

SUPPORTING INFORMATION

Enantioselective synthesis of the antiepileptic agent, (-)- Levetiracetam through Evans asymmetric strategy

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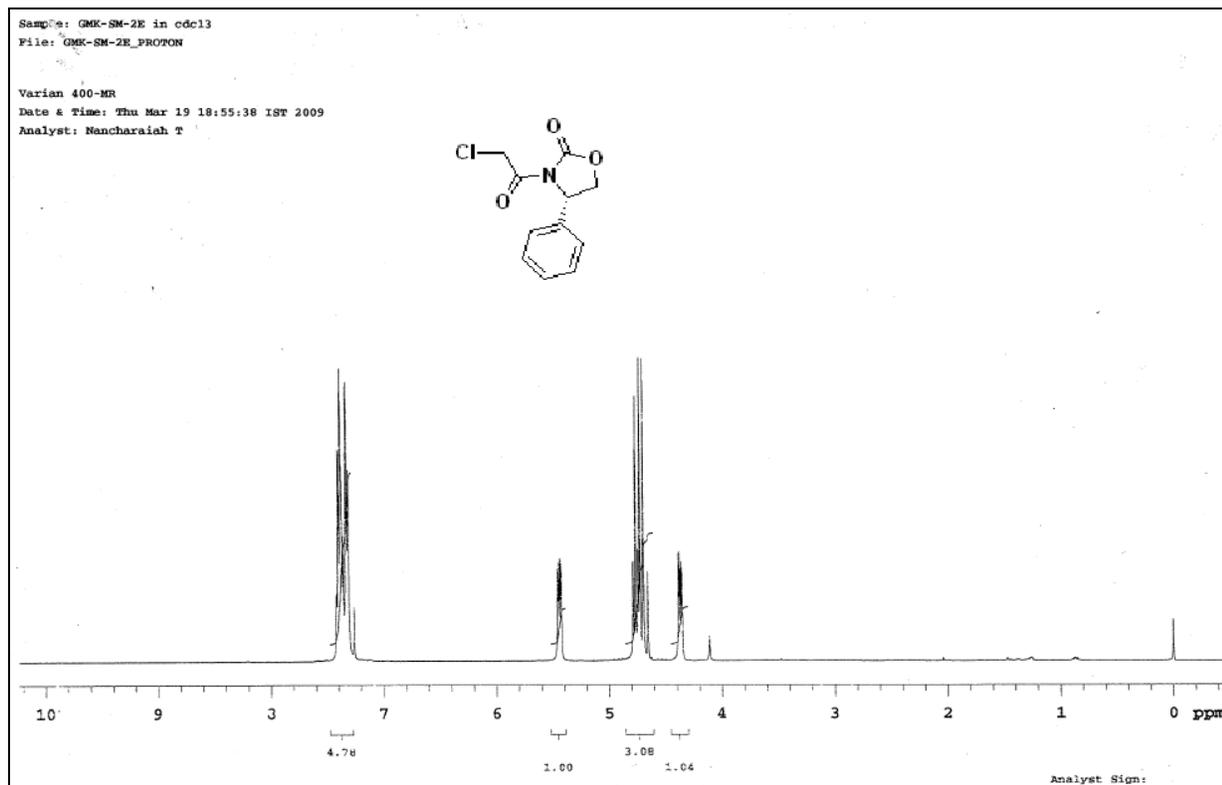
Supplementary Material

Materials and methods

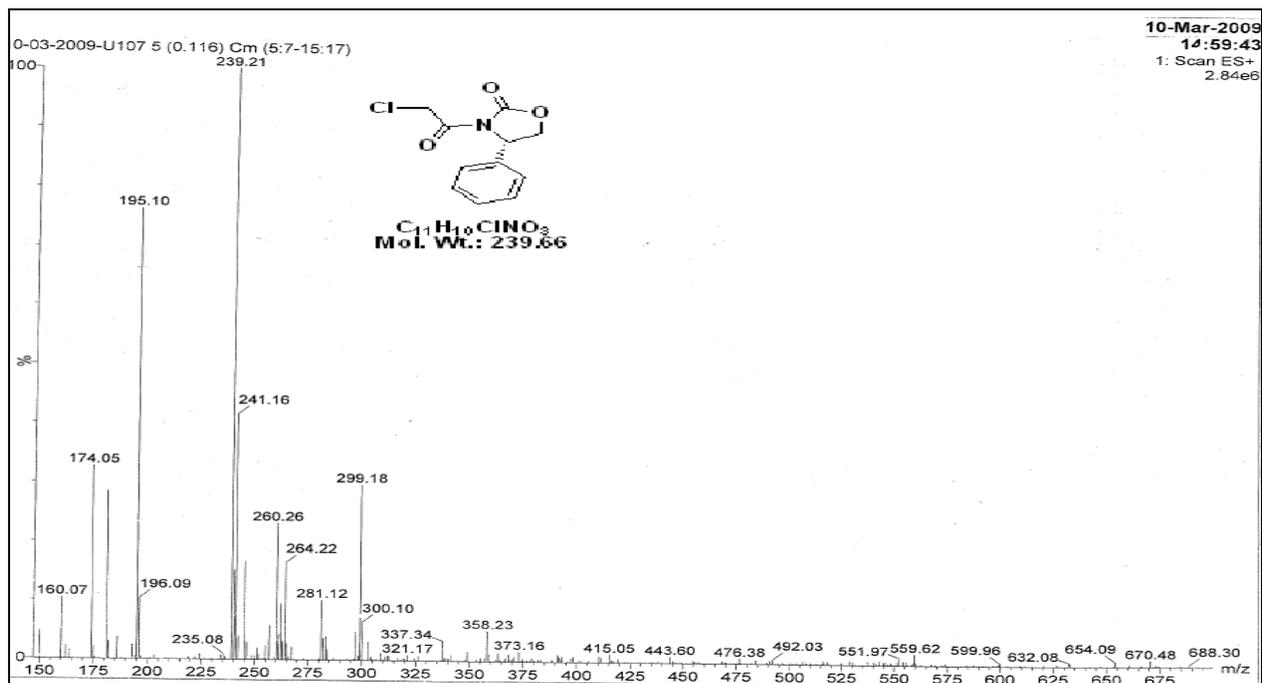
Melting points were determined on Buchi 540 melting point apparatus and are uncorrected. FT-IR spectra were recorded as KBr pellet on Nicolet 380 FT-IR Instrument (Model Thermo Electron Corporation-Spectrum One), ¹H and ¹³C NMR (proton decoupled) spectra were recorded on Varian 400MHz spectrometer using DMSO-*d*₆, CDCl₃ as solvent and tetramethylsilane (TMS) as internal standard. Mass spectra were recorded on Agilent triple quadrupole mass spectrometer equipped with turboion spray interface at 375 °C. All the organic extracts were dried over sodium sulfate after work-up. The dry reactions were carried out under nitrogen atmosphere with magnetic/mechanical stirring. Unless otherwise mentioned all the solvents and reagents used were of LR grade. TLC was performed on precoated silica-gel plates, which were visualized using UV light and sulphuric acid/ethanol (5:95) charring. Flash column-chromatography was carried out on silica gel (230-400 mesh) unless otherwise stated

¹H NMR, ¹³C NMR, MS, IR Spectra and HPLC

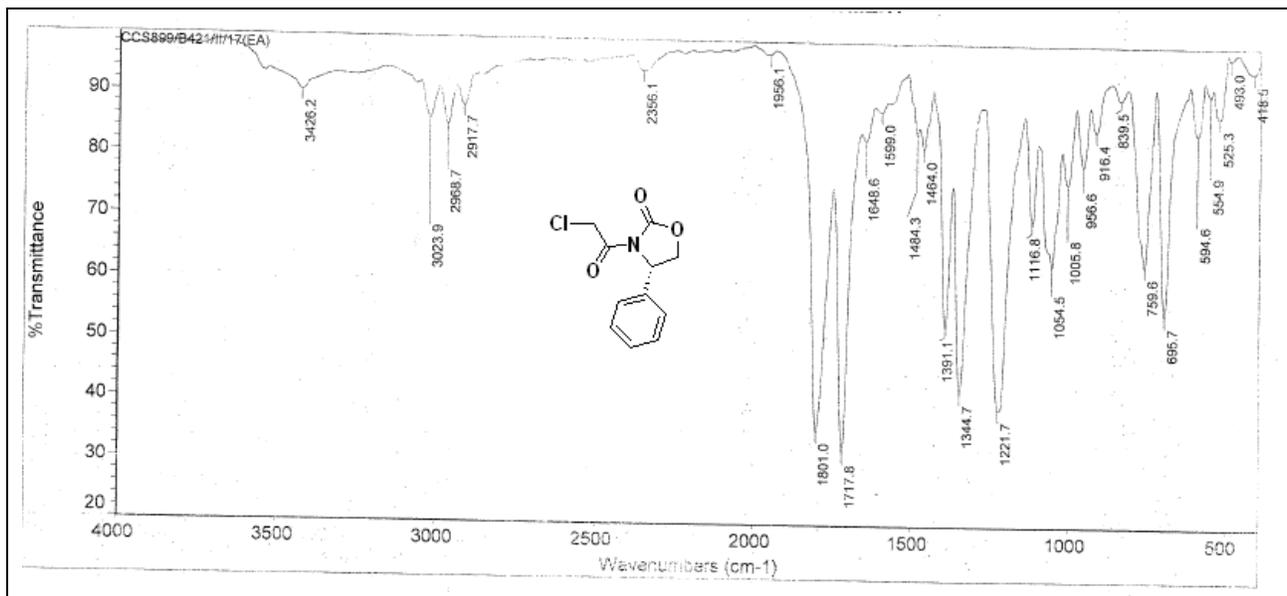
¹H NMR in (CDCl₃): compound 3



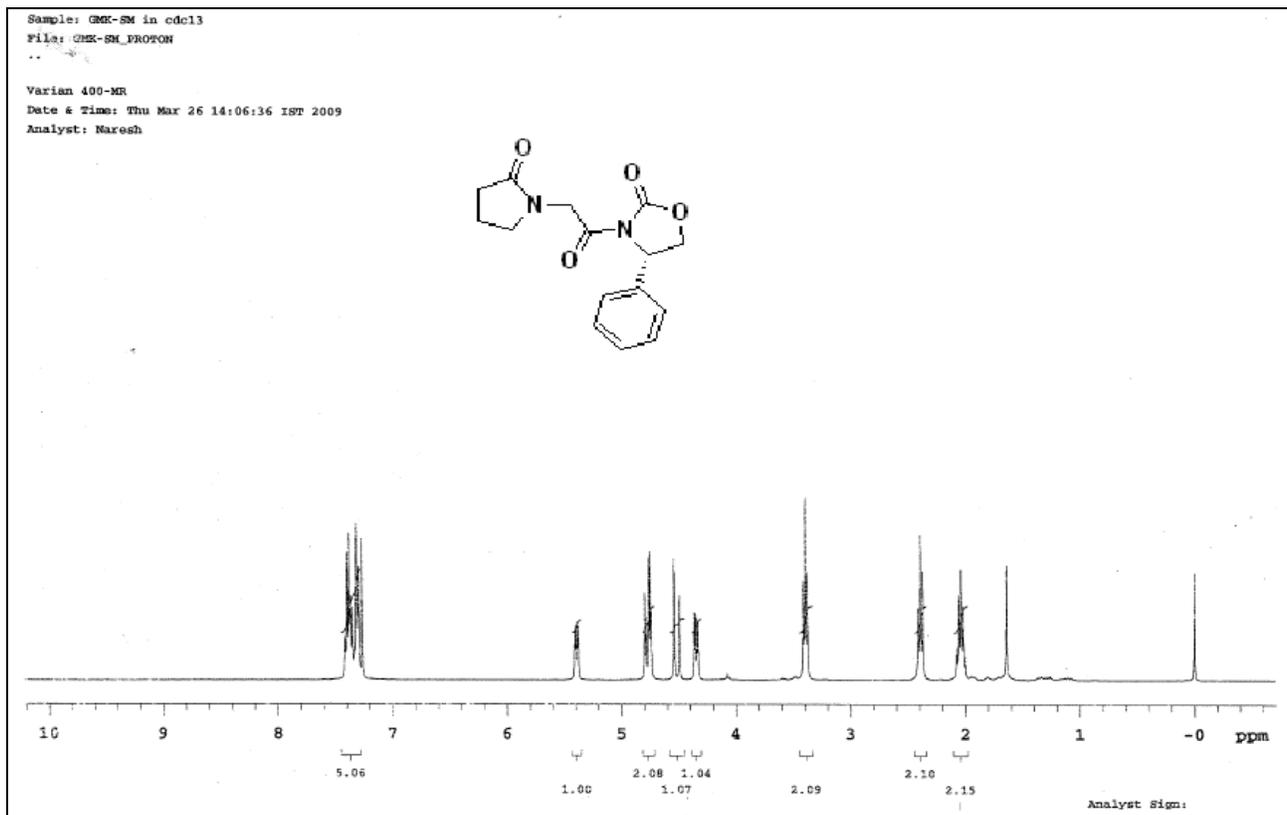
MS (ESI): compound 3



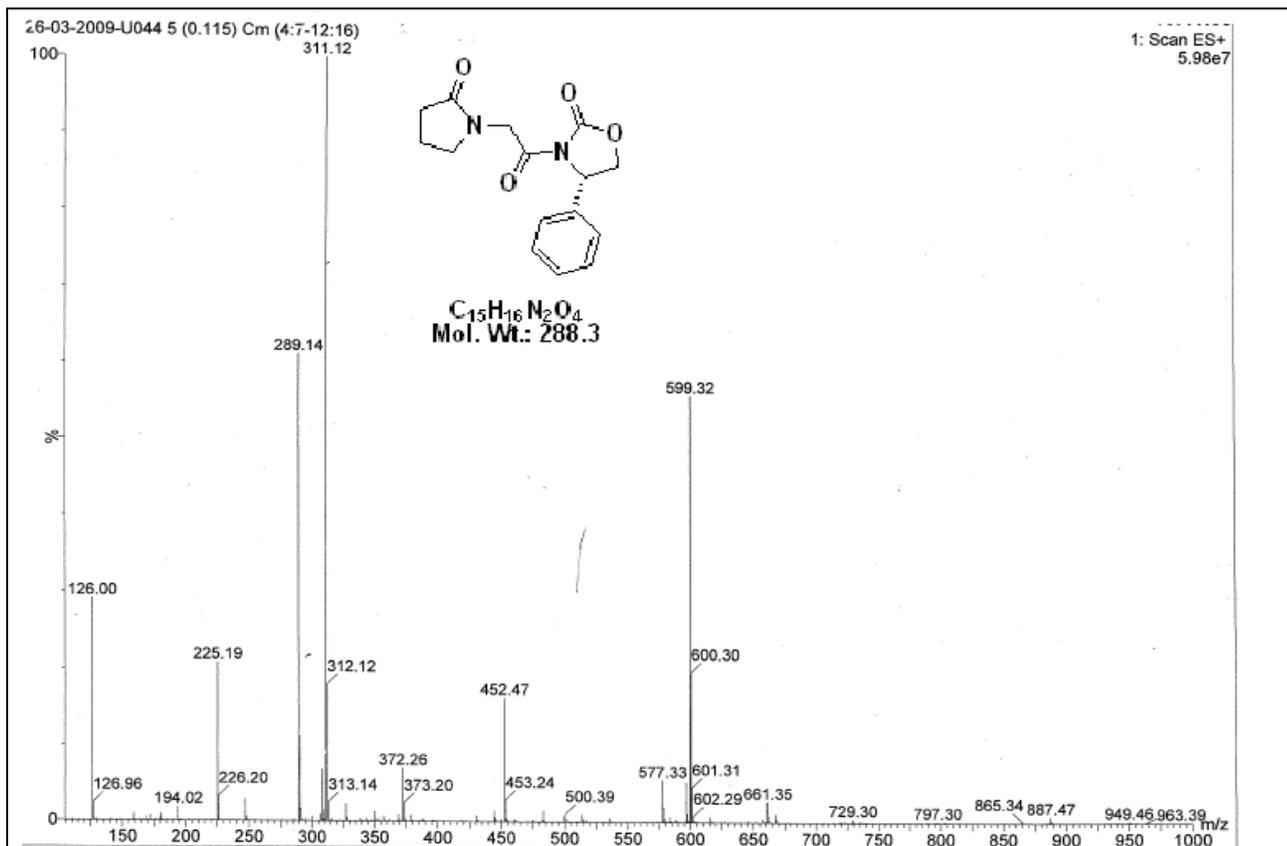
IR (CHCl₃): compound 3



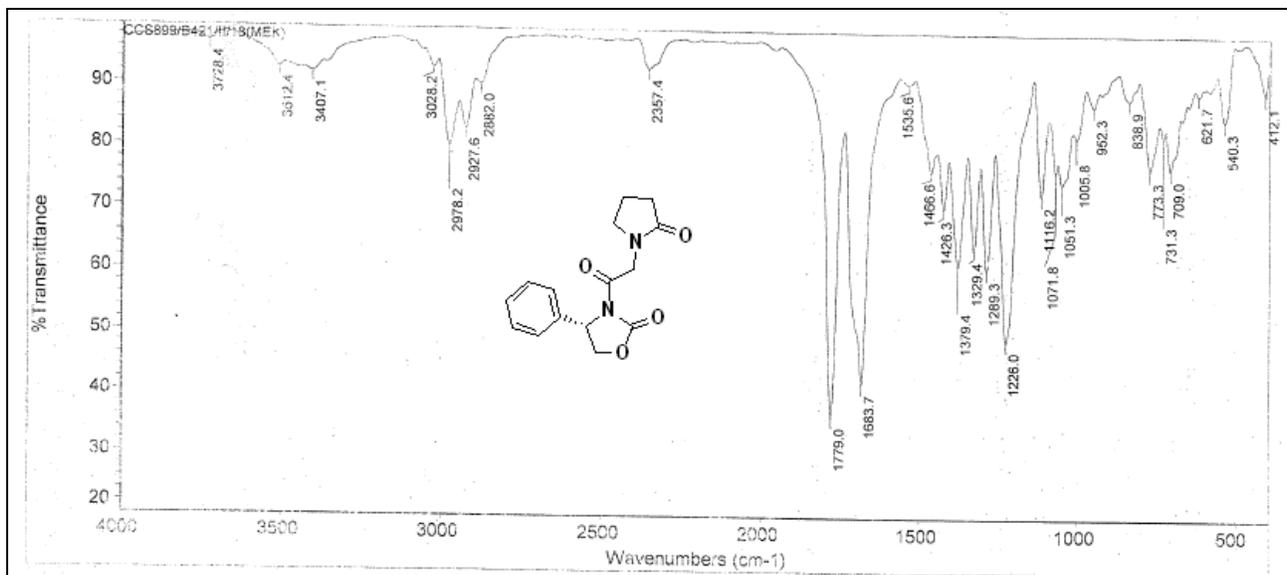
¹H NMR in (CDCl₃): compound 4



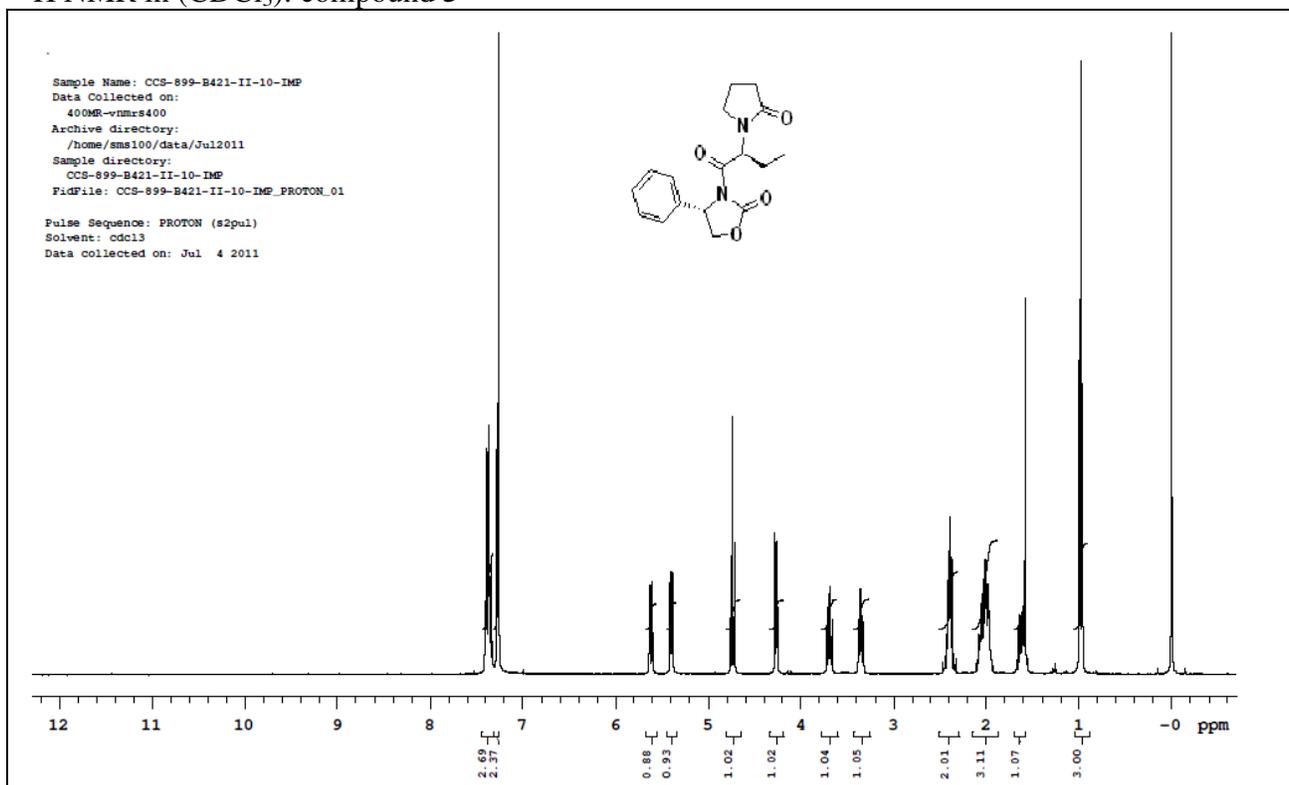
MS (ESI): compound 4



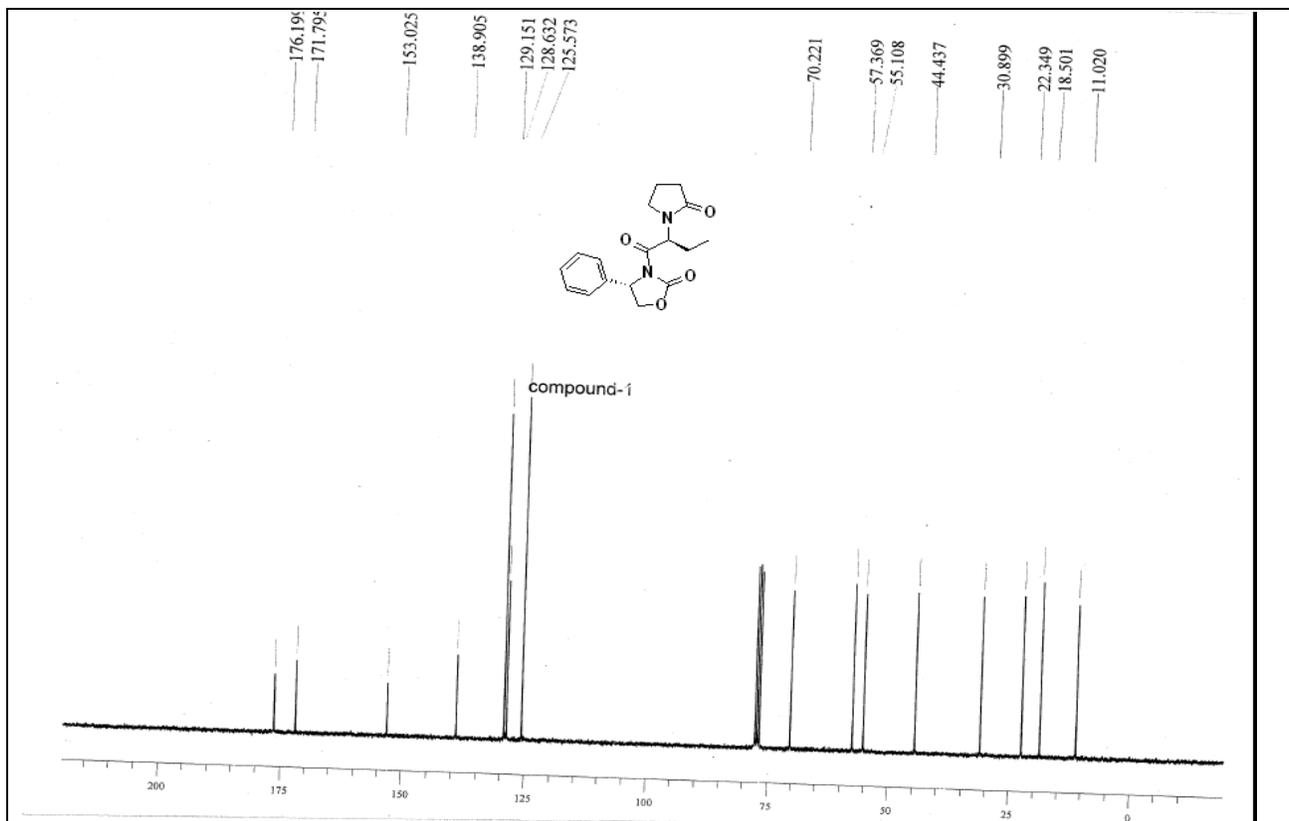
IR in (CHCl₃): compound 4



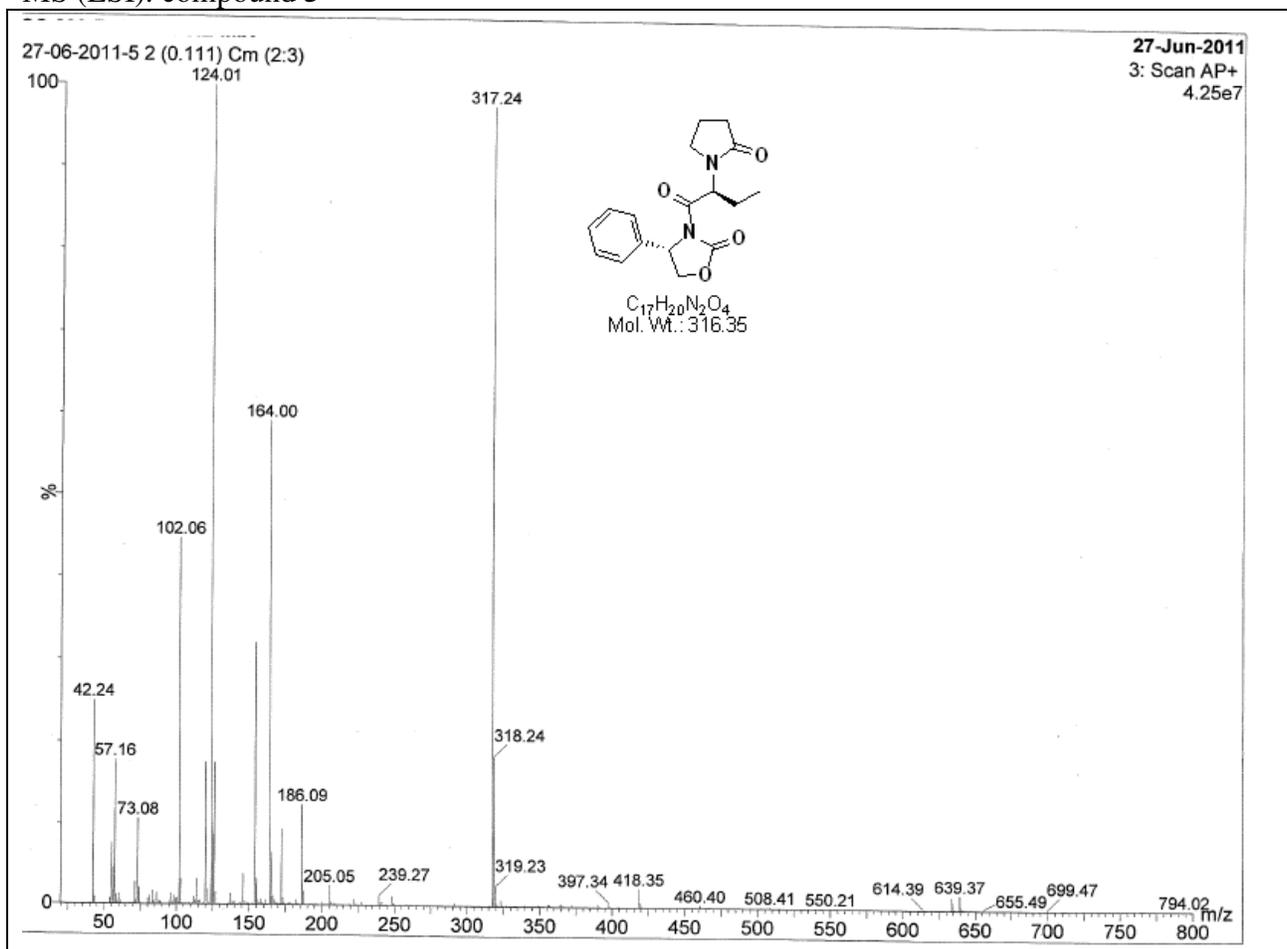
¹H NMR in (CDCl₃): compound 5



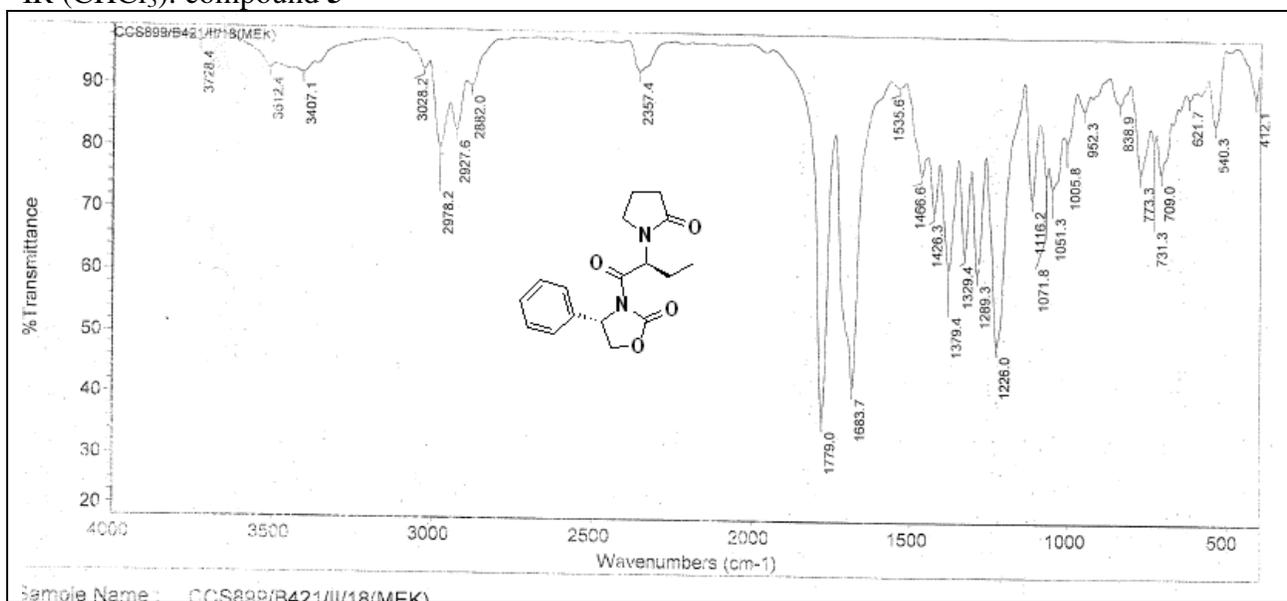
¹³C NMR in (CDCl₃): compound 5



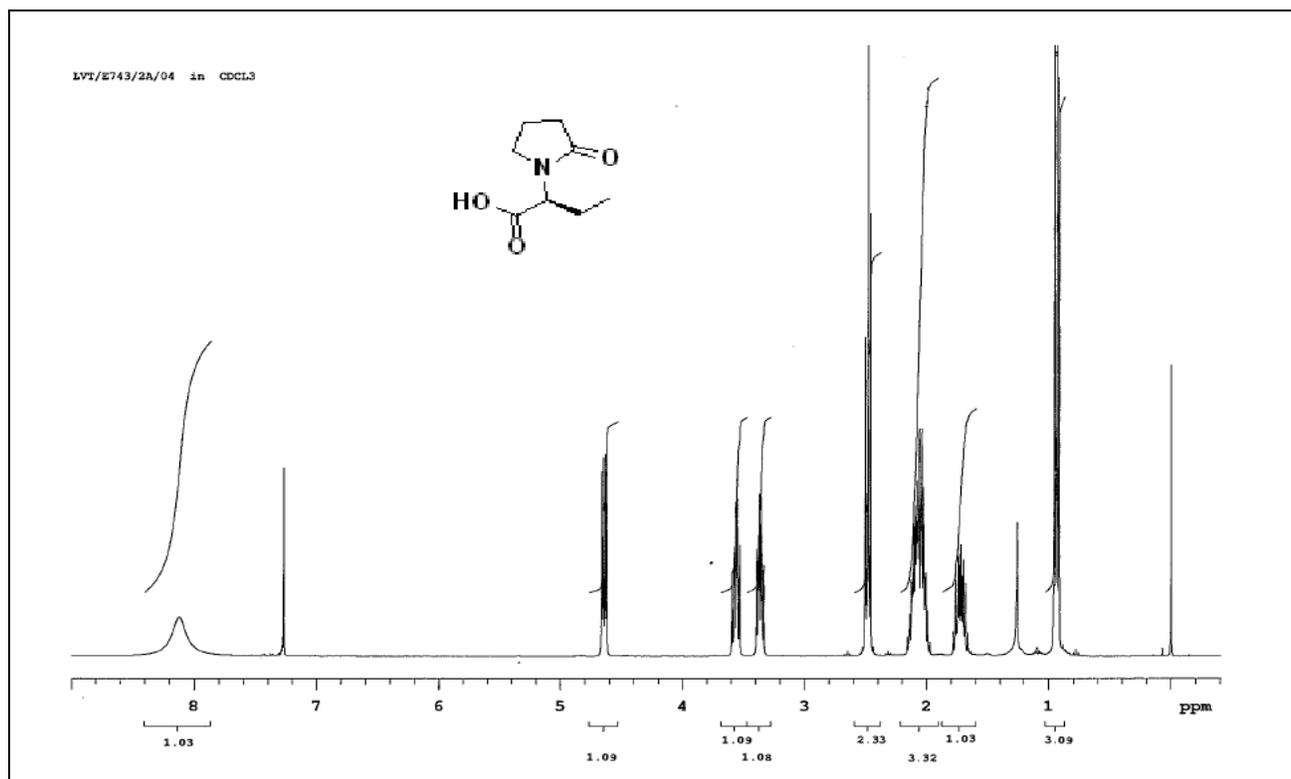
MS (ESI): compound 5



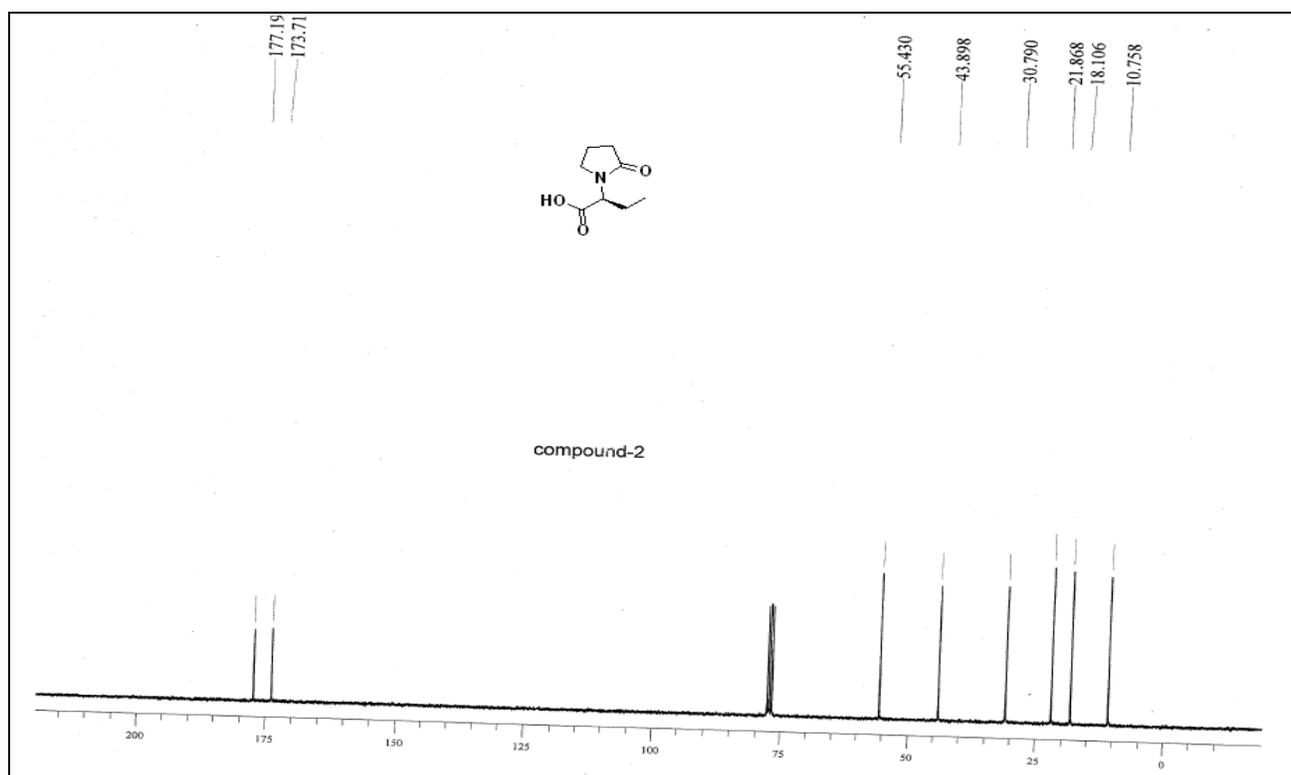
IR (CHCl₃): compound 5



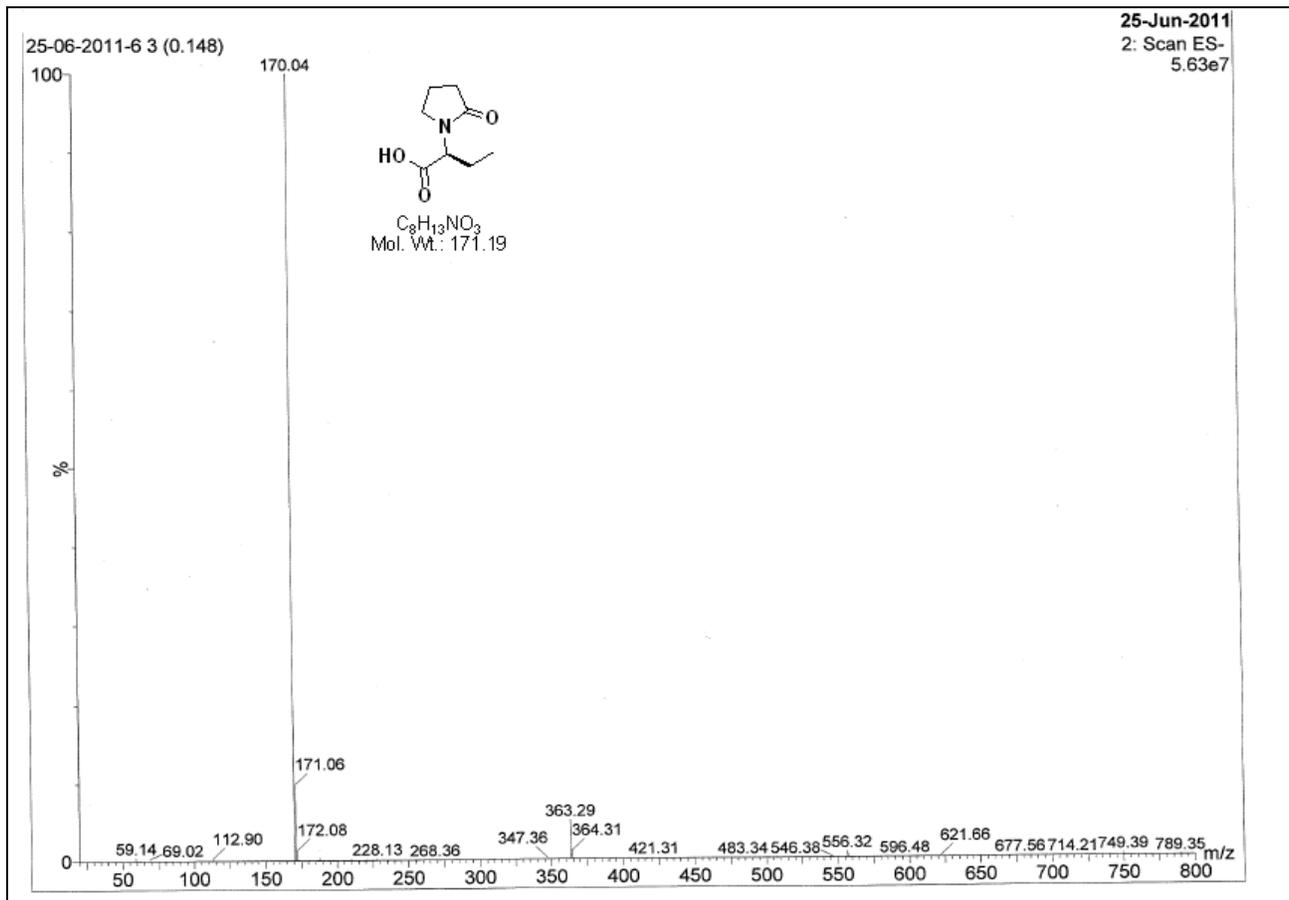
^1H NMR in (CDCl_3): compound 6



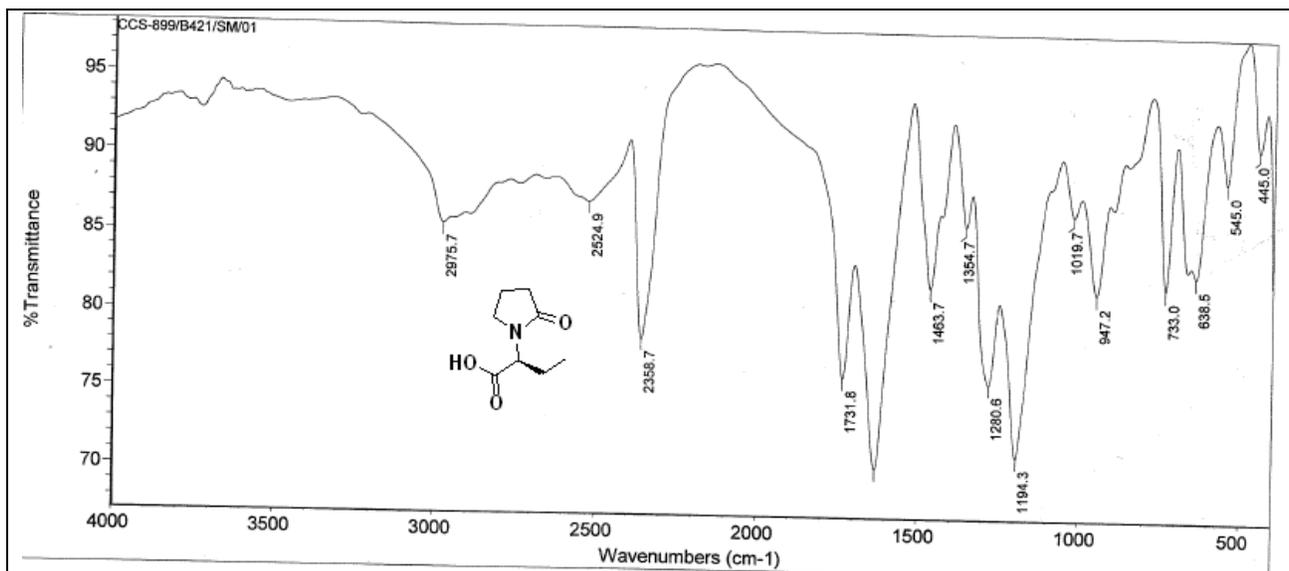
^{13}C NMR in (CDCl_3): compound 6



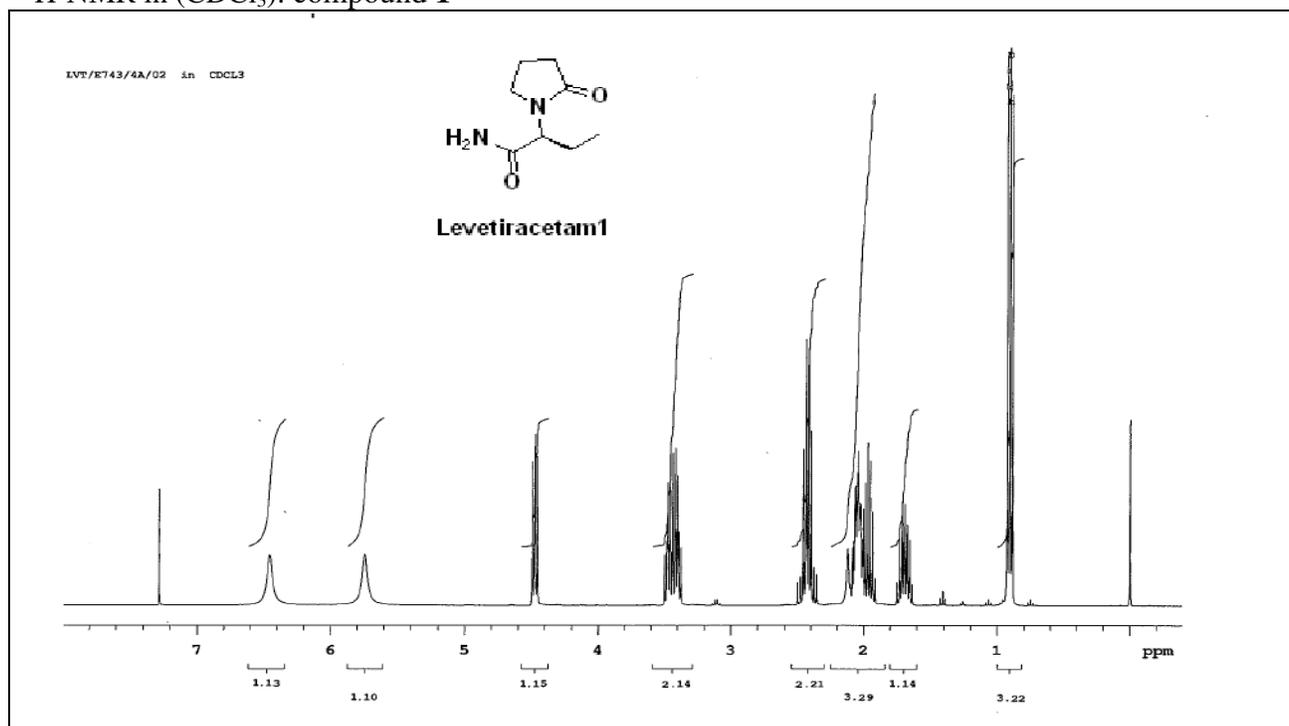
MS(ESI): compound 6



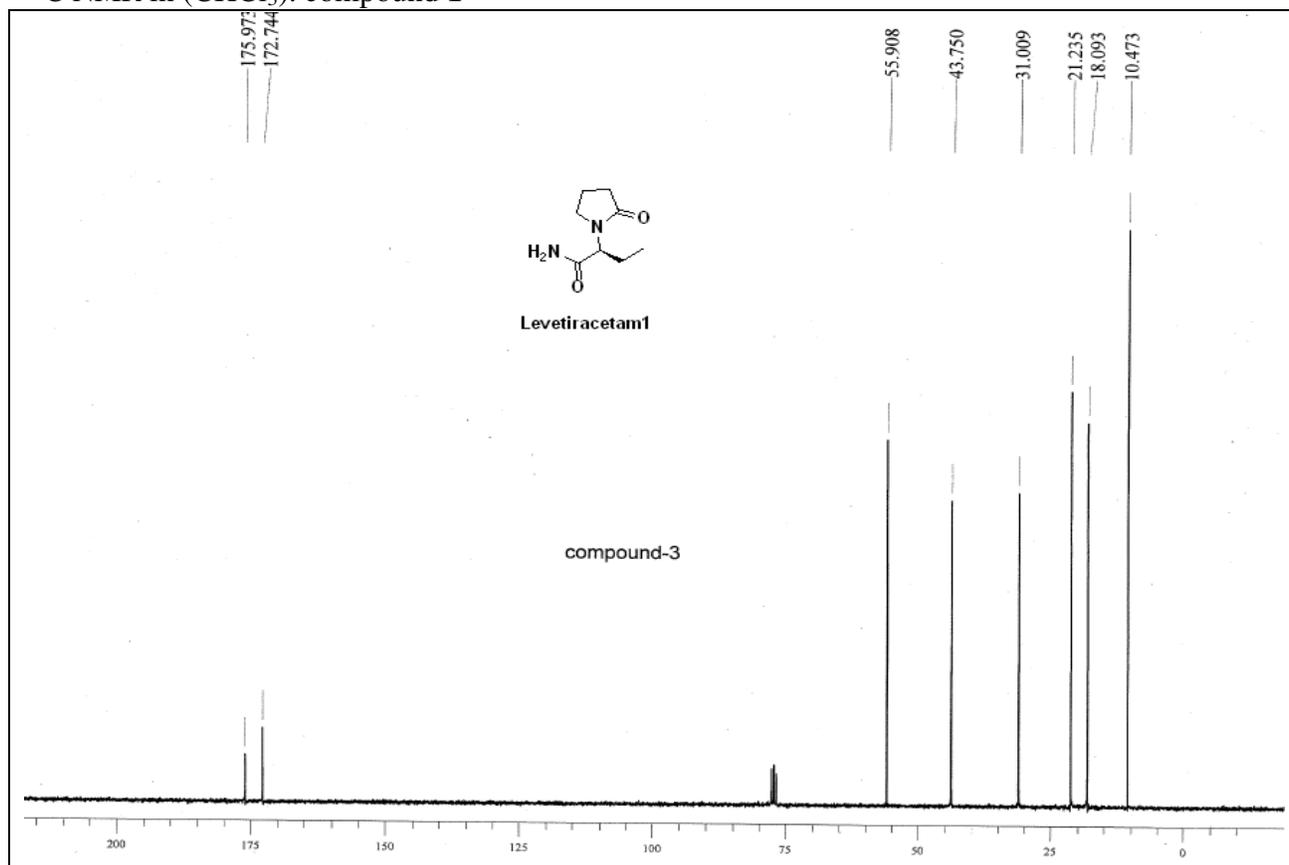
IR in (CHCl₃): compound 6



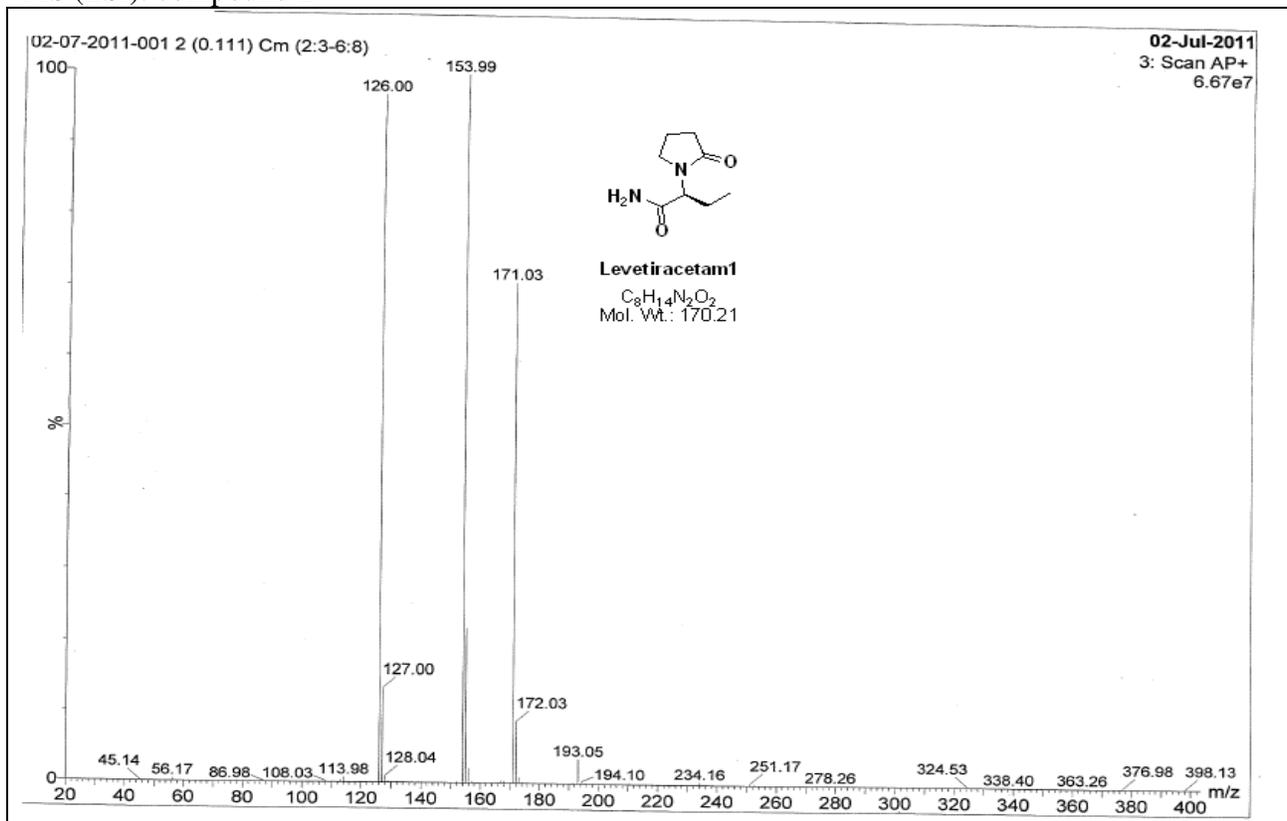
¹H-NMR in (CDCl₃): compound 1



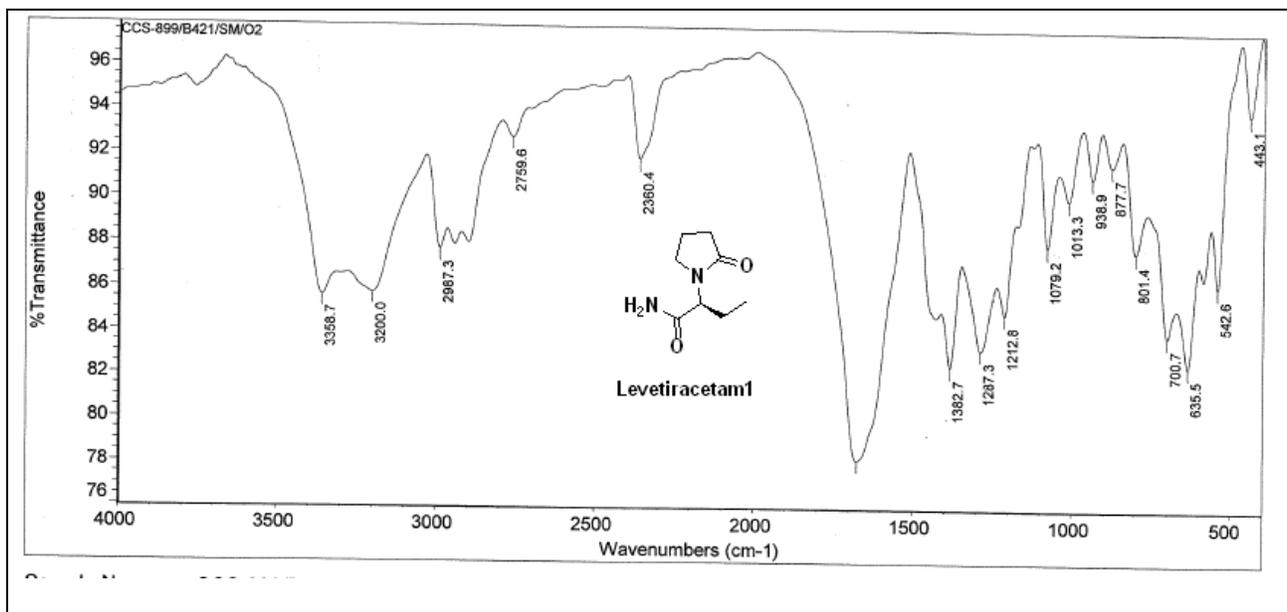
¹³C NMR in (CHCl₃): compound 1



MS (ESI): compound 1

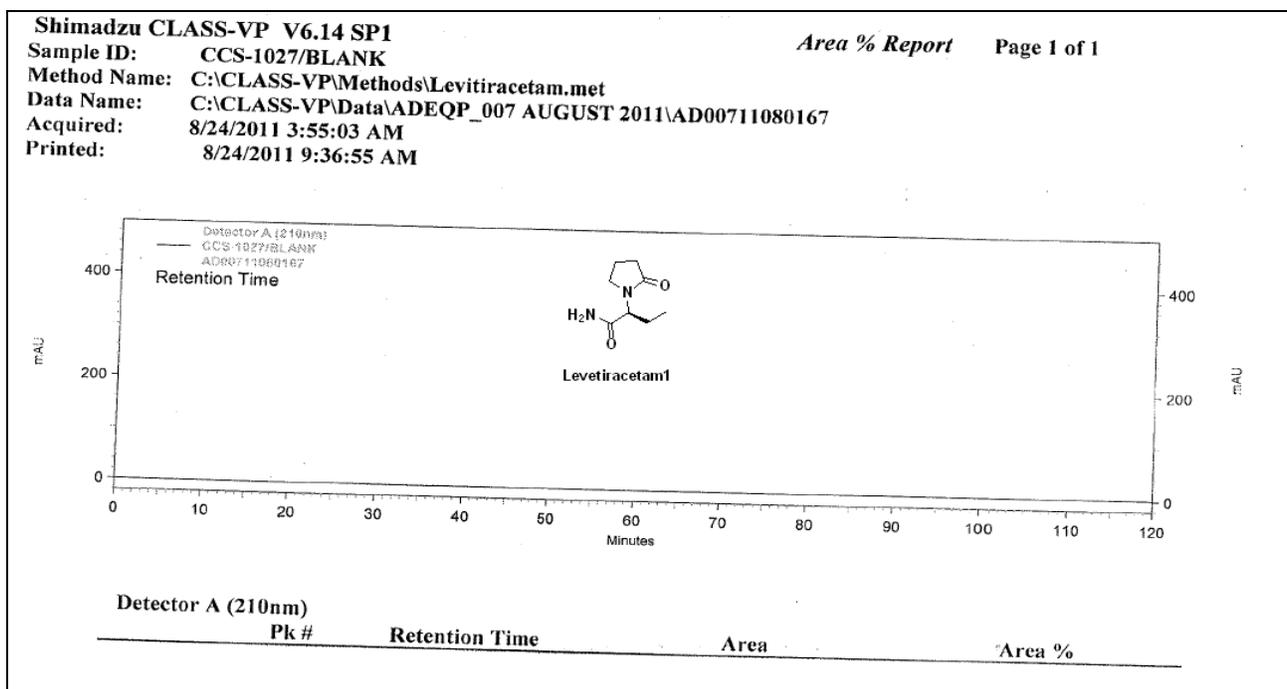


IR in (CHCl₃) : compound 1



Chiral HPLC Chromatogram for Levetiracetam,1 :

Blank chromatogram:



Chiral compound chromatogram:

