SUPPORTING INFORMATION

For

An Efficient Synthesis of Iminoquinones by Chemoseletive Domino *ortho*-hydroxylation/oxidation/imidation sequence of 2- aminoaryl ketone

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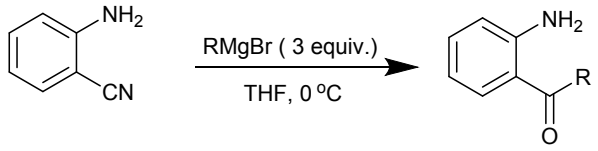
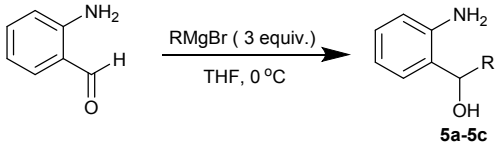
Synthesis of 2-amino benzophenone derivatives[1] (1i-k)

Magnesium turnings were placed in a oven dried two neck 50 mL round bottom flask and the flask was further dried by hot air gun with applying vacuum. Then the setup was allowed to room temperature, refilled with nitrogen. Under nitrogen flow, a catalytic amount of iodine was added, followed by freshly distilled THF. Then followed by corresponding aryl halide was added by drop wise. After the disappearance of the iodine color, the reaction was allowed to stir at room temperature for 2 hours. Once all the magnesium turnings were dissolved. The Grignard reagent was added to solution of 2-amino benzonitrile dissolved in THF at 0 ^{o}C over 40 min. Then the reaction was allowed to warm to amibient temperature and allowed to stir at this temperature for 6h. The reaction was quenched by slow addition of 10 % HCl and made basic nature by the addition of NaOH at 0 ^{o}C. The organic layer was extracted with ethyl acetate. The combined organic layers were dried over Na_2SO_4 and the solvent was evaporated under vacuum. The residue was purified by column chromatography with ethyl acetate/hexanes solvents to provide pure products (**1i-1k**).



Synthesis of secondary alcohols[1] (5a-5c)

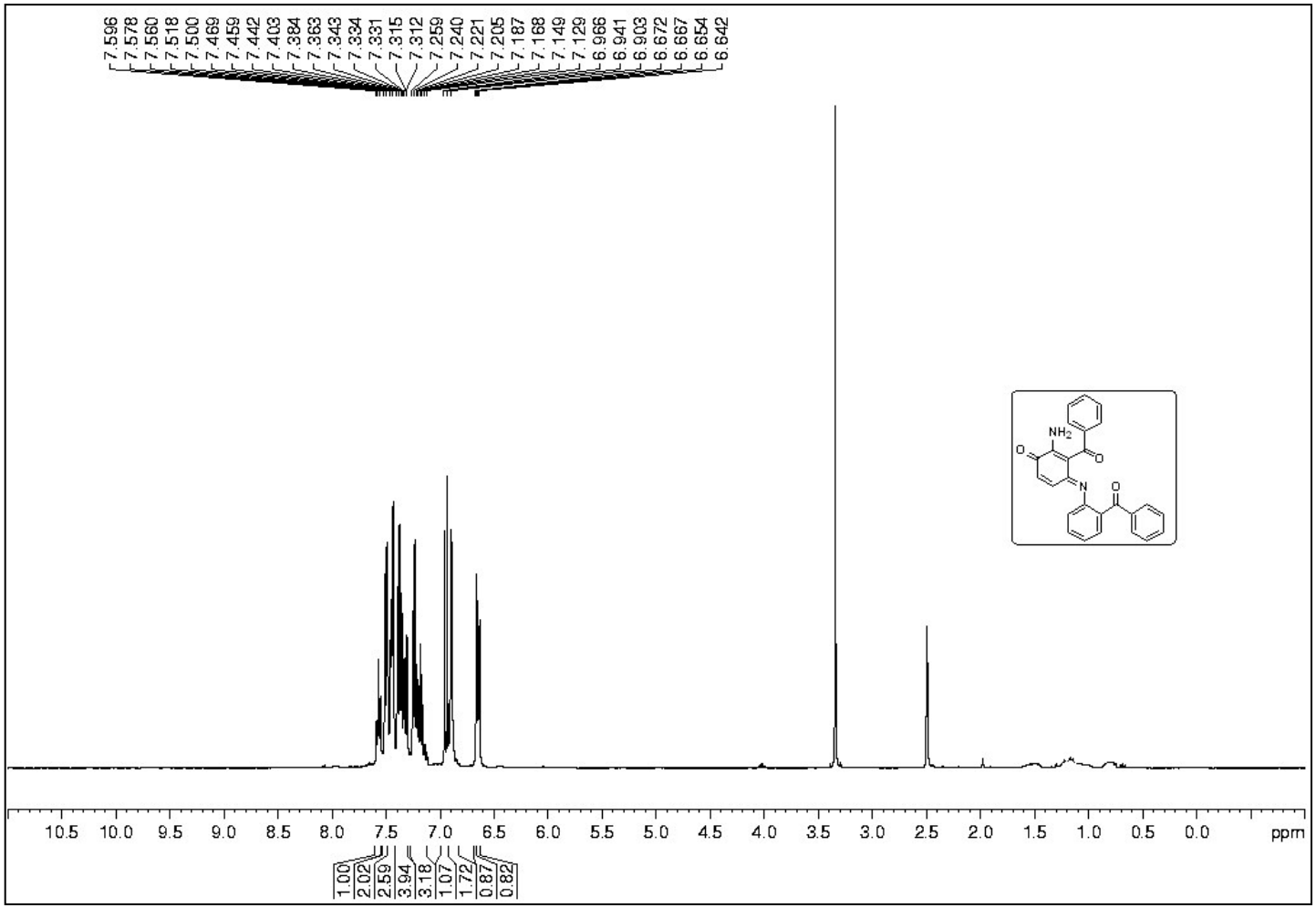
Grignard reagent was added to solution of 2-aminobenzaldehyde dissolved in THF at 0 ^{o}C over 40 min. Then the reaction was allowed to warm to amibient temperature and allowed to stir at this temperature for 6h. The reaction was quenched by slow addition of saturated NH_4Cl at 0 ^{o}C. The organic layer was extracted with ethyl acetate. The combined organic layers were dried over Na_2SO_4 and the solvent was evaporated under vacuum. The residue was purified by column chromatography with ethyl acetate/hexanes solvents to provide pure products (**5a-5c**).



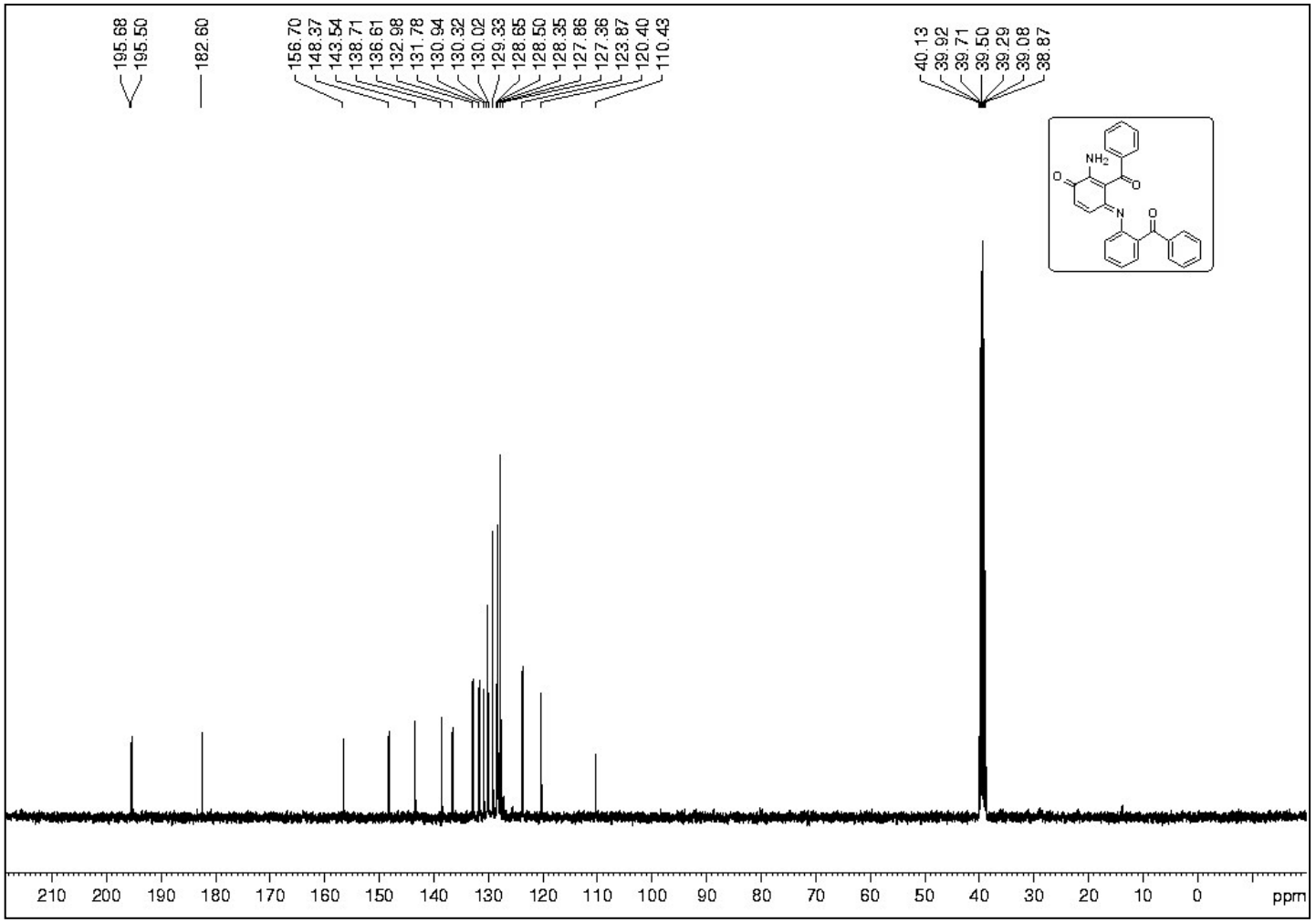
5a-5c

Reference:

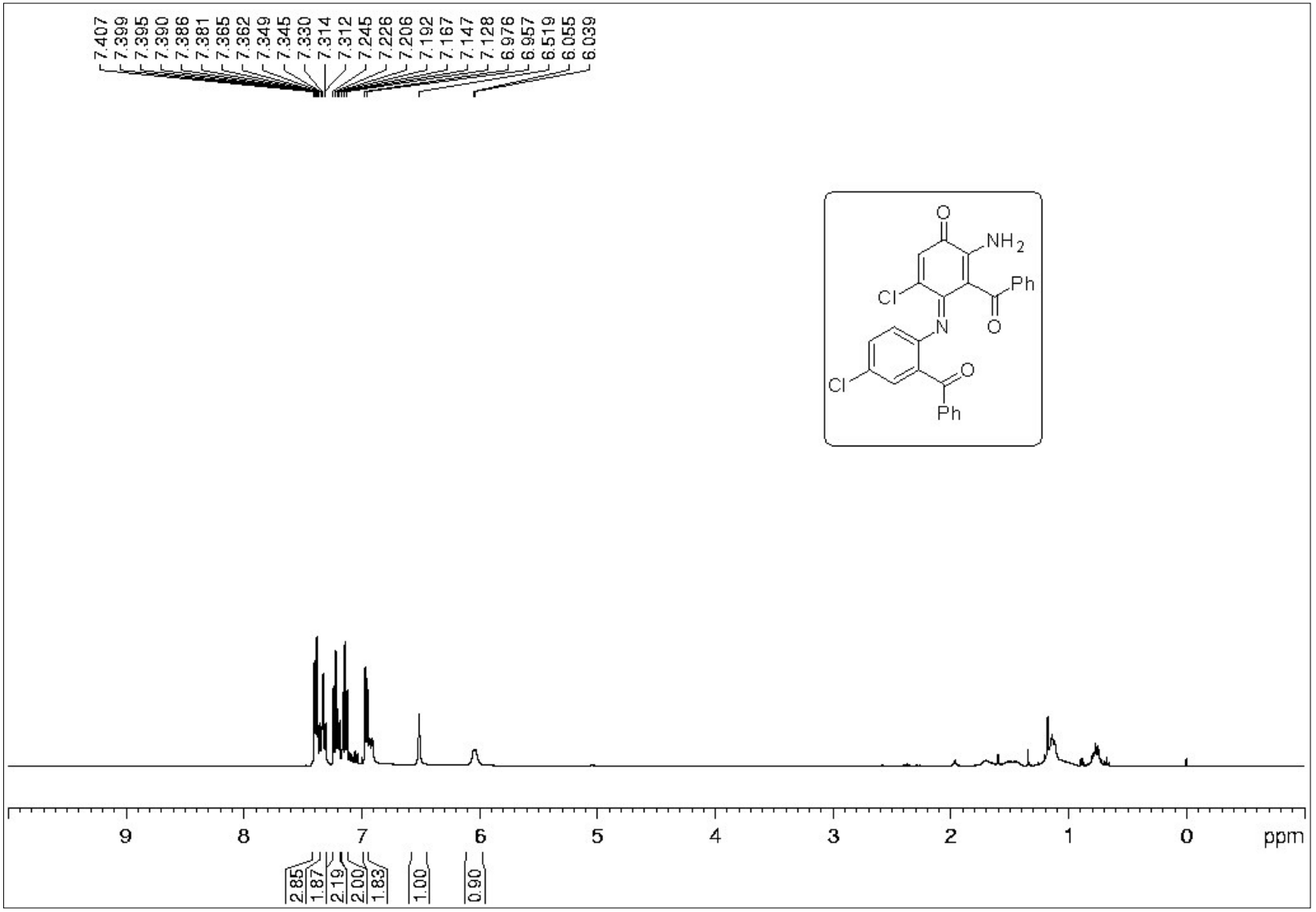
1) Z. Huang, Y. Yang, Q. Xiao, Y. Zhang, J. Wang, *Eur. J. Org. Chem.* **2012**, 6586-6593.



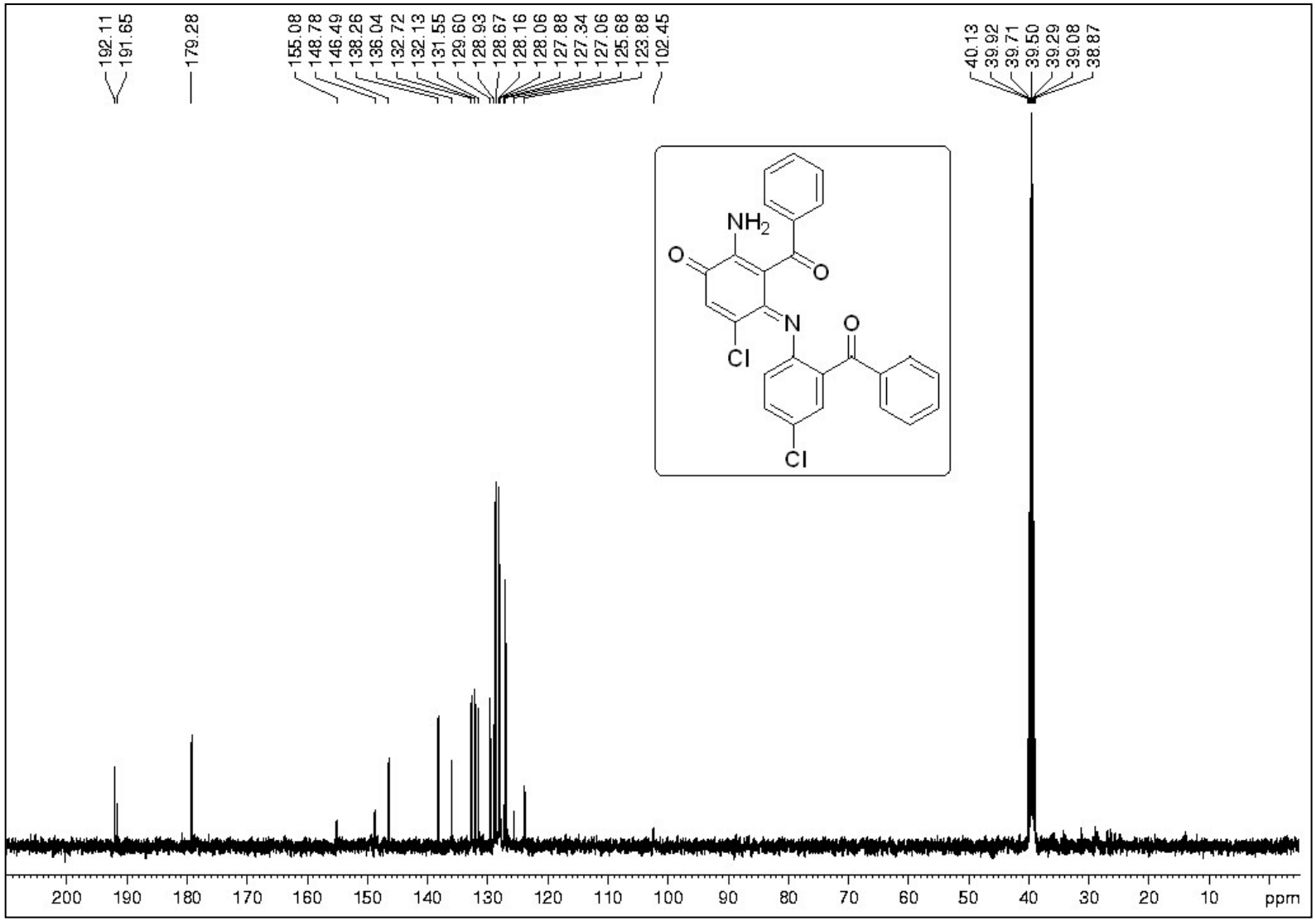
400 MHz ^{1H}NMR spectrum of **2a** in DMSO-d_6



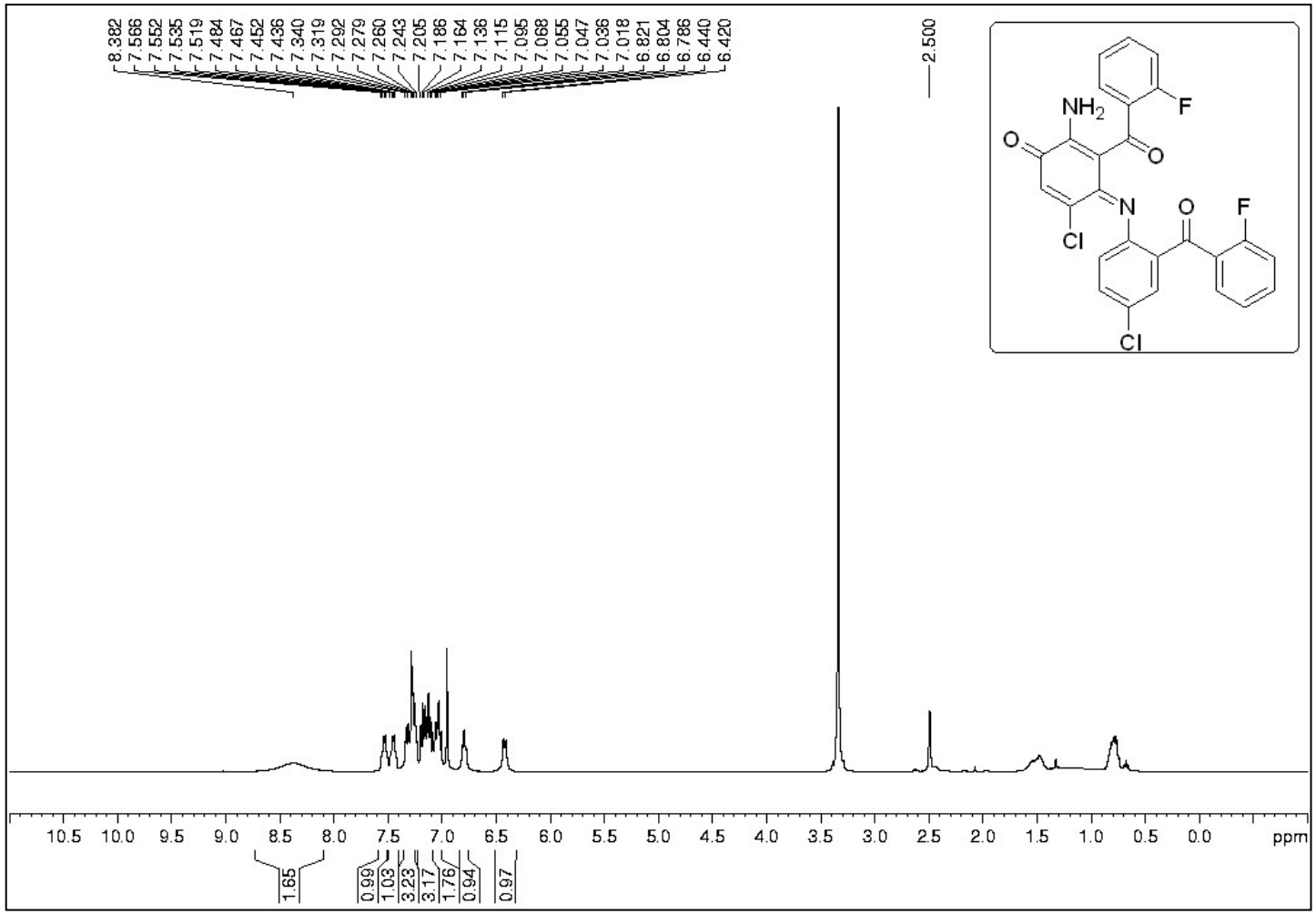
100 MHz ^{13}C NMR spectrum of **2a** in DMSO-d_6



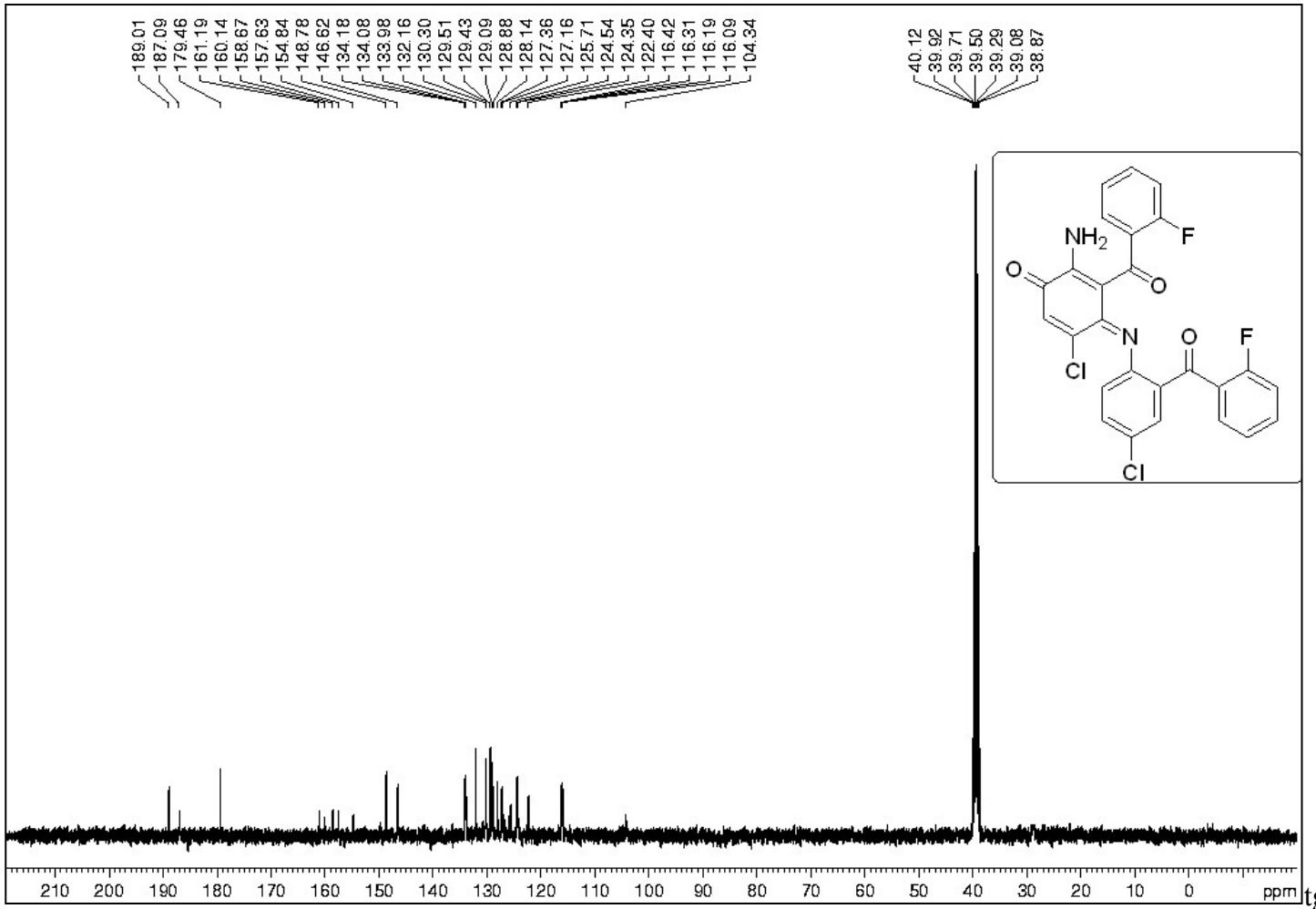
400 MHz ^{1H} NMR spectrum of **2b** in $CDCl_3$



100 MHz ^{13}C NMR spectrum of **2b** in DMSO-d_6



400 MHz ^{1}H NMR spectrum of **2c** in DMSO-d_6



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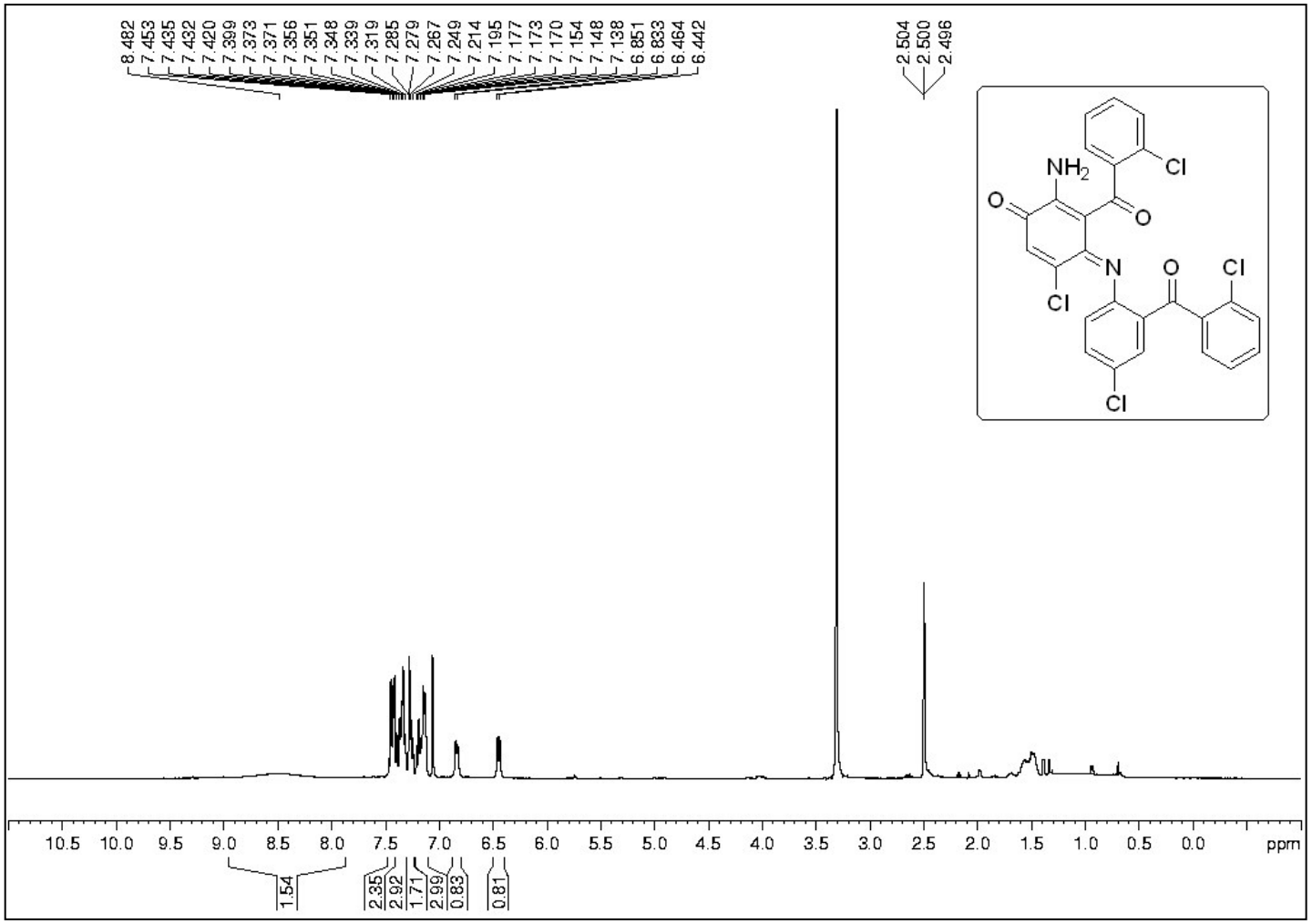
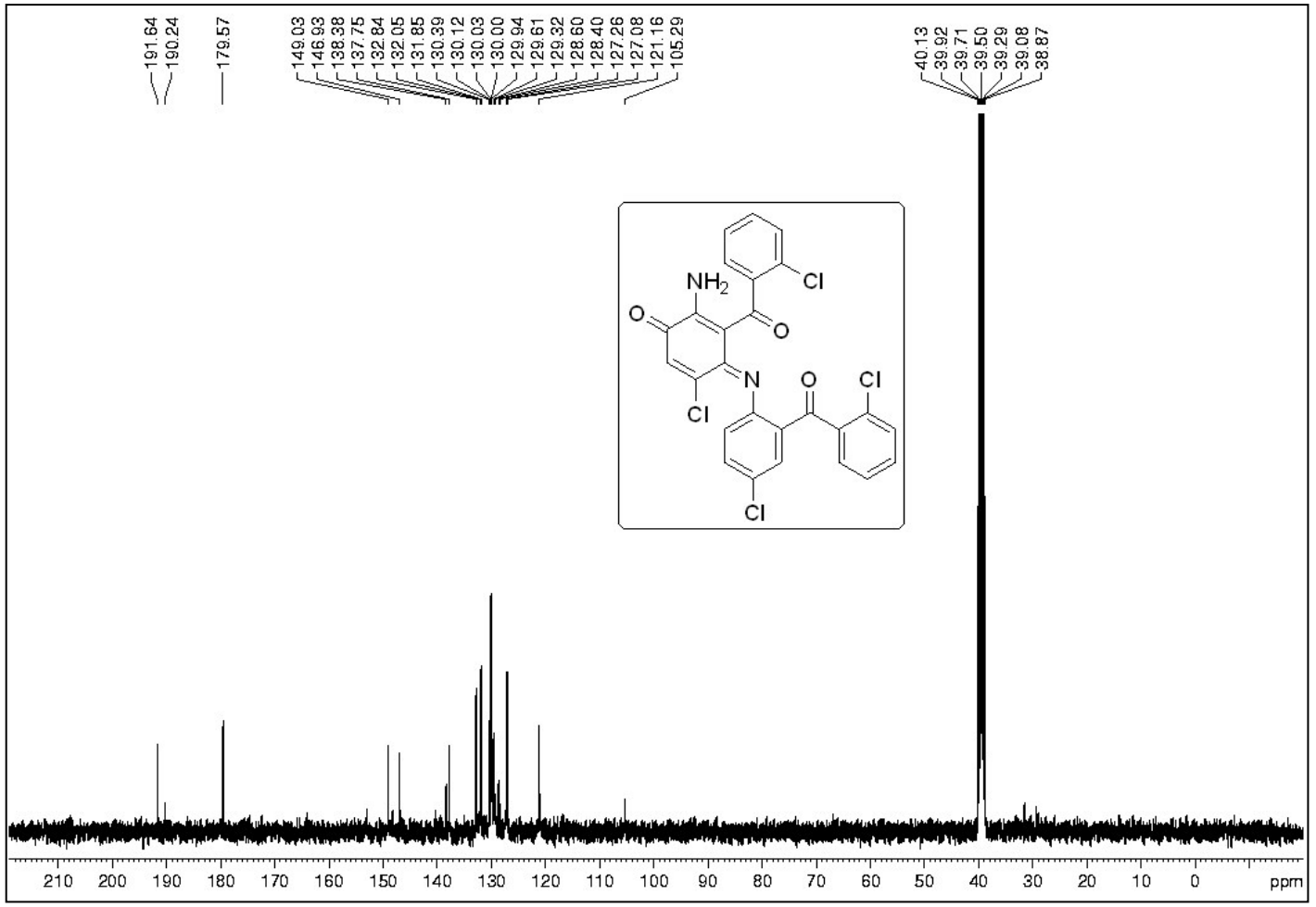
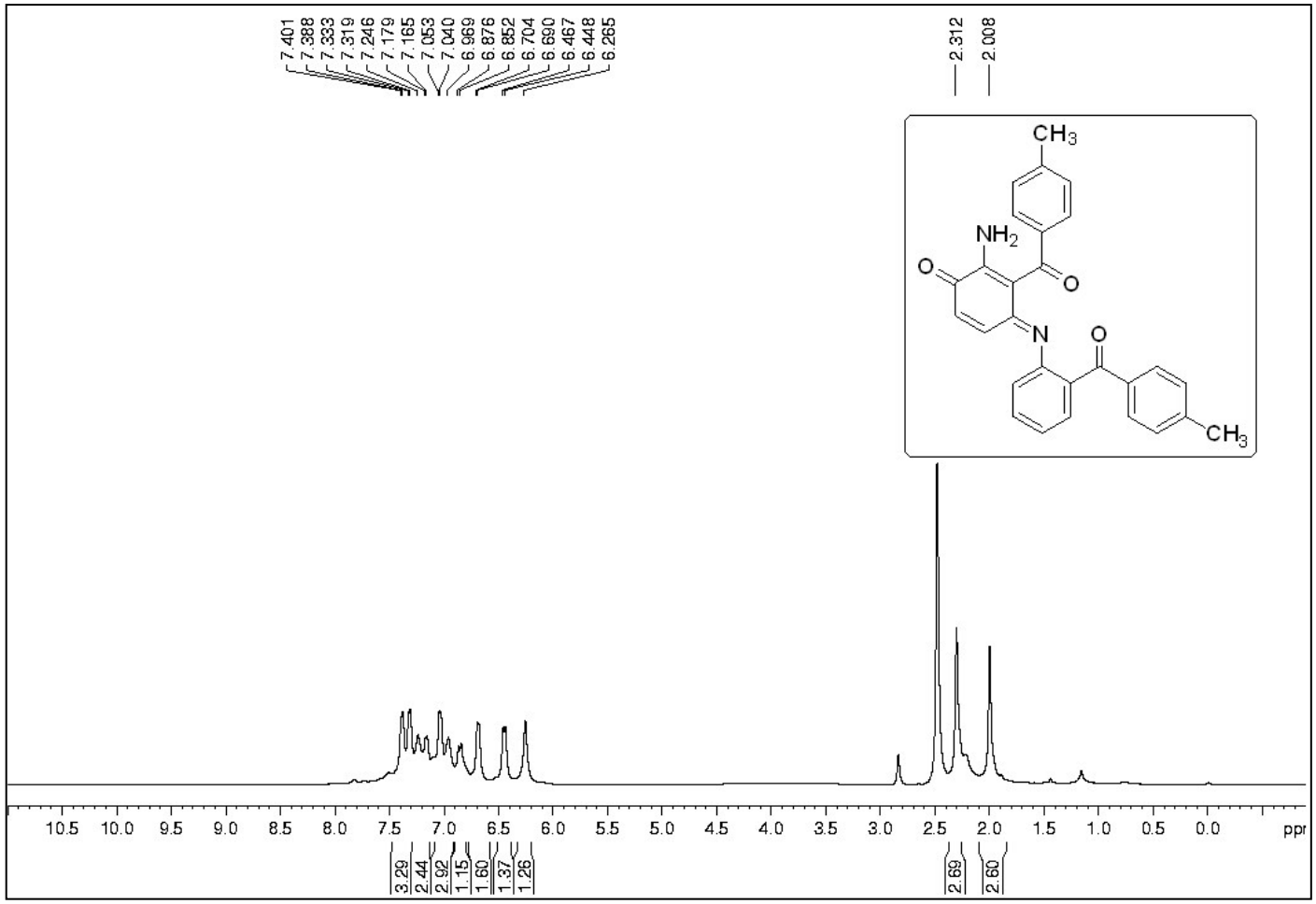
100 MHz ^{13}C NMR spectrum of **2c** in DMSO-d_6



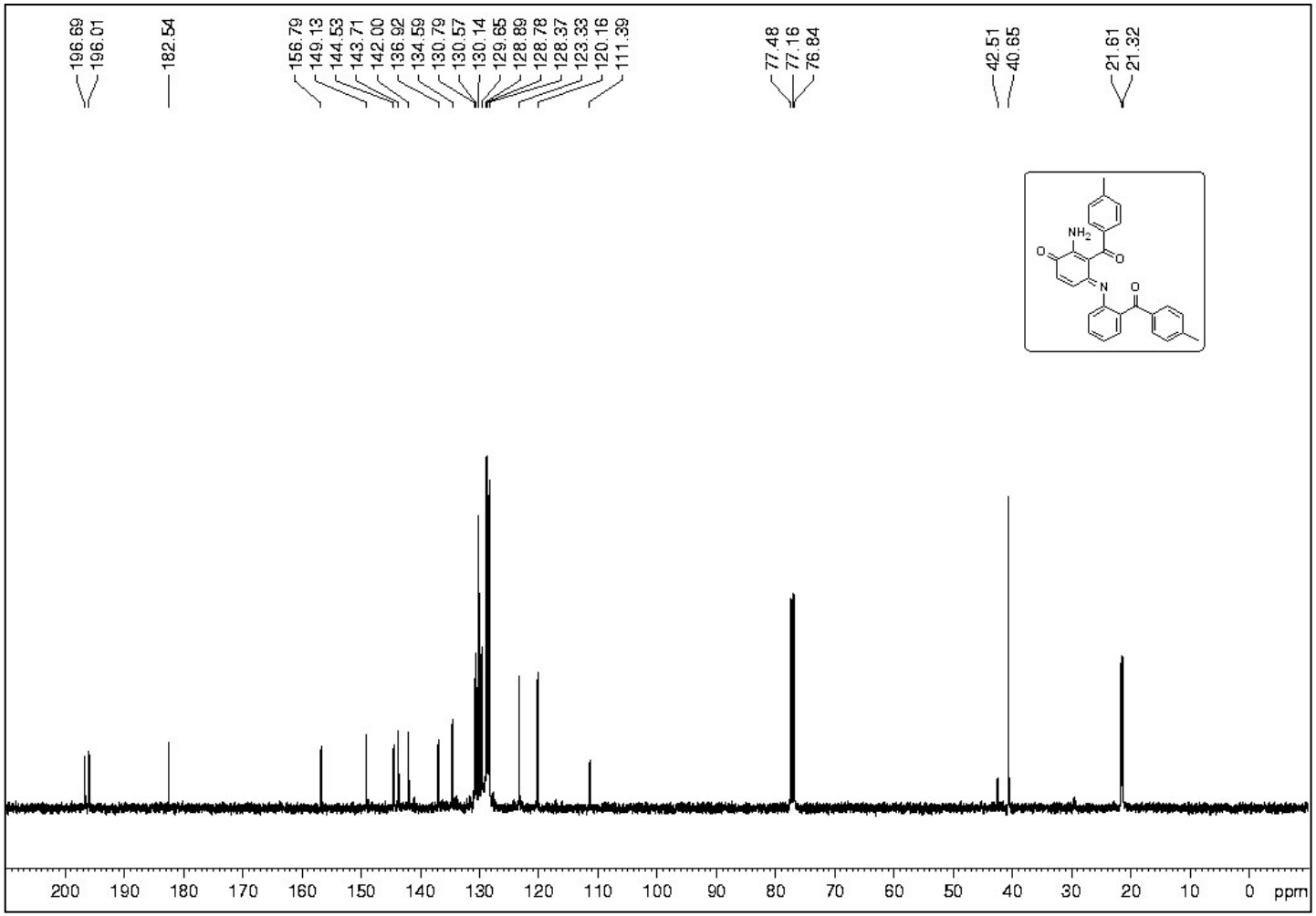
400 MHz ^{1}HNMR spectrum of **2d** in DMSO-d_6



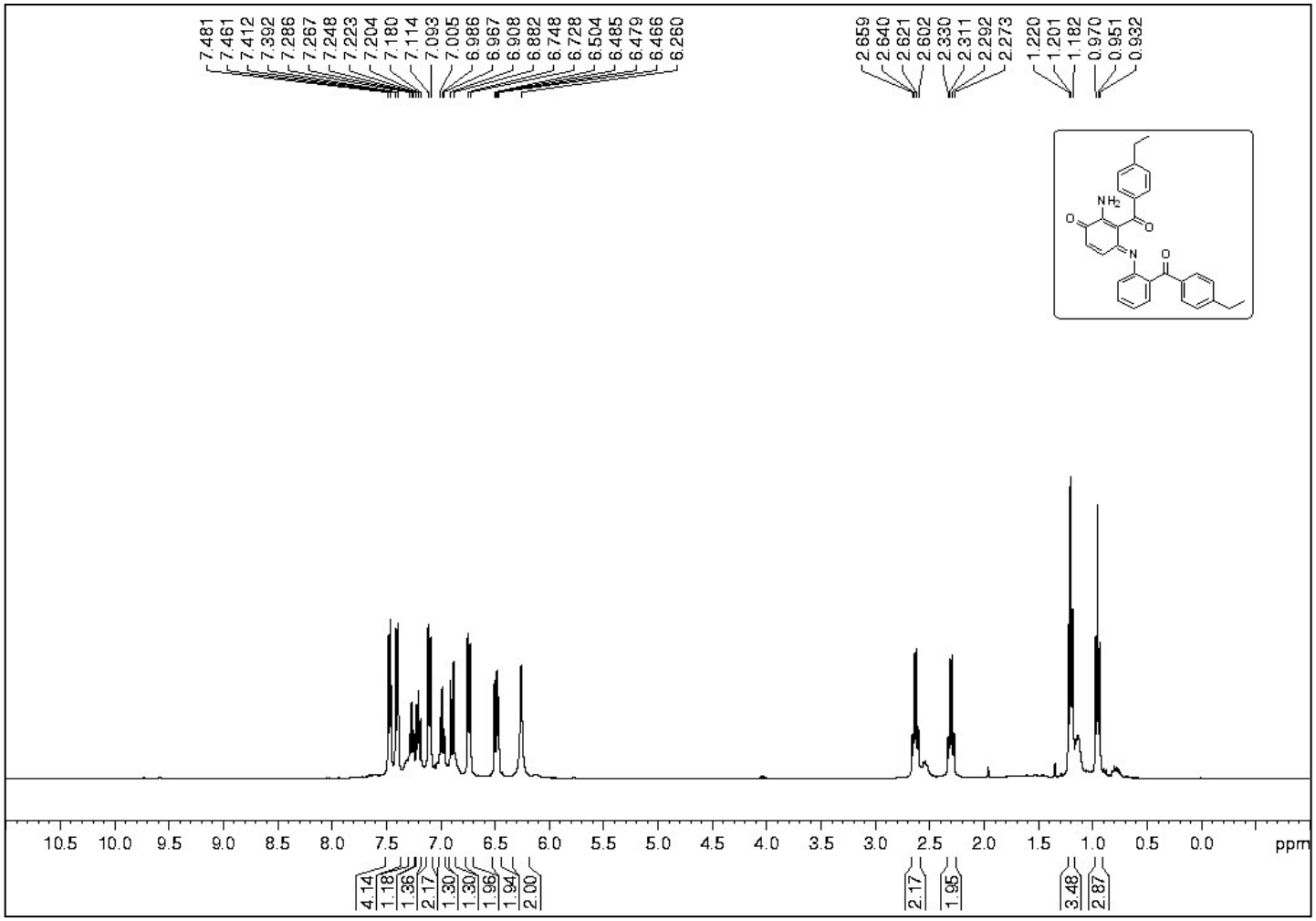
100 MHz ^{13}C NMR spectrum of **2d** in DMSO-d_6



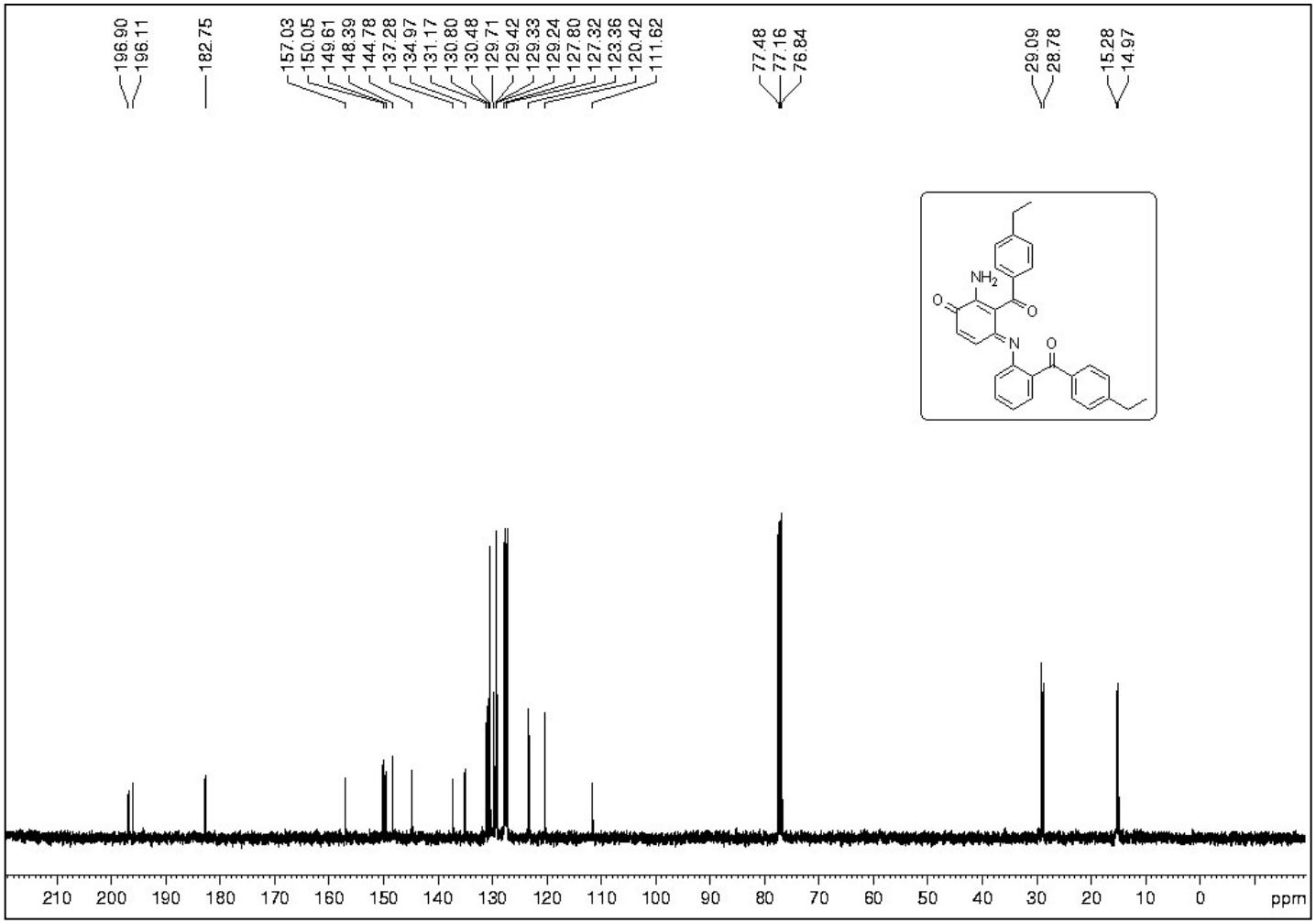
400 MHz ^{1}H NMR spectrum of **2e** in DMSO-d_6



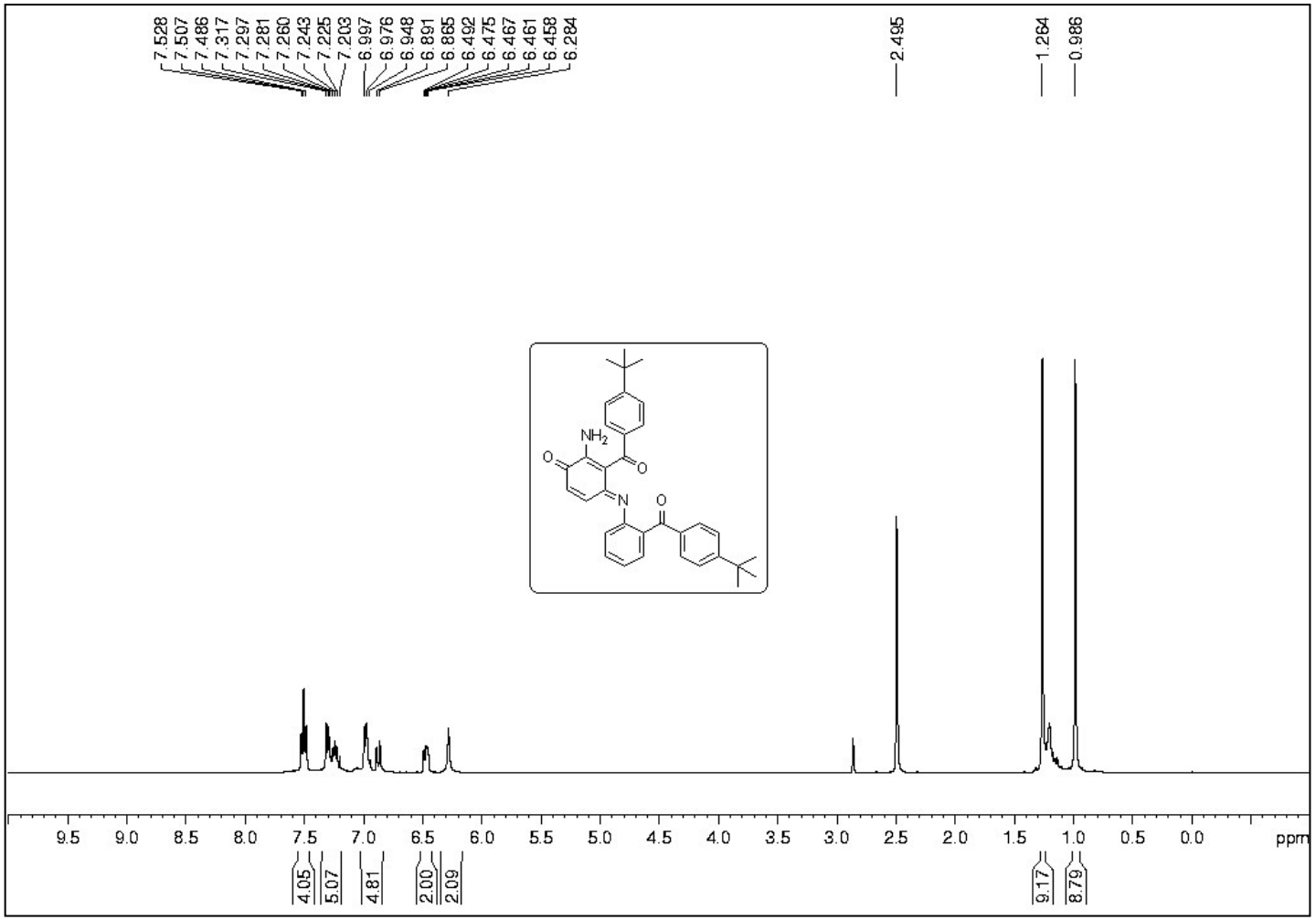
100 MHz ^{13}C NMR spectrum of **2e** in $CDCl_3$



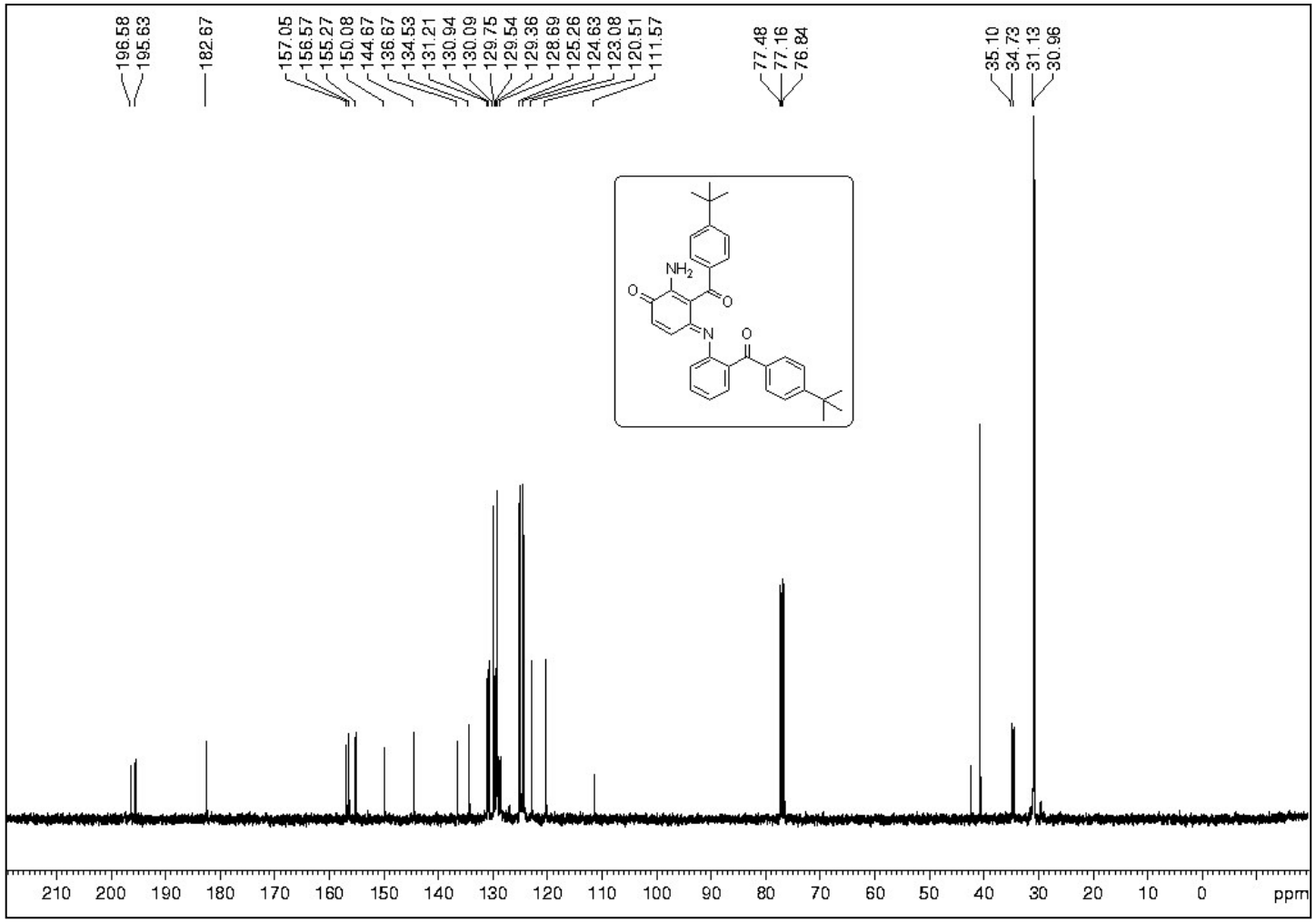
400 MHz ^{1}H NMR spectrum of **2f** in $CDCl_3$



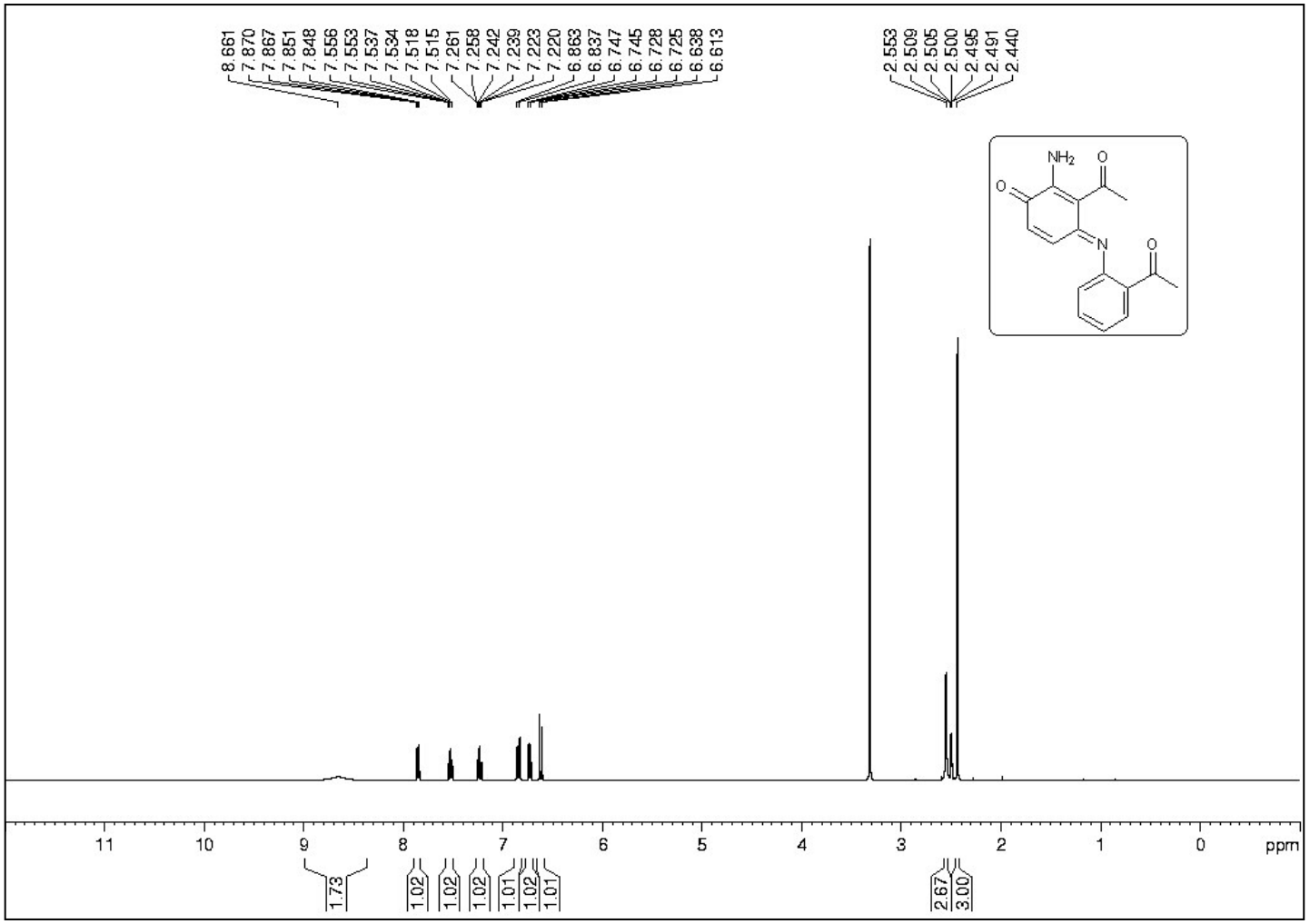
100 MHz ^{13}C NMR spectrum of **2f** in $CDCl_3$



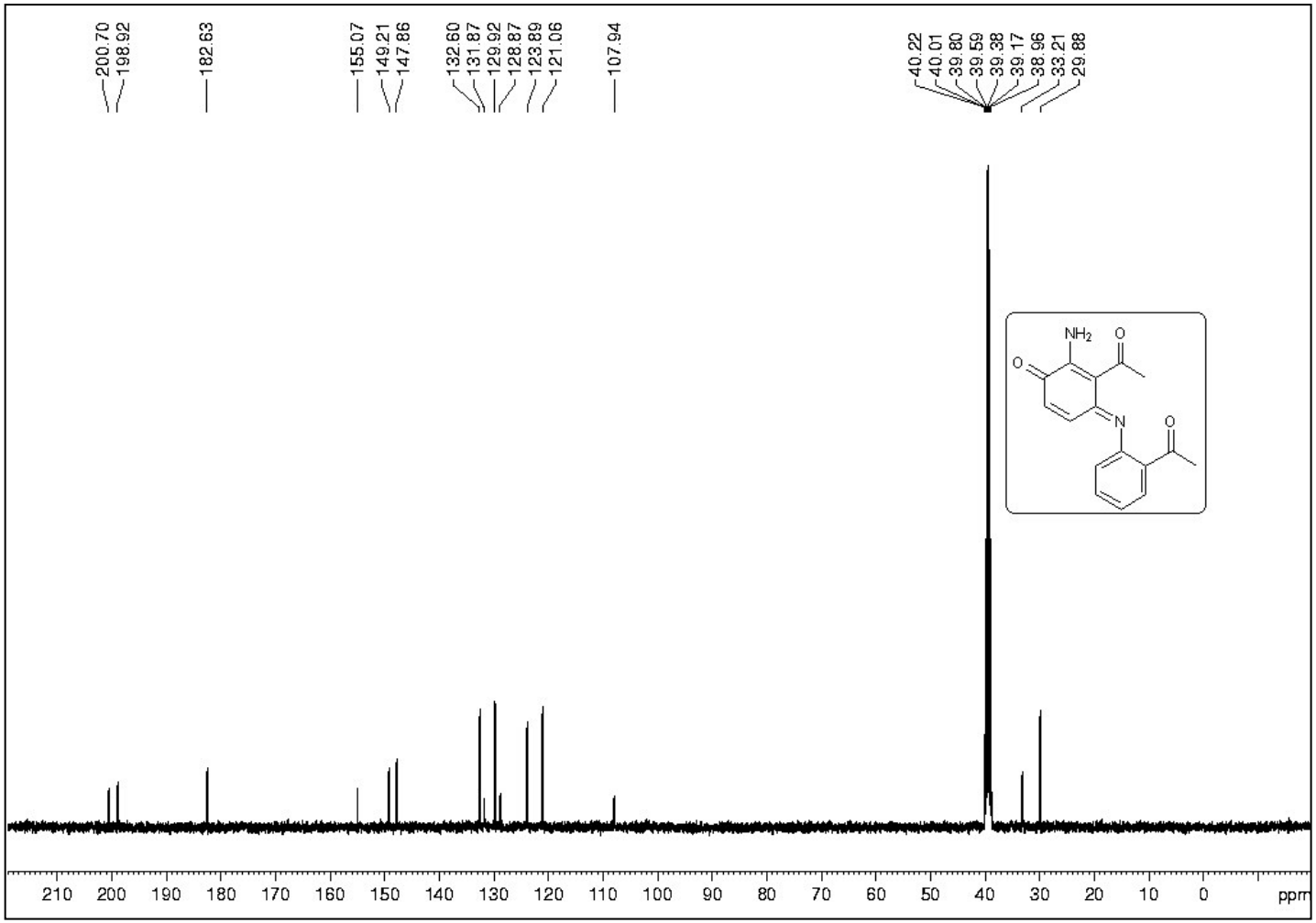
400 MHz ^{1}H NMR spectrum of **2g** in DMSO-d_6



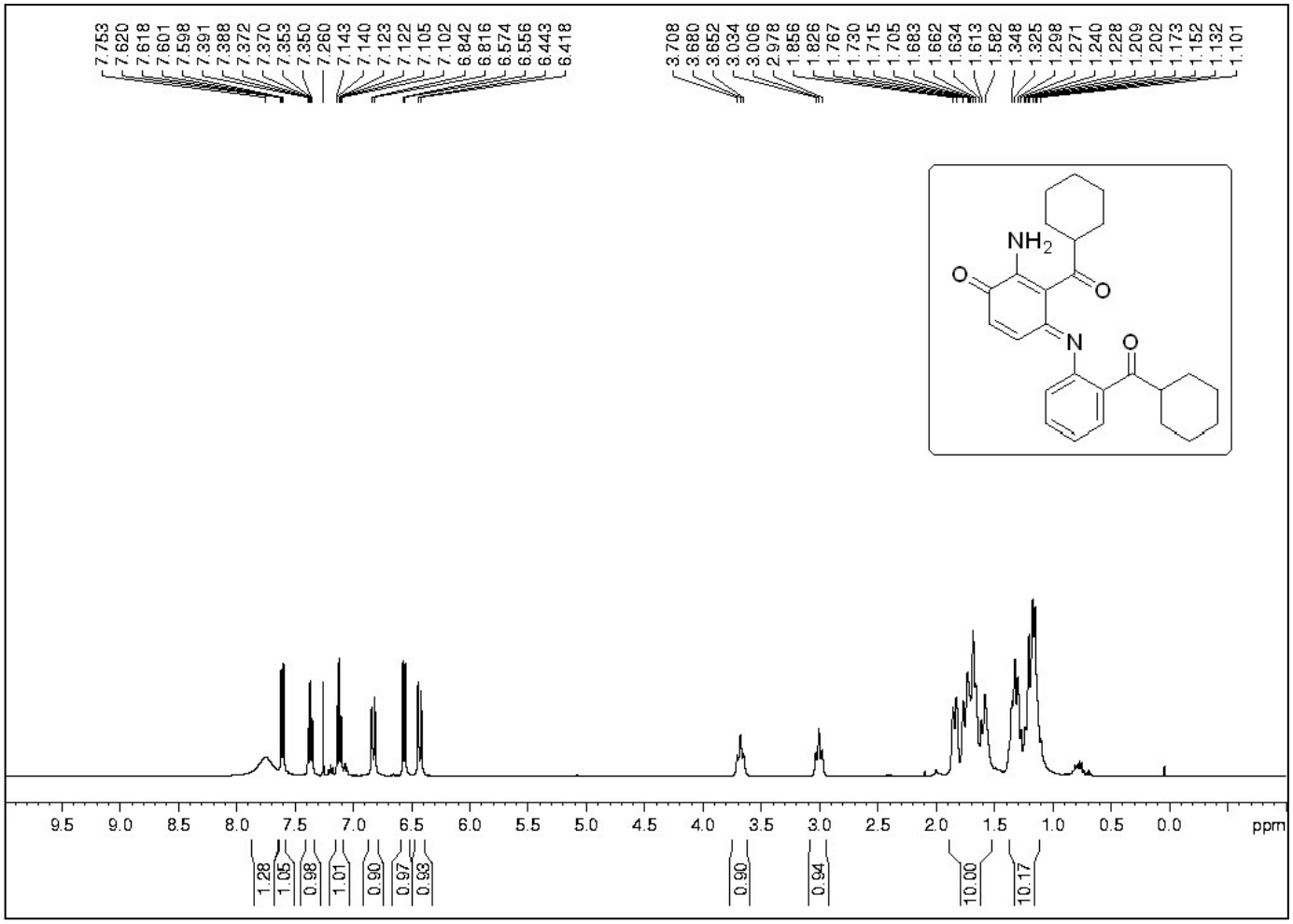
100 MHz ^{13}C NMR spectrum of **2g** in $CDCl_3$: DMSO-d_6



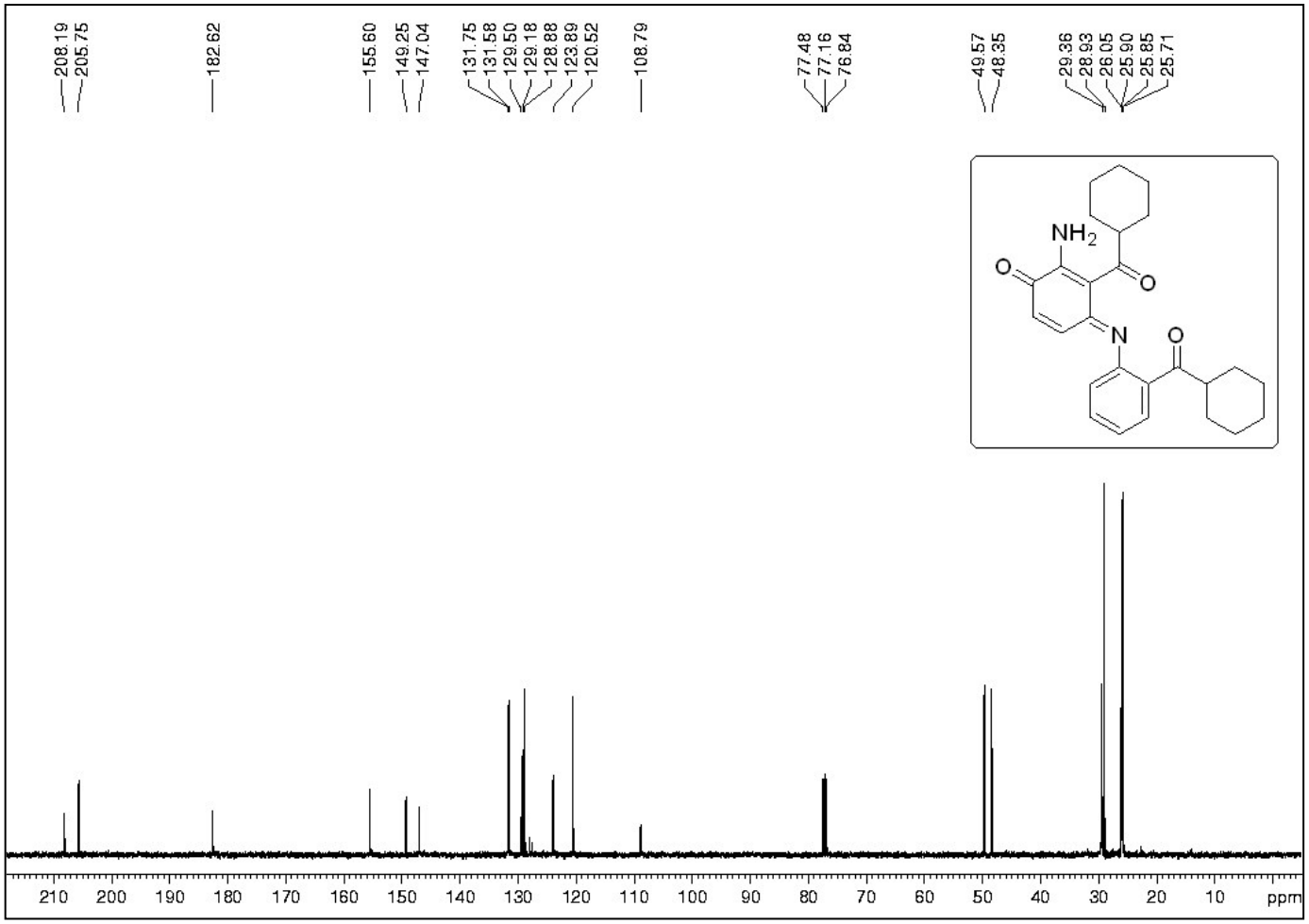
400 MHz ^{1}H NMR spectrum of **2h** in DMSO-d_6



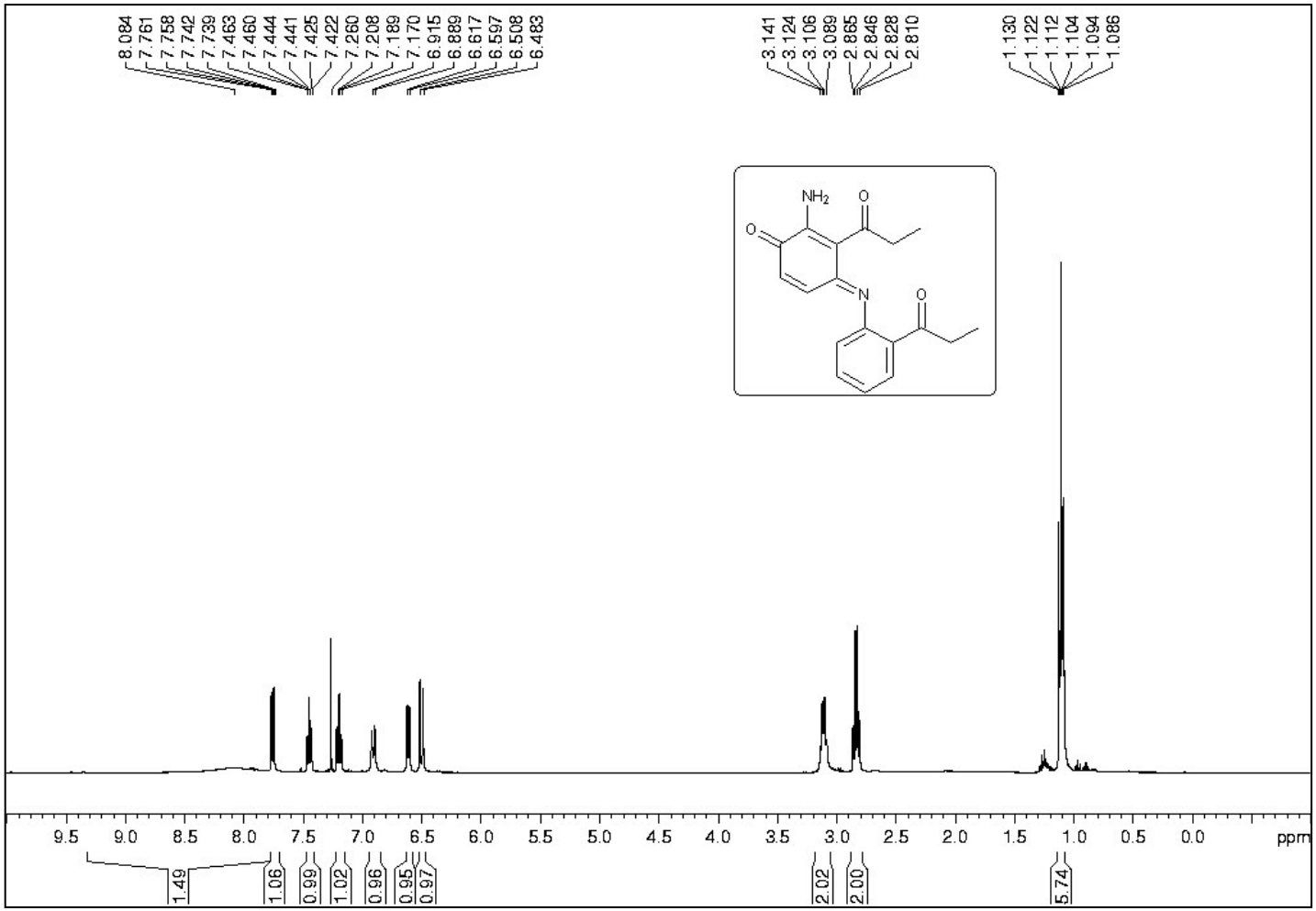
100 MHz ^{13}C NMR spectrum of **2h** in DMSO-d_6



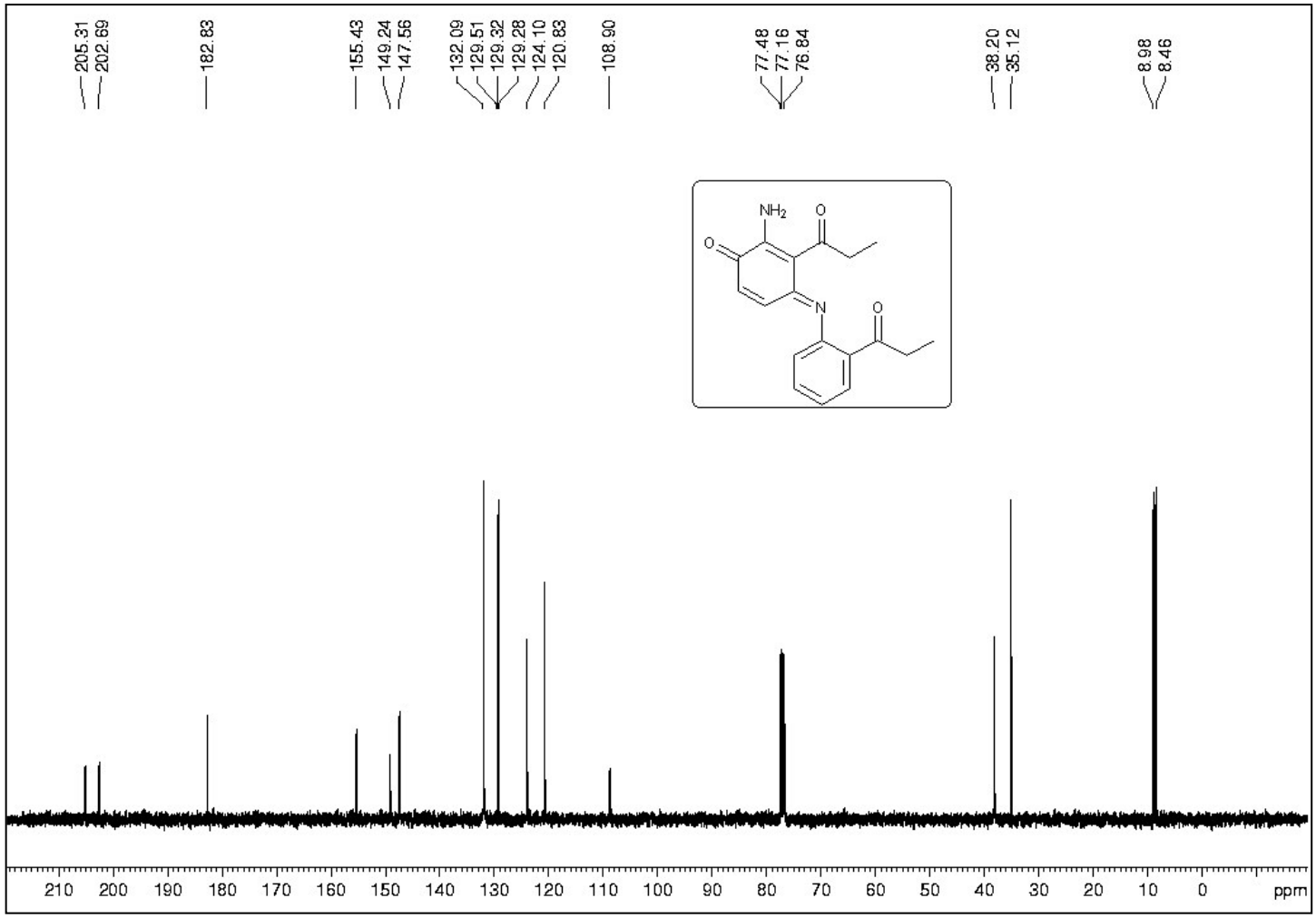
400 MHz ^{13}H NMR spectrum of **2i** in $CDCl_3$



100 MHz ^{13}C NMR spectrum of **2i** in $CDCl_3$



400 MHz ^{1}H NMR spectrum of **2j** in $CDCl_3$



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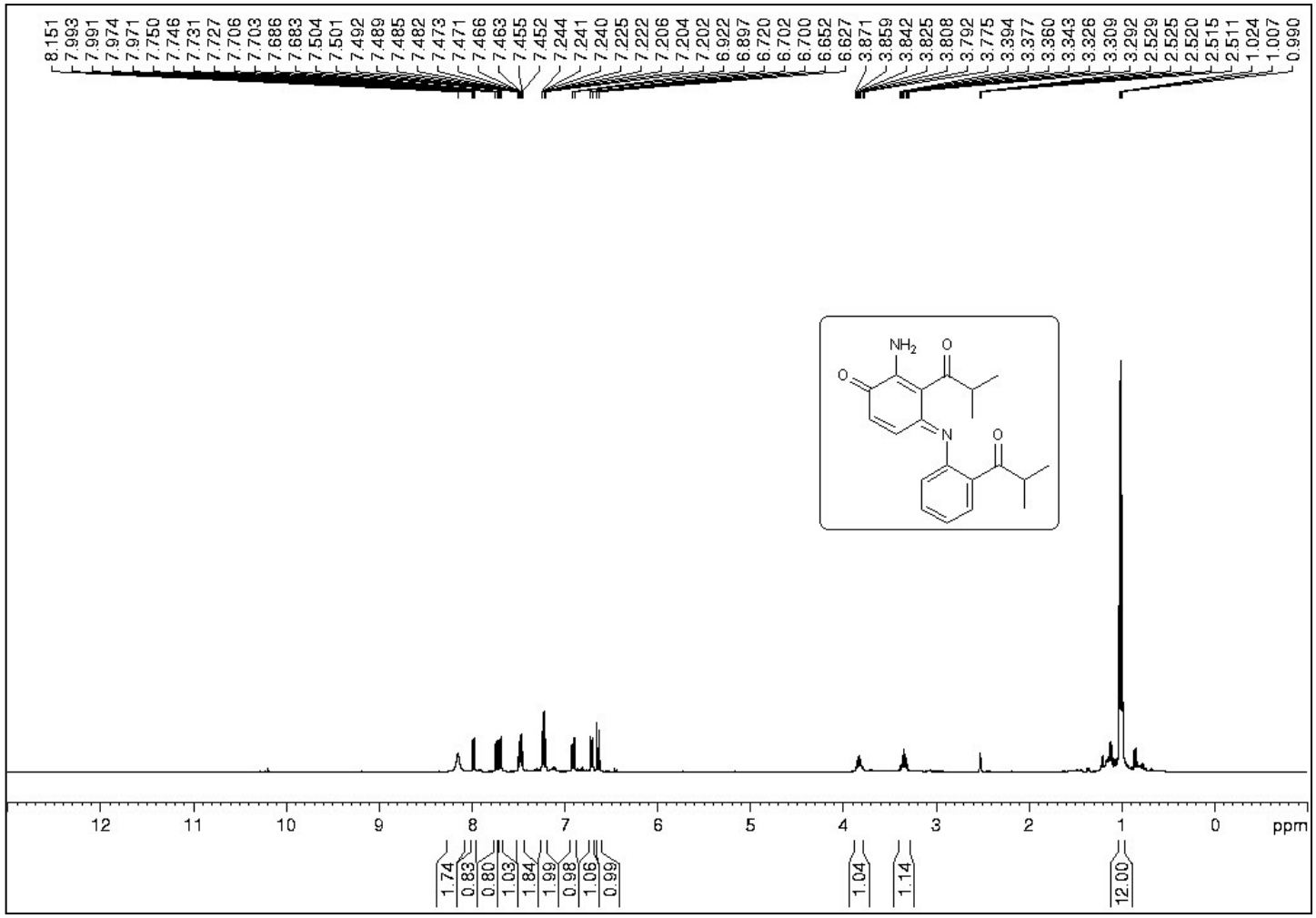
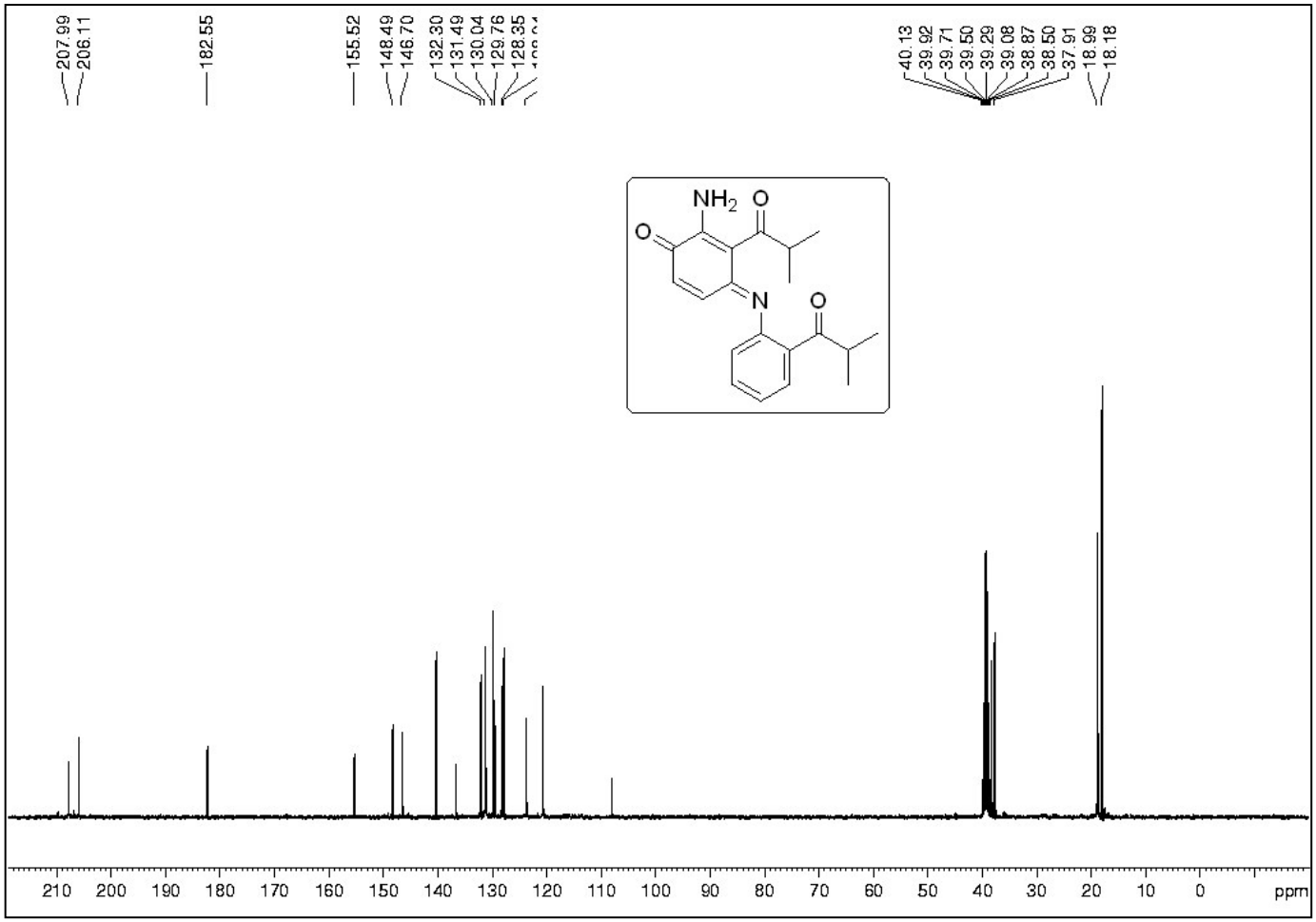
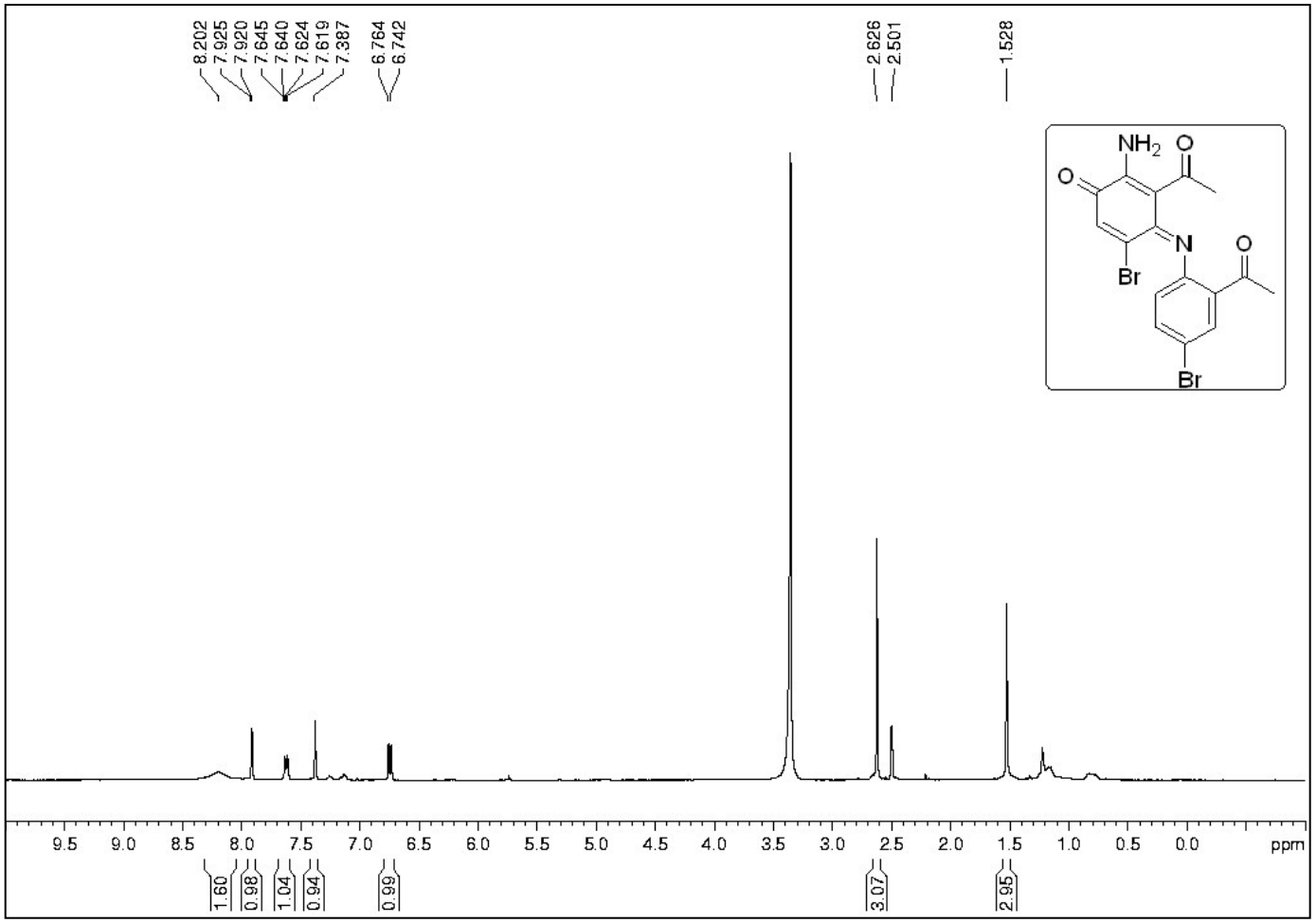


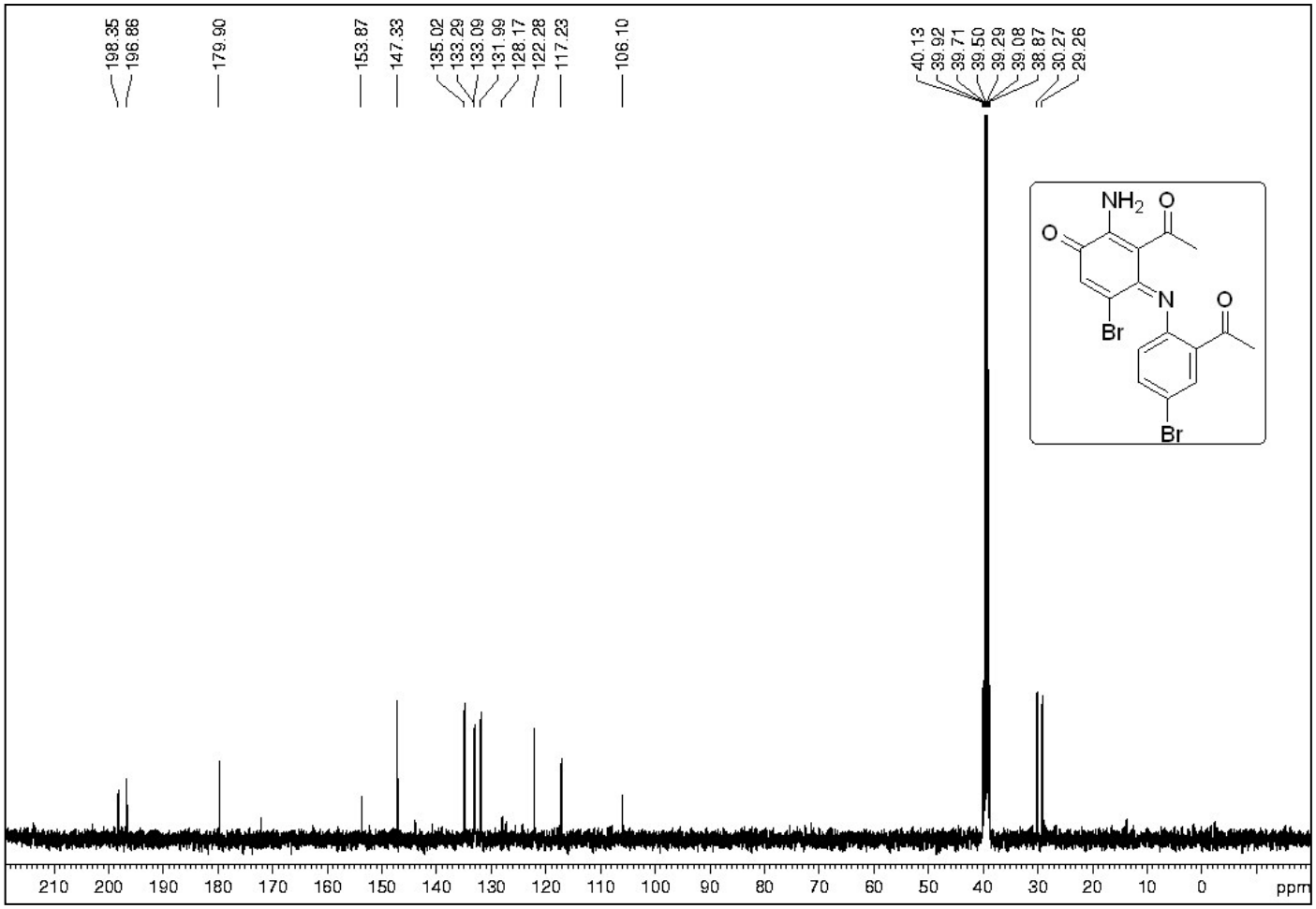
400 MHz ^{1}H NMR spectrum of **2k** in DMSO-d_6



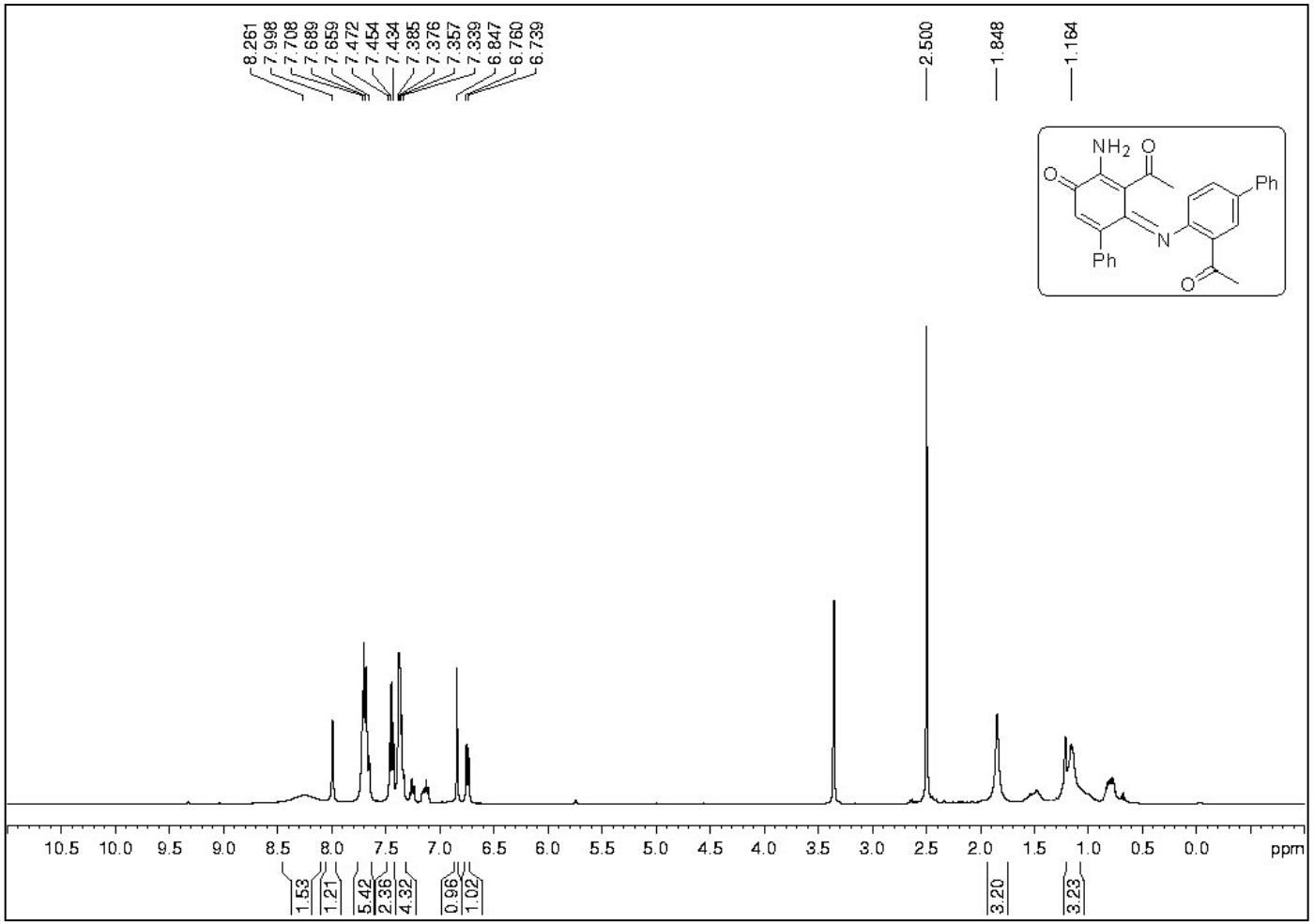
100 MHz ^{13}C NMR spectrum of **2k** in DMSO-d_6



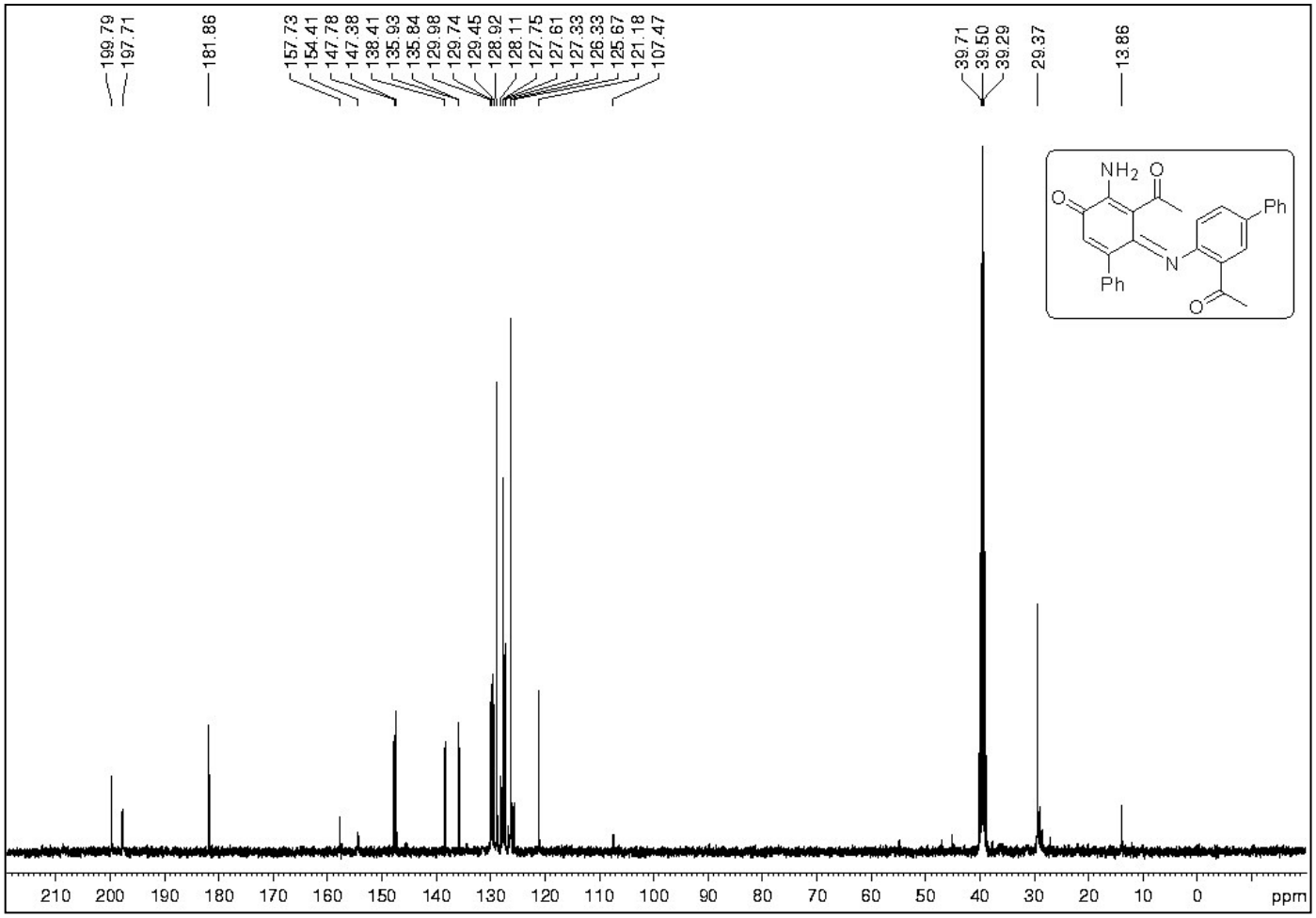
400 MHz ^{13}C NMR spectrum of **2l** in $CDCl_3$



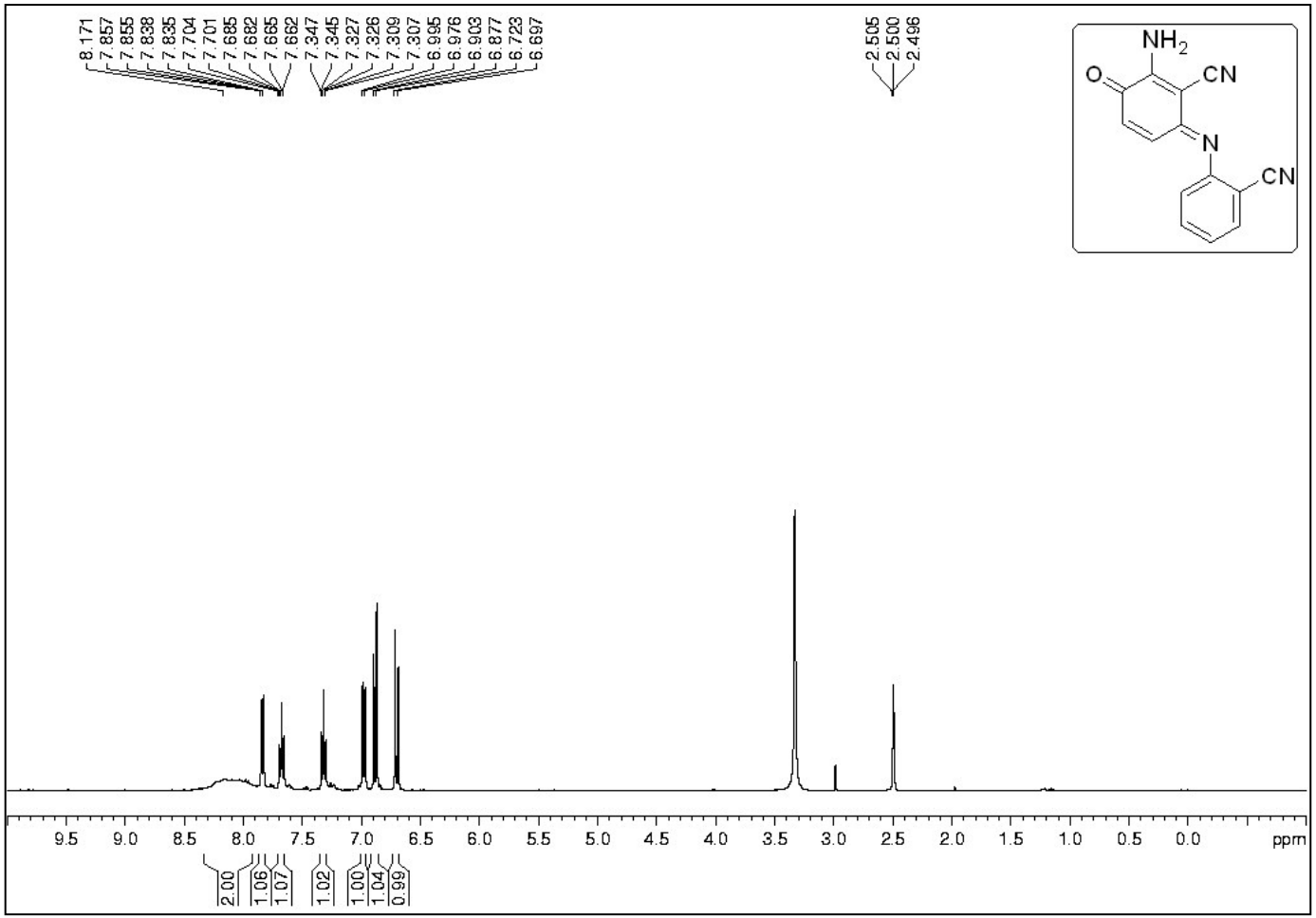
100 MHz ^{13}C NMR spectrum of **2l** in DMSO-d_6



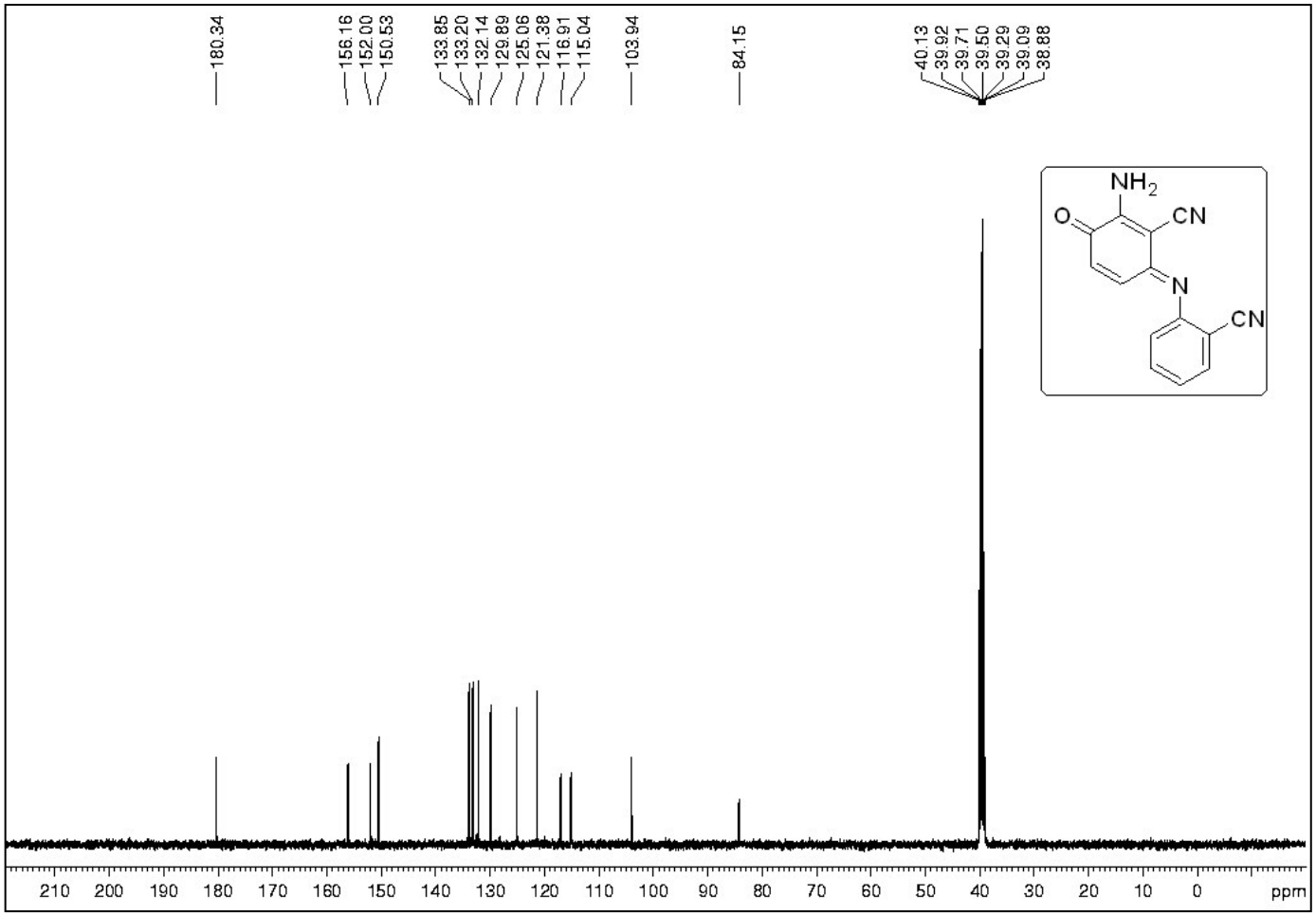
400 MHz ^{1}H NMR spectrum of **2m** in DMSO-d_6



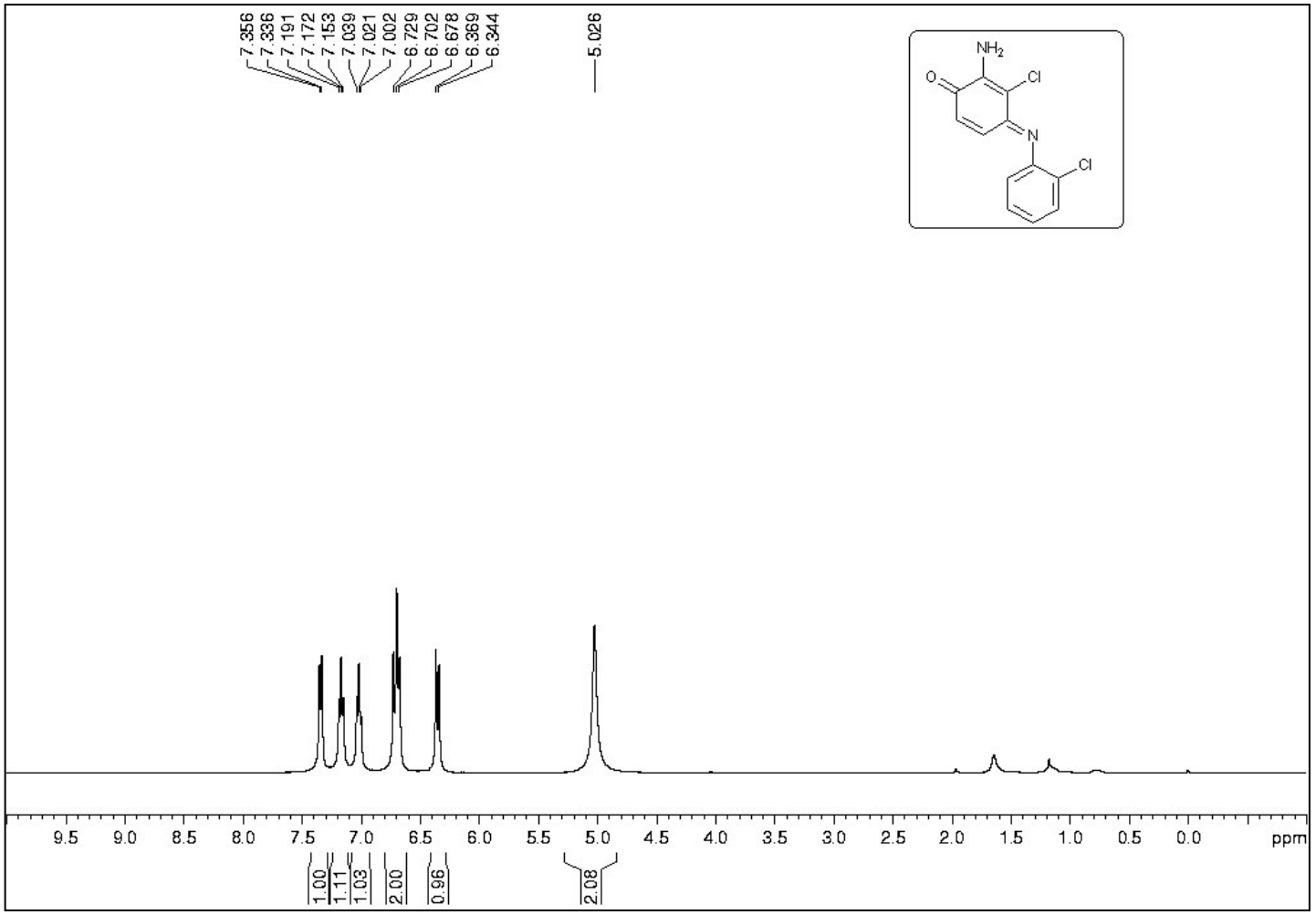
100 MHz ^{13}C NMR spectrum of **2m** in DMSO-d_6



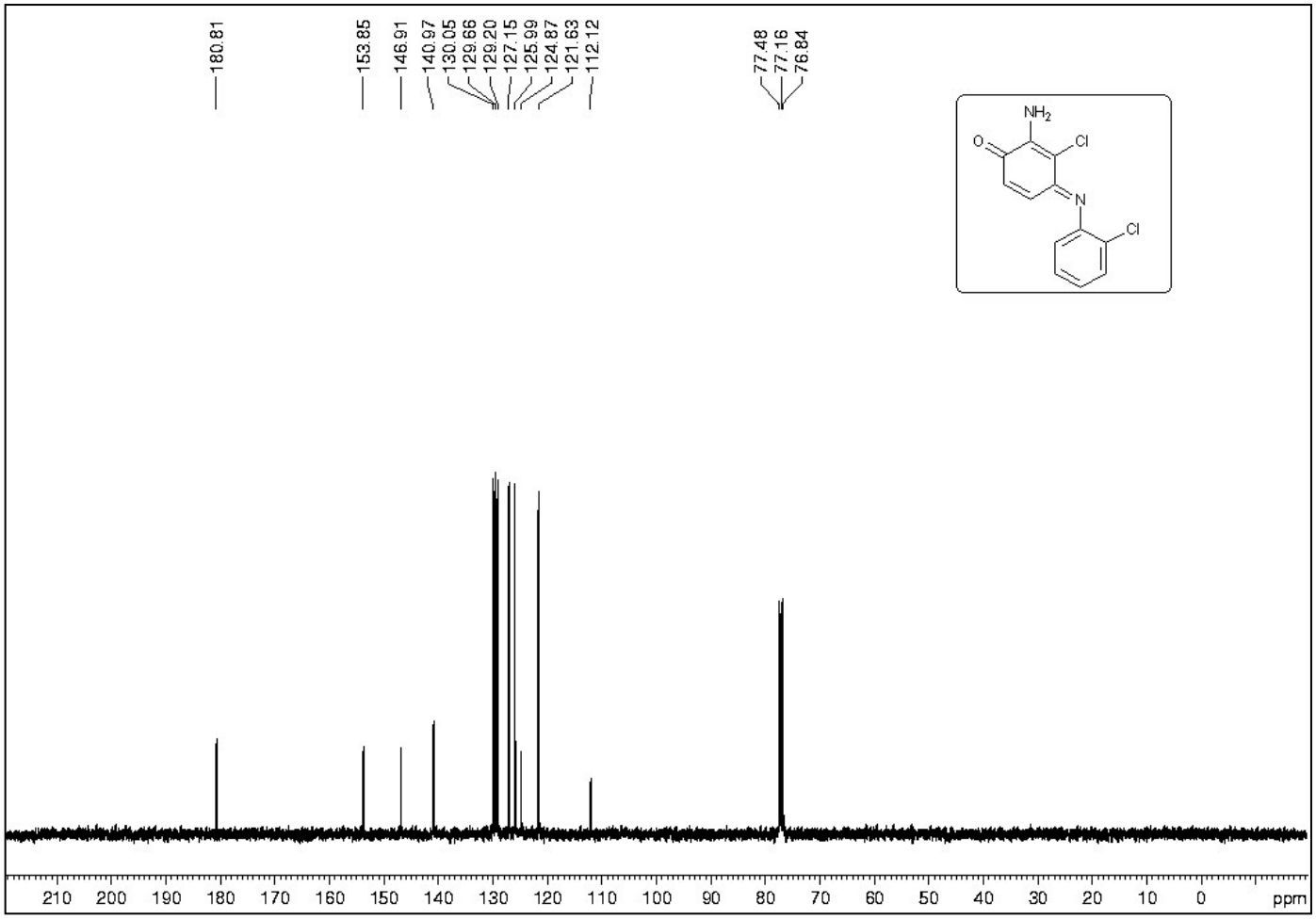
400 MHz ^{1}H NMR spectrum of **4a** in DMSO-d_6



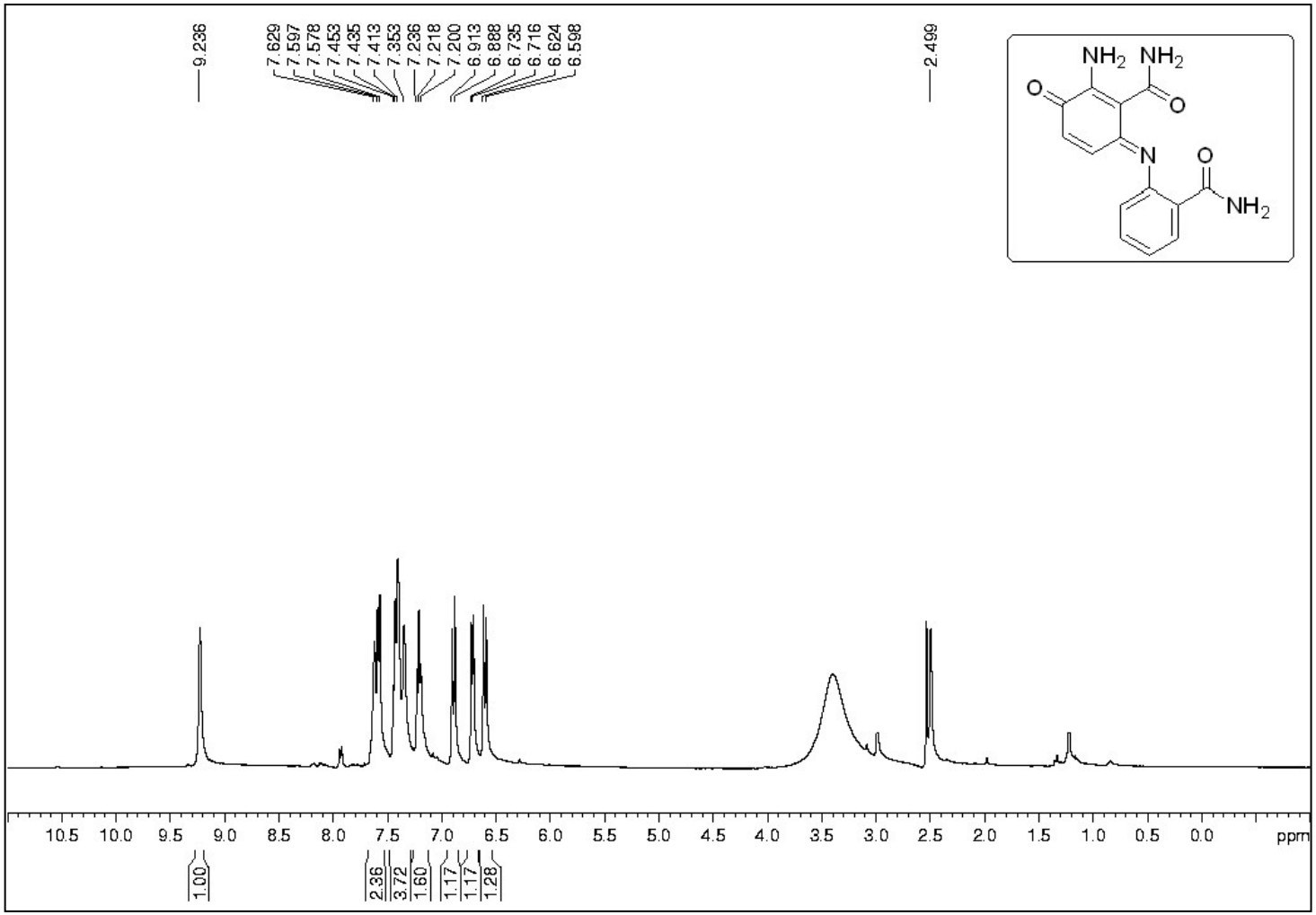
100 MHz ^{13}C NMR spectrum of **4a** in DMSO-d_6



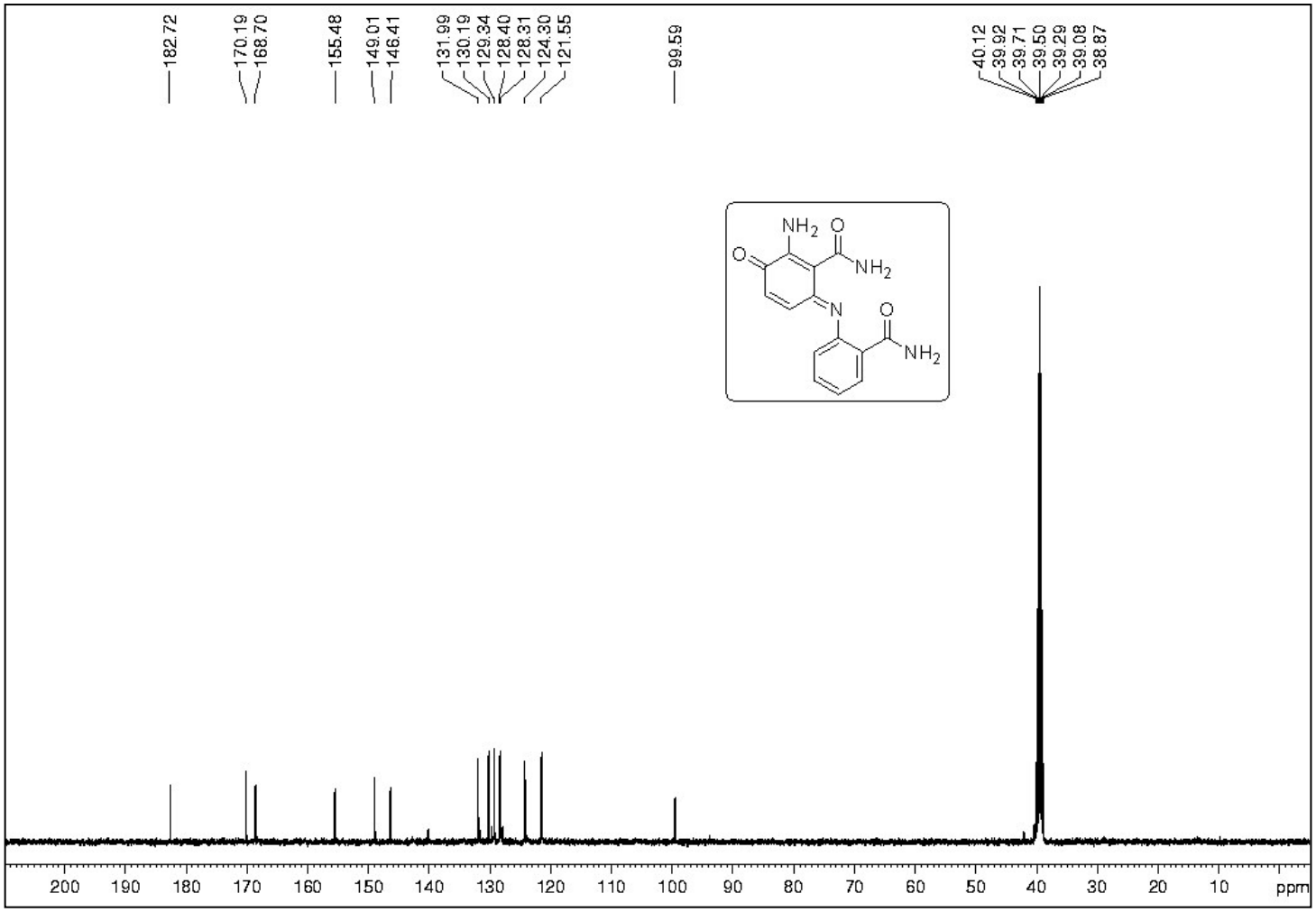
400 MHz ^{1}H NMR spectrum of **4b** in $CDCl_3$



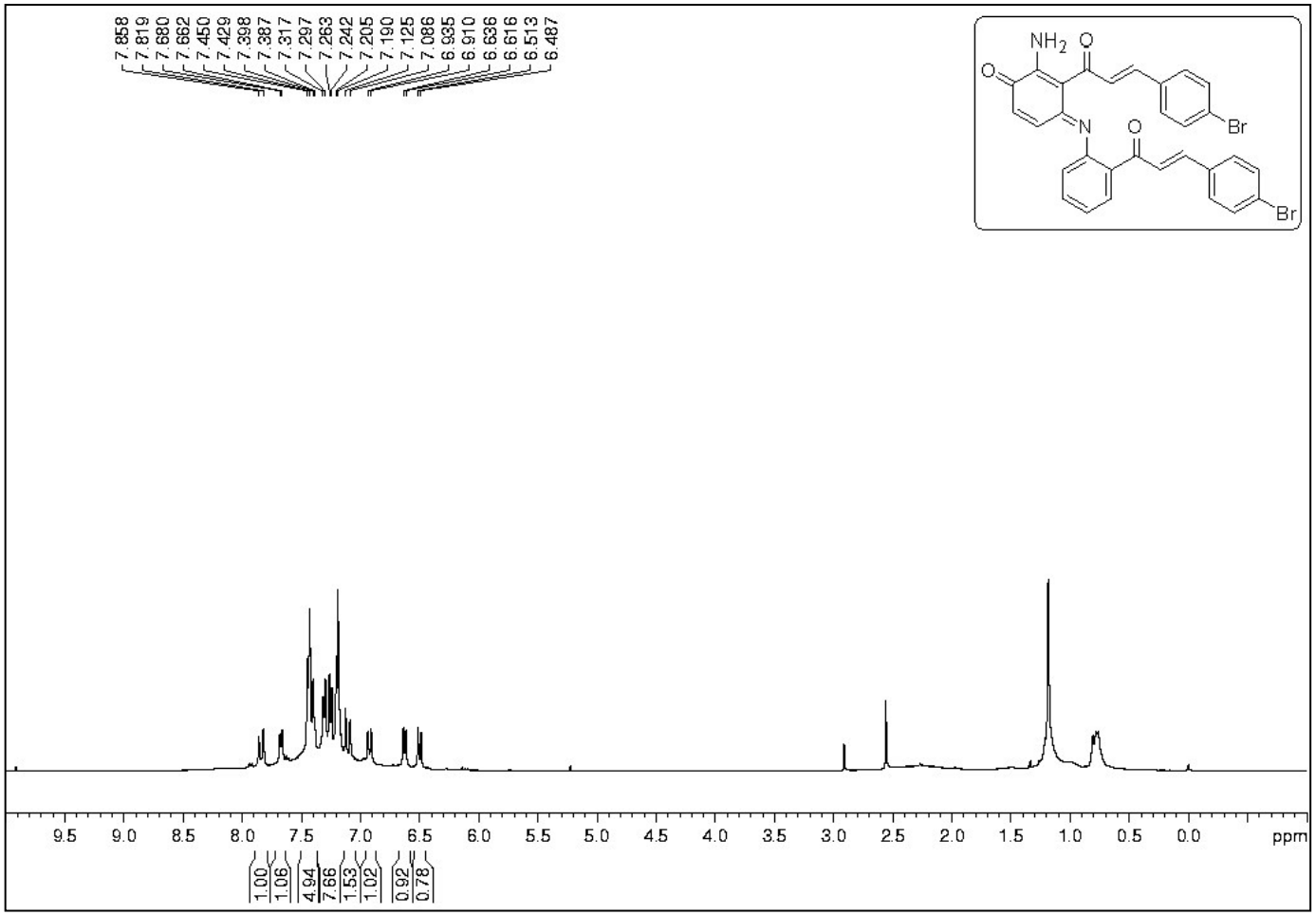
100 MHz ^{13}C NMR spectrum of **4b** in $CDCl_3$



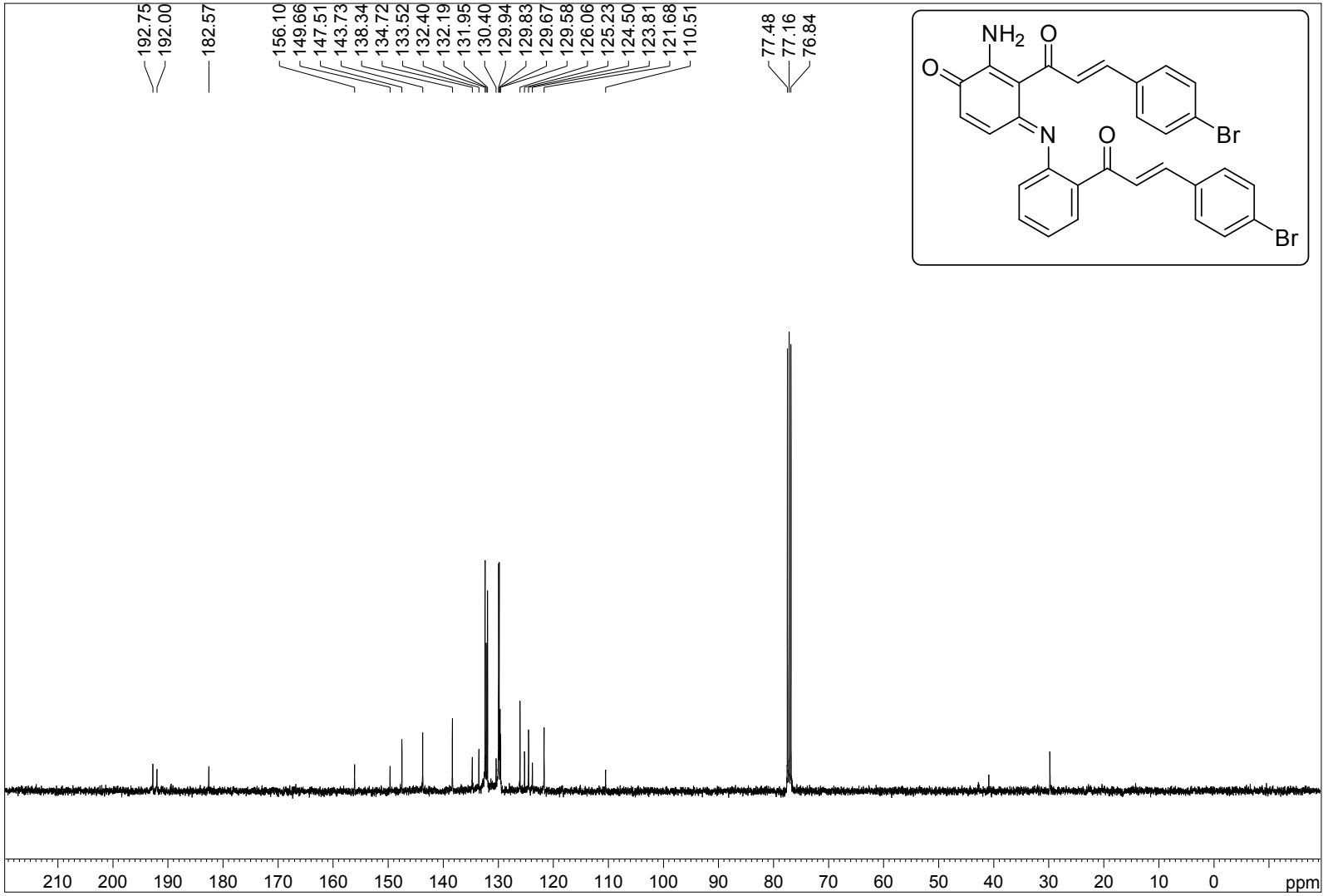
400 MHz ^{1}H NMR spectrum of **4c** in DMSO-d_6



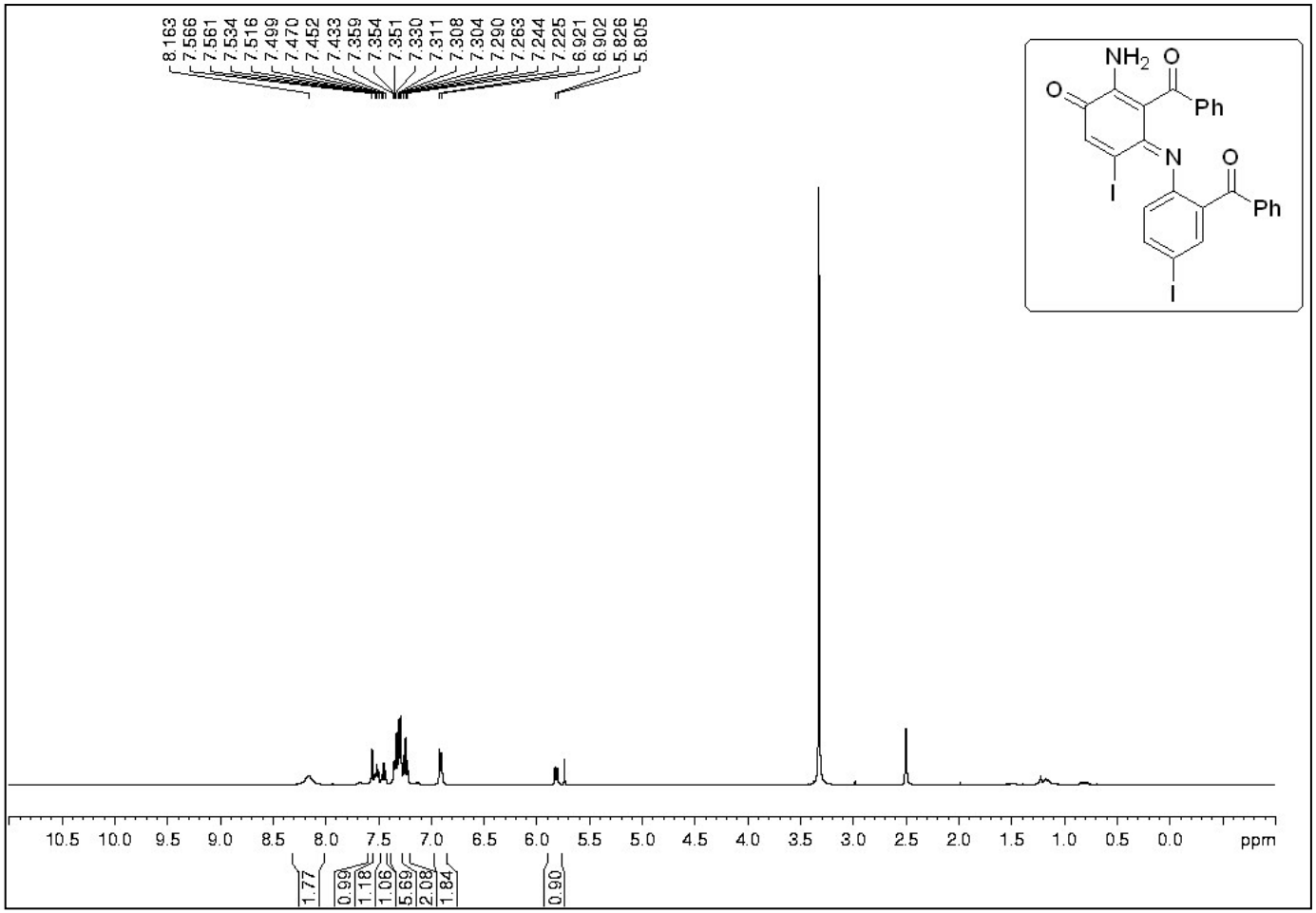
100 MHz ^{13}CNMR spectrum of **4c** in DMSO-d_6



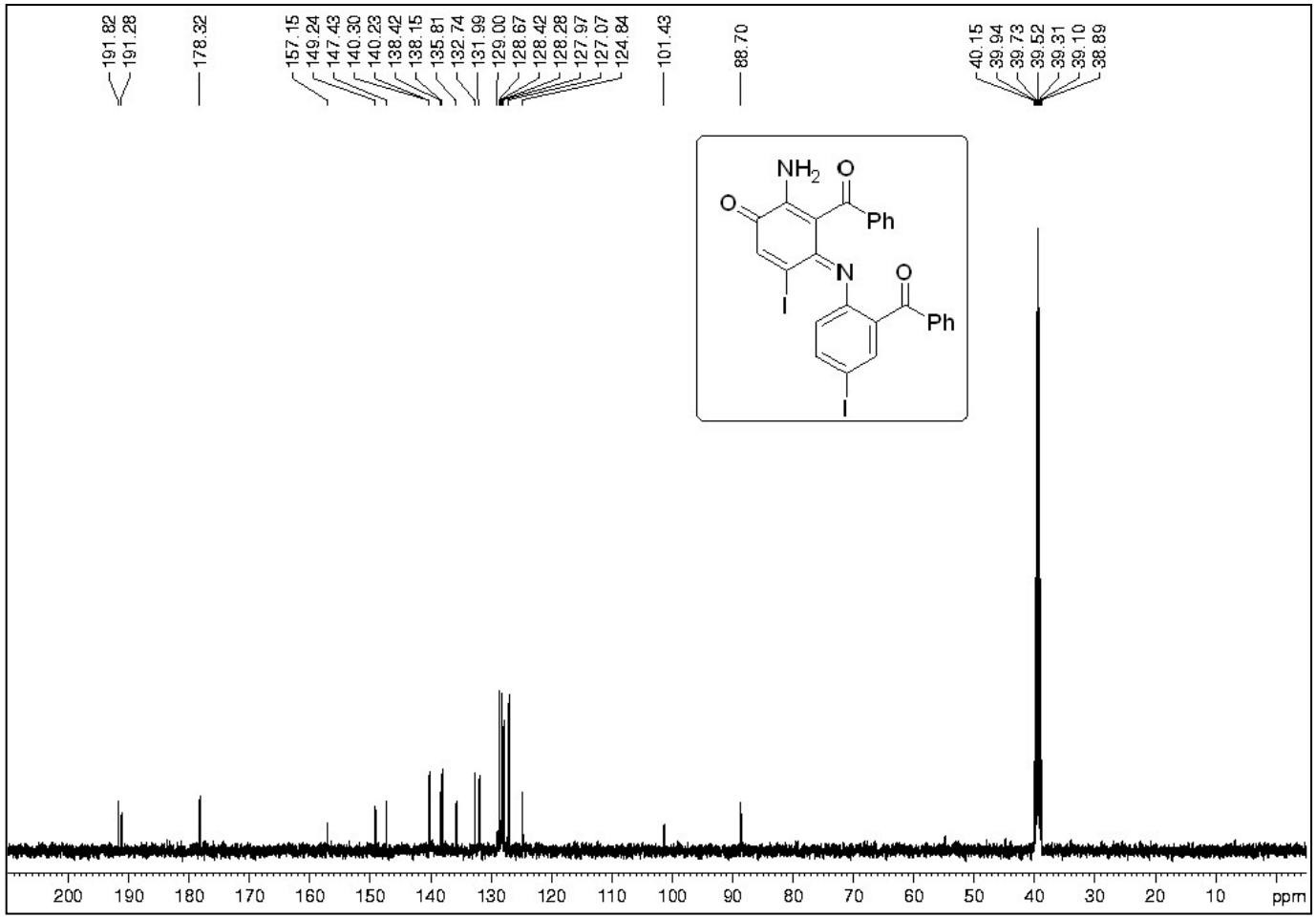
100 MHz ^{1}H NMR spectrum of **4d** in $CDCl_3$



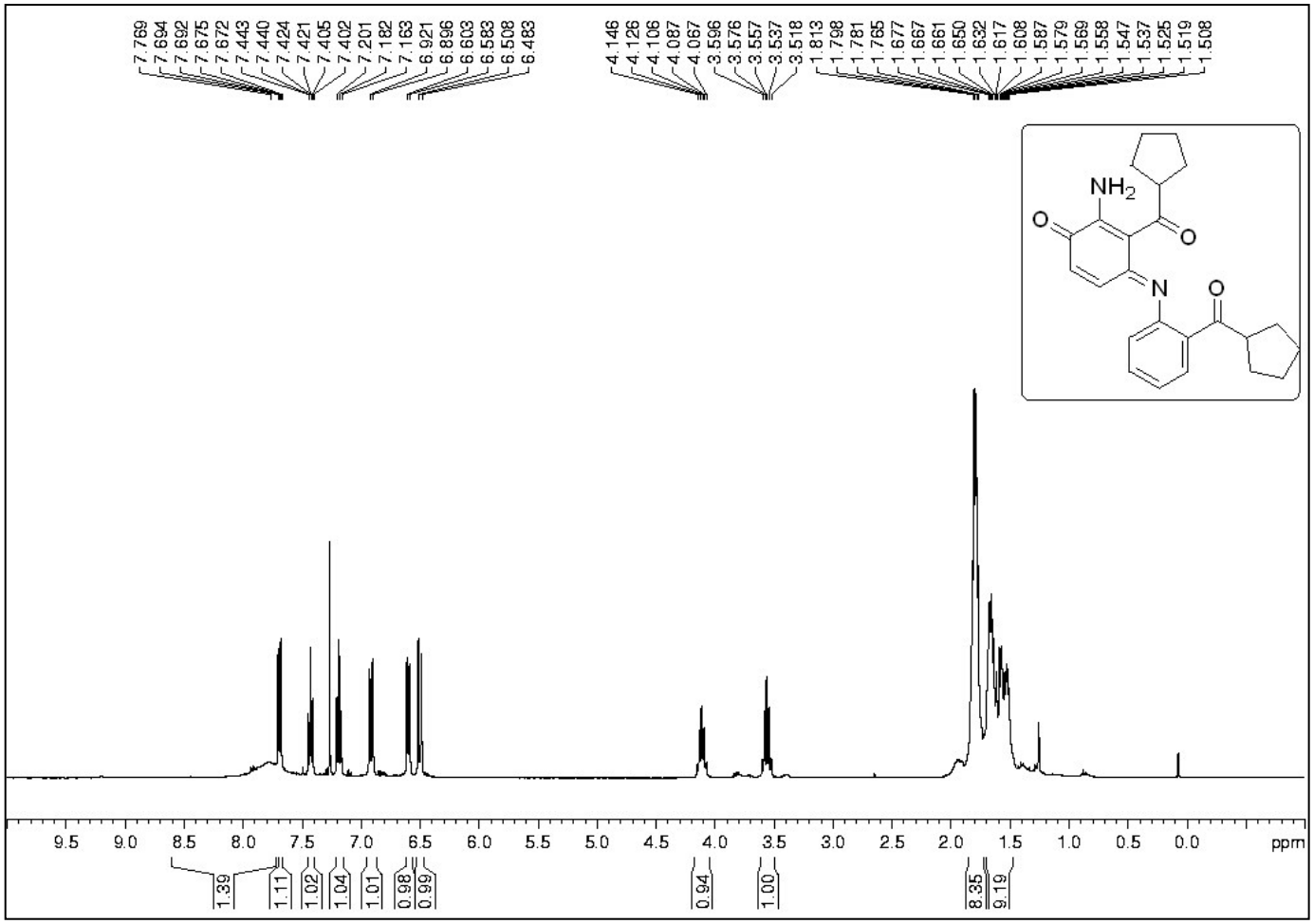
100 MHz ^{13}C NMR spectrum of **4d** in $CDCl_3$



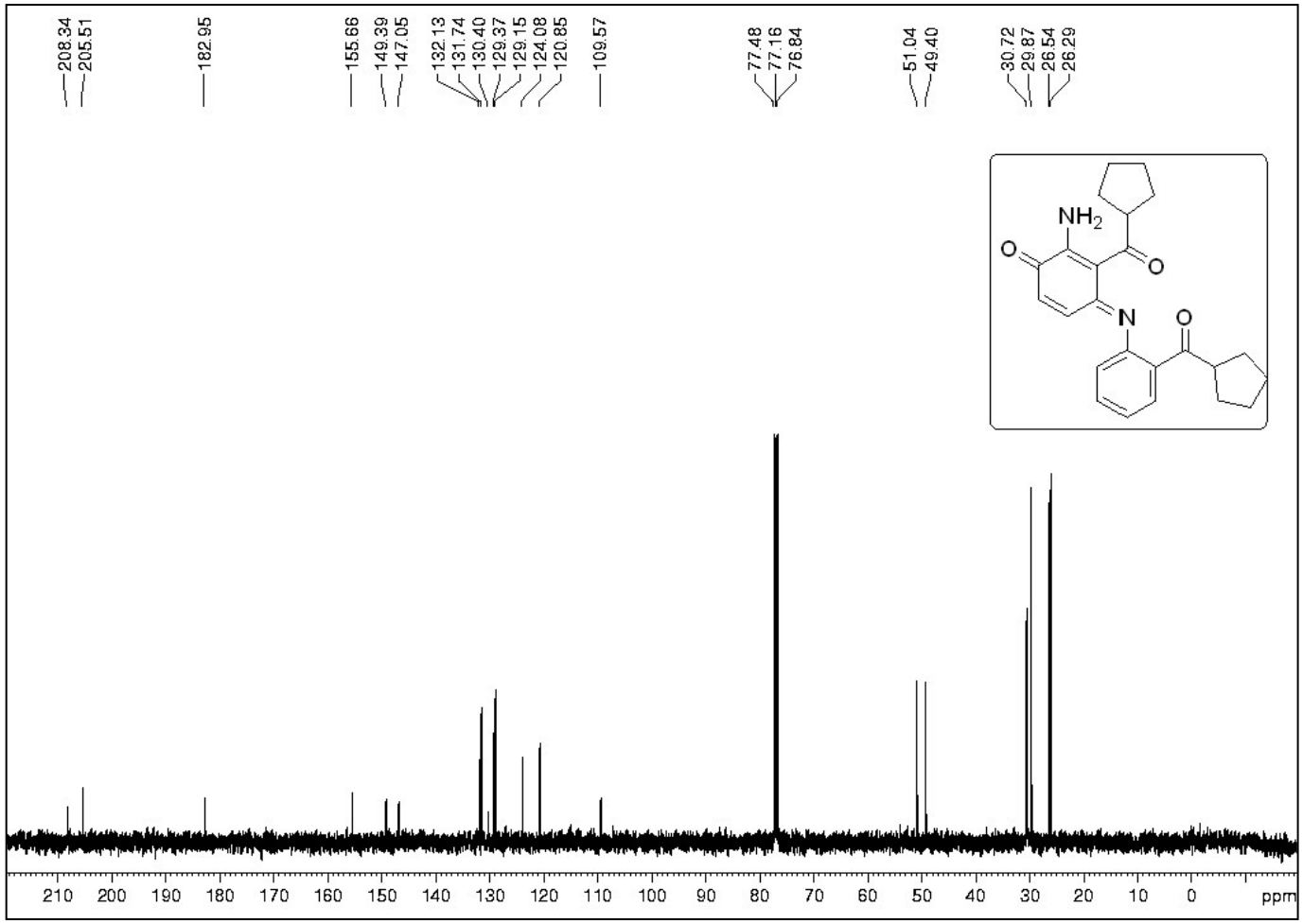
400 MHz ^{1}H NMR spectrum of **6a** in DMSO-d_6



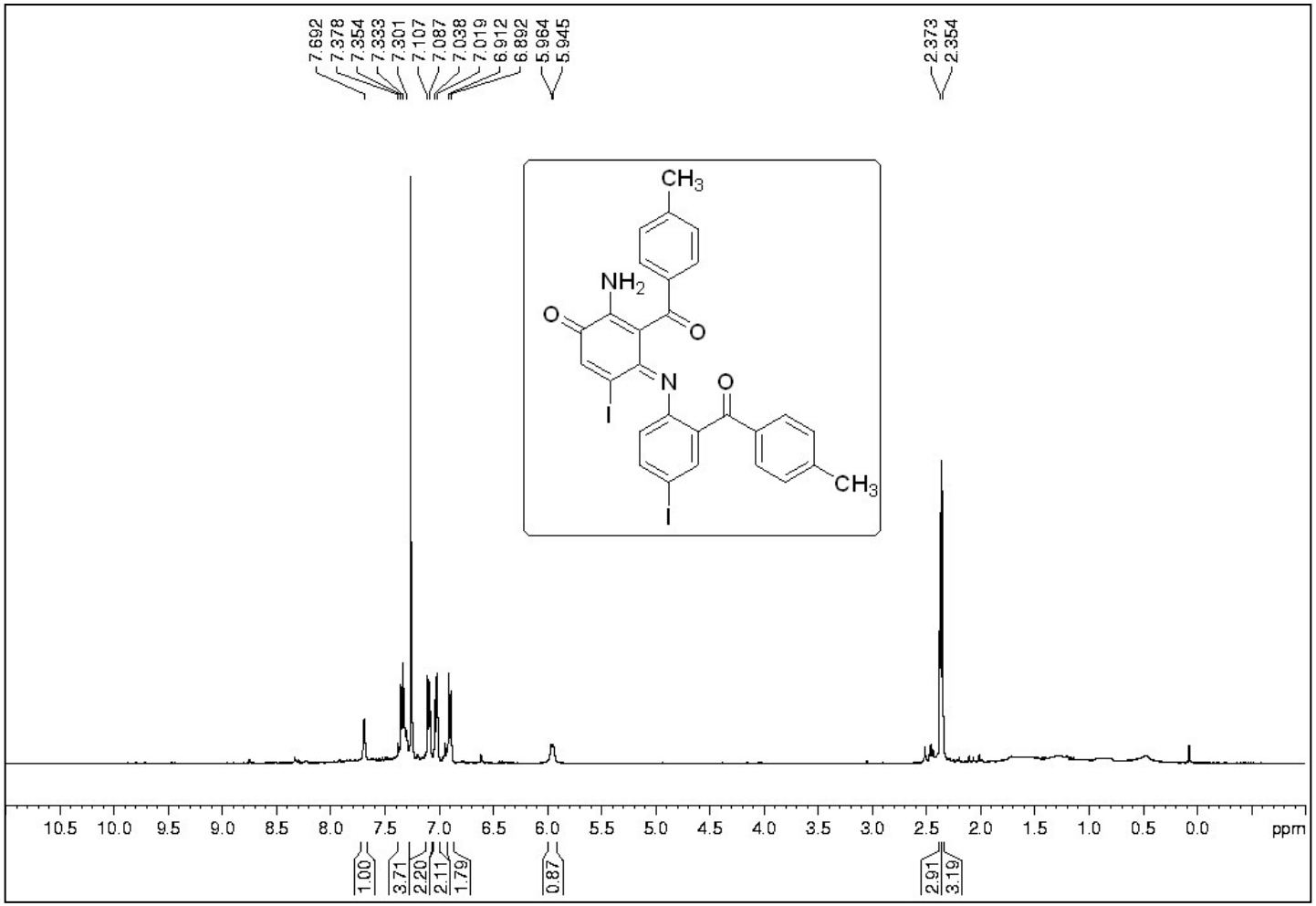
100 MHz ^{13}C NMR spectrum of **6a** in DMSO-d_6



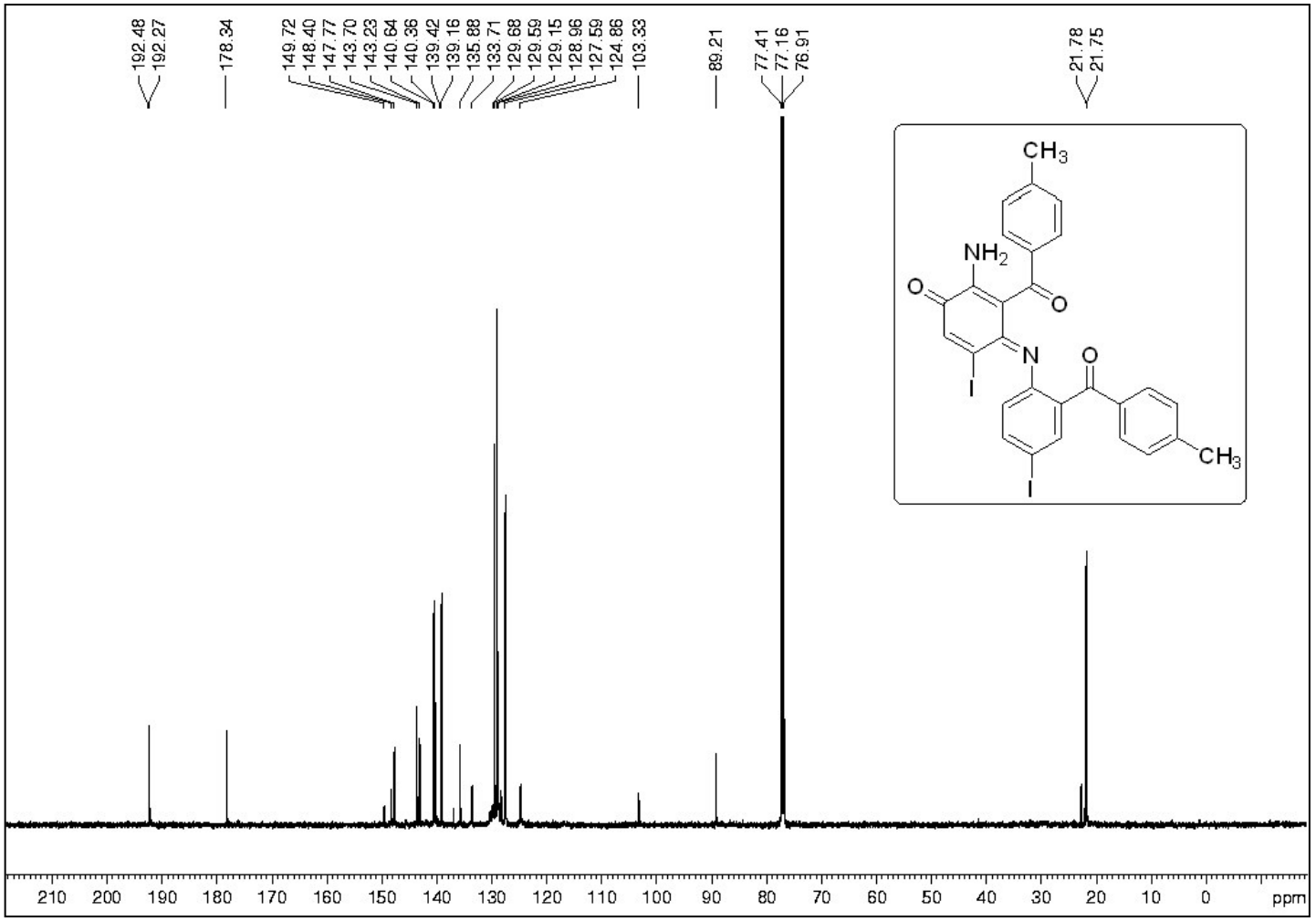
400 MHz ^{1}H NMR spectrum of **6b** in $CDCl_3$



100 MHz ^{13}C NMR spectrum of **6b** in $CDCl_3$



400 MHz ^{1}H NMR spectrum of **8a** in $CDCl_3$



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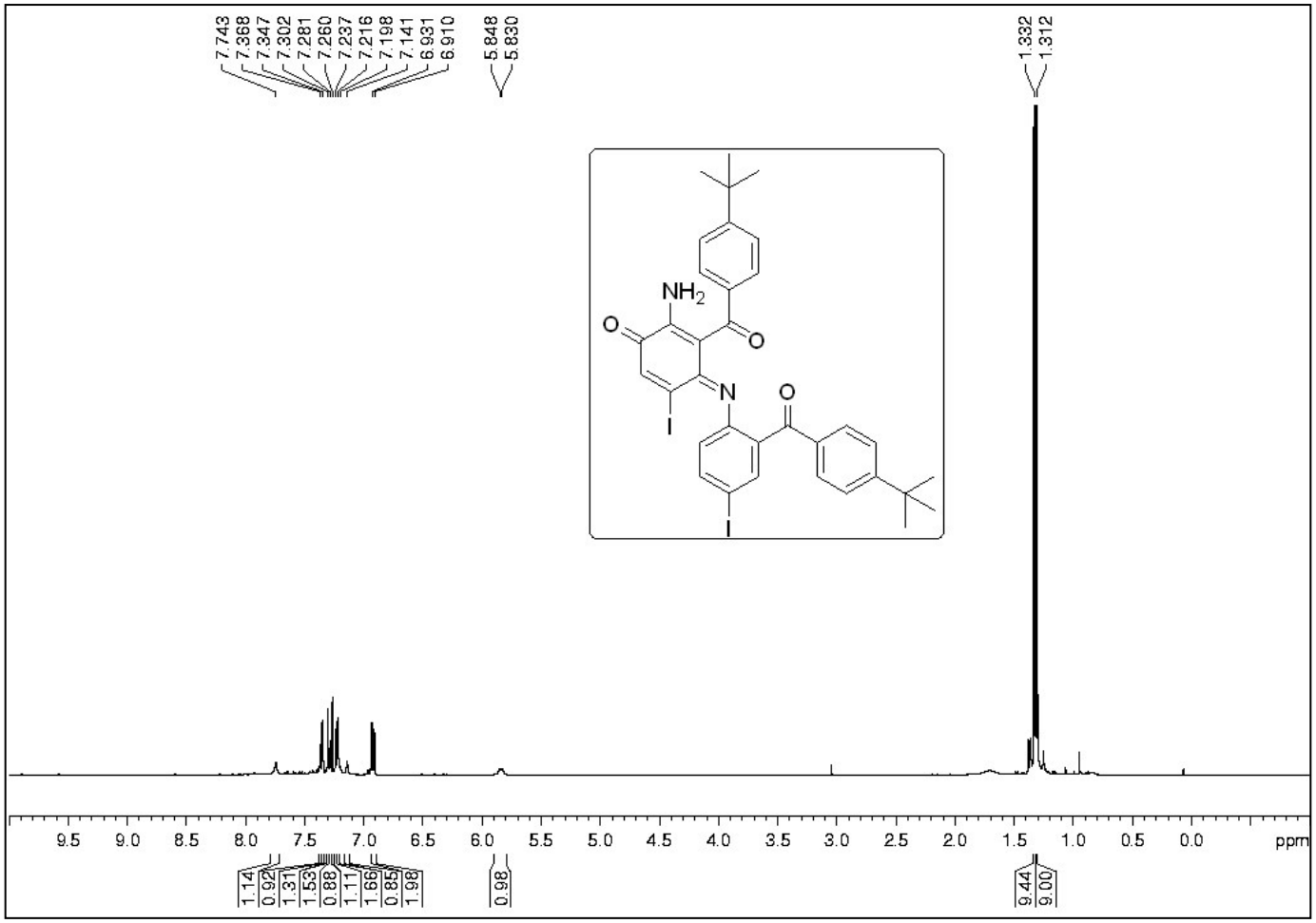
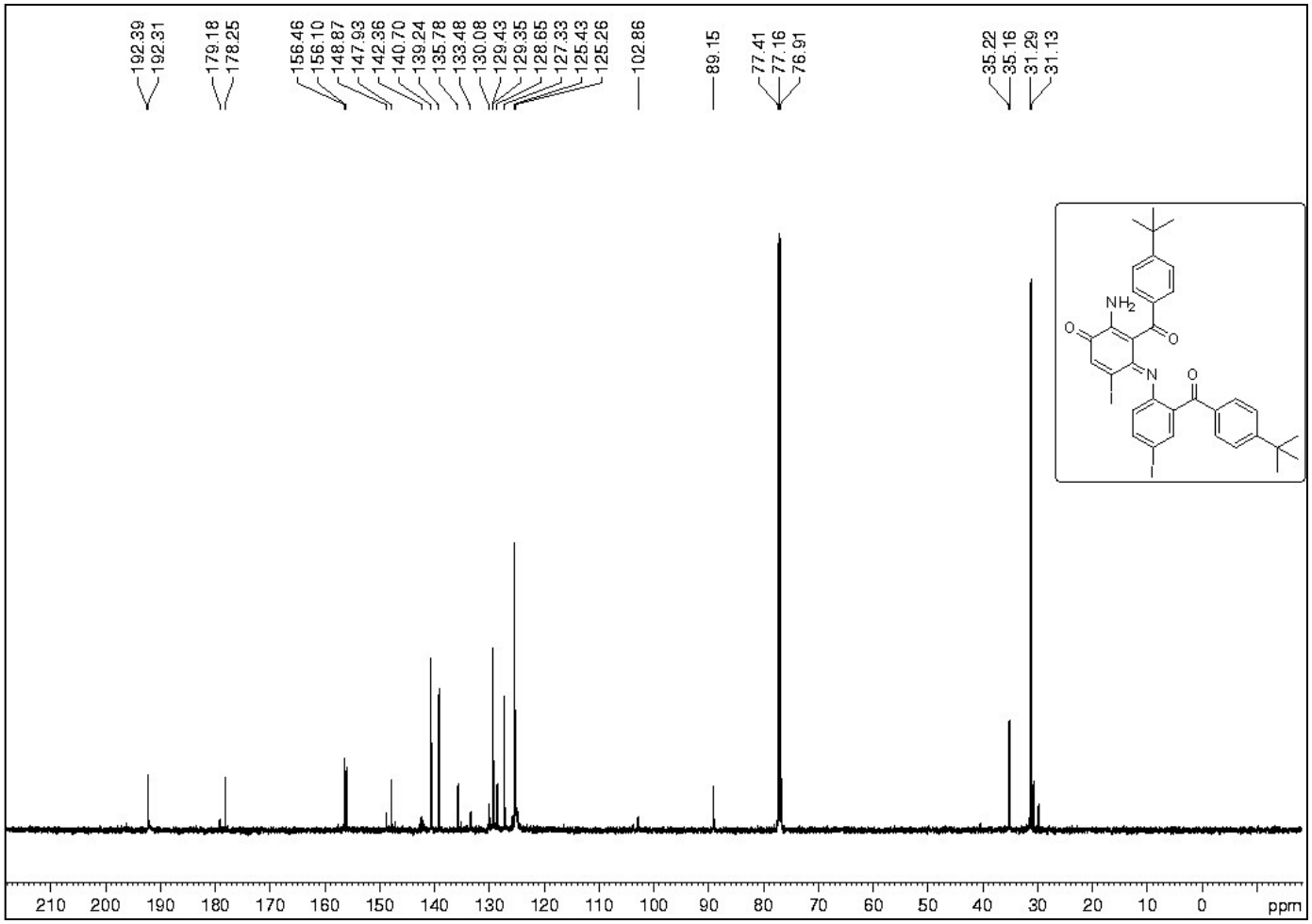
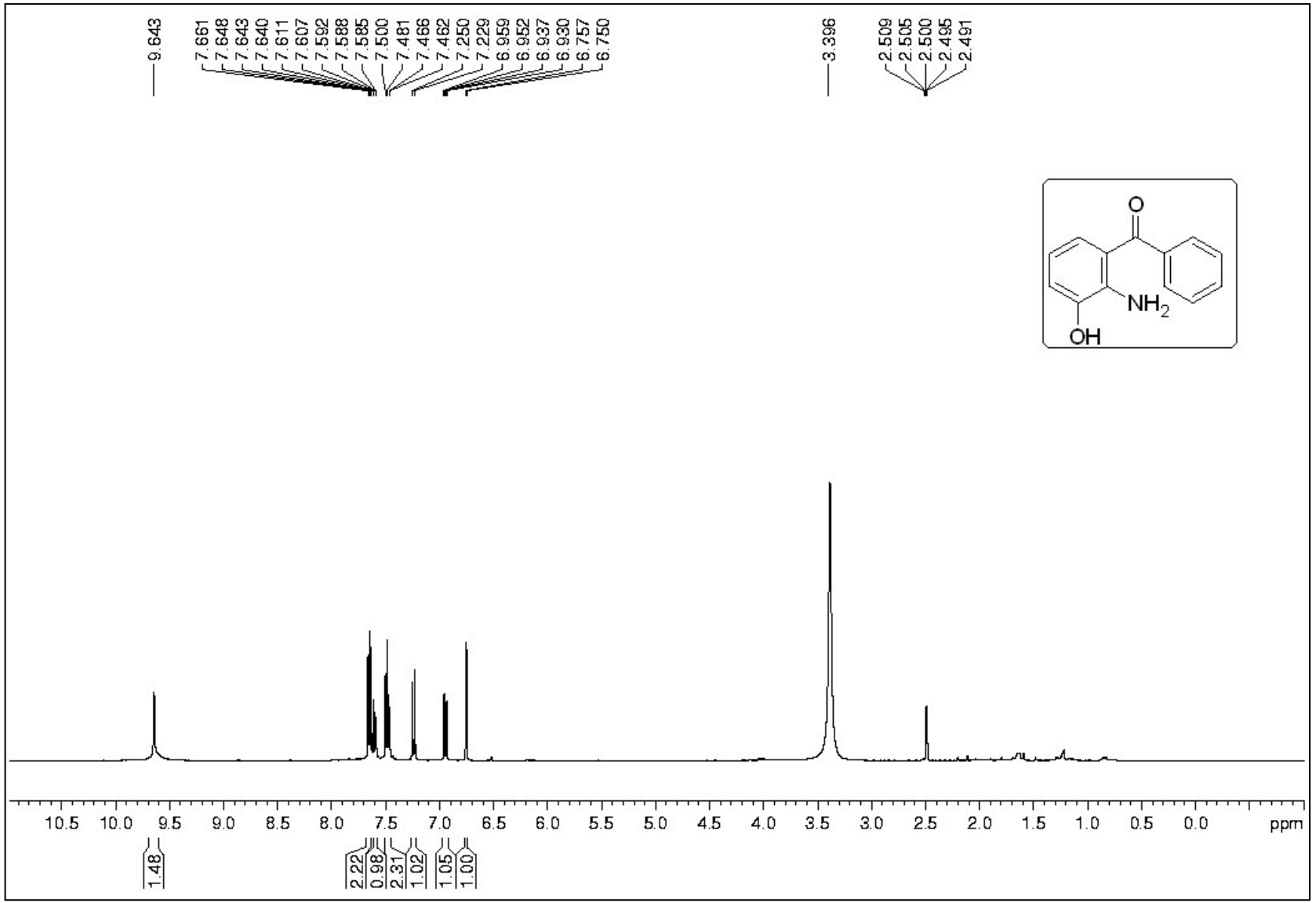


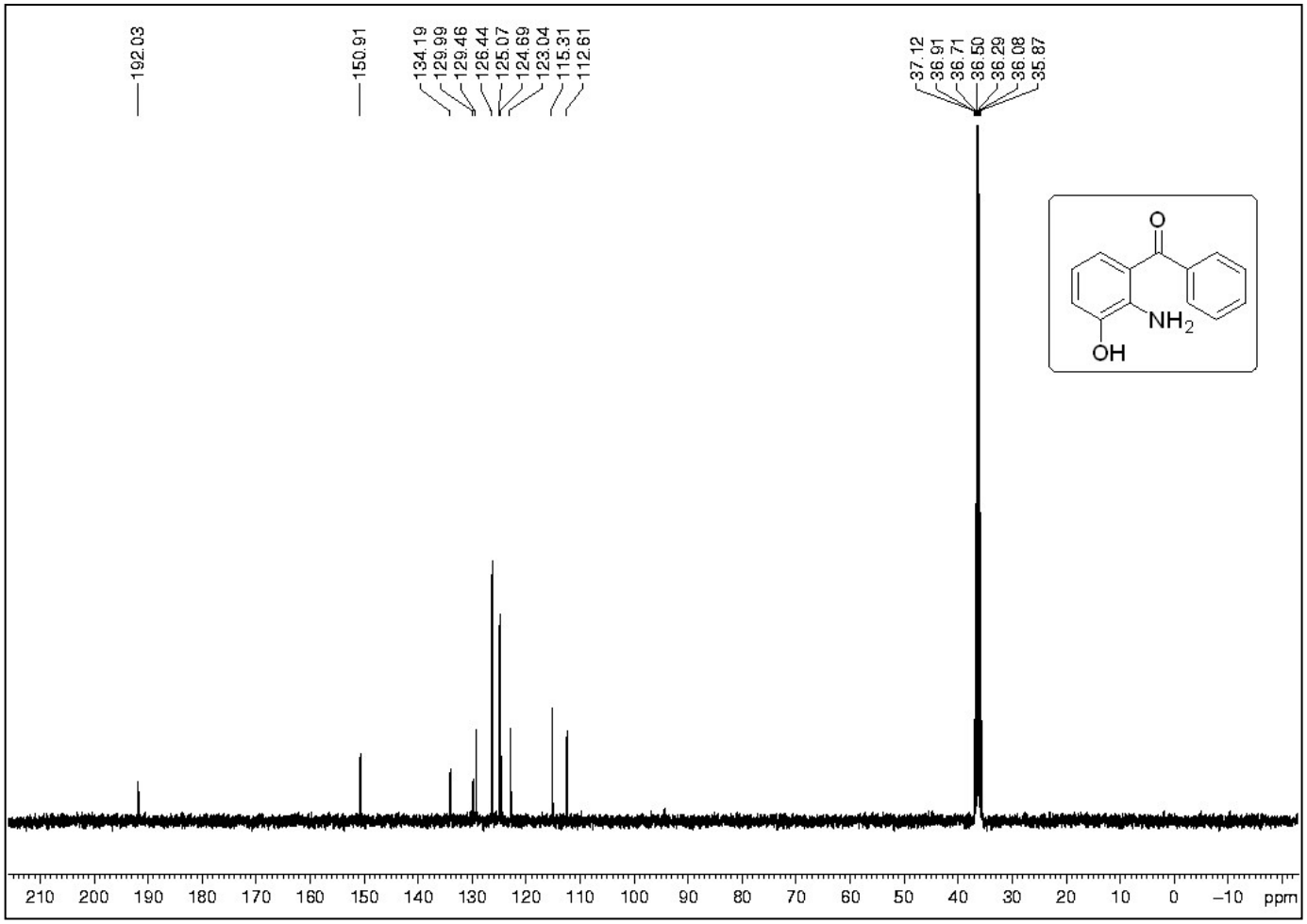
400 MHz ^{1}H NMR spectrum of **8b** in $CDCl_3$



100 MHz ^{13}C NMR spectrum of **8b** in $CDCl_3$



400 MHz ^{1}H NMR spectrum of **9** in DMSO-d_6



100 MHz ^{13}C NMR spectrum of **9** in DMSO-d_6