

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL092225\
 Data File : VL042976.D
 Acq On : 23 Sep 2025 02:22
 Operator : SY/MD
 Sample : Q3131-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 141-1A-2

Manual Integrations
 APPROVED

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

Quant Time: Sep 24 01:13:59 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	2.787	49	142688	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	412064	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	367269	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	280234	10.222	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.200%
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.499	85	72159	3.760	ppbv	94
3) Chlorodifluoromethane	1.470	51	6145m	0.257	ppbv	
4) Chloromethane	1.531	50	3494	0.402	ppbv	94
9) Propene	1.489	41	53781m	5.168	ppbv	
10) Heptane	4.985	43	12088m	0.435	ppbv	
11) Trichlorofluoromethane	1.877	101	7922	0.428	ppbv	99
13) Ethanol	1.722	45	128905	127.697	ppbv	96
15) Acetone	1.835	43	384118m	20.669	ppbv	
17) tert-Butyl alcohol	2.046	59	5375	0.264	ppbv #	72
19) Isopropyl Alcohol	1.887	45	23113	2.069	ppbv #	1
20) Methylene Chloride	2.062	84	7616m	0.755	ppbv	
26) Hexane	2.826	57	143051	6.681	ppbv #	42
29) Chloroform	2.845	83	4013m	0.143	ppbv	
30) Cyclohexane	3.858	84	9777	0.546	ppbv	88
34) 2-Butanone	2.557	43	41609	1.441	ppbv	98
35) Carbon Tetrachloride	3.761	117	2429m	0.091	ppbv	
36) Benzene	3.658	78	27676	0.715	ppbv #	91
37) 1,2-Dichloroethane	3.221	62	4116	0.202	ppbv	99
41) Tetrahydrofuran	3.068	42	6061m	0.365	ppbv	
44) 2,2,4-Trimethylpentane	4.641	57	84058	1.258	ppbv #	89
50) 4-Methyl-2-Pentanone	5.771	43	5299m	0.137	ppbv	
53) Toluene	6.936	91	92307	2.015	ppbv	100
58) Ethyl Benzene	9.357	91	26614	0.441	ppbv	95
59) m/p-Xylene	9.532	91	80258	1.688	ppbv #	100
60) o-Xylene	9.966	91	28894	0.608	ppbv	99
61) Styrene	9.869	104	5085	0.226	ppbv	95
73) 1,3,5-Trimethylbenzene	11.202	105	4817	0.100	ppbv	90
74) 1,2,4-Trimethylbenzene	11.536	105	15499	0.291	ppbv #	66

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

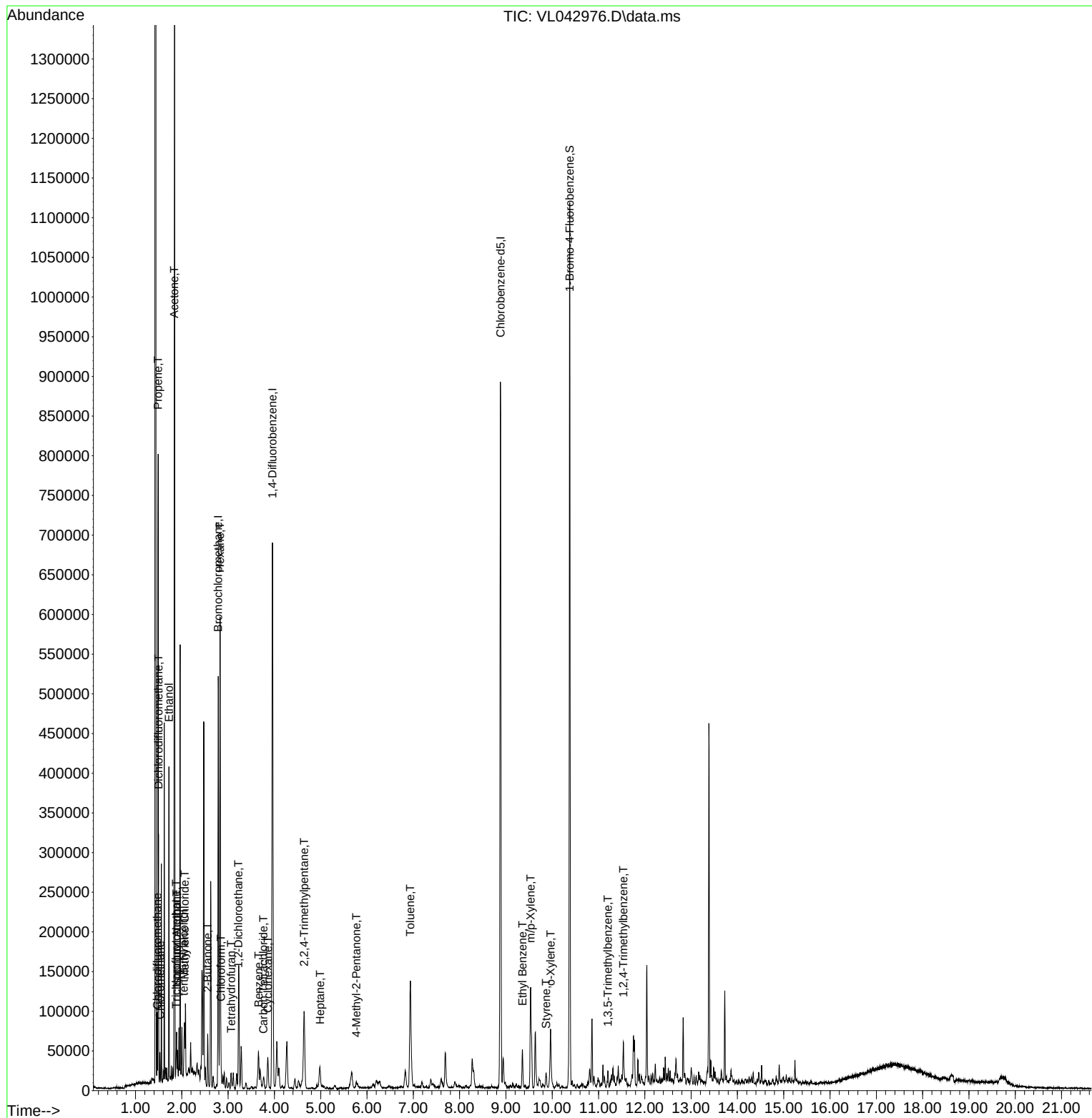
Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL092225\
Data File : VL042976.D
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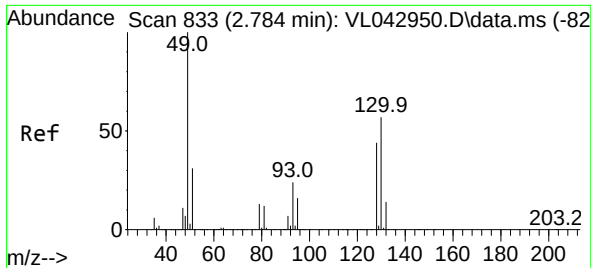
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2

Manual Integrations
APPROVED

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

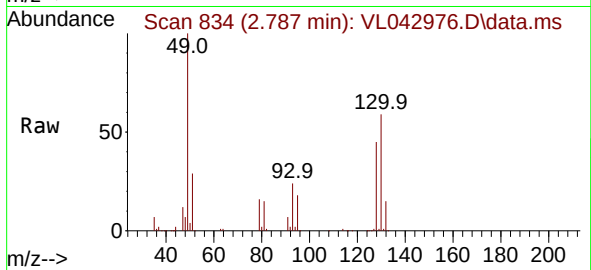
Quant Time: Sep 24 01:13:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL092225AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug
QLast Update : Tue Sep 23 02:39:16 2025
Response via : Initial Calibration





#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 833
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

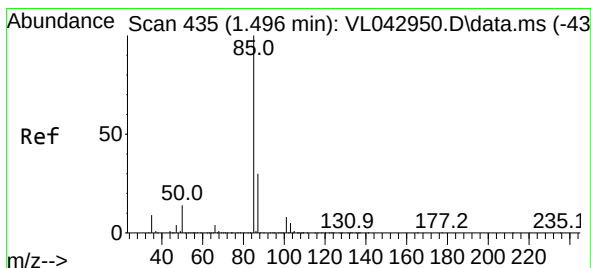
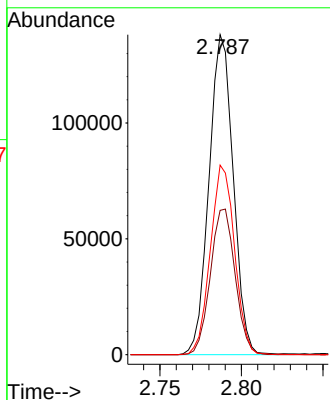
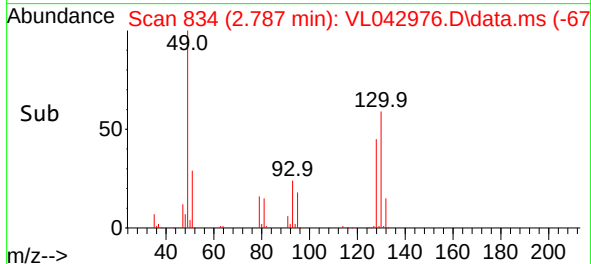
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 49 Resp: 142688
Ion Ratio Lower Upper
49 100
128 46.5 22.9 68.8
130 59.3 29.1 87.3

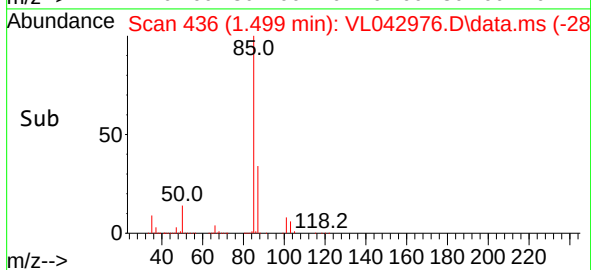
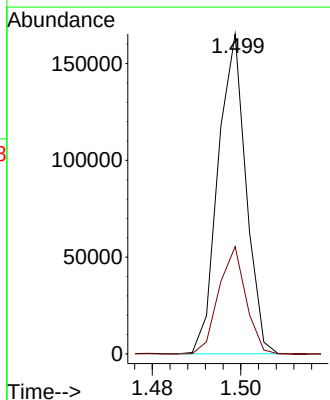
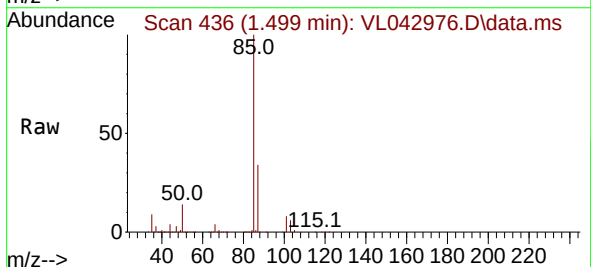
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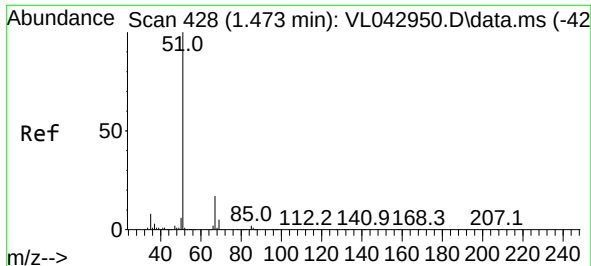
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#2
Dichlorodifluoromethane
Concen: 3.760 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

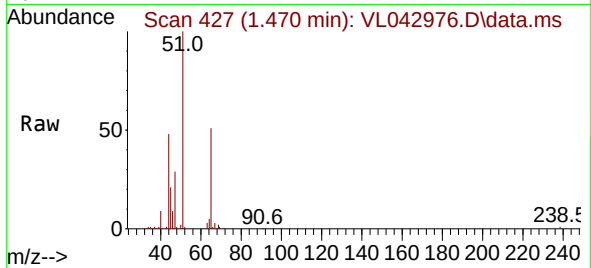
Tgt Ion: 85 Resp: 72159
Ion Ratio Lower Upper
85 100
87 33.6 24.3 36.5





#3
Chlorodifluoromethane
Concen: 0.257 ppbv m
RT: 1.470 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

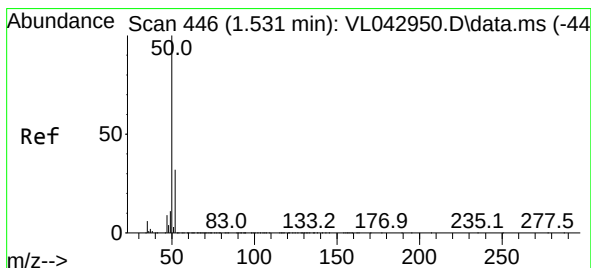
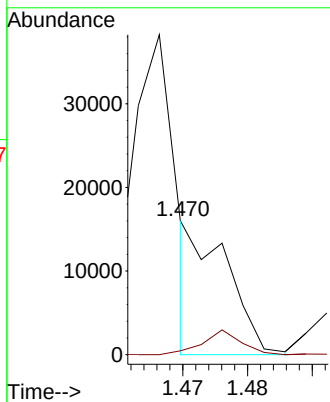
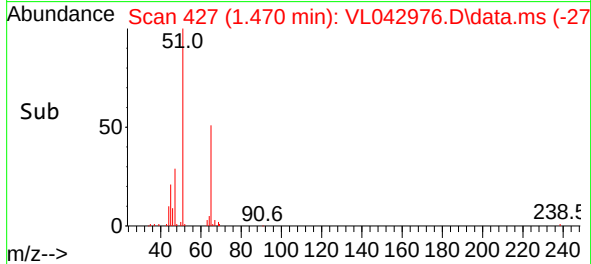
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 51 Resp: 614
Ion Ratio Lower Upper
51 100
67 17.4 13.8 20.8

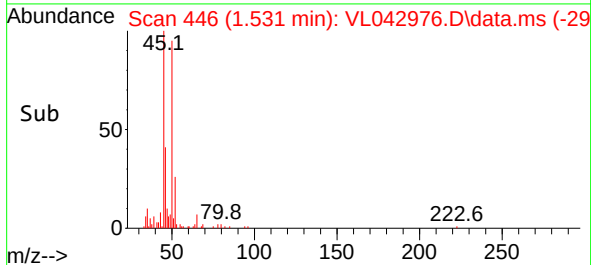
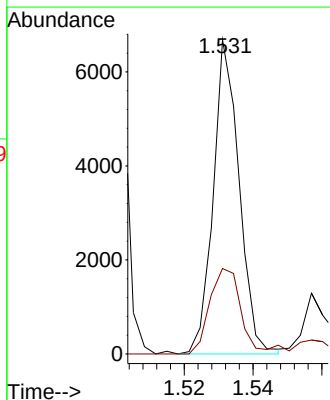
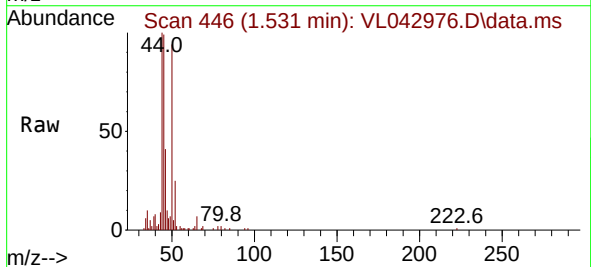
Manual Integrations
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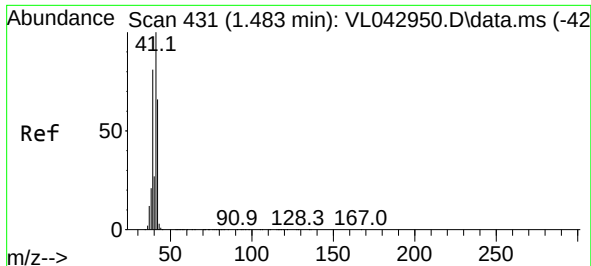
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#4
Chloromethane
Concen: 0.402 ppbv
RT: 1.531 min Scan# 446
Delta R.T. -0.000 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

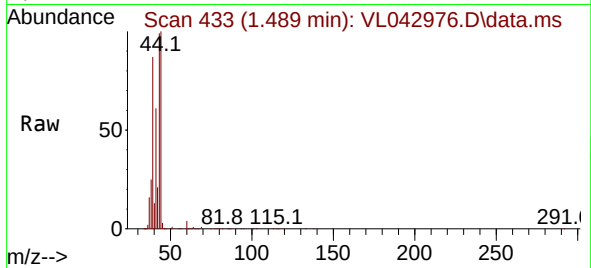
Tgt Ion: 50 Resp: 3494
Ion Ratio Lower Upper
50 100
52 29.2 25.9 38.9





#9
 Propene
 Concen: 5.168 ppbv m
 RT: 1.489 min Scan# 41
 Delta R.T. 0.006 min
 Lab File: VL042976.D
 Acq: 23 Sep 2025 02:22

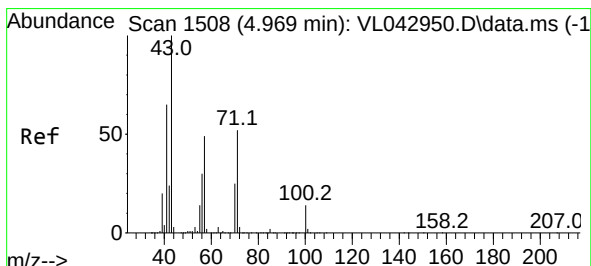
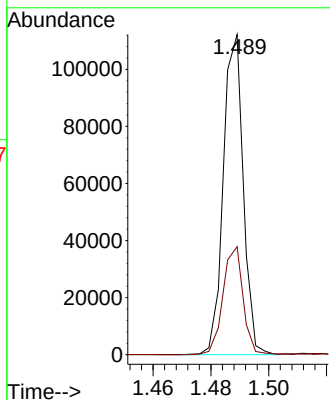
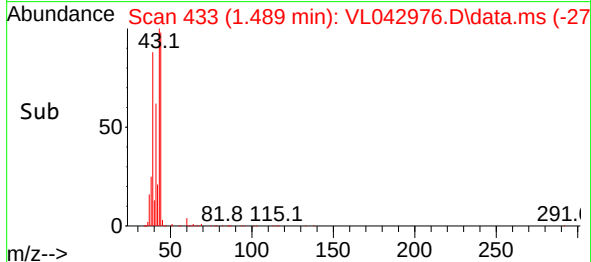
Instrument :
 MSVOA_1
 ClientSampleId :
 141-1A-2



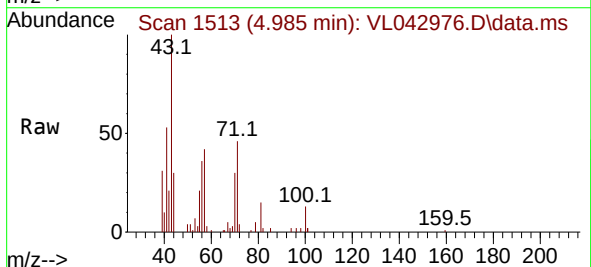
Tgt Ion: 41 Resp: 5378
 Ion Ratio Lower Upper
 41 100
 42 35.4 57.4 86.2

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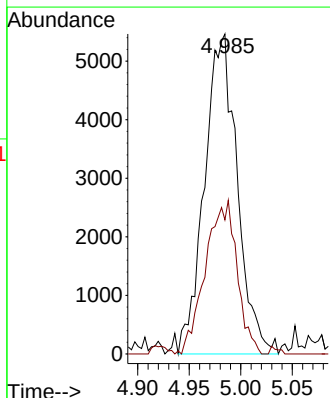
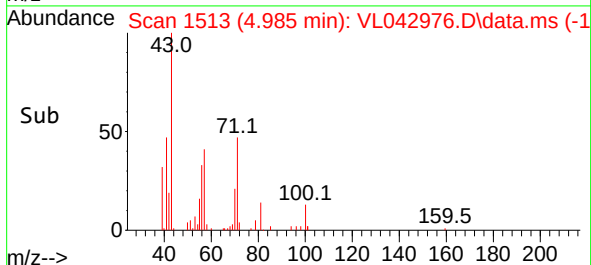
Reviewed By :Mahesh Dadoda 09/24/2025
 Supervised By :Semsettin Yesilyurt 09/24/2025

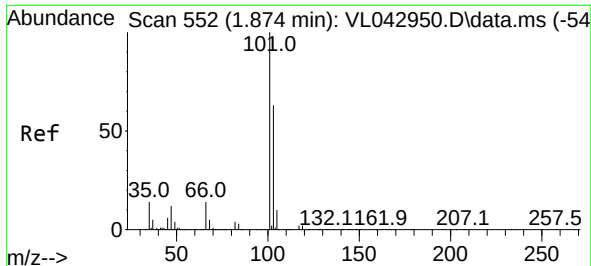


#10
 Heptane
 Concen: 0.435 ppbv m
 RT: 4.985 min Scan# 1513
 Delta R.T. 0.016 min
 Lab File: VL042976.D
 Acq: 23 Sep 2025 02:22



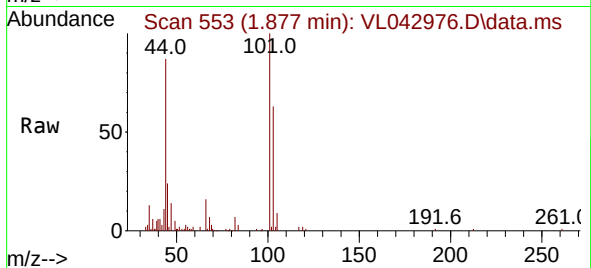
Tgt Ion: 43 Resp: 12088
 Ion Ratio Lower Upper
 43 100
 57 47.7 38.6 57.8





#11
Trichlorofluoromethane
Concen: 0.428 ppbv
RT: 1.877 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

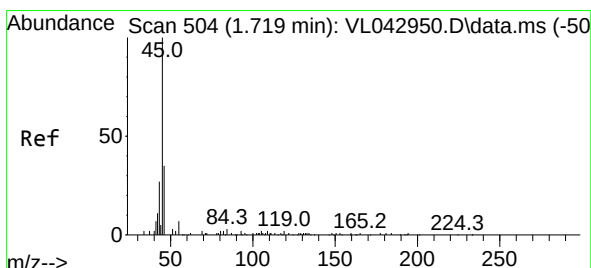
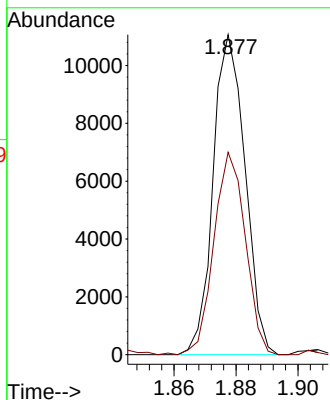
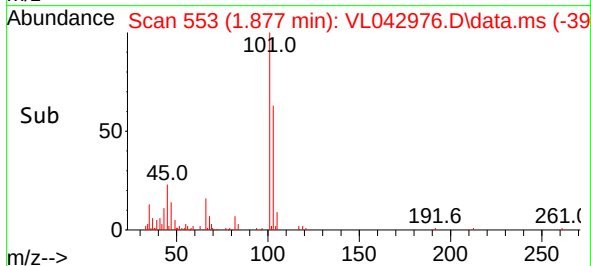
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



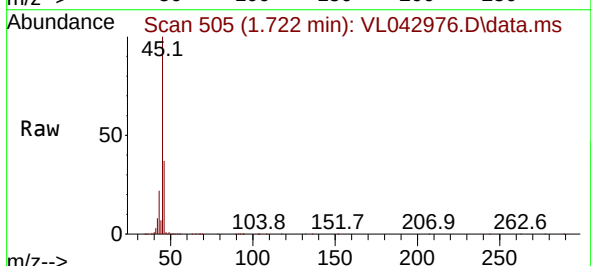
Tgt Ion:101 Resp: 792
Ion Ratio Lower Upper
101 100
103 63.3 50.1 75.1

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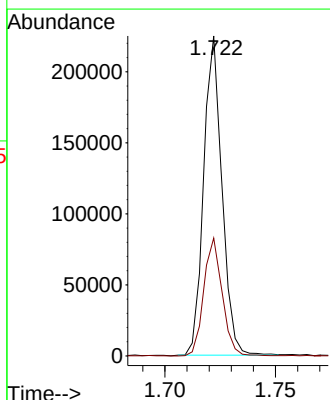
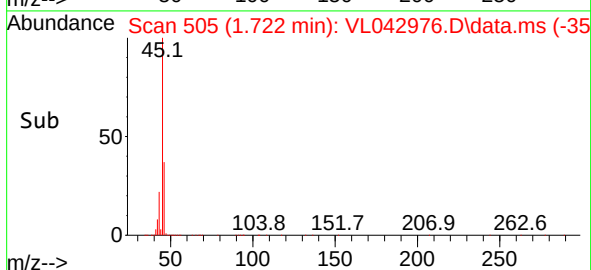
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025

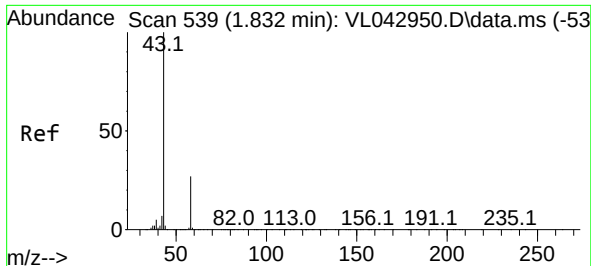


#13
Ethanol
Concen: 127.697 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22



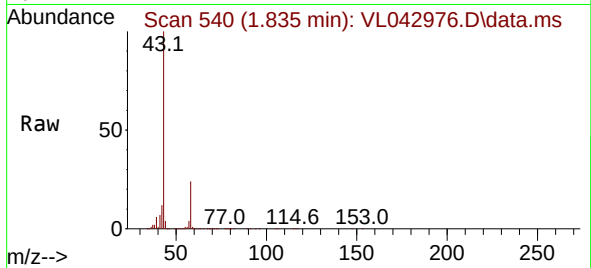
Tgt Ion: 45 Resp: 128905
Ion Ratio Lower Upper
45 100
46 37.7 16.2 64.6





#15
Acetone
Concen: 20.669 ppbv m
RT: 1.835 min Scan# 54
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

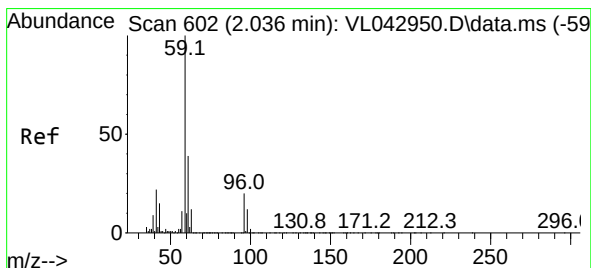
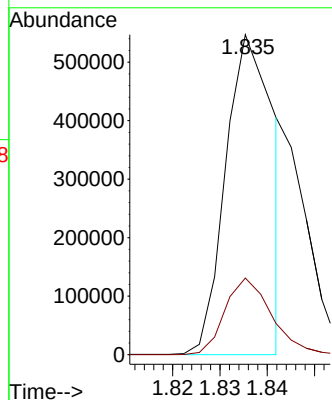
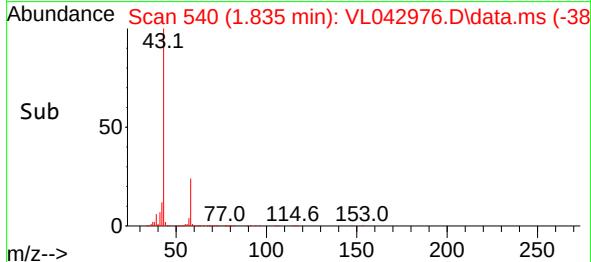
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 43 Resp: 384118
Ion Ratio Lower Upper
43 100
58 23.5 22.3 33.5

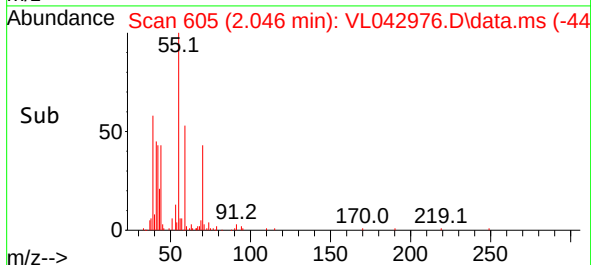
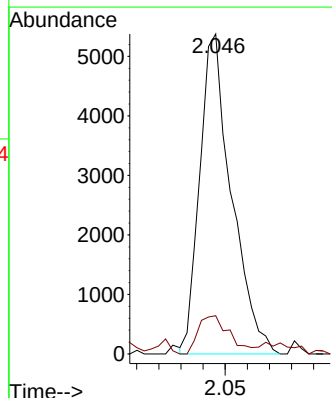
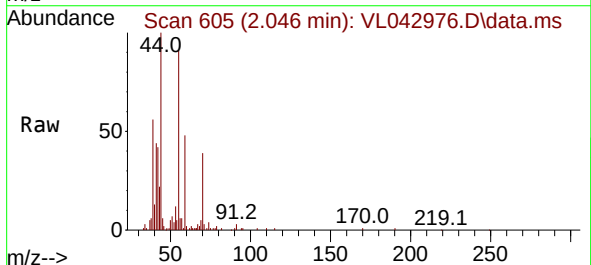
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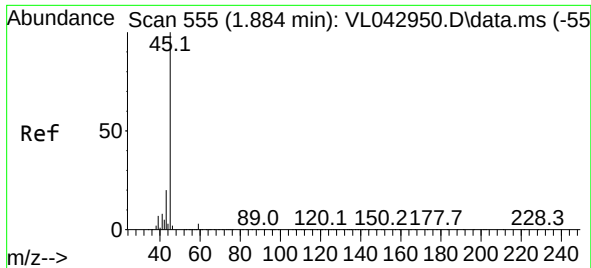
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#17
tert-Butyl alcohol
Concen: 0.264 ppbv
RT: 2.046 min Scan# 605
Delta R.T. 0.010 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

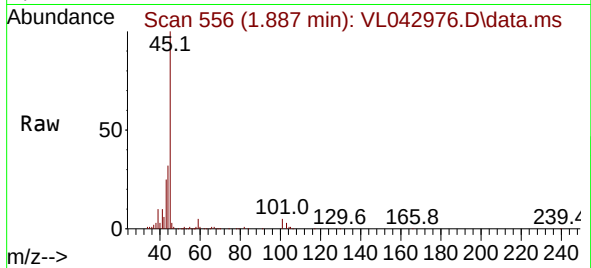
Tgt Ion: 59 Resp: 5375
Ion Ratio Lower Upper
59 100
57 0.0 8.6 12.8#





#19
Isopropyl Alcohol
Concen: 2.069 ppbv
RT: 1.887 min Scan# 511
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

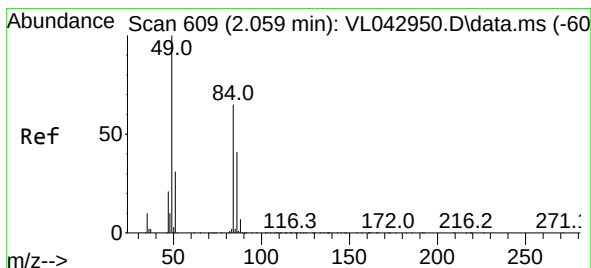
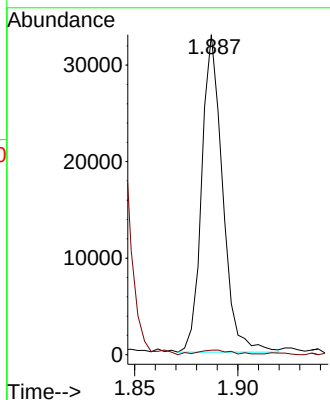
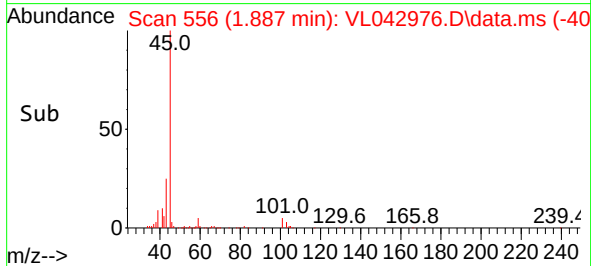
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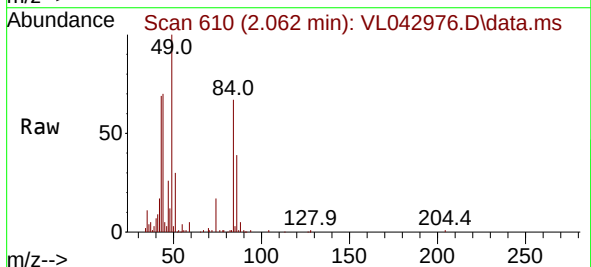
Tgt Ion: 45 Resp: 2311
Ion Ratio Lower Upper
45 100
58 390.5 31.0 46.6

Manual Integrations
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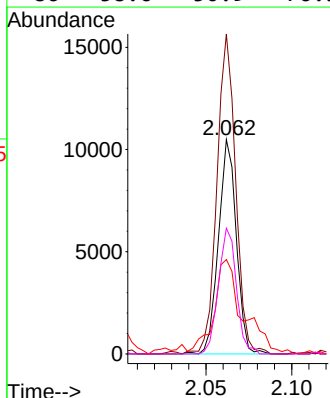
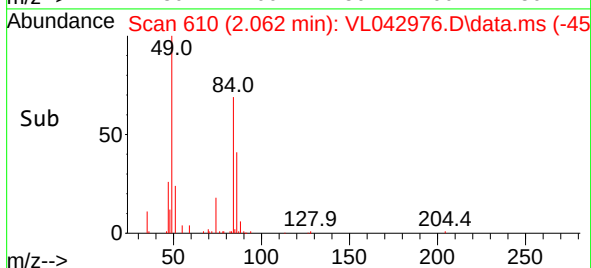
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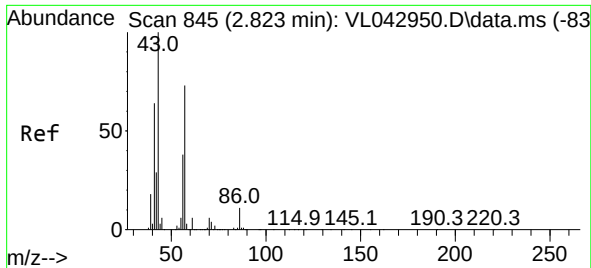


#20
Methylene Chloride
Concen: 0.755 ppbv m
RT: 2.062 min Scan# 610
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22



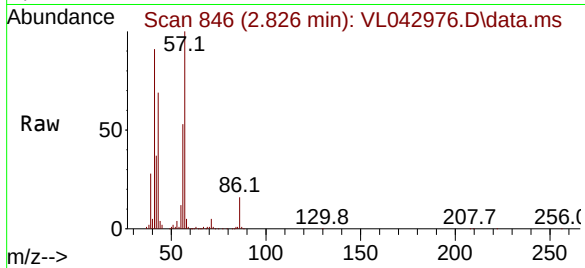
Tgt Ion: 84 Resp: 7616
Ion Ratio Lower Upper
84 100
49 149.3 124.1 186.1
51 44.0 39.8 59.8
86 58.6 50.9 76.3





#26
Hexane
Concen: 6.681 ppbv
RT: 2.826 min Scan# 845
Delta R.T. 0.003 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

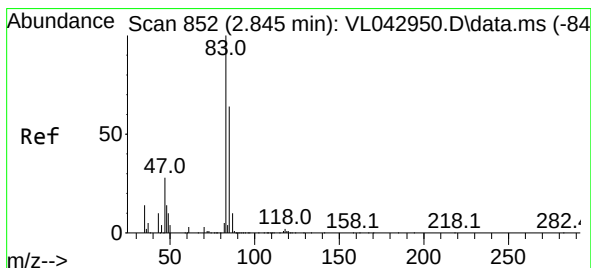
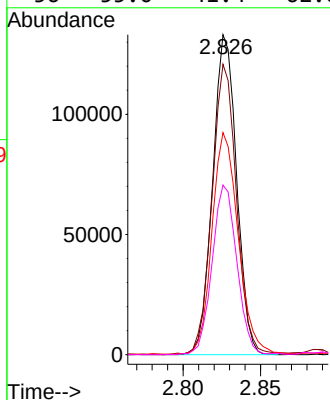
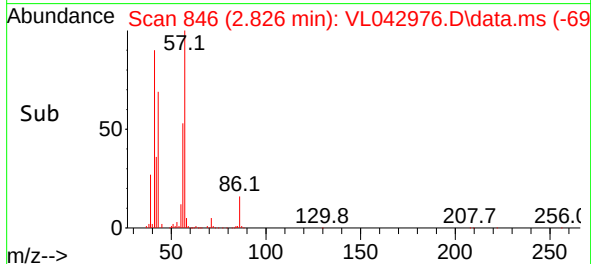
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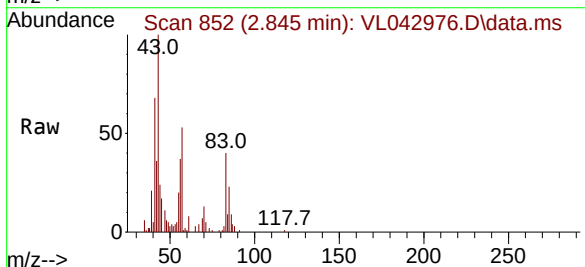
Tgt Ion: 57 Resp: 14305
Ion Ratio Lower Upper
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41 92.8 71.7 107.5
43 77.0 180.8 271.2
56 55.0 41.4 62.0

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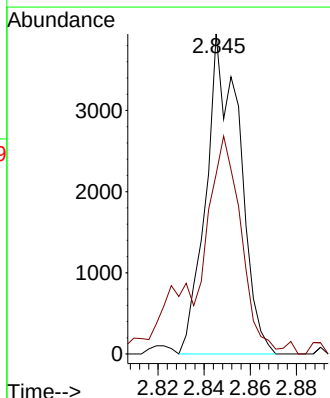
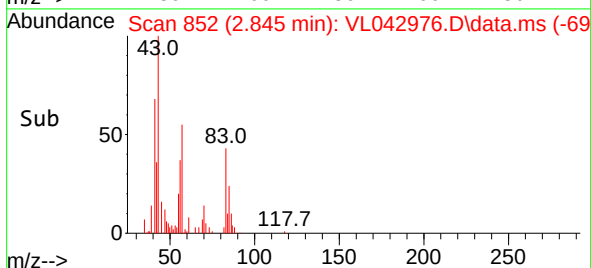
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025

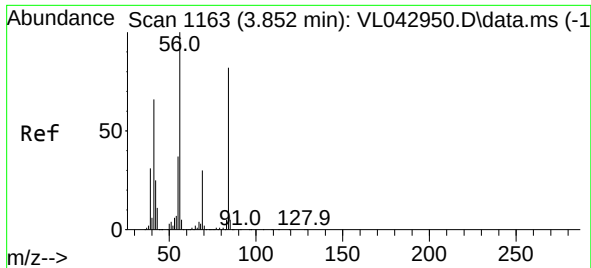


#29
Chloroform
Concen: 0.143 ppbv m
RT: 2.845 min Scan# 852
Delta R.T. -0.000 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22



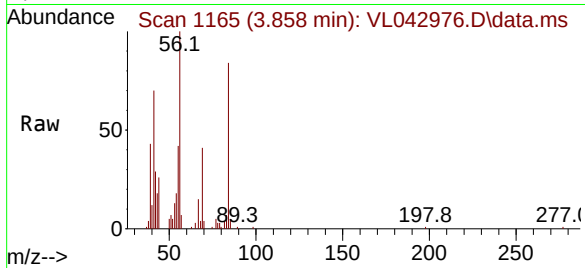
Tgt Ion: 83 Resp: 4013
Ion Ratio Lower Upper
83 100
85 56.2 51.2 76.8





#30
Cyclohexane
Concen: 0.546 ppbv
RT: 3.858 min Scan# 1165
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

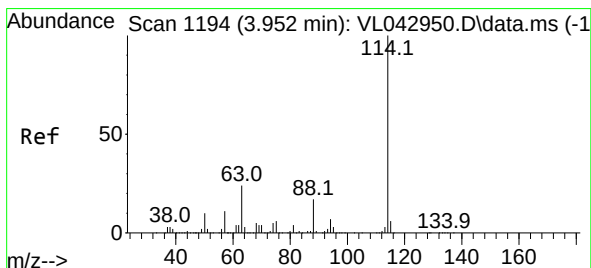
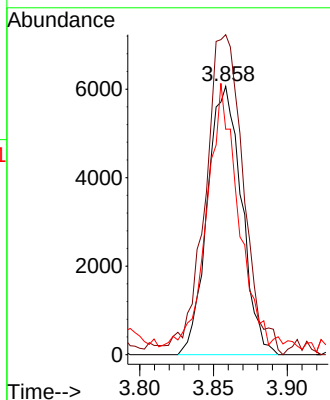
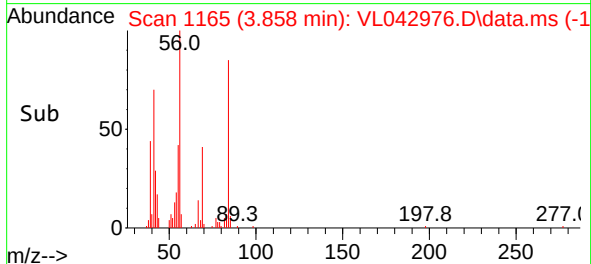
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 84 Resp: 977
Ion Ratio Lower Upper
84 100
56 136.2 102.2 153.4
41 98.1 65.6 98.4

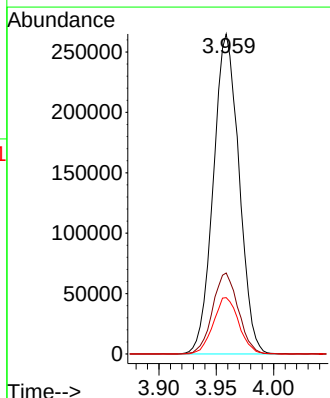
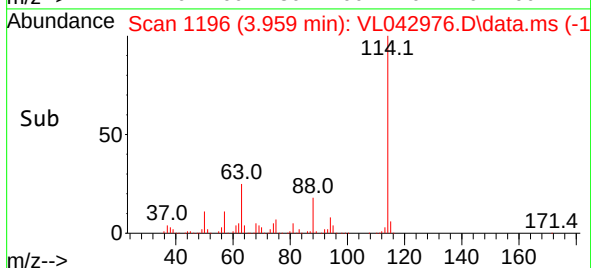
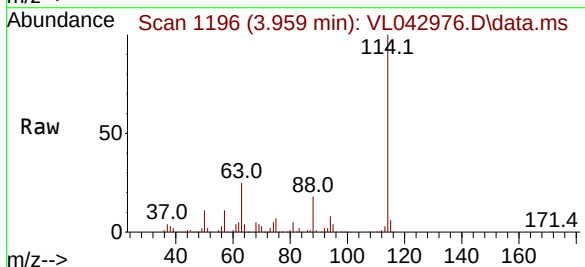
Manual Integrations
APPROVED

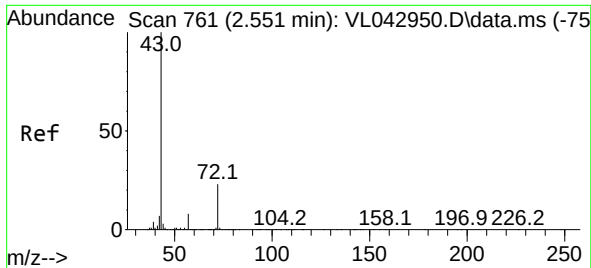
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

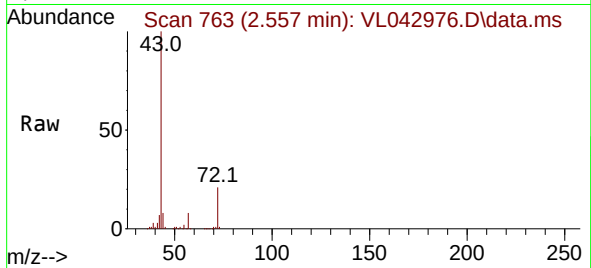
Tgt Ion:114 Resp: 412064
Ion Ratio Lower Upper
114 100
63 25.4 19.4 29.2
88 17.5 14.2 21.2





#34
2-Butanone
Concen: 1.441 ppbv
RT: 2.557 min Scan# 70
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

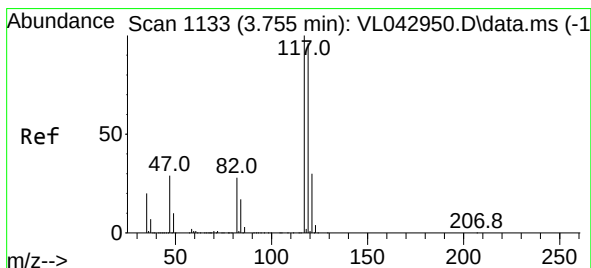
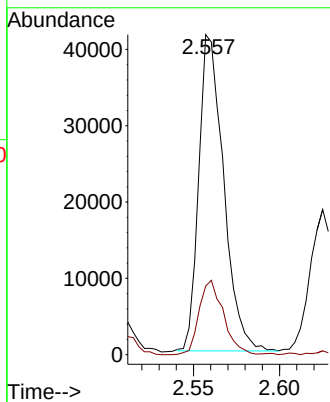
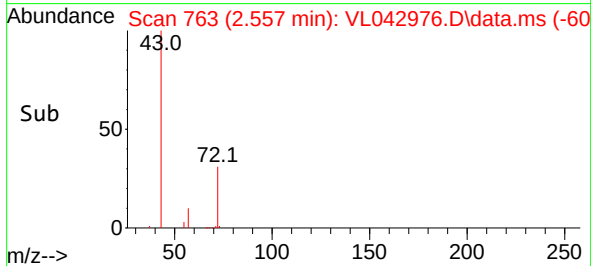
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 43 Resp: 41609
Ion Ratio Lower Upper
43 100
72 23.2 17.7 26.5

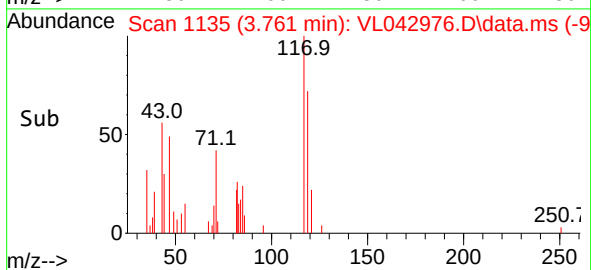
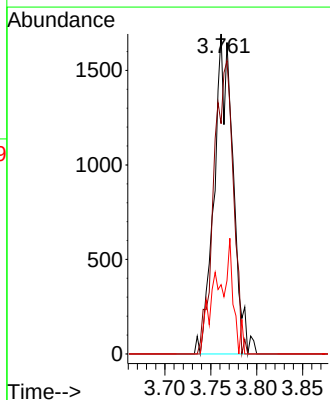
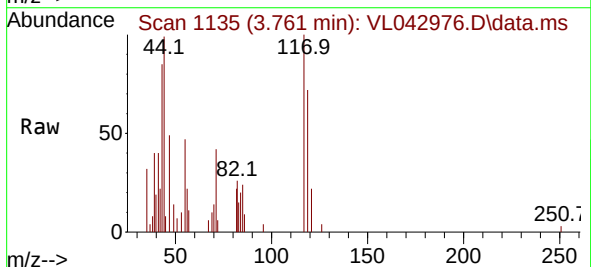
Manual Integrations
APPROVED

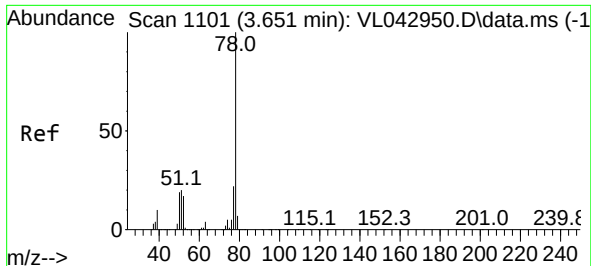
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#35
Carbon Tetrachloride
Concen: 0.091 ppbv m
RT: 3.761 min Scan# 1135
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

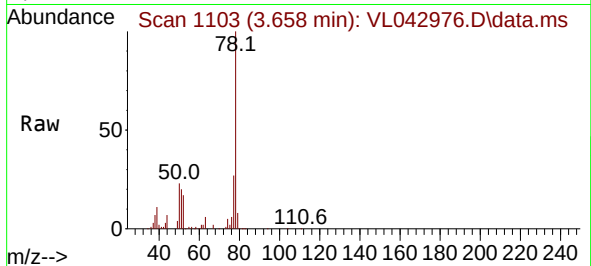
Tgt Ion:117 Resp: 2429
Ion Ratio Lower Upper
117 100
119 71.9 76.9 115.3#
121 21.6 23.7 35.5#





#36
Benzene
Concen: 0.715 ppbv
RT: 3.658 min Scan# 1101
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

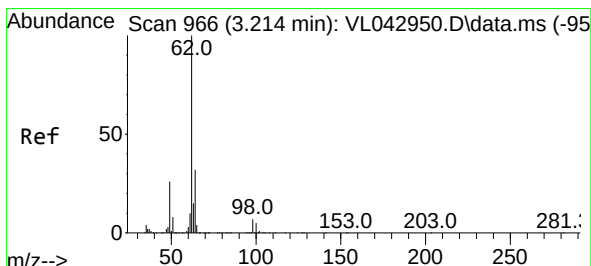
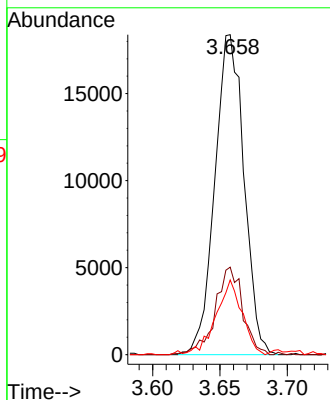
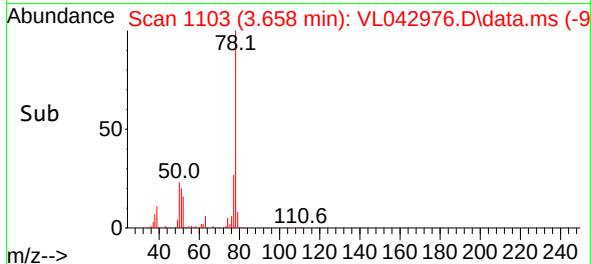
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



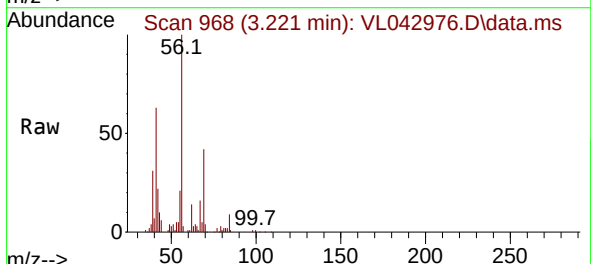
Tgt Ion: 78 Resp: 27670
Ion Ratio Lower Upper
78 100
77 27.0 17.8 26.6
50 22.1 15.0 22.4

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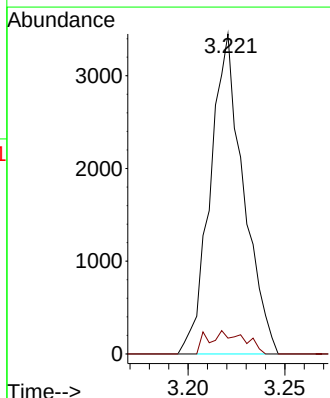
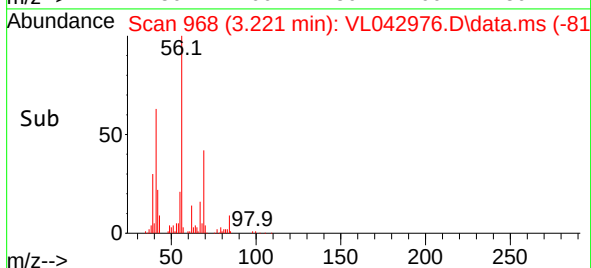
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025

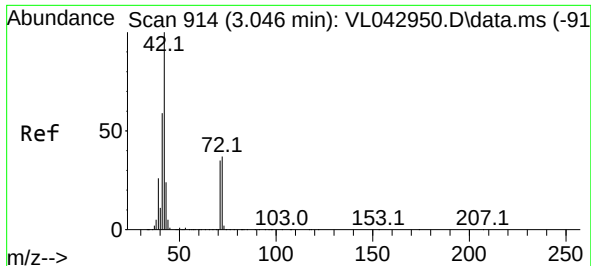


#37
1,2-Dichloroethane
Concen: 0.202 ppbv
RT: 3.221 min Scan# 968
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22



Tgt Ion: 62 Resp: 4116
Ion Ratio Lower Upper
62 100
98 7.8 5.9 8.9





#41

Tetrahydrofuran

Concen: 0.365 ppbv m

RT: 3.068 min Scan# 91

Delta R.T. 0.022 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

Instrument :

MSVOA_1

ClientSampleId :

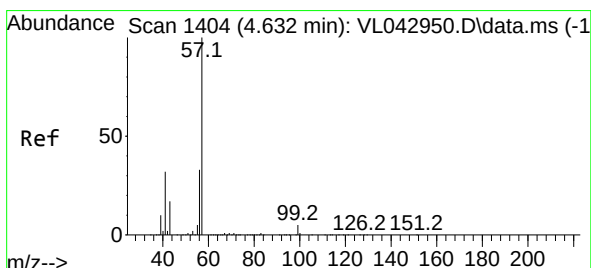
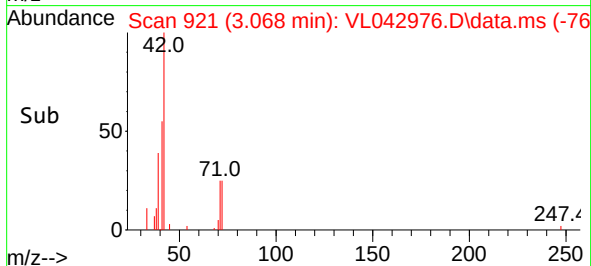
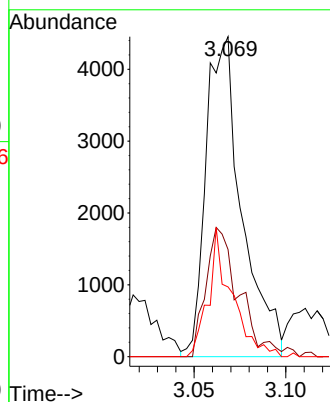
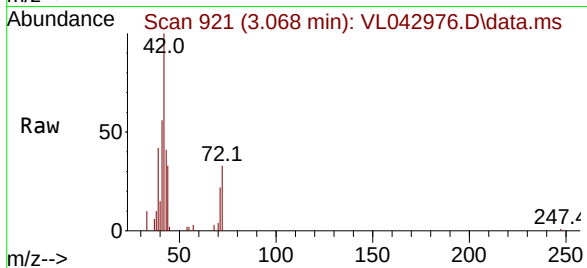
141-1A-2

Tgt Ion: 42	Resp: 606
Ion Ratio	Lower Upper
42	100
72	37.9 30.0 45.0
71	26.3 28.8 43.2

Manual Integrations

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



#44

2,2,4-Trimethylpentane

Concen: 1.258 ppbv

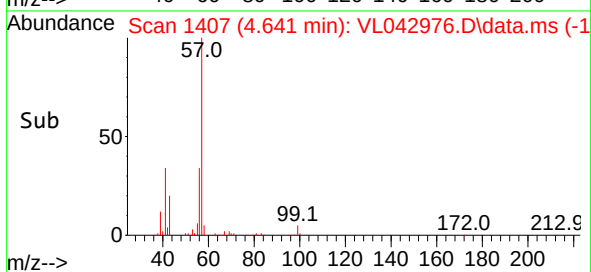
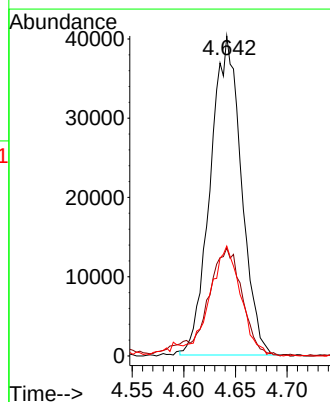
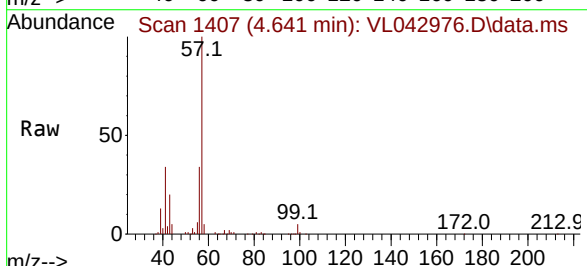
RT: 4.641 min Scan# 1407

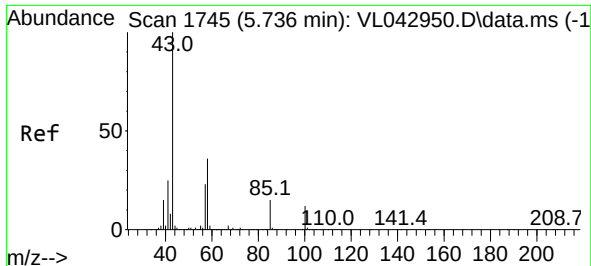
Delta R.T. 0.010 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

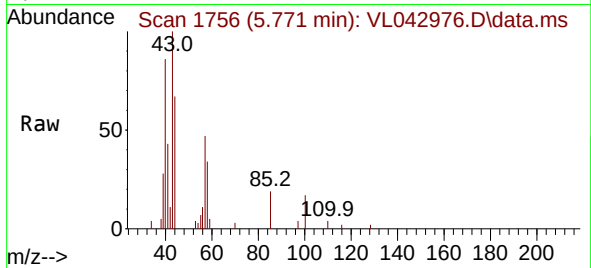
Tgt Ion: 57	Resp: 84058
Ion Ratio	Lower Upper
57	100
41	39.0 25.5 38.3
56	37.2 25.8 38.8





#50
4-Methyl-2-Pentanone
Concen: 0.137 ppbv m
RT: 5.771 min Scan# 1756
Delta R.T. 0.035 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

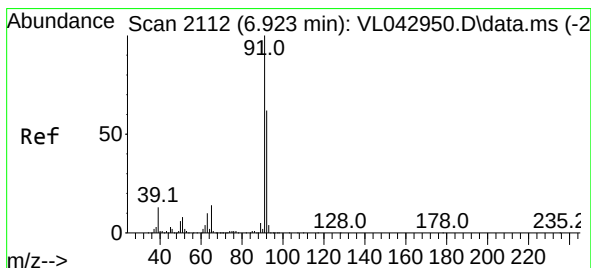
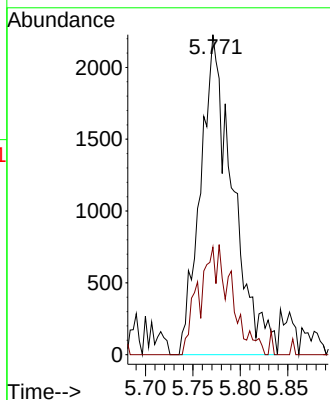
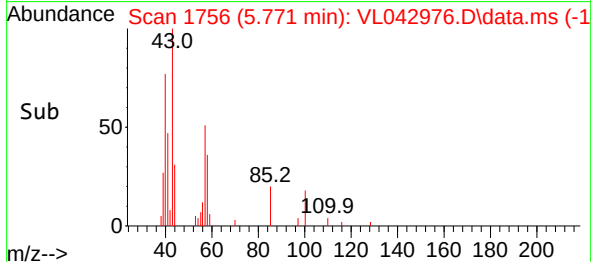
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 43 Resp: 5298
Ion Ratio Lower Upper
43 100
58 0.0 28.4 42.6

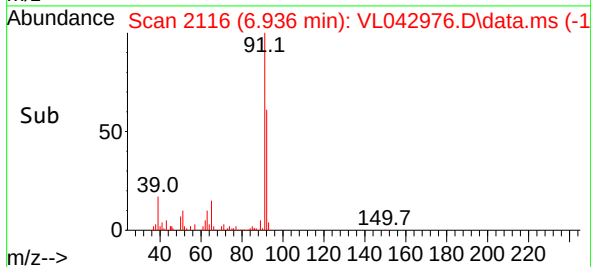
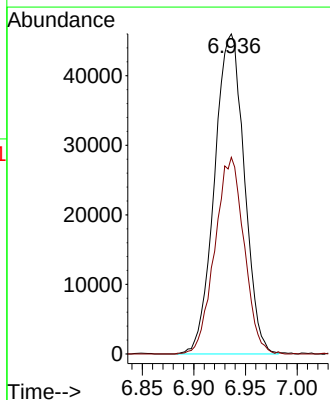
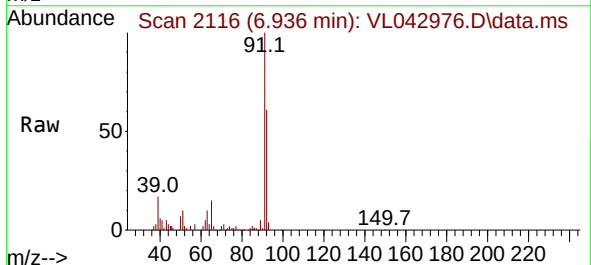
Manual Integrations
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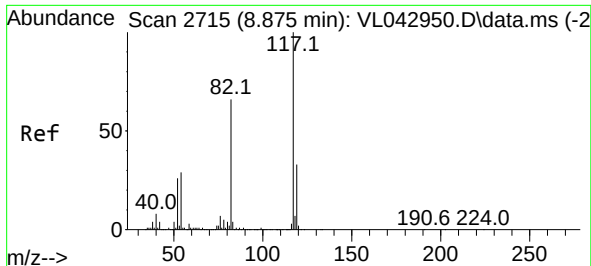
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#53
Toluene
Concen: 2.015 ppbv
RT: 6.936 min Scan# 2116
Delta R.T. 0.013 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

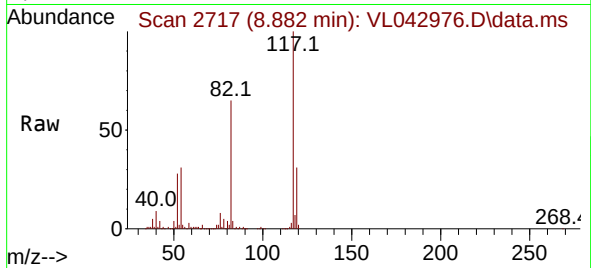
Tgt Ion: 91 Resp: 92307
Ion Ratio Lower Upper
91 100
92 60.4 48.2 72.2





#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.882 min Scan# 2715
Delta R.T. 0.006 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

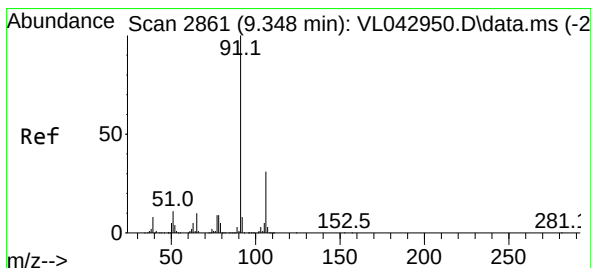
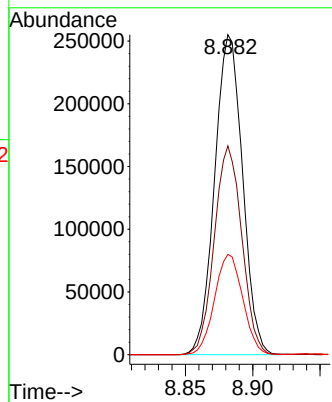
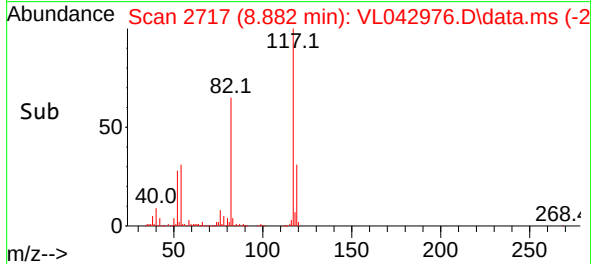
Instrument :
MSVOA_L
ClientSampleId :
141-1A-2



Tgt Ion: 117 Resp: 367269
Ion Ratio Lower Upper
117 100
82 64.5 52.8 79.2
119 31.7 26.5 39.7

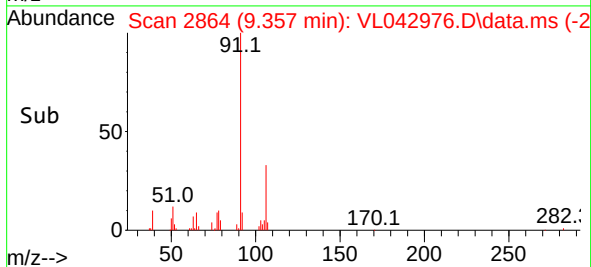
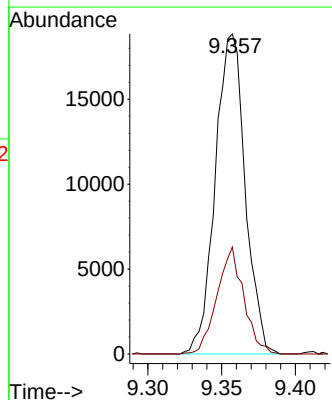
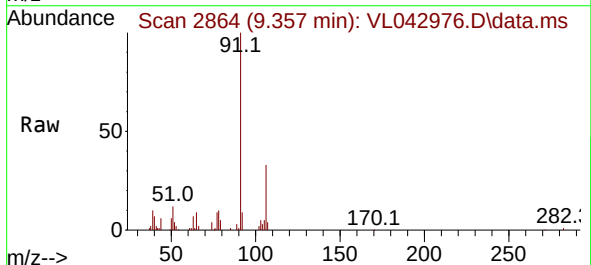
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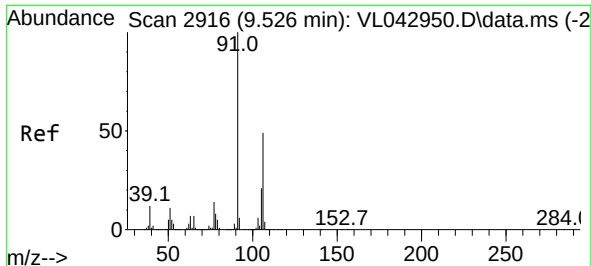
Reviewed By :Mahesh Dadoda 09/24/2025
Supervised By :Semsettin Yesilyurt 09/24/2025



#58
Ethyl Benzene
Concen: 0.441 ppbv
RT: 9.357 min Scan# 2864
Delta R.T. 0.010 min
Lab File: VL042976.D
Acq: 23 Sep 2025 02:22

Tgt Ion: 91 Resp: 26614
Ion Ratio Lower Upper
91 100
106 33.4 24.6 37.0





#59

m/p-Xylene

Concen: 1.688 ppbv

RT: 9.532 min Scan# 2916

Delta R.T. 0.006 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

Instrument :

MSVOA_L

ClientSampleId :

141-1A-2

Tgt Ion: 91 Resp: 80258

Ion Ratio Lower Upper

91 100

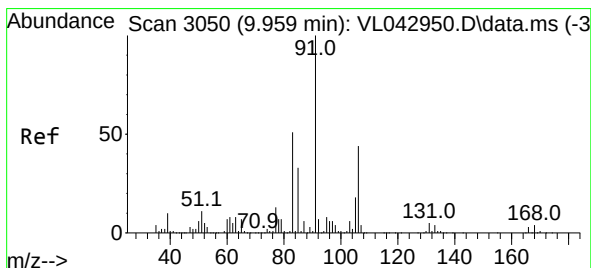
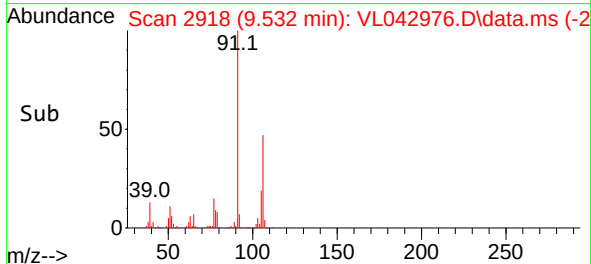
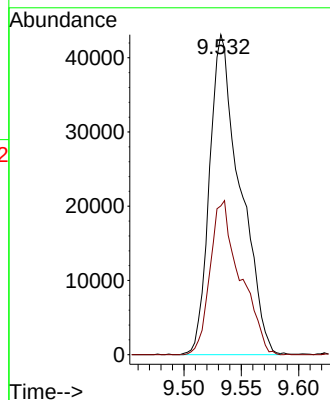
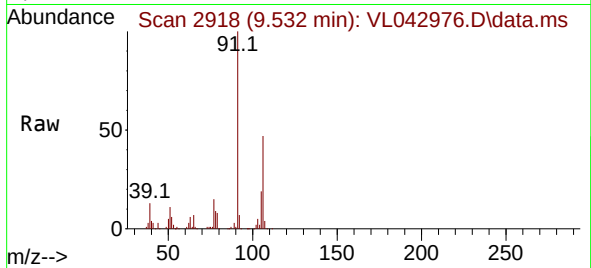
106 47.3 0.0 0.0

Manual Integrations

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Reviewed By :Mahesh Dadoda 09/24/2025

Supervised By :Semsettin Yesilyurt 09/24/2025



#60

o-Xylene

Concen: 0.608 ppbv

RT: 9.966 min Scan# 3052

Delta R.T. 0.006 min

Lab File: VL042976.D

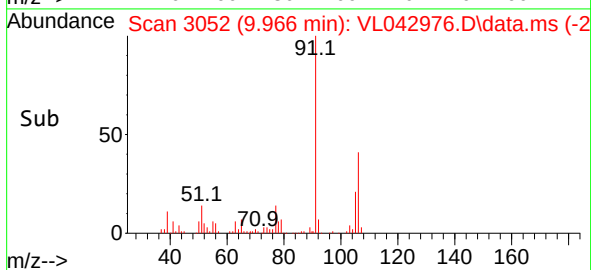
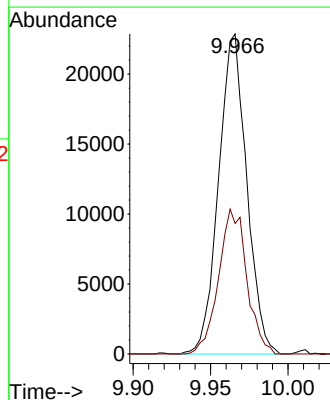
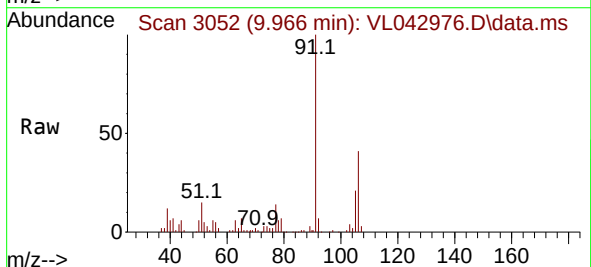
Acq: 23 Sep 2025 02:22

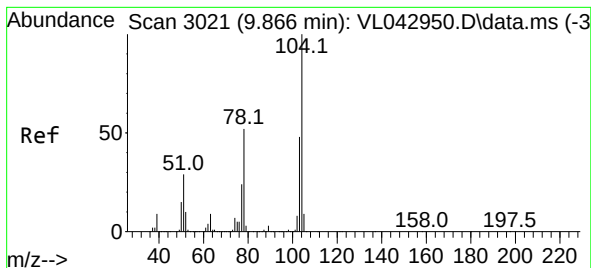
Tgt Ion: 91 Resp: 28894

Ion Ratio Lower Upper

91 100

106 45.5 22.4 67.0





#61

Styrene

Concen: 0.226 ppbv

RT: 9.869 min Scan# 3021

Delta R.T. 0.003 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

Instrument :

MSVOA_L

ClientSampleId :

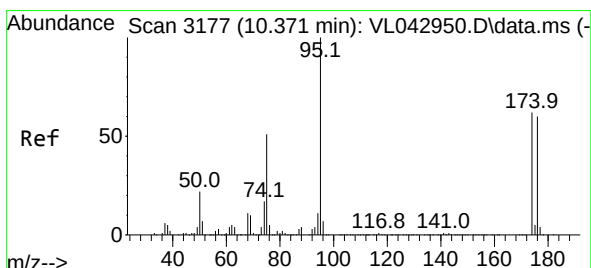
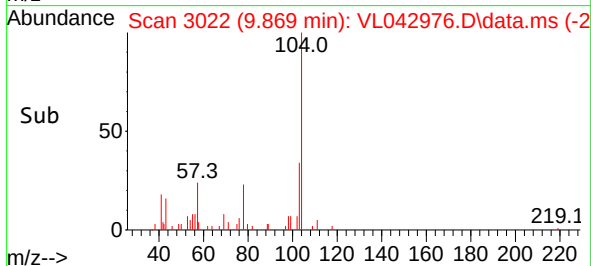
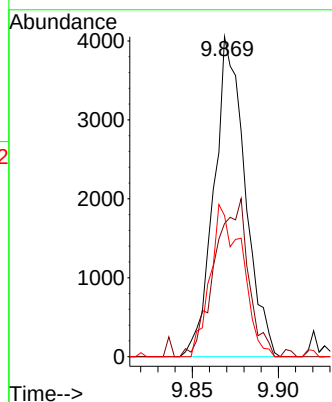
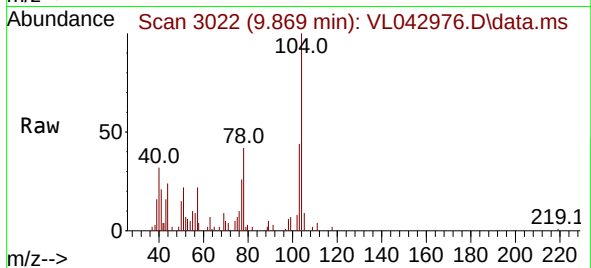
141-1A-2

Tgt Ion:104	Resp:	508
Ion Ratio	Lower	Upper
104	100	
78	54.8	39.9 59.9
103	48.6	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: 10.222 ppbv

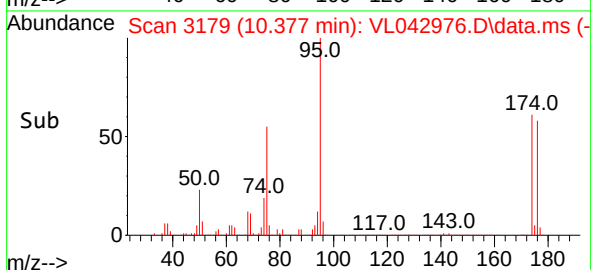
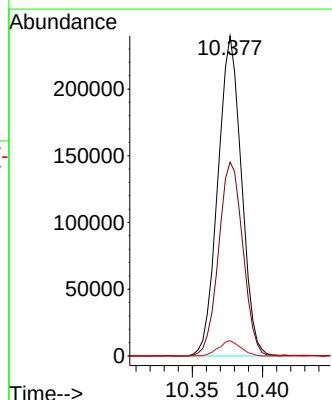
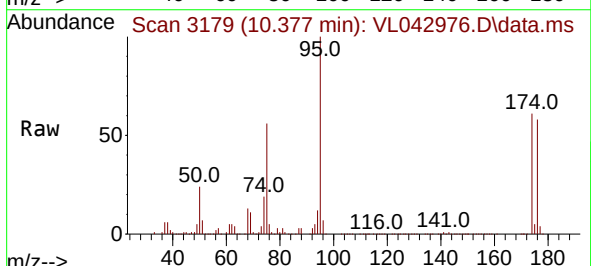
RT: 10.377 min Scan# 3179

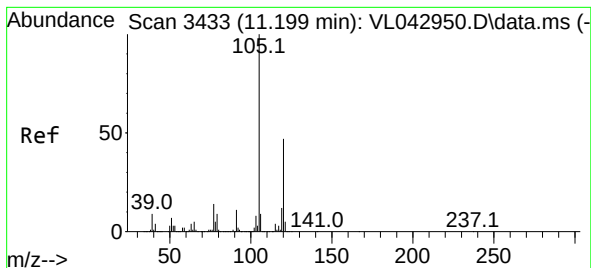
Delta R.T. 0.006 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

Tgt Ion: 95	Resp:	280234
Ion Ratio	Lower	Upper
95	100	
174	62.4	51.4 77.2
175	4.5	4.0 6.0





#73

1,3,5-Trimethylbenzene

Concen: 0.100 ppbv

RT: 11.202 min Scan# 3433

Delta R.T. 0.003 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

Instrument :

MSVOA_1

ClientSampleId :

141-1A-2

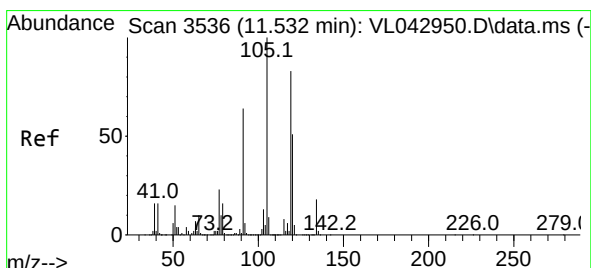
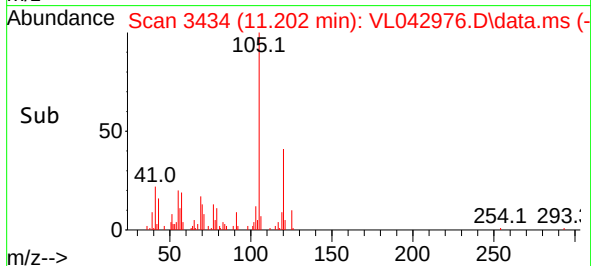
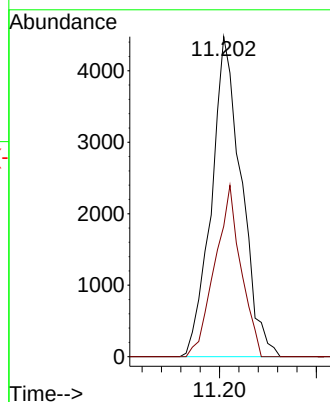
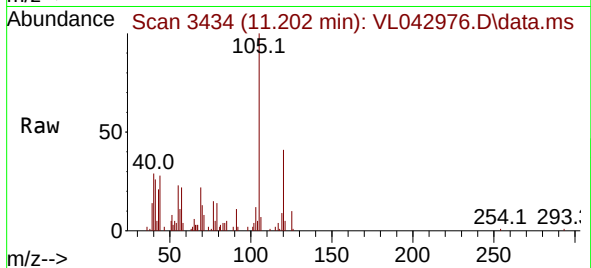
Tgt Ion:105 Resp: 481

Ion	Ratio	Lower	Upper
105	100		
120	40.8	38.0	57.0

Manual Integrations

APPROVED

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



#74

1,2,4-Trimethylbenzene

Concen: 0.291 ppbv

RT: 11.536 min Scan# 3537

Delta R.T. 0.003 min

Lab File: VL042976.D

Acq: 23 Sep 2025 02:22

Tgt Ion:105 Resp: 15499

Ion	Ratio	Lower	Upper
105	100		
120	46.2	40.9	61.3
91	14.9	51.2	76.8#
77	15.1	18.4	27.6#

