

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL040821\
 Data File : VL036765.D
 Acq On : 9 Apr 2021 1:04
 Operator : SY/AP
 Sample : M1981-03 4X
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-2

Manual Integrations
 APPROVED

MMDadoda
 4/12/2021 11:47:58 AM

Quant Time: Apr 09 12:17:29 2021

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M

Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar 2

QLast Update : Thu Mar 25 09:42:40 2021

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1426672	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.17	114	3520133	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.08	117	2930764	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.41	95	2551440	10.92	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	109.20%

Target Compounds

					Ovalue
5) Vinyl Chloride	3.25	62	310258	3.205 ppbv	97
9) Propene	3.00	41	491540	5.784 ppbv	93
10) Heptane	8.12	43	564972	2.610 ppbv	98
13) Ethanol	3.60	45	96342	9.521 ppbv	99
15) Acetone	3.84	43	4373696	31.148 ppbv	98
20) Methylene Chloride	4.34	84	911024	13.857 ppbv	98
22) trans-1,2-Dichloroethene	4.88	96	34147m	0.546 ppbv	
26) Hexane	5.68	57	1120522	7.233 ppbv #	47
27) Carbon Disulfide	4.54	76	235362	1.542 ppbv	97
30) Cyclohexane	7.12	84	324038	2.579 ppbv	85
31) cis-1,2-Dichloroethene	5.54	61	765101	5.106 ppbv	96
34) 2-Butanone	5.24	43	504795	2.938 ppbv	97
36) Benzene	6.88	78	580780	1.789 ppbv	96
38) Trichloroethene	7.83	130	1053257	8.336 ppbv	96
44) 2,2,4-Trimethylpentane	7.86	57	5980530	10.467 ppbv #	72
52) Tetrachloroethene	11.22	164	14702m	0.123 ppbv	
53) Toluene	9.80	91	418340	1.210 ppbv	99
58) Ethyl Benzene	12.71	91	599742m	1.407 ppbv	
59) m/p-Xylene	12.97	91	1242305	3.340 ppbv	96
60) o-Xylene	13.69	91	1147120	3.190 ppbv	99
62) Isopropylbenzene	14.66	105	305256	0.630 ppbv	100
64) n-propylbenzene	15.56	120	59867	0.506 ppbv #	40
67) sec-Butylbenzene	17.30	105	249278m	0.421 ppbv	
69) p-Isopropyltoluene	17.65	119	331970	0.717 ppbv #	91
72) 4-Ethyltoluene	15.84	105	394491	1.001 ppbv #	88
73) 1,3,5-Trimethylbenzene	16.00	105	691965	1.882 ppbv	99
74) 1,2,4-Trimethylbenzene	16.76	105	1032662	2.624 ppbv #	69
79) Naphthalene	22.19	128	39069m	0.170 ppbv	

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

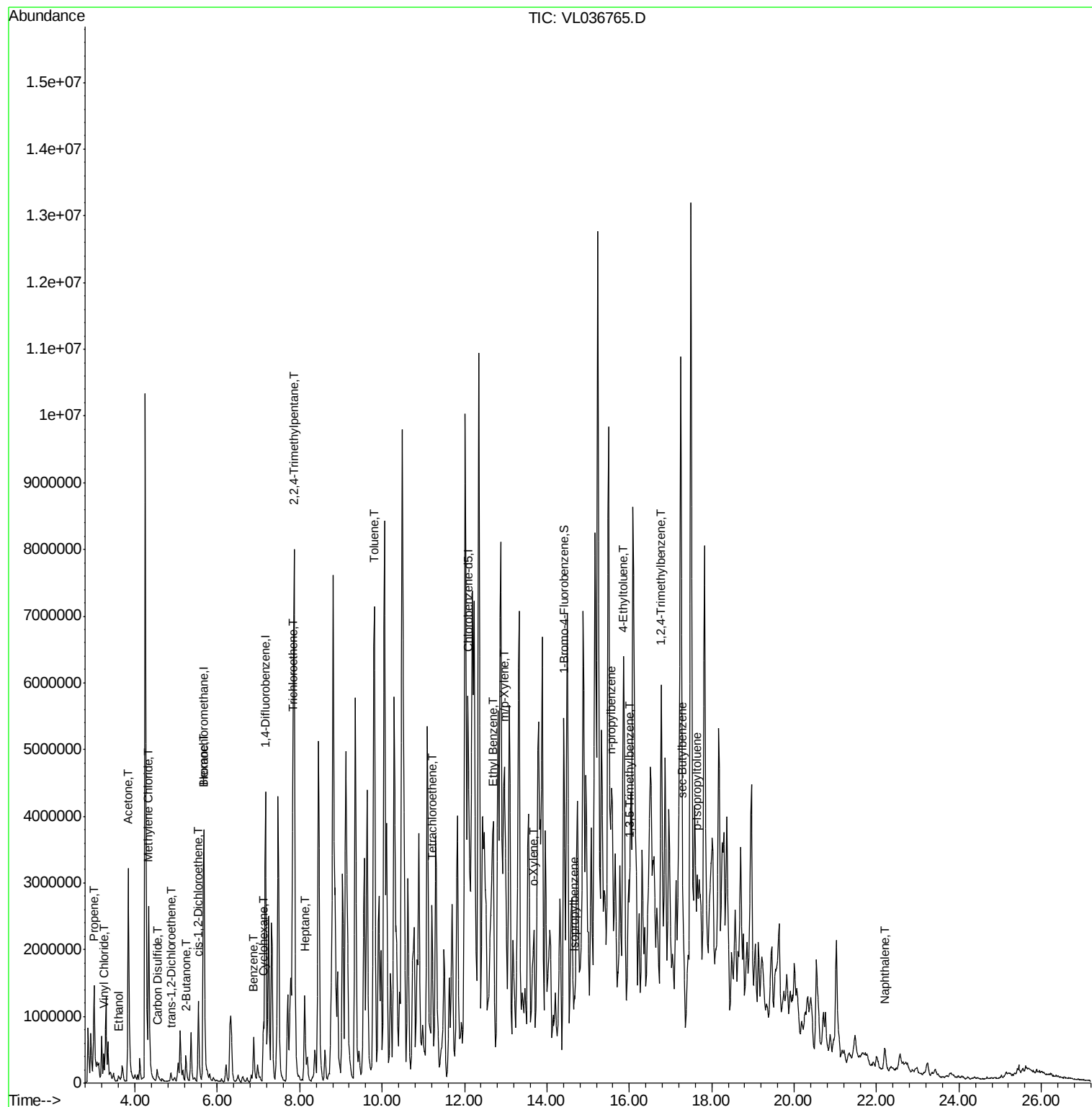
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL040821\
Data File : VL036765.D
Acq On : 9 Apr 2021 1:04
Operator : SY/AP
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Misc : 400mL/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

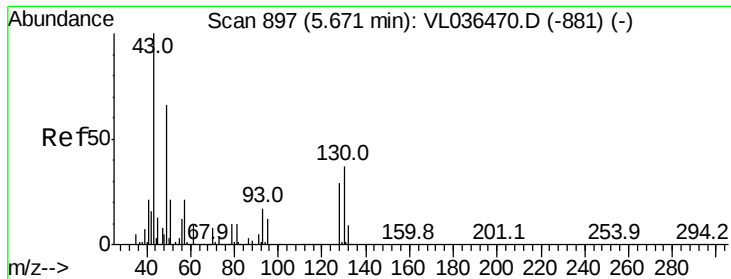
Instrument :
MSVOA_L
ClientSampled :
SG-2

Quant Time: Apr 09 12:17:29 2021
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL032521AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Thu Mar
QLast Update : Thu Mar 25 09:42:40 2021
Response via : Initial Calibration

Manual Integrations
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#1

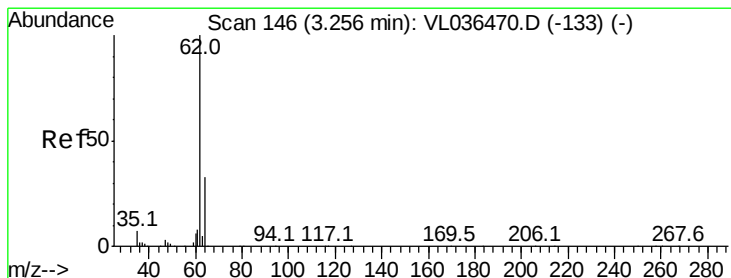
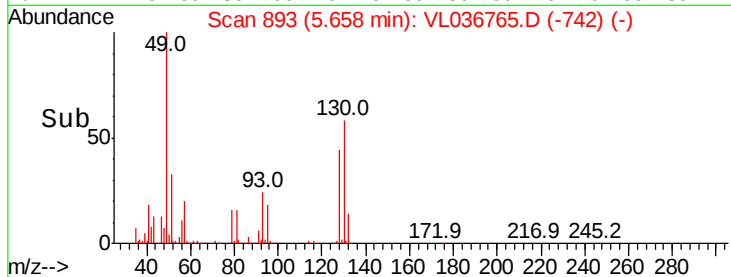
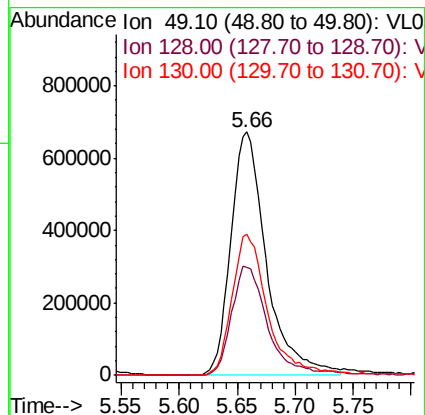
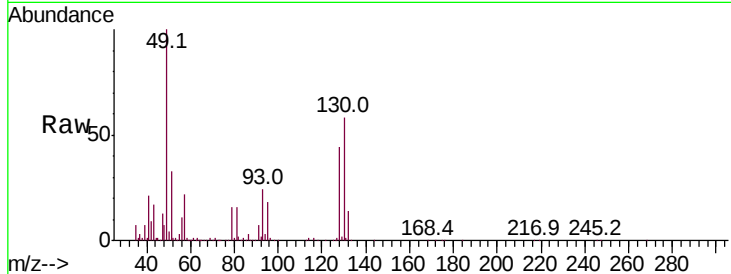
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.66 min Scan# 893
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampled :
SG-2

Tot Ion: 49 Resp: 1426672
Ion Ratio Lower Upper
49 100
128 46.5 23.5 70.6
130 58.5 29.1 87.4

Manual Integrations
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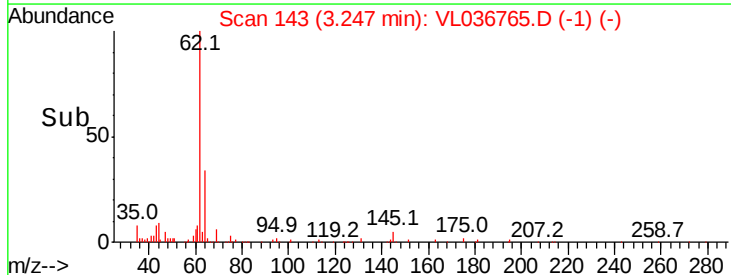
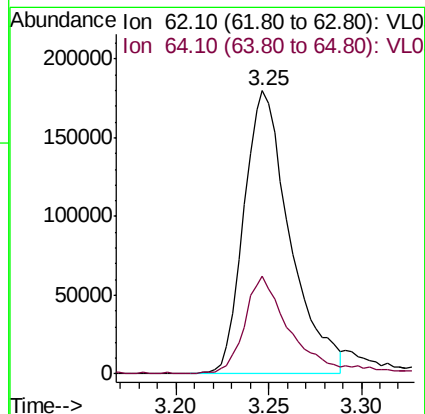
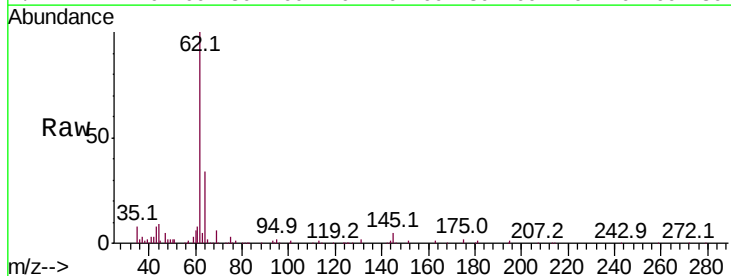
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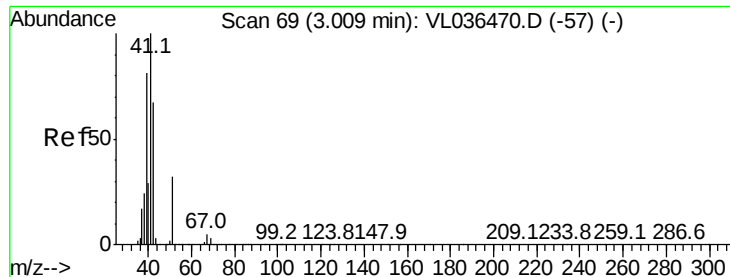


#5

Vinyl Chloride
Concen: 3.205 ppbv
RT: 3.25 min Scan# 143
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Tgt Ion: 62 Resp: 310258
Ion Ratio Lower Upper
62 100
64 34.5 26.4 39.6





#9

Propene

Concen: 5.784 ppbv

RT: 3.00 min Scan# 67

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

Client Sampled :

SG-2

Tot Ion: 41 Resp: 491540

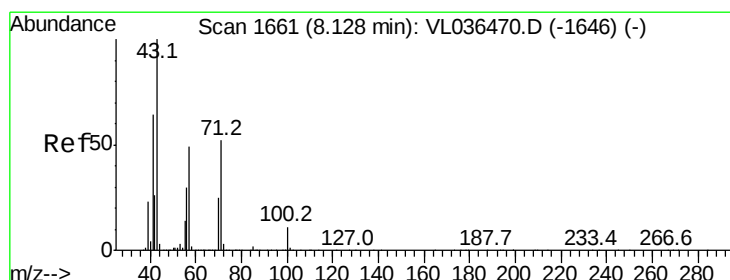
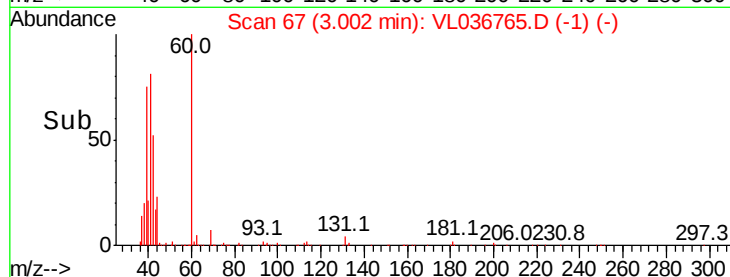
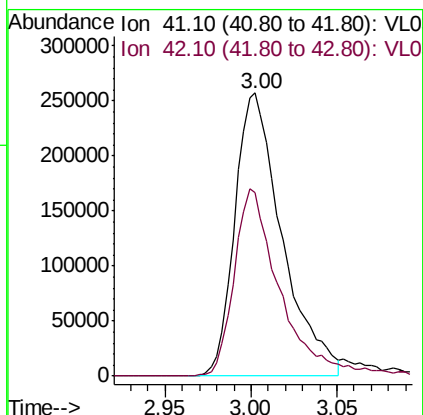
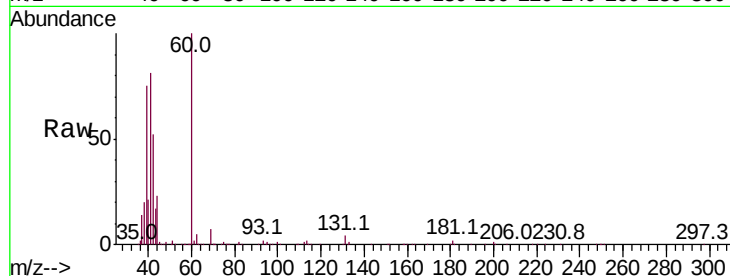
Ion Ratio Lower Upper

41 100

42 65.2 57.0 85.4

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#10

Heptane

Concen: 2.610 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.01 min

Lab File: VL036765.D

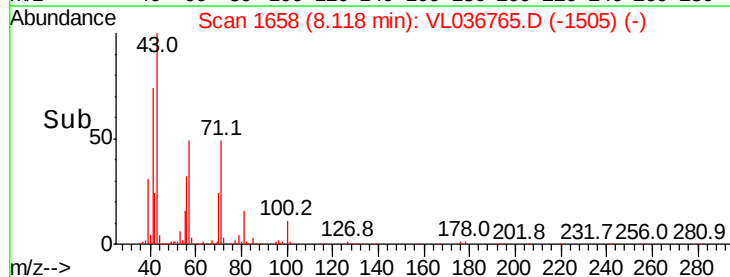
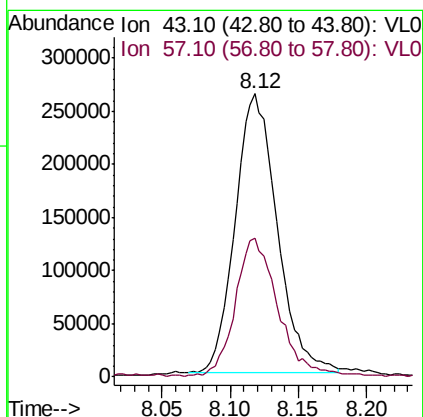
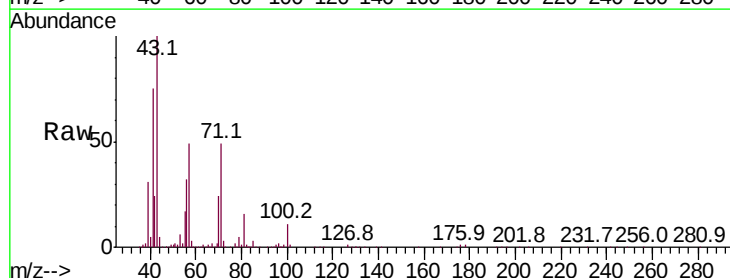
Acq: 9 Apr 2021 1:04

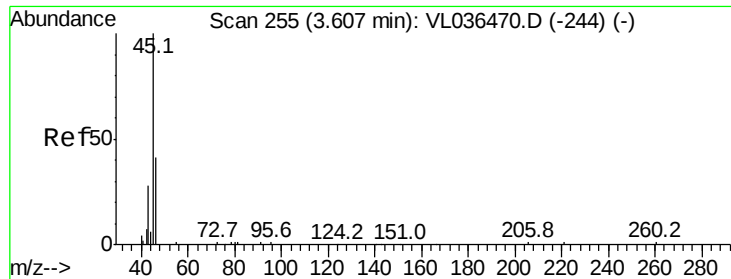
Tgt Ion: 43 Resp: 564972

Ion Ratio Lower Upper

43 100

57 50.2 39.0 58.6





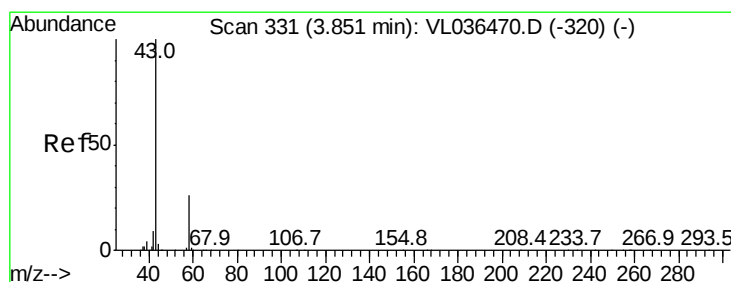
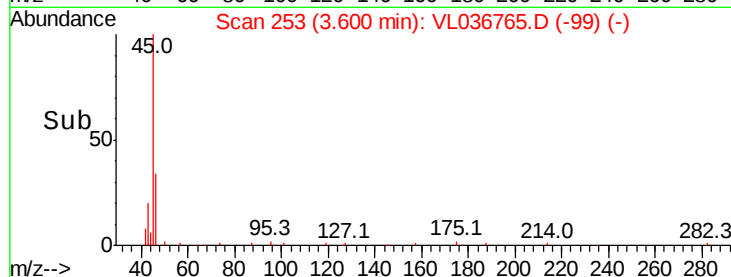
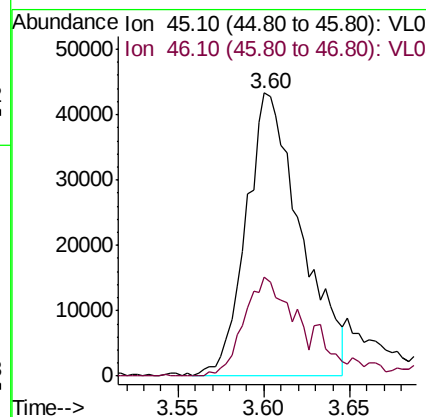
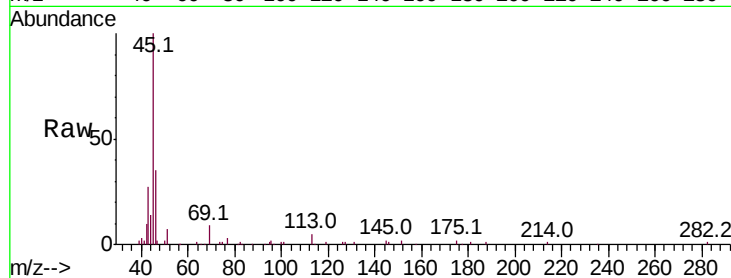
#13
Ethanol
Concen: 9.521 ppbv
RT: 3.60 min Scan# 253
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampleId :
SG-2

Tot Ion: 45 Resp: 96342
Ion Ratio Lower Upper
45 100
46 42.1 16.6 66.2

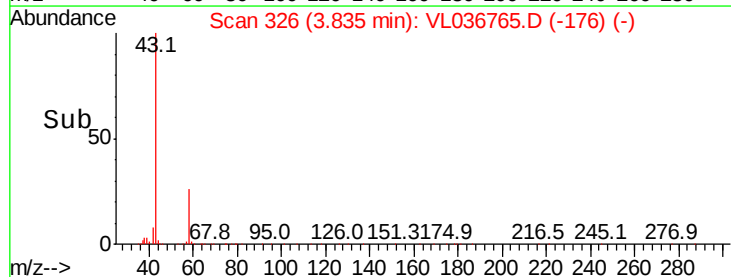
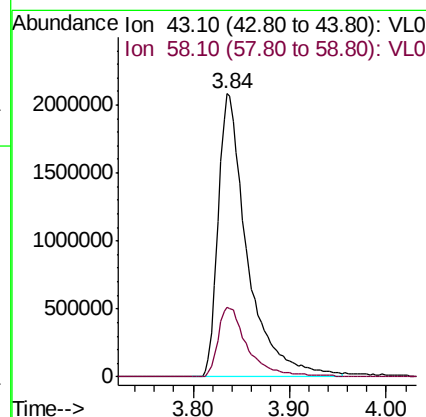
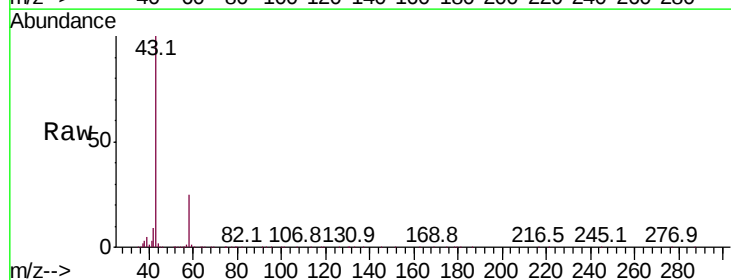
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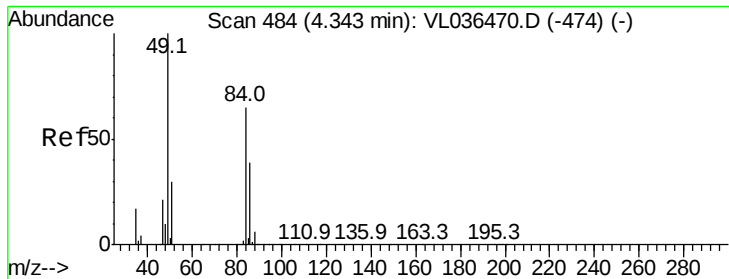
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#15
Acetone
Concen: 31.148 ppbv
RT: 3.84 min Scan# 326
Delta R.T. -0.02 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Tgt Ion: 43 Resp: 4373696
Ion Ratio Lower Upper
43 100
58 25.6 21.2 31.8





#20

Methylene Chloride

Concen: 13.857 ppbv

RT: 4.34 min Scan# 482

Delta R.T. -0.01 min

Lab File: VL036765.D

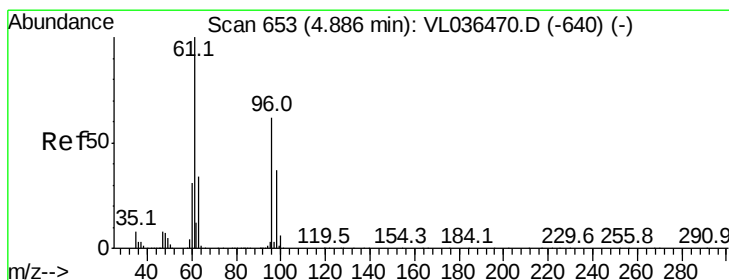
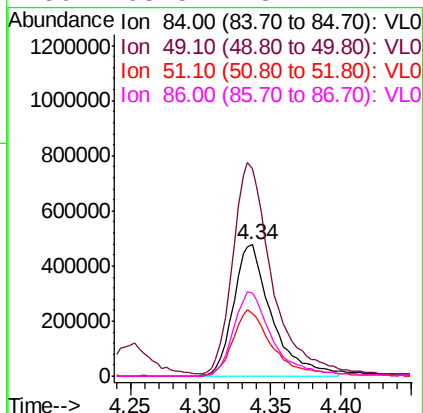
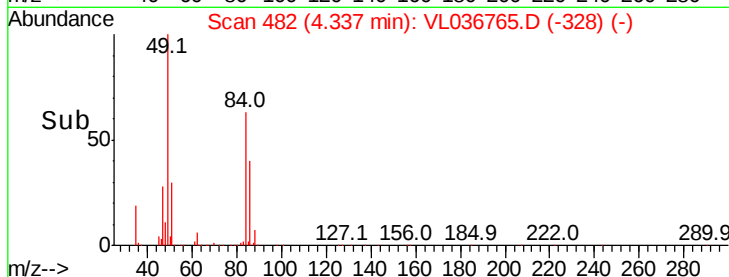
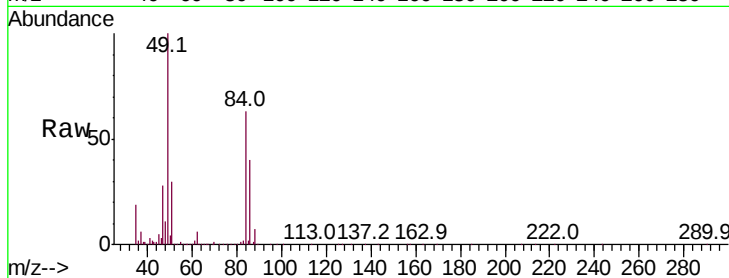
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampled :
SG-2

Tot Ion	84	Resp	911024
Ion Ratio	Lower	Upper	
84	100		
49	155.6	122.9	184.3
51	47.5	36.9	55.3
86	63.5	48.2	72.4

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#22

trans-1,2-Dichloroethene

Concen: 0.546 ppbv m

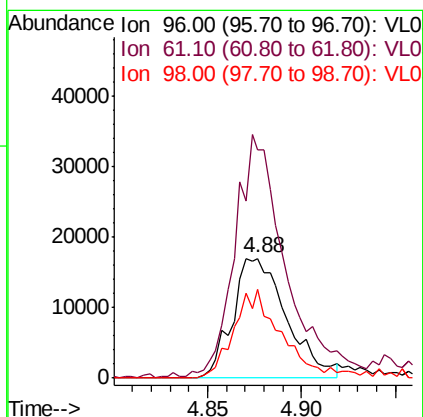
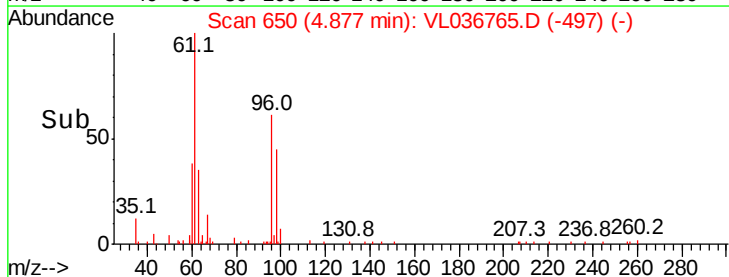
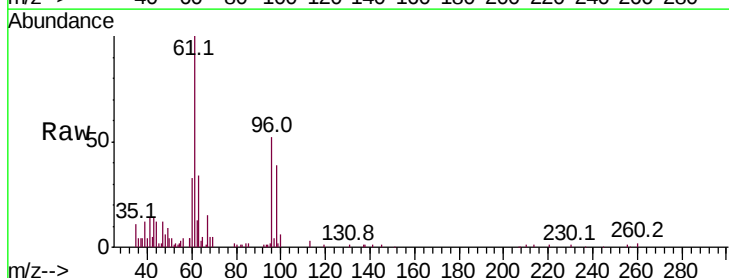
RT: 4.88 min Scan# 650

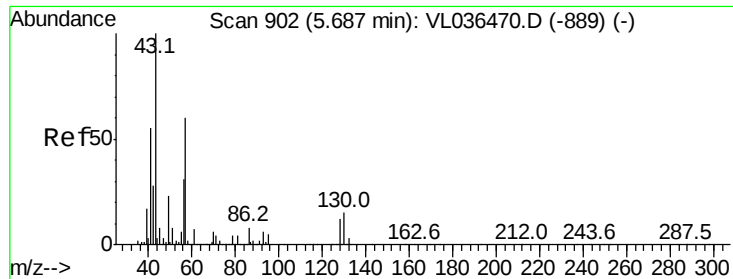
Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Tgt Ion	96	Resp	34147
Ion Ratio	Lower	Upper	
96	100		
61	191.1	129.4	194.0
98	74.3	48.2	72.4#





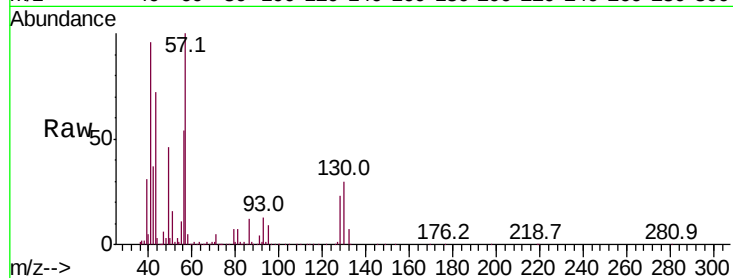
#26
Hexane
Concen: 7.233 ppbv
RT: 5.68 min Scan# 899
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampleId :
SG-2

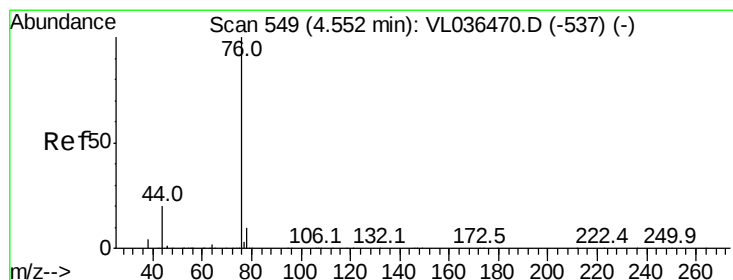
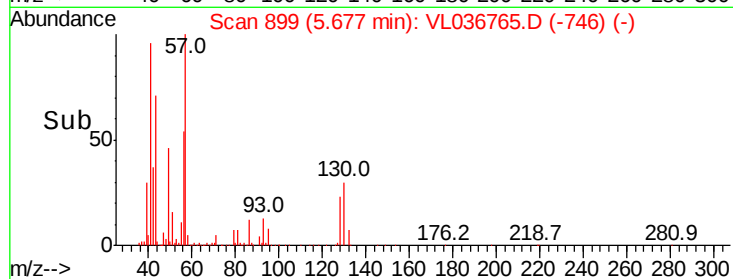
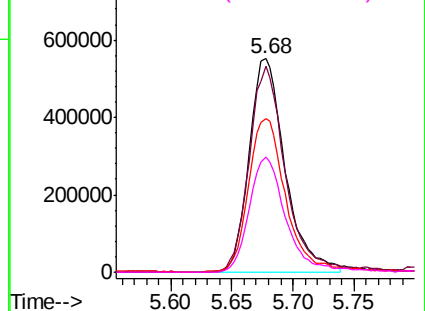
Tot Ion: 57 Resp: 1120522
Ion Ratio Lower Upper
57 100
41 98.0 77.2 115.8
43 74.9 173.8 260.6#
56 55.6 43.8 65.6

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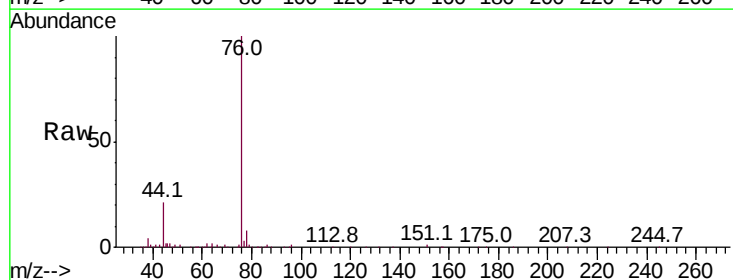


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

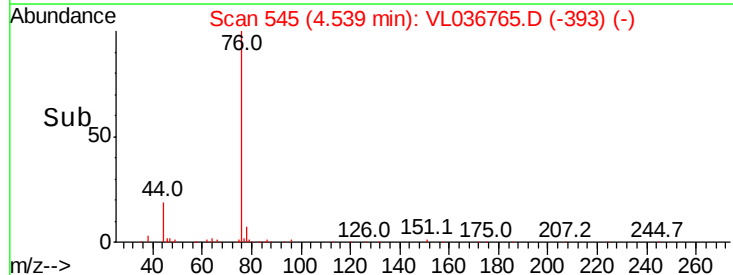
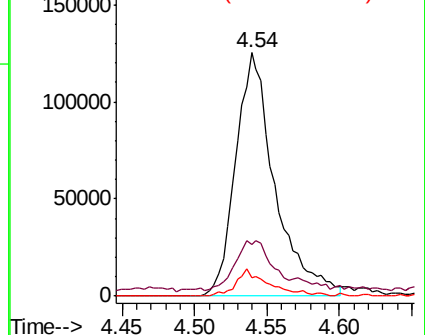


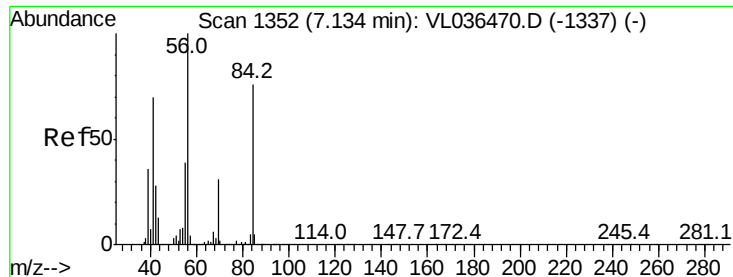
#27
Carbon Disulfide
Concen: 1.542 ppbv
RT: 4.54 min Scan# 545
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Tgt Ion: 76 Resp: 235362
Ion Ratio Lower Upper
76 100
44 23.7 17.5 26.3
78 9.7 8.6 13.0



Abundance Ion 76.00 (75.70 to 76.70): VL0
Ion 44.10 (43.80 to 44.80): VL0
Ion 78.00 (77.70 to 78.70): VL0





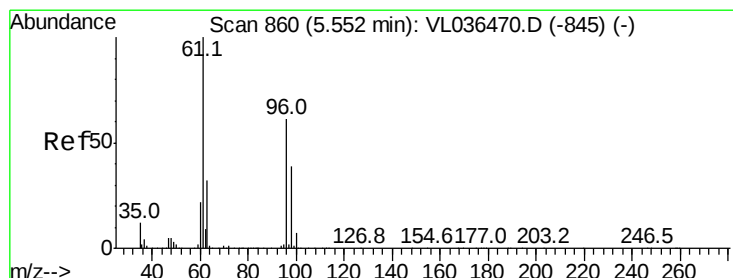
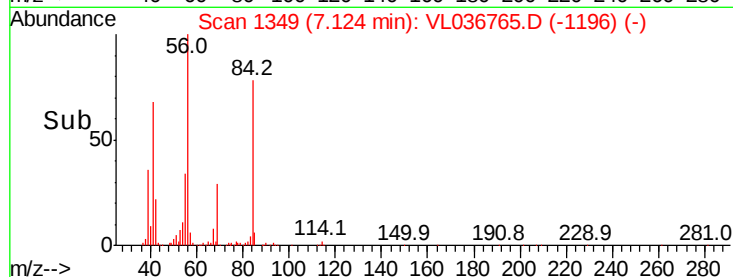
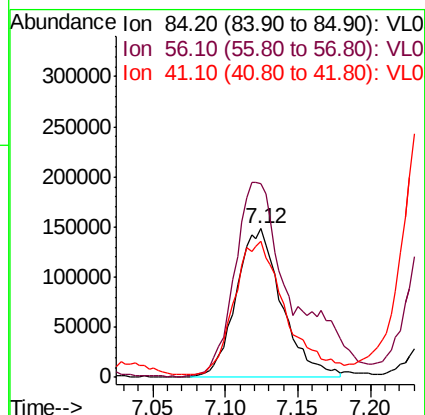
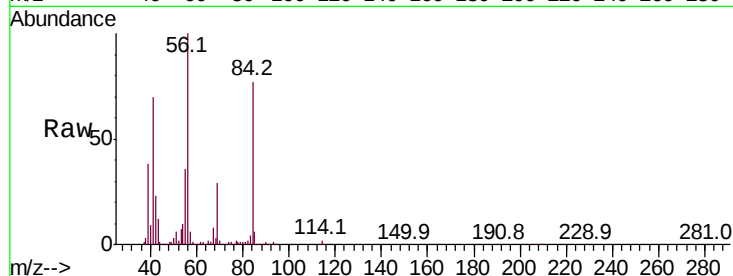
#30
Cyclohexane
Concen: 2.579 ppbv
RT: 7.12 min Scan# 1349
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampled :
SG-2

Tot Ion	Ratio	Lower	Upper
84	100		
56	166.3	114.6	171.8
41	102.0	75.3	112.9

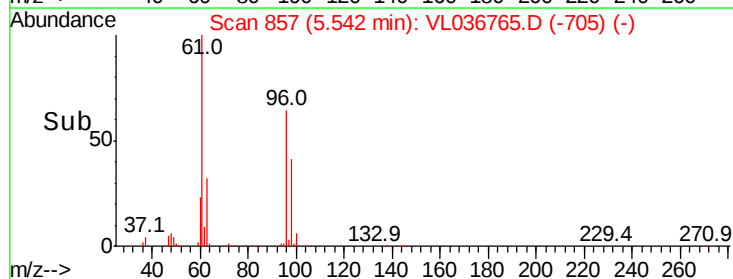
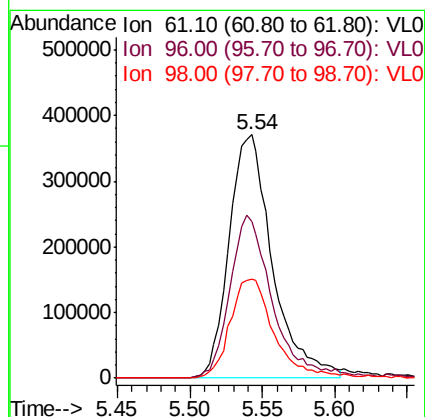
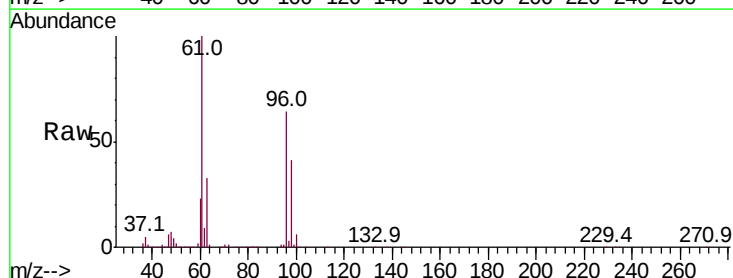
Manual Integrations
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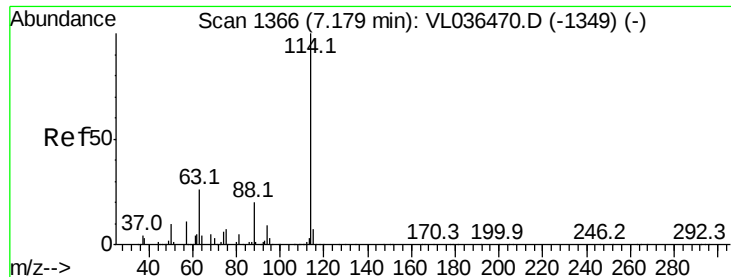
MMDadoda
4/12/2021 11:47:58 AM



#31
cis-1,2-Dichloroethene
Concen: 5.106 ppbv
RT: 5.54 min Scan# 857
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Tgt Ion	Ratio	Lower	Upper
61	100		
96	64.1	48.7	73.1
98	40.8	31.4	47.0





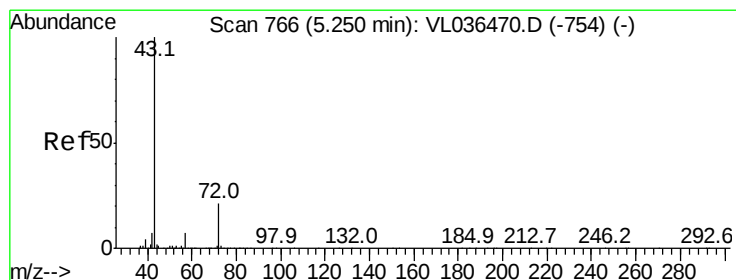
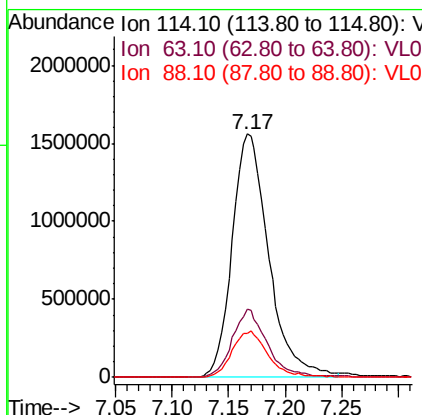
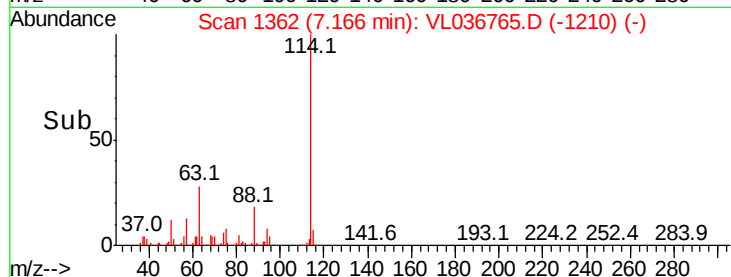
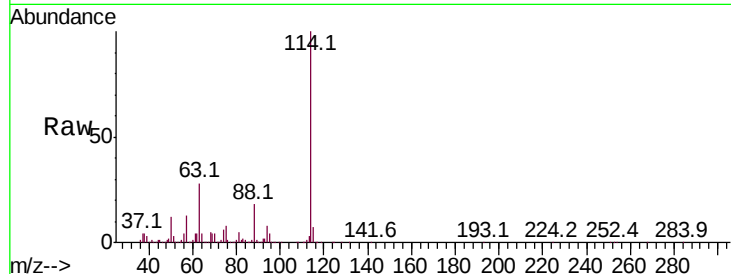
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1362
 Delta R.T. -0.01 min
 Lab File: VL036765.D
 Acq: 9 Apr 2021 1:04

Instrument :
 MSVOA_L
 ClientSampled :
 SG-2

Tot Ion:114 Resp: 3520133
 Ion Ratio Lower Upper
 114 100
 63 27.0 22.4 33.6
 88 19.0 15.4 23.0

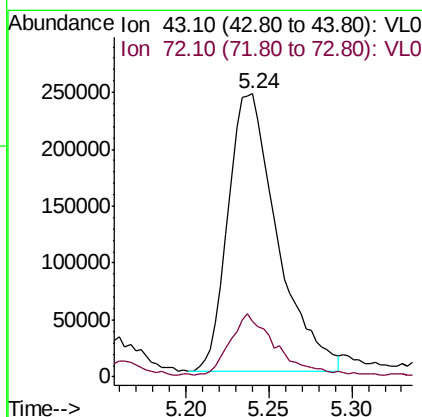
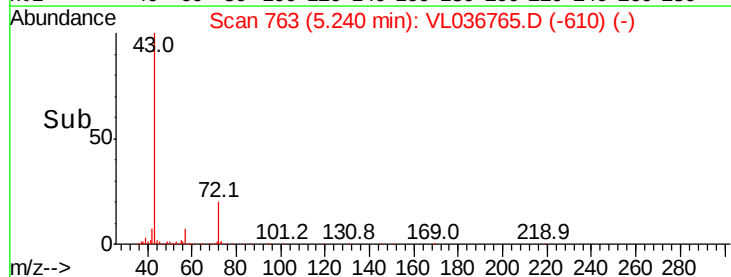
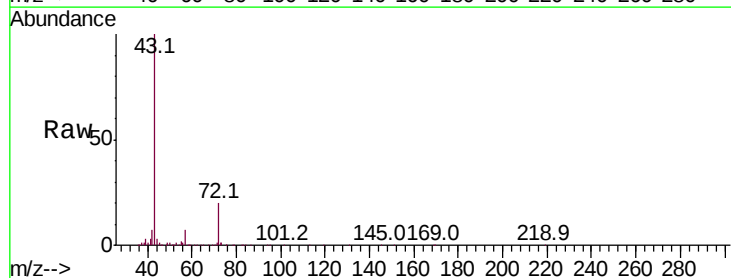
Manual Integrations
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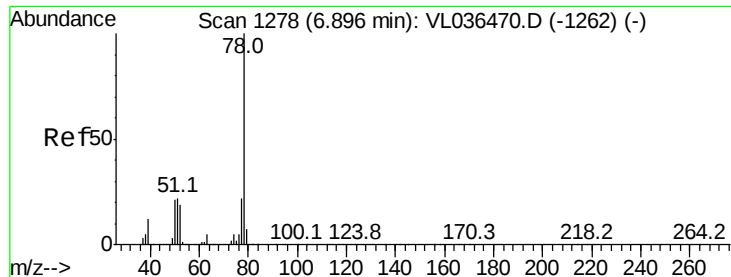
MMDadoda
 4/12/2021 11:47:58 AM



#34
 2-Butanone
 Concen: 2.938 ppbv
 RT: 5.24 min Scan# 763
 Delta R.T. -0.01 min
 Lab File: VL036765.D
 Acq: 9 Apr 2021 1:04

Tgt Ion: 43 Resp: 504795
 Ion Ratio Lower Upper
 43 100
 72 22.5 17.0 25.6





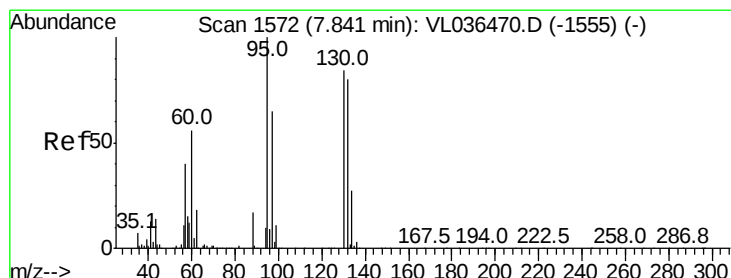
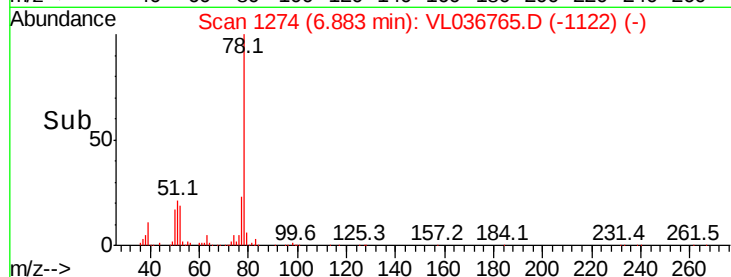
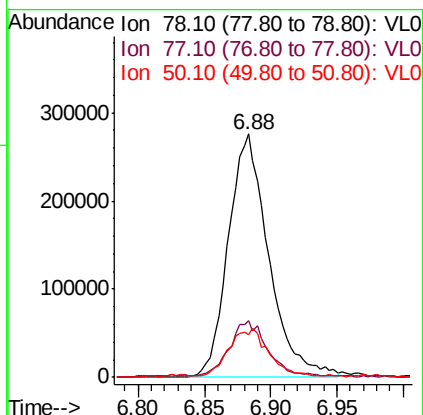
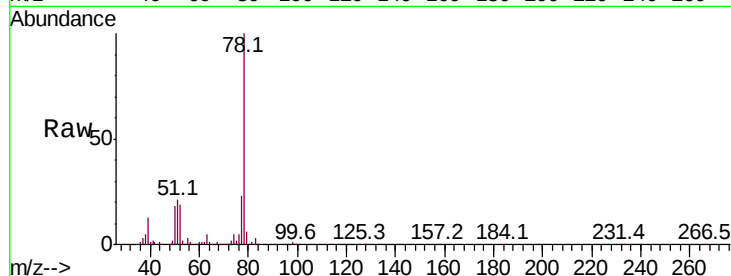
#36
Benzene
Concen: 1.789 ppbv
RT: 6.88 min Scan# 1274
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampled :
SG-2

Tot Ion	Ratio	Lower	Upper
78	100		
77	22.5	18.0	27.0
50	17.0	16.5	24.7

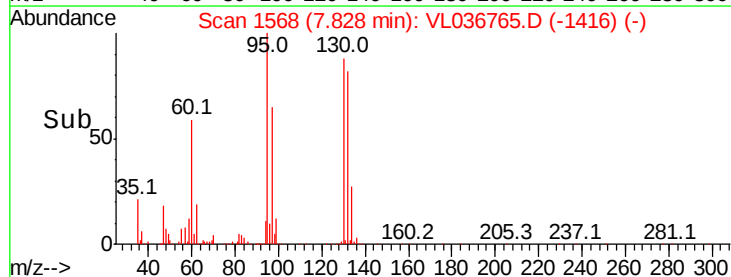
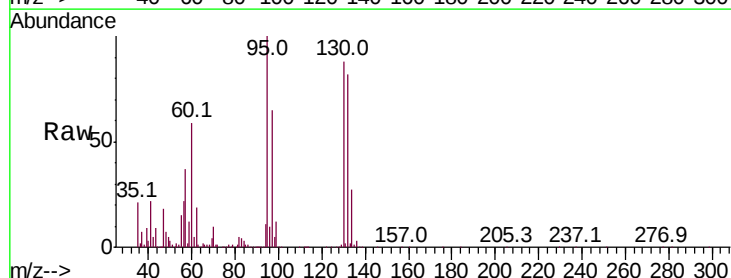
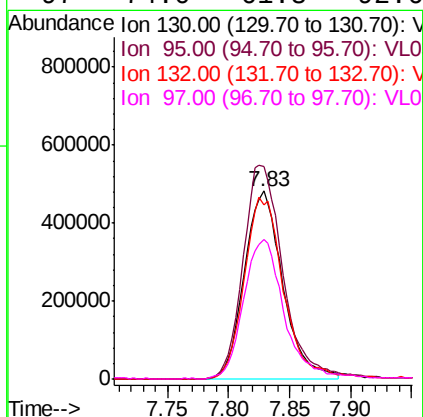
Manual Integrations
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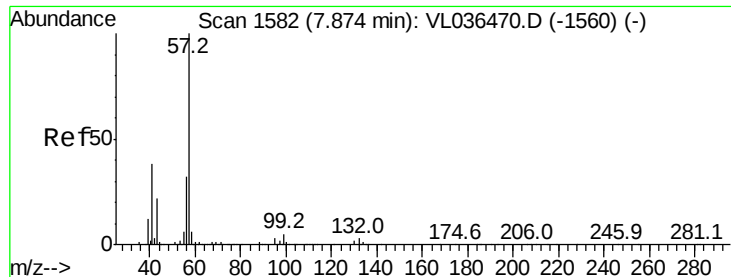
MMDadoda
4/12/2021 11:47:58 AM



#38
Trichloroethene
Concen: 8.336 ppbv
RT: 7.83 min Scan# 1568
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Tgt Ion	Ratio	Lower	Upper
130	100		
95	113.4	95.7	143.5
132	92.9	76.2	114.4
97	74.0	61.8	92.6





#44

2,2,4-Trimethylpentane

Concen: 10.467 ppbv

RT: 7.86 min Scan# 1579

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

ClientSampled :

SG-2

Tot Ion: 57 Resp: 5980530

Ion Ratio Lower Upper

57 100

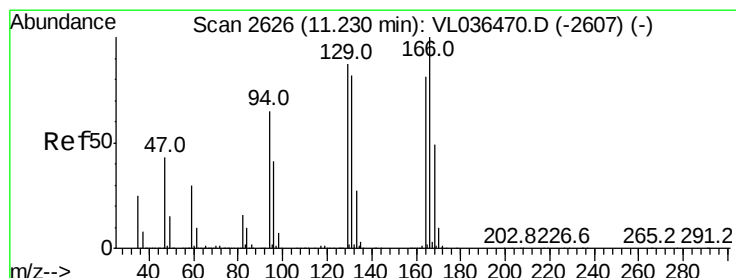
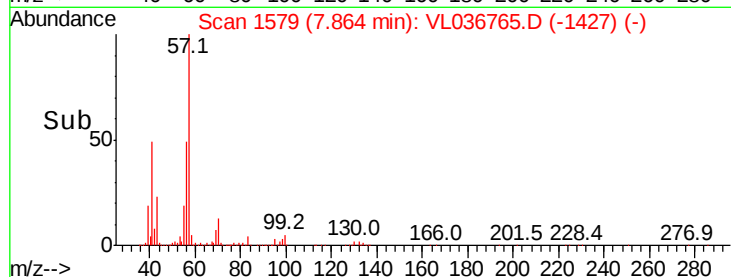
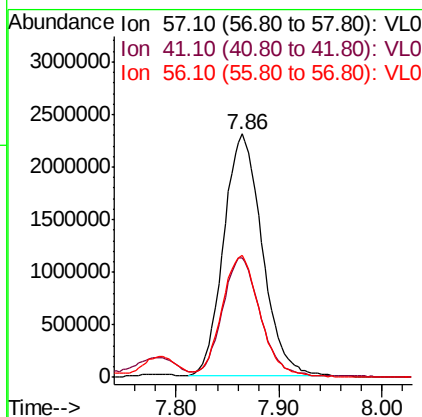
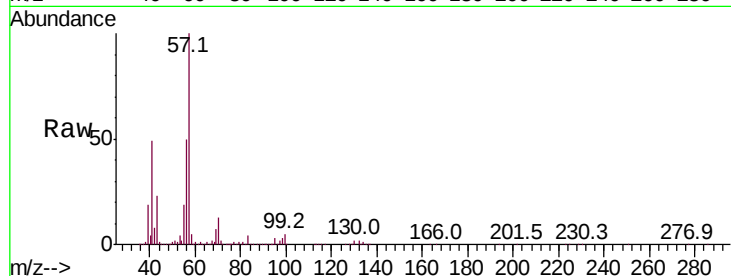
41 50.1 28.8 43.2#

56 50.6 26.1 39.1#

Manual Integrations
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#52

Tetrachloroethene

Concen: 0.123 ppbv m

RT: 11.22 min Scan# 2623

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Tgt Ion: 164 Resp: 14702

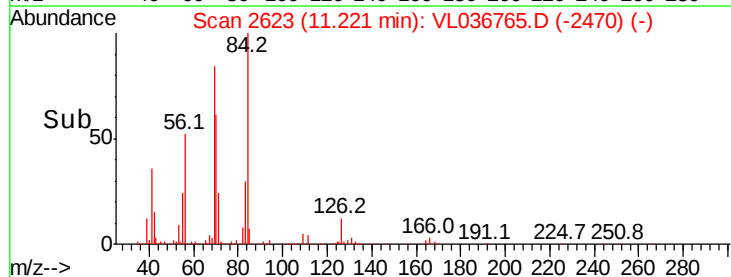
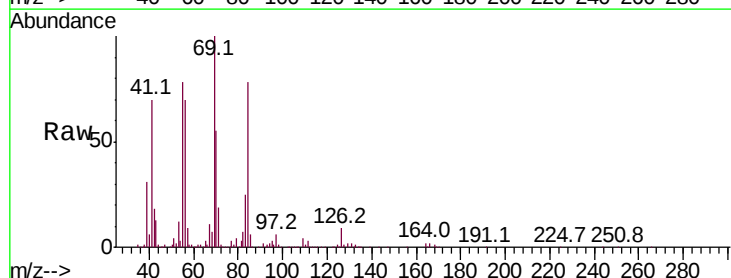
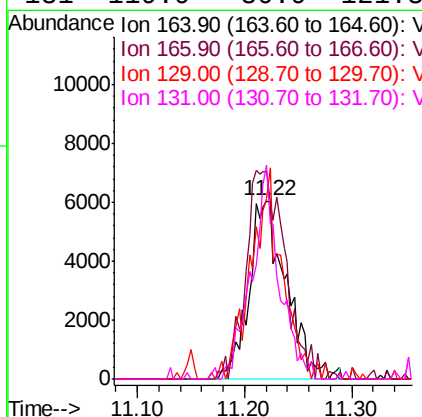
Ion Ratio Lower Upper

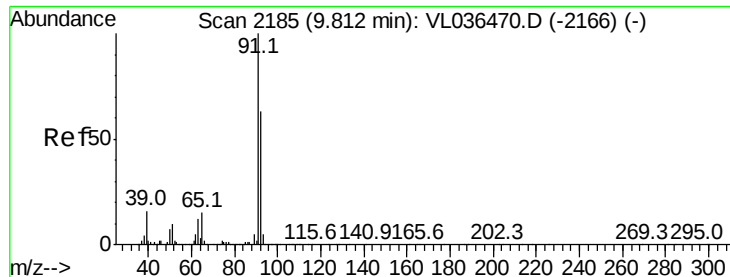
164 100

166 116.2 98.3 147.5

129 101.4 85.8 128.8

131 119.9 80.9 121.3





#53

Toluene

Concen: 1.210 ppbv

RT: 9.80 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

ClientSampleId :

SG-2

Tot Ion: 91 Resp: 418340

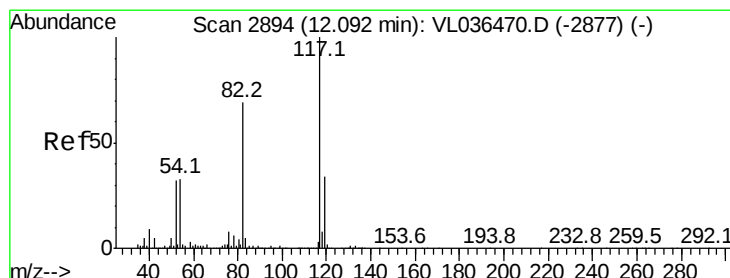
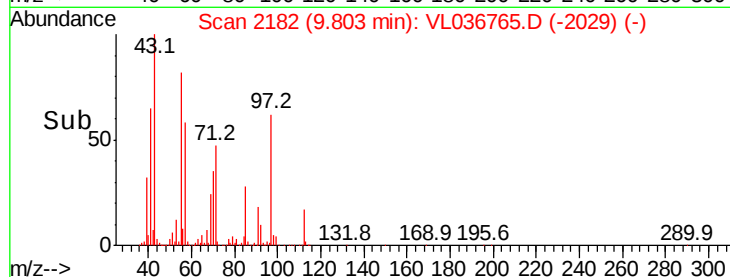
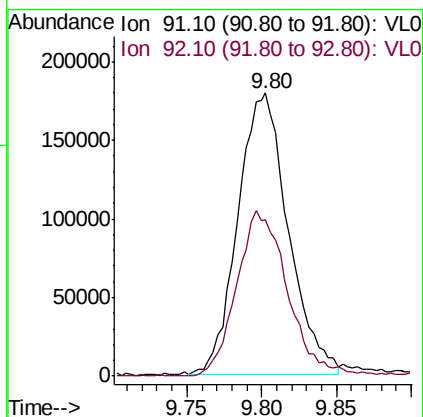
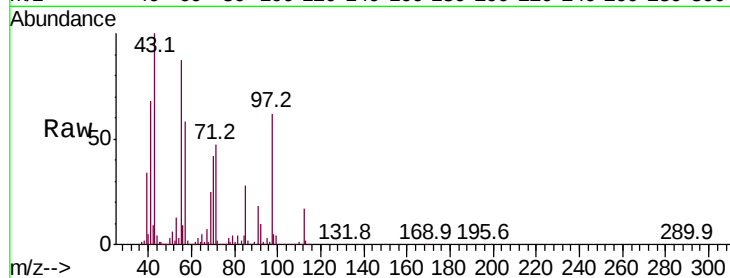
Ion Ratio Lower Upper

91 100

92 60.0 48.8 73.2

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.08 min Scan# 2890

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

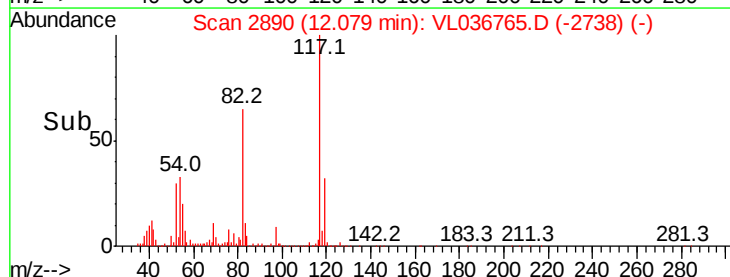
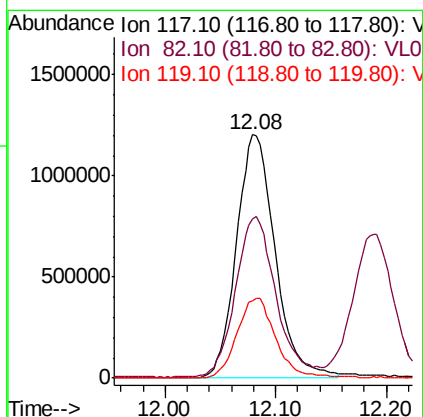
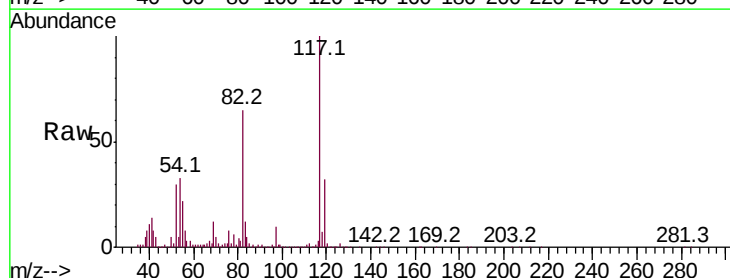
Tgt Ion: 117 Resp: 2930764

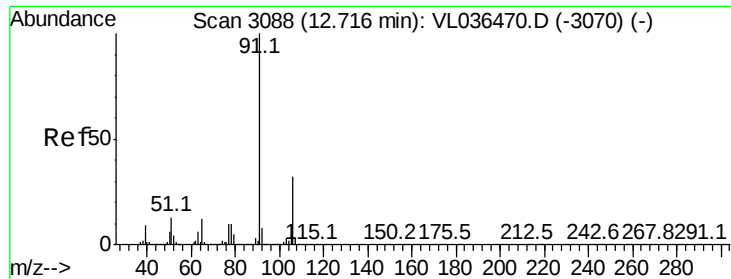
Ion Ratio Lower Upper

117 100

82 69.0 57.4 86.0

119 33.6 47.4 71.0#





#58

Ethyl Benzene

Concen: 1.407 ppbv

RT: 12.71 min Scan# 3085

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

ClientSampled :

SG-2

Tot Ion: 91 Resp: 599742

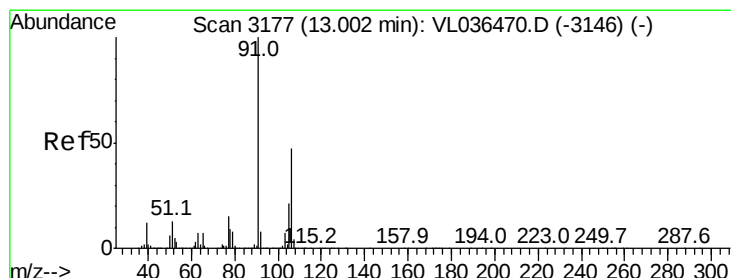
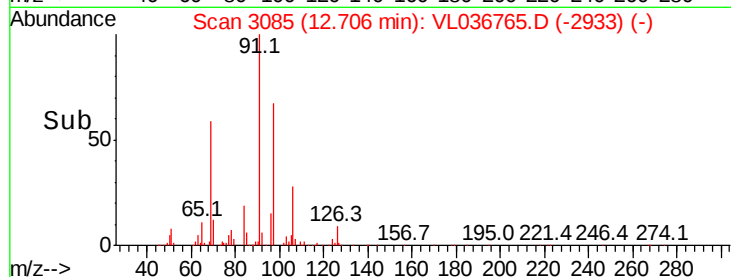
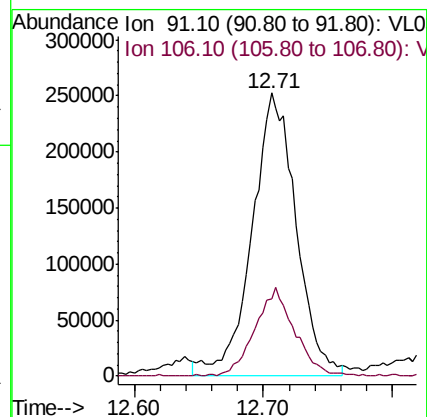
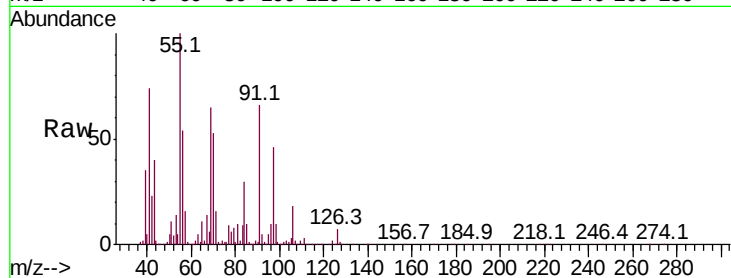
Ion Ratio Lower Upper

91 100

106 27.2 25.3 37.9

Manual Integrations
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#59

m/p-Xylene

Concen: 3.340 ppbv

RT: 12.97 min Scan# 3166

Delta R.T. -0.04 min

Lab File: VL036765.D

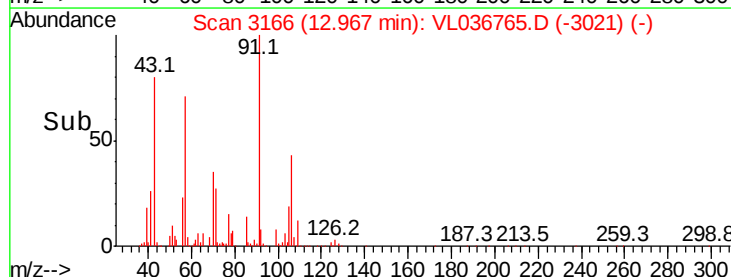
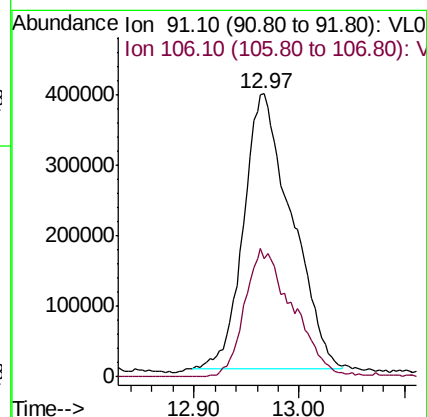
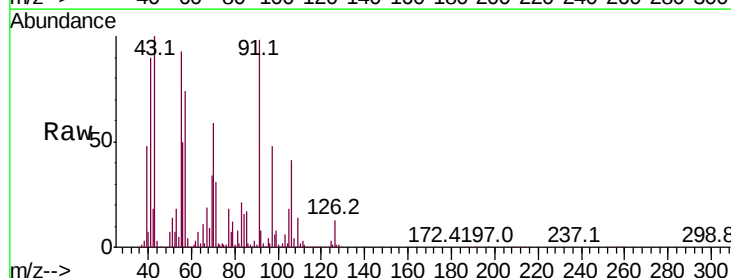
Acq: 9 Apr 2021 1:04

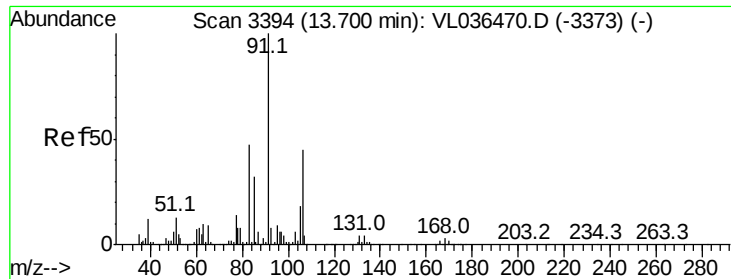
Tgt Ion: 91 Resp: 1242305

Ion Ratio Lower Upper

91 100

106 46.9 35.3 52.9





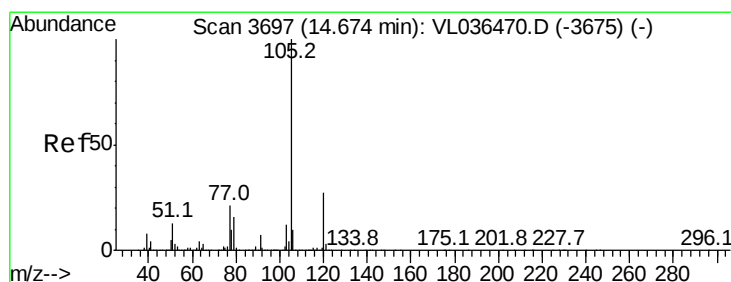
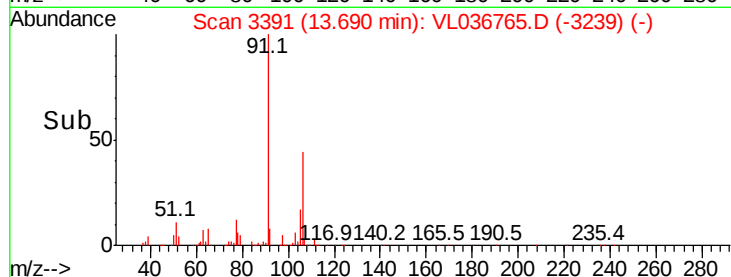
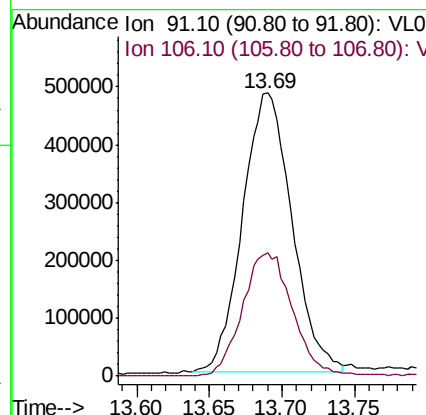
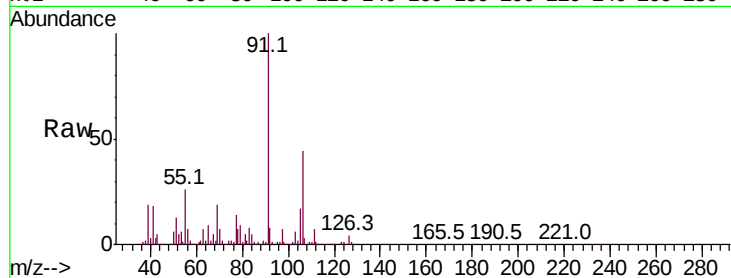
#60
o-Xylene
Concen: 3.190 ppbv
RT: 13.69 min Scan# 3391
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Instrument :
MSVOA_L
ClientSampled :
SG-2

Tot Ion: 91 Resp: 1147120
Ion Ratio Lower Upper
91 100
106 45.2 22.3 66.9

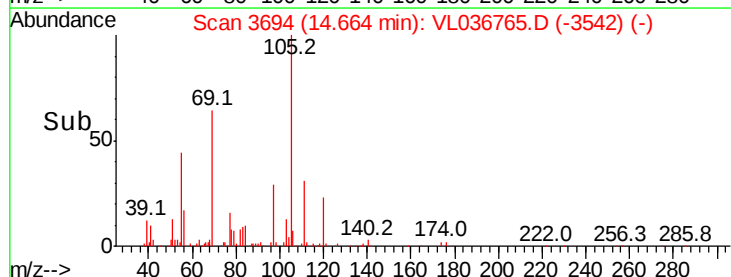
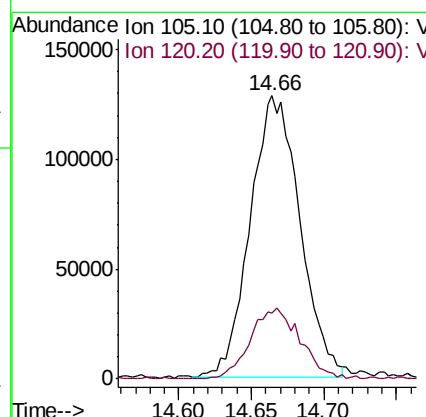
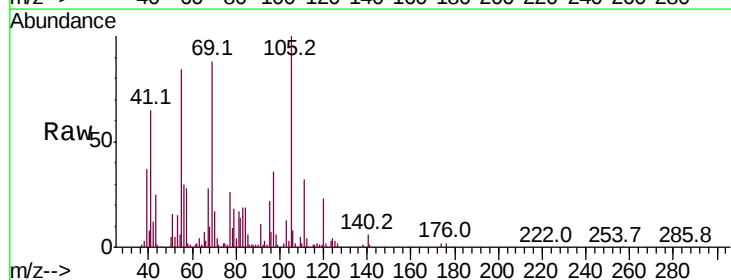
Manual Integrations
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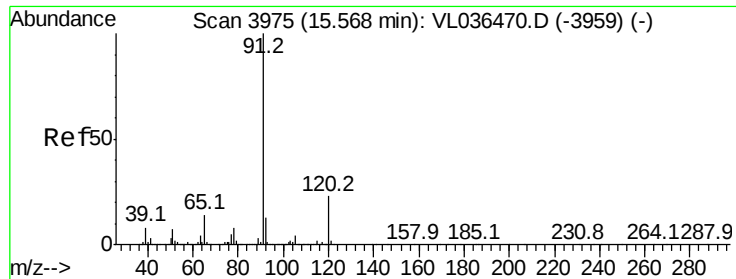
MMDadoda
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#62
Isopropylbenzene
Concen: 0.630 ppbv
RT: 14.66 min Scan# 3694
Delta R.T. -0.01 min
Lab File: VL036765.D
Acq: 9 Apr 2021 1:04

Tgt Ion:105 Resp: 305256
Ion Ratio Lower Upper
105 100
120 25.6 20.6 31.0





#64

n-propylbenzene

Concen: 0.506 ppbv

RT: 15.56 min Scan# 3972

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

ClientSampled :

SG-2

Tot Ion:120 Resp: 59867

Ion Ratio Lower Upper

120 100

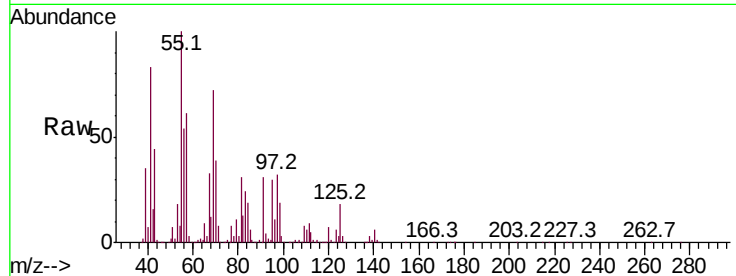
91 631.1 377.4 566.2#

Manual Integrations

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Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

150000

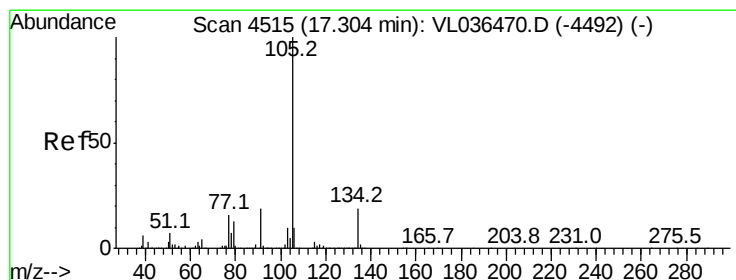
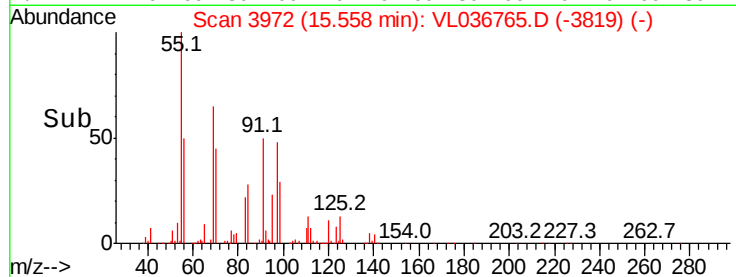
100000

50000

0

15.50 15.55 15.60

Time-->



#67

sec-Butylbenzene

Concen: 0.421 ppbv m

RT: 17.30 min Scan# 4513

Delta R.T. -0.01 min

Lab File: VL036765.D

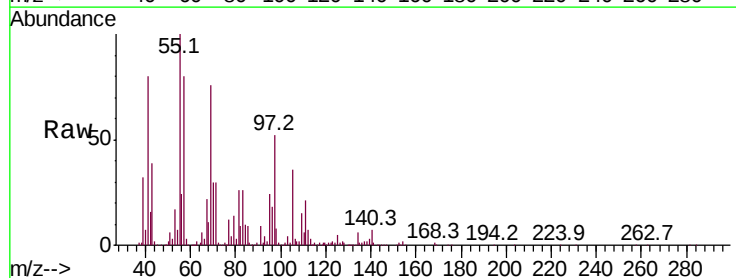
Acq: 9 Apr 2021 1:04

Tgt Ion:105 Resp: 249278

Ion Ratio Lower Upper

105 100

134 16.7 14.7 22.1



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 134.20 (133.90 to 134.90): V

120000

100000

80000

60000

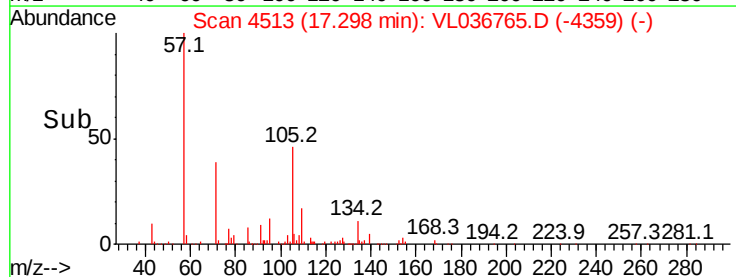
40000

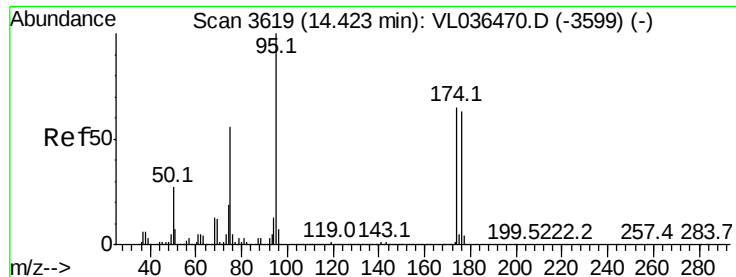
20000

0

17.25 17.30 17.35

Time-->





#68

1-Bromo-4-Fluorobenzene

Concen: 10.923 ppbv

RT: 14.41 min Scan# 3615

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

ClientSampled :

SG-2

Tot Ion: 95 Resp: 2551440

Ion Ratio Lower Upper

95 100

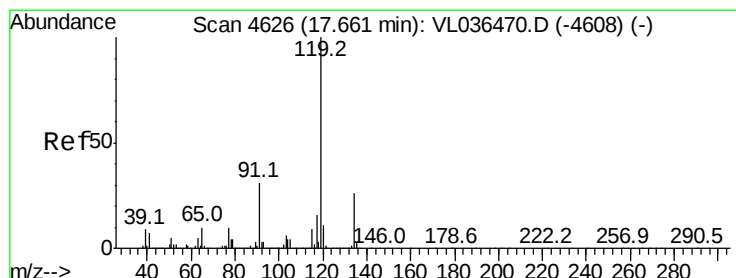
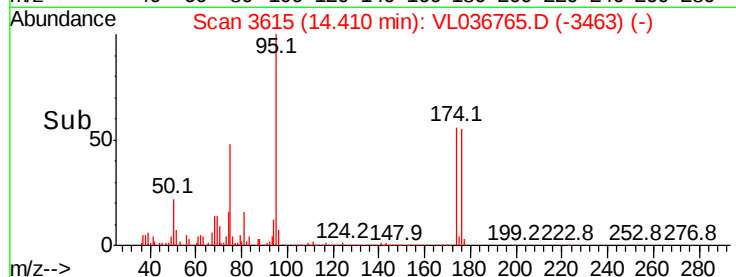
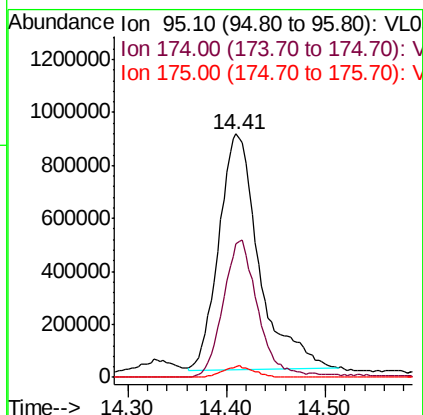
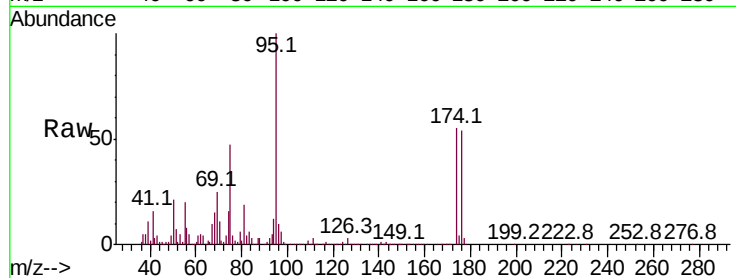
174 50.5 51.0 76.6#

175 3.8 3.9 5.9#

Manual Integrations
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#69

p-Isopropyltoluene

Concen: 0.717 ppbv

RT: 17.65 min Scan# 4623

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

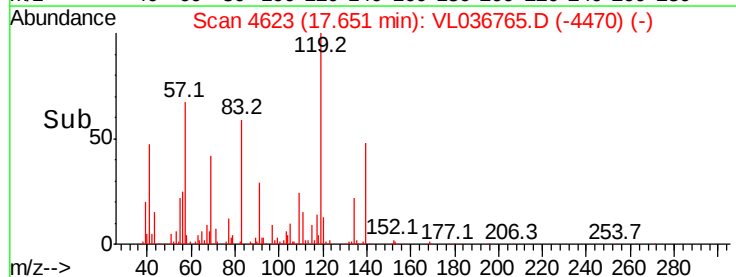
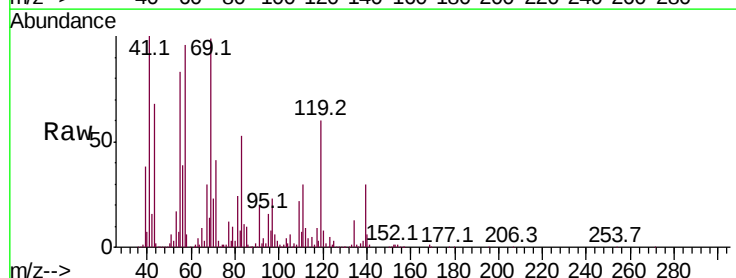
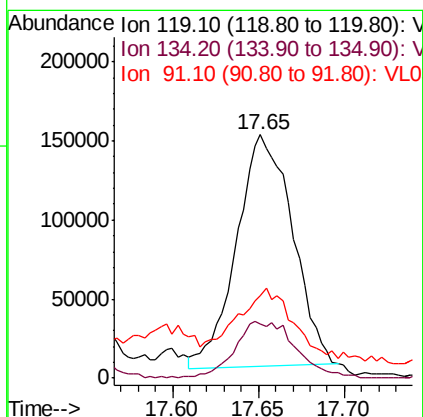
Tgt Ion: 119 Resp: 331970

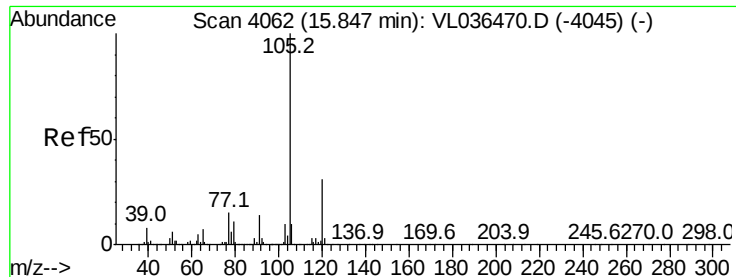
Ion Ratio Lower Upper

119 100

134 26.4 20.6 30.8

91 39.5 25.0 37.6#





#72

4-Ethyltoluene

Concen: 1.001 ppbv

RT: 15.84 min Scan# 4061

Delta R.T. -0.00 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

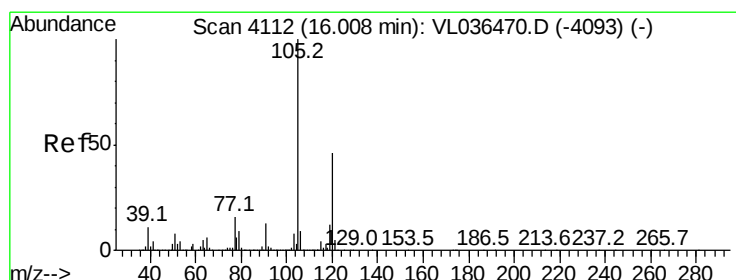
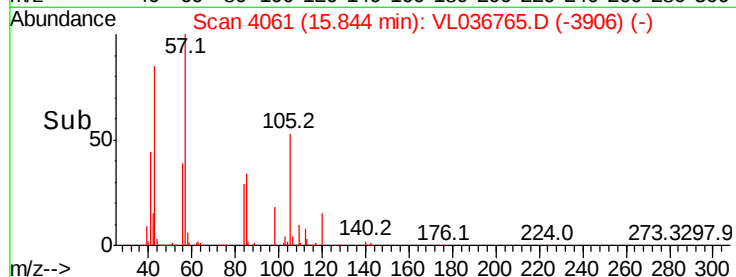
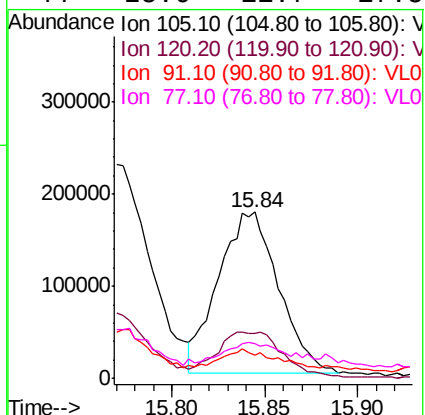
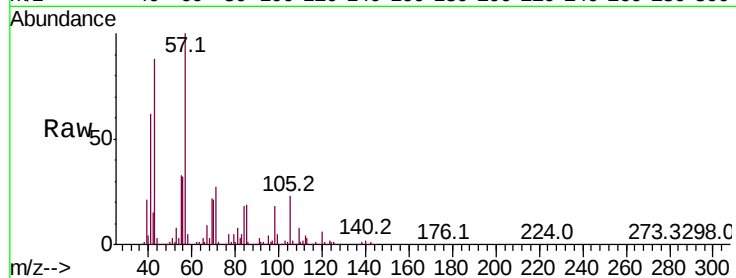
ClientSampleId :

SG-2

Tot Ion:	105	Resp:	394491
Ion Ratio	Lower	Upper	
105	100		
120	32.3	24.0	36.0
91	19.8	11.0	16.4#
77	25.6	11.7	17.5#

Manual Integrations
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#73

1,3,5-Trimethylbenzene

Concen: 1.882 ppbv

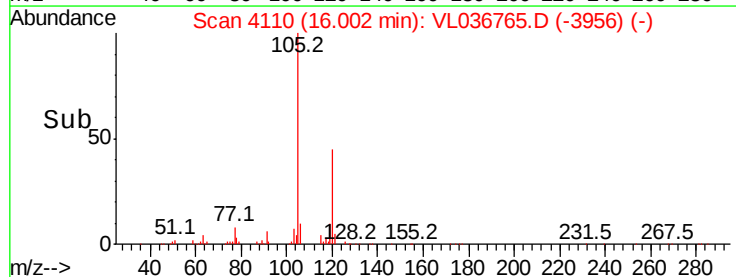
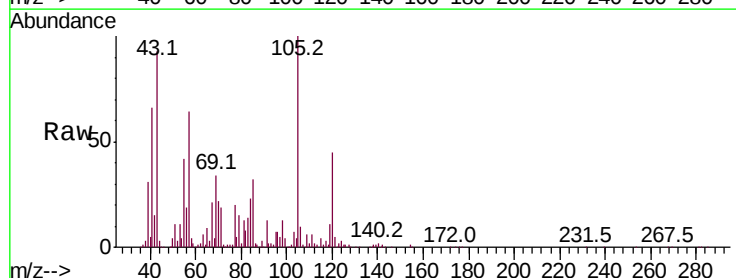
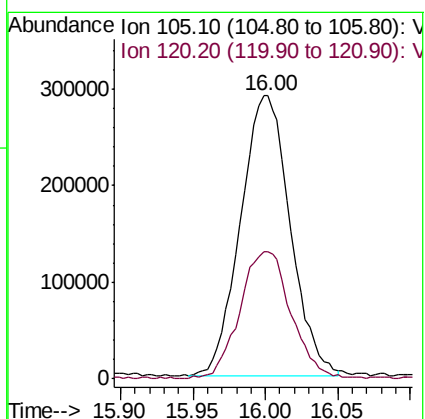
RT: 16.00 min Scan# 4110

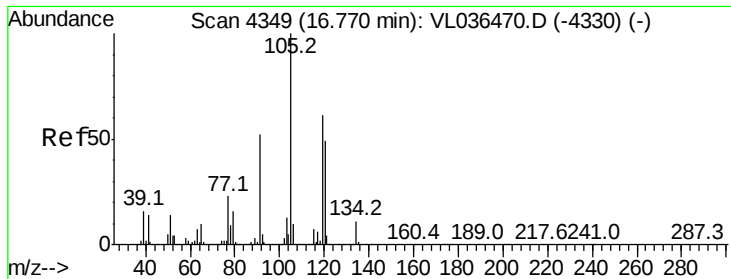
Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Tgt Ion:	105	Resp:	691965
Ion Ratio	Lower	Upper	
105	100		
120	45.3	36.6	54.8





#74

1,2,4-Trimethylbenzene

Concen: 2.624 ppbv

RT: 16.76 min Scan# 4347

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Instrument :

MSVOA_L

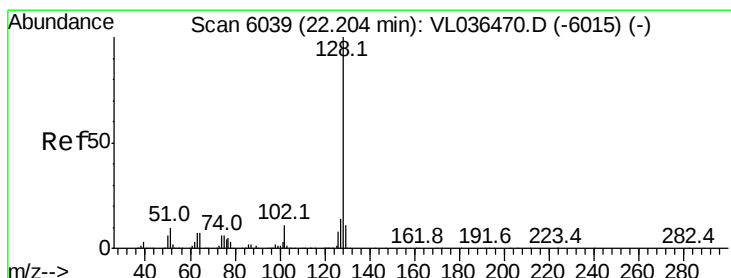
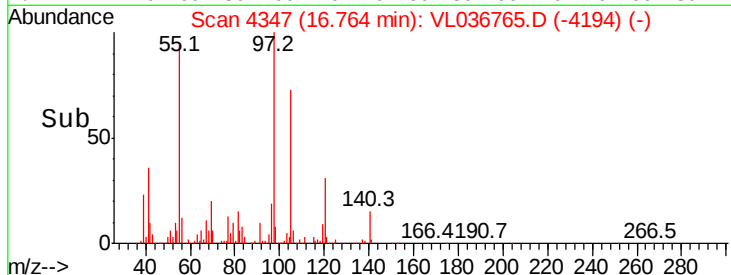
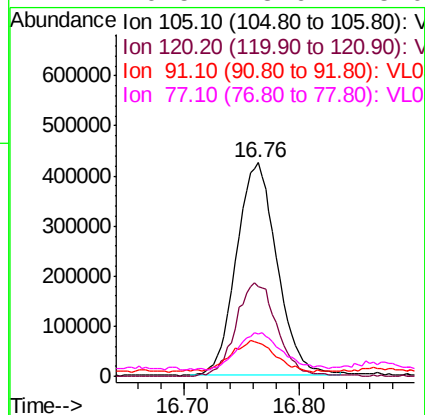
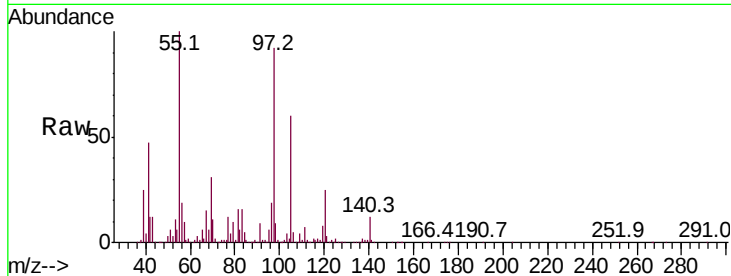
ClientSampleId :

SG-2

Tot Ion	Ratio	Lower	Upper
105	100		
120	42.0	39.2	58.8
91	13.1	42.6	64.0#
77	16.5	18.6	28.0#

Manual Integrations
APPROVED

MMDadoda
4/12/2021 11:47:58 AM



#79

Naphthalene

Concen: 0.170 ppbv m

RT: 22.19 min Scan# 6035

Delta R.T. -0.01 min

Lab File: VL036765.D

Acq: 9 Apr 2021 1:04

Tgt Ion	Ratio	Lower	Upper
128	100		
127	11.8	10.9	16.3
129	11.7	9.0	13.4

