82 64.4 52.6 78.8

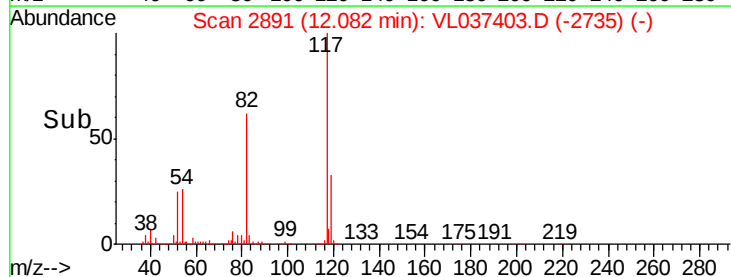
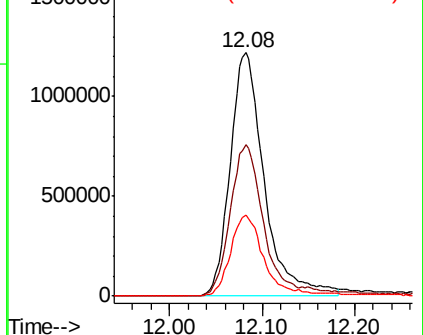
119 33.6 46.7 70.1#

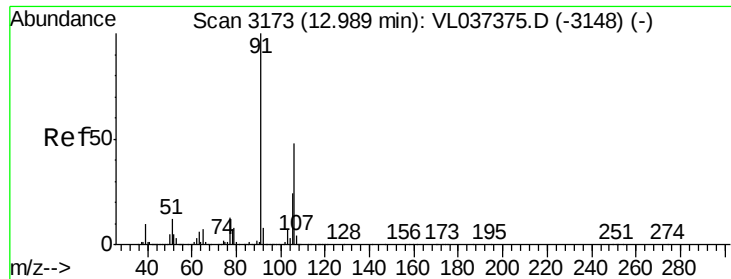


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





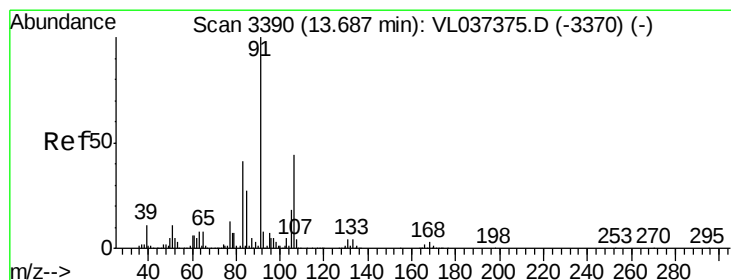
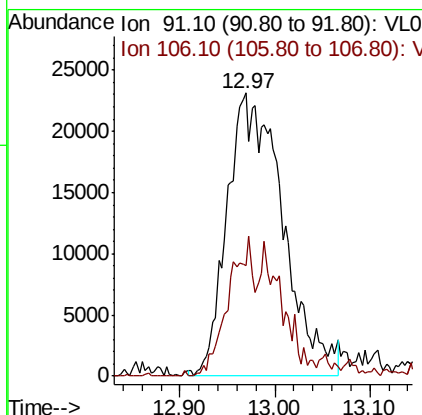
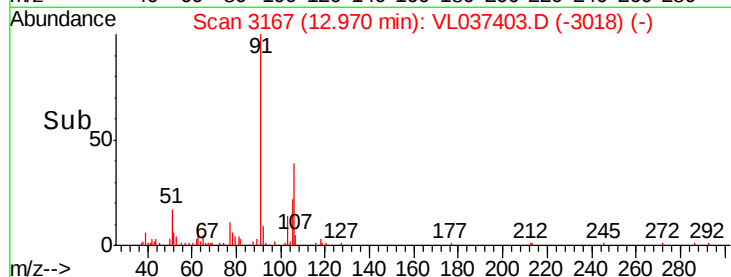
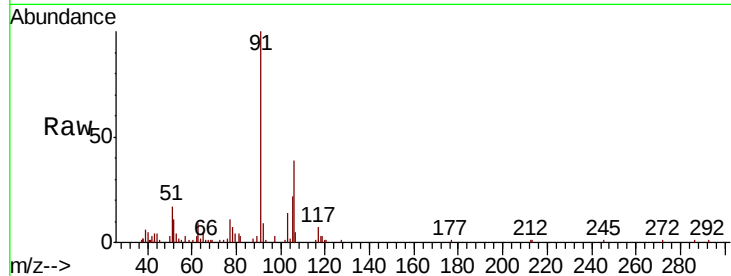
#59
m/p-Xylene
Concen: 0.264 ppbv m
RT: 12.97 min Scan# 3167
Delta R.T. -0.02 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Instrument :
MSVOA_L
ClientSampleId :
IA-PLAY-ROOM-1RE

Tot Ion: 91 Resp: 94358
Ion Ratio Lower Upper
91 100
106 0.0 36.6 55.0#

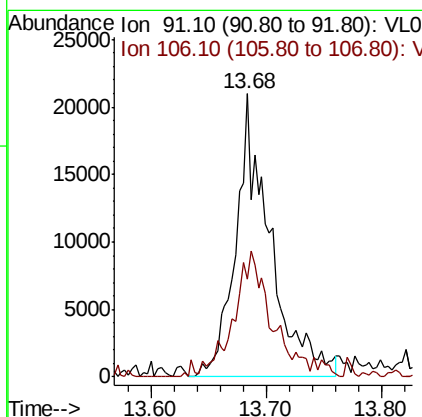
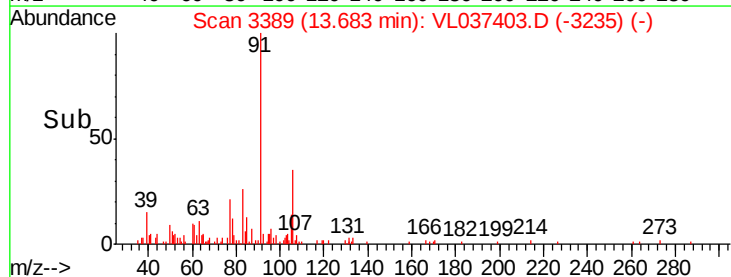
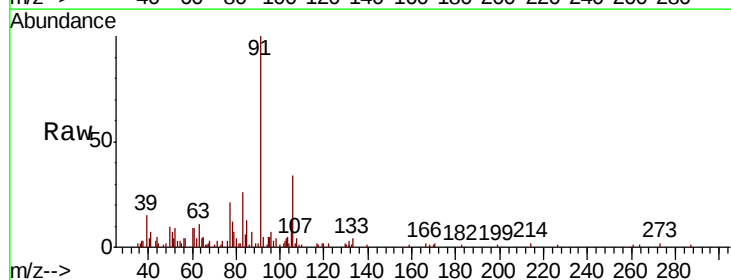
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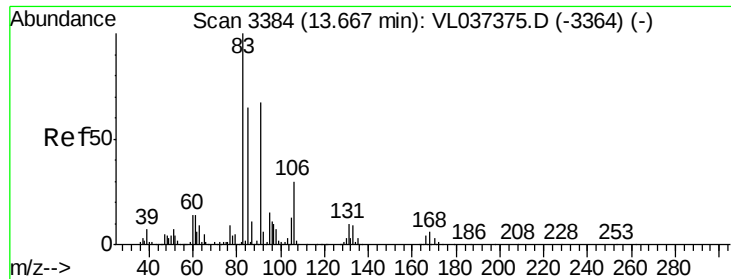
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#60
o-Xylene
Concen: 0.130 ppbv m
RT: 13.68 min Scan# 3389
Delta R.T. -0.00 min
Lab File: VL037403.D
Acq: 11 Aug 2021 23:55

Tgt Ion: 91 Resp: 43103
Ion Ratio Lower Upper
91 100
106 51.9 23.2 69.6





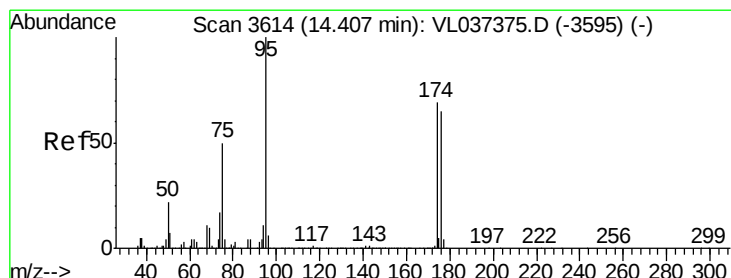
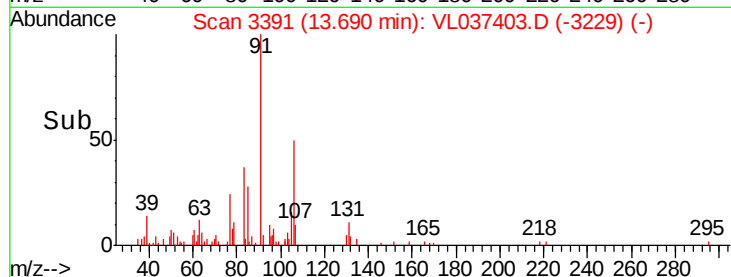
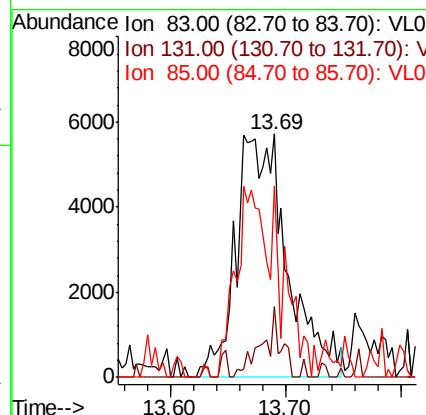
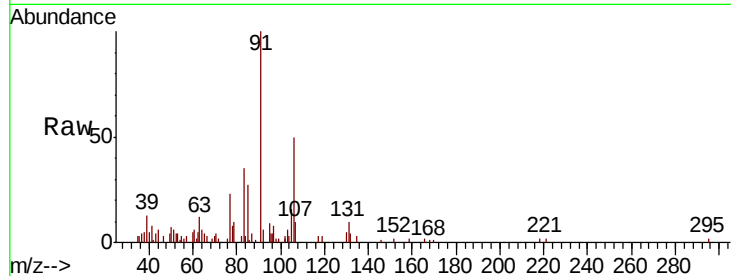
#63
 1,1,2,2-Tetrachloroethane
 Concen: 0.071 ppbv m
 RT: 13.69 min Scan# 3391
 Delta R.T. 0.02 min
 Lab File: VL037403.D
 Acq: 11 Aug 2021 23:55

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-PLAY-ROOM-1RE

Tot Ion	Ratio	Lower	Upper
83	100		
131	0.9	5.1	15.4#
85	6.3	32.6	97.7#

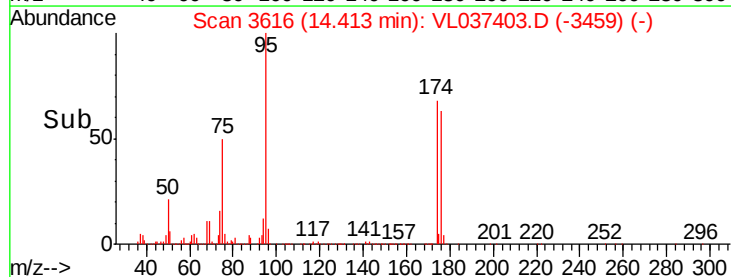
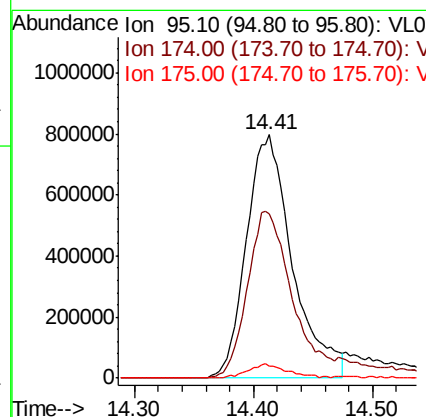
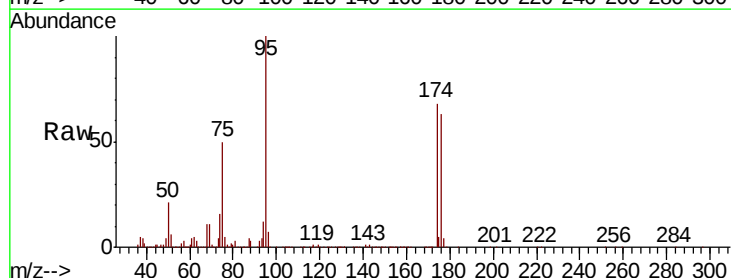
Manual Integrations
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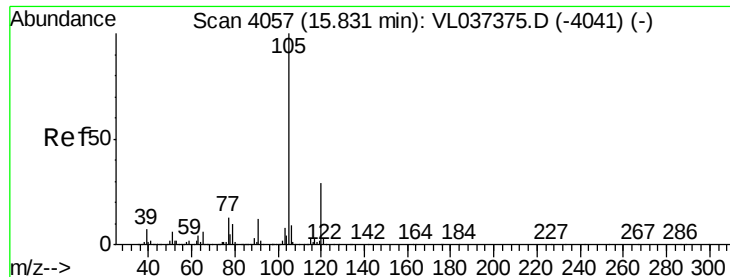
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#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.216 ppbv
 RT: 14.41 min Scan# 3616
 Delta R.T. 0.01 min
 Lab File: VL037403.D
 Acq: 11 Aug 2021 23:55

Tgt Ion	Ratio	Lower	Upper
95	100		
174	77.2	58.3	87.5
175	5.5	4.3	6.5





#72

4-Ethyltoluene

Concen: 0.106 ppbv m

RT: 15.83 min Scan# 4058

Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Instrument :

MSVOA_L

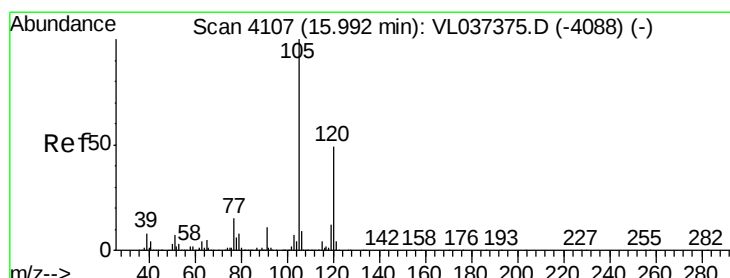
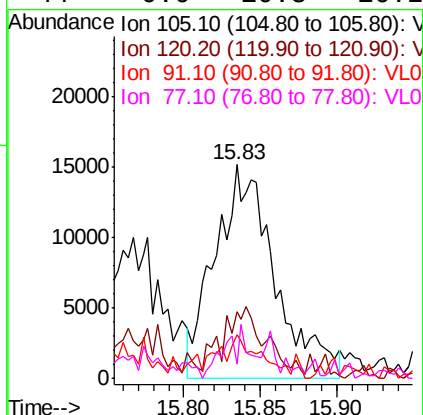
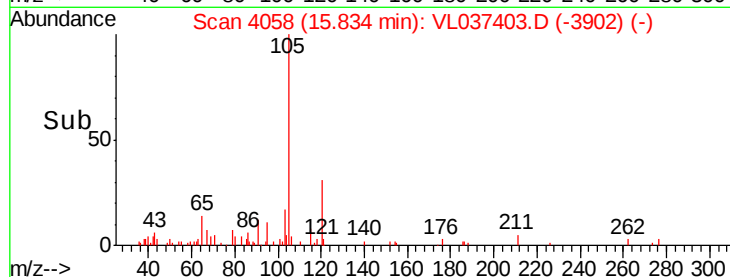
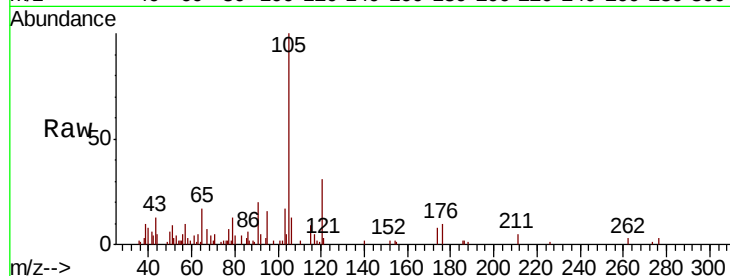
ClientSampleId :

IA-PLAY-ROOM-1RE

Tot Ion	Ratio	Resp	Lower	Upper
105	100	41072		
120	0.0	24.5	36.7#	
91	15.6	9.9	14.9#	
77	0.0	10.8	16.2#	

Manual Integrations
APPROVED

apatel
8/12/2021 10:17:26 AM



#73

1,3,5-Trimethylbenzene

Concen: 0.104 ppbv m

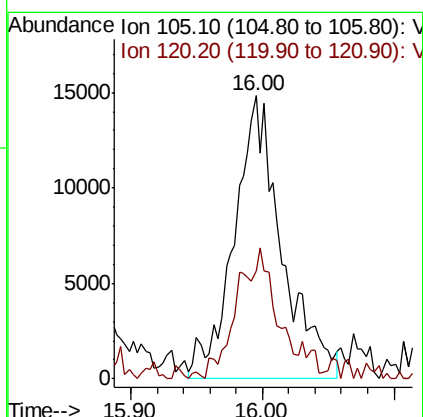
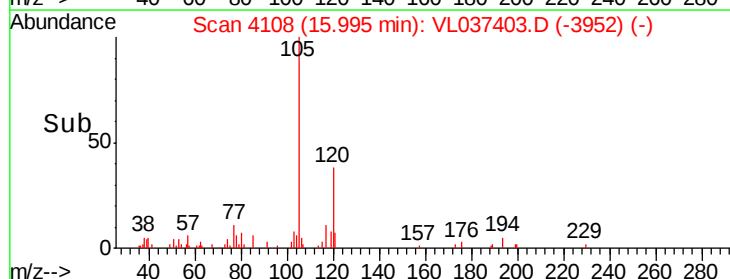
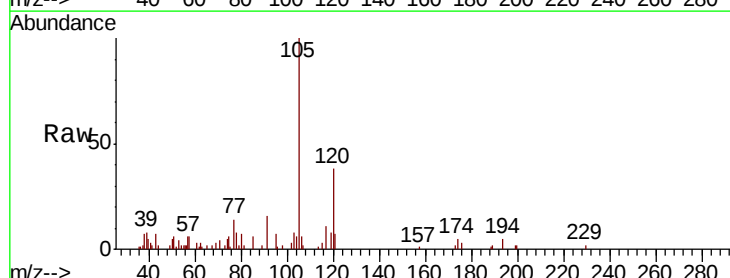
RT: 16.00 min Scan# 4108

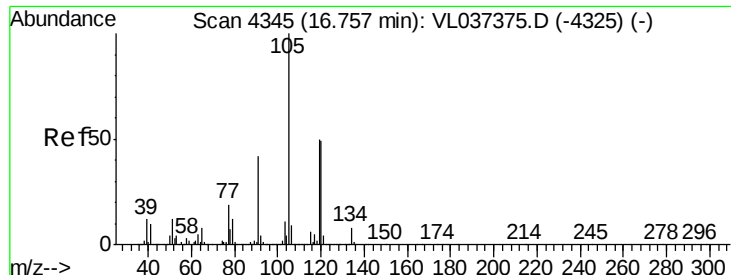
Delta R.T. 0.00 min

Lab File: VL037403.D

Acq: 11 Aug 2021 23:55

Tgt Ion	Ratio	Resp	Lower	Upper
105	100	37493		
120	38.1	38.9	58.3#	





#74
 1,2,4-Trimethylbenzene
 Concen: 0.199 ppbv m
 RT: 16.76 min Scan# 4345
 Delta R.T. -0.00 min
 Lab File: VL037403.D
 Acq: 11 Aug 2021 23:55

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-PLAY-ROOM-1RE

Tot Ion:	105	Resp:	72728
Ion Ratio	Lower	Upper	
105	100		
120	41.7	39.0	58.4
91	37.4	34.4	51.6
77	20.3	15.7	23.5

Manual Integrations
 APPROVED

apatel
 8/12/2021 10:17:26 AM

