

Supporting Information

Iron-catalyzed cascade reaction of 2-aminobenzyl alcohols with benzylamines: synthesis of quinazolines by trapping of ammonia

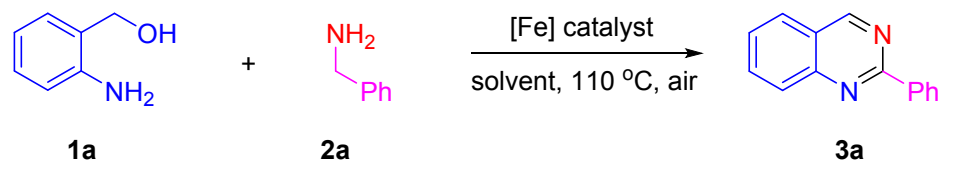
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Table of Contents

Screening of Different Reaction Conditions	2
¹HNMR & ¹³CNMR Spectra of Compounds 3a-3n	3-16
¹HNMR & ¹³CNMR Spectra of Compounds 4a-4n	17-32
¹HNMR & ¹³CNMR Spectra of Compounds 5, 6, 7, 9 and 10	33-36

Table S1. Optimization of the Reaction Conditions^a

			
Entry	Catalyst	Solvent	Yield (%) ^b
1	FeBr ₂	chlorobenzene	73
2	Fe(OAc) ₂	chlorobenzene	41
3	FeSO ₄ ·7H ₂ O	chlorobenzene	47
4	FeC ₂ O ₄ ·2H ₂ O	chlorobenzene	33
5	FeF ₃	chlorobenzene	25
6	Fe(NO ₃) ₃	chlorobenzene	19
7	FeBr ₂	1,4-dioxane	54
8	FeBr ₂	DMA	trace
9	FeBr ₂	NMP	trace

^a Reaction conditions: **1a** (1.0 mmol), **2a** (1.3 mmol), Fe catalyst (10 mol %), solvent (1 mL), 110 °C, air atmosphere, 24h. ^b Yields of the isolated product.

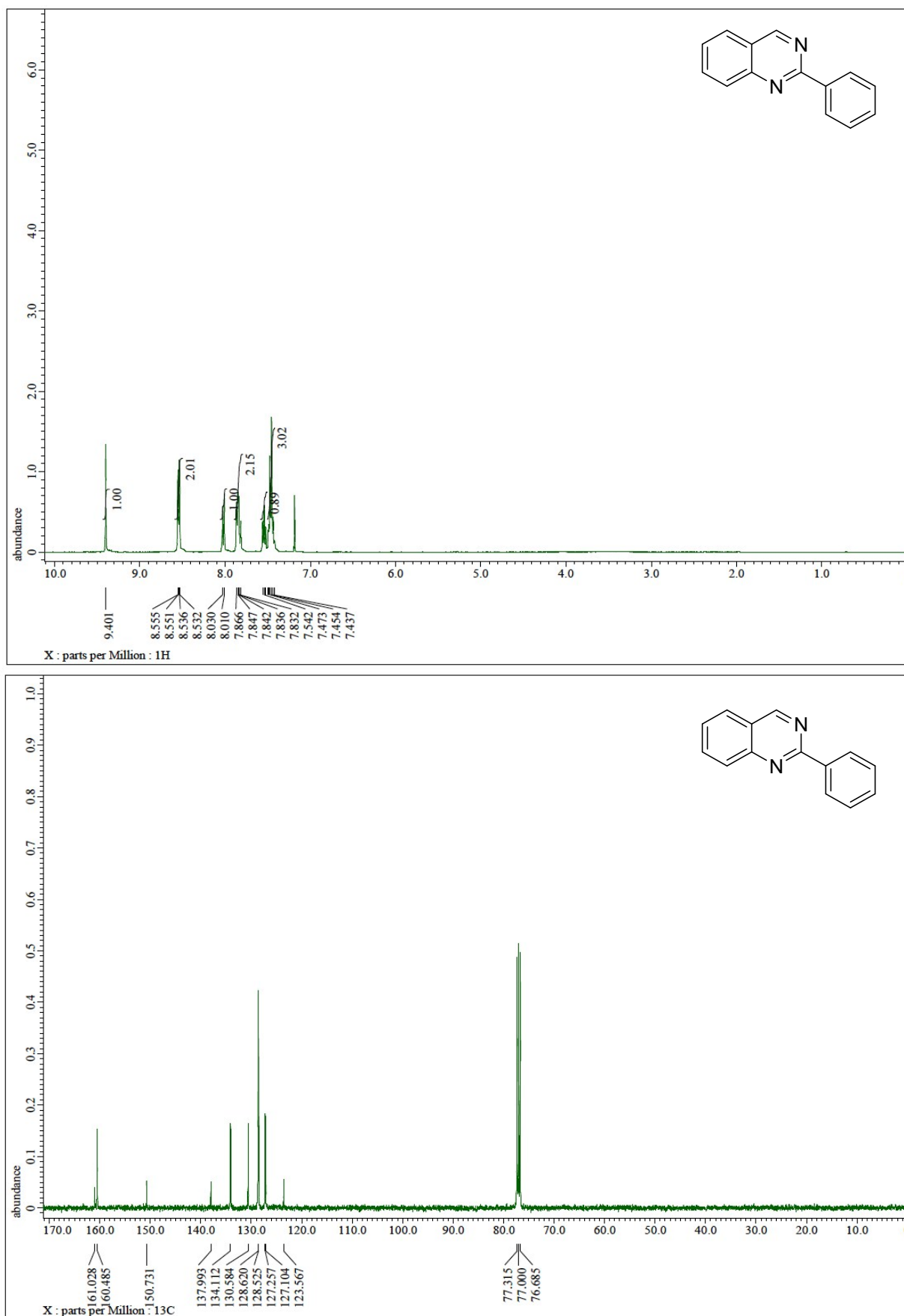


Figure S1. ¹H NMR of **3a** (400 MHz, CDCl₃) and ¹³C NMR of **3a** (100 MHz, CDCl₃).

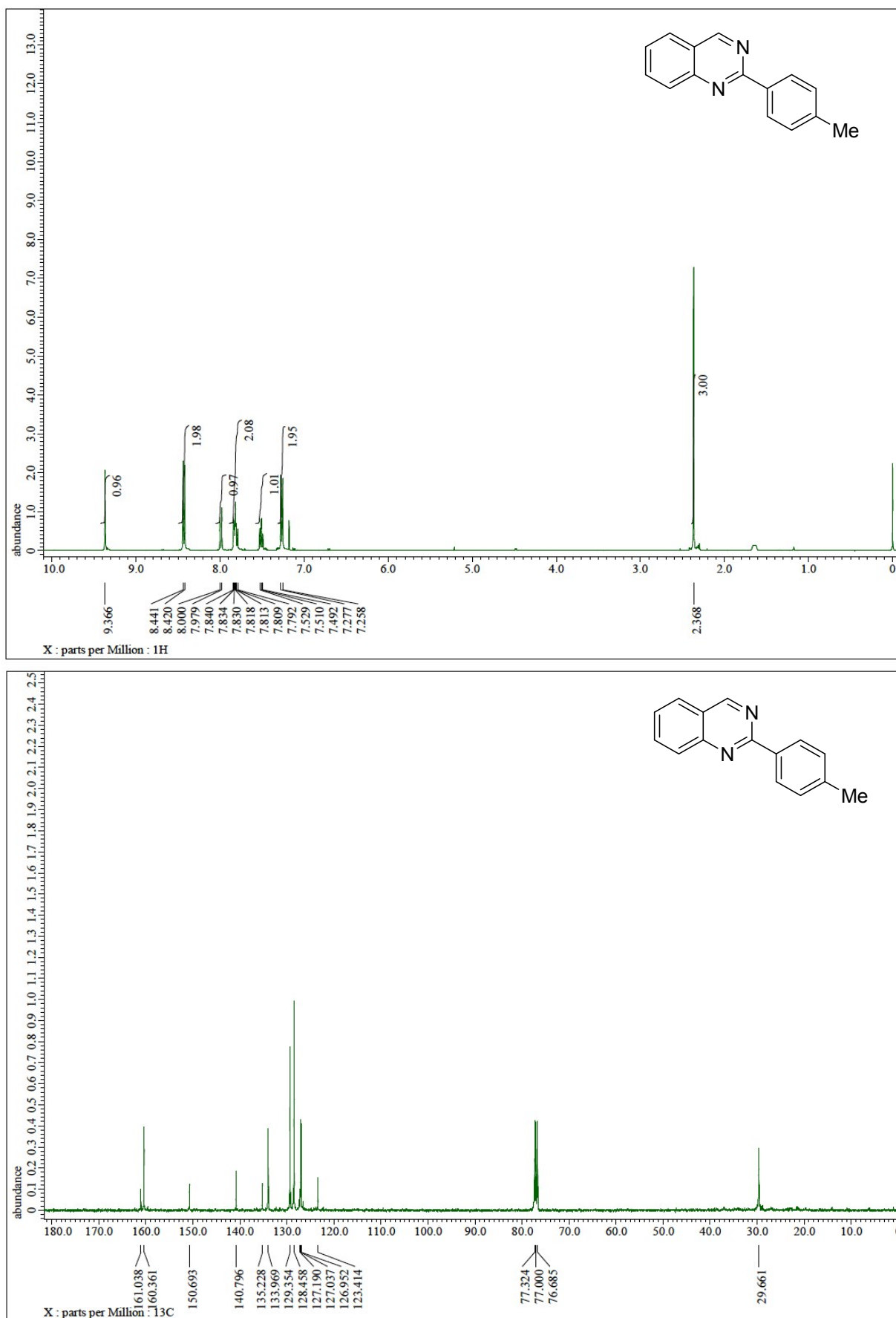


Figure S2. ¹H NMR of **3b** (400 MHz, CDCl₃) and ¹³C NMR of **3b** (100 MHz, CDCl₃).

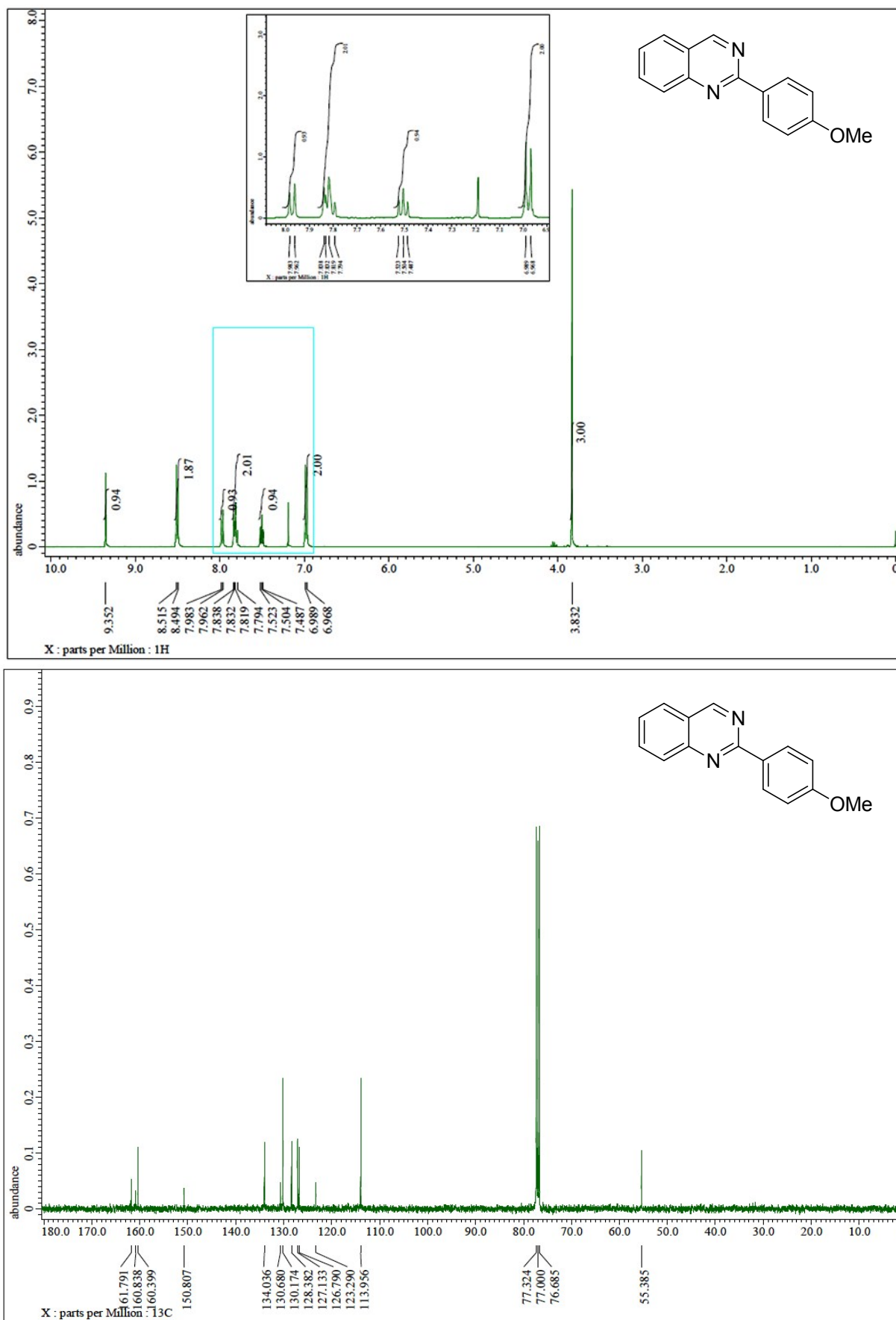


Figure S3. ¹H NMR of **3c** (400 MHz, CDCl₃) and ¹³C NMR of **3c** (100 MHz, CDCl₃).

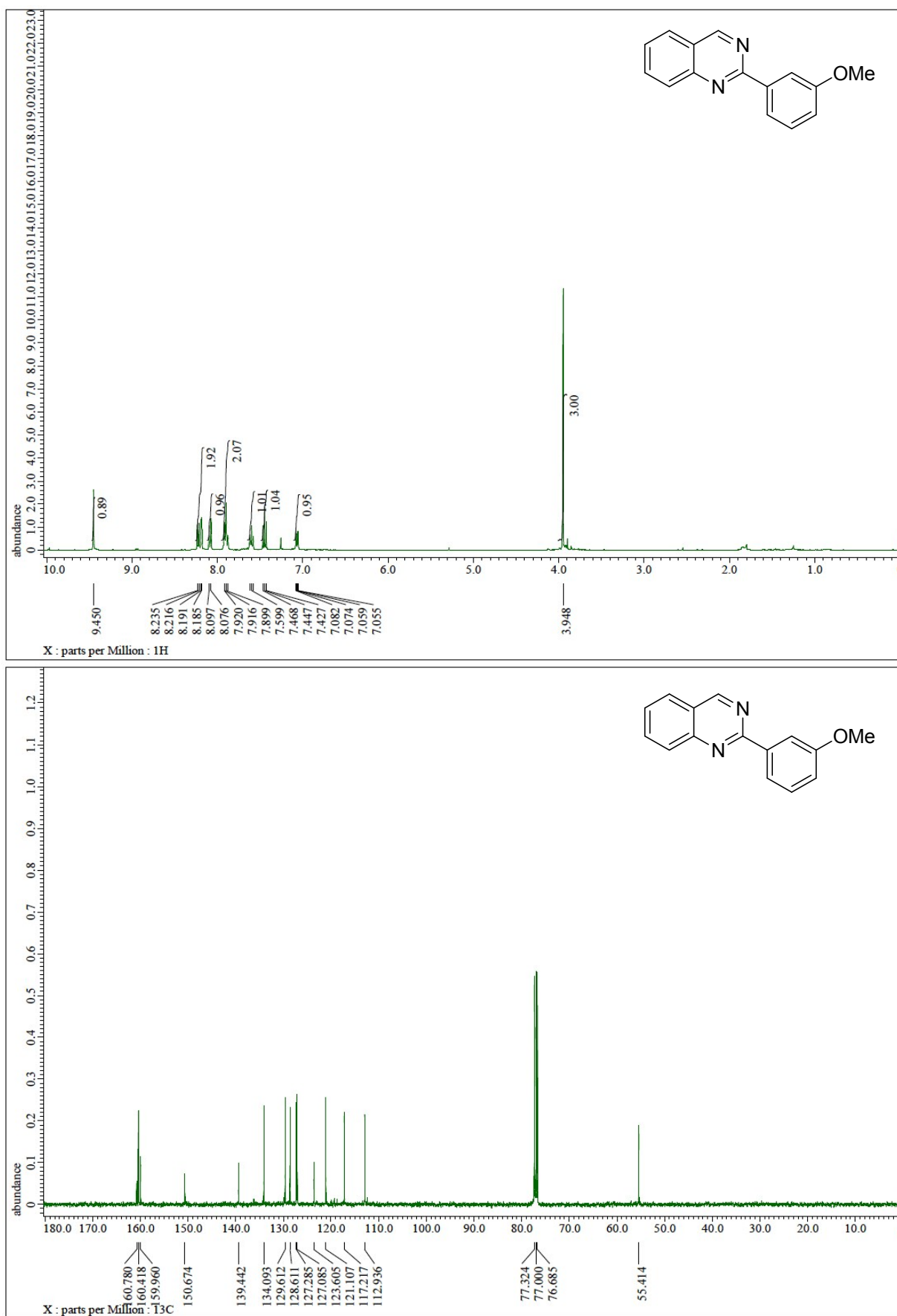


Figure S4. ^1H NMR of **3d** (400 MHz, CDCl_3) and ^{13}C NMR of **3d** (100 MHz, CDCl_3).

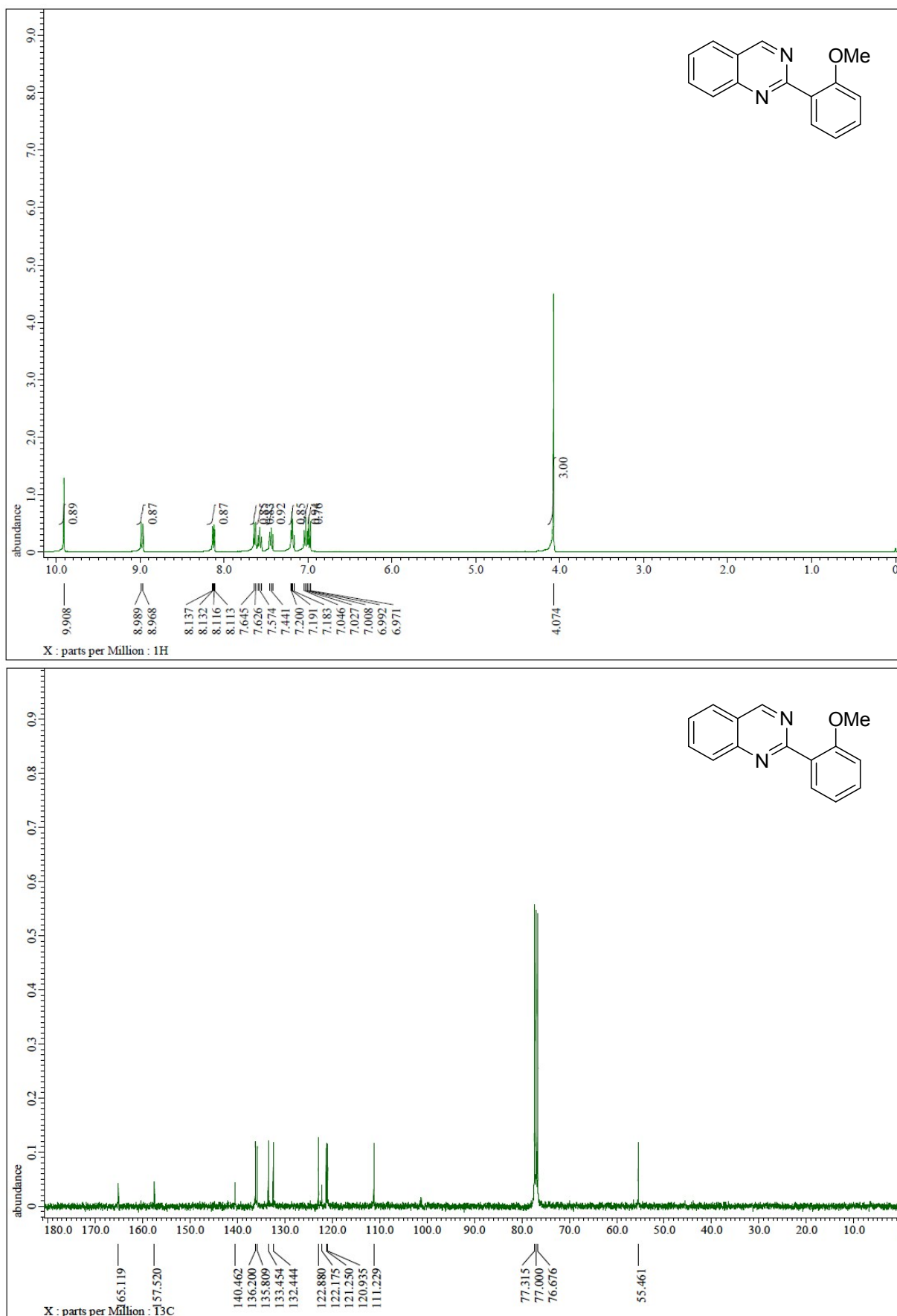


Figure S5. ¹H NMR of **3e** (400 MHz, CDCl₃) and ¹³C NMR of **3e** (100 MHz, CDCl₃).

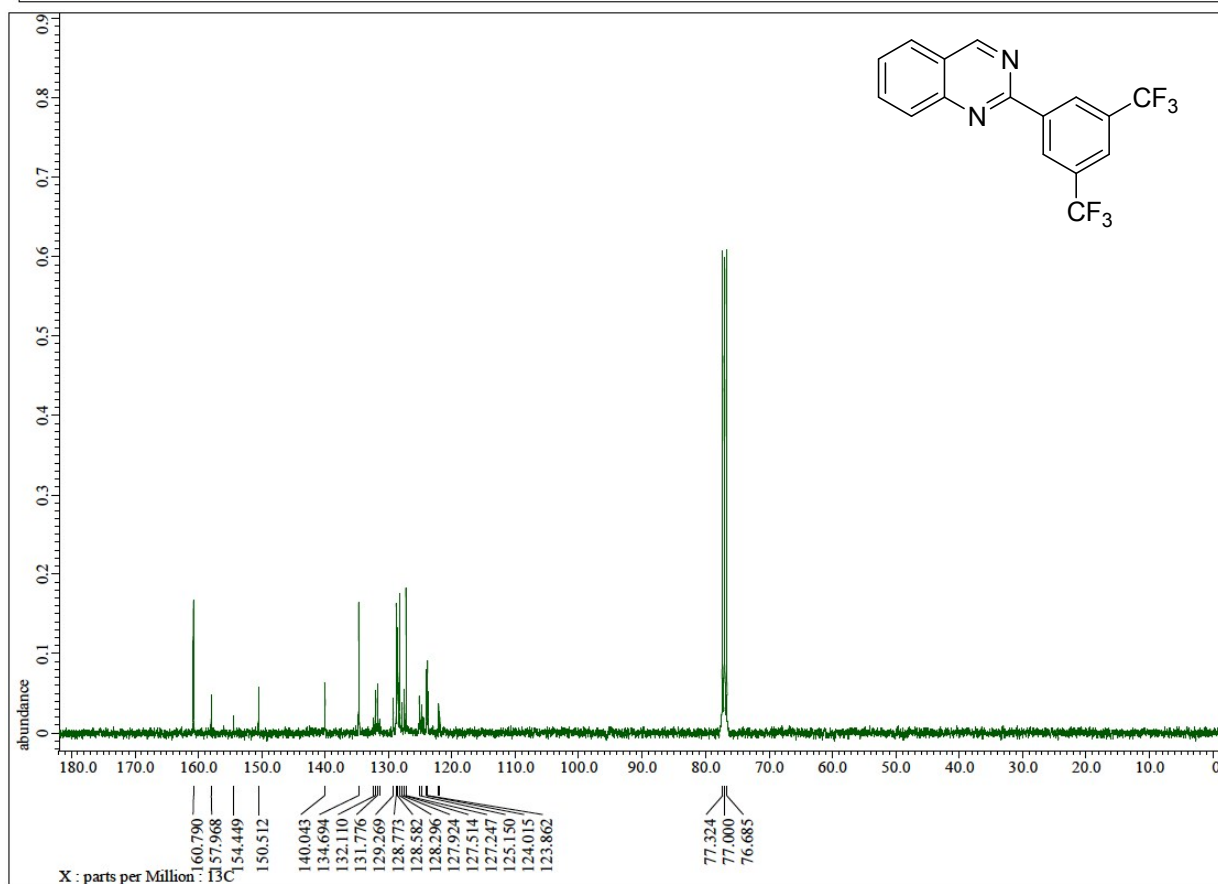
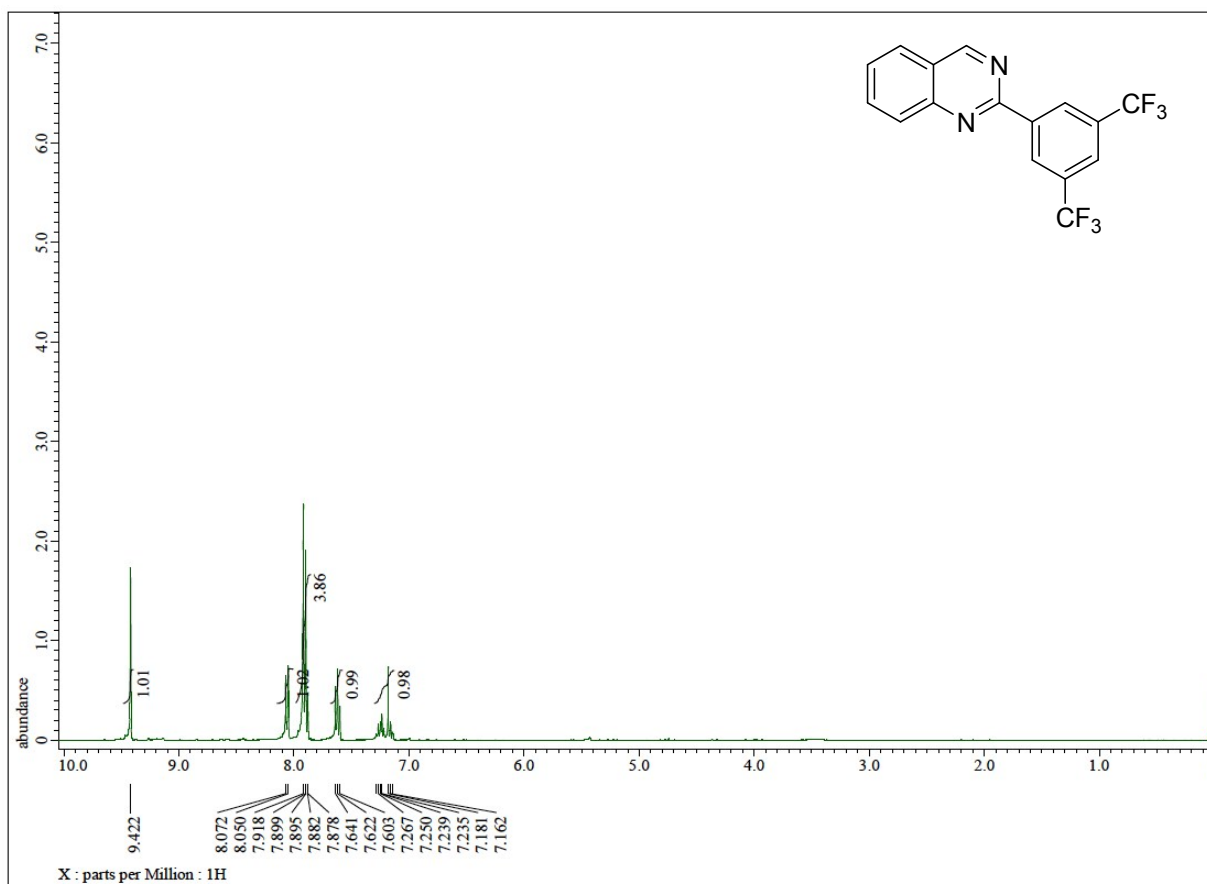


figure S7. ¹H NMR of **3g** (400 MHz, CDCl₃) and ¹³C NMR of **3g** (100 MHz, CDCl₃).

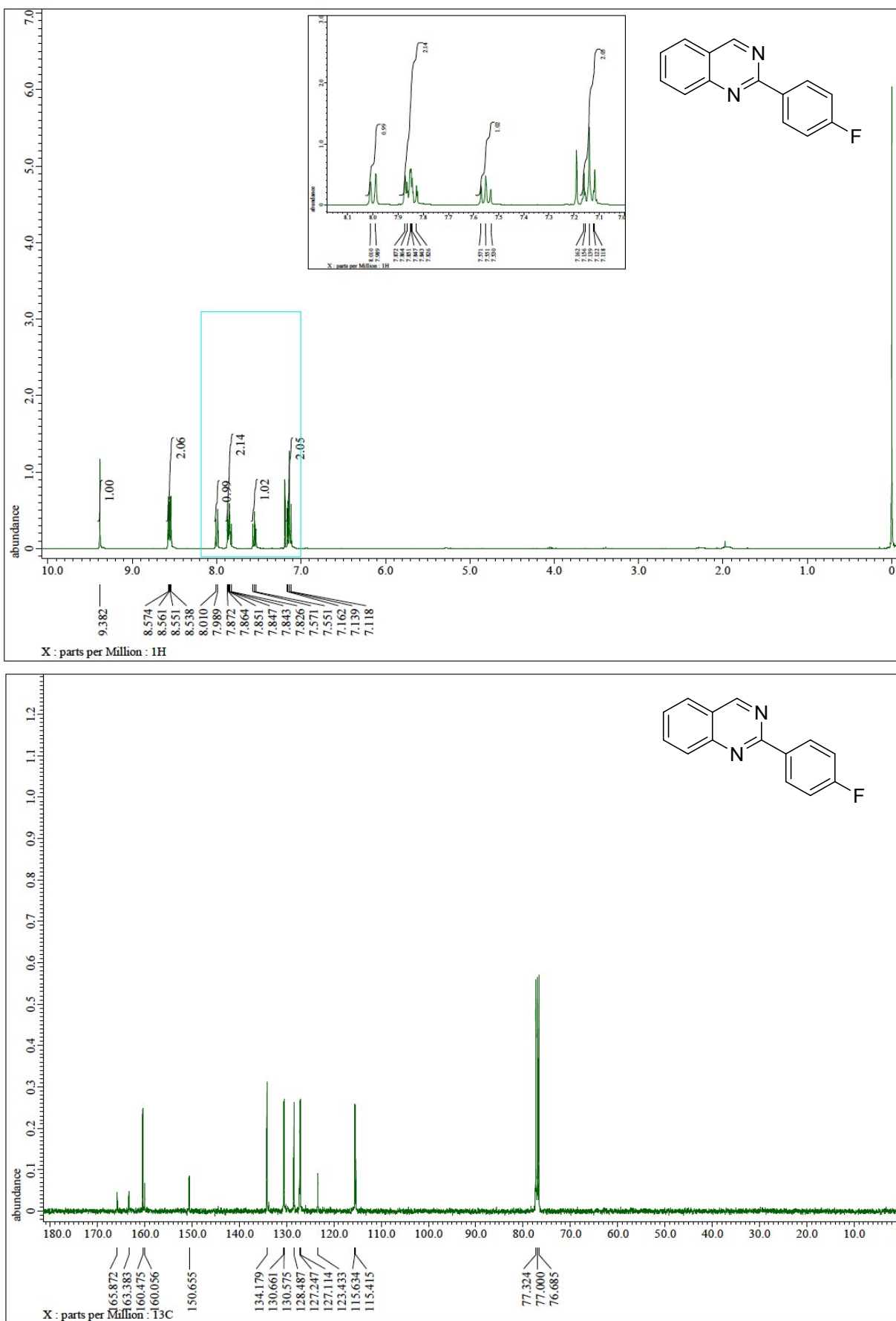


Figure S8. ¹H NMR of **3h** (400 MHz, CDCl₃) and ¹³C NMR of **3h** (100 MHz, CDCl₃).

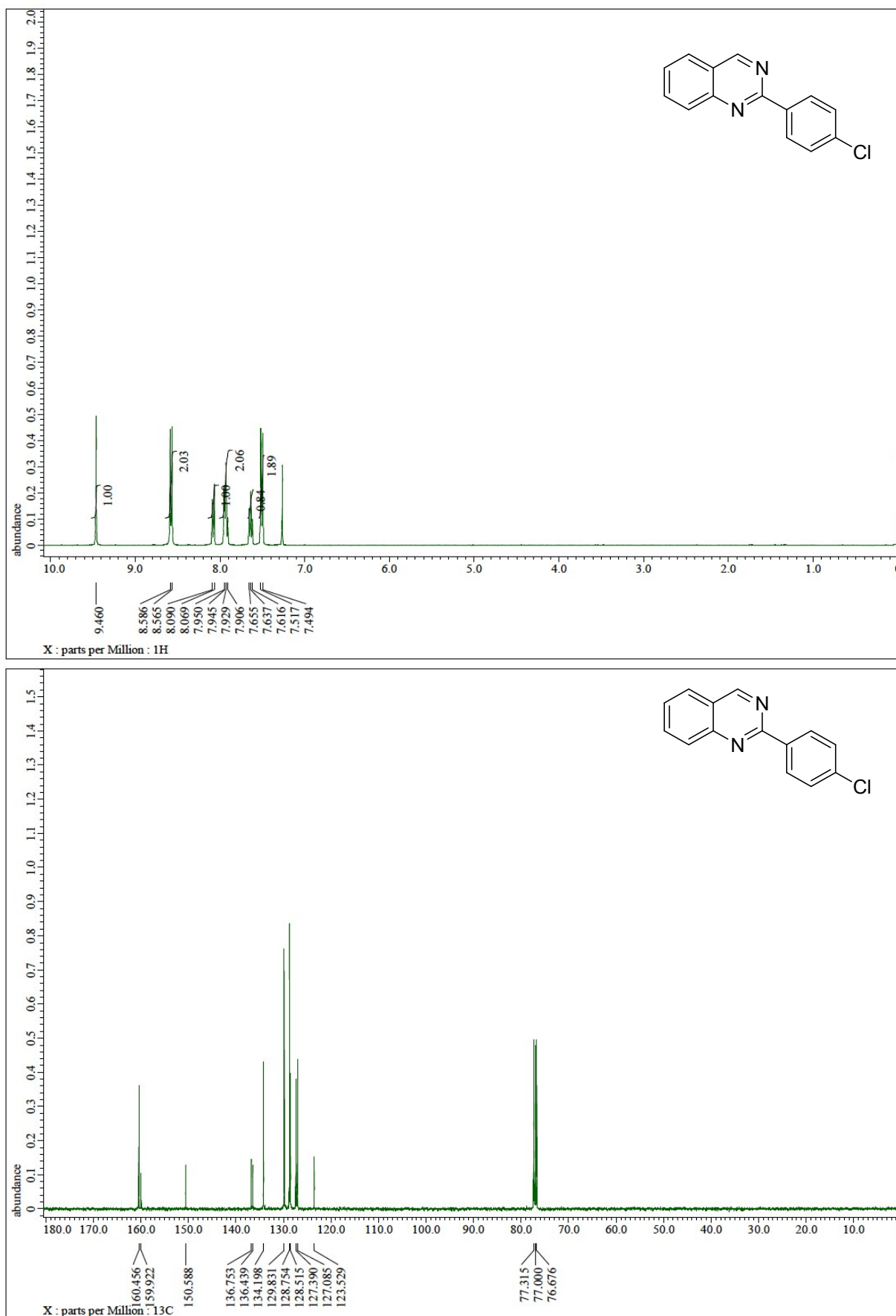


Figure S9. ¹H NMR of **3i** (400 MHz, CDCl₃) and ¹³C NMR of **3i** (100 MHz, CDCl₃).

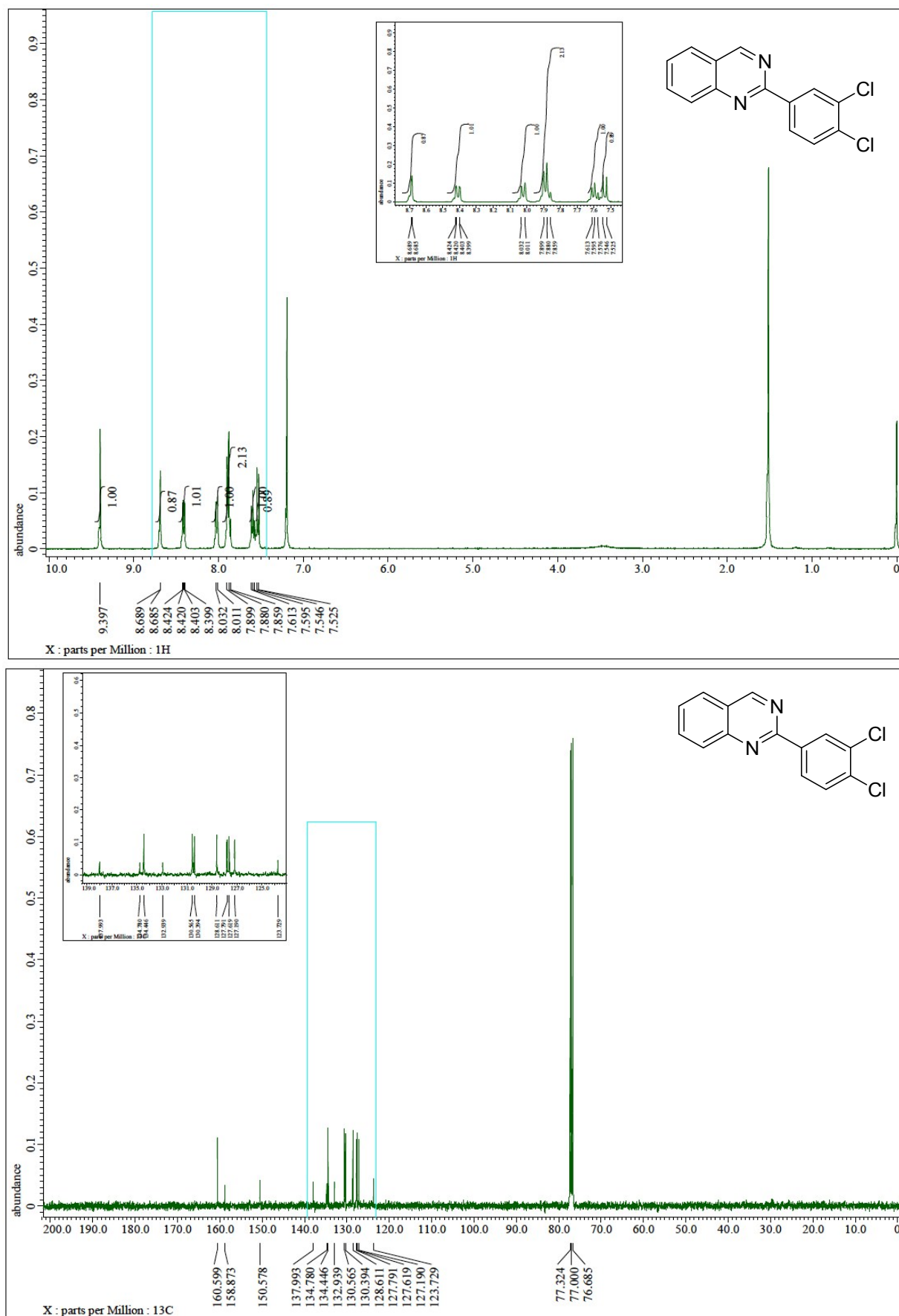


Figure S10. ¹H NMR of **3j** (400 MHz, CDCl₃) and ¹³C NMR of **3j** (100 MHz, CDCl₃).

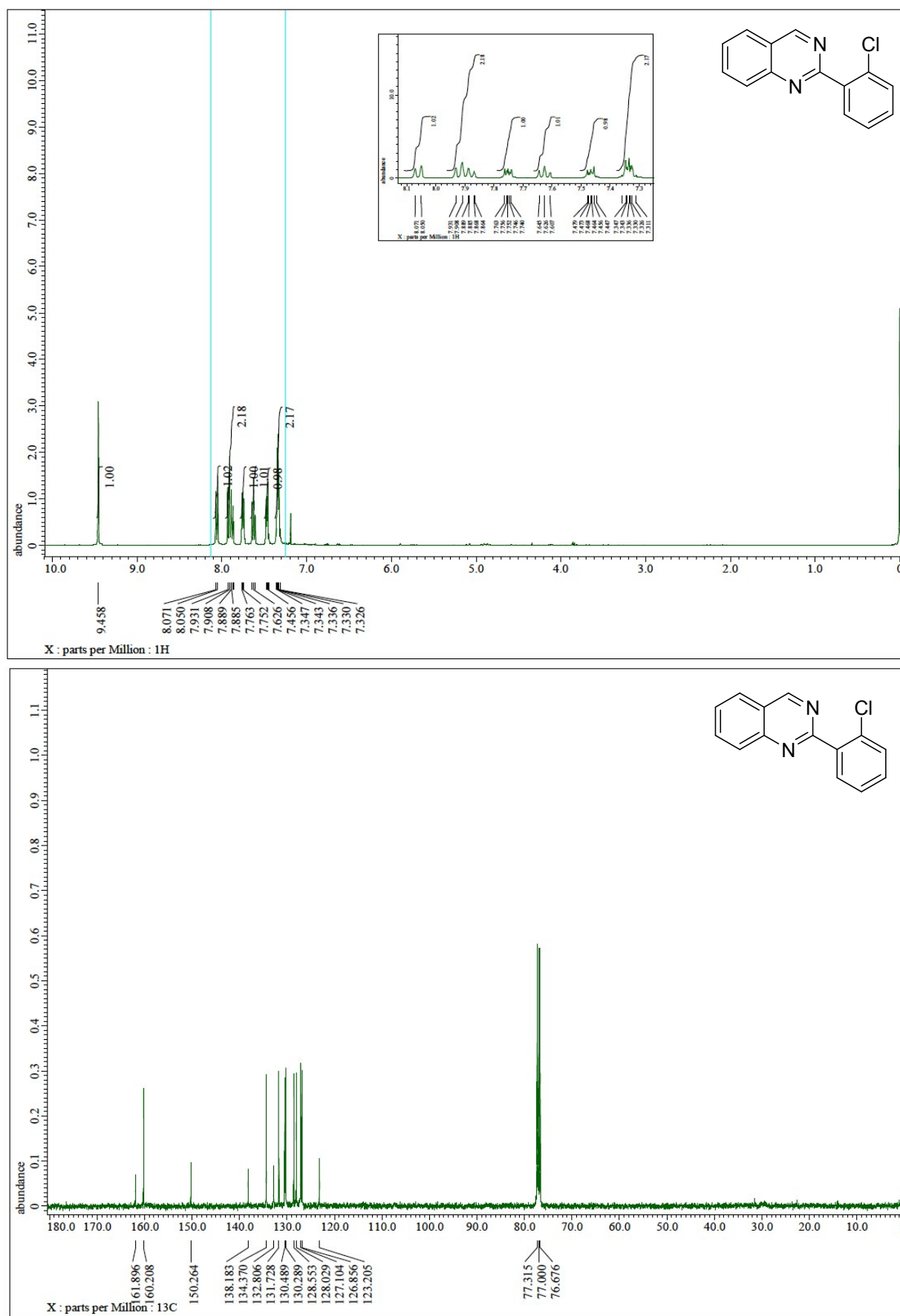


Figure S11. ¹H NMR of **3k** (400 MHz, CDCl₃) and ¹³C NMR of **3k** (100 MHz, CDCl₃).

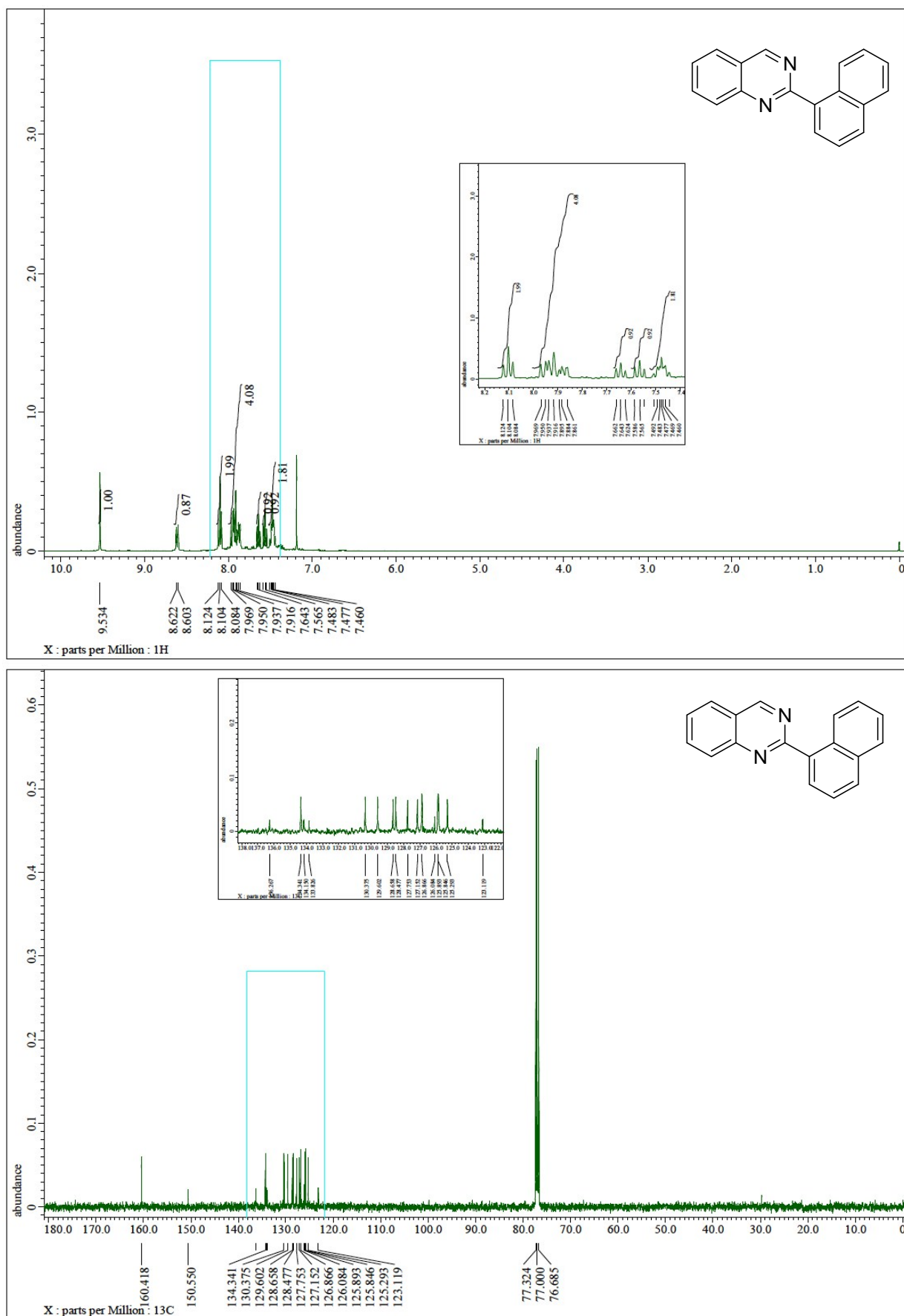


Figure S12. ¹H NMR of **31** (400 MHz, CDCl₃) and ¹³C NMR of **31** (100 MHz, CDCl₃).

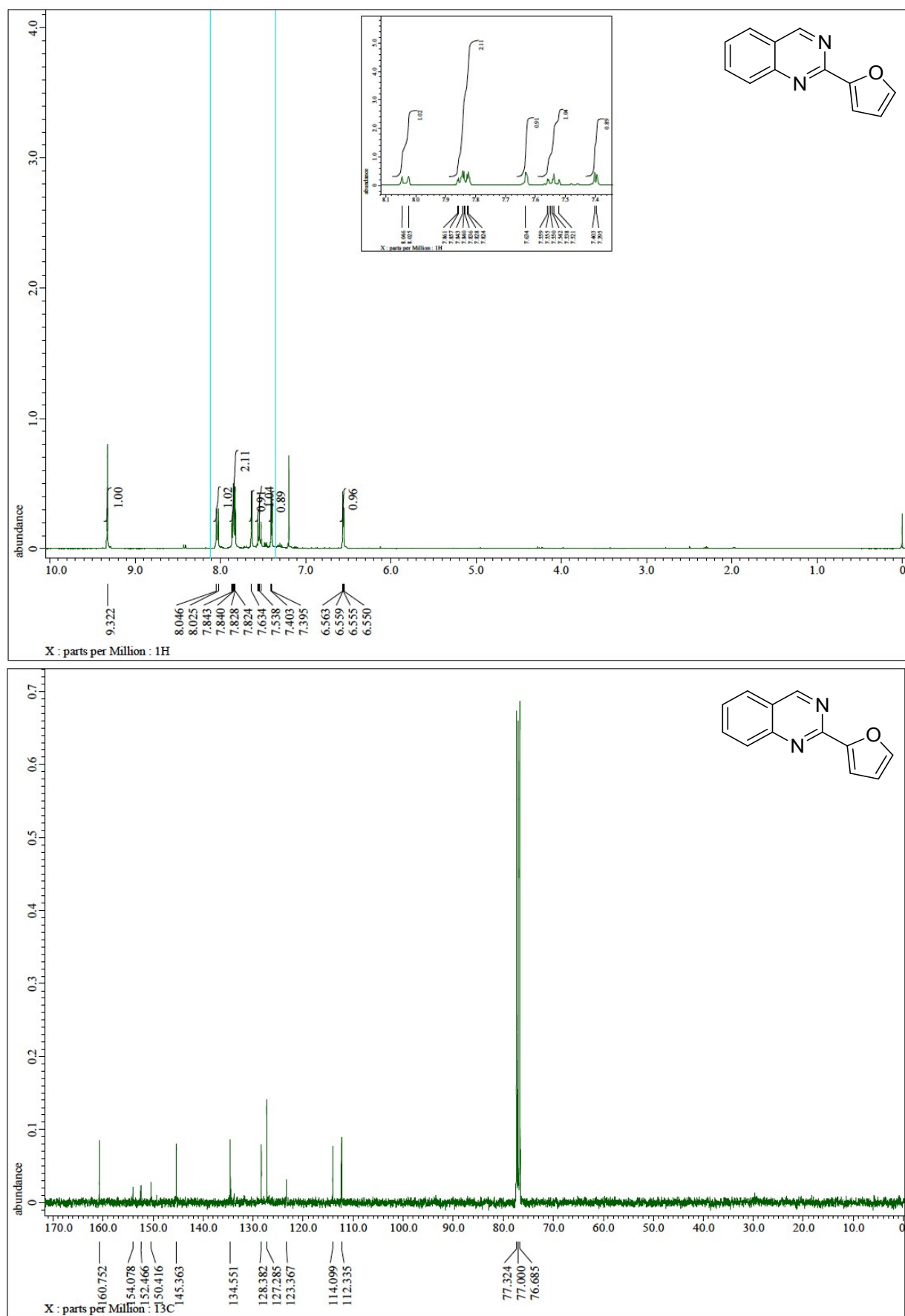


Figure S13. ¹H NMR of **3m** (400 MHz, CDCl₃) and ¹³C NMR of **3m** (100 MHz, CDCl₃).

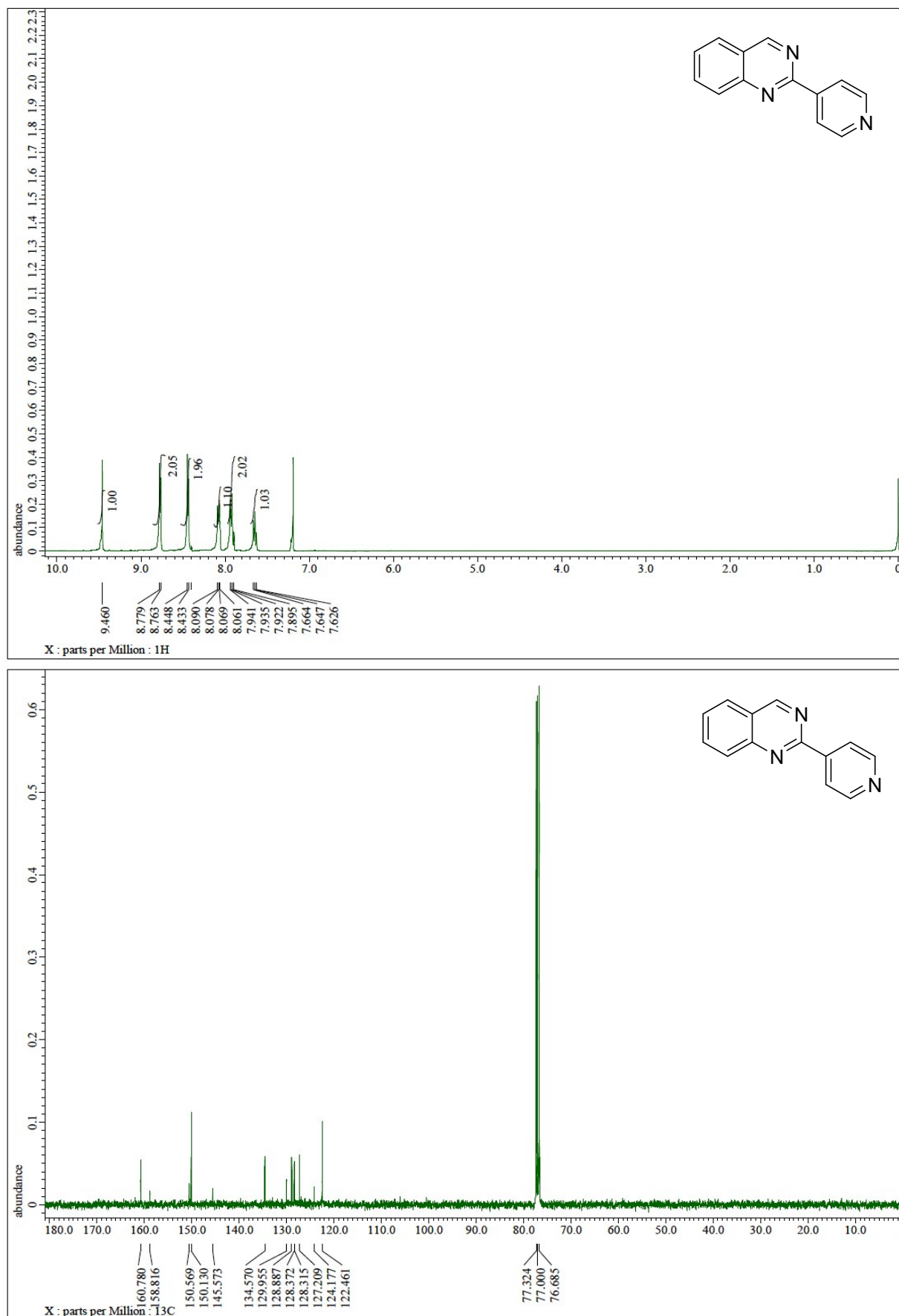


Figure S14. ¹H NMR of **3n** (400 MHz, CDCl₃) and ¹³C NMR of **3n** (100 MHz, CDCl₃).

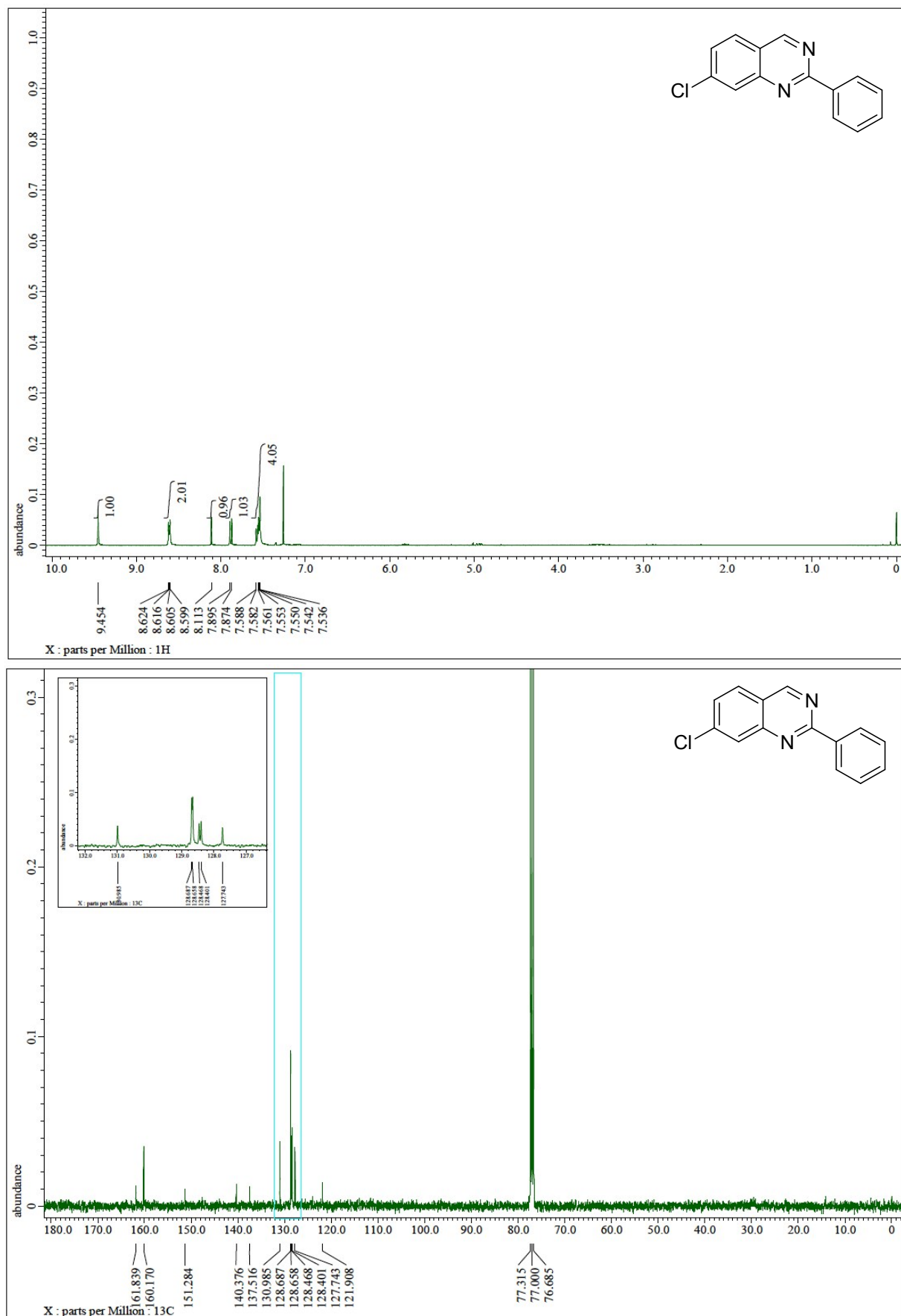


Figure S15. ¹H NMR of **4a** (400 MHz, CDCl₃) and ¹³C NMR of **4a** (100 MHz, CDCl₃).

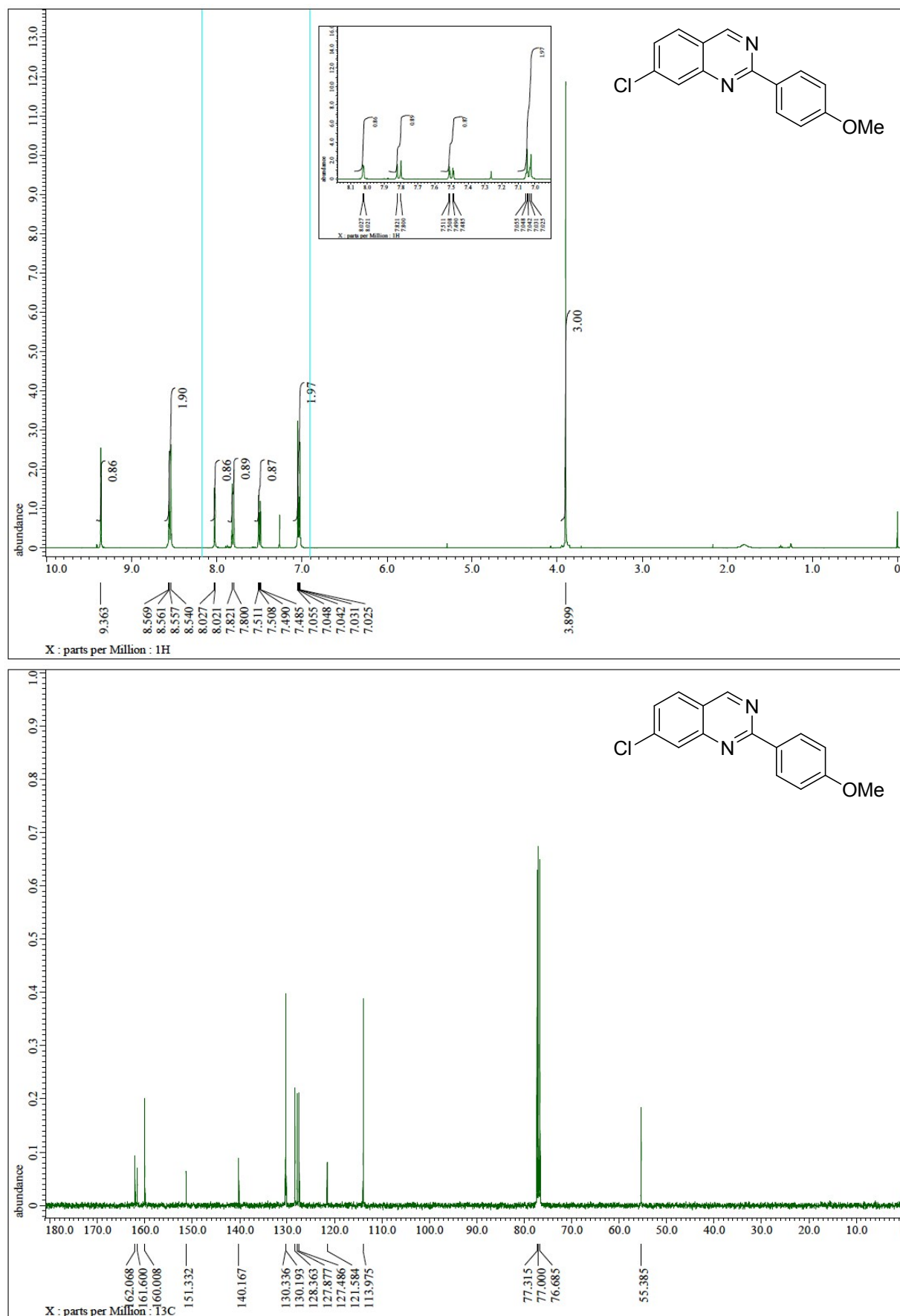


Figure S16. ¹H NMR of **4b** (400 MHz, CDCl₃) and ¹³C NMR of **4b** (100 MHz, CDCl₃).

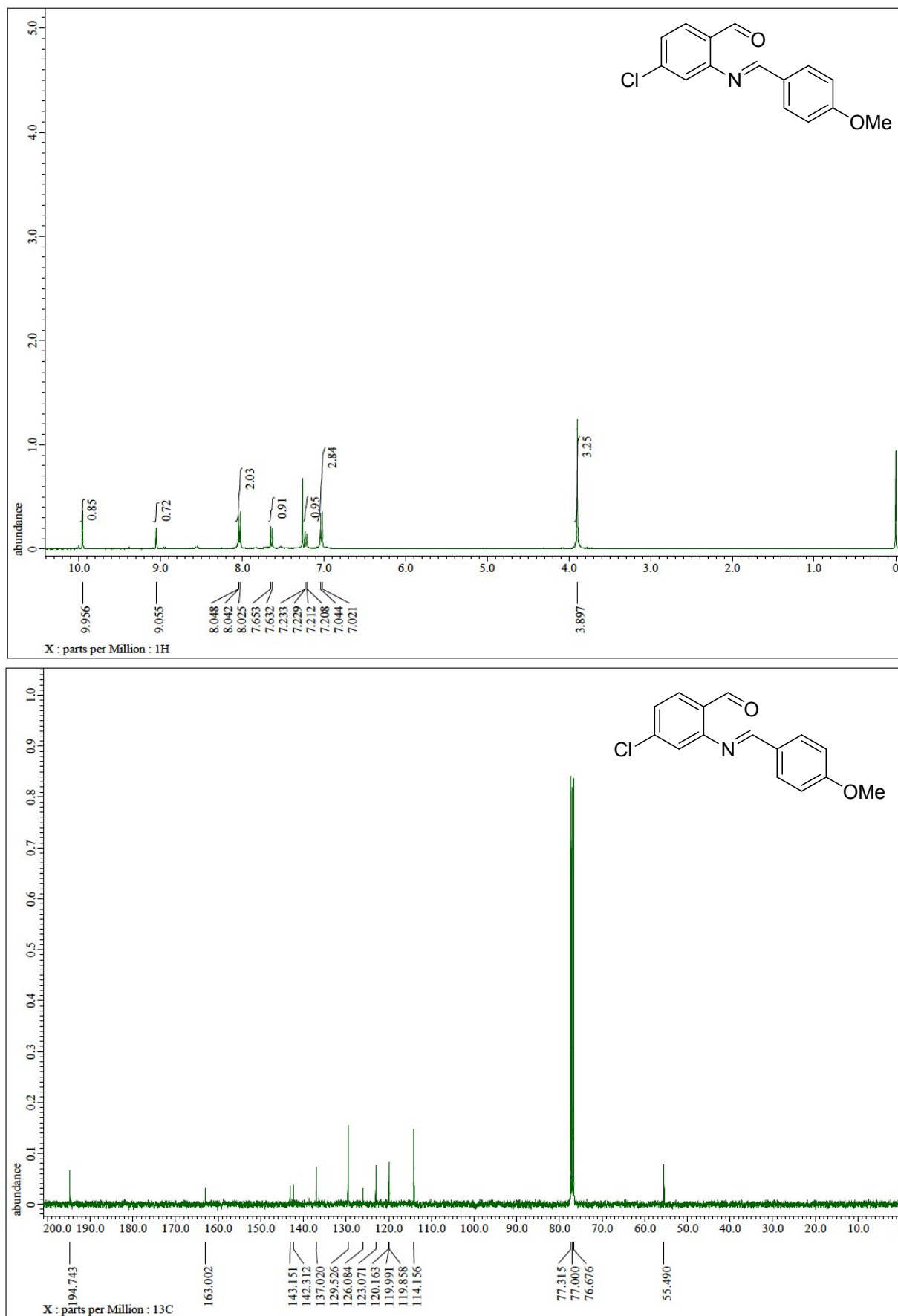


Figure S17. ¹H NMR of **4b'** (400 MHz, CDCl₃) and ¹³C NMR of **4b'** (100 MHz, CDCl₃).



Figure S18. ¹H NMR of **4c** (400 MHz, CDCl₃) and ¹³C NMR of **4c** (100 MHz, CDCl₃).

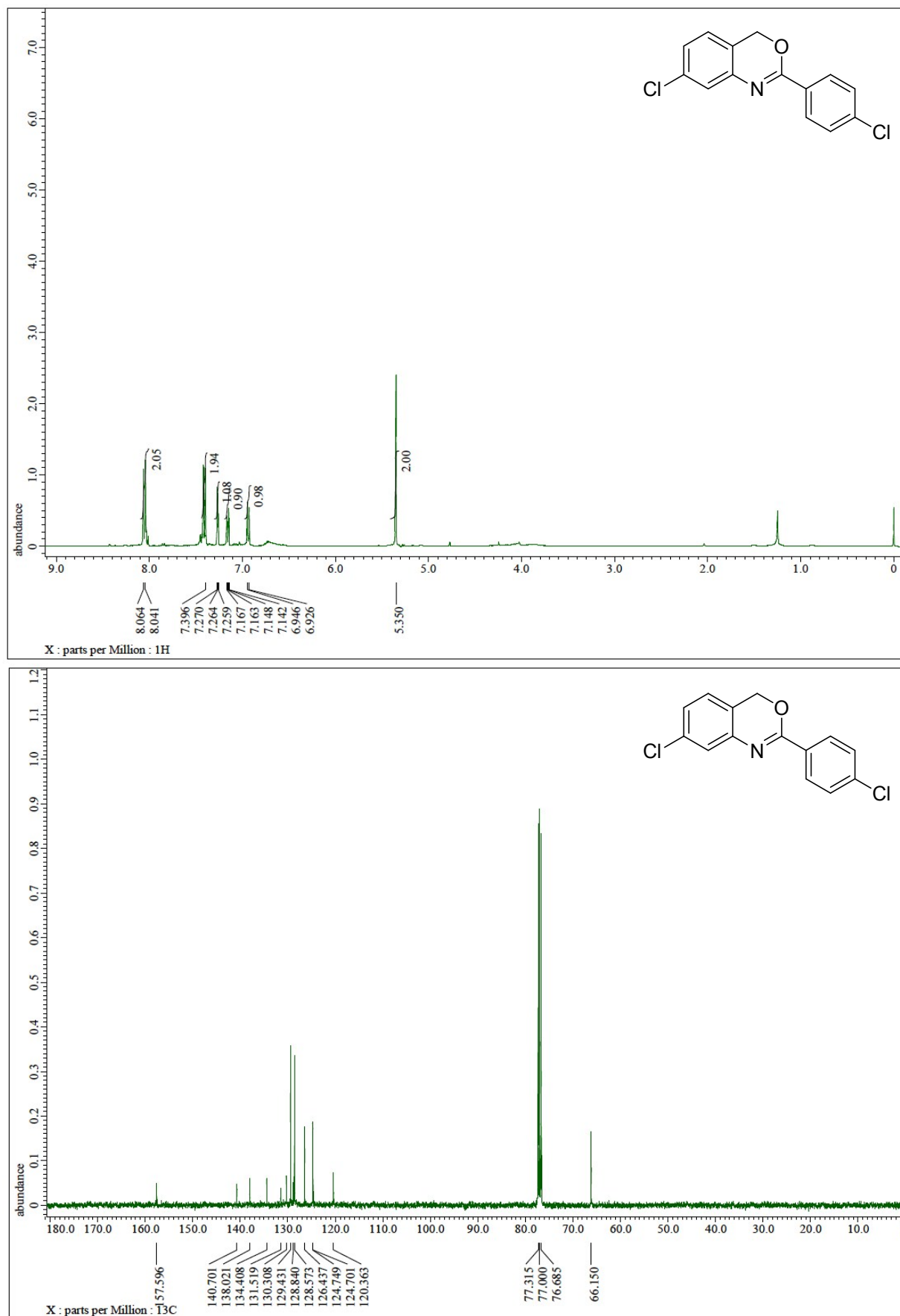


Figure S19. ¹H NMR of **4c'** (400 MHz, CDCl₃) and ¹³C NMR of **4c'** (100 MHz, CDCl₃).

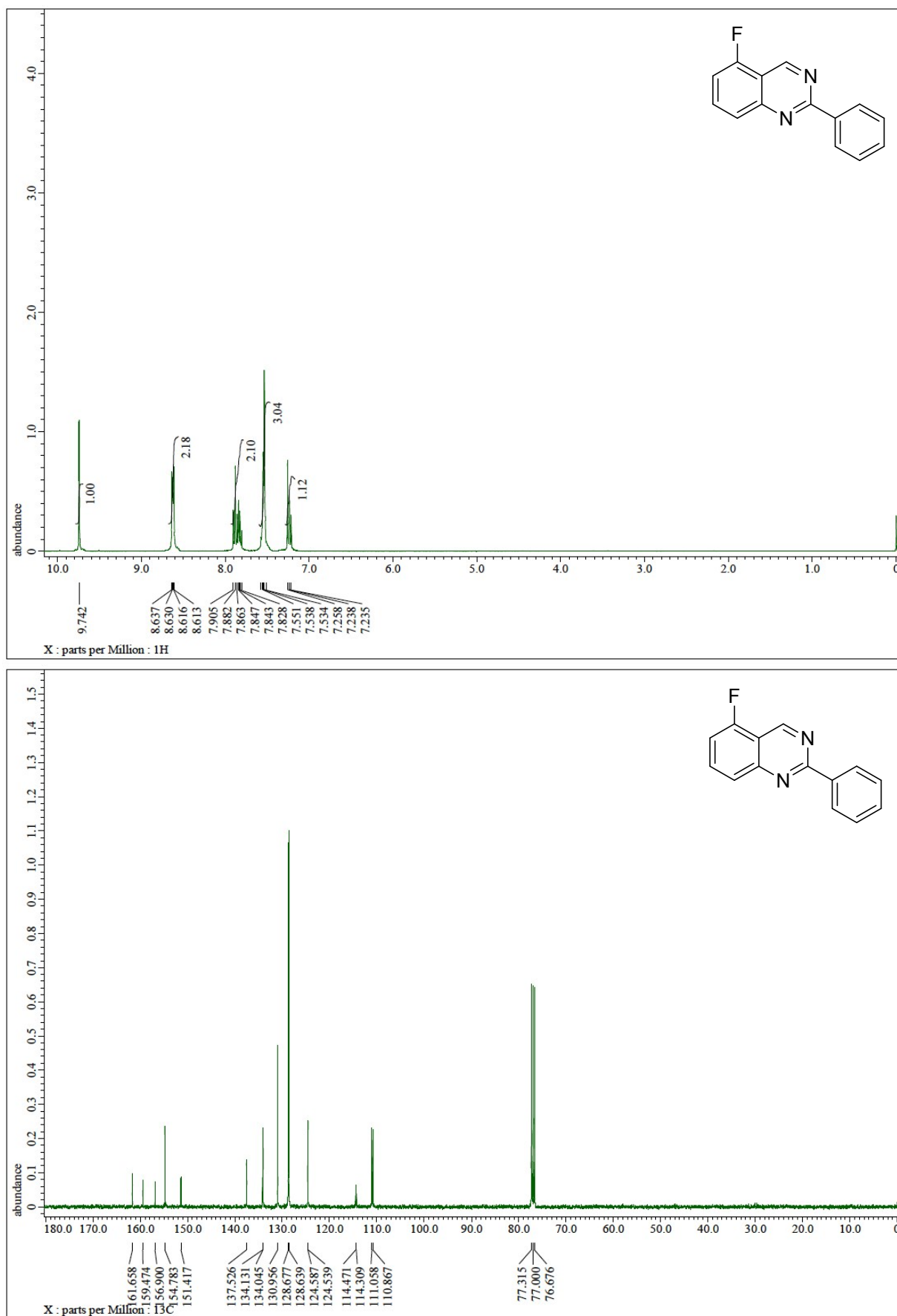


Figure S20. ¹H NMR of **4d** (400 MHz, CDCl₃) and ¹³C NMR of **4d** (100 MHz, CDCl₃).

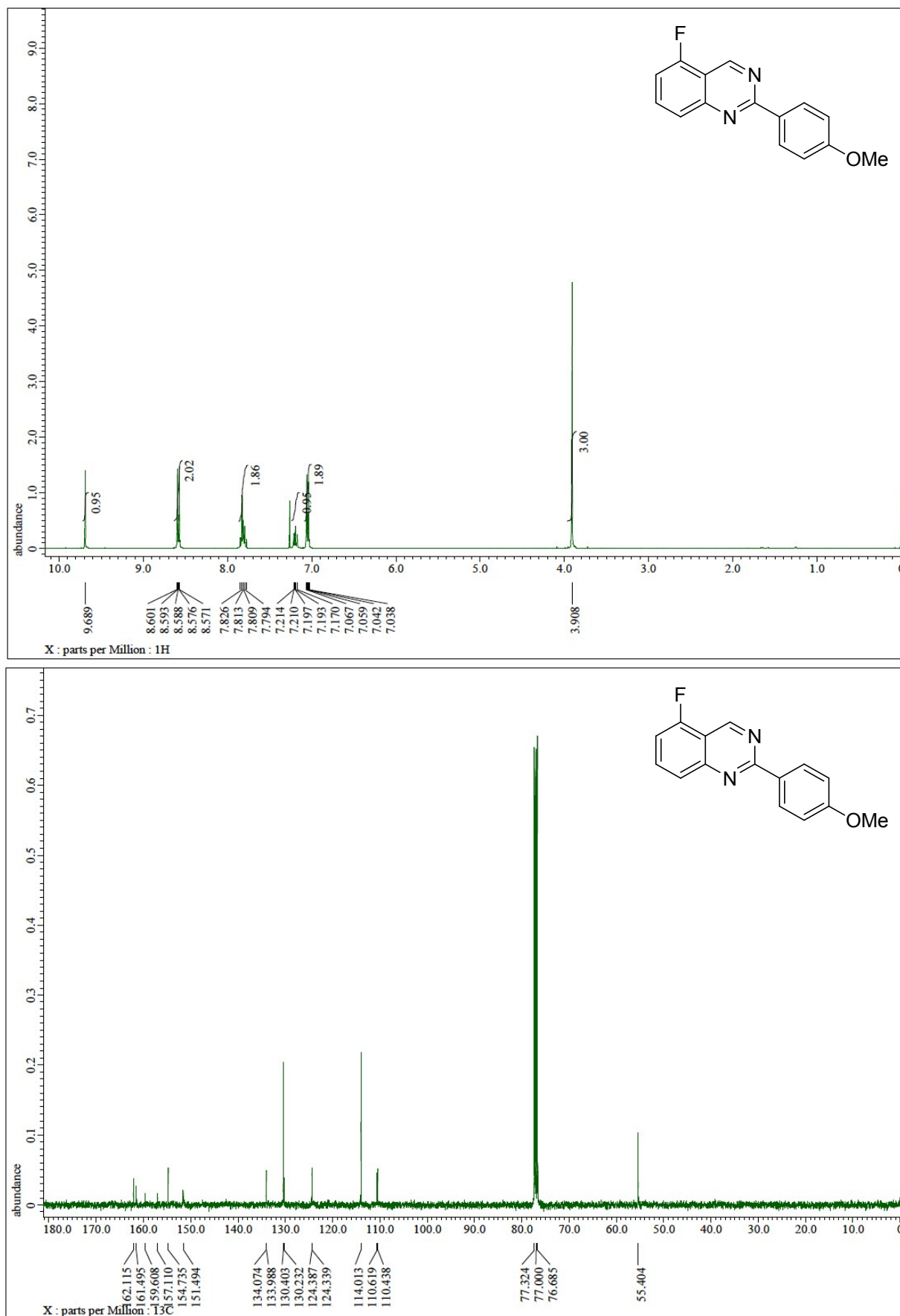


Figure S21. ¹H NMR of **4e** (400 MHz, CDCl₃) and ¹³C NMR of **4e** (100 MHz, CDCl₃).

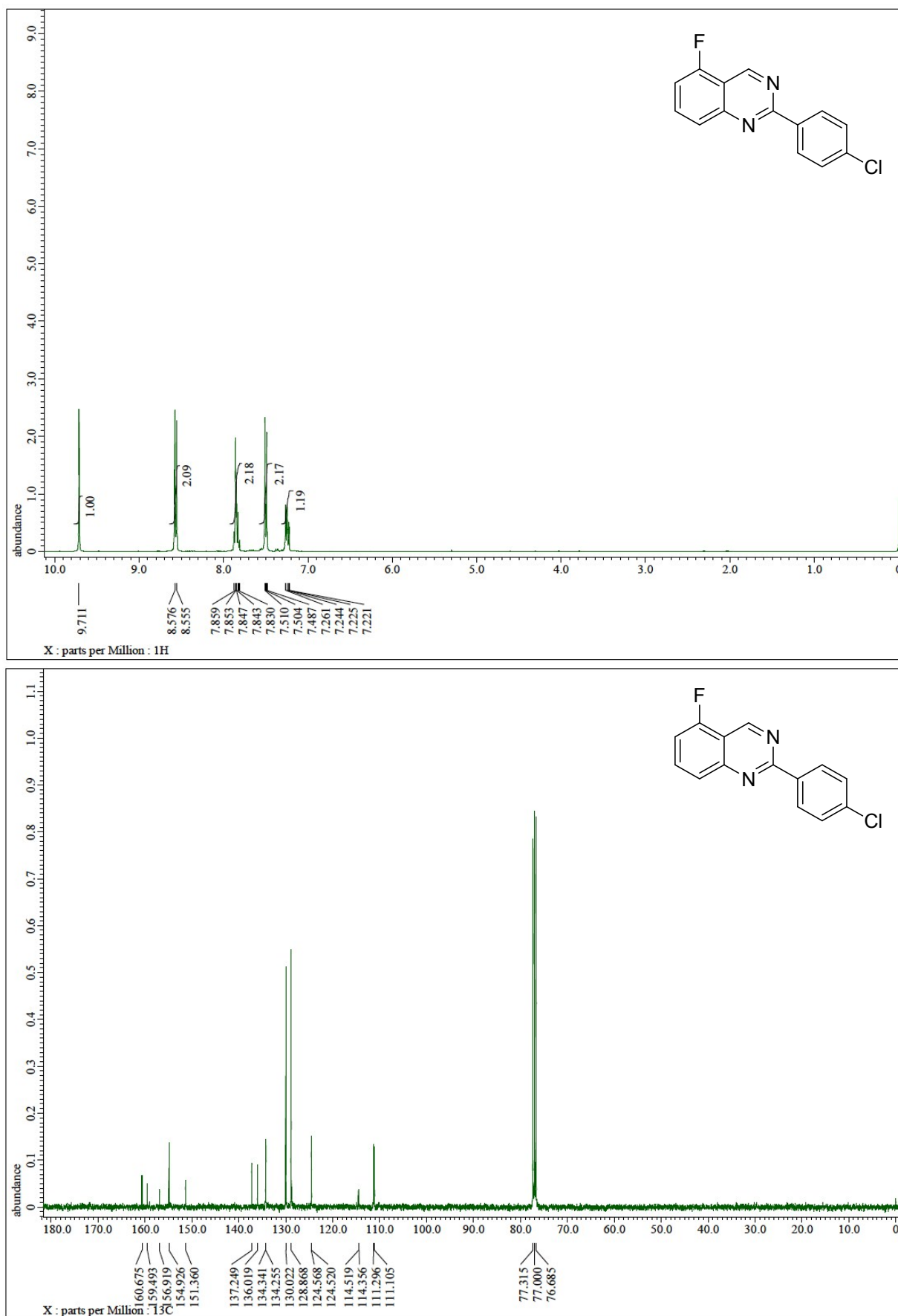


Figure S22. ¹H NMR of **4f** (400 MHz, CDCl₃) and ¹³C NMR of **4f** (100 MHz, CDCl₃).

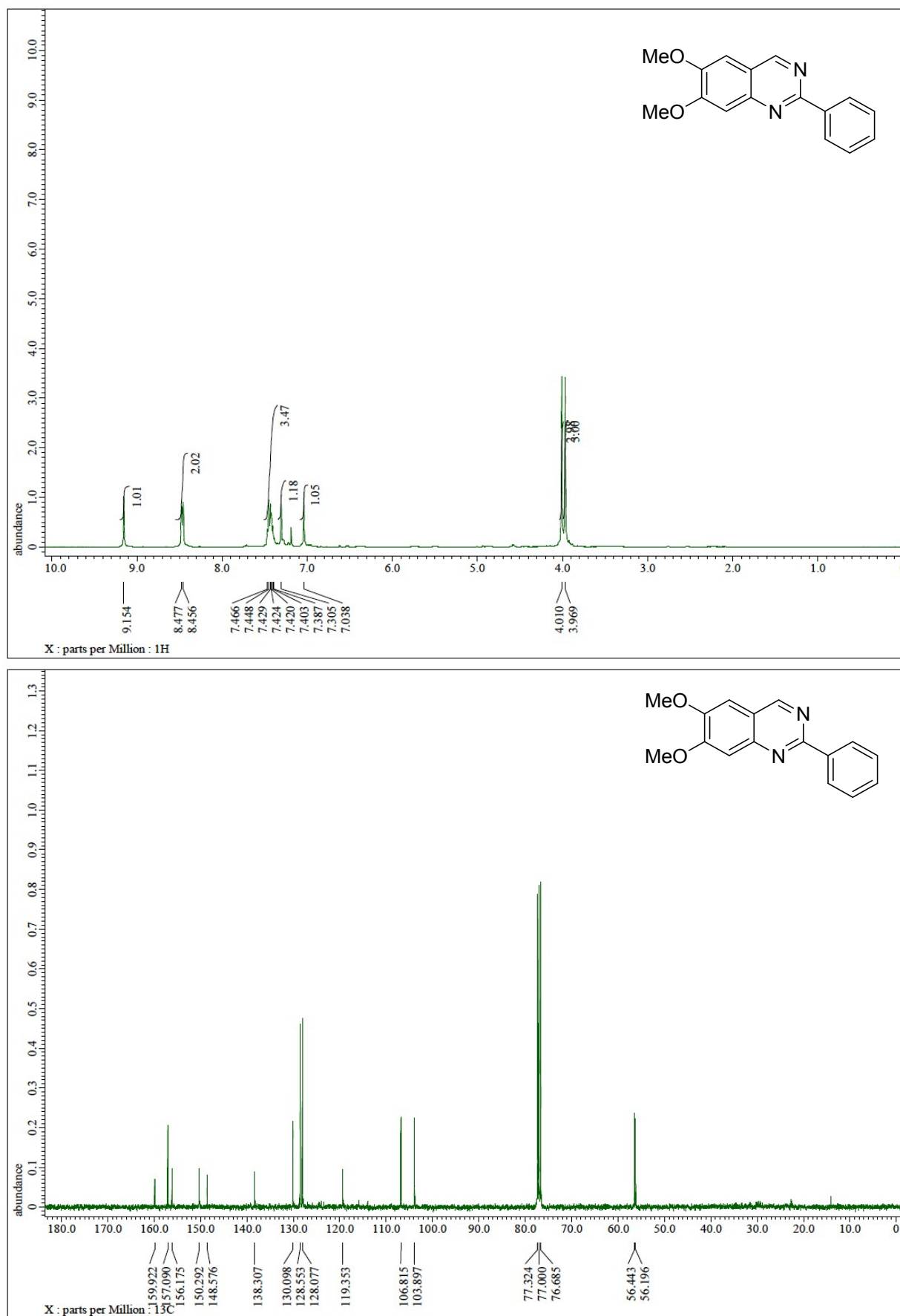


Figure S23. ¹H NMR of **4g** (400 MHz, CDCl₃) and ¹³C NMR of **4g** (100 MHz, CDCl₃).

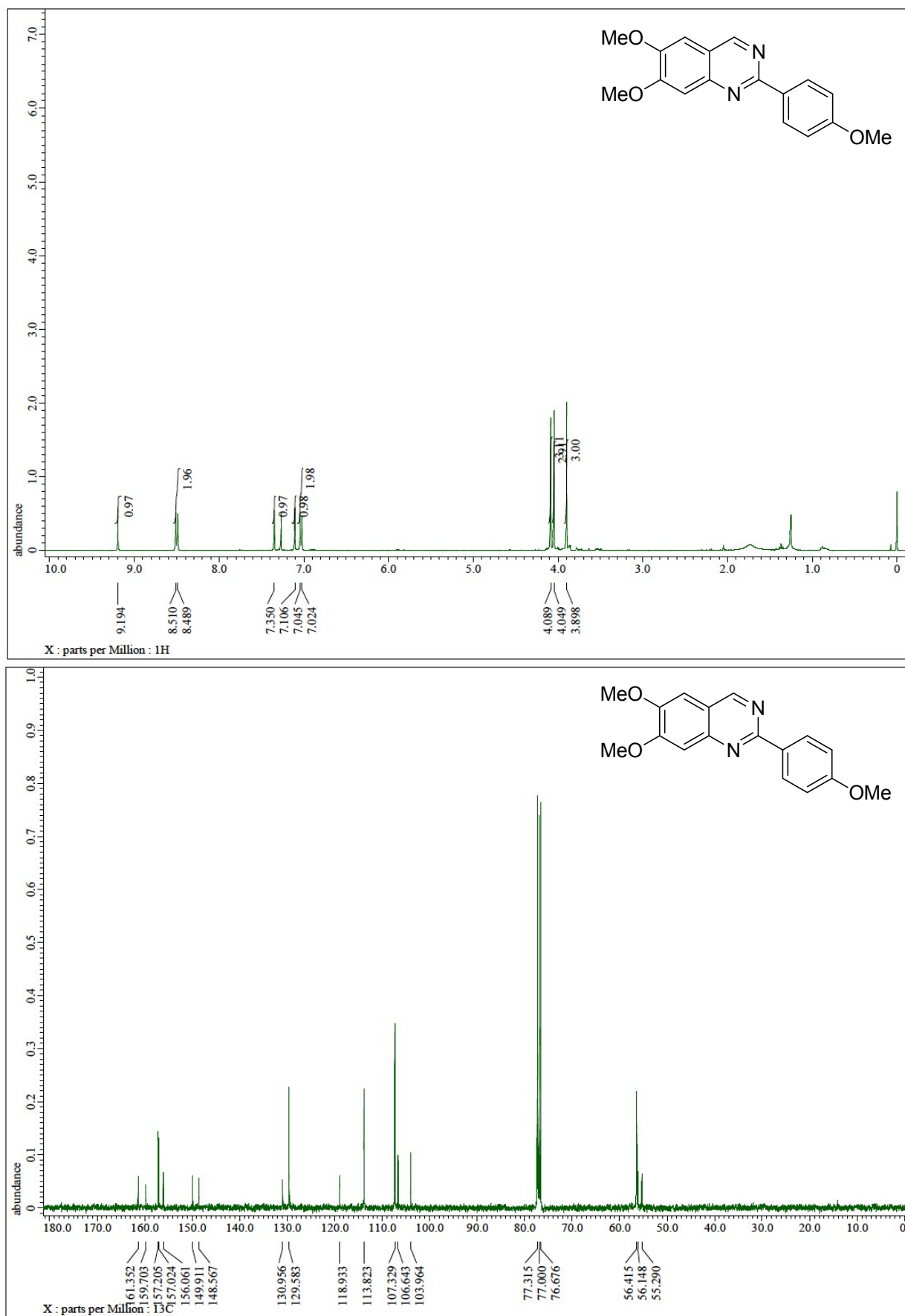


Figure S24. ¹H NMR of **4h** (400 MHz, CDCl₃) and ¹³C NMR of **4h** (100 MHz, CDCl₃).

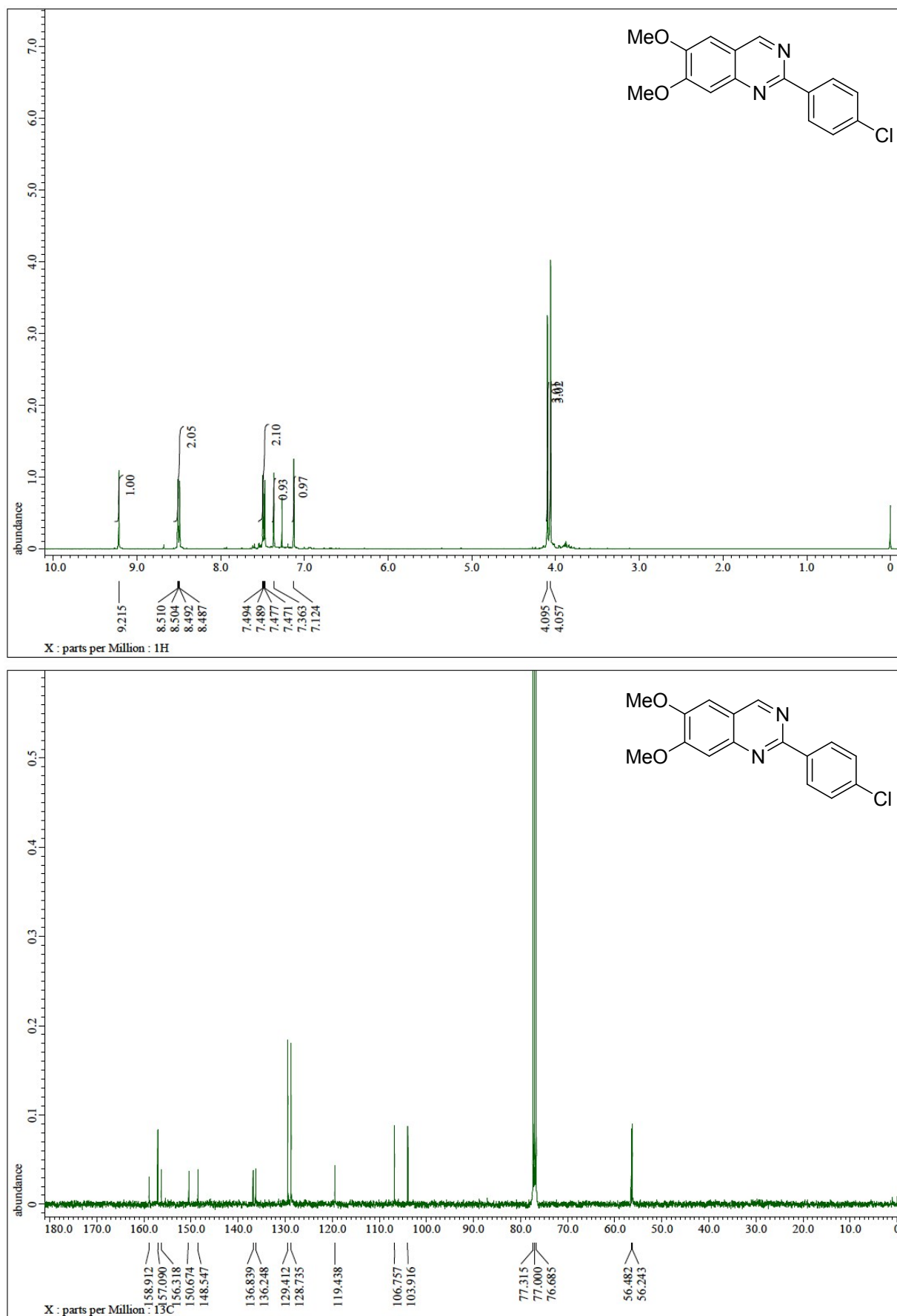


Figure S25. ¹H NMR of **4i** (400 MHz, CDCl₃) and ¹³C NMR of **4i** (100 MHz, CDCl₃).

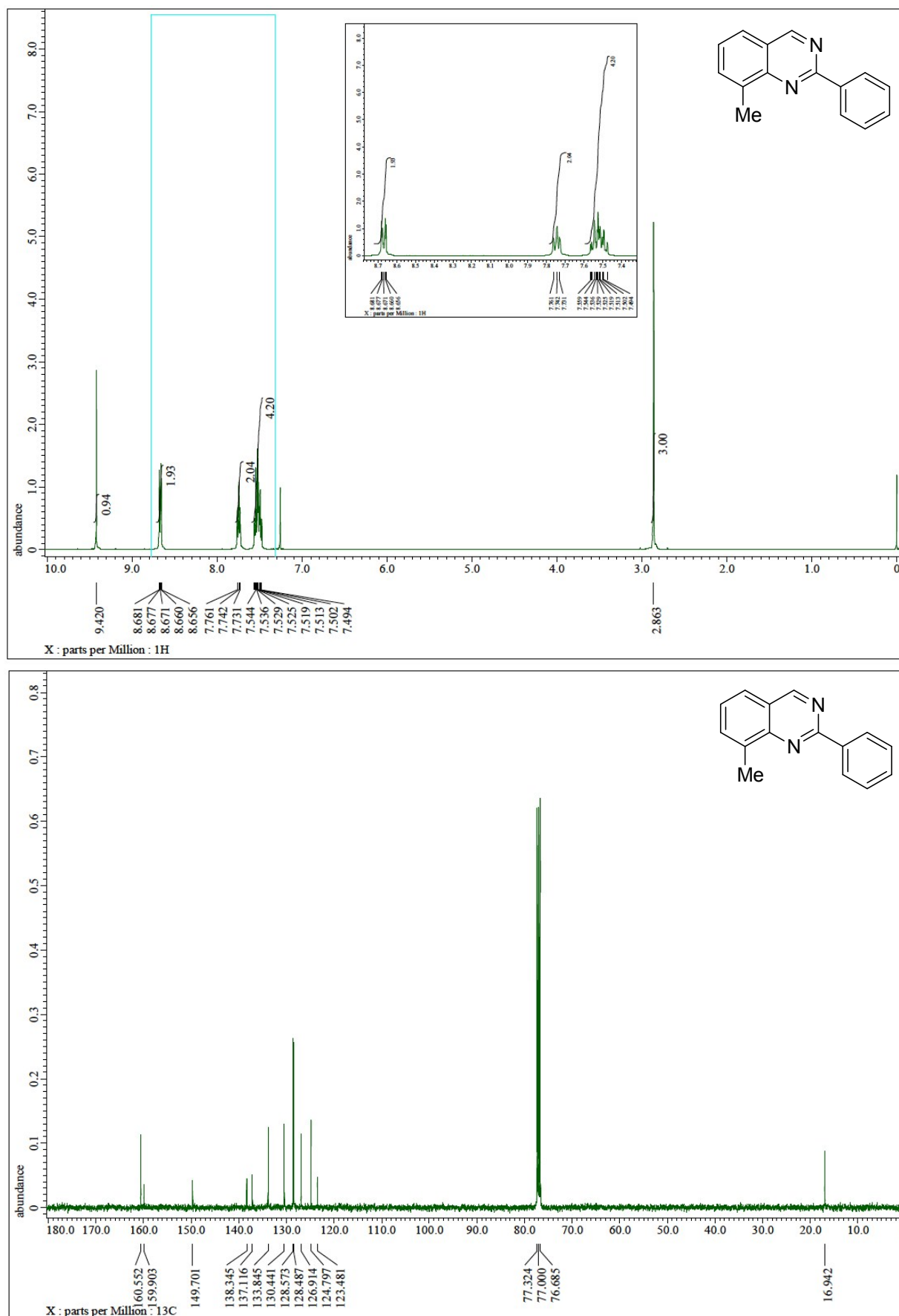


Figure S26. ¹H NMR of **4j** (400 MHz, CDCl₃) and ¹³C NMR of **4j** (100 MHz, CDCl₃).

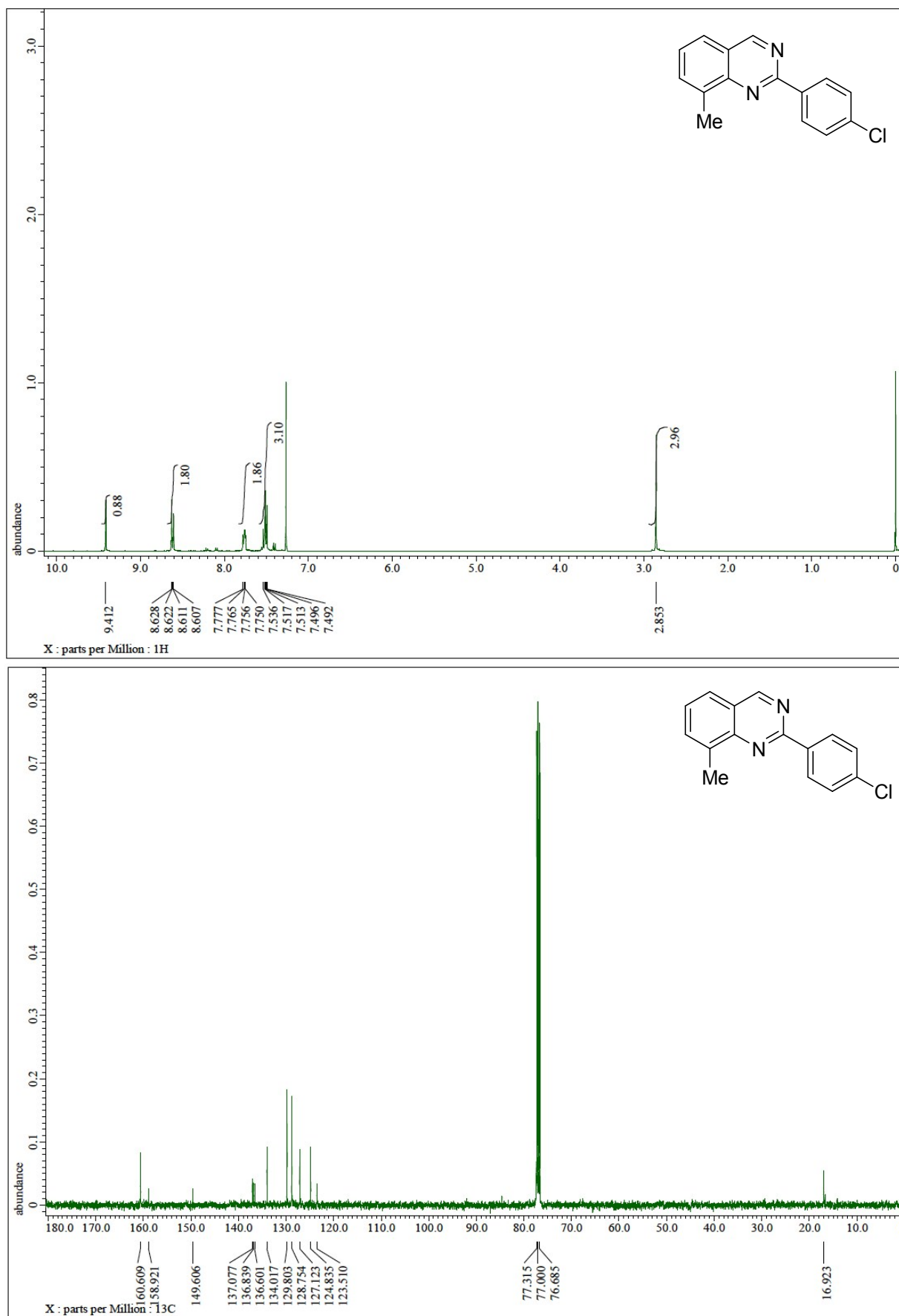


Figure S27. ¹H NMR of **4k** (400 MHz, CDCl₃) and ¹³C NMR of **4k** (100 MHz, CDCl₃).

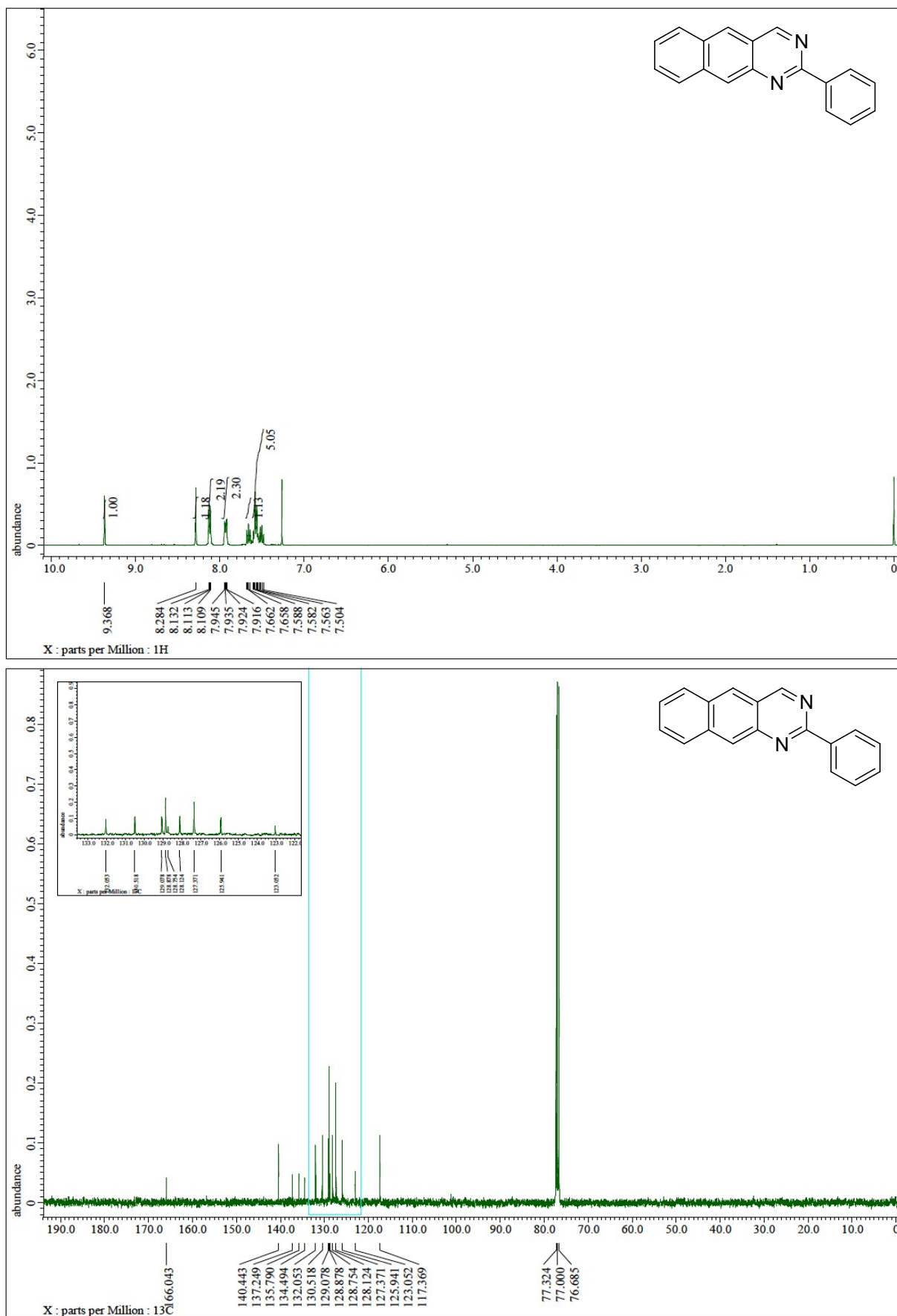


Figure S28. ¹H NMR of **4l** (400 MHz, CDCl₃) and ¹³C NMR of **4l** (100 MHz, CDCl₃).

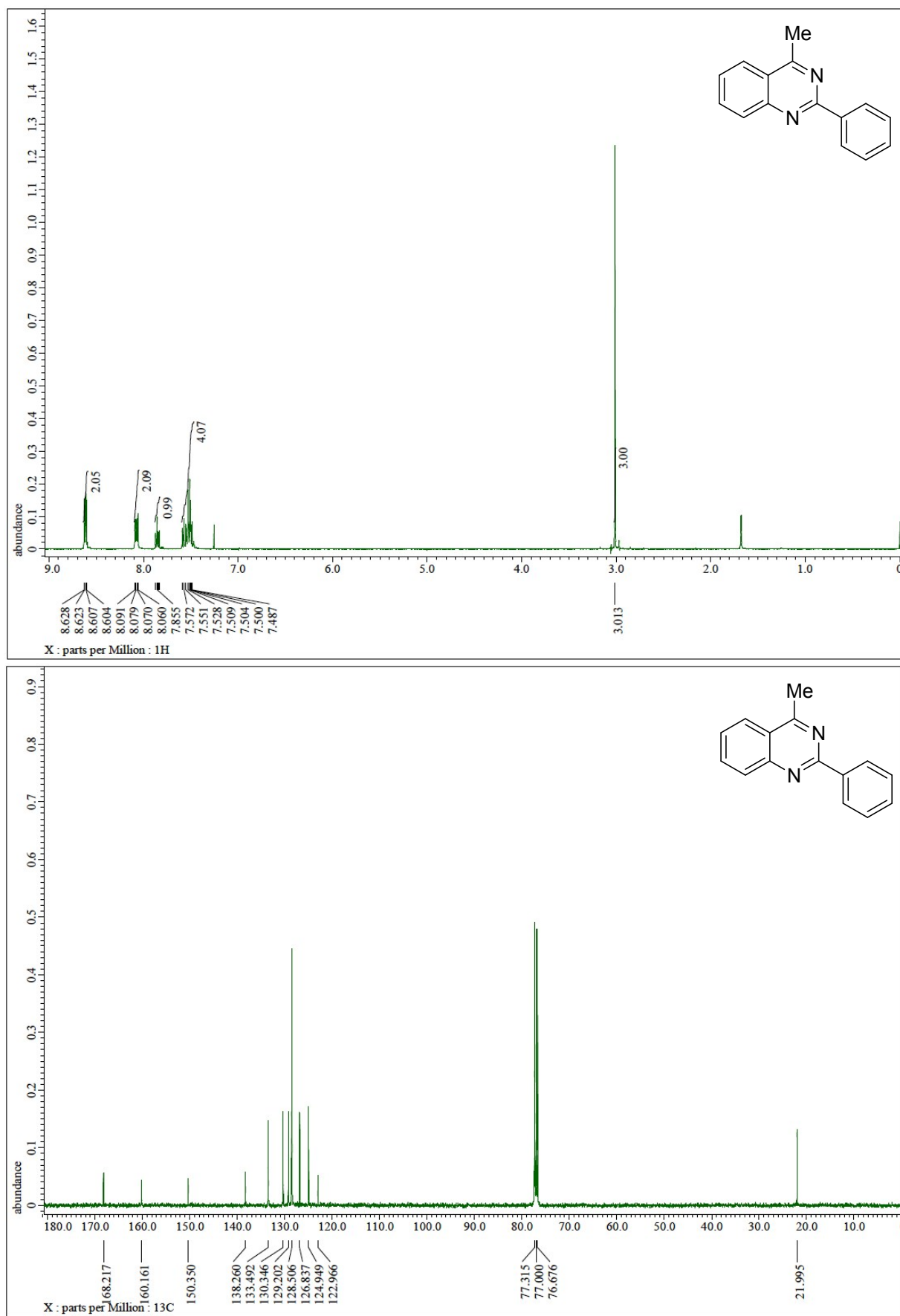


Figure S29. ^1H NMR of **4m** (400 MHz, CDCl_3) and ^{13}C NMR of **4m** (100 MHz, CDCl_3).

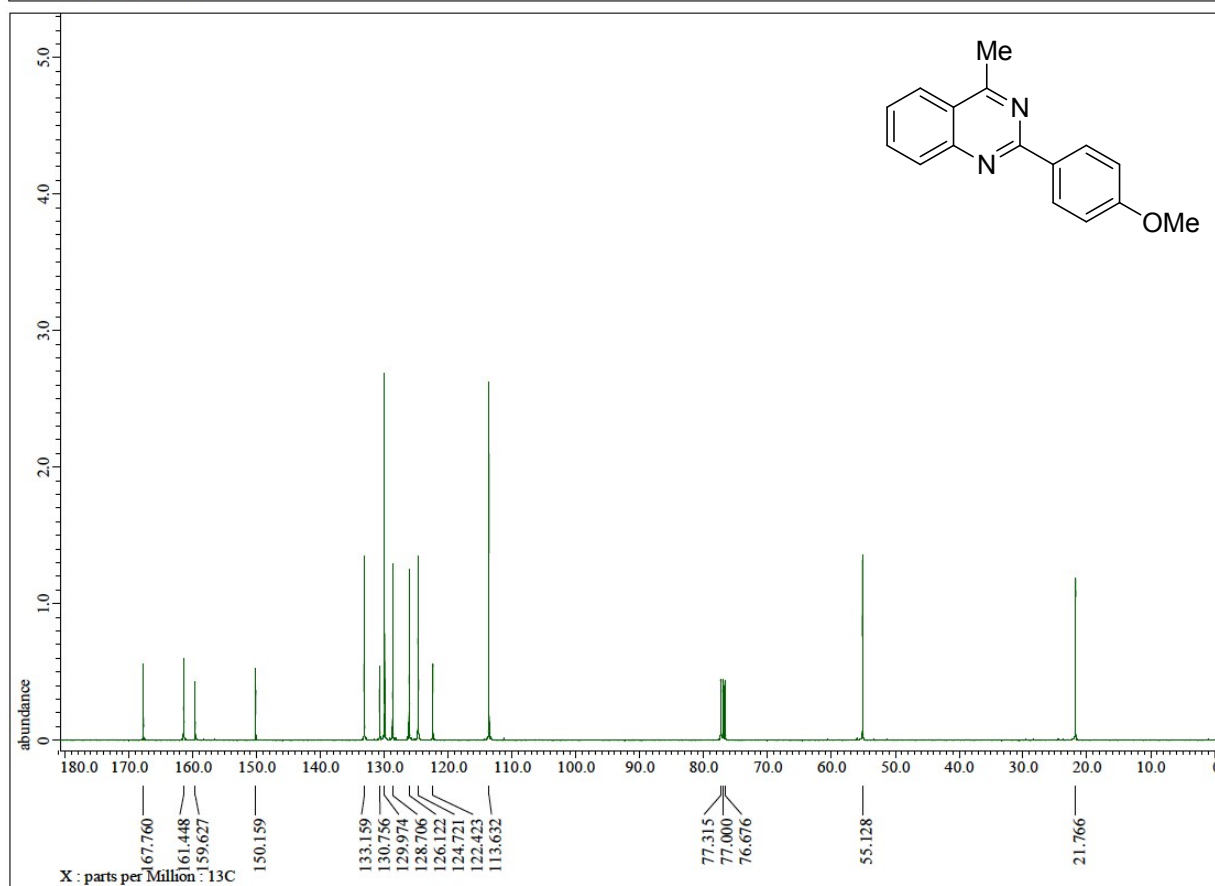
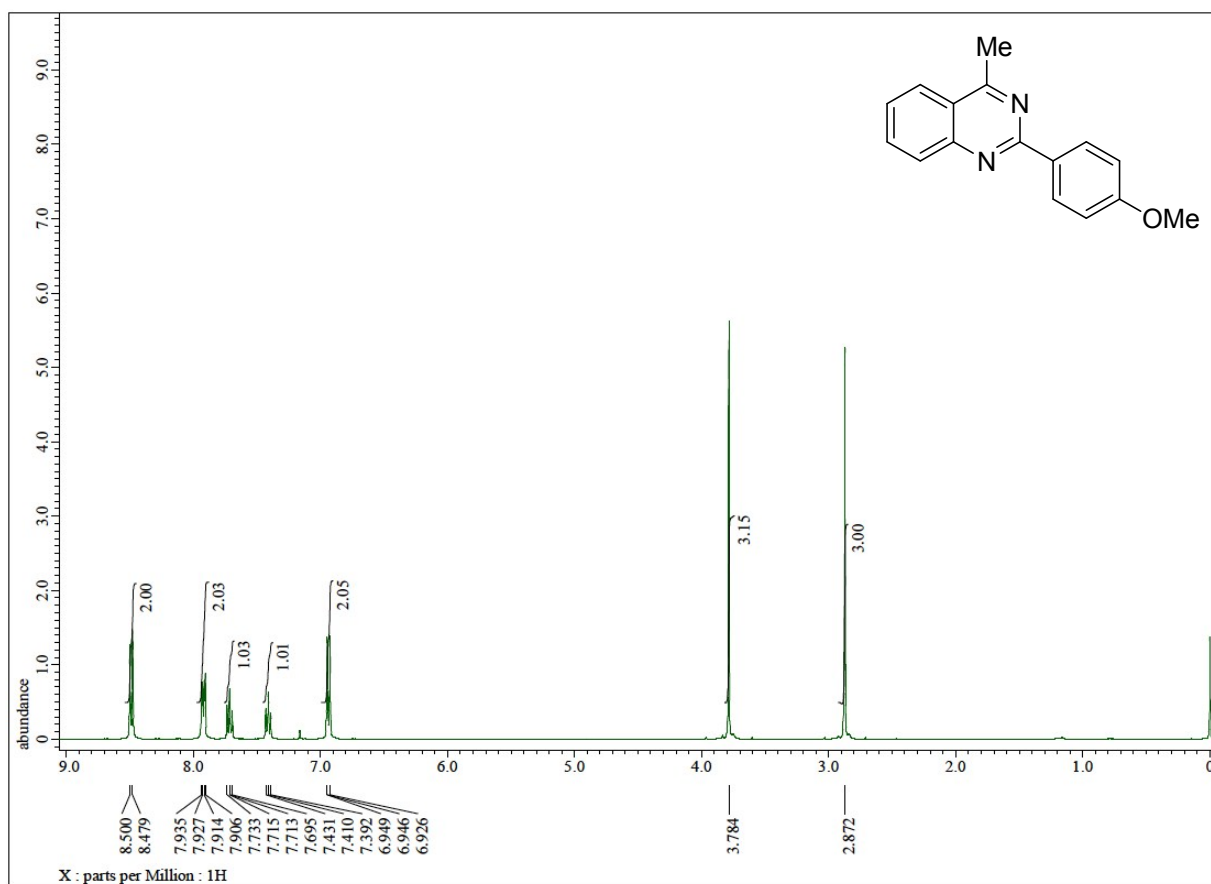


Figure S30. ¹H NMR of **4n** (400 MHz, CDCl₃) and ¹³C NMR of **4n** (100 MHz, CDCl₃).

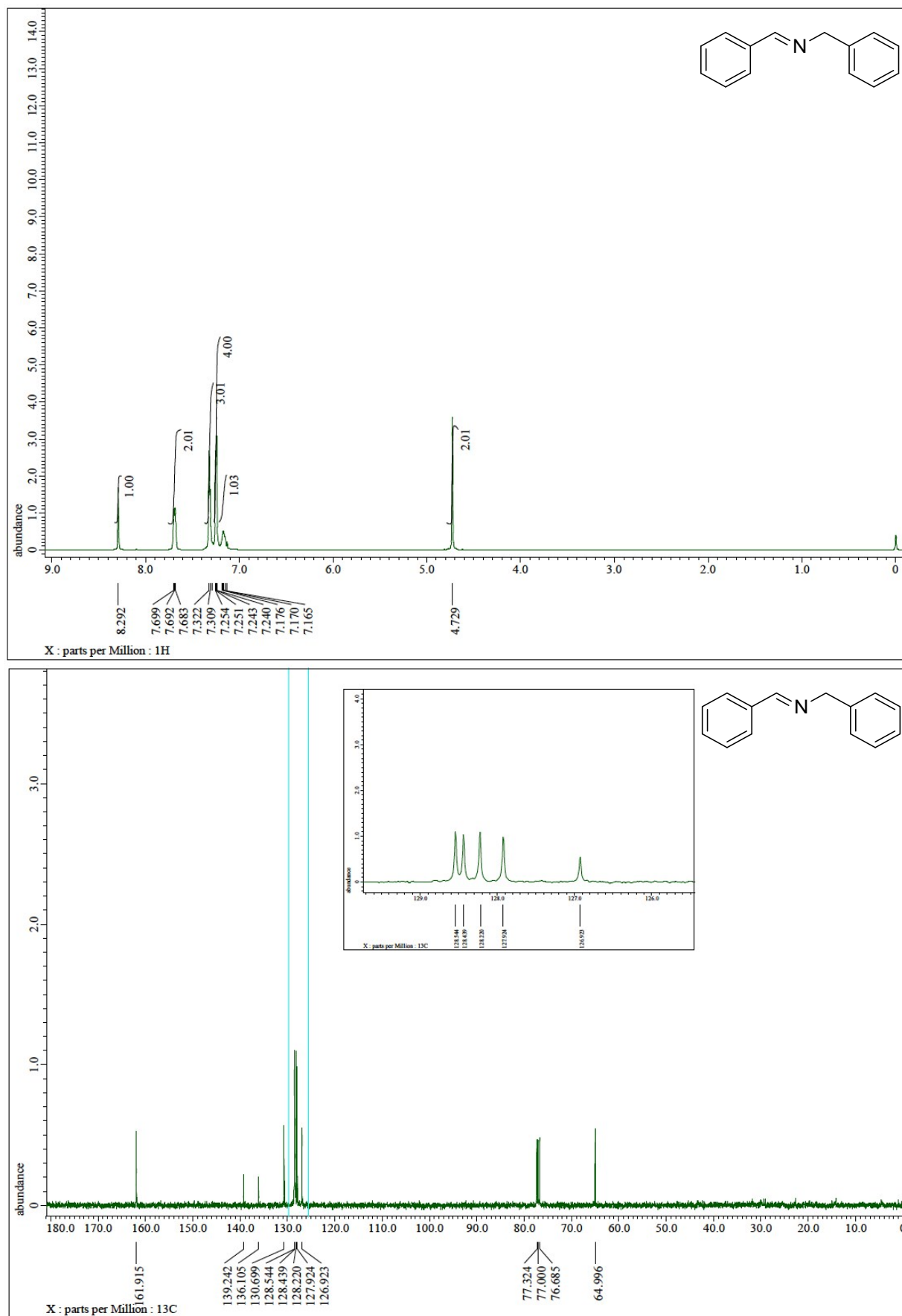


Figure S31. ¹H NMR of **5** (400 MHz, CDCl₃) and ¹³C NMR of **5** (100 MHz, CDCl₃).

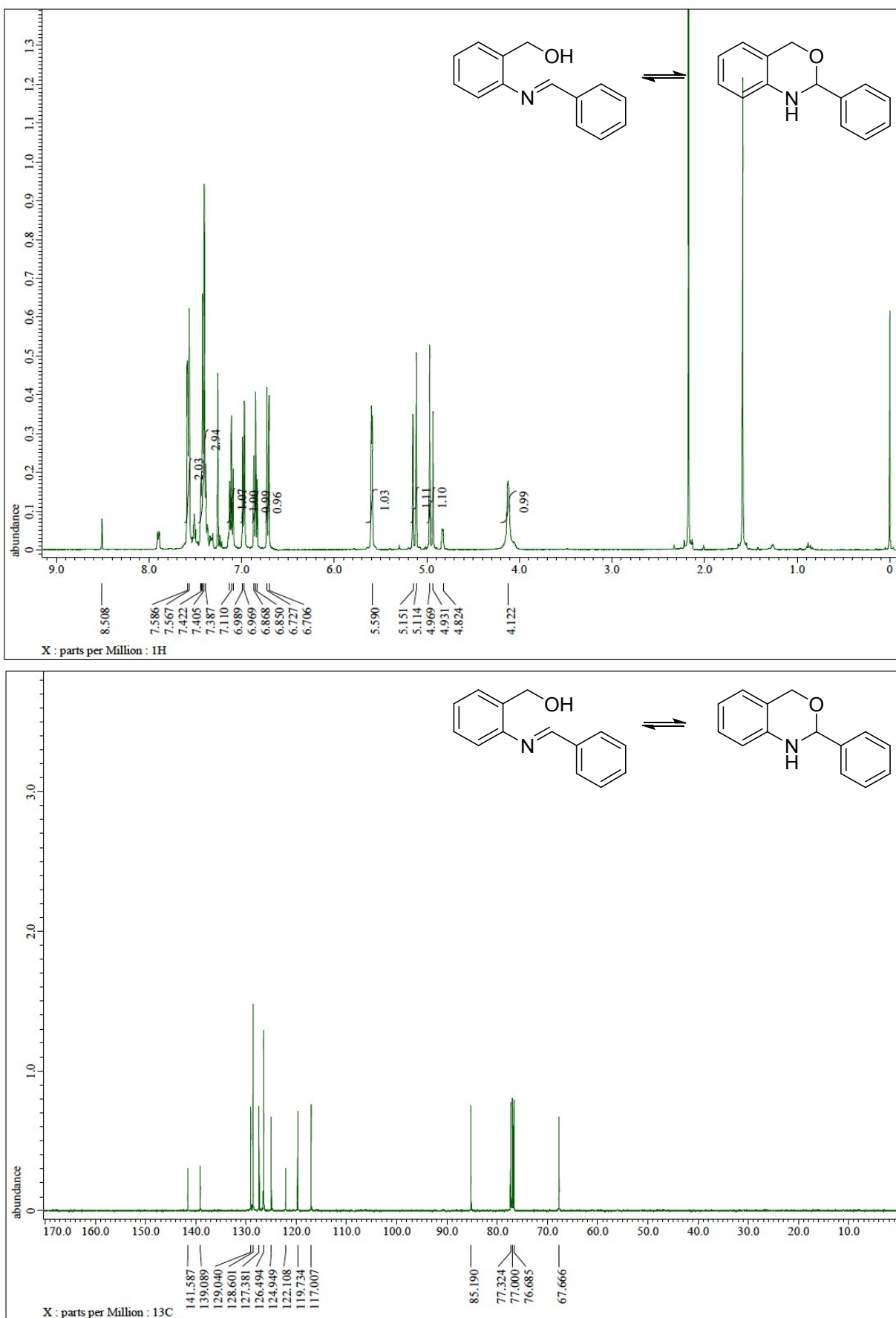


Figure S32. ¹H NMR of **6** & **7** (400 MHz, CDCl₃) and ¹³C NMR of **6** & **7** (100 MHz, CDCl₃).

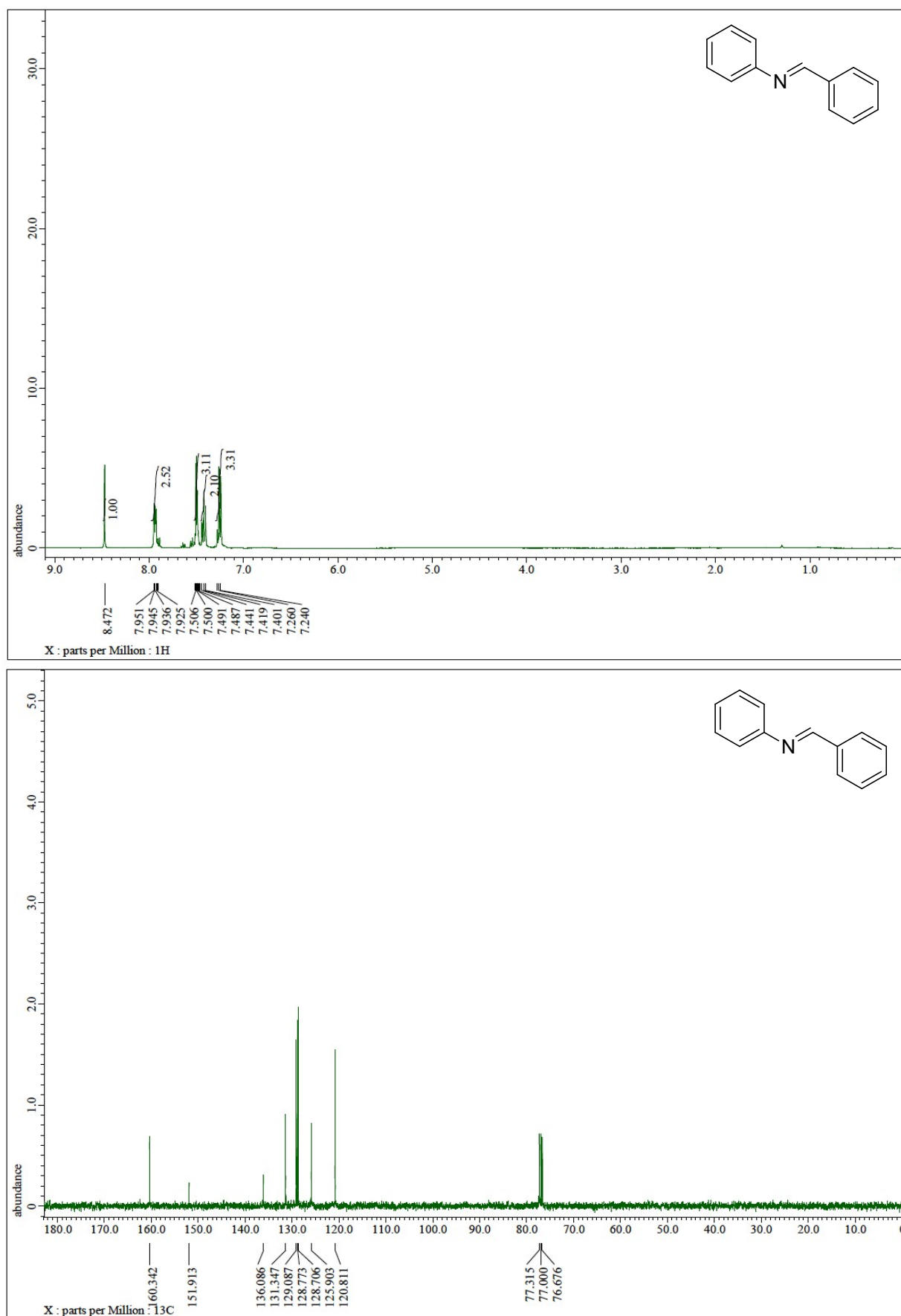


Figure S33. ¹H NMR of **9** (400 MHz, CDCl₃) and ¹³C NMR of **9** (100 MHz, CDCl₃).

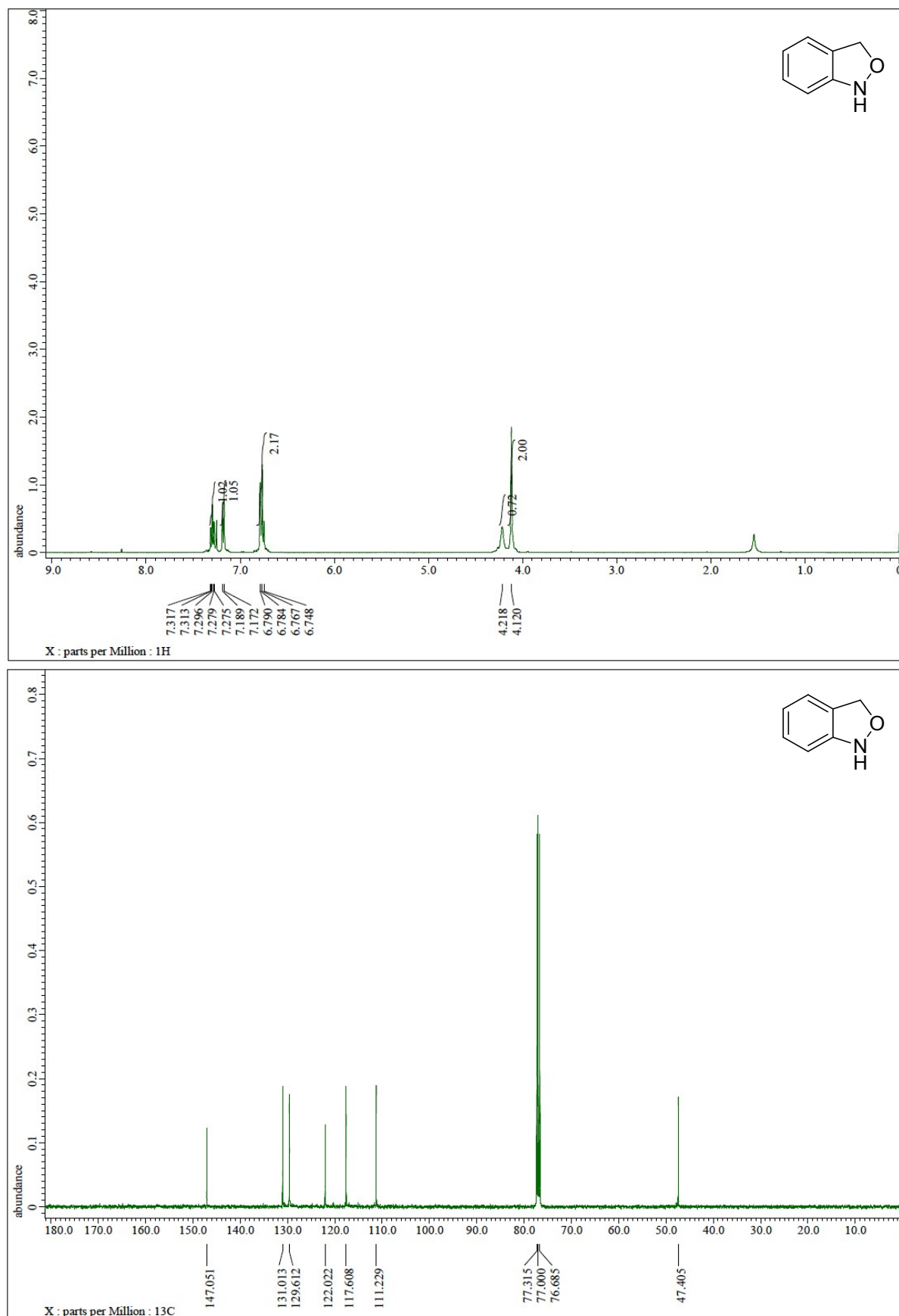


Figure S34. ¹H NMR of **10** (400 MHz, CDCl₃) and ¹³C NMR of **10** (100 MHz, CDCl₃).