Electronic Supplementary Material (ESI) for New Journal of Chemistry.

SUPPORTING INFORMATION

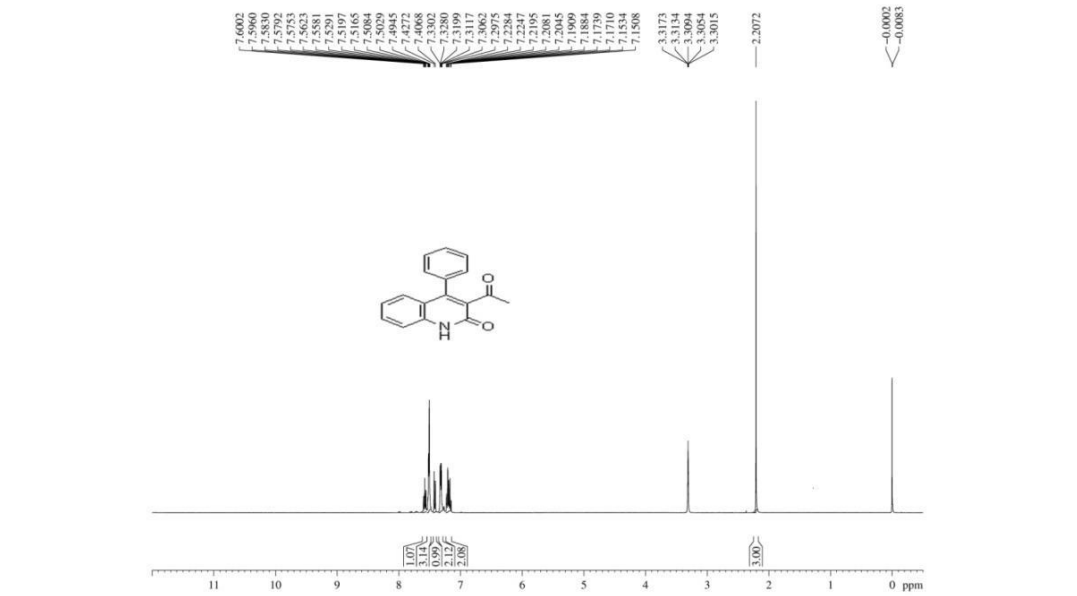
Friedländer annulation: Scope and limitations of metal Lewis acid catalysts in selectivity control for the synthesis of functionalised quinolines

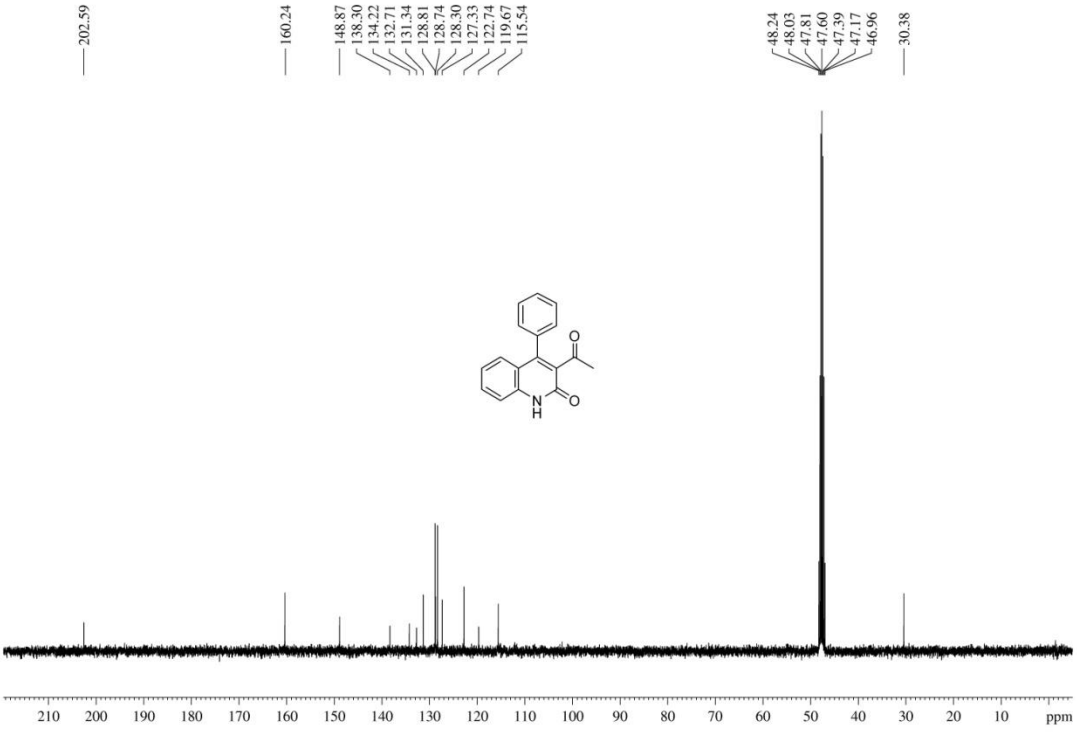
Babita Tanwar, Dinesh Kumar, Asim Kumar, Md. Imam Ansari, Mohammad Mohsin Qadri, Maulikkumar D. Vaja, Madhulika Singh and Asit K. Chakraborti*

Department of Medicinal Chemistry,
National Institute of Pharmaceutical Education and Research (NIPER),
Sector 67, S. A. S. Nagar 160 062, Punjab, India.
*Corresponding Author: akchakraborti@niper.ac.in; akchakraborti@rediffmail.com

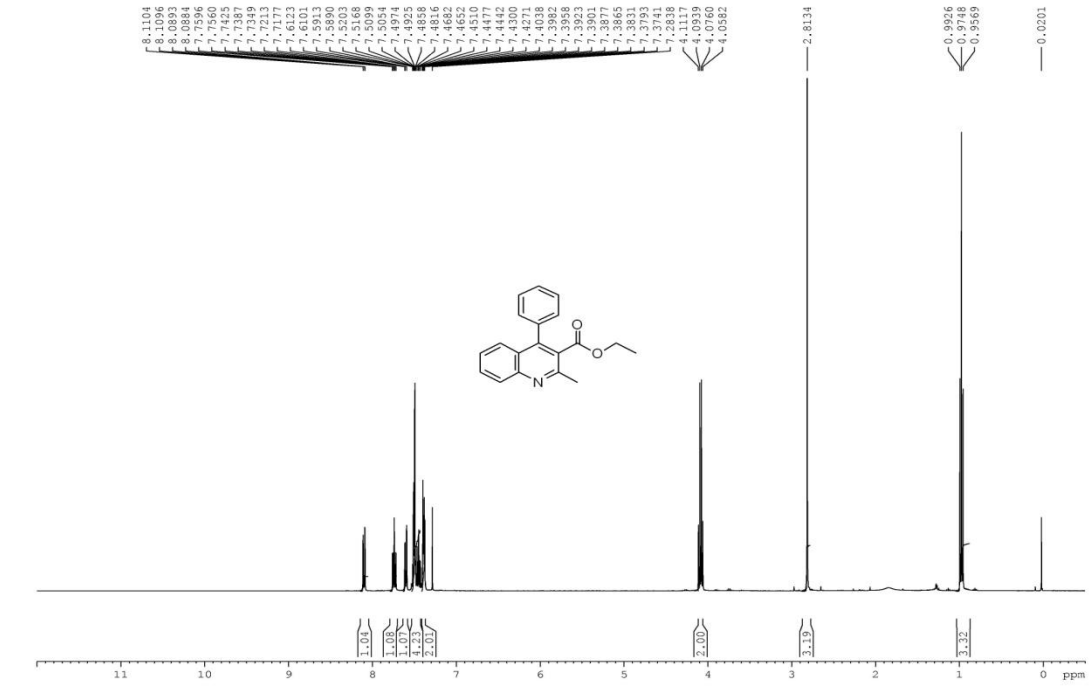
Contents

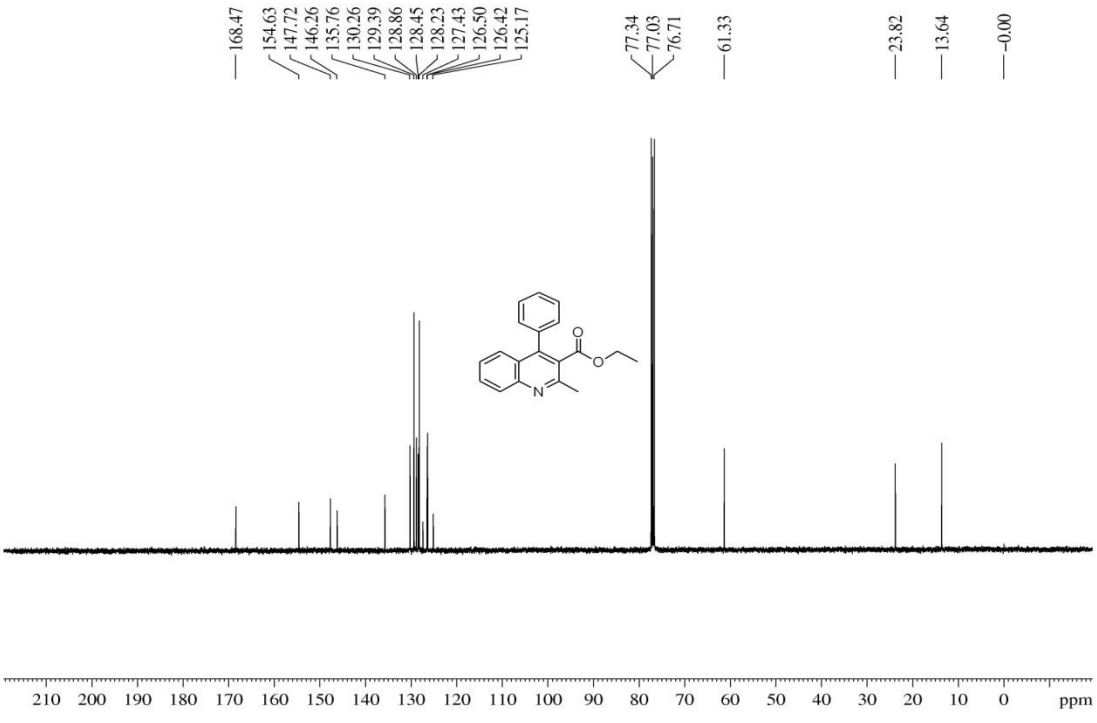
^{1}H and ^{13}C NMR Spectra of Non-friedlander product 3b



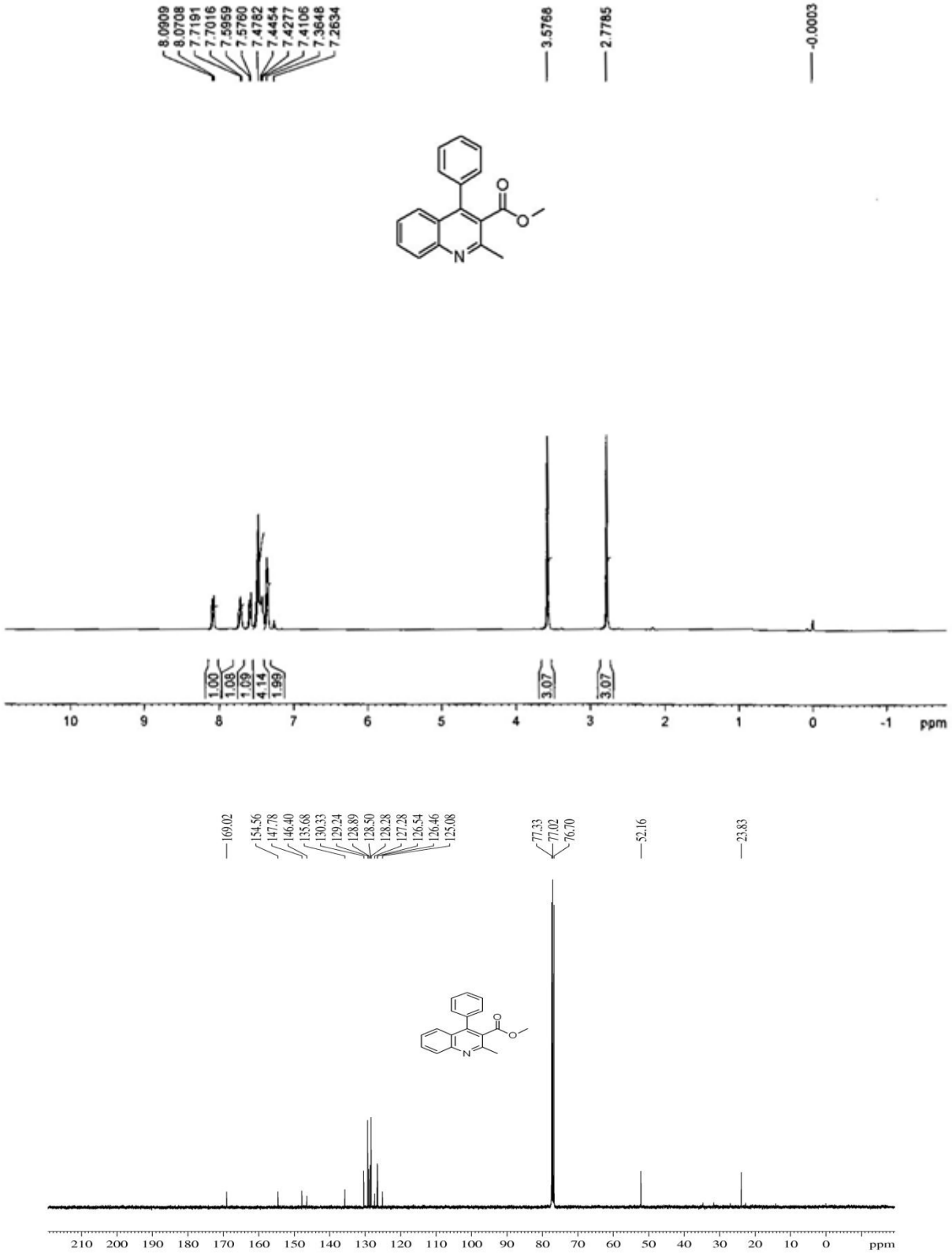


^{1}H and ^{13}C NMR Spectra (Entry 1, Table 4)

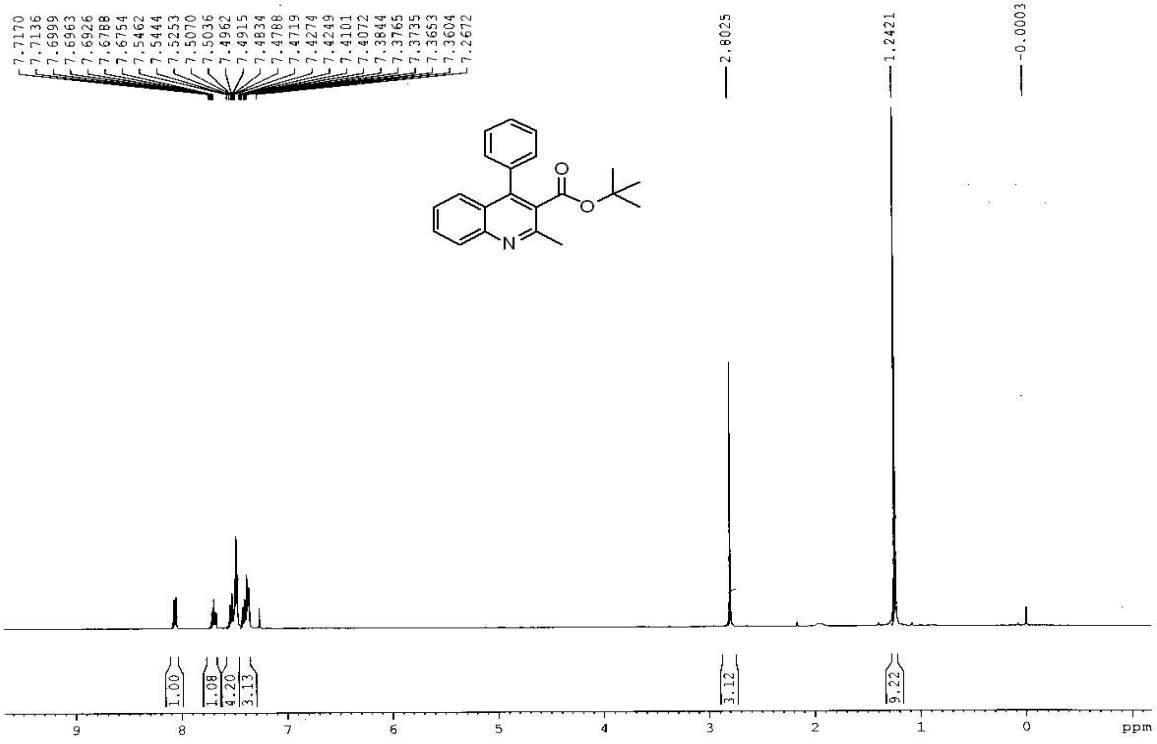


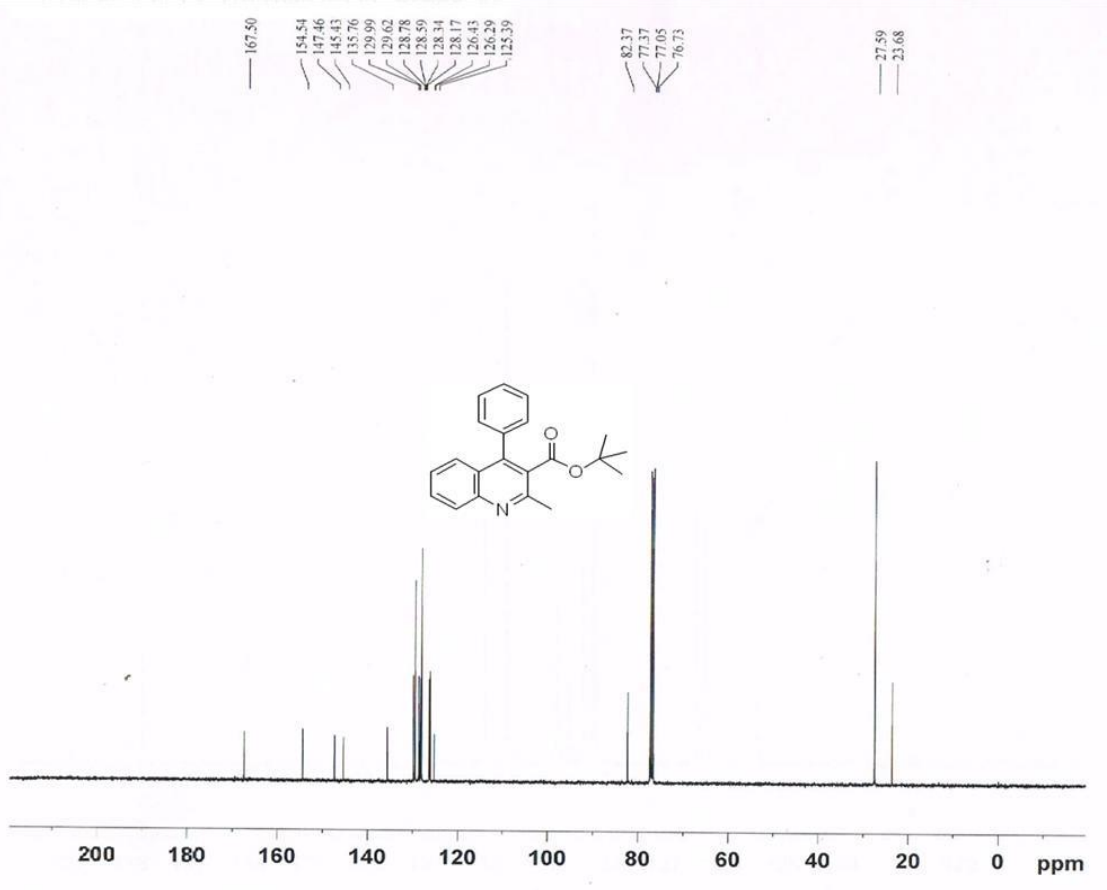


^{1}H and ^{13}C NMR Spectra (Entry 2, Table 4)

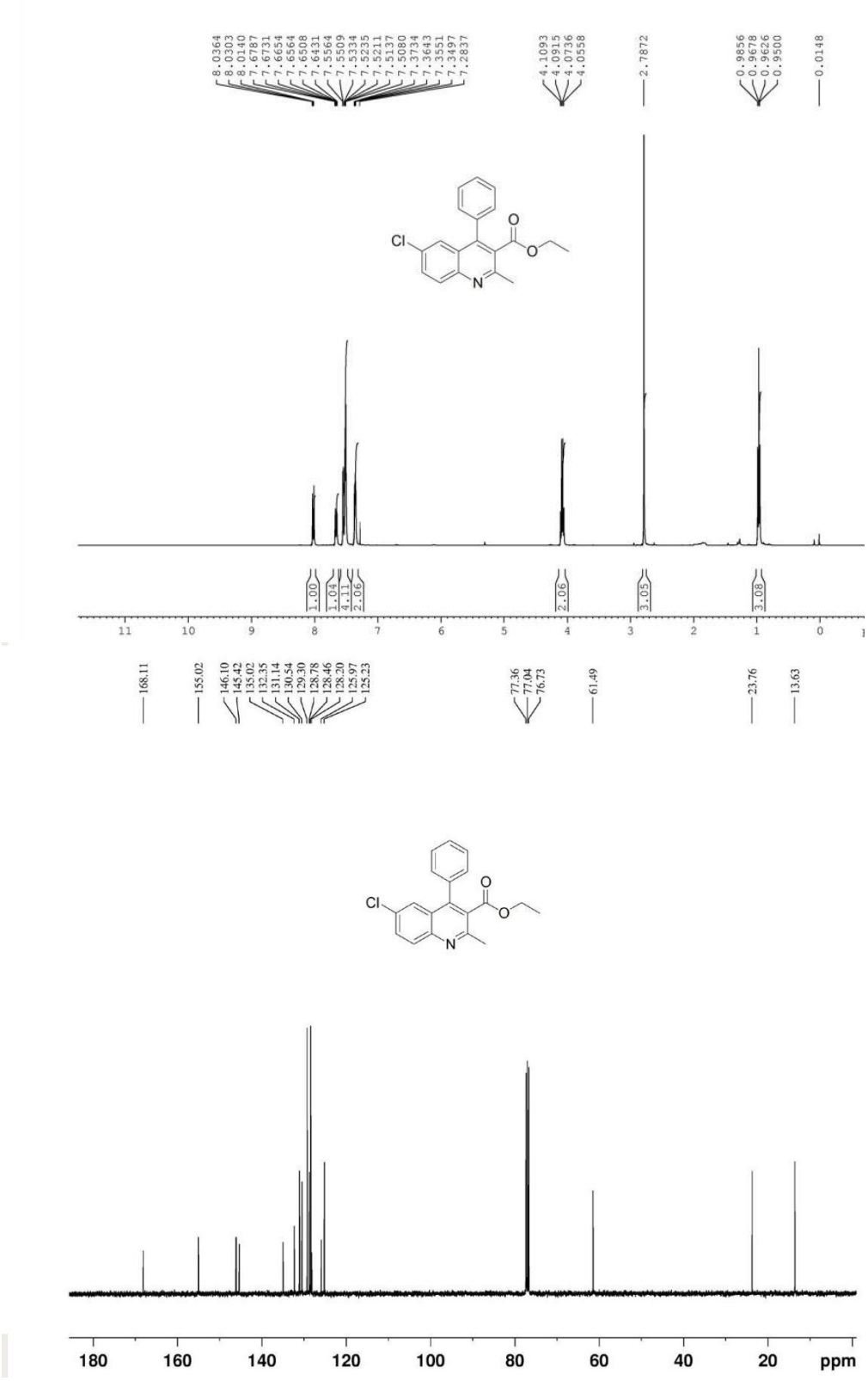


^{1}H and ^{13}C NMR Spectra (Entry 3, Table 4)

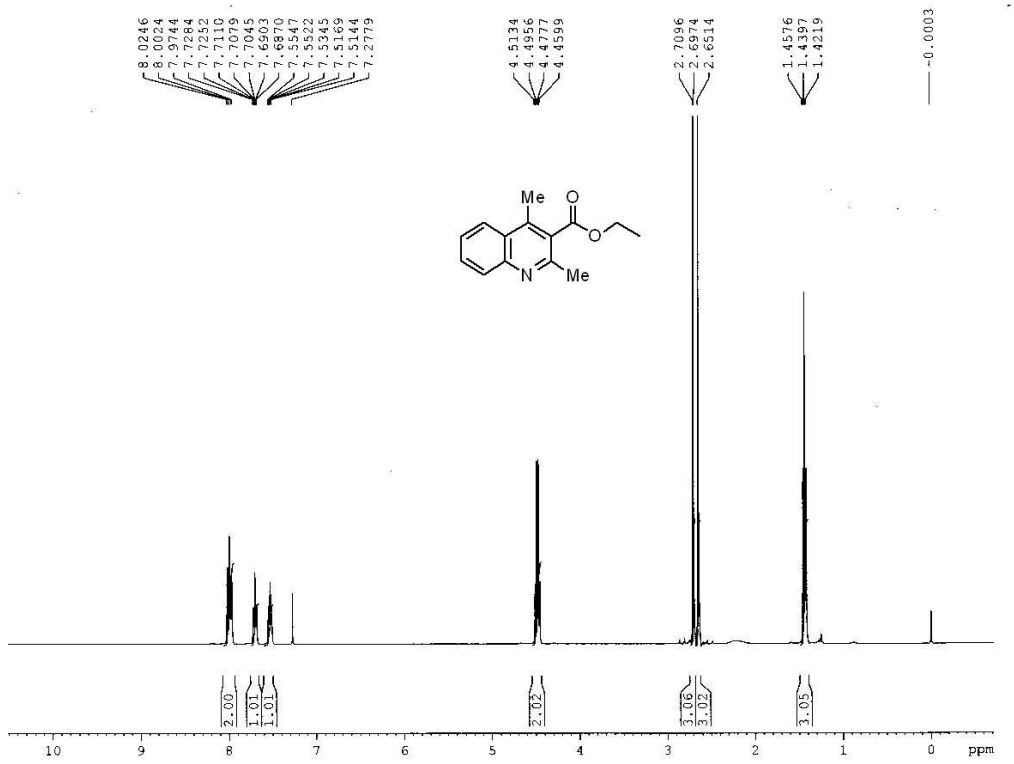


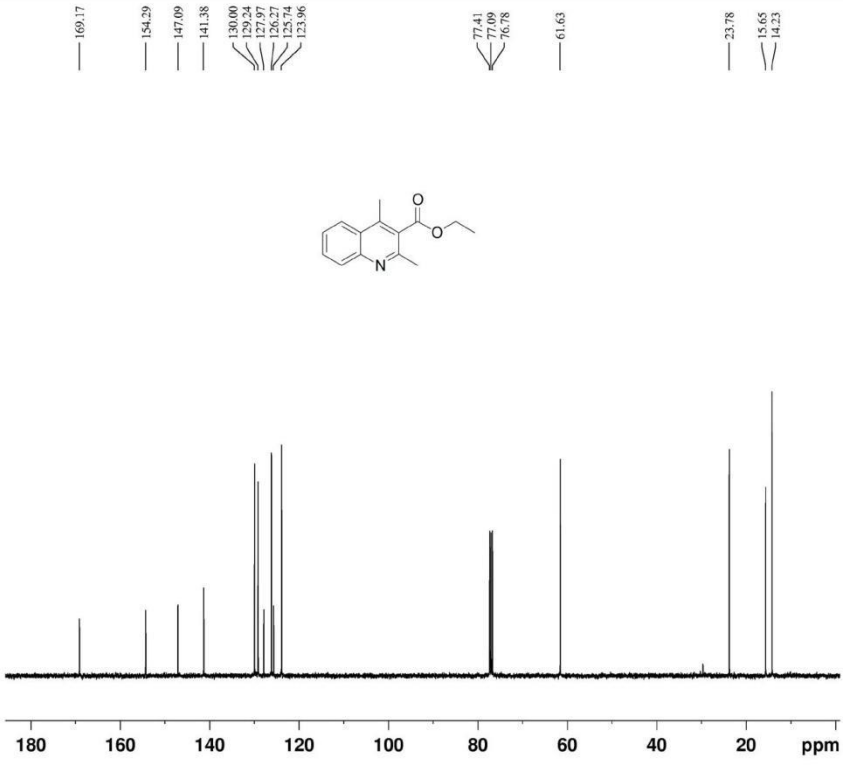


^{1}H and ^{13}C NMR Spectra (Entry 4, Table 4)

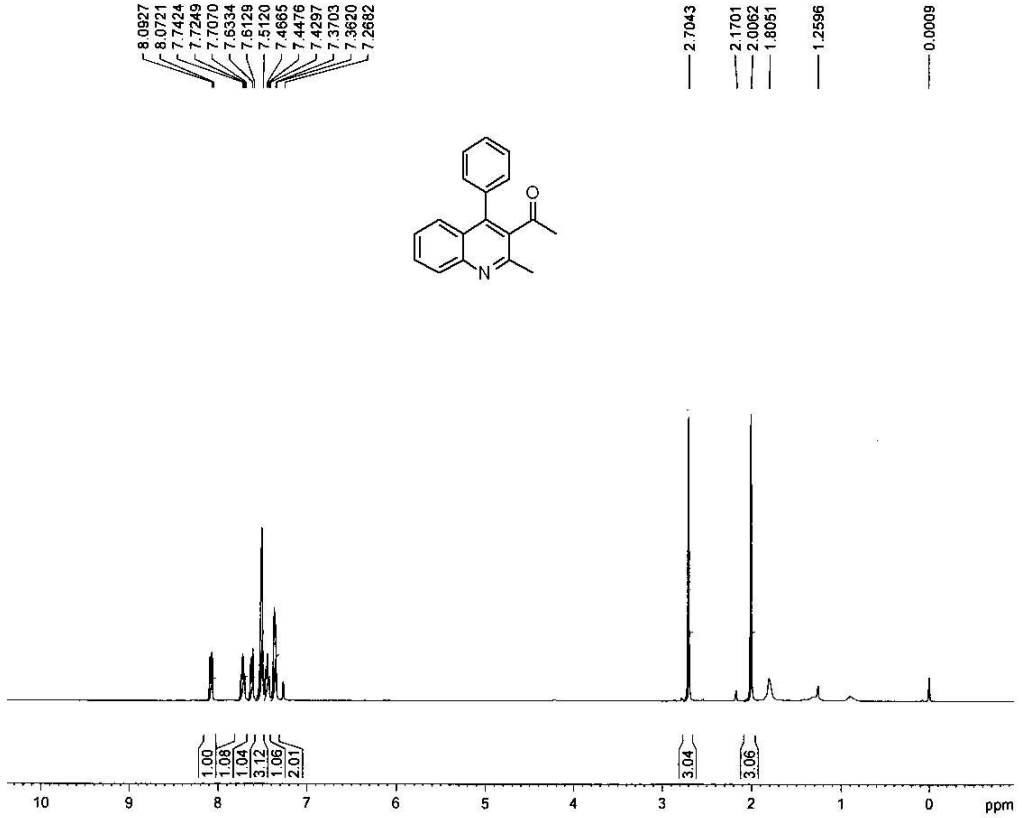


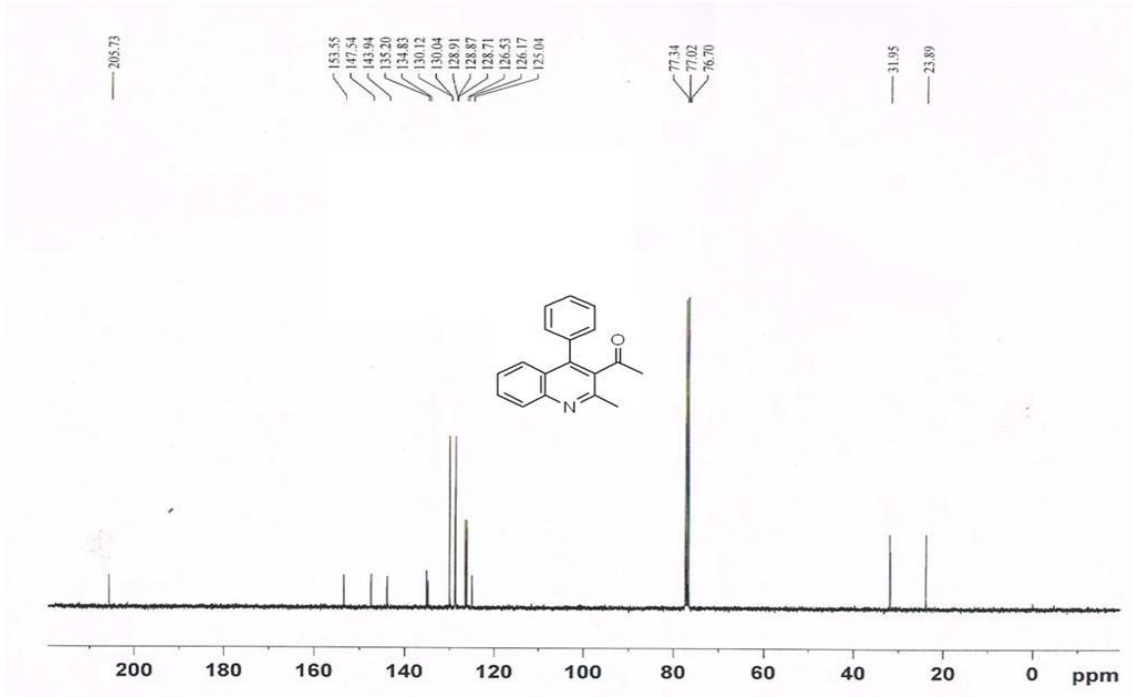
^{1}H and ^{13}C NMR Spectra (Entry 5, Table 4)



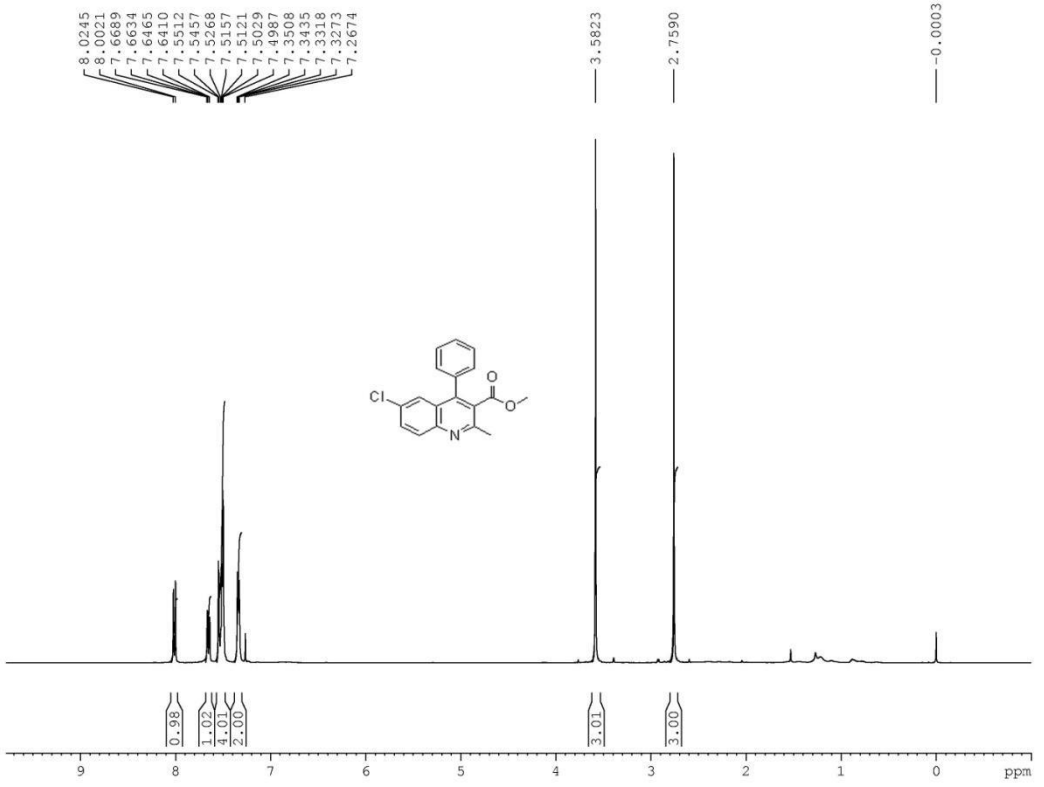


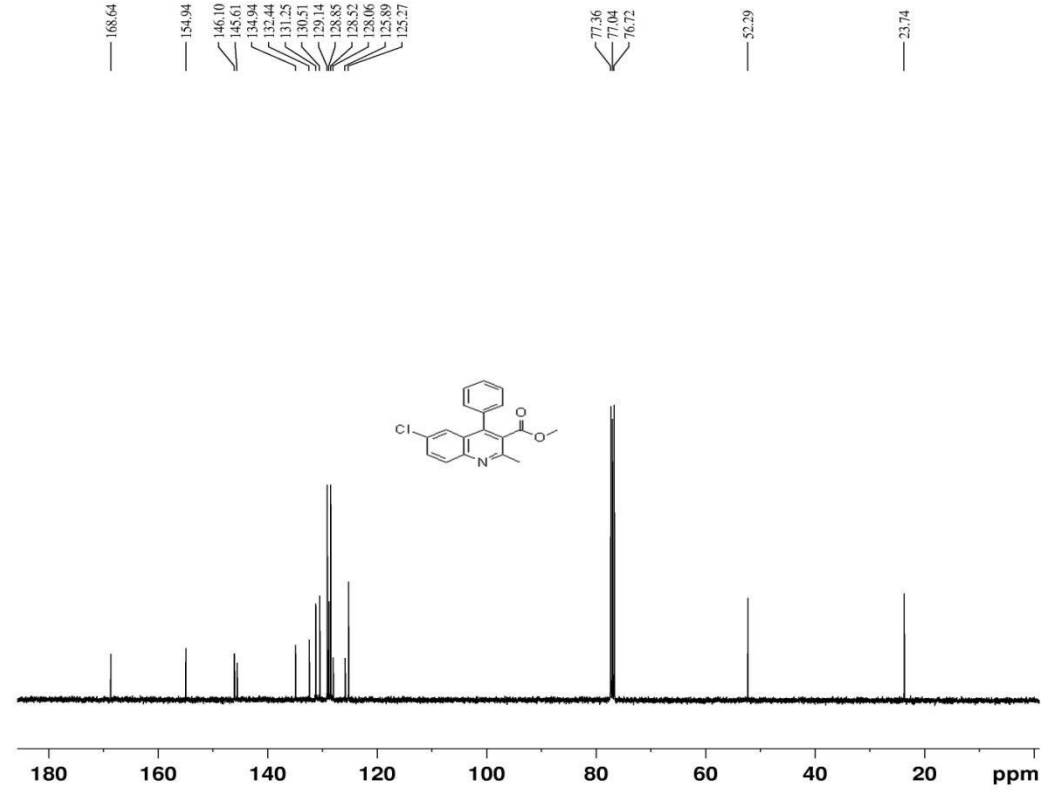
^{1}H and ^{13}C NMR Spectra (Entry 6, Table 4)



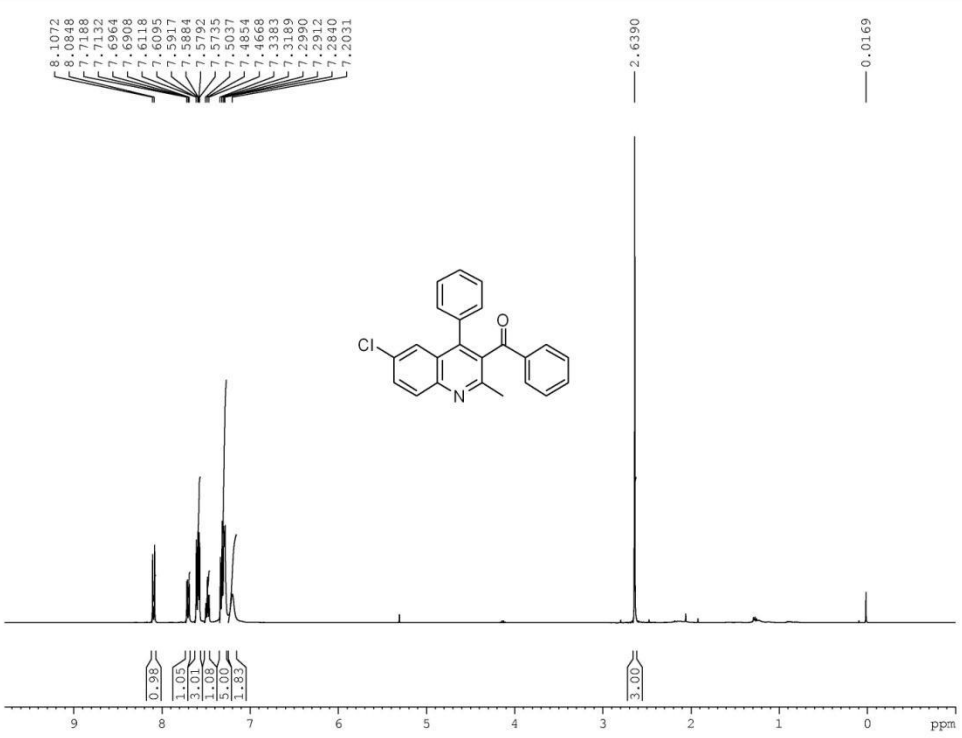


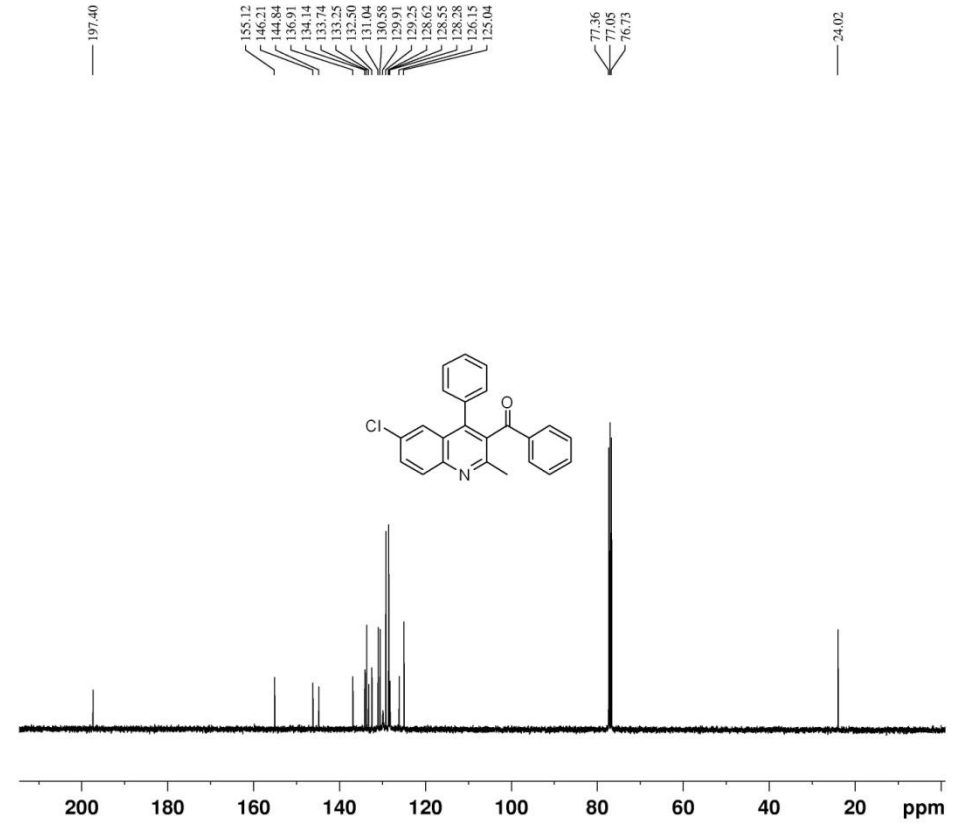
^{1}H and ^{13}C NMR Spectra (Entry 7, Table 4)



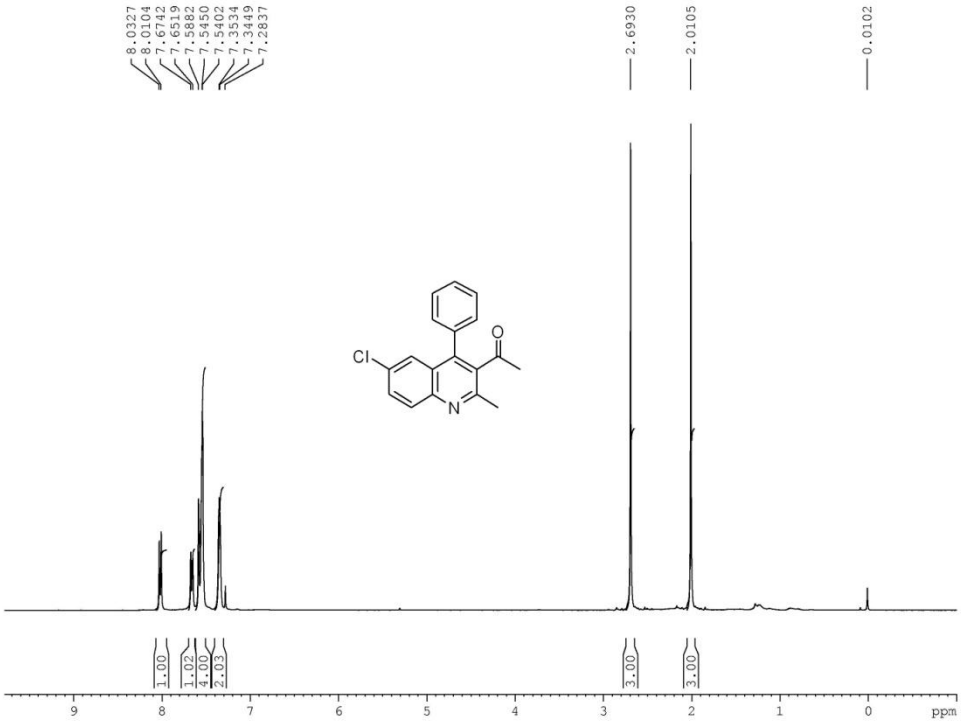


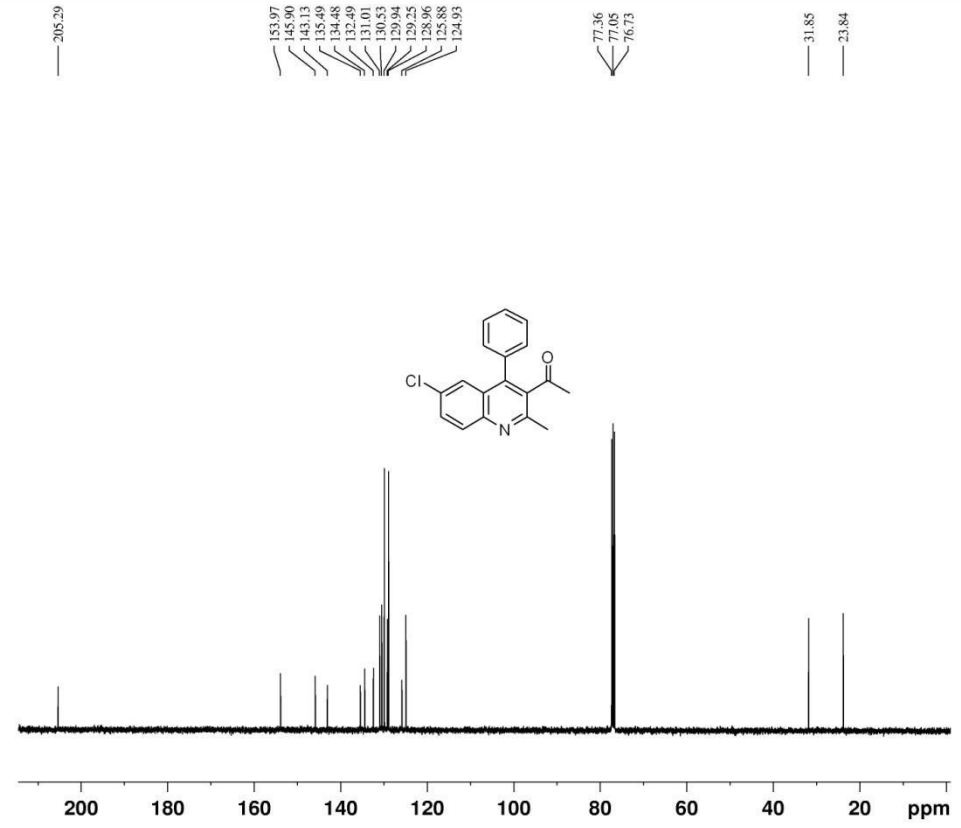
^{1}H and ^{13}C NMR Spectra (Entry 8, Table 4)



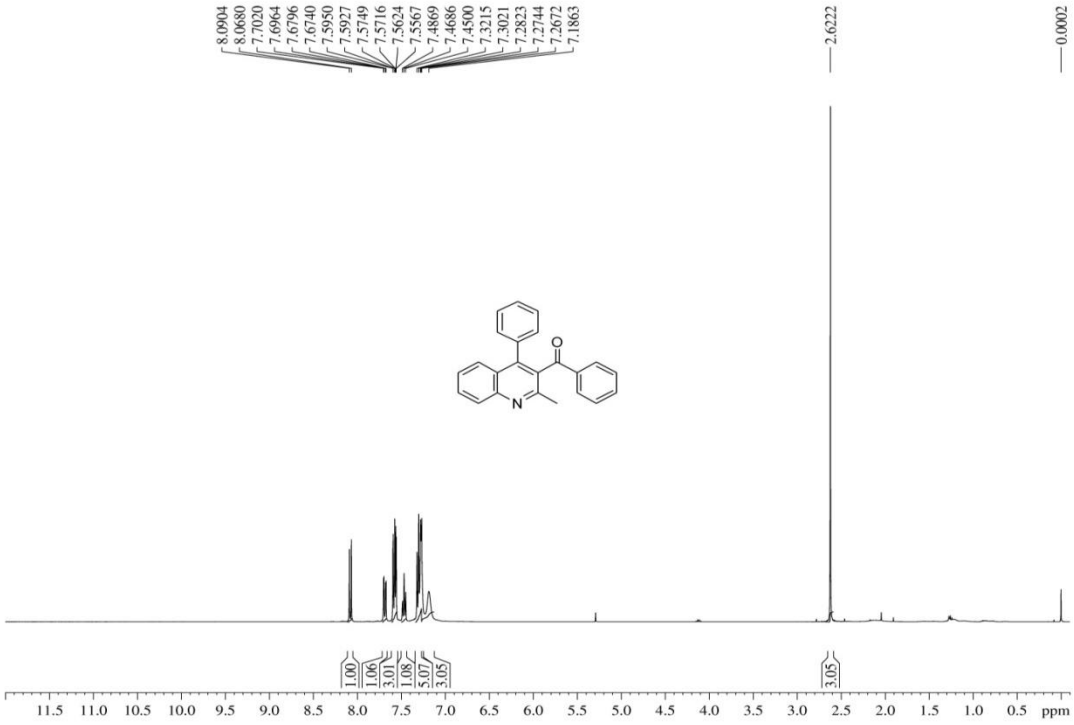


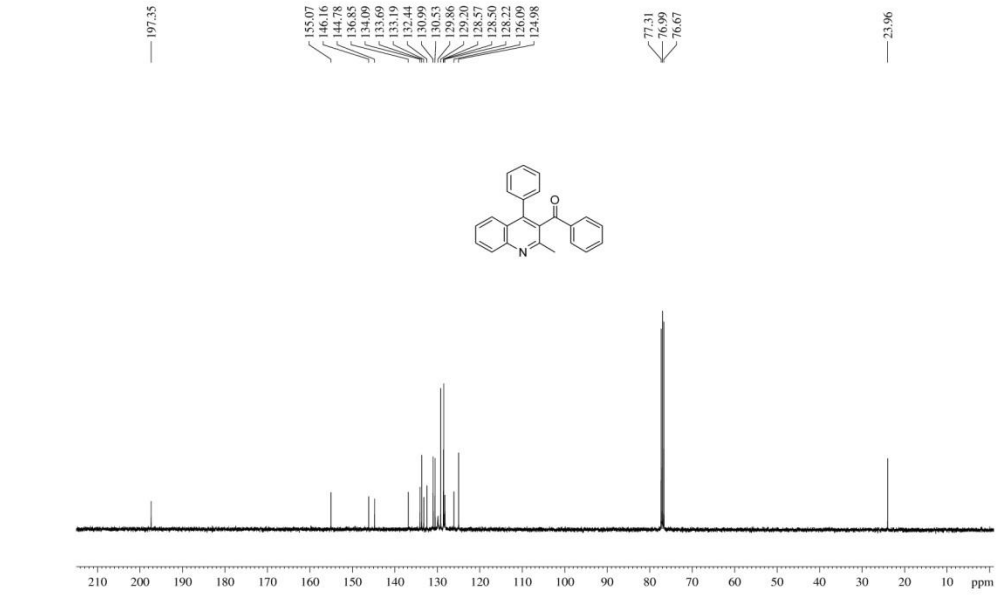
^{1}H and ^{13}C NMR Spectra (Entry 9, Table 4)



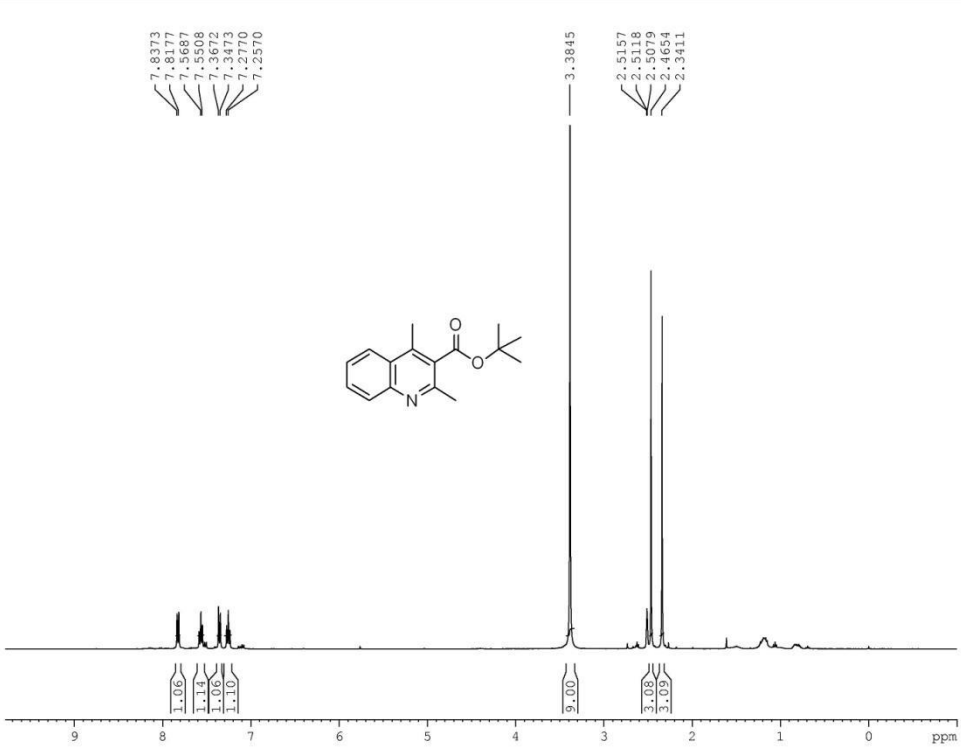


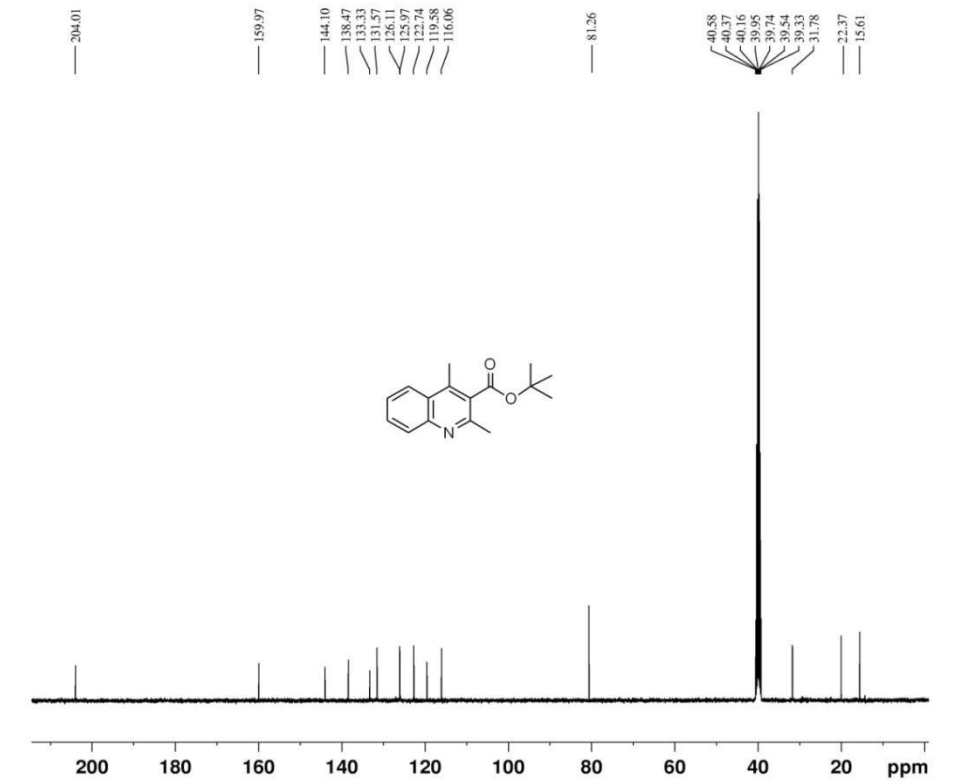
^{1}H and ^{13}C NMR Spectra (Entry 10, Table 4)



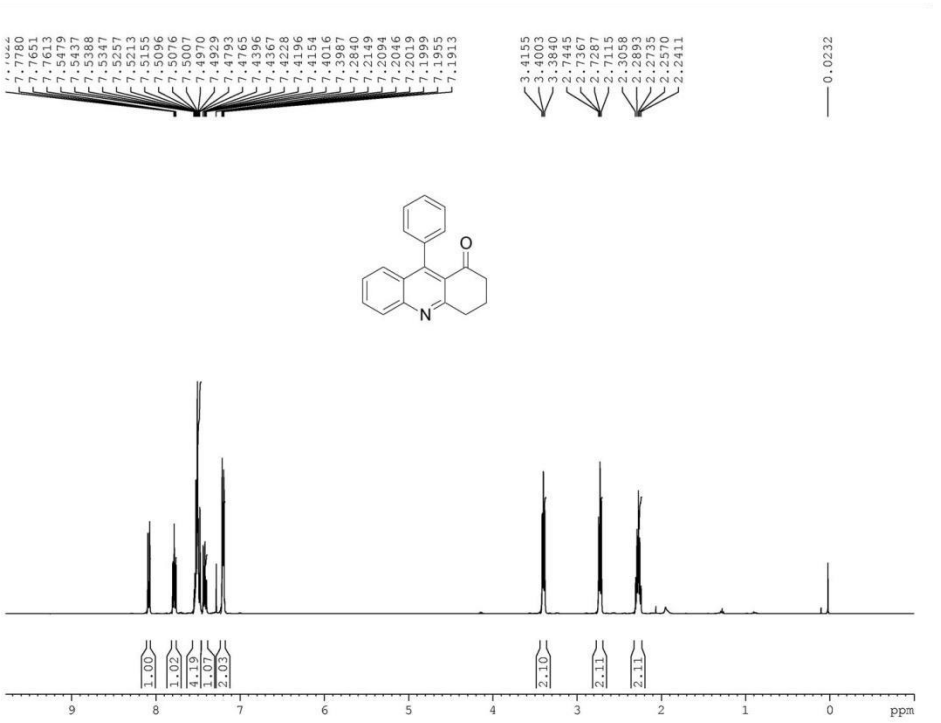


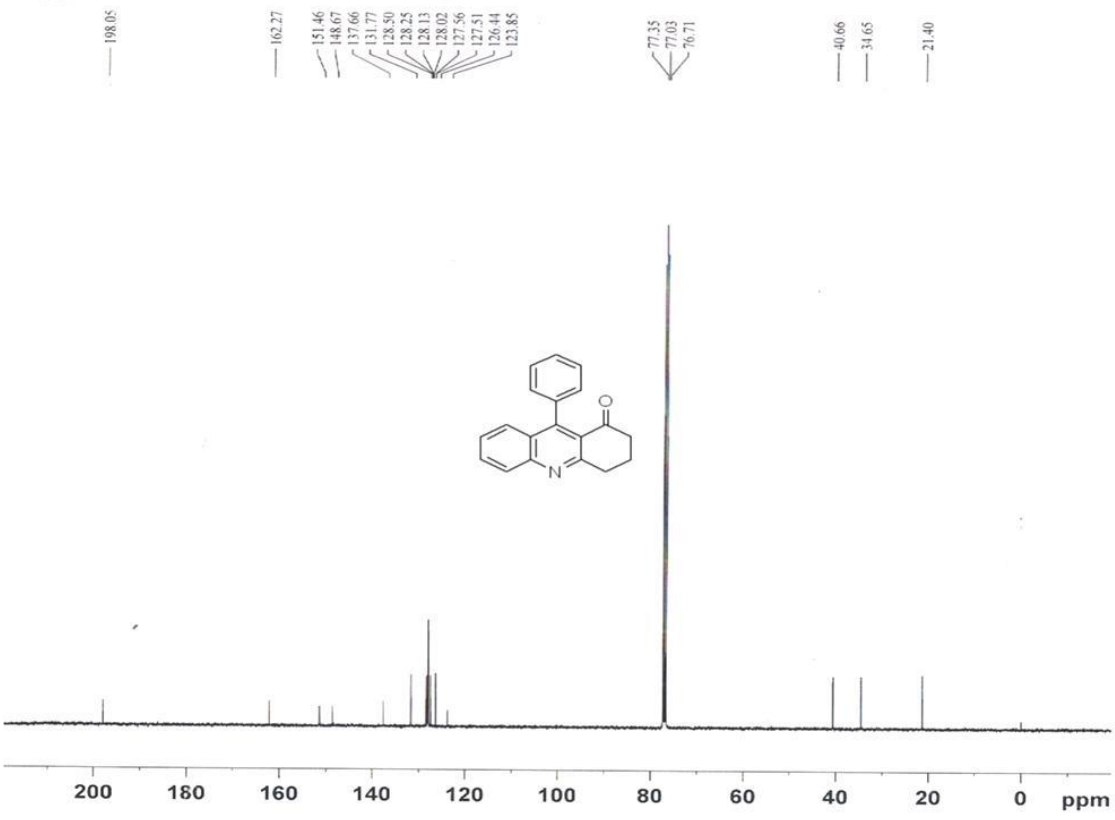
^{1}H and ^{13}C NMR Spectra (Entry 11, Table 4)



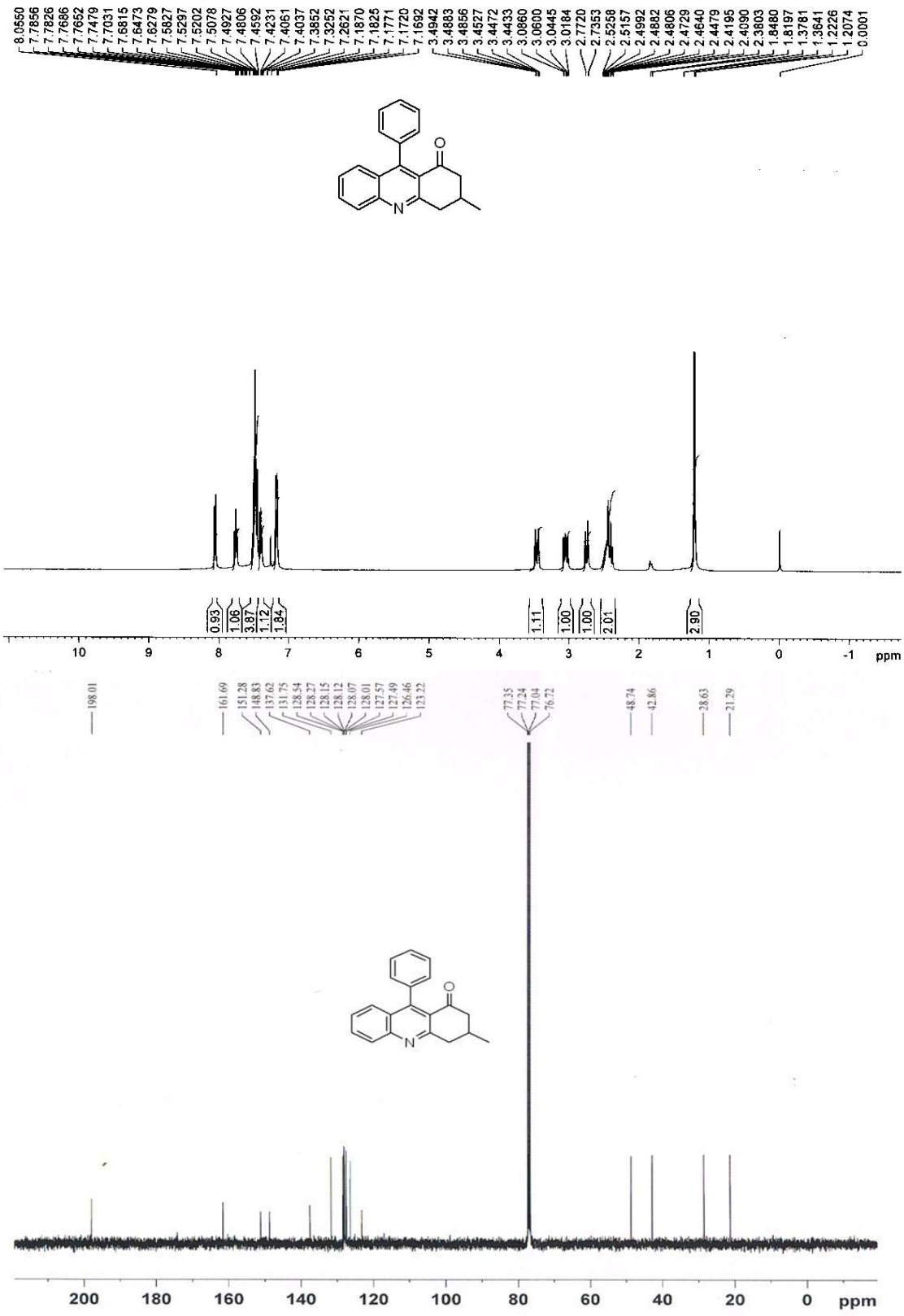


^{1}H and ^{13}C NMR Spectra (Entry 12, Table 4)

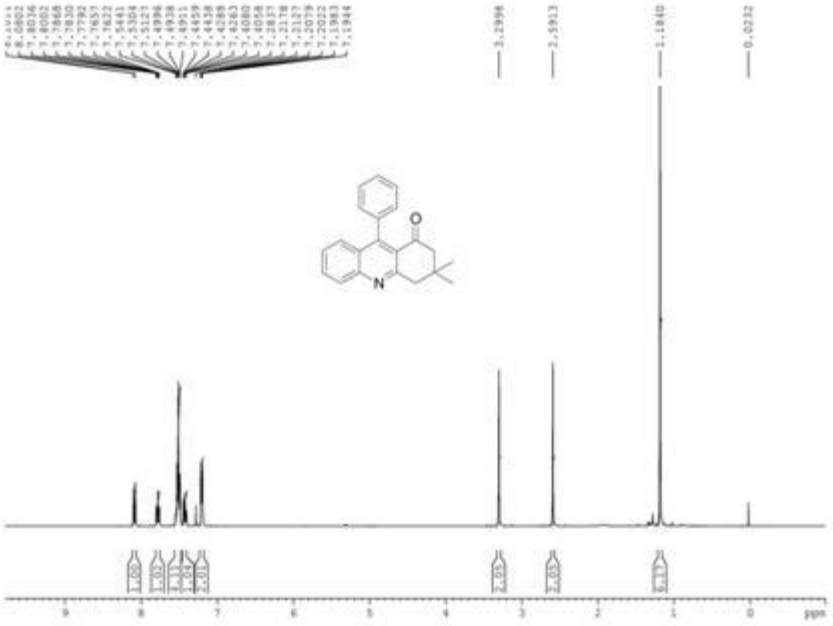


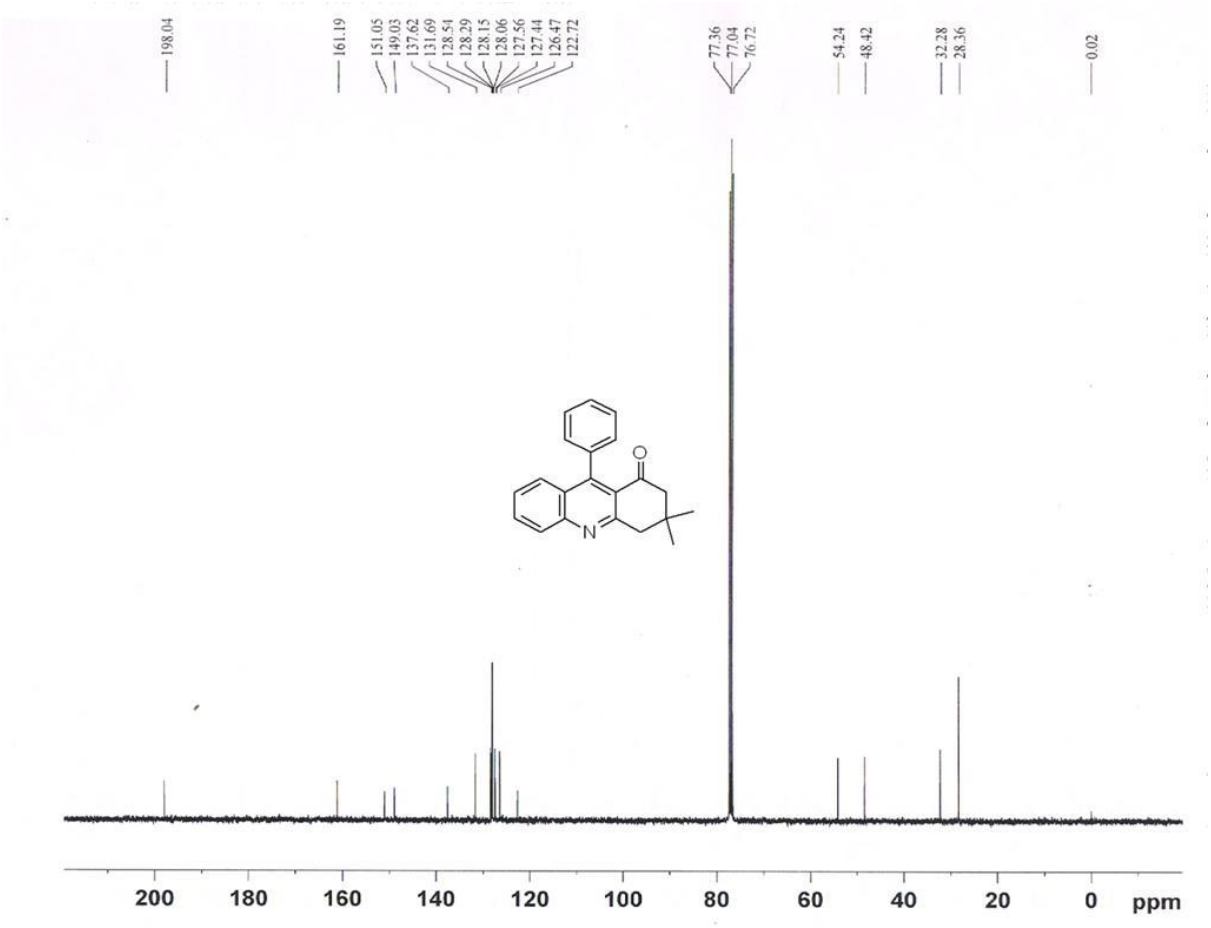


^{1}H and ^{13}C NMR Spectra (Entry 13, Table 4)

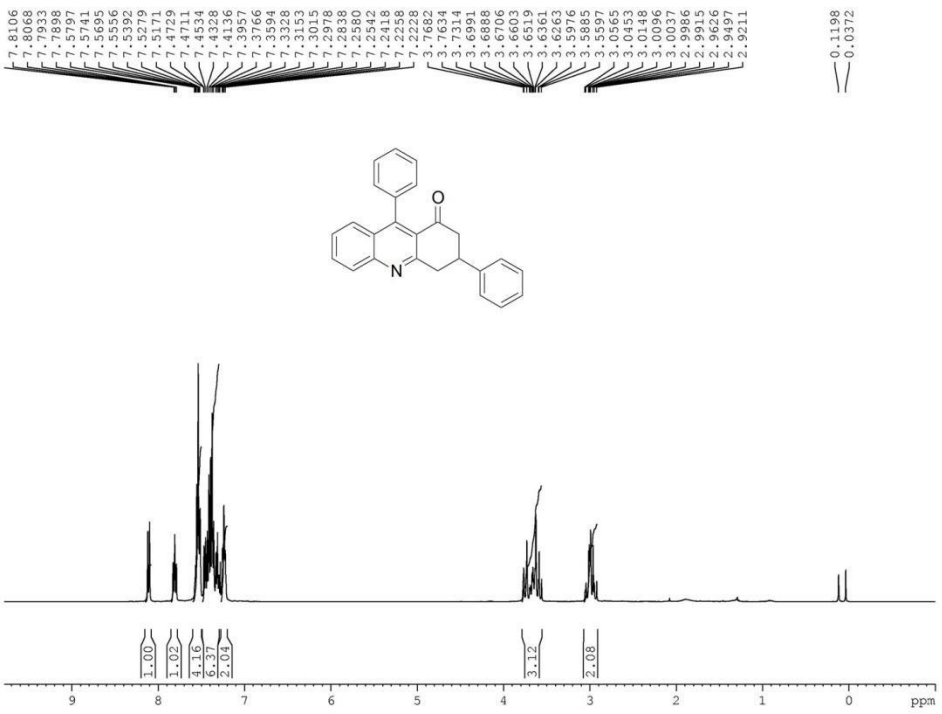


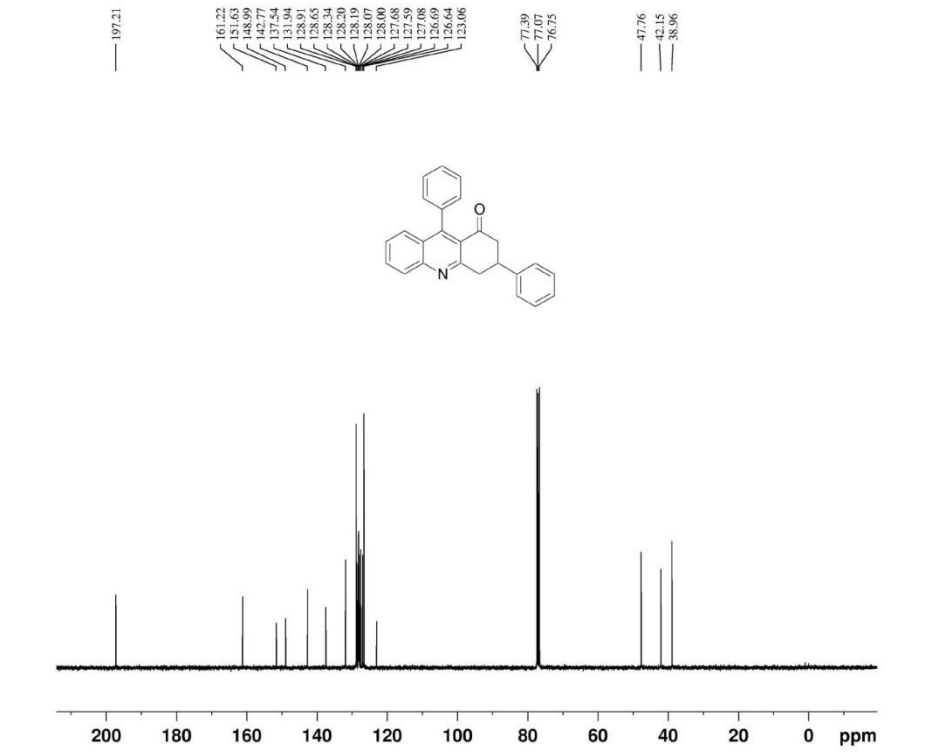
^{1}H and ^{13}C NMR Spectra (Entry 14, Table 4)



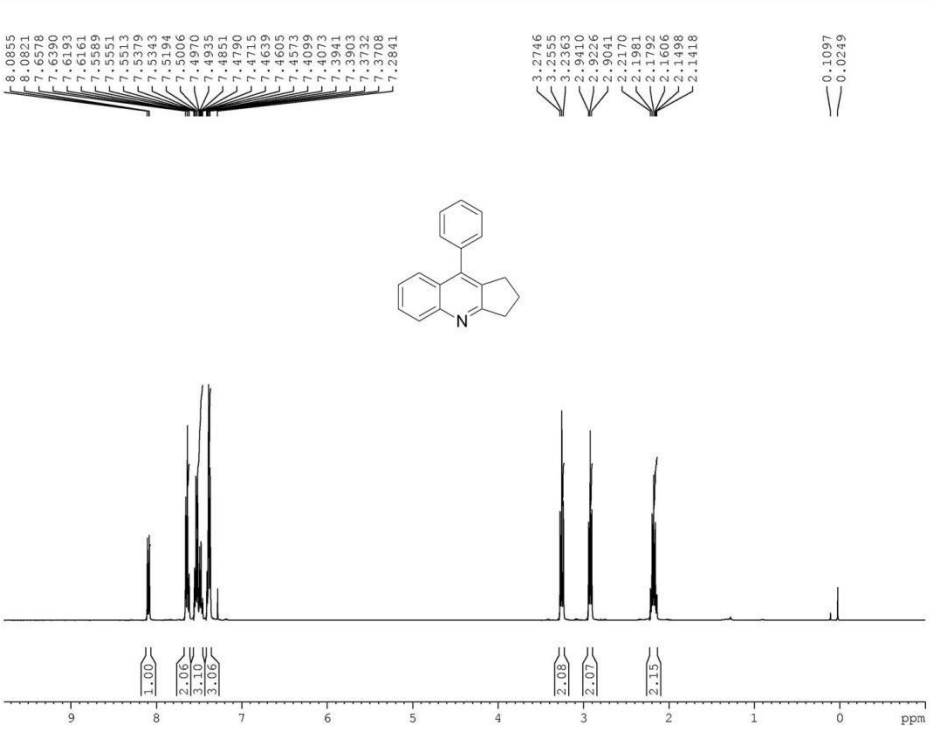


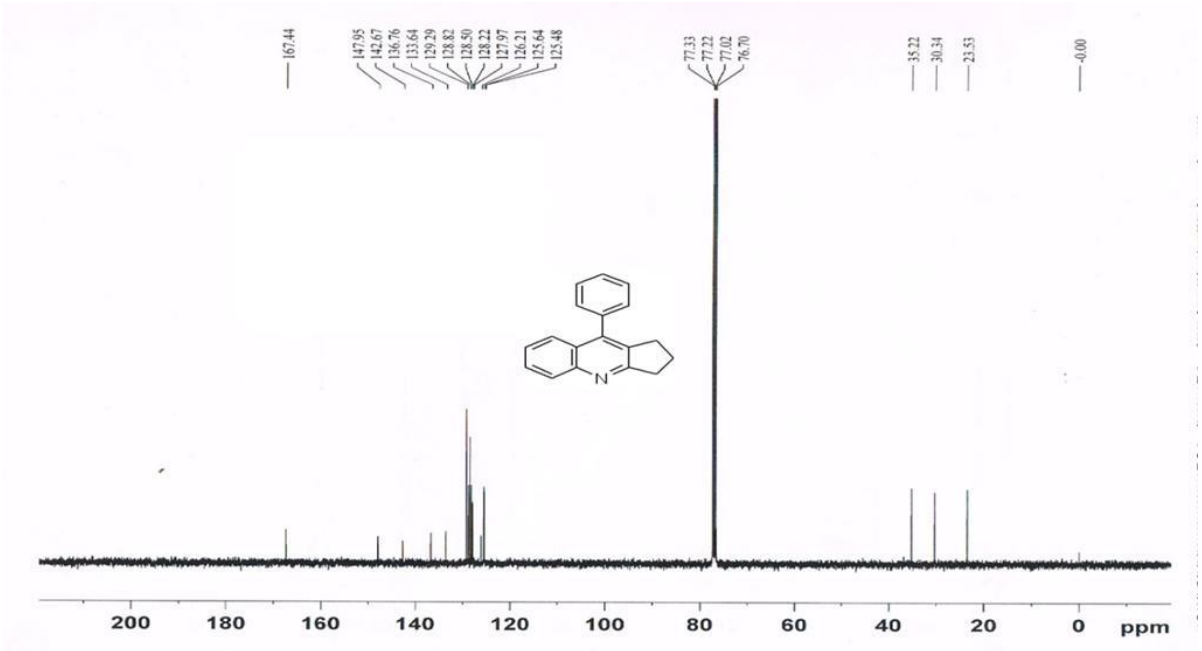
^{1}H and ^{13}C NMR Spectra (Entry 15, Table 4)



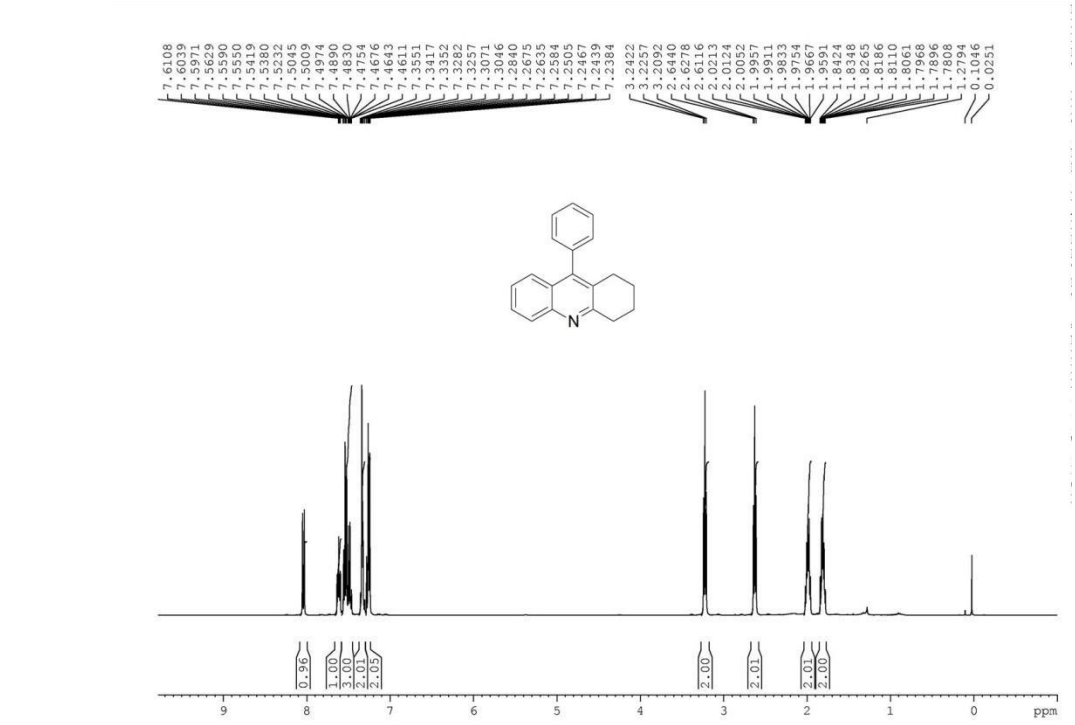


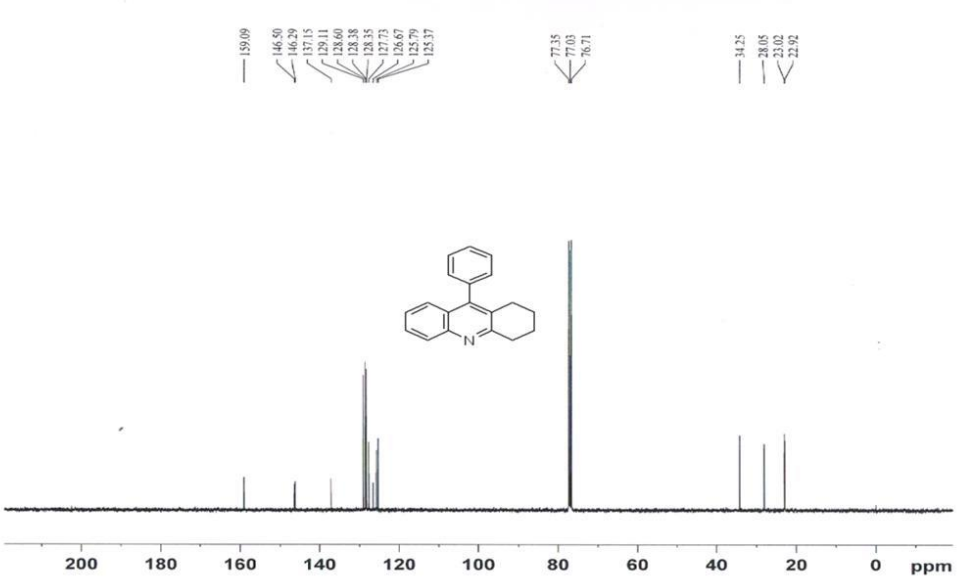
^{1}H and ^{13}C NMR Spectra (Entry 16, Table 4)



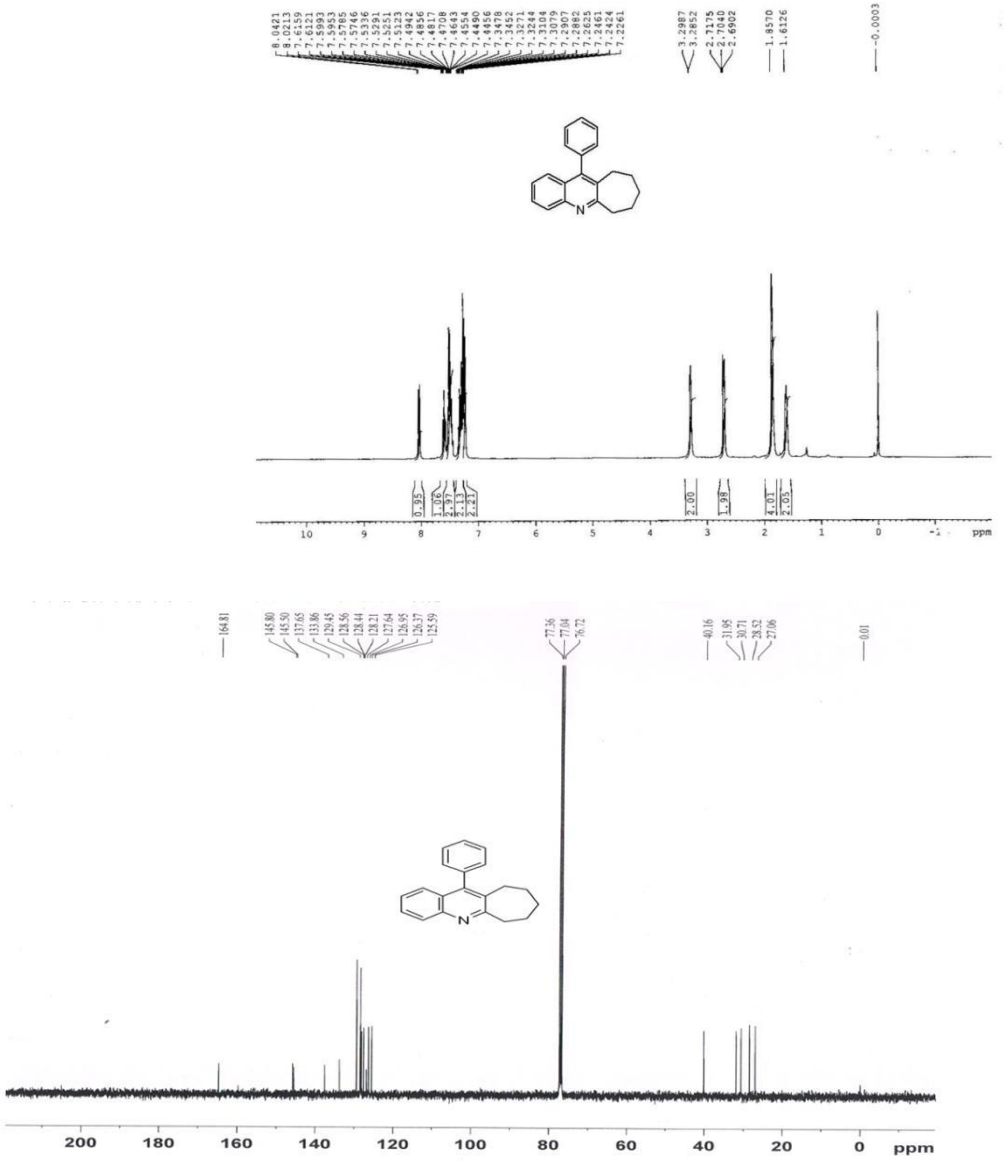


^{1}H and ^{13}C NMR Spectra (Entry 17, Table 4)

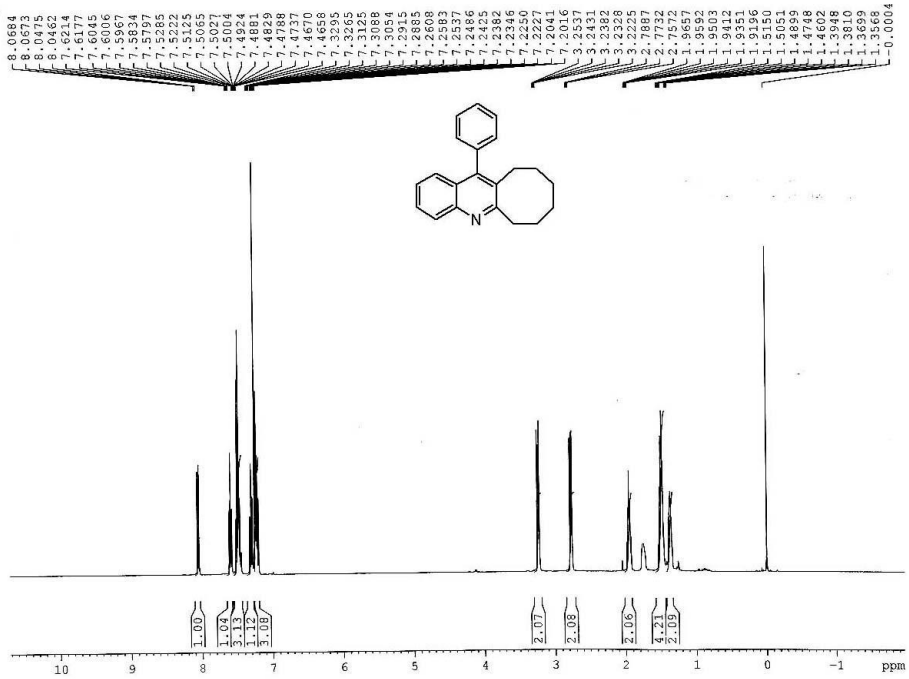


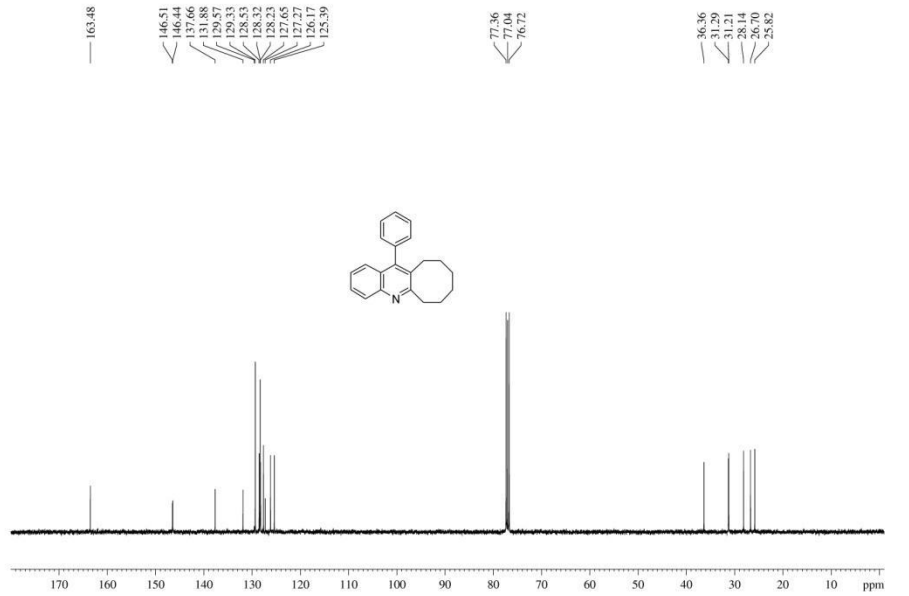


^{1}H and ^{13}C NMR Spectra (Entry 18, Table 4)

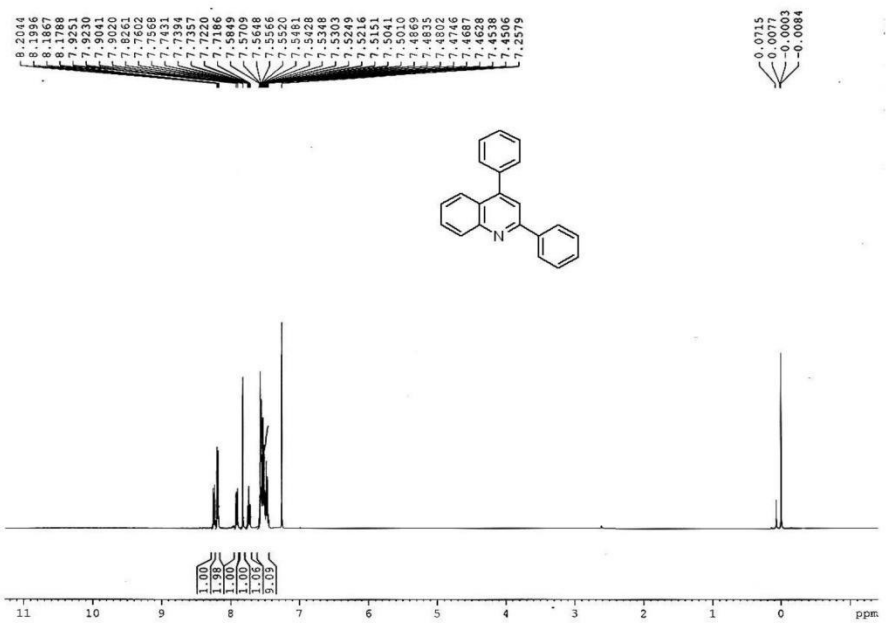


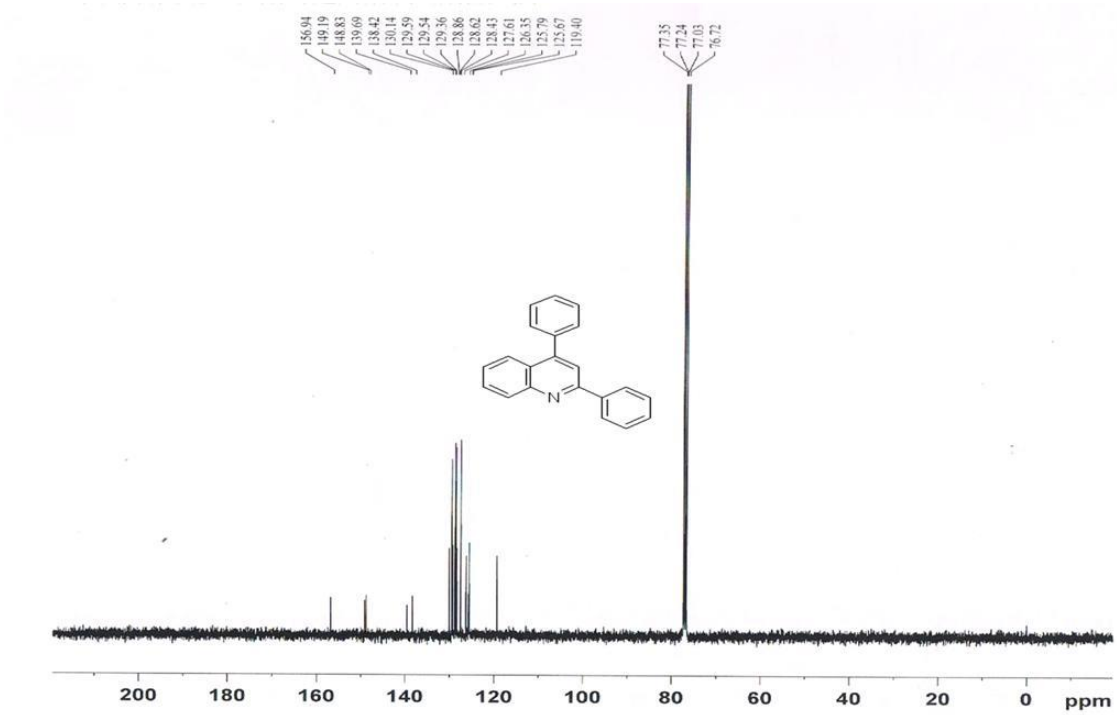
^{1}H and ^{13}C NMR Spectra (Entry 19, Table 4)



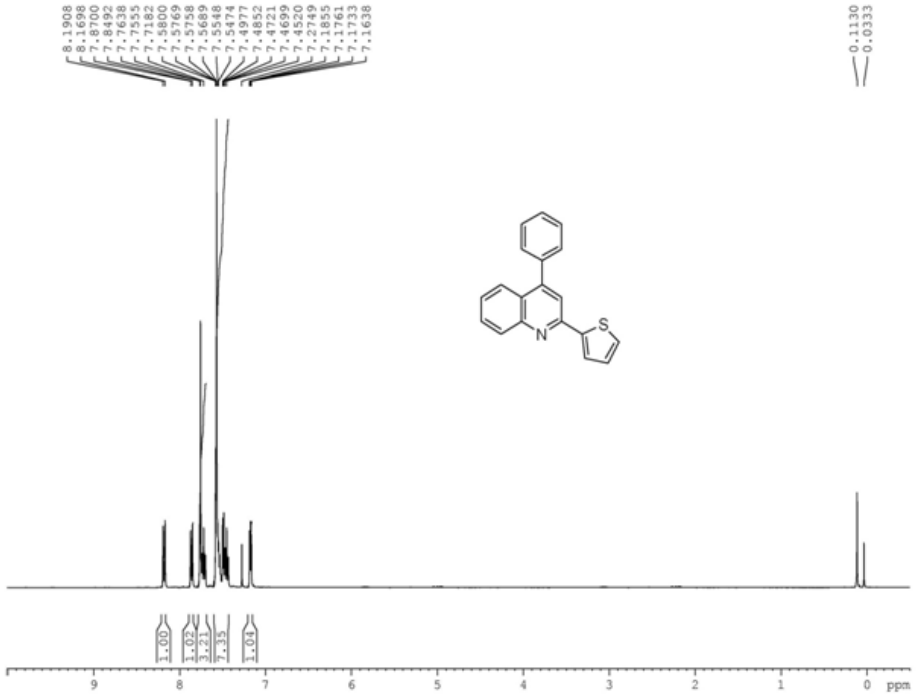


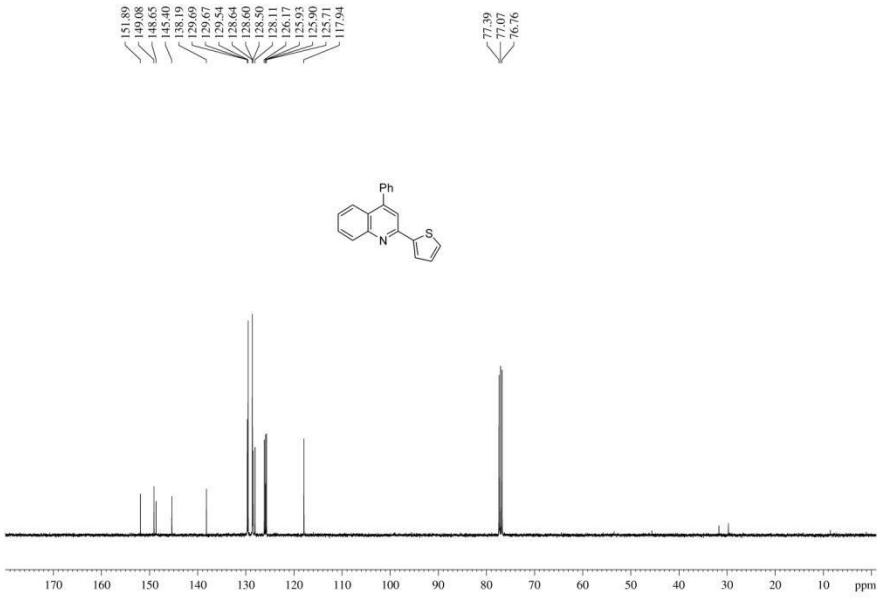
^{1}H and ^{13}C NMR Spectra (Entry 20, Table 4)



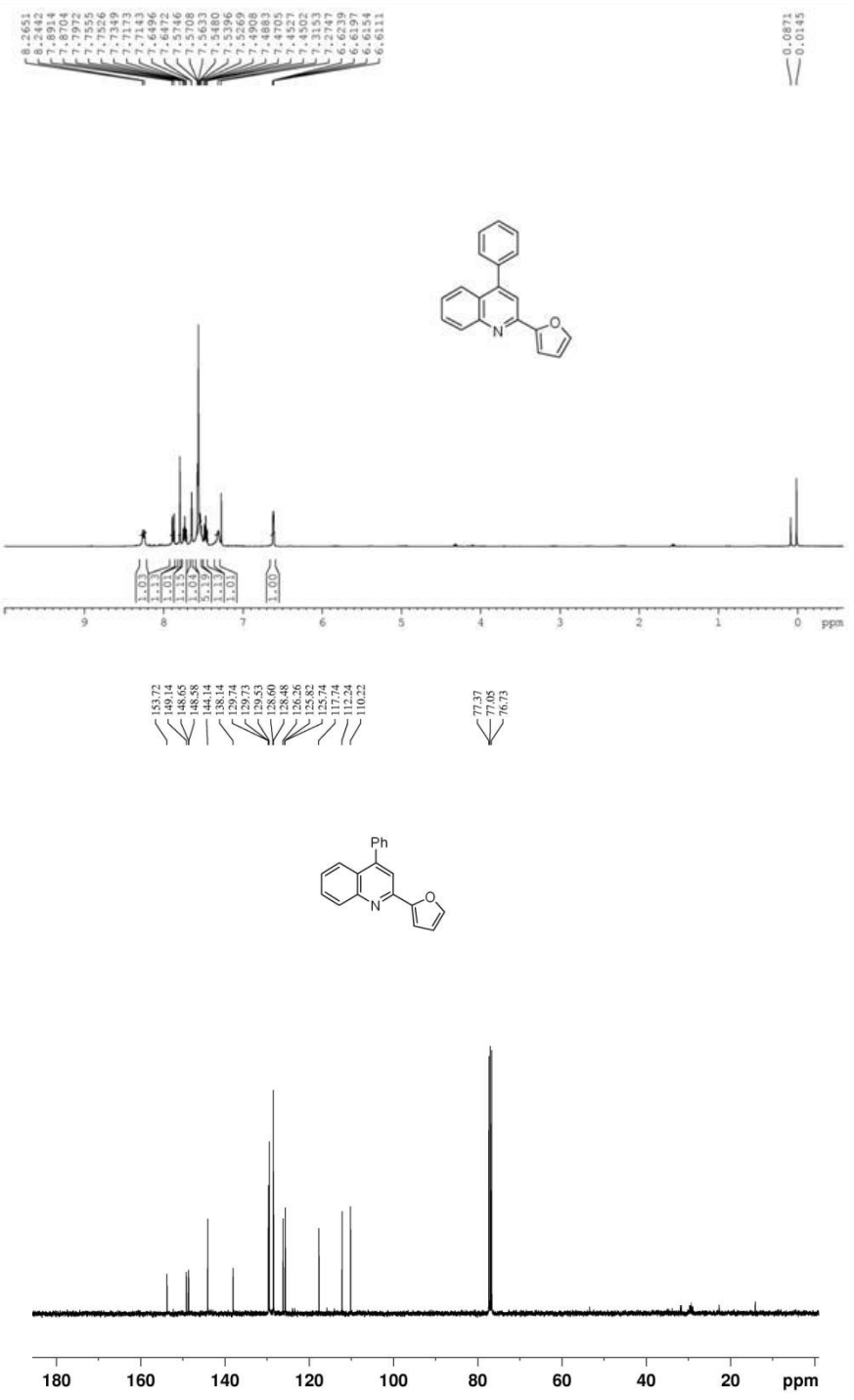


^{1}H and ^{13}C NMR Spectra (Entry 21, Table 4)

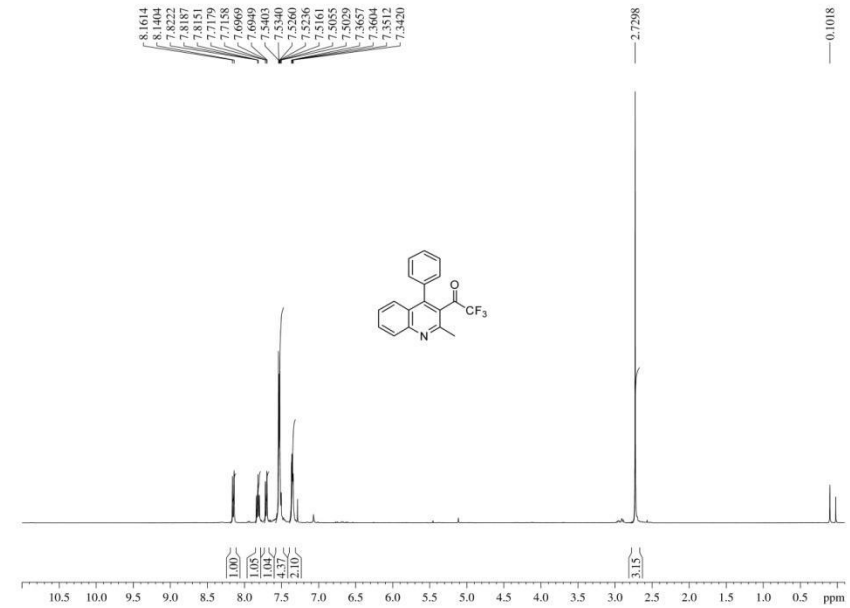


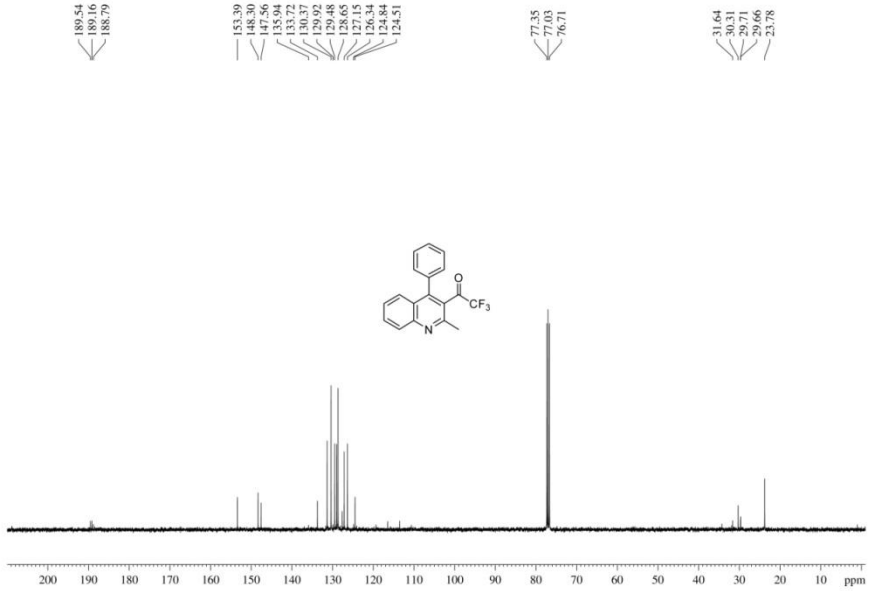


^{1}H and ^{13}C NMR Spectra (Entry 22, Table 4)

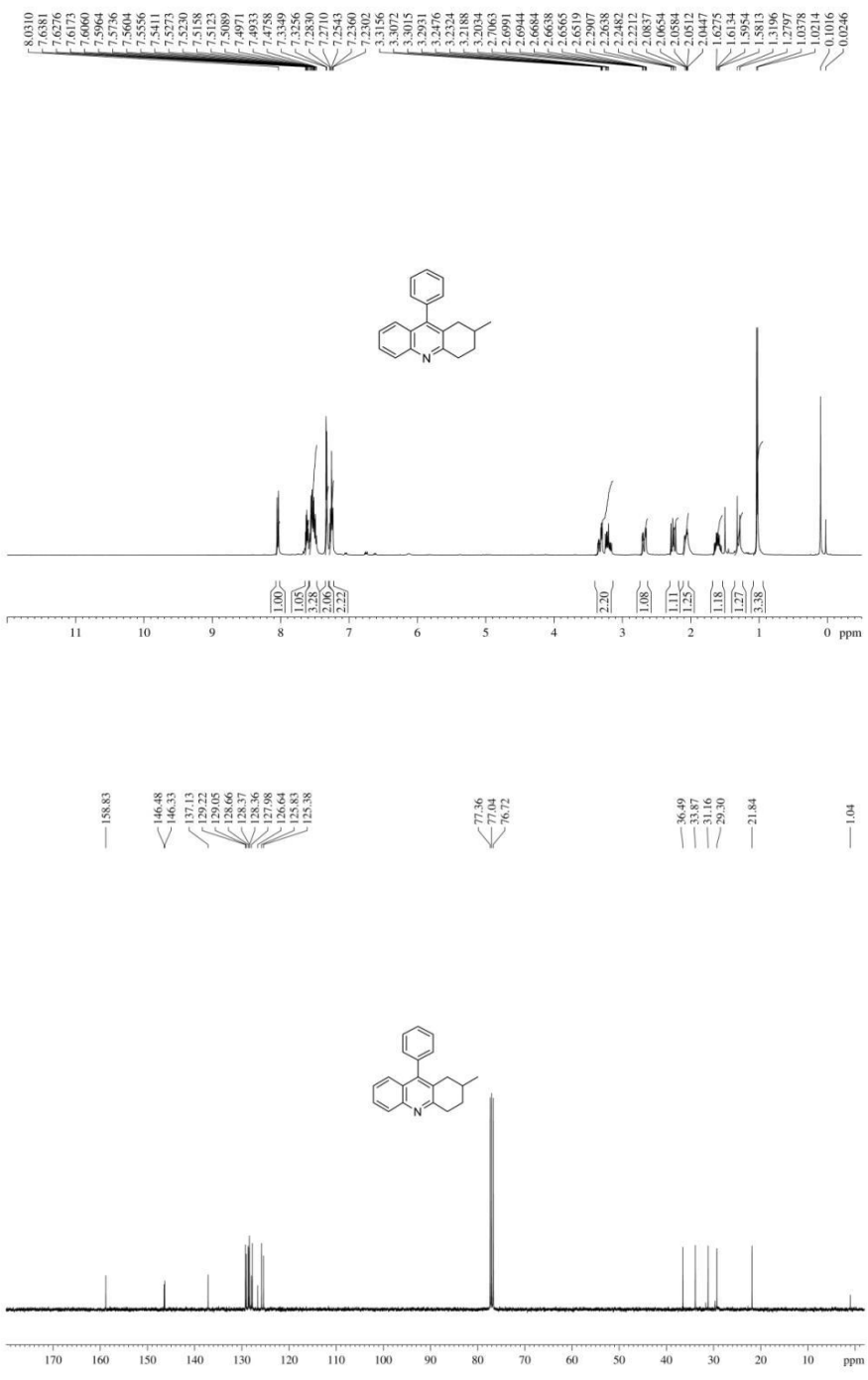


^{1}H and ^{13}C NMR Spectra (Entry 23, Table 4)

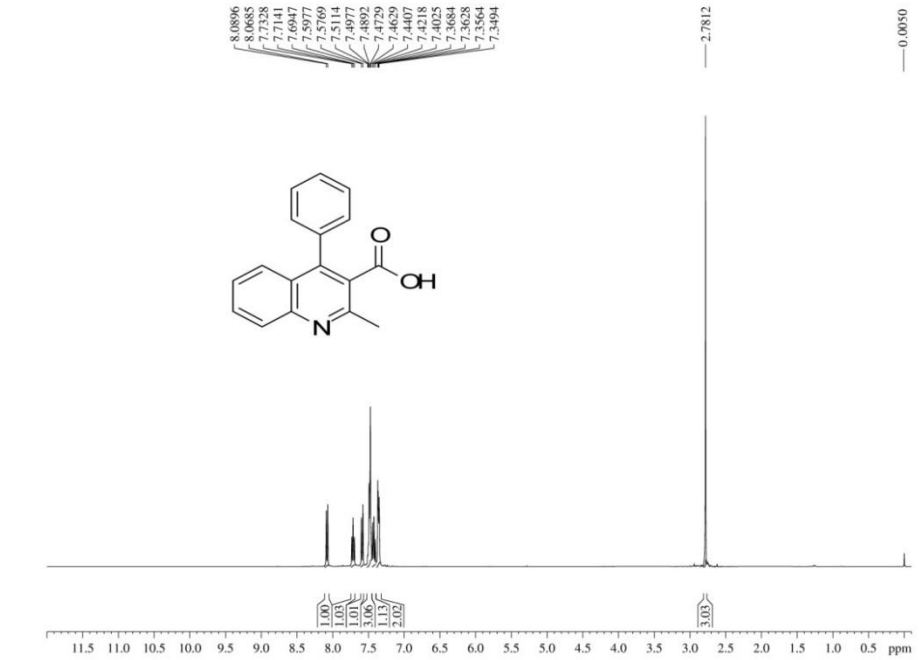


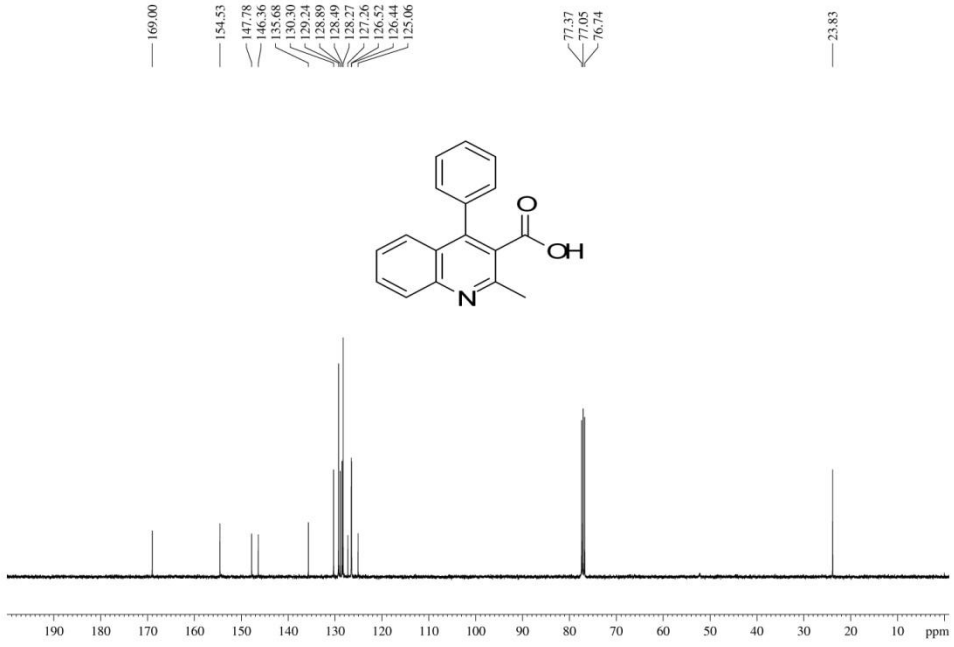


^{1}H and ^{13}C NMR Spectra (Entry 24, Table 4)



^{1}H and ^{13}C NMR Spectra of **4** obtained by reacting **1** with **2** under catalyst-free condition at 140 ^{o}C in xylene





^{1}H and ^{13}C NMR Spectra of **3a** obtained by reacting **1** with **2** in presence of $In(OTf)_3$ at 140 ^{o}C in xylene