Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry.

Synthesis of Pyrazolo[1,5-*a*]quinoxalin-4(5*H*)-ones via One-pot Amidation/N–Arylation Reactions Under Transition Metal-Free Conditions

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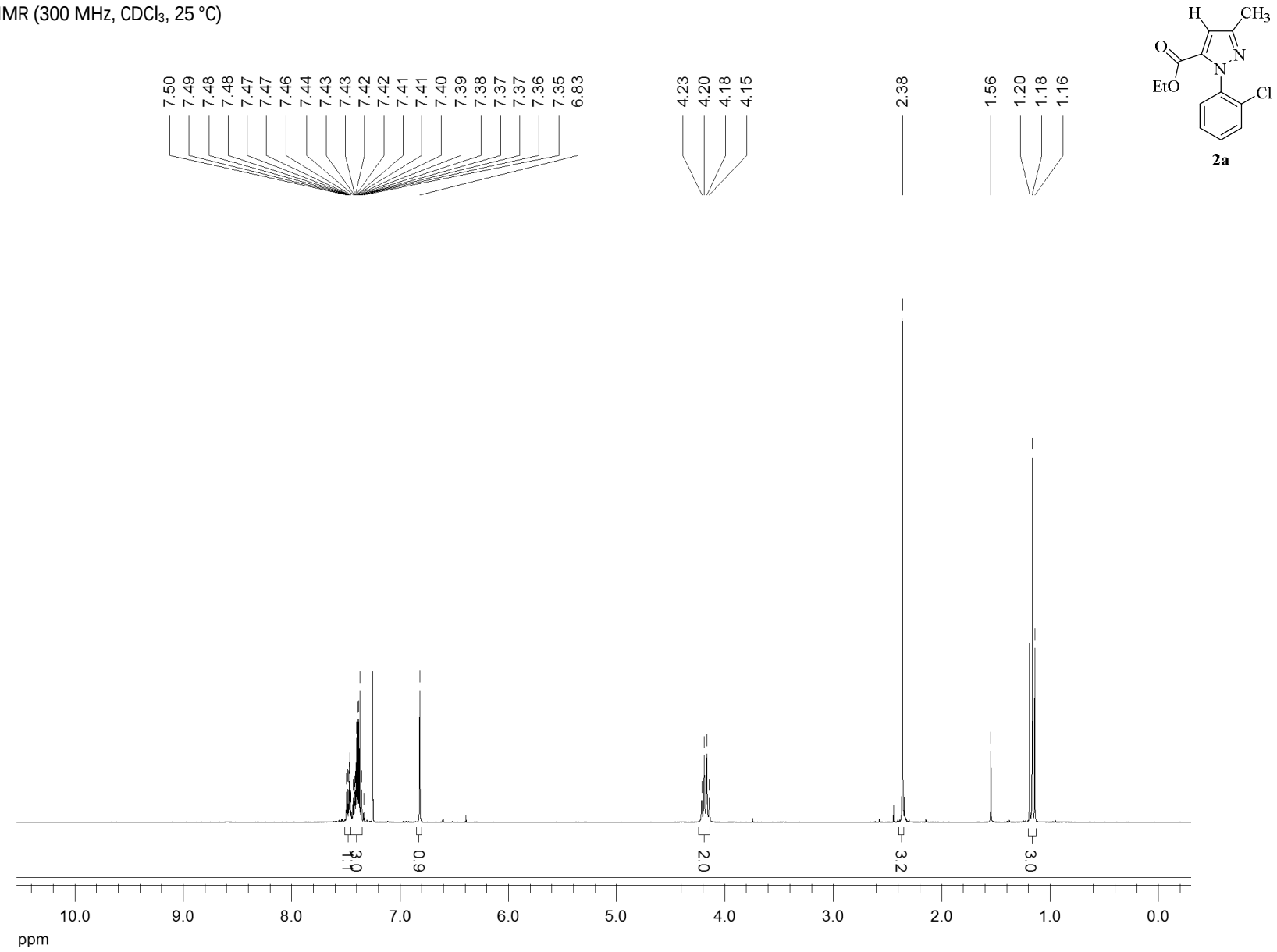
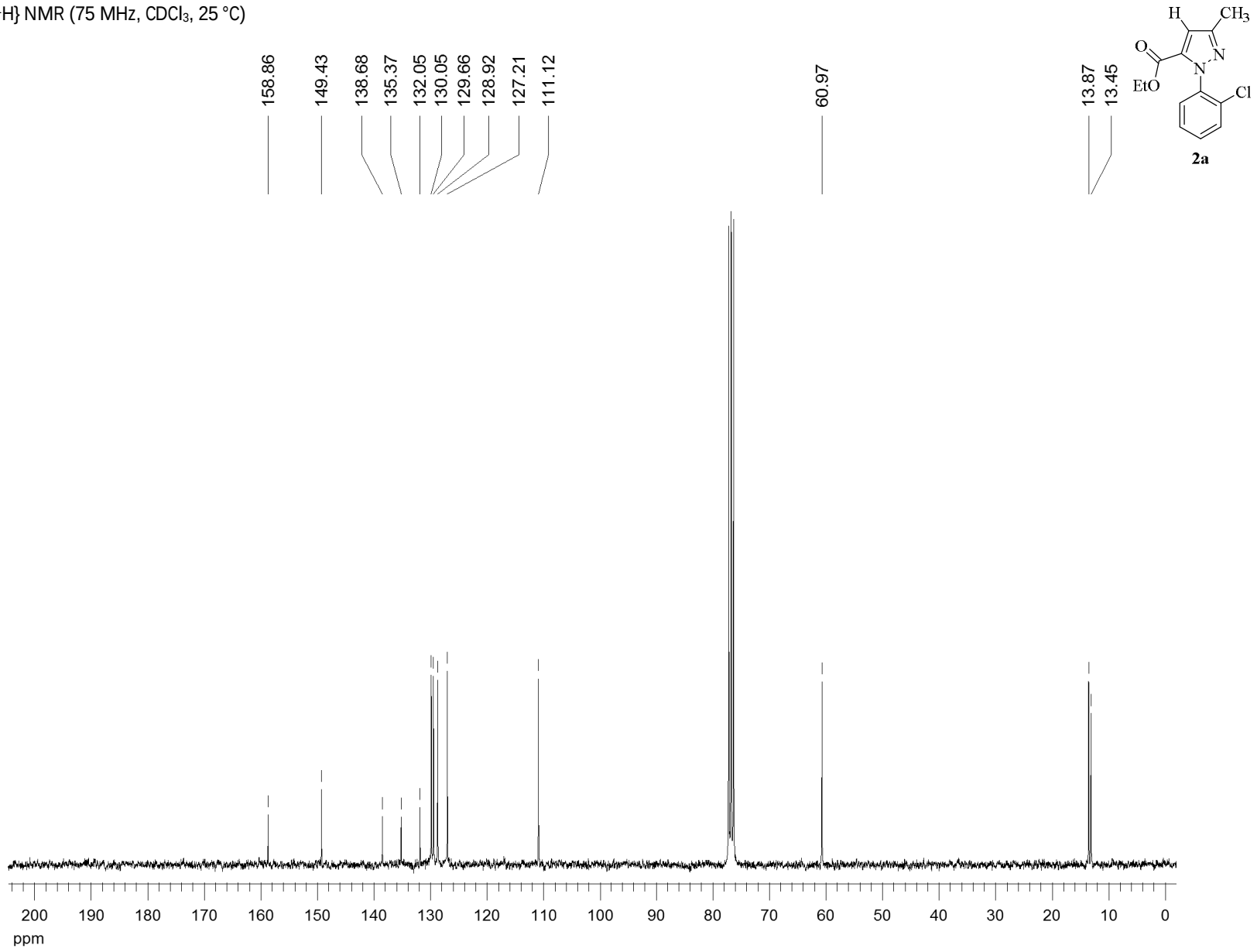
[b] Department of Chemistry, Dalhousie University Halifax, NS, B3H 4R2 Canada

Contents: NMR spectral data.

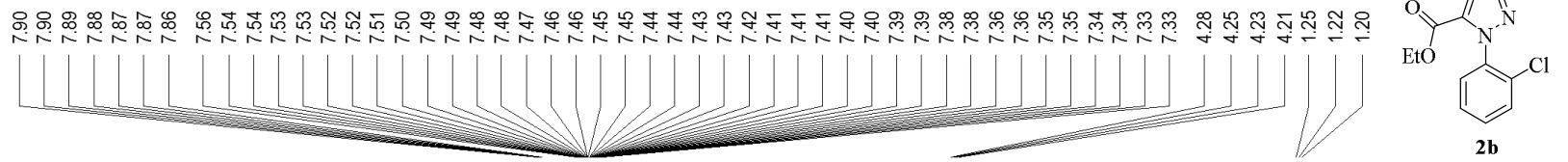
2a – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)

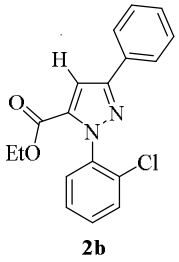


2a – ^{13}C **{**^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)

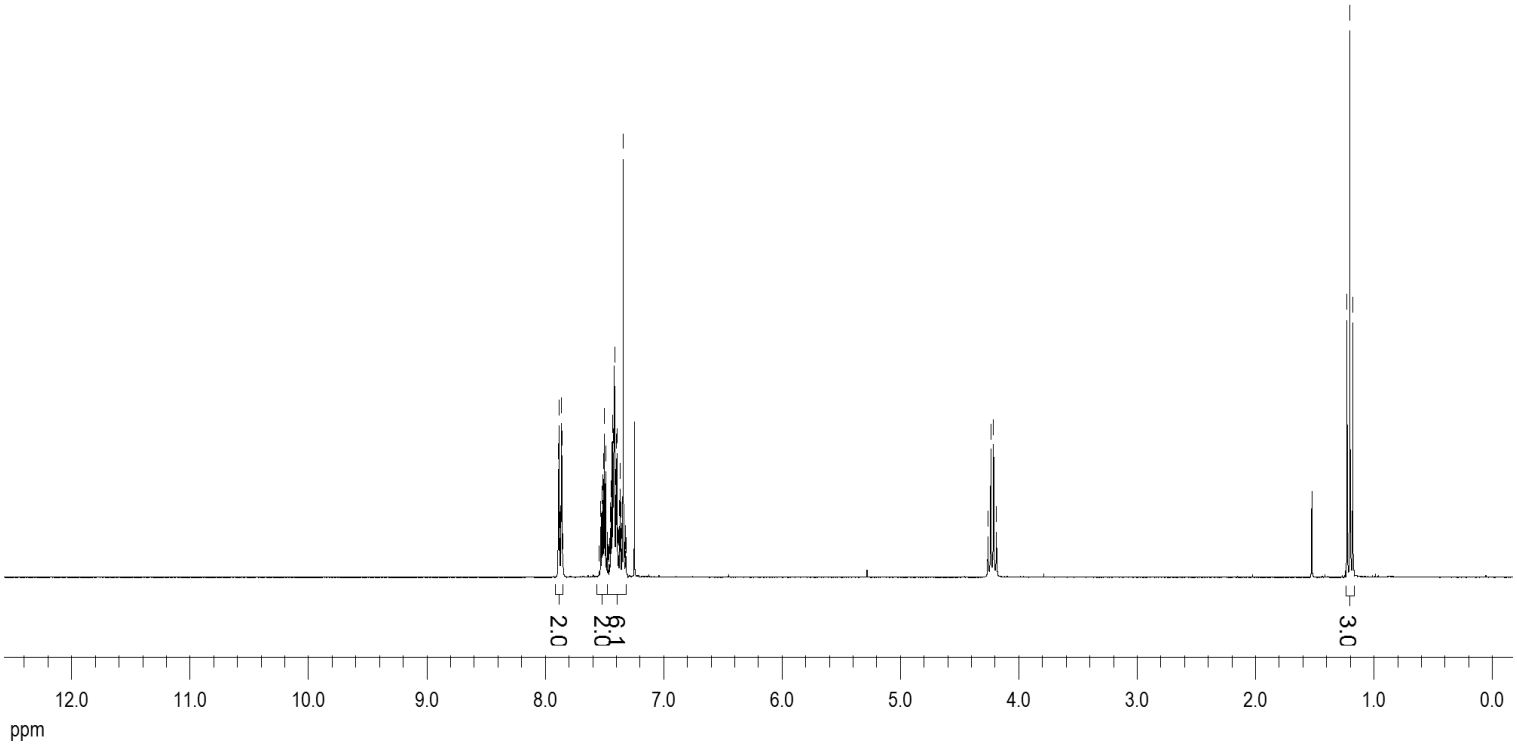


2b – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)

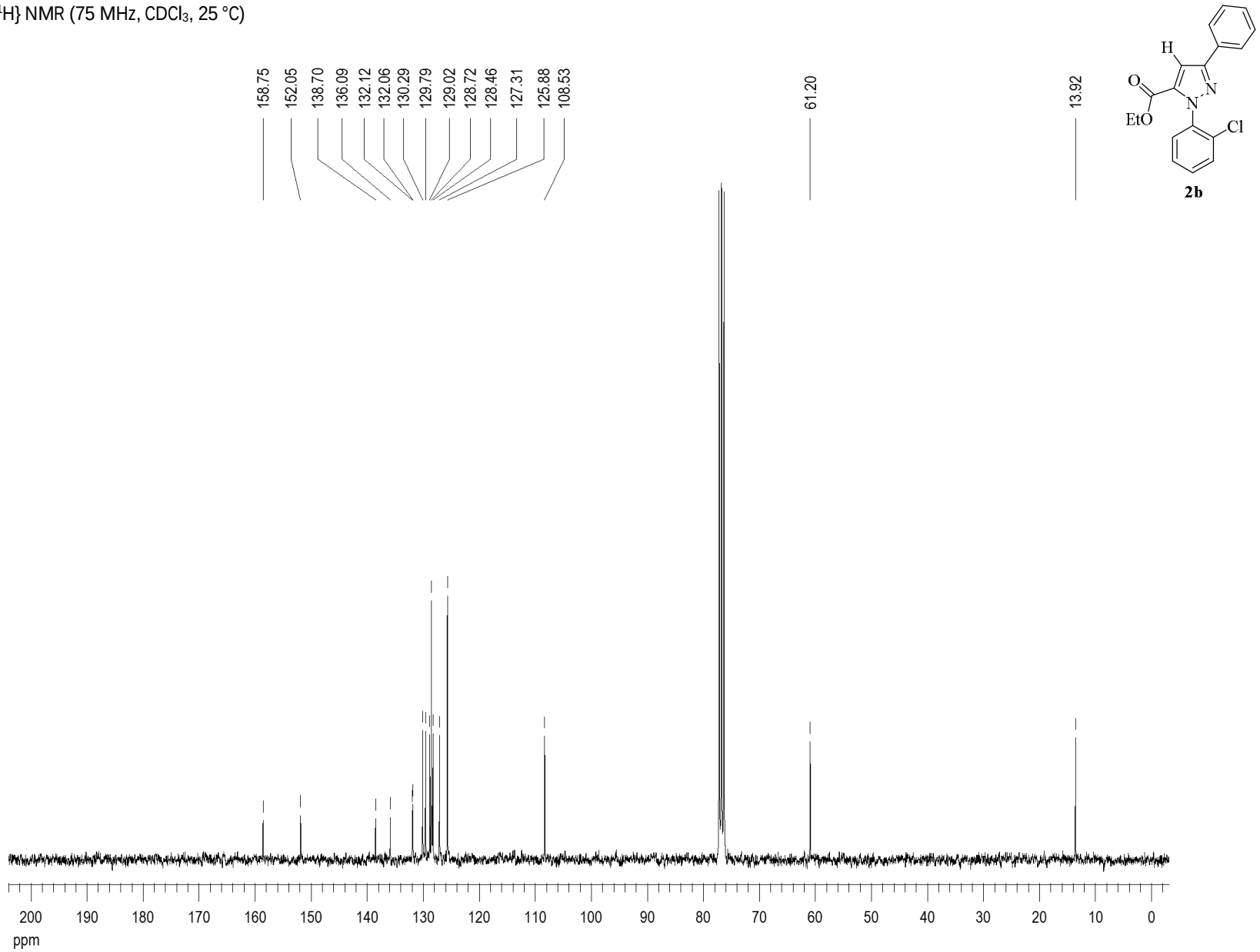




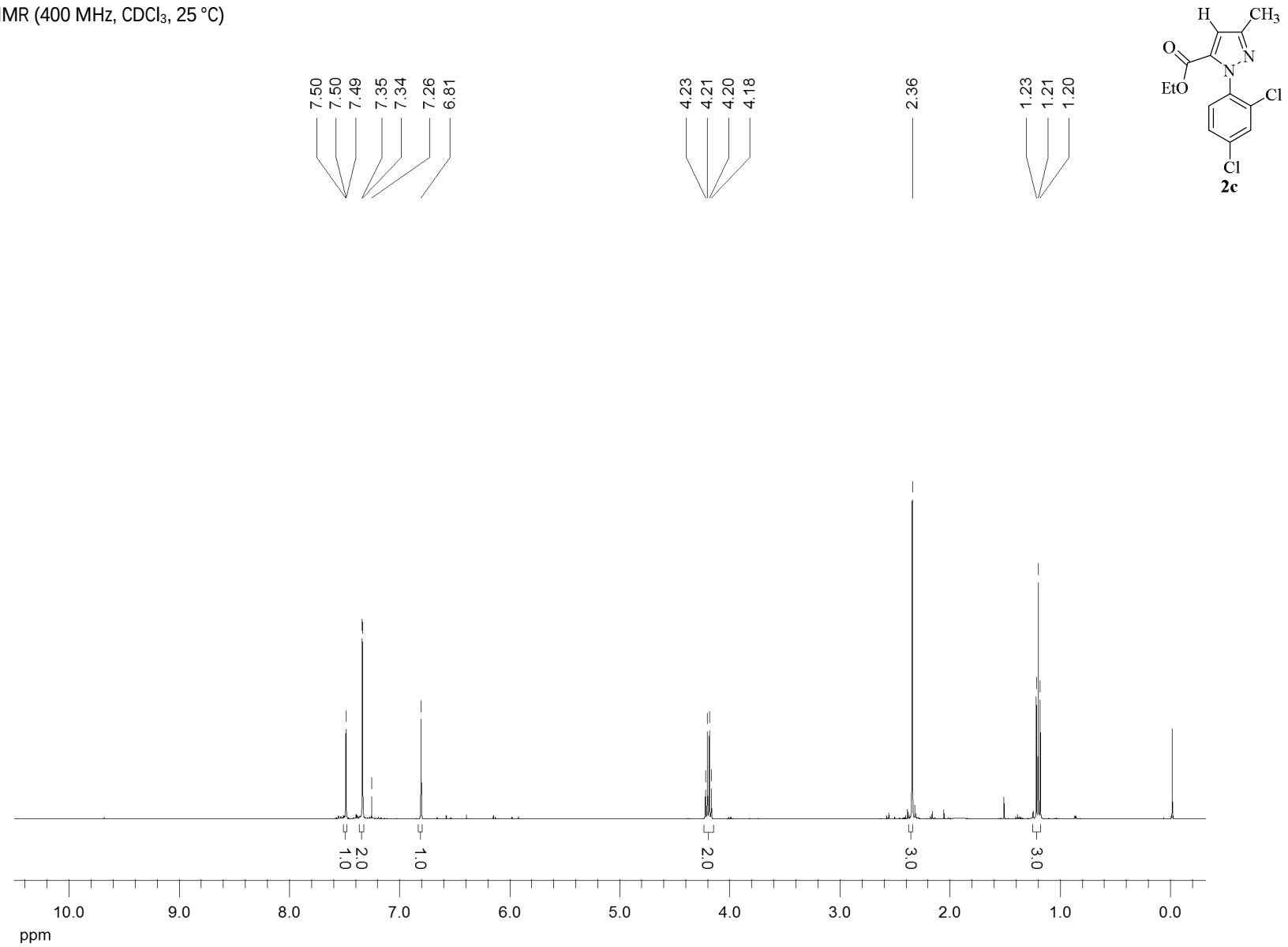
2b



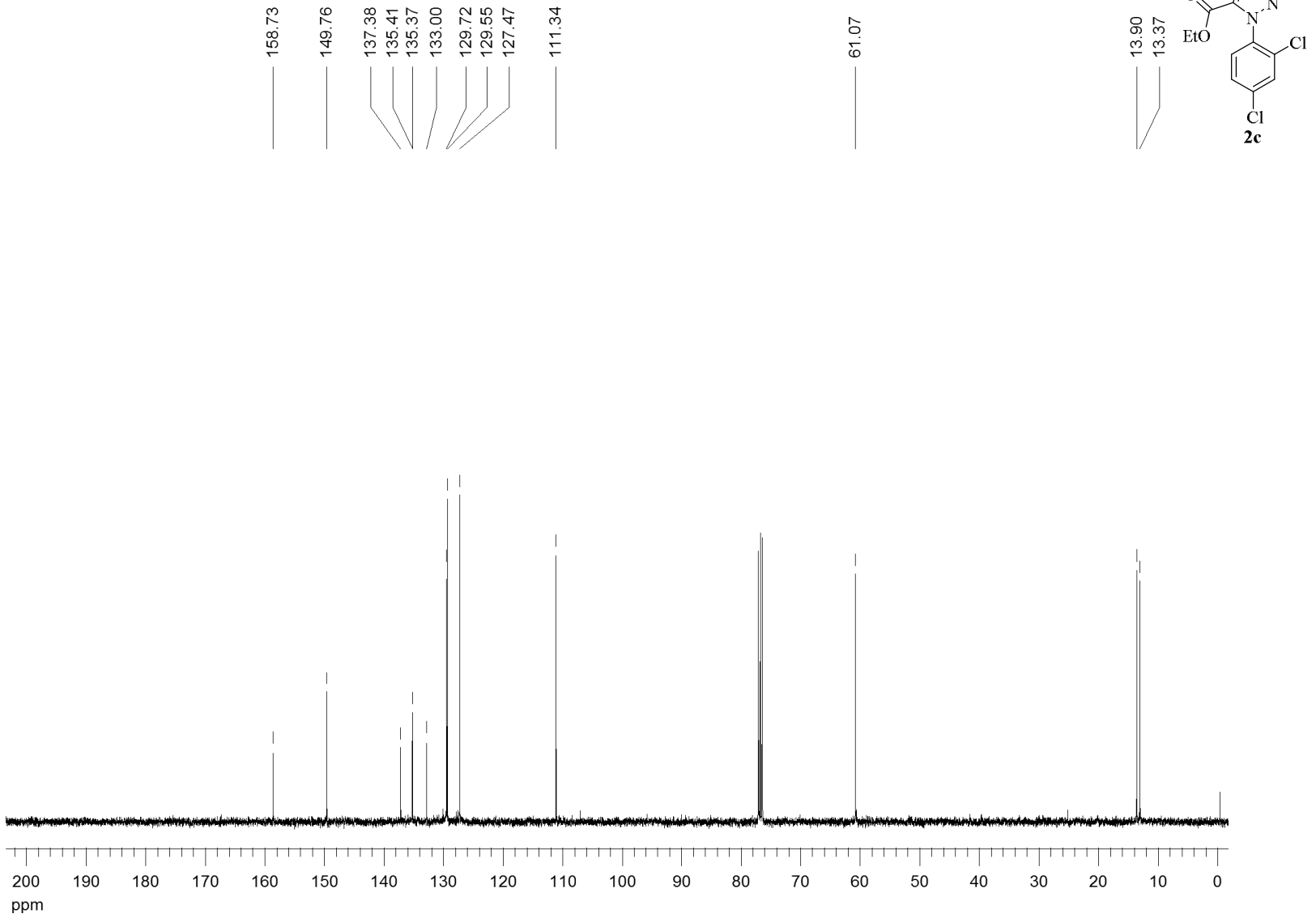
2b – ^{13}C **{**^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



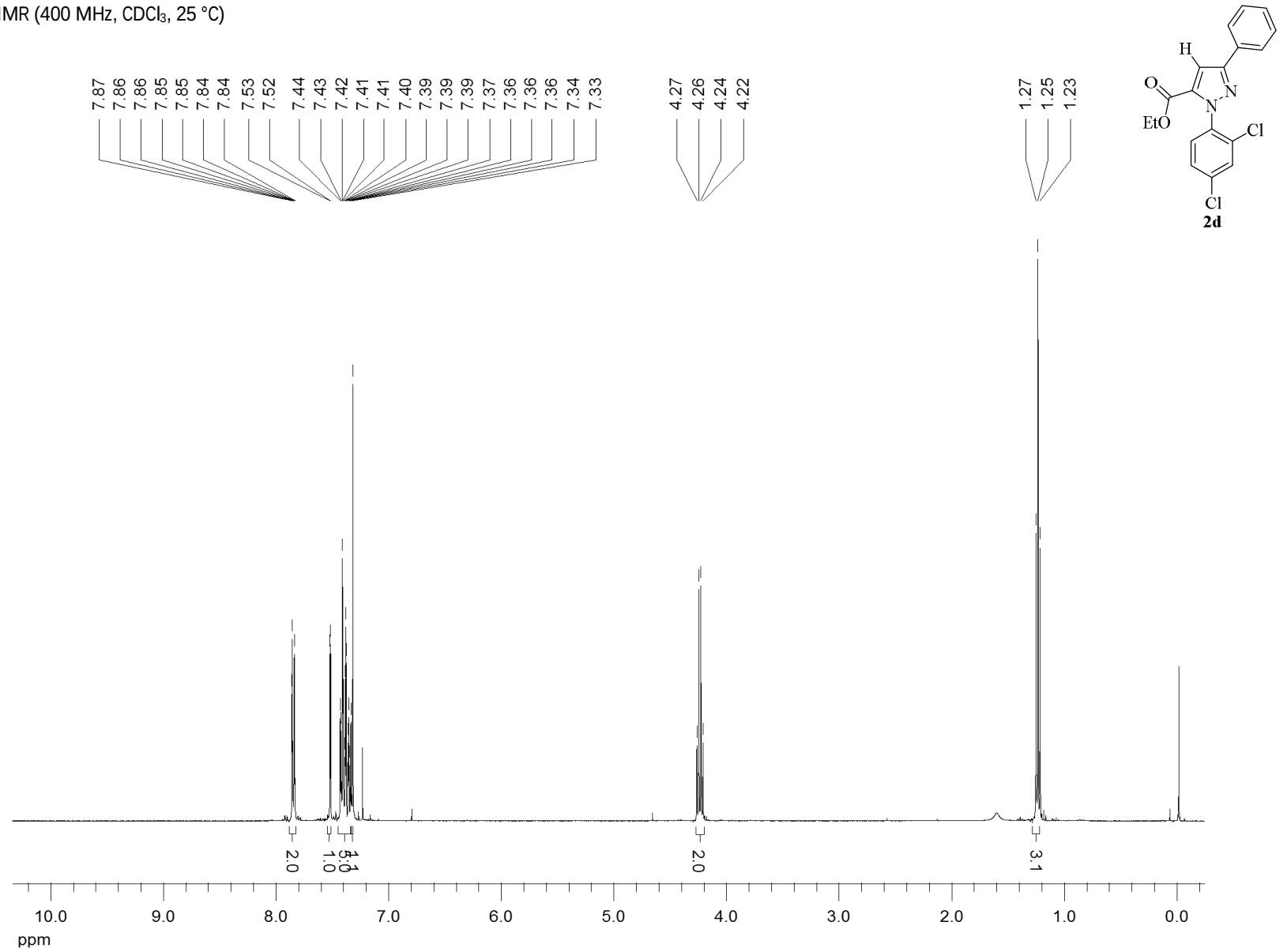
2c – ^{1}H NMR (400 MHz, $CDCl_3$, 25 °C)



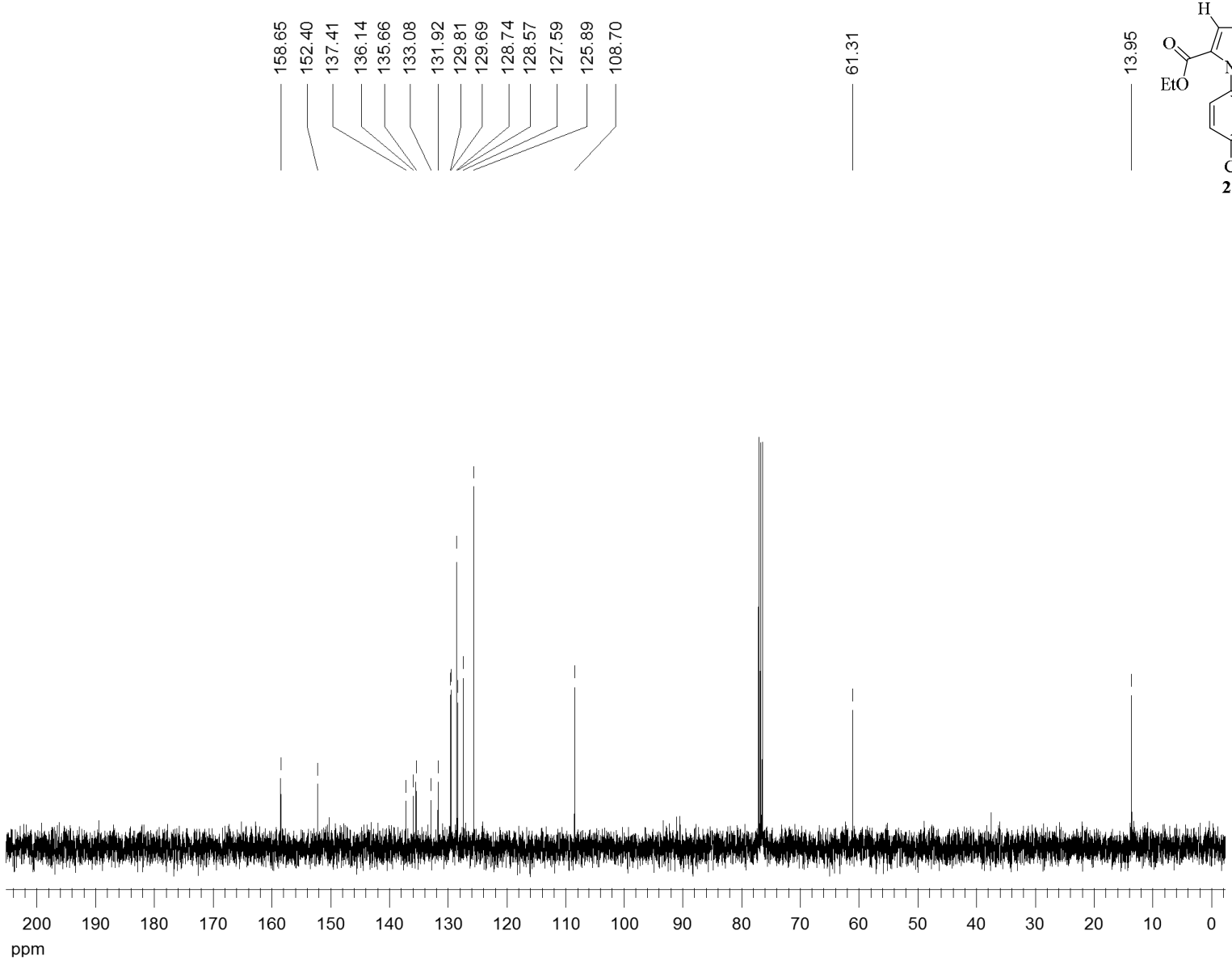
2c – ^{13}C **{**^{1}H} NMR (100 MHz, $CDCl_3$, 25 °C)



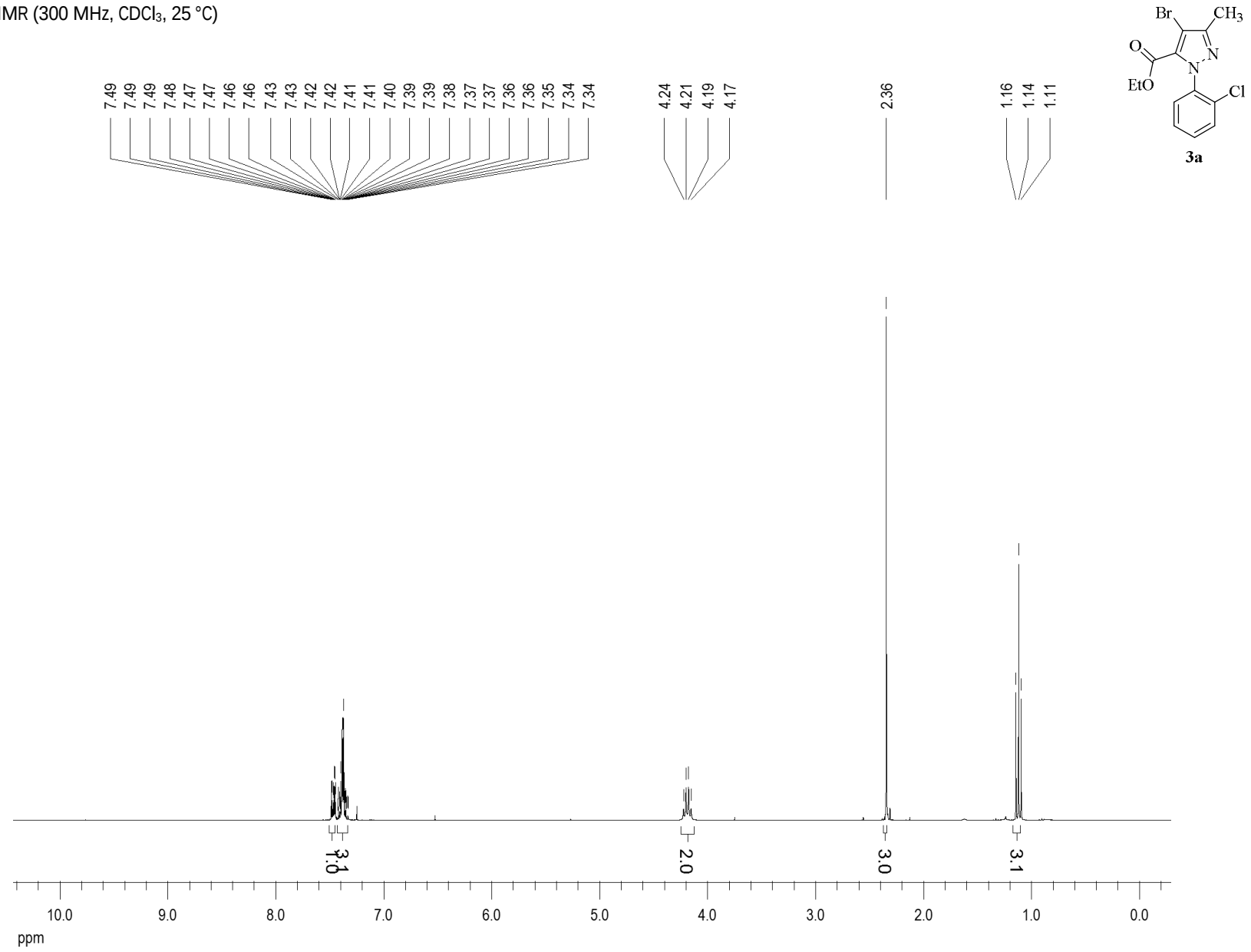
2d – ^{1}H NMR (400 MHz, $CDCl_3$, 25 °C)



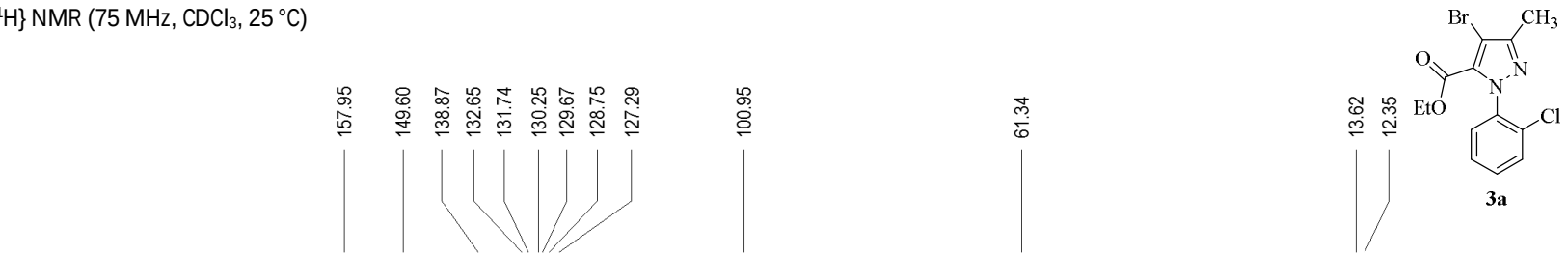
2d – ^{13}C **{**^{1}H} NMR (100 MHz, $CDCl_3$, 25 °C)

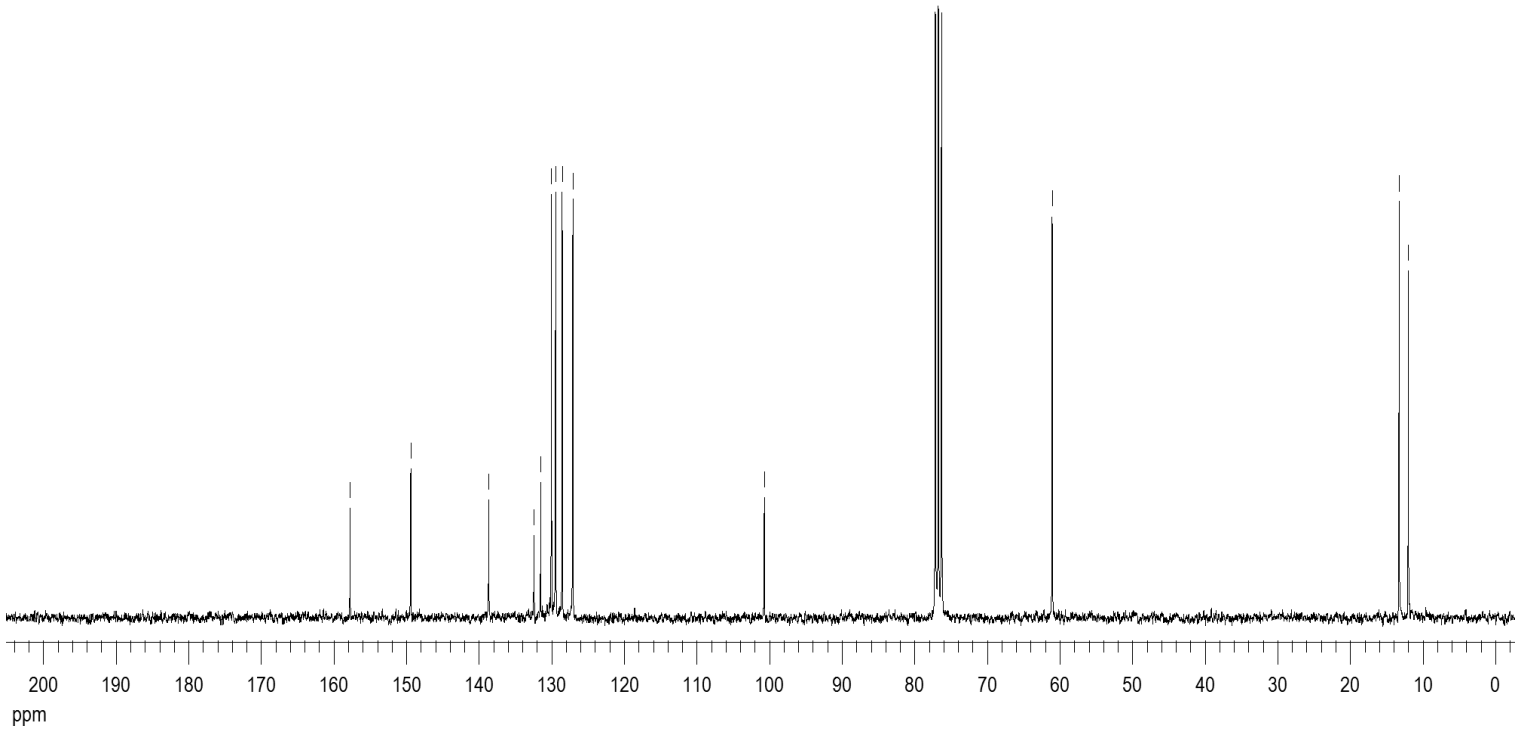


3a – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)

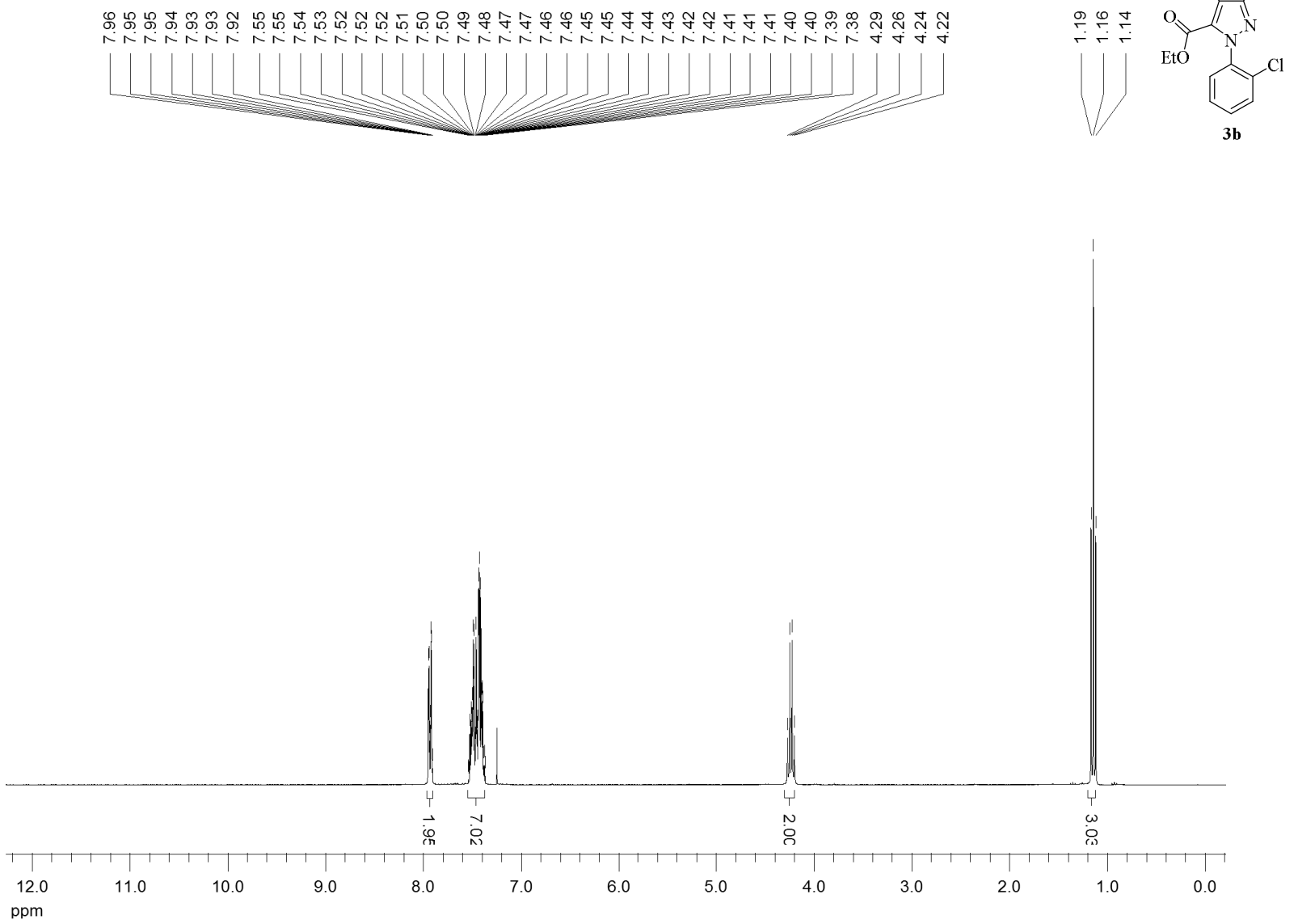


3a – $^{13}C\ \{^{1}H\}$ NMR (75 MHz, $CDCl_3$, 25 °C)

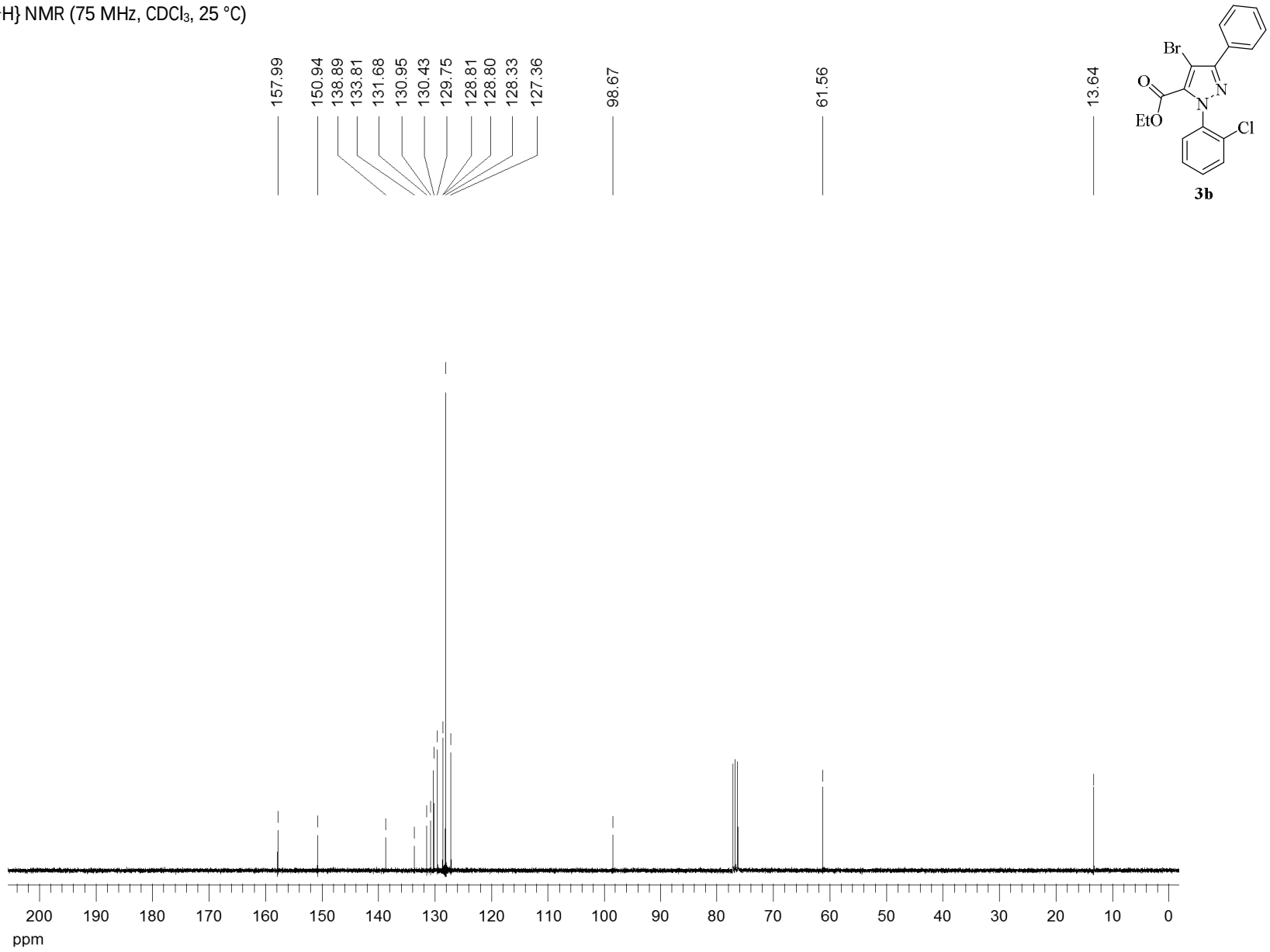




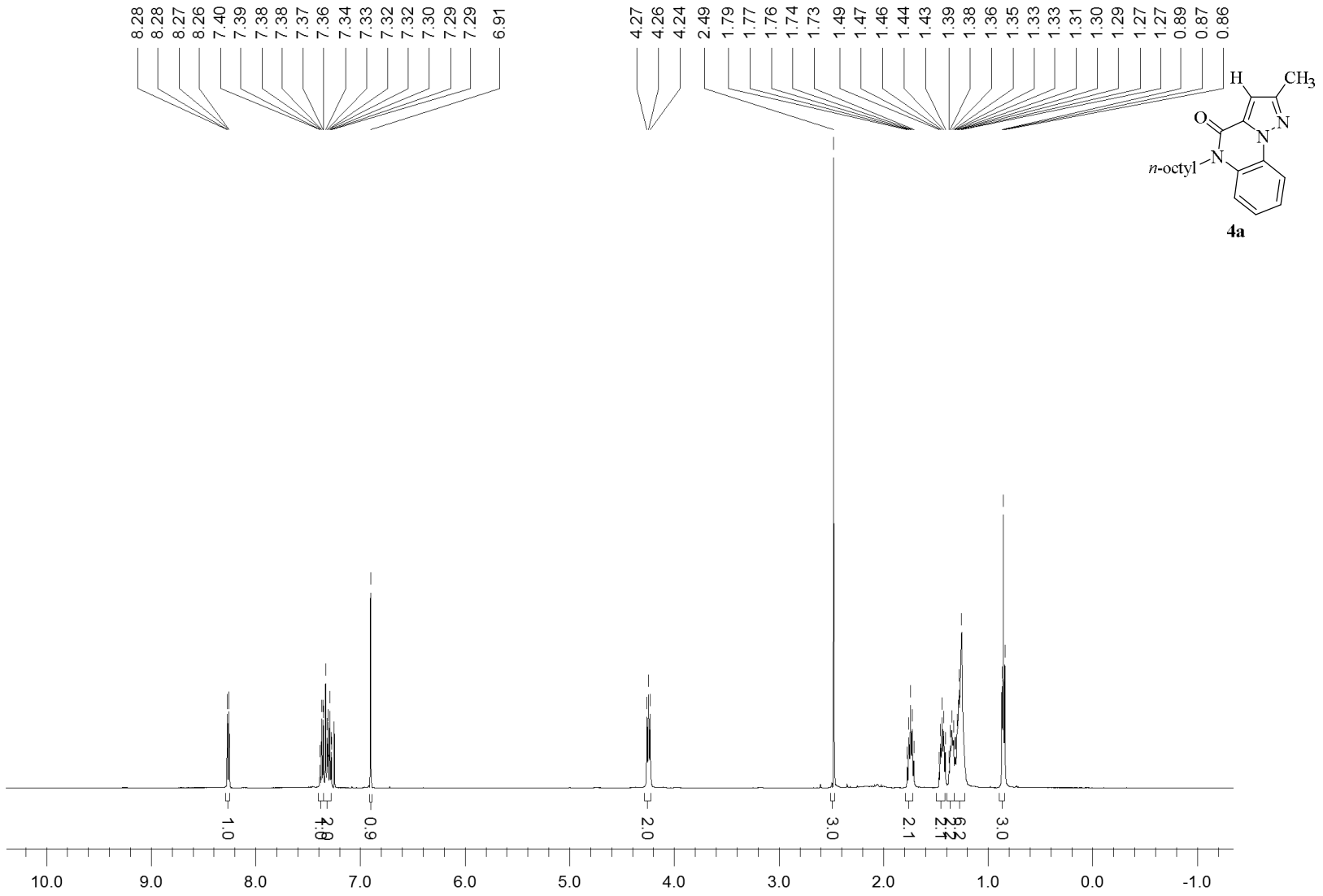
3b – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



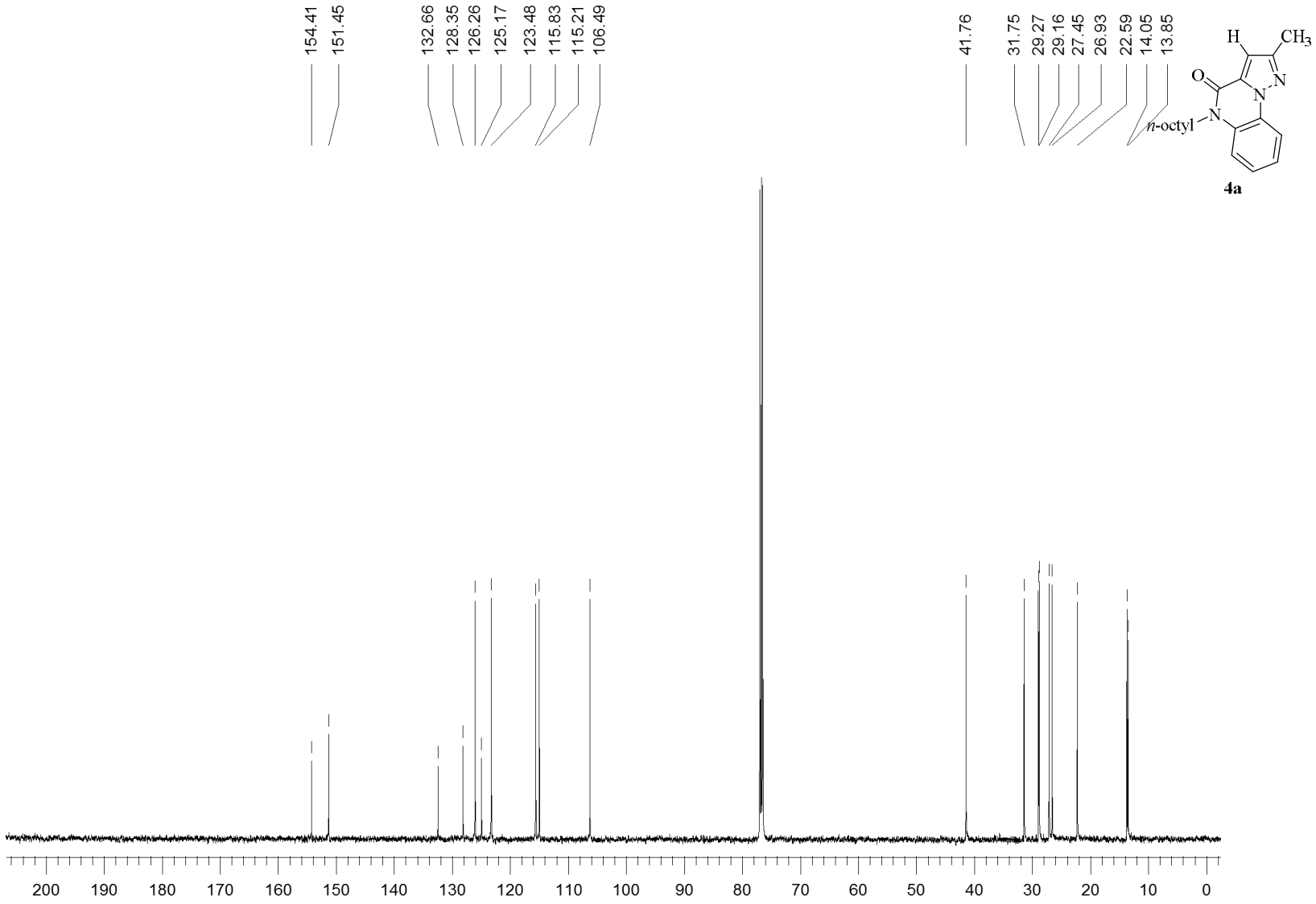
3b – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



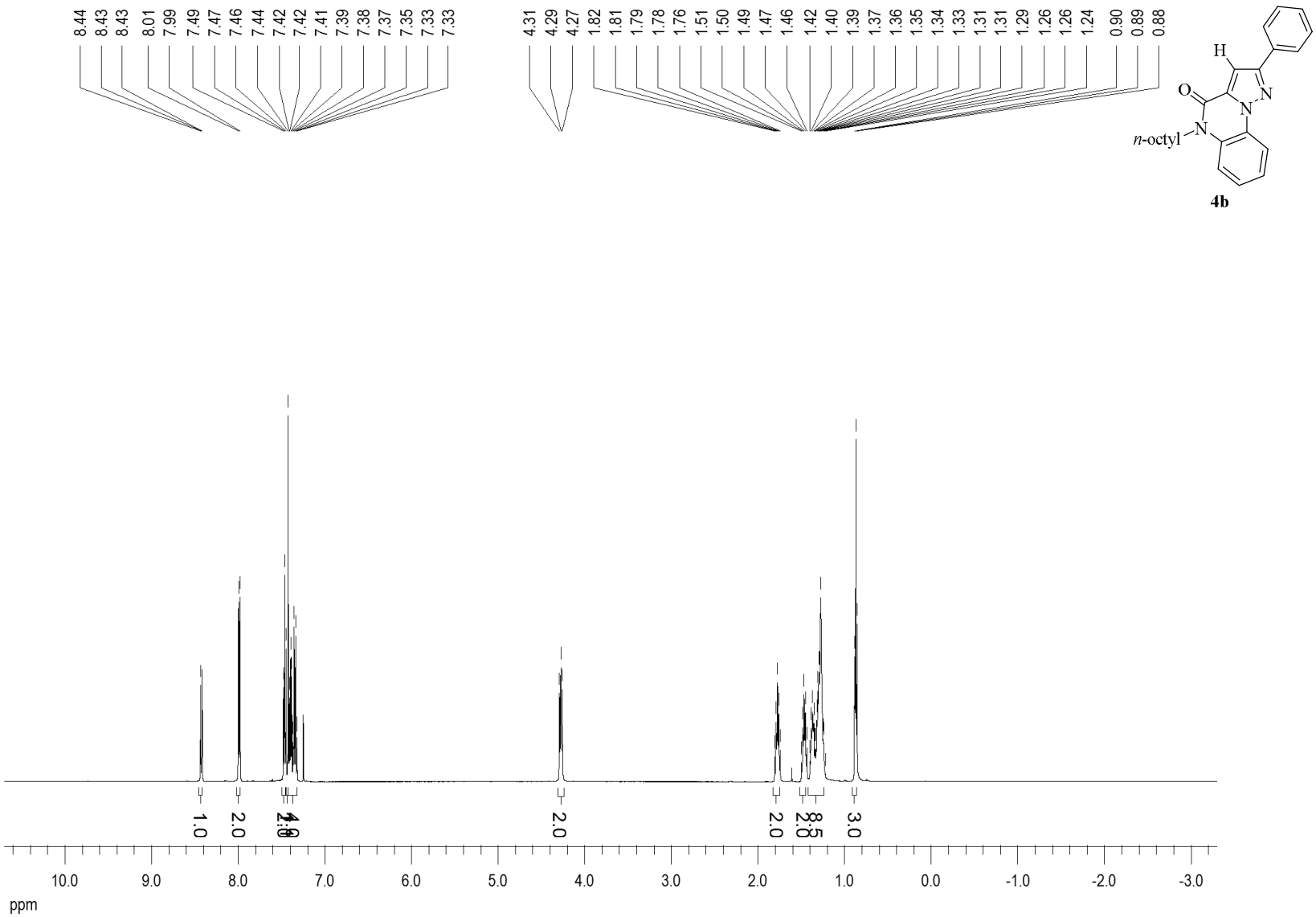
4a – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



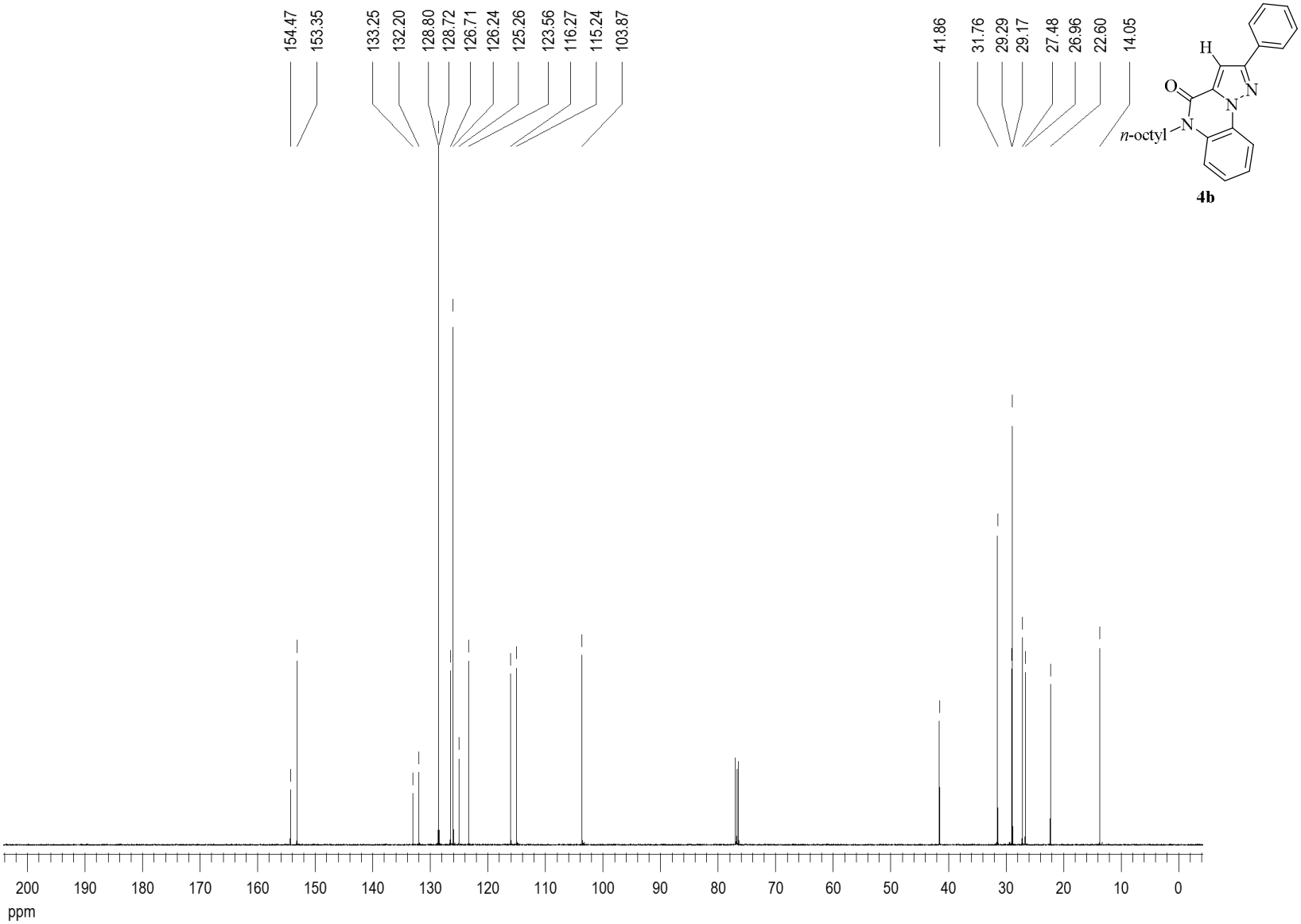
4a – $^{13}C\ \{^{1}H\}$ NMR (125 MHz, $CDCl_3$, 25 °C)



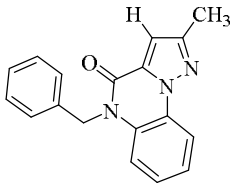
4b – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



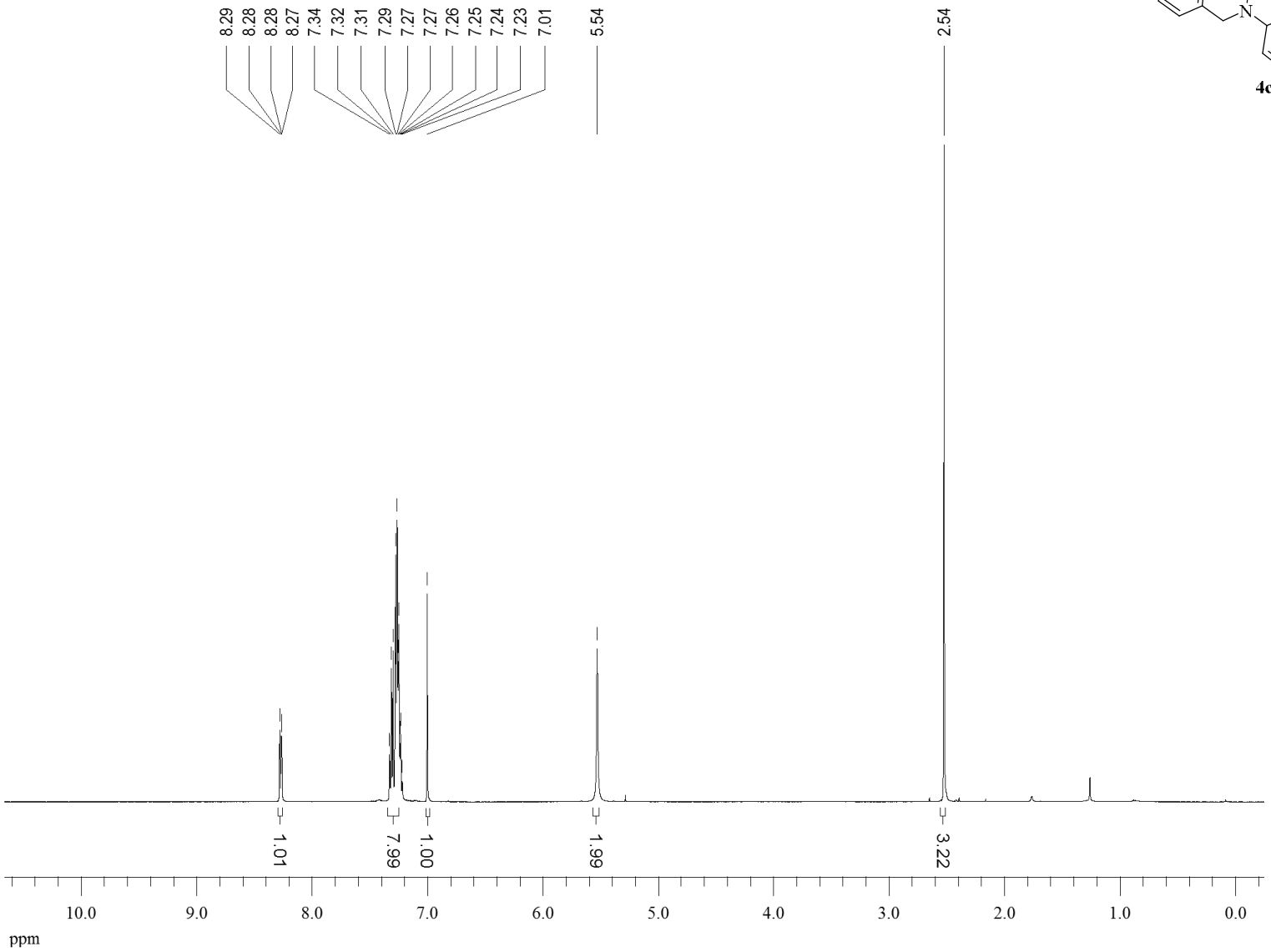
4b – ^{13}C {^{1}H} NMR (125 MHz, $CDCl_3$, 25 °C)



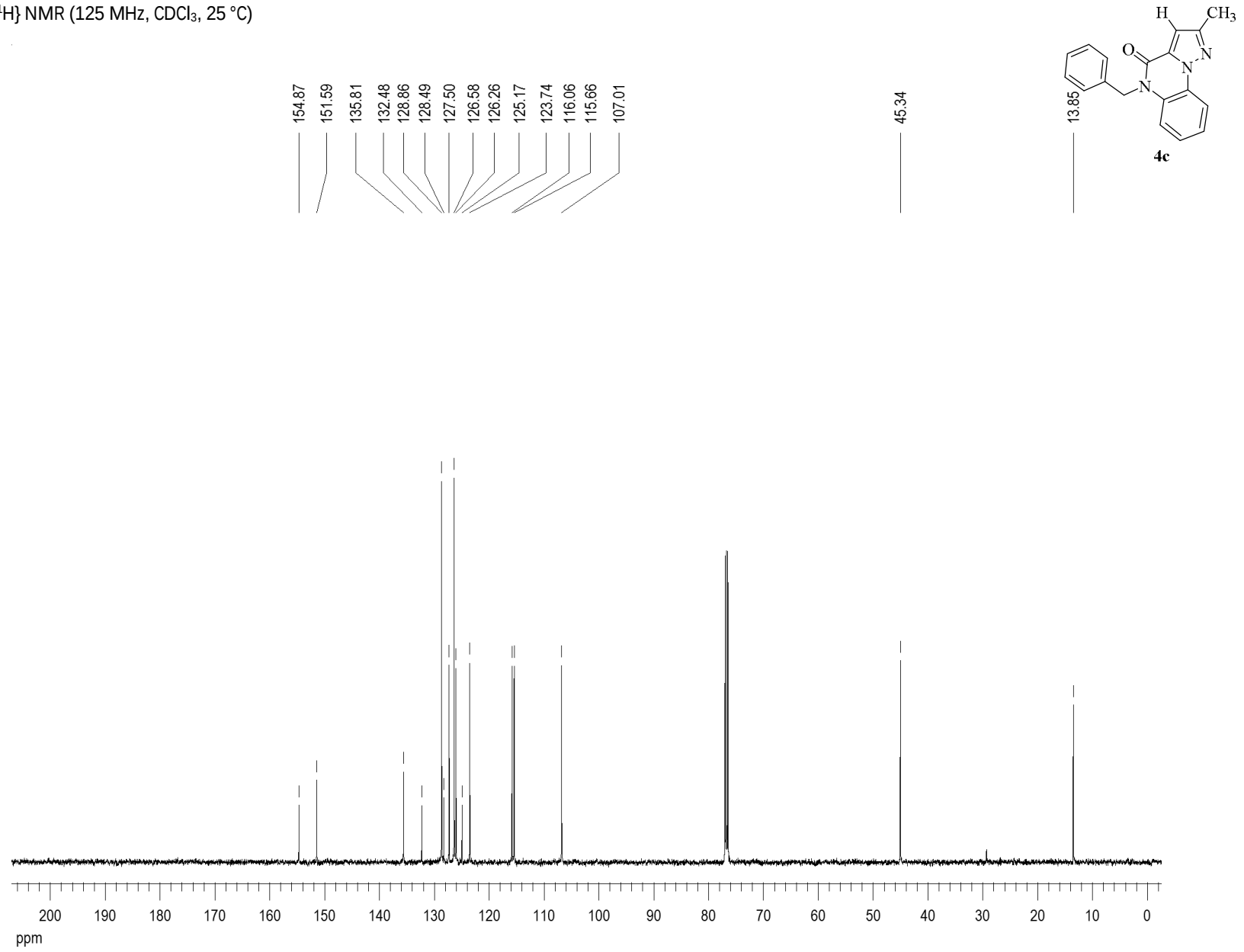
4c – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



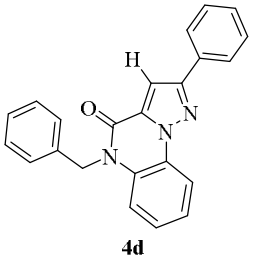
4c



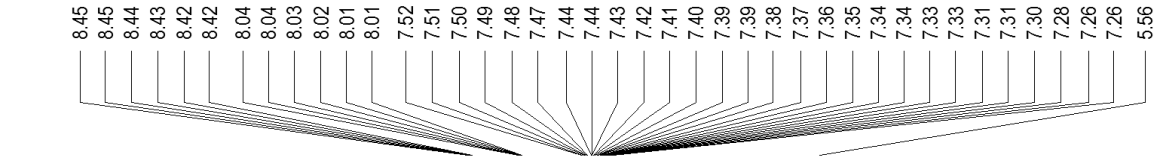
4c – ^{13}C {^{1}H} NMR (125 MHz, $CDCl_3$, 25 °C)

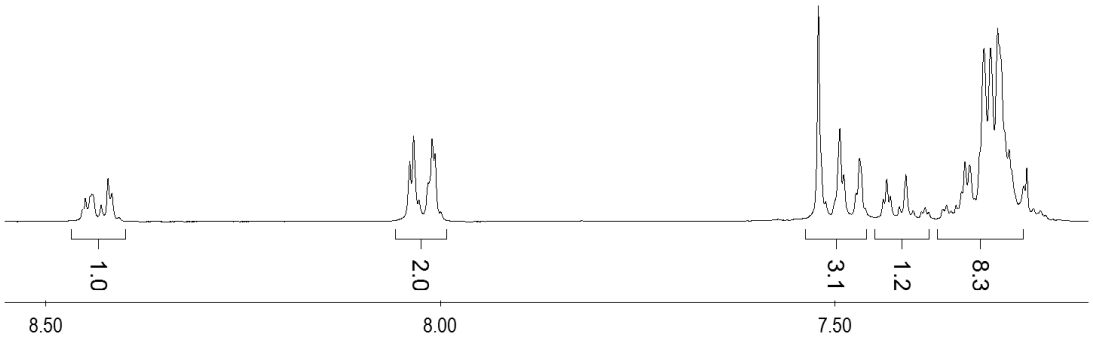


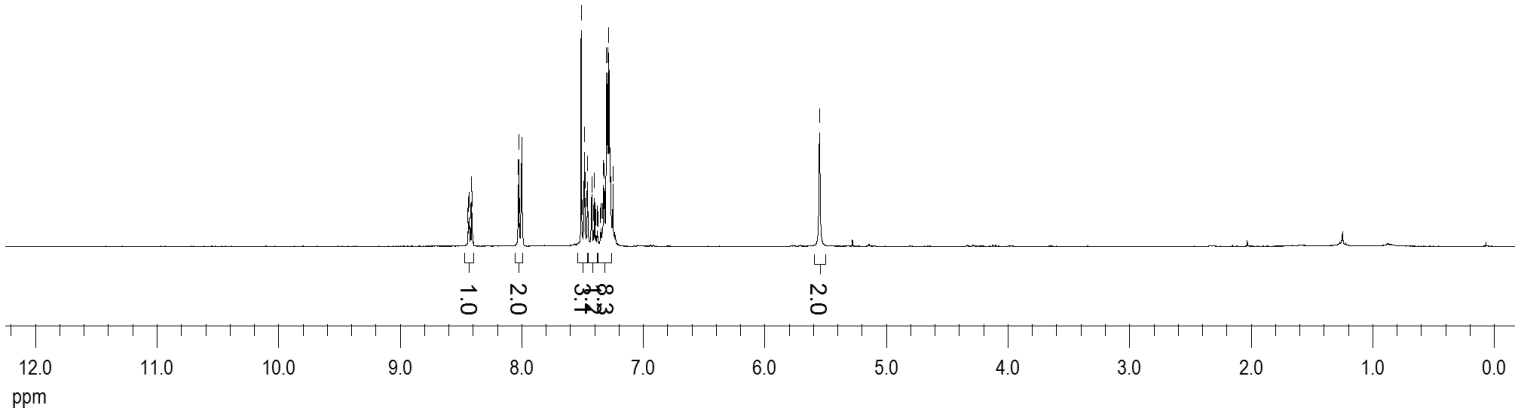
4d – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



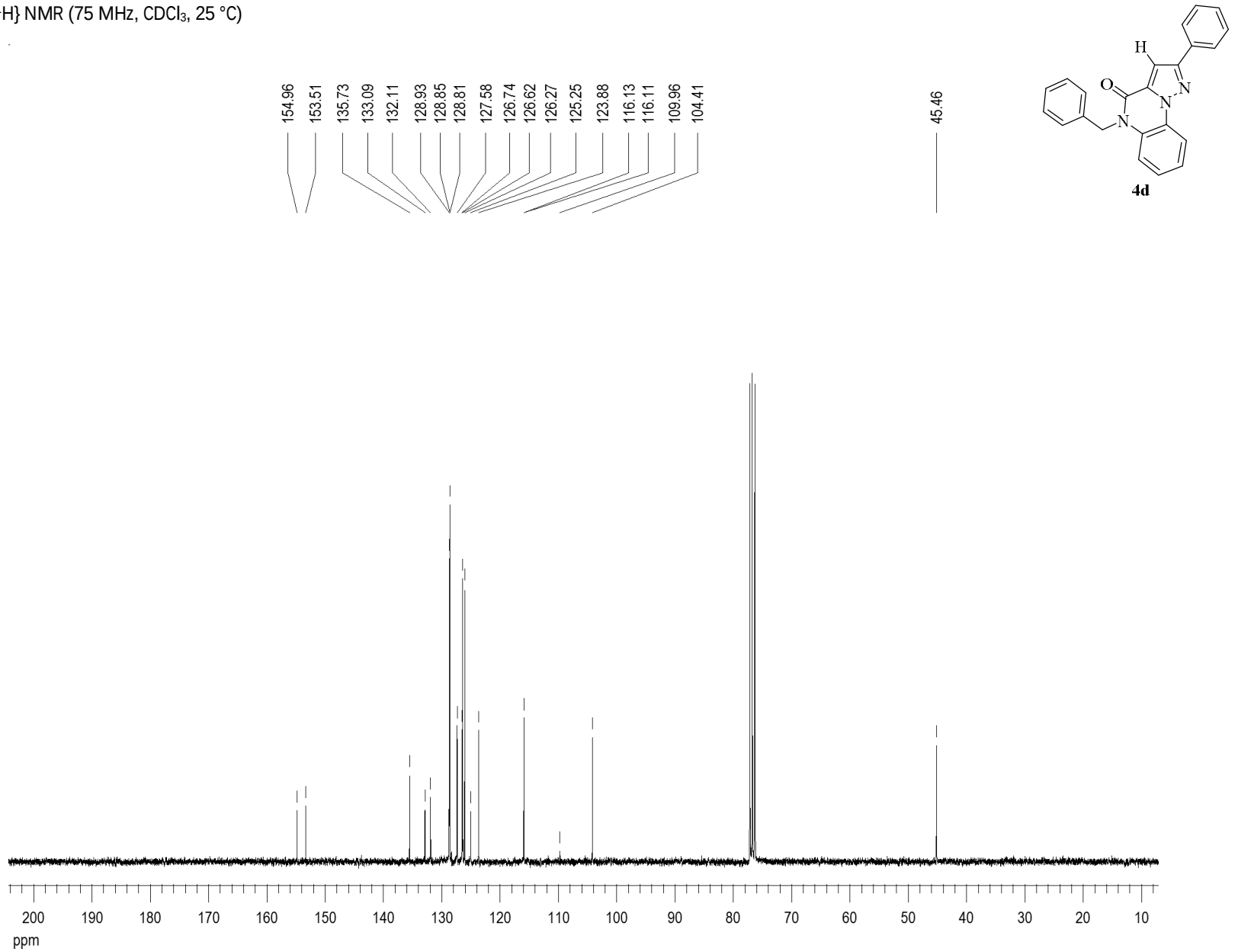
4d



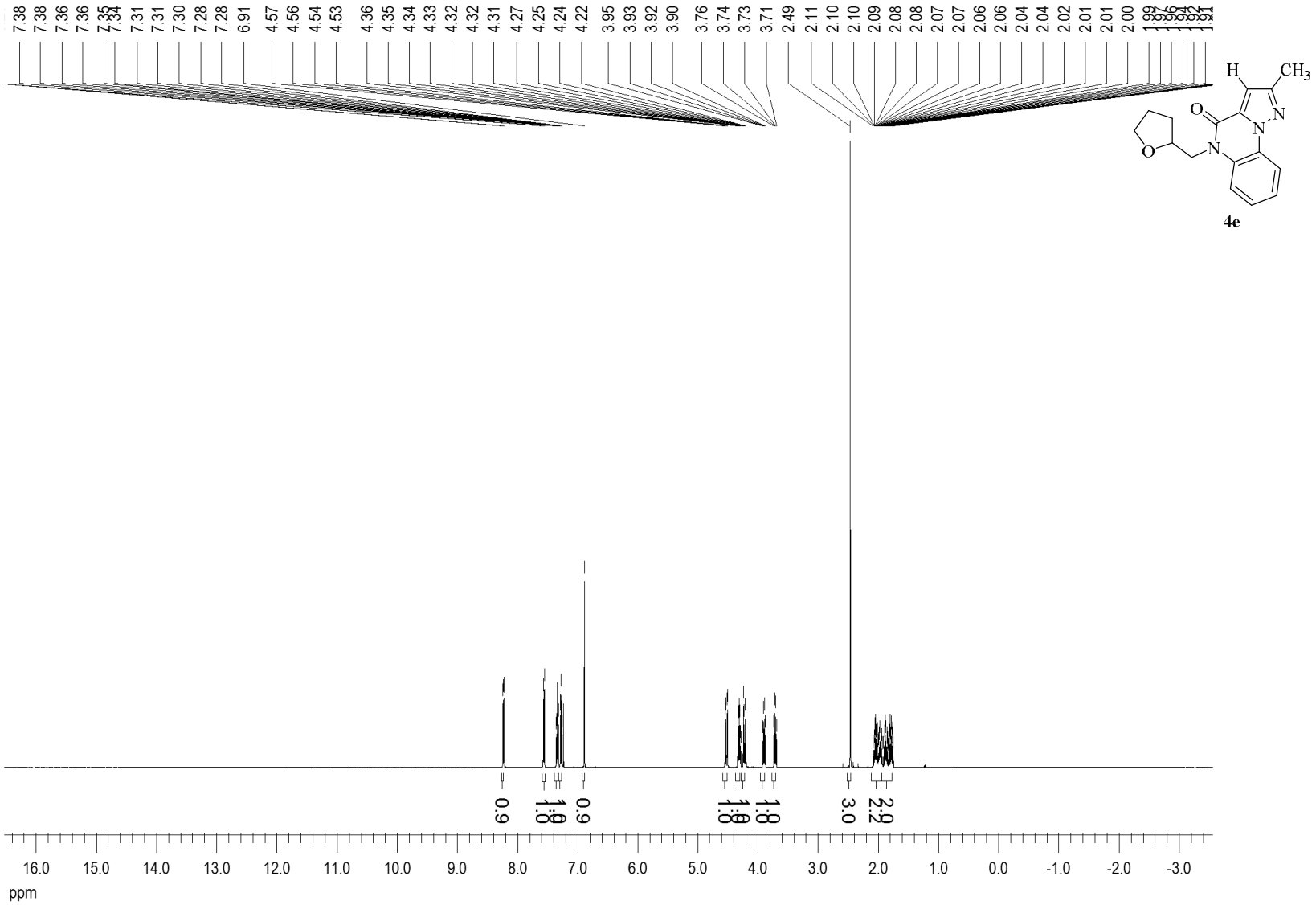




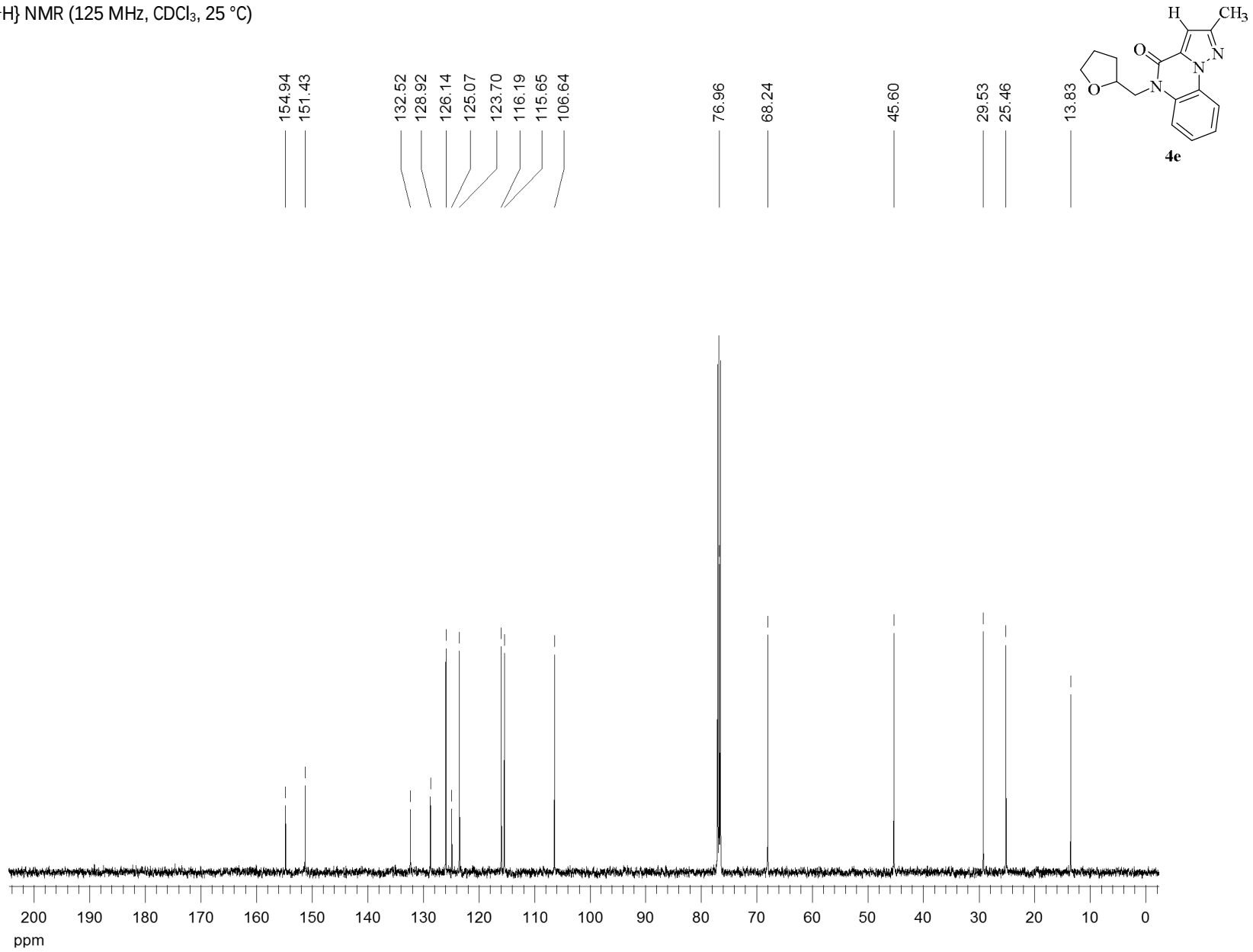
4d – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



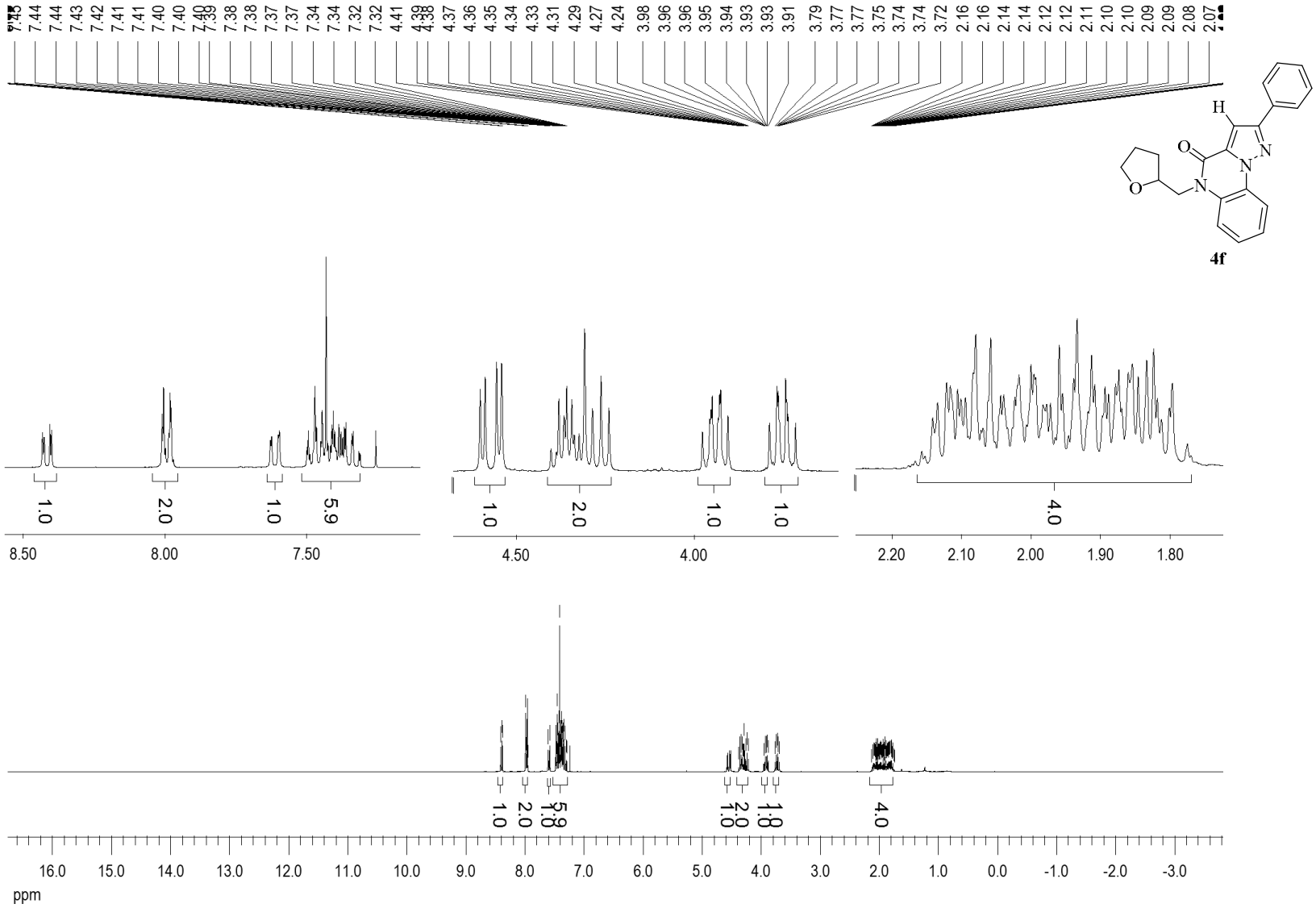
4e – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



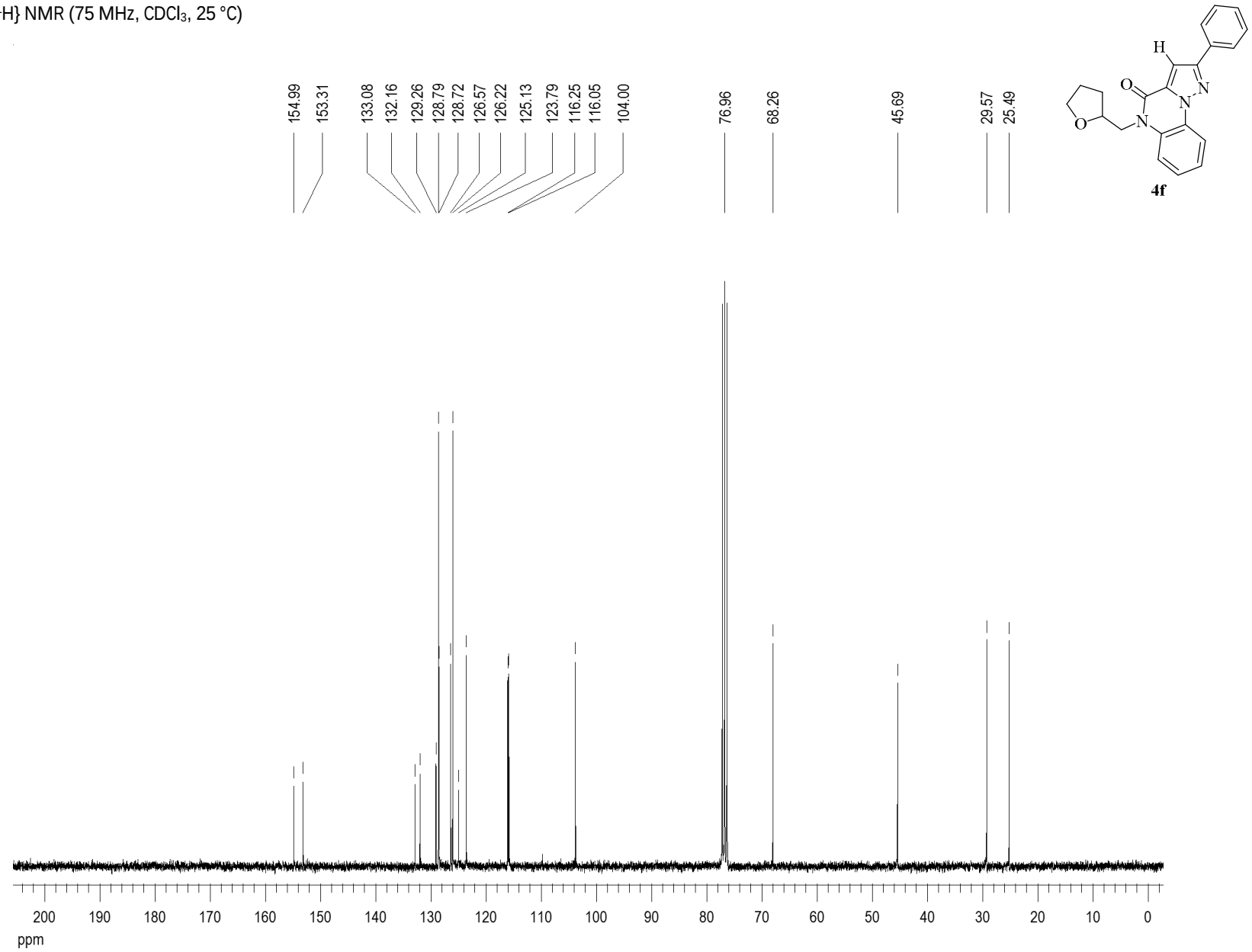
4e – ^{13}C {^{1}H} NMR (125 MHz, $CDCl_3$, 25 °C)



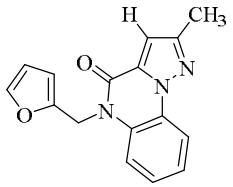
4f – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



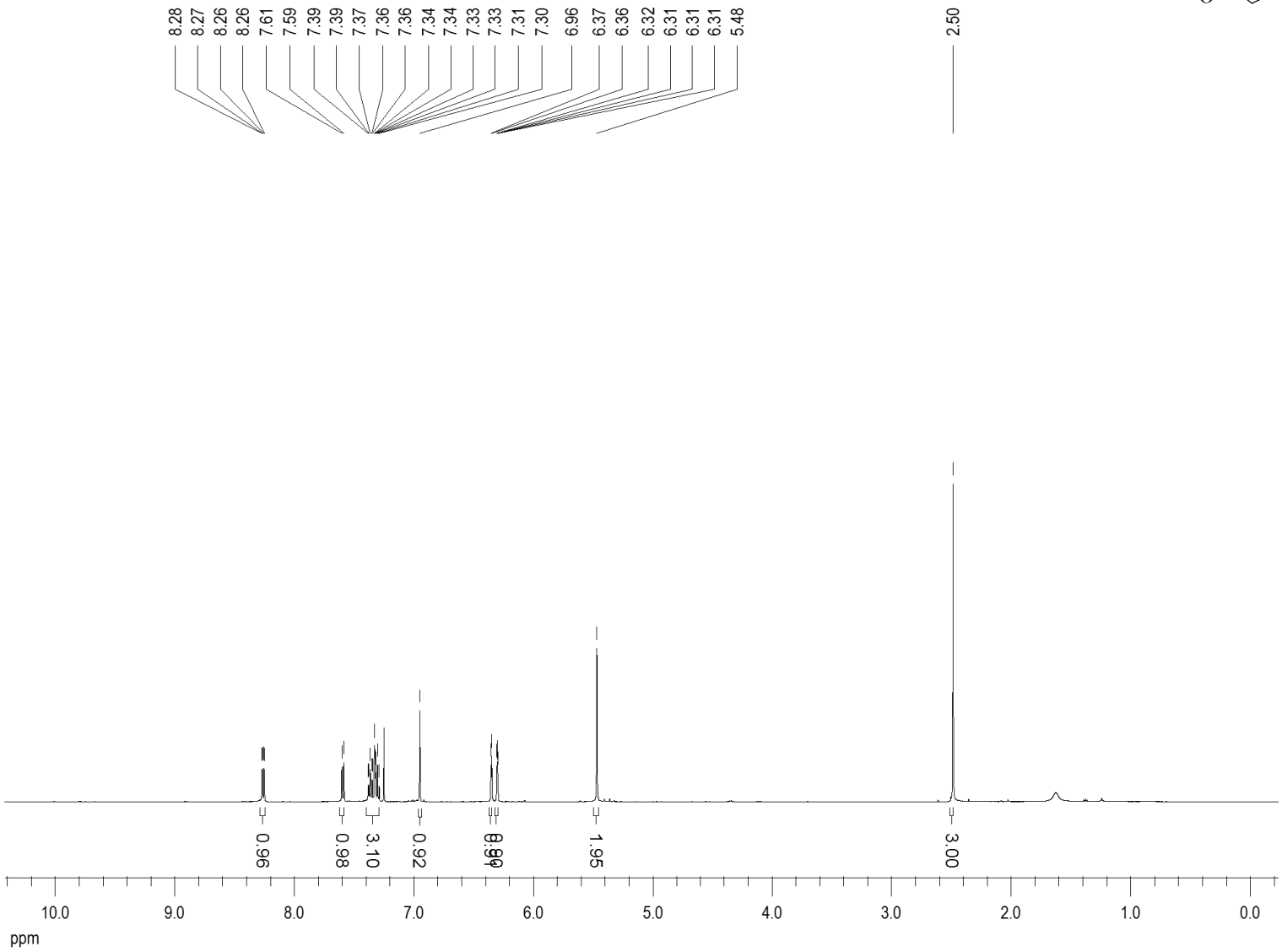
4f – $^{13}C\{^{1}H\}$ NMR (75 MHz, $CDCl_3$, 25 °C)



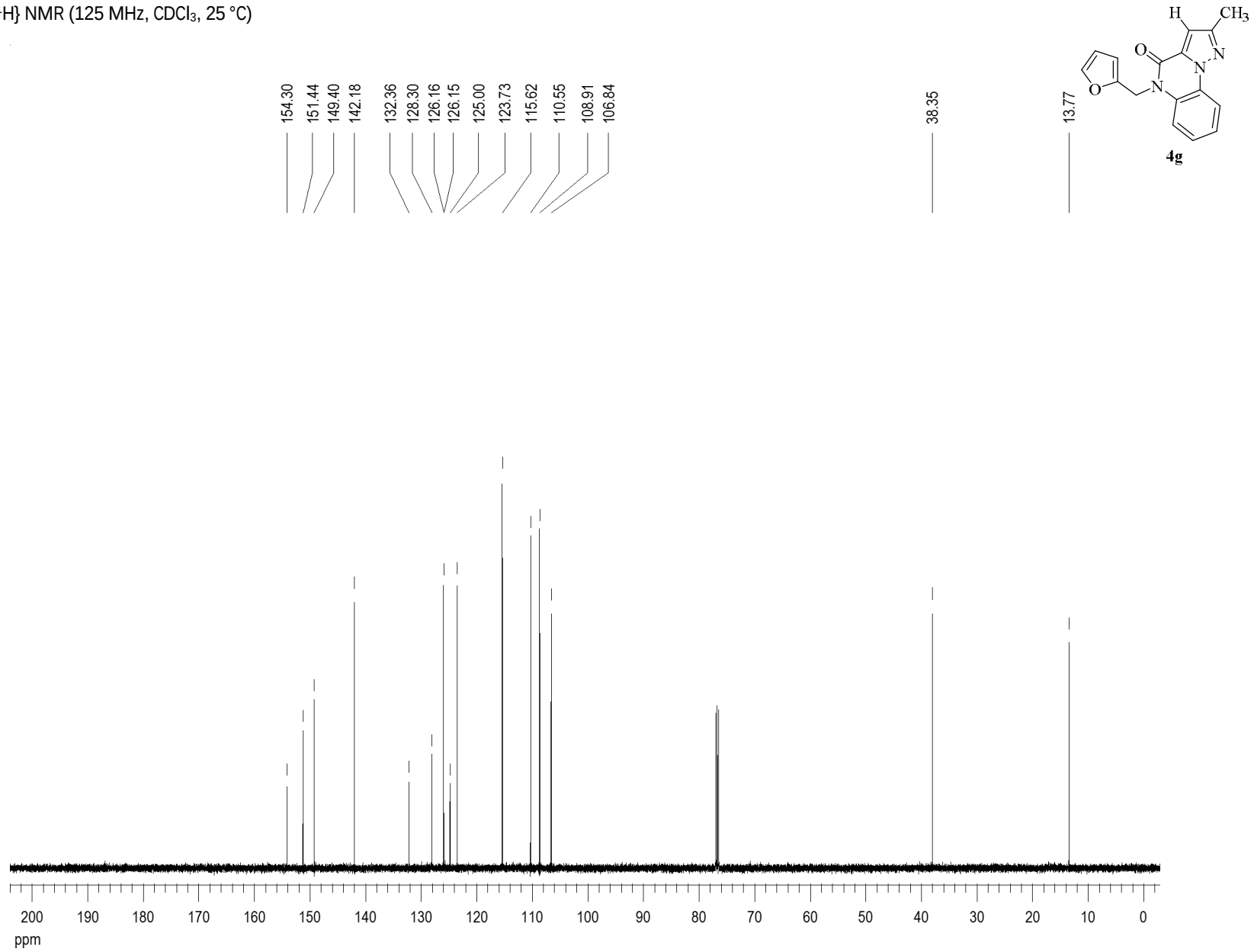
4g – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



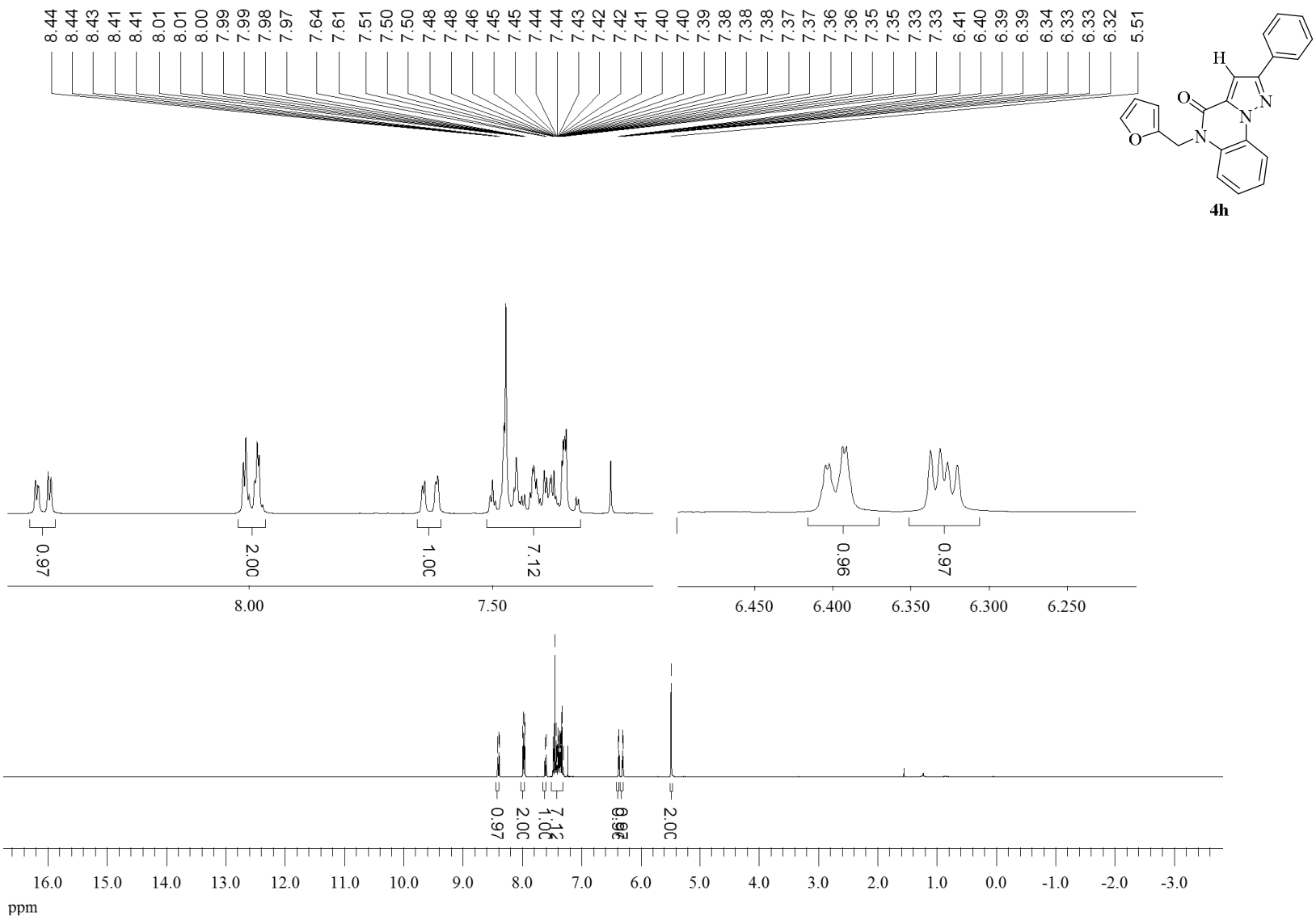
4g



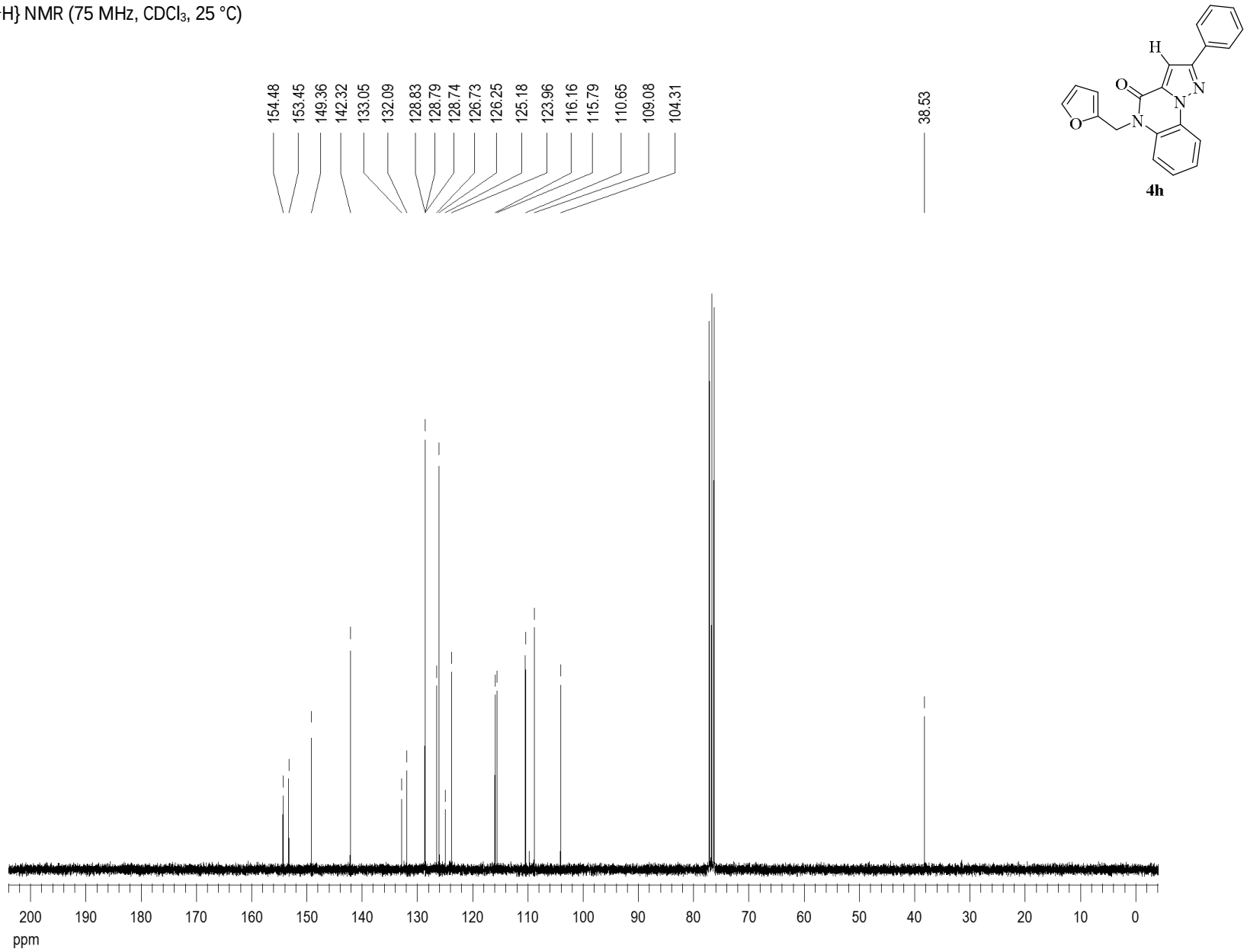
4g – $^{13}C\ \{^{1}H\}$ NMR (125 MHz, $CDCl_3$, 25 °C)



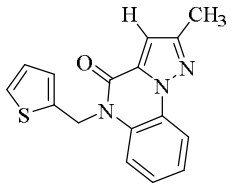
4h – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



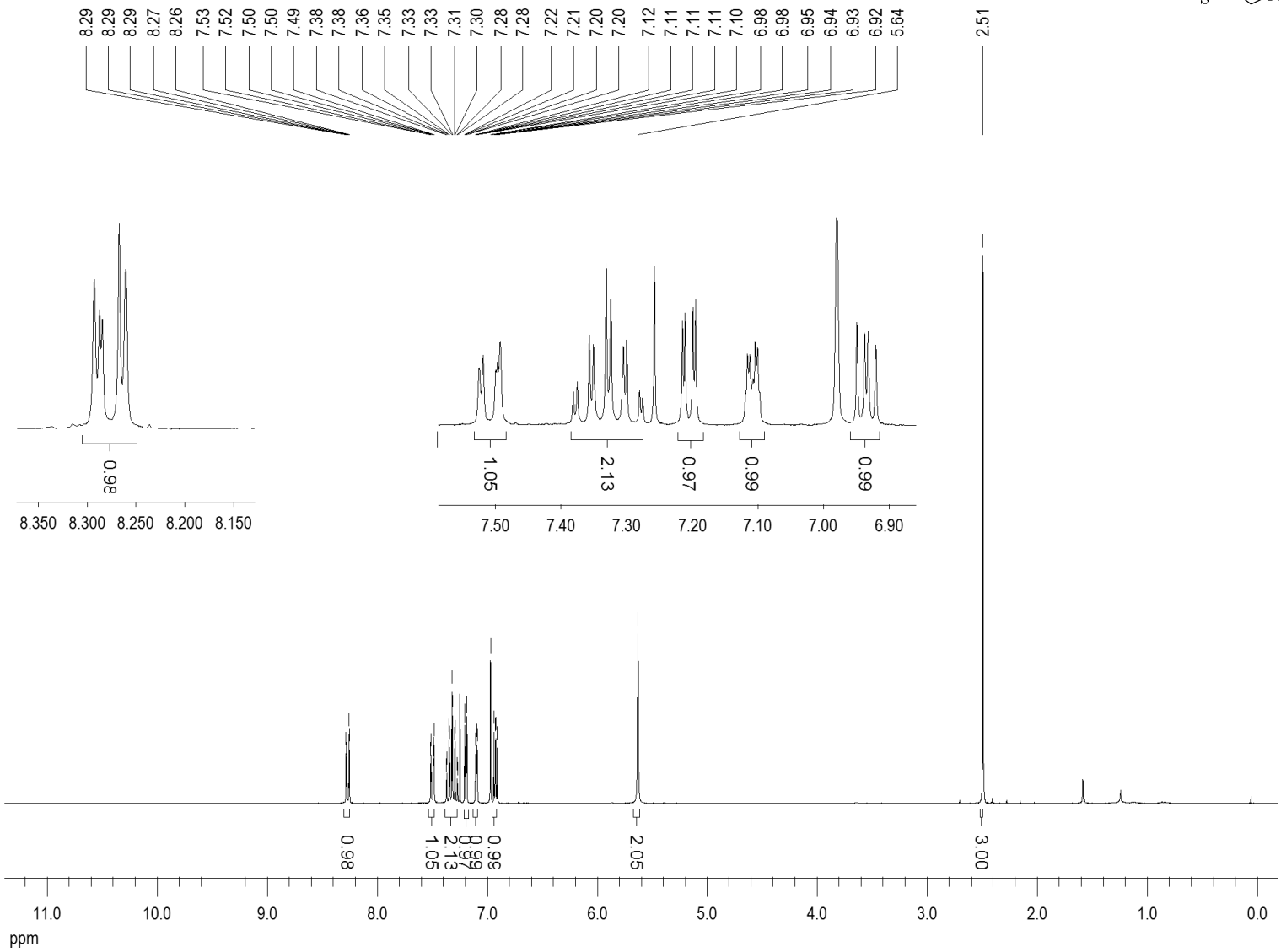
4h – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



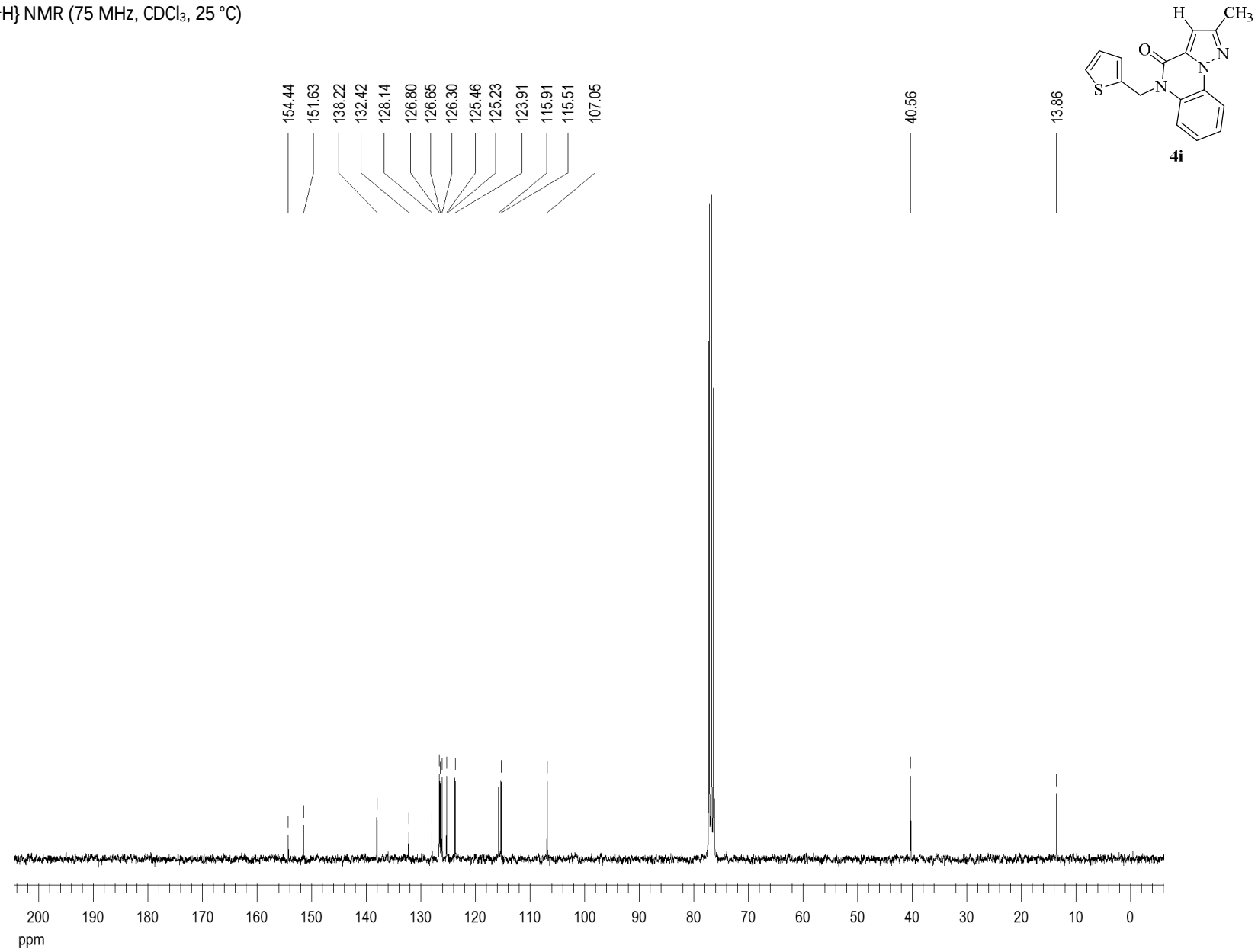
4i – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



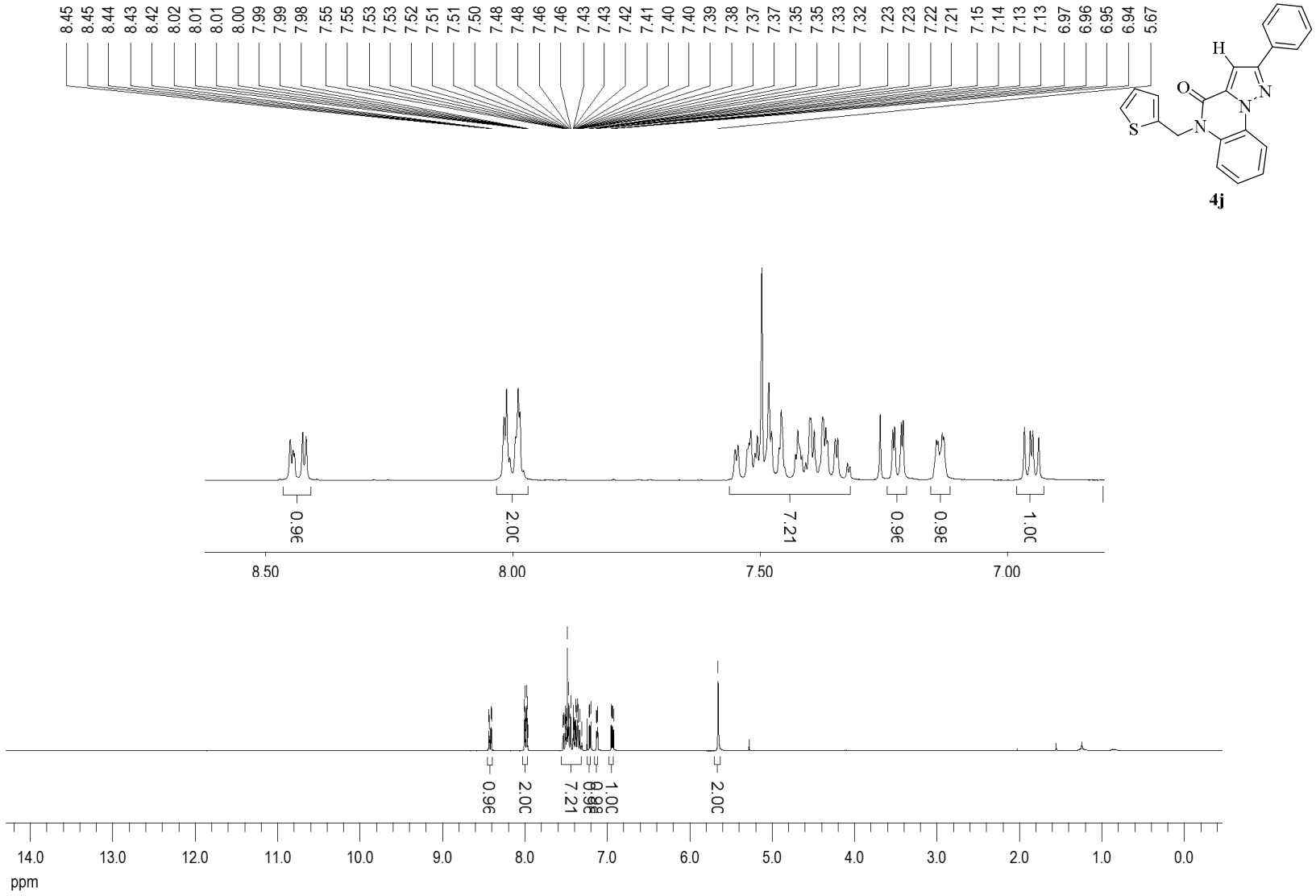
4i



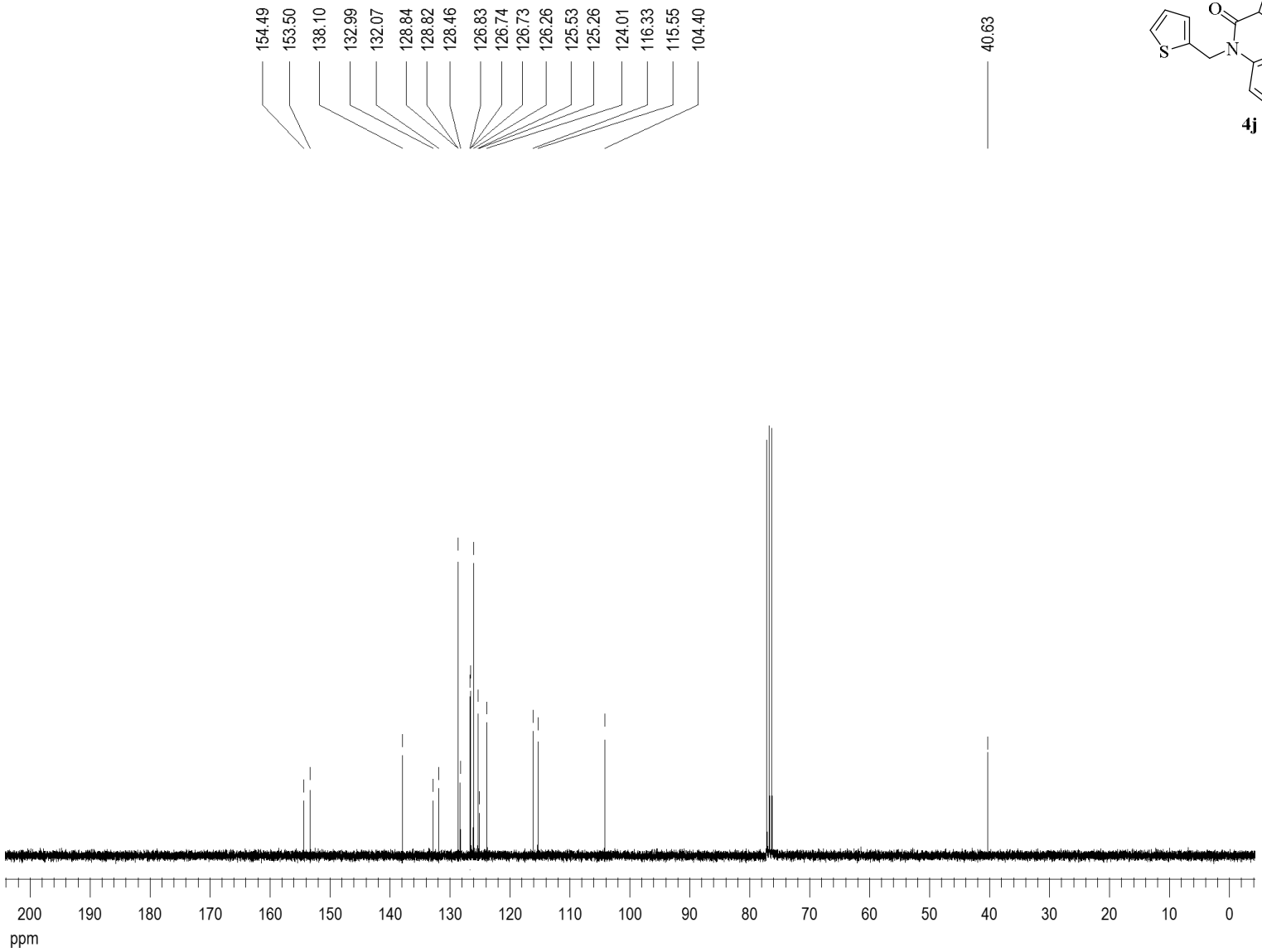
4i – $^{13}C\{^{1}H\}$ NMR (75 MHz, $CDCl_3$, 25 °C)



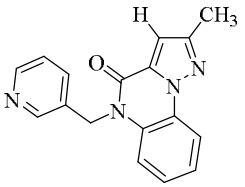
4j – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



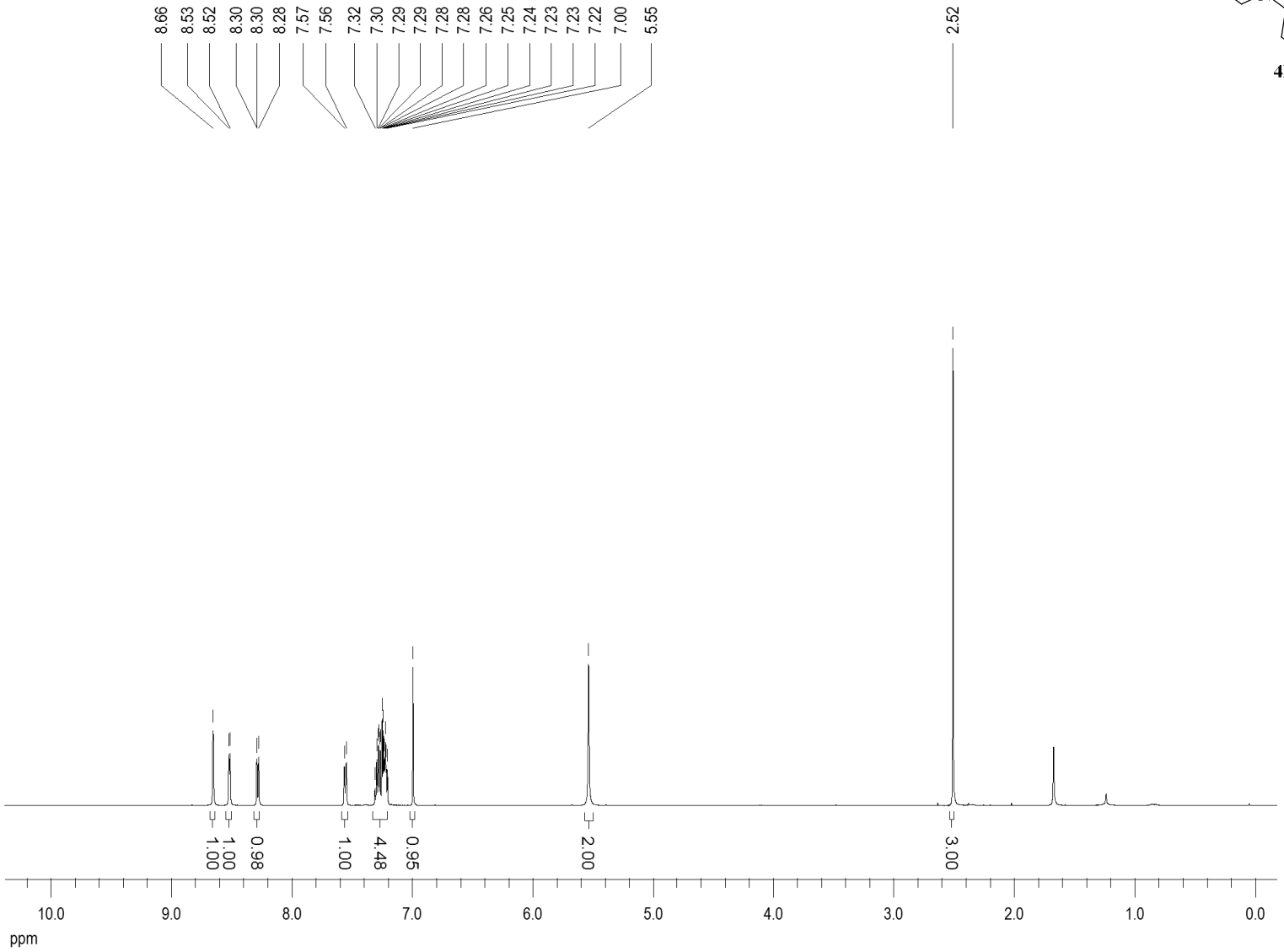
4j – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



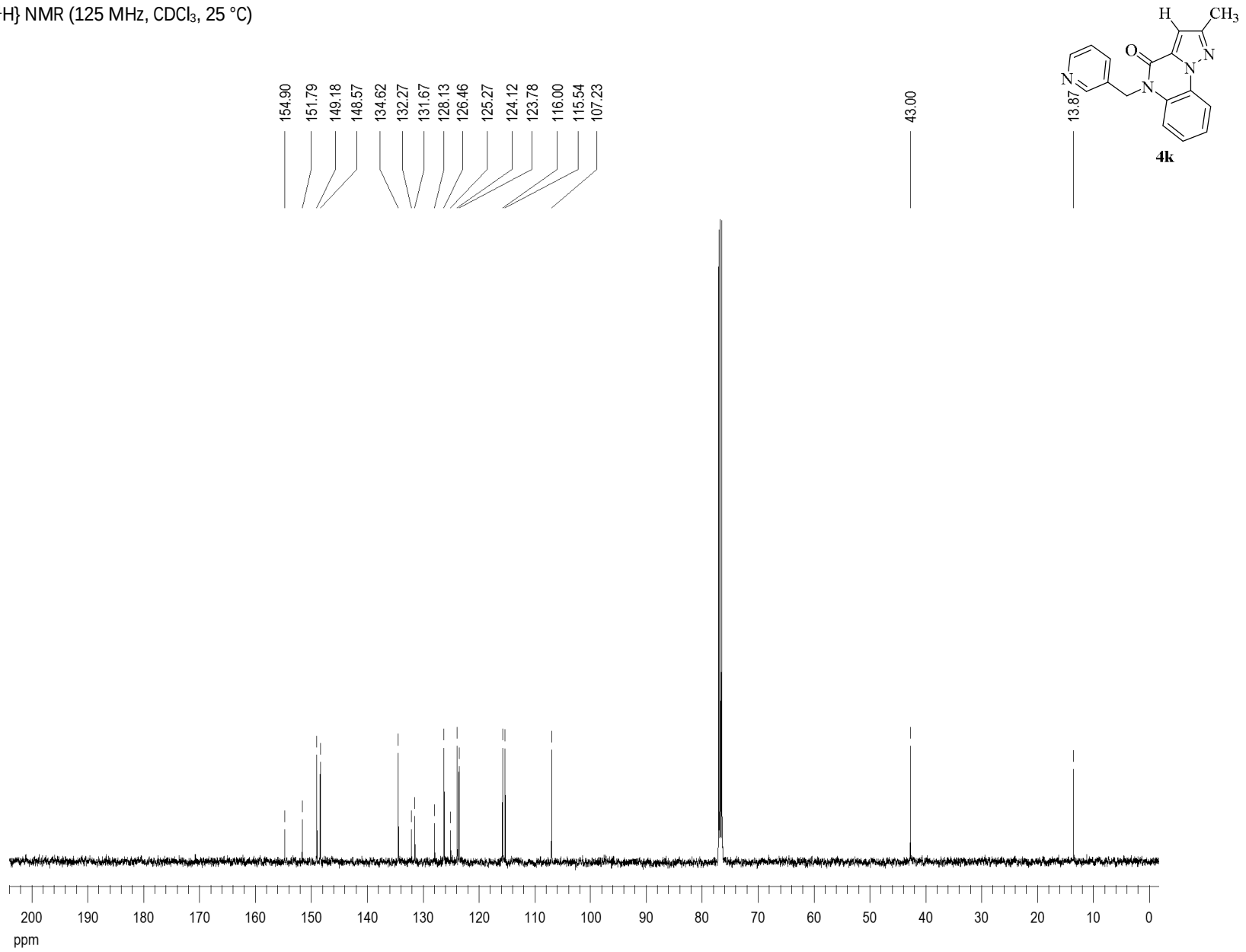
4k – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)



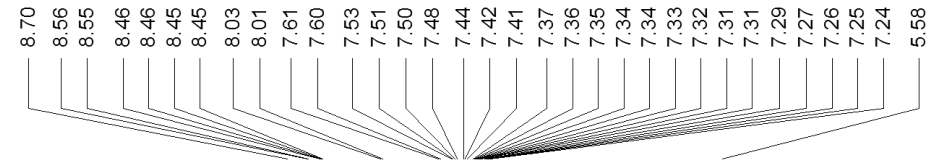
4k

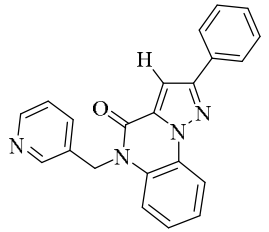


4k – ^{13}C {^{1}H} NMR (125 MHz, $CDCl_3$, 25 °C)

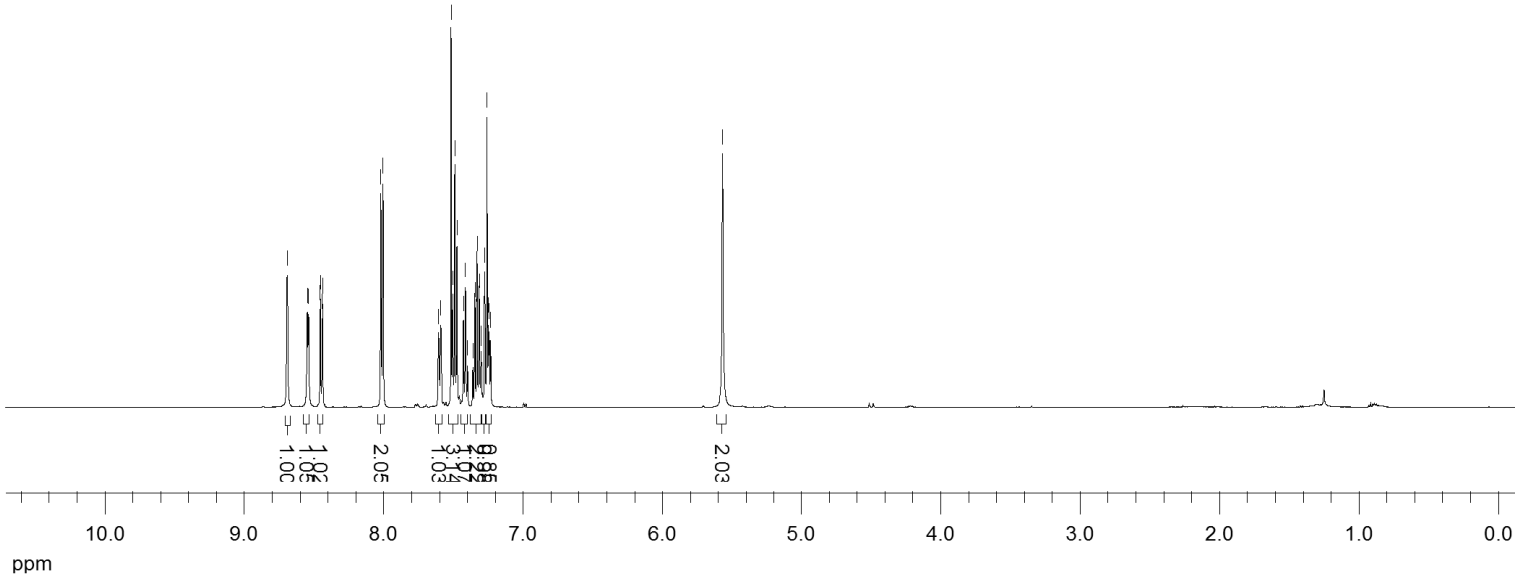


4l – ^{1}H NMR (500 MHz, $CDCl_3$, 25 °C)

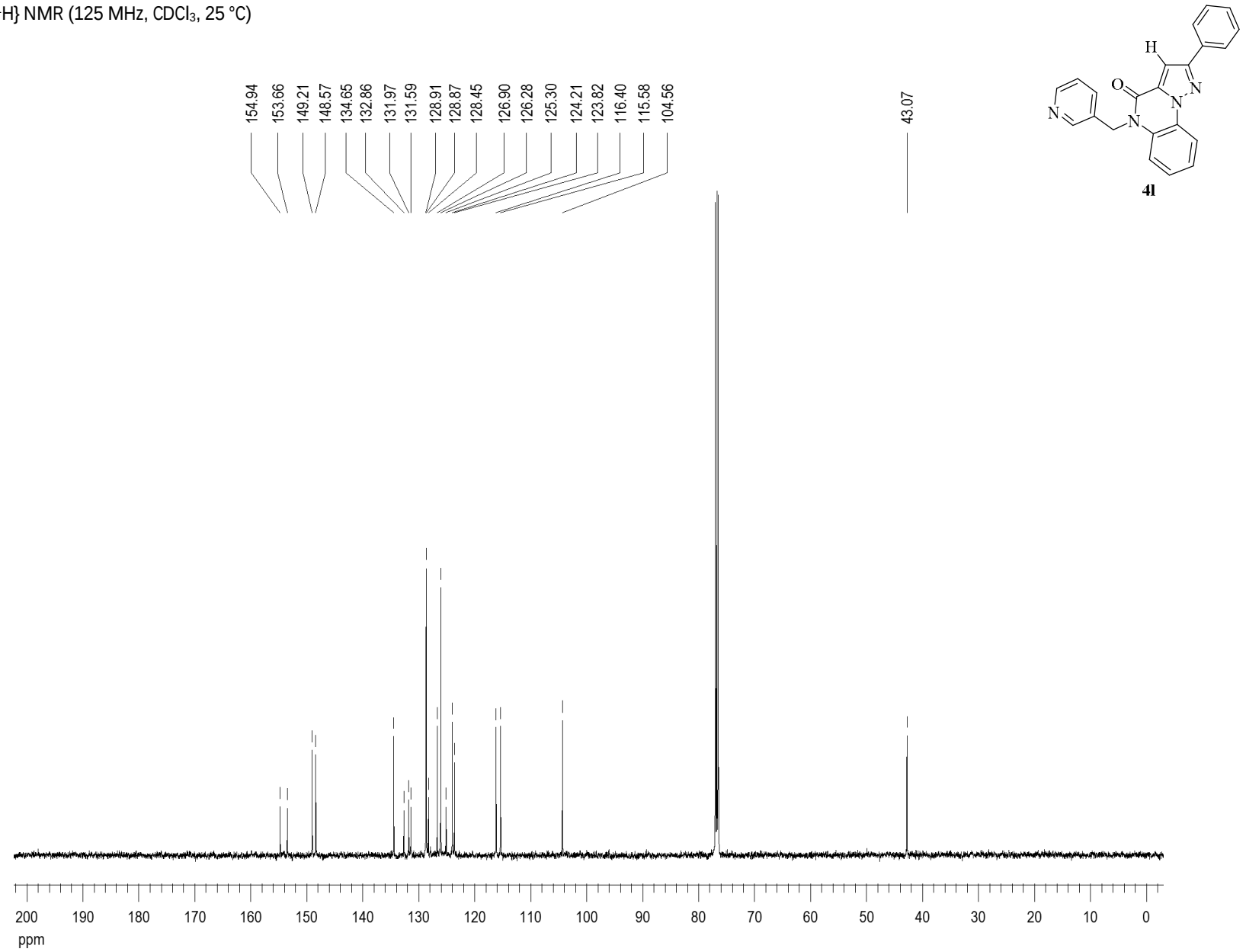




4l

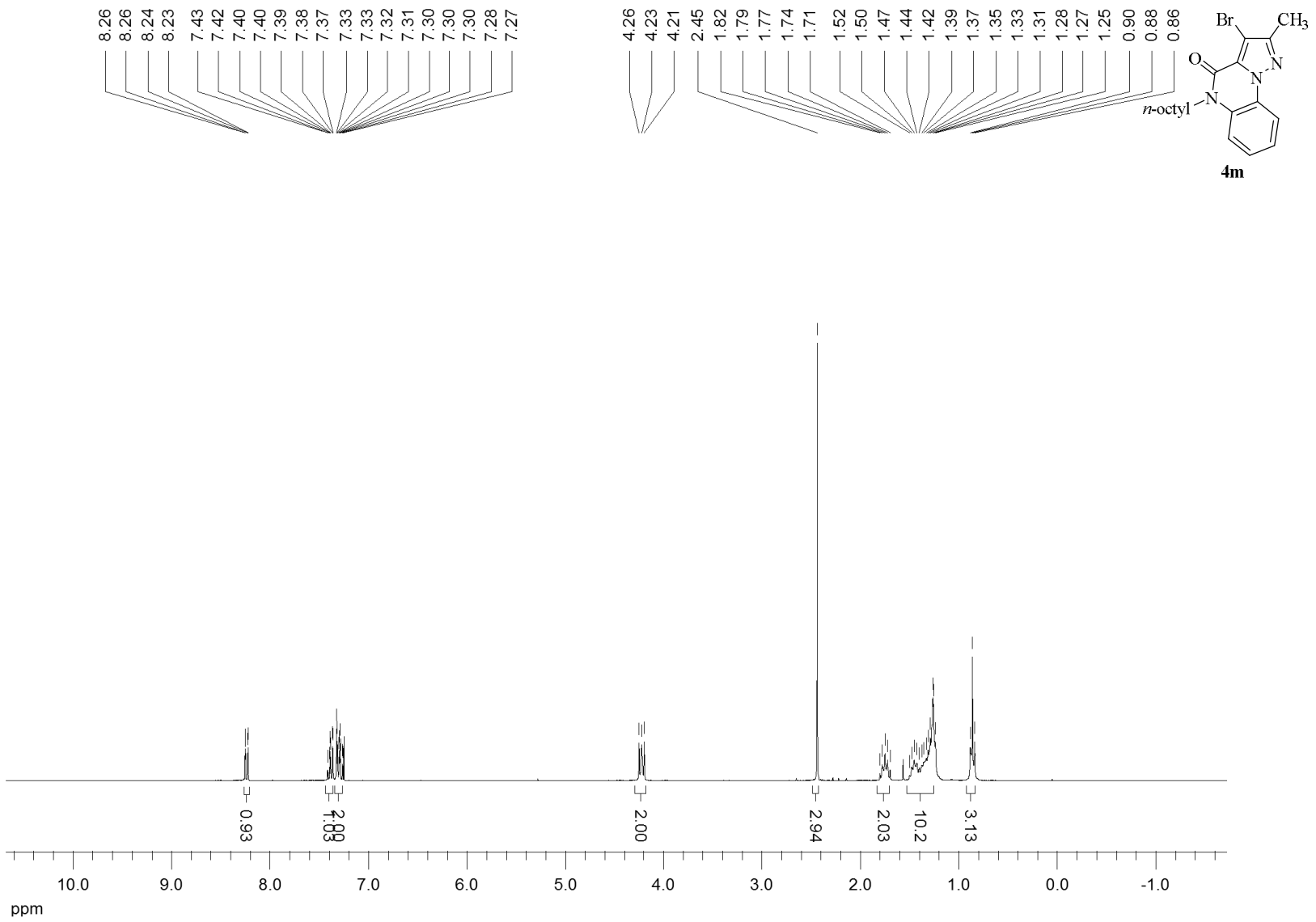


4l – $^{13}C\{^{1}H\}$ NMR (125 MHz, $CDCl_3$, 25 °C)

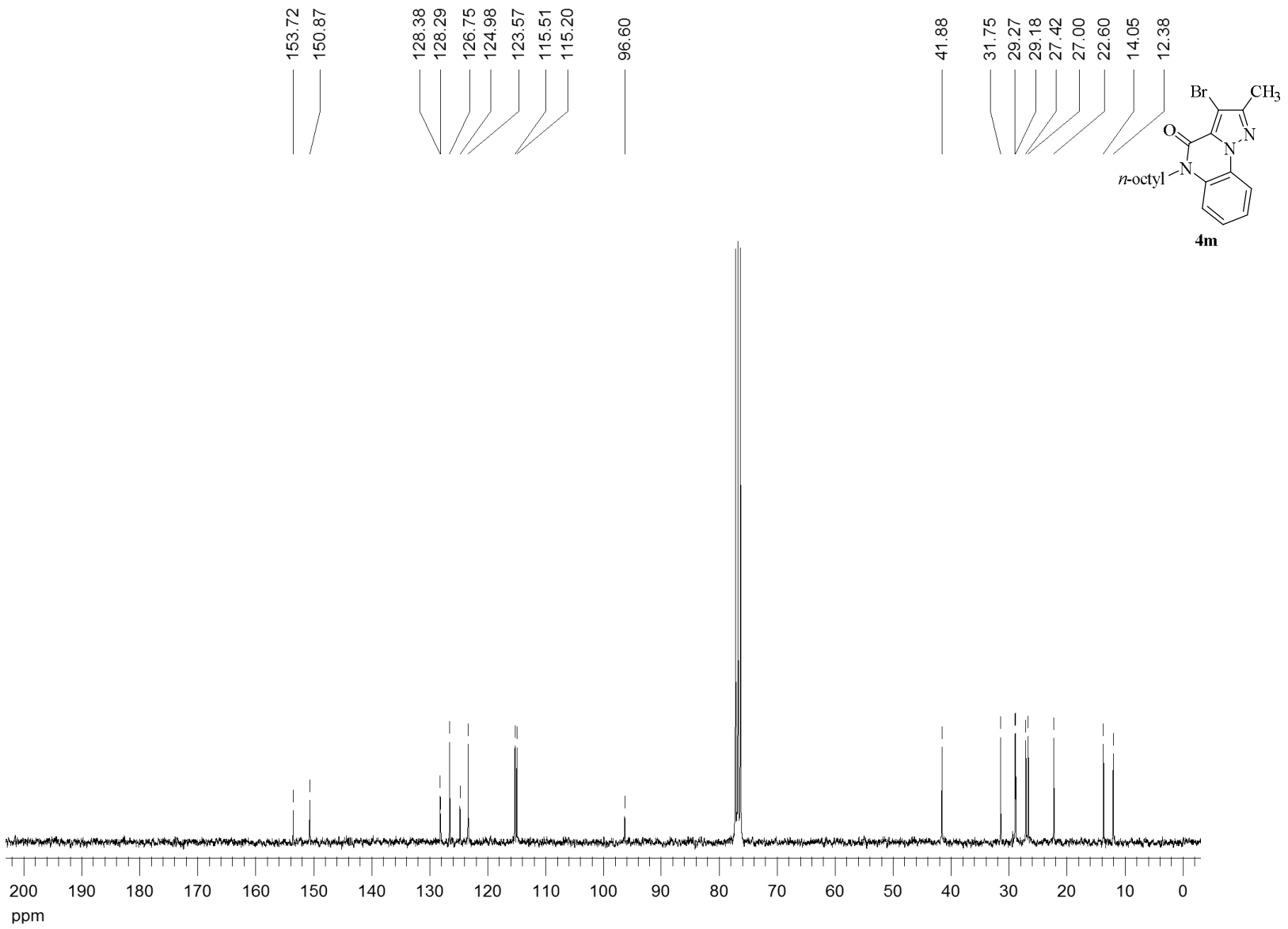


4l

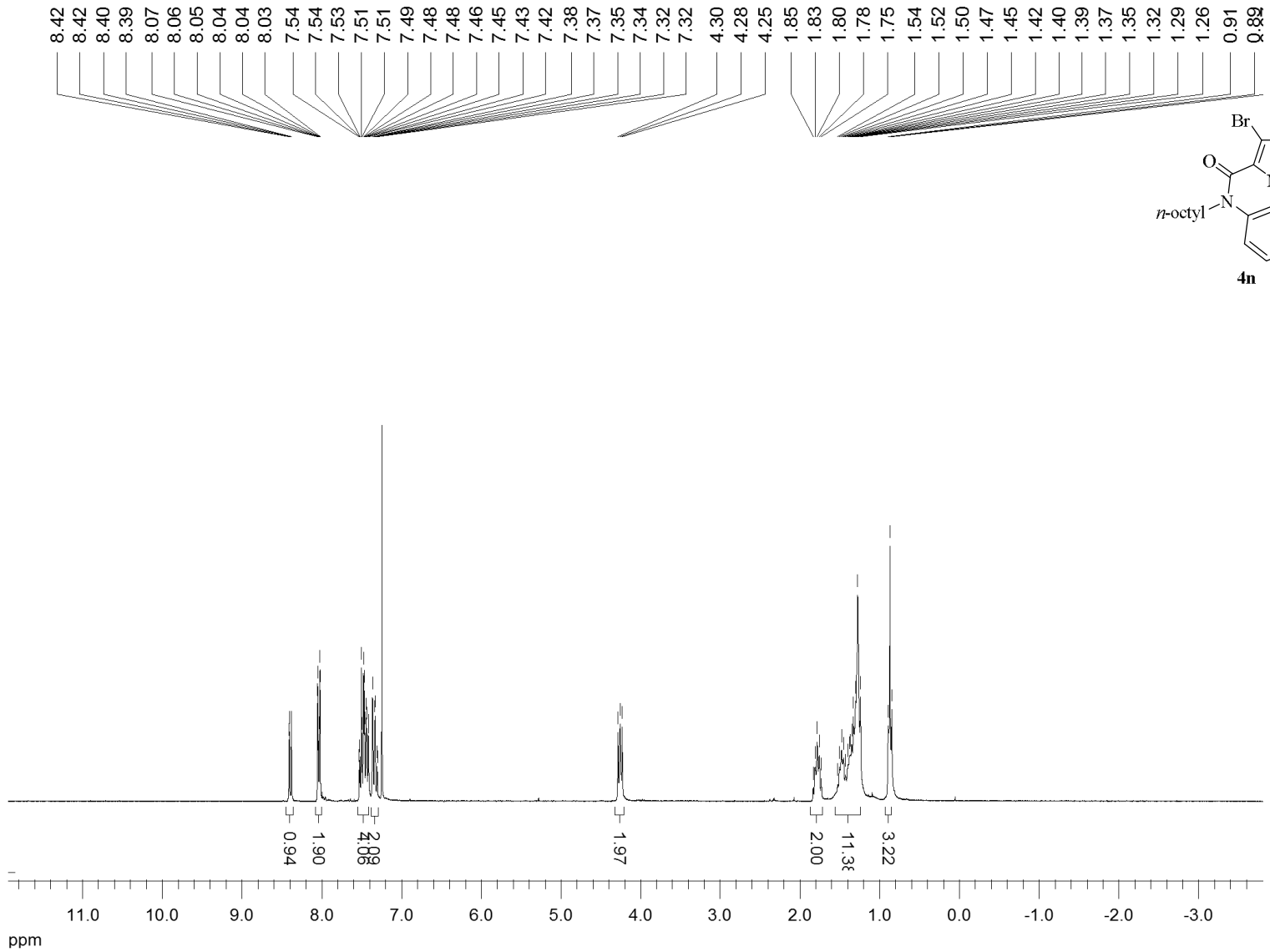
4m – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



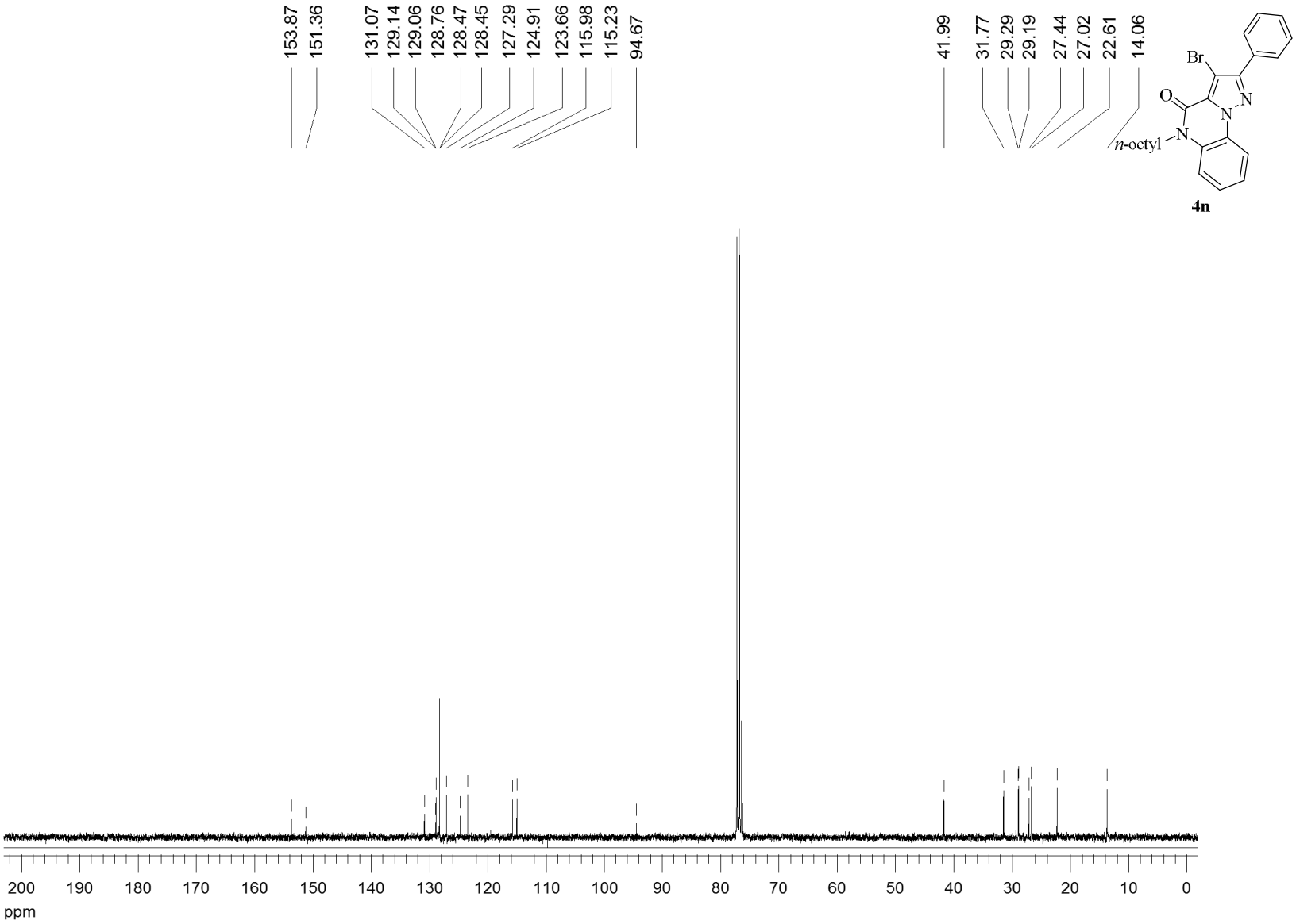
4m – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



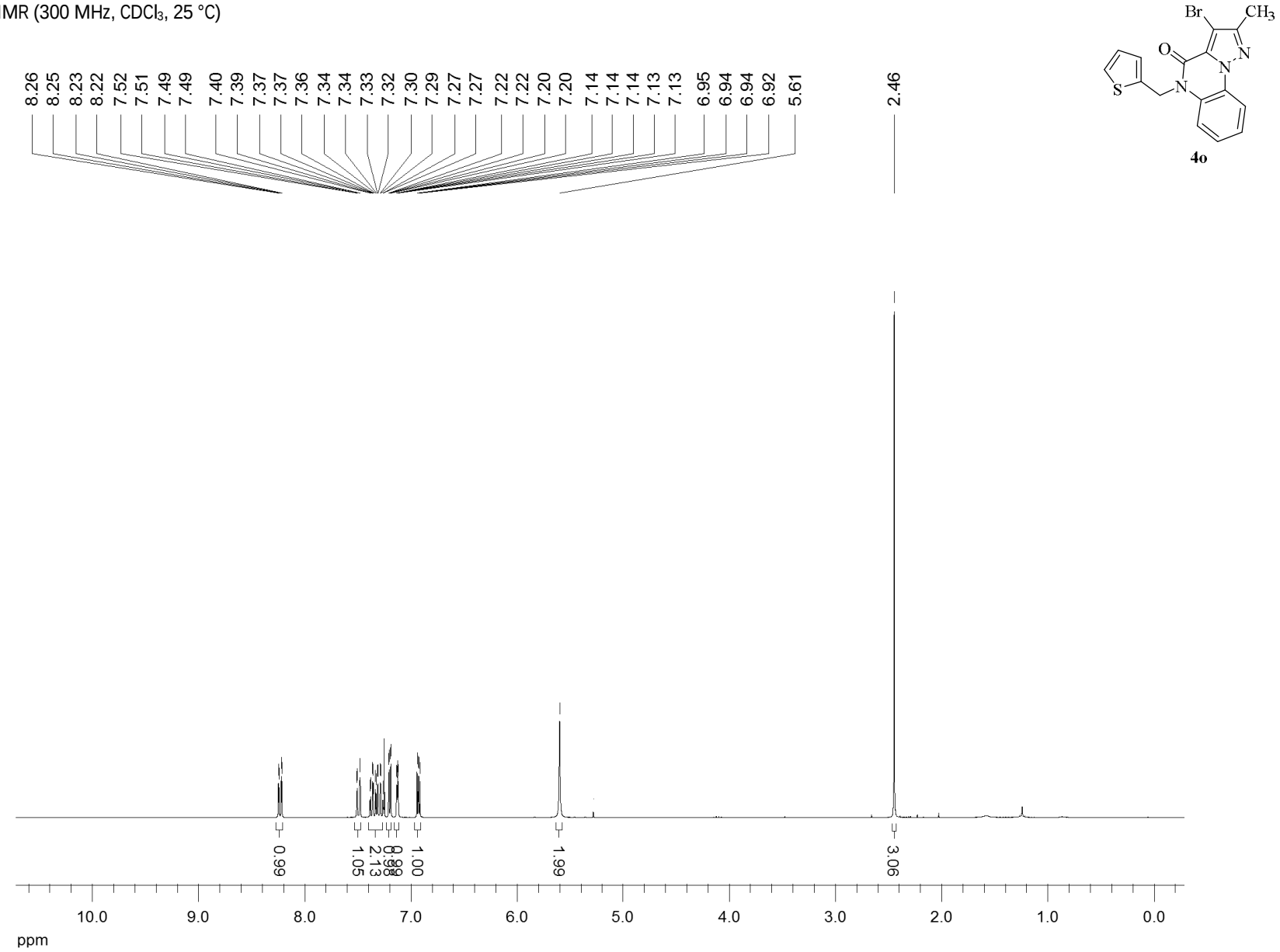
4n – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



4n – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)

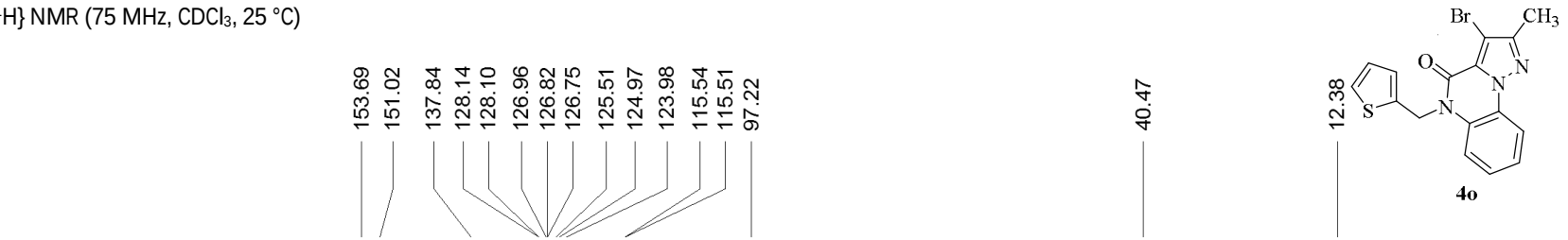


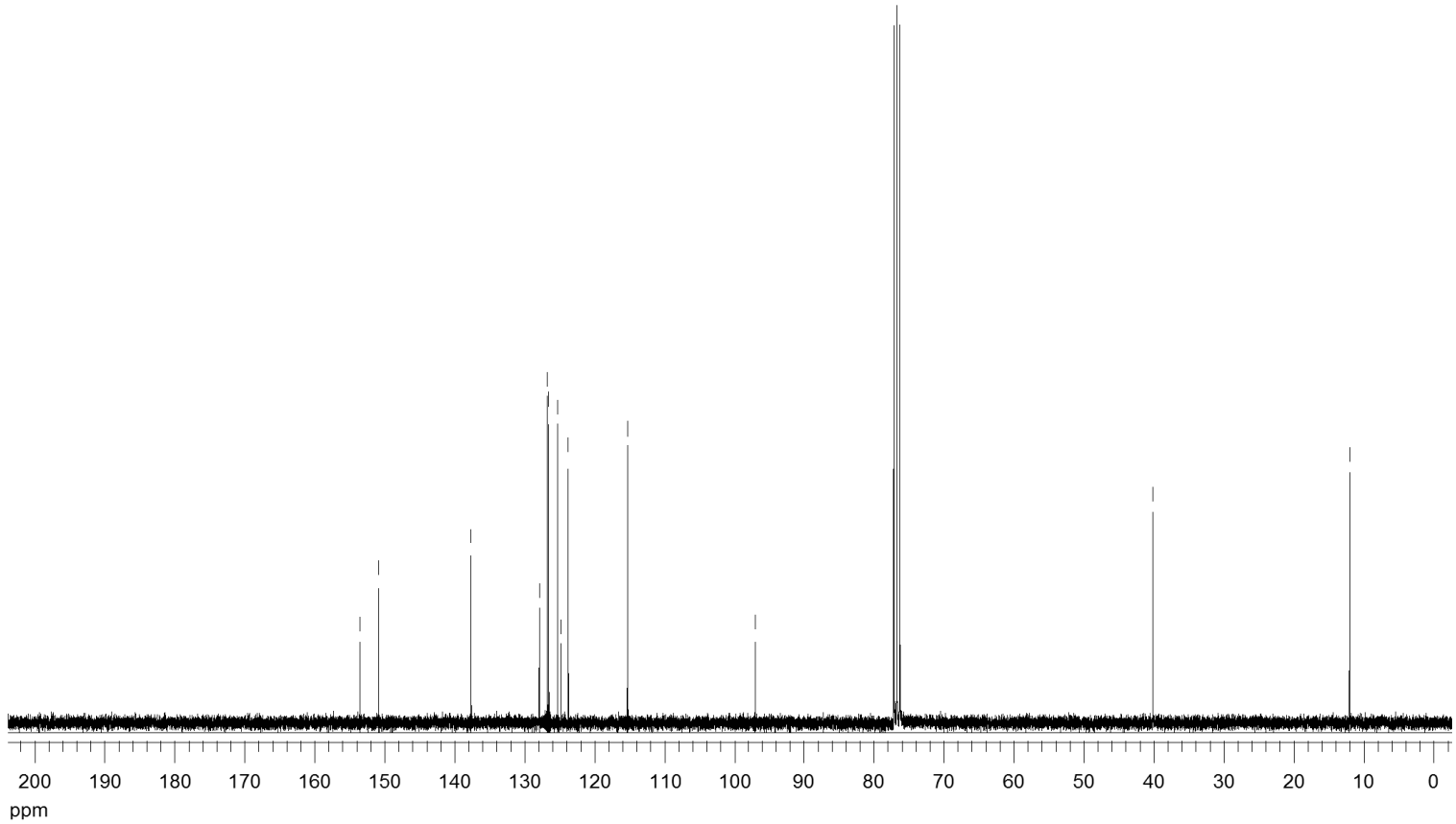
4o – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



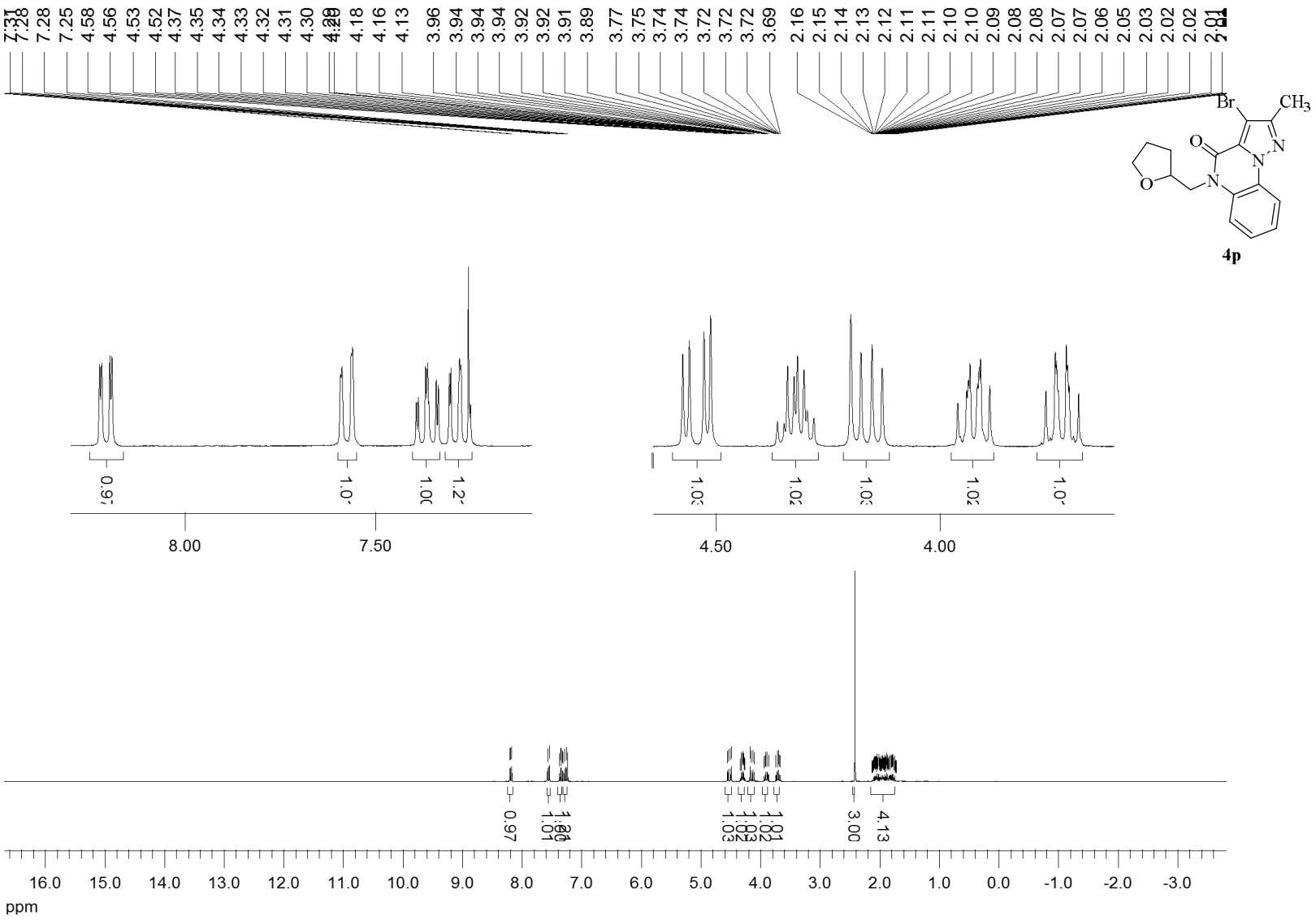
4o

4o – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)

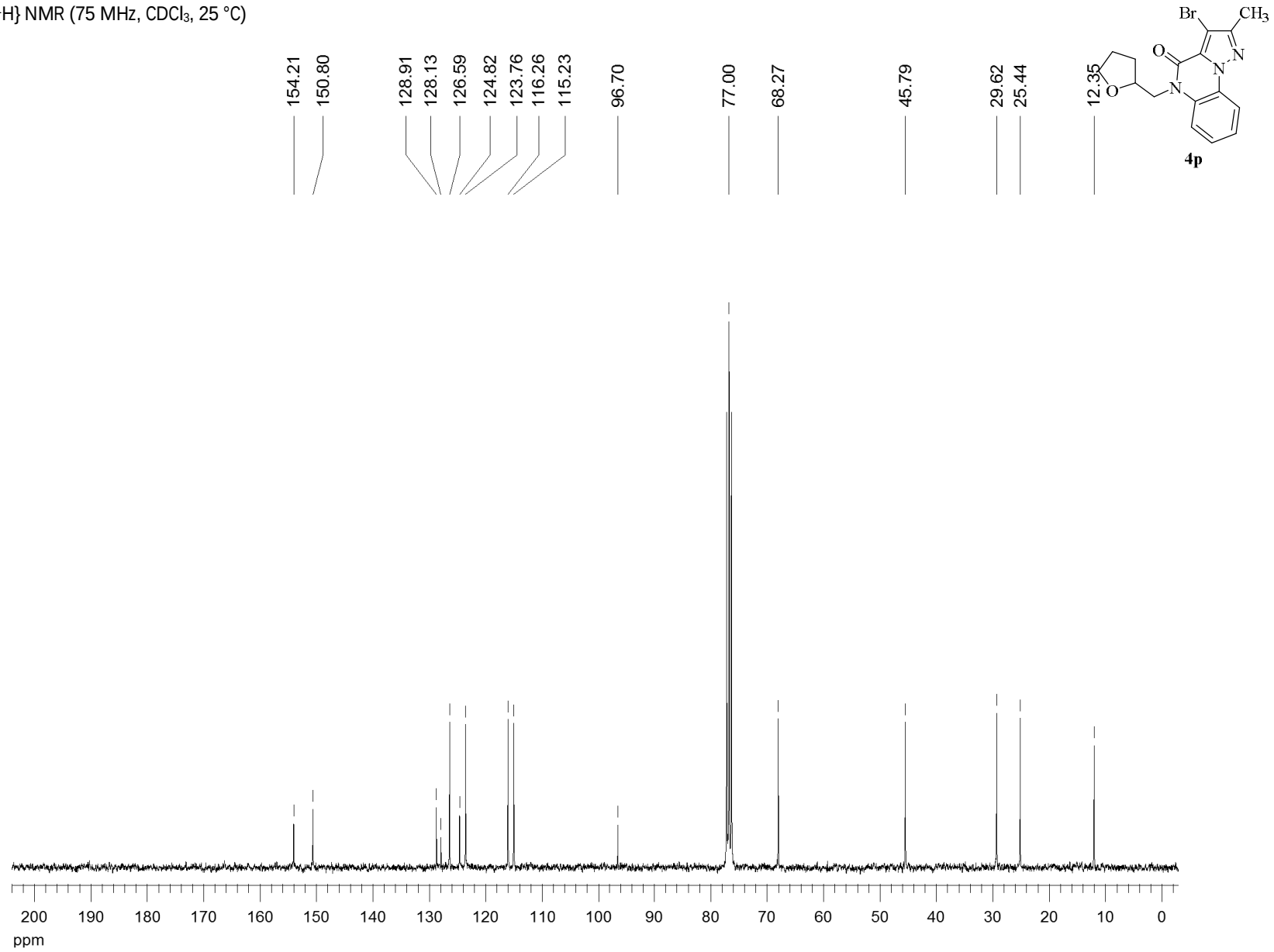




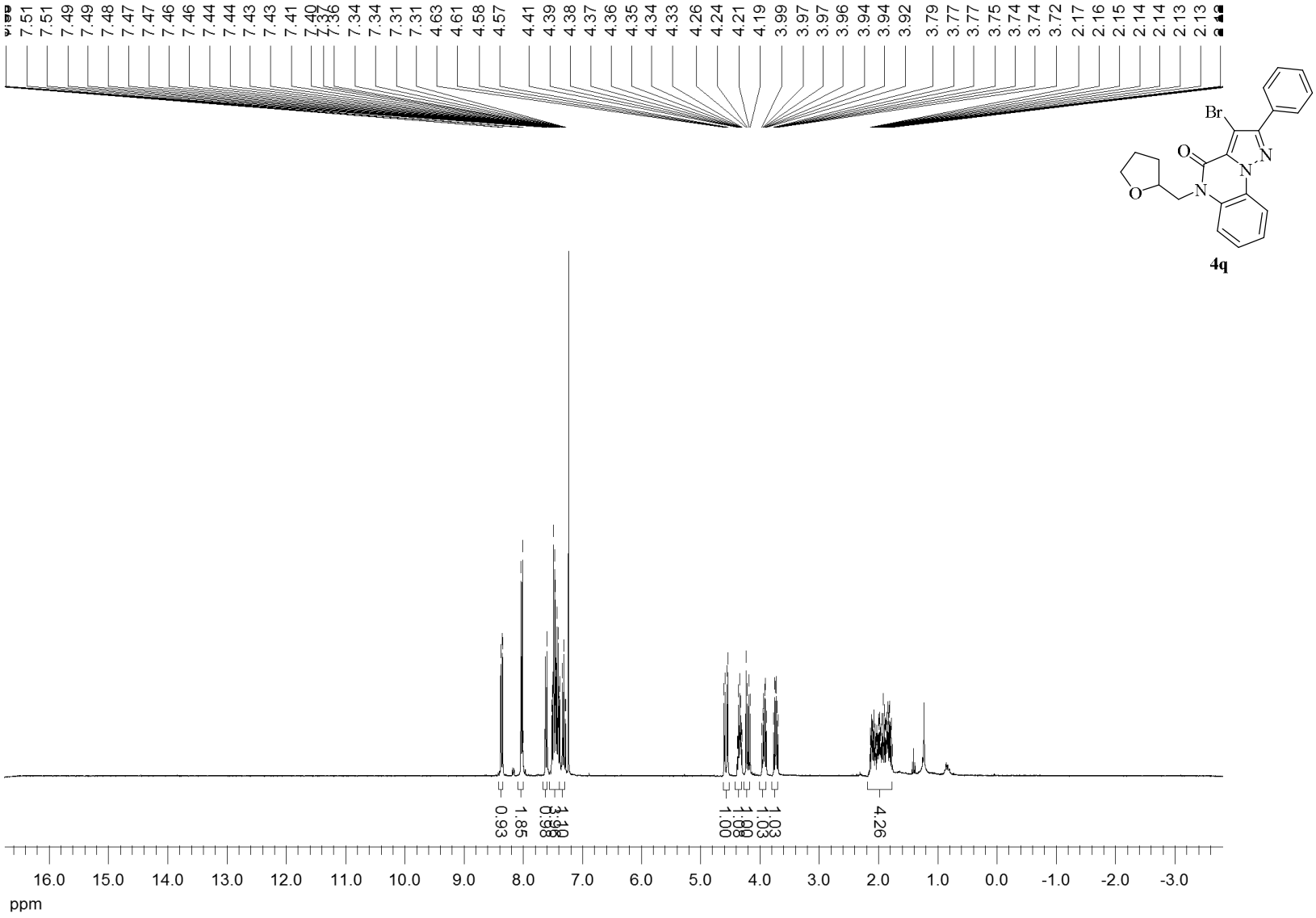
4p – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



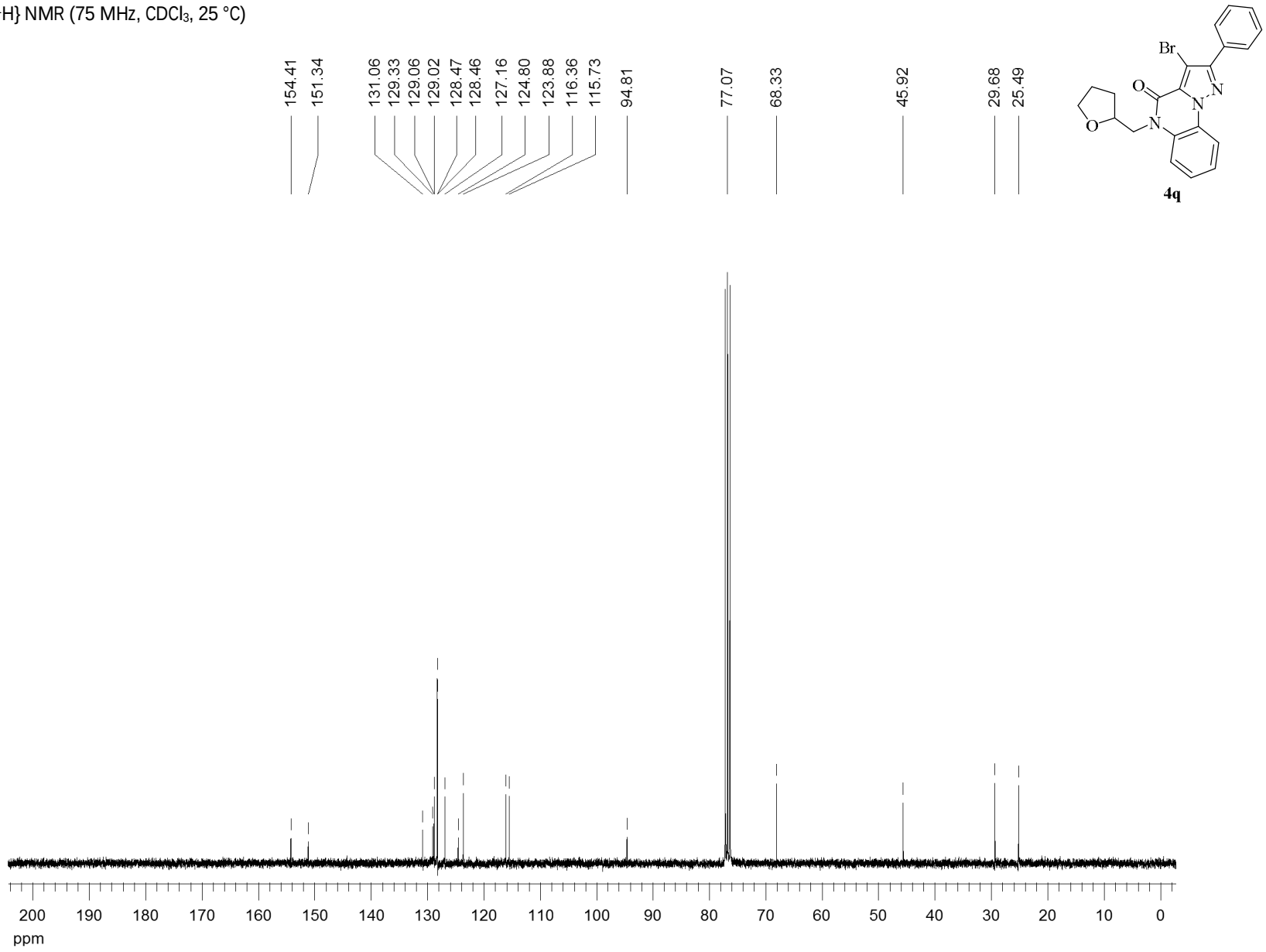
4p – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



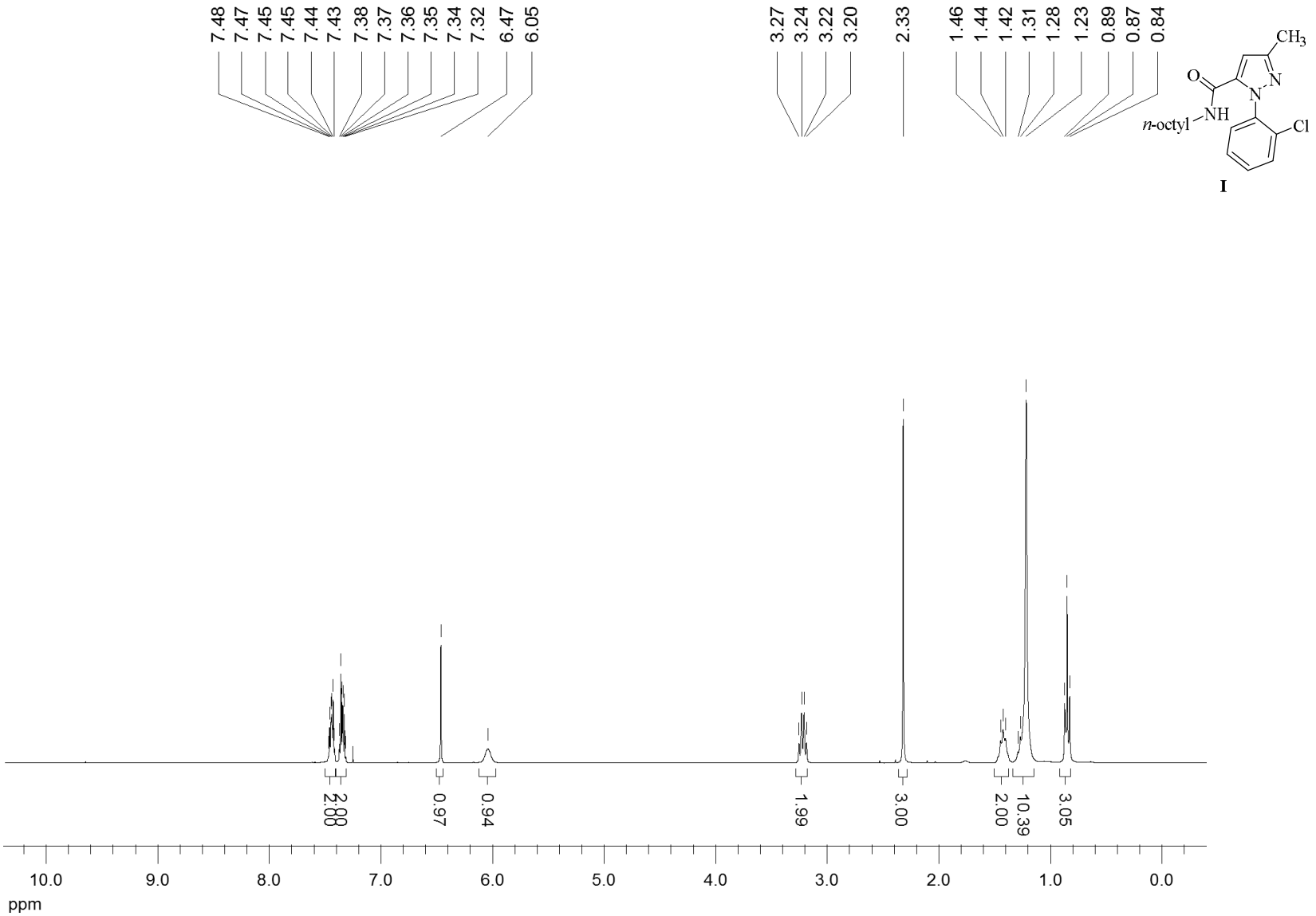
4q – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



4q – ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)



I – ^{1}H NMR (300 MHz, $CDCl_3$, 25 °C)



I - ^{13}C {^{1}H} NMR (75 MHz, $CDCl_3$, 25 °C)