

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121621\
 Data File : VL038200.D
 Acq On : 16 Dec 2021 22:14
 Operator : SY/AP
 Sample : M5119-01
 Misc : 400mL/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA L
 ClientSampleId :
 SG-2

Manual Integrations
 APPROVED

Reviewed By :Amit Patel 12/20/2021
 Supervised By :Mahesh Dadoda 12/20/2021

Quant Time: Dec 17 07:57:13 2021
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111821A
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument:
 QLast Update : Thu Nov 18 13:16:09 2021
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.68	49	1065095	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2998775	10.00	ppbv	0.01
55) Chlorobenzene-d5	12.19	117	1091039	10.00	ppbv	0.12

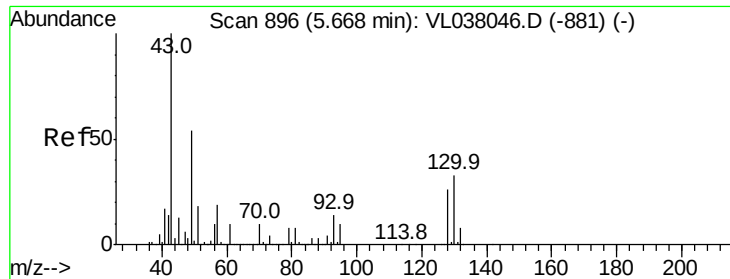
System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene 14.50 95 6650966m 84.51 ppbv 0.09
 Spiked Amount 10.000 Range 65 - 135 Recovery = 845.10%#

Target Compounds

					Ovalue
3) Chlorodifluoromethane	2.99	51	40564m	0.181 ppbv	
4) Chloromethane	3.14	50	1066977	14.013 ppbv	97
5) Vinyl Chloride	3.26	62	267103	3.576 ppbv	94
7) Chloroethane	3.56	64	66767	2.519 ppbv	98
9) Propene	3.01	41	18884017	229.242 ppbv #	73
10) Heptane	8.17	43	25985439	127.635 ppbv #	81
11) Trichlorofluoromethane	3.97	101	36452m	0.218 ppbv	
13) Ethanol	3.60	45	322042	40.455 ppbv	91
15) Acetone	3.85	43	8042329	87.090 ppbv #	84
19) Isopropyl Alcohol	3.97	45	9442681	141.520 ppbv	100
20) Methylene Chloride	4.36	84	470563	9.097 ppbv	95
22) trans-1,2-Dichloroethene	4.91	96	7695m	0.140 ppbv	
26) Hexane	5.70	57	859687	5.811 ppbv #	72
27) Carbon Disulfide	4.57	76	150557	1.136 ppbv	98
28) Methyl tert-Butyl Ether	5.05	73	34079	0.271 ppbv #	1
29) Chloroform	5.76	83	6122604	28.083 ppbv	94
30) Cyclohexane	7.14	84	554271	4.127 ppbv #	1
32) 1,1,1-Trichloroethane	6.52	97	6727m	0.030 ppbv	
34) 2-Butanone	5.25	43	6433814	53.208 ppbv	98
35) Carbon Tetrachloride	7.03	117	8366m	0.040 ppbv	
36) Benzene	6.90	78	1528892	5.111 ppbv #	89
38) Trichloroethene	7.85	130	3825m	0.034 ppbv	
43) Methyl Methacrylate	8.02	69	615831	6.018 ppbv	93
52) Tetrachloroethene	11.40	164	25540m	0.231 ppbv	
53) Toluene	9.83	91	3443539	10.005 ppbv	99
58) Ethyl Benzene	12.87	91	39682035	220.055 ppbv #	40
59) m/p-Xylene	13.15	91	37608041	247.747 ppbv #	65
60) o-Xylene	13.85	91	16013256	113.715 ppbv	92
62) Isopropylbenzene	14.74	105	524158	2.622 ppbv	97
69) p-Isopropyltoluene	17.68	119	413480	2.154 ppbv	97
73) 1,3,5-Trimethylbenzene	16.04	105	45599m	0.306 ppbv	
74) 1,2,4-Trimethylbenzene	16.80	105	153085m	0.996 ppbv	
79) Naphthalene	22.21	128	15183m	0.188 ppbv	

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.68 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:

Ion Ratio

49 100

128 48.

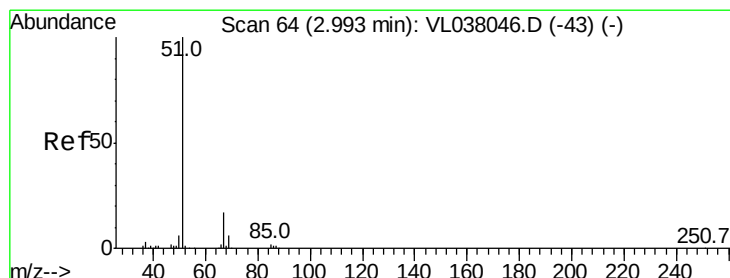
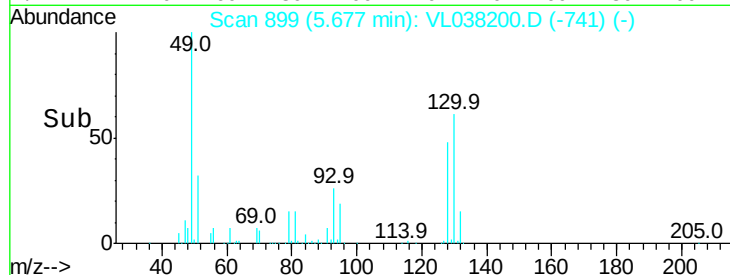
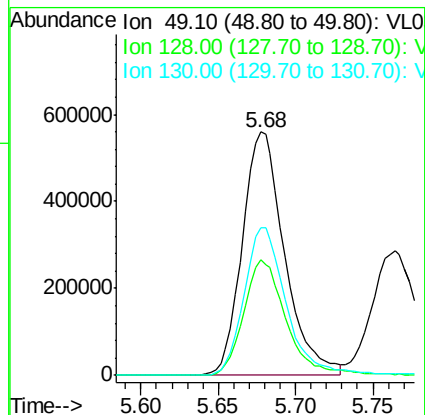
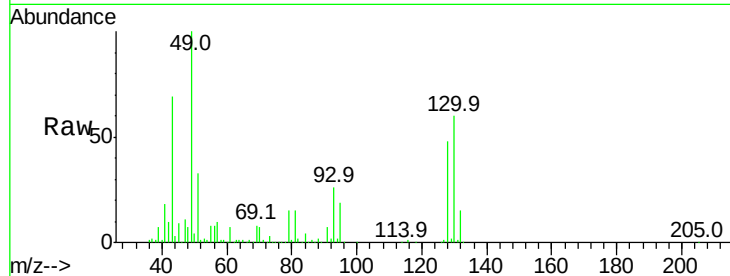
130 61.

Manual Integrations

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Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#3

Chlorodifluoromethane

Concen: 0.181 ppbv m

RT: 2.99 min Scan# 63

Delta R.T. -0.00 min

Lab File: VL038200.D

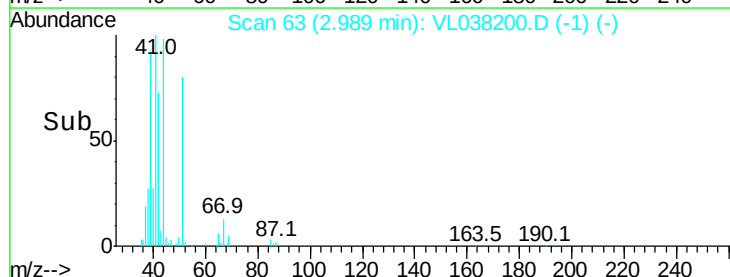
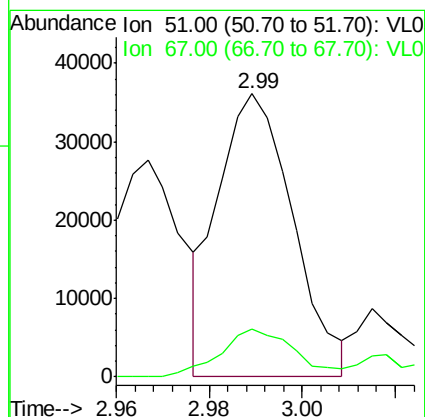
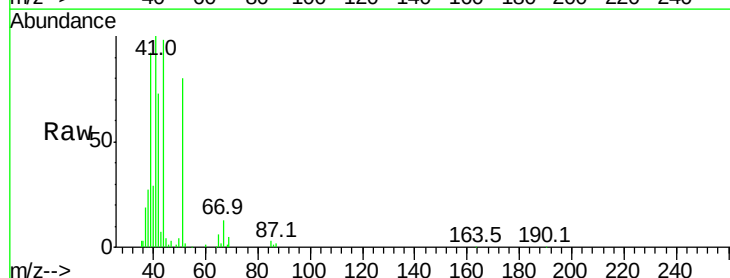
Acq: 16 Dec 2021 22:14

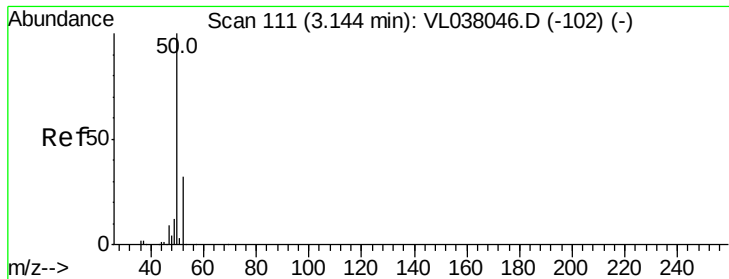
Tgt Ion: 51 Resp: 40564

Ion Ratio Lower Upper

51 100

67 23.0 13.8 20.8#





#4

Chloromethane

Concen: 14.013 ppbv

RT: 3.14 Instrument :

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:

Ion Ratio

50 100

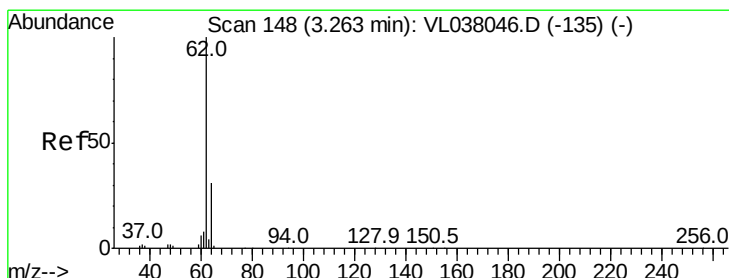
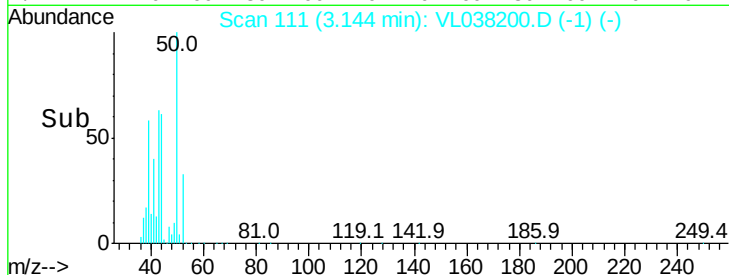
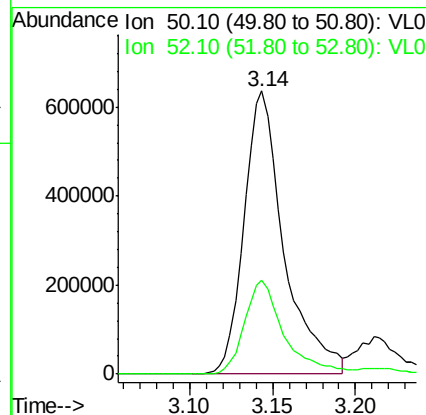
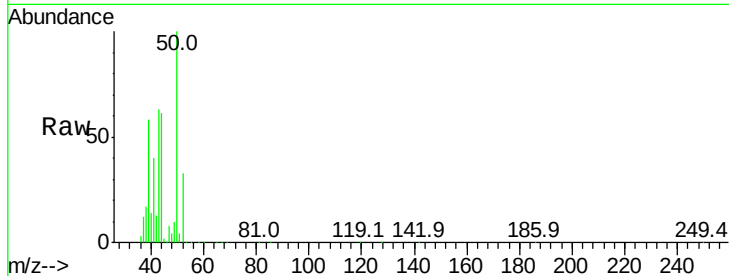
52 33.

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#5

Vinyl Chloride

Concen: 3.576 ppbv

RT: 3.26 min Scan# 148

Delta R.T. -0.00 min

Lab File: VL038200.D

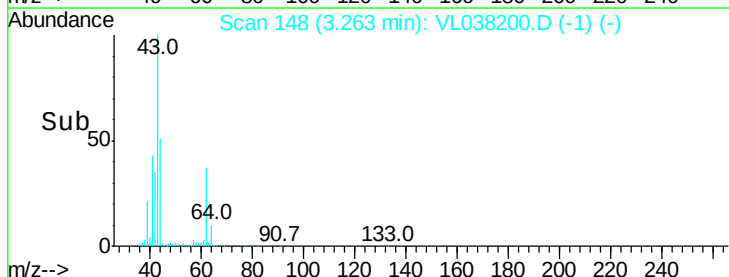
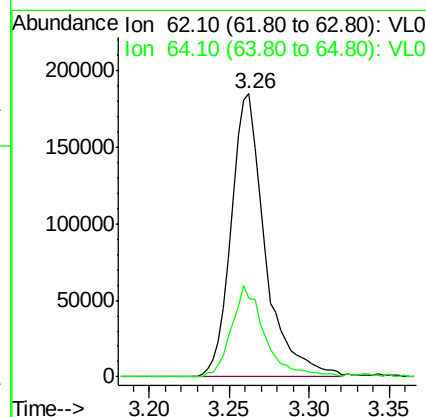
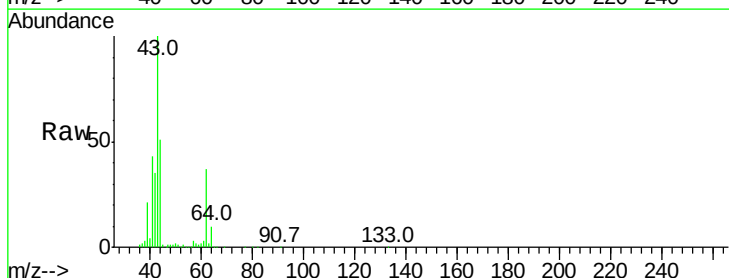
Acq: 16 Dec 2021 22:14

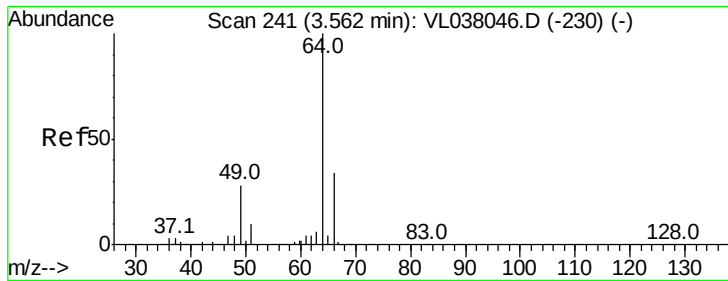
Tgt Ion: 62 Resp: 267103

Ion Ratio Lower Upper

62 100

64 27.9 25.1 37.7





#7

Chloroethane

Concen: 2.519 ppbv

RT: 3.56 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:

Ion Ratio

64 100

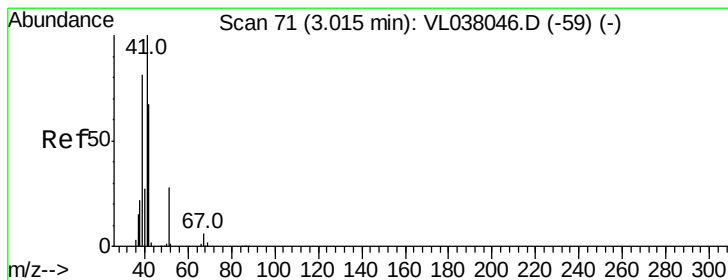
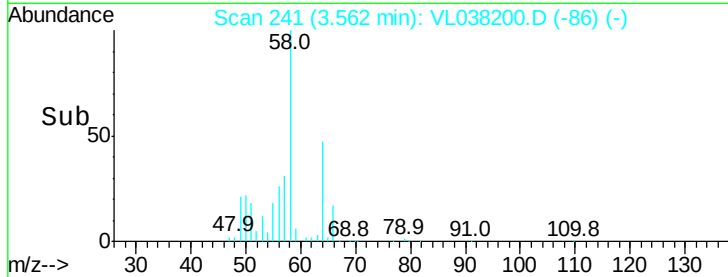
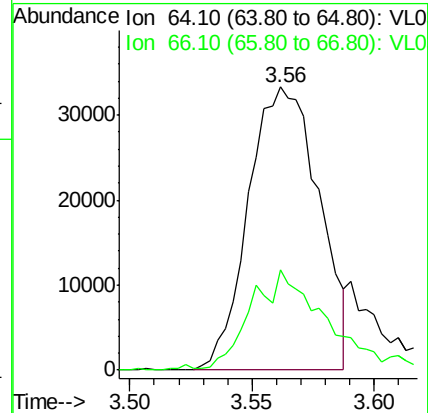
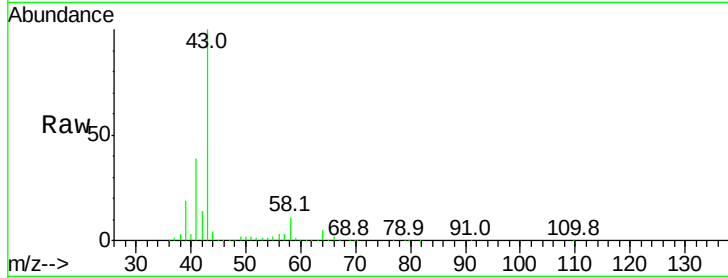
66 35.

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#9

Propene

Concen: 229.242 ppbv

RT: 3.01 min Scan# 71

Delta R.T. -0.00 min

Lab File: VL038200.D

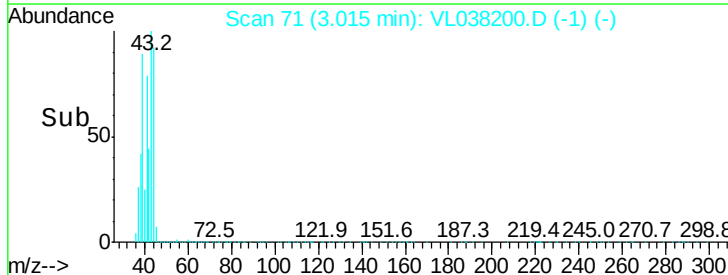
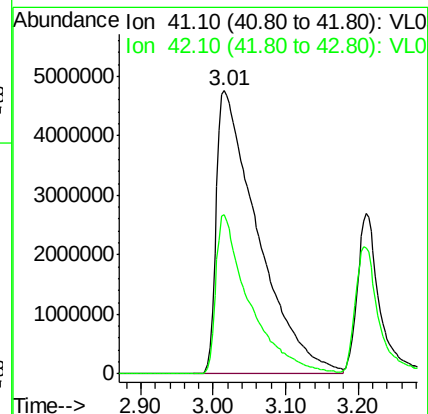
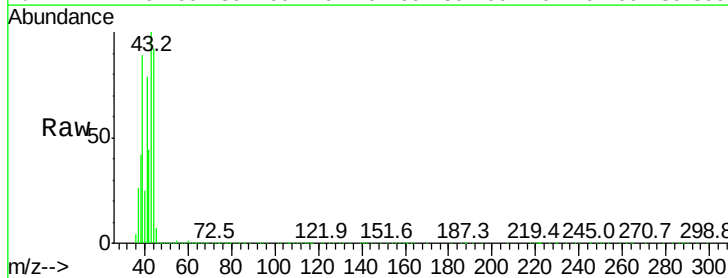
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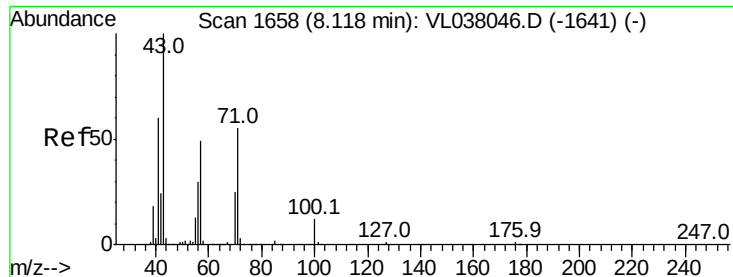
Tgt Ion: 41 Resp:18884017

Ion Ratio Lower Upper

41 100

42 45.6 53.8 80.8#



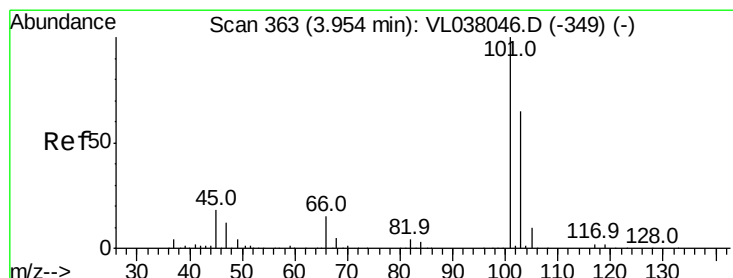
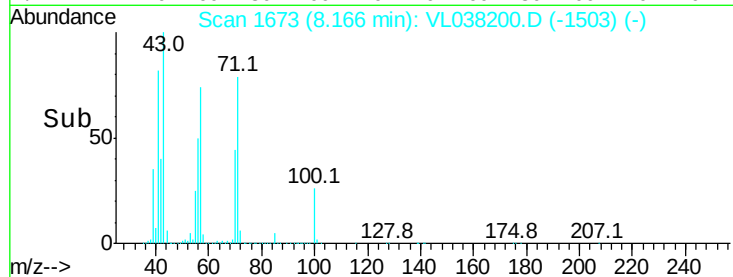
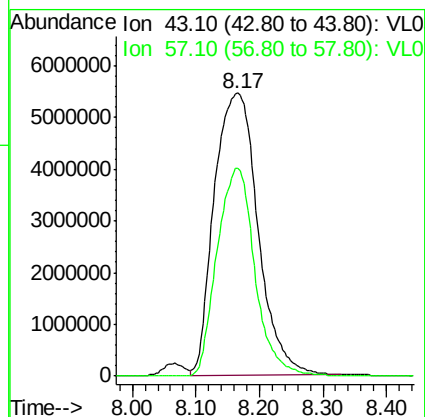
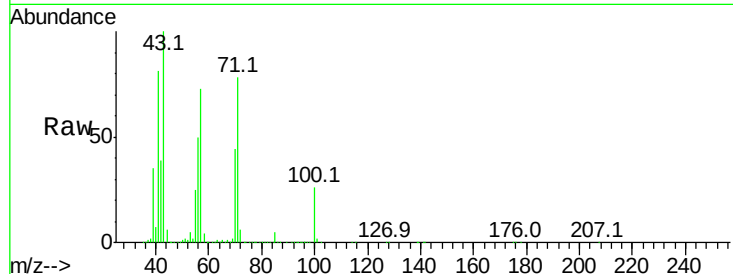


#10
 Heptane
 Concen: 127.635 ppbv
 RT: 8.17
 Instrument: MSVOA_1
 Delta R.T.:
 Lab File: ClientSampleId:
 Acq: 16 Dec 2021 22:14

Tot Ion:
 Ion Ratio
 43 100
 57 63.

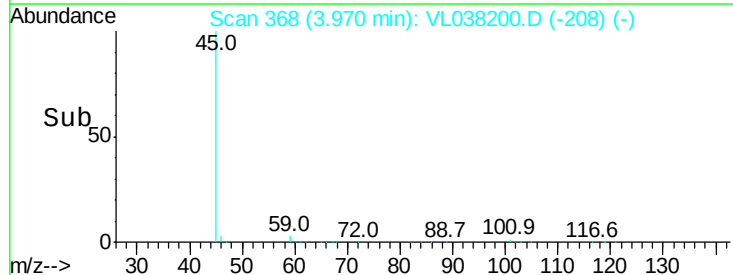
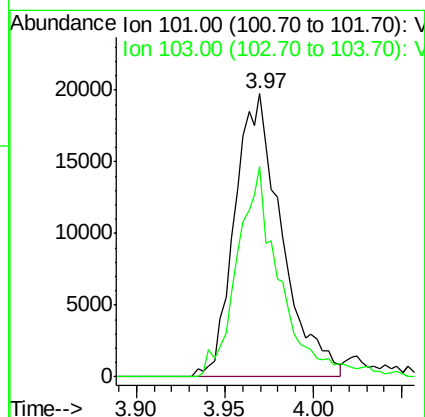
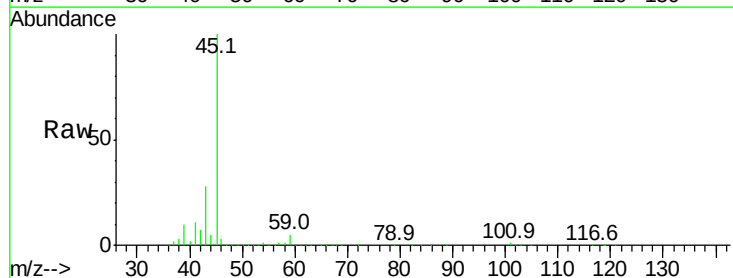
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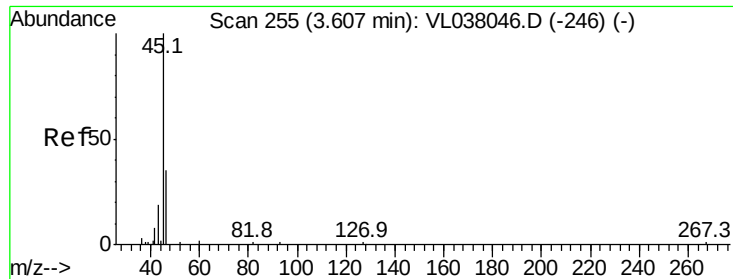
Reviewed By :Amit Patel 12/20/2021
 Supervised By :Mahesh Dadoda 12/20/2021



#11
 Trichlorofluoromethane
 Concen: 0.218 ppbv m
 RT: 3.97 min Scan# 368
 Delta R.T. 0.02 min
 Lab File: VL038200.D
 Acq: 16 Dec 2021 22:14

Tgt Ion:101 Resp: 36452
 Ion Ratio Lower Upper
 101 100
 103 74.1 51.8 77.6



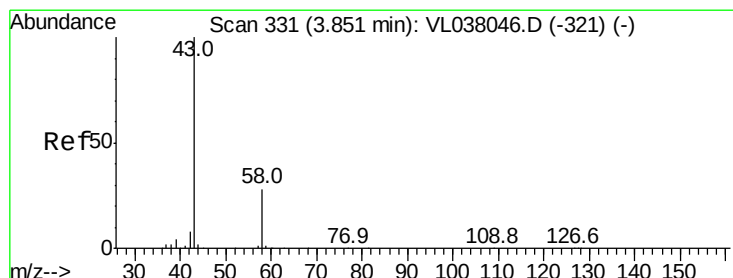
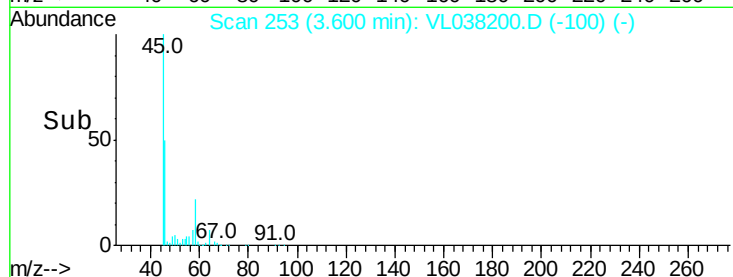
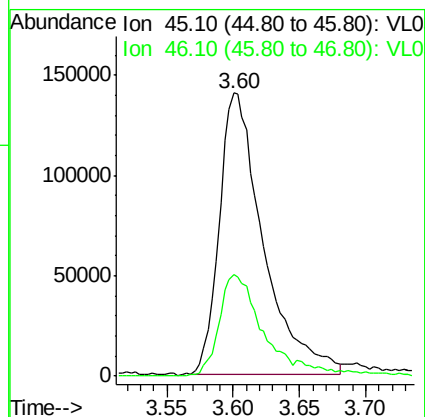
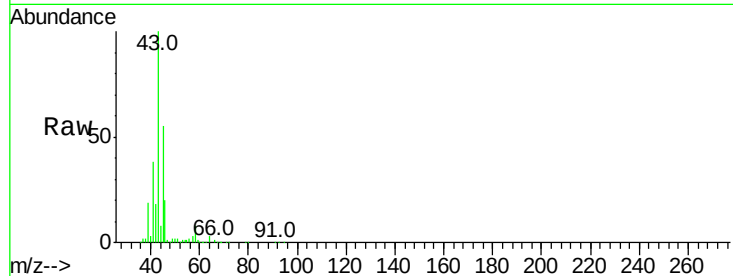


#13
Ethanol
Concen: 40.455 ppbv
RT: 3.60
Delta R.T. MSVOA_L
Lab File: ClientSampleId :
Acq: 16 Dec 2021 22:14

Tot Ion:
Ion Ratio
45 100
46 38.

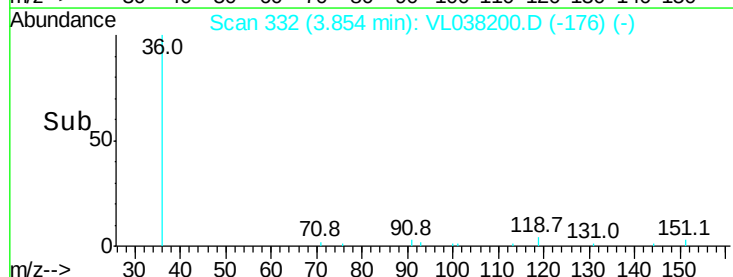
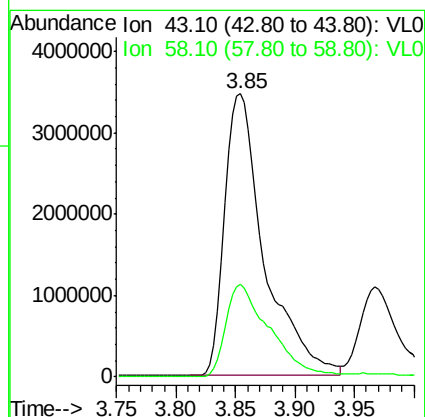
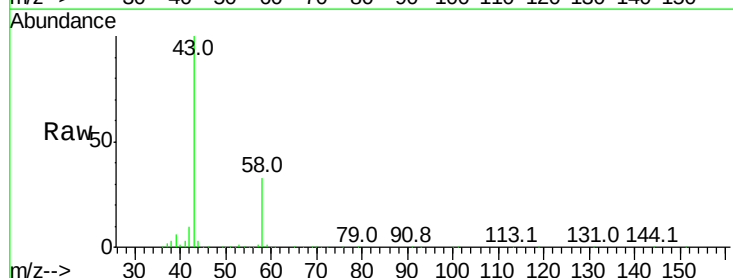
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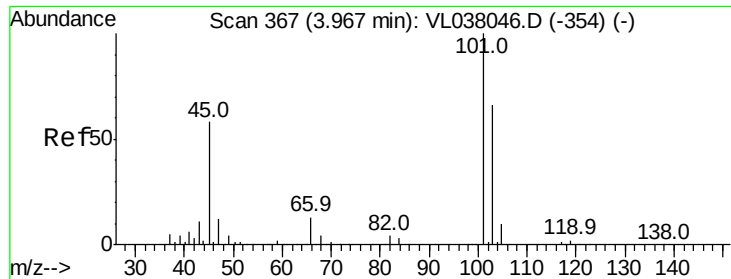
Reviewed By :Amit Patel 12/20/2021
Supervised By :Mahesh Dadoda 12/20/2021



#15
Acetone
Concen: 87.090 ppbv
RT: 3.85 min Scan# 332
Delta R.T. 0.00 min
Lab File: VL038200.D
Acq: 16 Dec 2021 22:14

Tgt Ion: 43 Resp: 8042329
Ion Ratio Lower Upper
43 100
58 36.2 22.4 33.6#





#19

Isopropyl Alcohol

Concen: 141.520 ppbv

RT: 3.97

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22:14

Tot Ion:

Ion Ratio

45 100

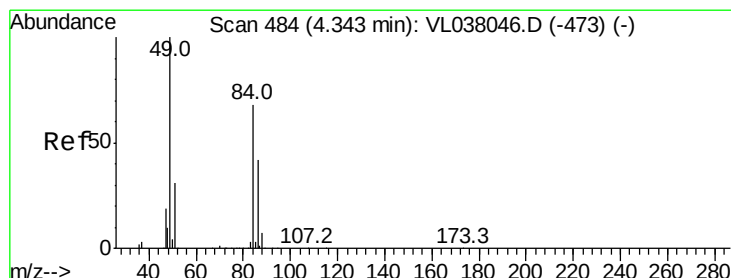
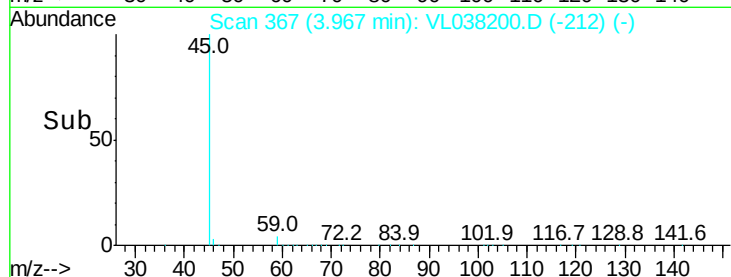
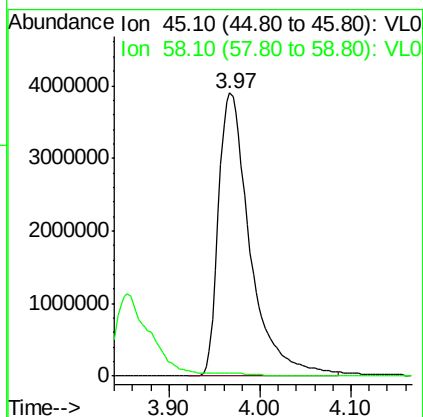
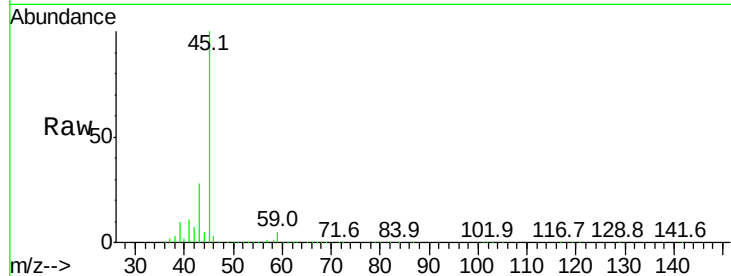
58 1.

Manual Integrations

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#20

Methylene Chloride

Concen: 9.097 ppbv

RT: 4.36 min Scan# 489

Delta R.T. 0.02 min

Lab File: VL038200.D

Acq: 16 Dec 2021 22:14

Tgt Ion: 84 Resp: 470563

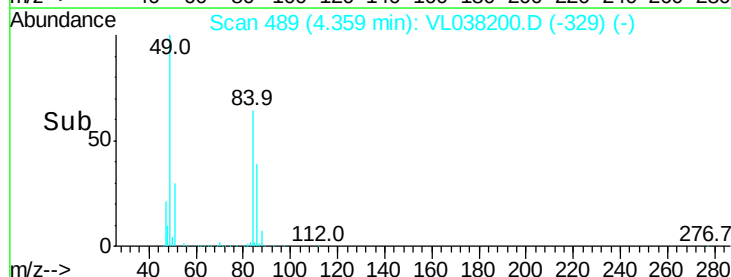
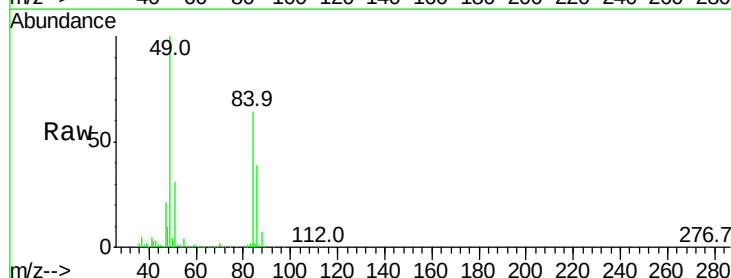
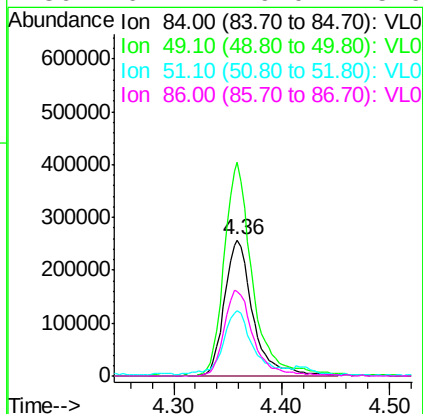
Ion Ratio Lower Upper

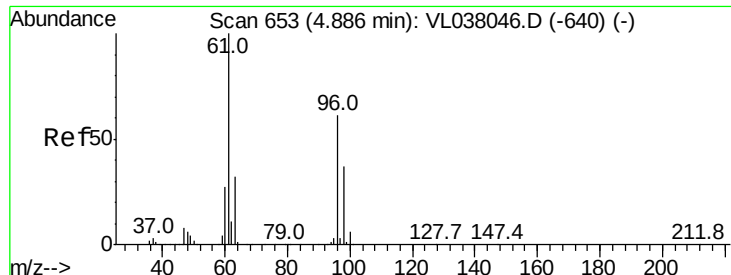
84 100

49 157.3 118.2 177.2

51 47.5 36.8 55.2

86 62.2 49.0 73.6





#22

trans-1,2-Dichloroethene

Concen: 0.140 ppbv m

RT: 4.91 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:

Ion Ratio

96 100

61 143.

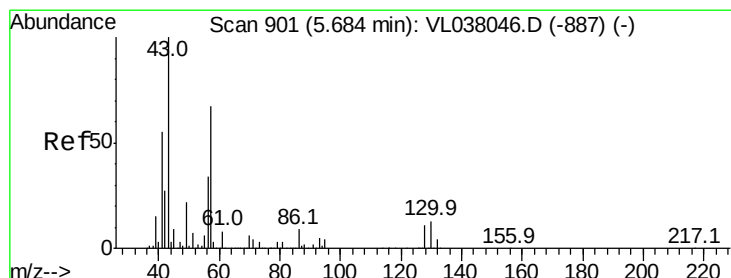
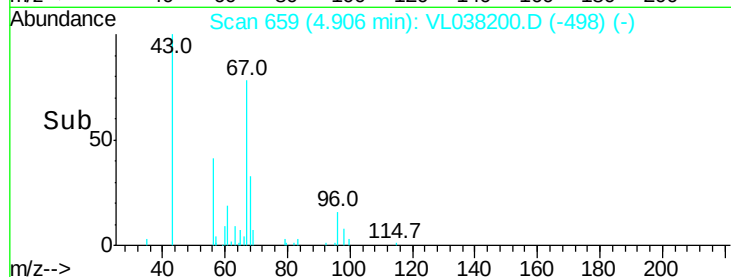
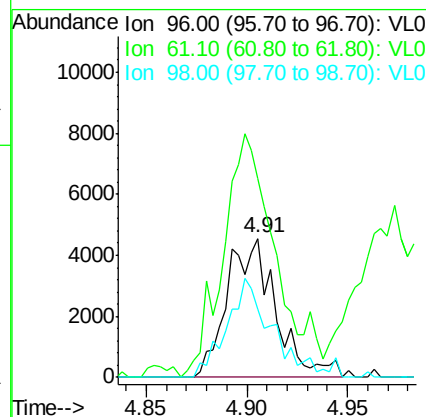
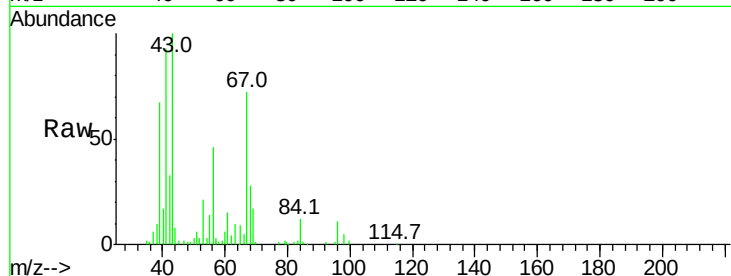
98 48.

Manual Integrations

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#26

Hexane

Concen: 5.811 ppbv

RT: 5.70 min Scan# 907

Delta R.T. 0.02 min

Lab File: VL038200.D

Acq: 16 Dec 2021 22:14

Tgt Ion: 57 Resp: 859687

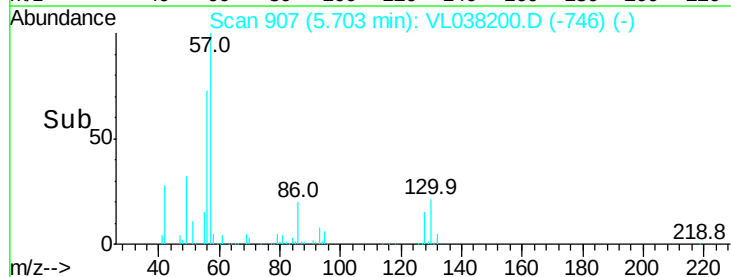
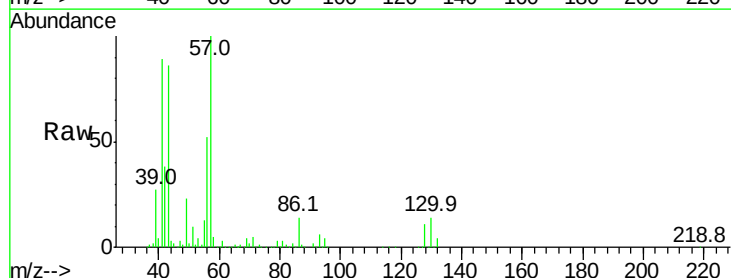
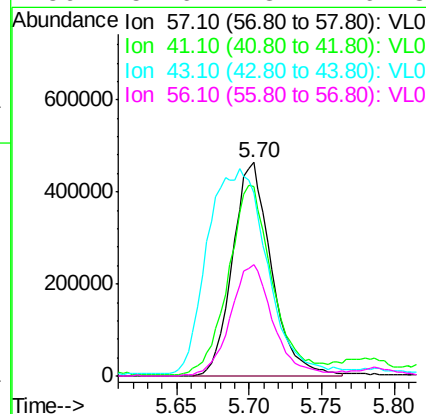
Ion Ratio Lower Upper

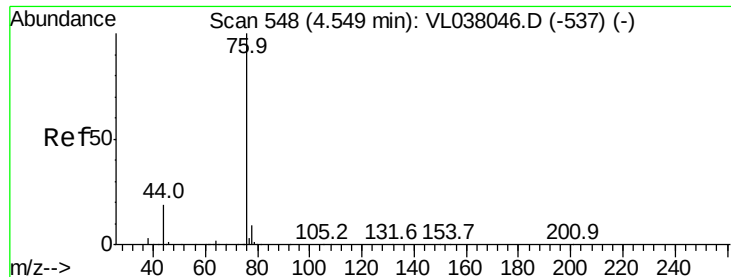
57 100

41 101.4 71.4 107.2

43 154.3 174.6 261.8#

56 57.6 43.2 64.8





#27

Carbon Disulfide

Concen: 1.136 ppbv

RT: 4.57 Instrument:

Delta R.T. MSVOA_L

Lab File: ClientSampleId:

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:

Ion Ratio

76 100

44 19.

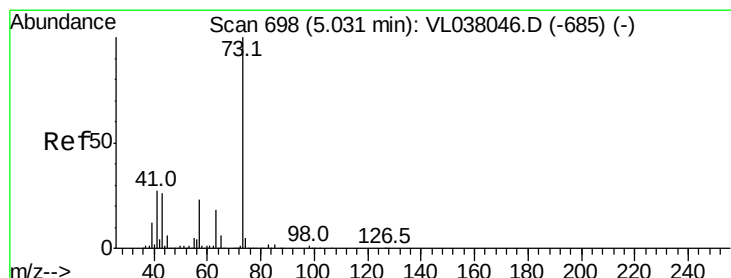
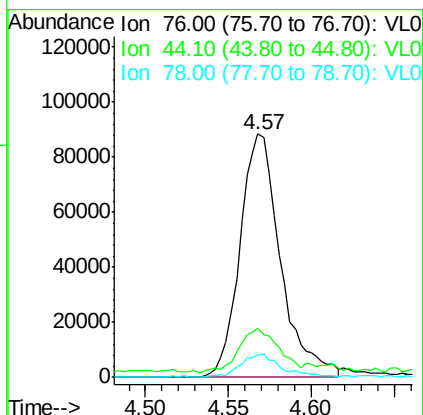
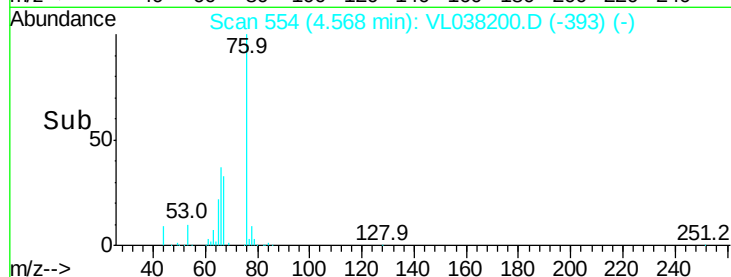
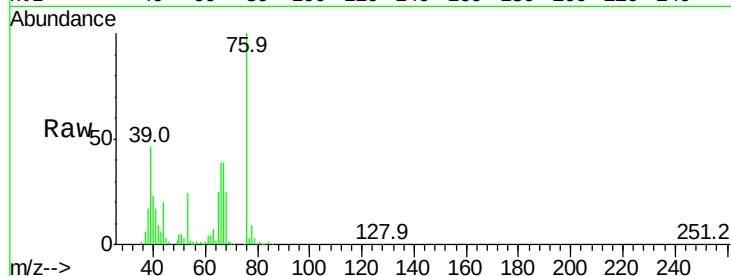
78 10.

Manual Integrations

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Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#28

Methyl tert-Butyl Ether

Concen: 0.271 ppbv

RT: 5.05 min Scan# 703

Delta R.T. 0.02 min

Lab File: VL038200.D

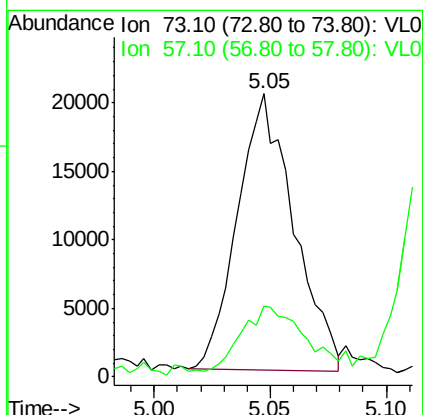
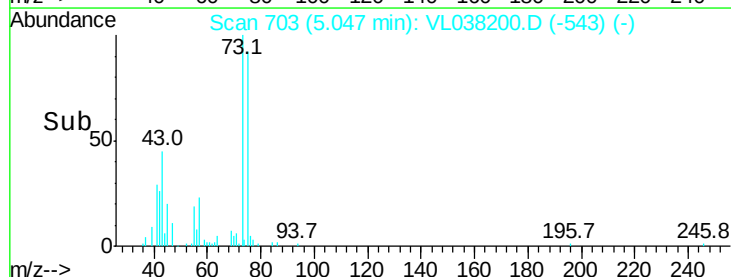
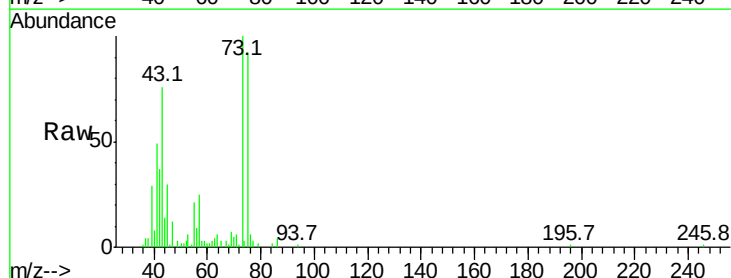
Acq: 16 Dec 2021 22:14

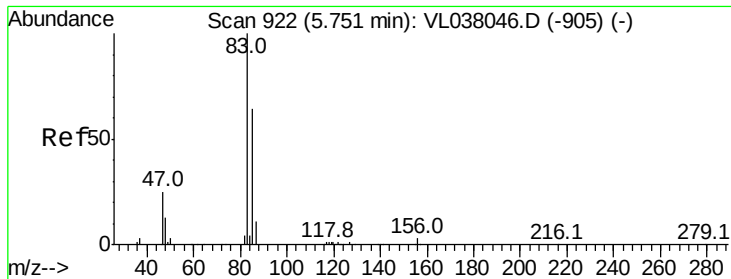
Tgt Ion: 73 Resp: 34079

Ion Ratio Lower Upper

73 100

57 144.2 19.0 28.4#



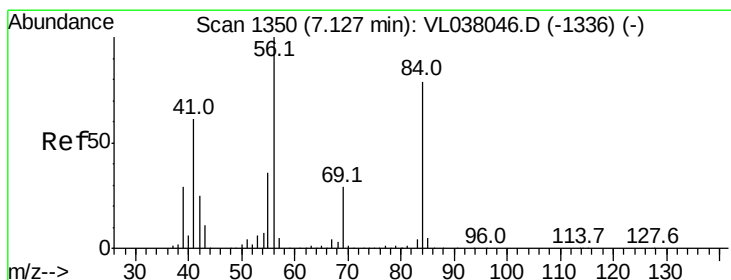
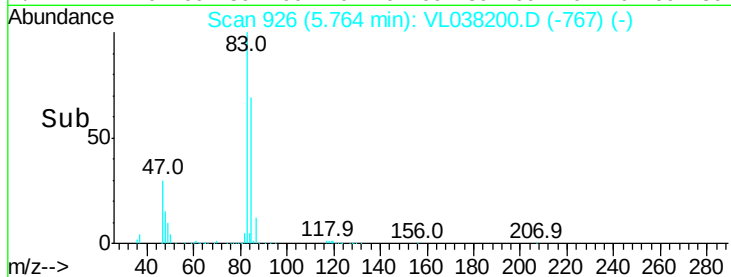
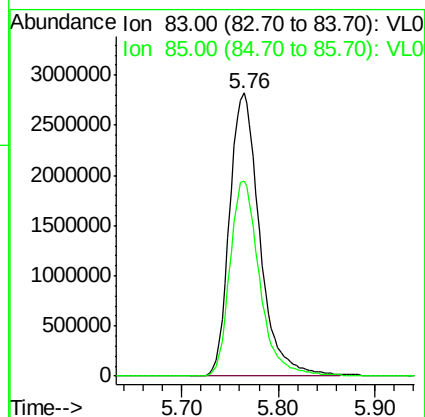
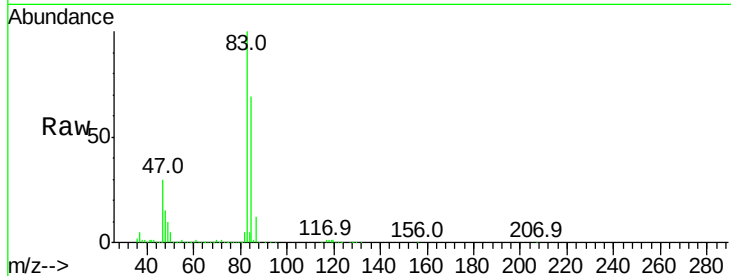


#29
Chloroform
Concen: 28.083 ppbv
RT: 5.76
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId:
Acq: 16 Dec 2021 22:14

Tot Ion:
Ion Ratio
83 100
85 68.

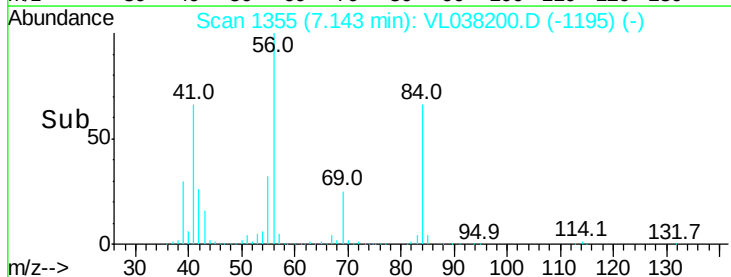
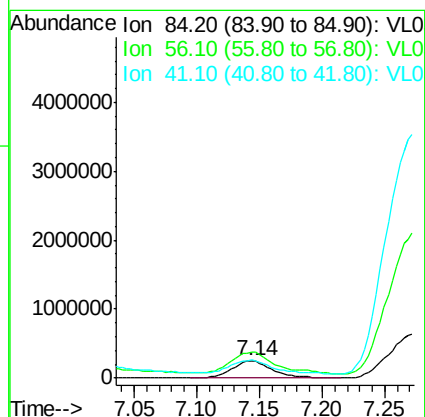
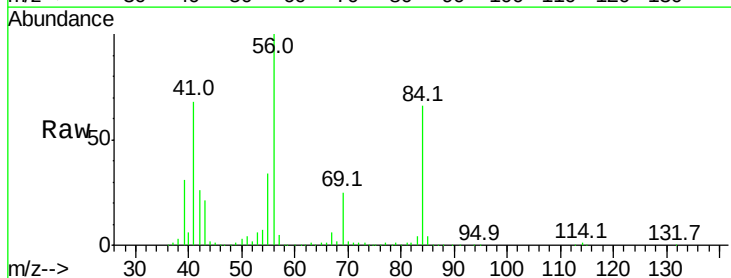
Manual Integrations
APPROVED

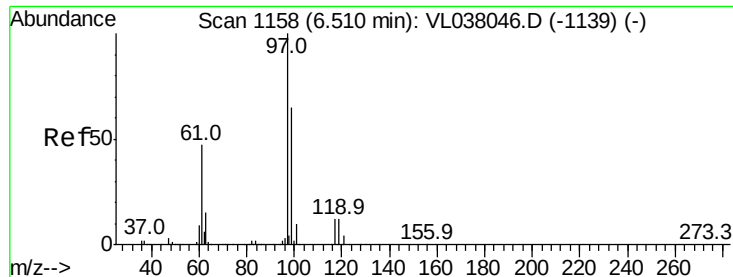
Reviewed By :Amit Patel 12/20/2021
Supervised By :Mahesh Dadoda 12/20/2021



#30
Cyclohexane
Concen: 4.127 ppbv
RT: 7.14 min Scan# 1355
Delta R.T. 0.02 min
Lab File: VL038200.D
Acq: 16 Dec 2021 22:14

Tgt Ion: 84 Resp: 554271
Ion Ratio Lower Upper
84 100
56 0.0 108.1 162.1#
41 380.2 64.4 96.6#





#32

1,1,1-Trichloroethane

Concen: 0.030 ppbv m

RT: 6.52 Instrument:

Delta R.T. MSVOA_L

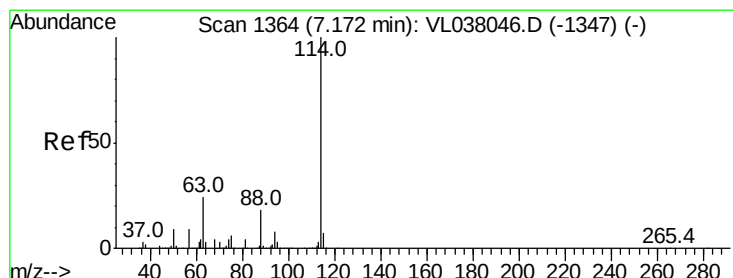
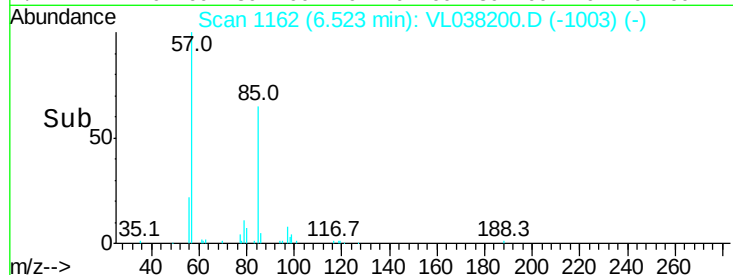
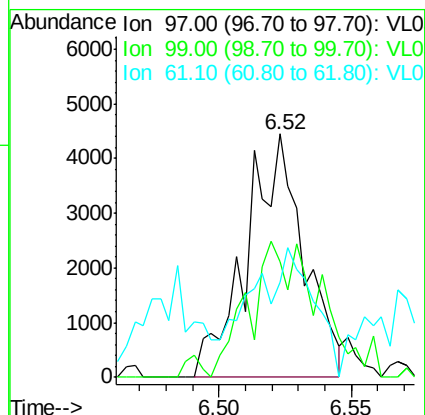
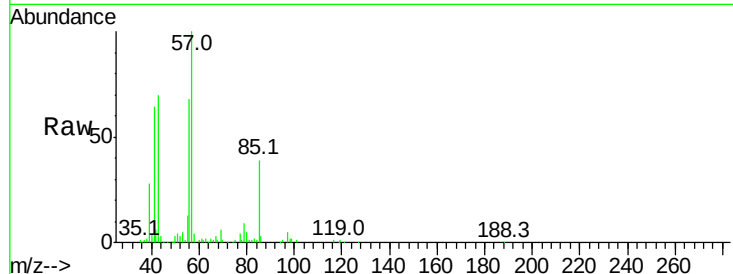
Lab File: ClientSampleId:

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:
Ion Rati
97 100
99 71.
61 0.

Manual Integrations
APPROVED

Reviewed By :Amit Patel 12/20/2021
Supervised By :Mahesh Dadoda 12/20/2021



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

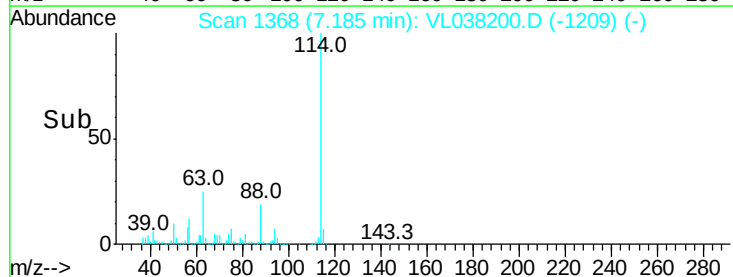
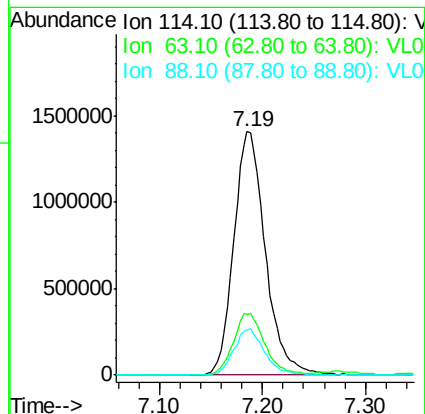
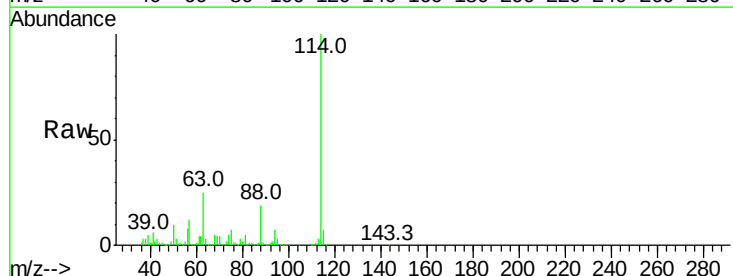
RT: 7.19 min Scan# 1368

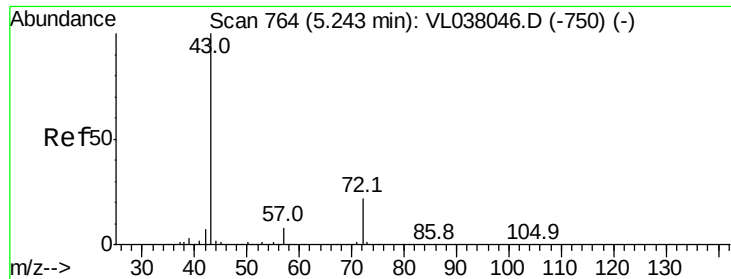
Delta R.T. 0.01 min

Lab File: VL038200.D

Acq: 16 Dec 2021 22:14

Tgt Ion:114 Resp: 2998775
Ion Ratio Lower Upper
114 100
63 25.4 19.7 29.5
88 18.5 14.4 21.6



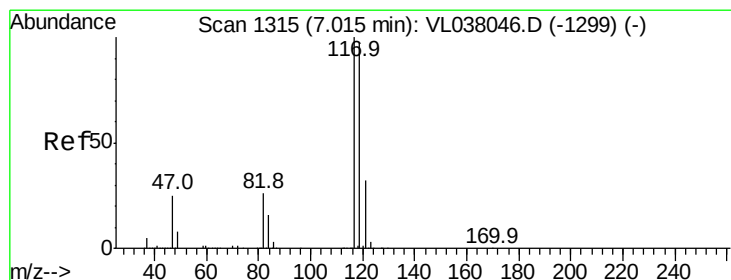
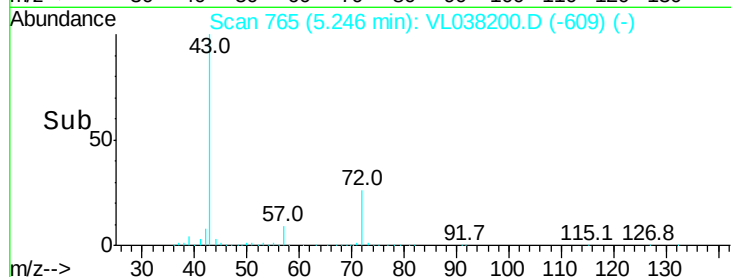
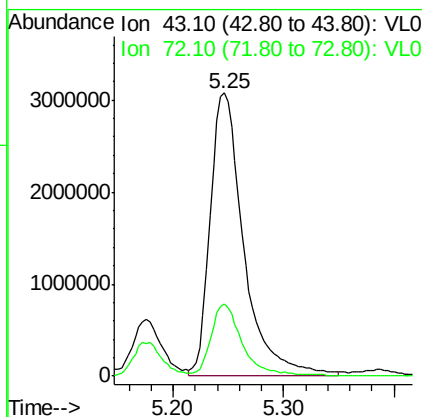
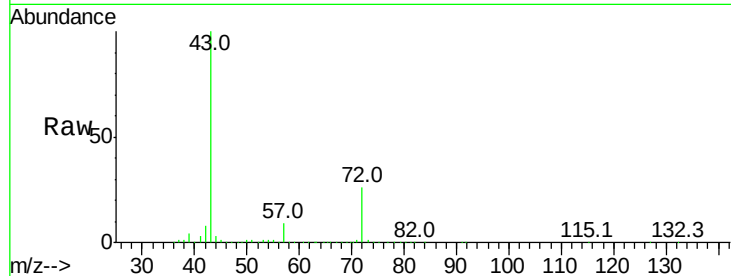


#34
2-Butanone
Concen: 53.208 ppbv
RT: 5.25
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 16 Dec 2021 22:14

Tot Ion:
Ion Ratio
43 100
72 24.

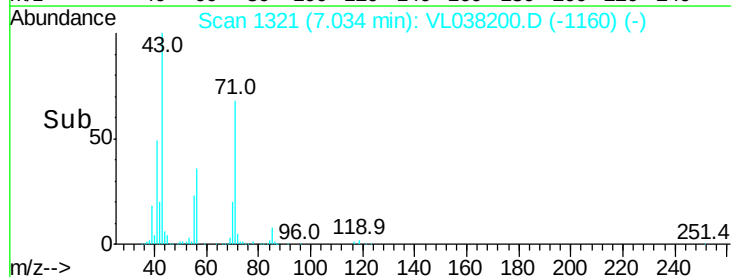
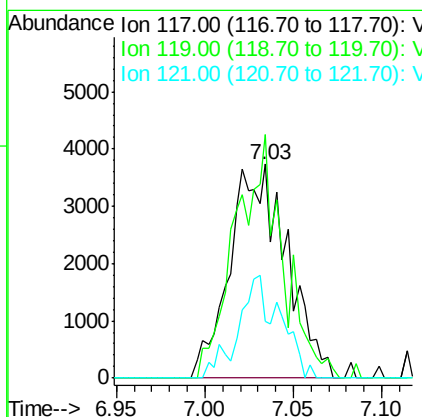
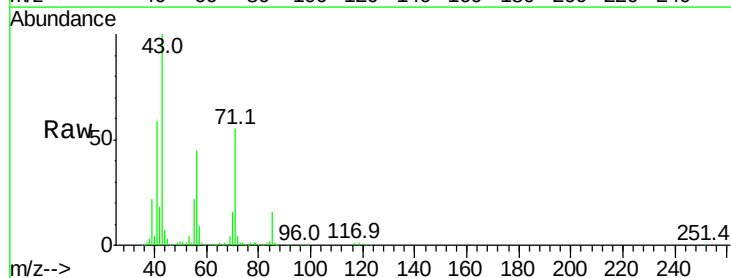
Manual Integrations
APPROVED

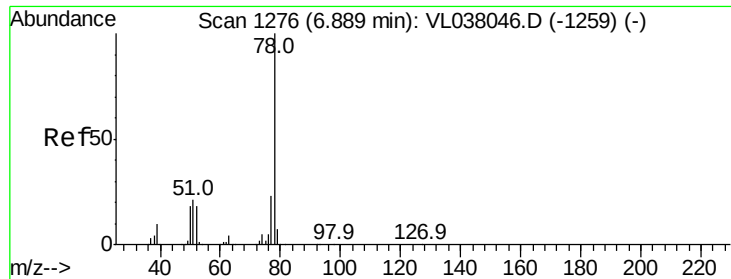
Reviewed By :Amit Patel 12/20/2021
Supervised By :Mahesh Dadoda 12/20/2021



#35
Carbon Tetrachloride
Concen: 0.040 ppbv m
RT: 7.03 min Scan# 1321
Delta R.T. 0.02 min
Lab File: VL038200.D
Acq: 16 Dec 2021 22:14

Tgt Ion:117 Resp: 8366
Ion Ratio Lower Upper
117 100
119 114.0 77.7 116.5
121 26.4 25.6 38.4



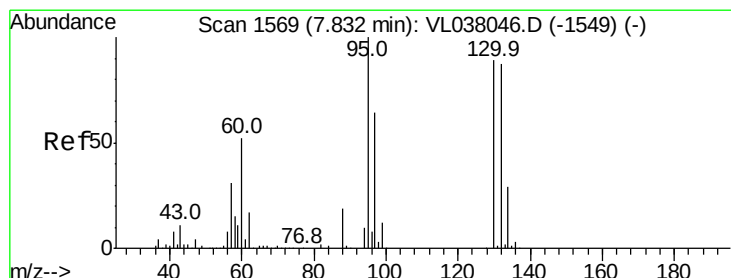
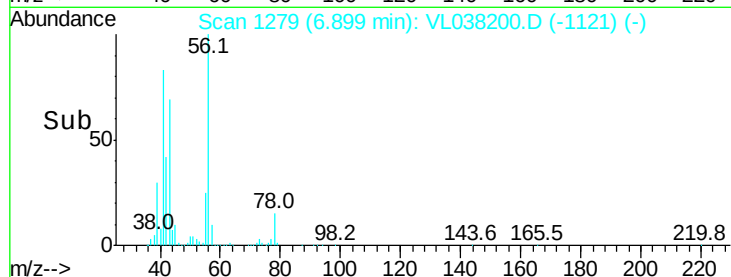
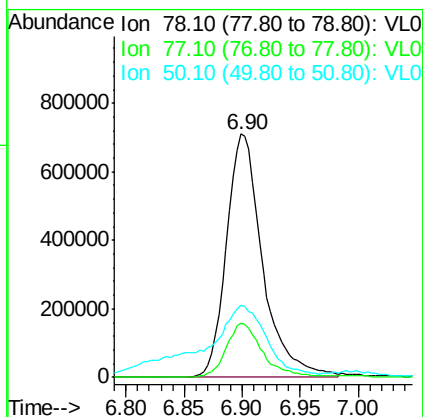
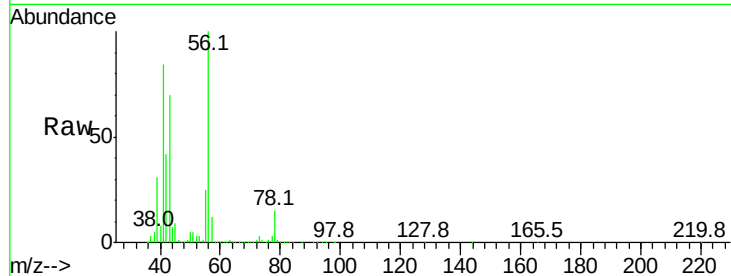


#36
Benzene
Concen: 5.111 ppbv
RT: 6.90
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampleId :
Acq: 16 Dec 2021 22:14

Tot Ion:
Ion Ratio
78 100
77 21.
50 27.

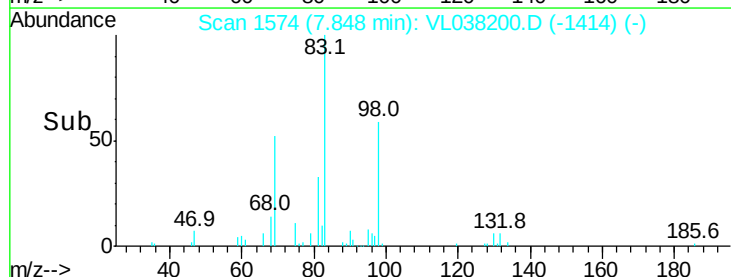
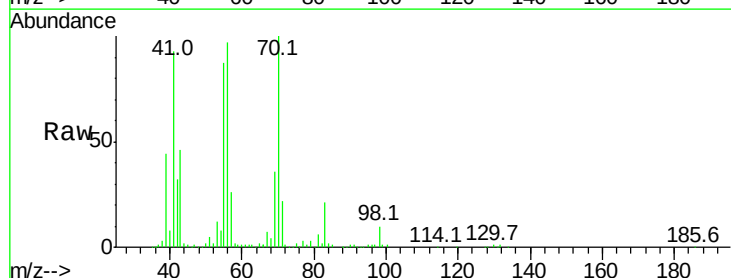
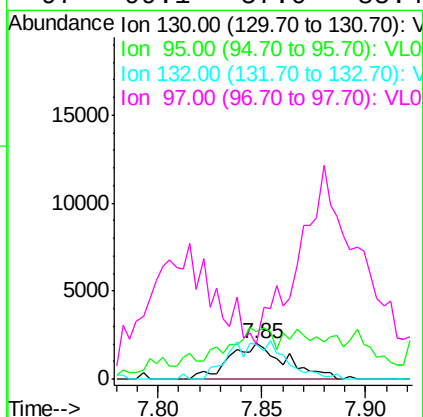
Manual Integrations
APPROVED

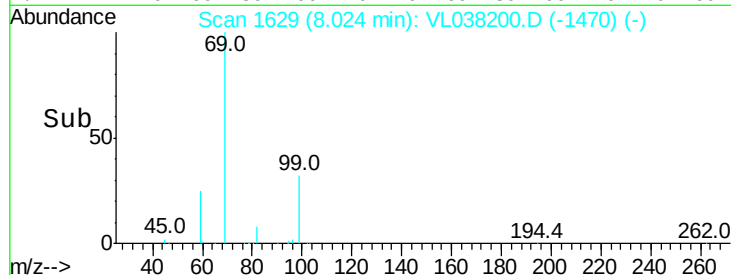
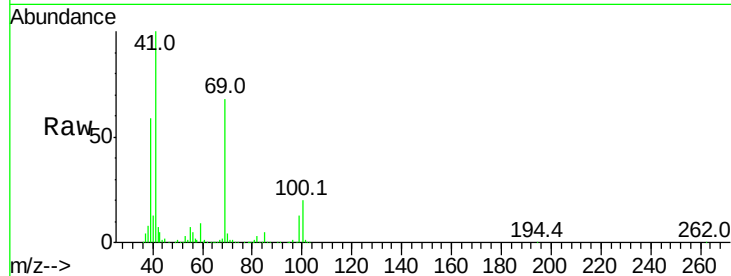
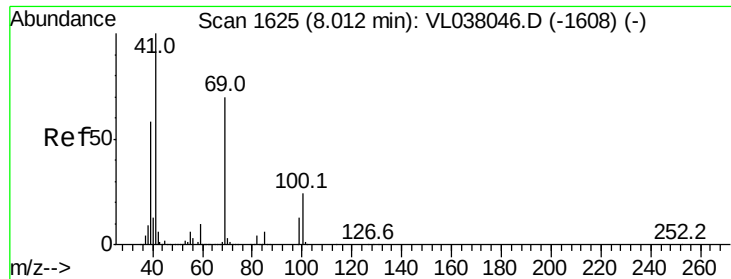
Reviewed By :Amit Patel 12/20/2021
Supervised By :Mahesh Dadoda 12/20/2021



#38
Trichloroethene
Concen: 0.034 ppbv m
RT: 7.85 min Scan# 1574
Delta R.T. 0.02 min
Lab File: VL038200.D
Acq: 16 Dec 2021 22:14

Tgt Ion:130 Resp: 3825
Ion Ratio Lower Upper
130 100
95 131.6 89.4 134.2
132 95.7 78.2 117.2
97 99.1 57.0 85.4#



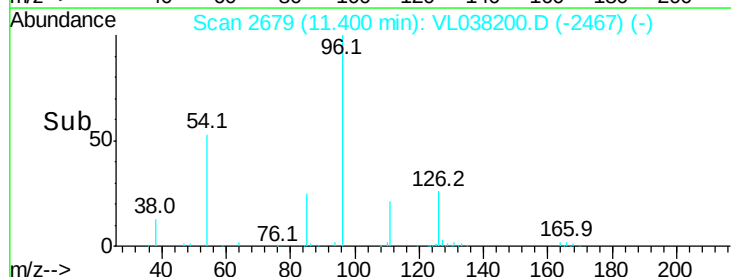
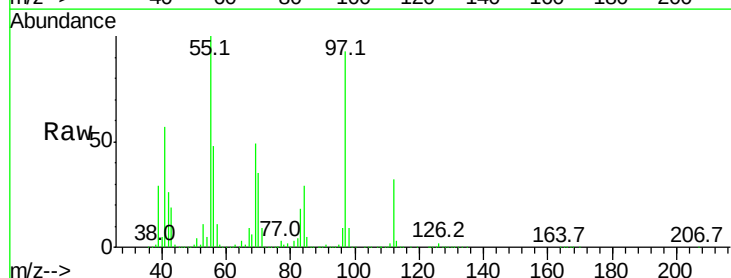
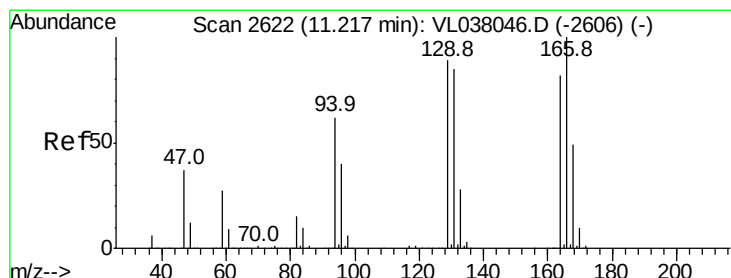
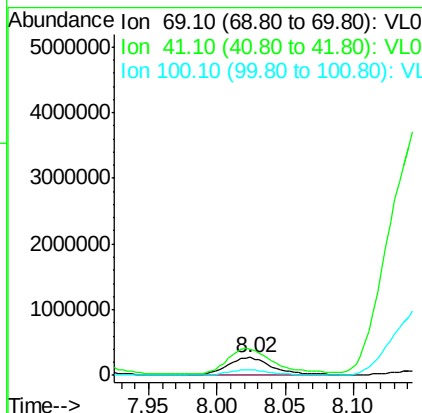


#43
Methyl Methacrylate
Concen: 6.018 ppbv
RT: 8.02
Instrument: MSVOA_1
Delta R.T.:
Lab File: ClientSampled :
Acq: 16 Dec 2021 22:14

Tot Ion:
Ion Ratio
69 100
41 154.
100 30.

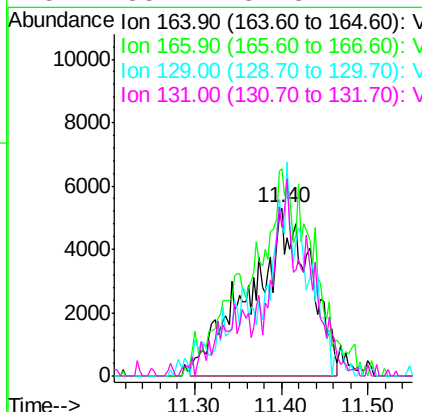
Manual Integrations
APPROVED

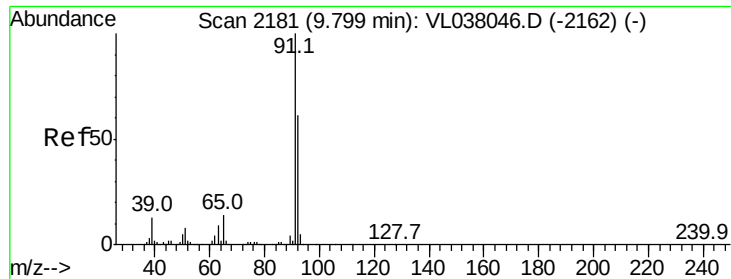
Reviewed By :Amit Patel 12/20/2021
Supervised By :Mahesh Dadoda 12/20/2021



#52
Tetrachloroethene
Concen: 0.231 ppbv m
RT: 11.40 min Scan# 2679
Delta R.T. 0.18 min
Lab File: VL038200.D
Acq: 16 Dec 2021 22:14

Tgt Ion:164 Resp: 25540
Ion Ratio Lower Upper
164 100
166 123.8 97.2 145.8
129 90.0 86.9 130.3
131 88.4 82.8 124.2





#53

Toluene

Concen: 10.005 ppbv

RT: 9.83 Instrument :

Delta R.T. MSVOA_1

Lab File: ClientSampled :

Acq: 16 Dec 2021 22:14 SG-2

Tot Ion:

Ion Ratio

91 100

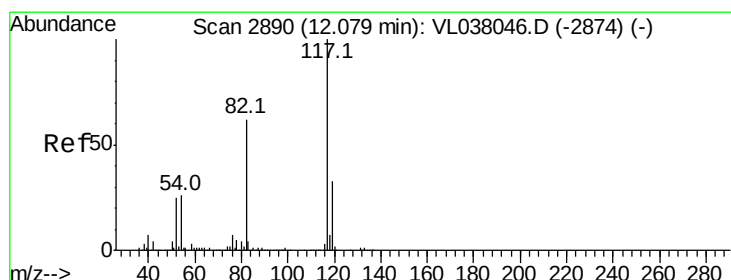
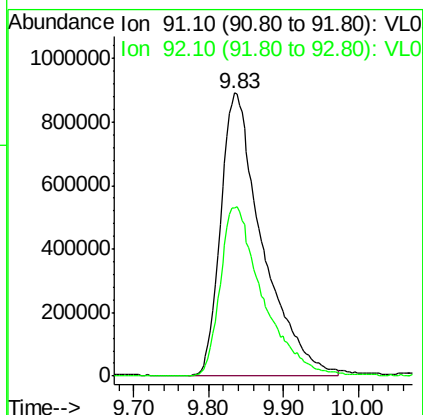
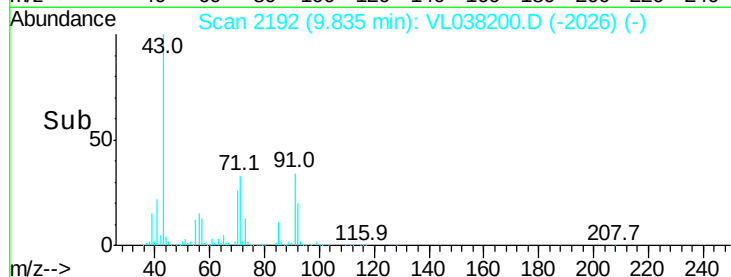
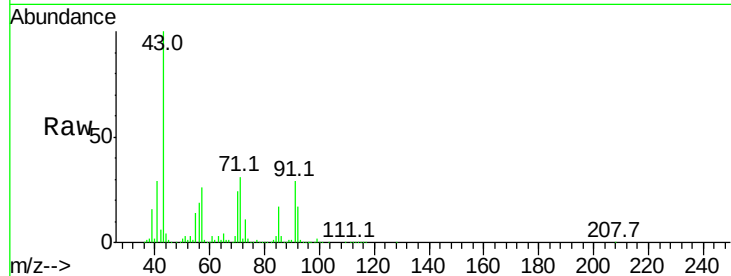
92 61.

Manual Integrations

APPROVED

Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.19 min Scan# 2926

Delta R.T. 0.12 min

Lab File: VL038200.D

Acq: 16 Dec 2021 22:14

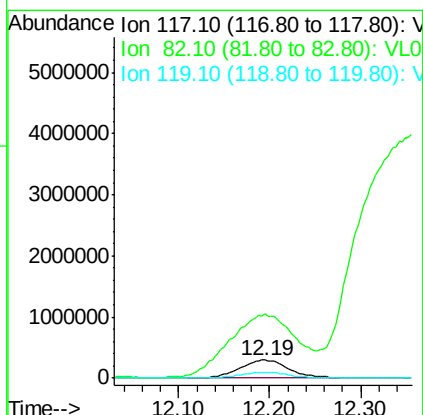
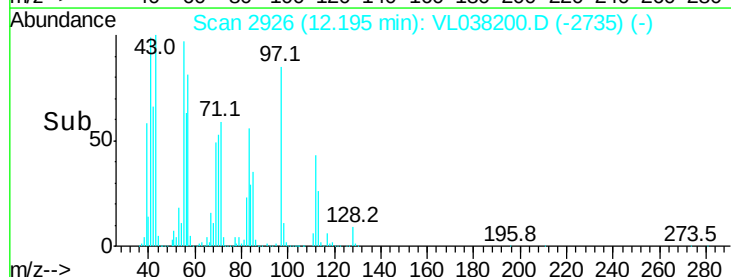
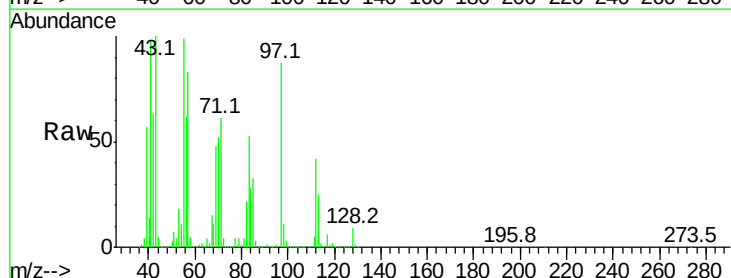
Tgt Ion:117 Resp: 1091039

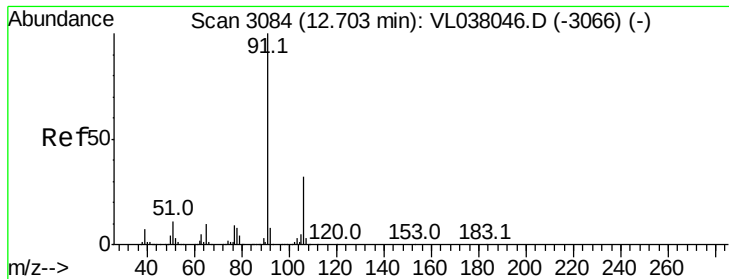
Ion Ratio Lower Upper

117 100

82 494.9 52.8 79.2#

119 33.6 26.8 40.2





#58

Ethyl Benzene

Concen: 220.055 ppbv

RT: 12.87

Delta R.T. MSVOA_L

Lab File:

Acq: 16 Dec 2021 22:14

ClientSampleId :

SG-2

Tot Ion:

Ion Ratio

91 100

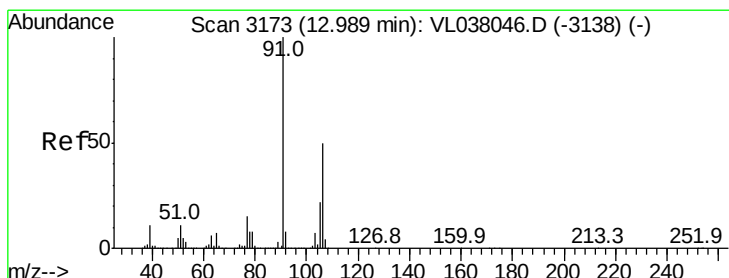
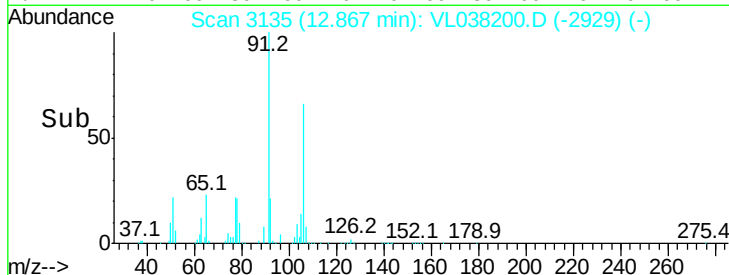
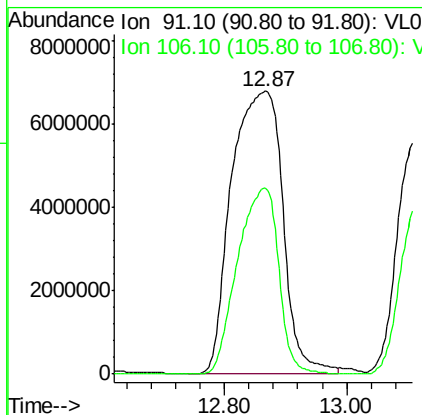
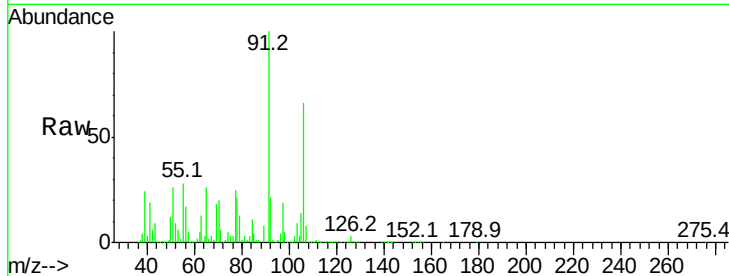
106 65.

Manual Integrations

APPROVED

Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#59

m/p-Xylene

Concen: 247.747 ppbv

RT: 13.15 min Scan# 3223

Delta R.T. 0.16 min

Lab File: VL038200.D

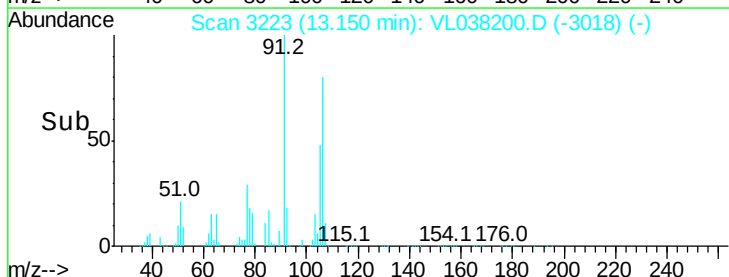
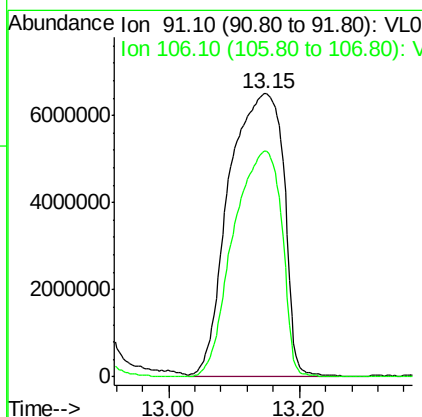
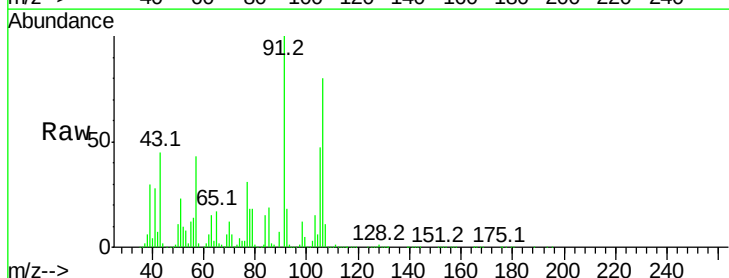
Acq: 16 Dec 2021 22:14

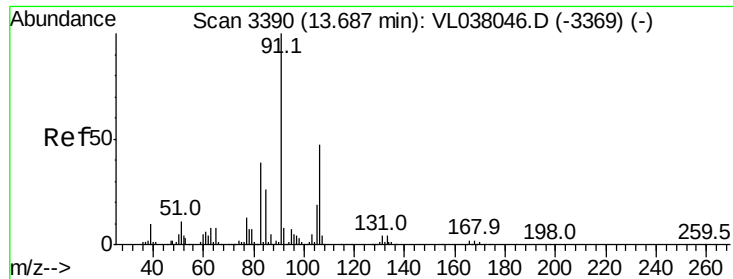
Tgt Ion: 91 Resp:37608041

Ion Ratio Lower Upper

91 100

106 70.9 38.1 57.1#





#60

o-Xylene

Concen: 113.715 ppbv

RT: 13.85

Delta R.T. MSVOA_1

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22:14

Tot Ion:

Ion Ratio

91 100

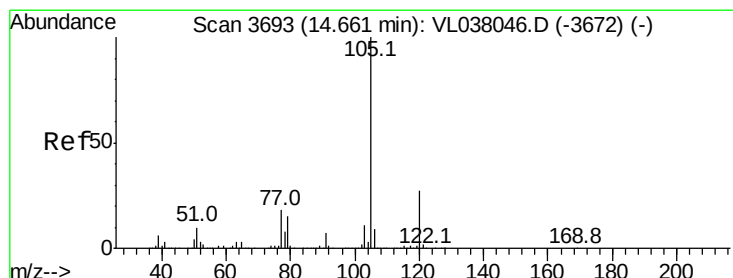
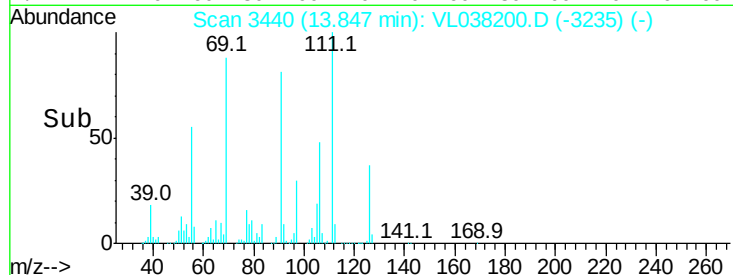
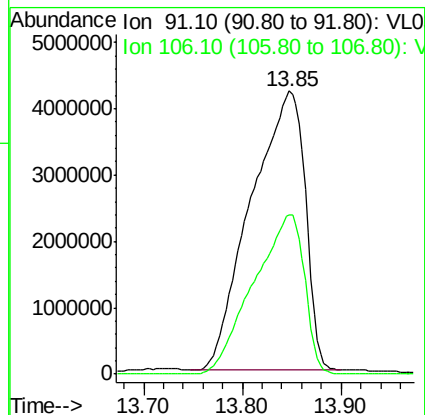
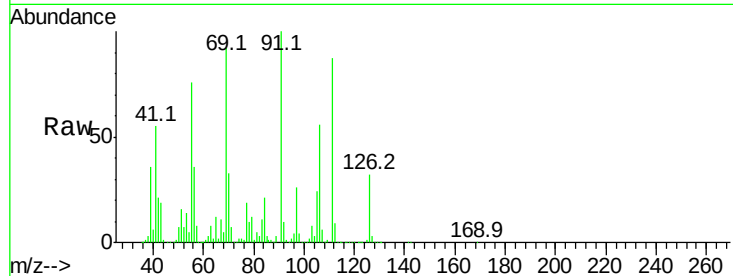
106 53.

Manual Integrations

APPROVED

Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#62

Isopropylbenzene

Concen: 2.622 ppbv

RT: 14.74 min Scan# 3718

Delta R.T. 0.08 min

Lab File: VL038200.D

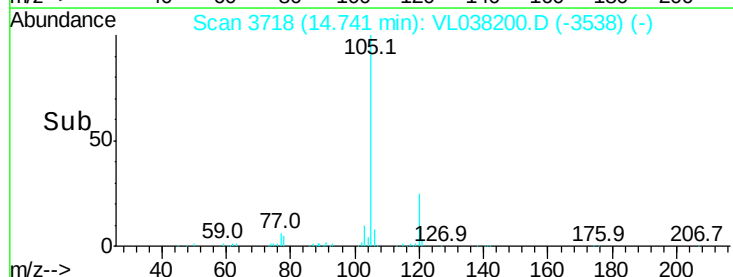
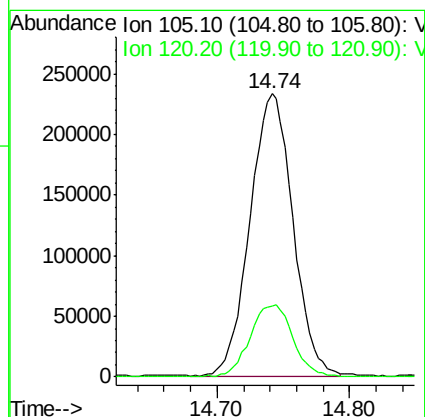
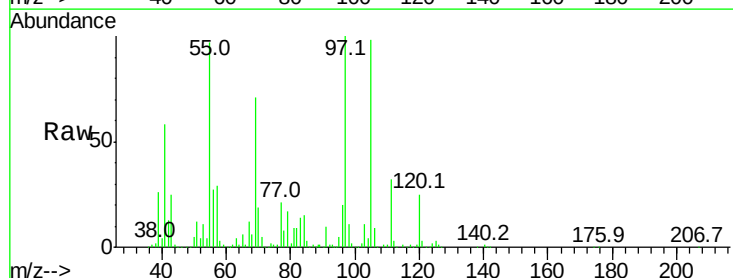
Acq: 16 Dec 2021 22:14

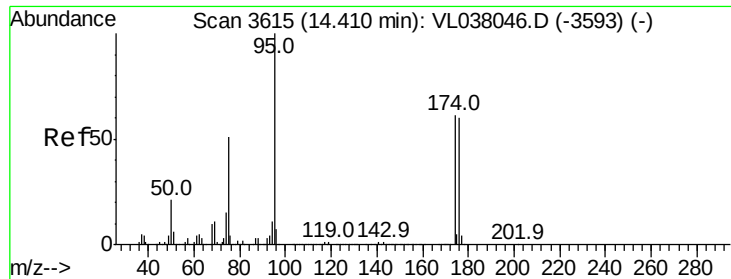
Tgt Ion:105 Resp: 524158

Ion Ratio Lower Upper

105 100

120 25.7 21.8 32.6





#68

1-Bromo-4-Fluorobenzene

Concen: 84.512 ppbv m

RT: 14.50

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22:14

Tot Ion:

Ion Ratio

95 100

174 0.

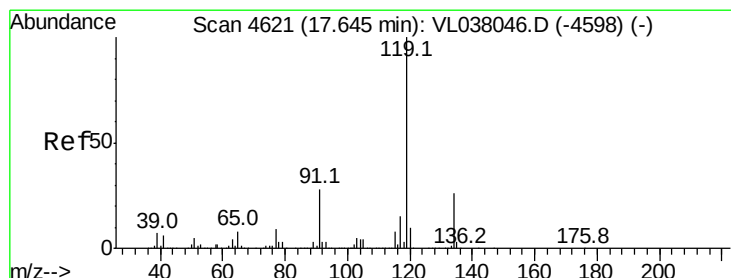
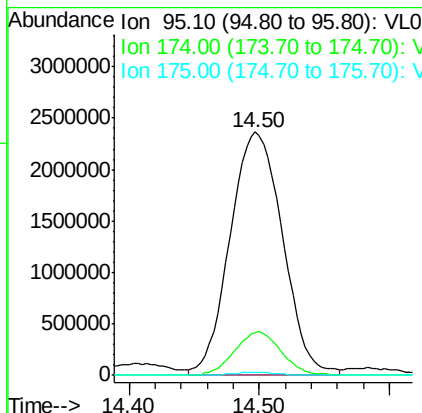
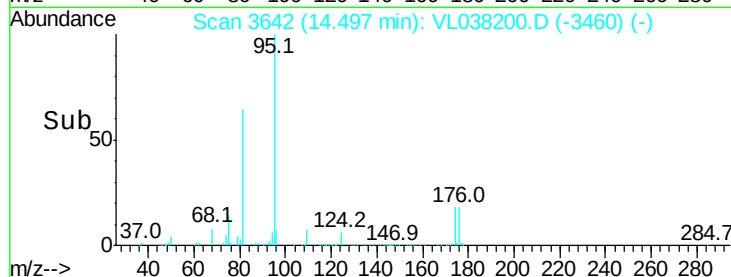
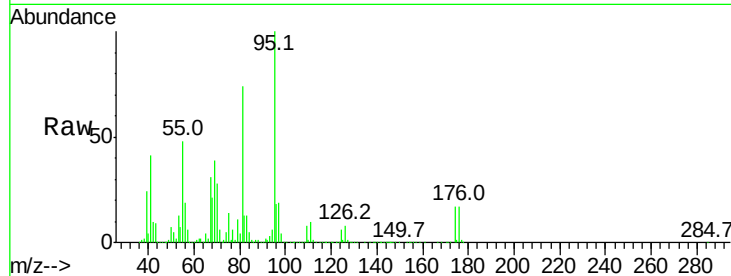
175 0.

Manual Integrations

APPROVED

Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#69

p-Isopropyltoluene

Concen: 2.154 ppbv

RT: 17.68 min Scan# 4632

Delta R.T. 0.04 min

Lab File: VL038200.D

Acq: 16 Dec 2021 22:14

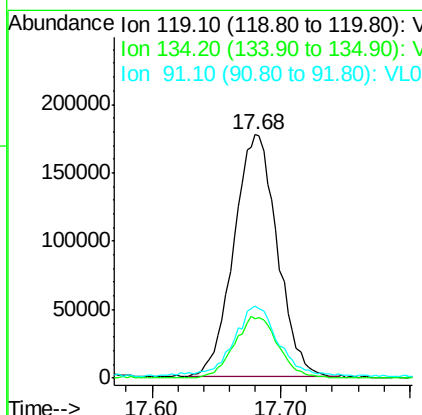
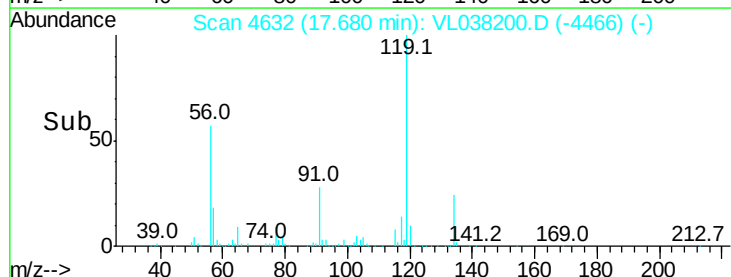
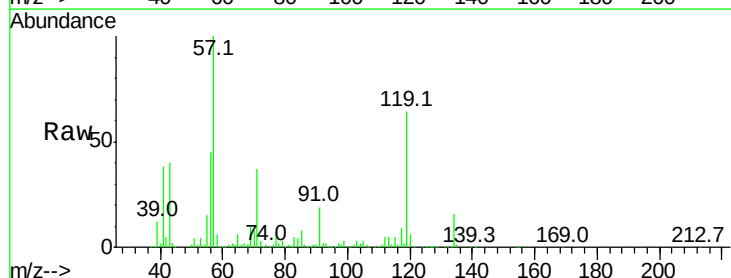
Tgt Ion:119 Resp: 413480

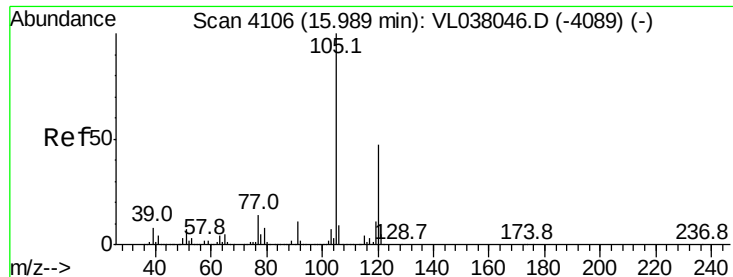
Ion Ratio Lower Upper

119 100

134 25.7 20.6 30.8

91 31.2 22.2 33.4





#73

1,3,5-Trimethylbenzene

Concen: 0.306 ppbv m

RT: 16.04

Delta R.T. MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22:14

Tot Ion:1

Ion Rati

105 100

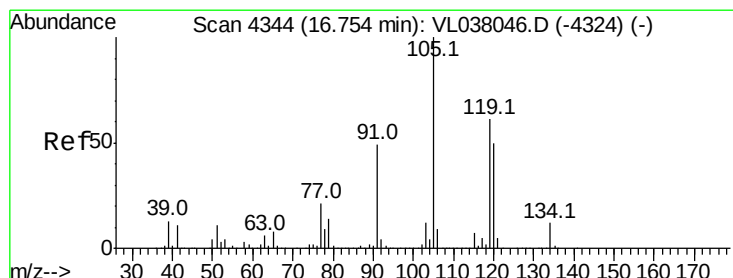
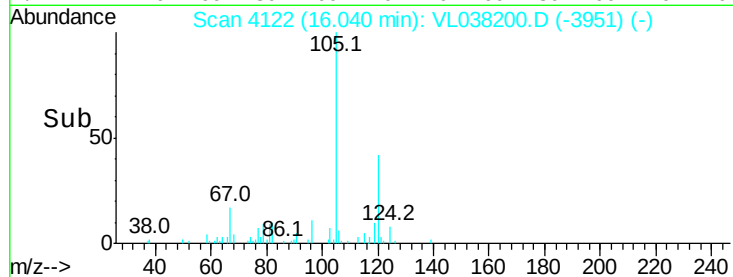
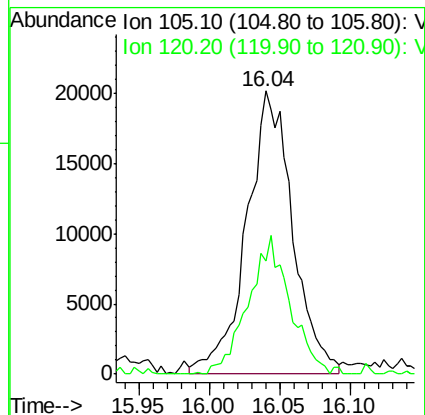
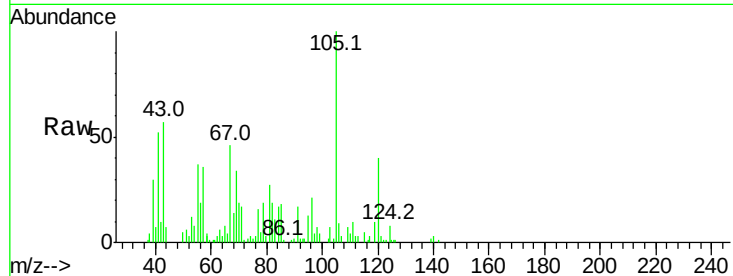
120 40.

Manual Integrations

APPROVED

Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021



#74

1,2,4-Trimethylbenzene

Concen: 0.996 ppbv m

RT: 16.80 min Scan# 4359

Delta R.T. 0.05 min

Lab File: VL038200.D

Acq: 16 Dec 2021 22:14

Tgt Ion:105 Resp: 153085

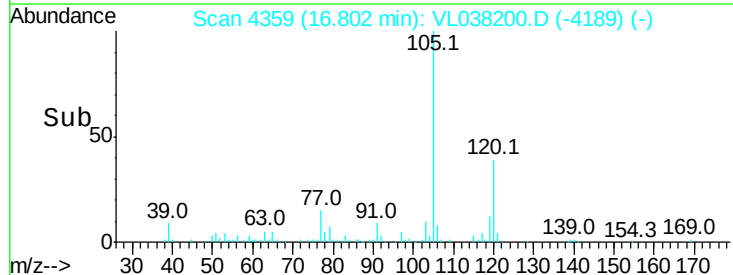
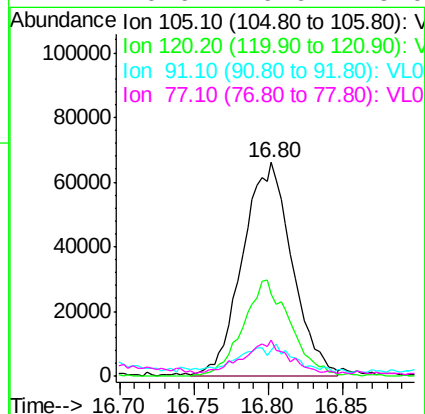
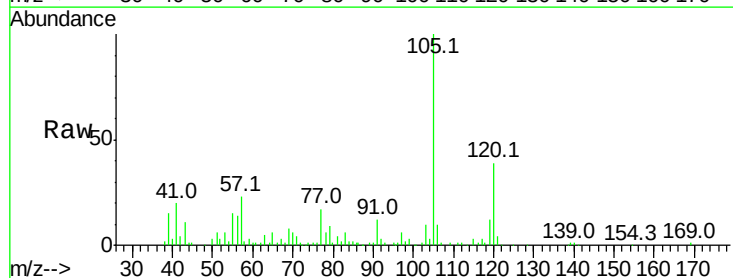
Ion Ratio Lower Upper

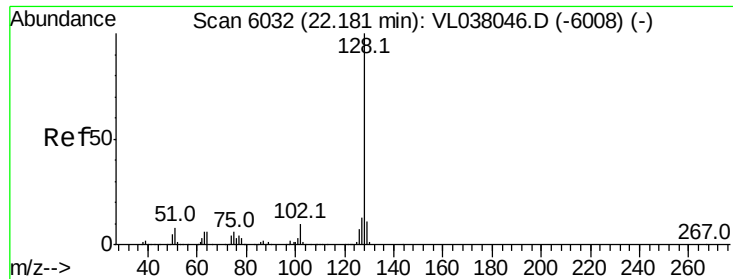
105 100

120 38.5 40.1 60.1#

91 12.0 39.8 59.8#

77 16.6 16.6 25.0#





#79

Naphthalene

Concen: 0.188 ppbv m

RT: 22.21

Delta R.T MSVOA_L

Lab File: ClientSampleId :

Acq: 16 Dec 2021 22.14

Tot Ion:1

Ion Rati

128 100

127 9.

129 10.

Manual Integrations

APPROVED

Reviewed By :Amit Patel 12/20/2021

Supervised By :Mahesh Dadoda 12/20/2021

