

Metal-Free Late-Stage C(sp²)–H Functionalization of *N*-Aryl Amines with Various Sodium Salts

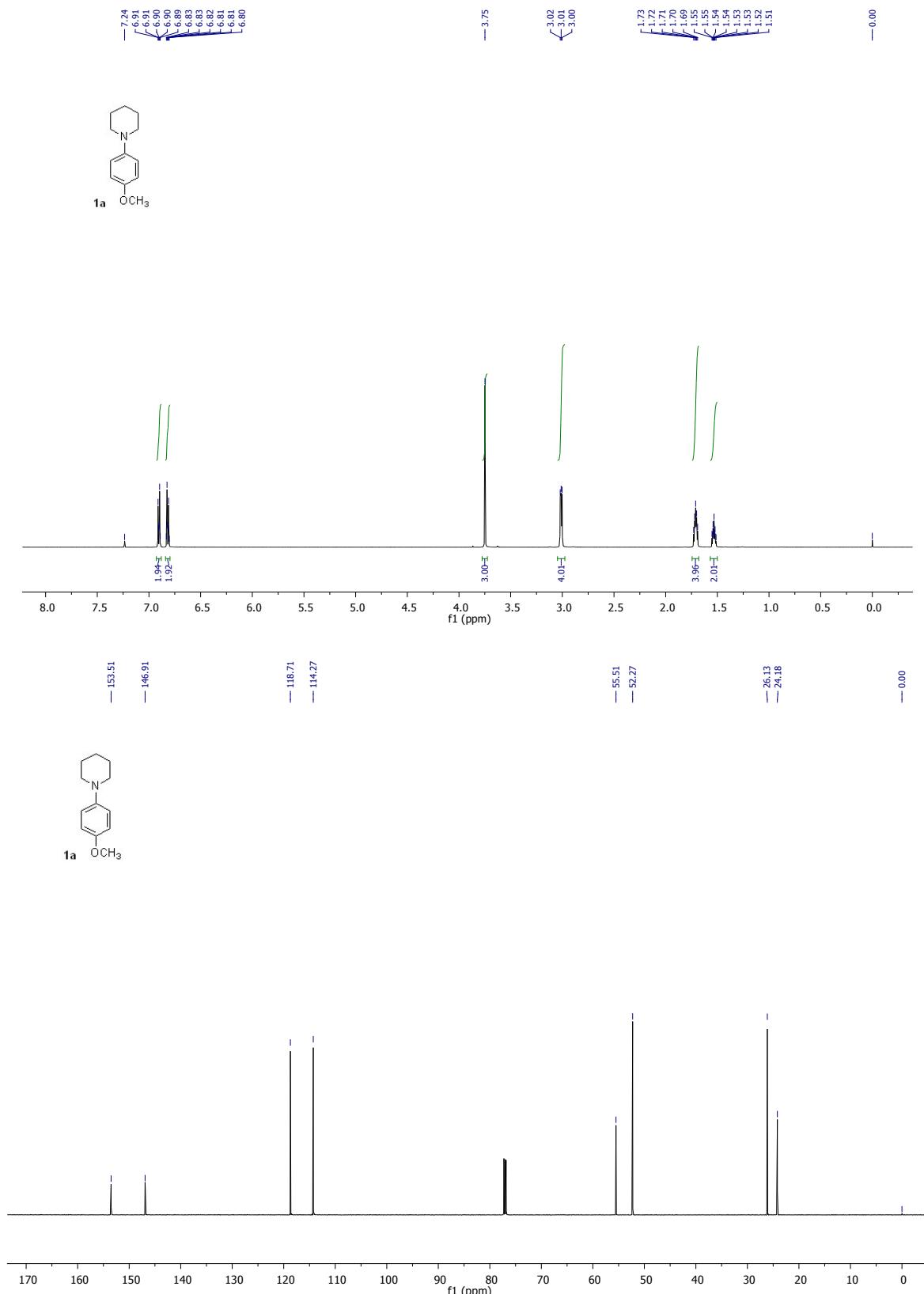
*Chandrashekar Mudithanapelli and Mi-hyun Kim**

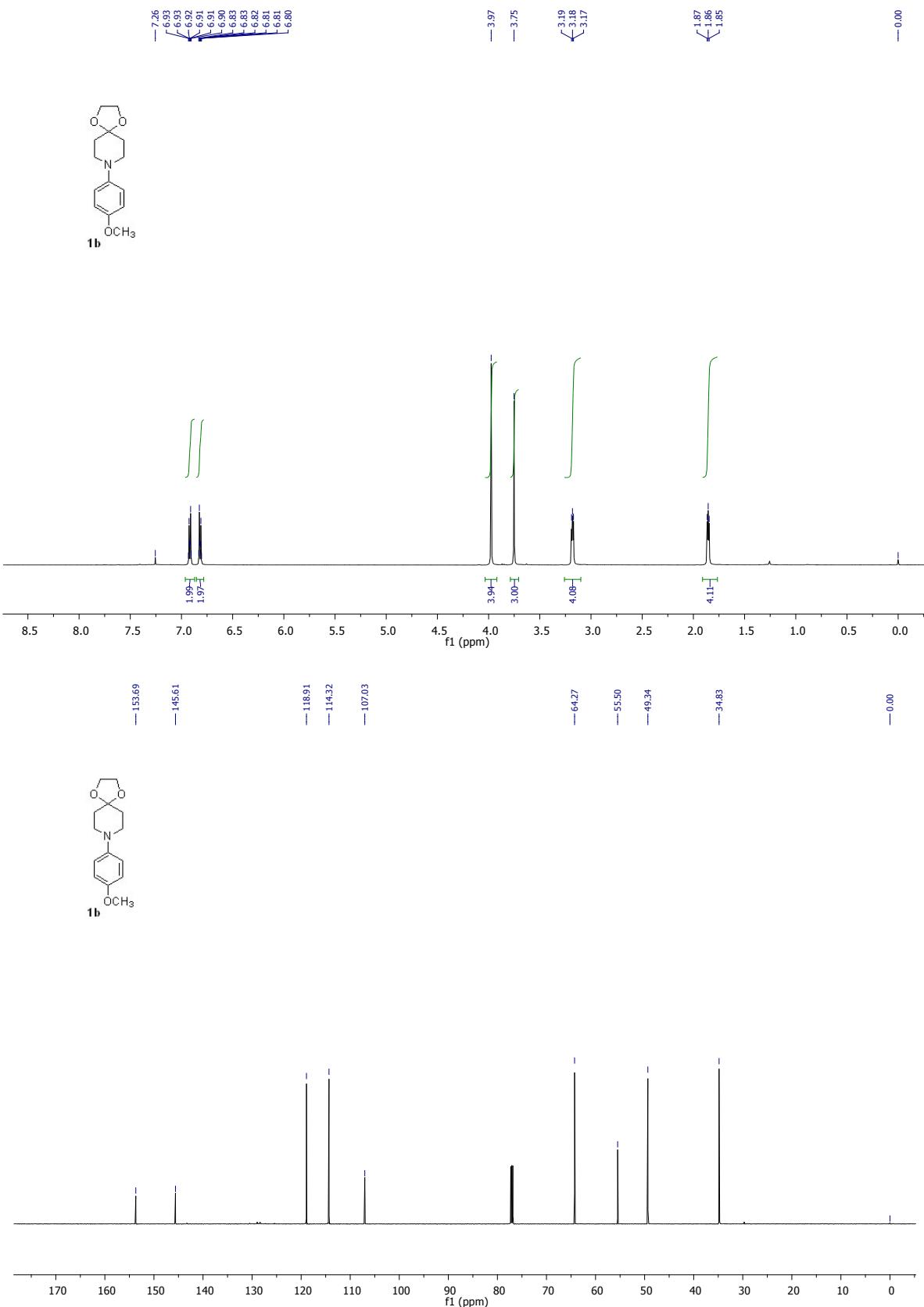
Gachon Institute of Pharmaceutical Science & Department of Pharmacy, College of Pharmacy, Gachon University,
191 Hambakmoeiro, Yeonsu-gu, Incheon 21936, Republic of Korea.

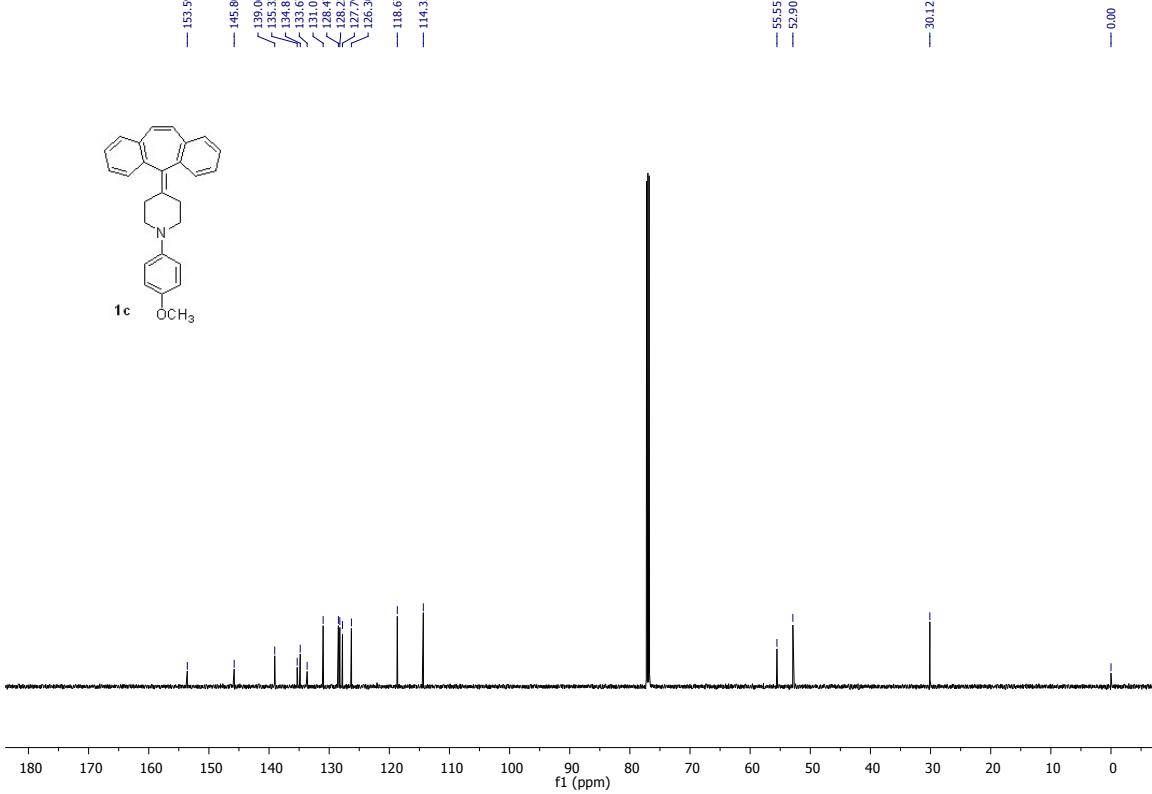
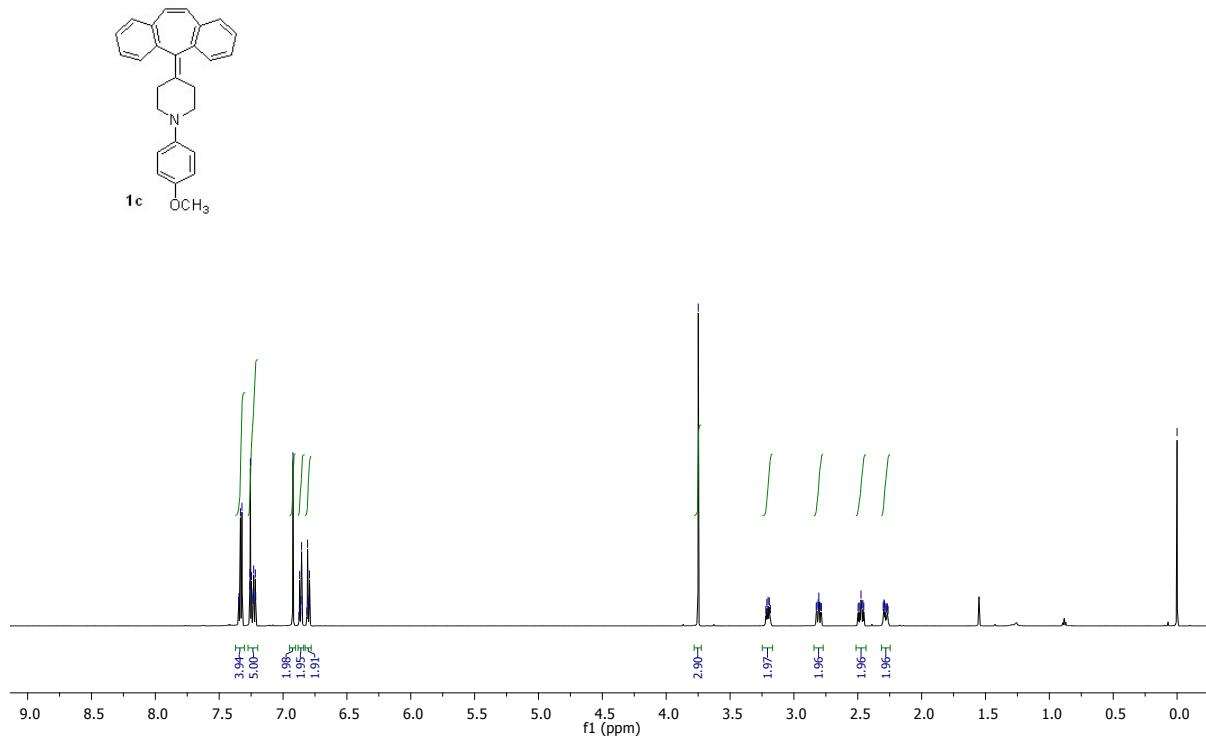
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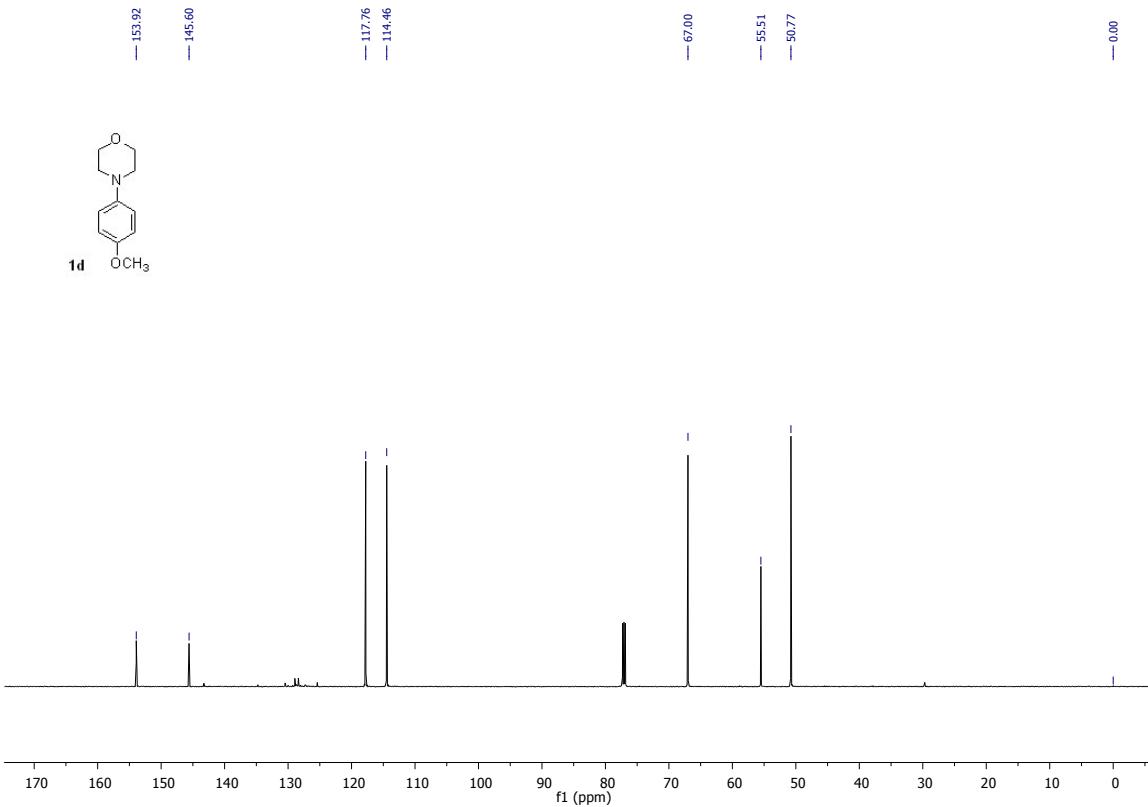
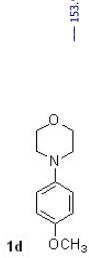
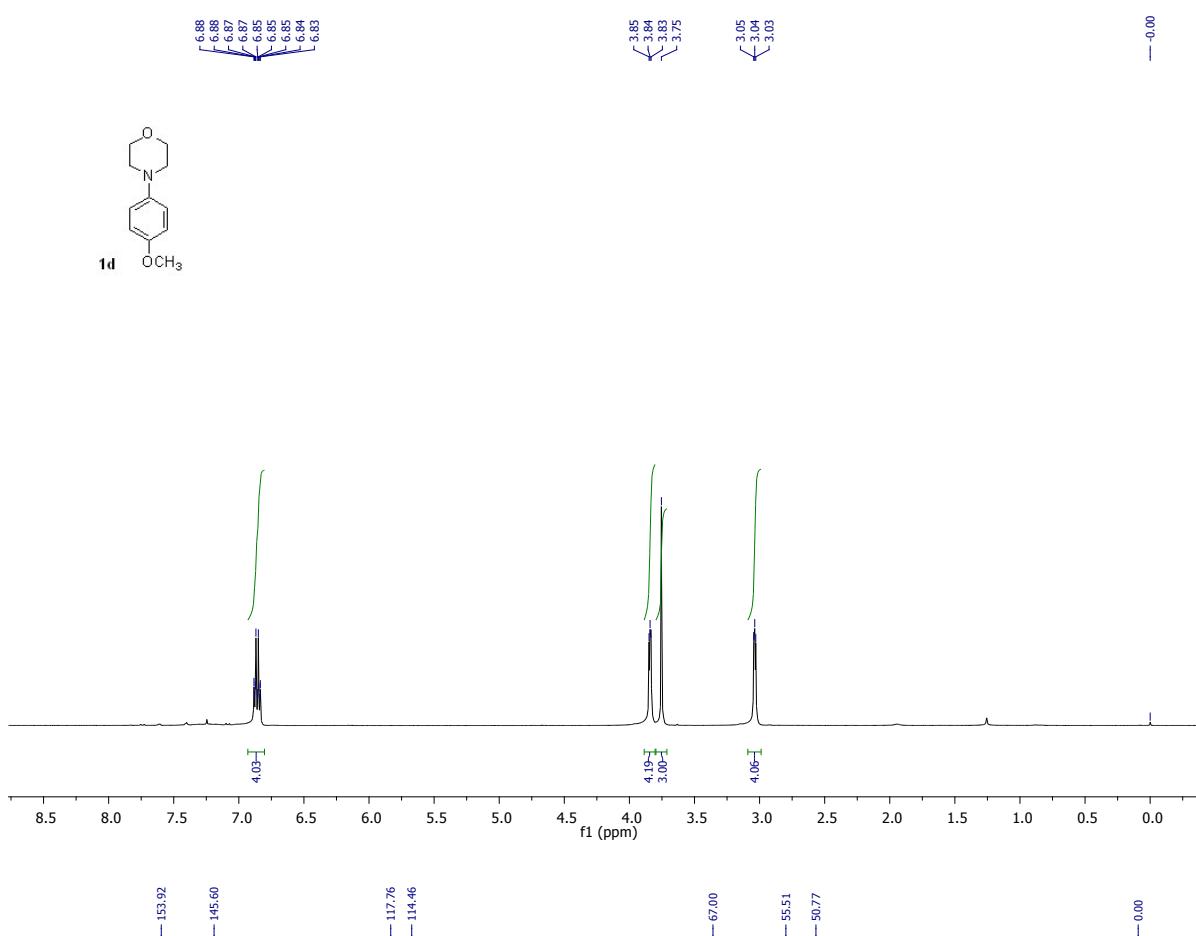
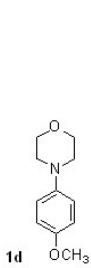
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II.	Copies of ¹ H and ¹³ C NMR spectra of products-----	S22-S72

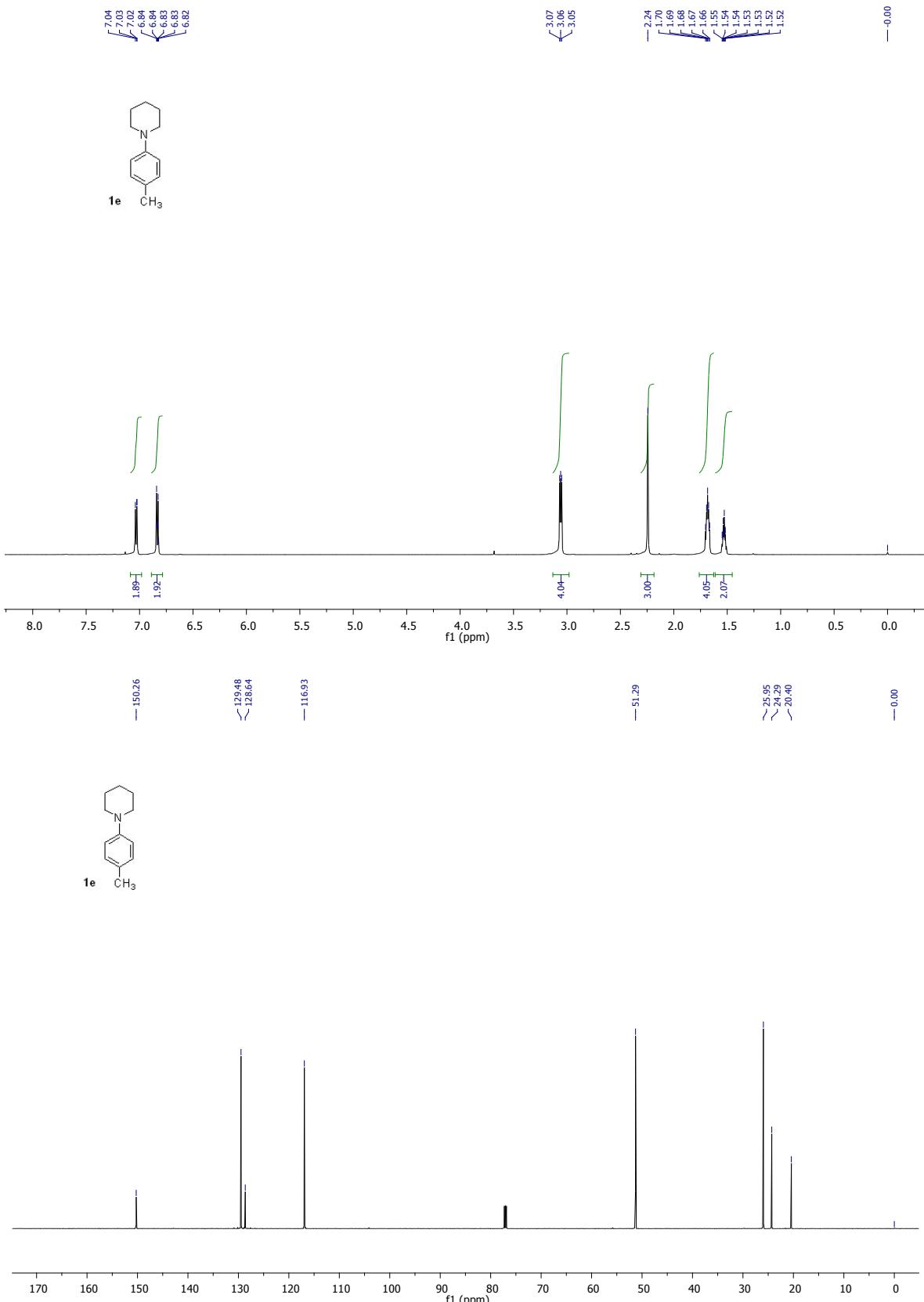
¹H and ¹³C NMR spectra of substrates.

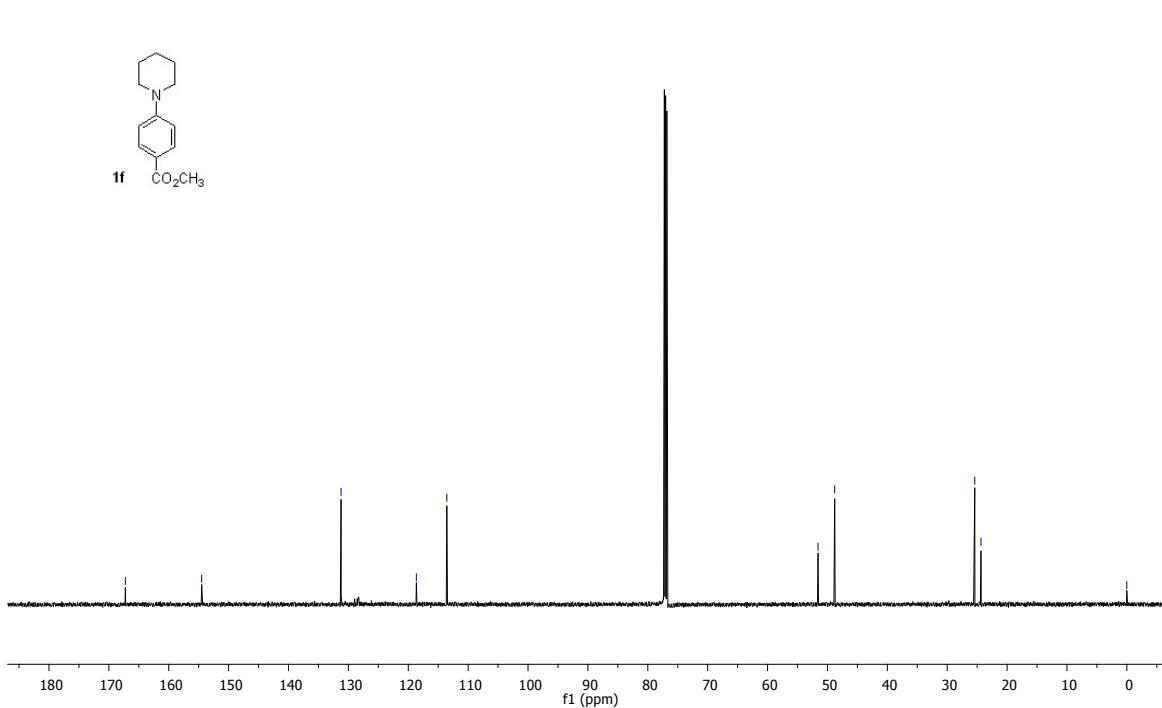
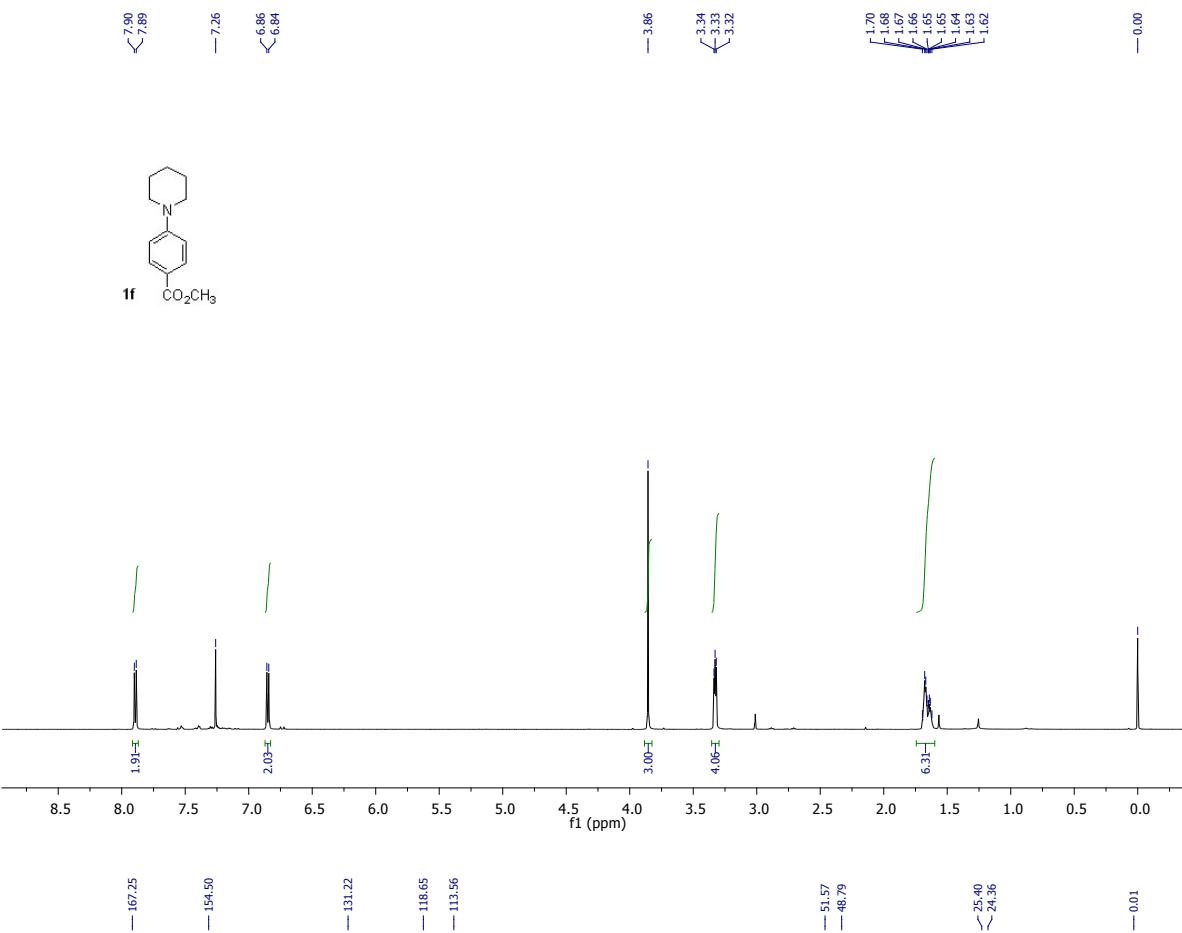


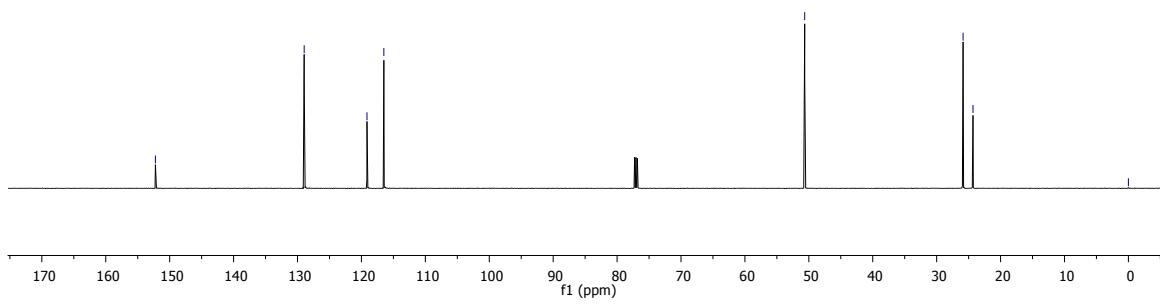
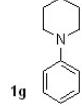
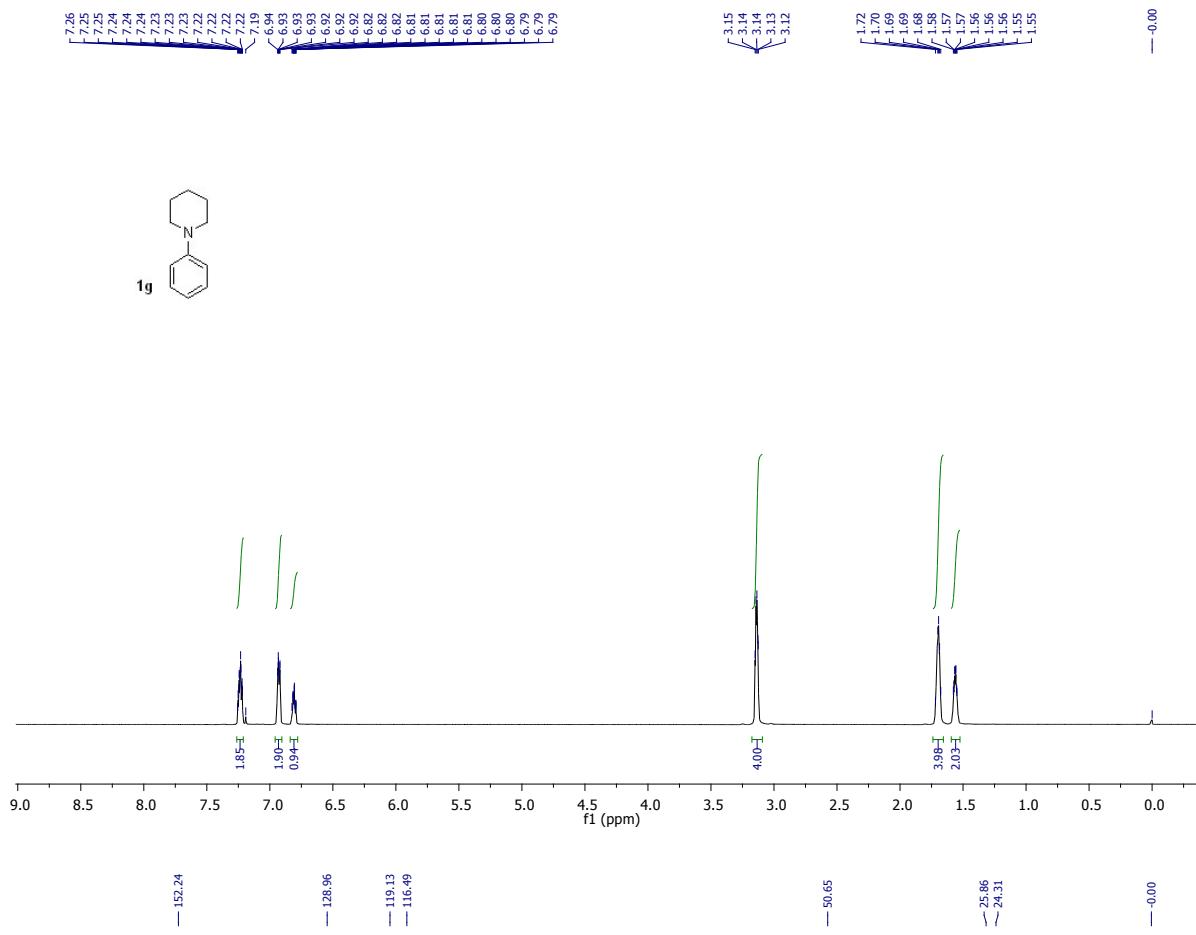


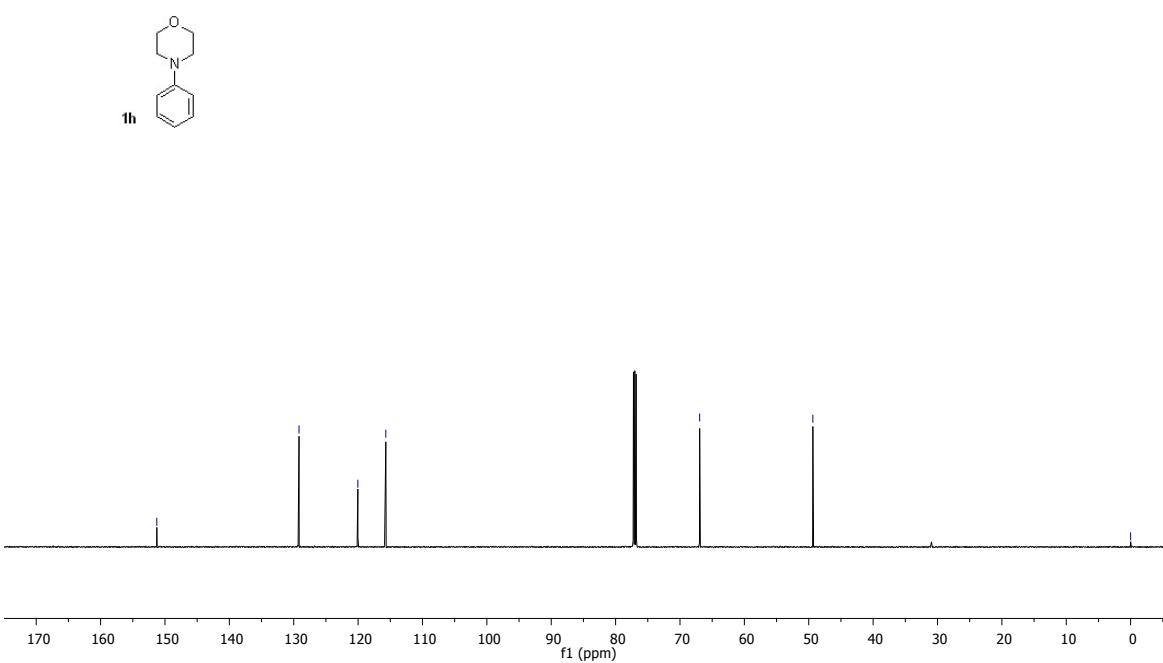
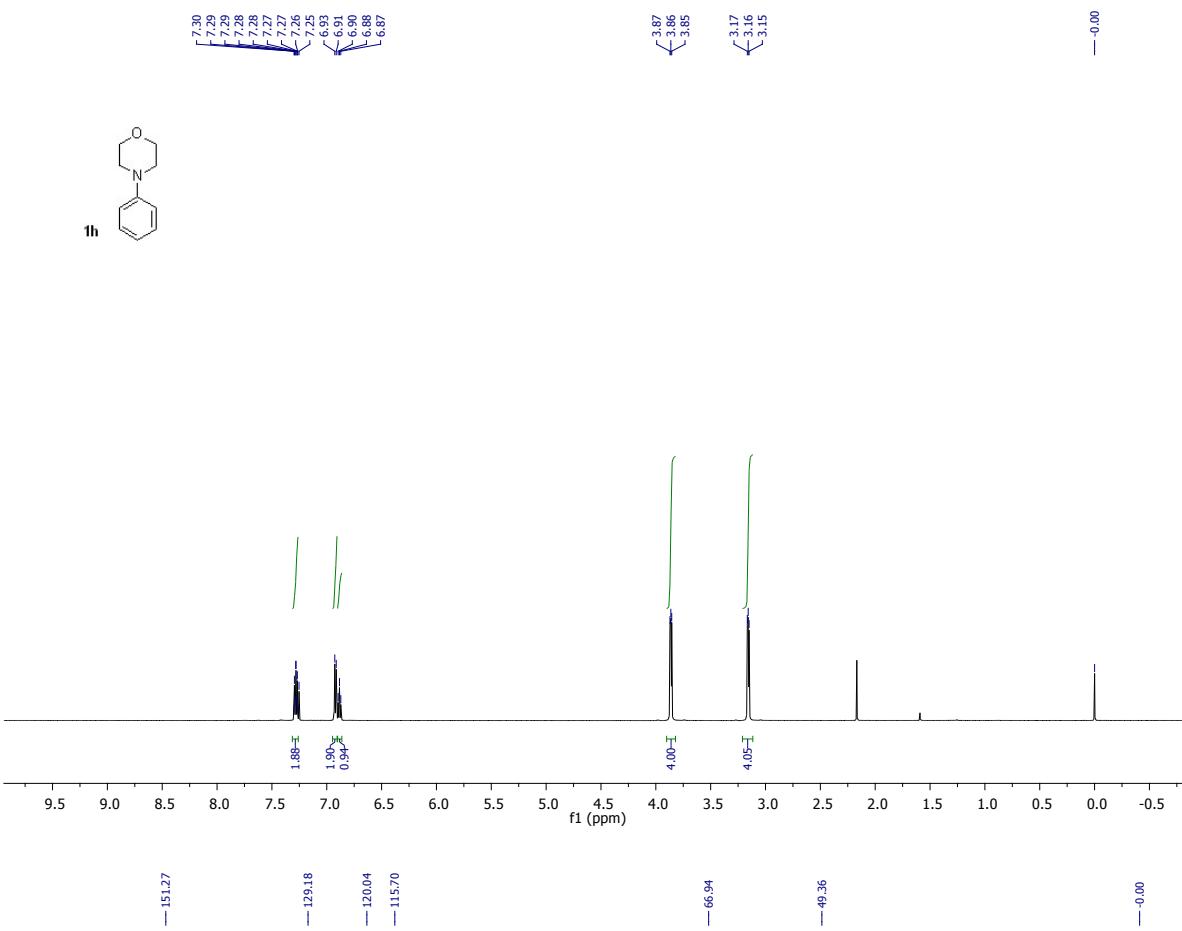


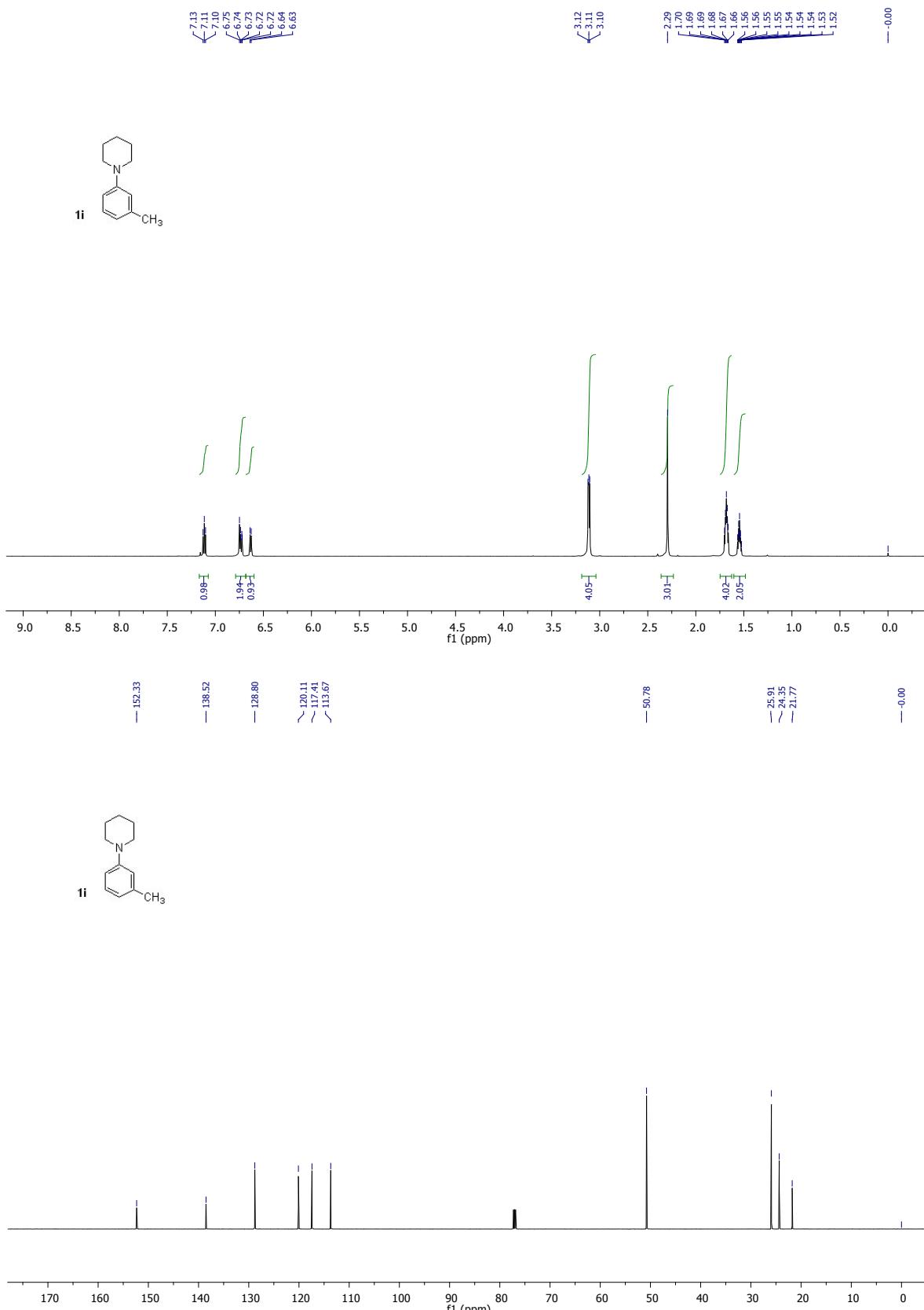


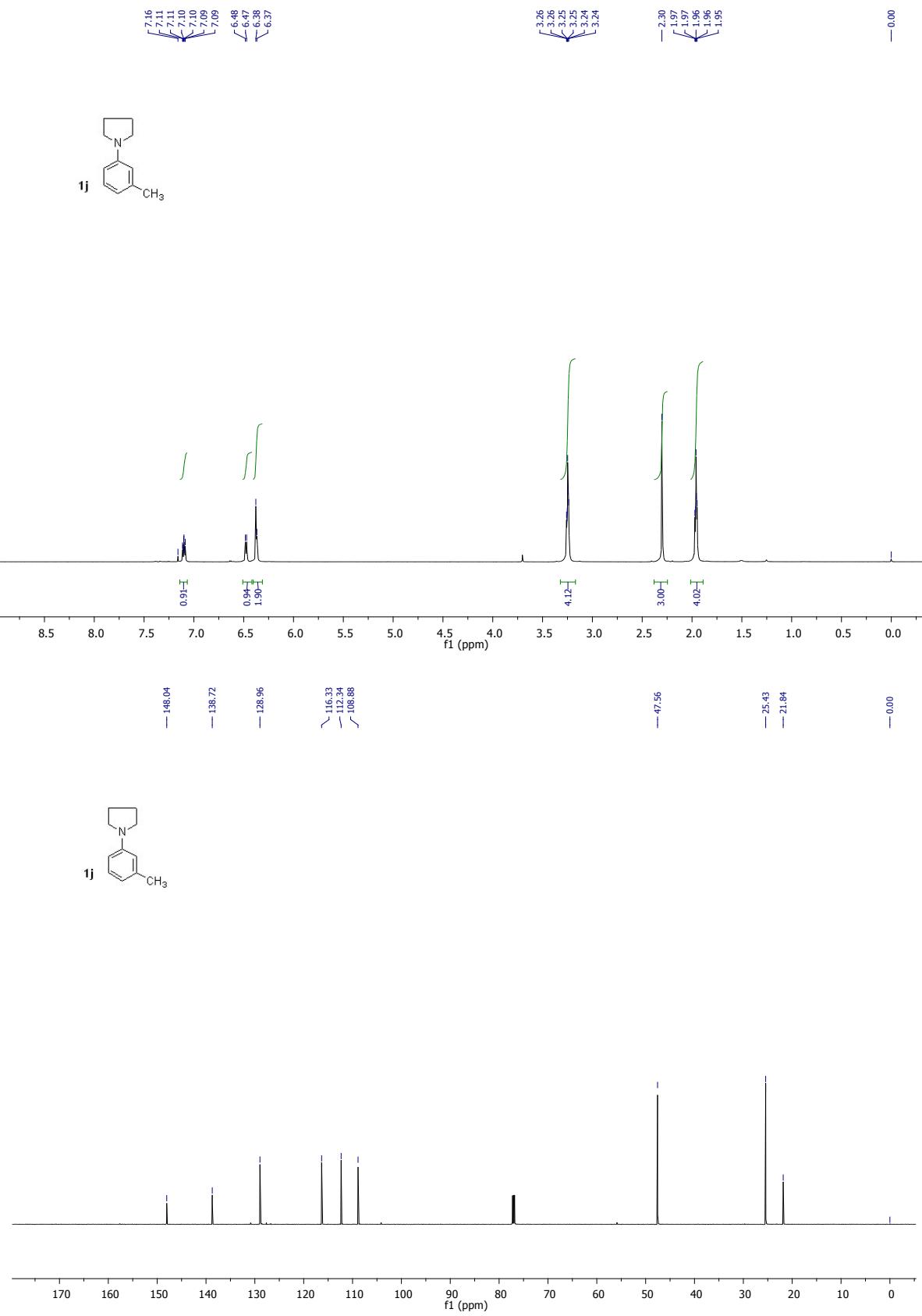


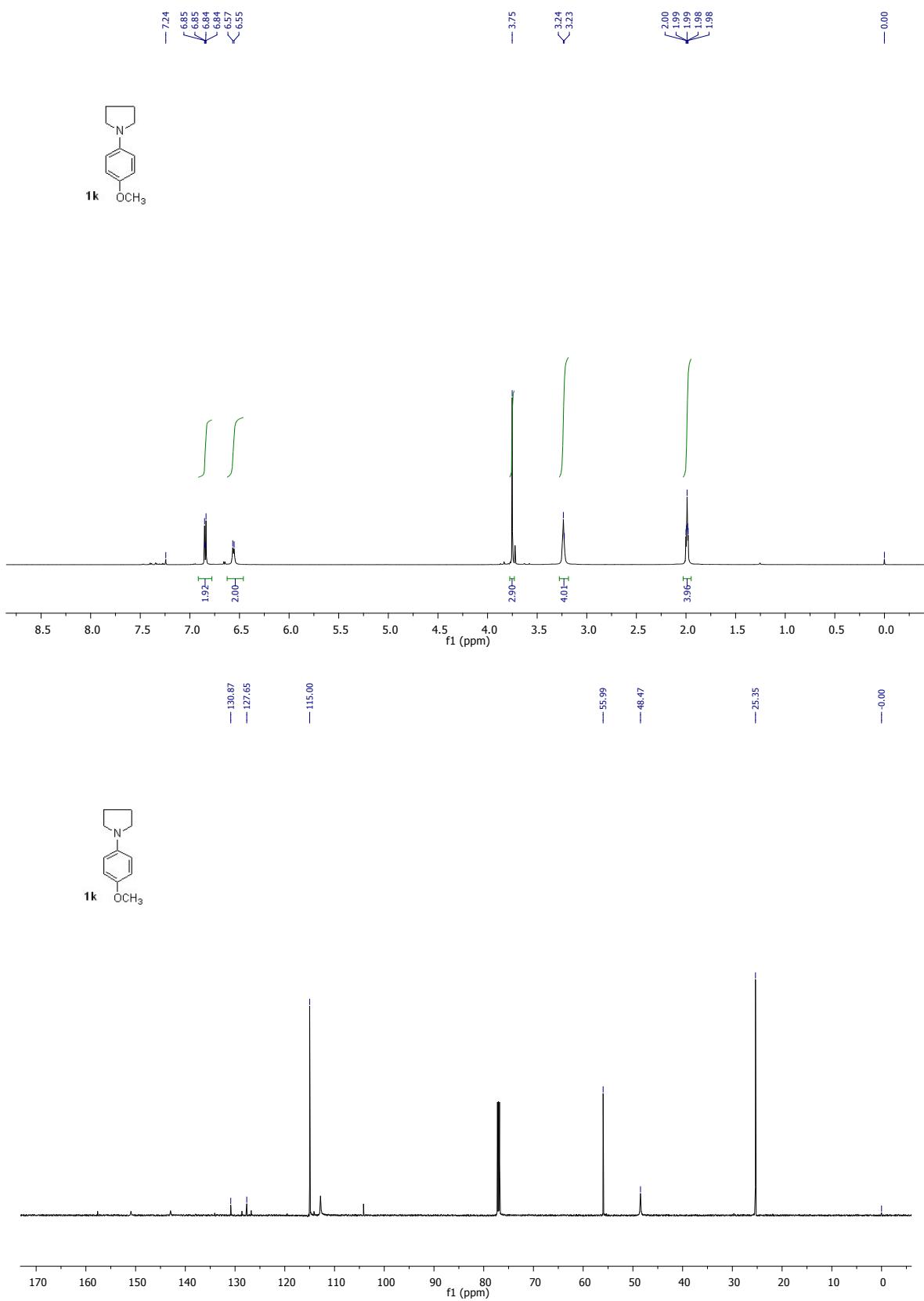


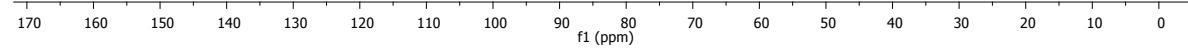
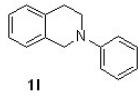
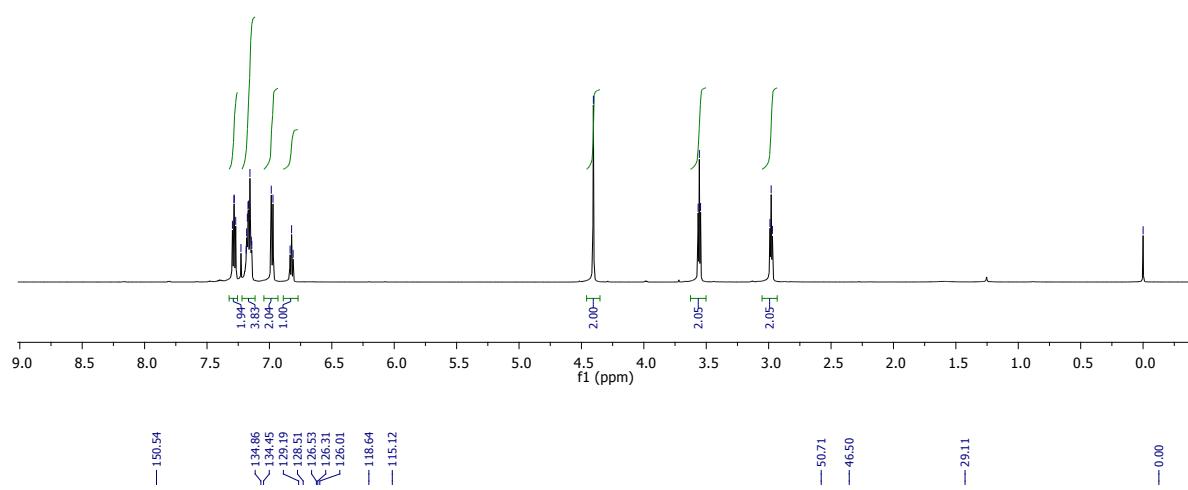




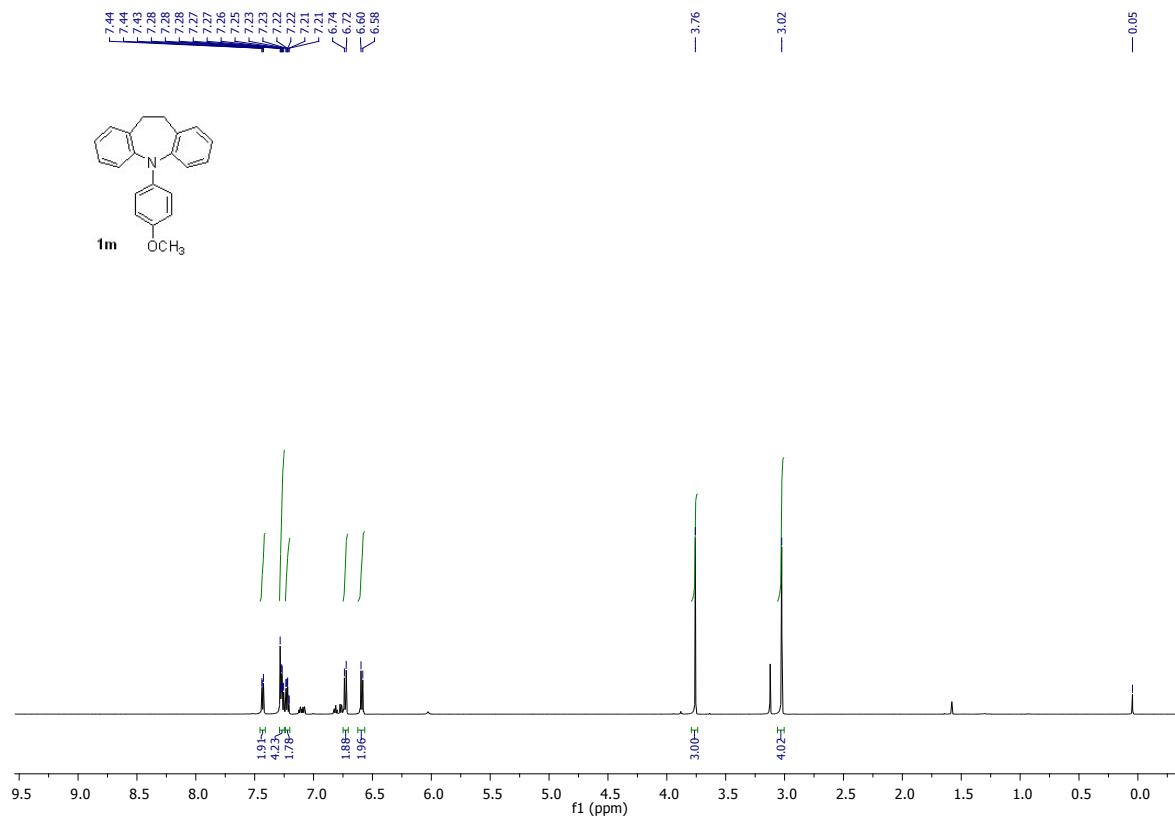
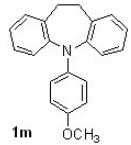




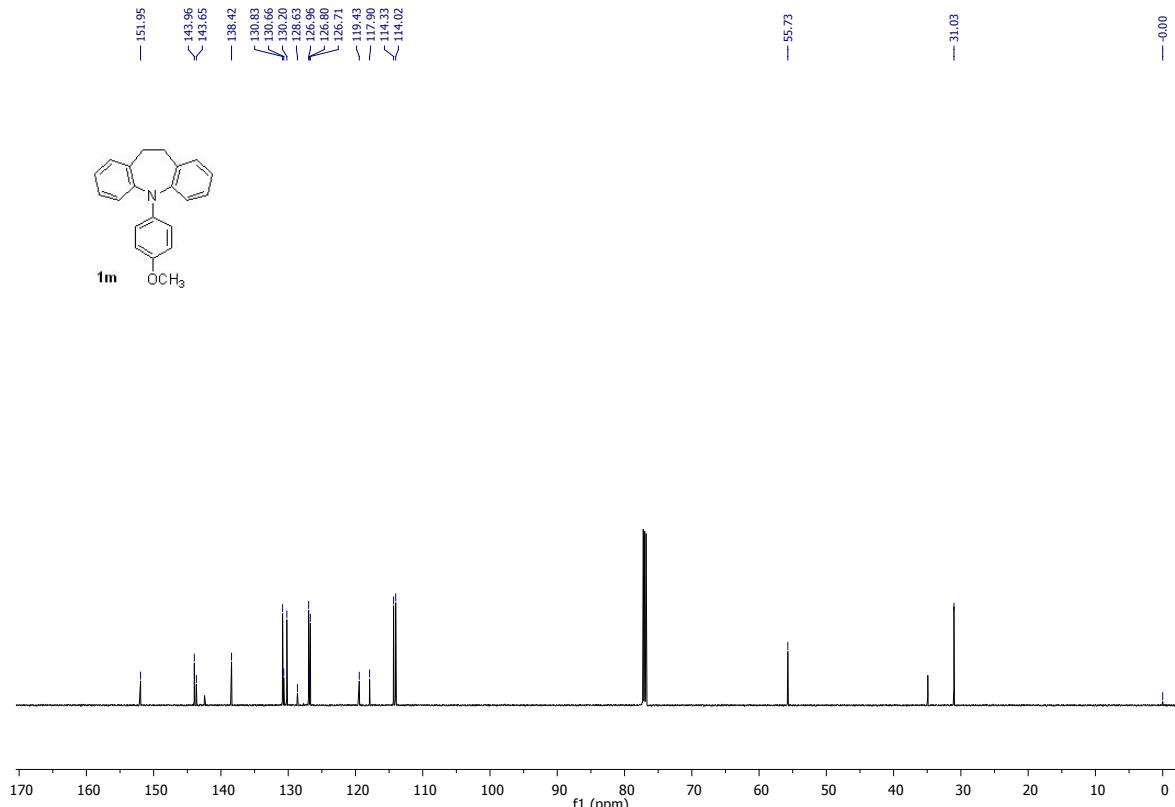
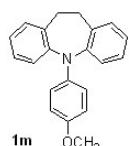


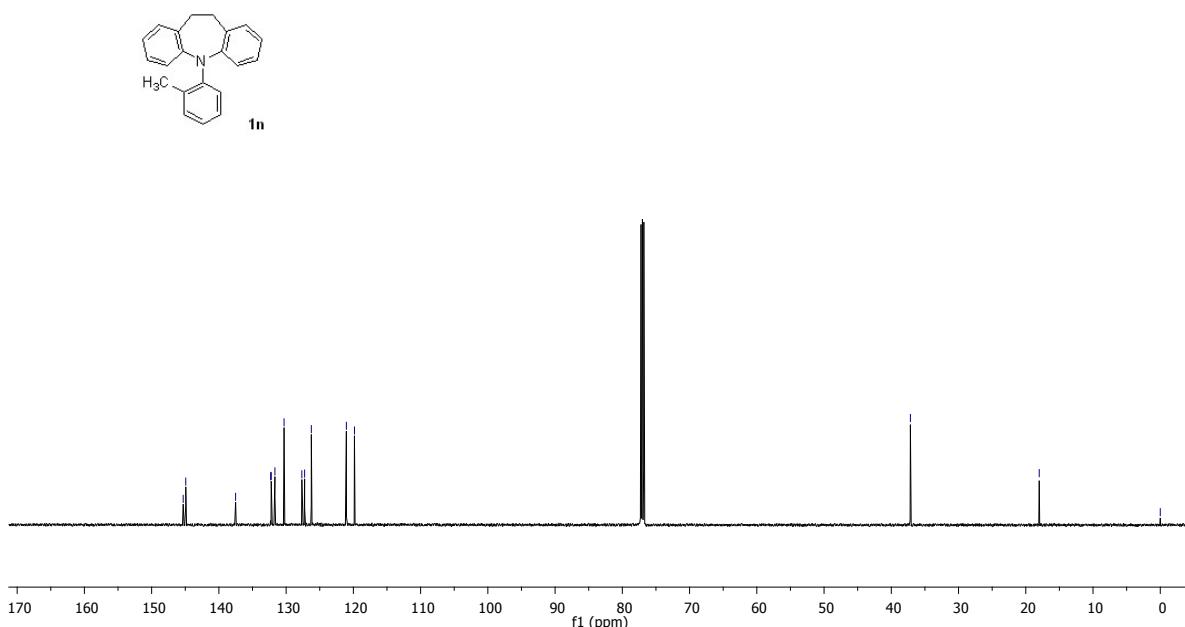
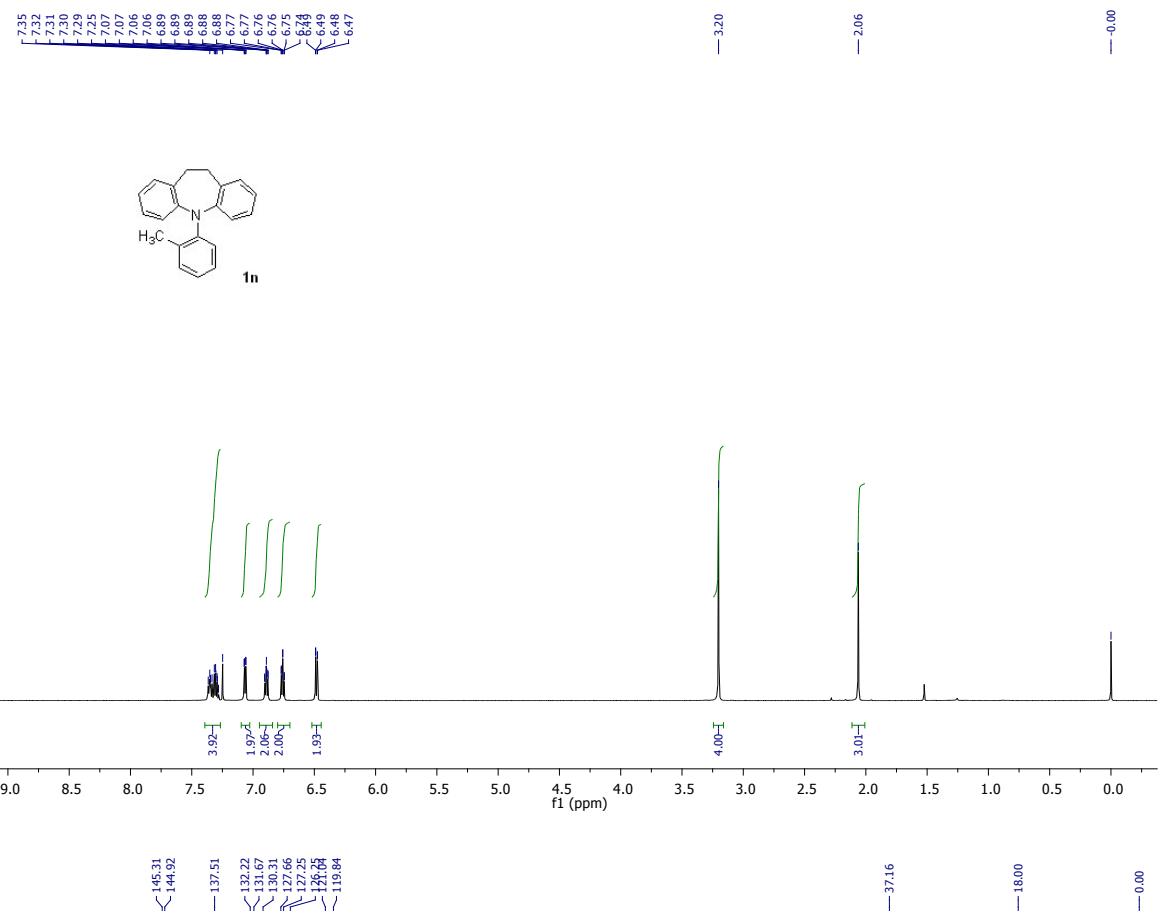


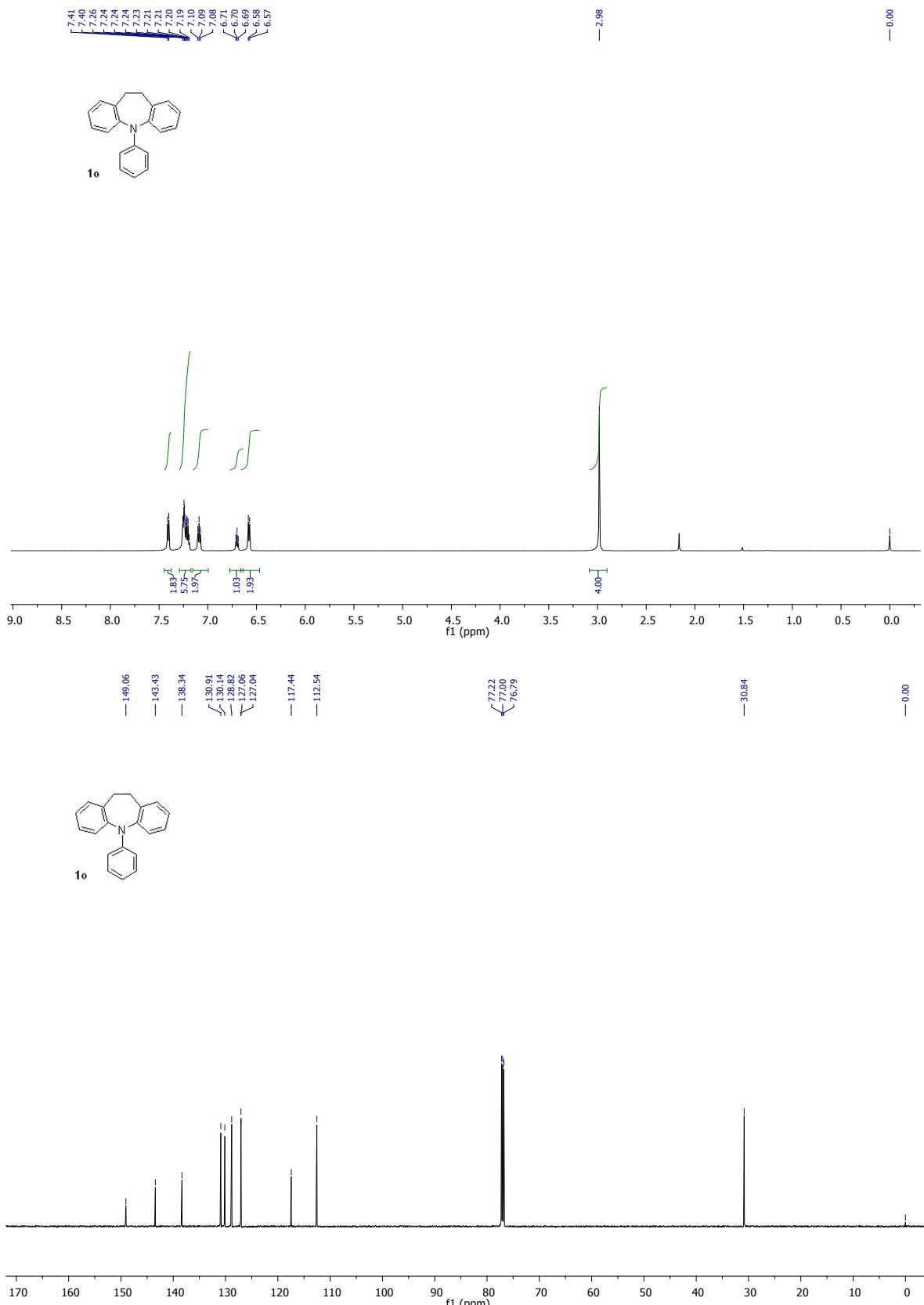
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 6.58

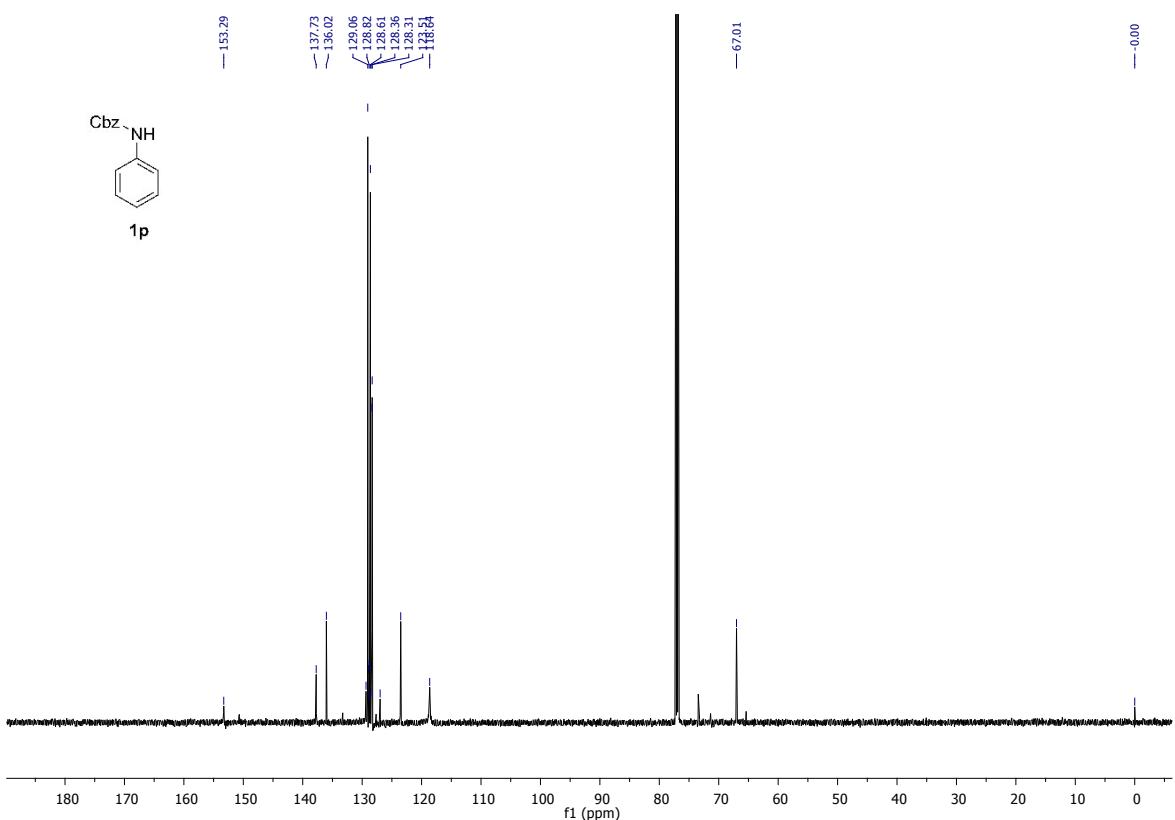
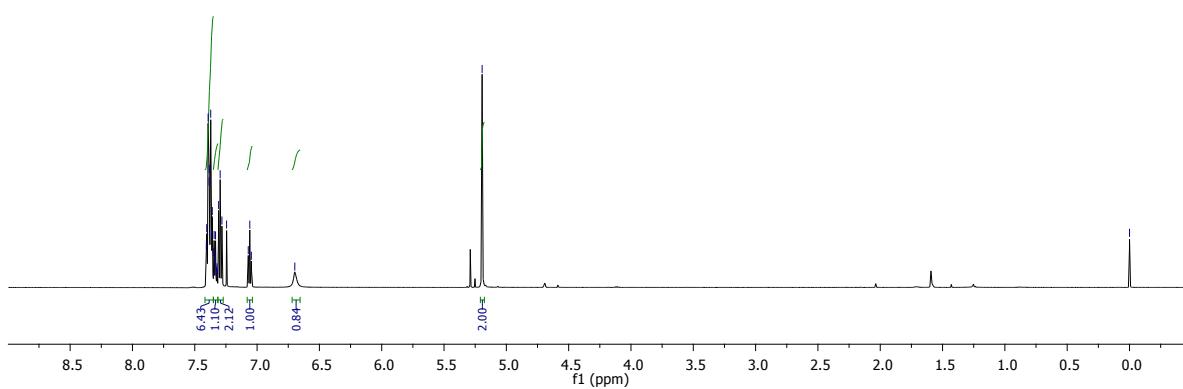


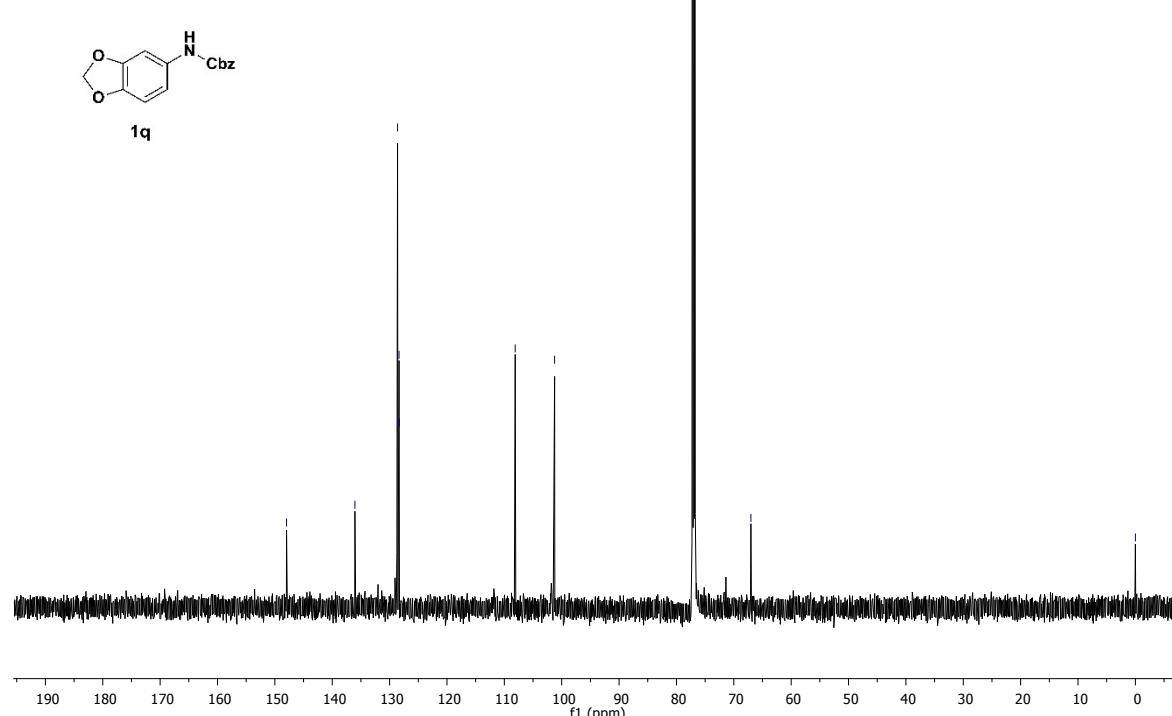
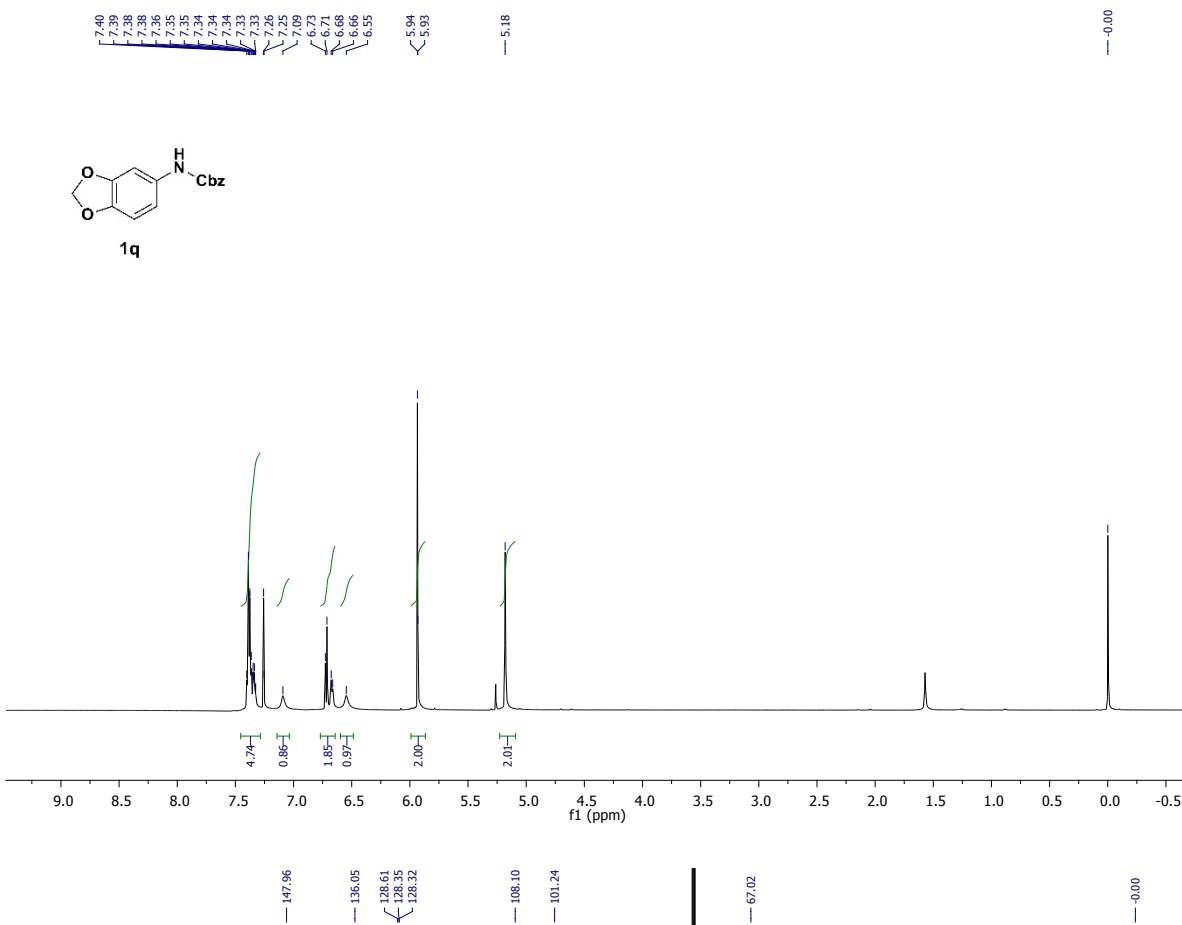
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 -114.02

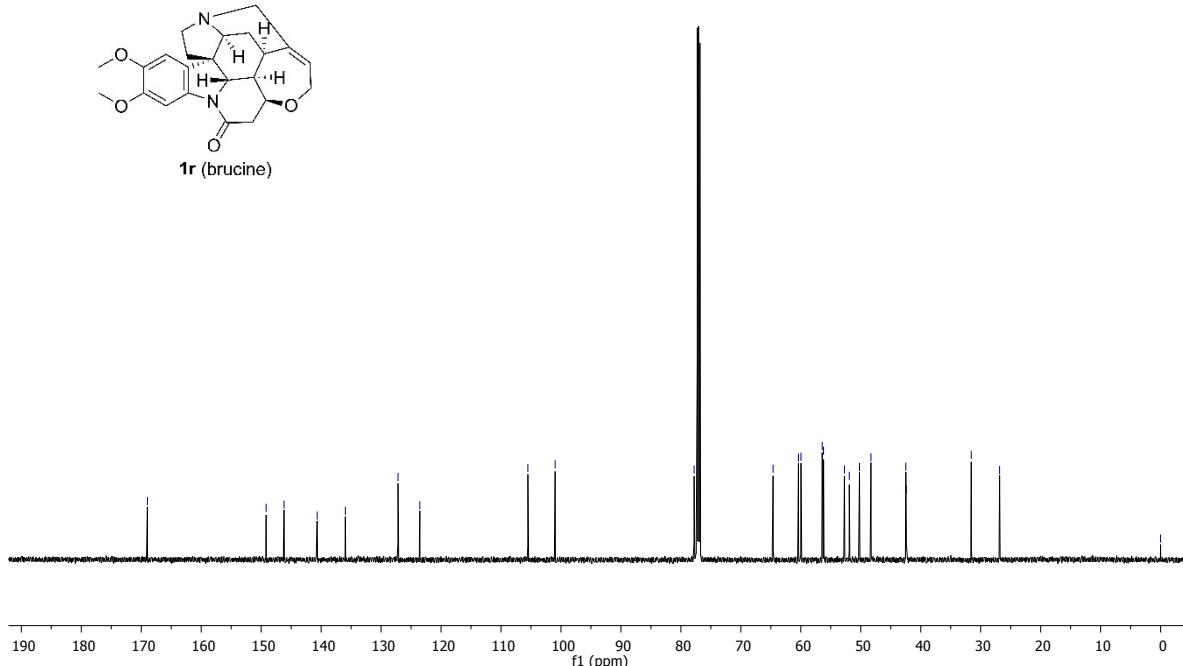
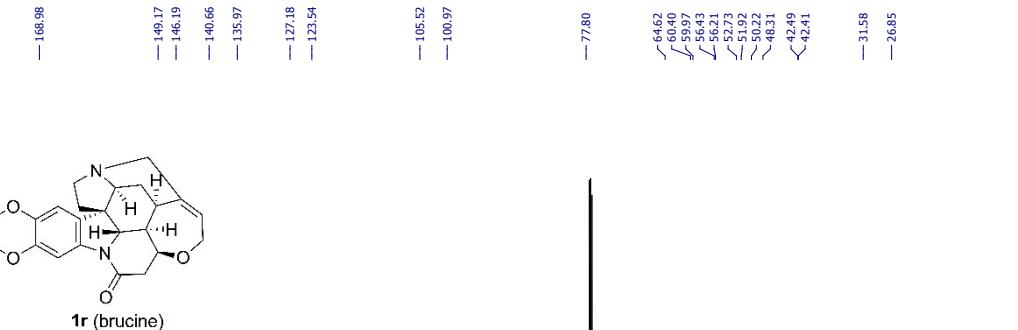
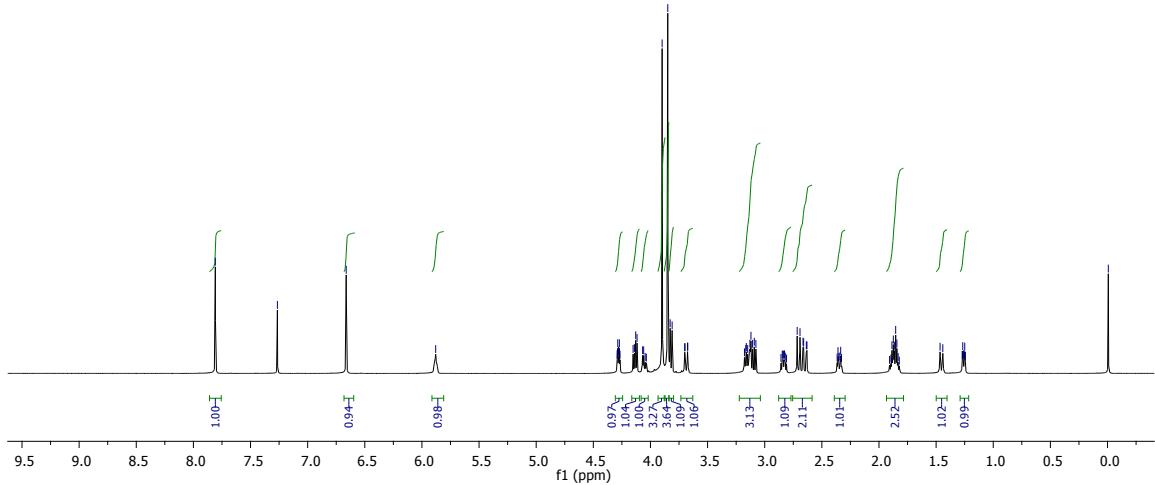
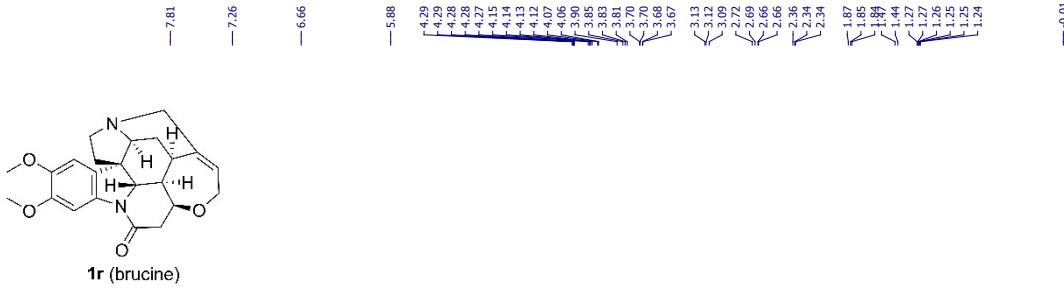


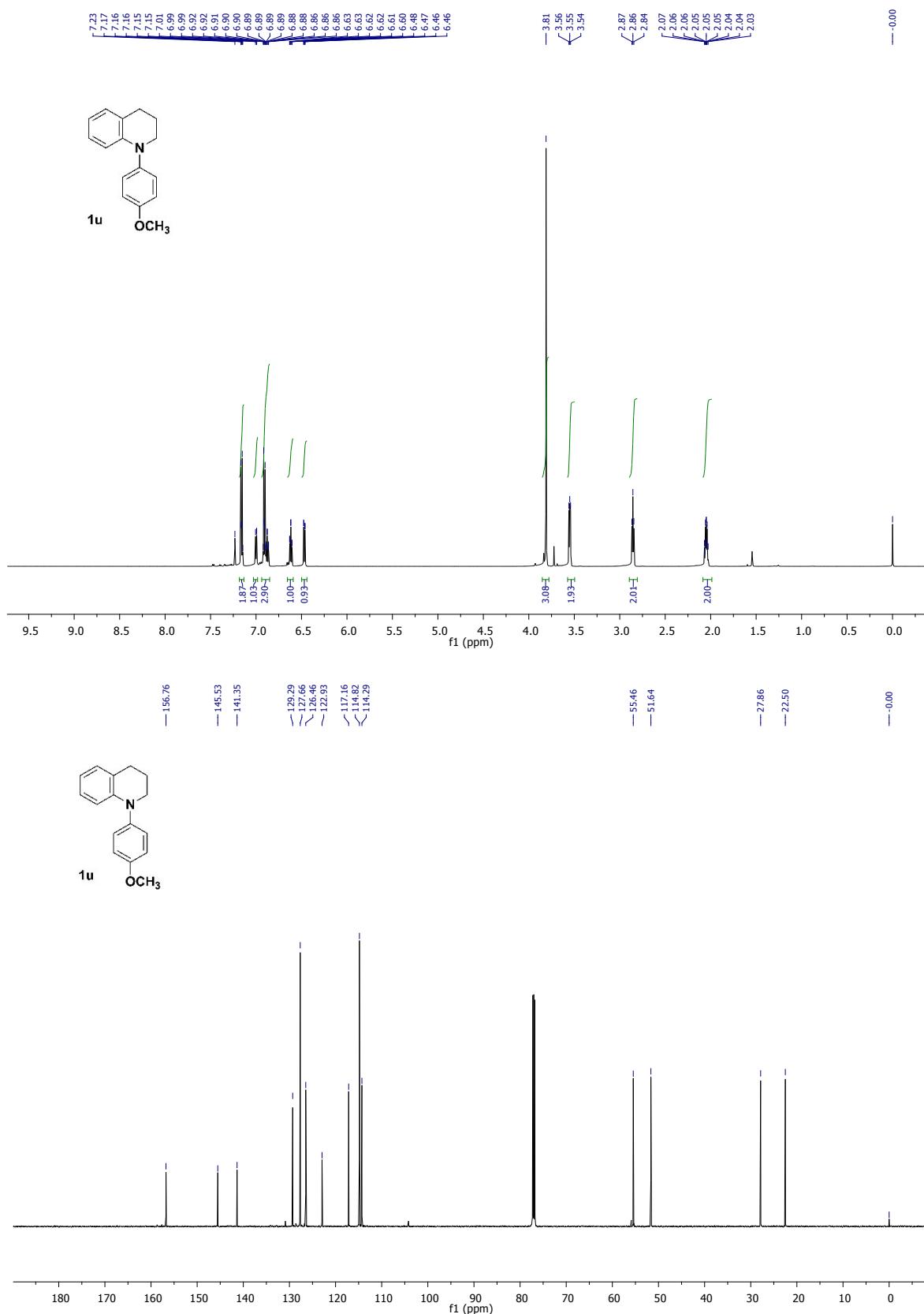


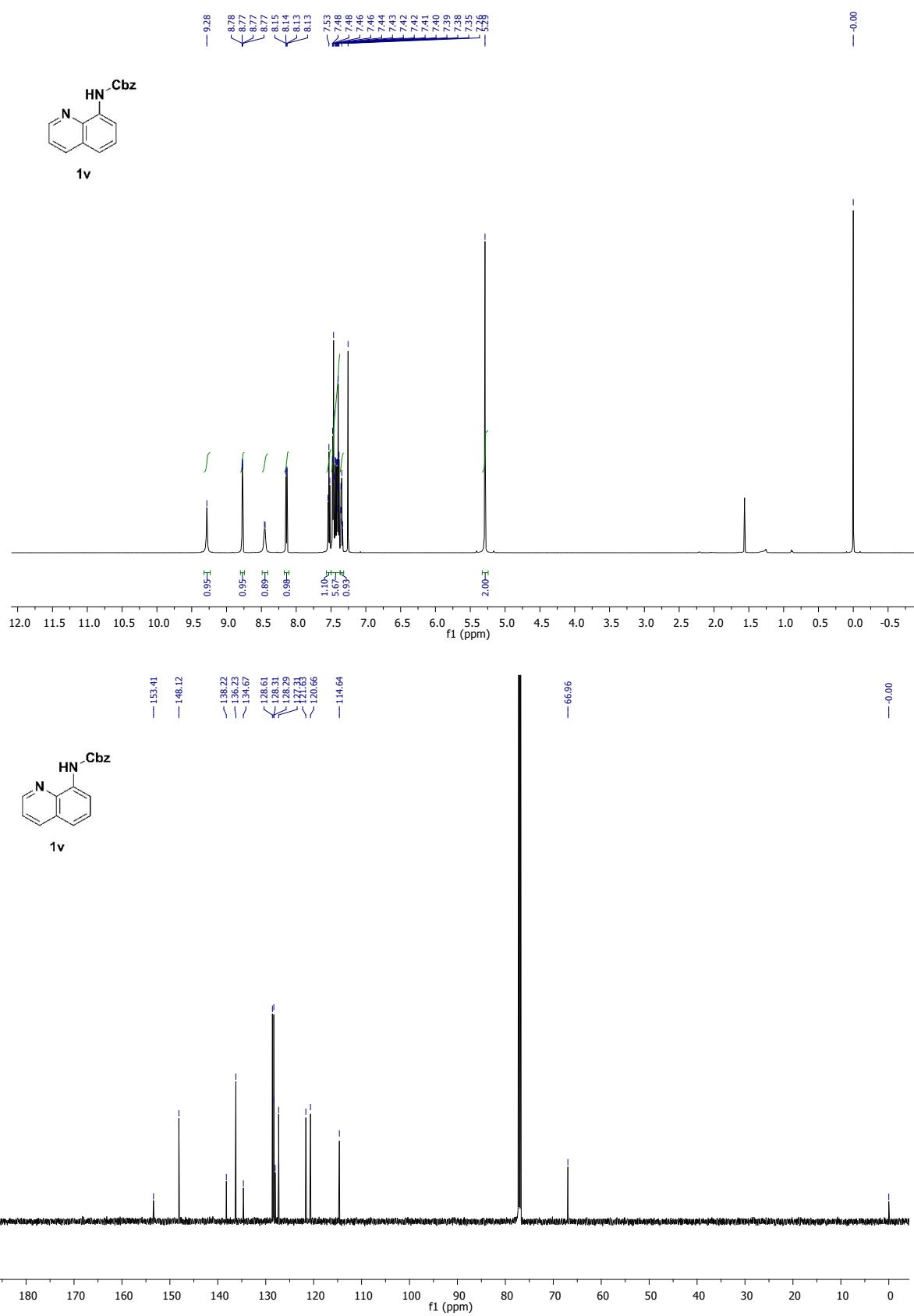




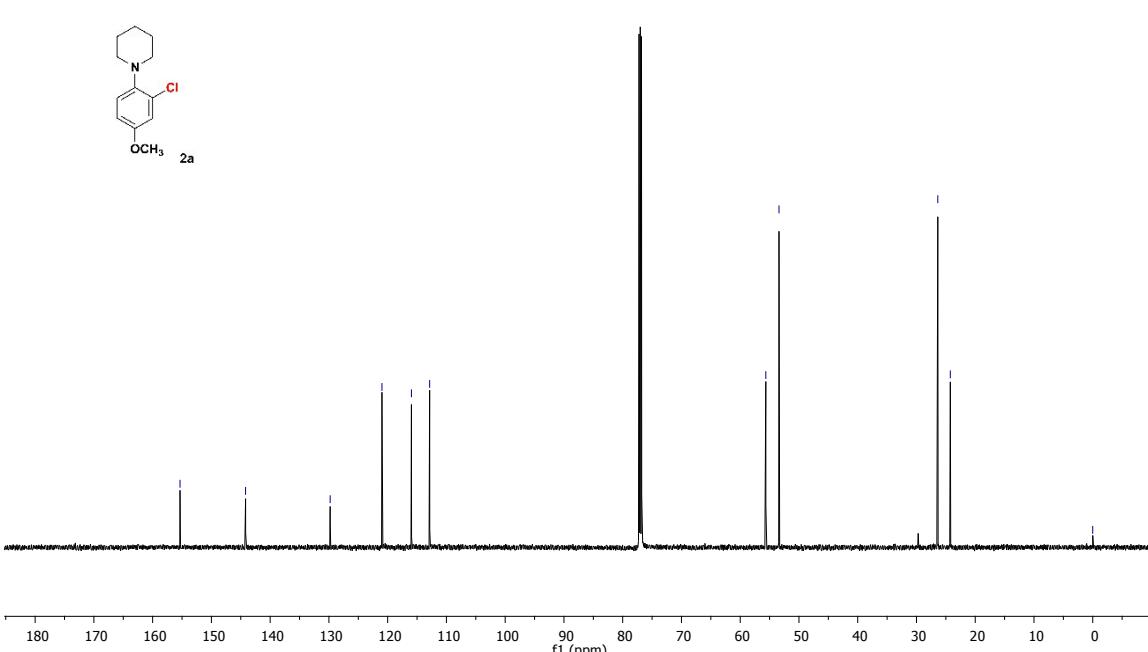
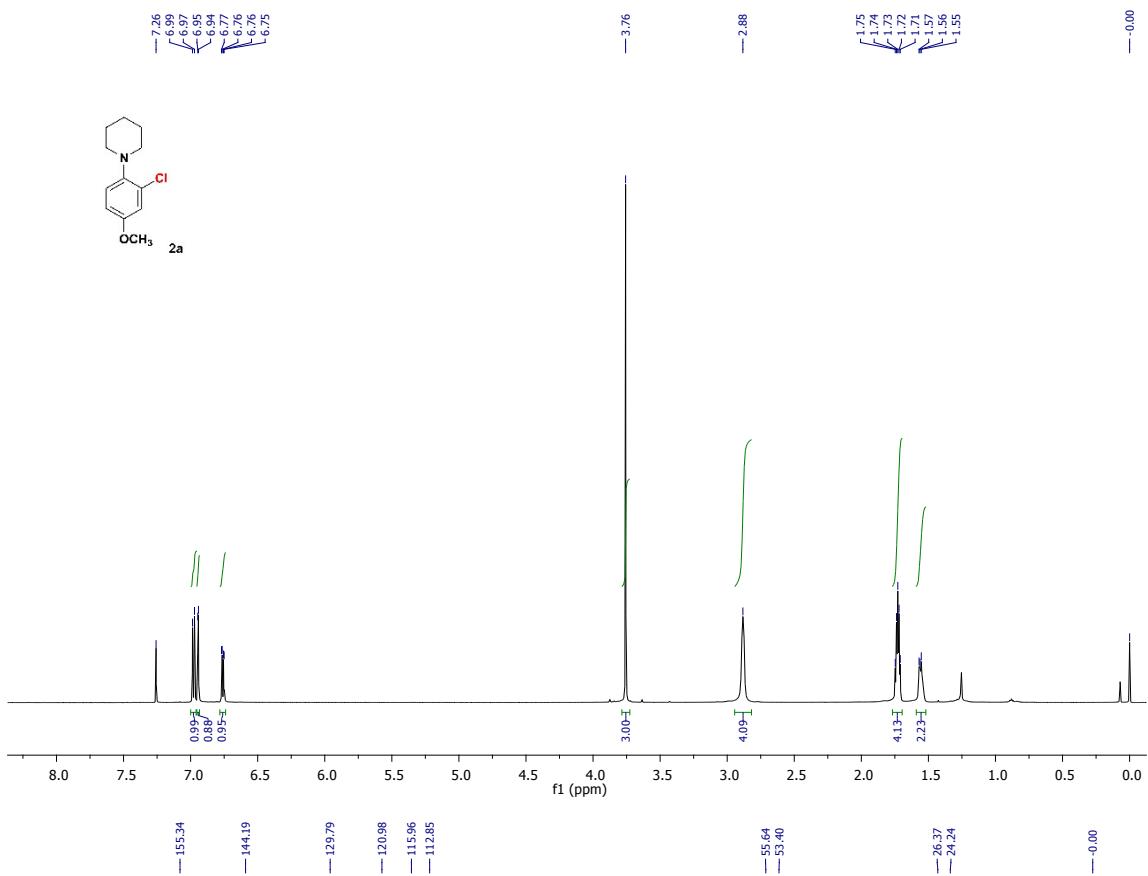


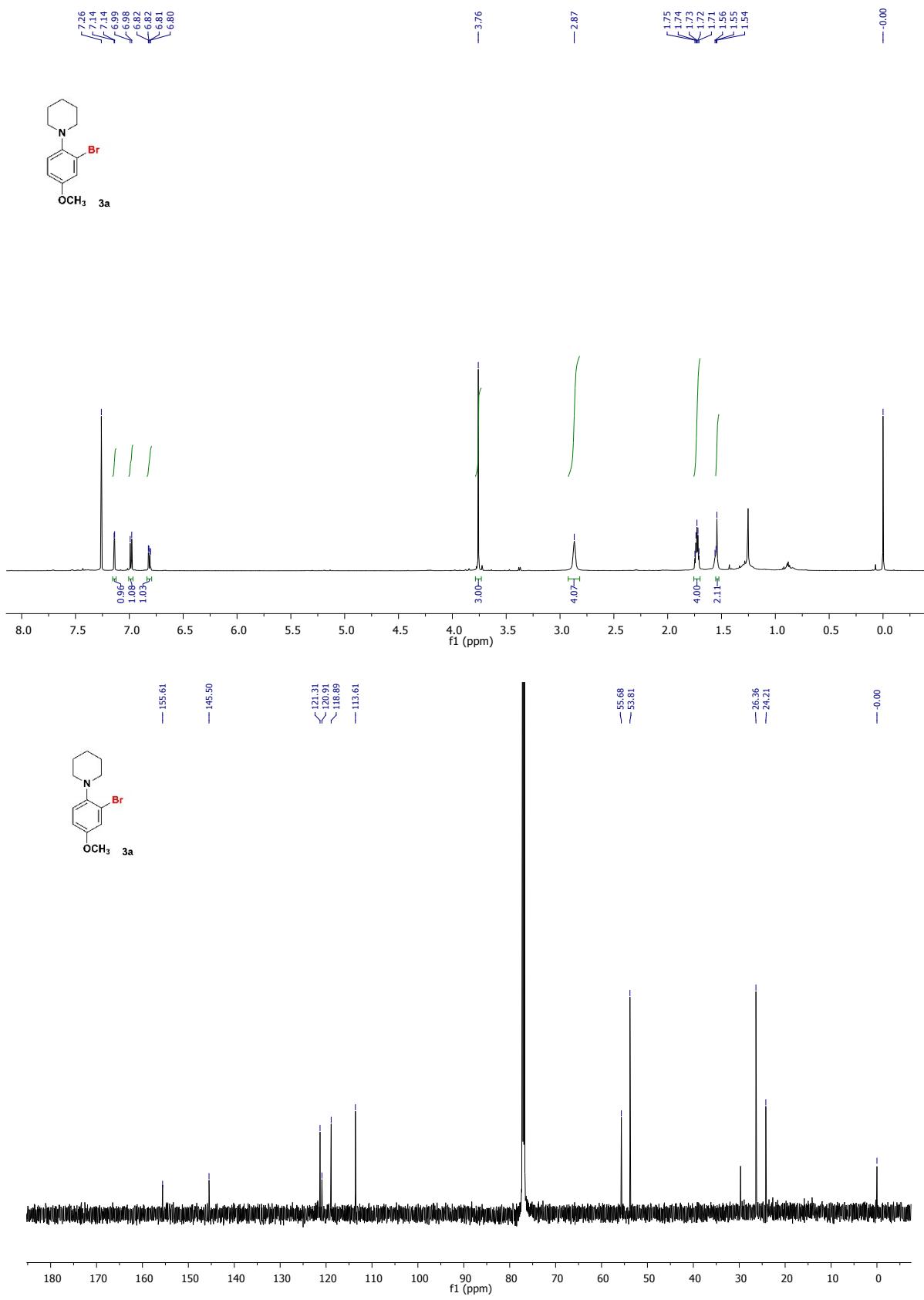




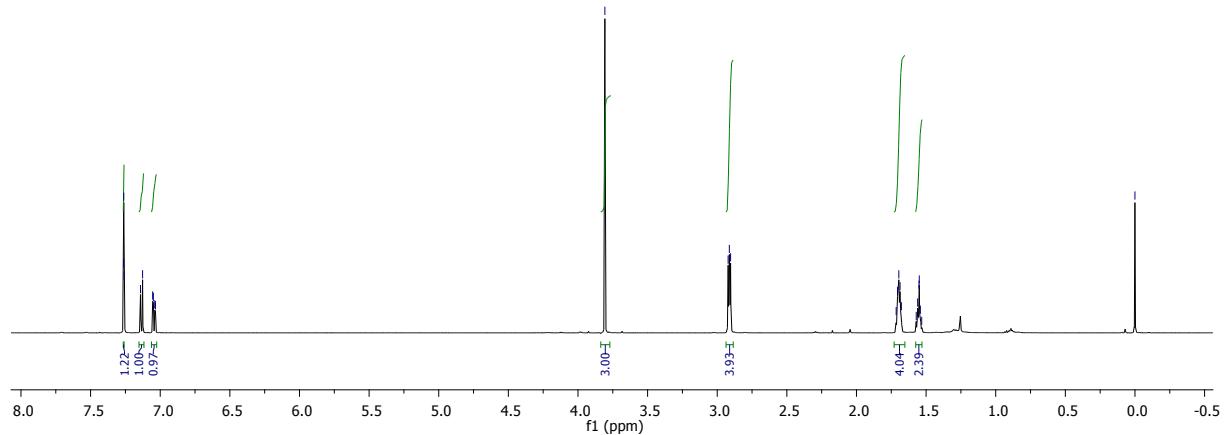
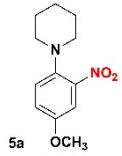


¹H and ¹³C NMR spectra of products

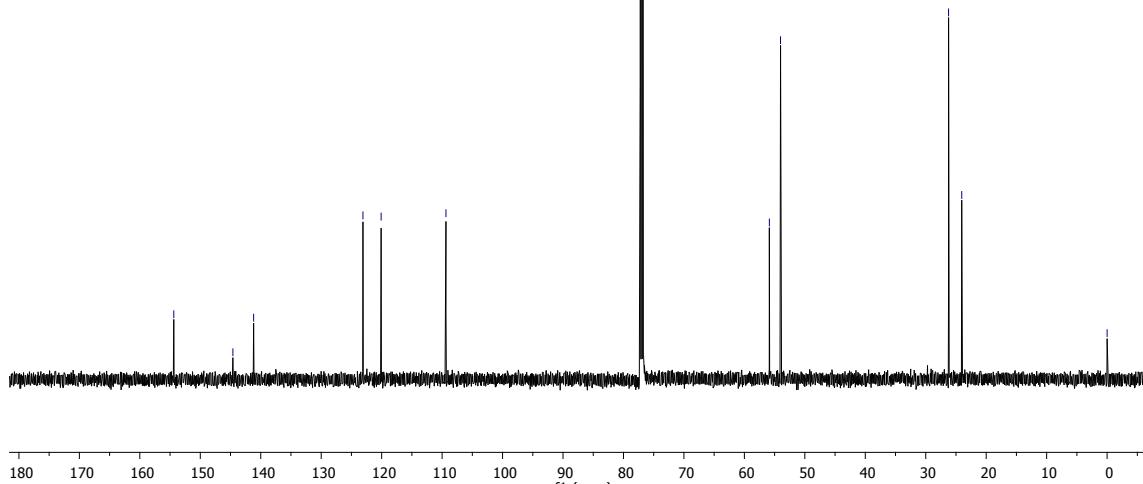
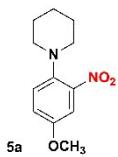


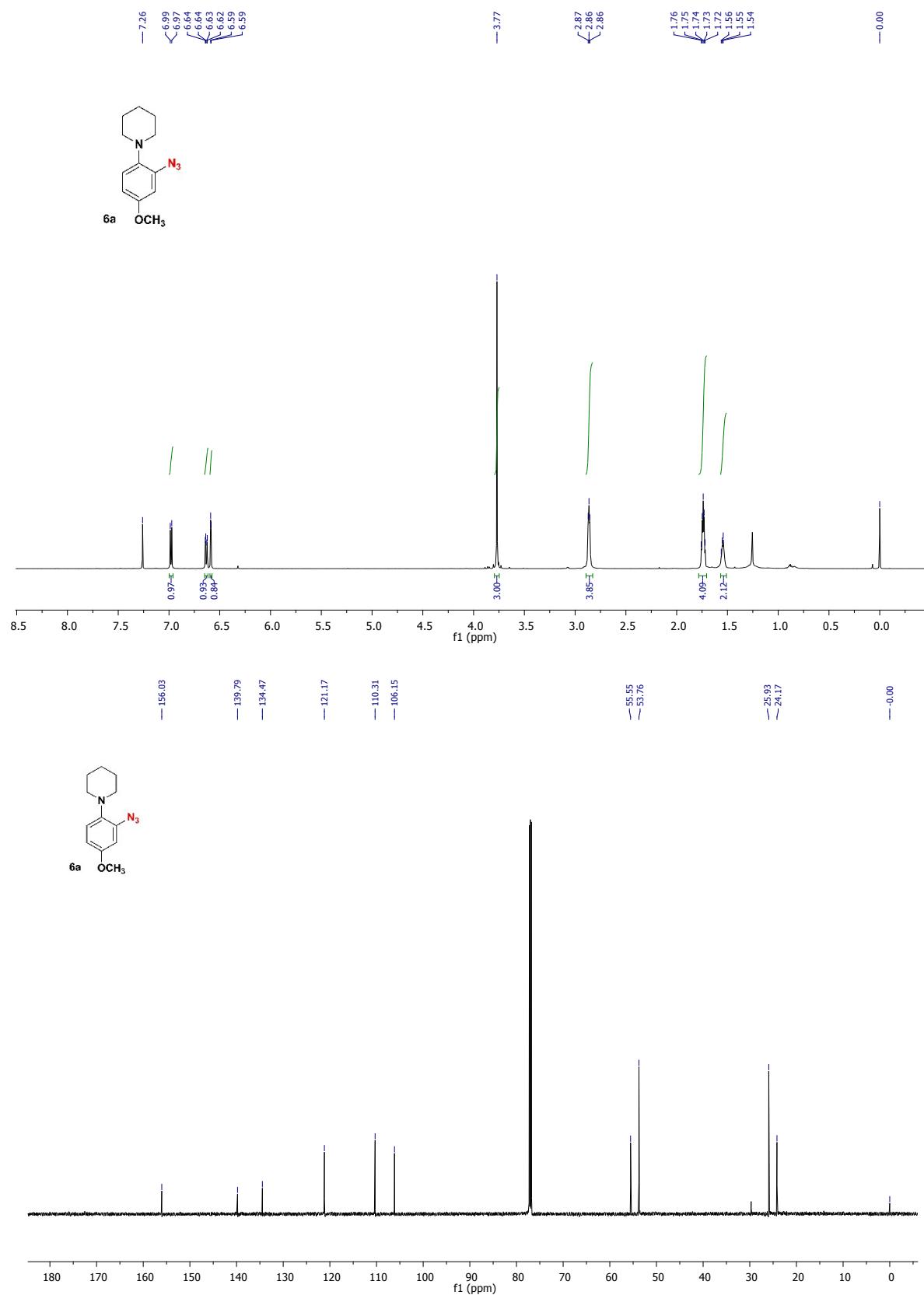


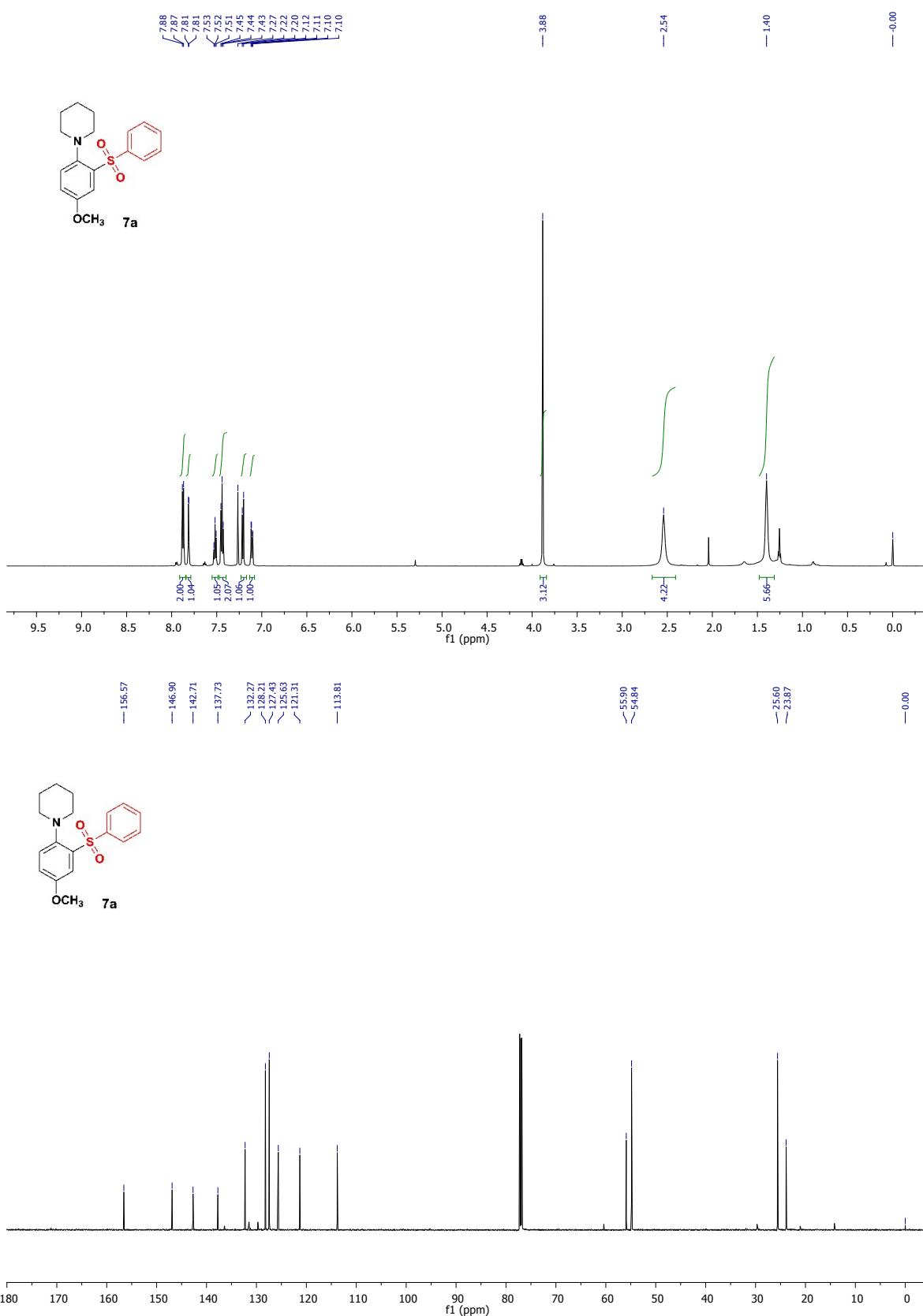
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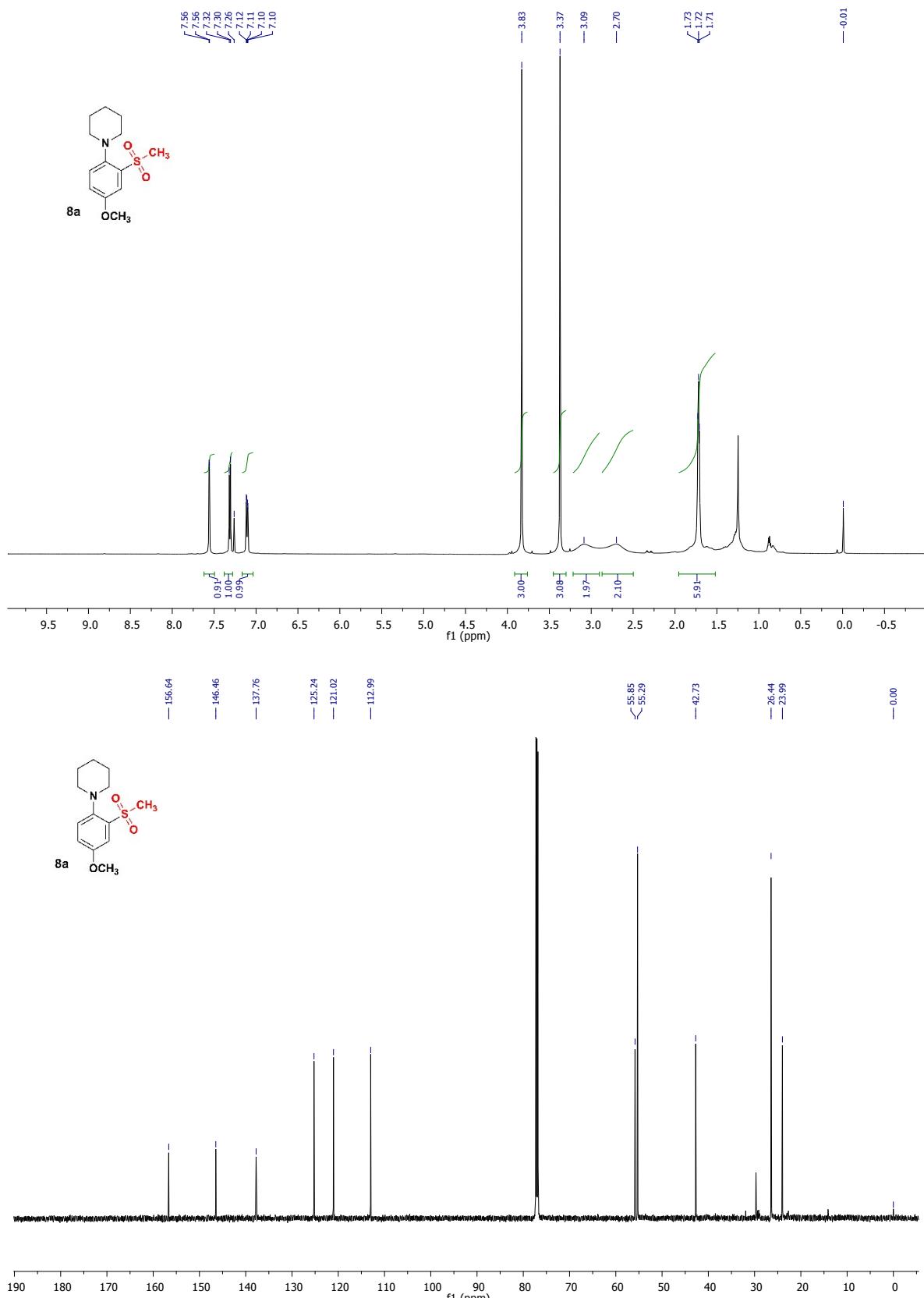


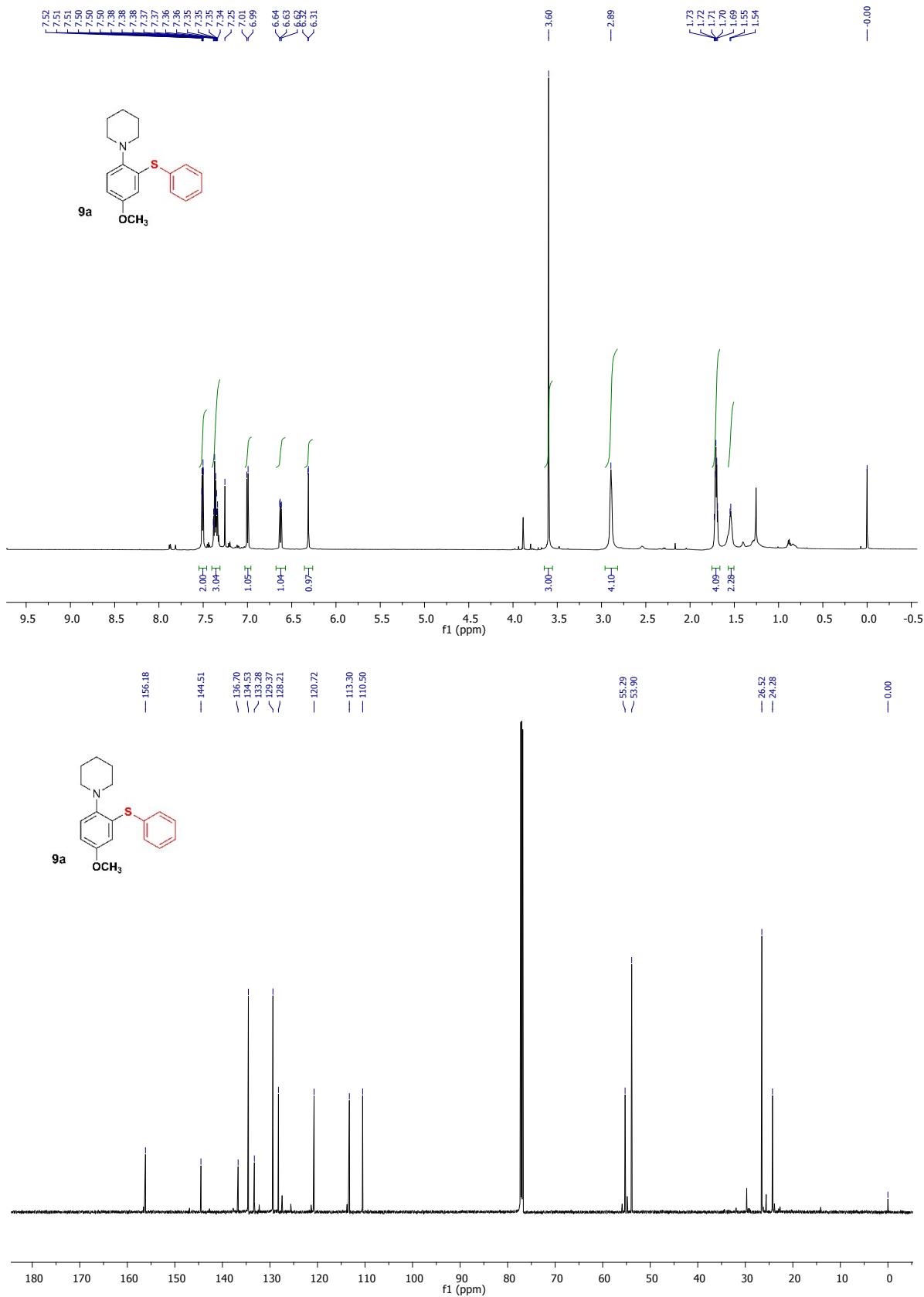
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2.99—
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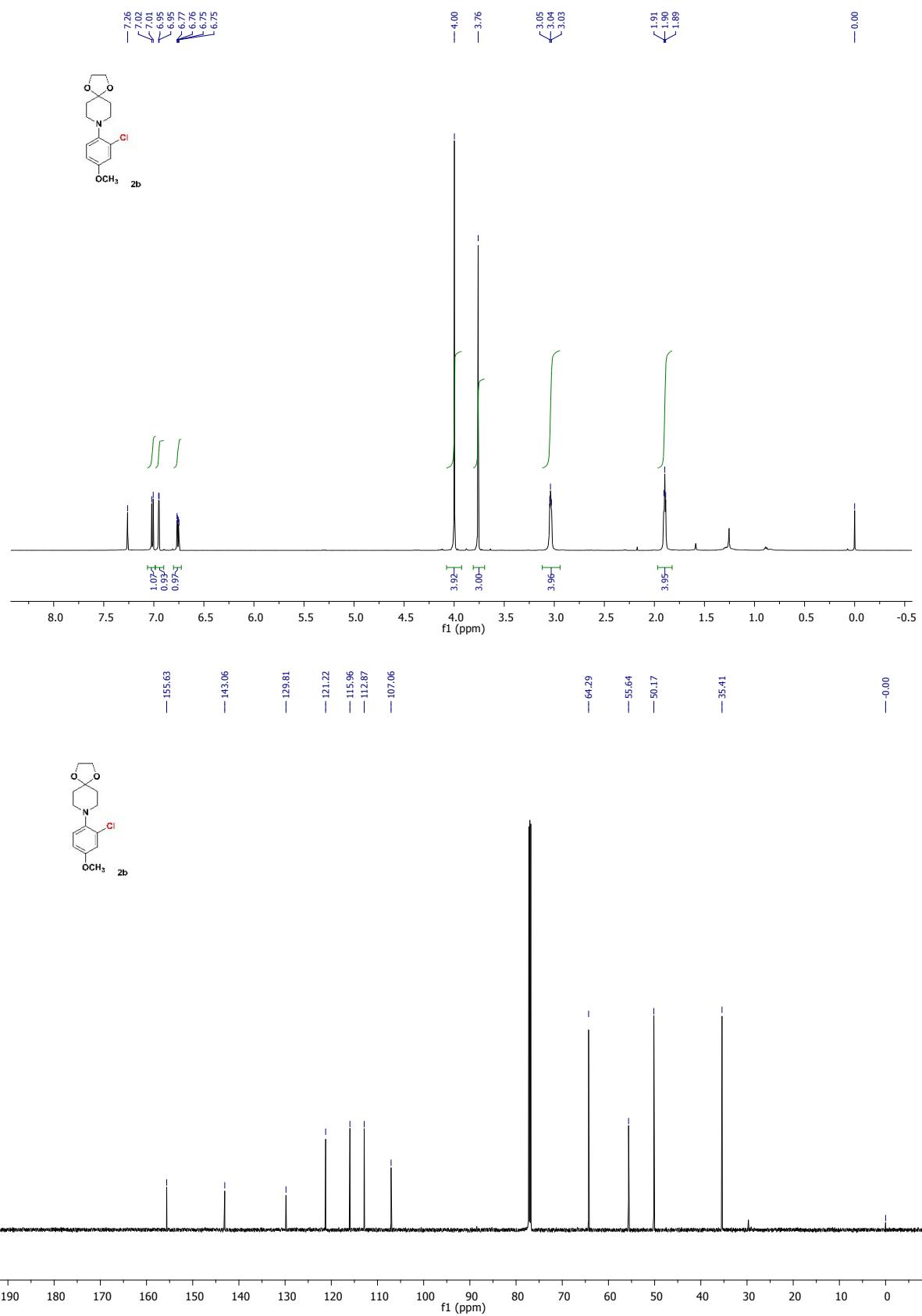


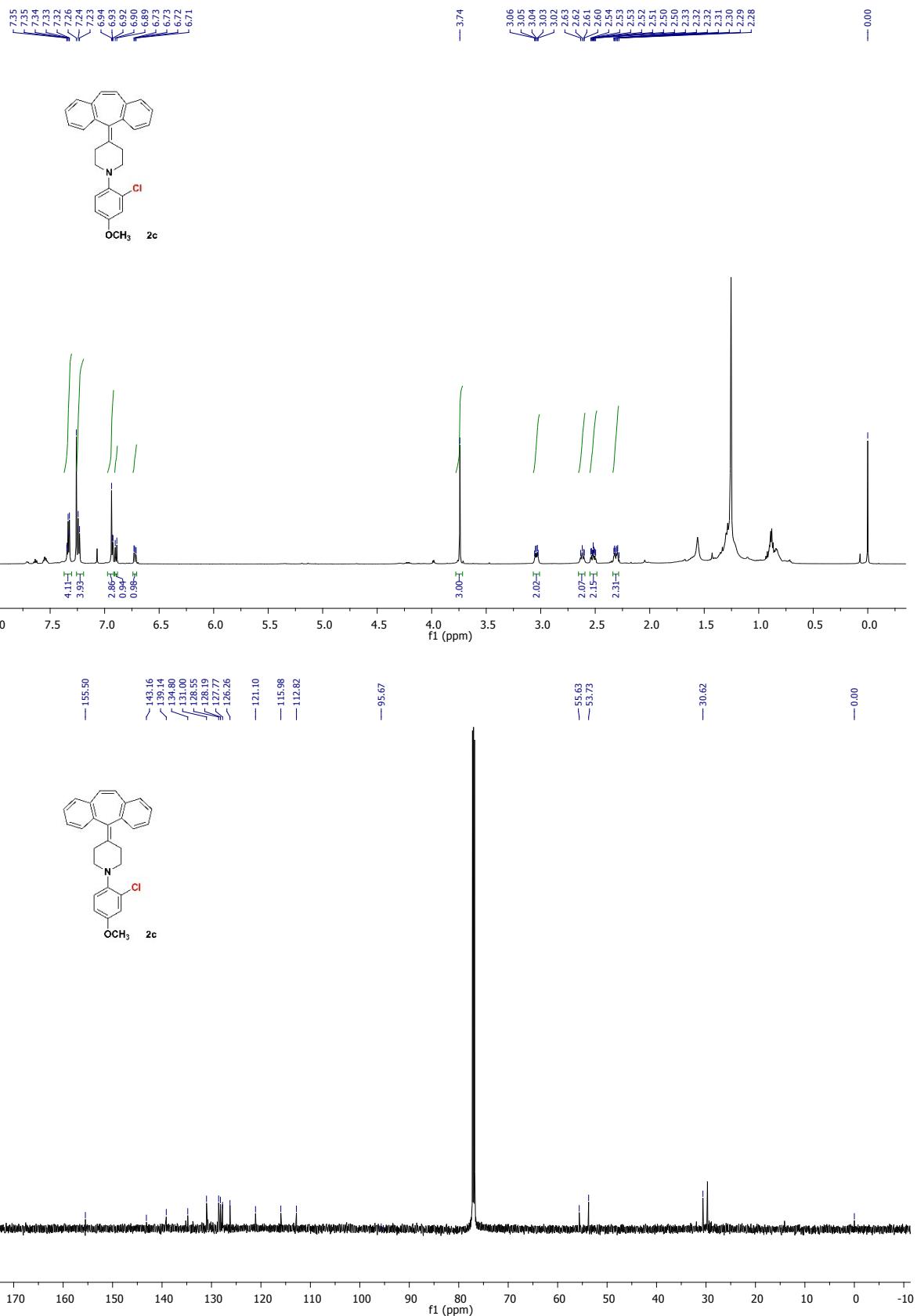


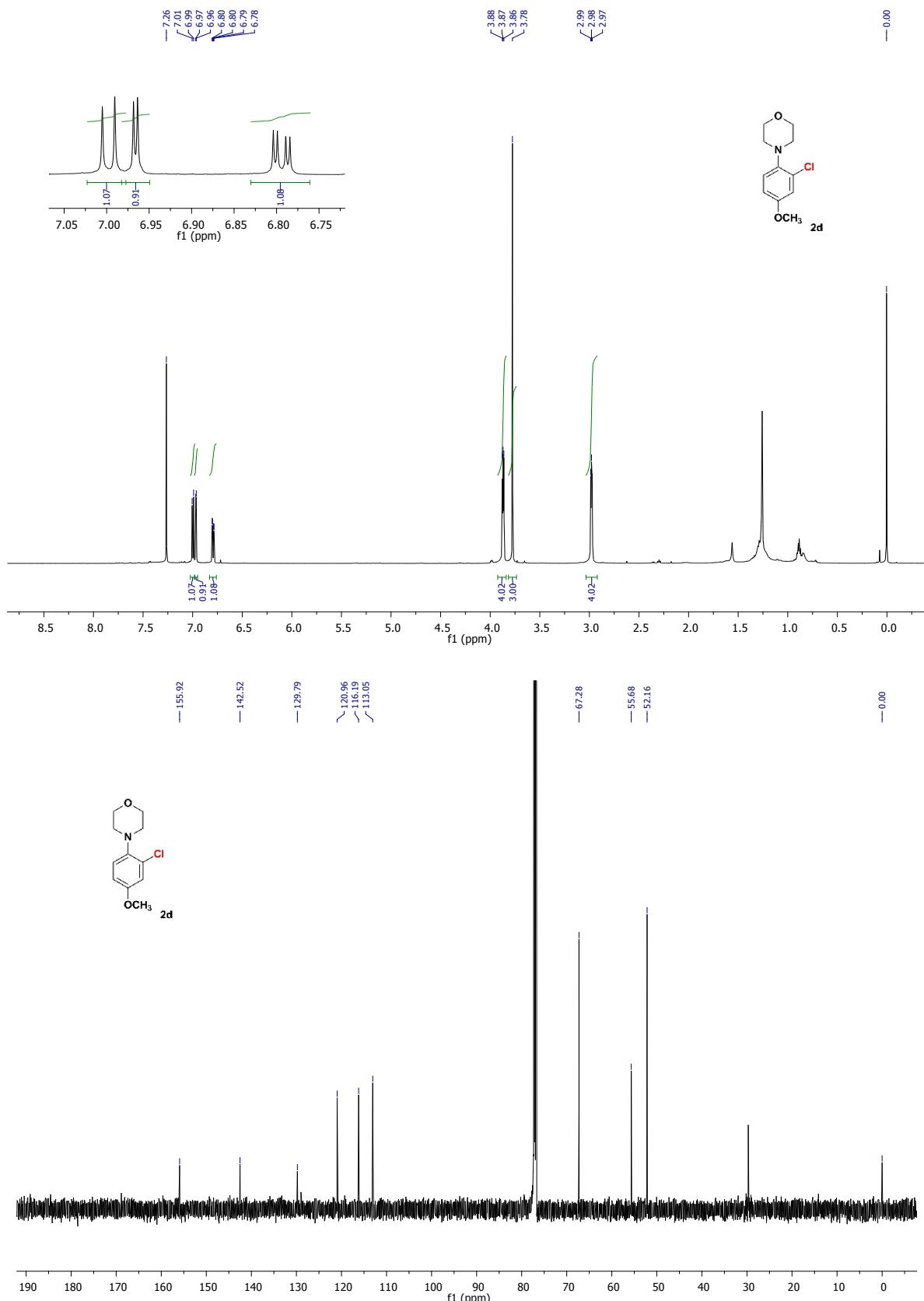


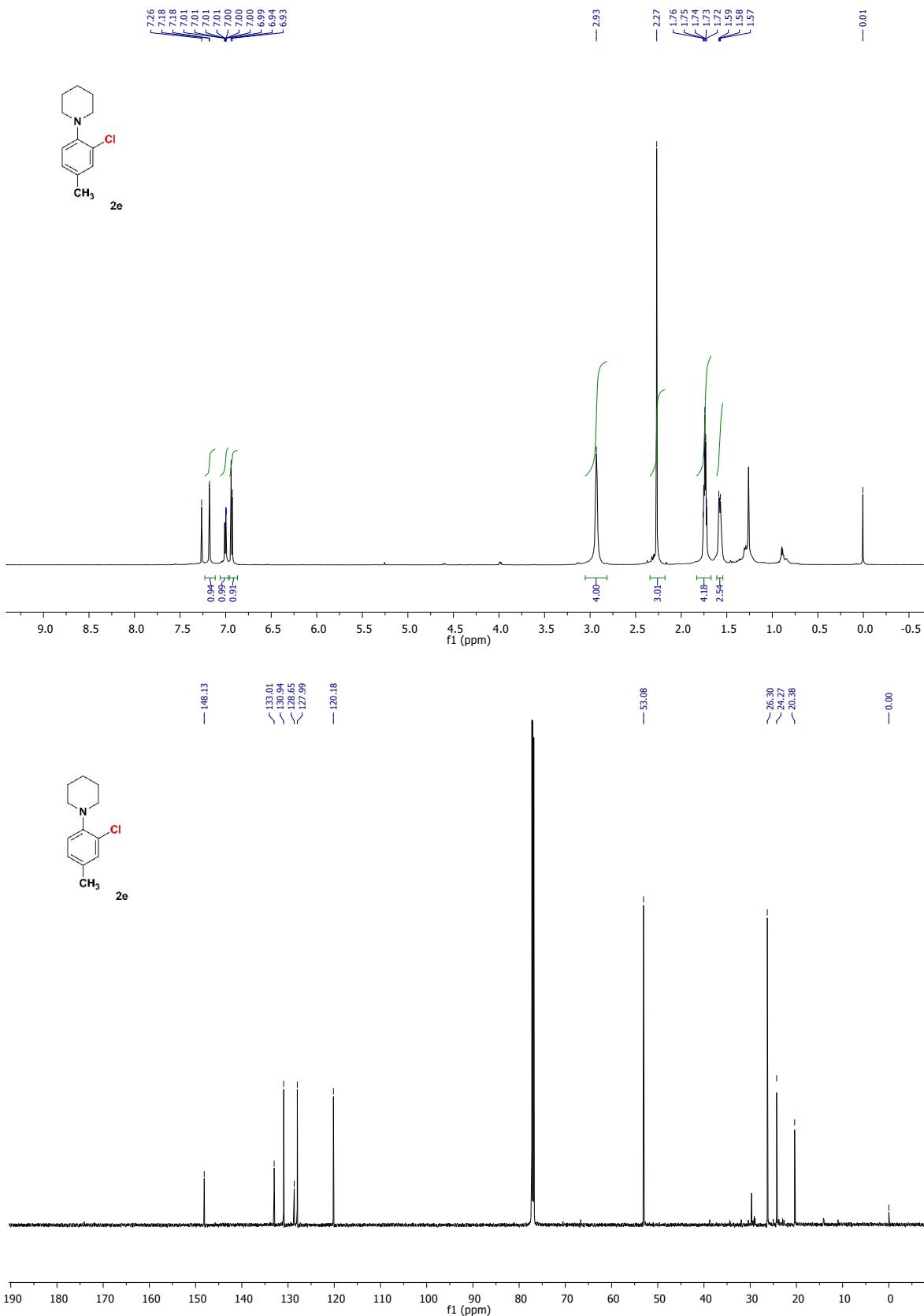


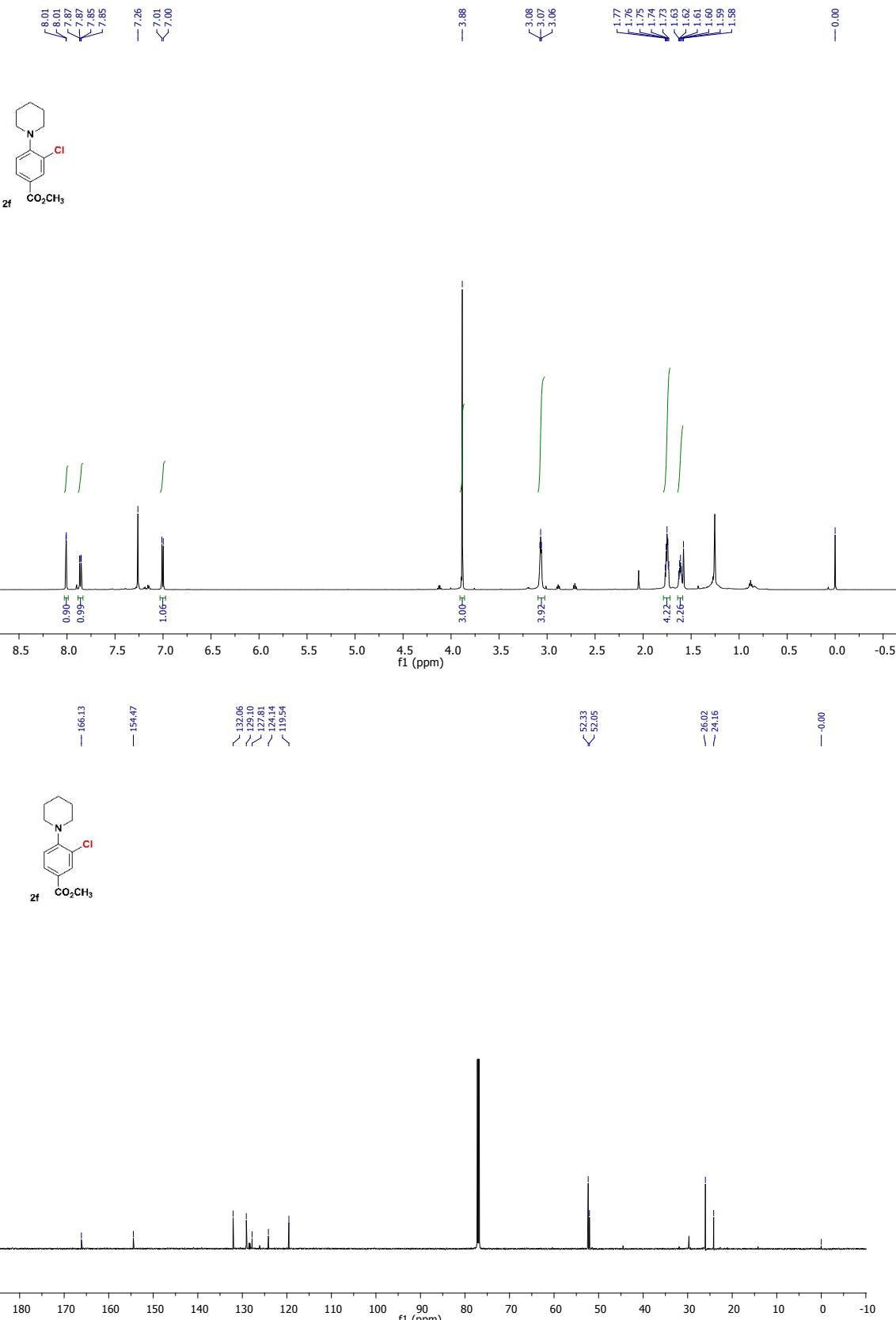








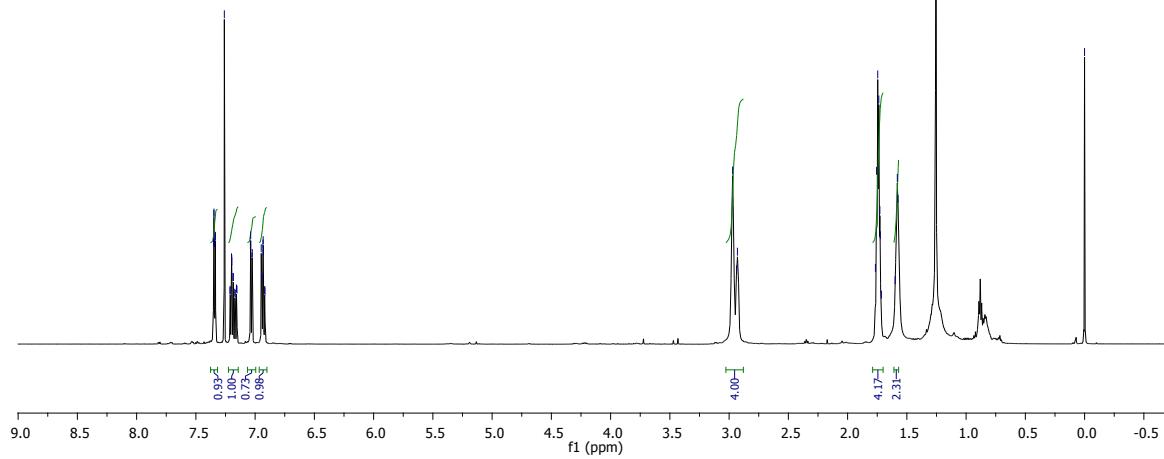






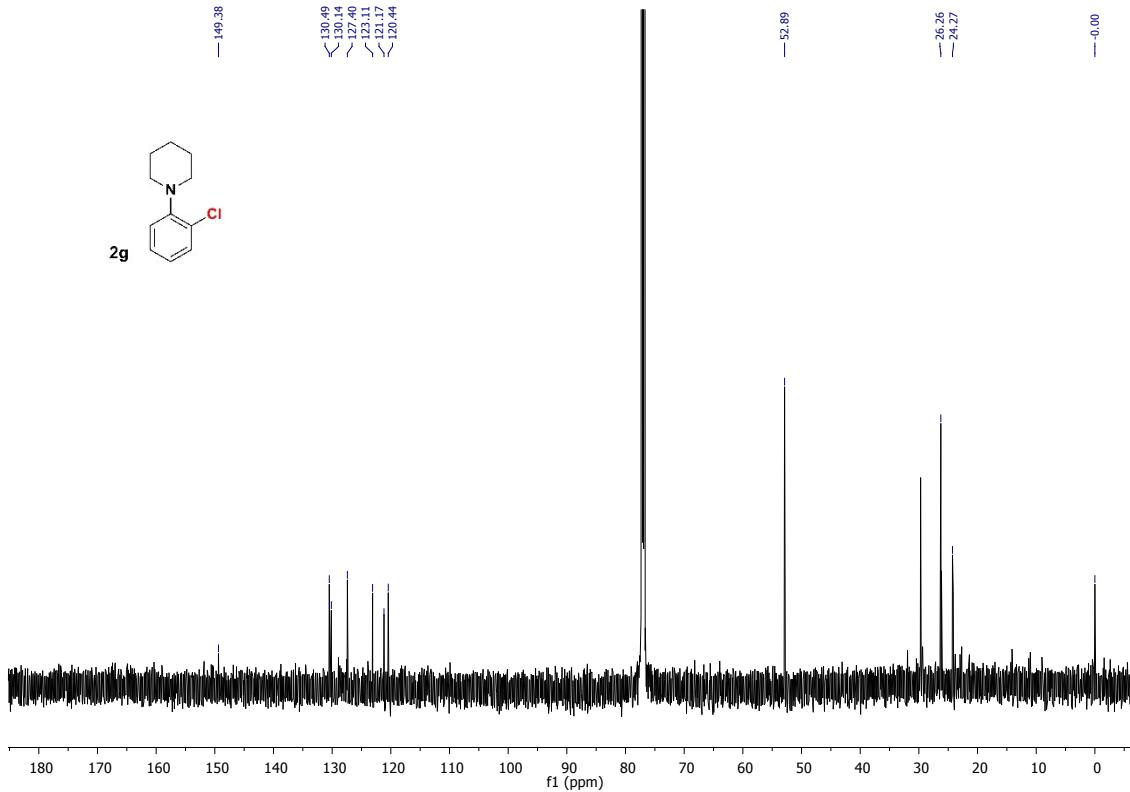
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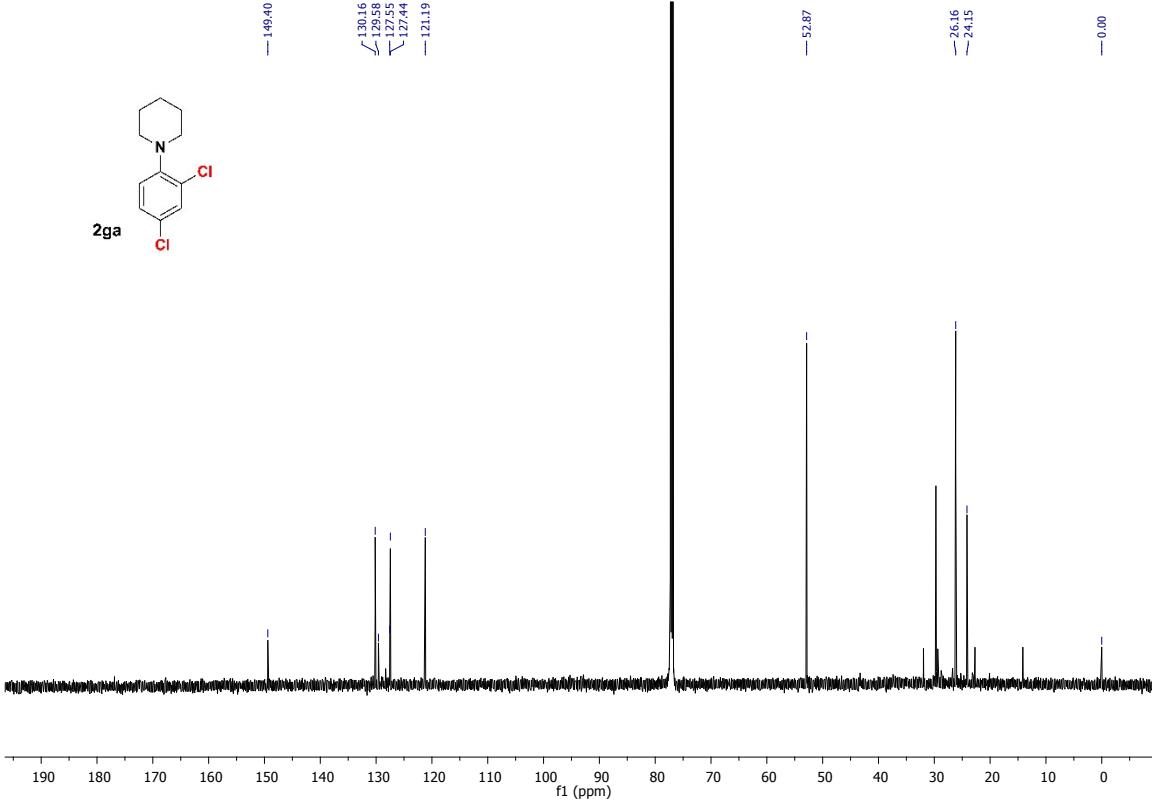
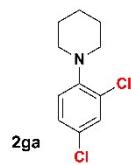
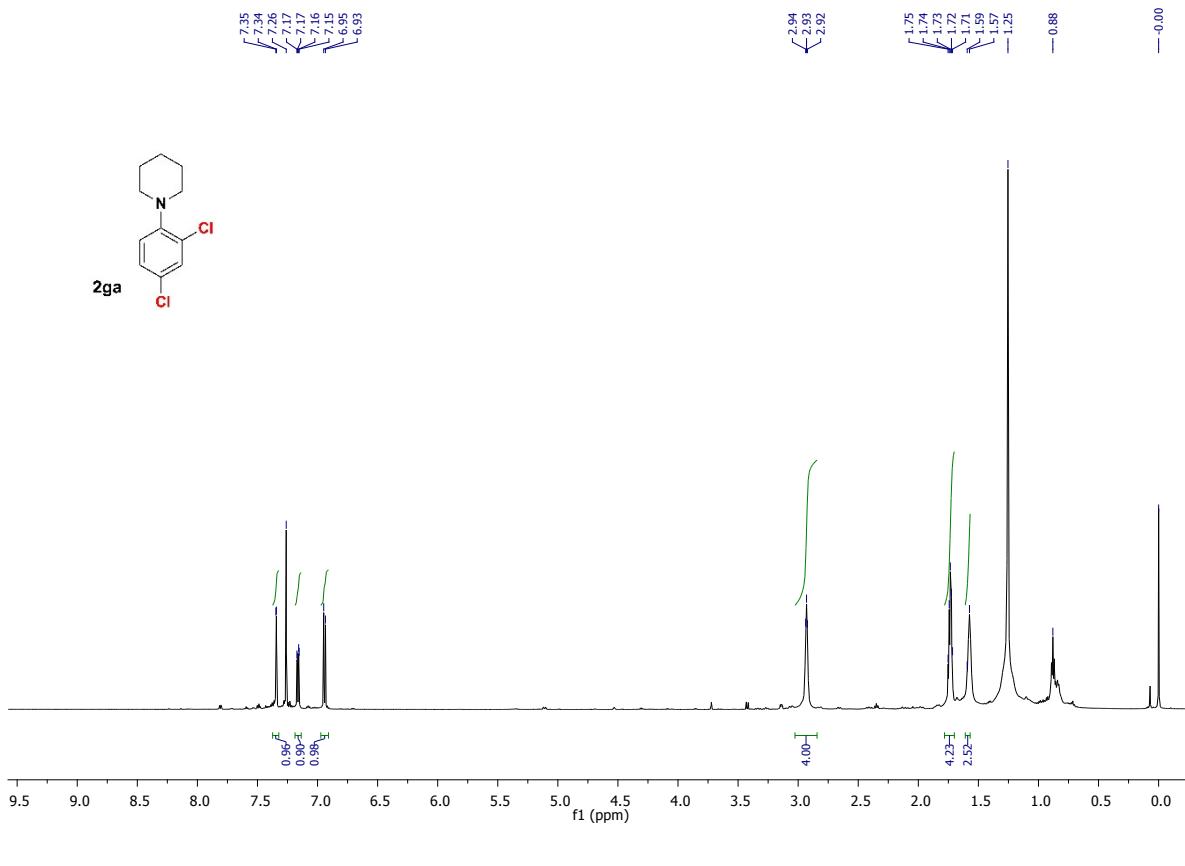
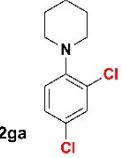
The chemical structure shows a piperazine ring fused to a benzene ring at the 4-position, with a chlorine atom (Cl) attached to the benzene ring.

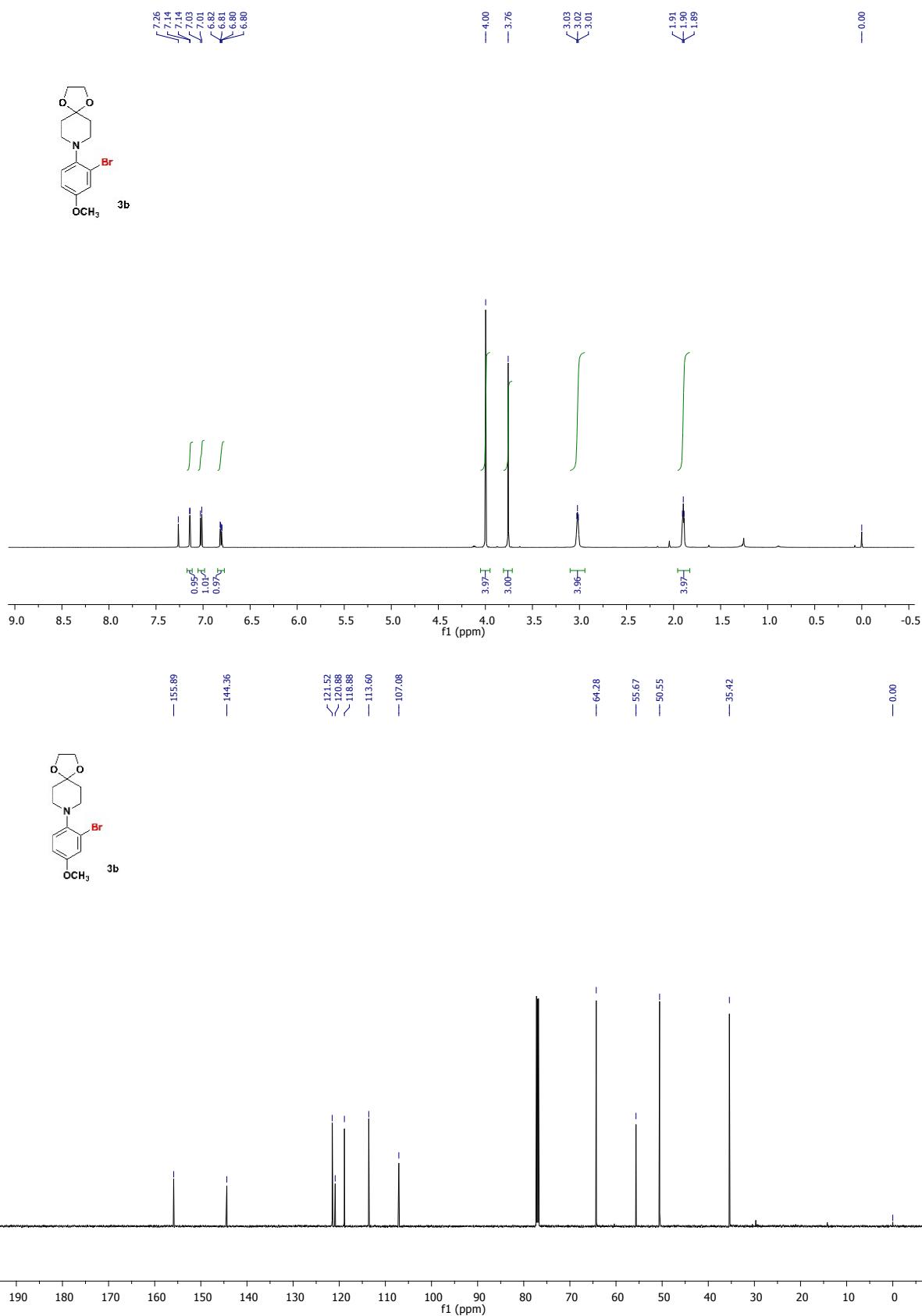


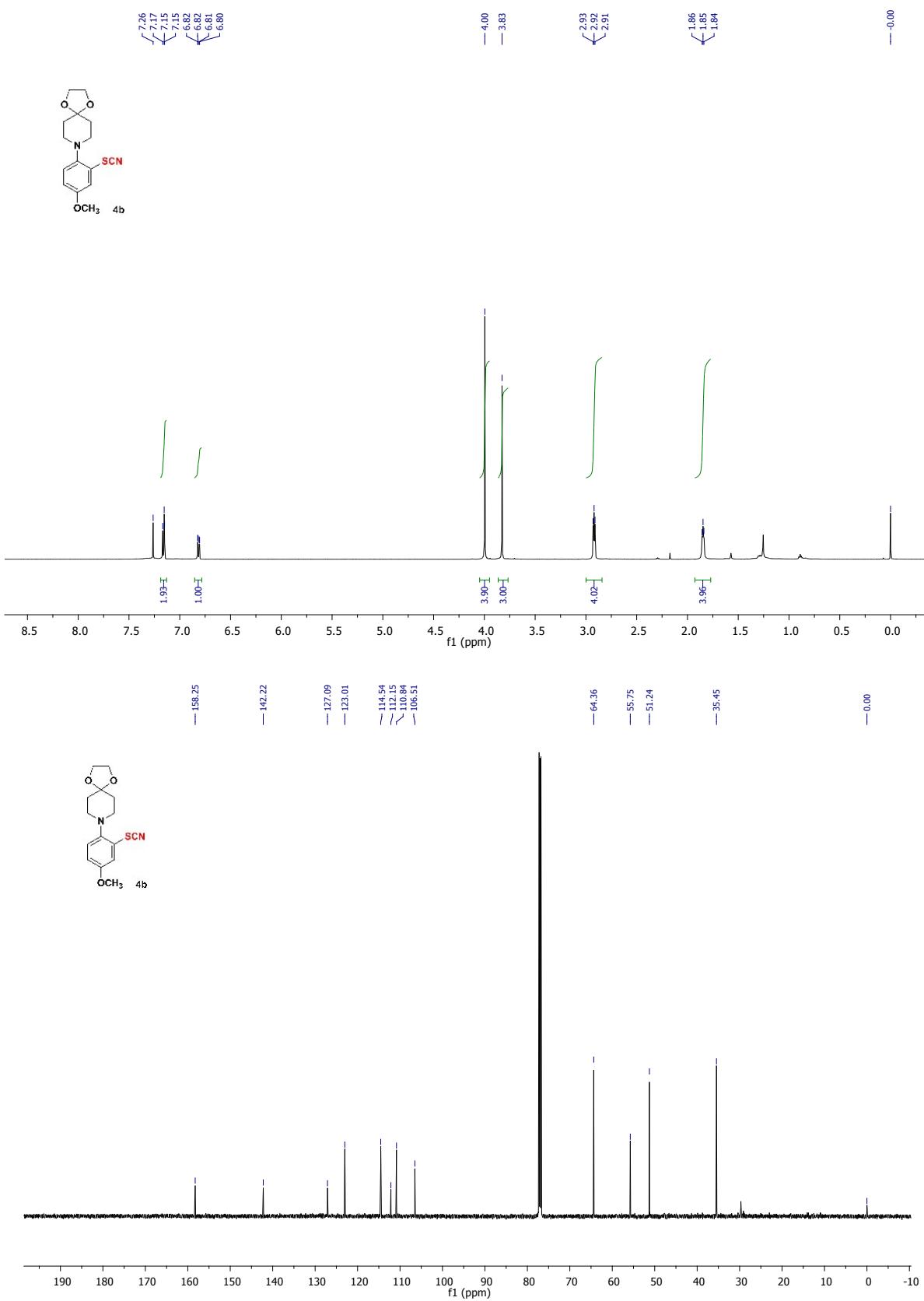
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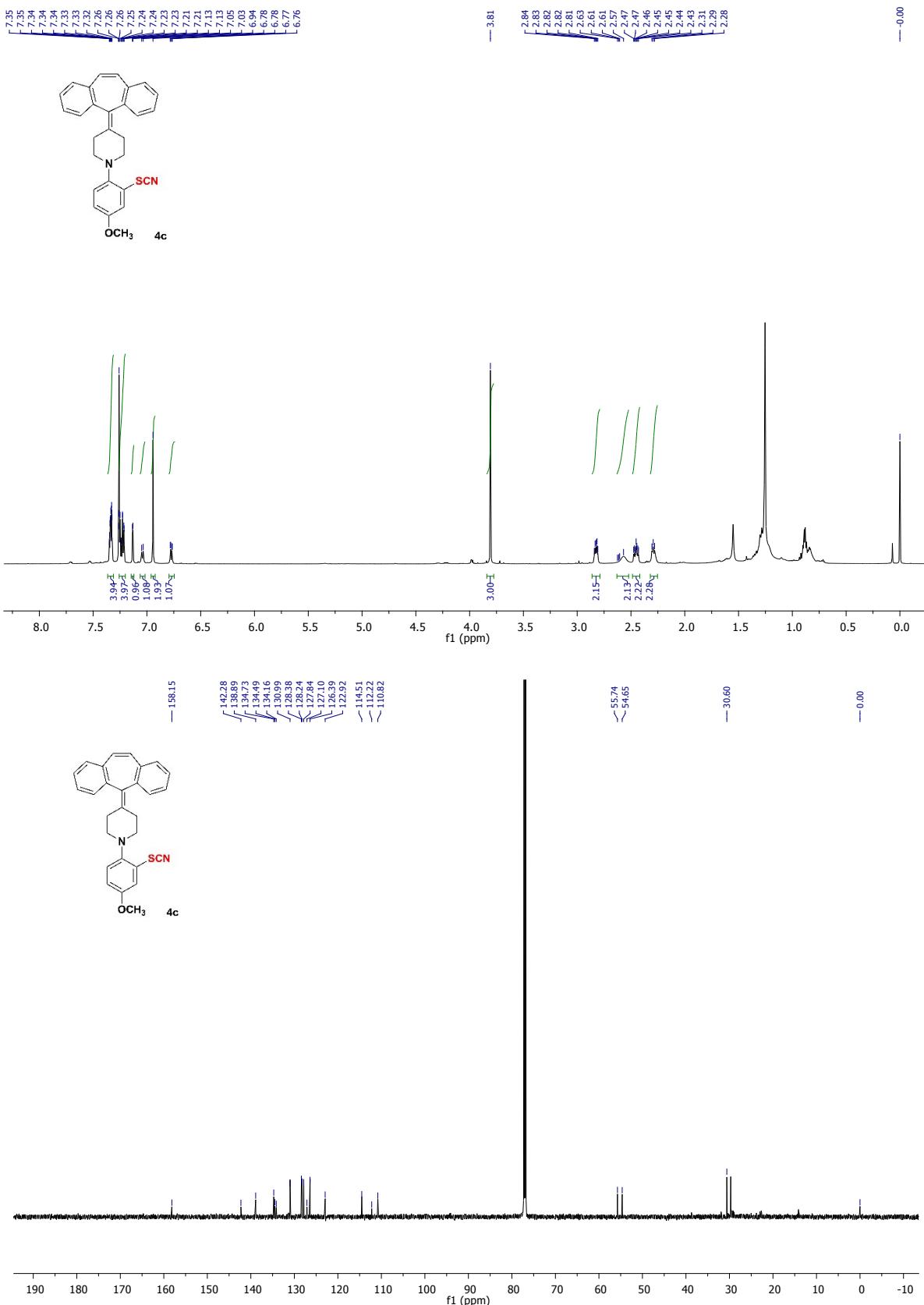
The chemical structure shows a piperazine ring system where one nitrogen atom is substituted with a 4-chlorophenyl group.

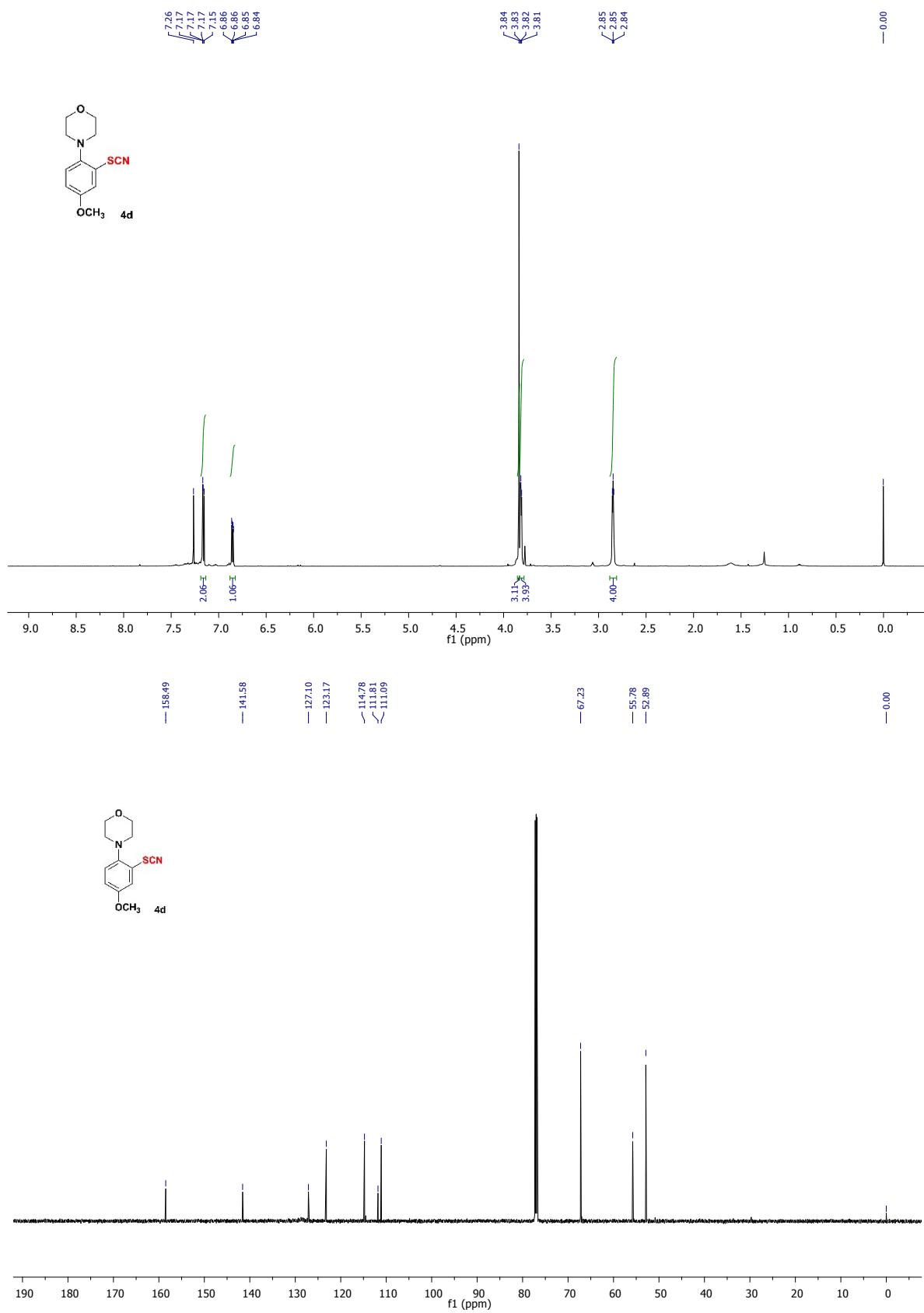


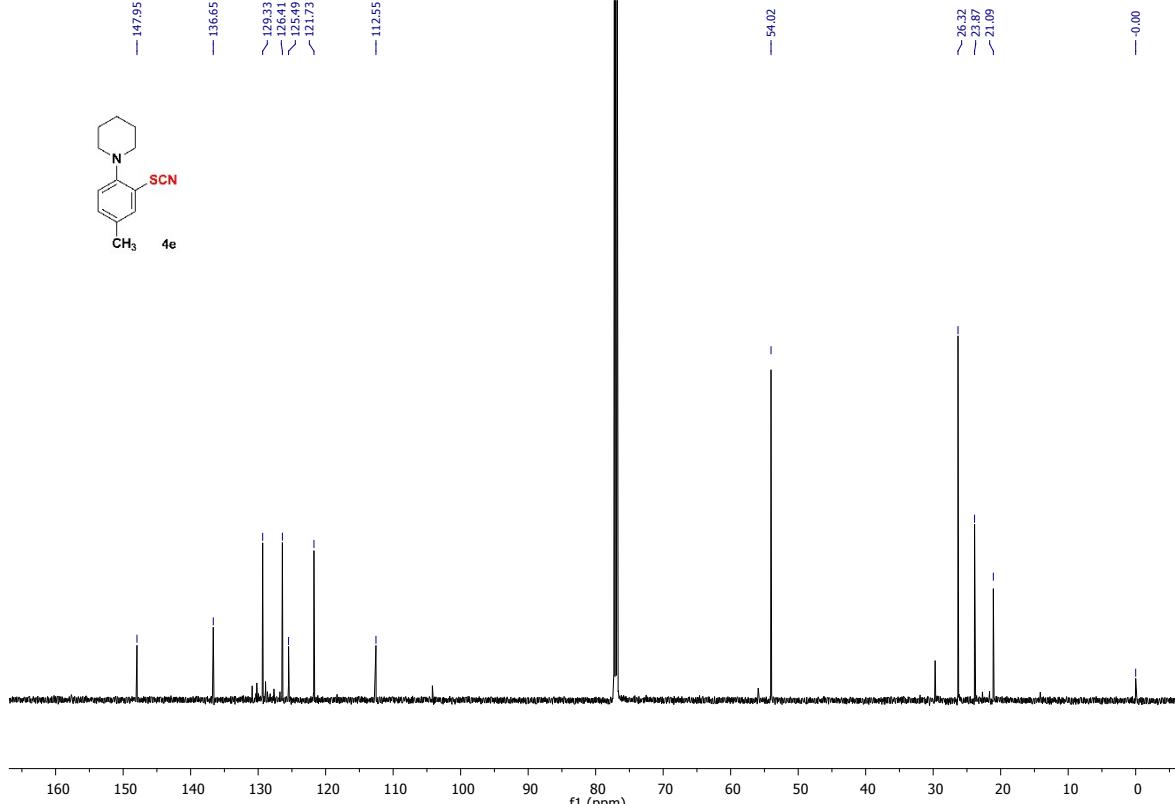
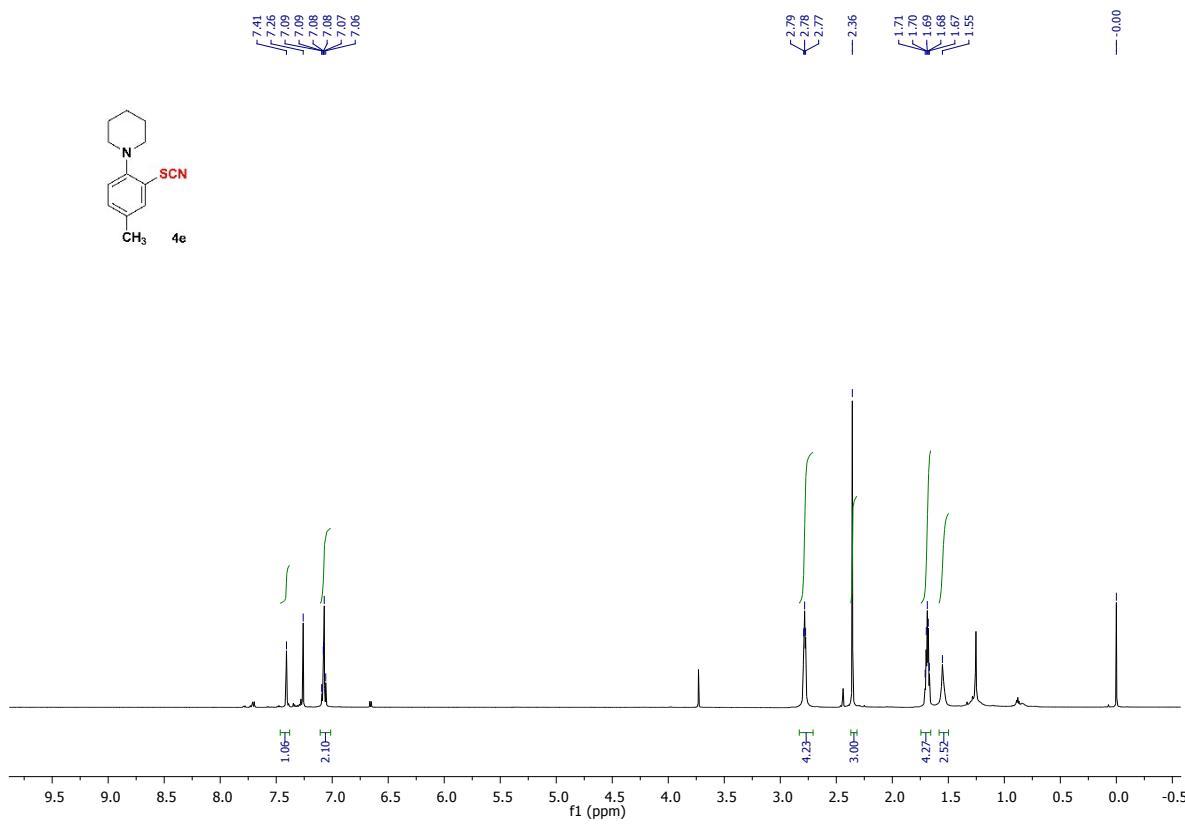


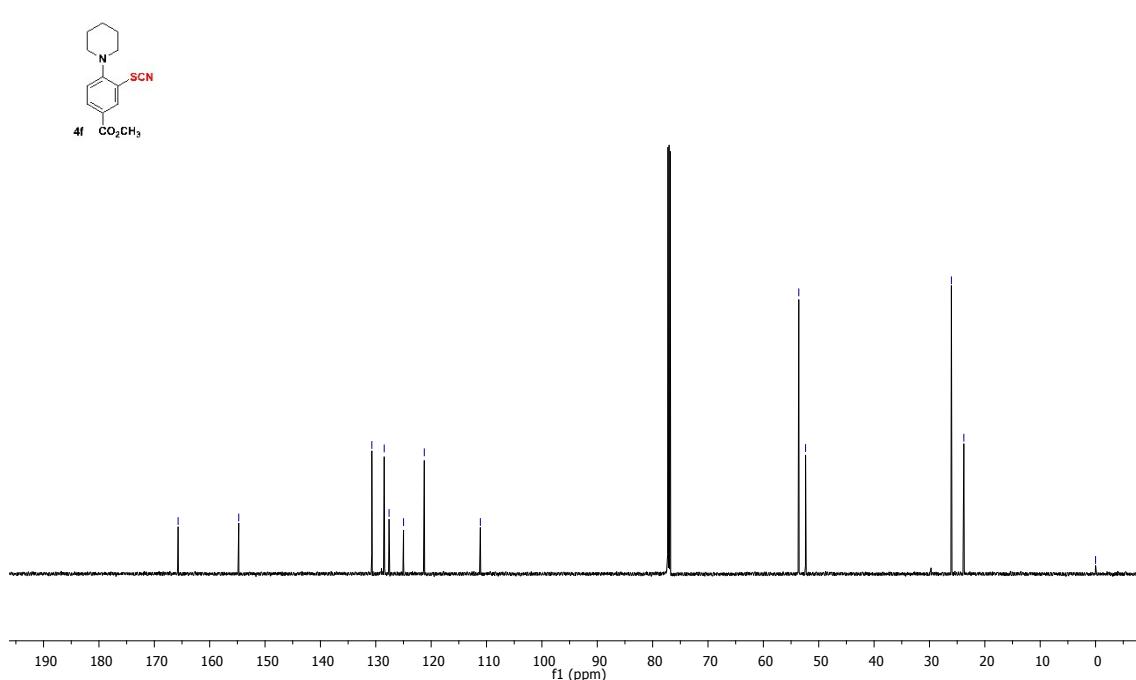
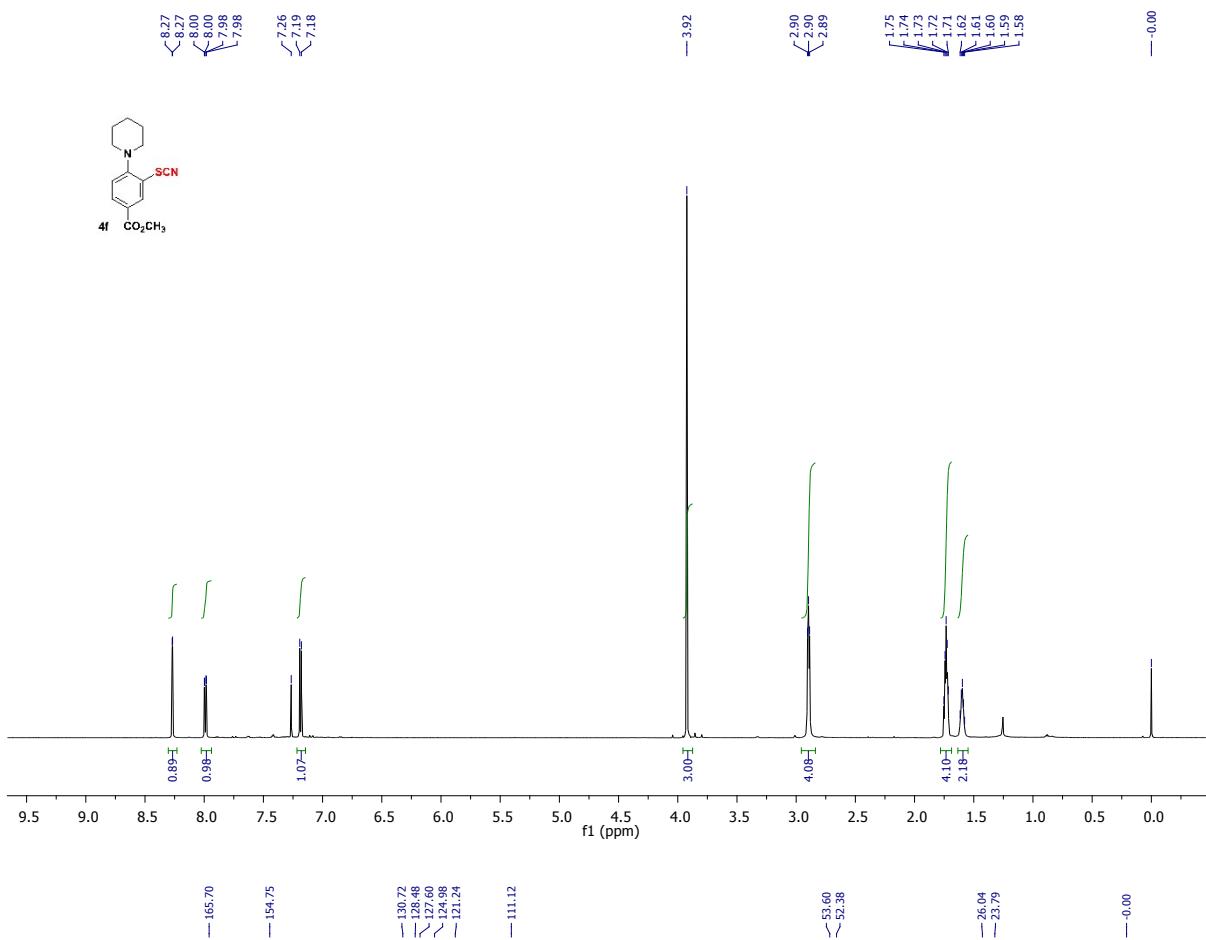


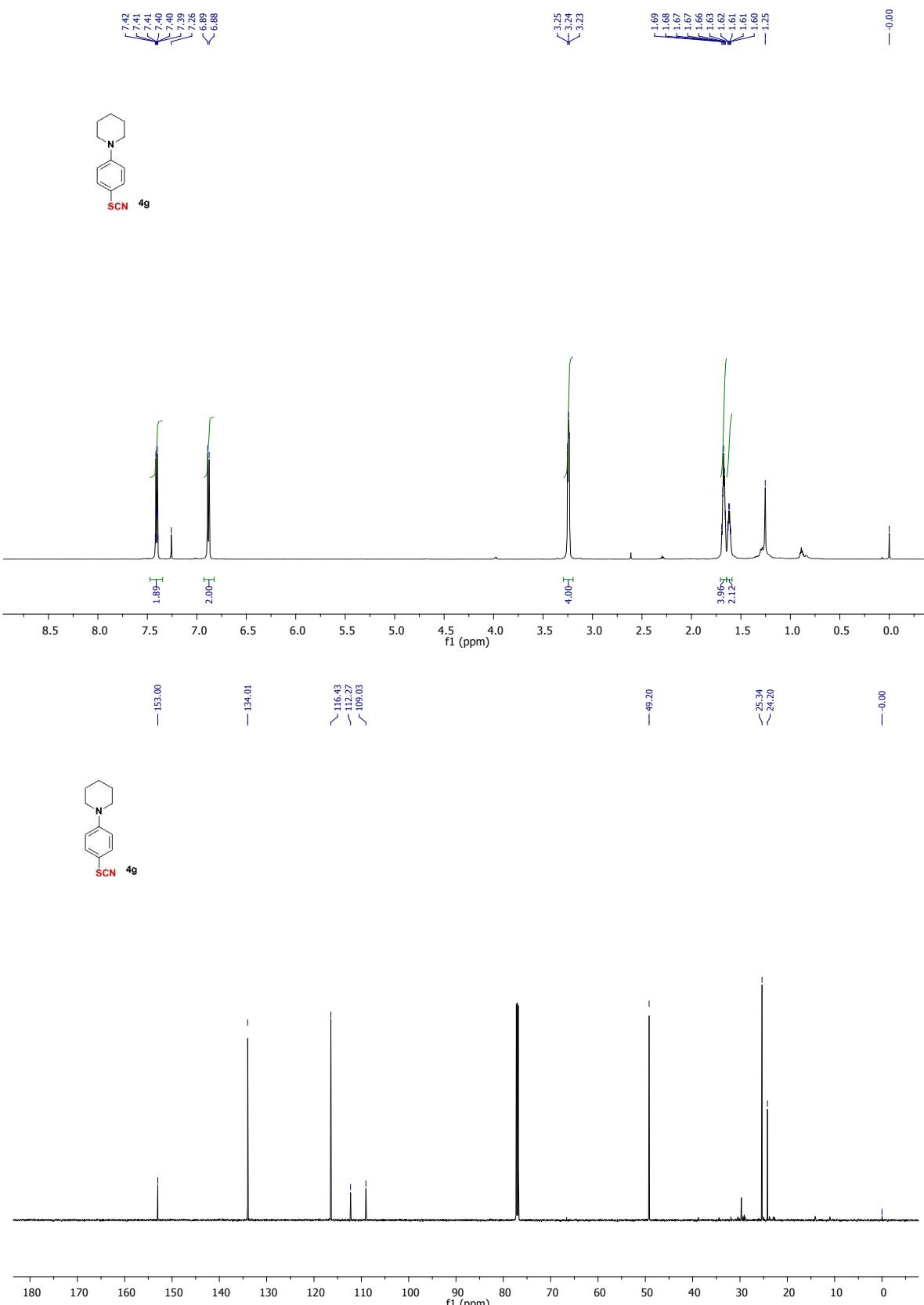


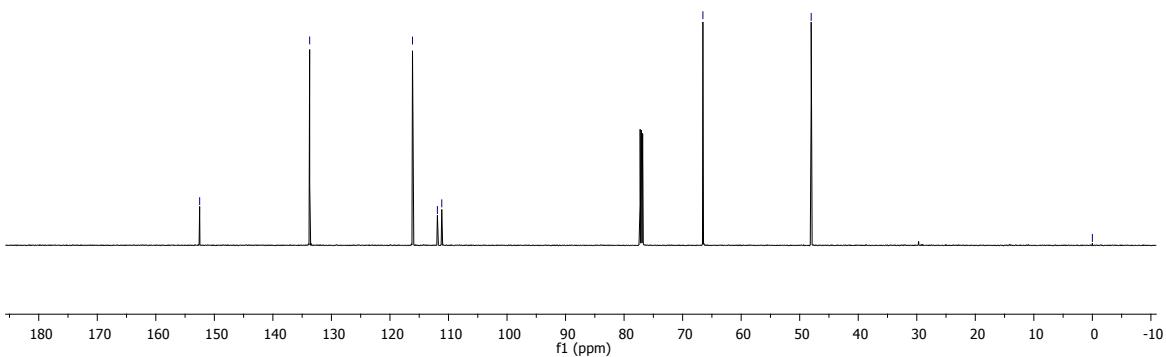
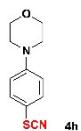
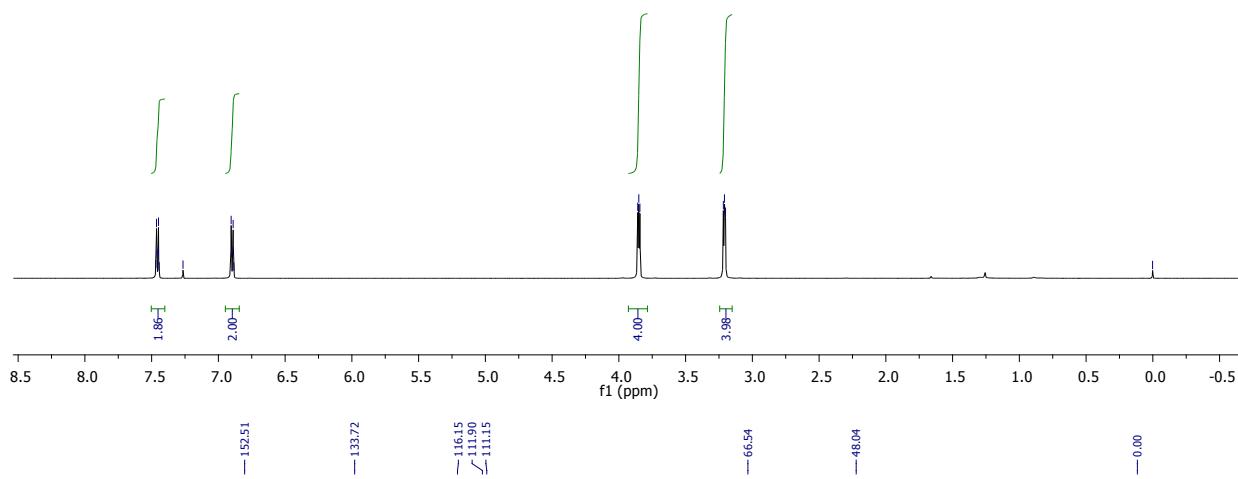
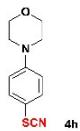


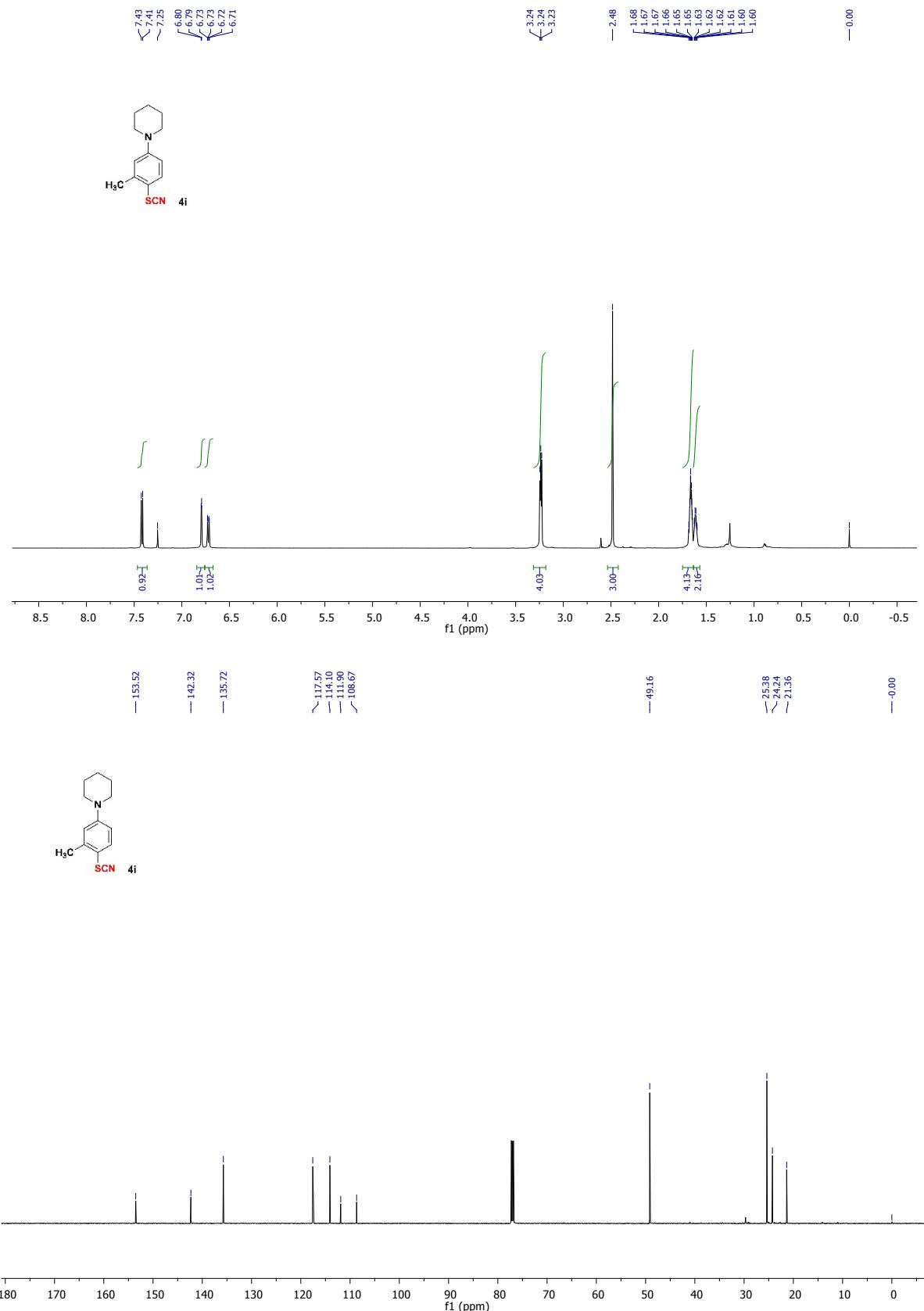


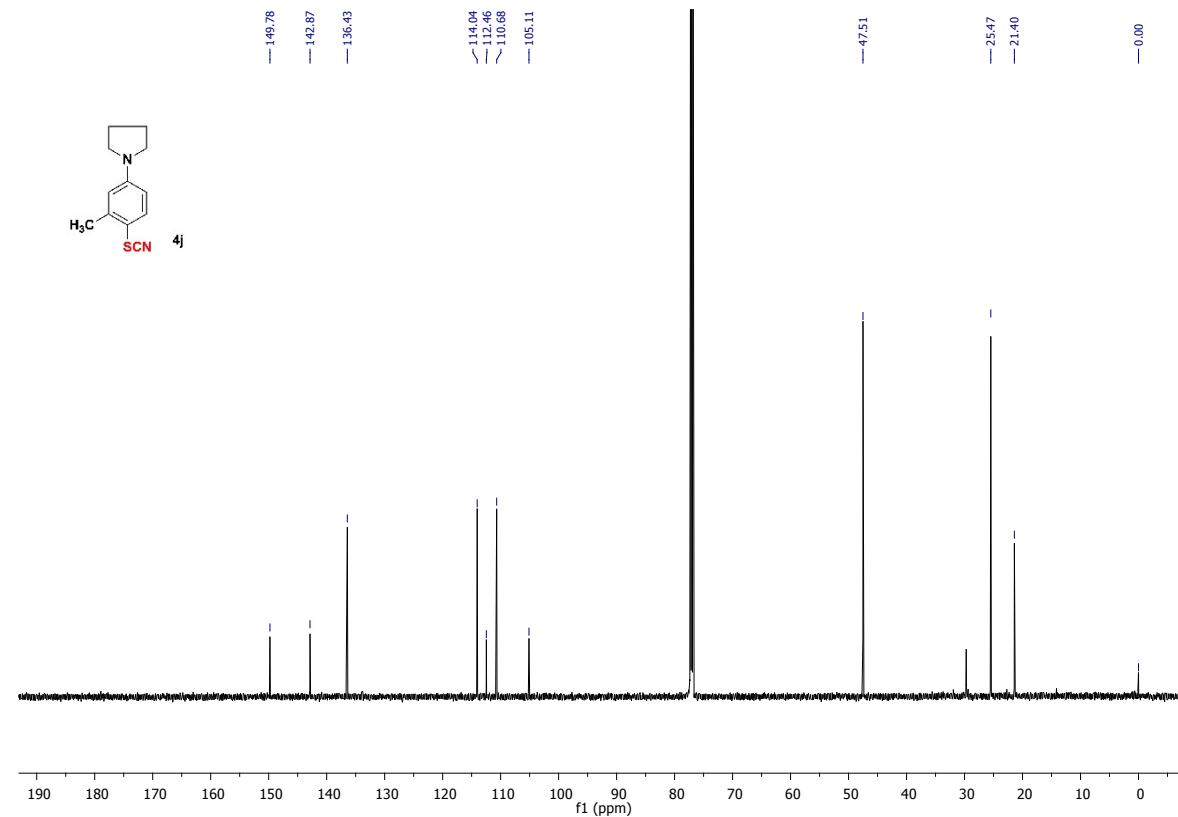
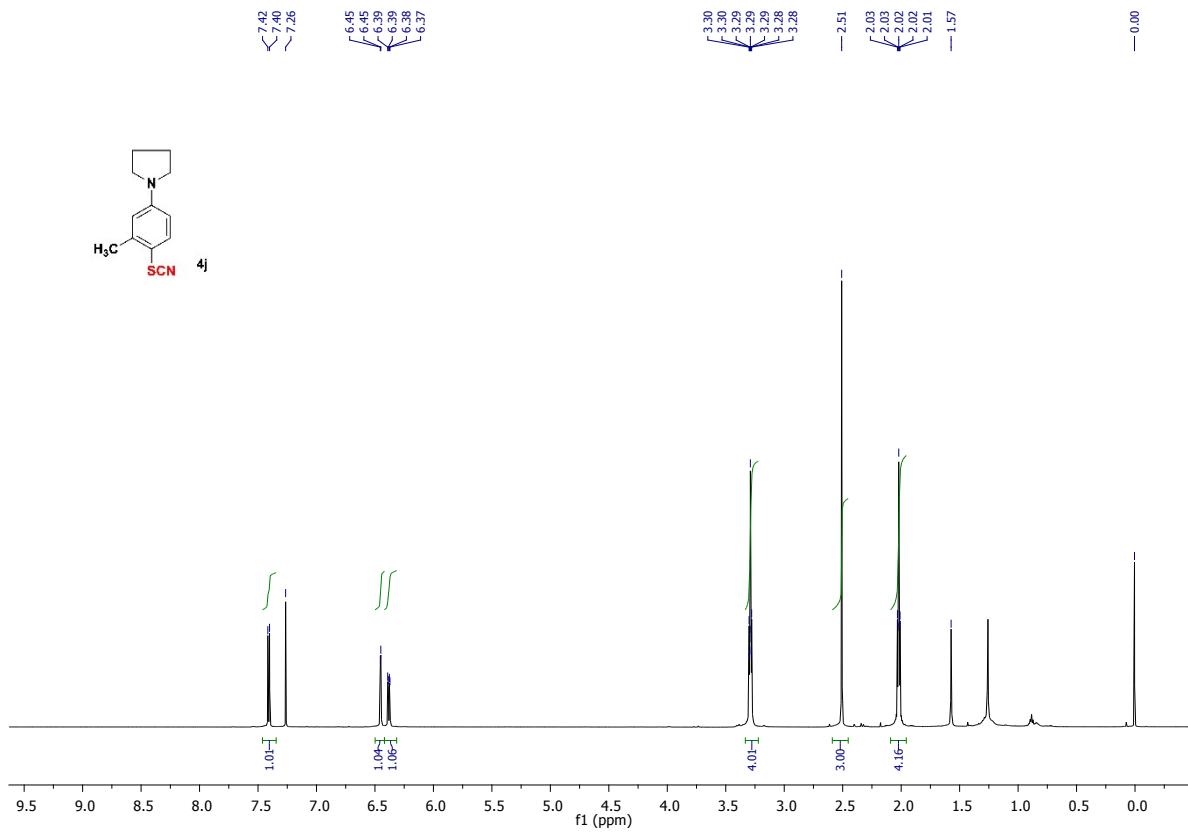


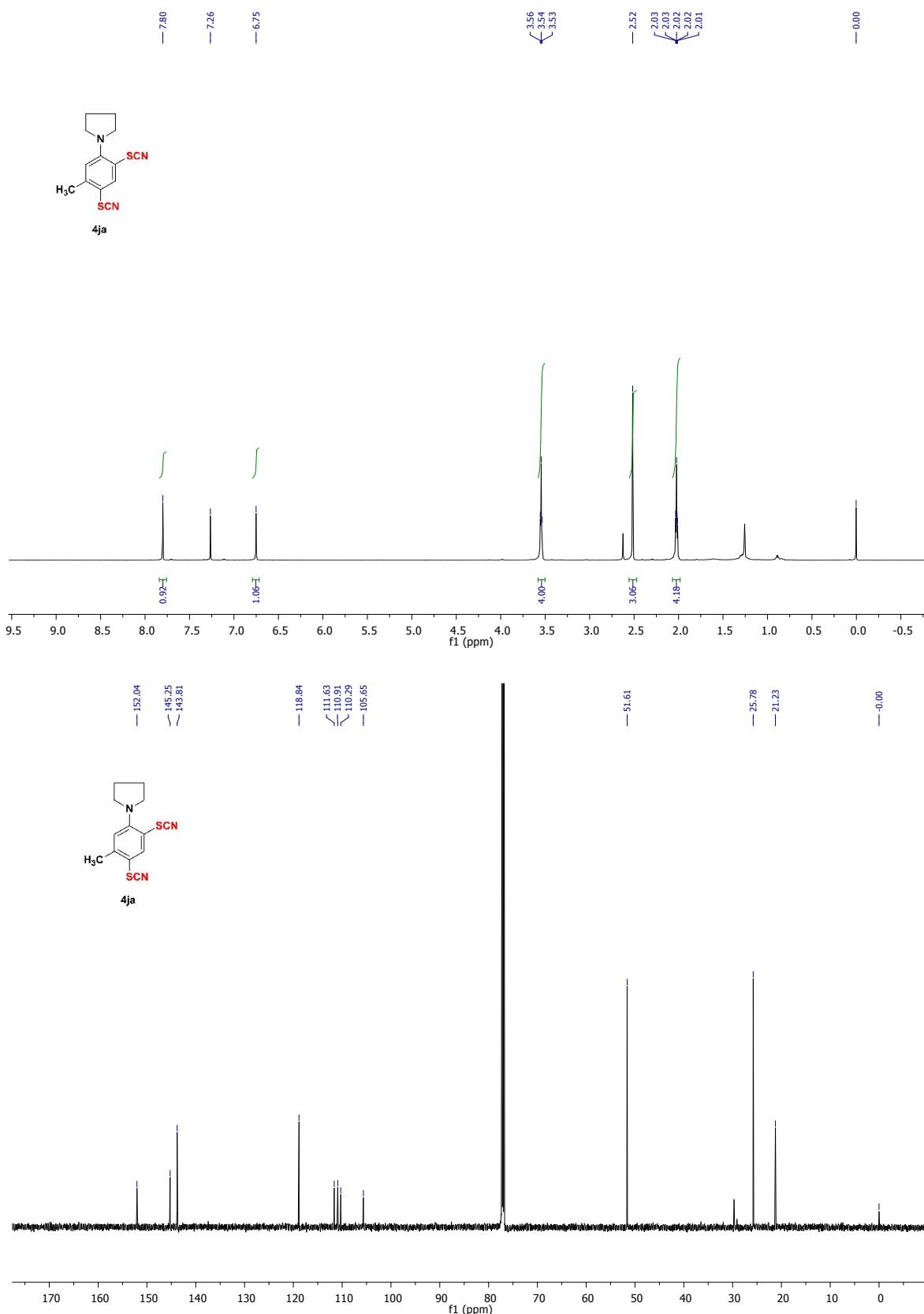


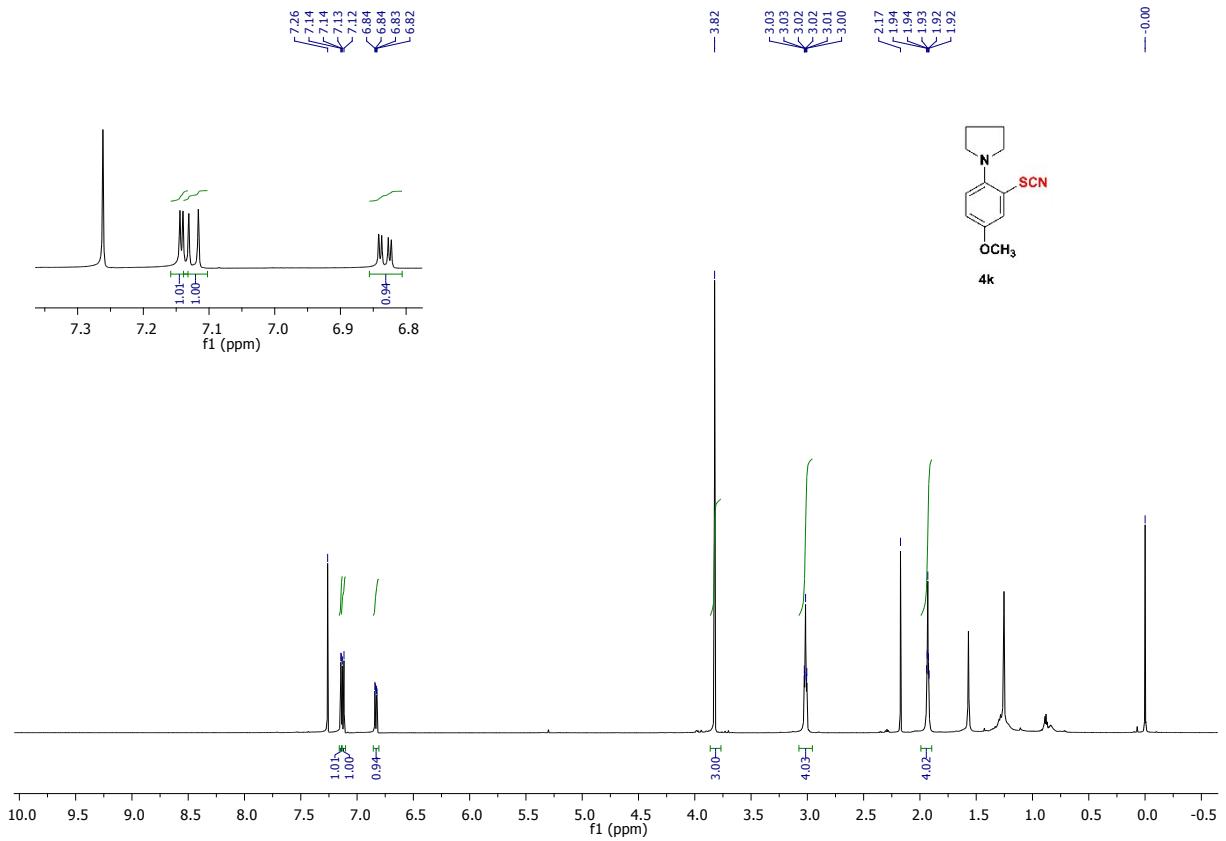


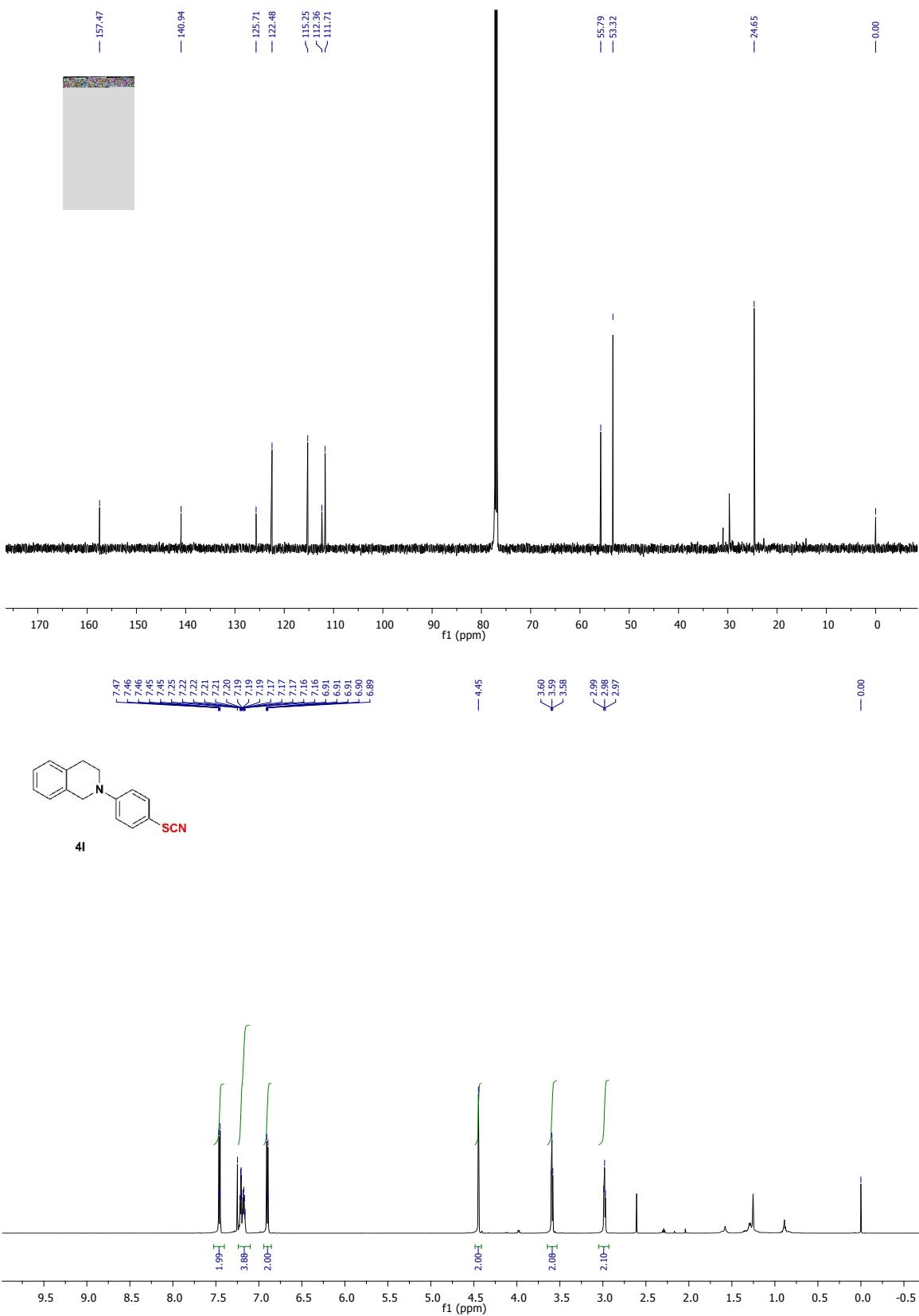


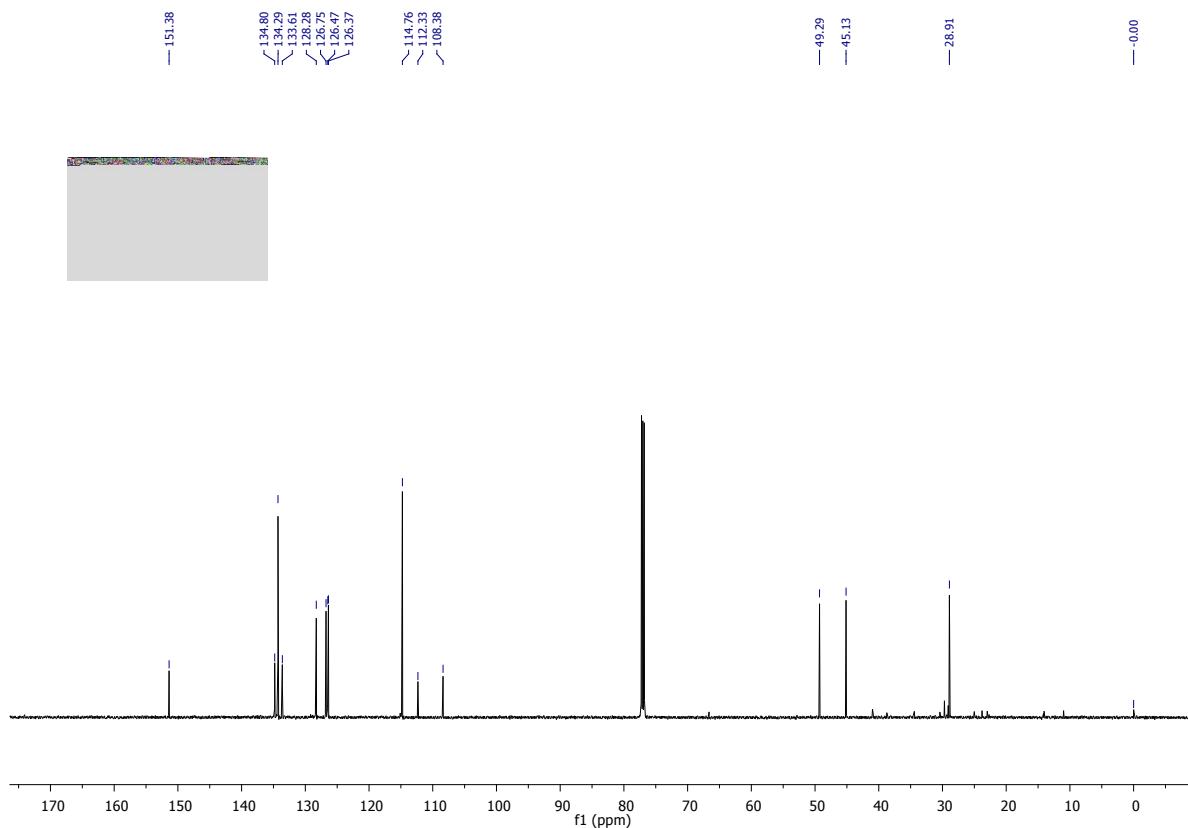






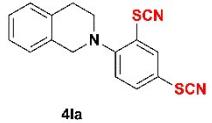




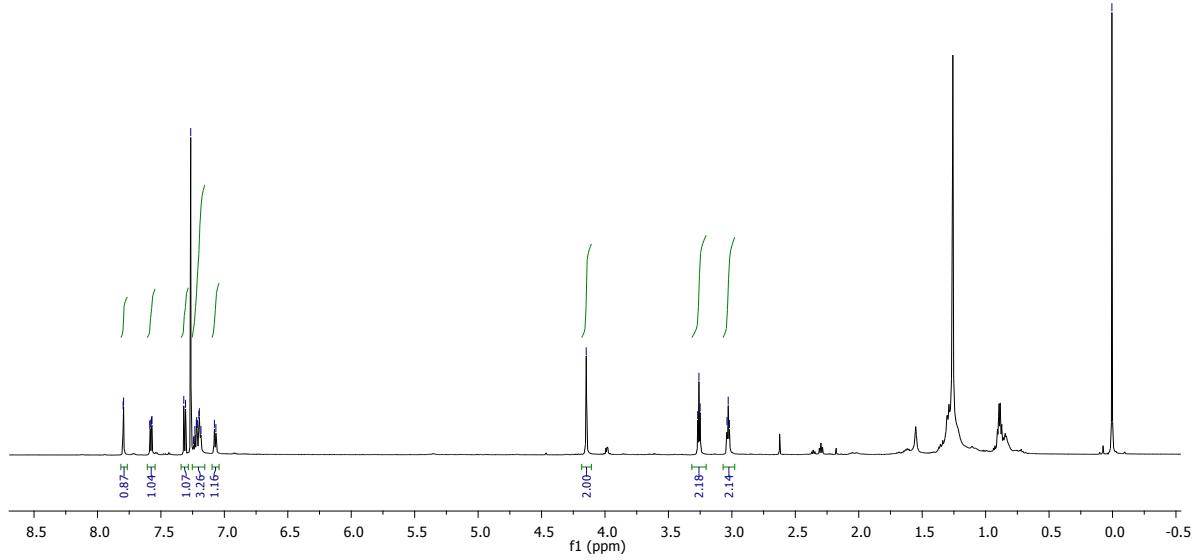




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41a



41-

