

## Supplementary Information

### Synthesis, characterization and cytotoxicity evaluation of a novel Magnetic Nanocomposite with Iron Oxide Deposited on Cellulose Nanofibers with nickel ( $\text{Fe}_3\text{O}_4@\text{NFC}@\text{ONSM-Ni}$ )

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#### Catalyst checking for study over the Hantzsch model reaction

Outset a mixture reaction of aldehyde (1 mmol), dimedone (1 mmol for PHQ), ammonium acetate (1.5 mmol), ethyl acetoacetate (2 mmol for 1,4-DHP or 1 mmol for PHQ), and  $\text{Fe}_3\text{O}_4@\text{NFC}@\text{ONSM-Ni}$  (II) (15 mg) were mixed thoroughly. The flask was heated at 65 °C with concomitant stirring. After completion of the reaction confirmed by TLC (EtOAc:n-hexane), hot ethanol (10 mL) was added and separated solid catalyst by a normal magnet. The spectral data for the selected compounds are as follows:

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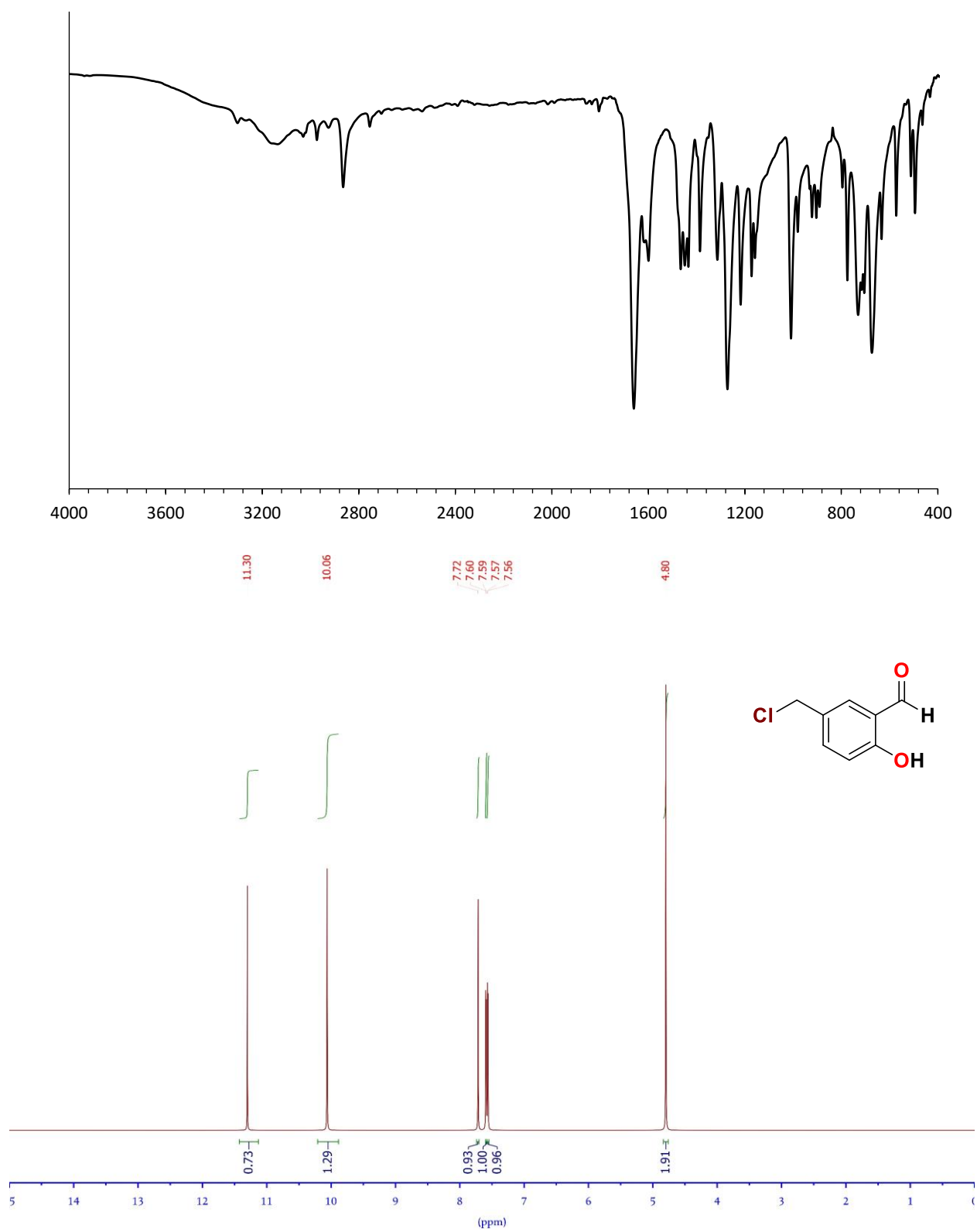
<sup>b+</sup> Student Research Committee, Birjand University of Medical Sciences, Birjand, Iran.

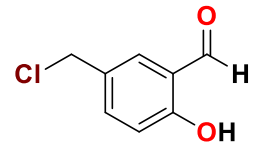
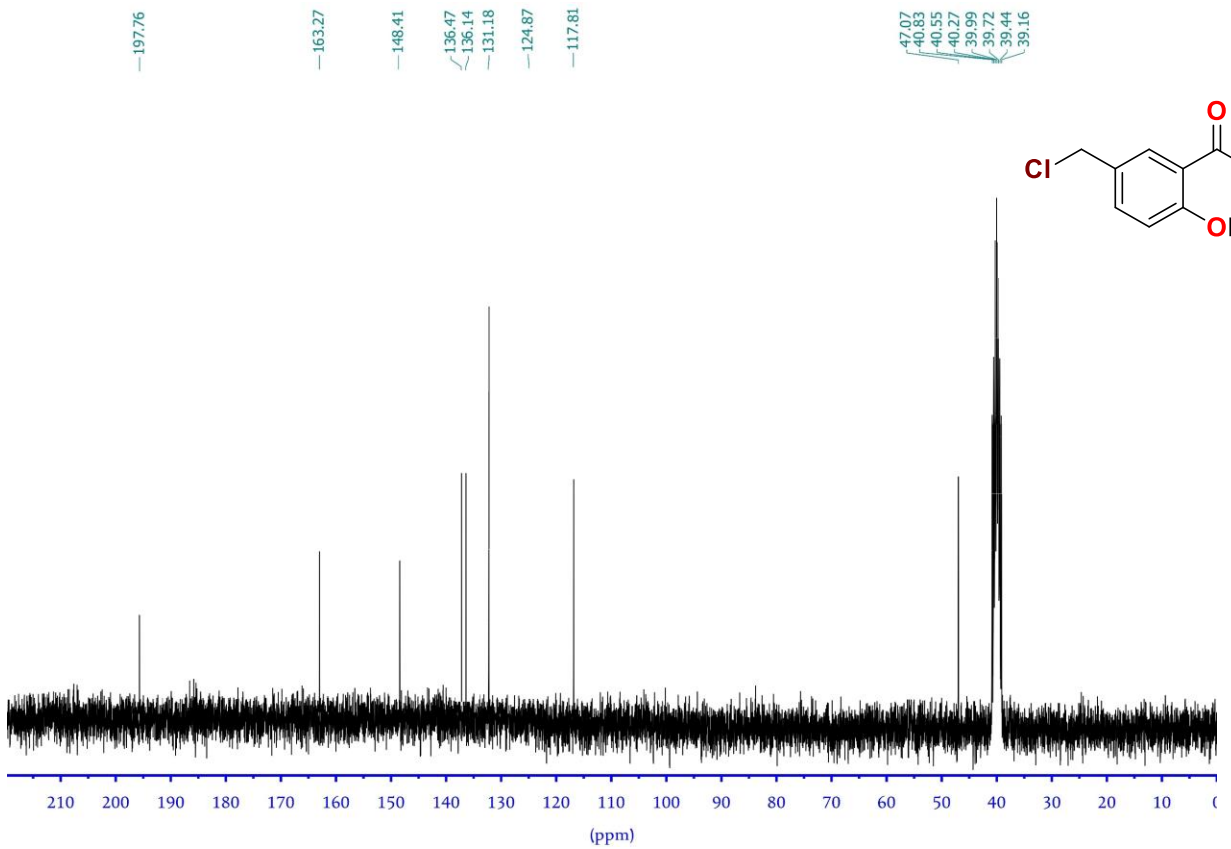
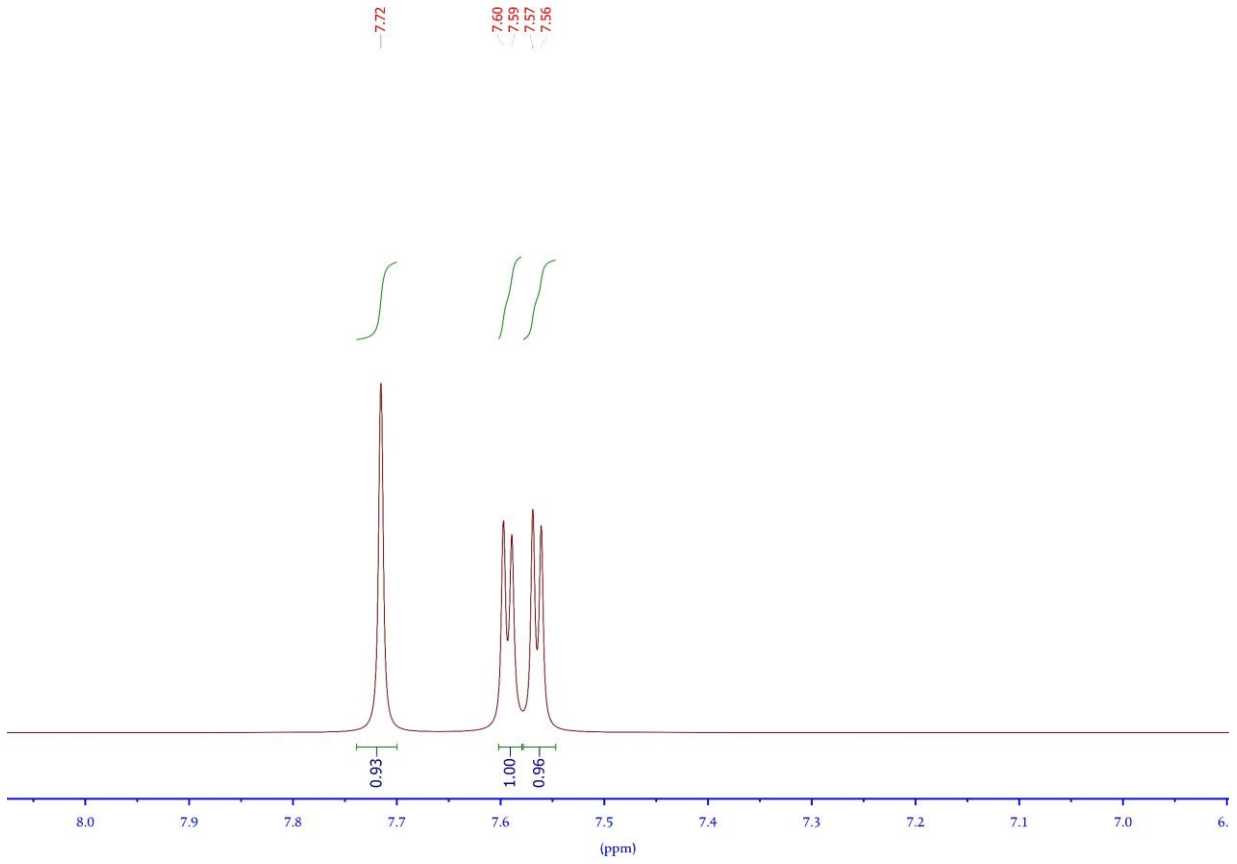
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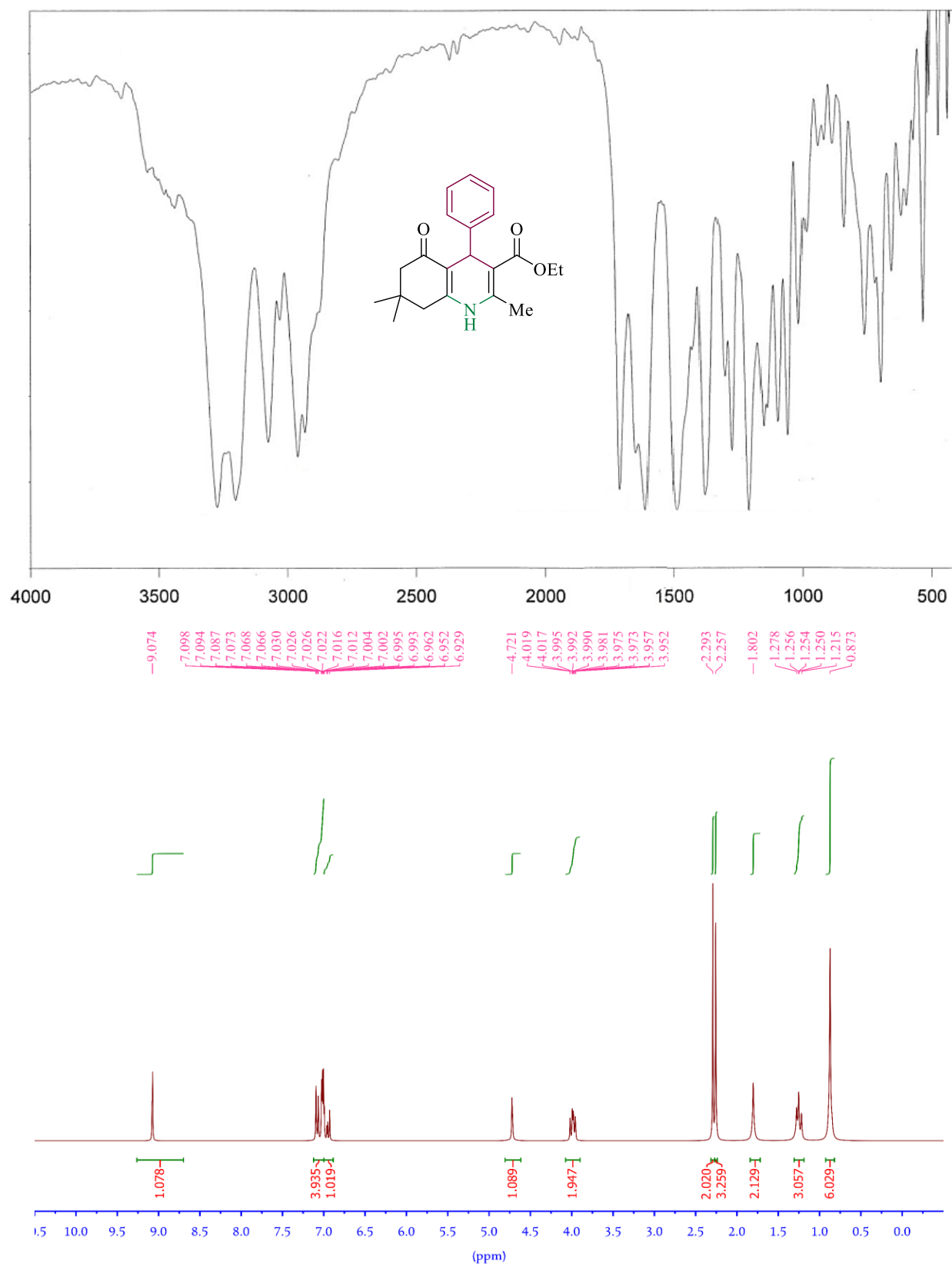
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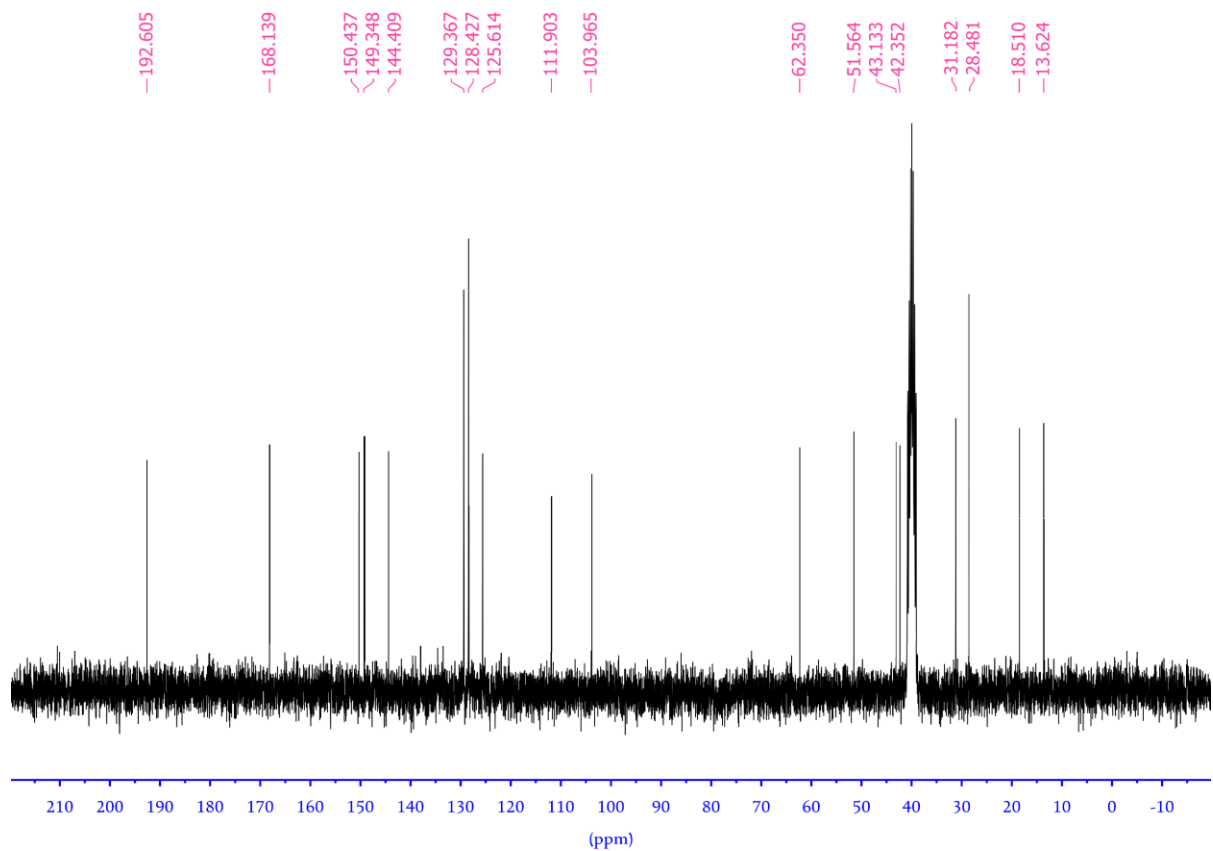
5-(chloromethyl)-2-hydroxybenzaldehyde (III)



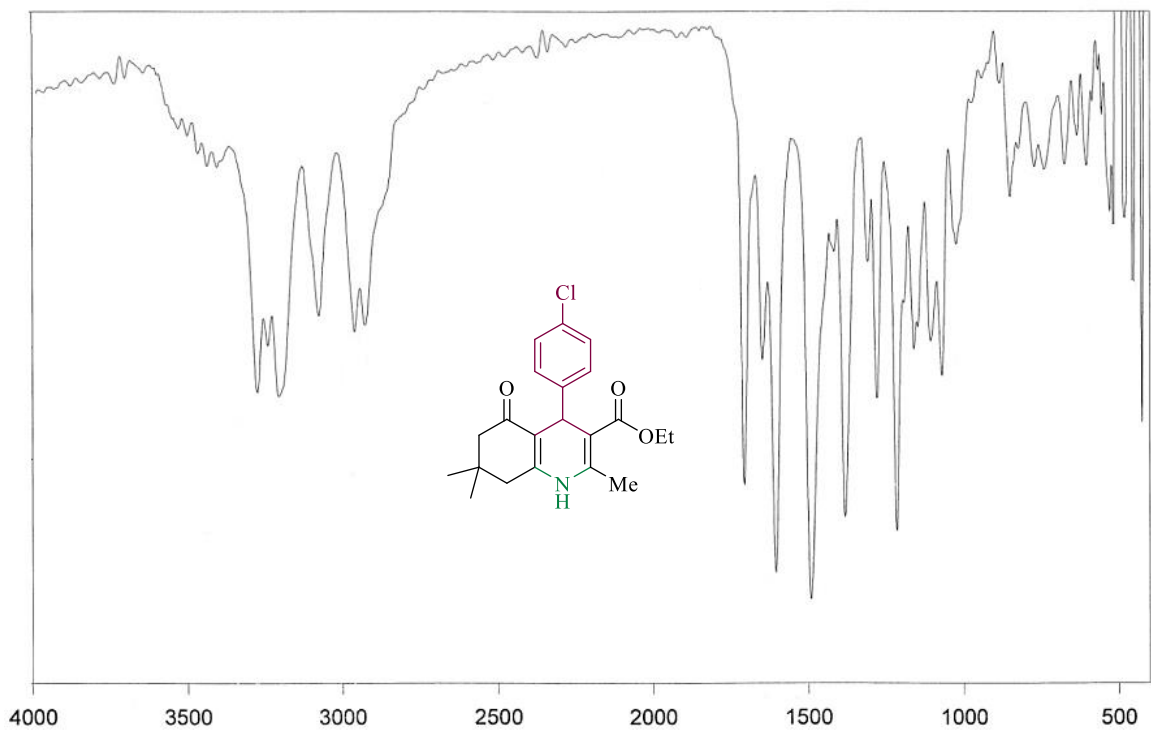


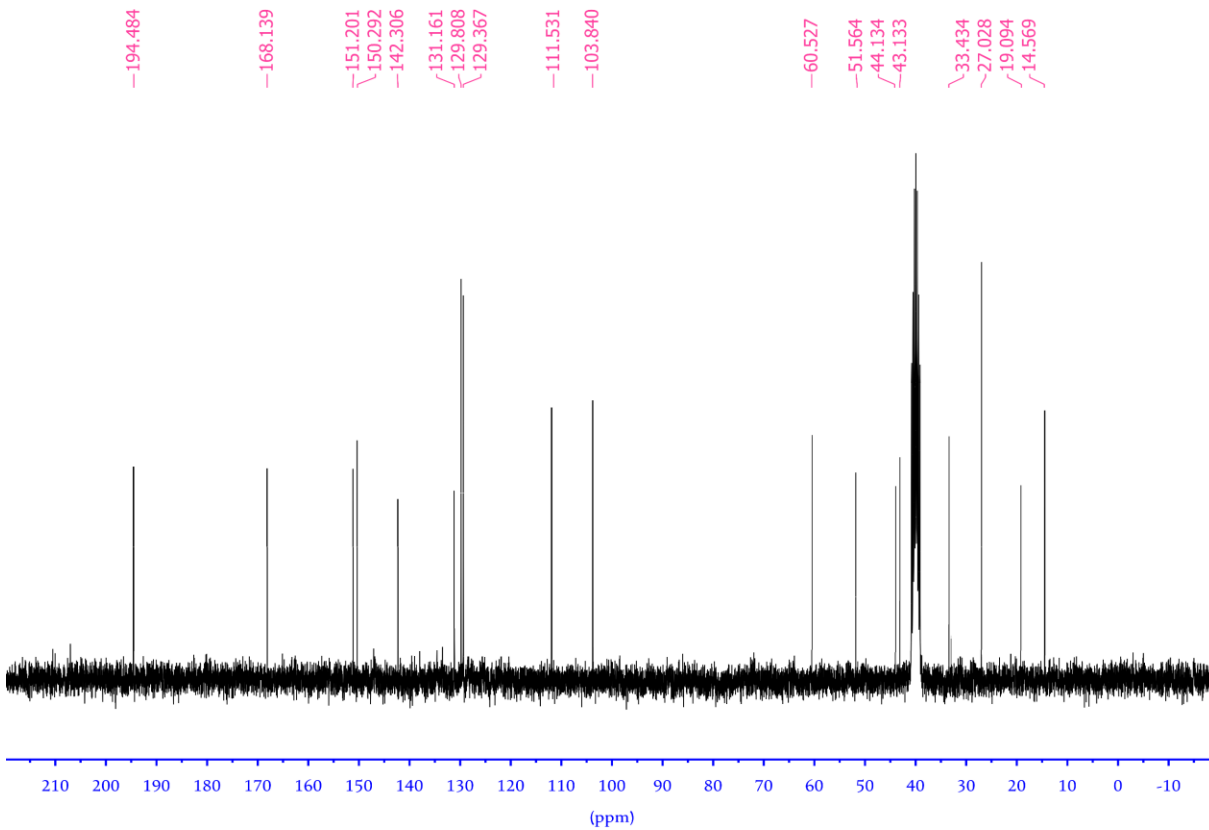
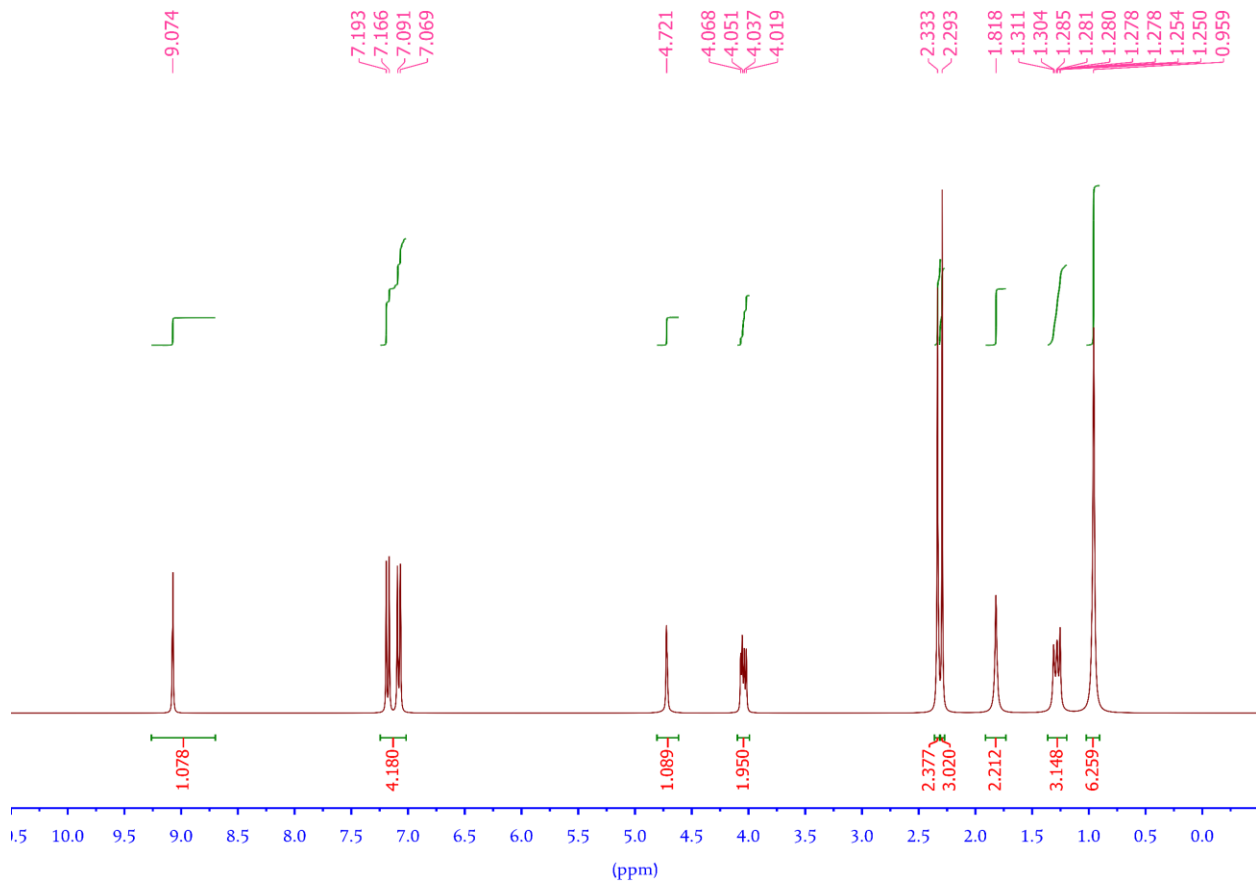
Ethyl 2,7,7-trimethyl-5-oxo-4-phenyl-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate (5a)



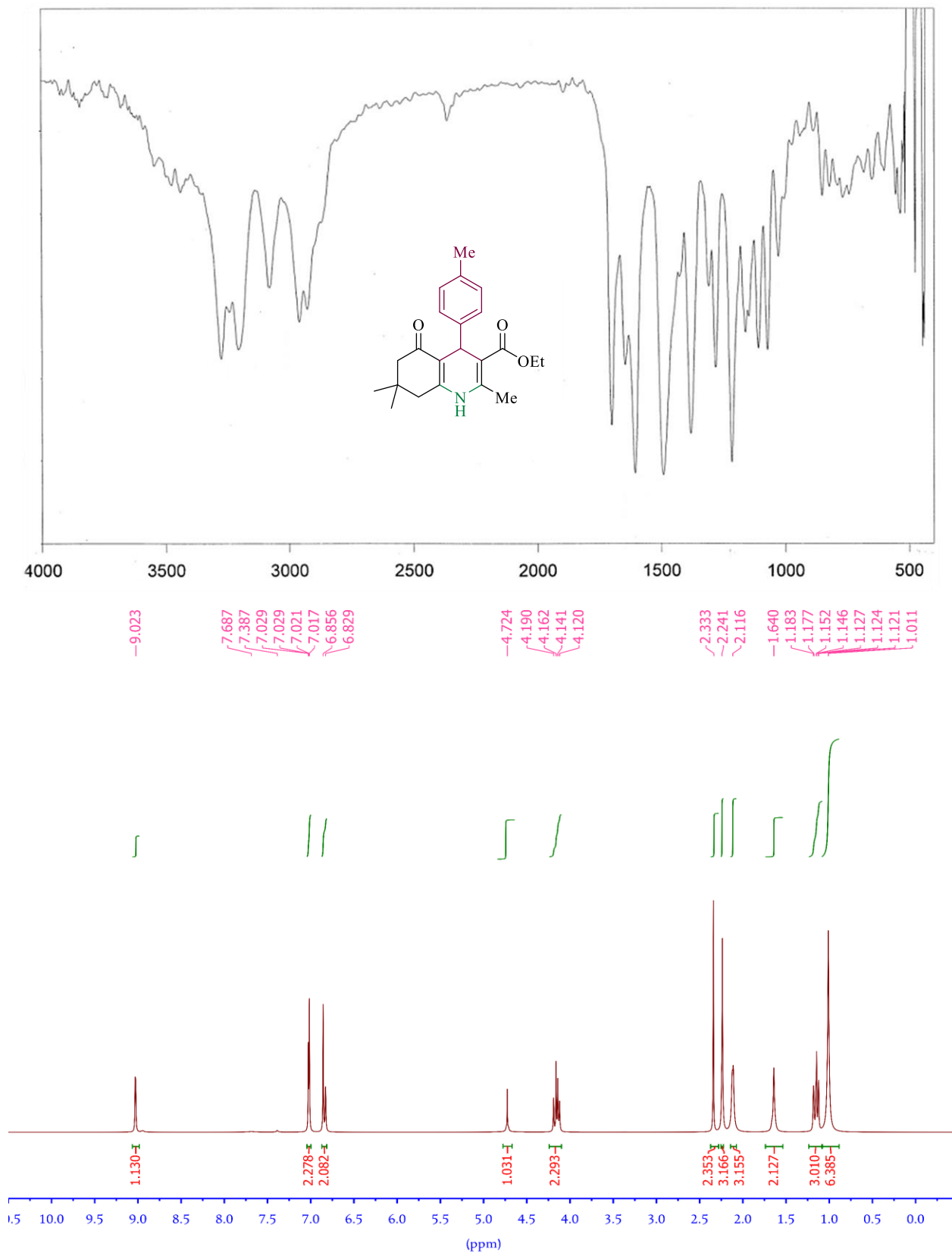


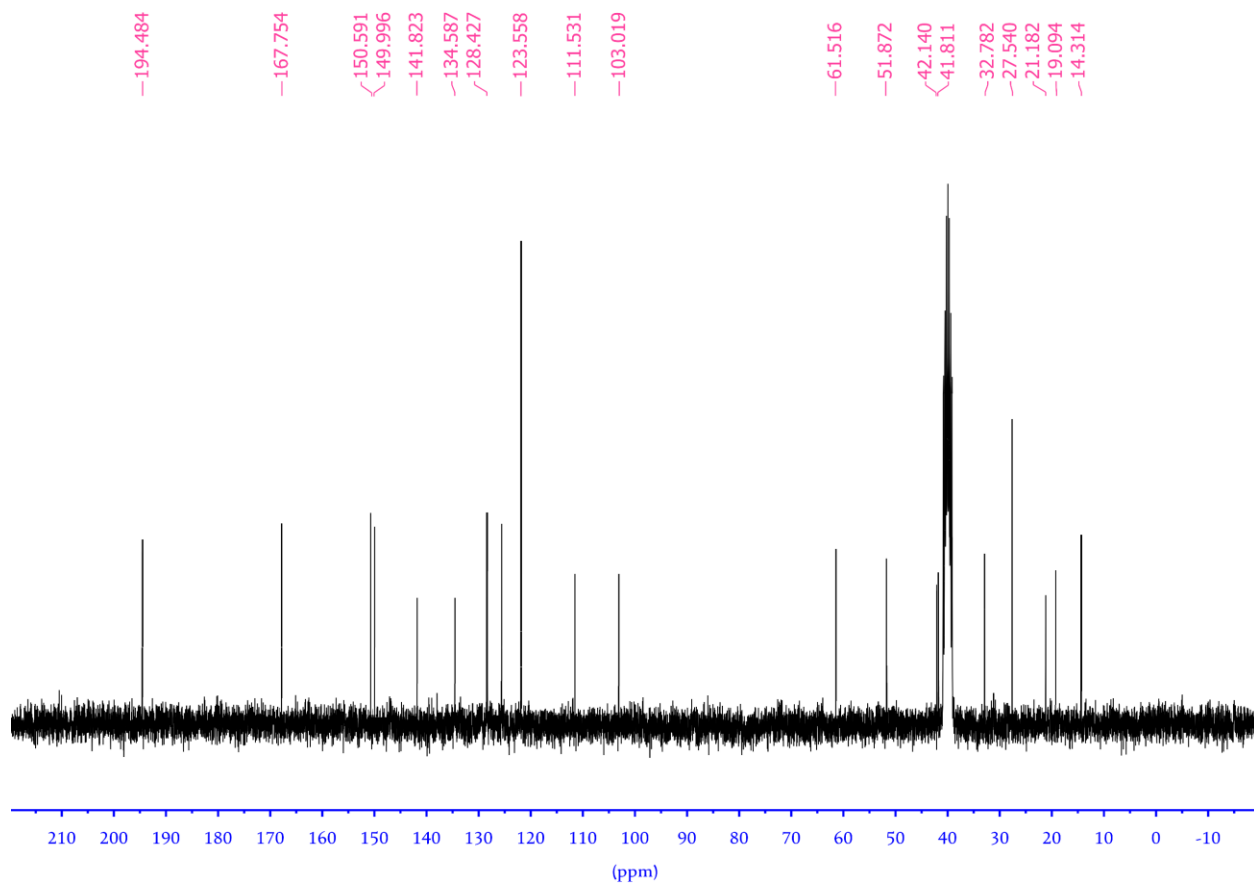
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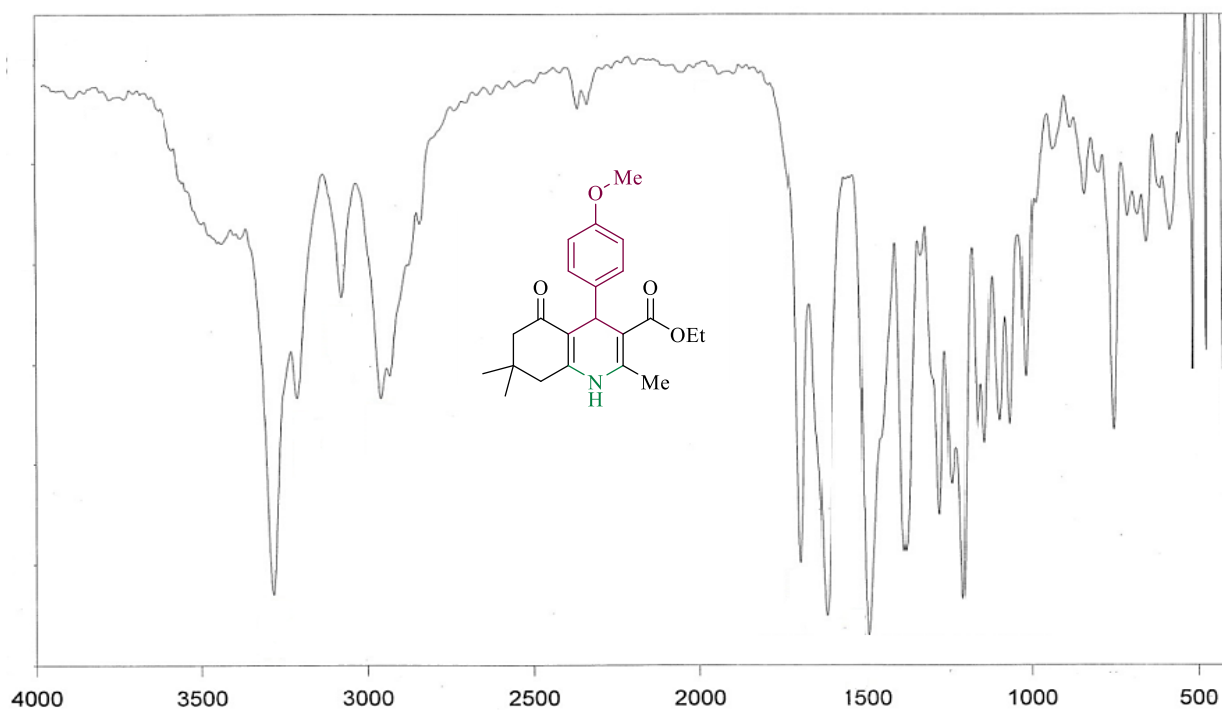


Ethyl 2,7,7-trimethyl-5-oxo-4-(p-tolyl)-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate (5e)

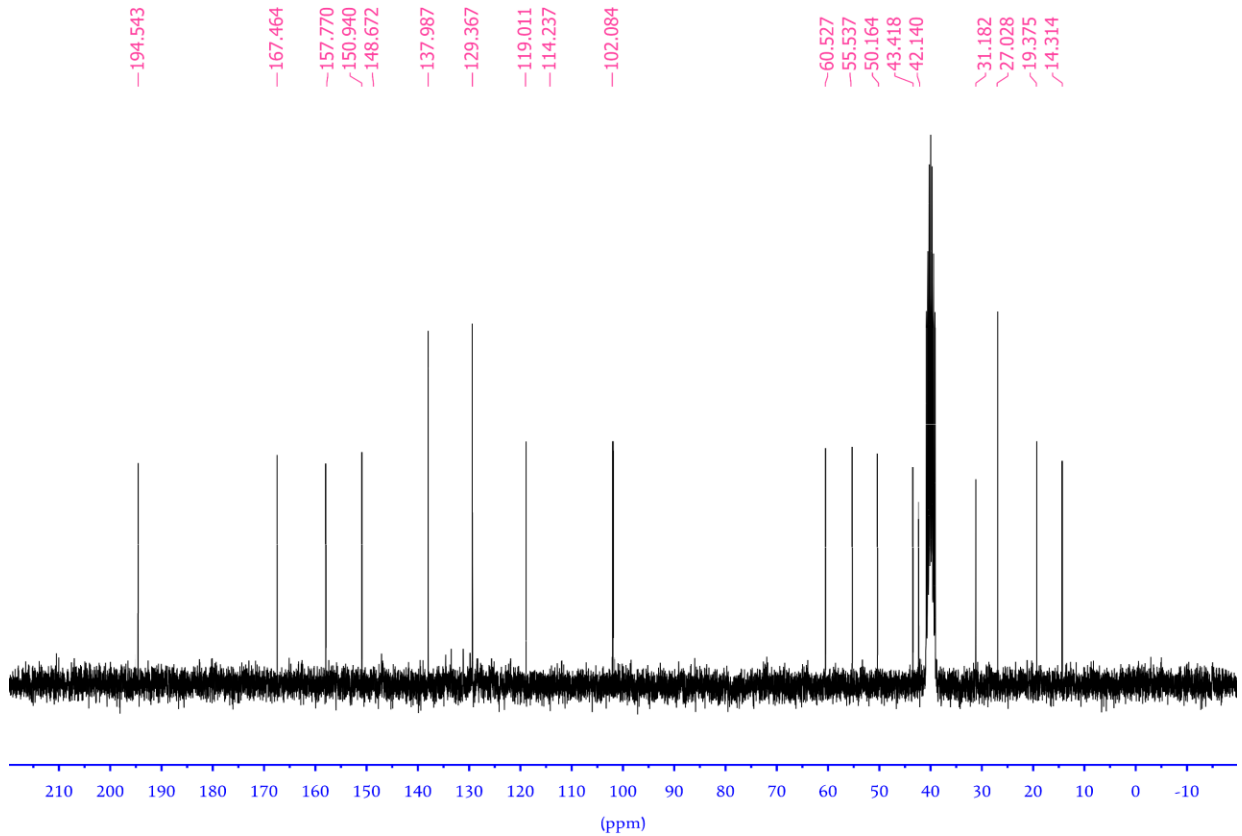
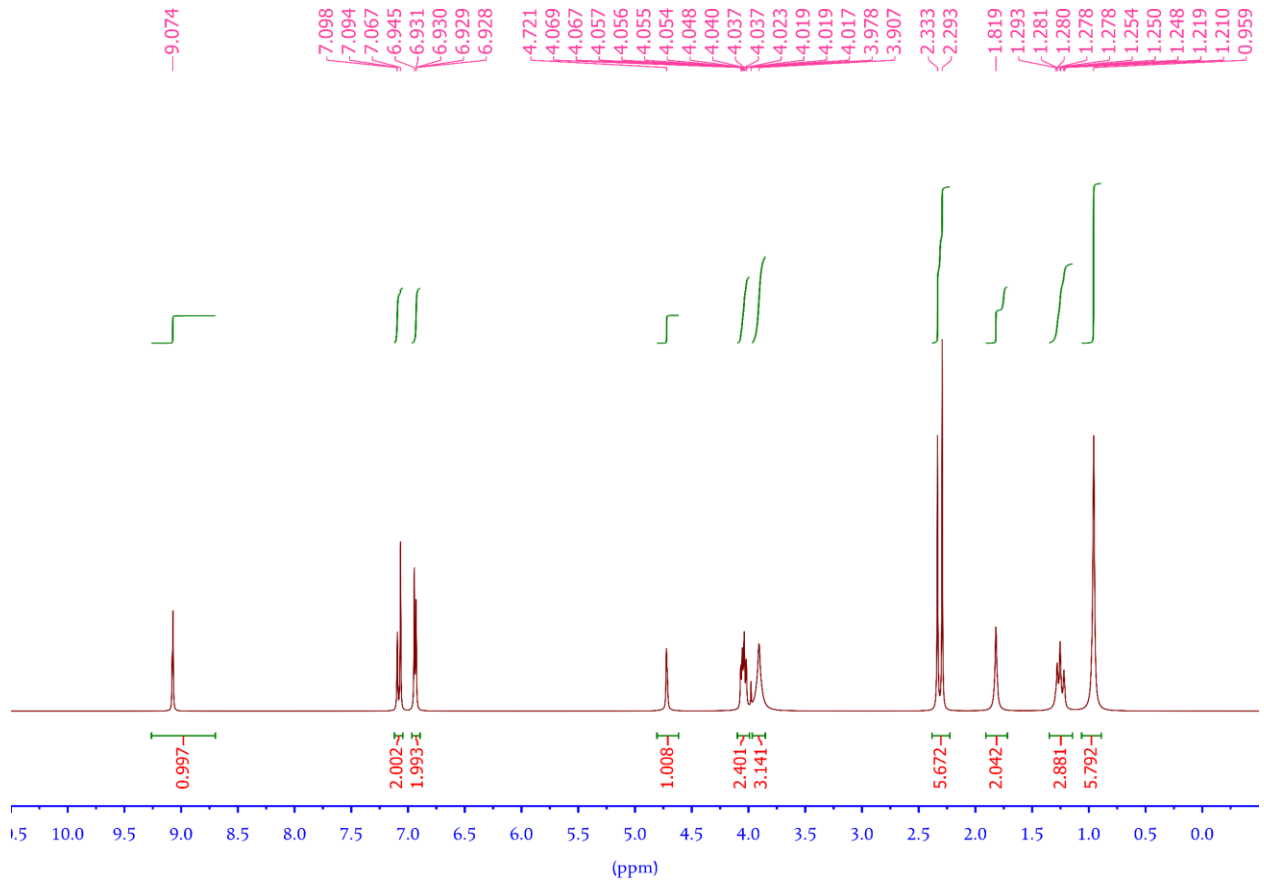




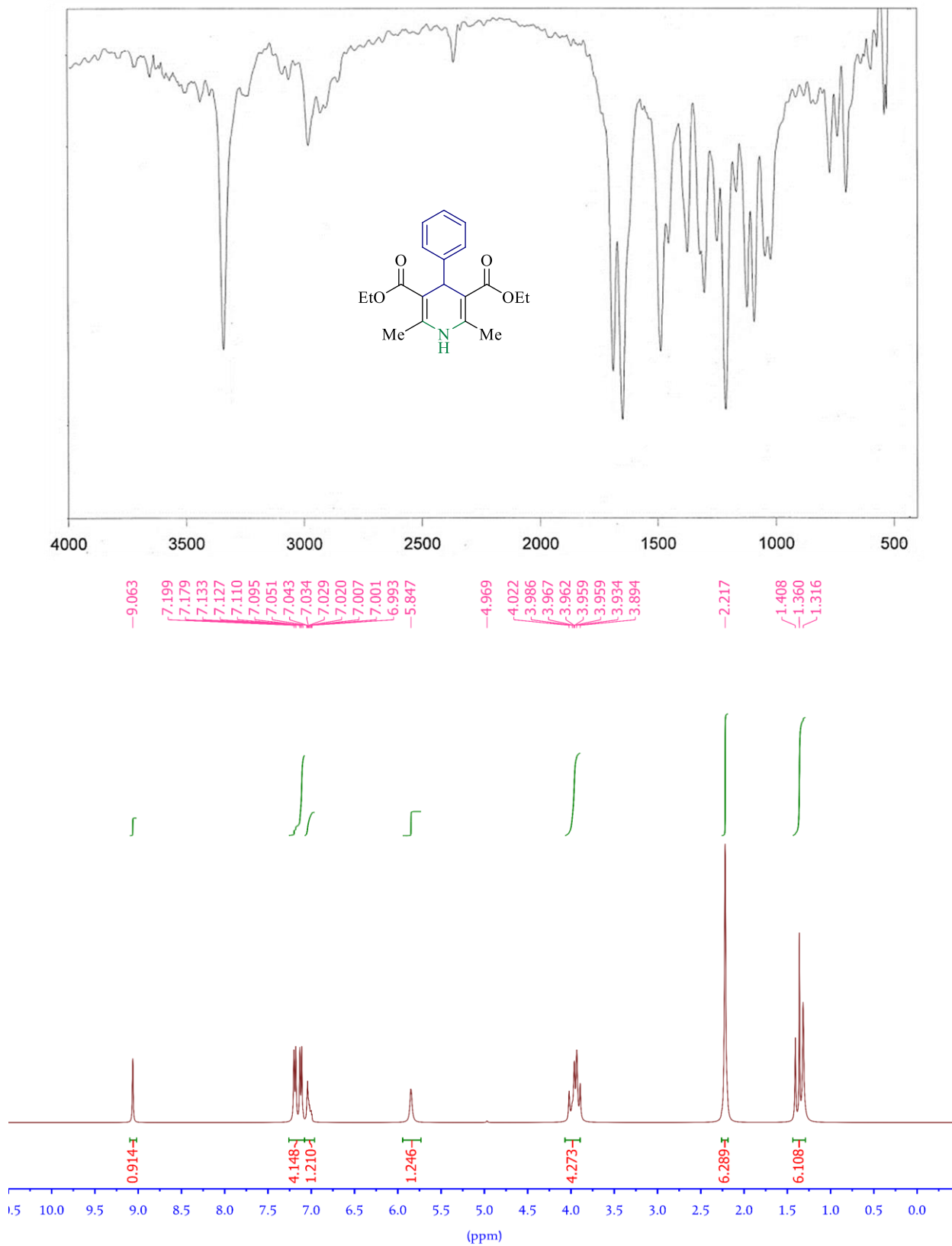
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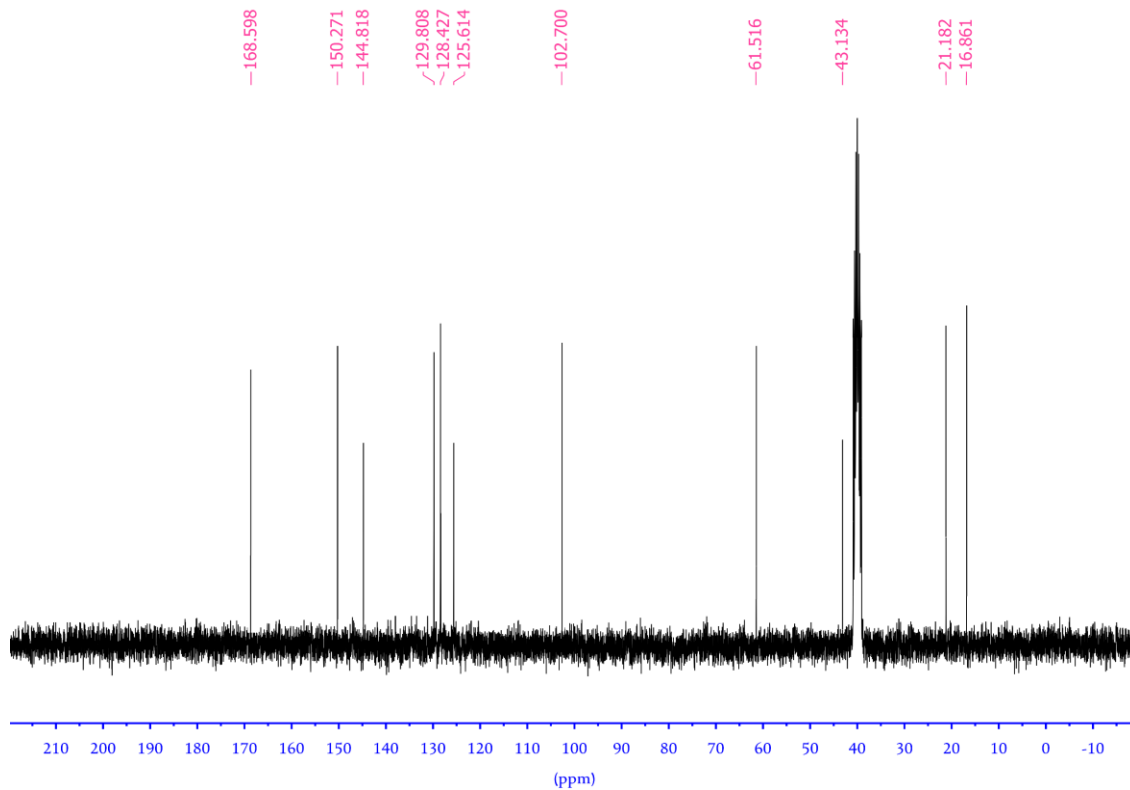




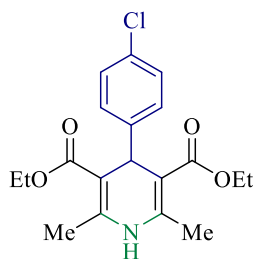
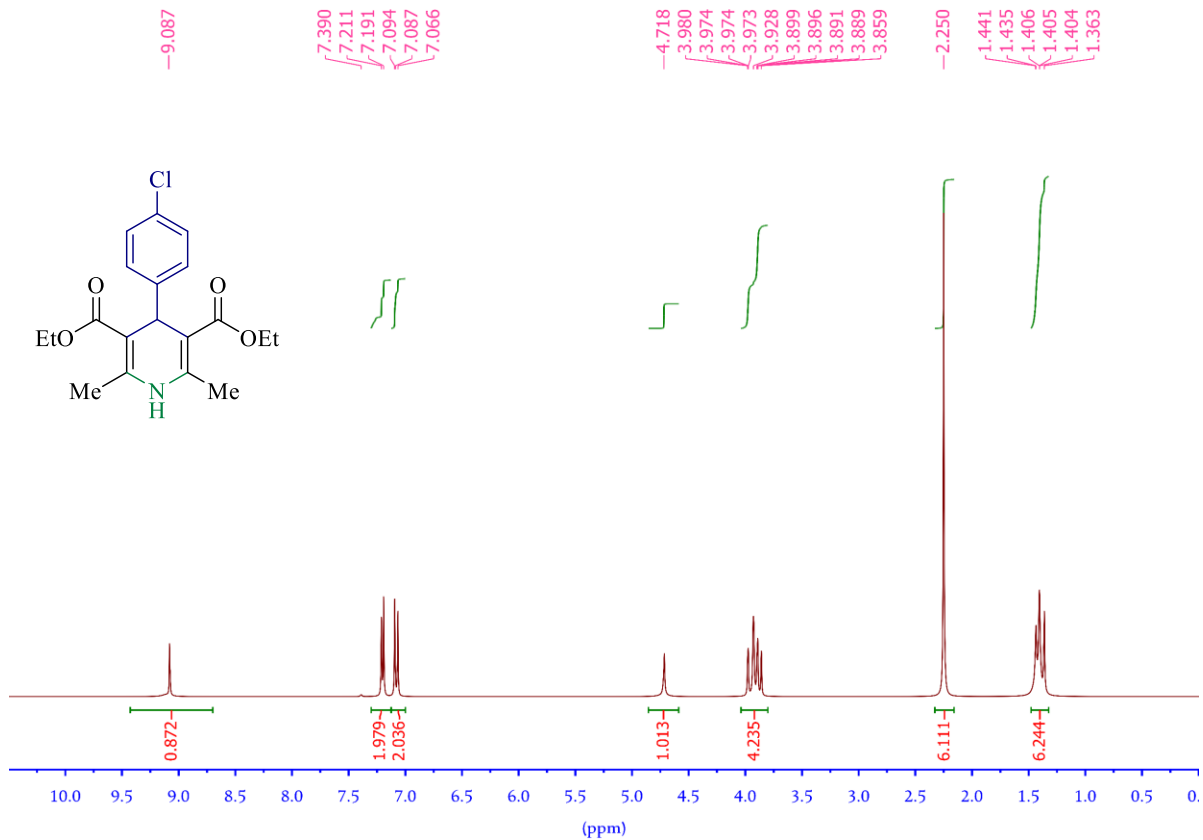


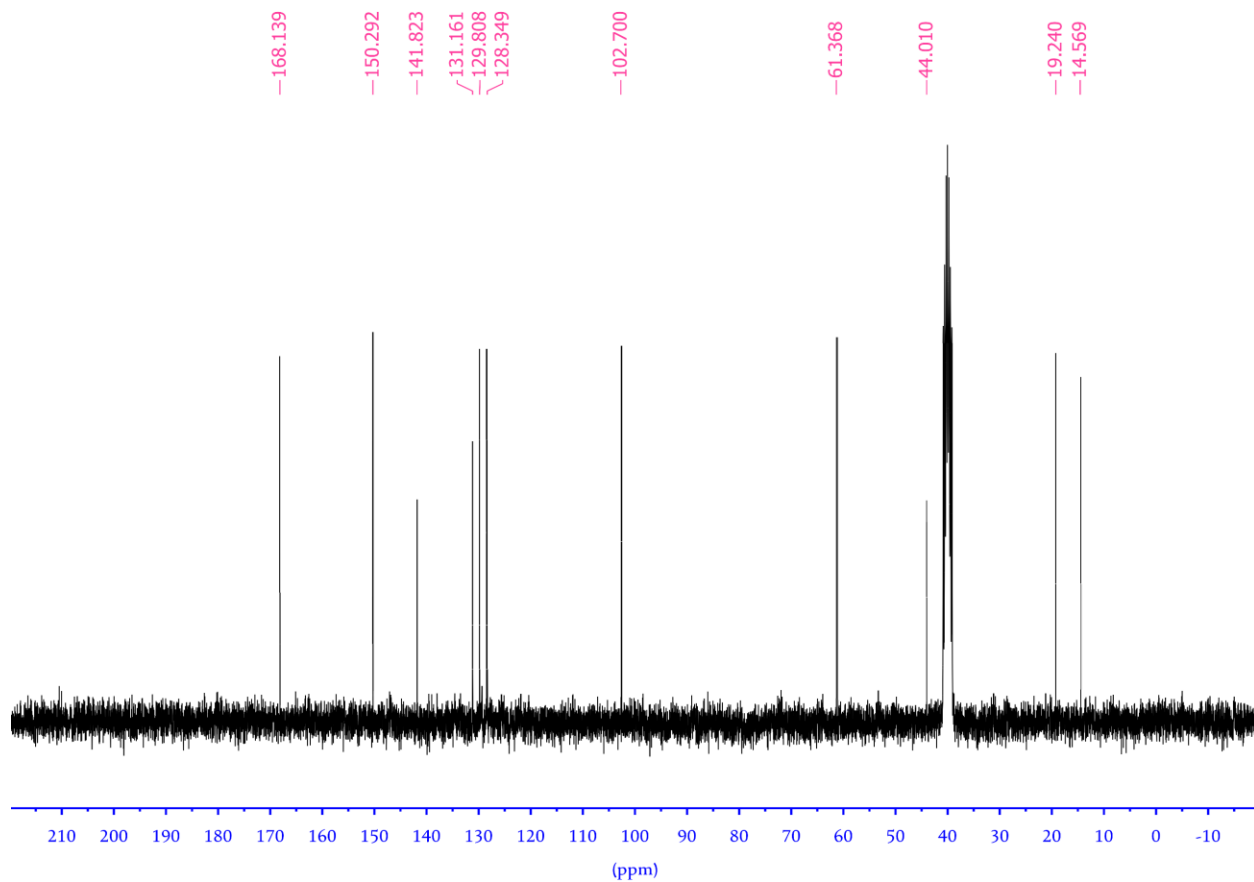
Diethyl 2,6-dimethyl-4-phenyl-1,4-dihydropyridine-3,5-dicarboxylate (6a)



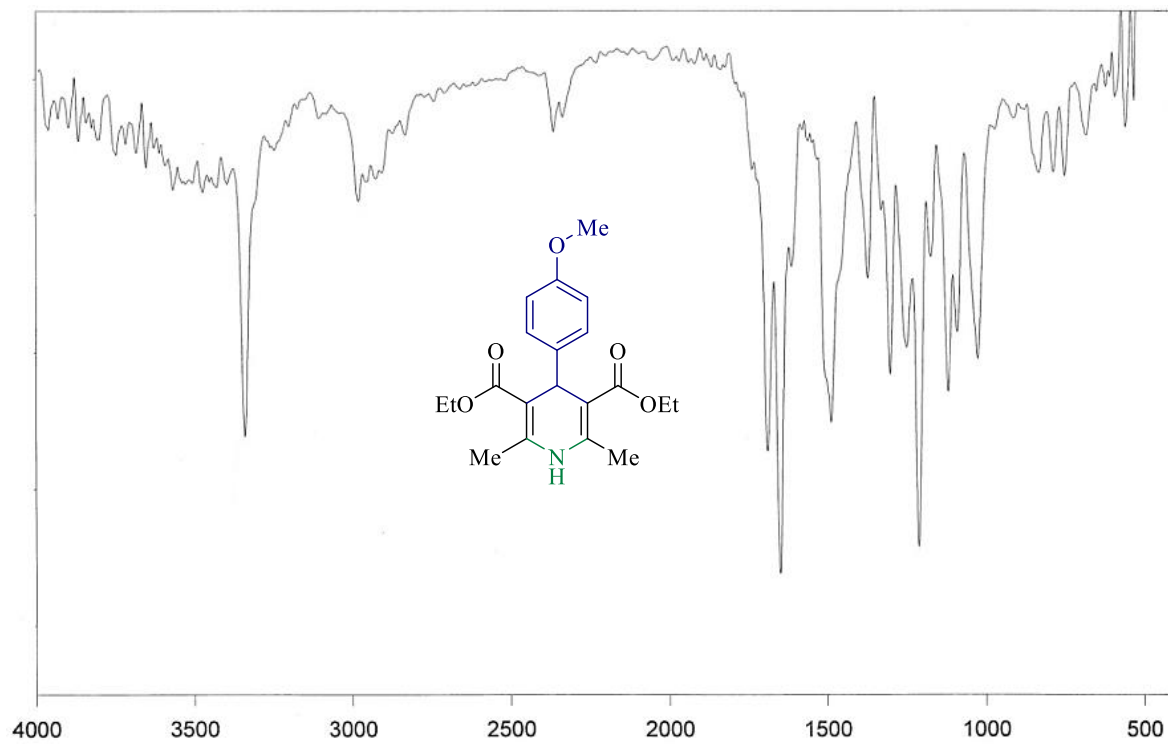


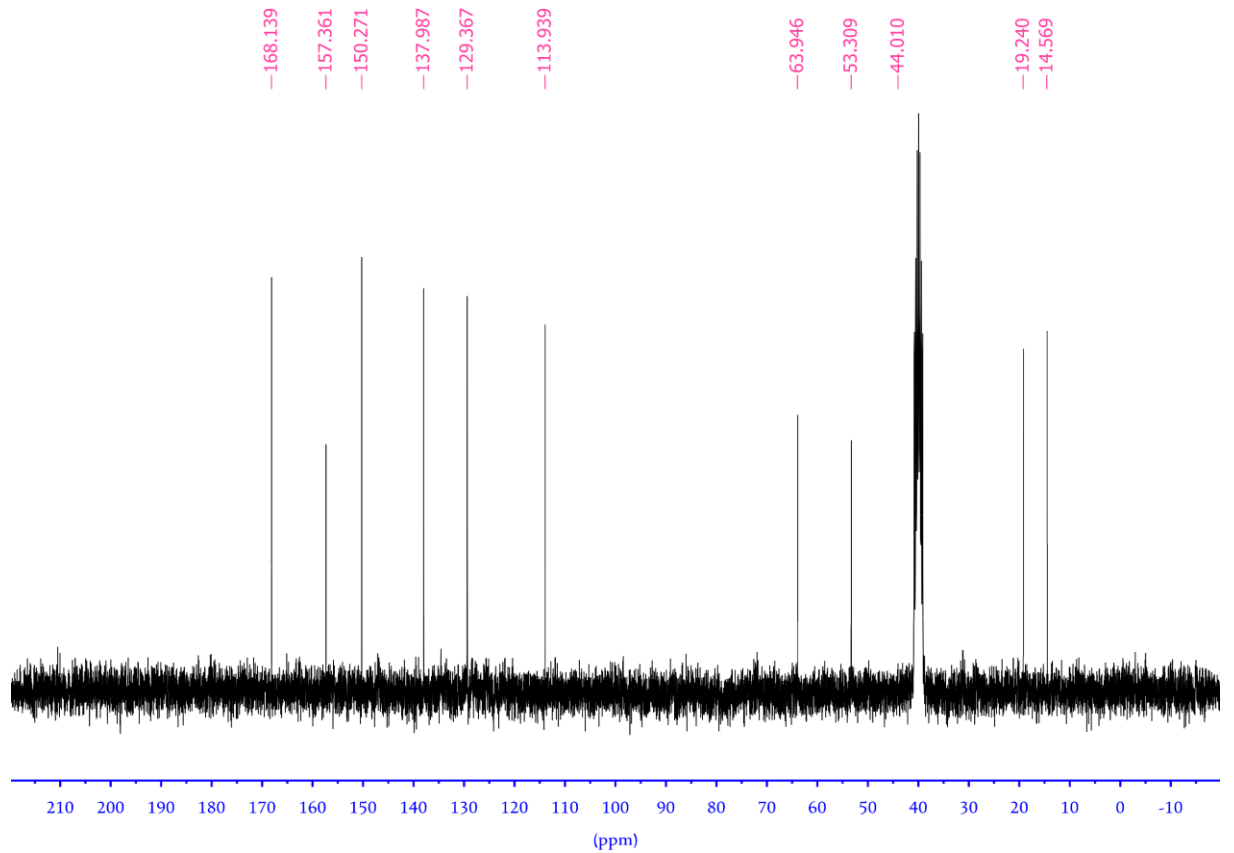
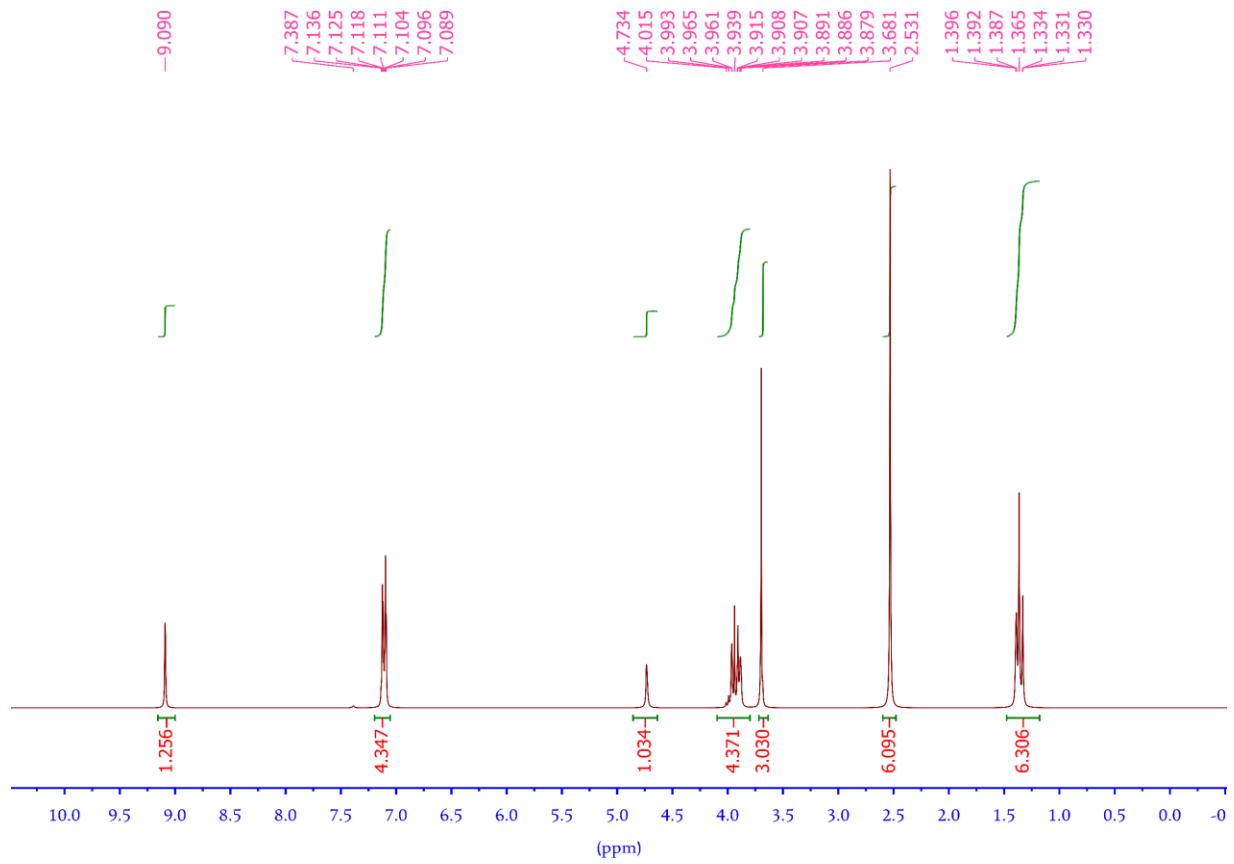
Diethyl 4-(4-chlorophenyl)-2,6-dimethyl-1,4-dihydropyridine-3,5-dicarboxylate (6c)



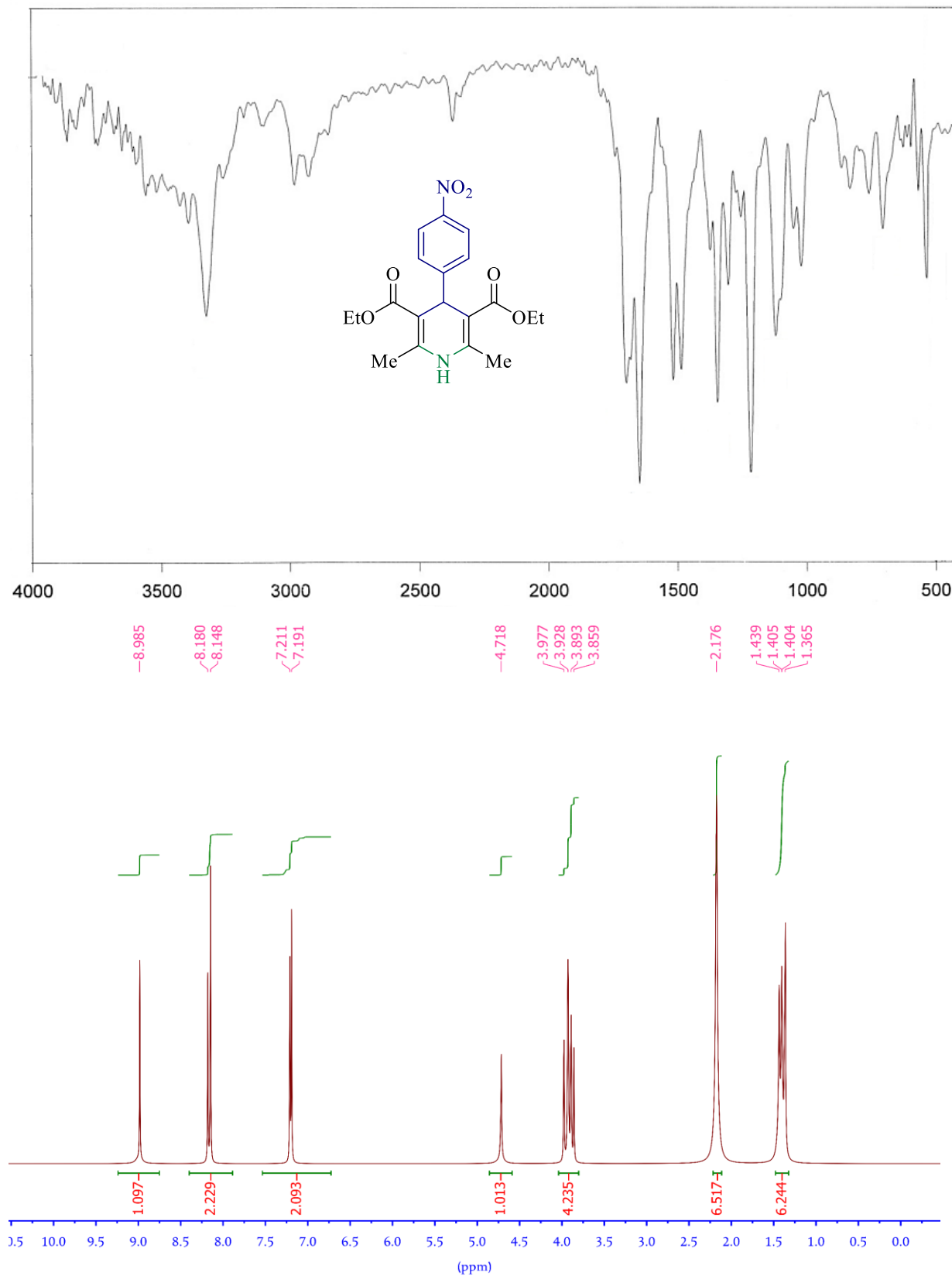


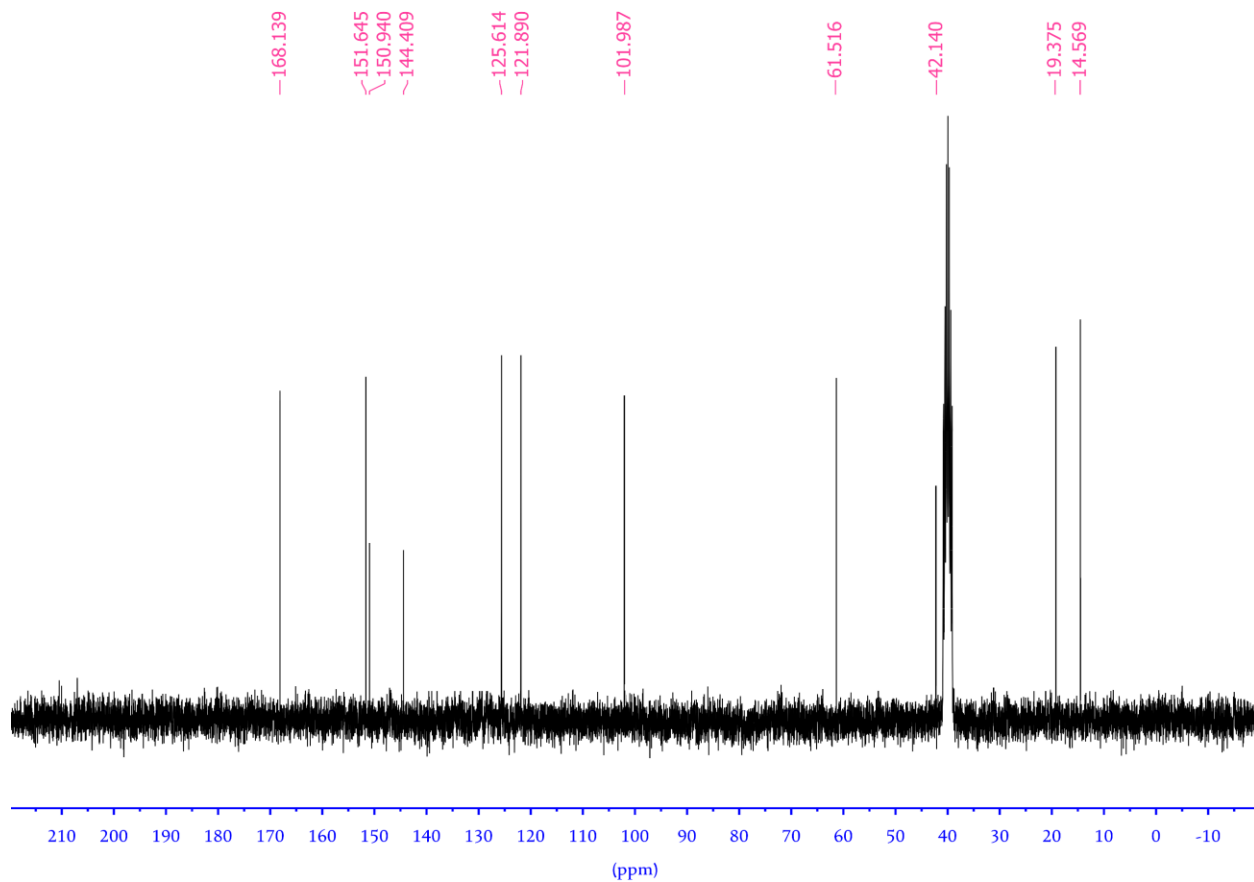
Diethyl 4-(4-methoxyphenyl)-2,6-dimethyl-1,4-dihydropyridine-3,5-dicarboxylate (6f)





Diethyl 2,6-dimethyl-4-(4-nitrophenyl)-1,4-dihydropyridine-3,5-dicarboxylate (6i)





Diethyl 4-(4-cyanophenyl)-2,6-dimethyl-1,4-dihydropyridine-3,5-dicarboxylate (6j)

