

Supplementary Material

The synthesis of thioglucosides substituted 1,4-naphthoquinones and their conversion in oxathiane fused quinone-thioglucoside conjugates

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Email: sergpol@piboc.dvo.ru

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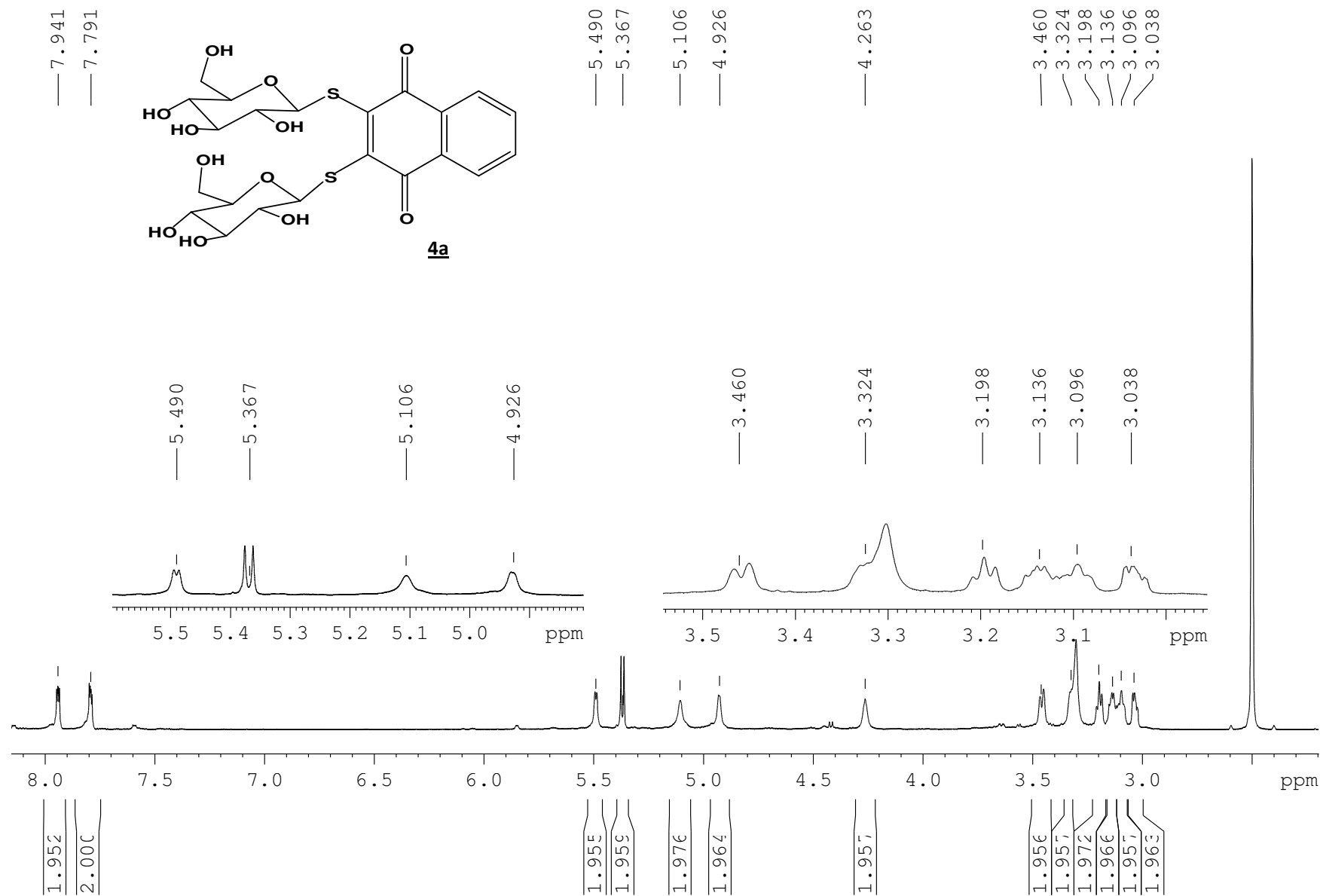
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¹³ C NMR spectra of 12b	S19
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Issue in Honor of Prof. Oleg A. Rakitin

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¹³ C NMR spectra of 16b	S37
¹ H NMR spectra of 17a	S38
¹³ C NMR spectra of 17a	S39
¹ H NMR spectra of 17b	S40
¹³ C NMR spectra of 17b	S41



—178.653

—146.494

—133.659

—132.625

—126.464

—83.876

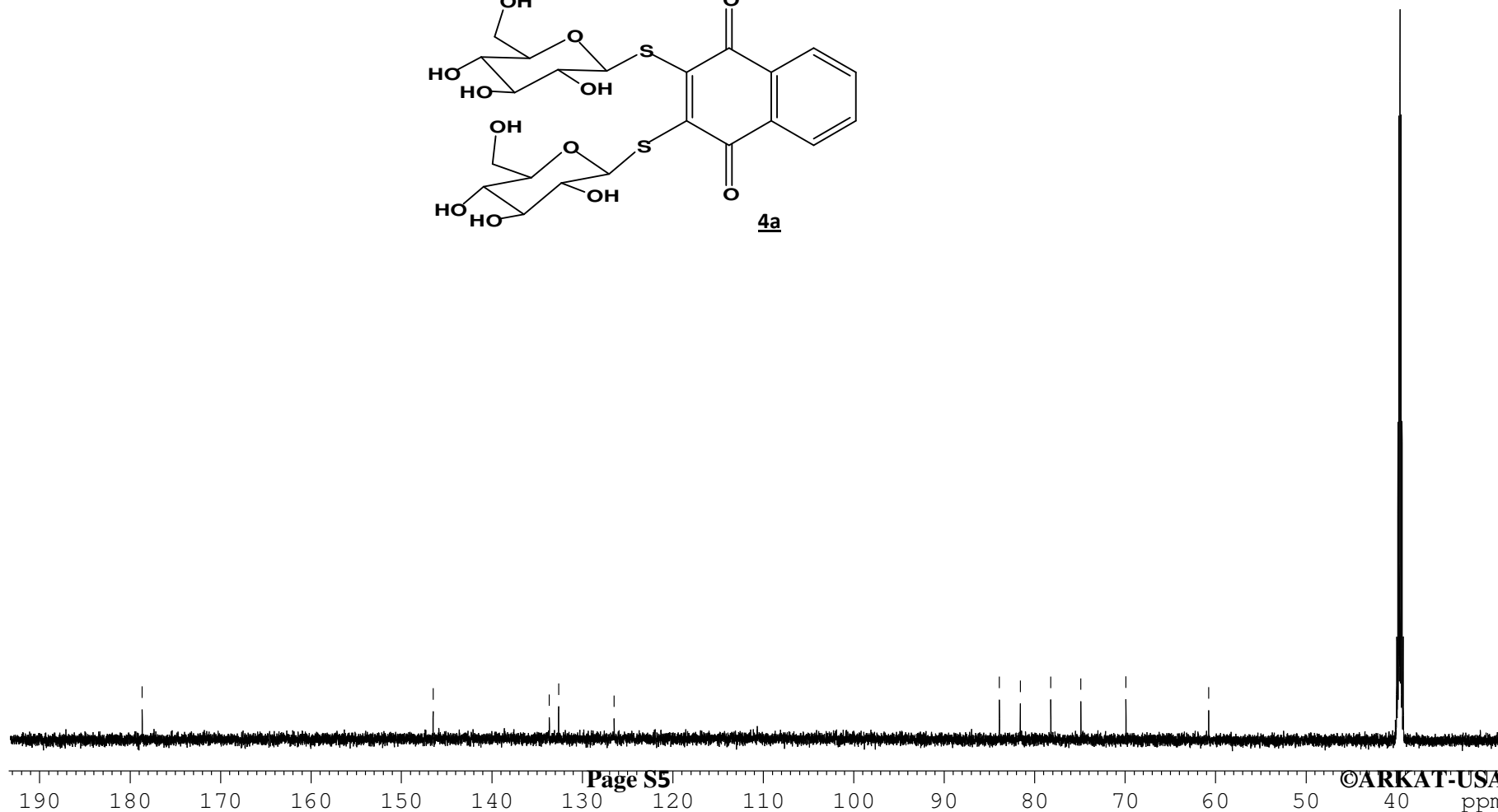
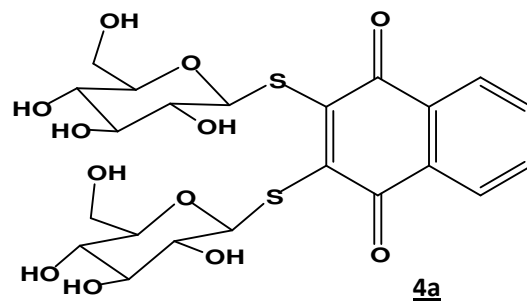
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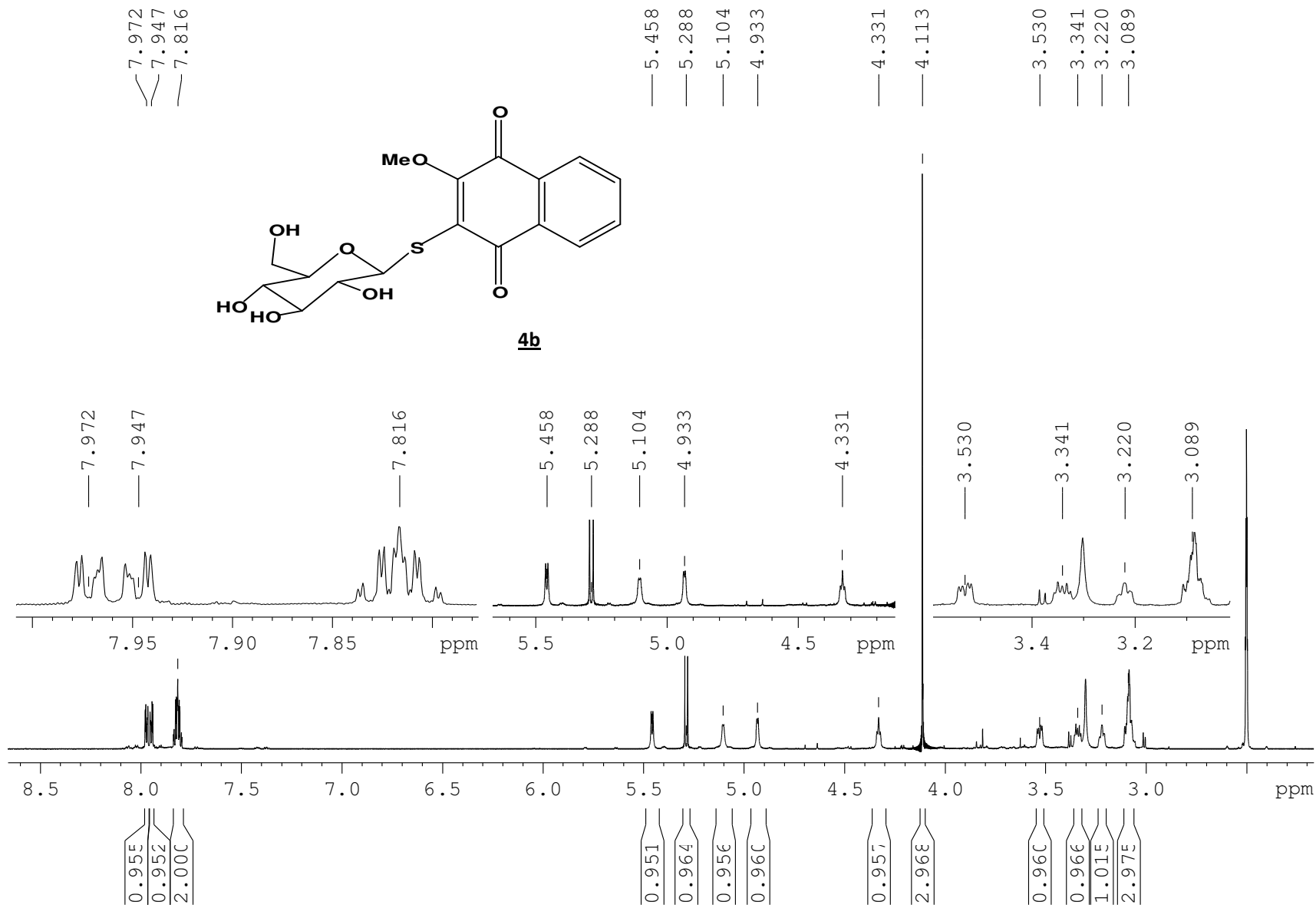
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—69.896

—60.743





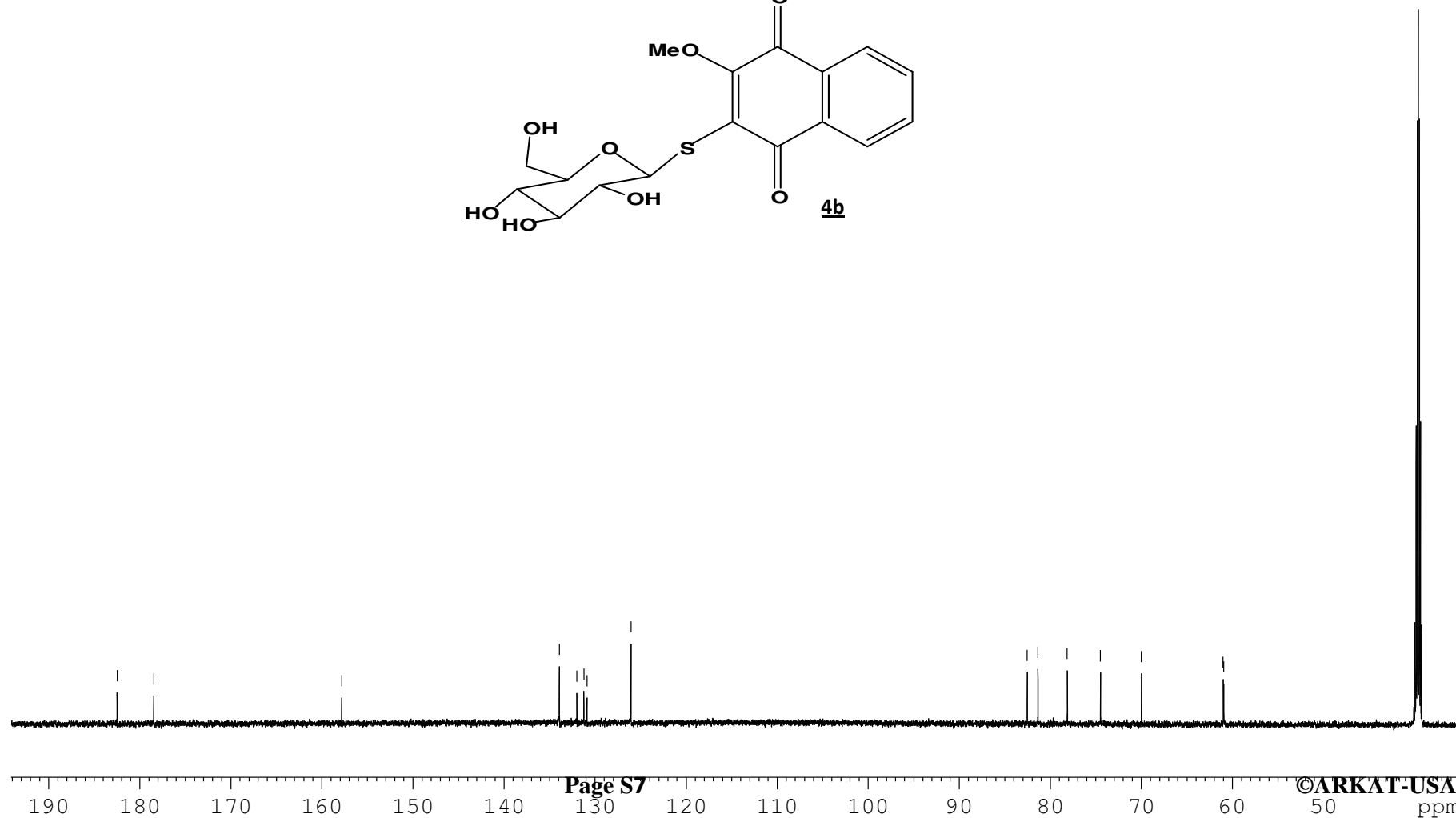
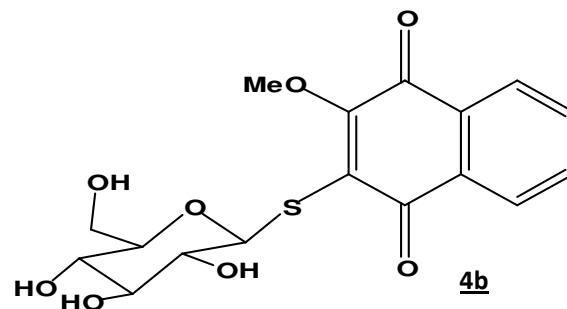
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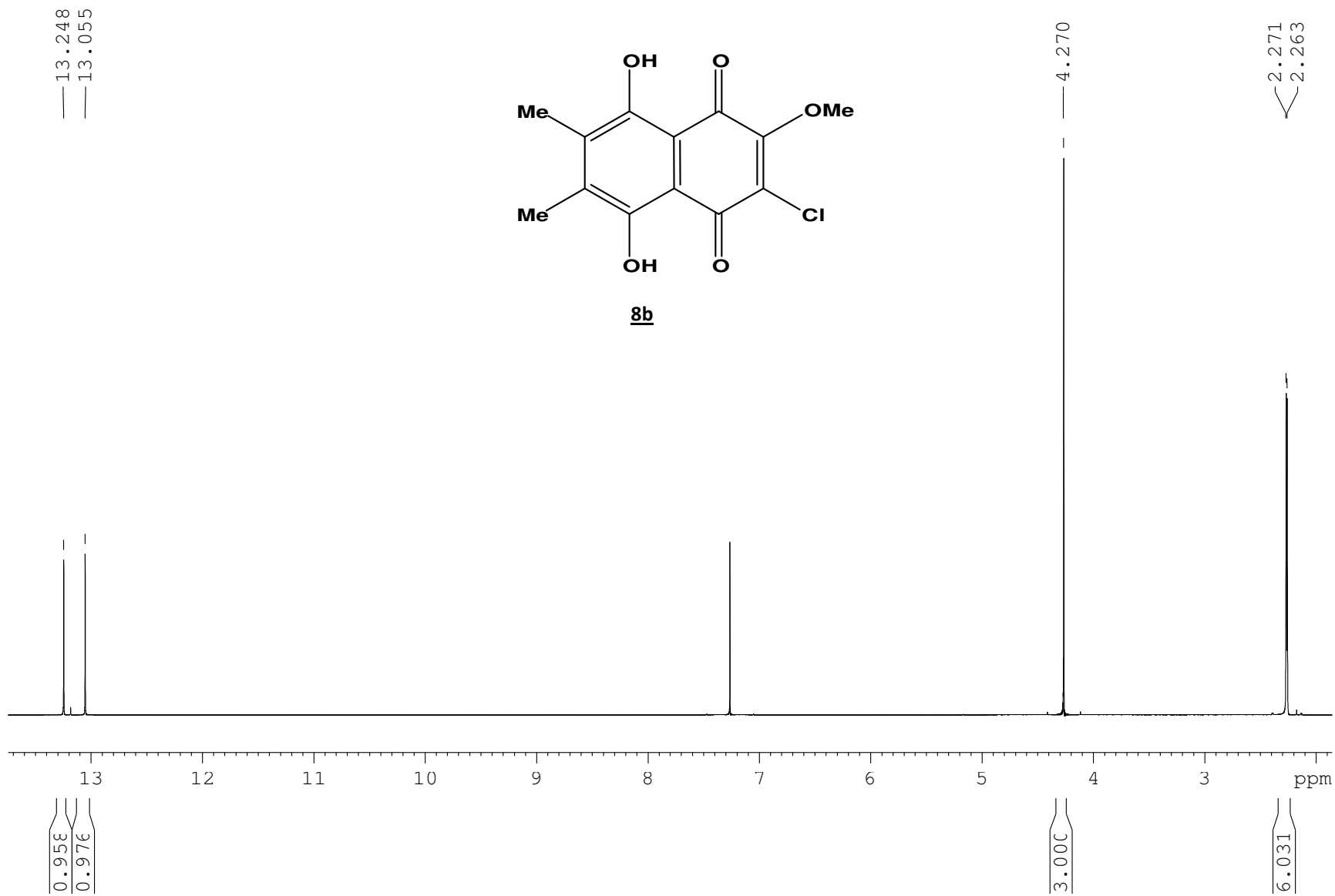
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131.996
131.235
130.890
126.029

82.545
81.377
78.150
74.501
69.986

61.033
60.960





174.040
173.329
166.954
165.880
— 156.229

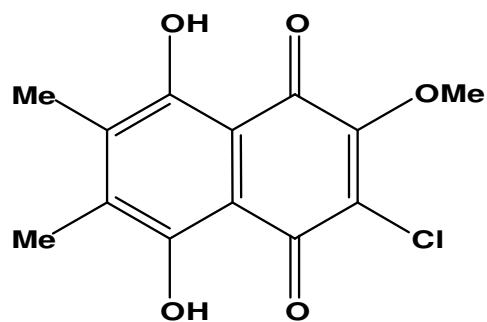
141.062
140.030

— 127.318

108.974
107.478

— 61.885

12.575
12.363



8b



180

170

160

150

140

130

120

110

100

90

80

70

60

50

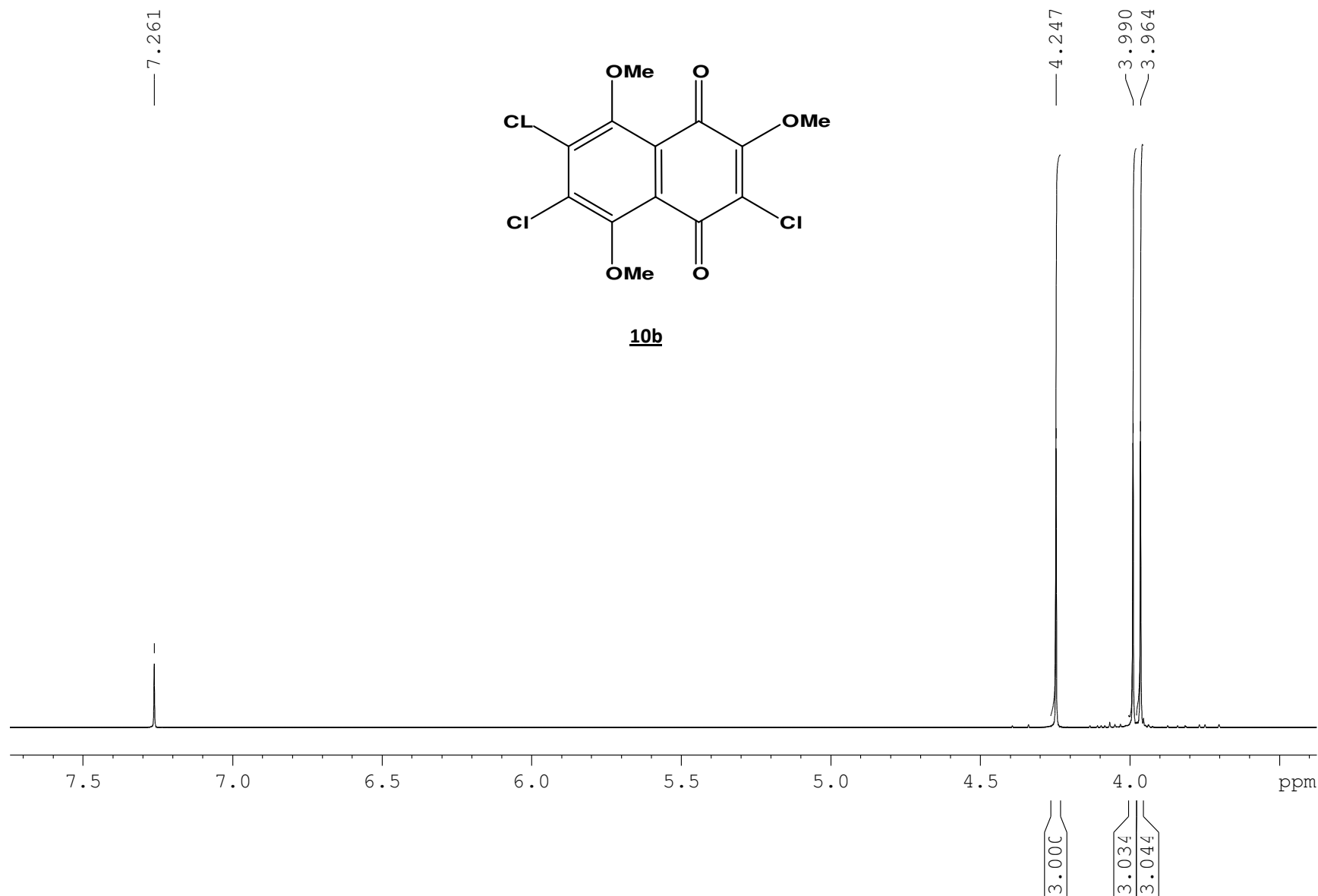
40

30

20

10

ppm



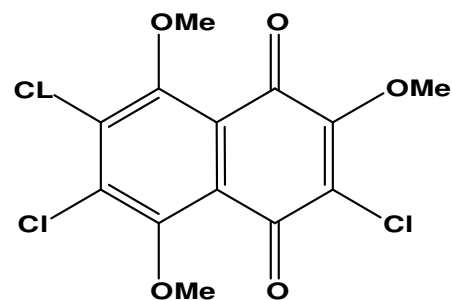
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156.672
153.453
153.423

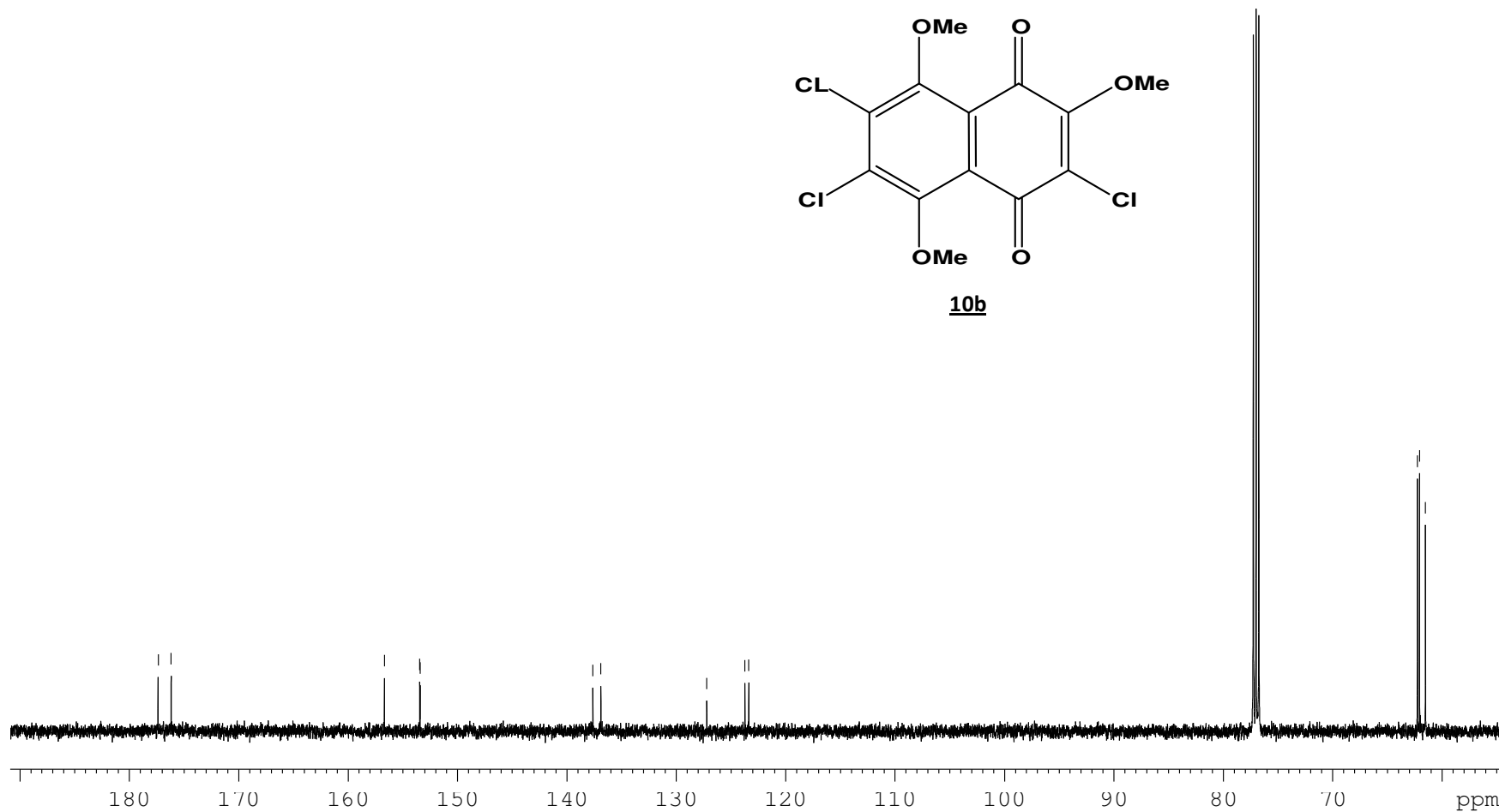
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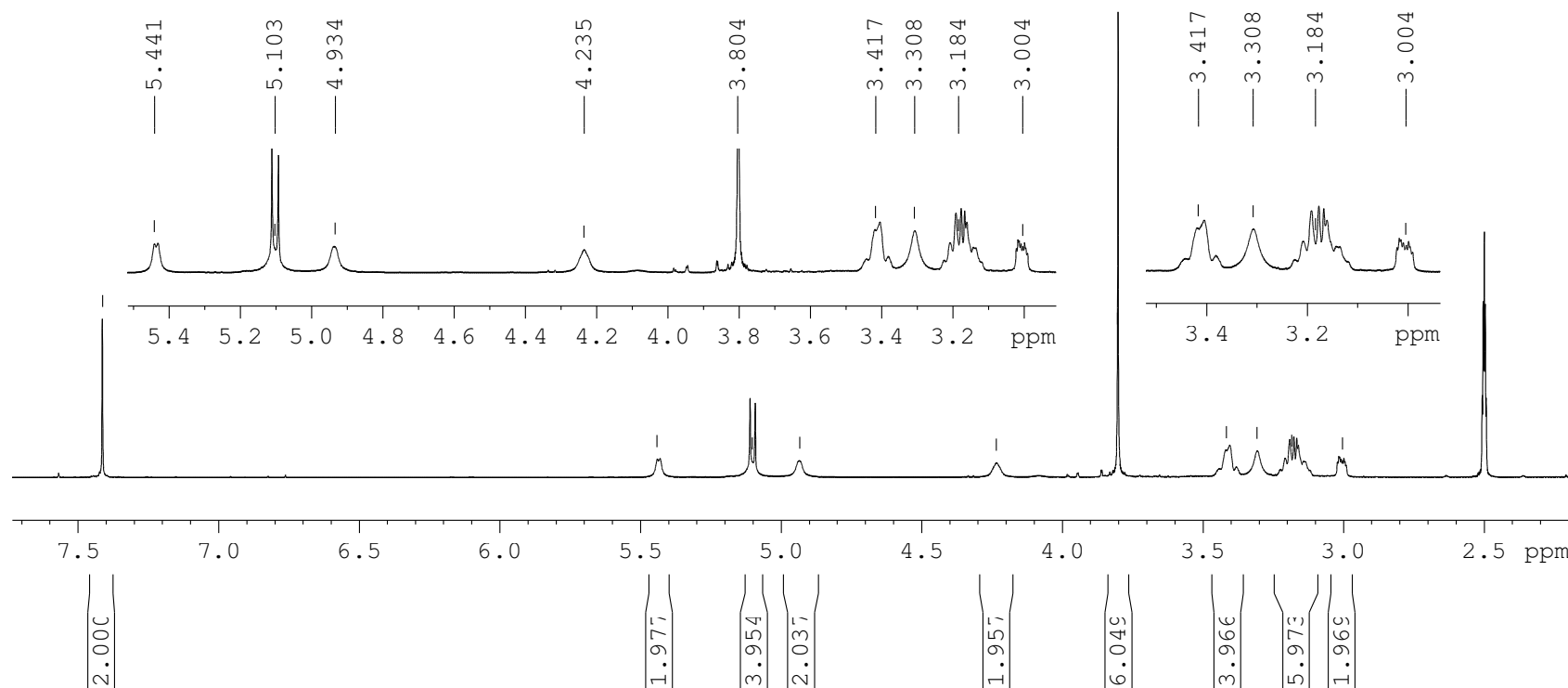
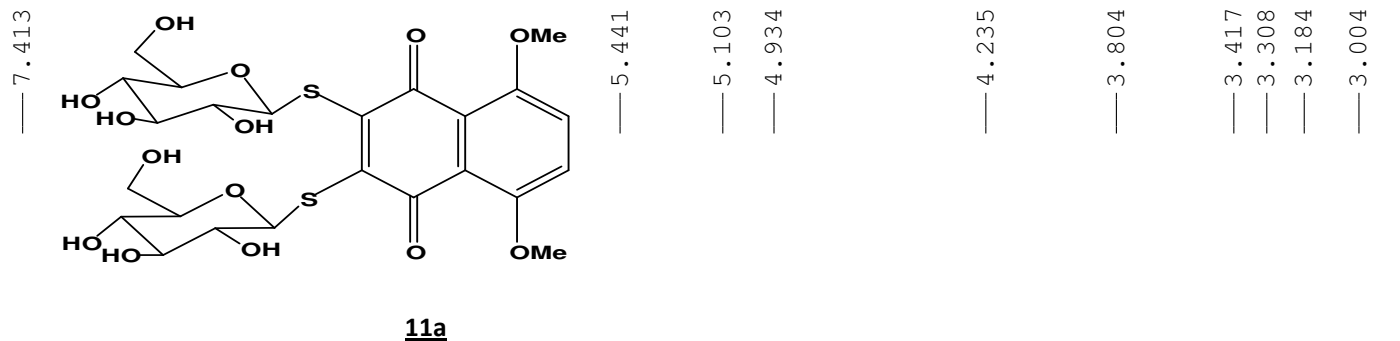
127.205
123.734
123.372

62.245
62.051
61.509



10b





—178.044

—151.929

—144.681

—122.164

—119.641

—83.587

—81.308

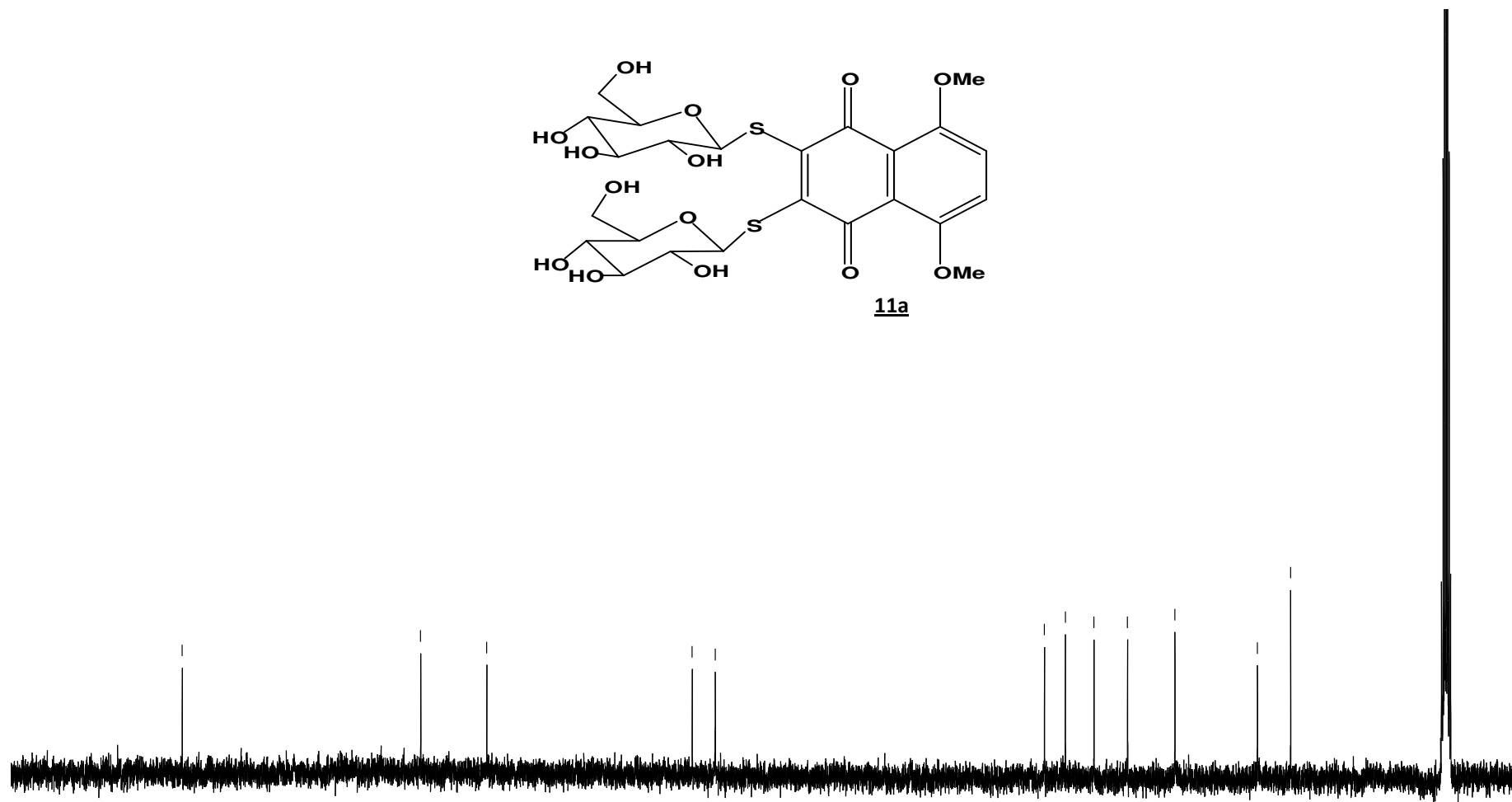
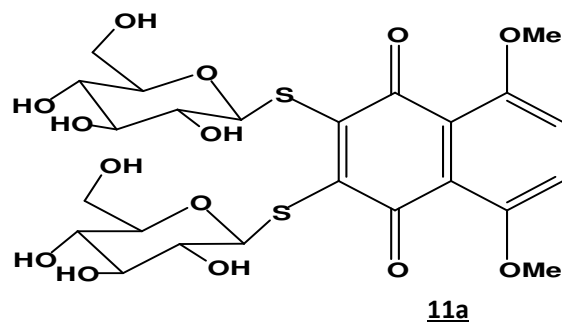
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—74.483

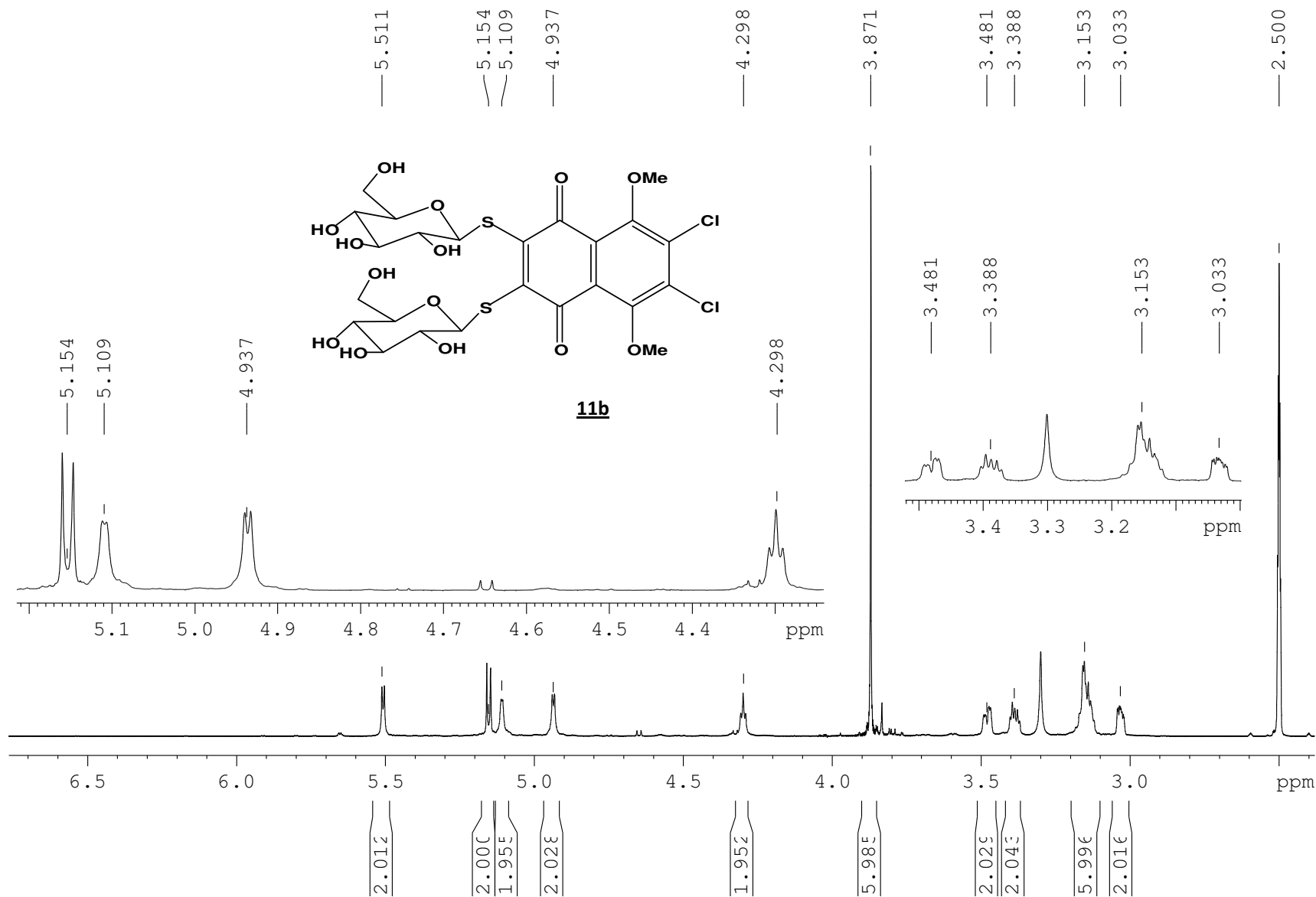
—69.303

—60.254

—56.618



190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 ppm



—176.460

—151.738

—145.430

—133.765

—126.315

—83.601

—81.562

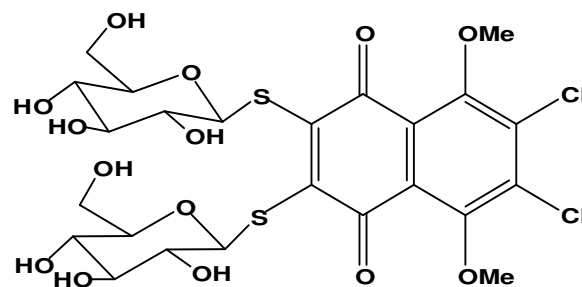
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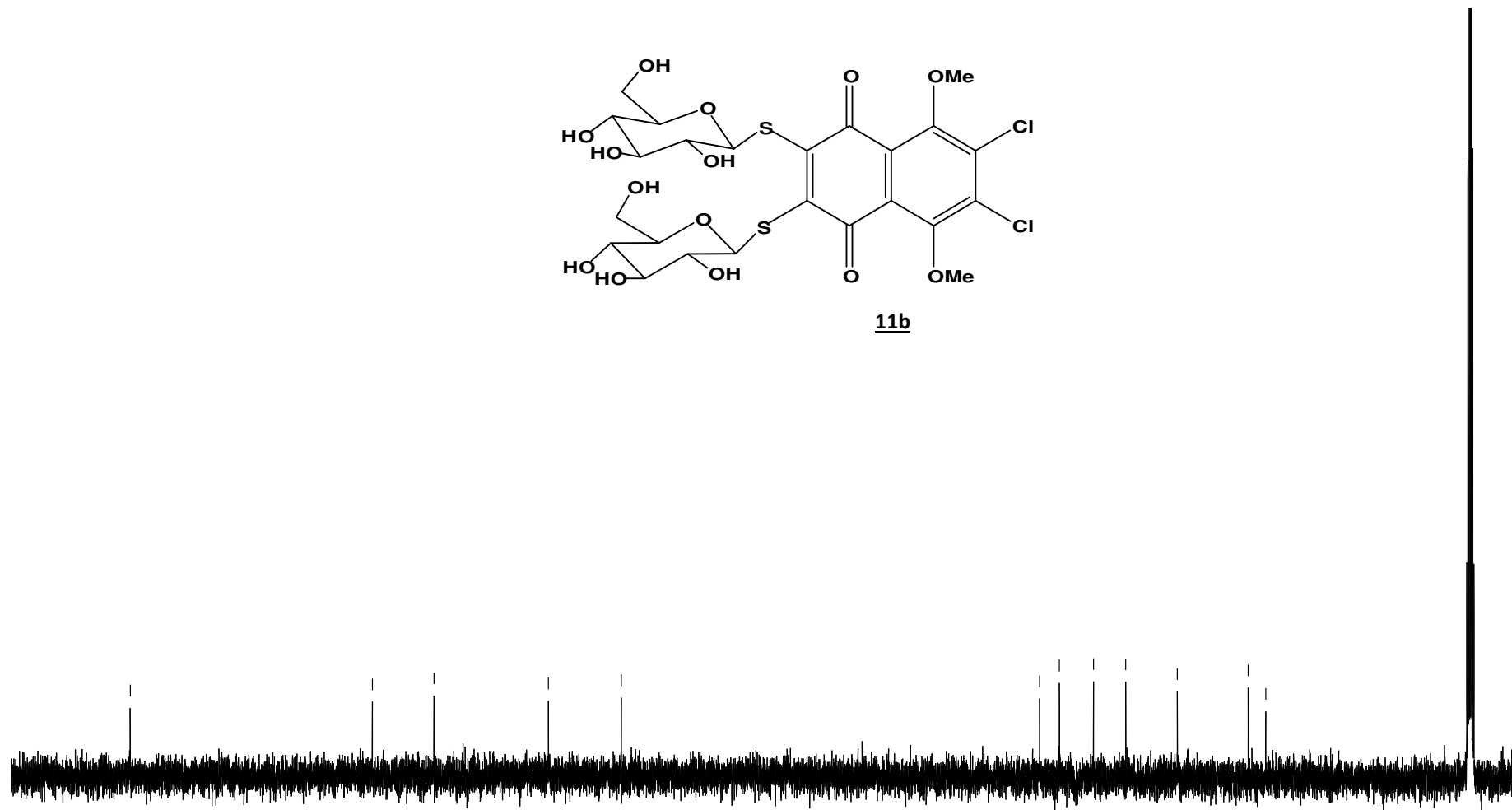
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—62.294

—60.494



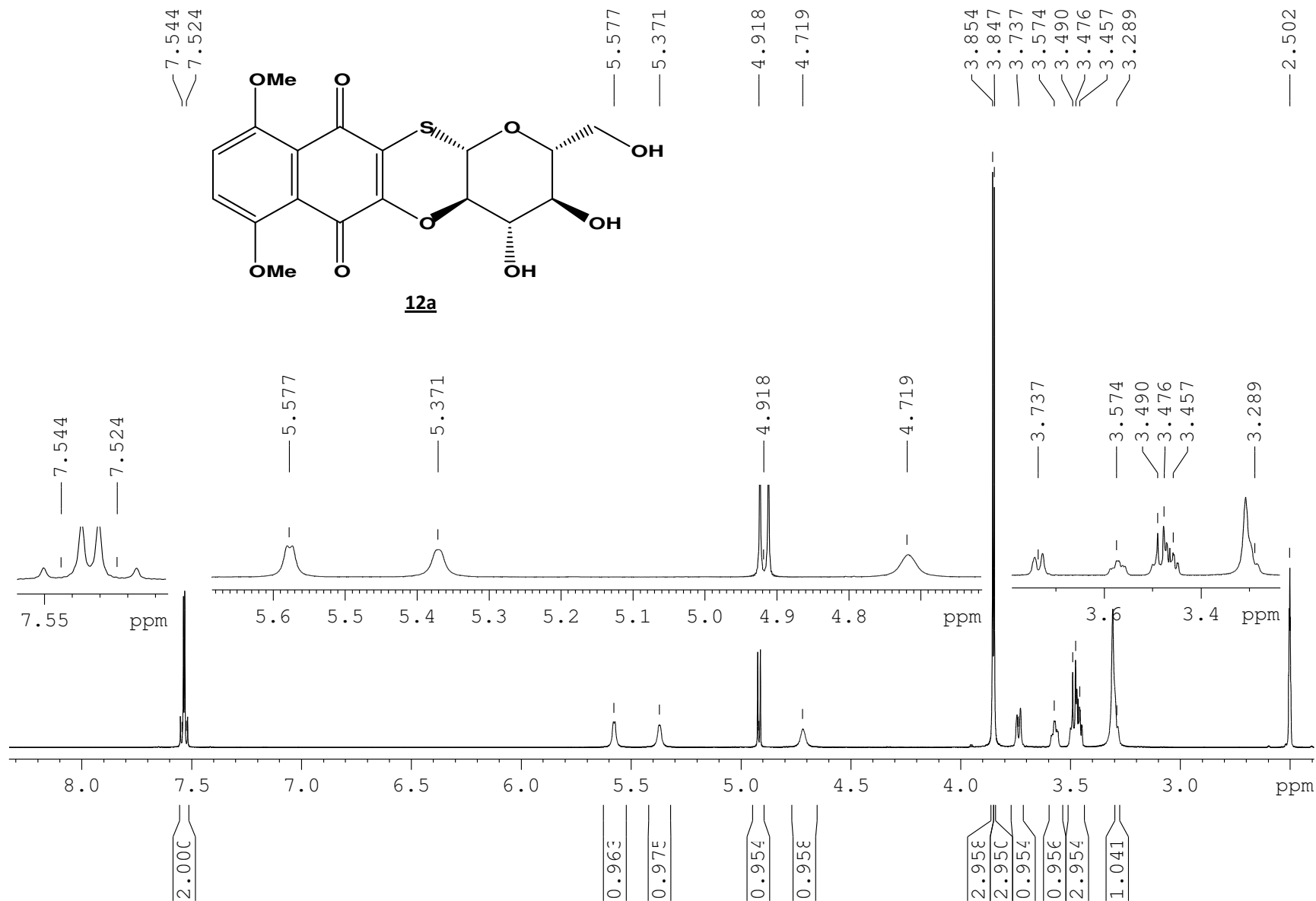
11b



180 170 160 150 140

130 120 110 100 90

50 ppm



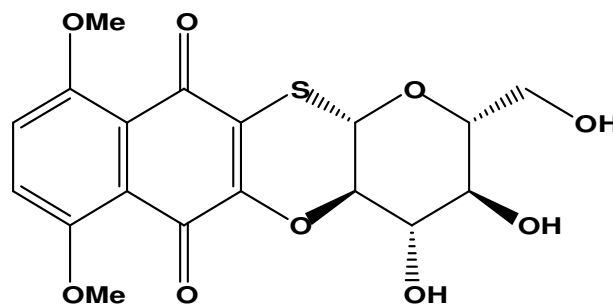
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— 174.679

— 153.841
— 153.343
— 149.707

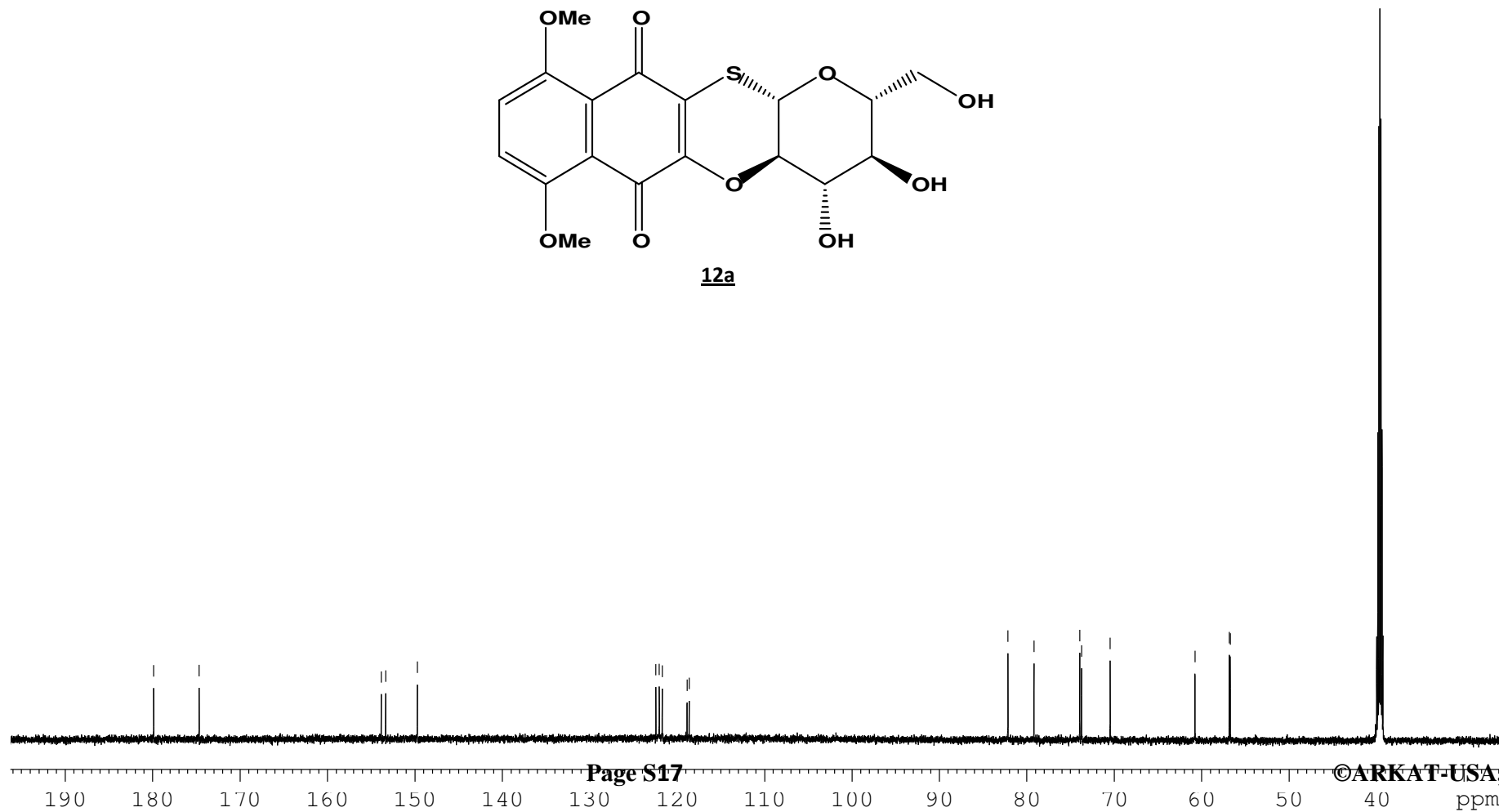
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— 122.040
— 121.689
— 118.875
— 118.618

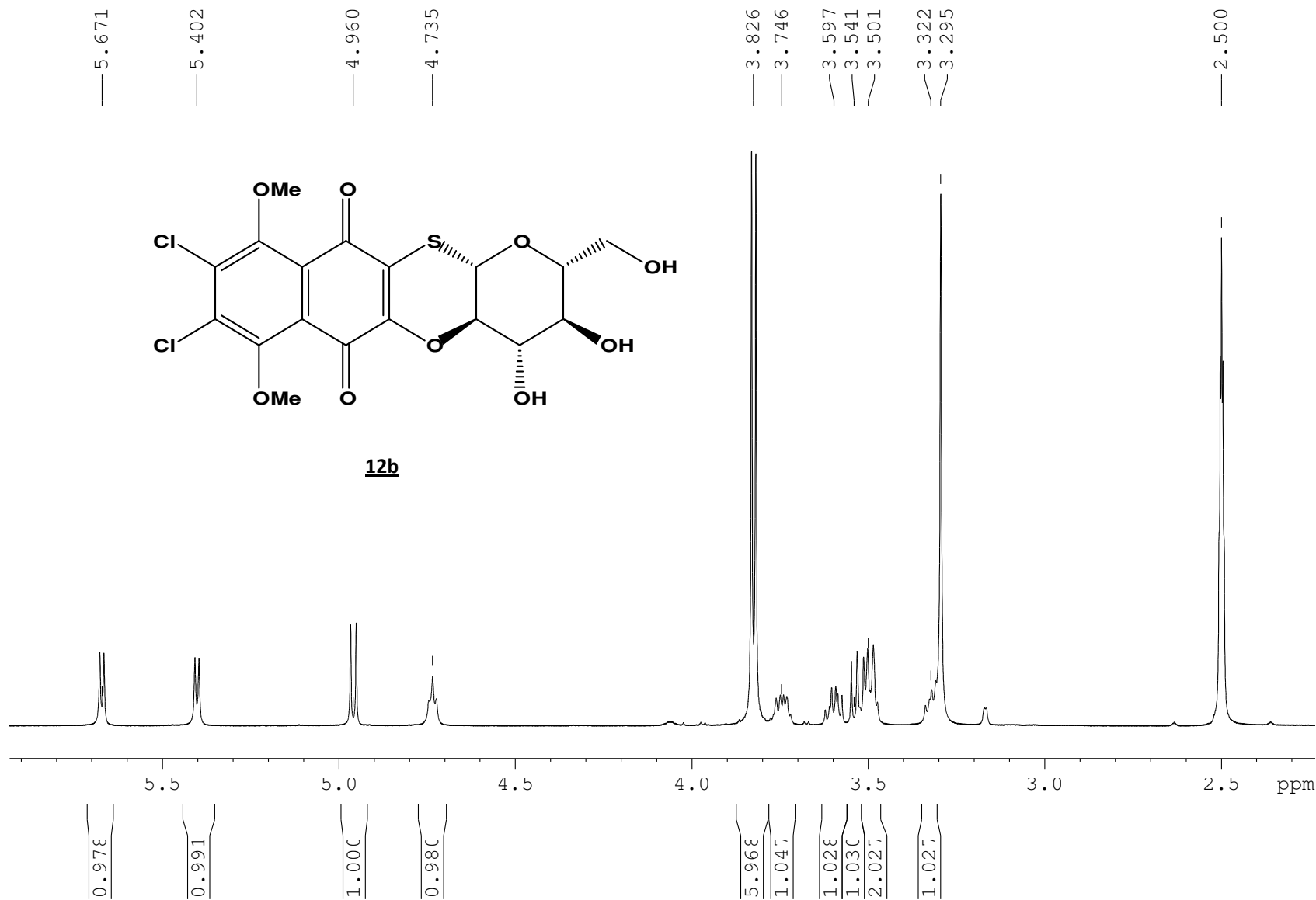
— 82.146
— 79.170
— 73.933
— 73.721
— 70.466

— 60.759
— 56.840
— 56.712



12a





— 178.914

— 173.407

— 152.900

— 152.277

— 149.919

— 135.271

— 135.100

— 123.895

— 123.384

— 123.090

— 82.234

— 79.341

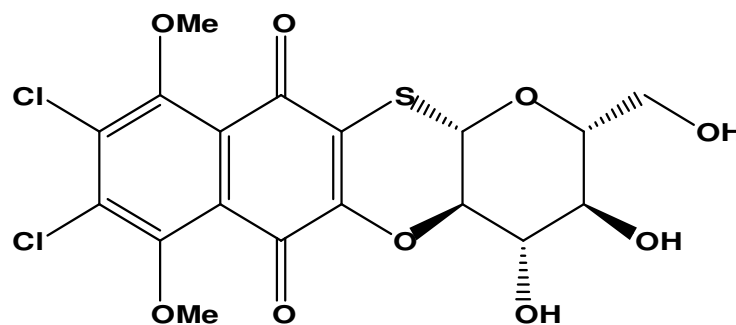
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— 73.628

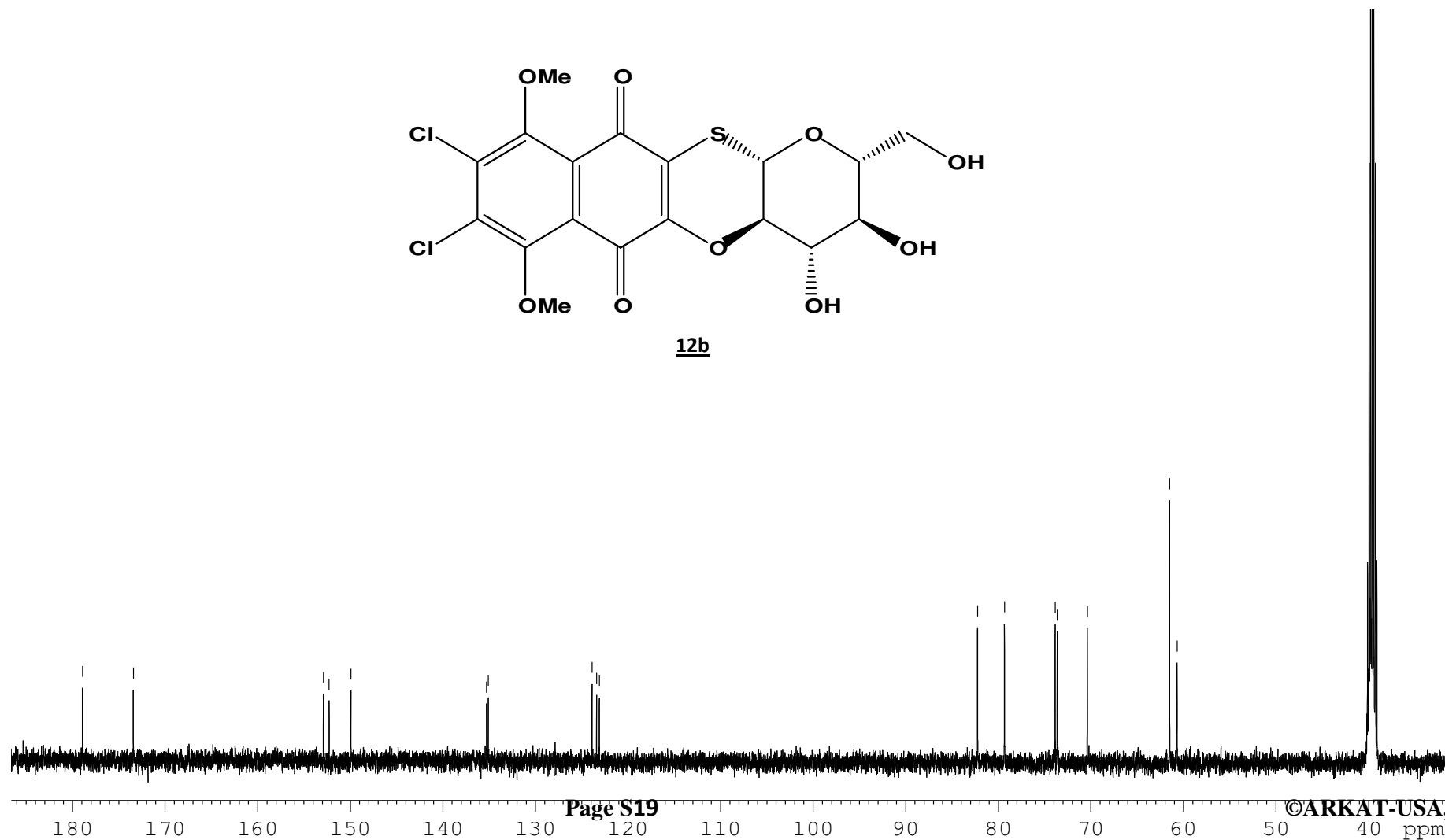
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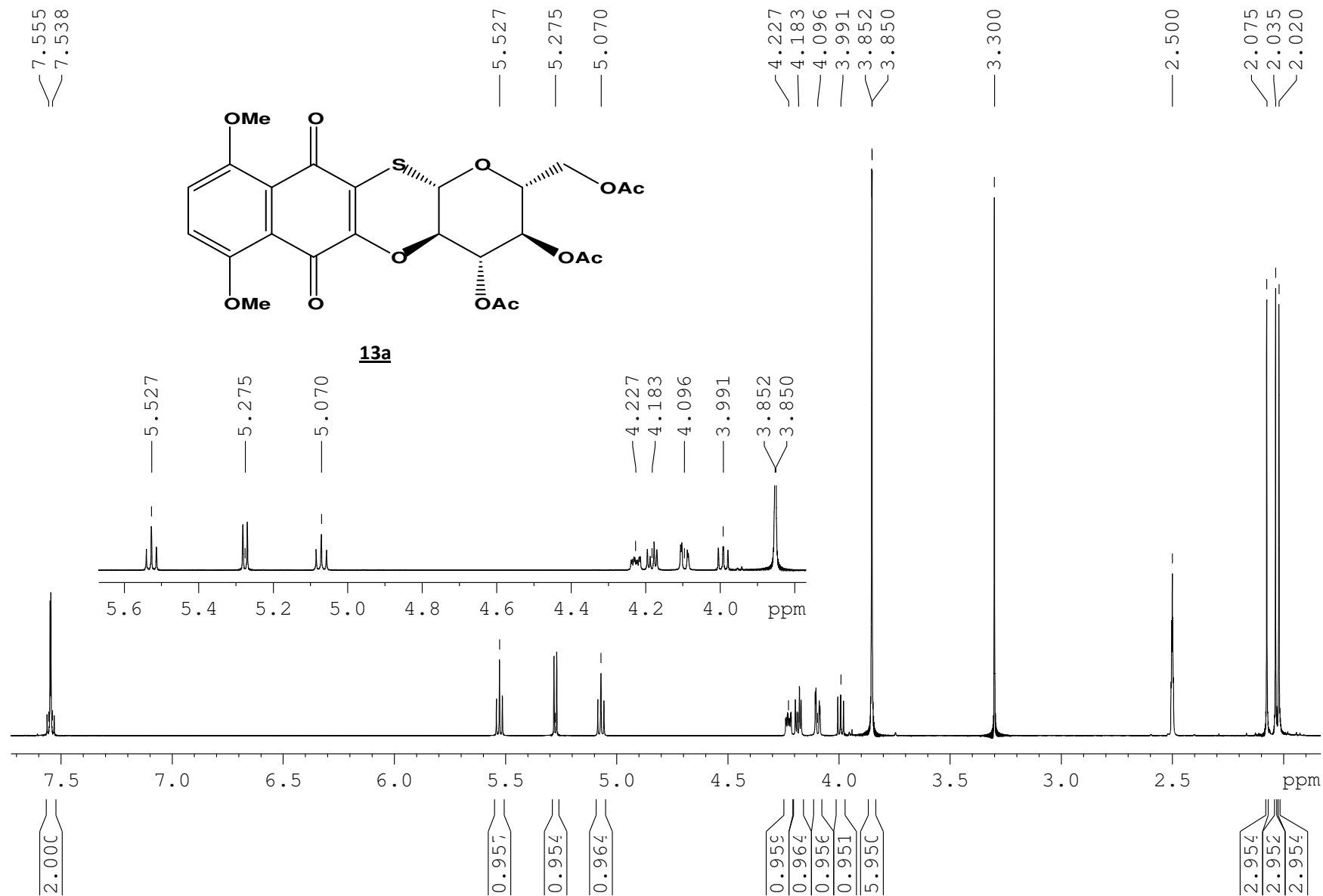
— 61.486

— 60.696



12b





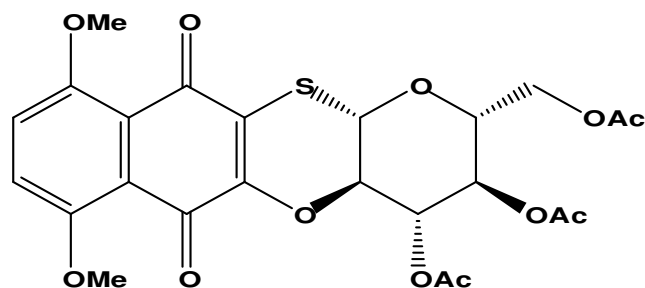
— 179.627
 / 174.089
 / 170.056
 / 169.465
 / 169.328

— 153.939
 / 153.452
 — 148.585

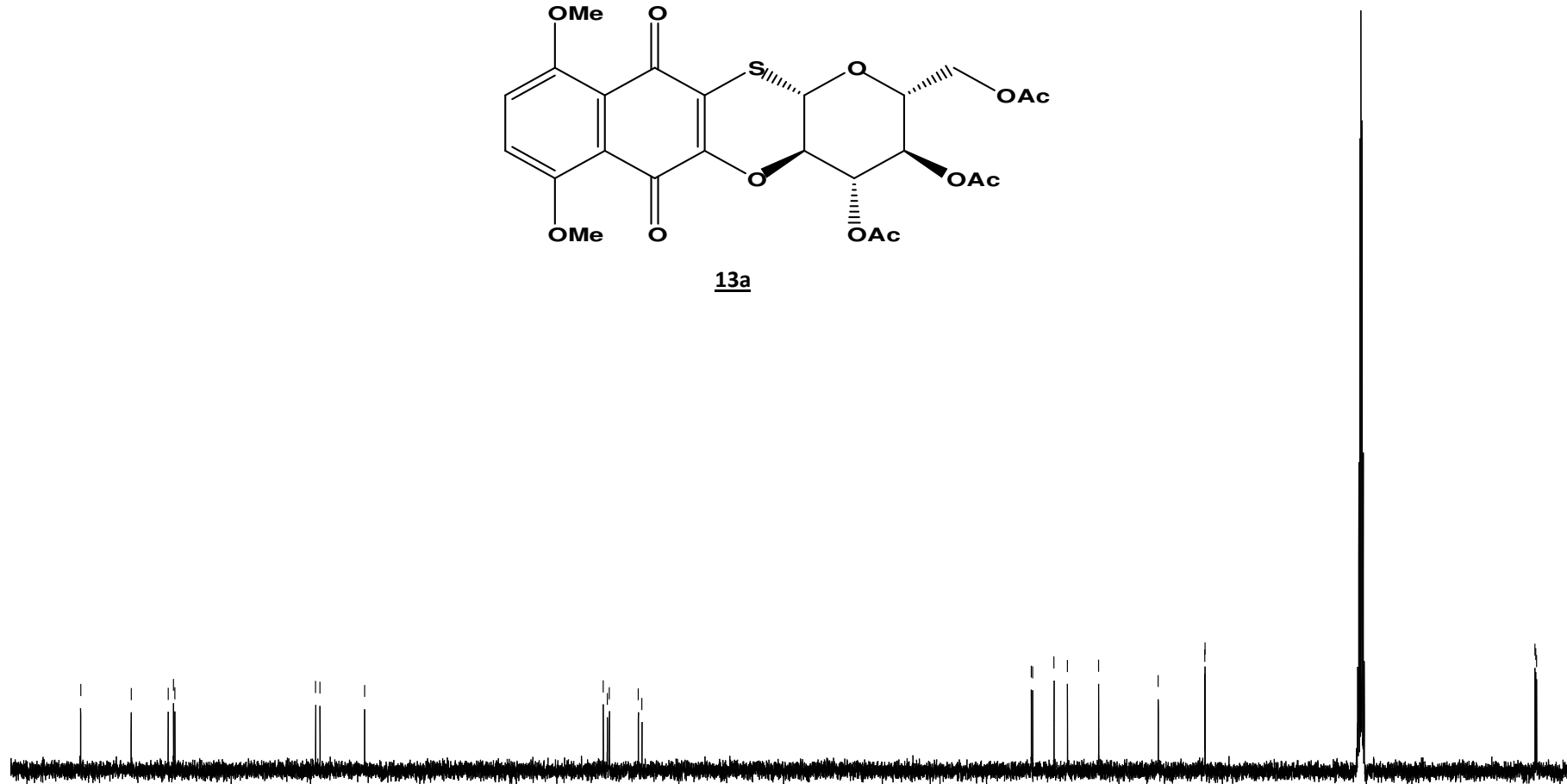
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 / 122.038
 / 121.800
 / 118.646
 / 118.246

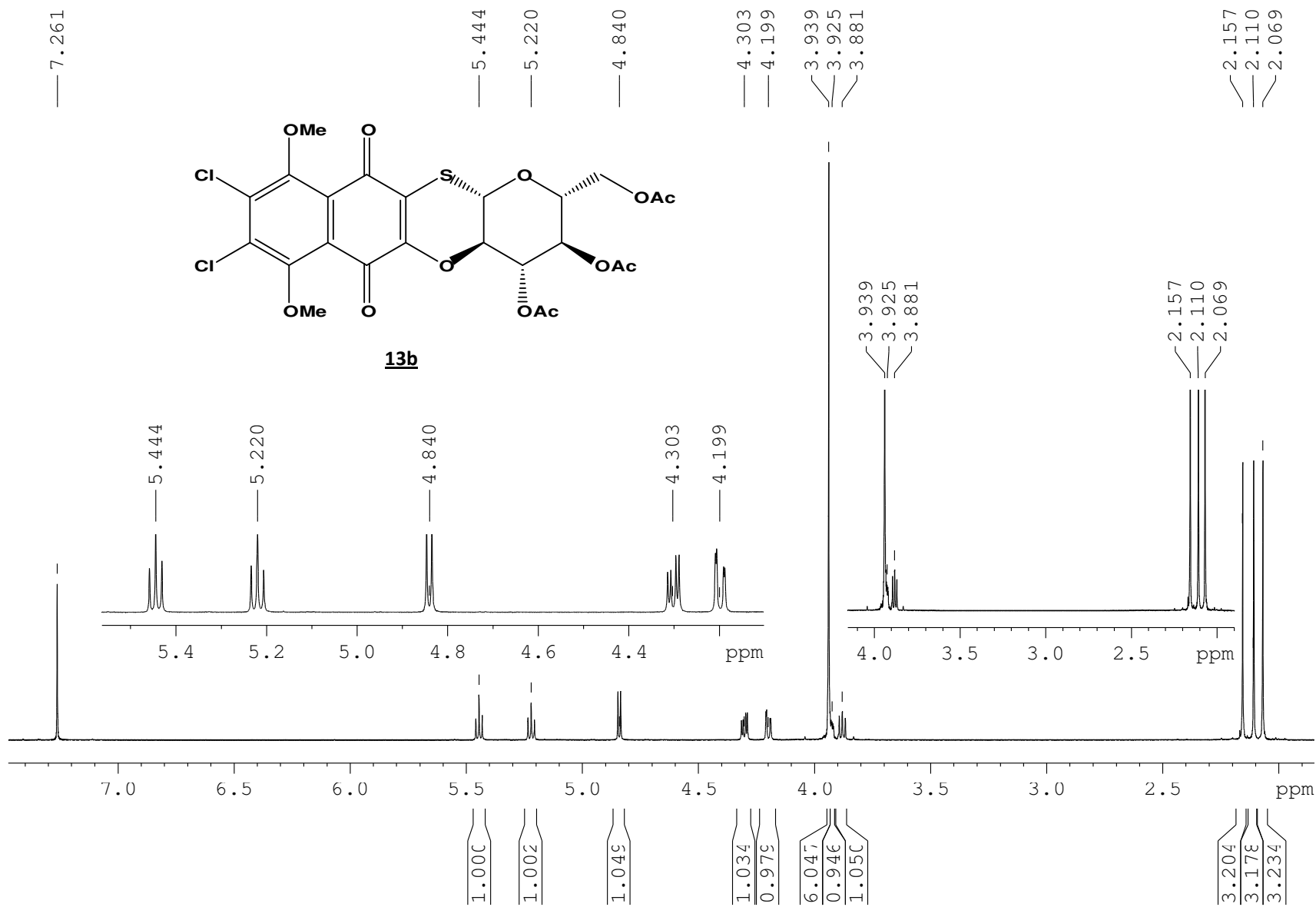
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 / 75.529
 / 73.166
 / 71.699
 / 68.290
 — 61.773
 / 56.698
 / 56.672

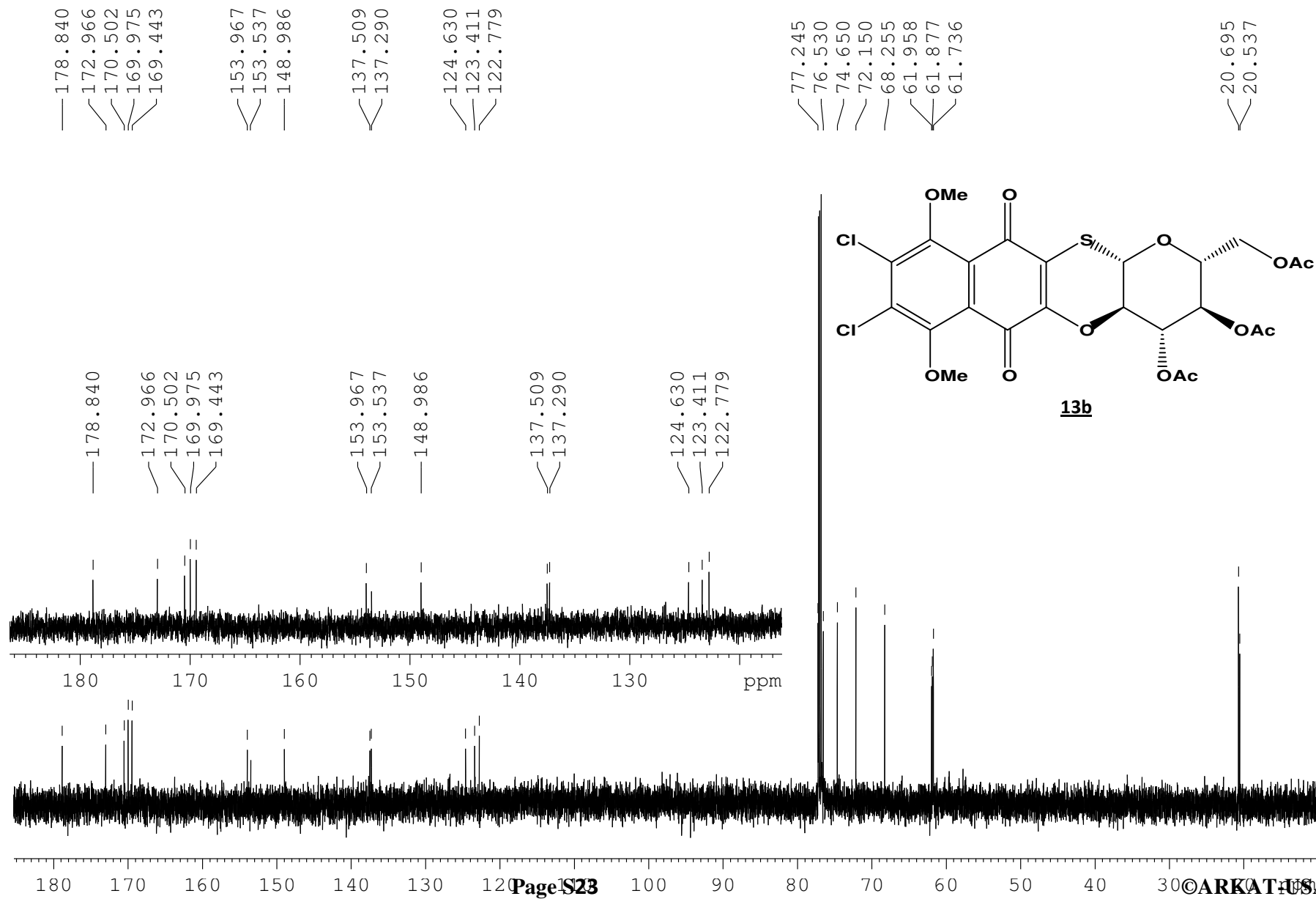
— 20.571
 / 20.495



13a







7.479
7.450

5.426

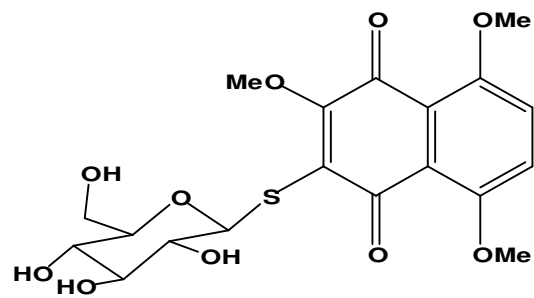
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5.077

4.883

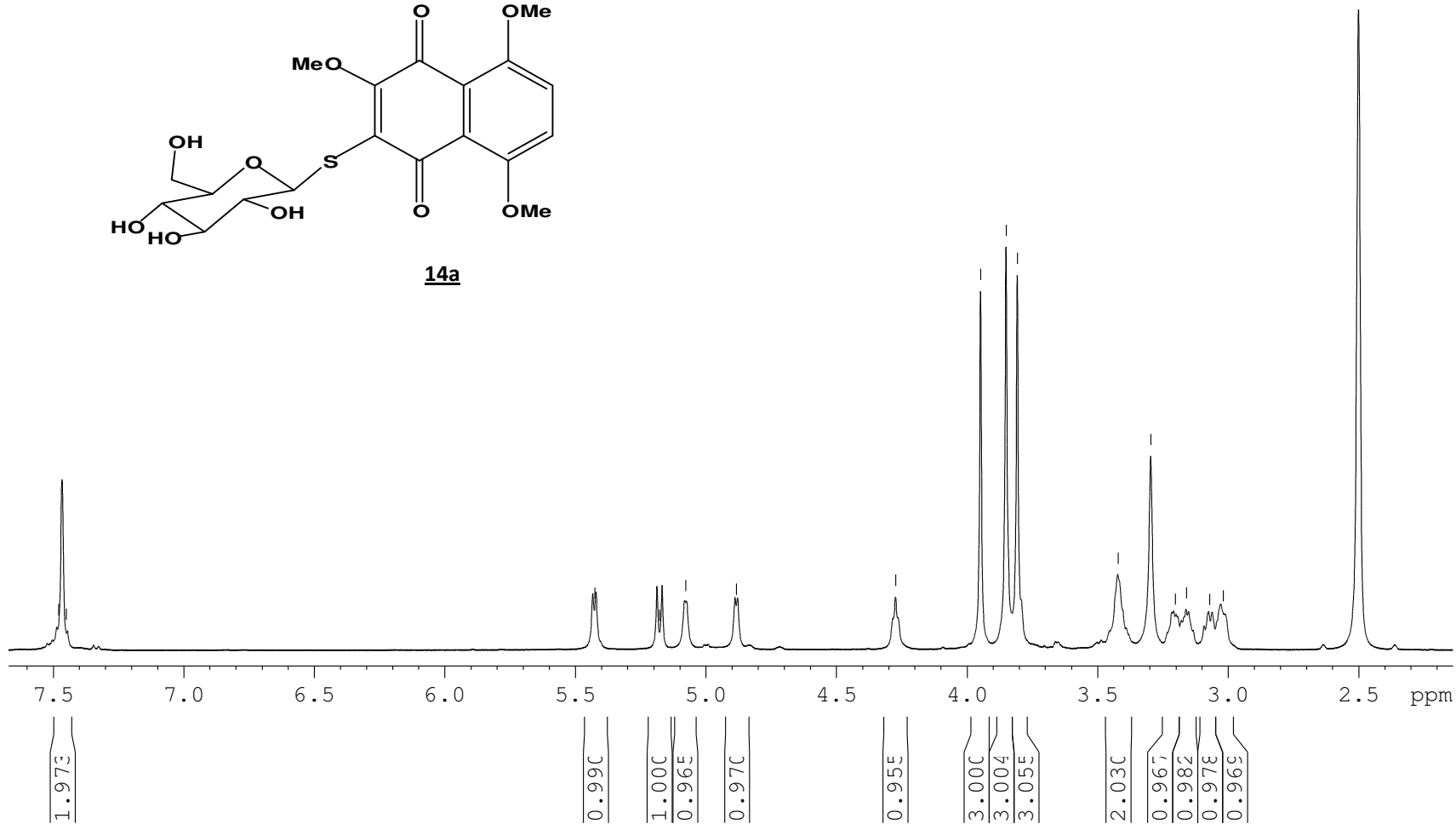
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3.947
3.850
3.807

3.421
3.296
3.202
3.160
3.070
3.019



14a



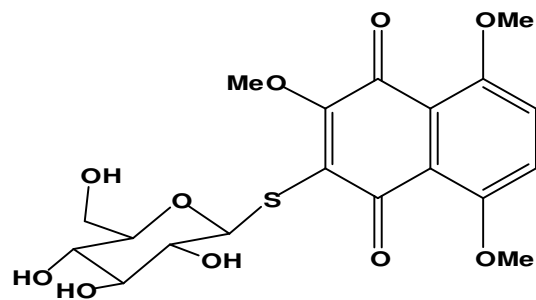
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— 177.127

— 156.199
— 152.882
— 152.195

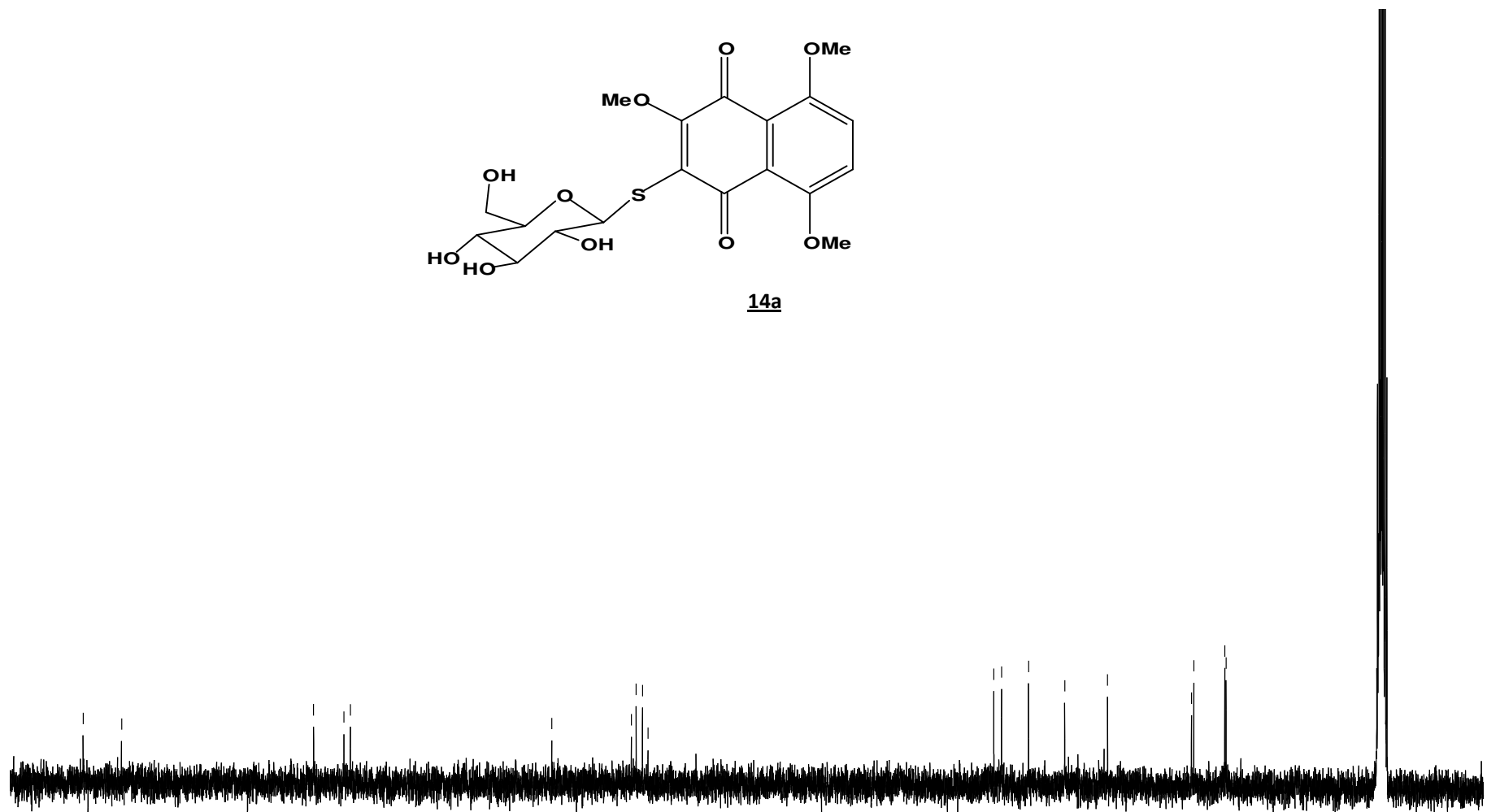
— 130.224
— 121.523
— 121.014
— 120.313
— 119.713

— 81.964
— 81.127
— 78.195
— 74.254
— 69.556

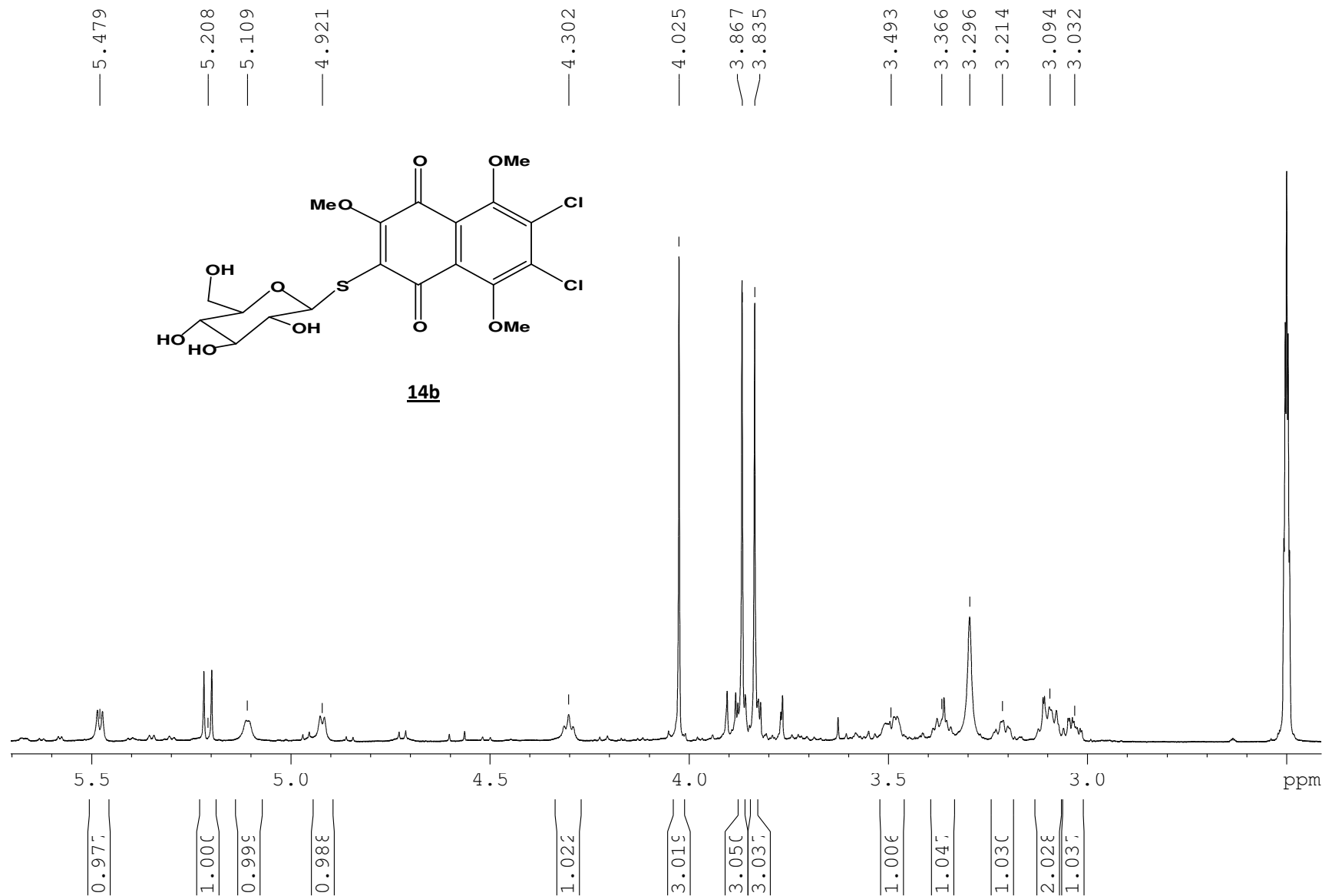
— 60.416
— 60.149
— 56.764
— 56.639



14a



180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 ppm

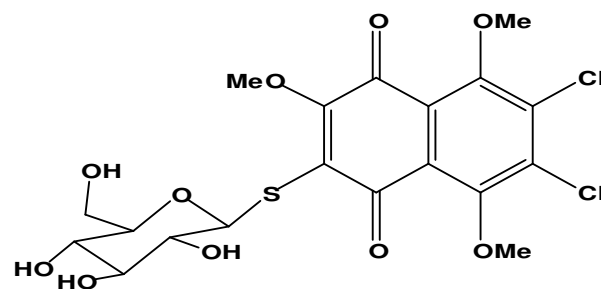


— 179.951
— 175.912

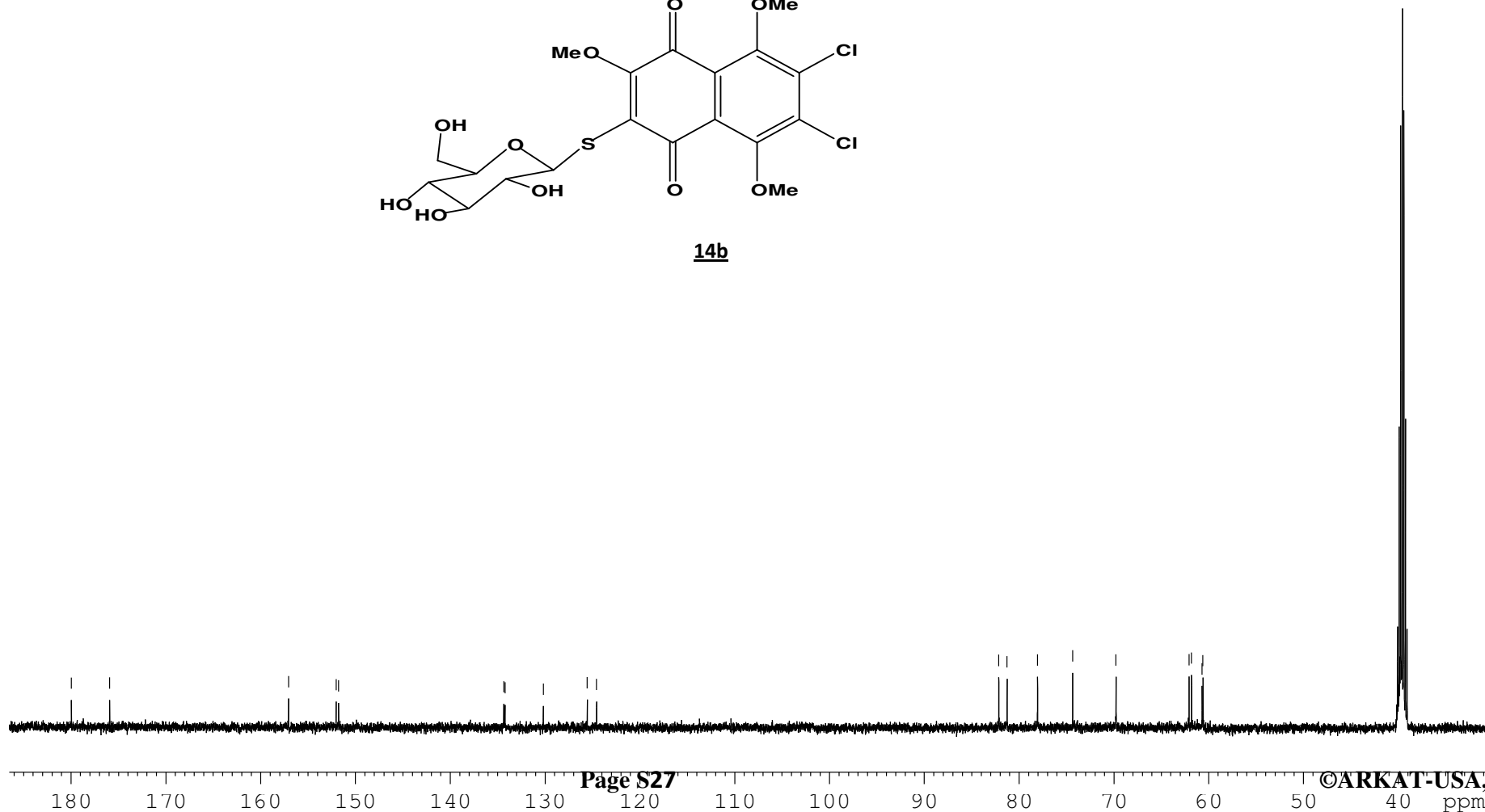
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— 152.011
— 151.780

— 134.330
— 134.211
— 130.171
— 125.565
— 124.591

— 82.148
— 81.281
— 78.058
— 74.365
— 69.781
— 62.086
— 61.835
— 60.706
— 60.602



14b





— 181.944
— 177.880

< 157.086
< 156.873

— 147.882

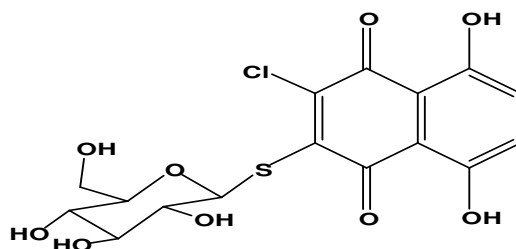
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< 129.159

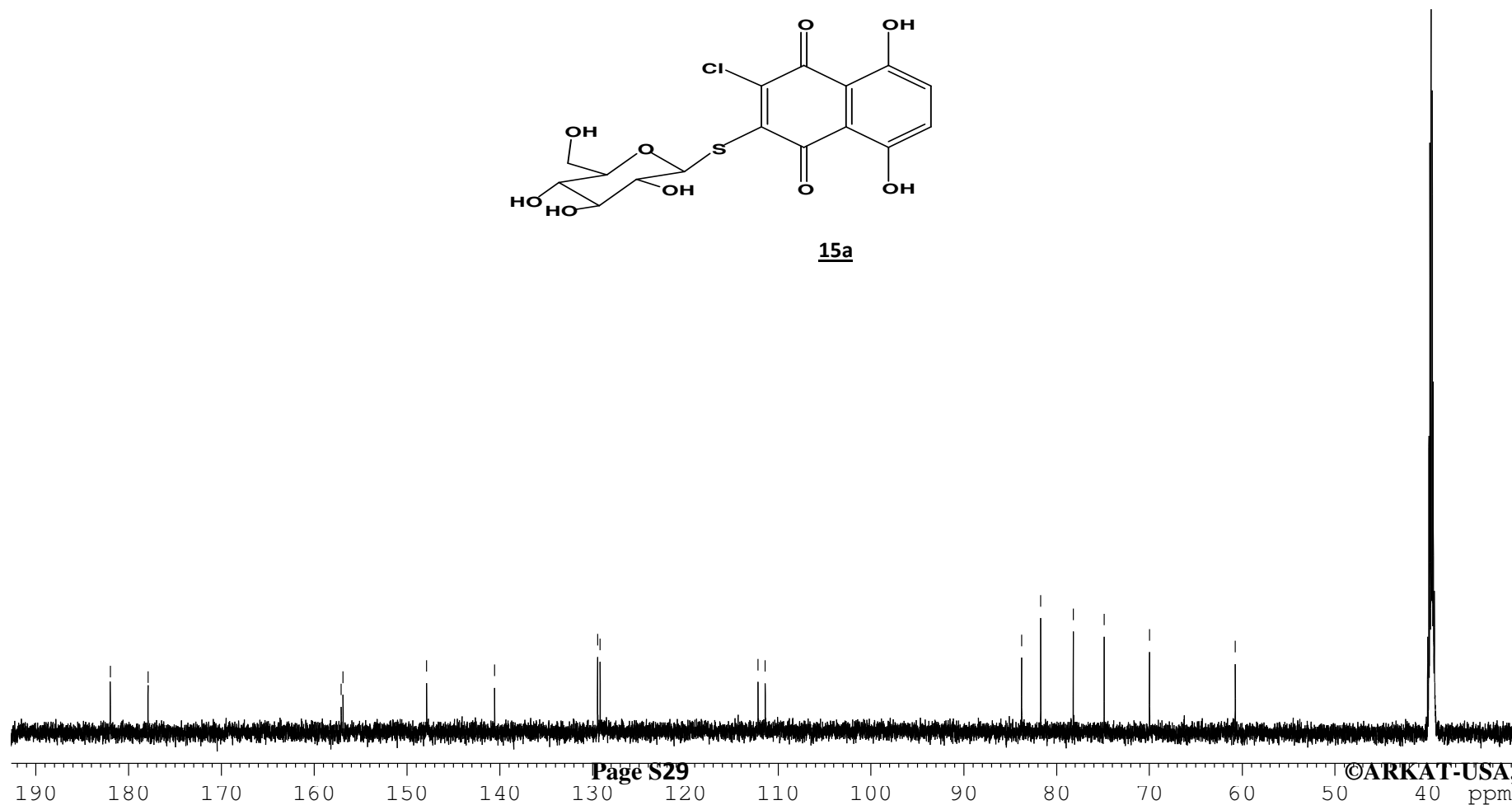
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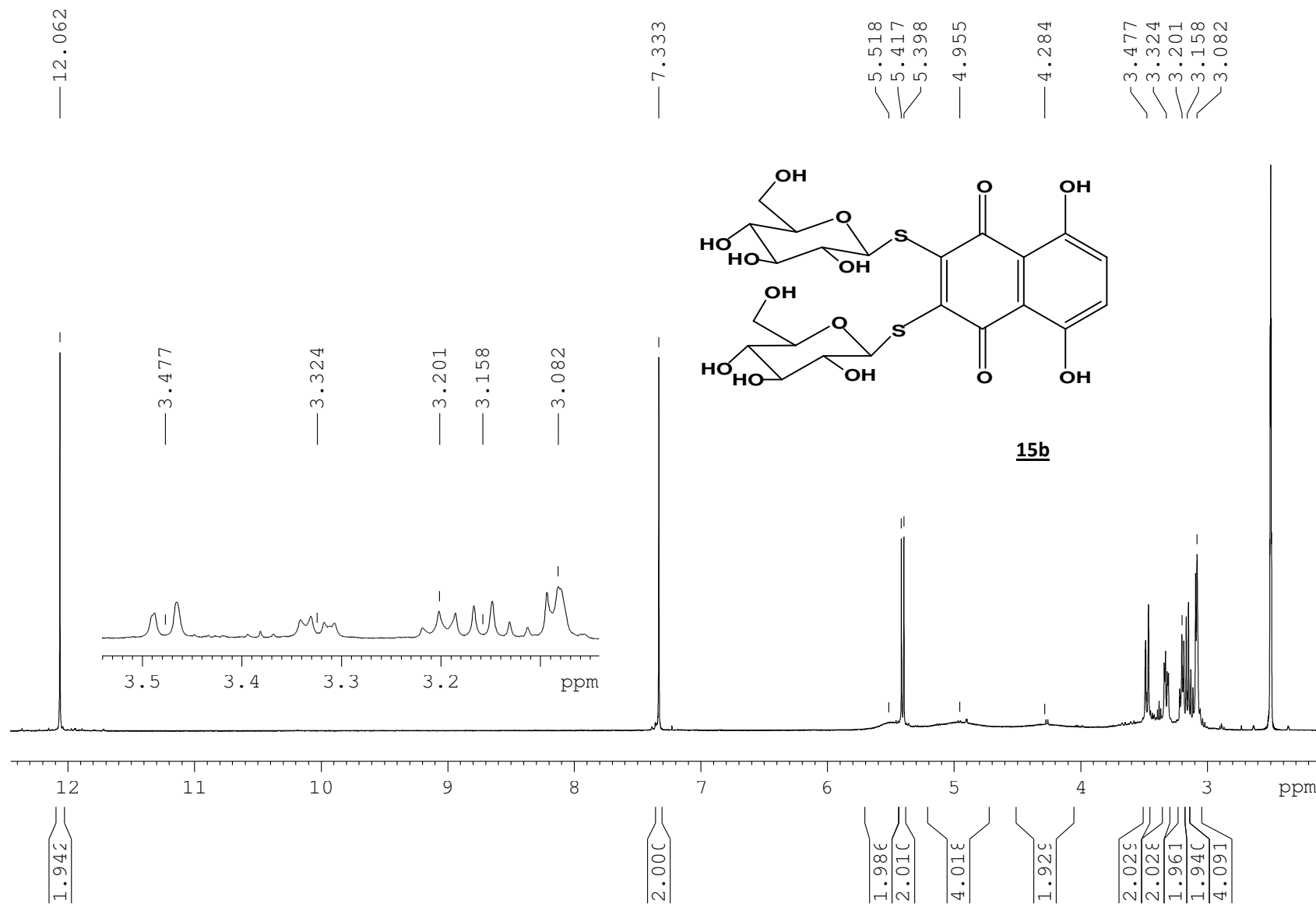
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— 78.189
— 74.856
— 69.960

— 60.724



15a





—181.851

—156.386

—147.286

—128.614

—112.125

—84.005

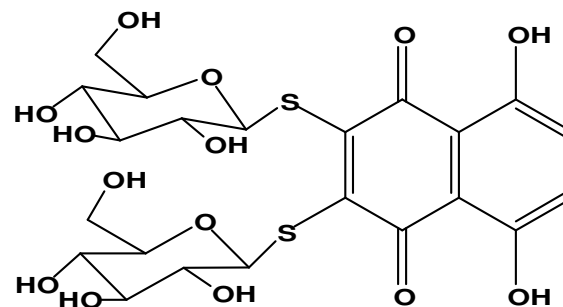
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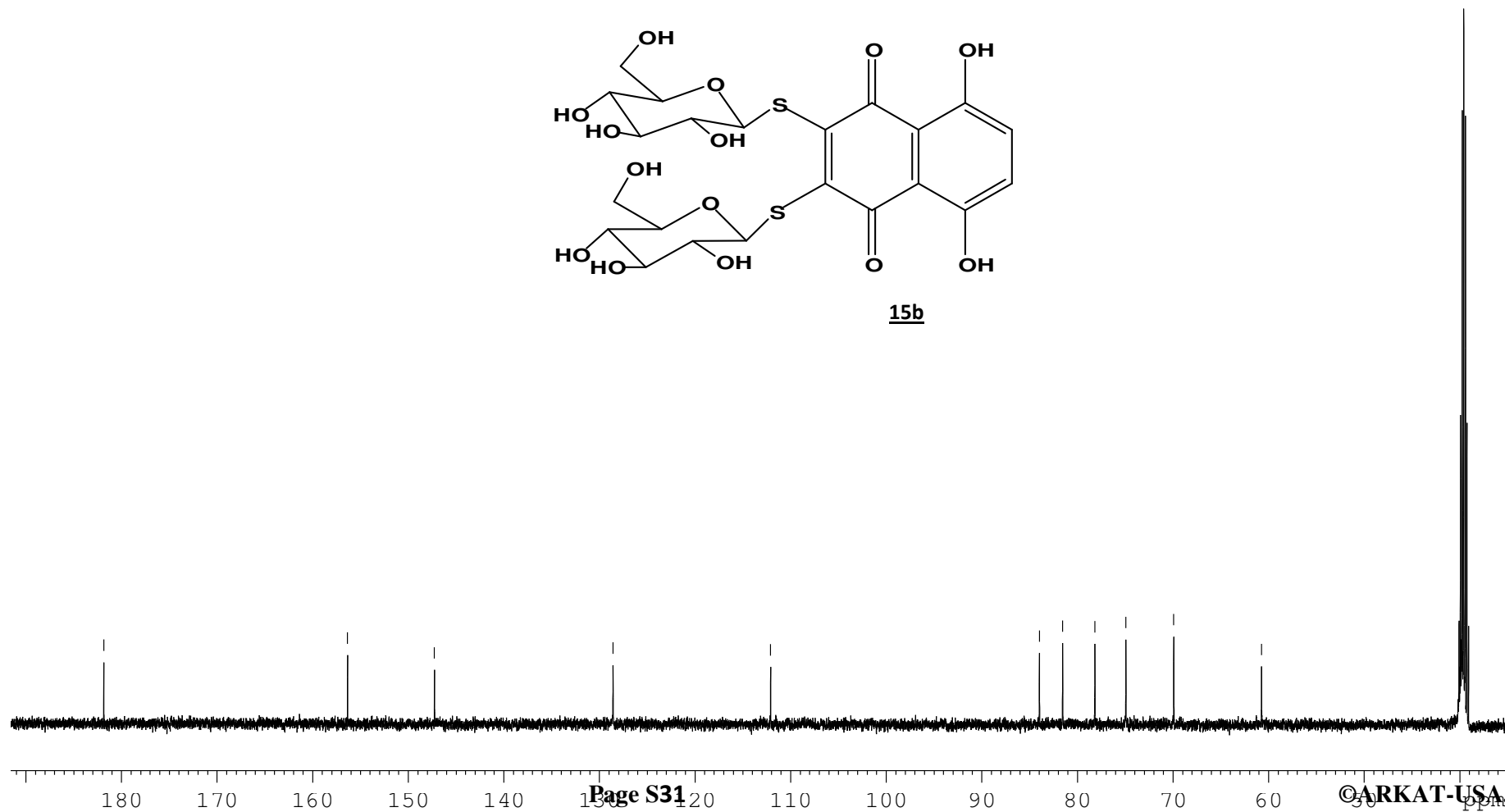
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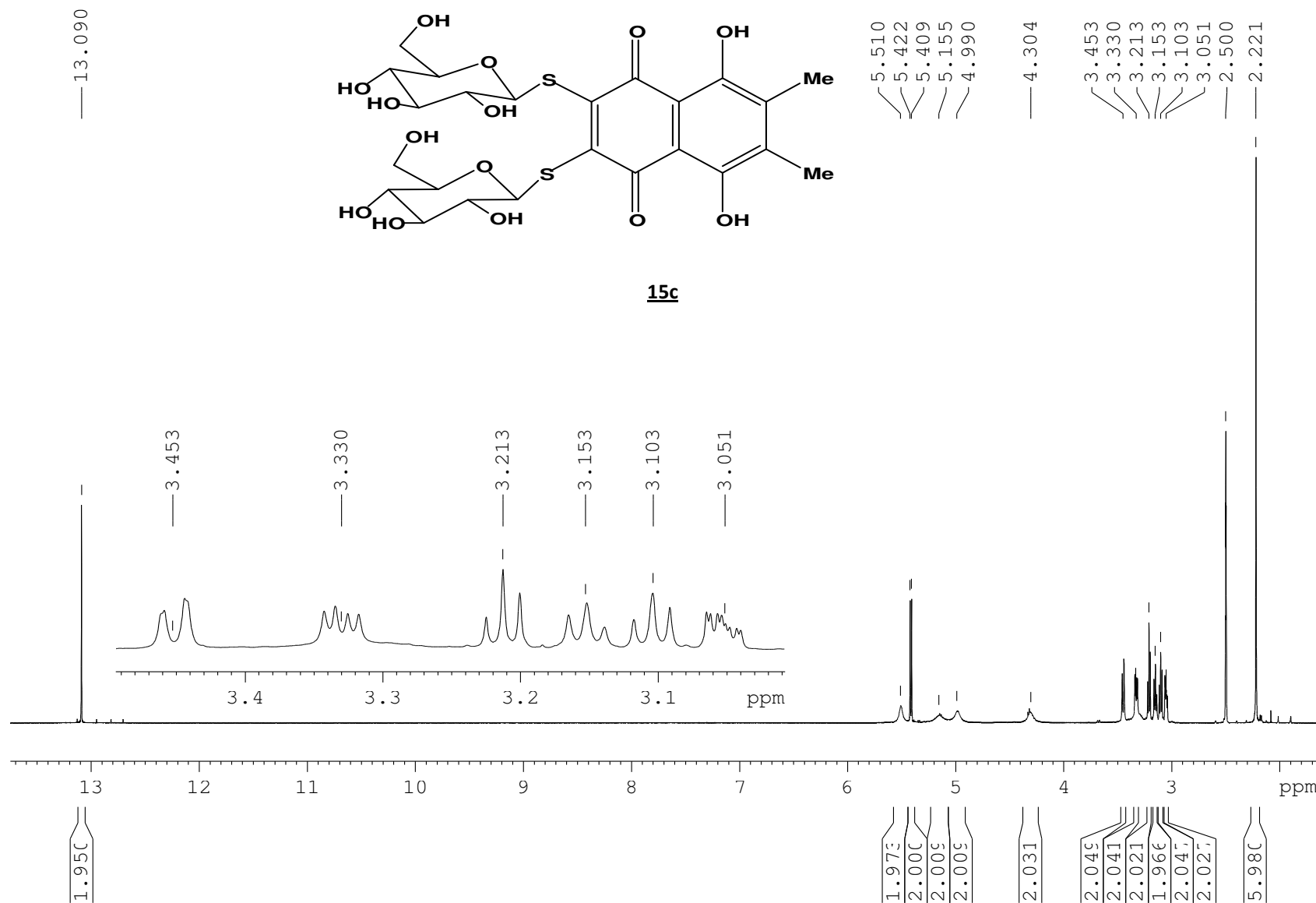
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—60.759



15b





—178.242

—160.610

—145.812

—138.138

—108.965

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—81.511

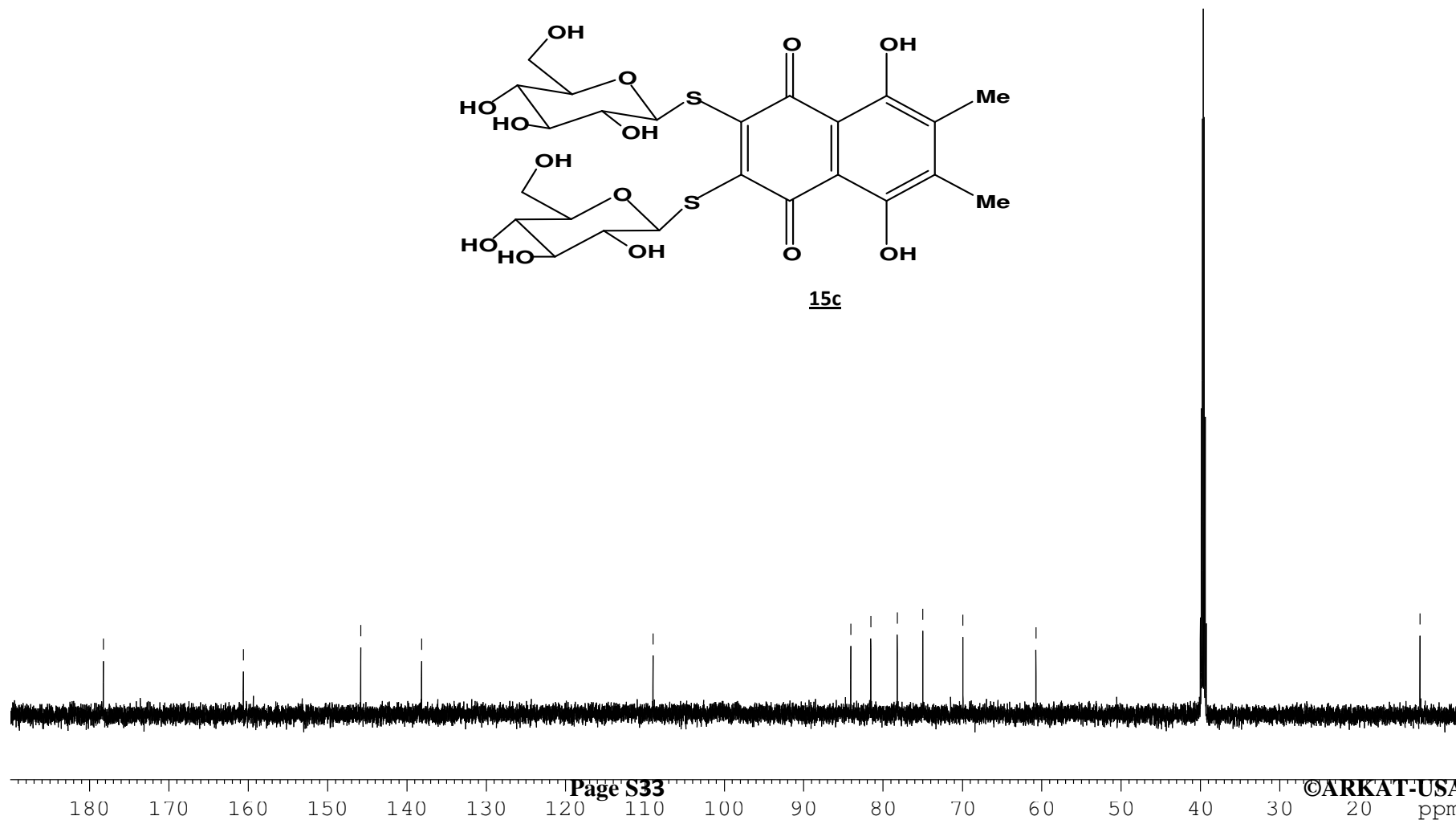
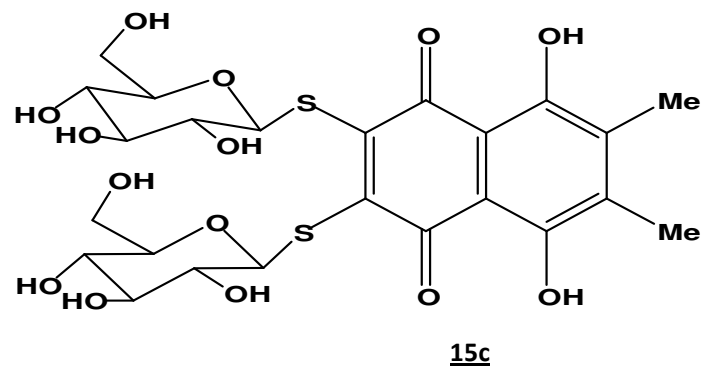
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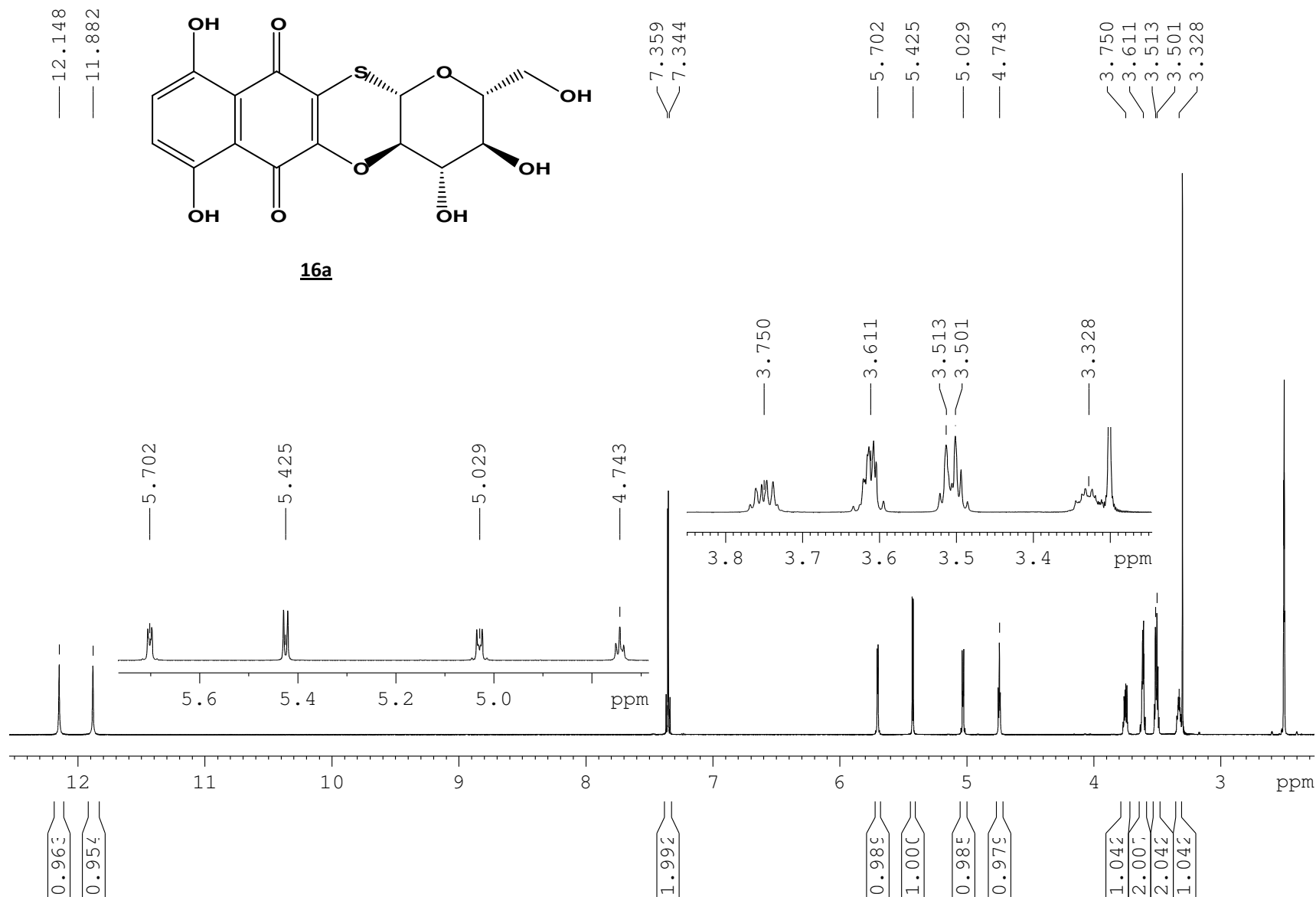
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—69.898

—60.714

—12.282





— 184.287

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— 124.007

— 110.531

— 110.478

— 82.294

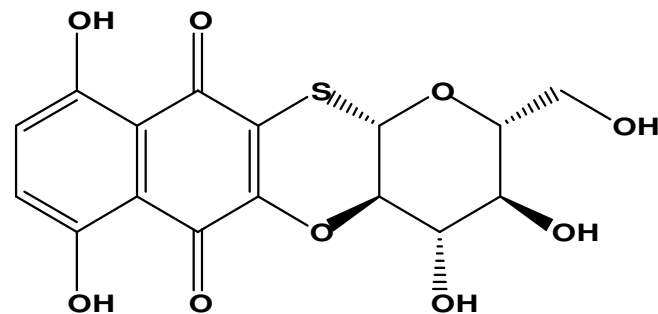
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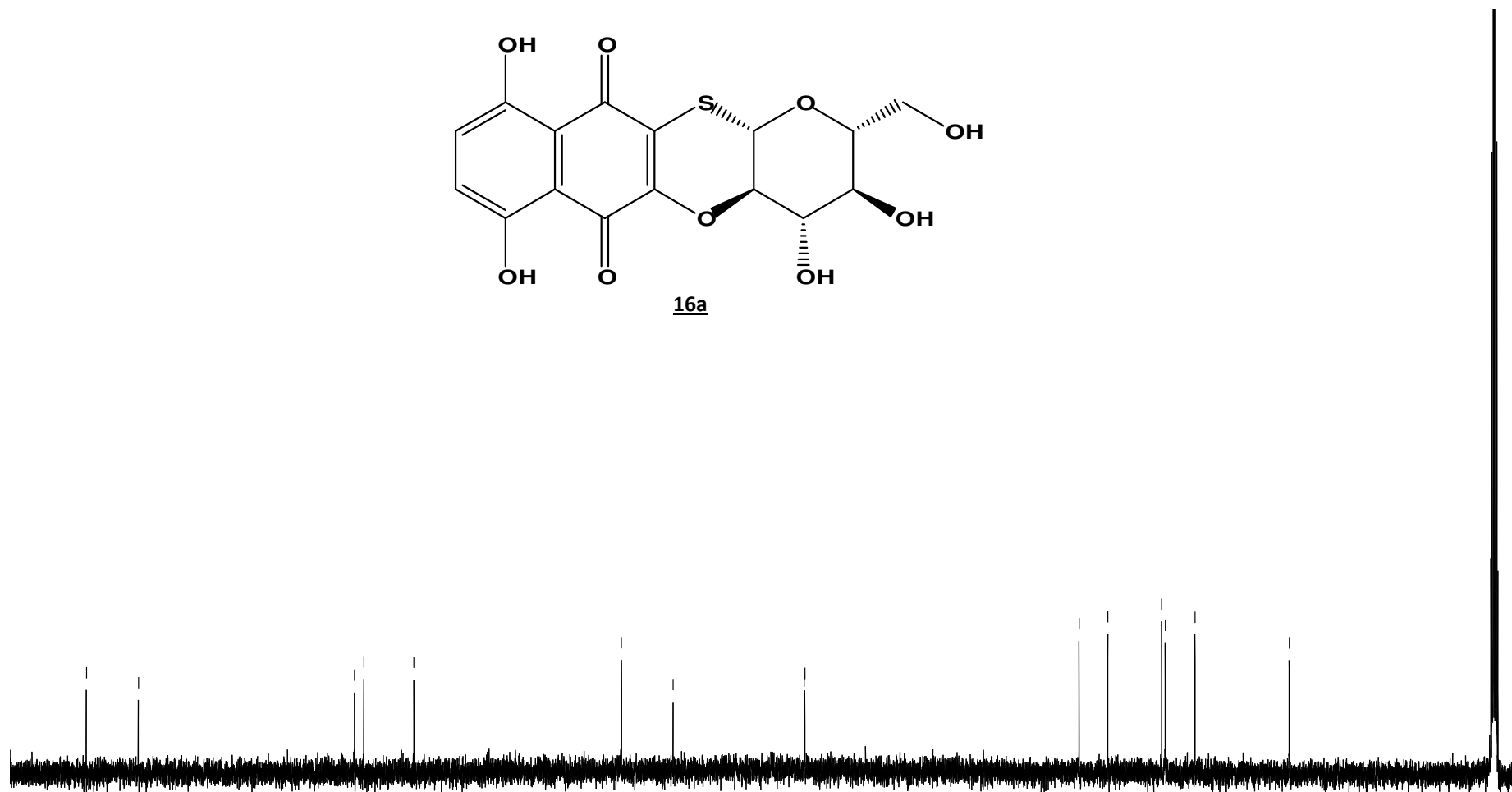
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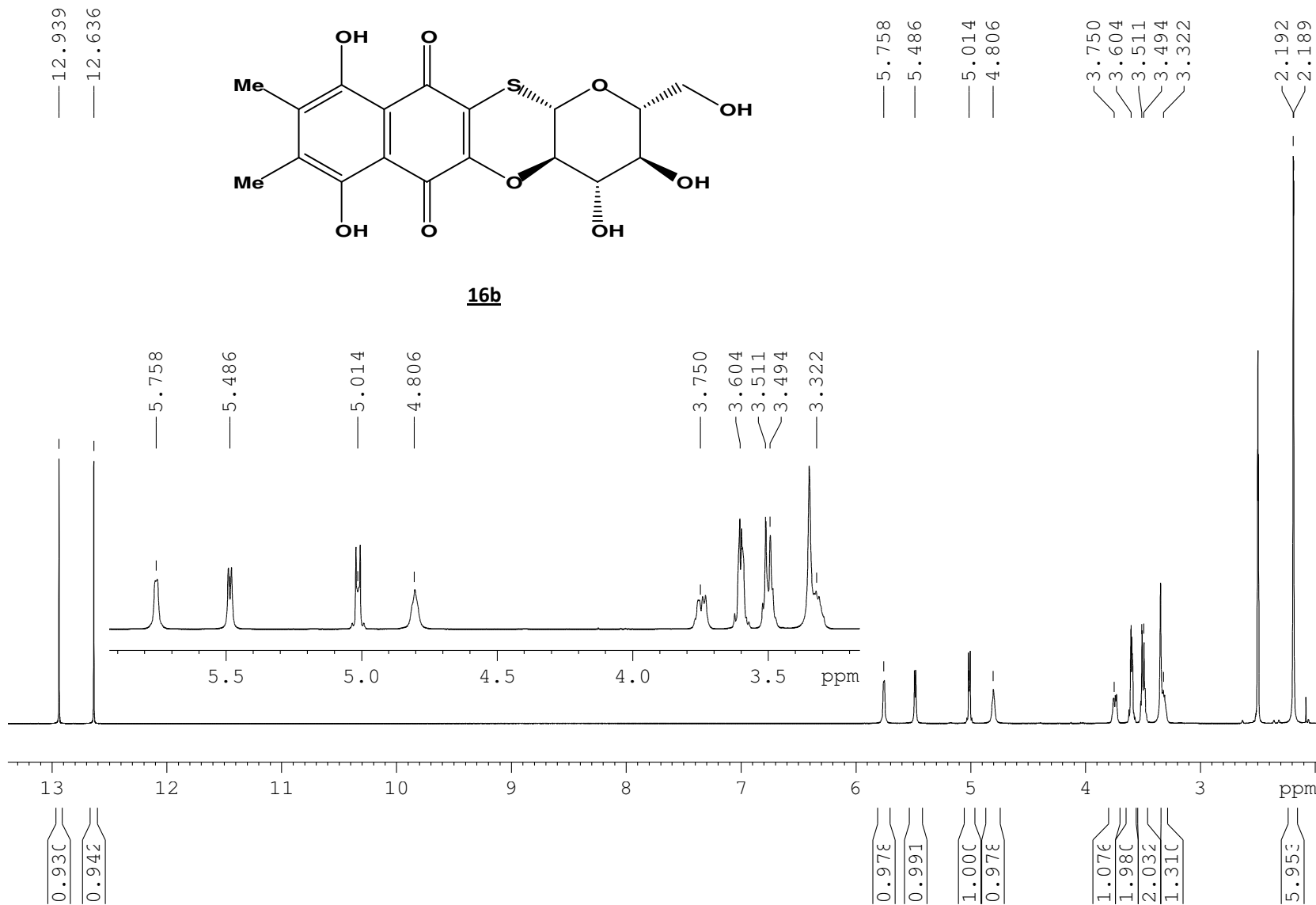
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— 60.698



16a





— 183.027
— 177.734

< 157.306
< 156.288
— 150.358

< 137.869
< 137.812

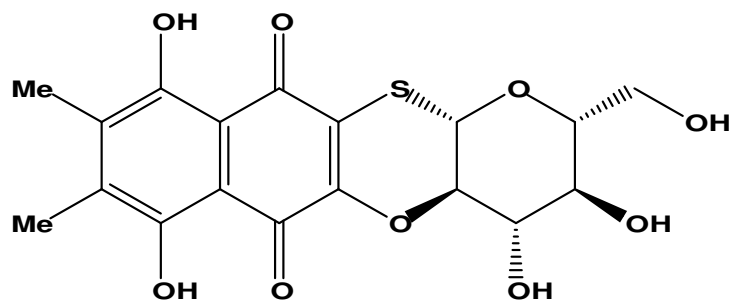
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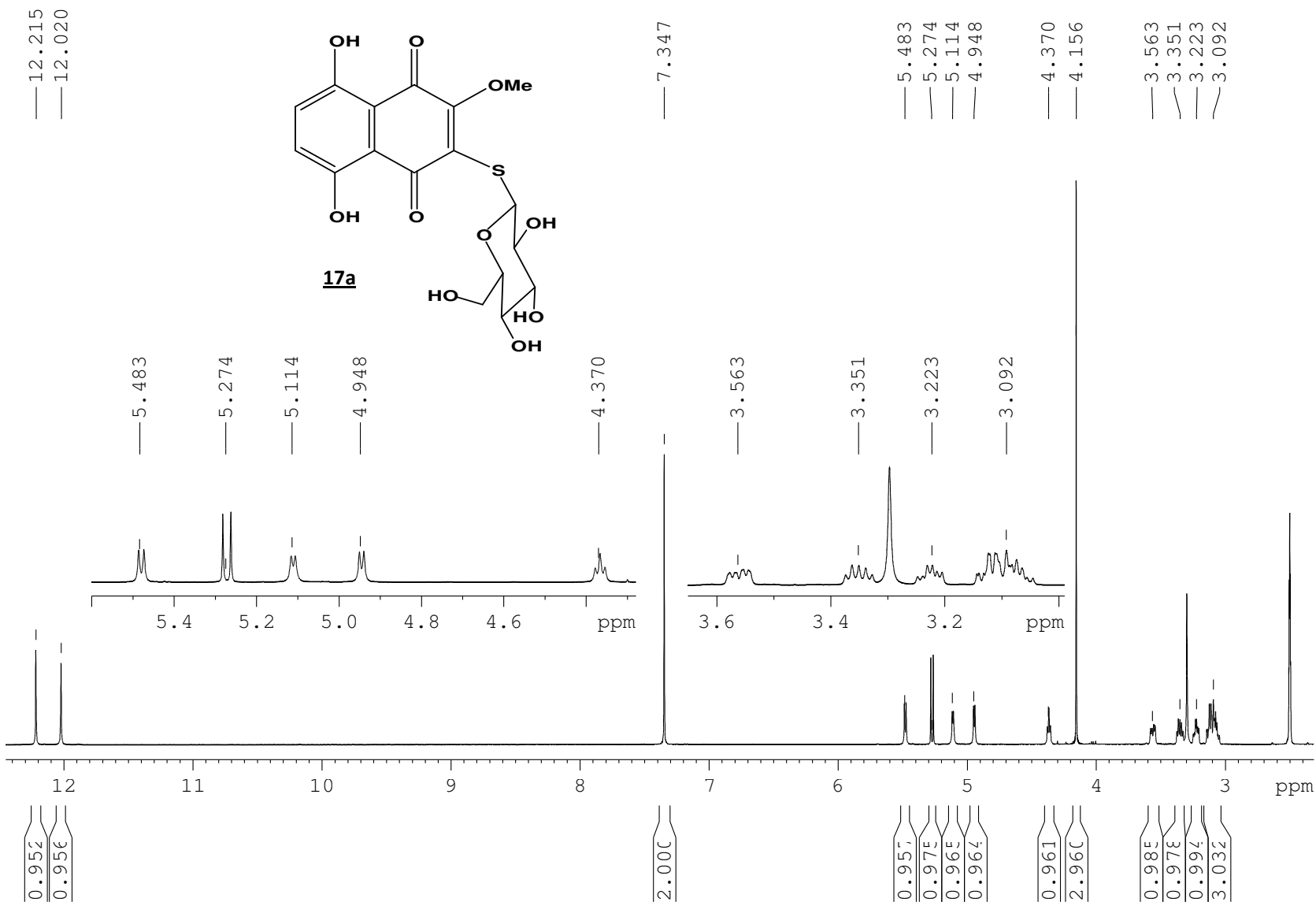
— 60.699

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< 12.138



16b





— 186.101
— 181.457

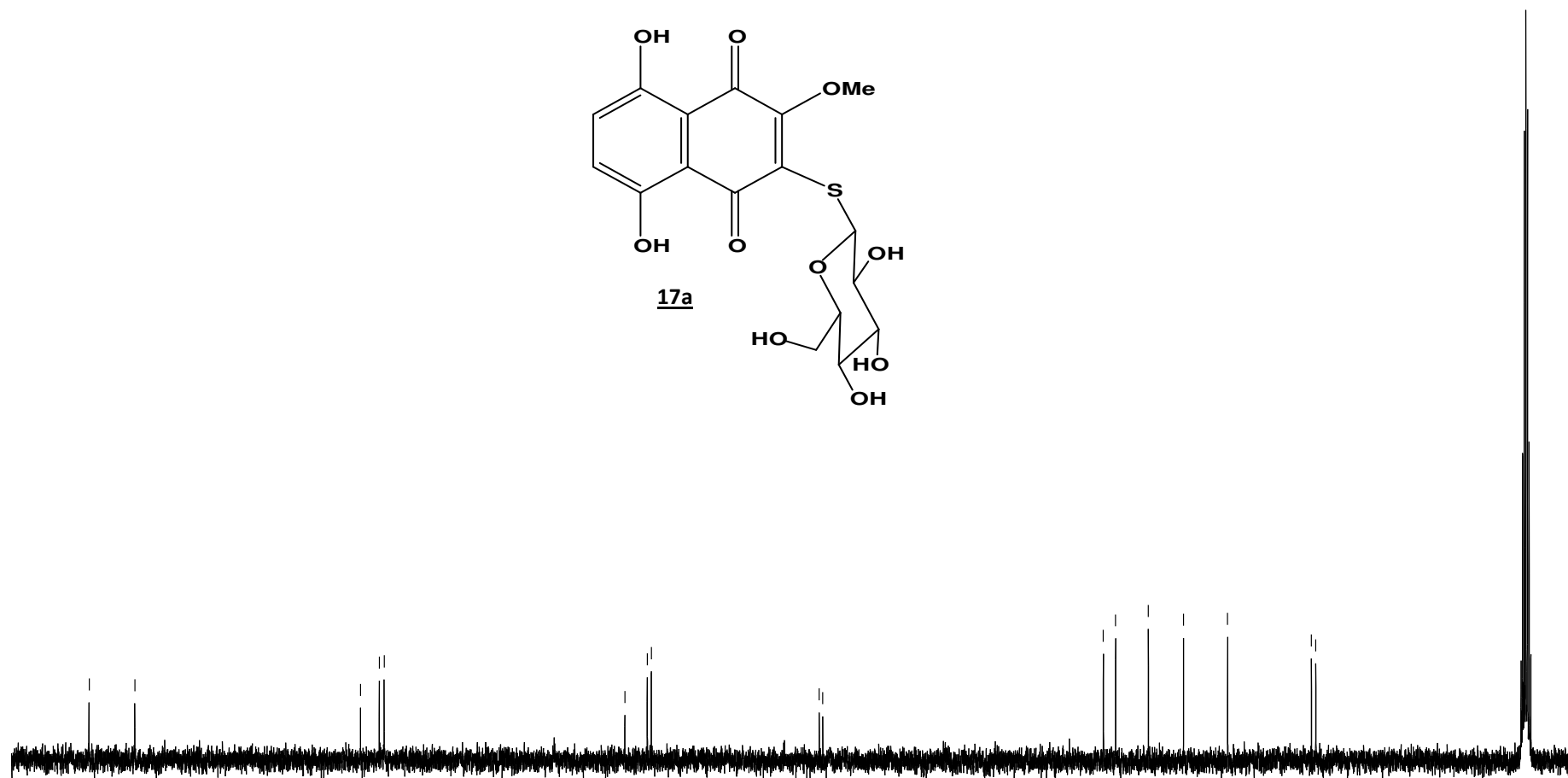
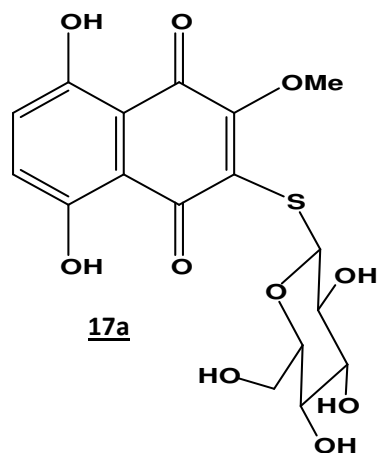
— 158.430
— 156.517
— 156.011

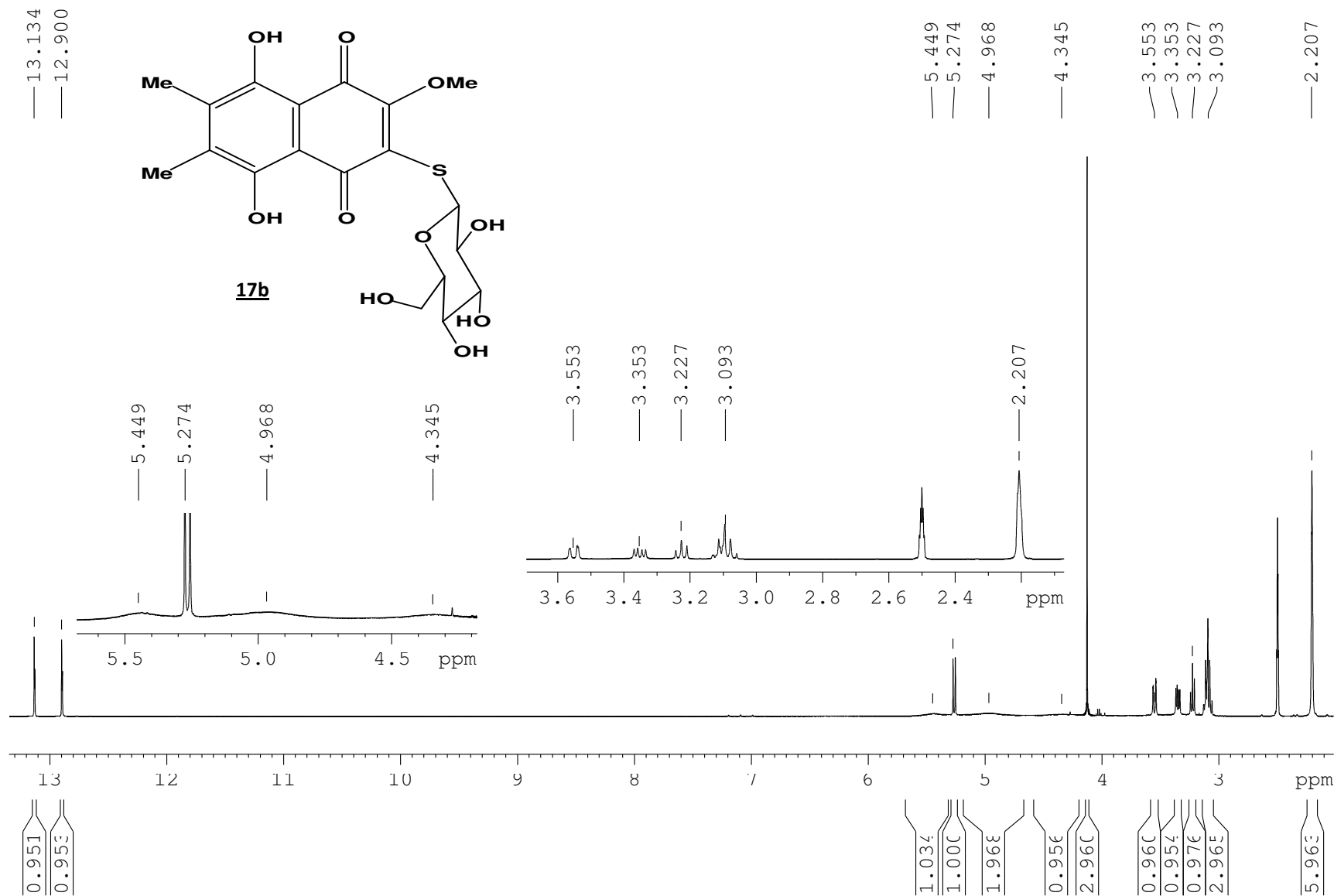
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— 111.661
— 111.301

— 82.684
— 81.437
— 78.112
— 74.522
— 70.010

— 61.483
— 61.015





16a

Honor of Prof. Oleg A. Rakitin

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— 182.107
— 177.274

< 160.403
< 159.810
< 158.054

< 138.598
< 138.024
— 130.738

< 108.948
< 107.966

< 82.880
< 81.368
< 78.117
— 74.489
— 69.961

< 61.398
< 60.968

< 12.293
< 12.117

