

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL092225\
 Data File : VL042980.D
 Acq On : 23 Sep 2025 04:44
 Operator : SY/MD
 Sample : Q3132-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 151-1A-2

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 09/24/2025
 Supervised By :Semsettin Yesilyurt 09/24/2025

Quant Time: Sep 24 01:16:31 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL092225AIR.M

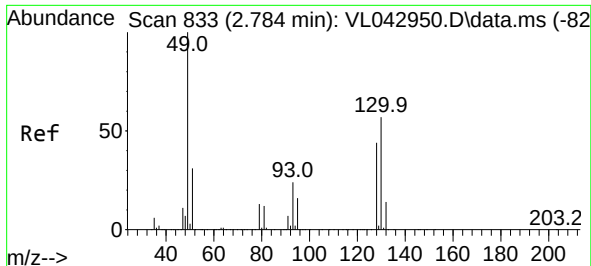
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 2

QLast Update : Tue Sep 23 02:39:16 2025

Response via : Initial Calibration

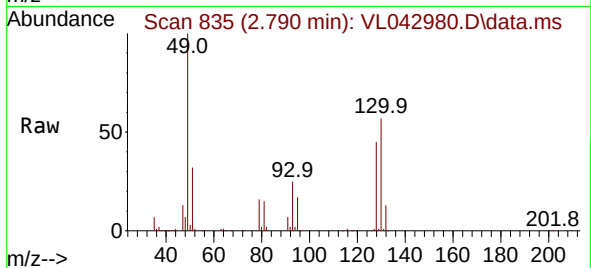
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	2.790	49	144544	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	414049	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	363422	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	284547	10.489	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	104.900%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	8977	0.462	ppbv	98
3) Chlorodifluoromethane	1.473	51	5094m	0.210	ppbv	
4) Chloromethane	1.534	50	4319	0.491	ppbv #	84
9) Propene	1.489	41	5457m	0.518	ppbv	
10) Heptane	4.988	43	7737m	0.275	ppbv	
11) Trichlorofluoromethane	1.881	101	8542	0.456	ppbv	97
13) Ethanol	1.722	45	341697	334.148	ppbv	96
15) Acetone	1.839	43	237044m	12.591	ppbv	
19) Isopropyl Alcohol	1.887	45	847050	74.844	ppbv #	38
20) Methylene Chloride	2.065	84	7194	0.656	ppbv #	83
26) Hexane	2.832	57	73023	3.367	ppbv #	57
29) Chloroform	2.852	83	26341	0.929	ppbv	97
30) Cyclohexane	3.865	84	4120m	0.227	ppbv	
34) 2-Butanone	2.564	43	15549	0.536	ppbv	99
35) Carbon Tetrachloride	3.771	117	1894m	0.070	ppbv	
36) Benzene	3.661	78	17329	0.446	ppbv	95
37) 1,2-Dichloroethane	3.221	62	4279	0.209	ppbv	100
41) Tetrahydrofuran	3.069	42	2477m	0.149	ppbv	
44) 2,2,4-Trimethylpentane	4.645	57	15144m	0.226	ppbv	
50) 4-Methyl-2-Pentanone	5.784	43	4249m	0.109	ppbv	
52) Tetrachloroethene	8.234	164	469	0.031	ppbv #	31
53) Toluene	6.940	91	60968	1.325	ppbv	100
58) Ethyl Benzene	9.357	91	14102	0.236	ppbv	99
59) m/p-Xylene	9.535	91	39034	0.830	ppbv #	100
60) o-Xylene	9.969	91	12216	0.260	ppbv	94
61) Styrene	9.872	104	4201	0.189	ppbv	94
74) 1,2,4-Trimethylbenzene	11.539	105	12546	0.238	ppbv #	67

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



#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 833
Delta R.T. 0.006 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

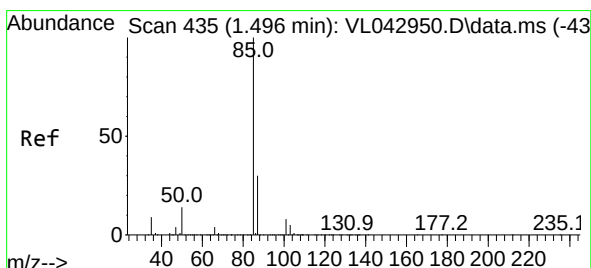
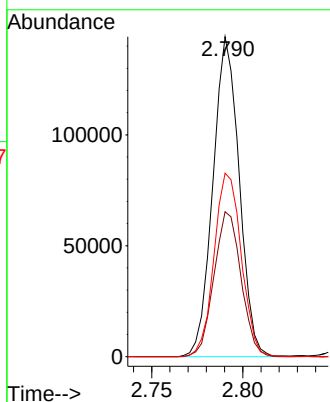
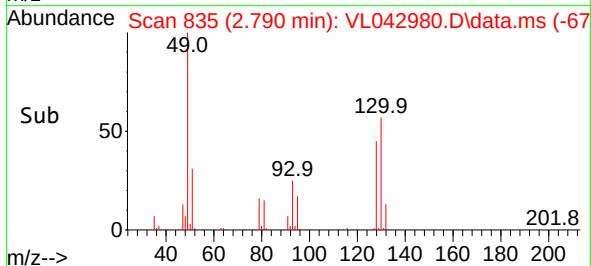
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



Tgt Ion: 49 Resp: 144544
Ion Ratio Lower Upper
49 100
128 46.6 22.9 68.8
130 59.4 29.1 87.3

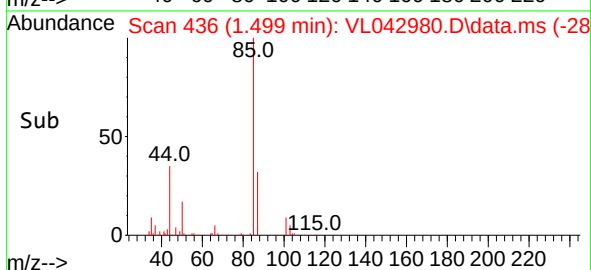
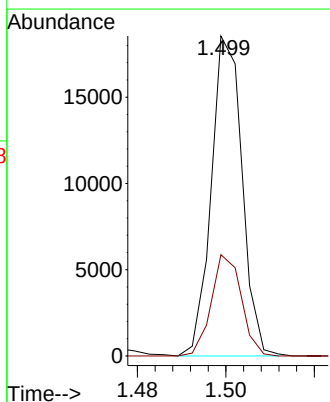
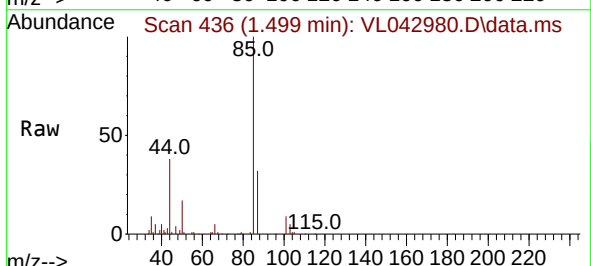
Manual Integrations
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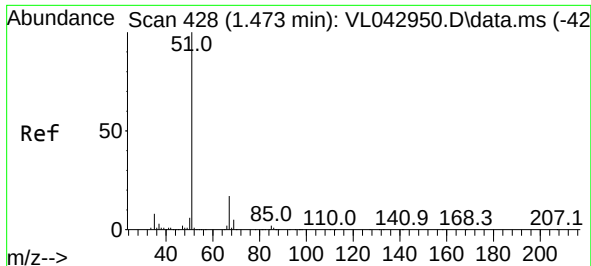
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#2
Dichlorodifluoromethane
Concen: 0.462 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

Tgt Ion: 85 Resp: 8977
Ion Ratio Lower Upper
85 100
87 31.6 24.3 36.5





#3

Chlorodifluoromethane

Concen: 0.210 ppbv m

RT: 1.473 min Scan# 41

Delta R.T. -0.000 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

Instrument :

MSVOA_L

ClientSampleId :

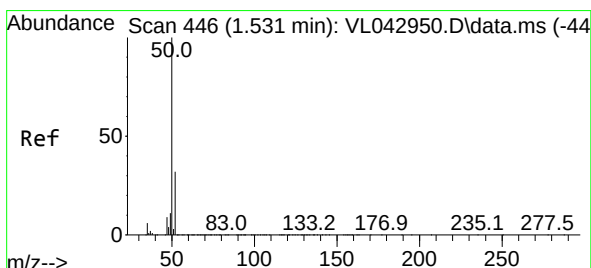
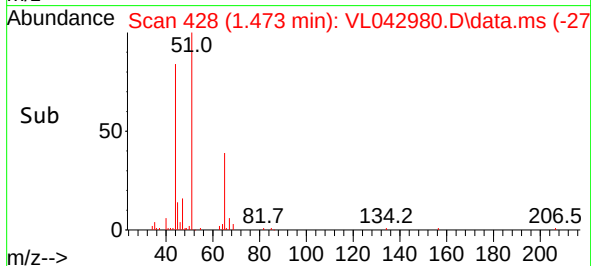
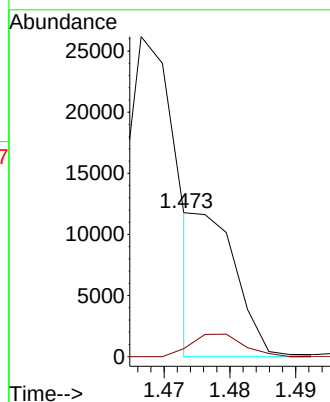
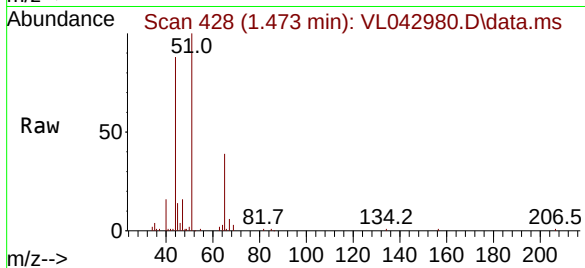
151-1A-2

Tgt Ion: 51 Resp: 5094
Ion Ratio Lower Upper
51 100
67 21.8 13.8 20.8

Manual Integrations

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Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#4

Chloromethane

Concen: 0.491 ppbv

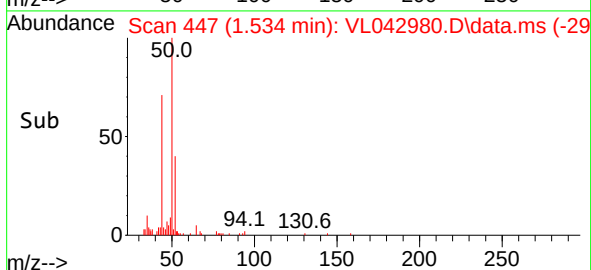
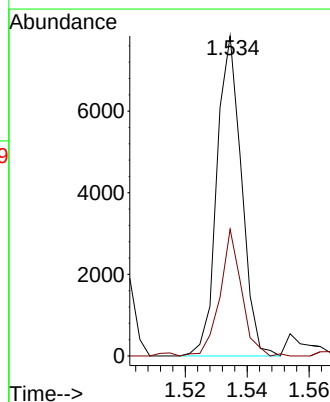
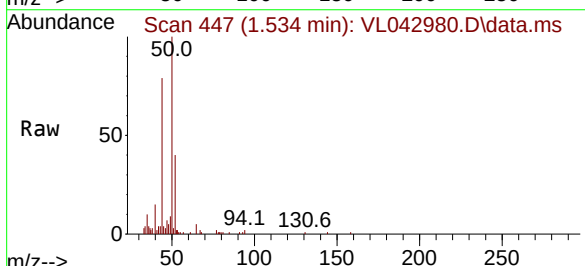
RT: 1.534 min Scan# 447

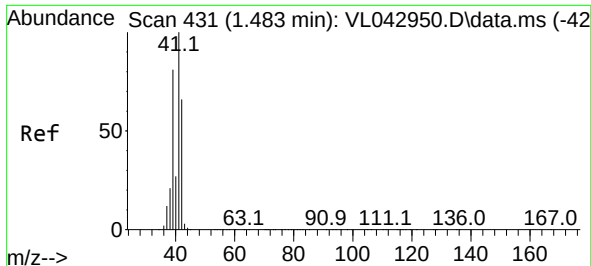
Delta R.T. 0.003 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

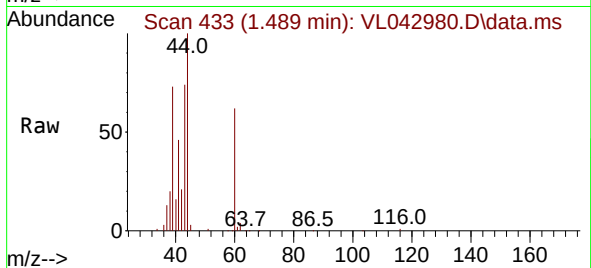
Tgt Ion: 50 Resp: 4319
Ion Ratio Lower Upper
50 100
52 41.4 25.9 38.9





#9
Propene
Concen: 0.518 ppbv m
RT: 1.489 min Scan# 41
Delta R.T. 0.006 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

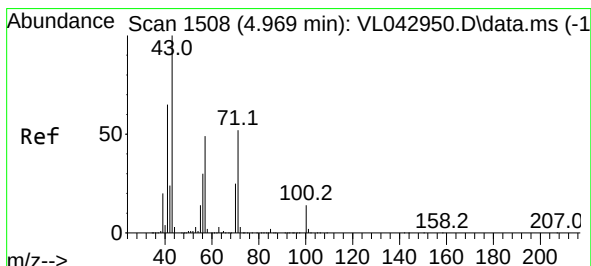
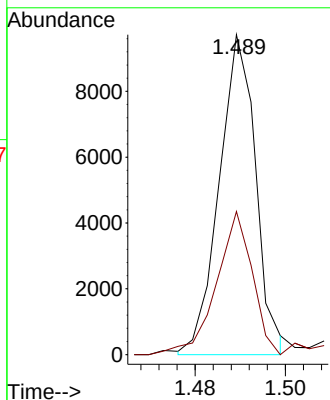
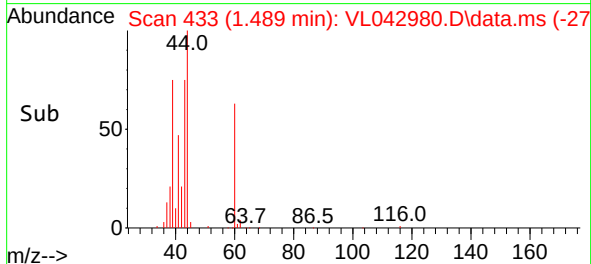
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



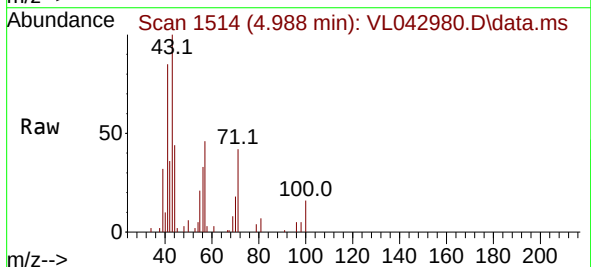
Tgt Ion: 41 Resp: 545
Ion Ratio Lower Upper
41 100
42 893.8 57.4 86.2

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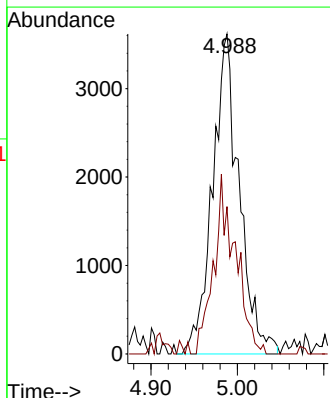
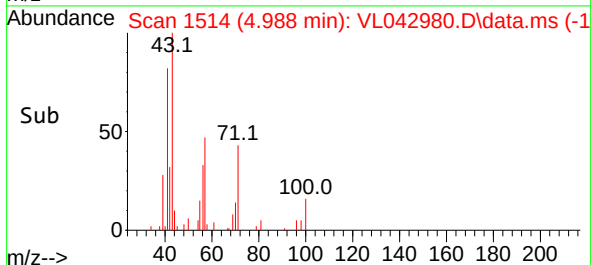
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025

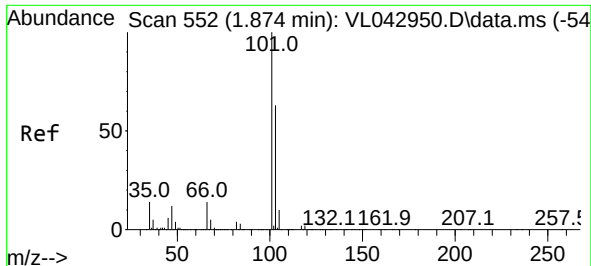


#10
Heptane
Concen: 0.275 ppbv m
RT: 4.988 min Scan# 1514
Delta R.T. 0.019 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44



Tgt Ion: 43 Resp: 7737
Ion Ratio Lower Upper
43 100
57 46.9 38.6 57.8





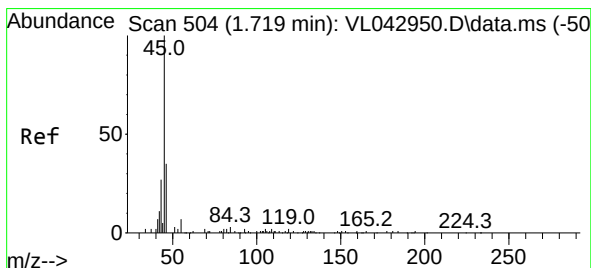
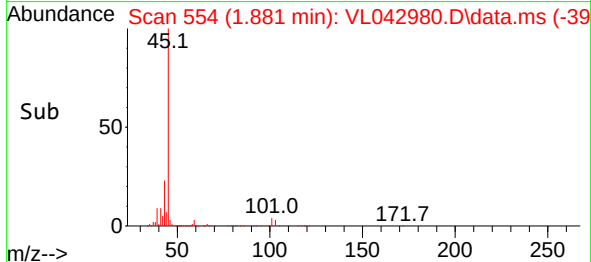
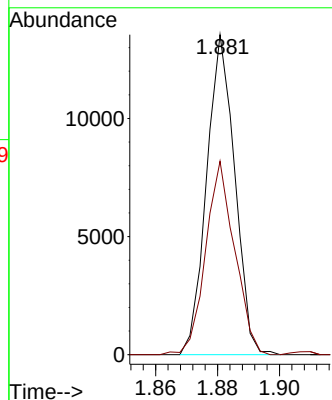
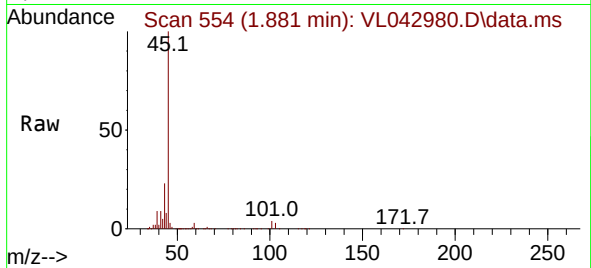
#11
 Trichlorofluoromethane
 Concen: 0.456 ppbv
 RT: 1.881 min Scan# 501
 Delta R.T. 0.006 min
 Lab File: VL042980.D
 Acq: 23 Sep 2025 04:44

Instrument :
 MSVOA_L
 ClientSampleId :
 151-1A-2

Tgt Ion:101 Resp: 854
 Ion Ratio Lower Upper
 101 100
 103 60.4 50.1 75.1

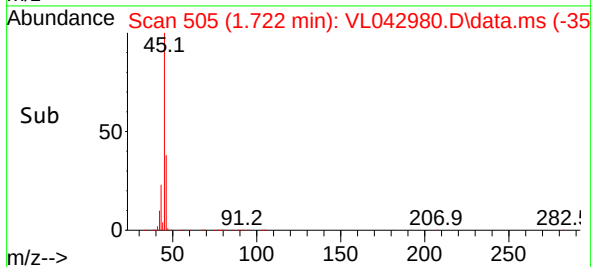
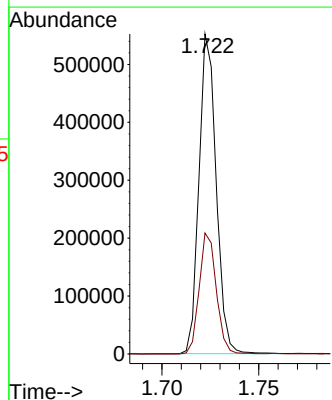
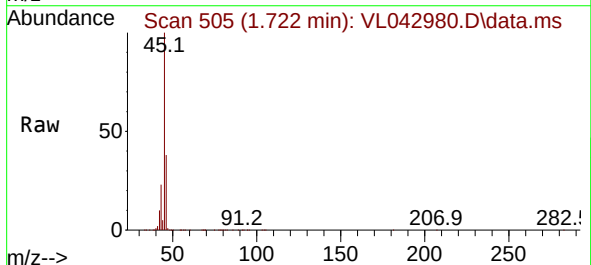
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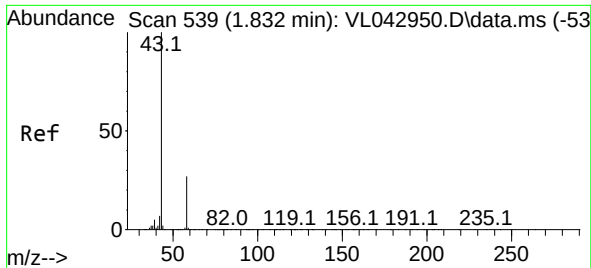
Reviewed By :Mahesh Dadoda 09/24/2025
 Supervised By :Semsettin Yesilyurt 09/24/2025



#13
 Ethanol
 Concen: 334.148 ppbv
 RT: 1.722 min Scan# 505
 Delta R.T. 0.003 min
 Lab File: VL042980.D
 Acq: 23 Sep 2025 04:44

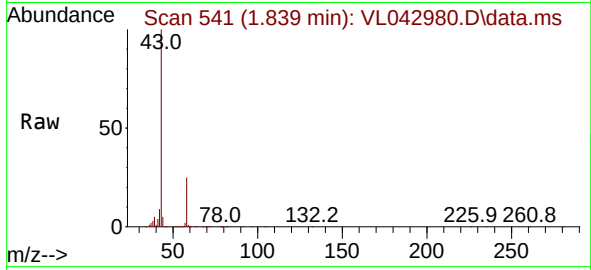
Tgt Ion: 45 Resp: 341697
 Ion Ratio Lower Upper
 45 100
 46 38.0 16.2 64.6





#15
Acetone
Concen: 12.591 ppbv m
RT: 1.839 min Scan# 541
Delta R.T. 0.006 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

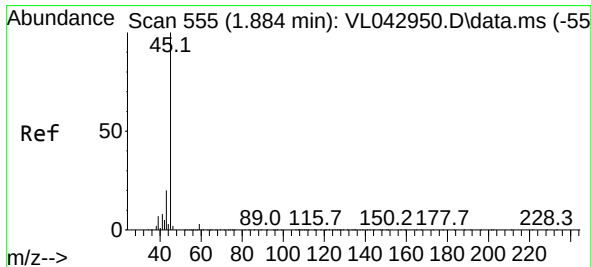
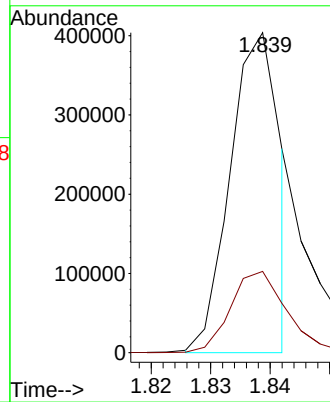
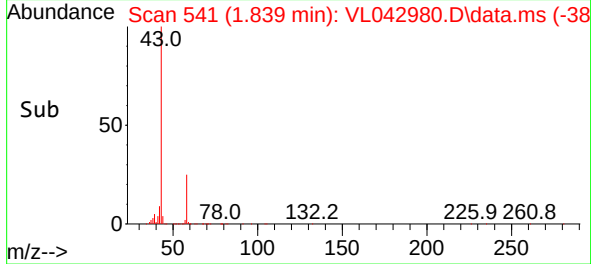
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



Tgt Ion: 43 Resp: 237044
Ion Ratio Lower Upper
43 100
58 28.7 22.3 33.5

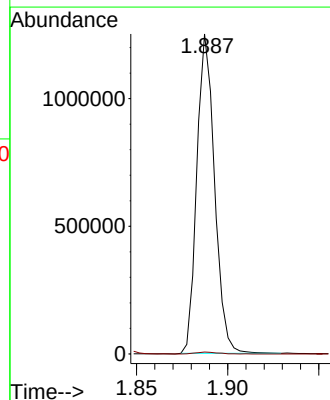
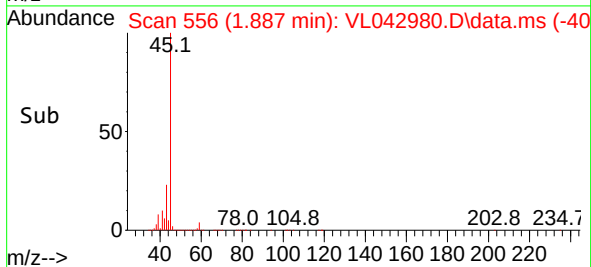
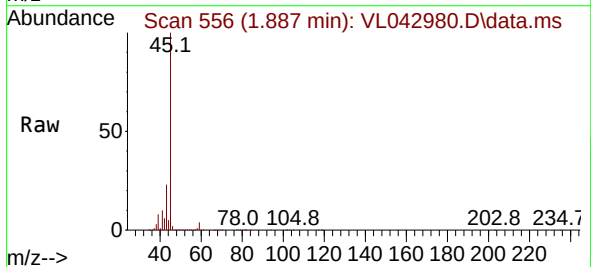
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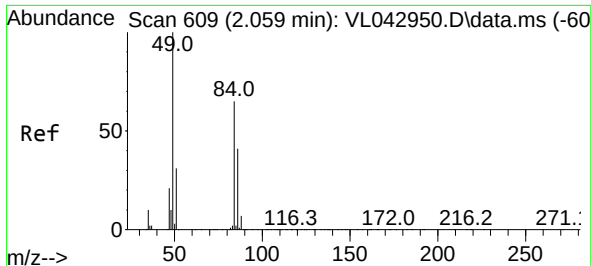
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#19
Isopropyl Alcohol
Concen: 74.844 ppbv
RT: 1.887 min Scan# 556
Delta R.T. 0.003 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

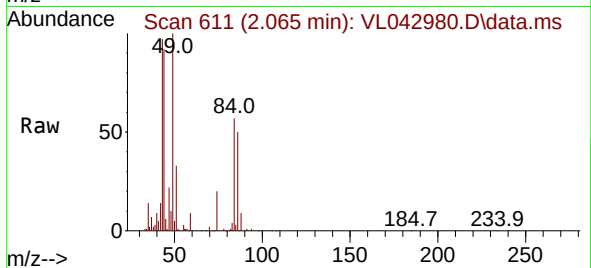
Tgt Ion: 45 Resp: 847050
Ion Ratio Lower Upper
45 100
58 0.8 31.0 46.6#





#20
Methylene Chloride
Concen: 0.656 ppbv
RT: 2.065 min Scan# 611
Delta R.T. 0.006 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

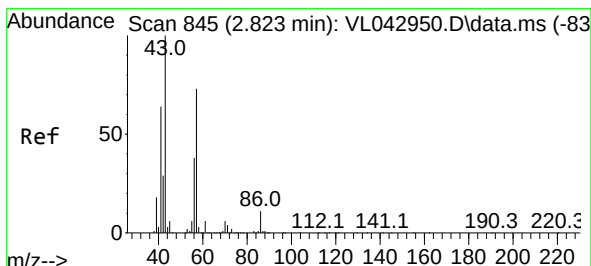
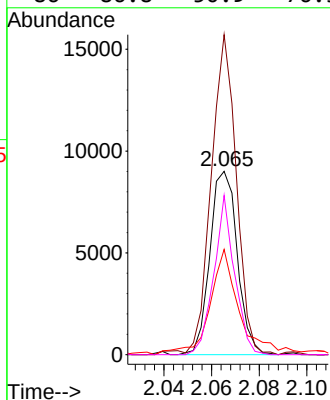
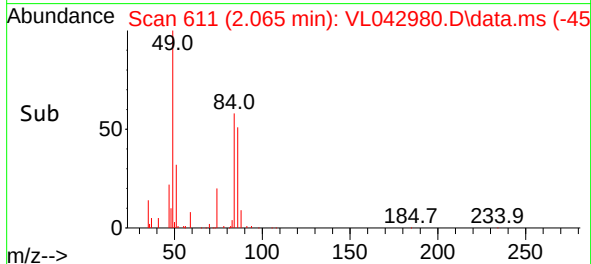
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



Tgt Ion: 84 Resp: 7194
Ion Ratio Lower Upper
84 100
49 174.5 124.1 186.1
51 55.0 39.8 59.8
86 86.8 50.9 76.3#

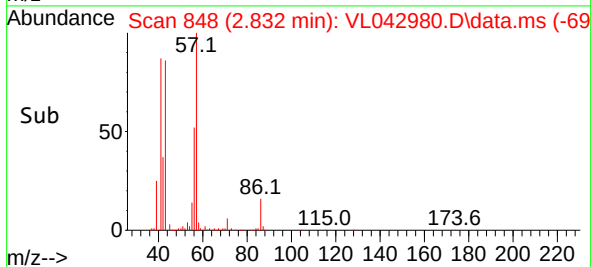
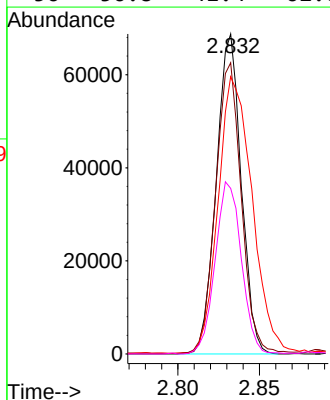
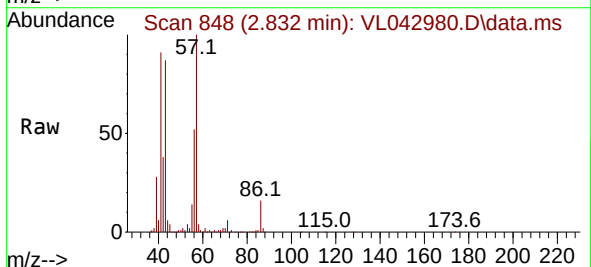
Manual Integrations
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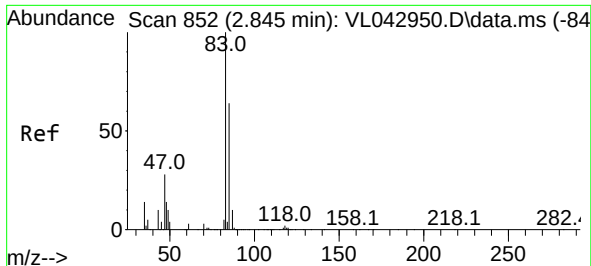
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#26
Hexane
Concen: 3.367 ppbv
RT: 2.832 min Scan# 848
Delta R.T. 0.010 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

Tgt Ion: 57 Resp: 73023
Ion Ratio Lower Upper
57 100
41 93.6 71.7 107.5
43 118.1 180.8 271.2#
56 56.8 41.4 62.0





#29

Chloroform

Concen: 0.929 ppbv

RT: 2.852 min Scan# 854

Delta R.T. 0.006 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

Instrument :

MSVOA_L

ClientSampleId :

151-1A-2

Tgt Ion: 83 Resp: 2634

Ion Ratio Lower Upper

83 100

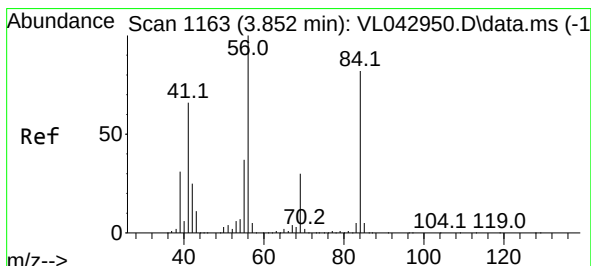
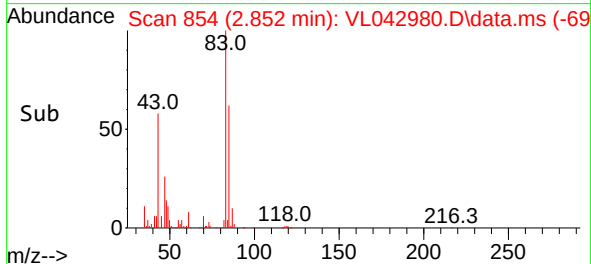
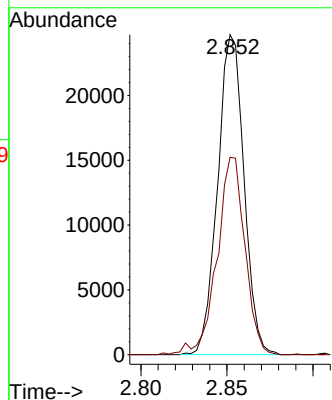
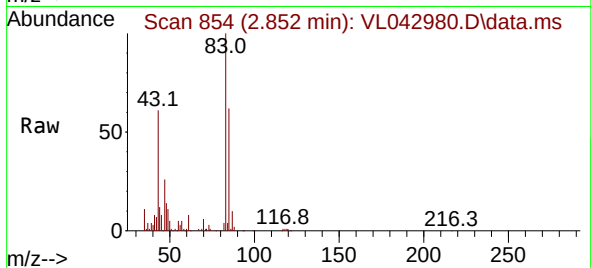
85 61.7 51.2 76.8

Manual Integrations

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Reviewed By :Mahesh Dadoda 09/24/2025

Supervised By :Semsettin Yesilyurt 09/24/2025



#30

Cyclohexane

Concen: 0.227 ppbv m

RT: 3.865 min Scan# 1167

Delta R.T. 0.013 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

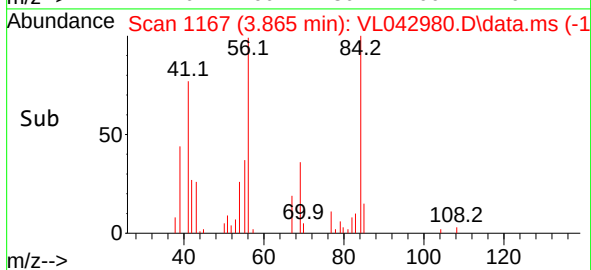
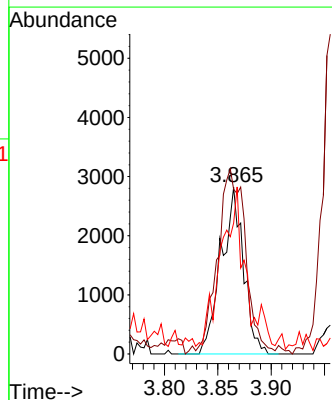
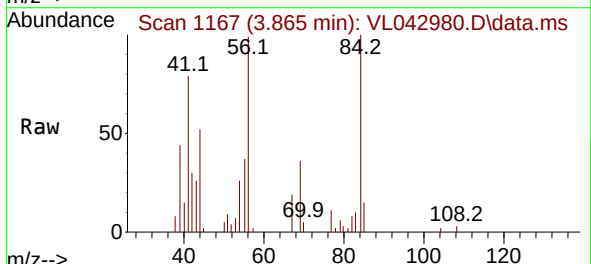
Tgt Ion: 84 Resp: 4120

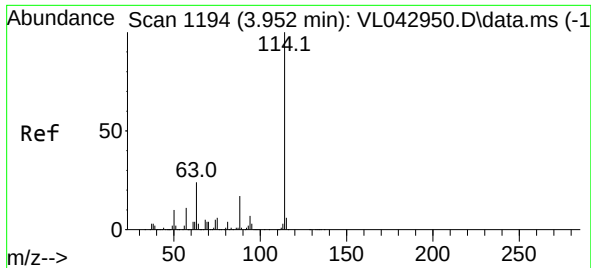
Ion Ratio Lower Upper

84 100

56 132.5 102.2 153.4

41 117.9 65.6 98.4#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1194

Delta R.T. 0.010 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

Instrument :

MSVOA_L

ClientSampleId :

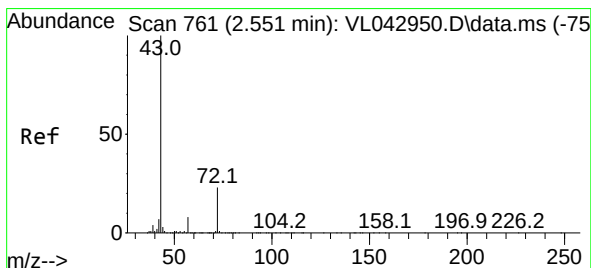
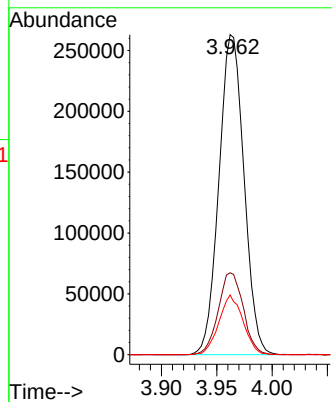
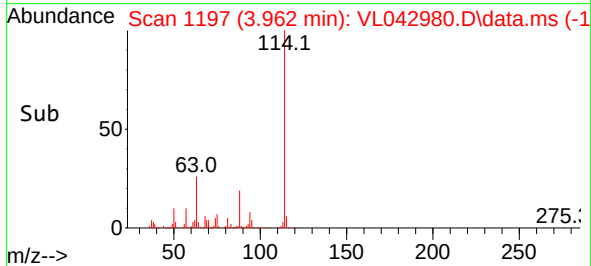
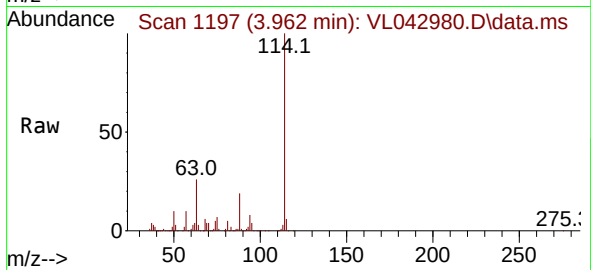
151-1A-2

Tgt Ion:114 Resp: 414049
 Ion Ratio Lower Upper
 114 100
 63 25.6 19.4 29.2
 88 18.0 14.2 21.2

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Reviewed By :Mahesh Dadoda 09/24/2025
 Supervised By :Semsettin Yesilyurt 09/24/2025



#34

2-Butanone

Concen: 0.536 ppbv

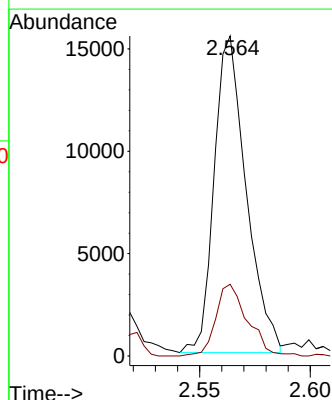
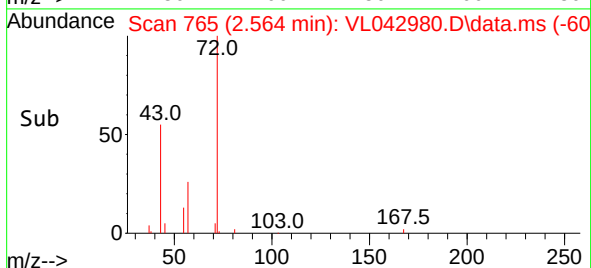
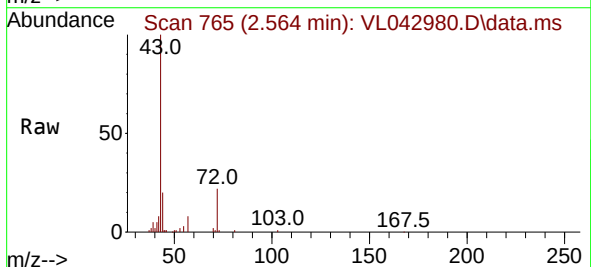
RT: 2.564 min Scan# 765

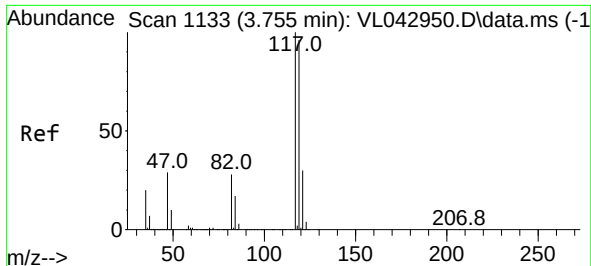
Delta R.T. 0.013 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

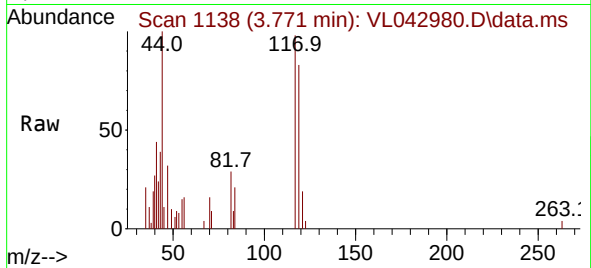
Tgt Ion: 43 Resp: 15549
 Ion Ratio Lower Upper
 43 100
 72 22.7 17.7 26.5





#35
Carbon Tetrachloride
Concen: 0.070 ppbv m
RT: 3.771 min Scan# 1133
Delta R.T. 0.016 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

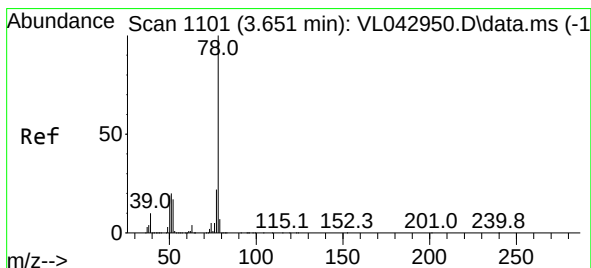
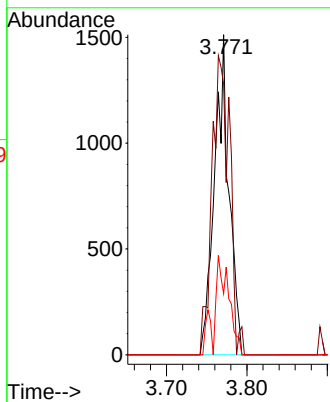
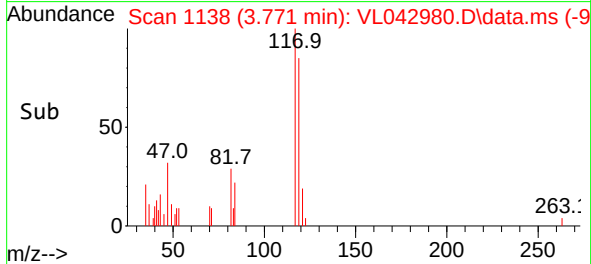
Instrument : MSVOA_L
ClientSampleId : 151-1A-2



Tgt Ion: 117 Resp: 1894
Ion Ratio Lower Upper
117 100
119 84.6 76.9 115.3
121 19.1 23.7 35.5

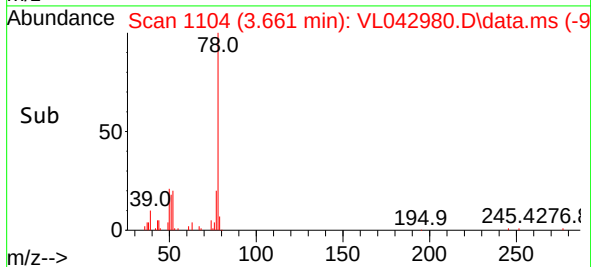
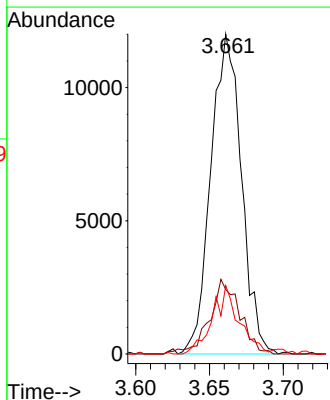
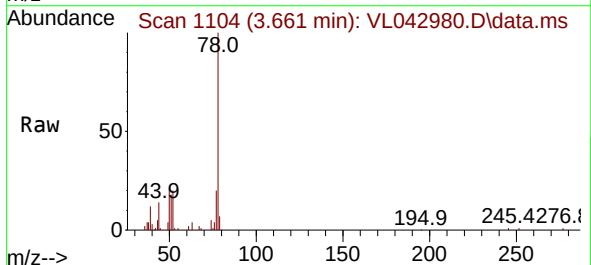
Manual Integrations
APPROVED

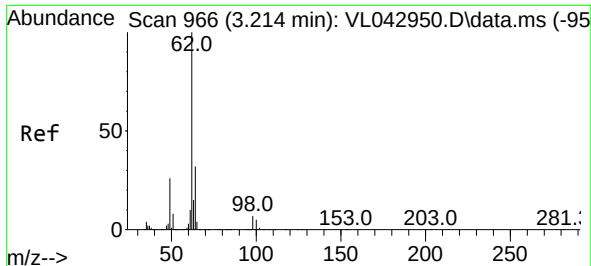
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#36
Benzene
Concen: 0.446 ppbv
RT: 3.661 min Scan# 1104
Delta R.T. 0.010 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

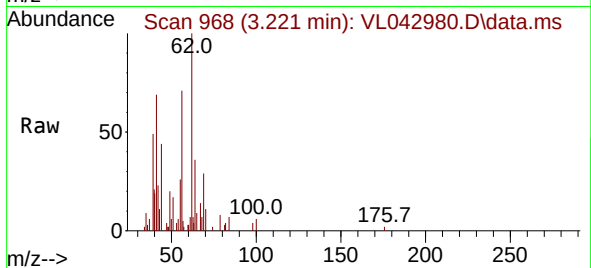
Tgt Ion: 78 Resp: 17329
Ion Ratio Lower Upper
78 100
77 20.2 17.8 26.6
50 21.4 15.0 22.4





#37
1,2-Dichloroethane
Concen: 0.209 ppbv
RT: 3.221 min Scan# 901
Delta R.T. 0.006 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

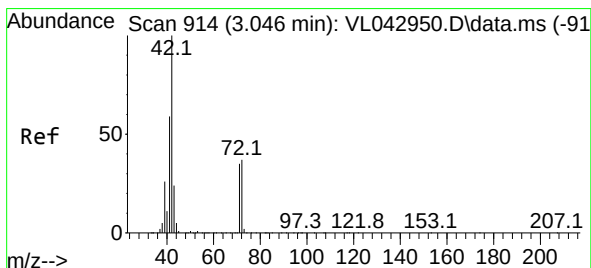
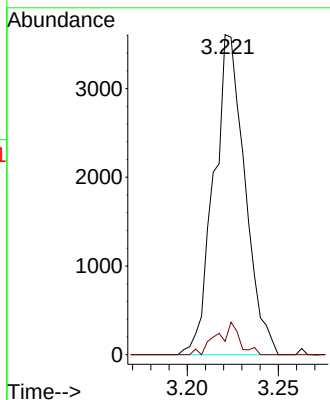
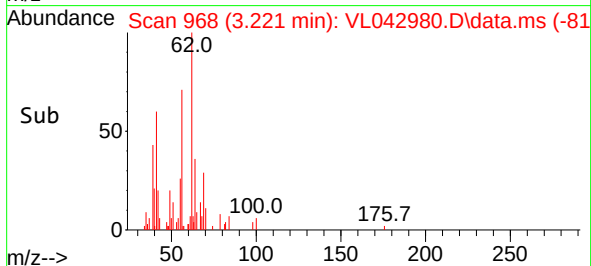
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



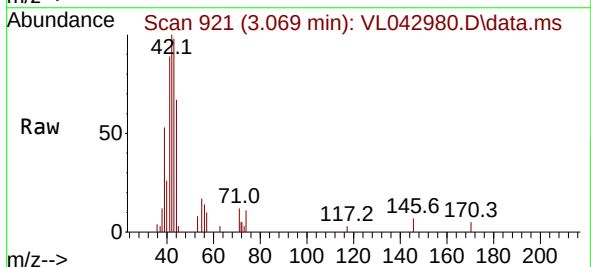
Tgt Ion: 62 Resp: 4279
Ion Ratio Lower Upper
62 100
98 7.4 5.9 8.9

Manual Integrations
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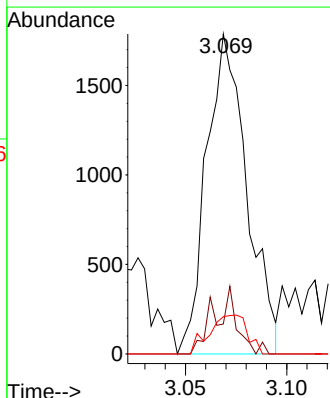
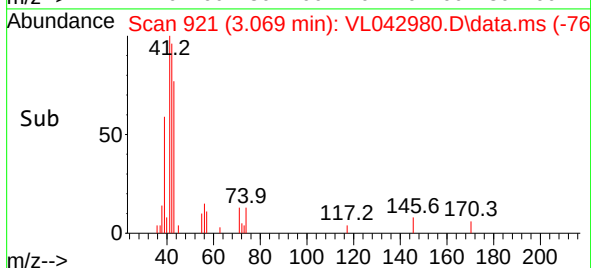
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025

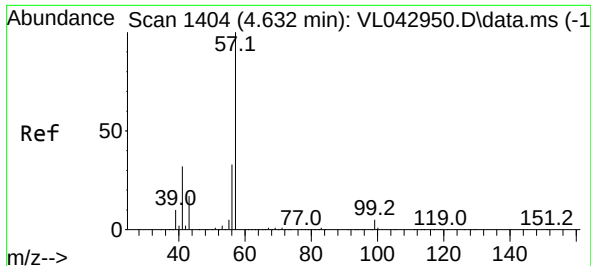


#41
Tetrahydrofuran
Concen: 0.149 ppbv m
RT: 3.069 min Scan# 921
Delta R.T. 0.023 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44



Tgt Ion: 42 Resp: 2477
Ion Ratio Lower Upper
42 100
72 0.0 30.0 45.0#
71 0.0 28.8 43.2#





#44

2,2,4-Trimethylpentane

Concen: 0.226 ppbv m

RT: 4.645 min Scan# 1404

Delta R.T. 0.013 min

Lab File: VL042980.D

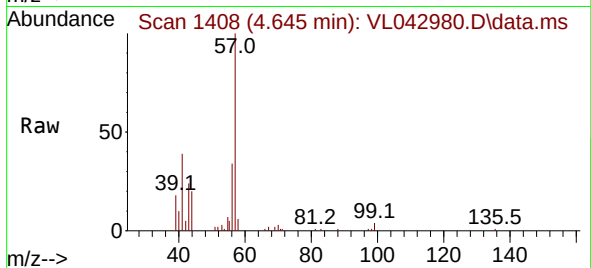
Acq: 23 Sep 2025 04:44

Instrument :

MSVOA_1

ClientSampleId :

151-1A-2



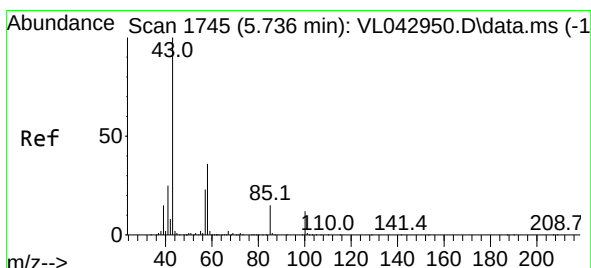
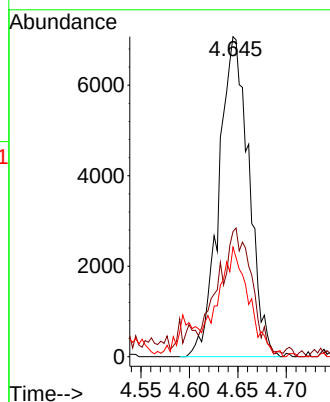
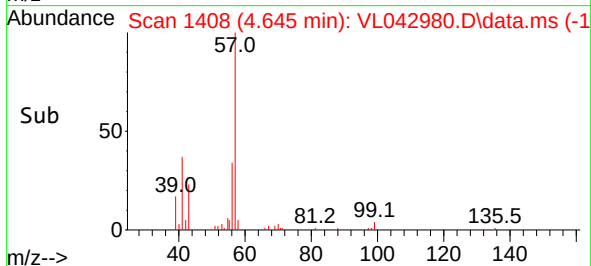
Tgt Ion:	57	Resp:	1514
Ion	Ratio	Lower	Upper
57	100		
41	51.5	25.5	38.3
56	43.7	25.8	38.8

Manual Integrations

APPROVED

Reviewed By :Mahesh Dadoda 09/24/2025

Supervised By :Semsettin Yesilyurt 09/24/2025



#50

4-Methyl-2-Pentanone

Concen: 0.109 ppbv m

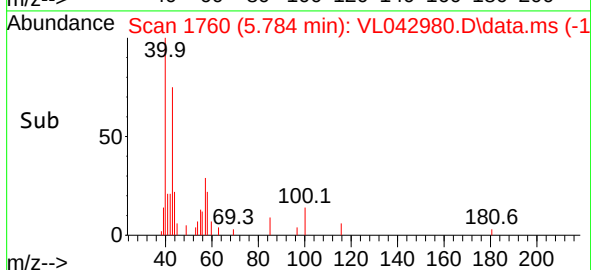
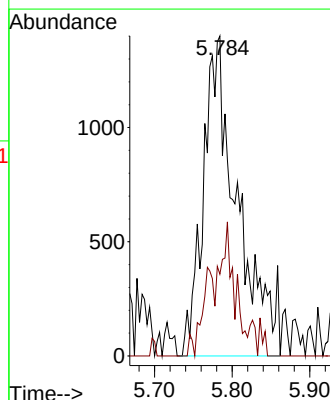
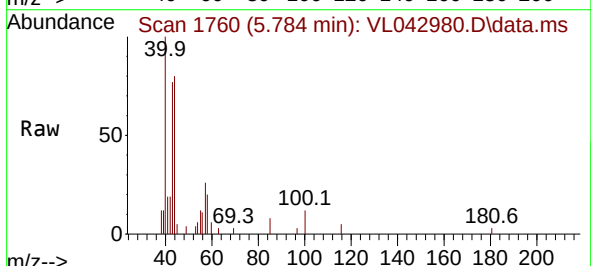
RT: 5.784 min Scan# 1760

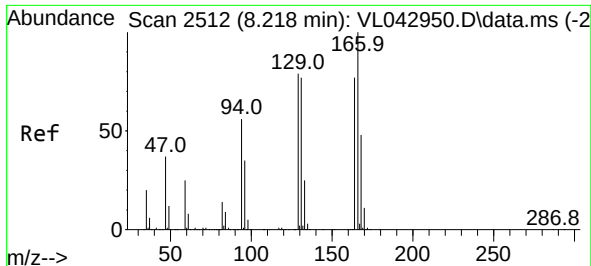
Delta R.T. 0.049 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

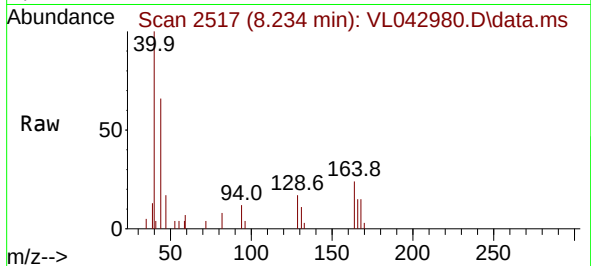
Tgt Ion:	43	Resp:	4249
Ion	Ratio	Lower	Upper
43	100		
58	0.0	28.4	42.6





#52
Tetrachloroethene
Concen: 0.031 ppbv
RT: 8.234 min Scan# 2117
Delta R.T. 0.016 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

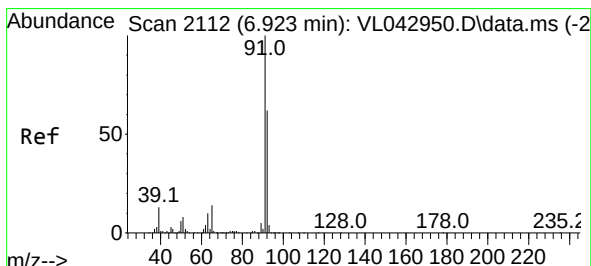
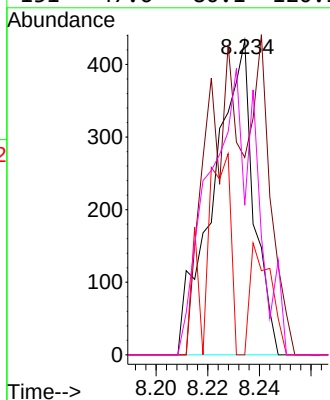
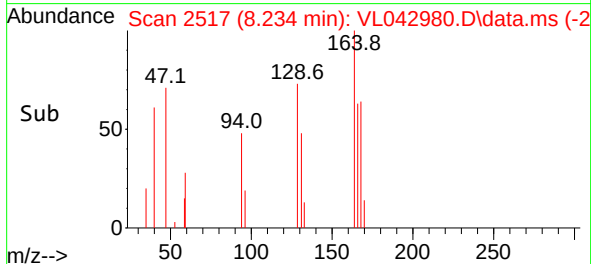
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



Tgt Ion:164 Resp: 469
Ion Ratio Lower Upper
164 100
166 62.8 103.5 155.3
129 0.0 82.2 123.4
131 47.6 80.1 120.1

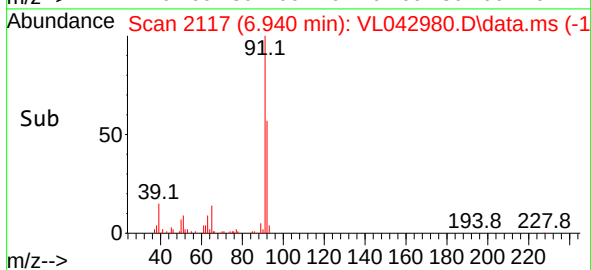
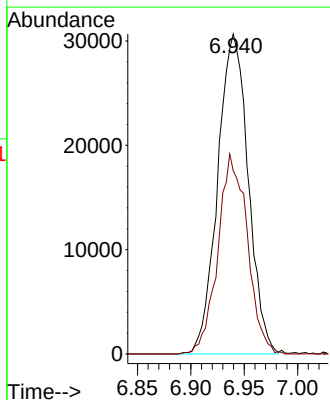
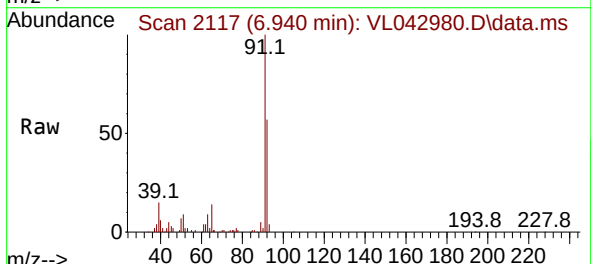
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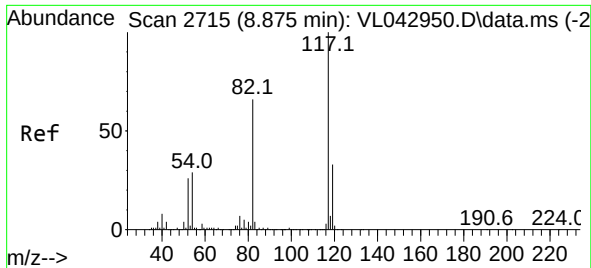
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#53
Toluene
Concen: 1.325 ppbv
RT: 6.940 min Scan# 2117
Delta R.T. 0.016 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

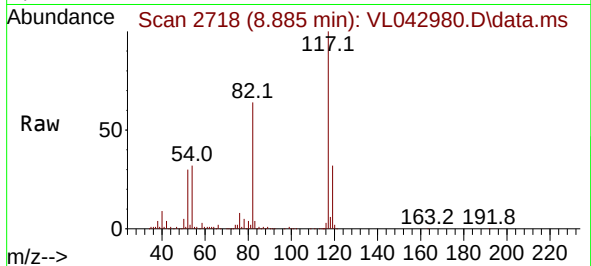
Tgt Ion: 91 Resp: 60968
Ion Ratio Lower Upper
91 100
92 60.2 48.2 72.2





#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 2715
Delta R.T. 0.010 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

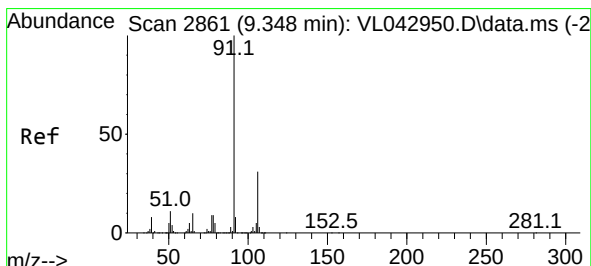
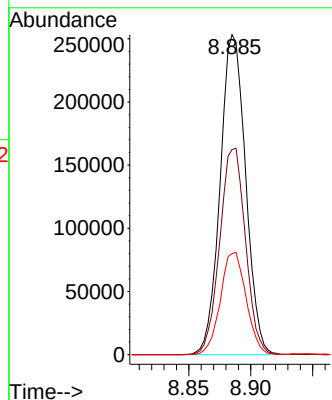
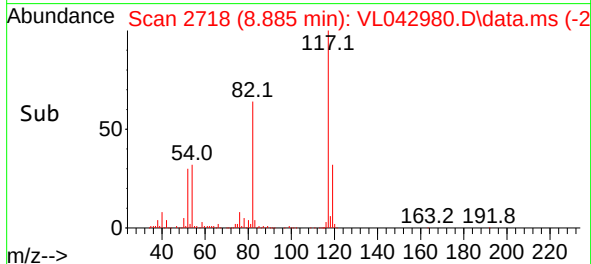
Instrument :
MSVOA_L
ClientSampleId :
151-1A-2



Tgt Ion: 117 Resp: 36342
Ion Ratio Lower Upper
117 100
82 65.3 52.8 79.2
119 32.3 26.5 39.7

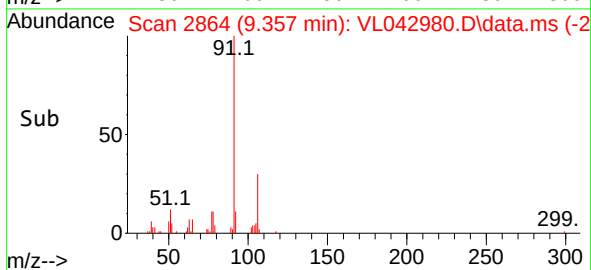
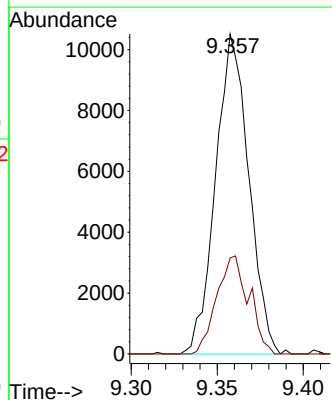
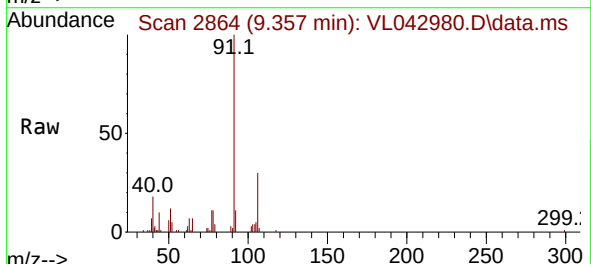
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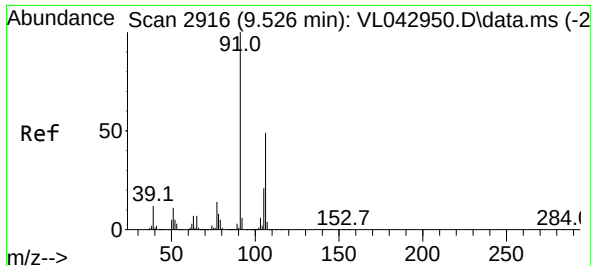
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#58
Ethyl Benzene
Concen: 0.236 ppbv
RT: 9.357 min Scan# 2864
Delta R.T. 0.010 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

Tgt Ion: 91 Resp: 14102
Ion Ratio Lower Upper
91 100
106 30.0 24.6 37.0





#59

m/p-Xylene

Concen: 0.830 ppbv

RT: 9.535 min Scan# 2916

Delta R.T. 0.010 min

Lab File: VL042980.D

Acq: 23 Sep 2025 04:44

Instrument :

MSVOA_L

ClientSampleId :

151-1A-2

Tgt Ion: 91 Resp: 39034

Ion Ratio Lower Upper

91 100

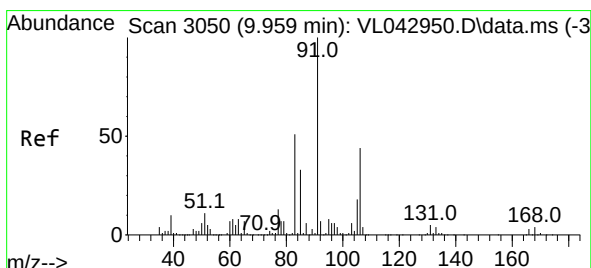
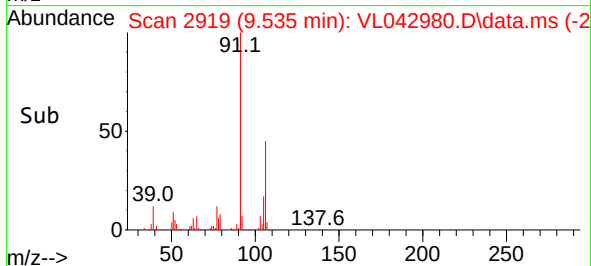
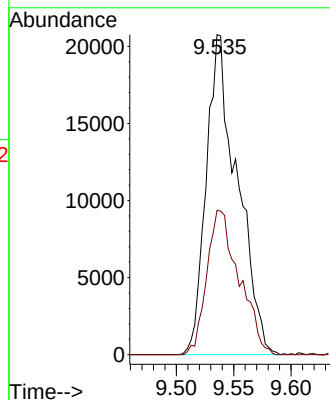
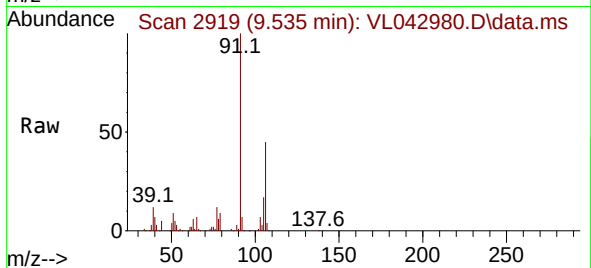
106 47.1 0.0 0.0

Manual Integrations

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Reviewed By :Mahesh Dadoda 09/24/2025

Supervised By :Semsettin Yesilyurt 09/24/2025



#60

o-Xylene

Concen: 0.260 ppbv

RT: 9.969 min Scan# 3053

Delta R.T. 0.010 min

Lab File: VL042980.D

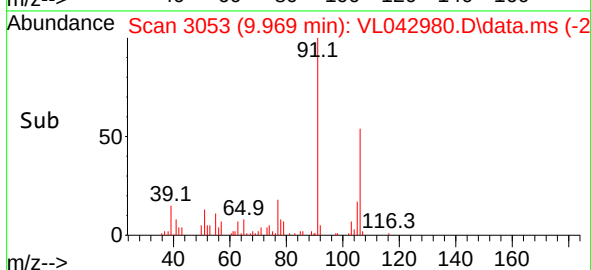
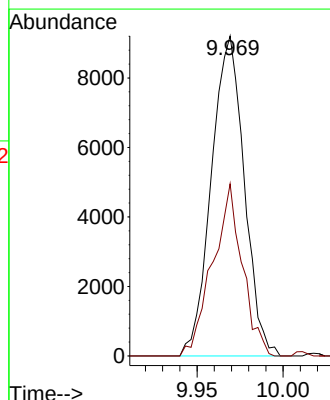
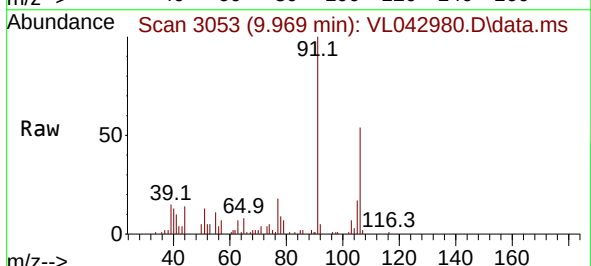
Acq: 23 Sep 2025 04:44

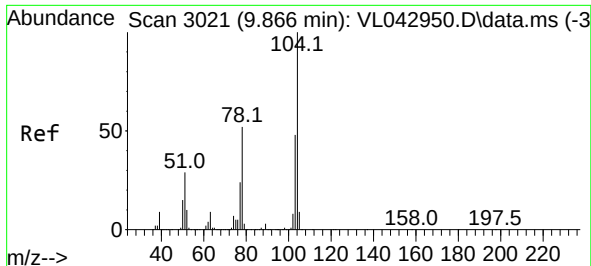
Tgt Ion: 91 Resp: 12216

Ion Ratio Lower Upper

91 100

106 48.7 22.4 67.0





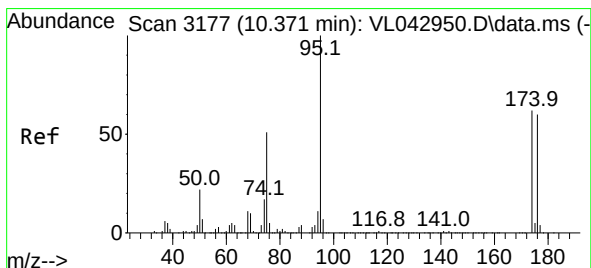
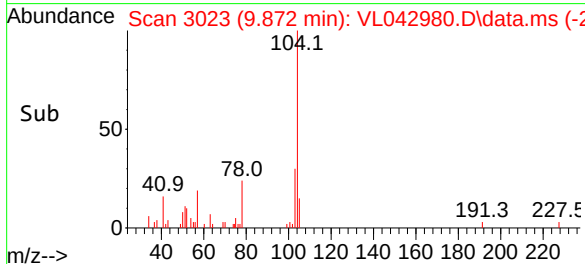
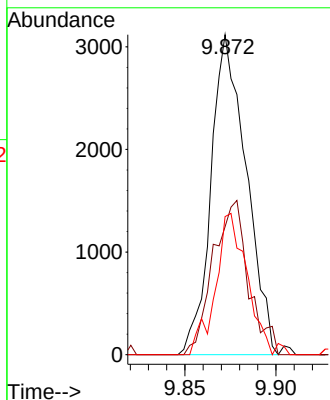
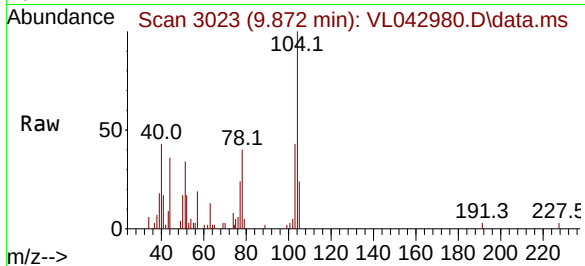
#61
Styrene
Concen: 0.189 ppbv
RT: 9.872 min Scan# 3021
Delta R.T. 0.006 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

Instrument :
MSVOA_1
ClientSampleId :
151-1A-2

Tgt Ion:104 Resp: 420
Ion Ratio Lower Upper
104 100
78 48.3 39.9 59.9
103 39.9 36.9 55.3

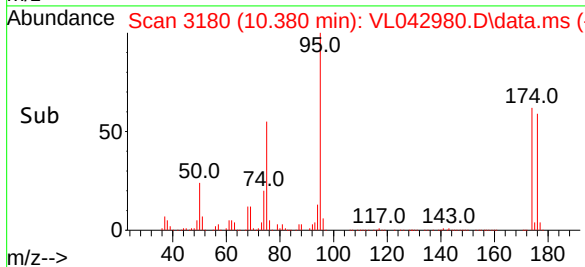
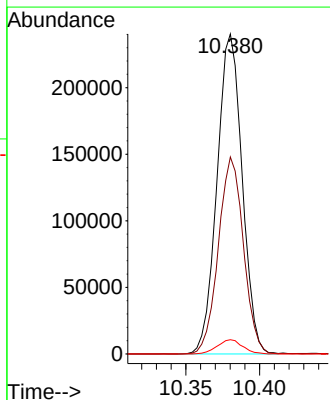
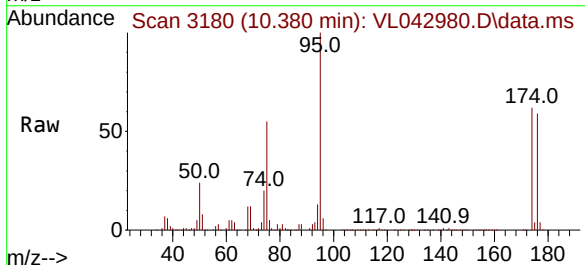
Manual Integrations
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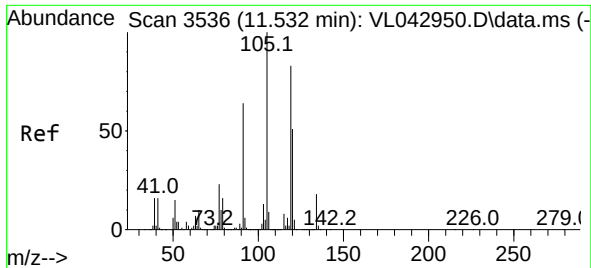
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#68
1-Bromo-4-Fluorobenzene
Concen: 10.489 ppbv
RT: 10.380 min Scan# 3180
Delta R.T. 0.010 min
Lab File: VL042980.D
Acq: 23 Sep 2025 04:44

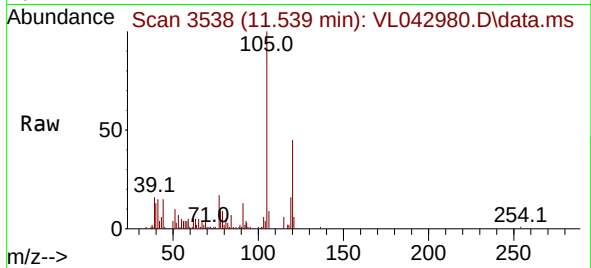
Tgt Ion: 95 Resp: 284547
Ion Ratio Lower Upper
95 100
174 61.6 51.4 77.2
175 4.5 4.0 6.0





#74
 1,2,4-Trimethylbenzene
 Concen: 0.238 ppbv
 RT: 11.539 min Scan# 3538
 Delta R.T. 0.006 min
 Lab File: VL042980.D
 Acq: 23 Sep 2025 04:44

Instrument :
 MSVOA_L
 ClientSampleId :
 151-1A-2



Tgt Ion:	105	Resp:	12540
Ion Ratio	Lower	Upper	
105	100		
120	50.9	40.9	61.3
91	12.7	51.2	76.8
77	16.1	18.4	27.6

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 09/24/2025
 Supervised By :Semsettin Yesilyurt 09/24/2025

