

Supplementary Material

Design and diversity-oriented synthesis of benzo- and pyrido-annulated medium-sized *N,S*-heterocycles *via* thio-Michael and Friedel-Crafts approaches

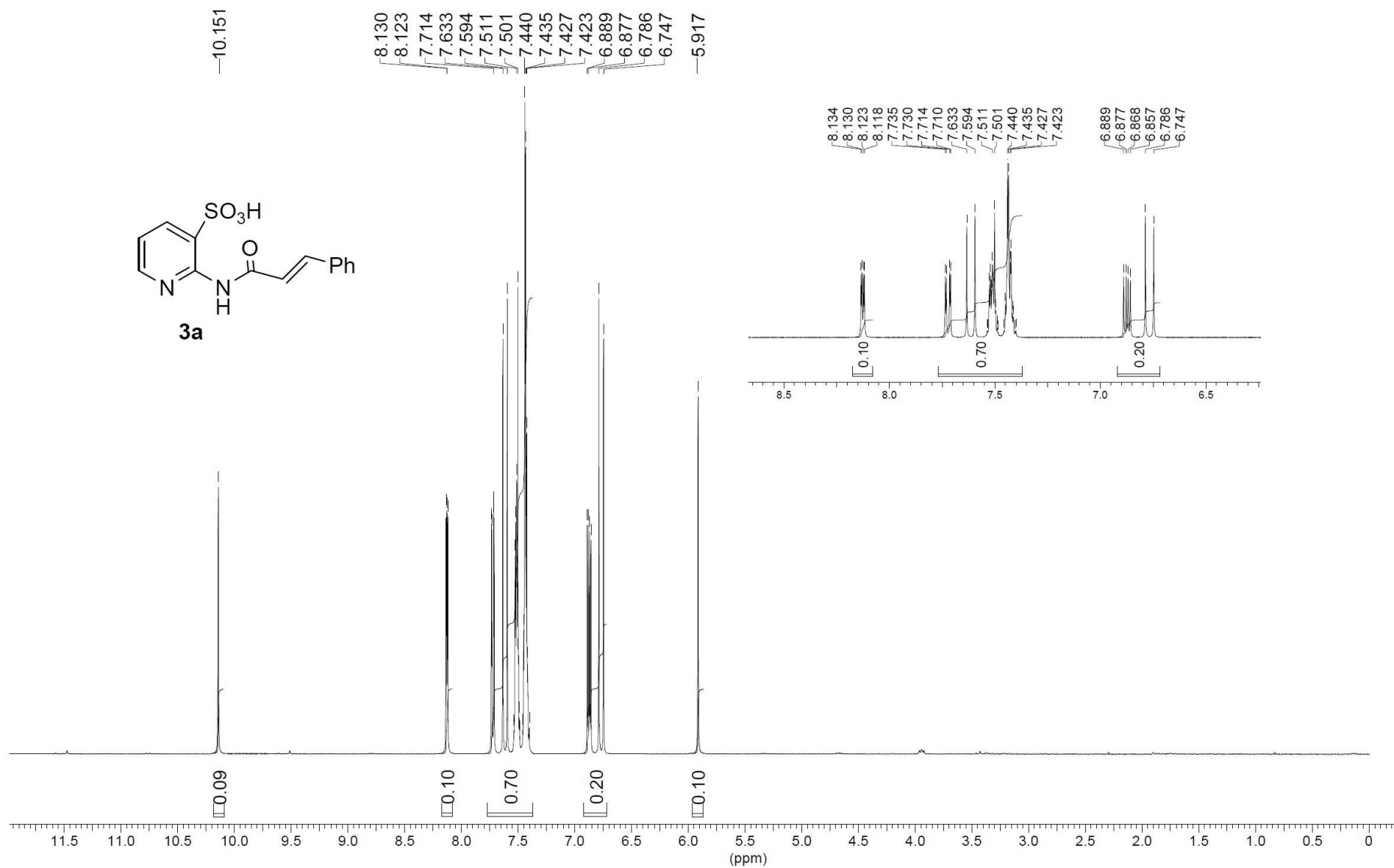
Hassan A. K. Abd El-Aal* and Ali A. Khalaf

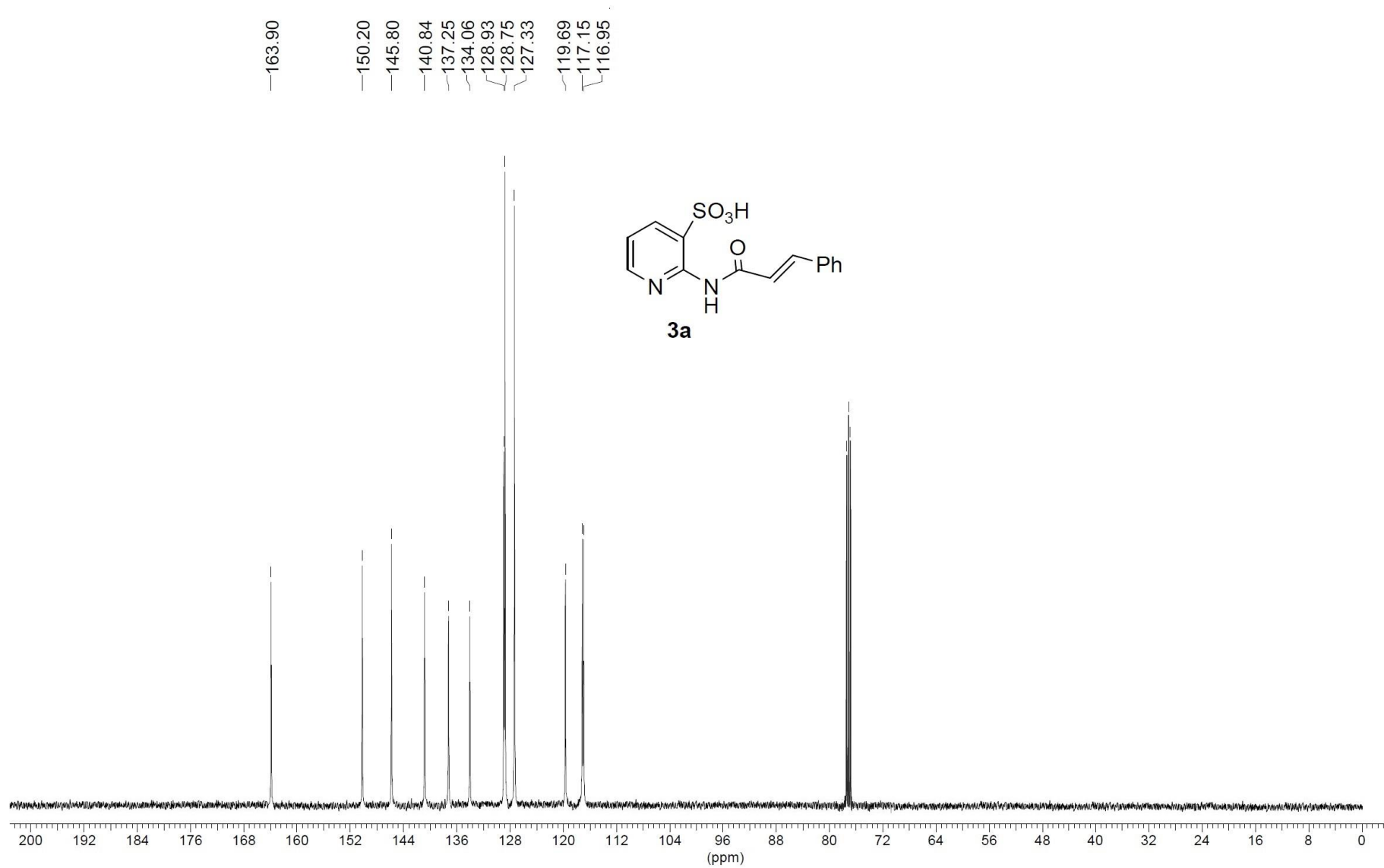
Chemistry Department, Faculty of Science, Assiut University, Assiut, 71516, Egypt

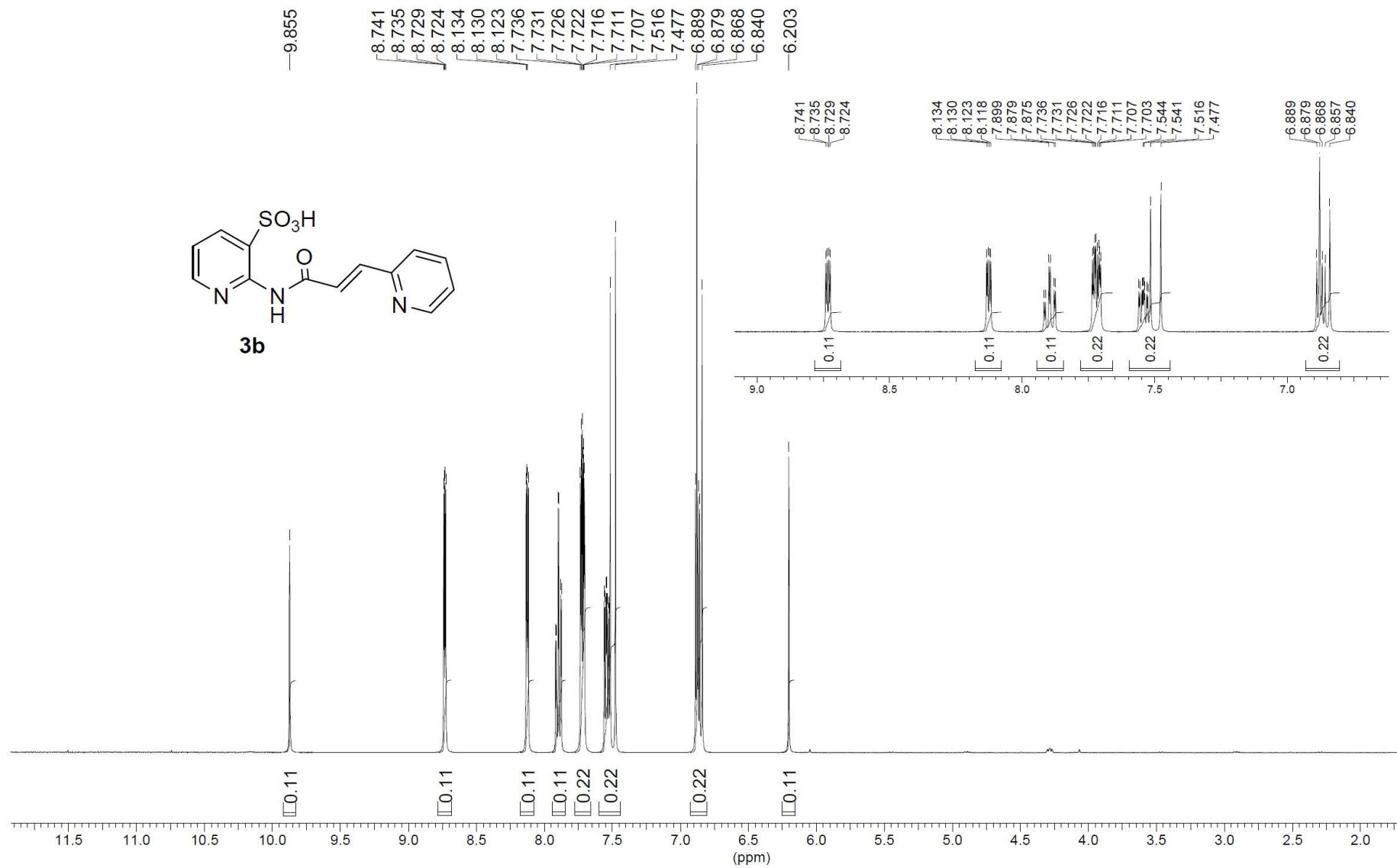
E-mails: hassankotb33@yahoo.com; hassankotb@aun.edu.eg

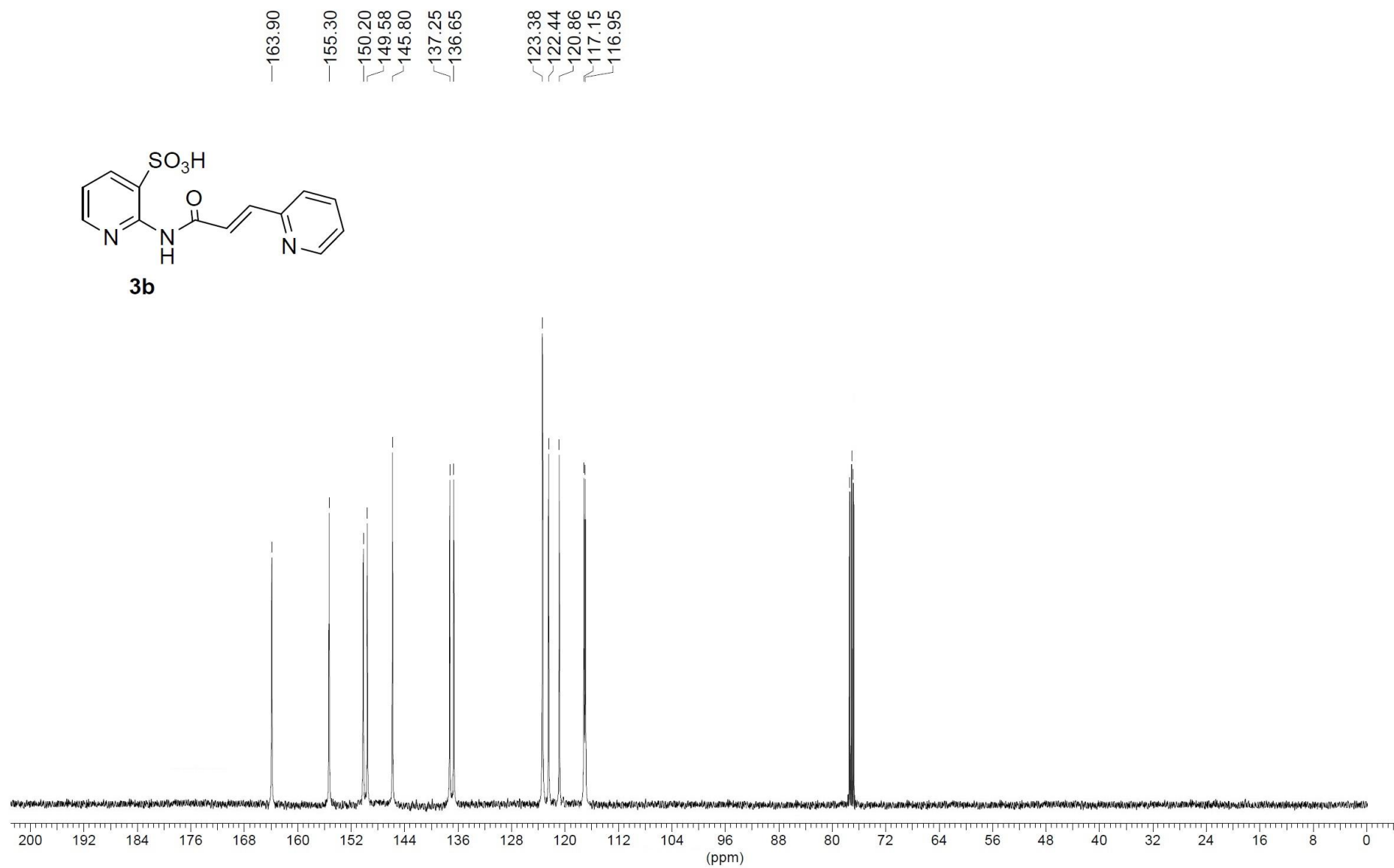
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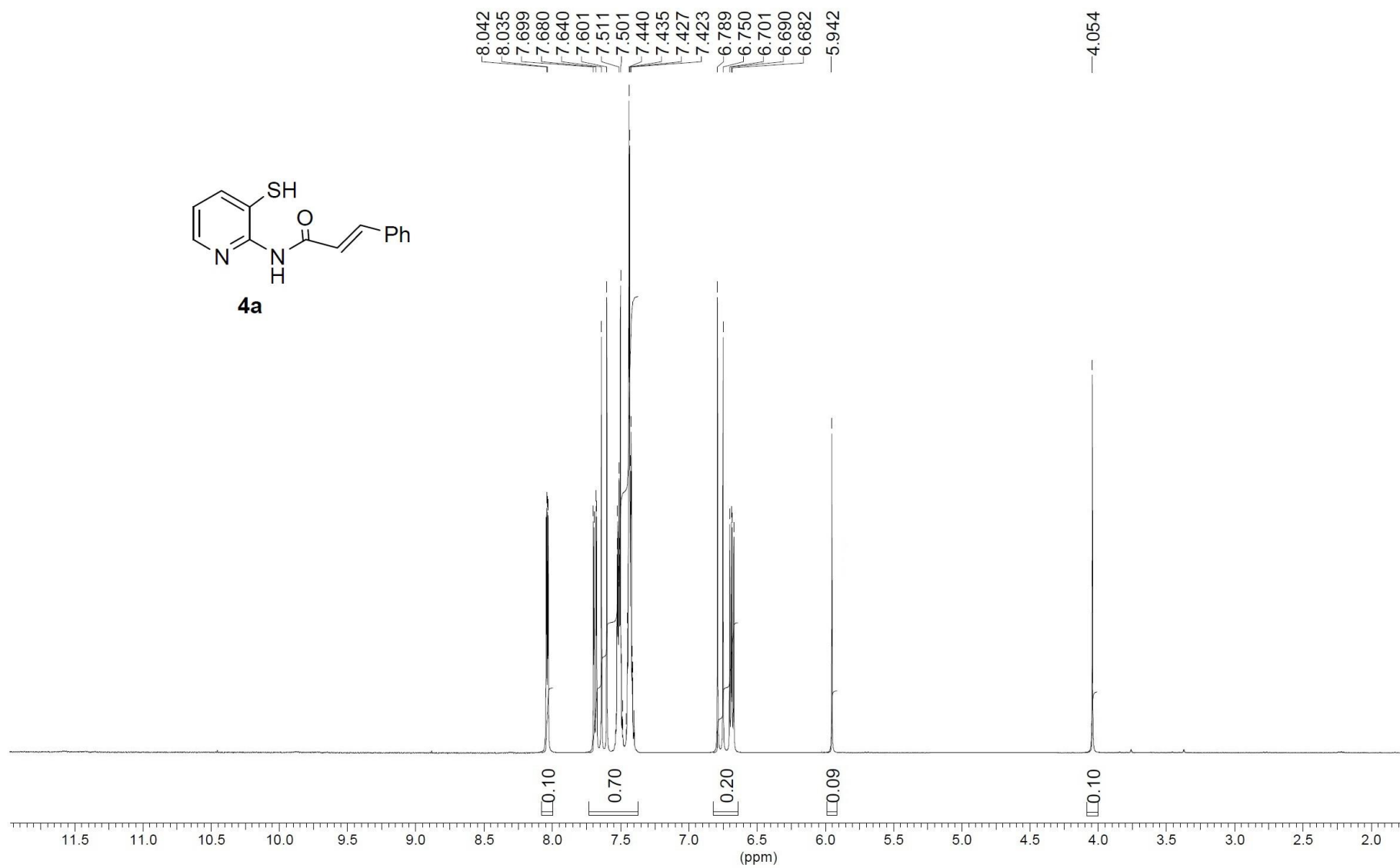
¹ H NMR and ¹³ C NMR Spectra copies of compounds 3a,b, 4a,b, 5a,b and 6a,b	S2
¹ H NMR and ¹³ C NMR Spectra copies of compounds 8a-f	S18
¹ H NMR and ¹³ C NMR Spectra copies of compounds 9a-f.....	S30

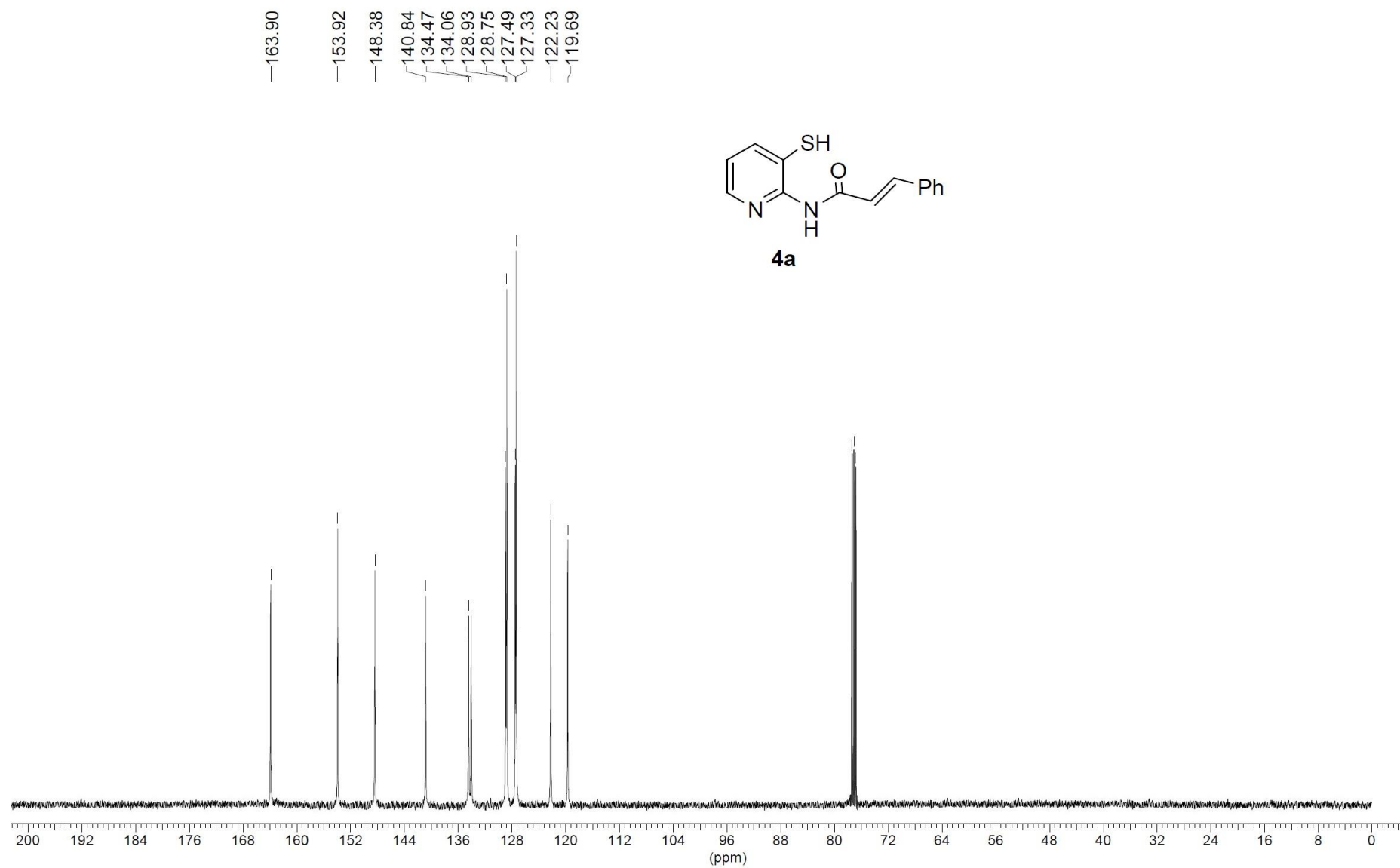


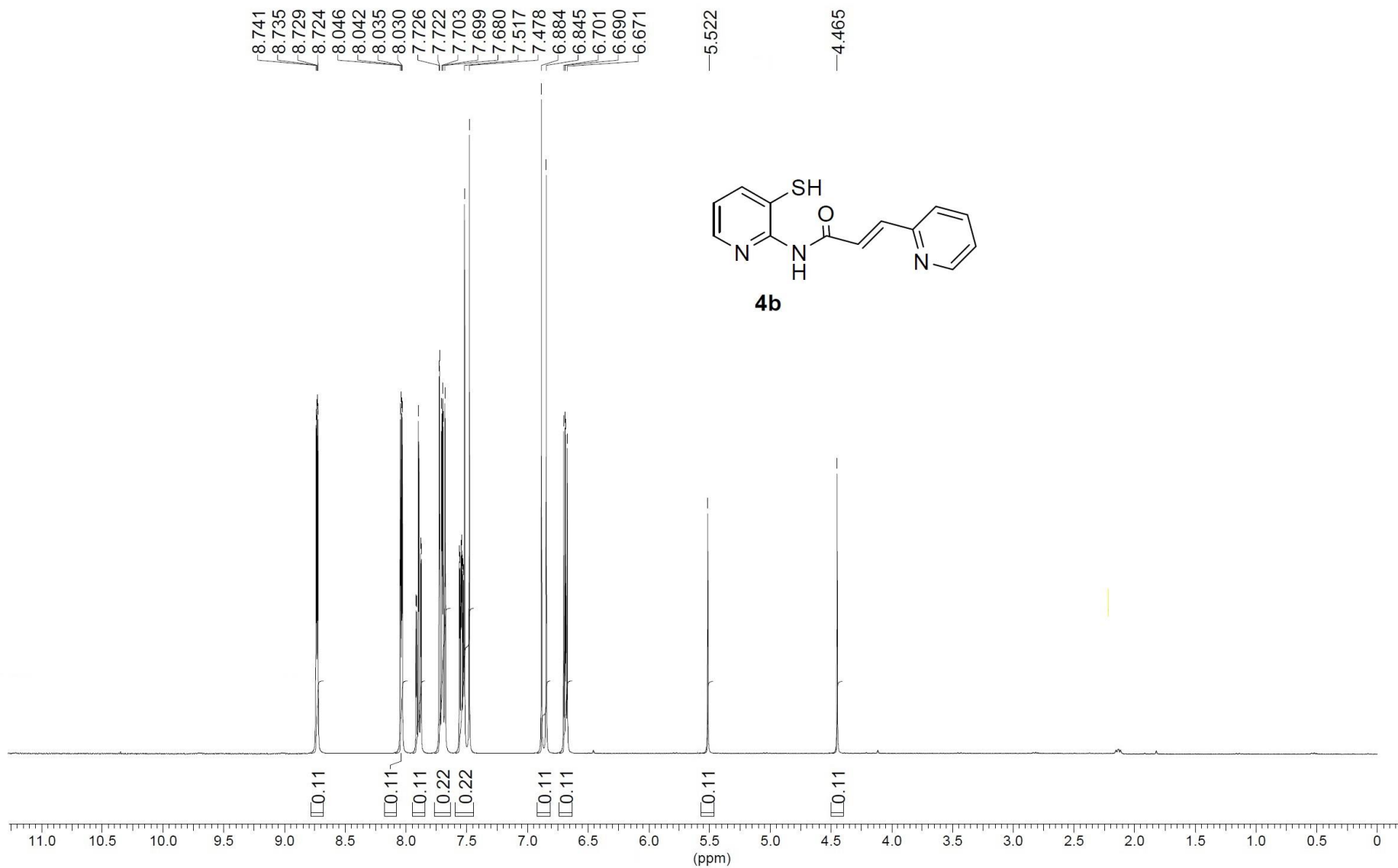


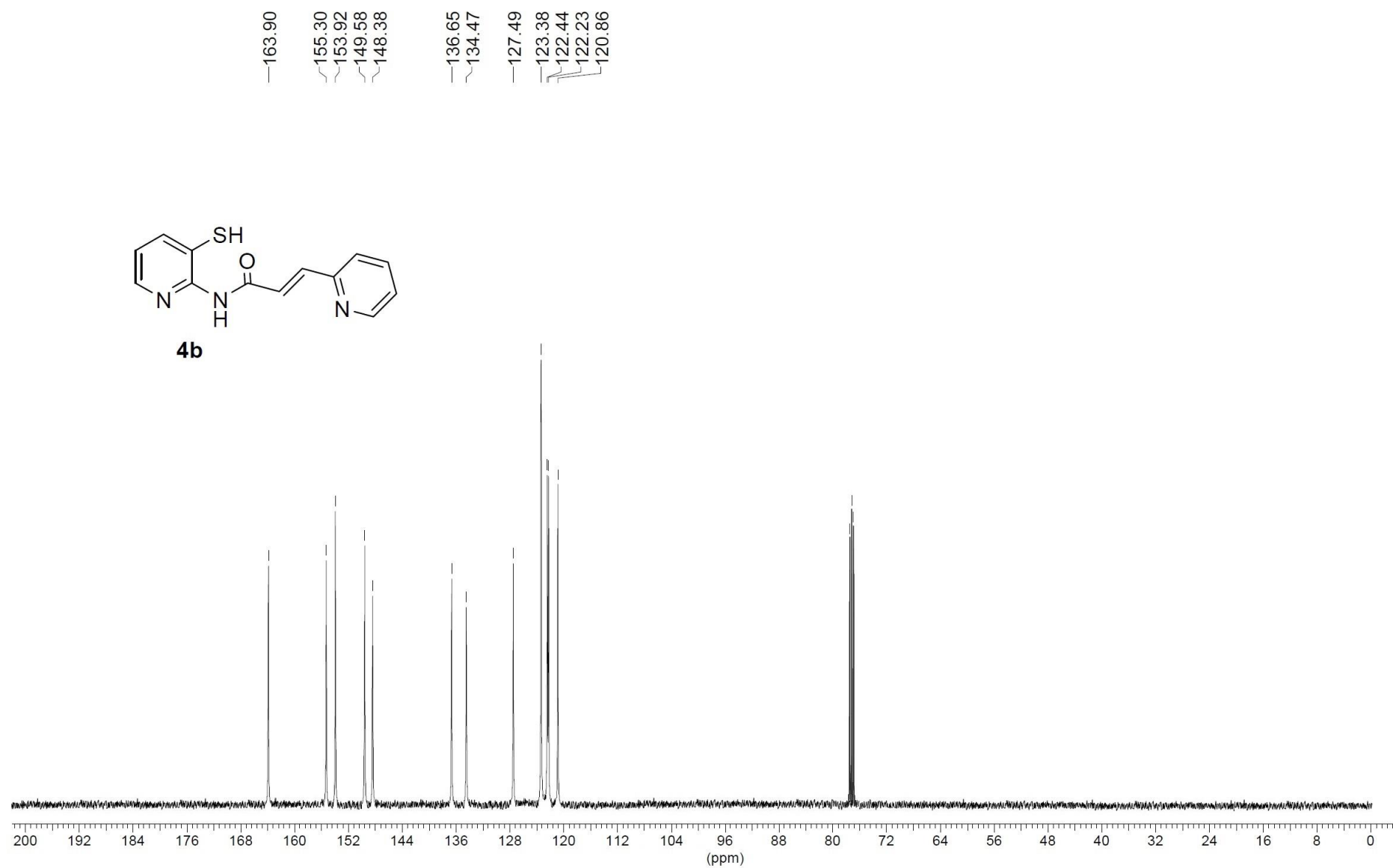


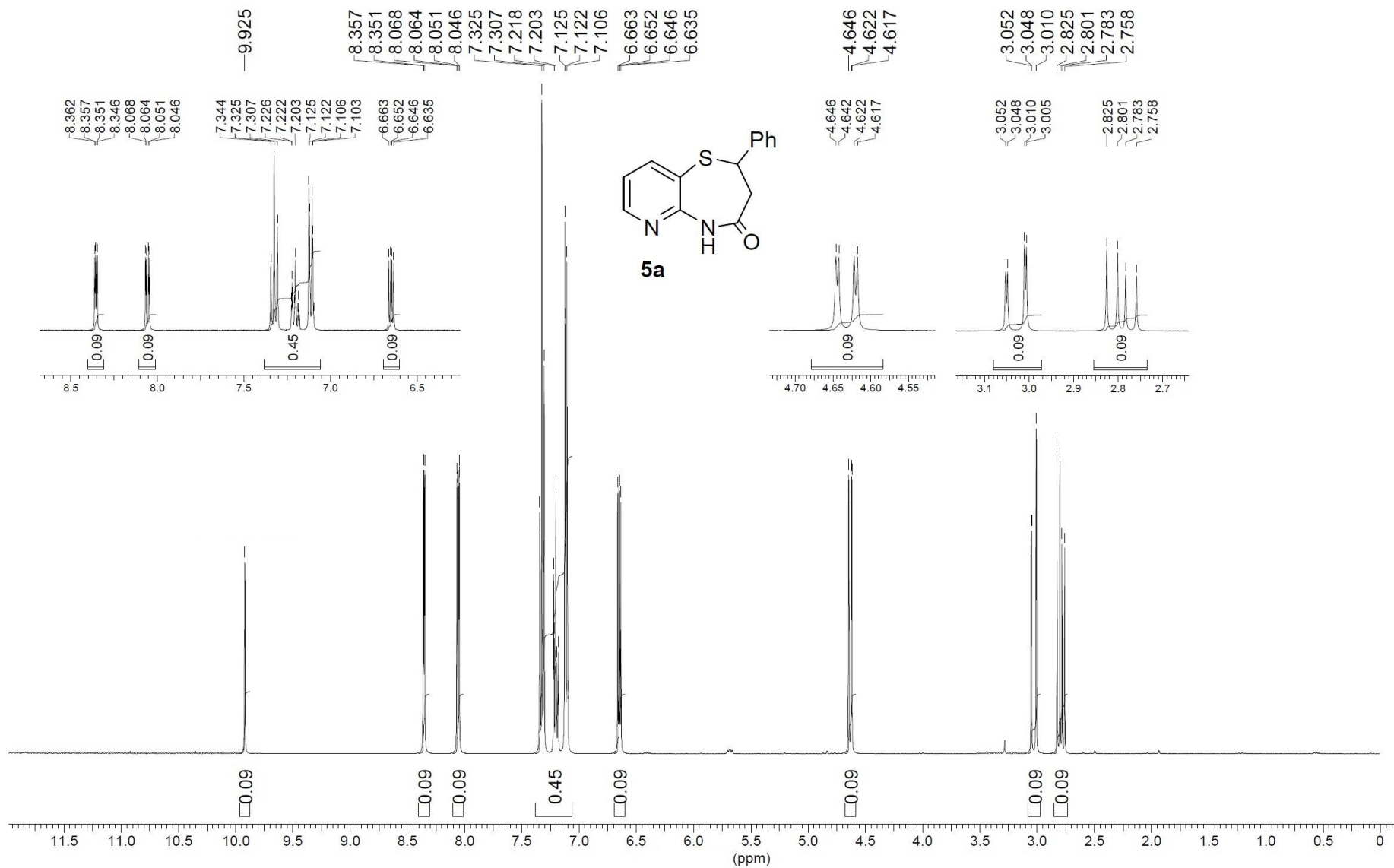


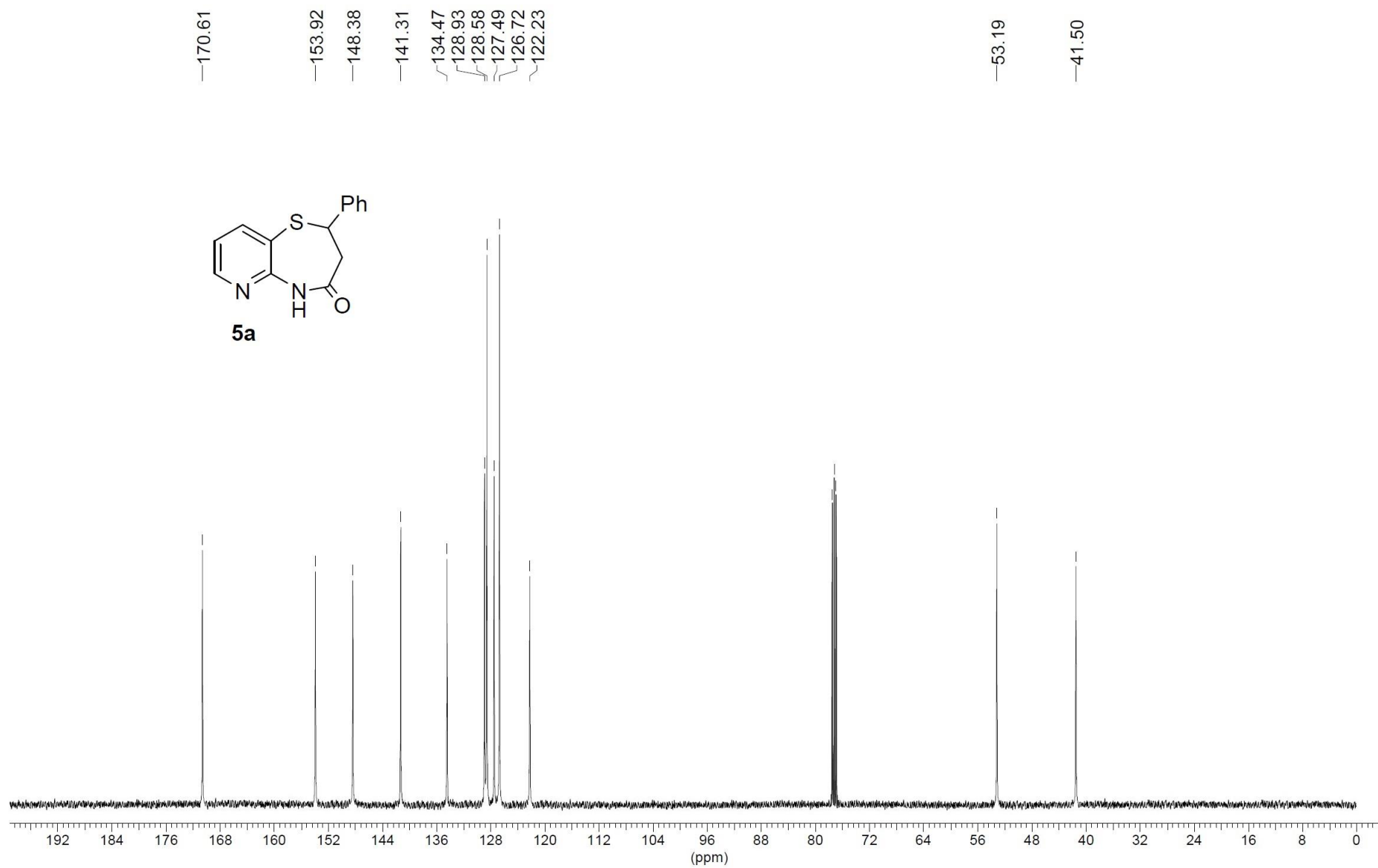


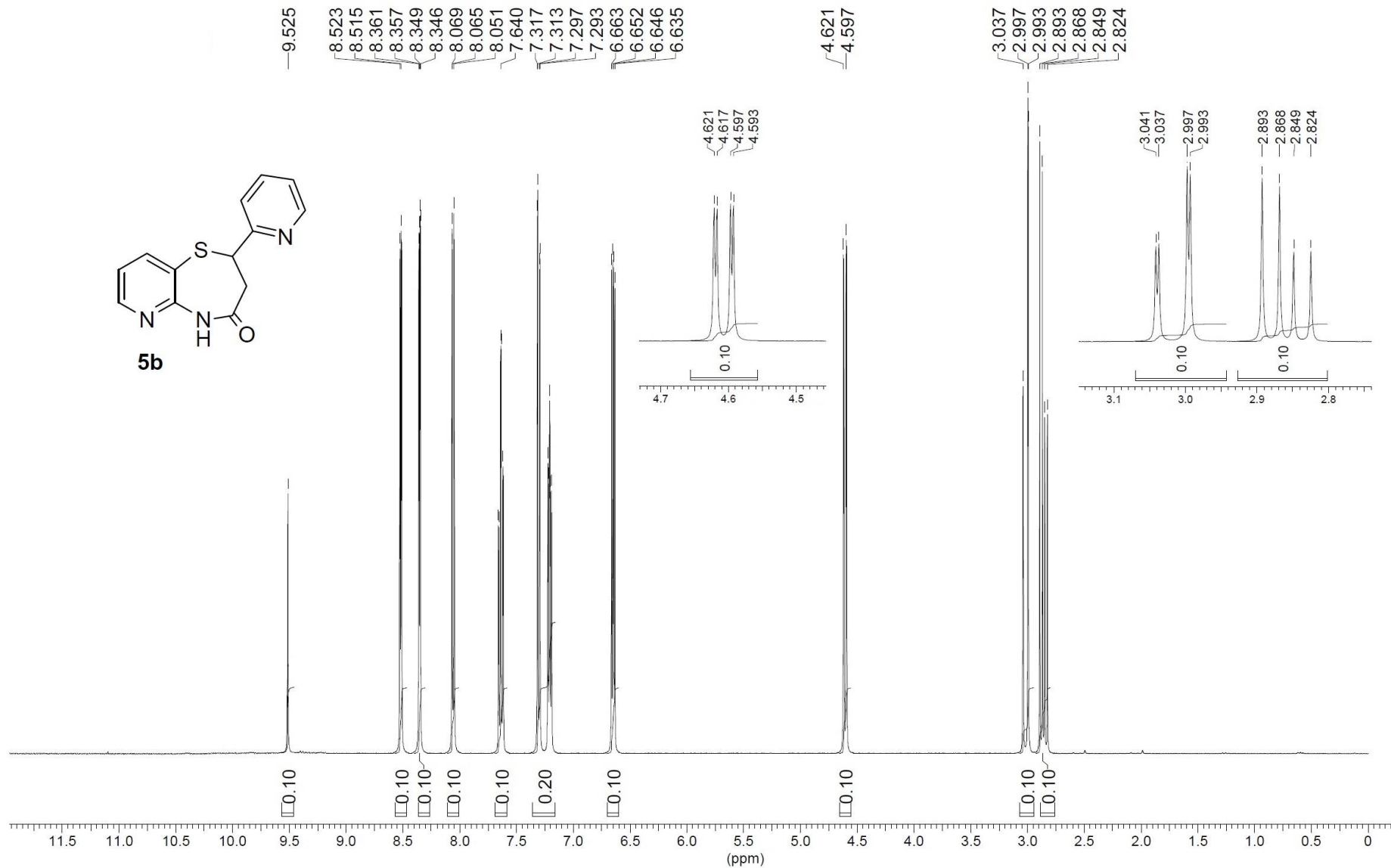


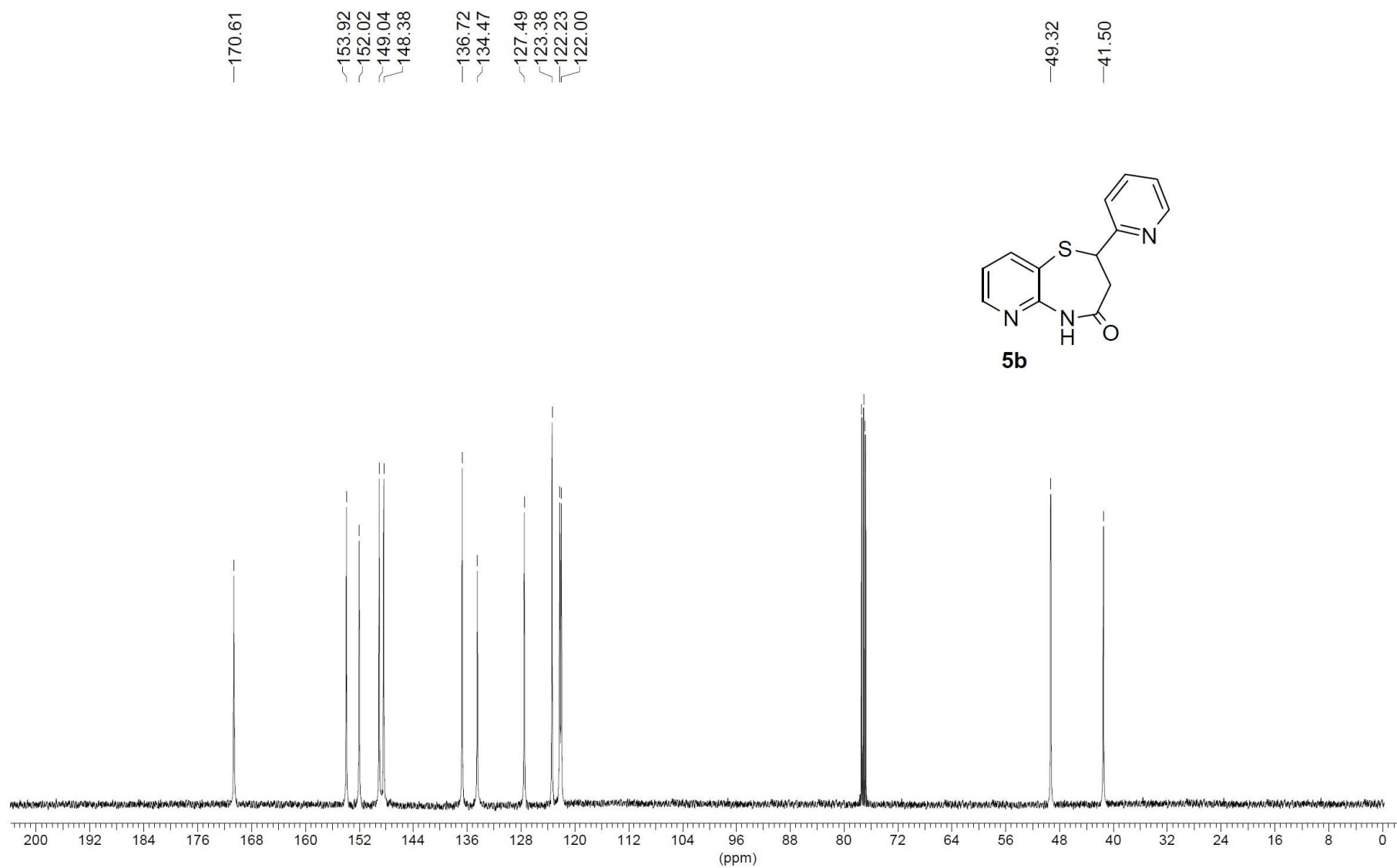


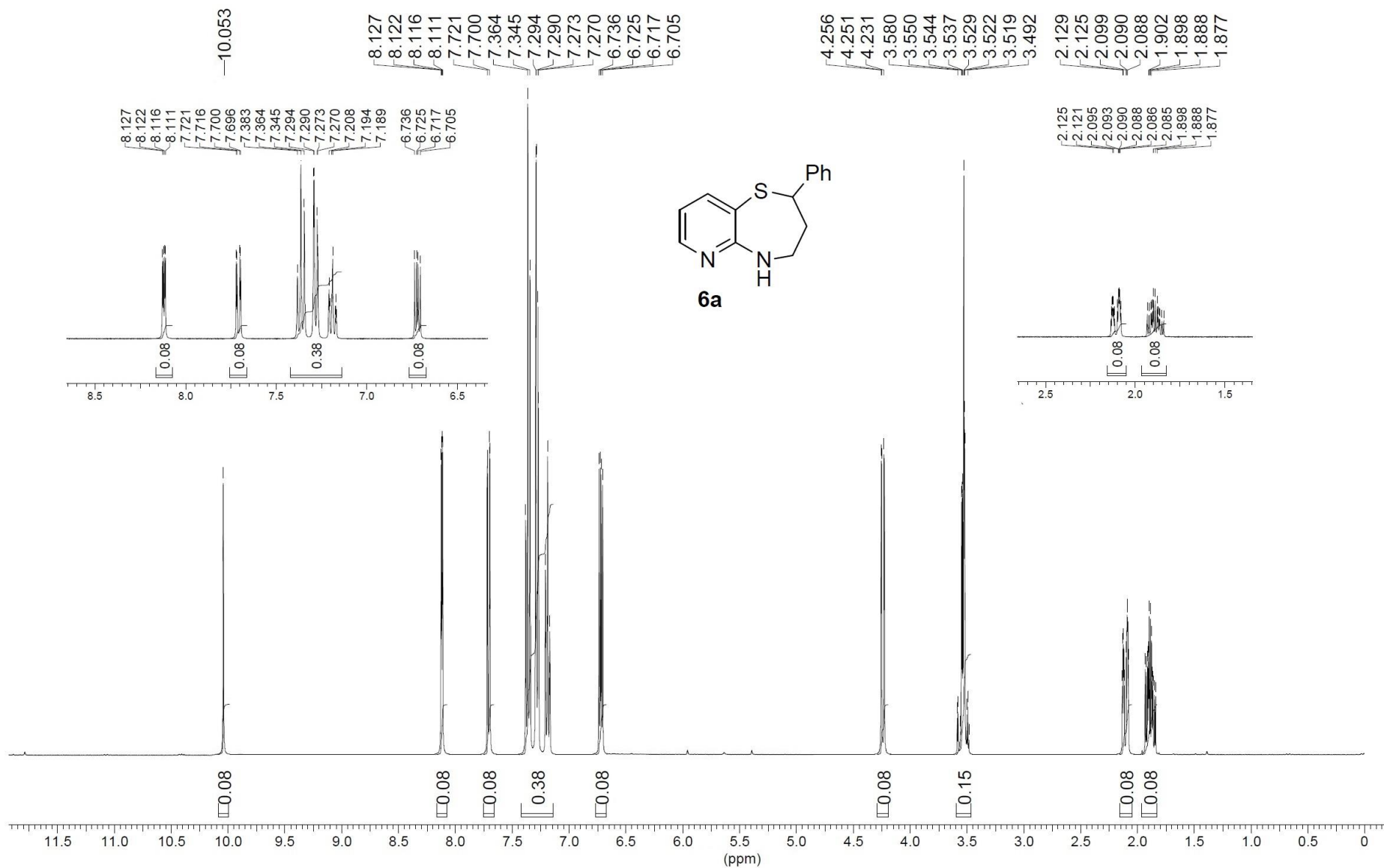


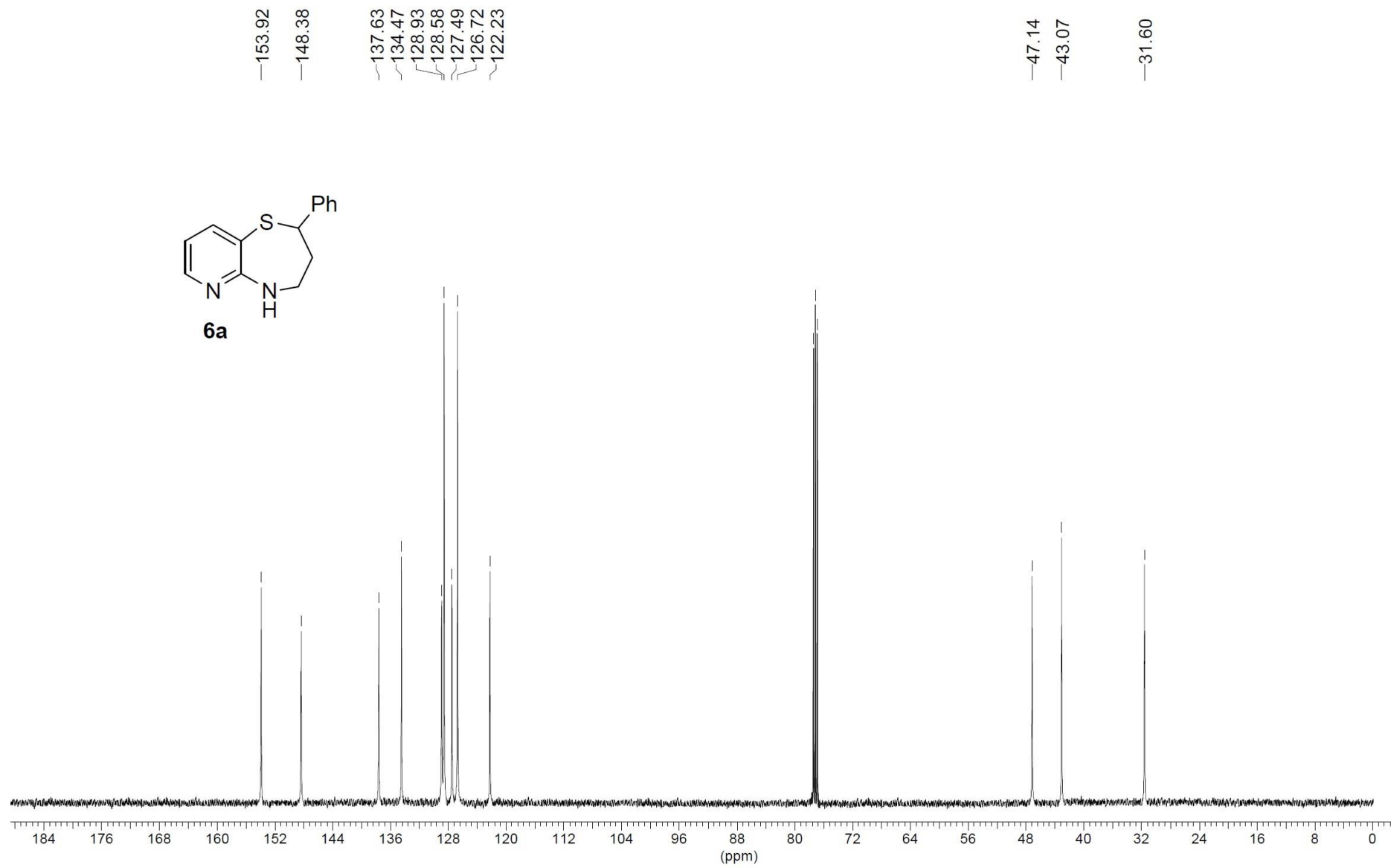


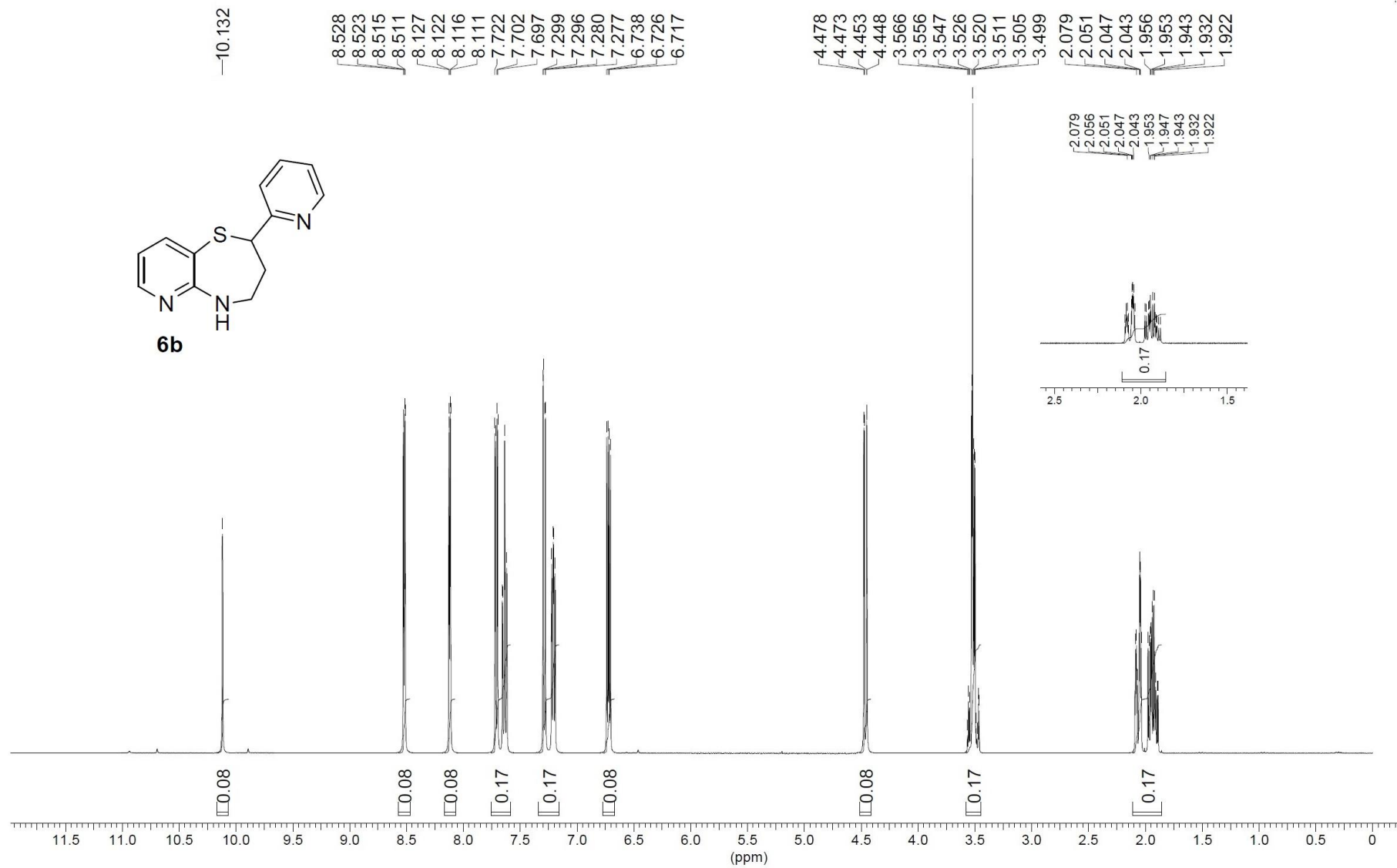












153.92
152.02
149.04
148.38

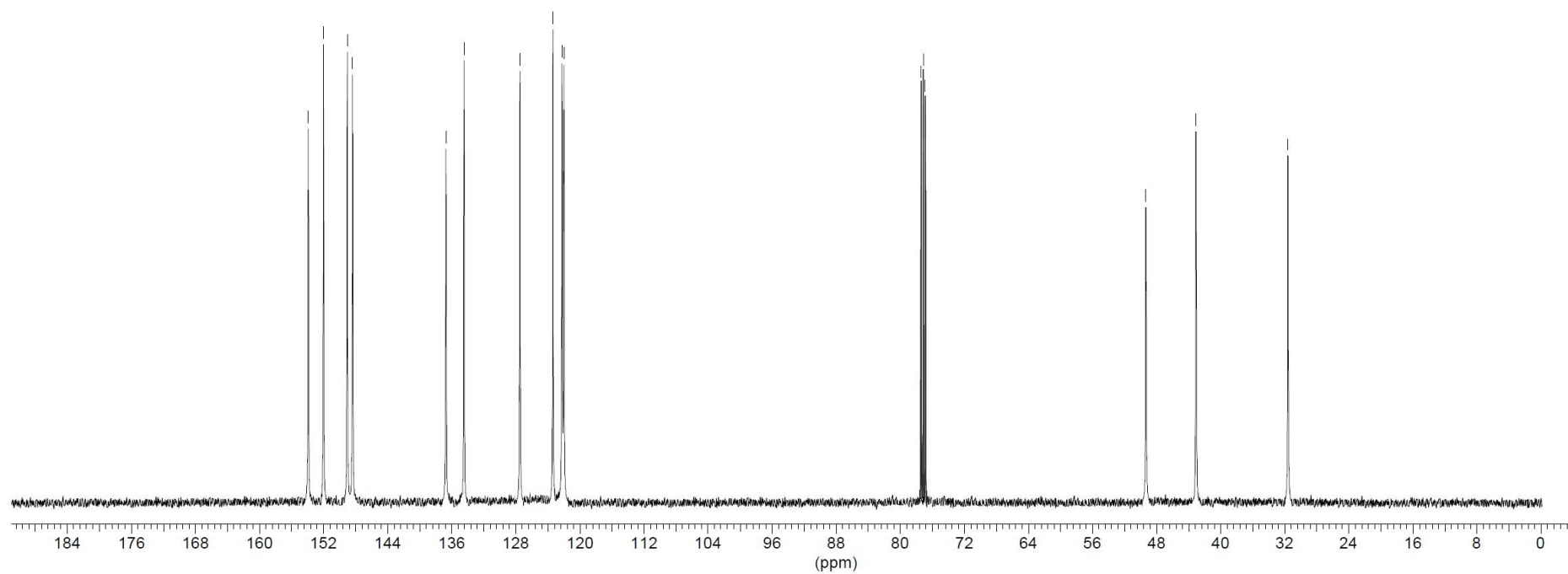
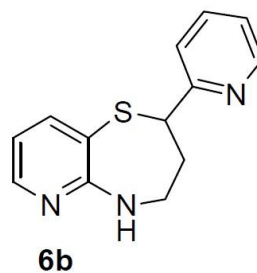
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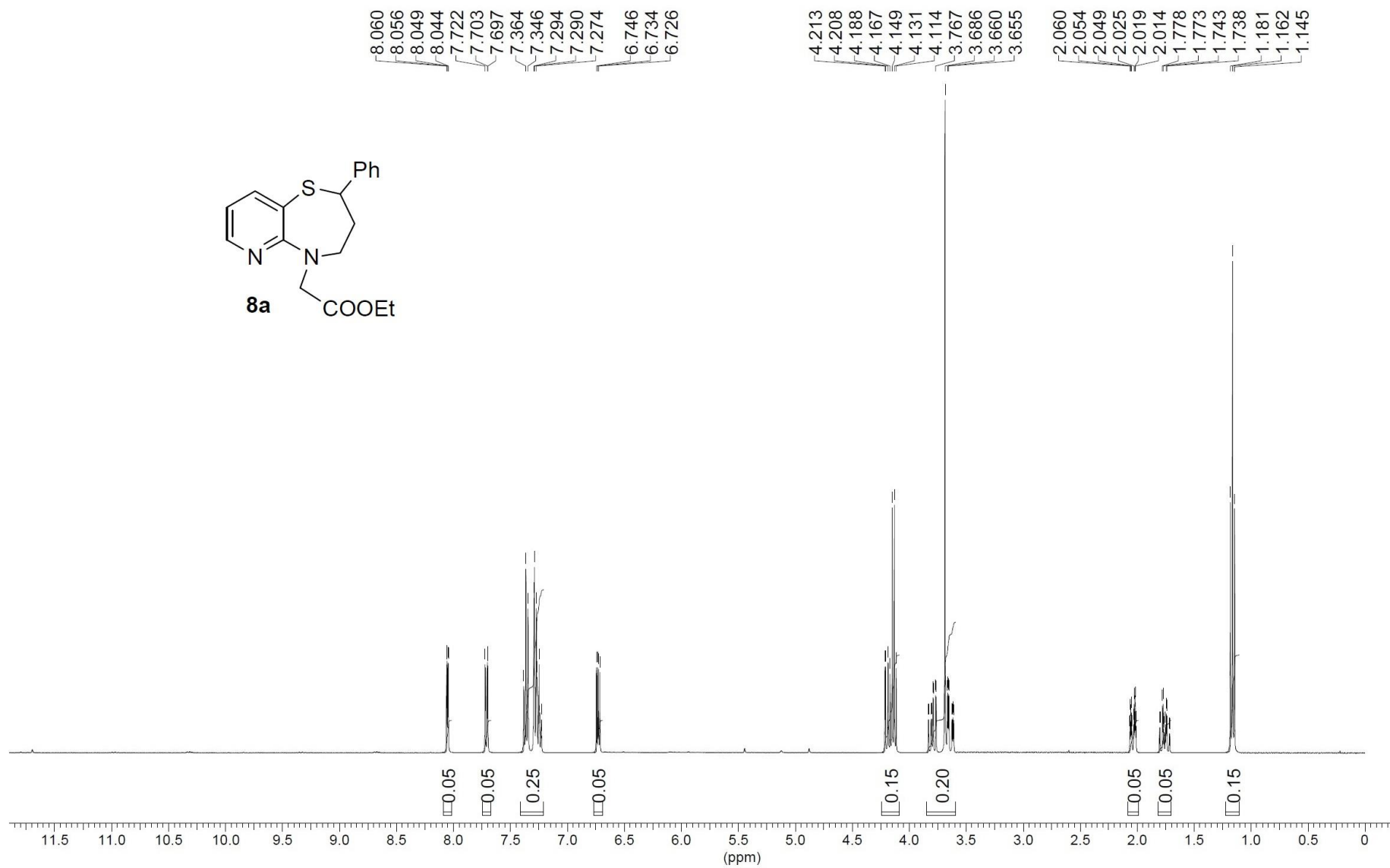
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122.23
122.00

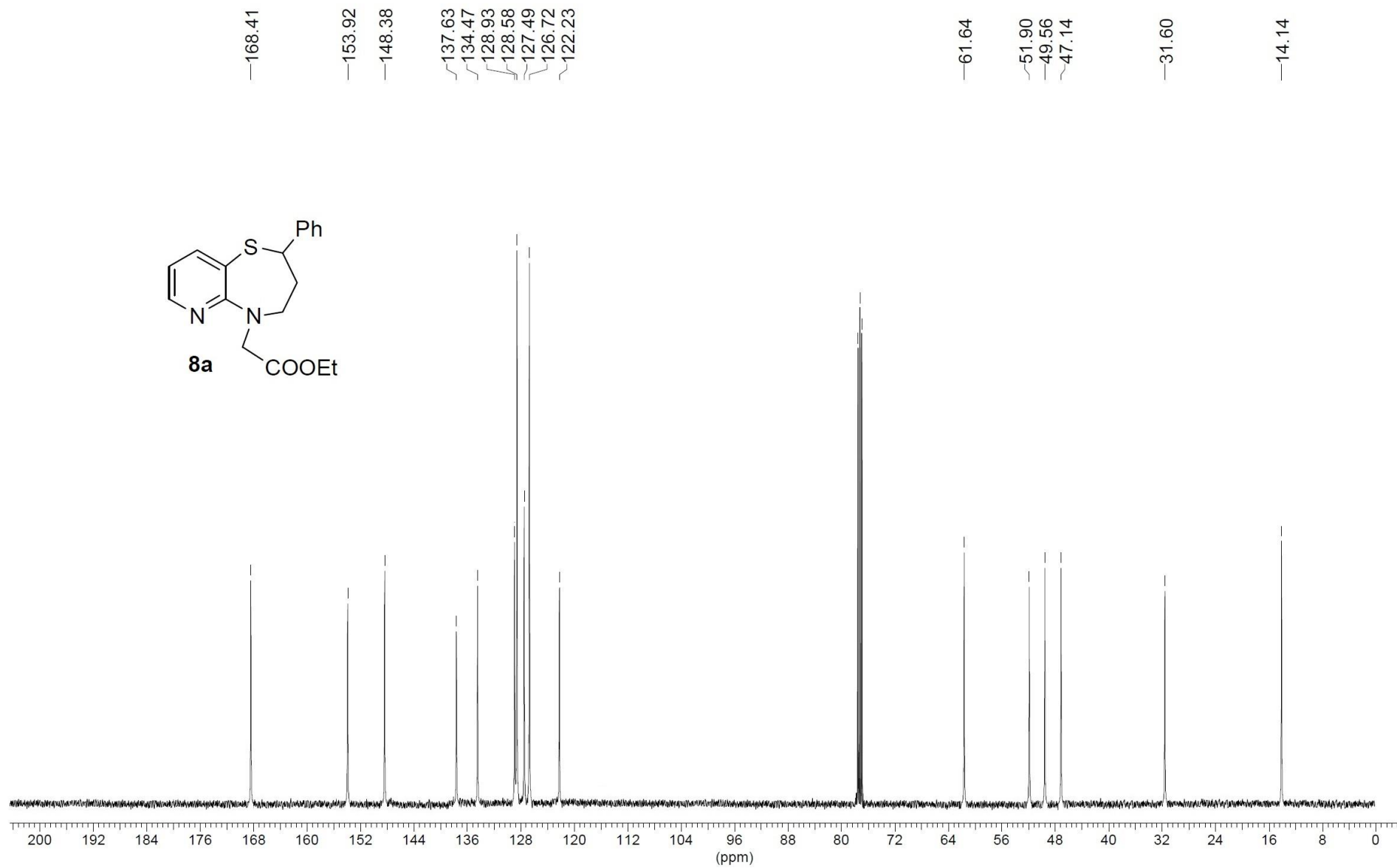
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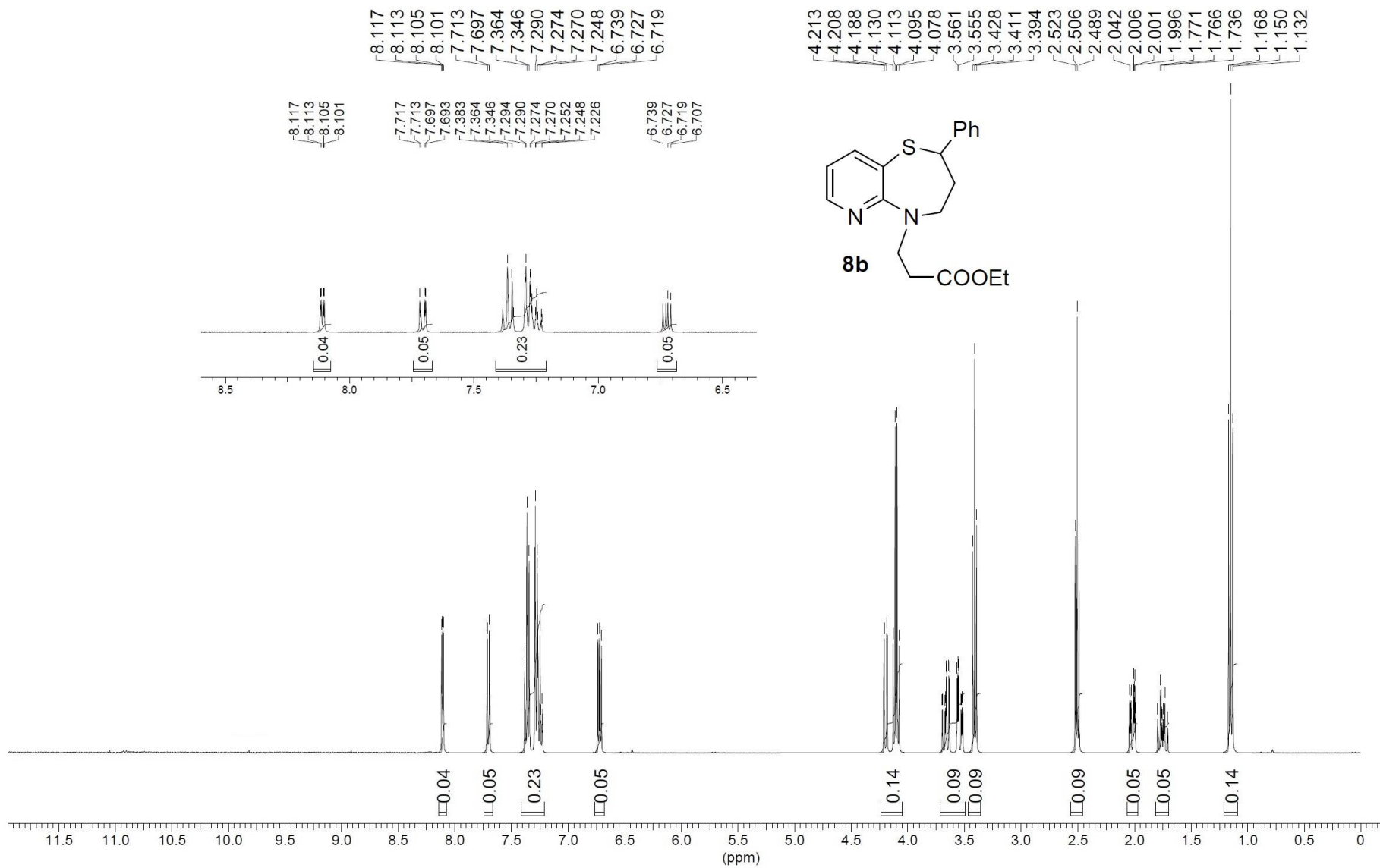
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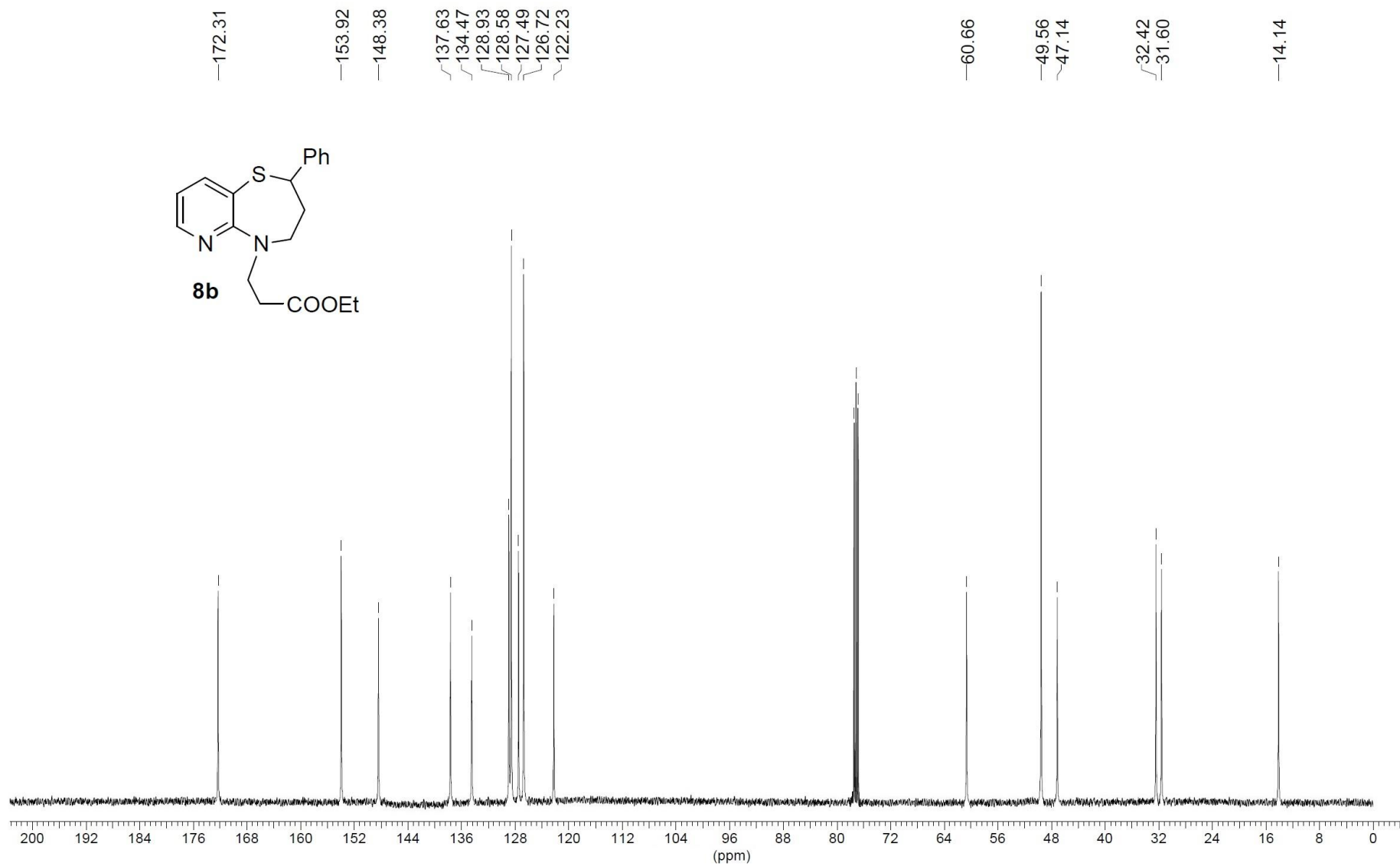
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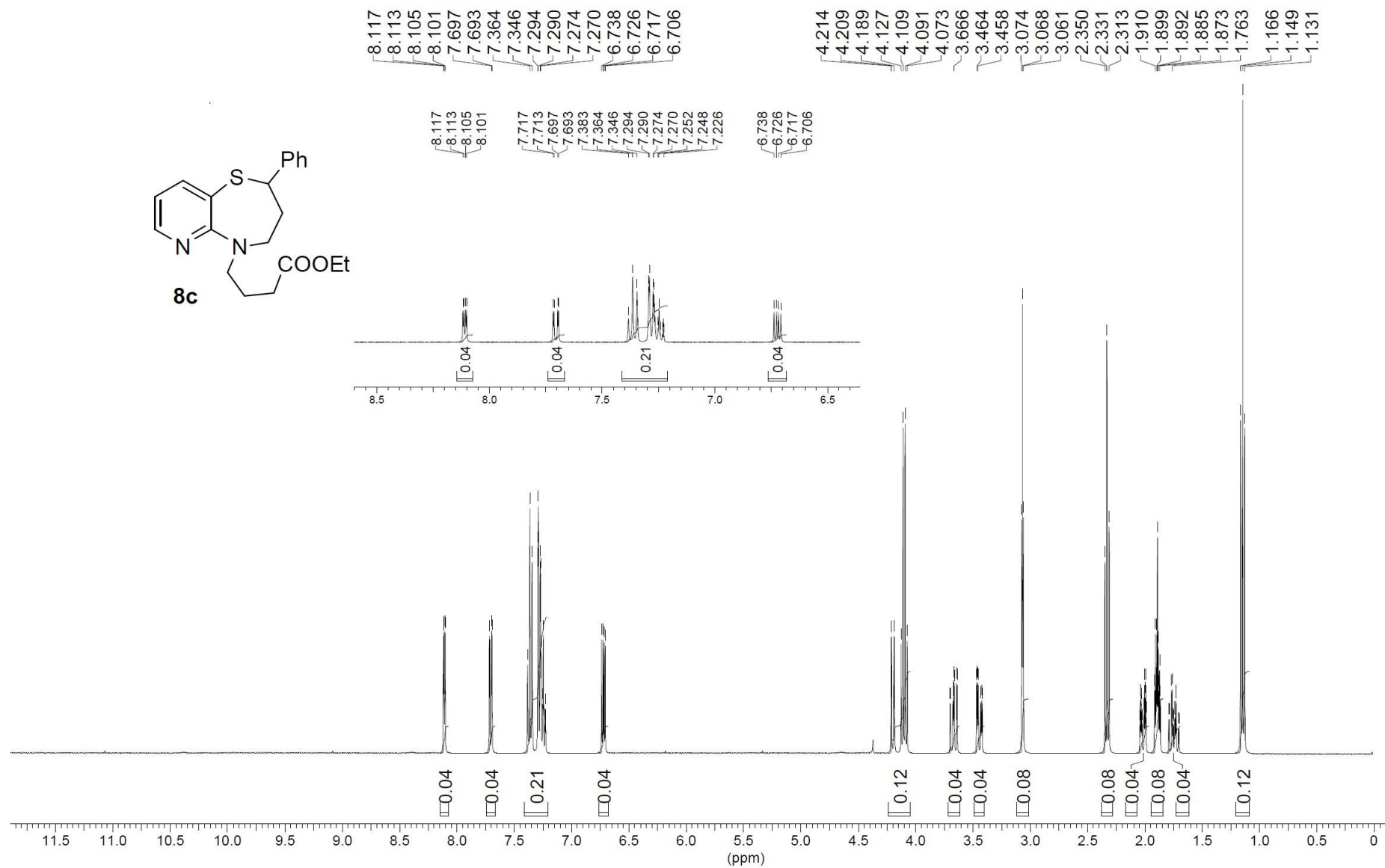


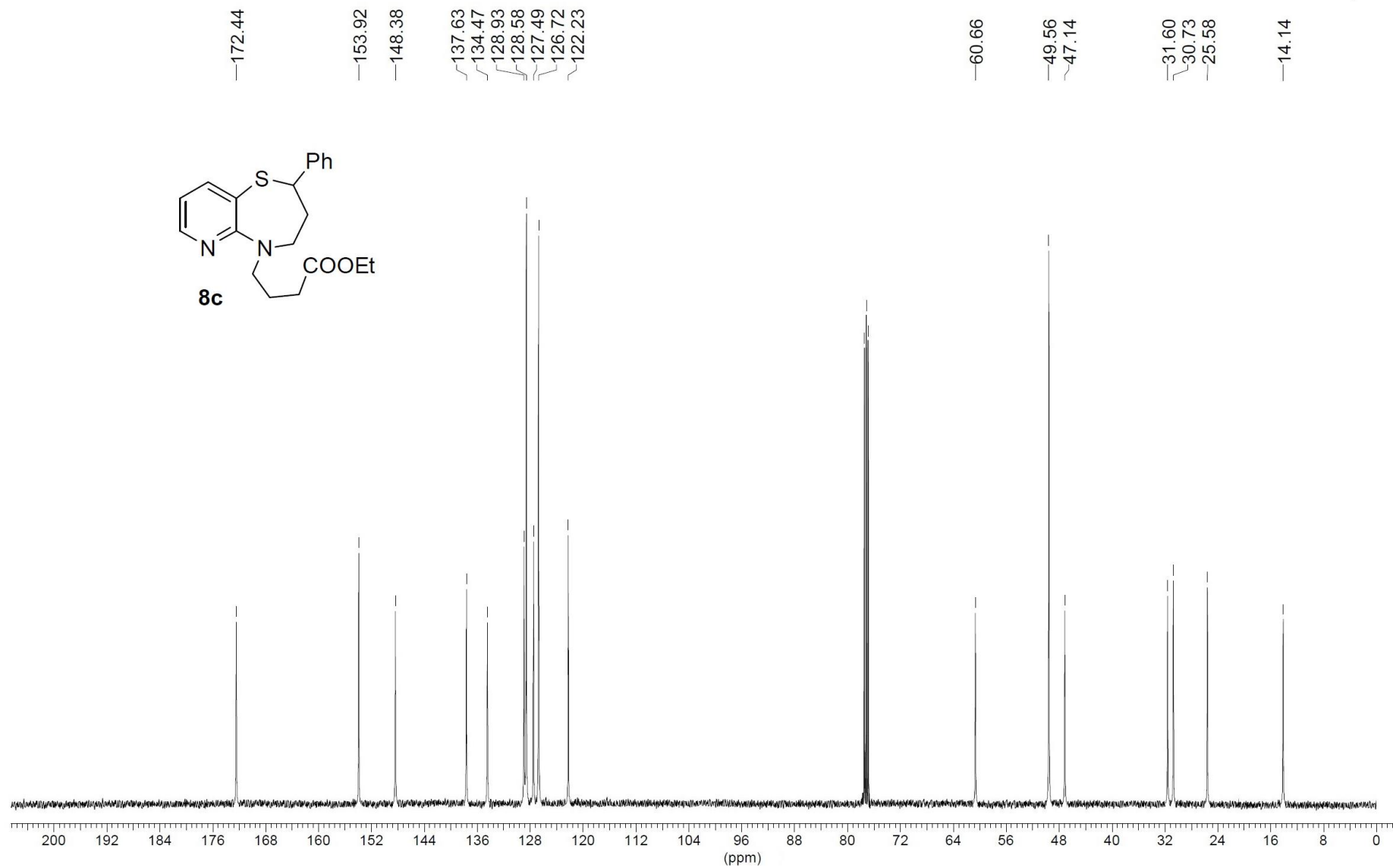


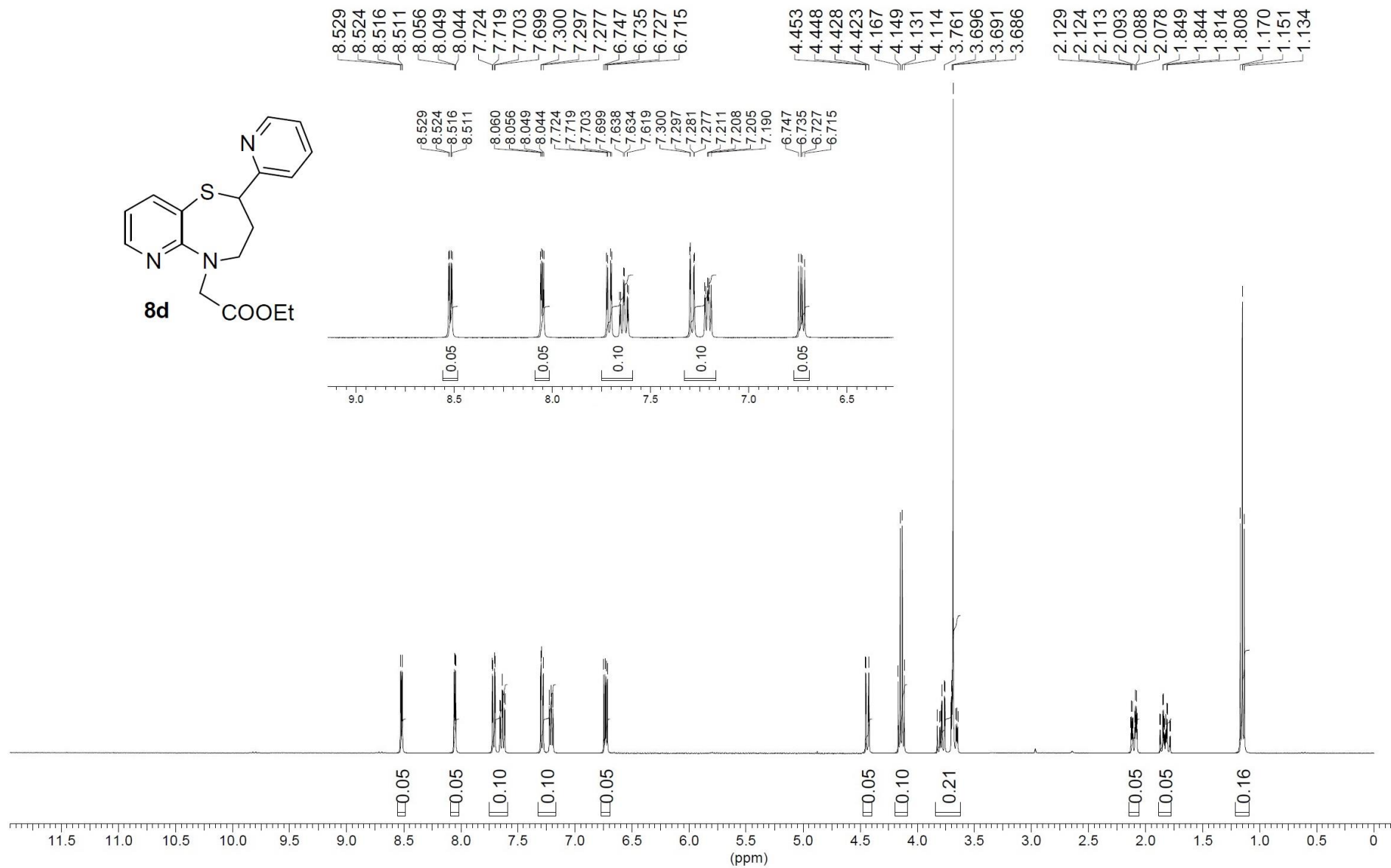
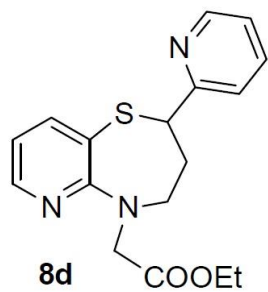












—168.41
—153.92
—152.02
—149.04
—148.38
—136.72
—134.47
—127.49
—123.38
—122.23
—122.00

—61.64
—51.90
—49.56
—49.32

—31.60

—14.14

