

Supplementary material

URACIL-CONTAINING HETERODIMERS OF A NEW TYPE: SYNTHESIS AND STUDY OF ANTI-VIRAL PROPERTIES

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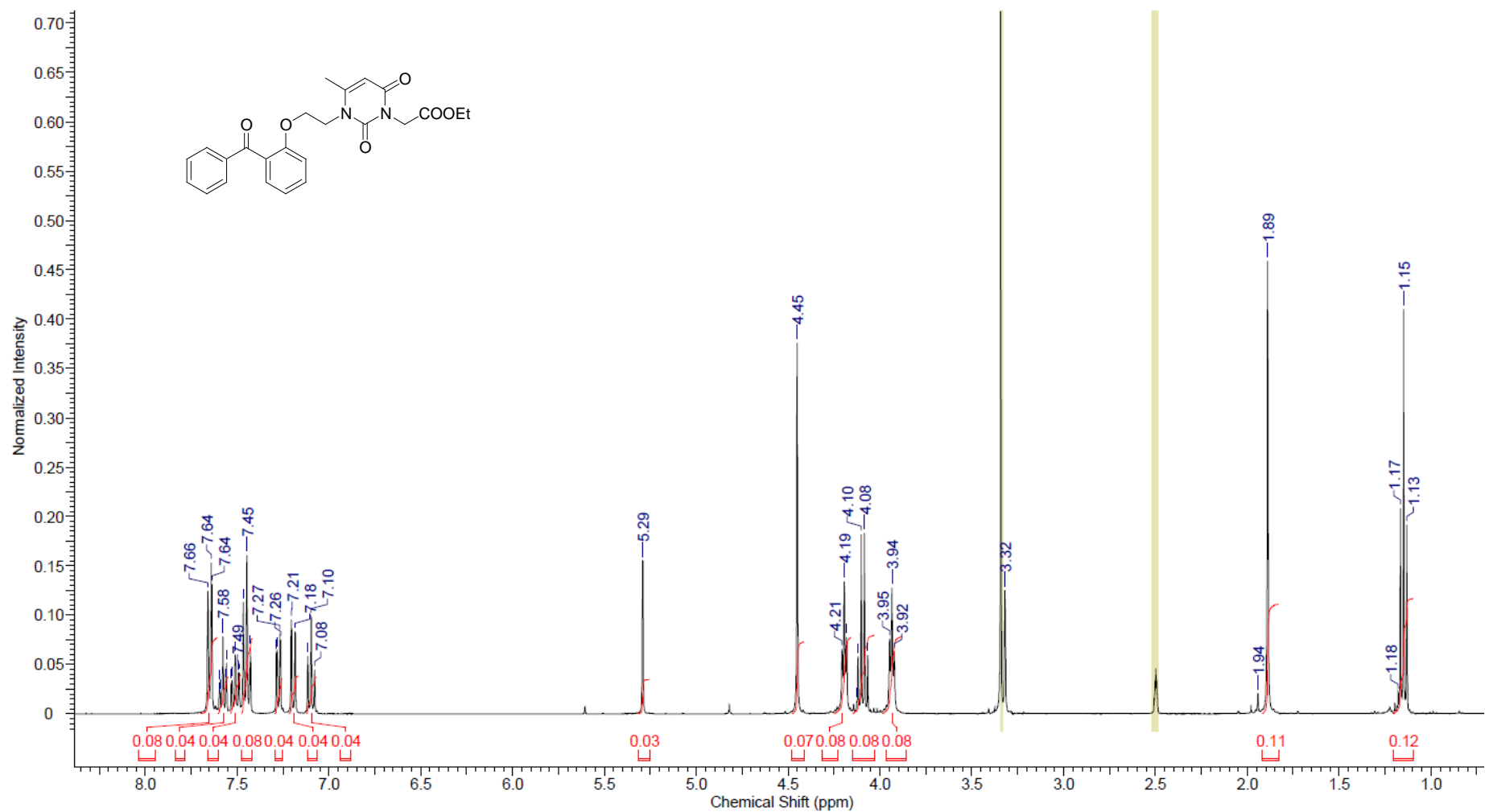


Figure S1 ¹H NMR spectrum of compound **4a** in DMSO-*d*₆ at 400 MHz.

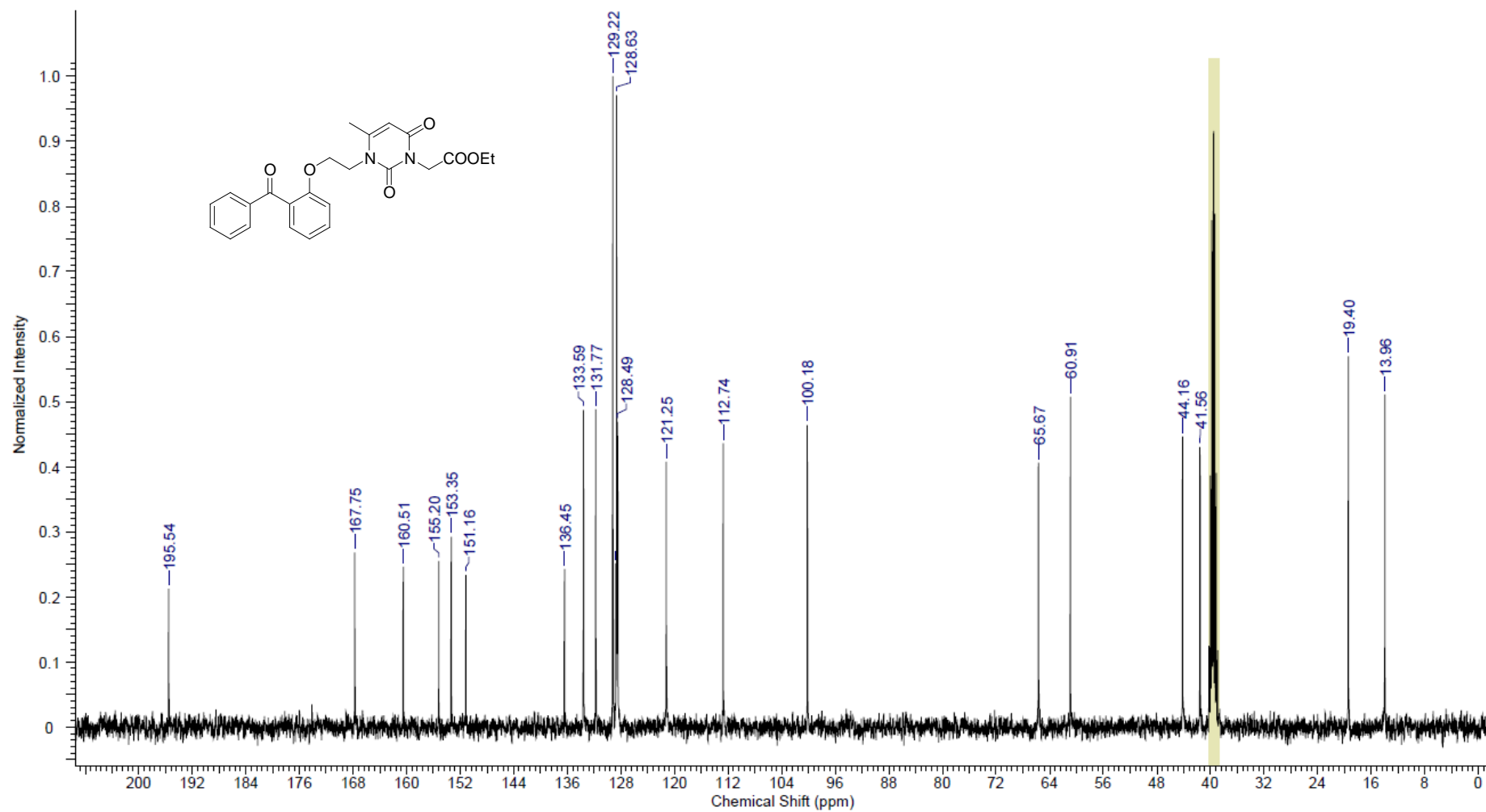


Figure S2 ^{13}C NMR spectrum of compound **4a** in $\text{DMSO-}d_6$ at 100 MHz.

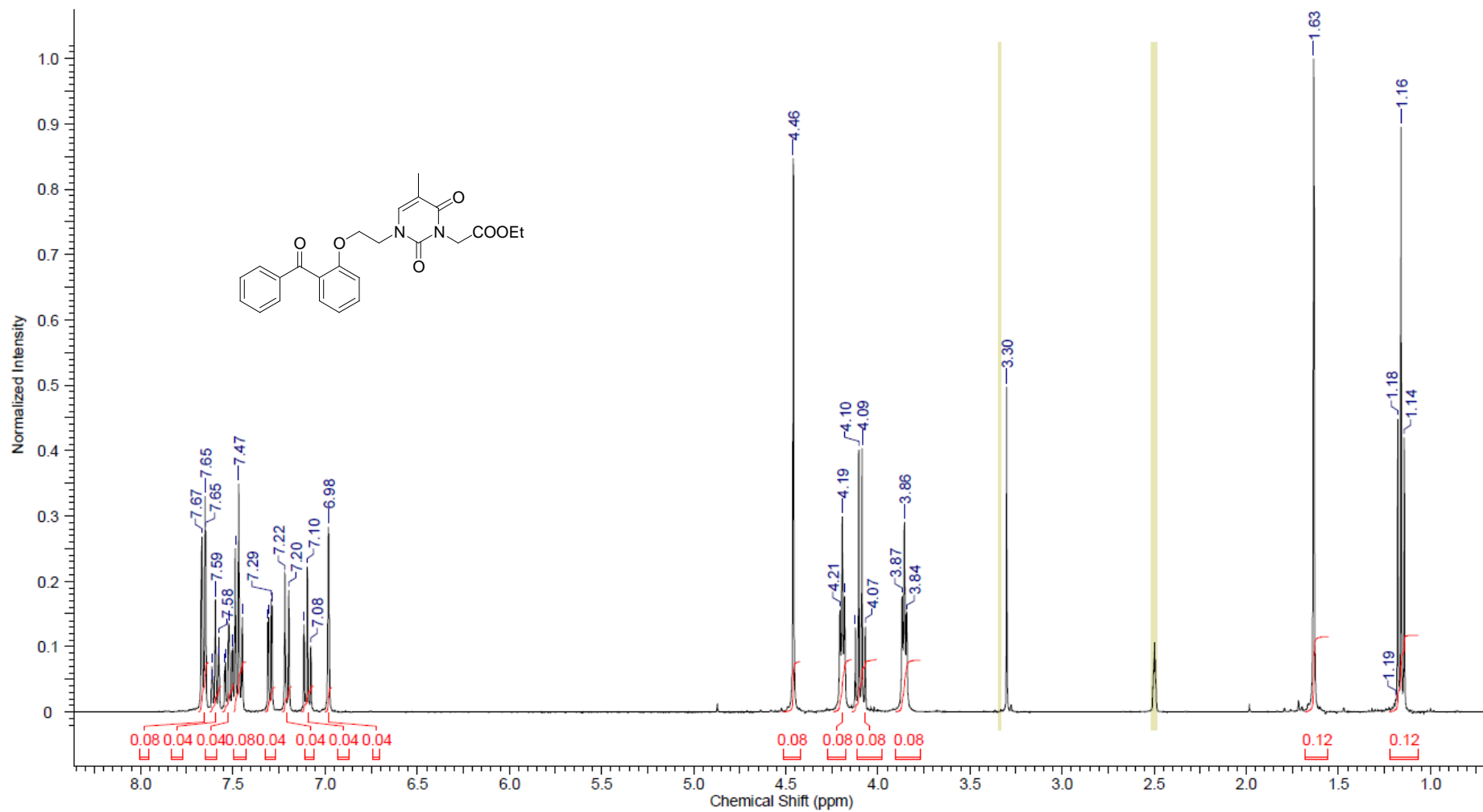


Figure S3. ^1H NMR spectrum of compound **4b** in $\text{DMSO-}d_6$ at 400 MHz.

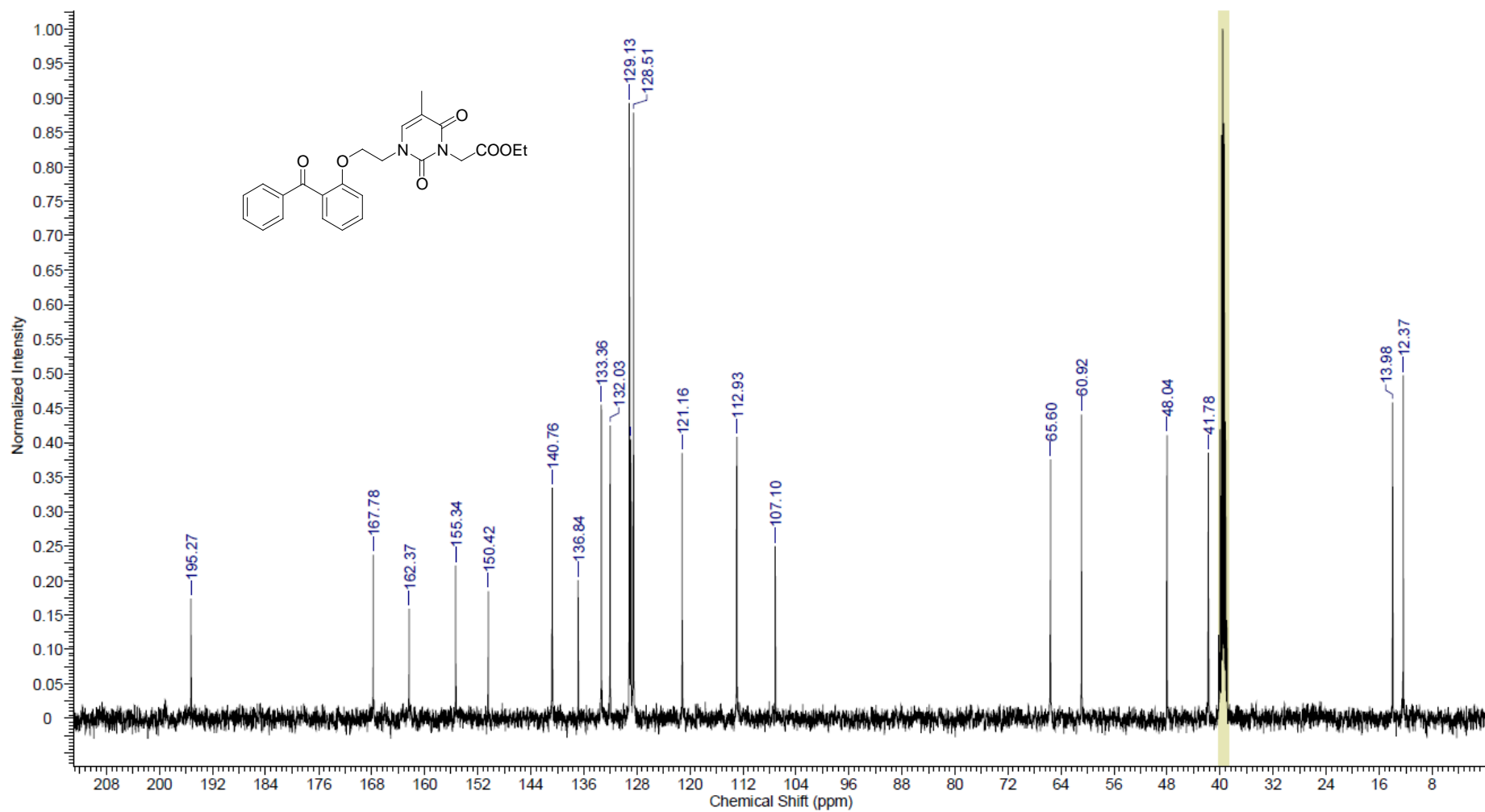


Figure S4. ^{13}C NMR spectrum of compound **4b** in $\text{DMSO-}d_6$ at 100 MHz.

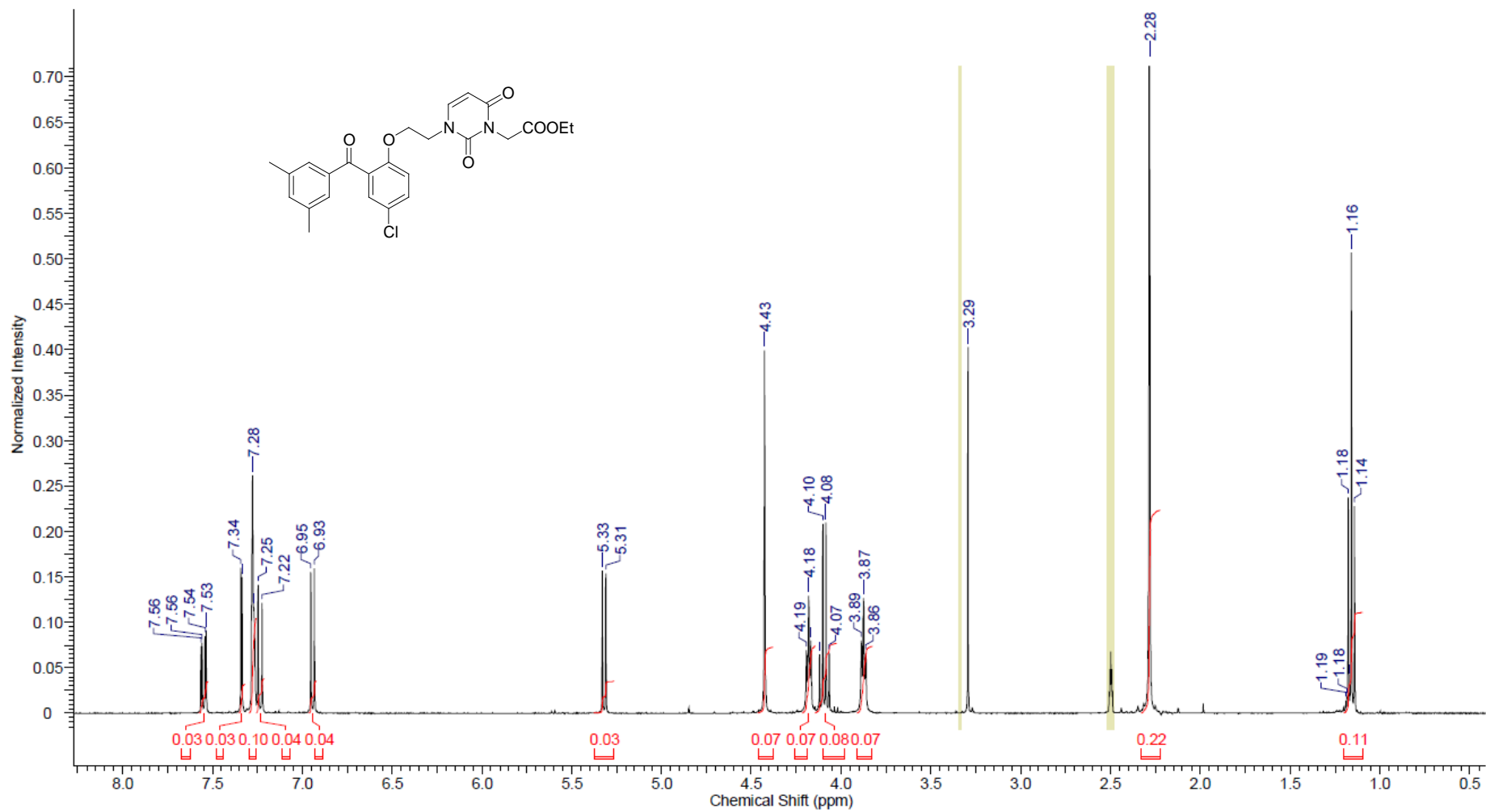


Figure S5. ¹H NMR spectrum of compound 4c in DMSO-*d*₆ at 400 MHz.

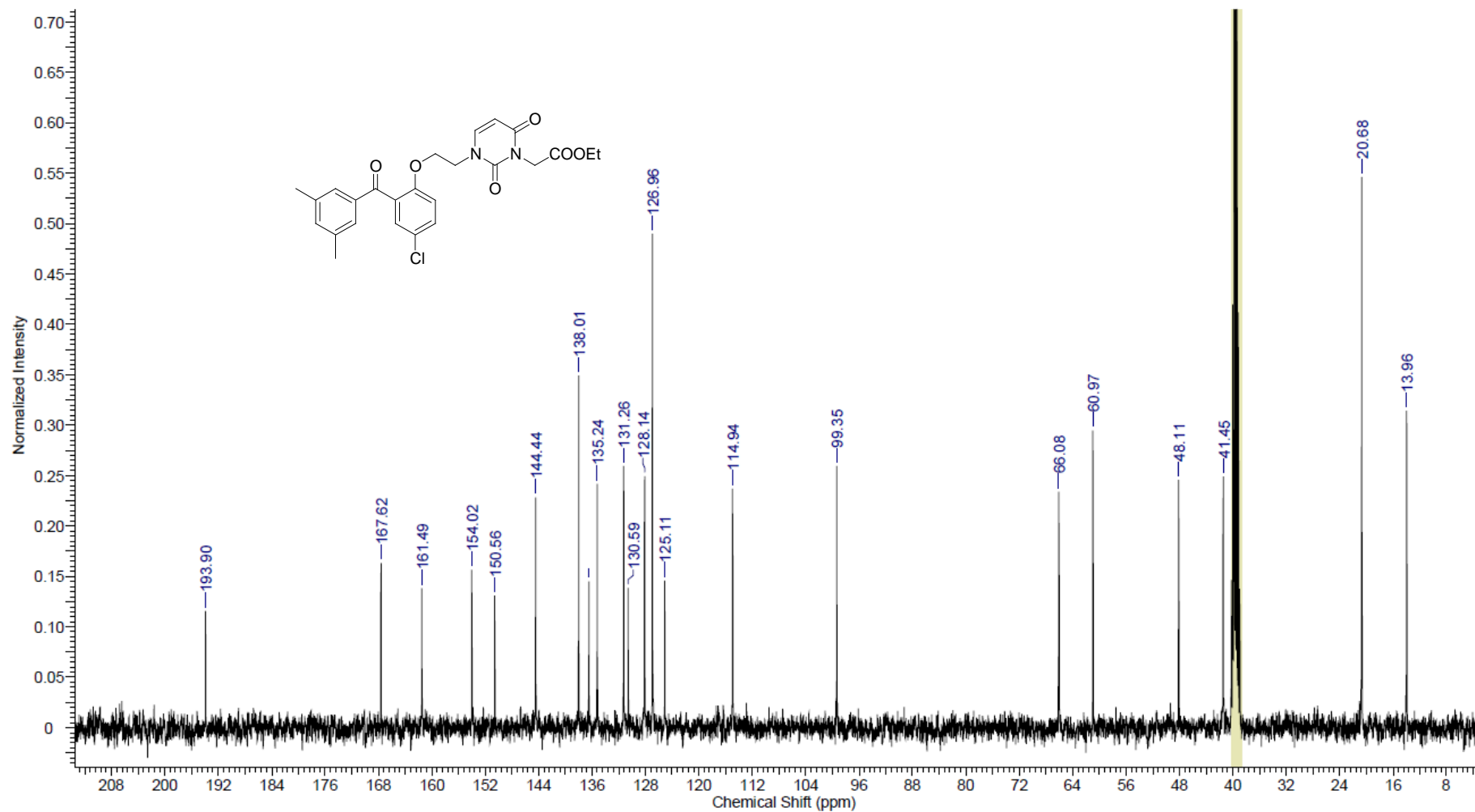


Figure S6. ¹³C NMR spectrum of compound 4c in DMSO-*d*₆ at 100 MHz.

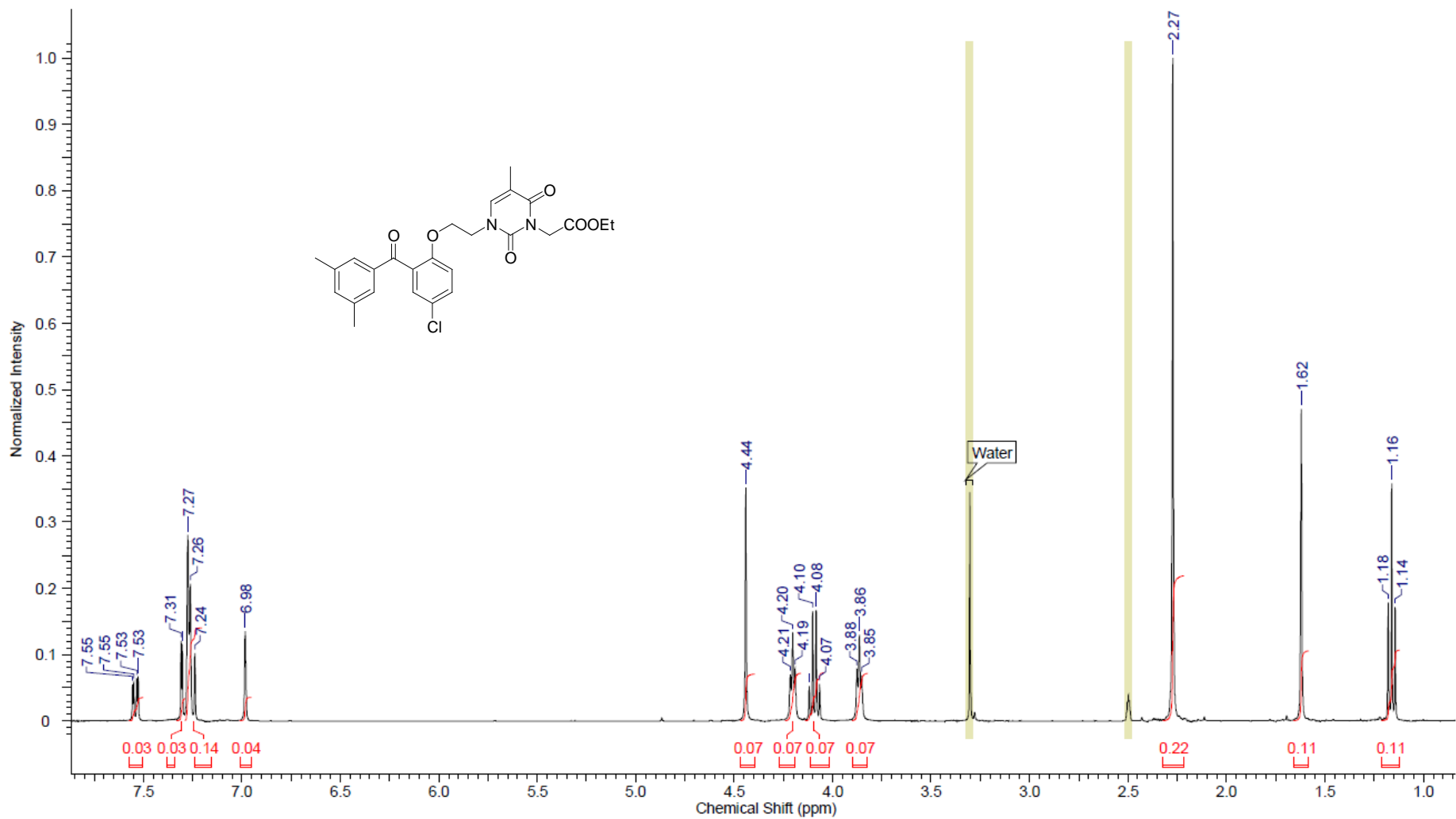


Figure S7. ^1H NMR spectrum of compound **4d** in CDCl_3 at 400 MHz.

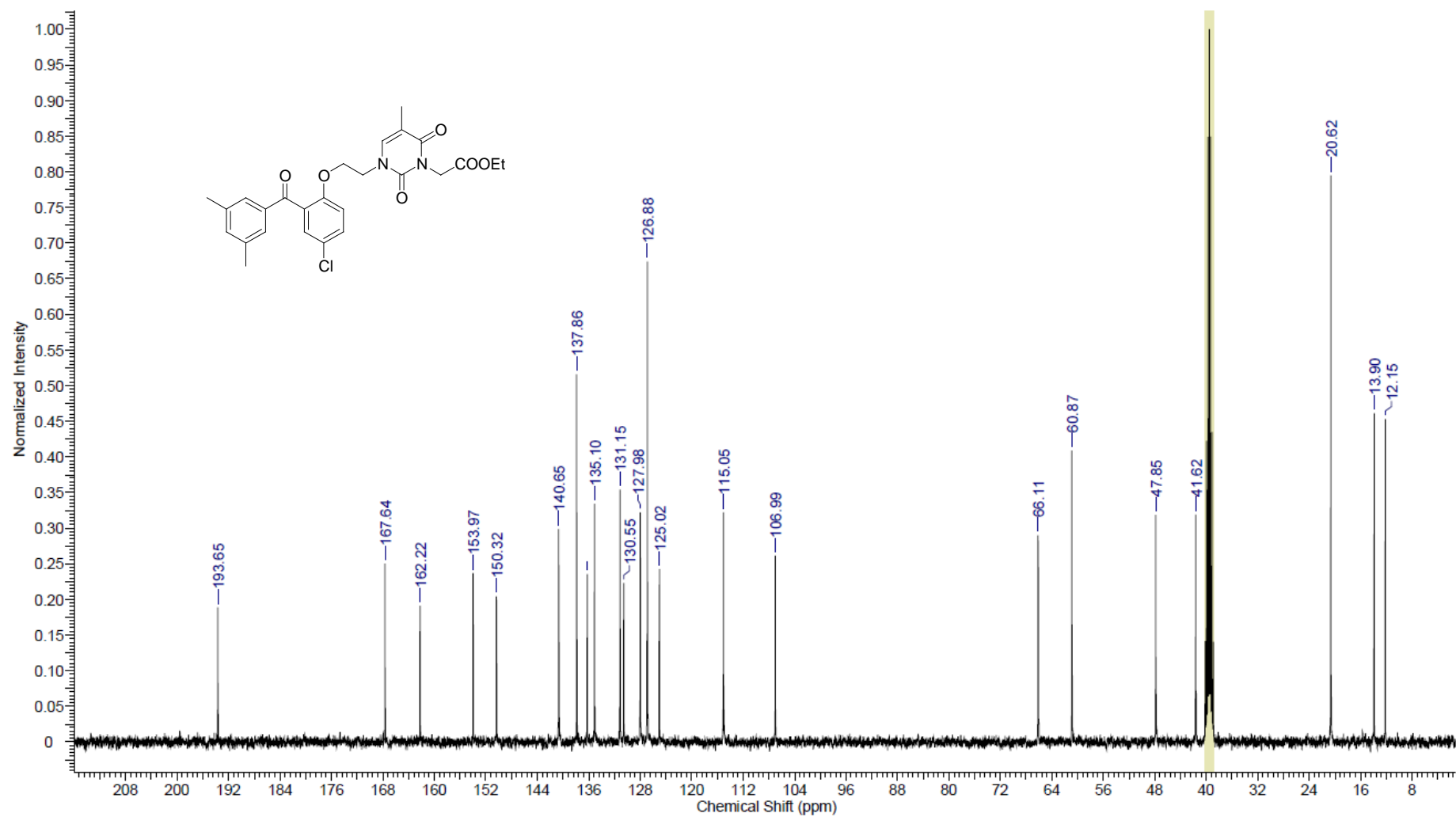


Figure S8. ^{13}C NMR spectrum of compound **4d** in CDCl_3 at 100 MHz.

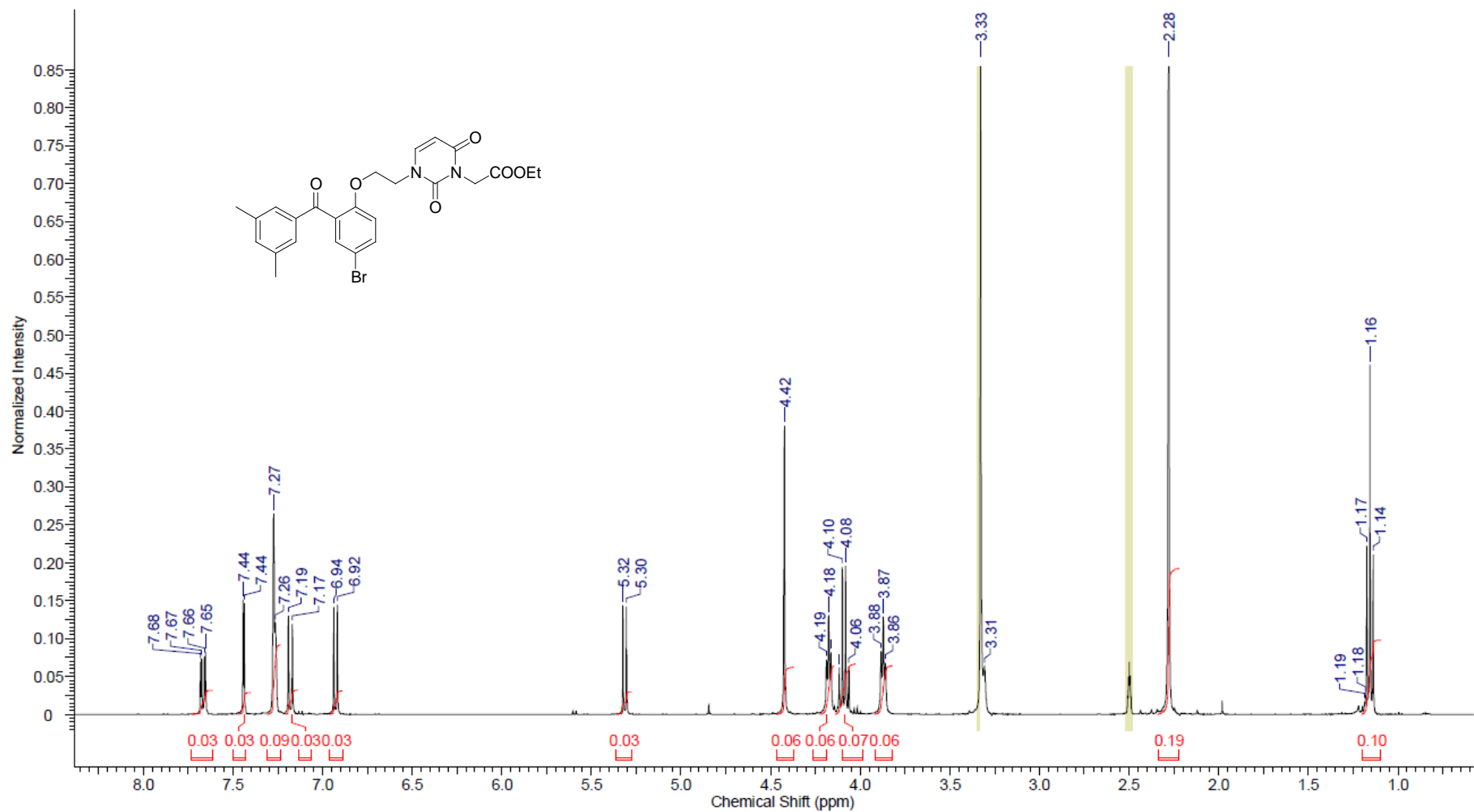


Figure S9. ¹H NMR spectrum of compound **4f** in DMSO-*d*₆ at 400 MHz.

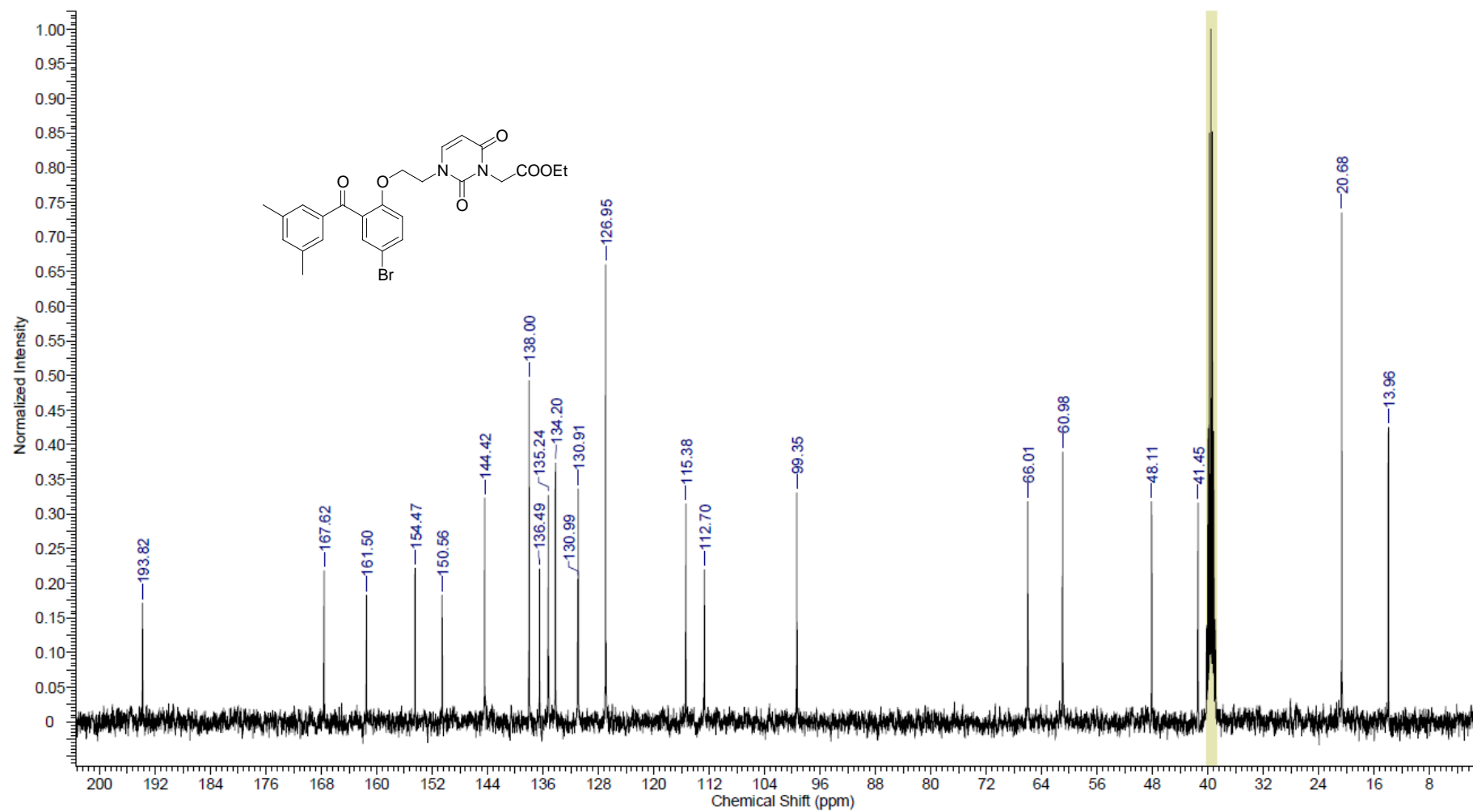


Figure S10. ^{13}C NMR spectrum of compound **4f** in $\text{DMSO-}d_6$ at 100 MHz.

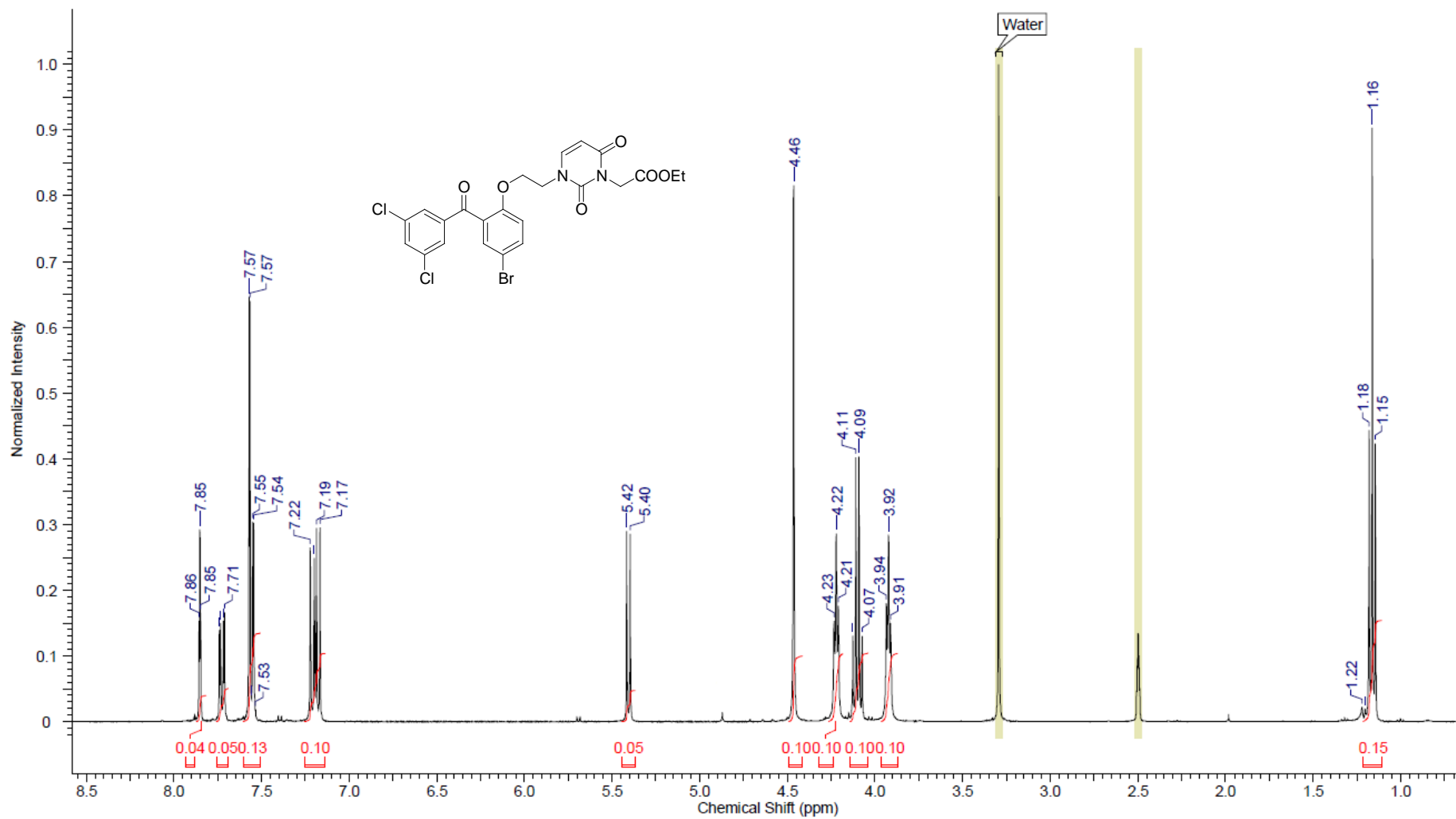


Figure S11. ^1H NMR spectrum of compound **4g** in $\text{DMSO-}d_6$ at 400 MHz.

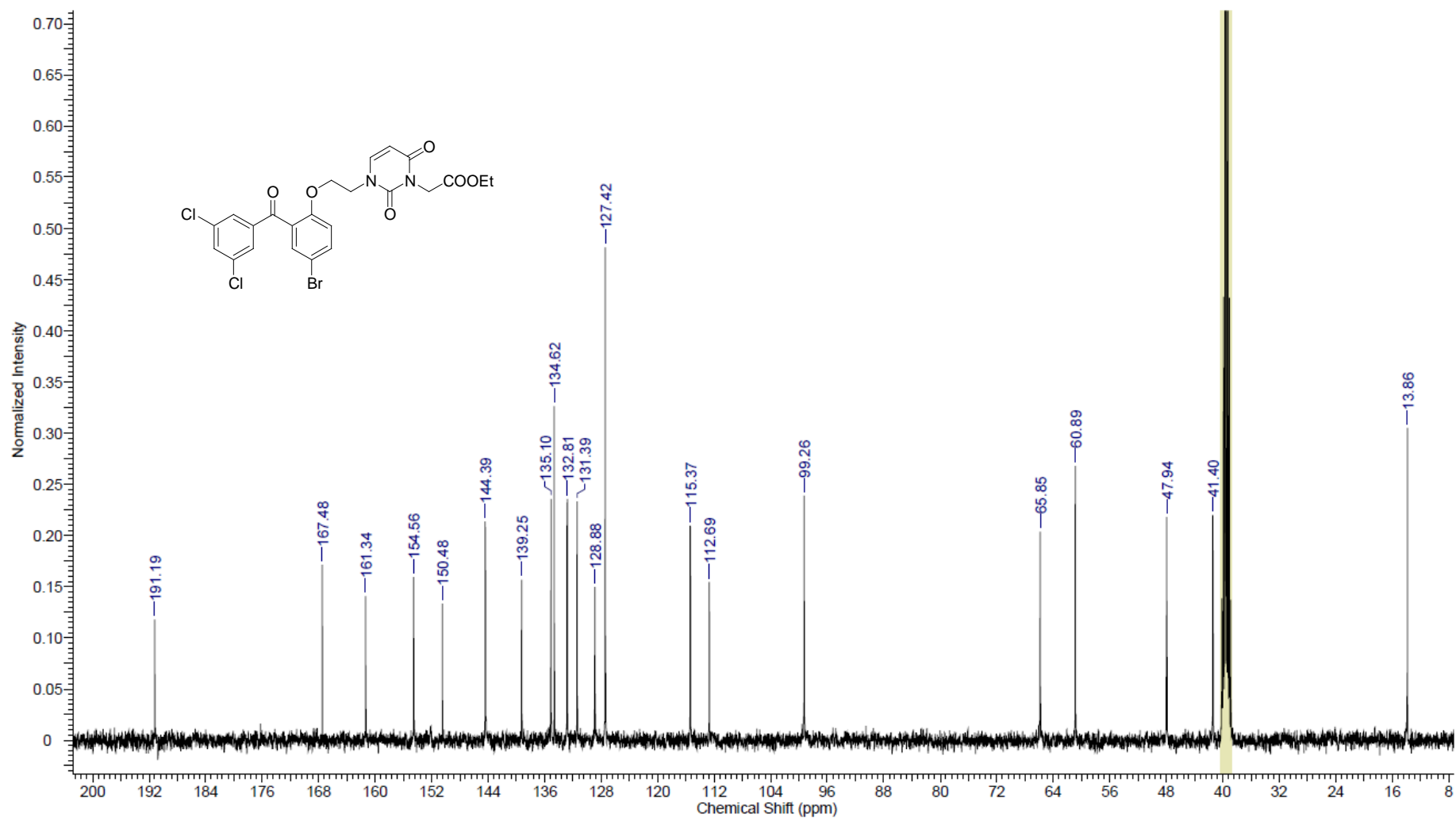


Figure S12. ¹³C NMR spectrum of compound **4g** in DMSO-*d*₆ at 100 MHz.

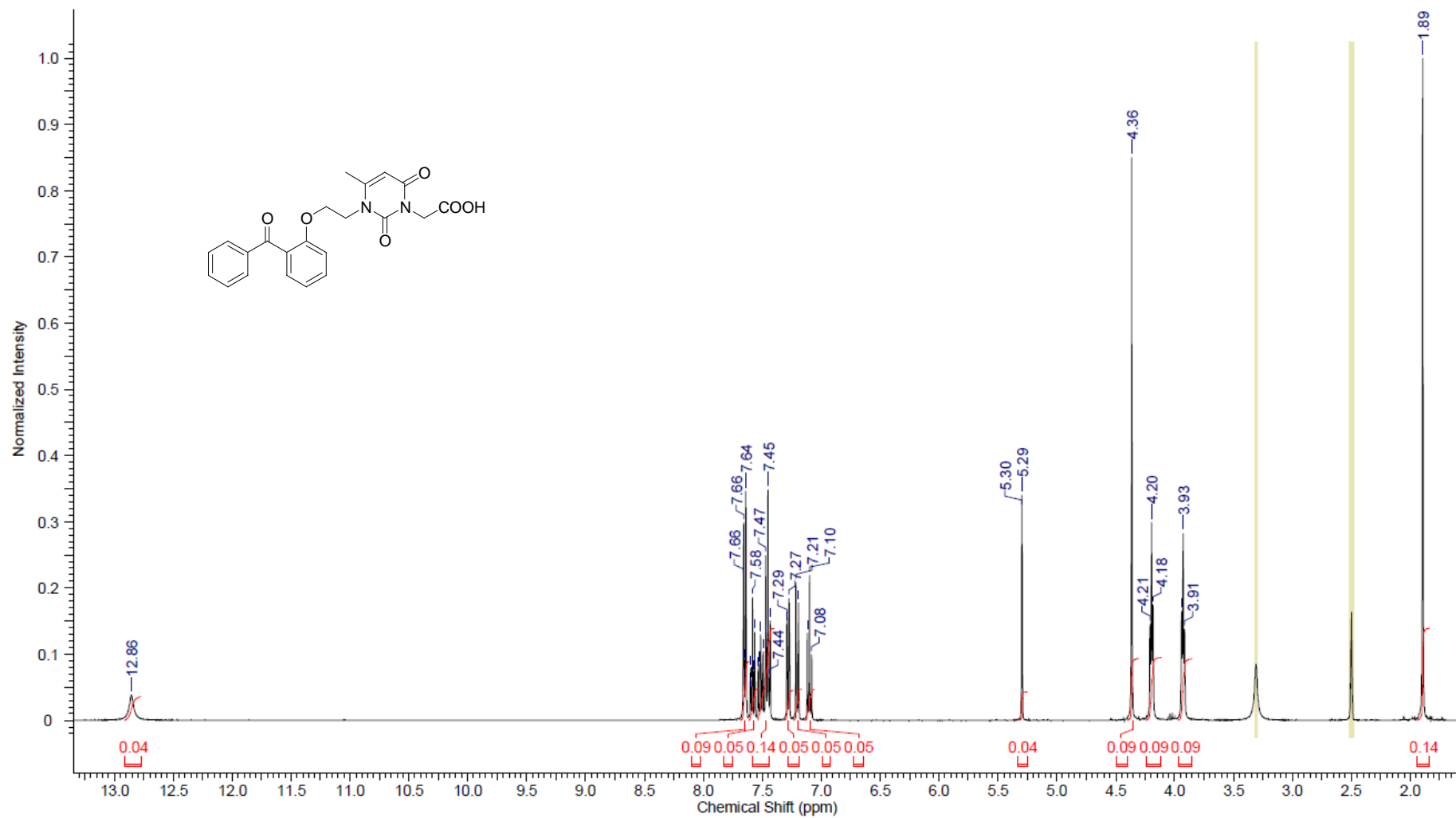


Figure S13. ¹H NMR spectrum of compound **5a** in DMSO-*d*₆ at 400 MHz.

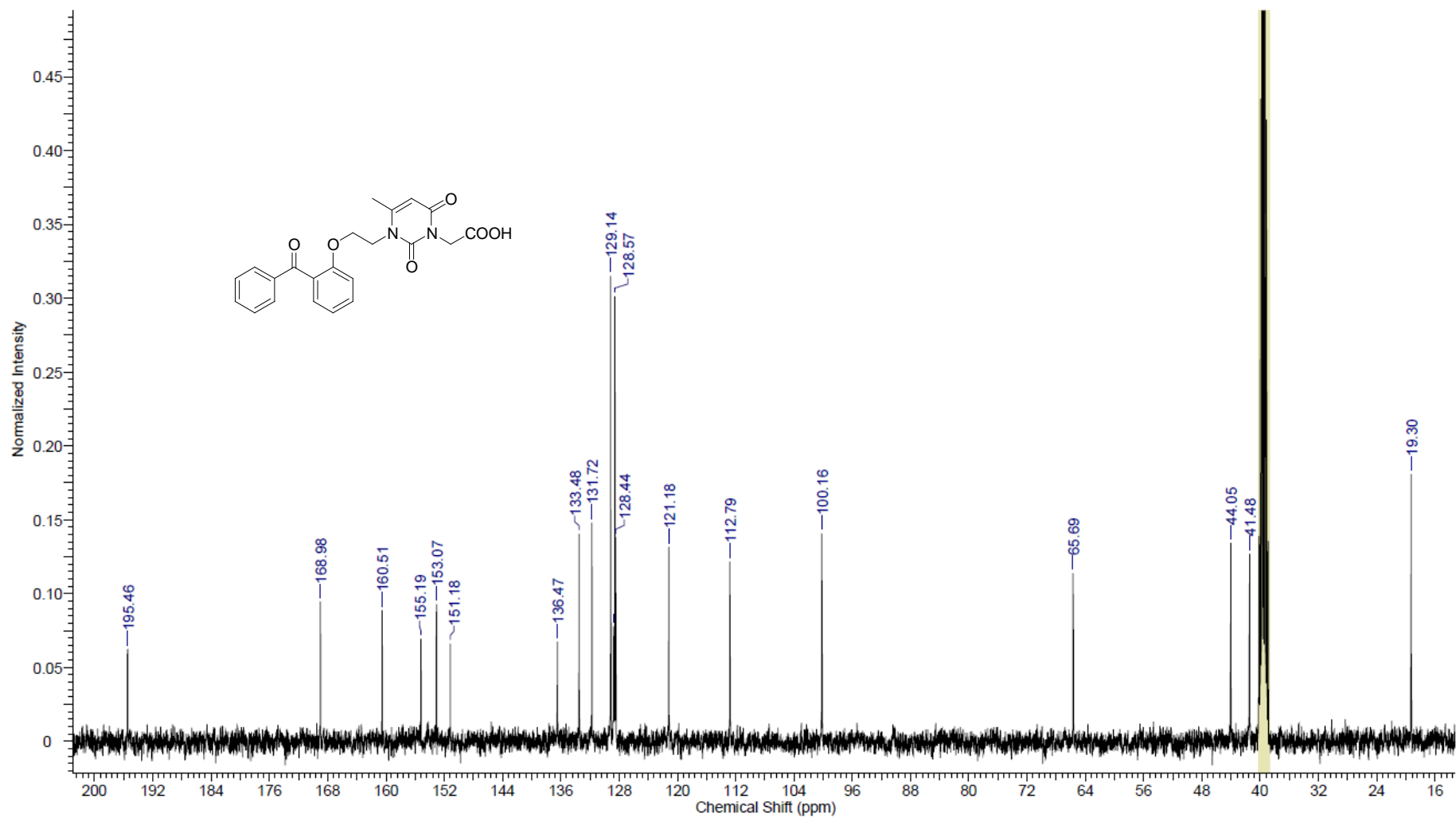


Figure S14. ^{13}C NMR spectrum of compound **5a** in $\text{DMSO-}d_6$ at 100 MHz.

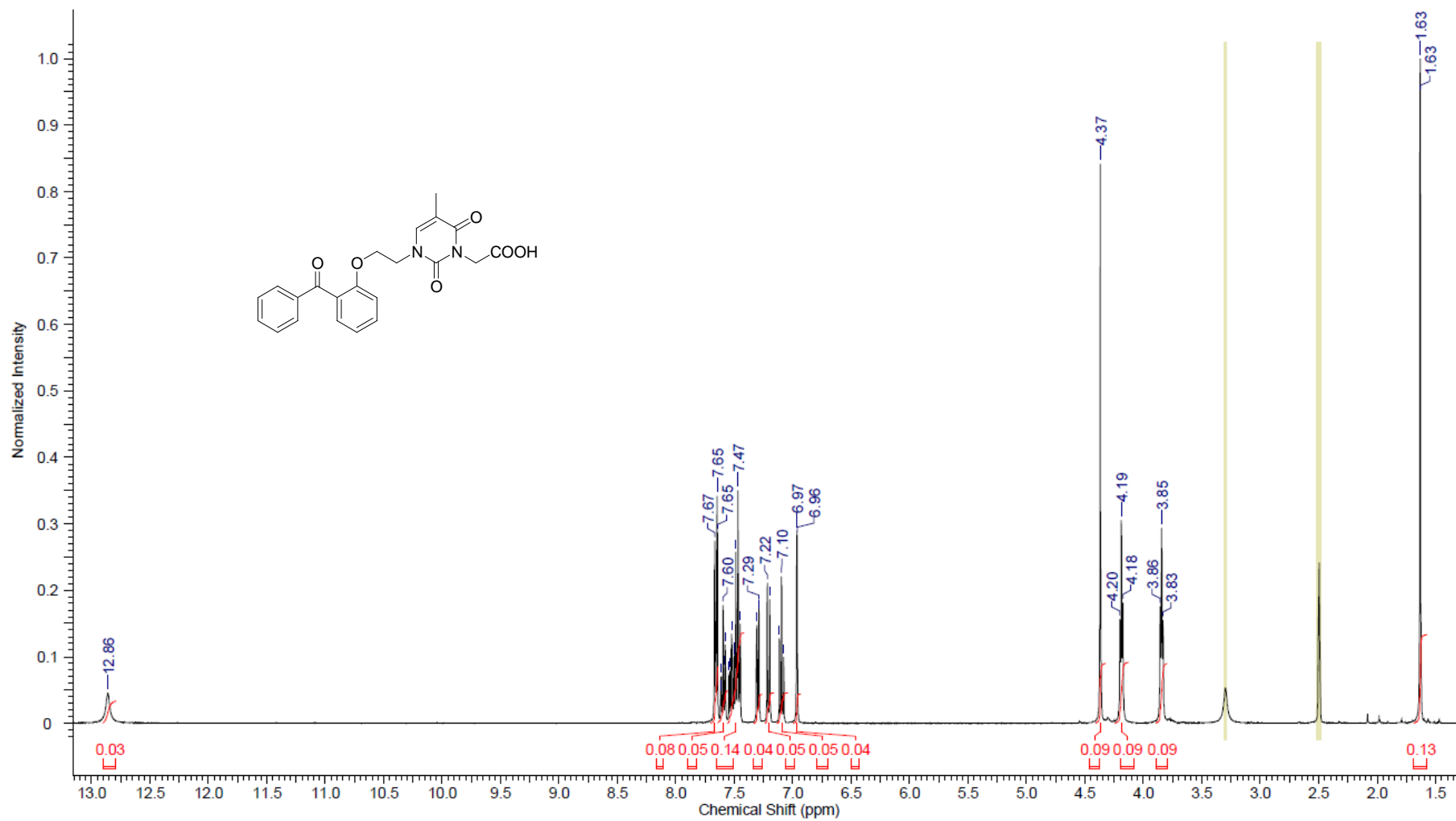


Figure S15. ^1H NMR spectrum of compound **5b** in $\text{DMSO-}d_6$ at 400 MHz.

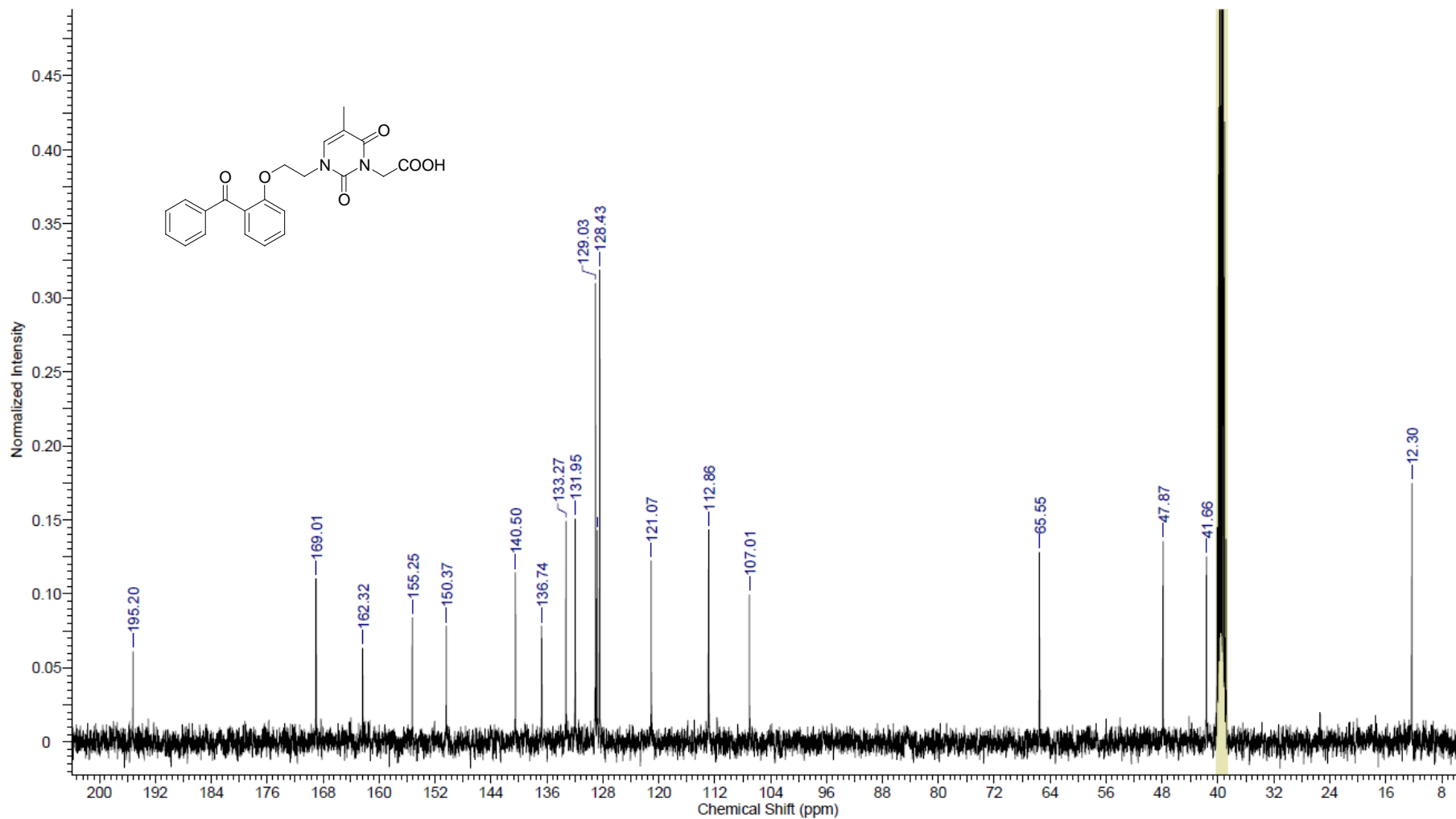


Figure S16. ^{13}C NMR spectrum of compound **5b** in $\text{DMSO-}d_6$ at 100 MHz.

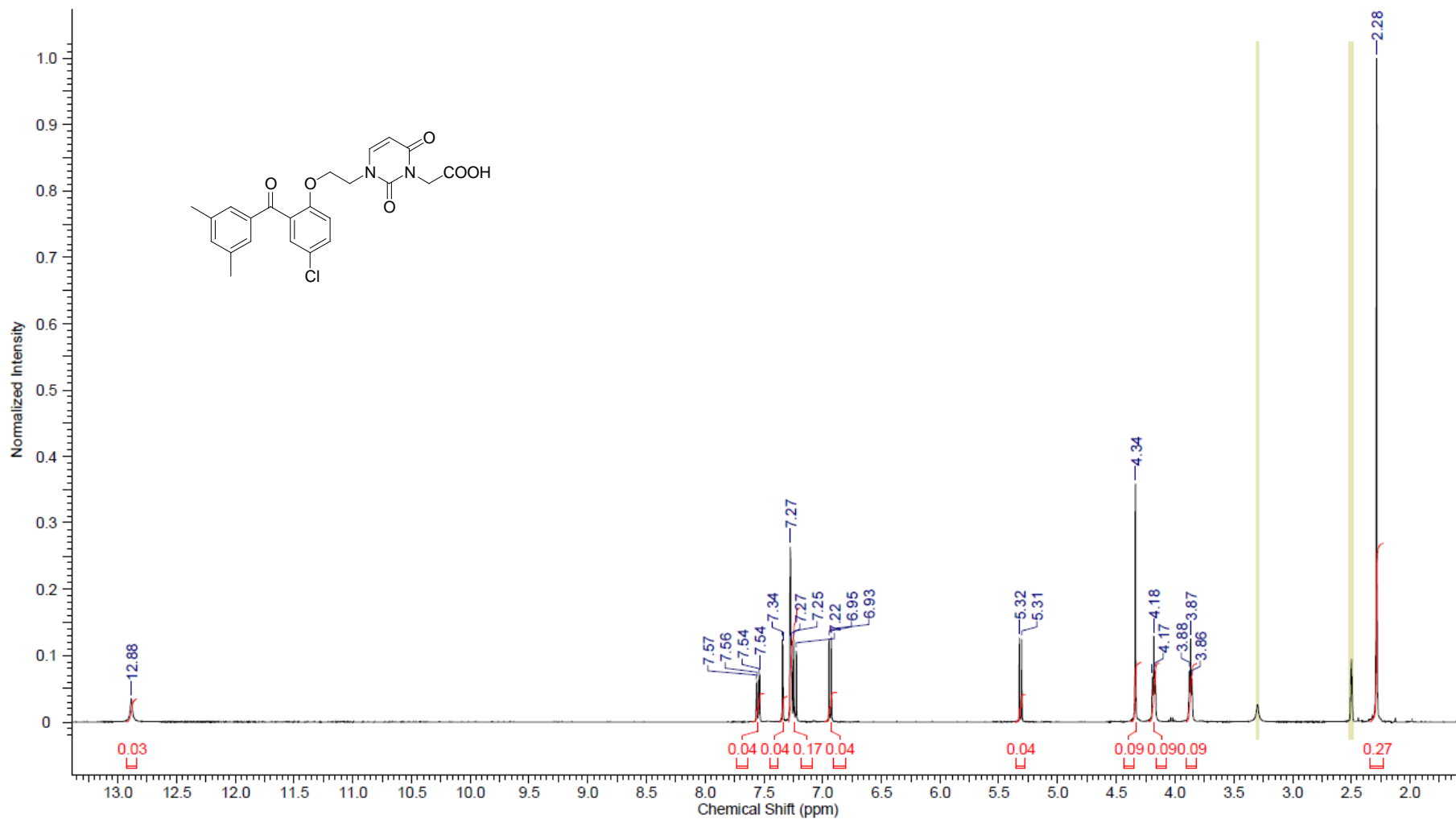


Figure S17. ^1H NMR spectrum of compound **5c** in DMSO- d_6 at 400 MHz.

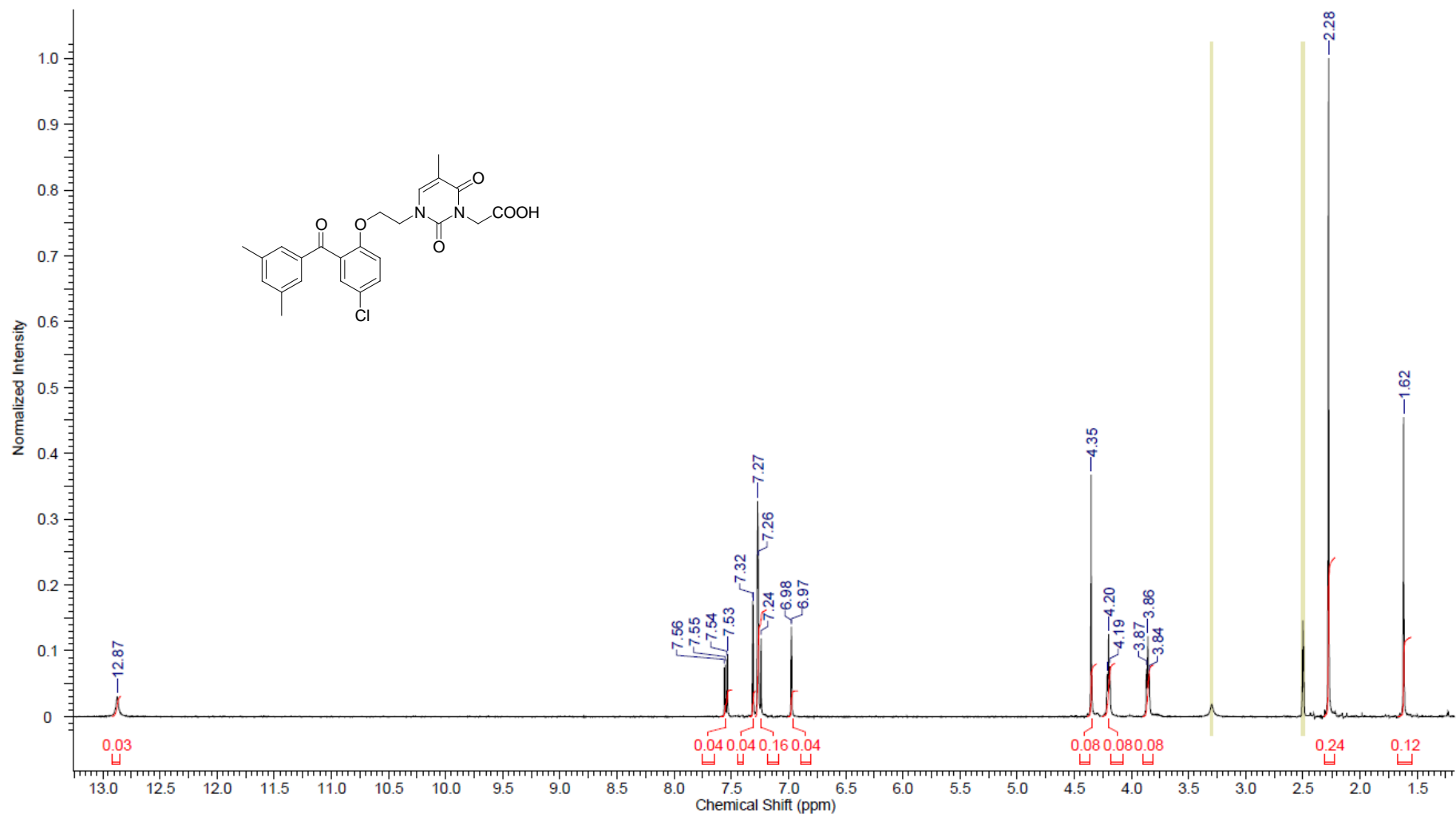


Figure S19. ^1H NMR spectrum of compound **5d** in DMSO- d_6 at 400 MHz.

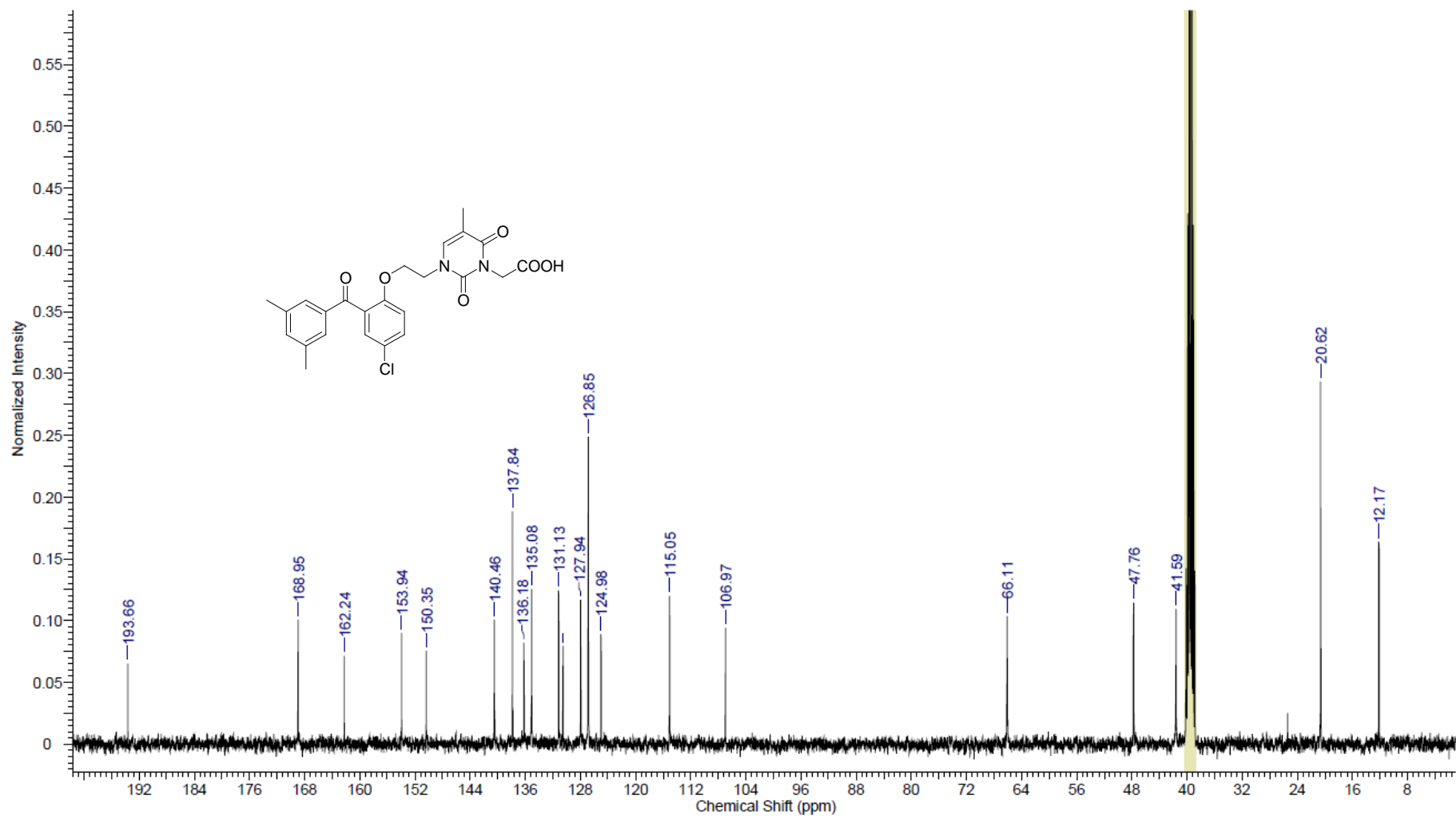


Figure S20. ^{13}C NMR spectrum of compound **5d** in $\text{DMSO-}d_6$ at 100 MHz.

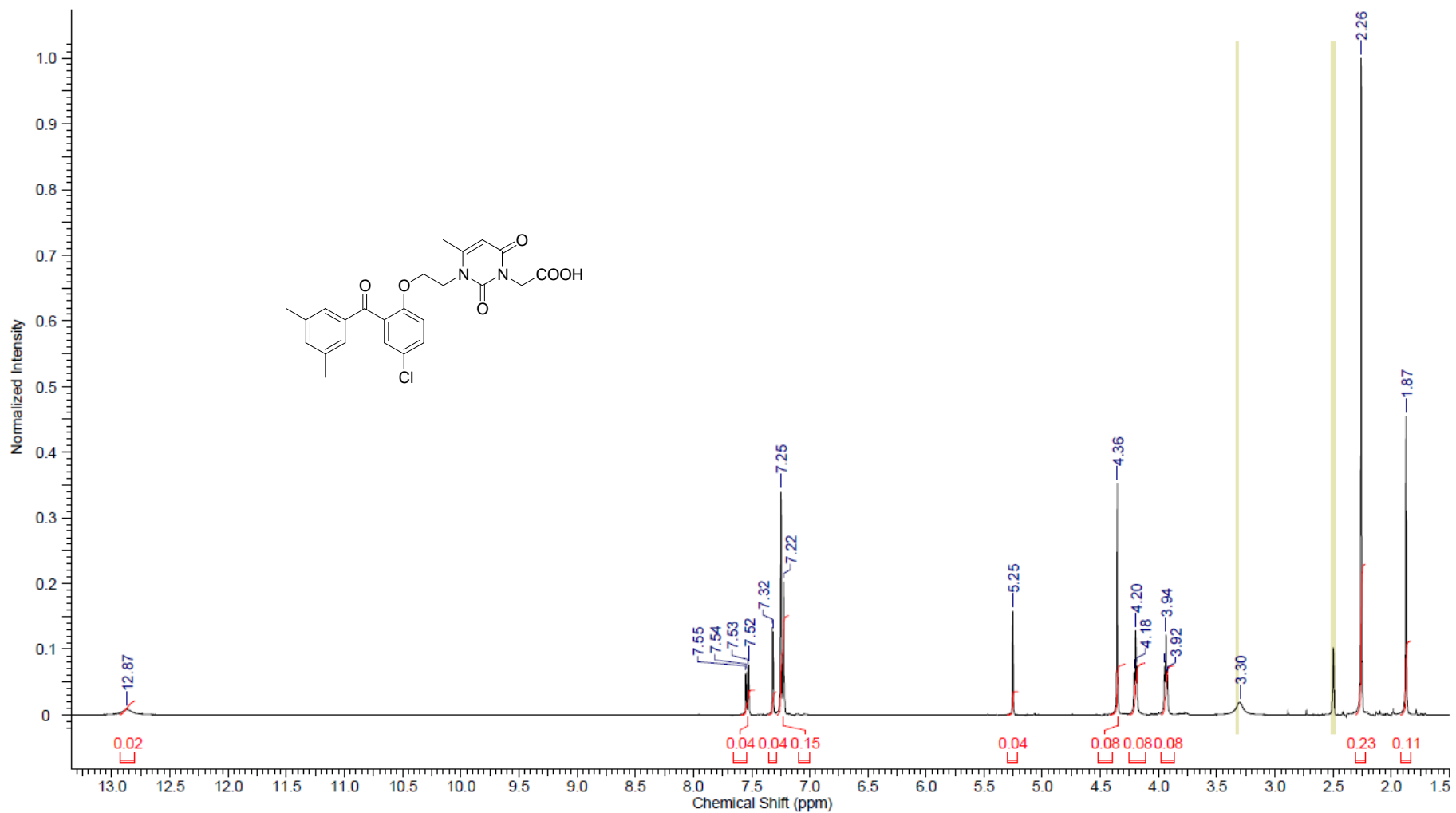


Figure S21. ^1H NMR spectrum of compound **5e** in $\text{DMSO-}d_6$ at 400 MHz.

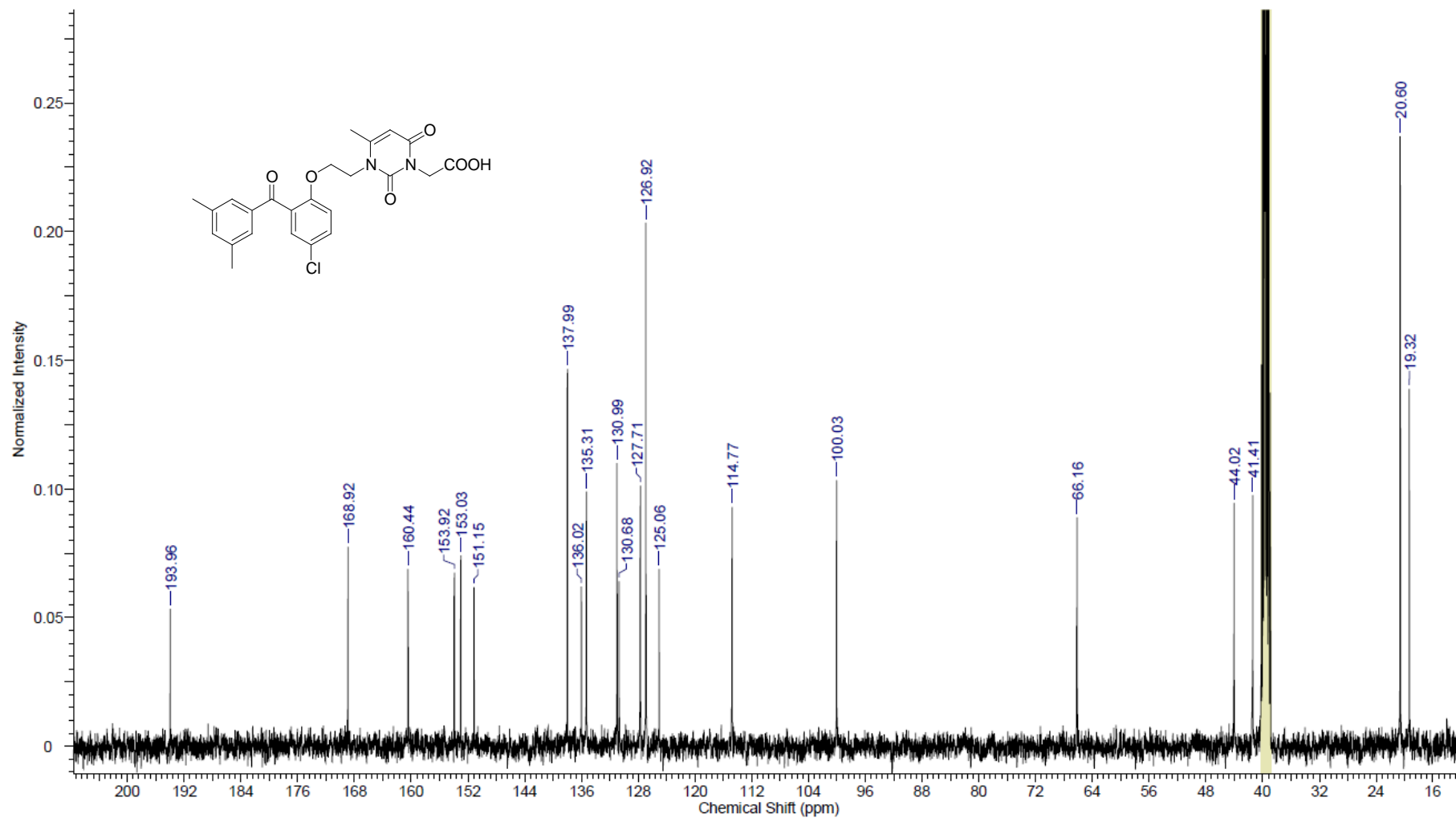


Figure S22. ¹³C NMR spectrum of compound **5e** in DMSO-*d*₆ at 100 MHz.

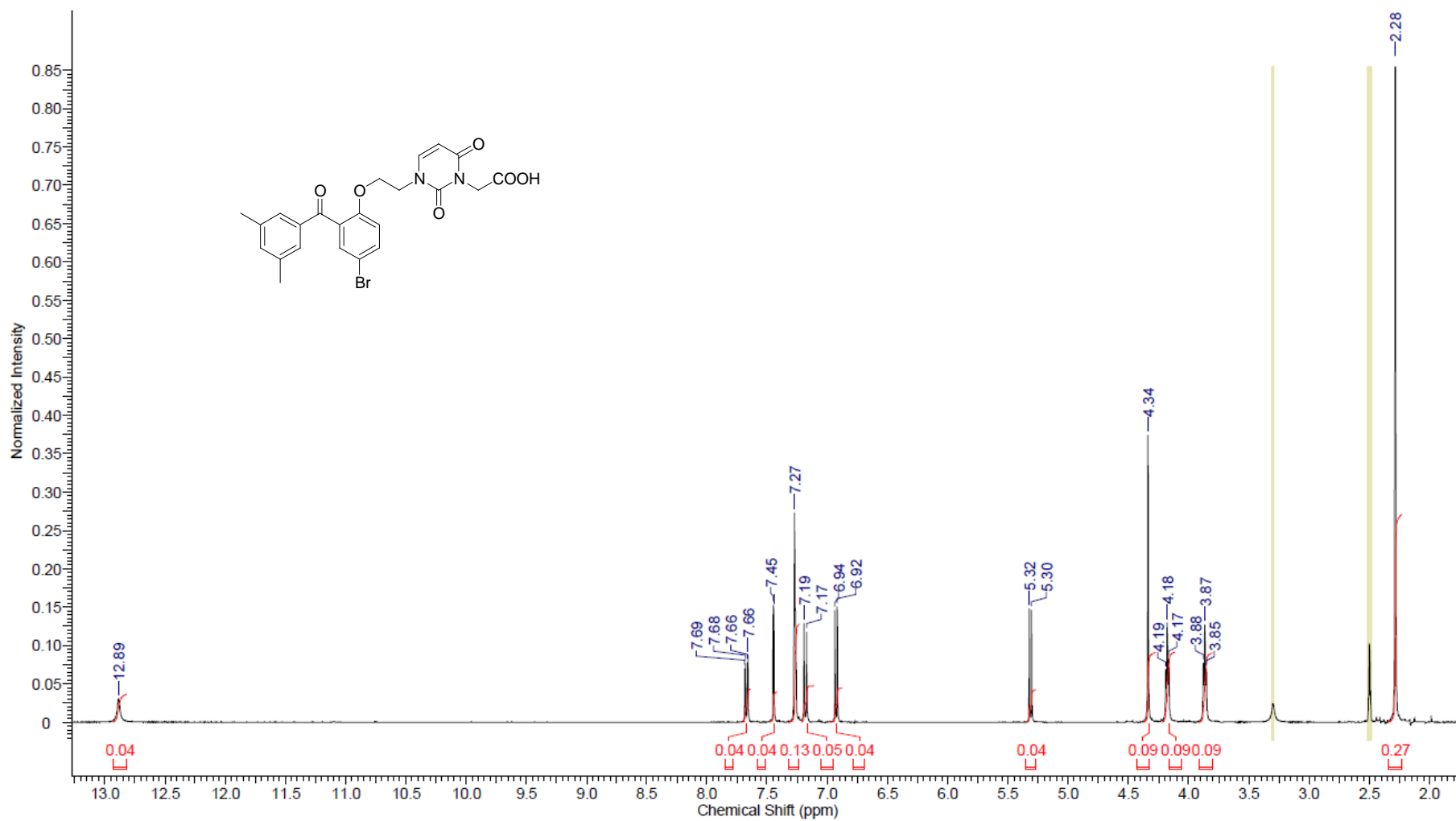


Figure S23. ^1H NMR spectrum of compound **5f** in $\text{DMSO-}d_6$ at 400 MHz.

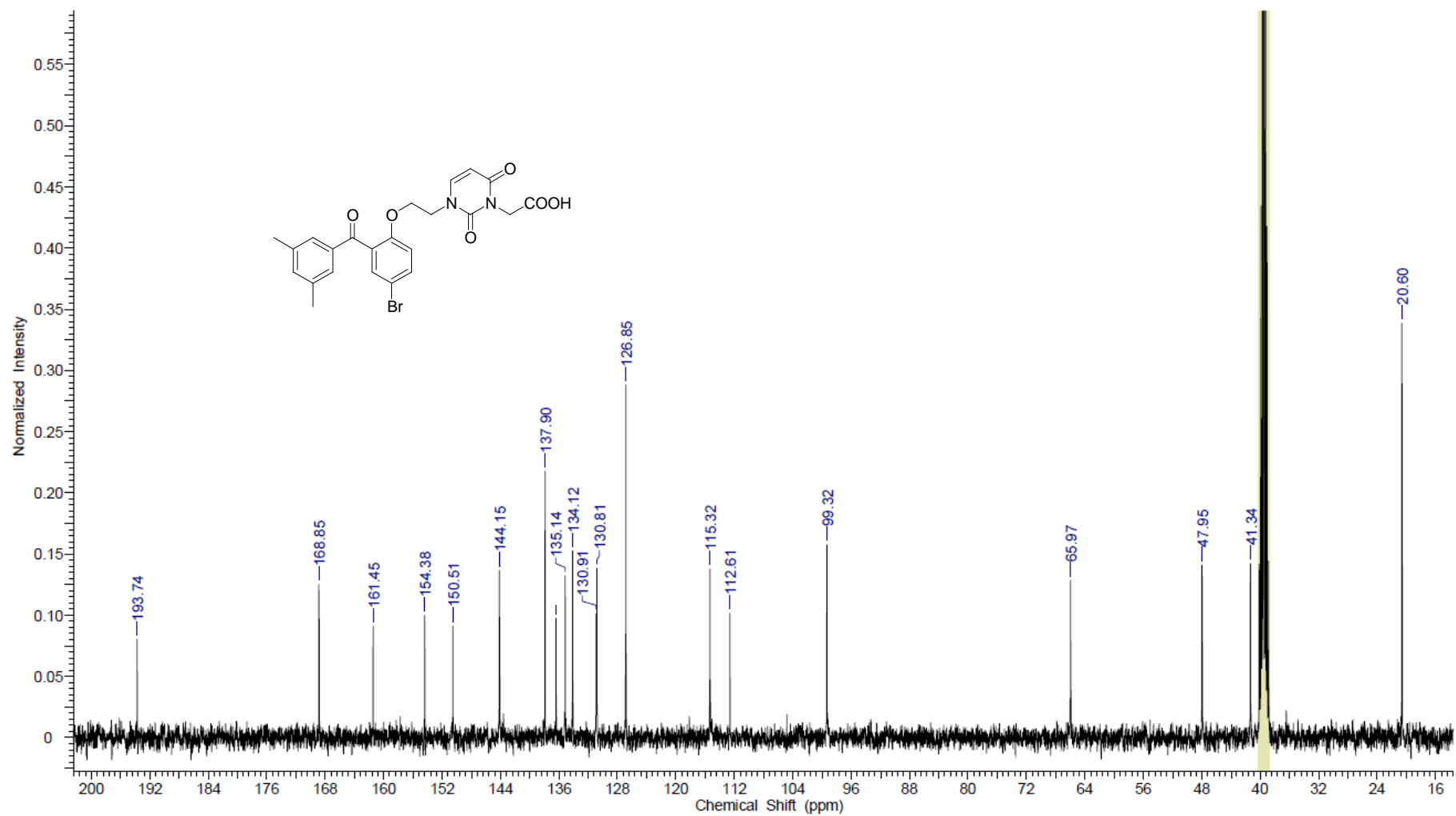


Figure S24. ¹³C NMR spectrum of compound **5f** in DMSO-*d*₆ at 100 MHz.

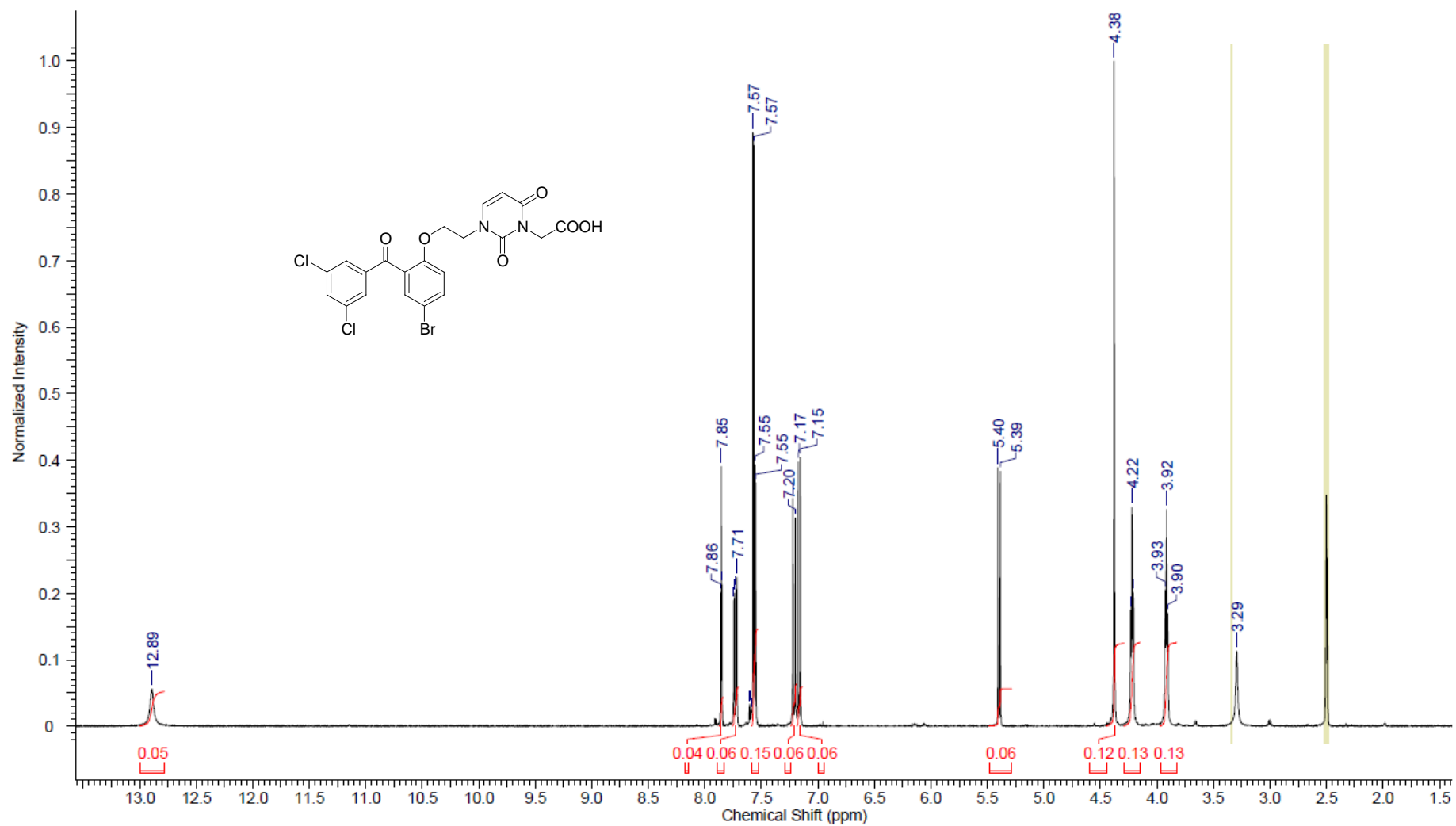


Figure S25. ¹H NMR spectrum of compound **5g** in DMSO-*d*₆ at 400 MHz.

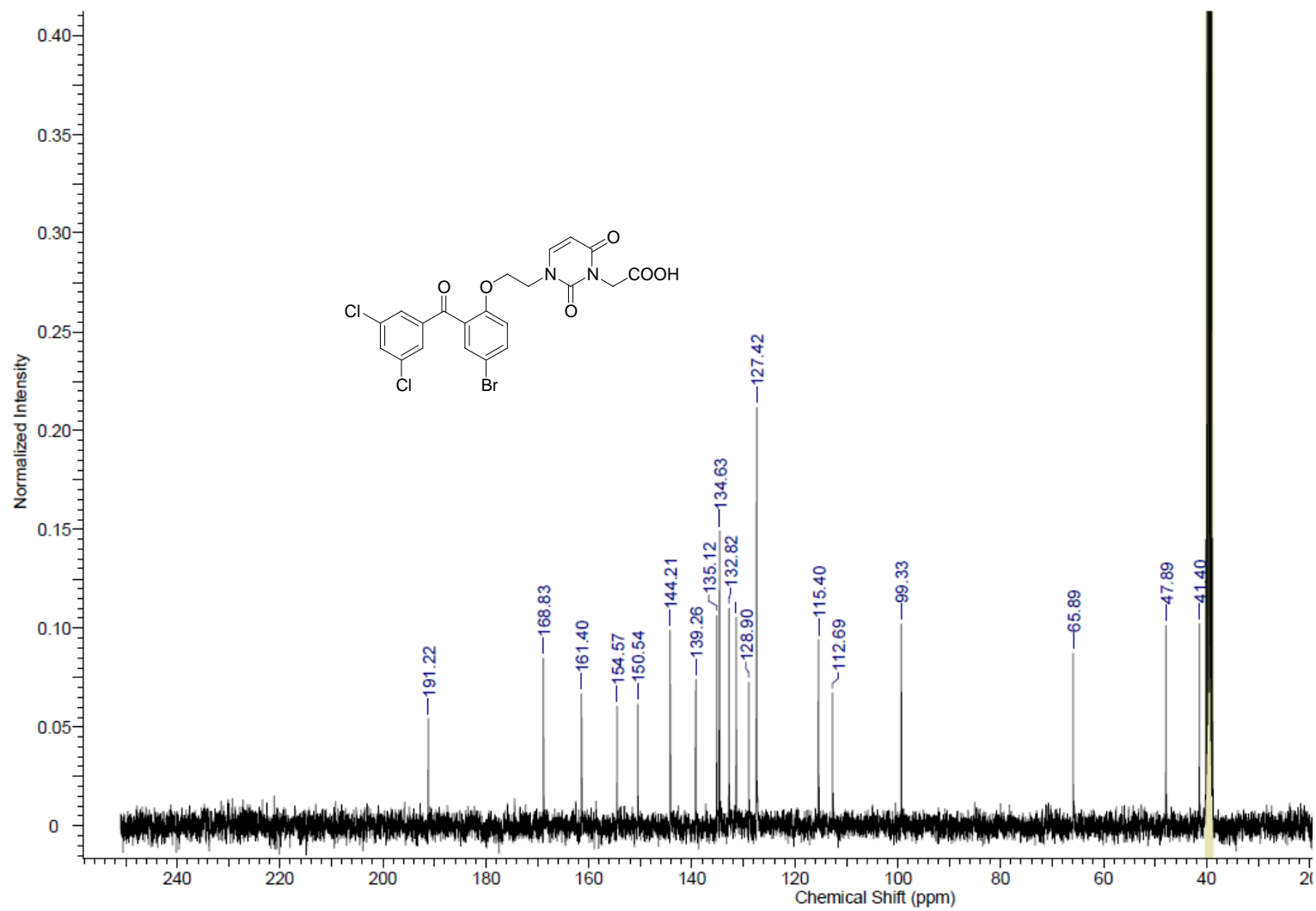


Figure S26. ¹³C NMR spectrum of compound **5g** in DMSO-*d*₆ at 100 MHz.

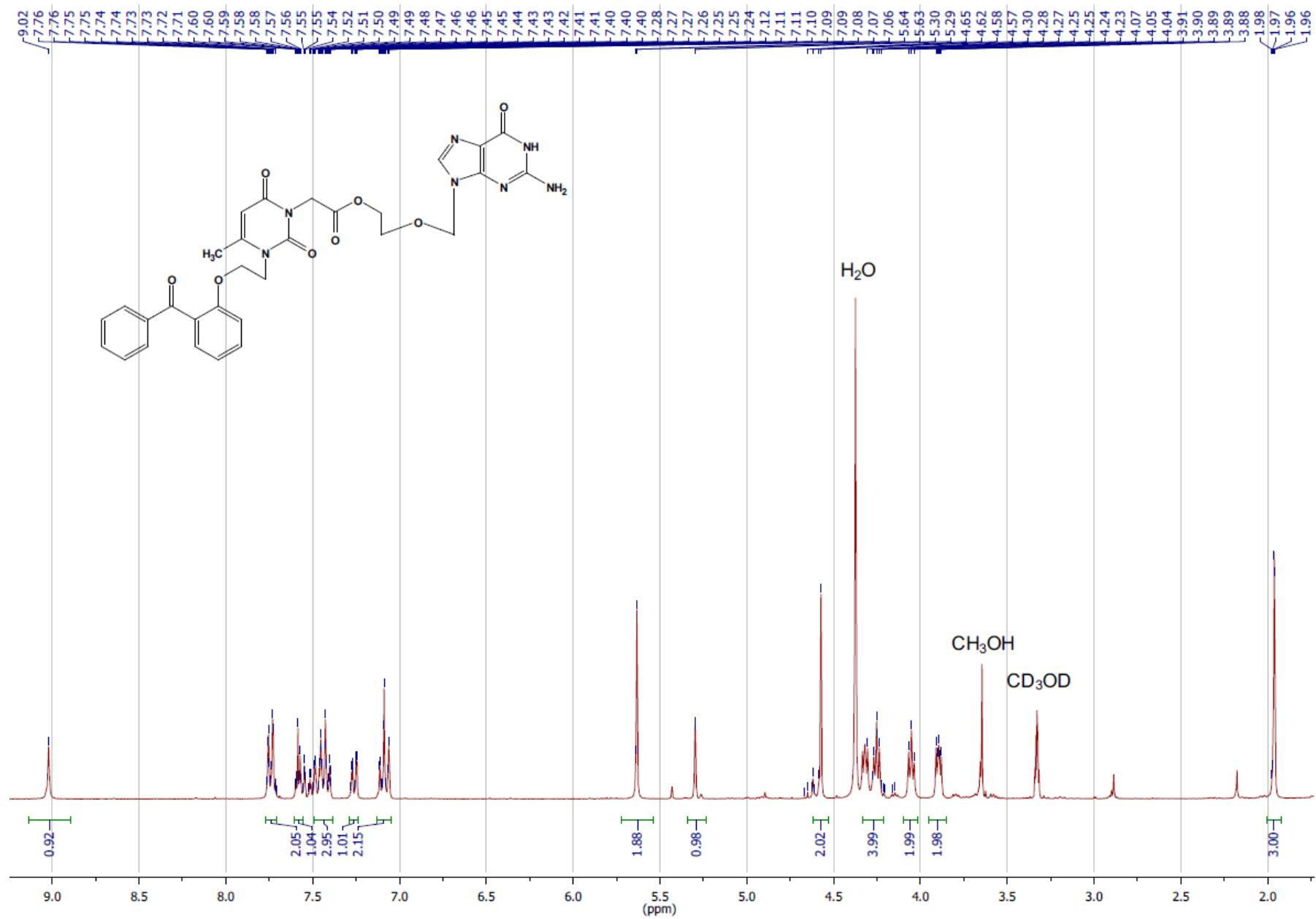


Figure S27. ^1H NMR spectrum of compound **2a** in CD_3OD at 400 MHz.

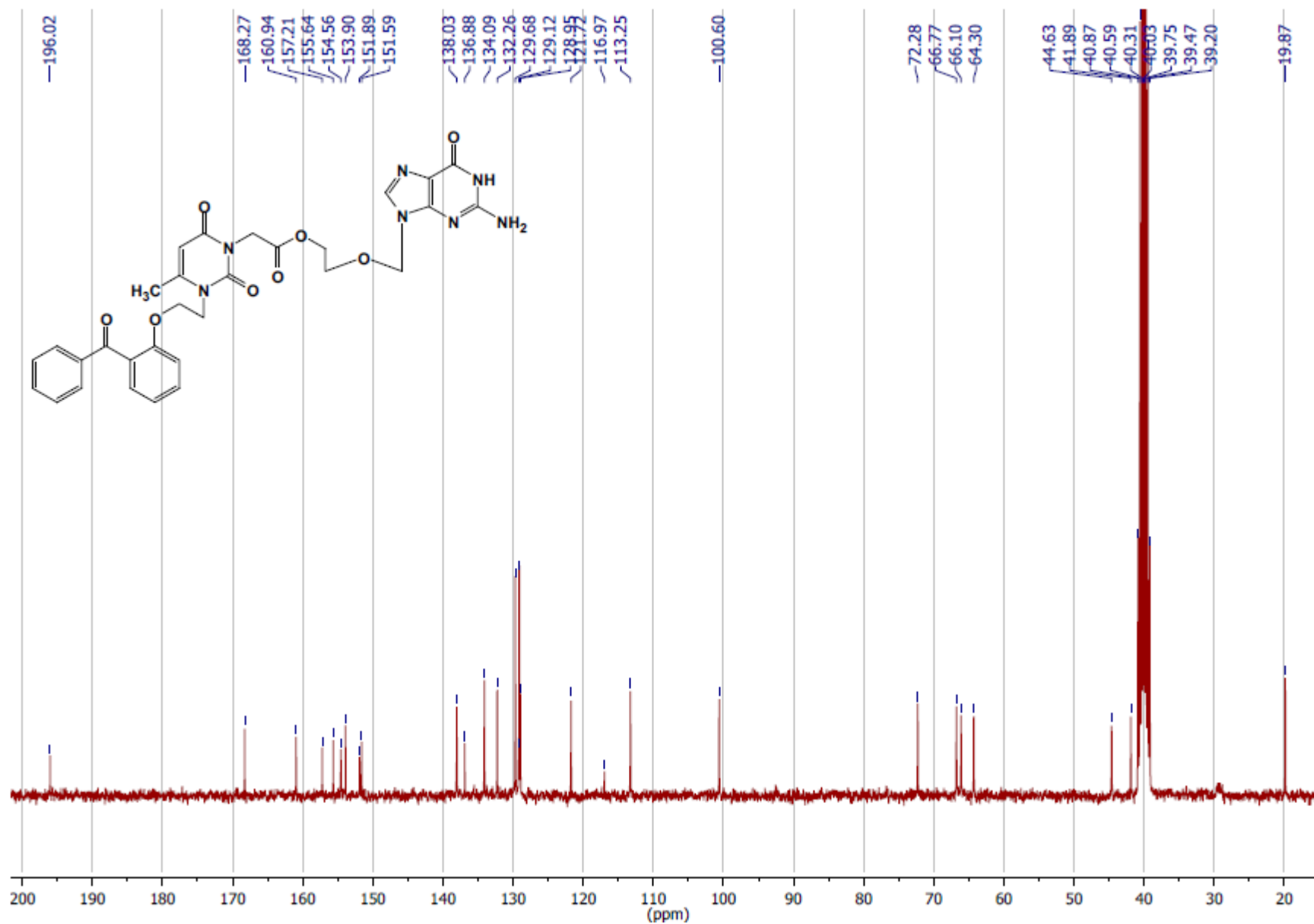


Figure S28. ^{13}C NMR spectrum of compound **2a** in DMSO-d_6 at 100 MHz.

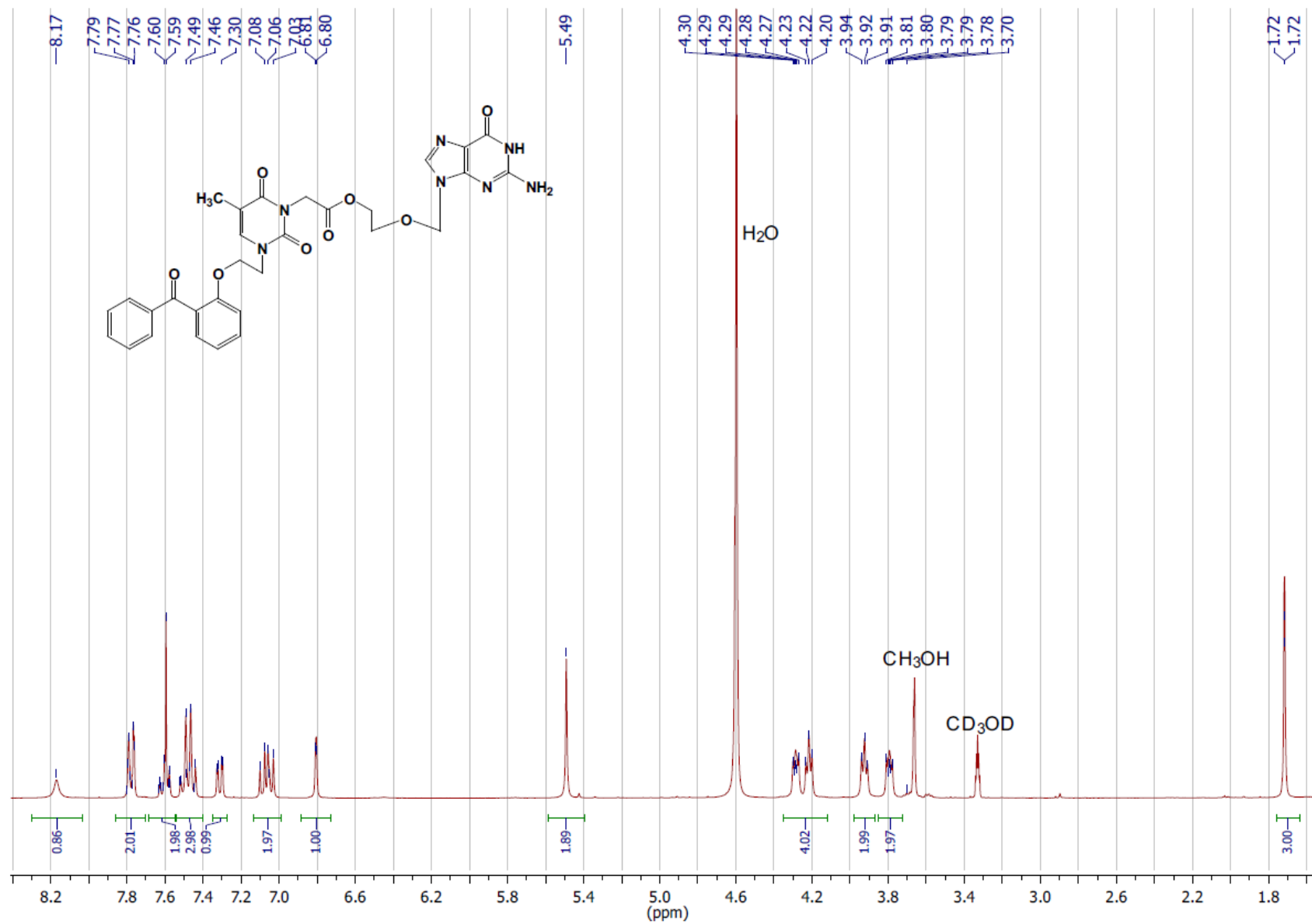


Figure S29. ¹H NMR spectrum of compound **2b** in CD₃OD at 400 MHz.

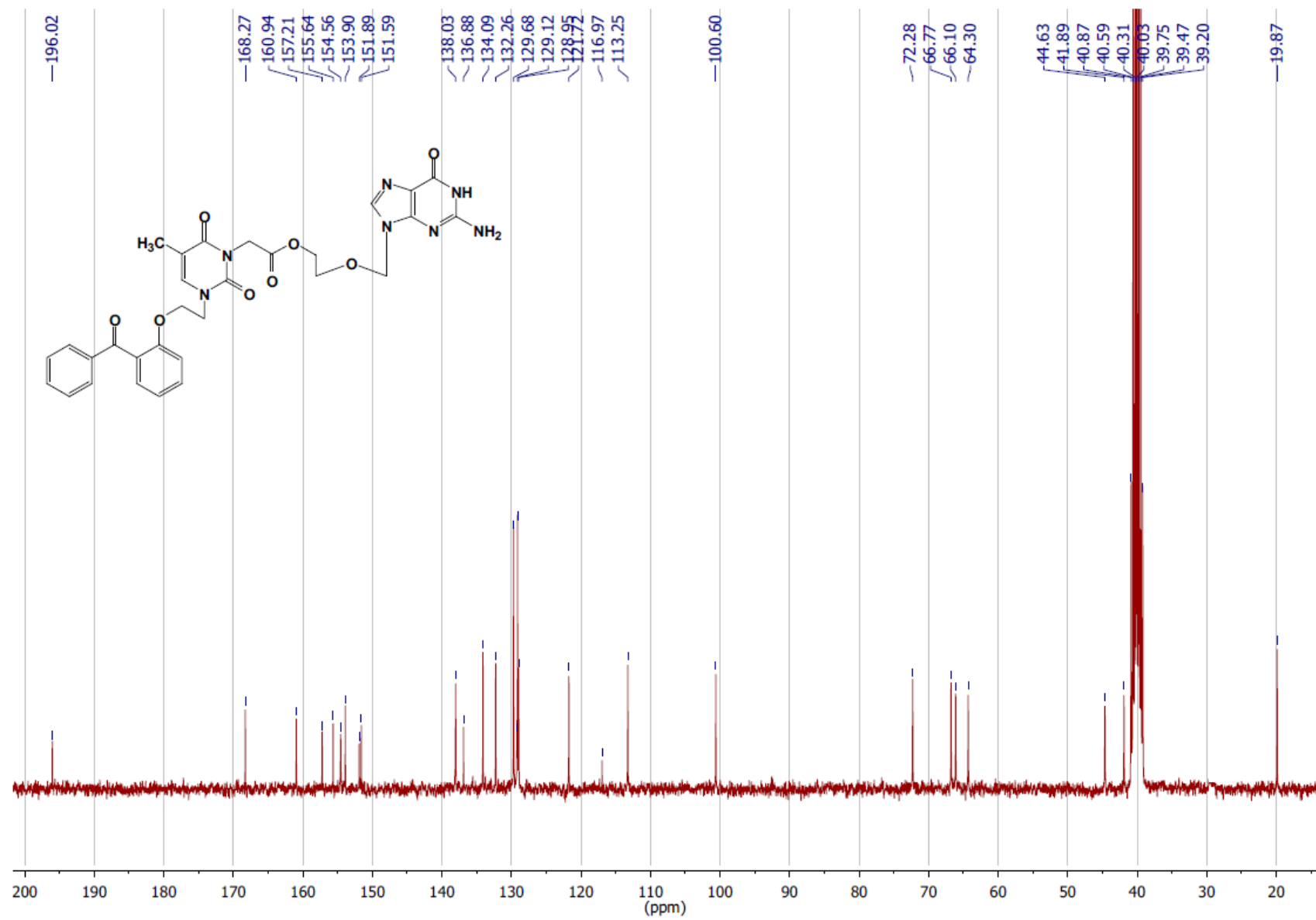


Figure S30. ¹³C NMR spectrum of compound **2b** in DMSO-d₆ at 100 MHz.

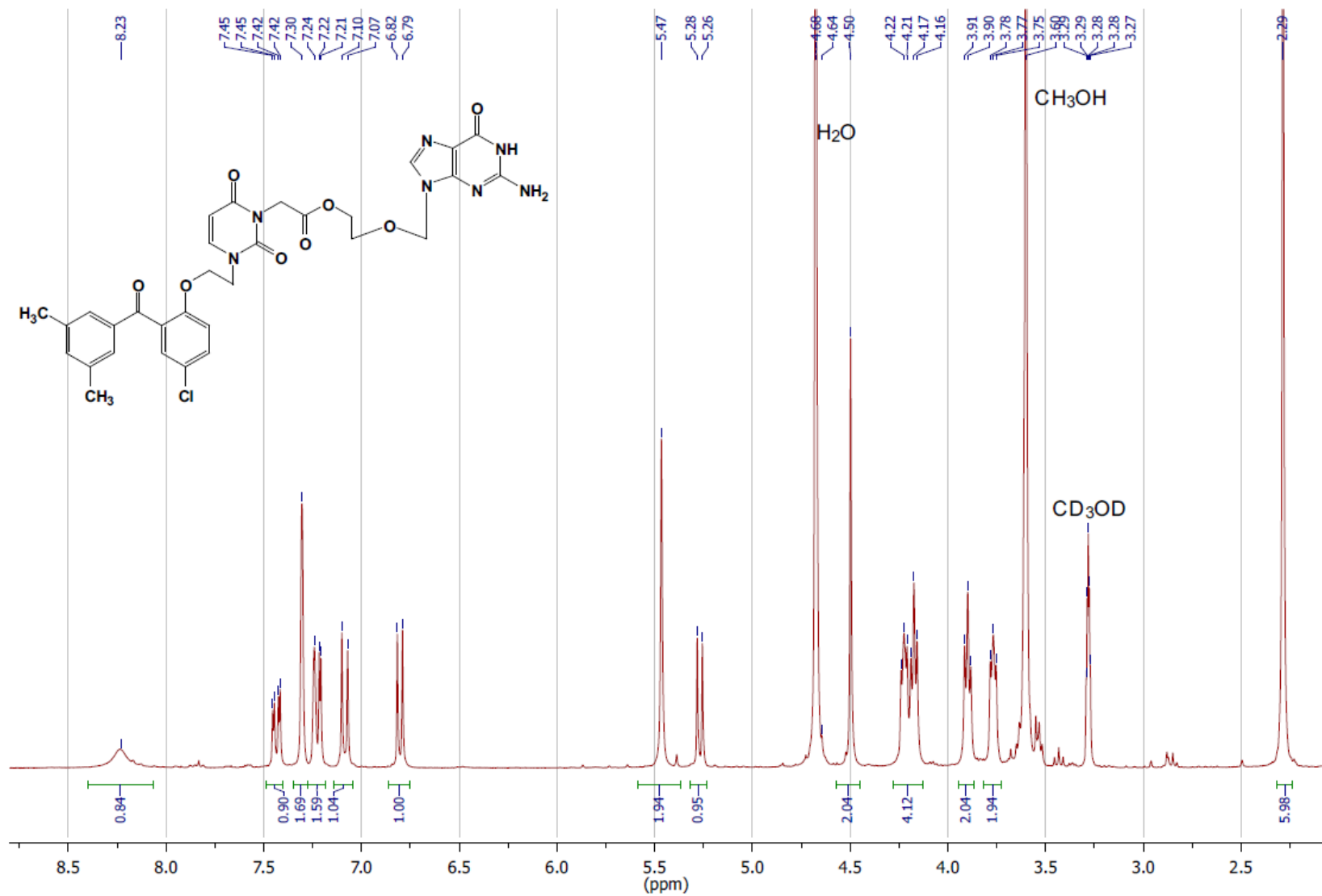


Figure S31. ^1H NMR spectrum of compound **2c** in CD_3OD at 400 MHz.

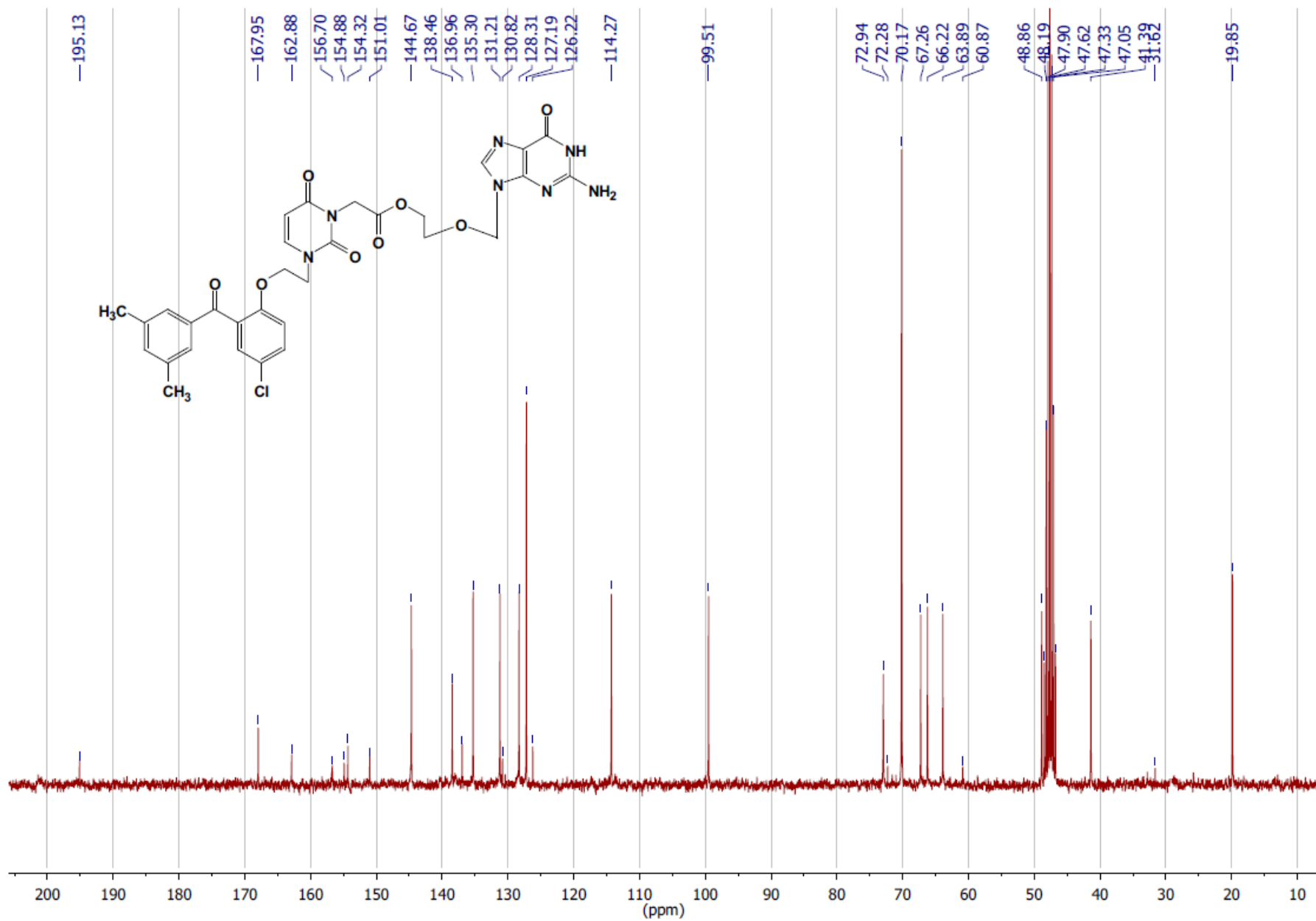


Figure S32. ¹³C NMR spectrum of compound **2c** in CD₃OD at 100 MHz.

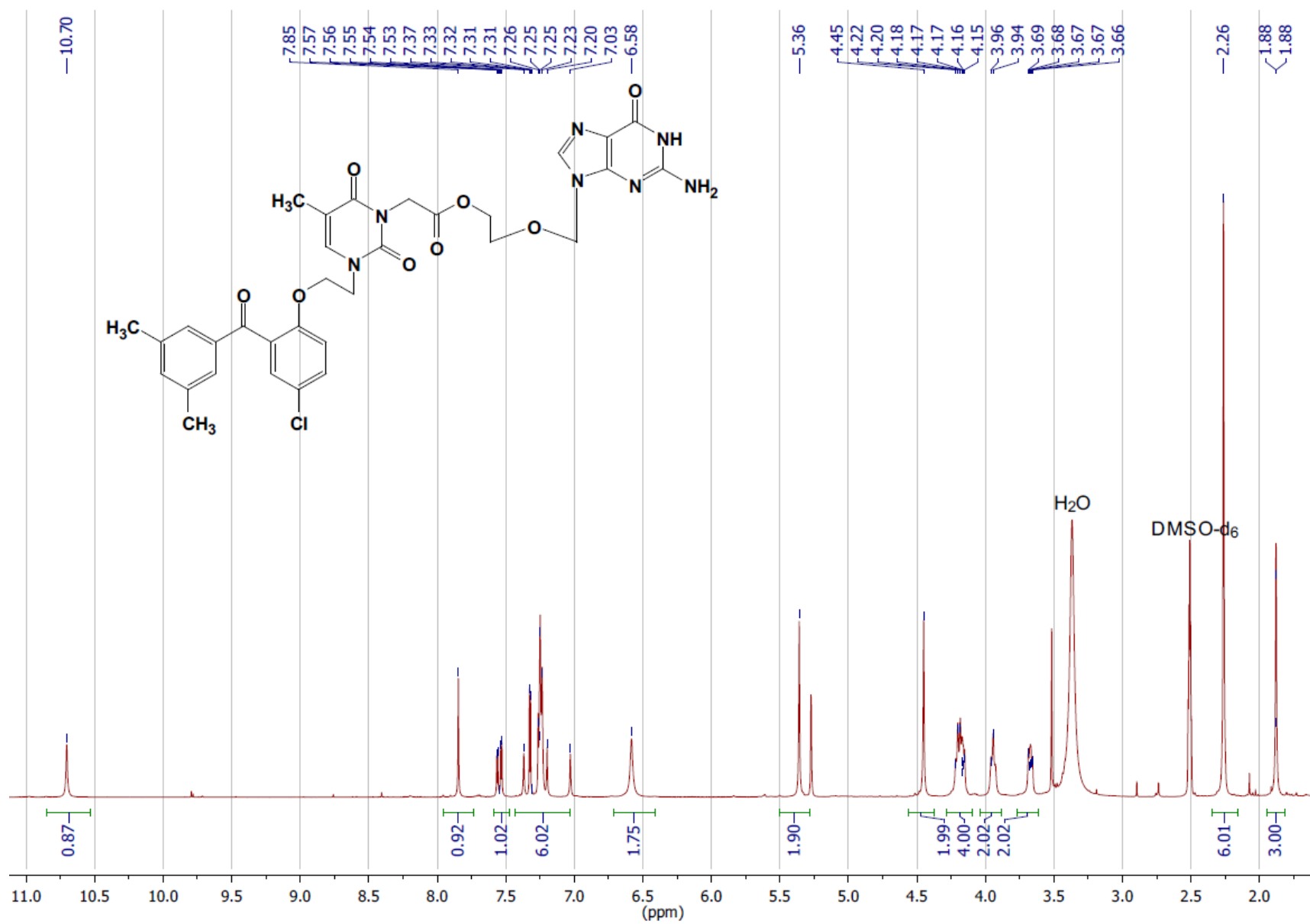


Figure S33. ¹H NMR spectrum of compound **2d** in DMSO-d₆ at 400 MHz.

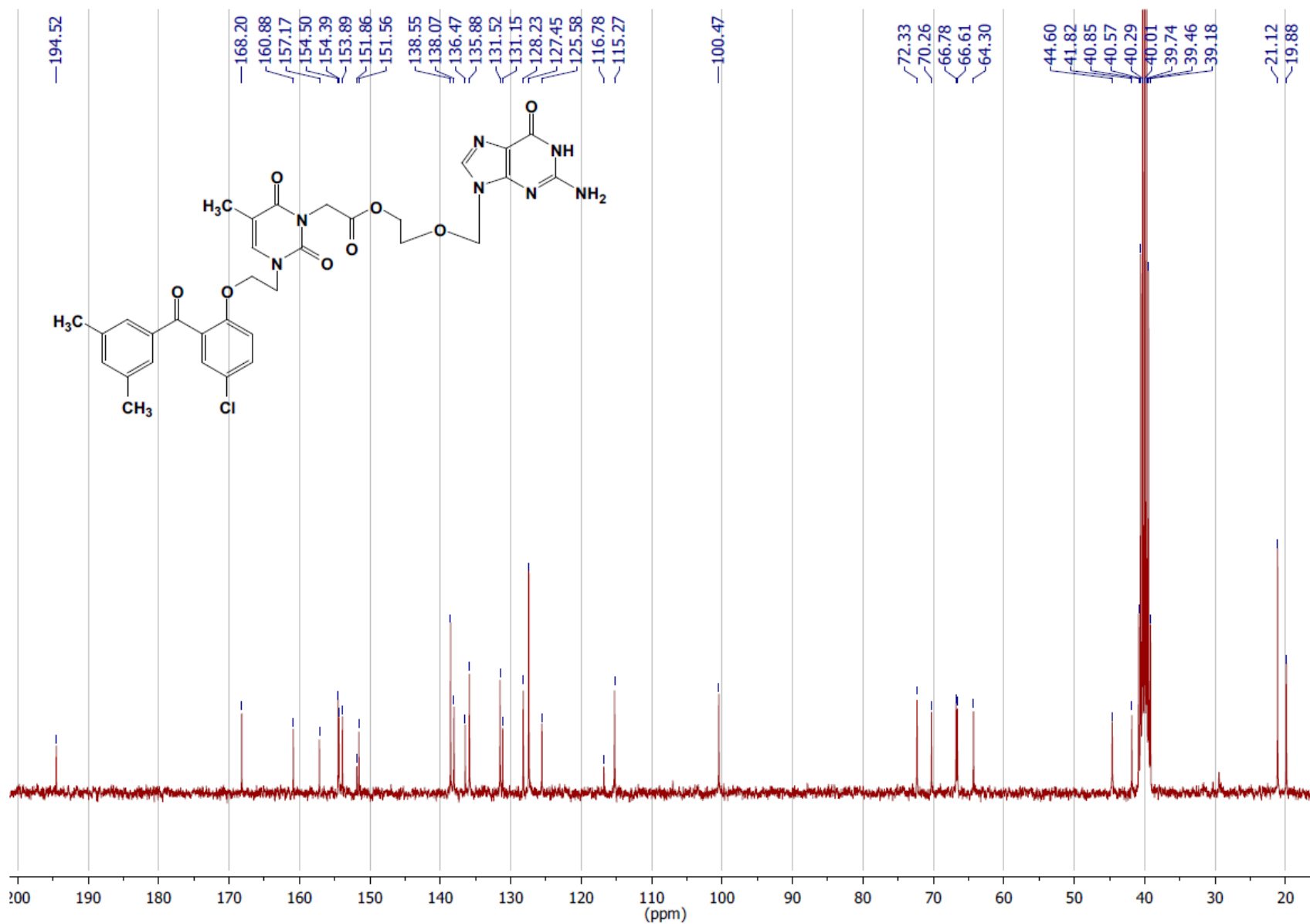


Figure S34. ^{13}C NMR spectrum of compound **2d** in DMSO-d_6 at 100 MHz.

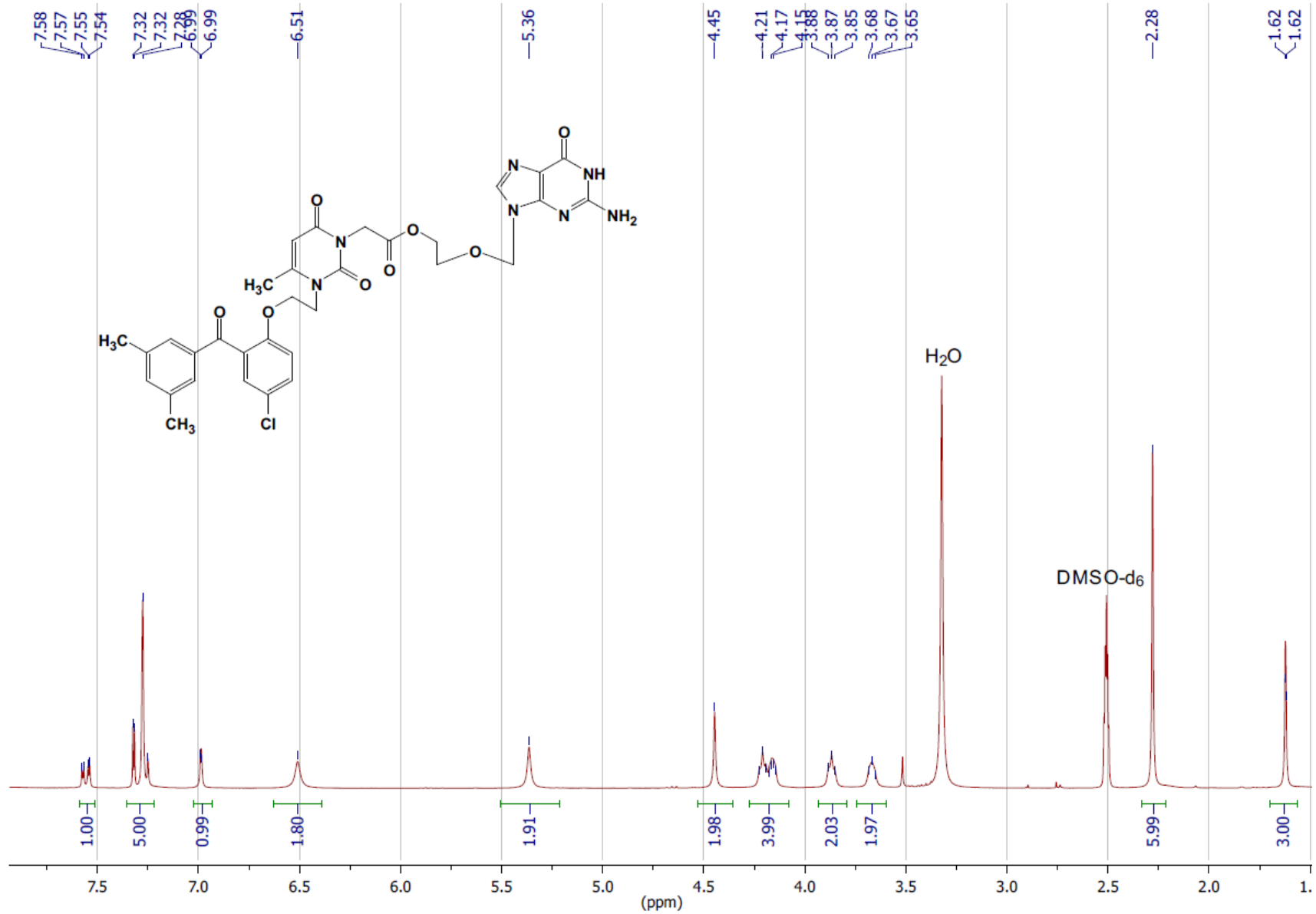


Figure S35. ^1H NMR spectrum of compound **2e** in DMSO- d_6 at 400 MHz.

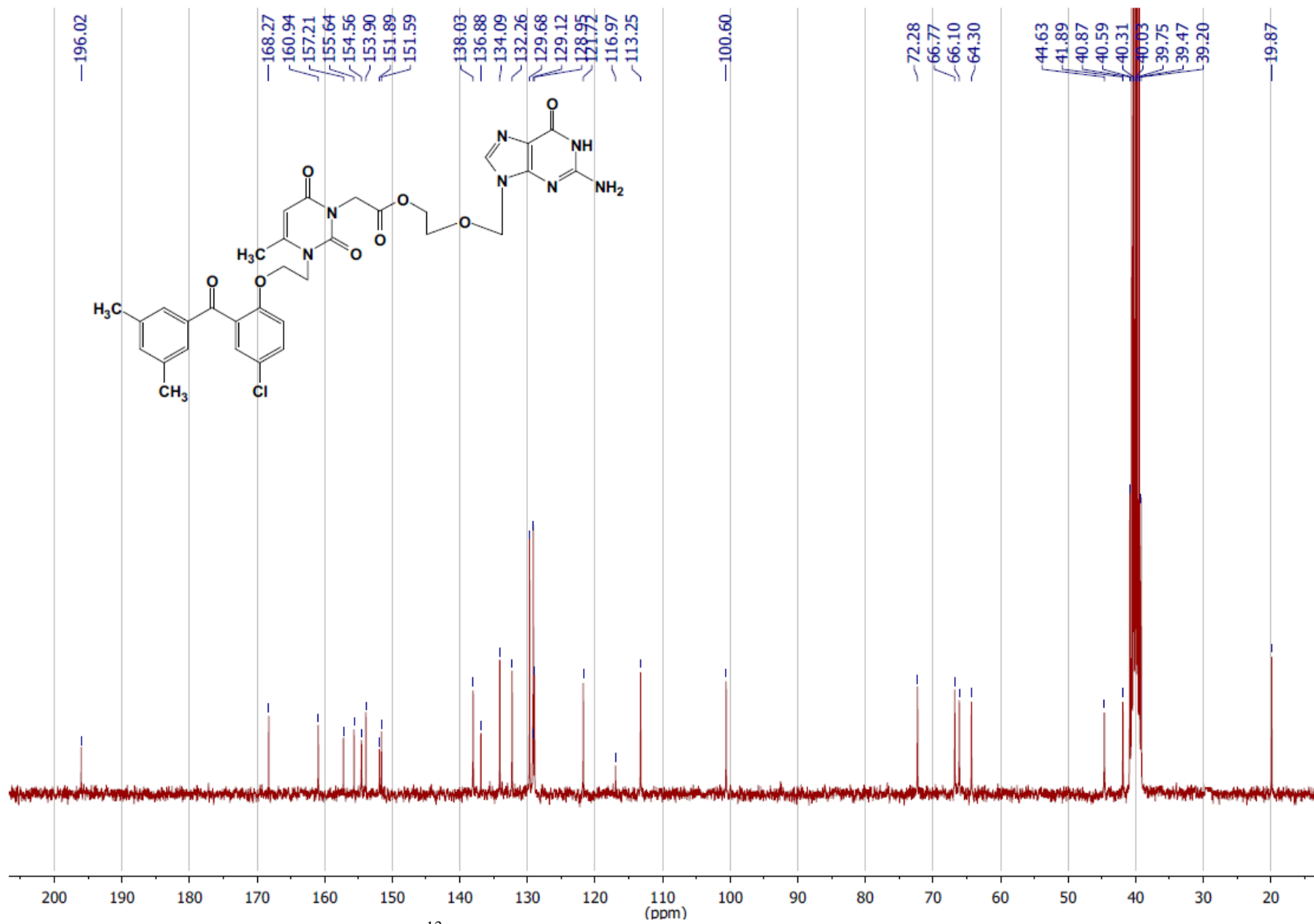


Figure S36. ^{13}C NMR spectrum of compound **2e** in DMSO- d_6 at 100 MHz.

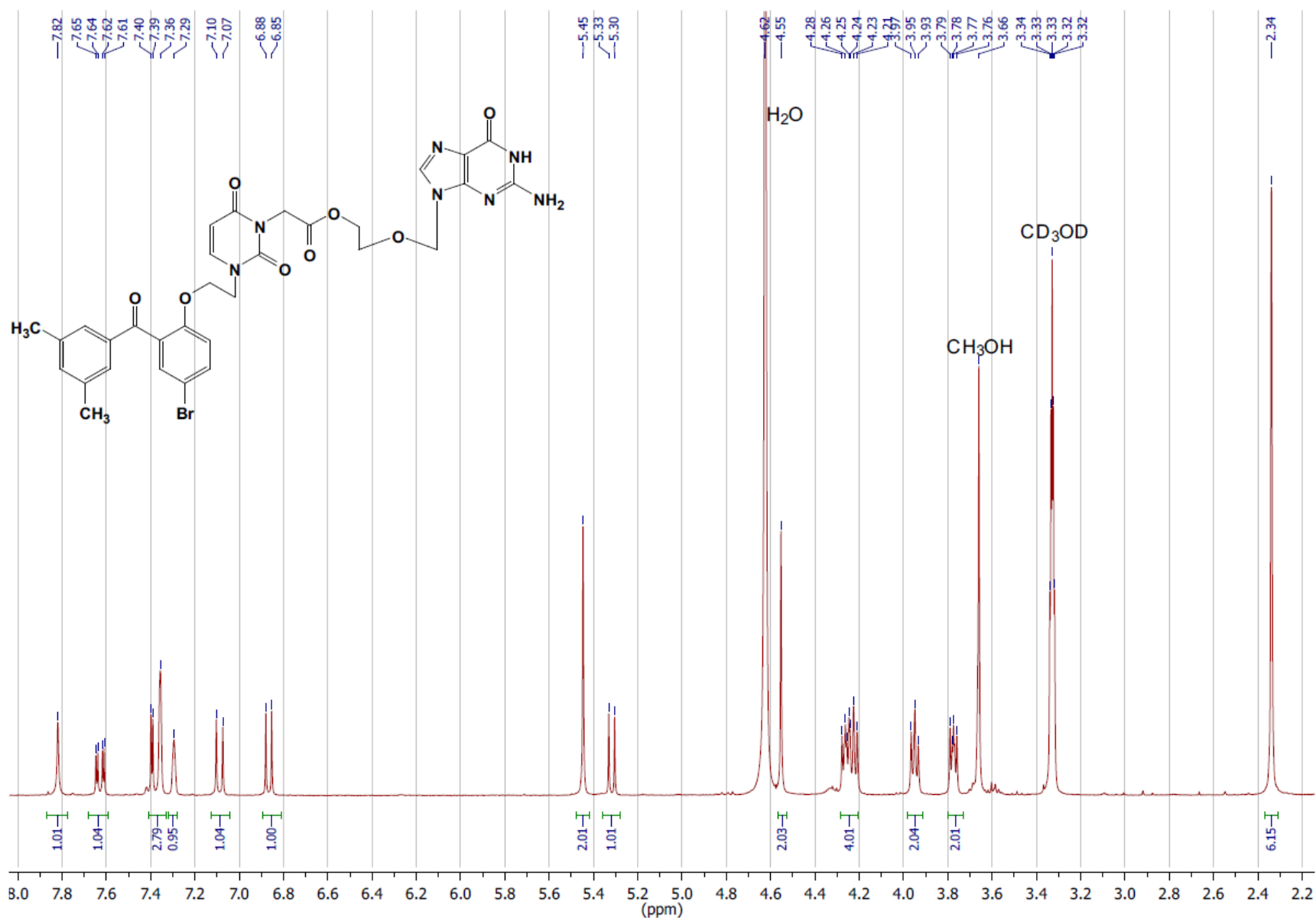


Figure S37. ¹H NMR spectrum of compound **2f** in CD₃OD at 400 MHz.

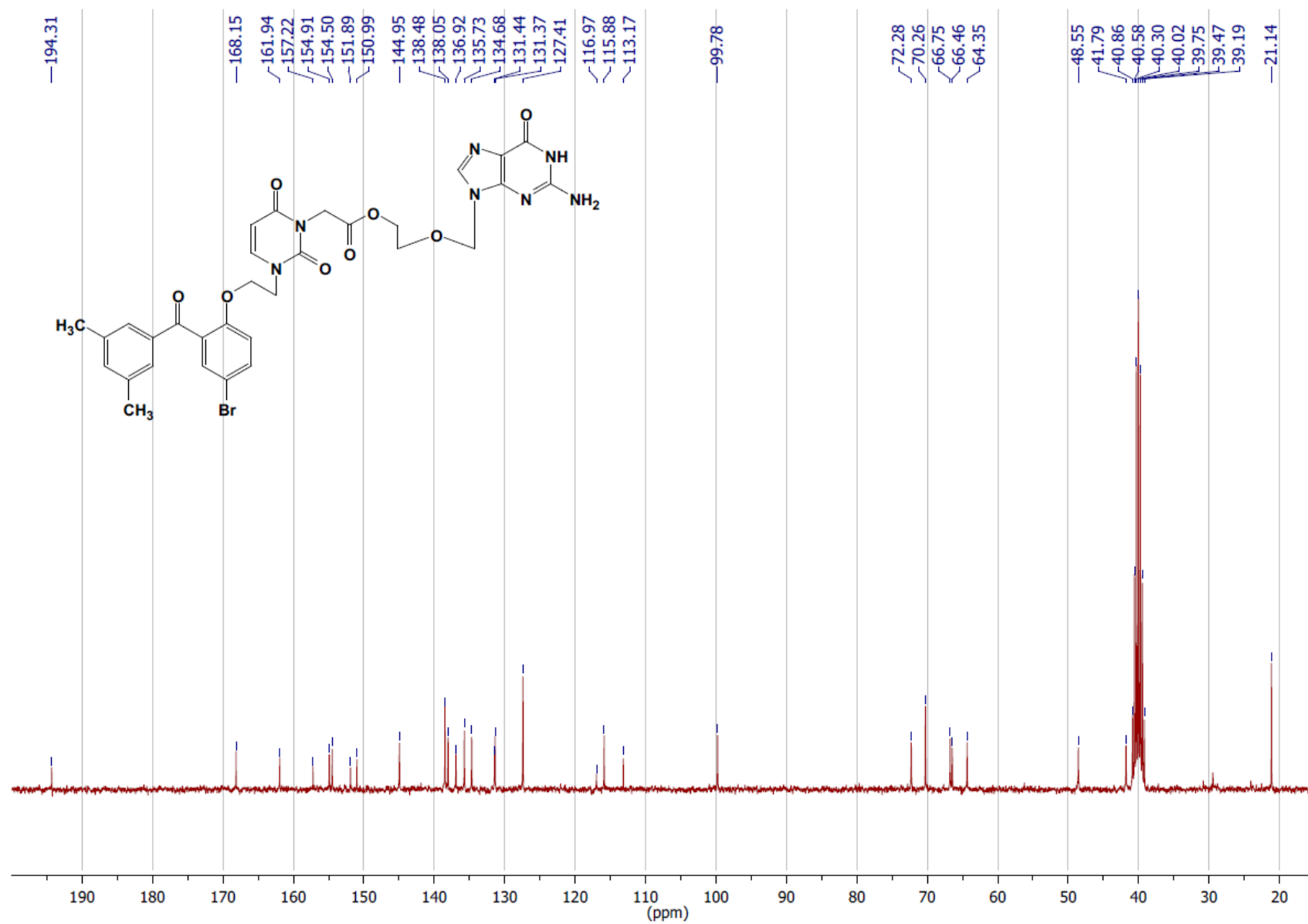


Figure S38. ¹³C NMR spectrum of compound **2f** in DMSO-d₆ at 100 MHz.

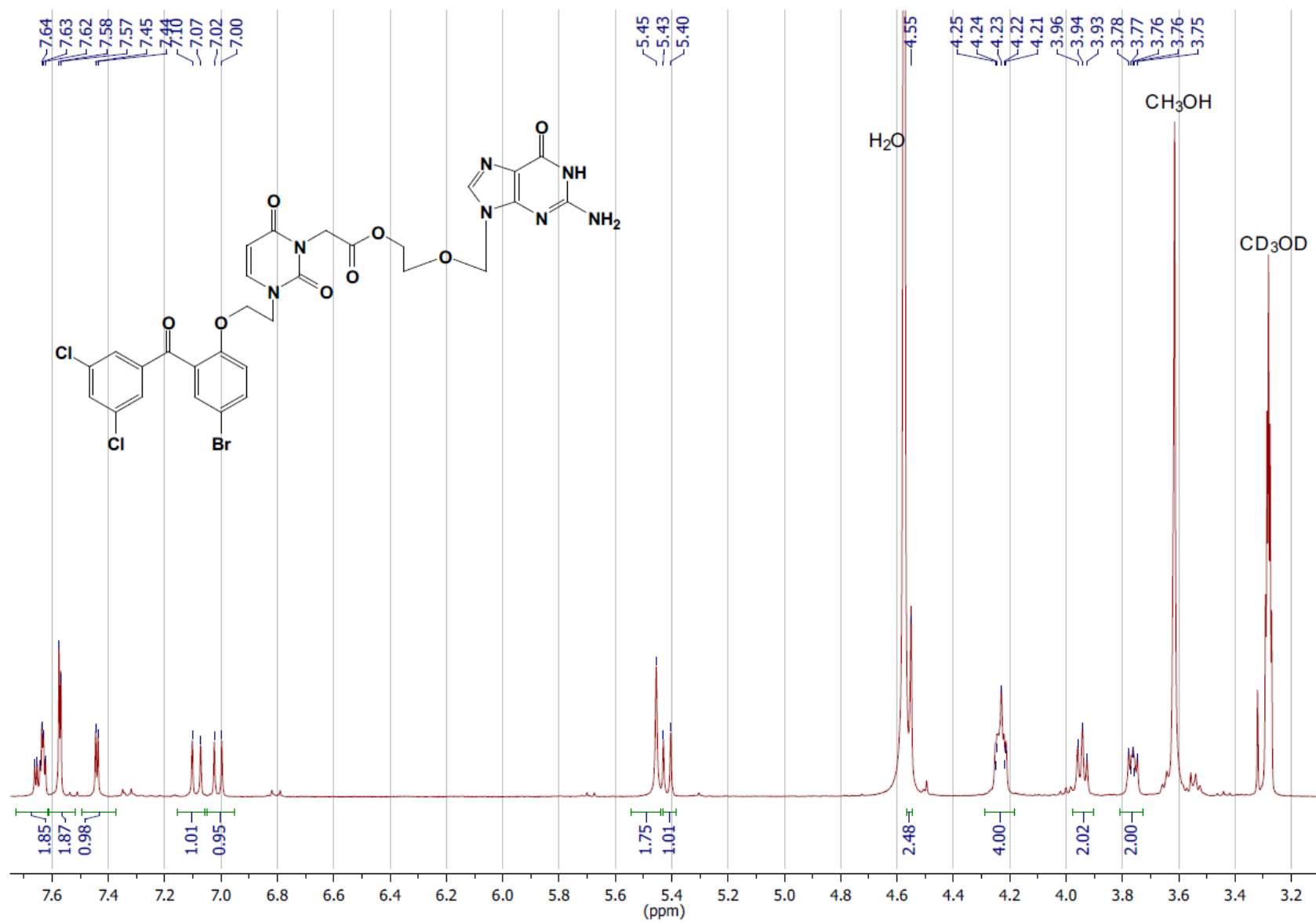


Figure S39. ¹H NMR spectrum of compound **2g** in CD₃OD at 400 MHz.

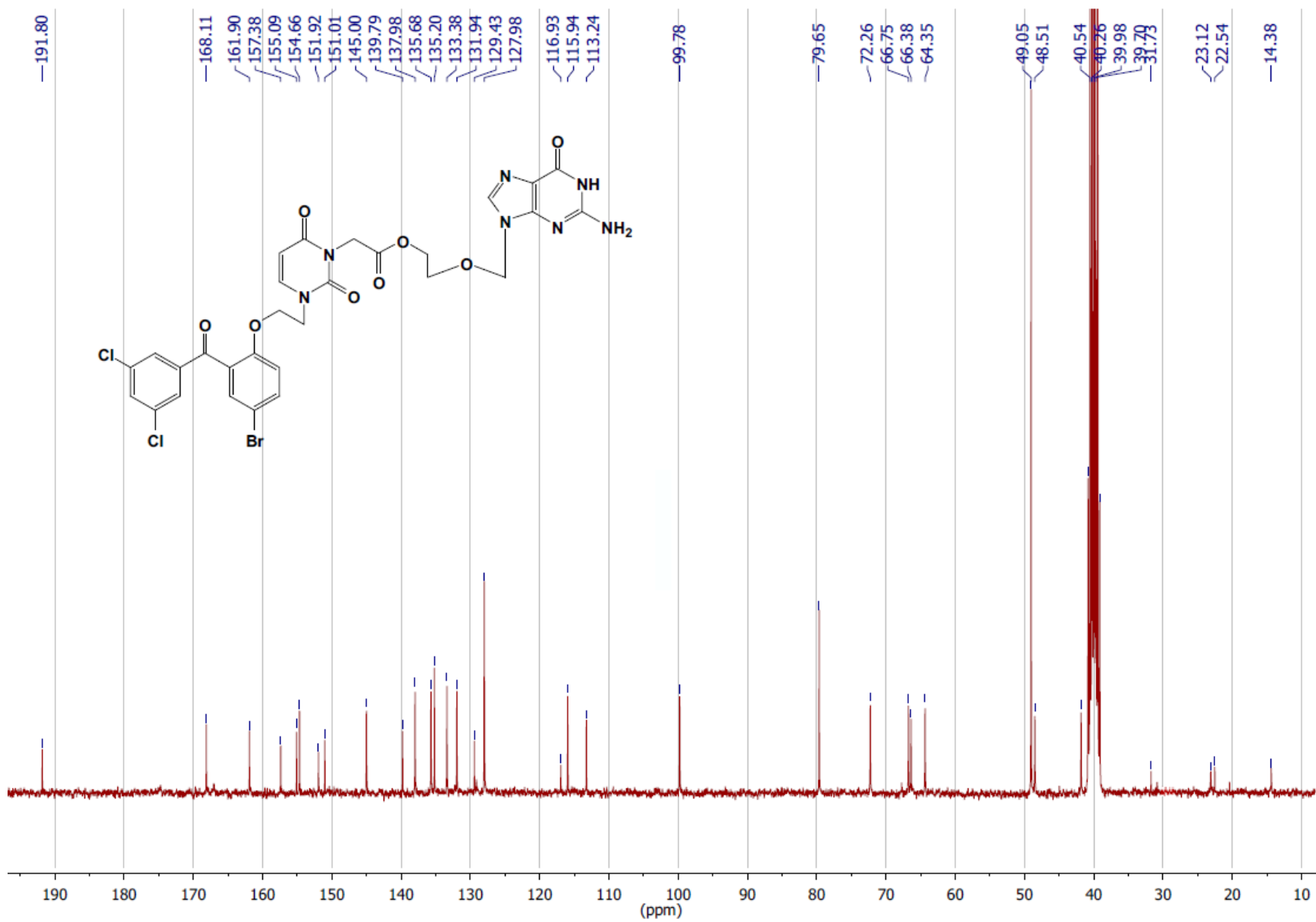


Figure S40. ¹³C NMR spectrum of compound 2g in DMSO-d₆ at 100 MHz.

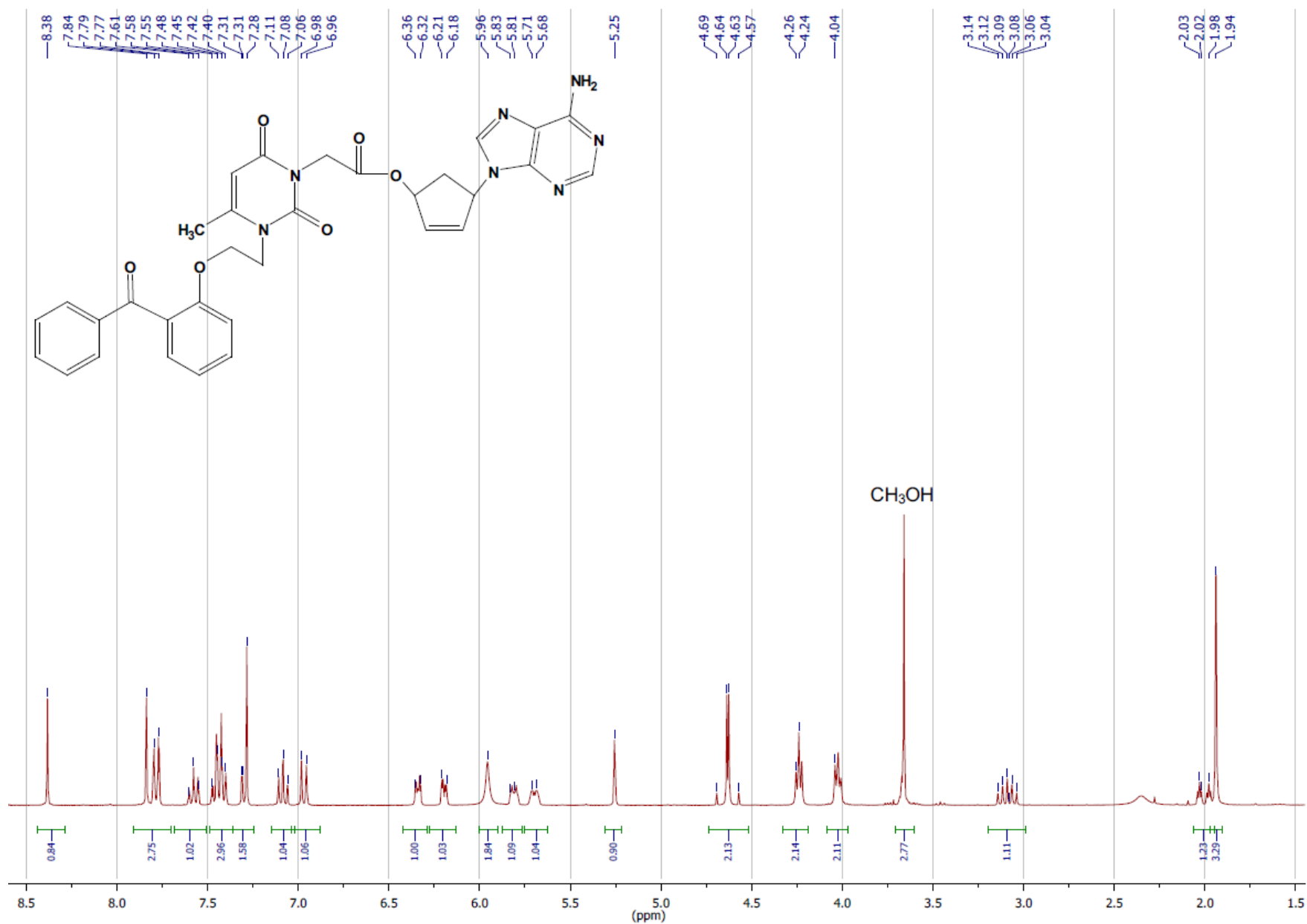


Figure S41. ¹H NMR spectrum of compound **6a** (in CDCl₃ at 400 MHz)

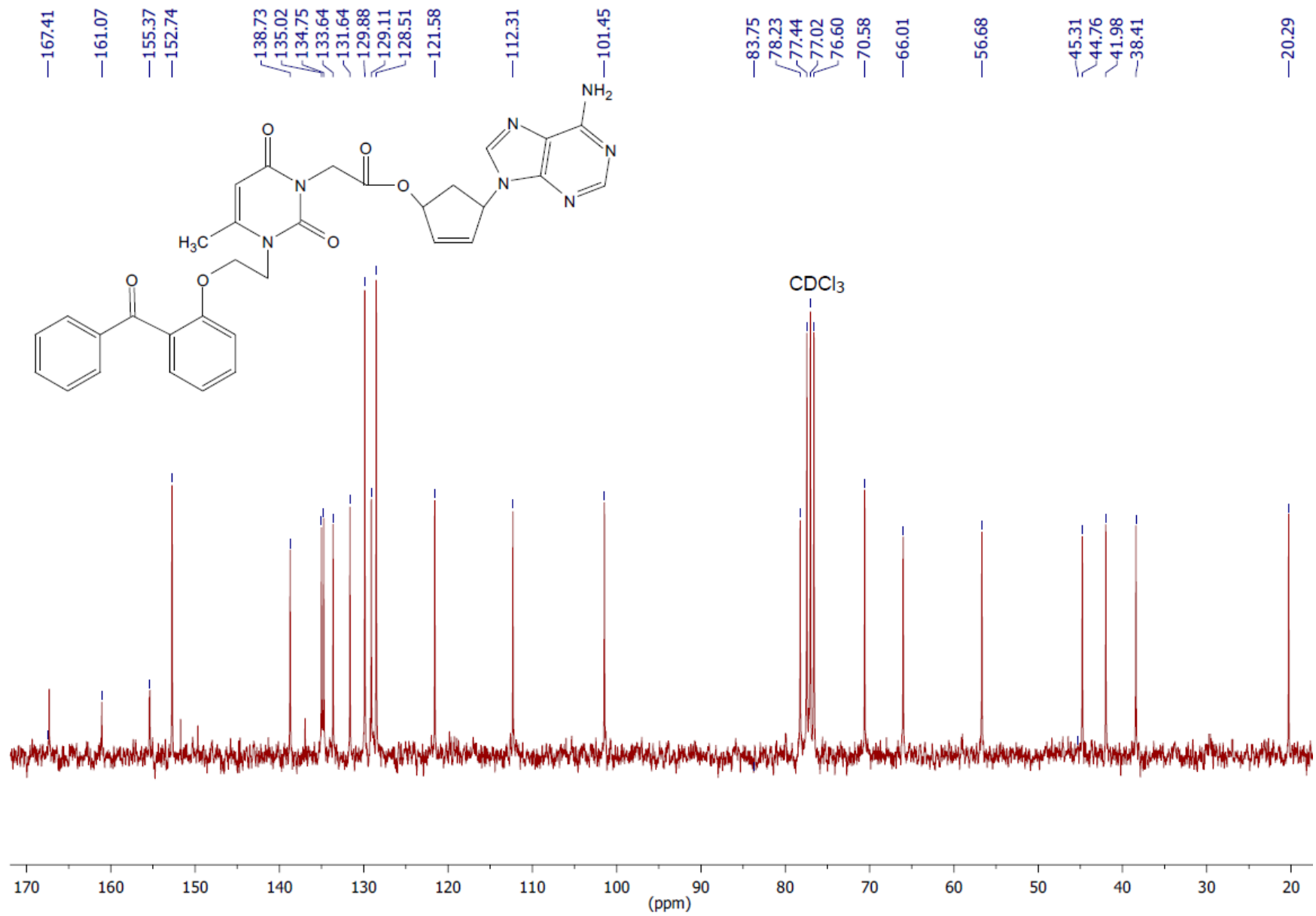


Figure S42. ¹³C NMR spectrum of compound **6a** (in CDCl₃ at 100 MHz)

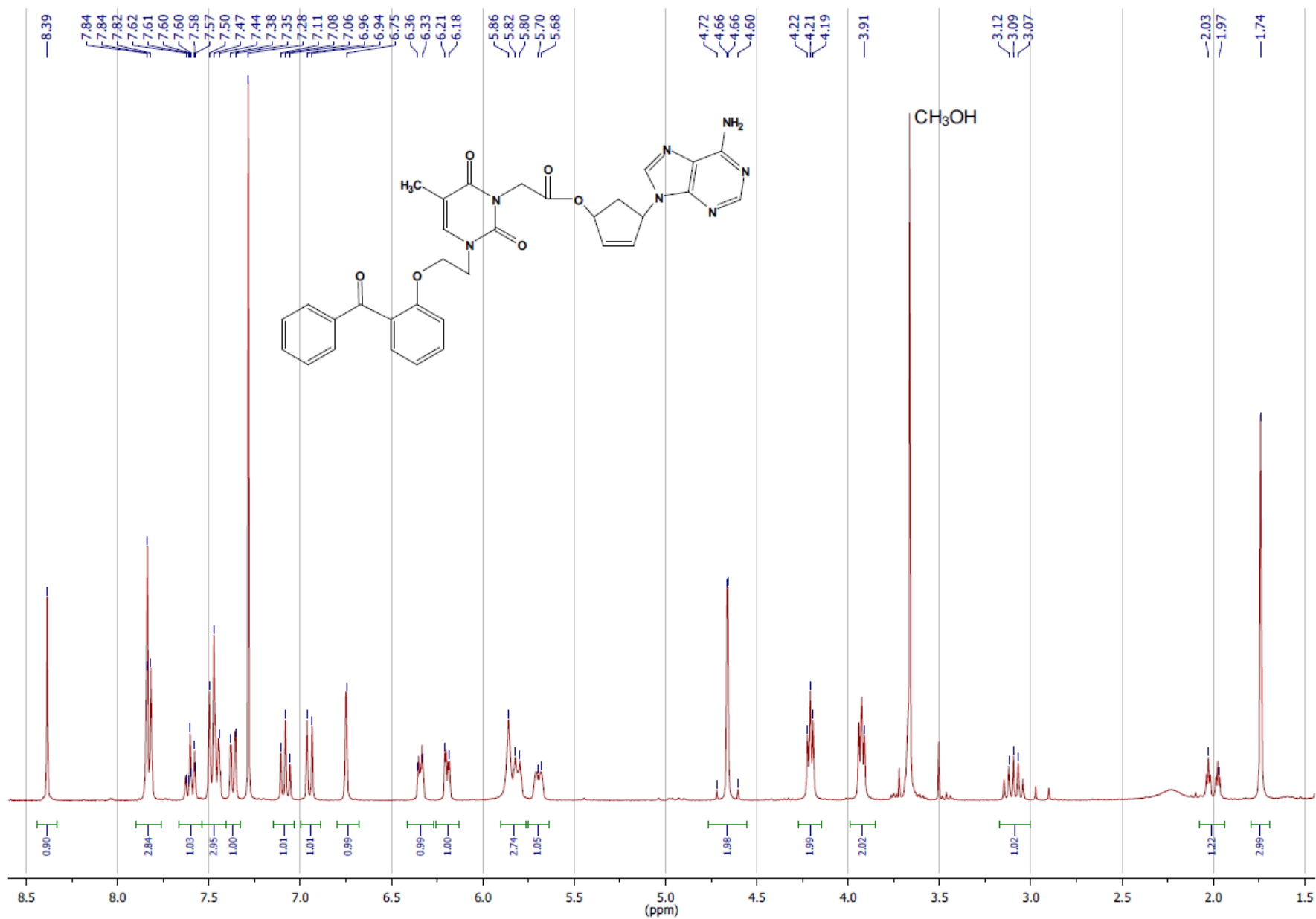


Figure S43. ¹H NMR spectrum of compound **6b** (in CDCl₃ at 400 MHz)

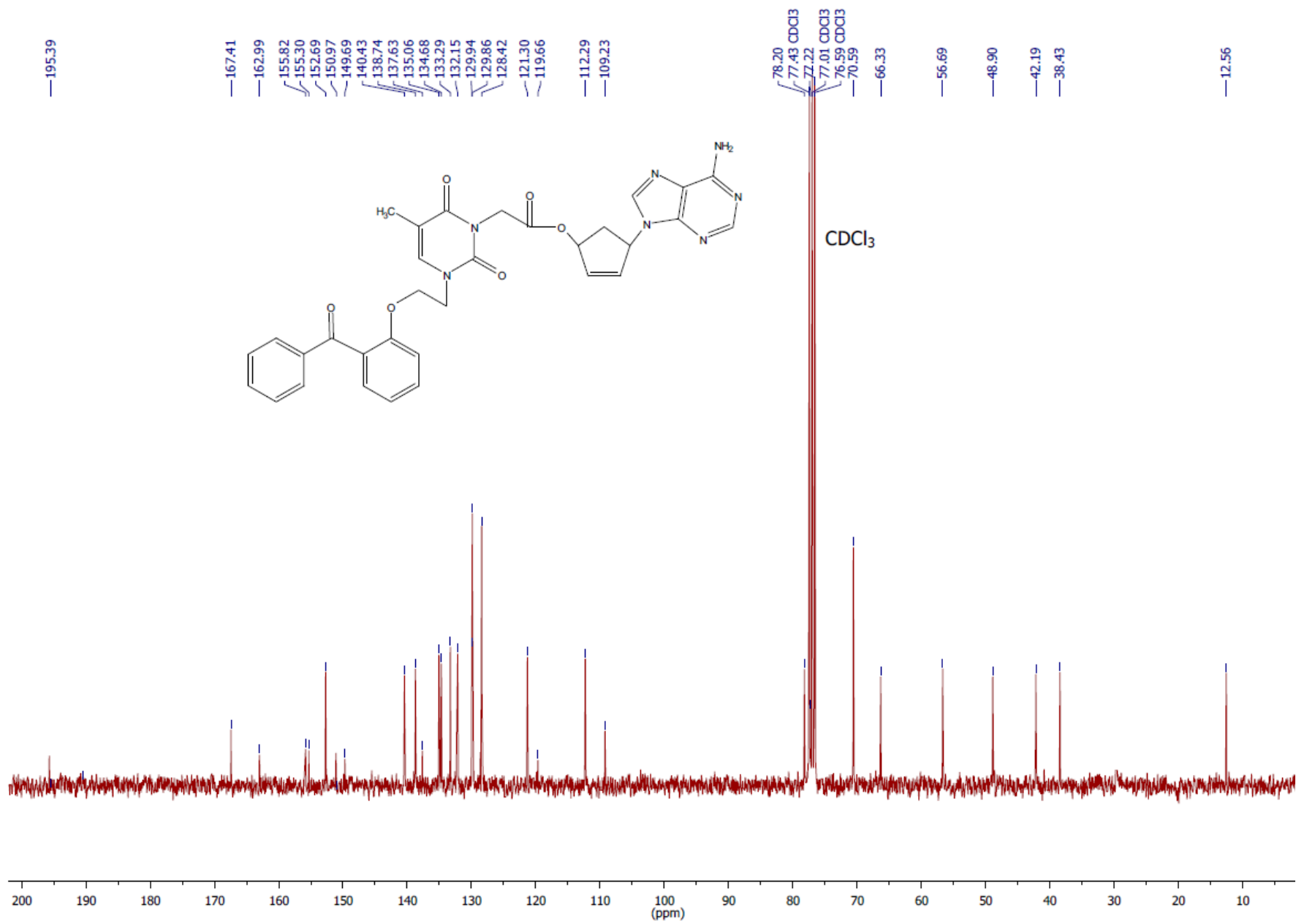


Figure S44. ¹³C NMR spectrum of compound **6b** (in CDCl₃ at 100 MHz)

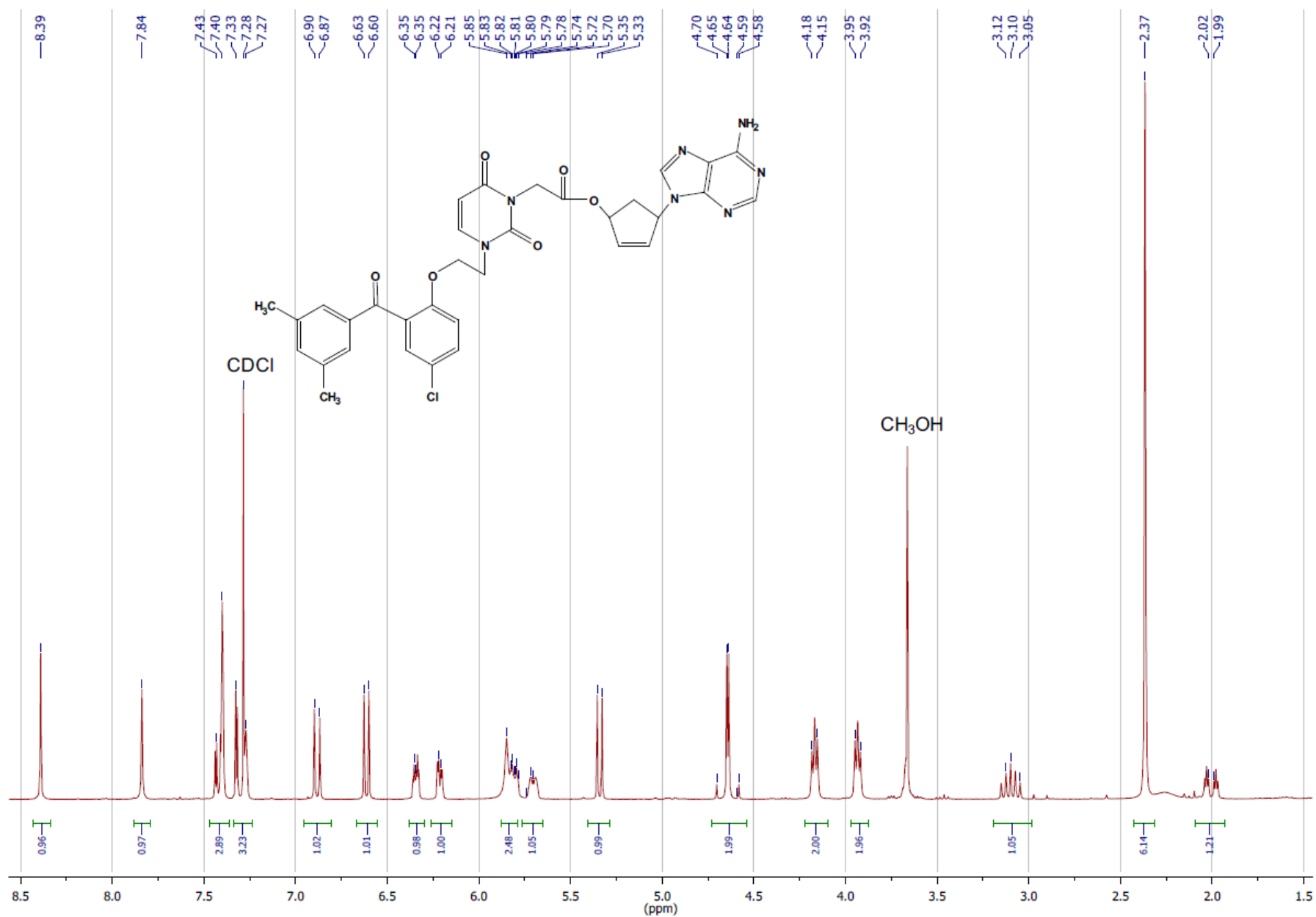


Figure S45. ^1H NMR spectrum of compound **6c** (in CDCl_3 at 400 MHz)

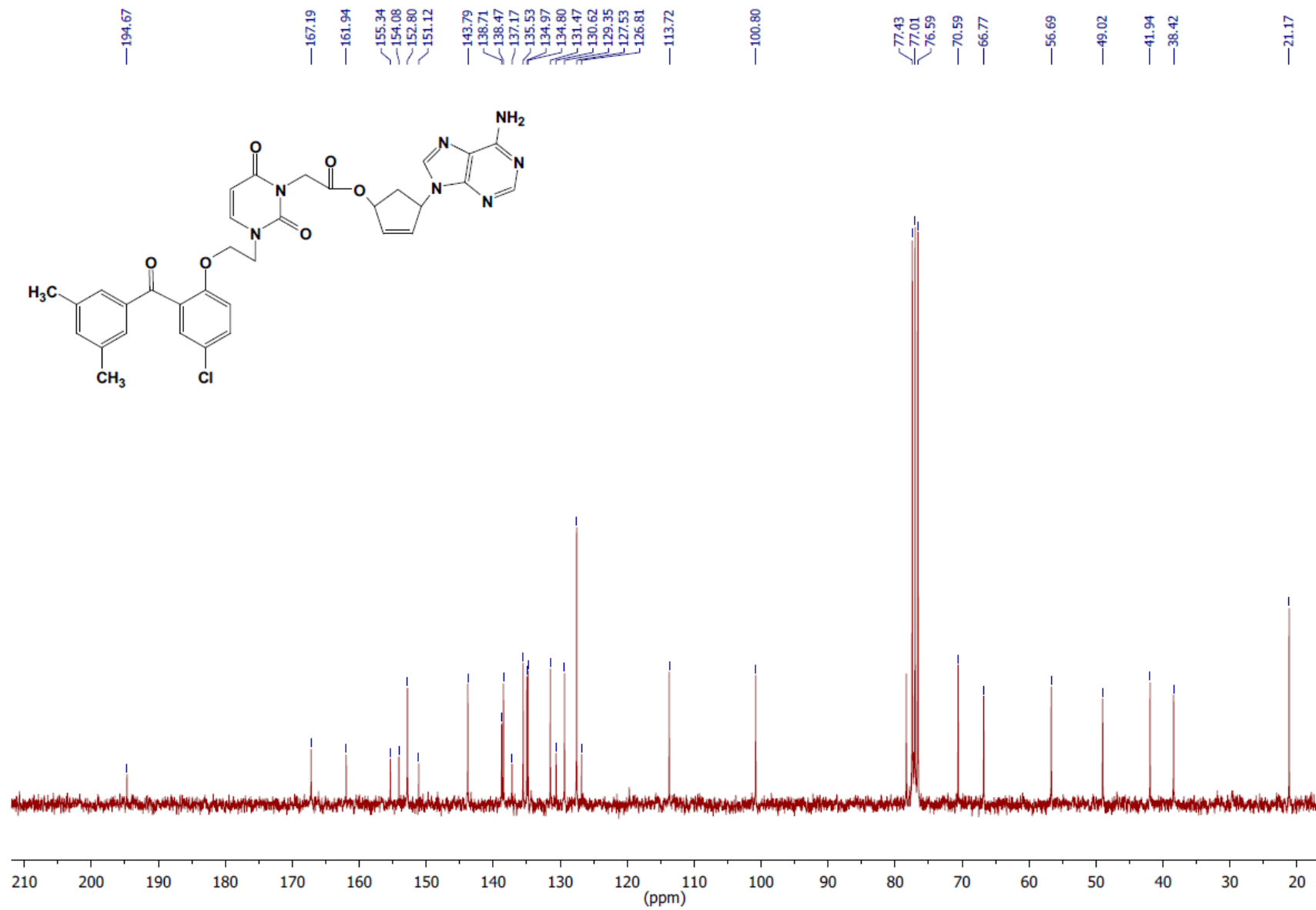


Figure S46. ¹³C NMR spectrum of compound **6c** (in CDCl₃ at 100 MHz)

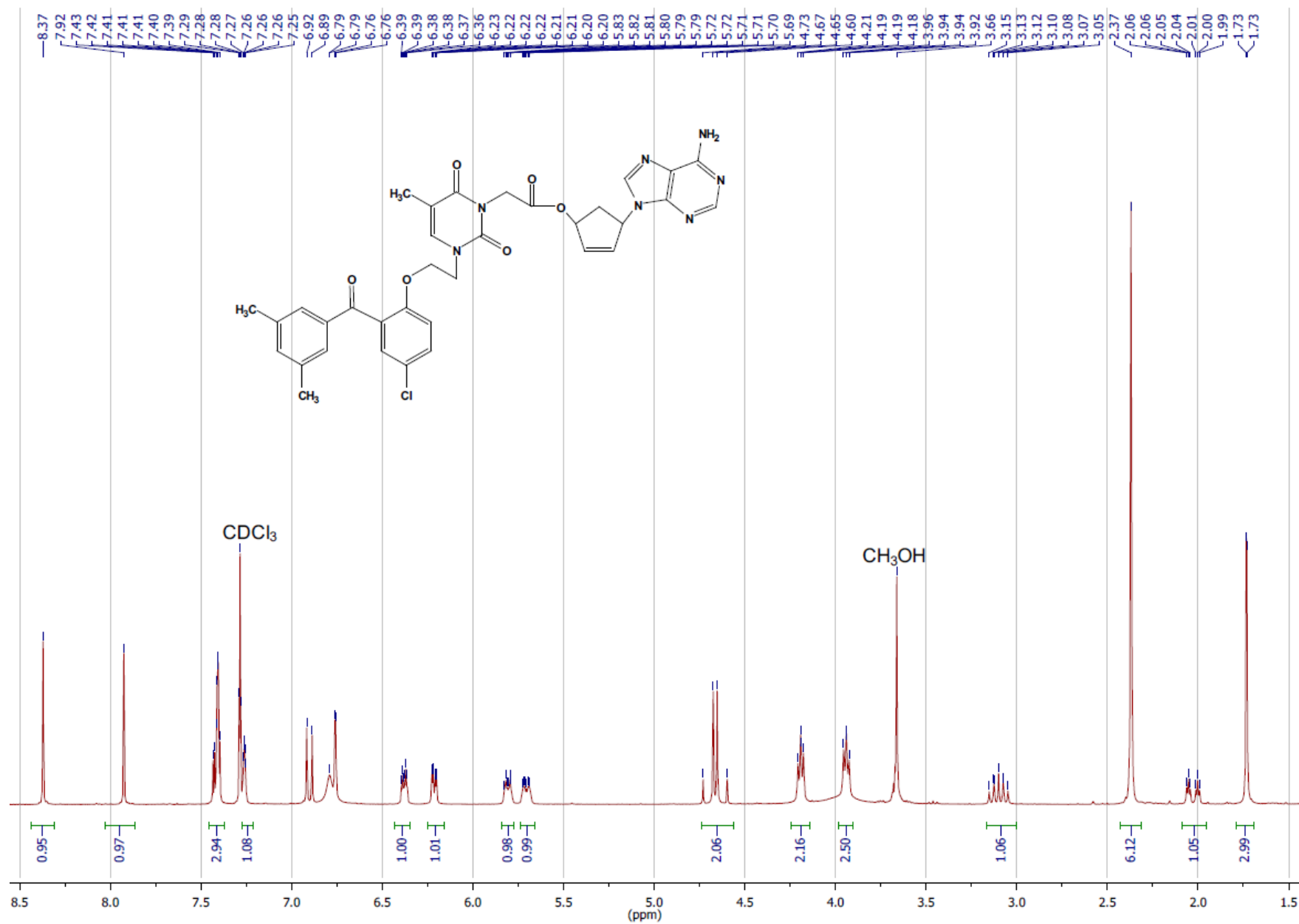


Figure S47. ¹H NMR spectrum of compound **6d** (in CDCl₃ at 400 MHz)

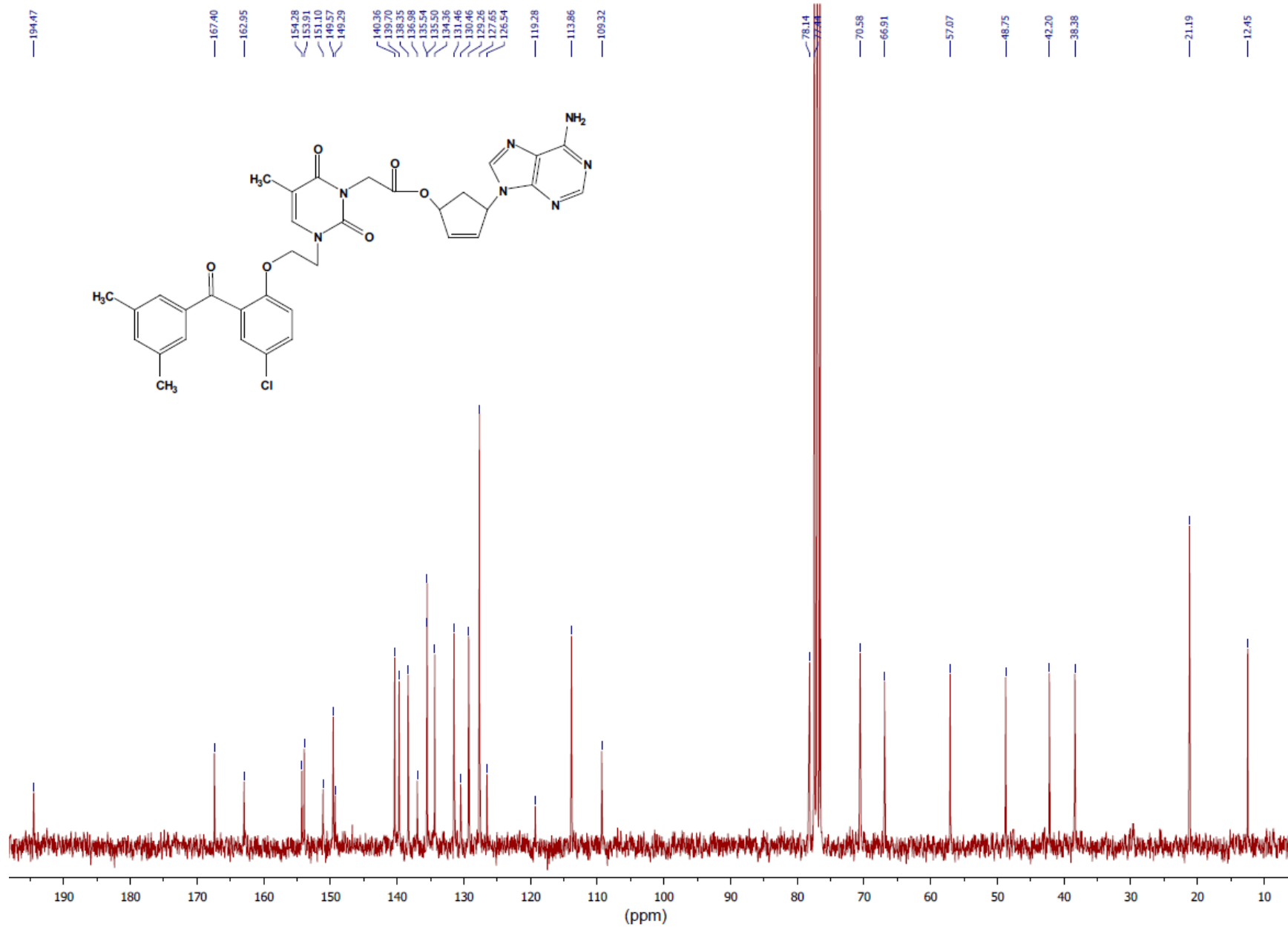


Figure S48. ¹³C NMR spectrum of compound **6d** (in CDCl₃ at 100 MHz)

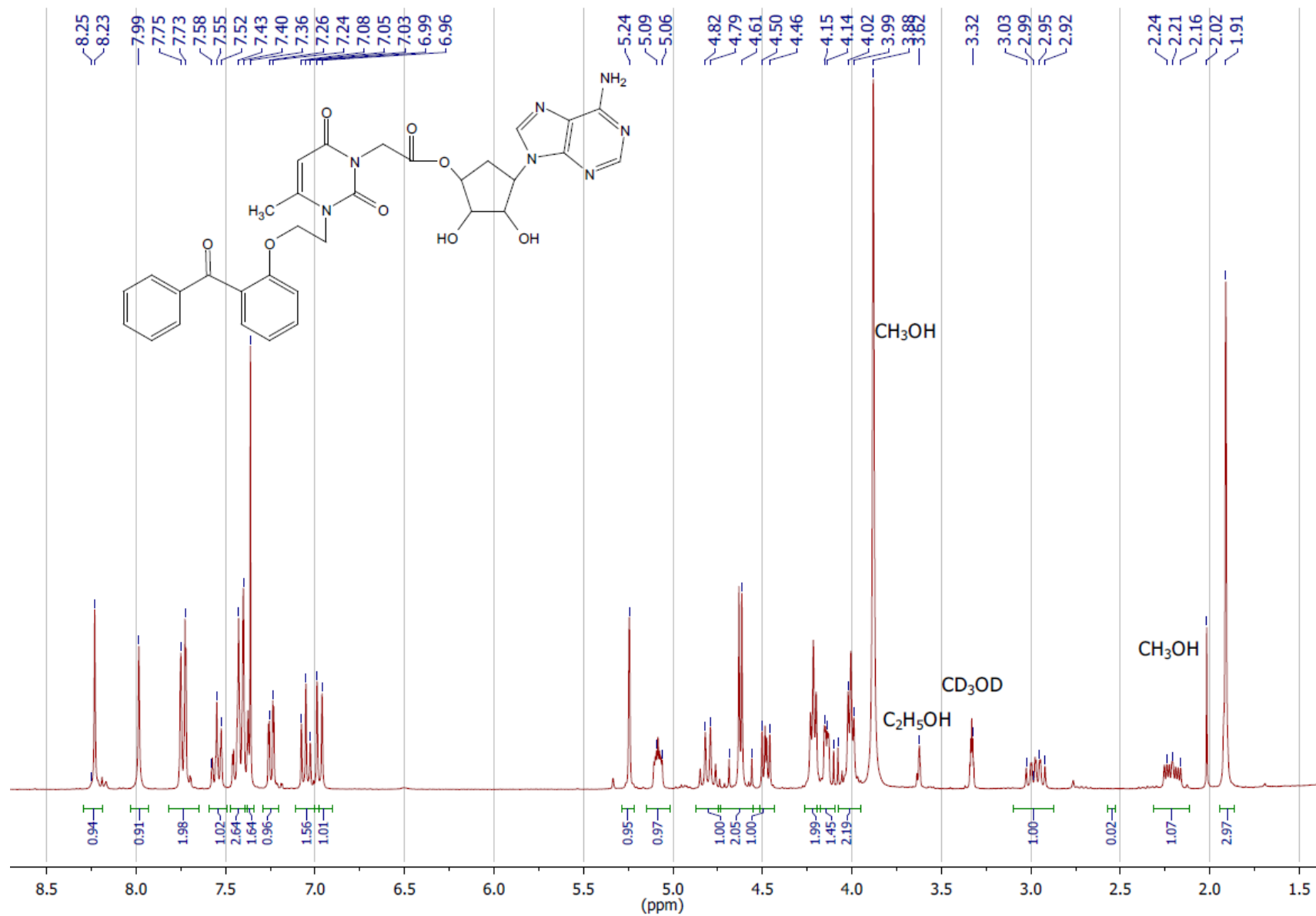
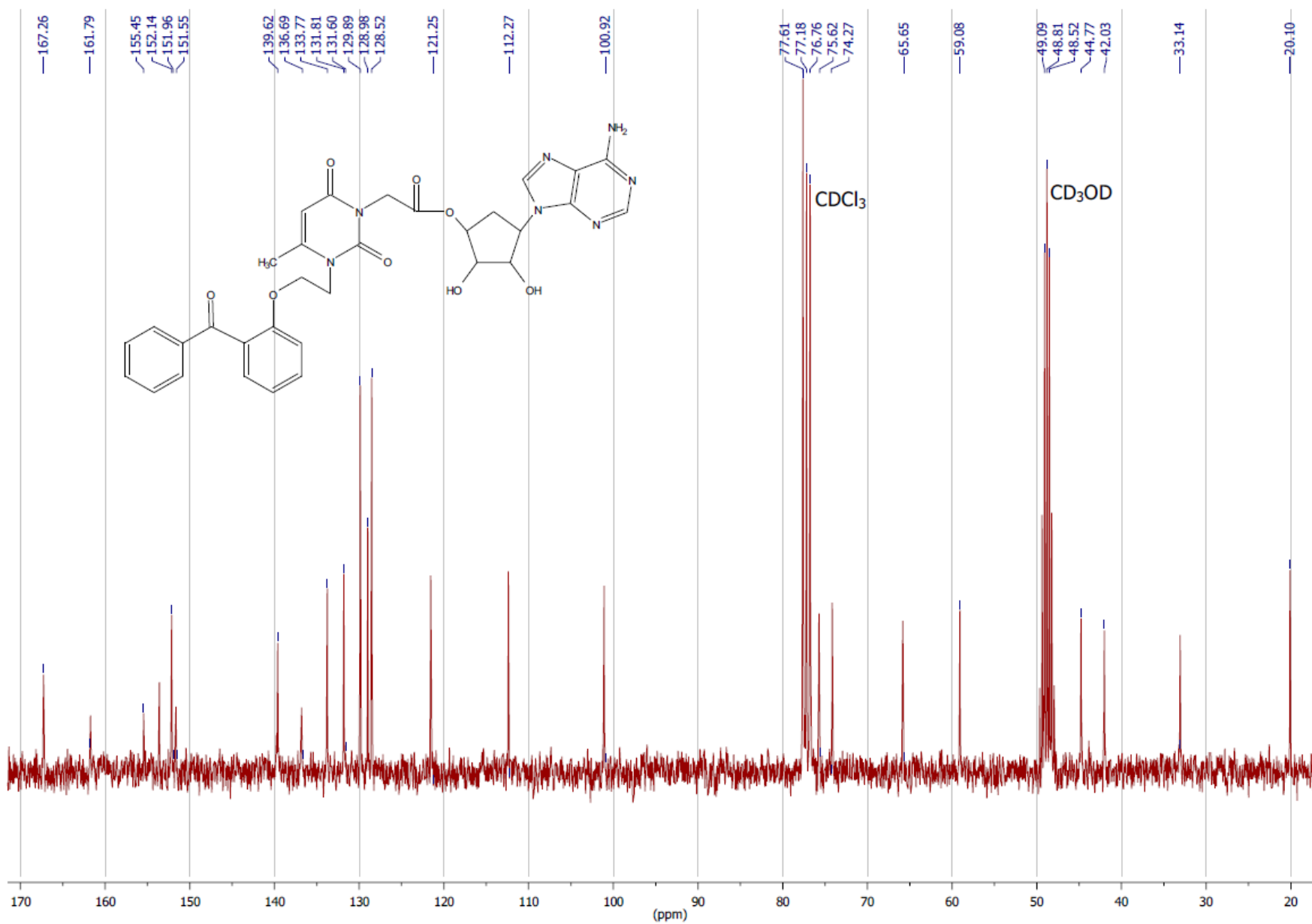


Figure S49. ¹H NMR spectrum of compound 3a (in CDCl₃: CD₃OD at 400 MHz)



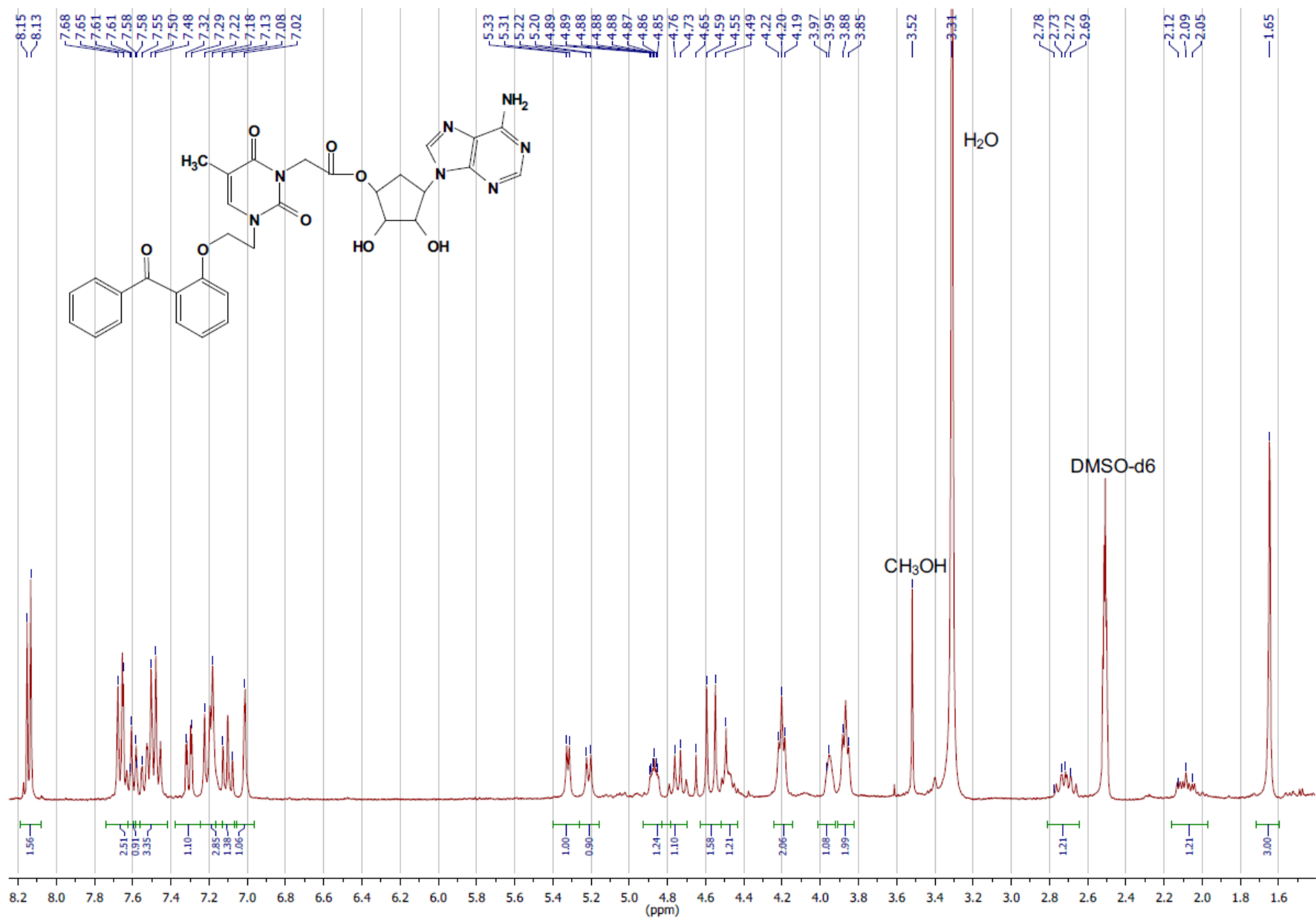


Figure S51. ¹H NMR spectrum of compound **3b** (in DMSO-*d*₆ at 400 MHz)

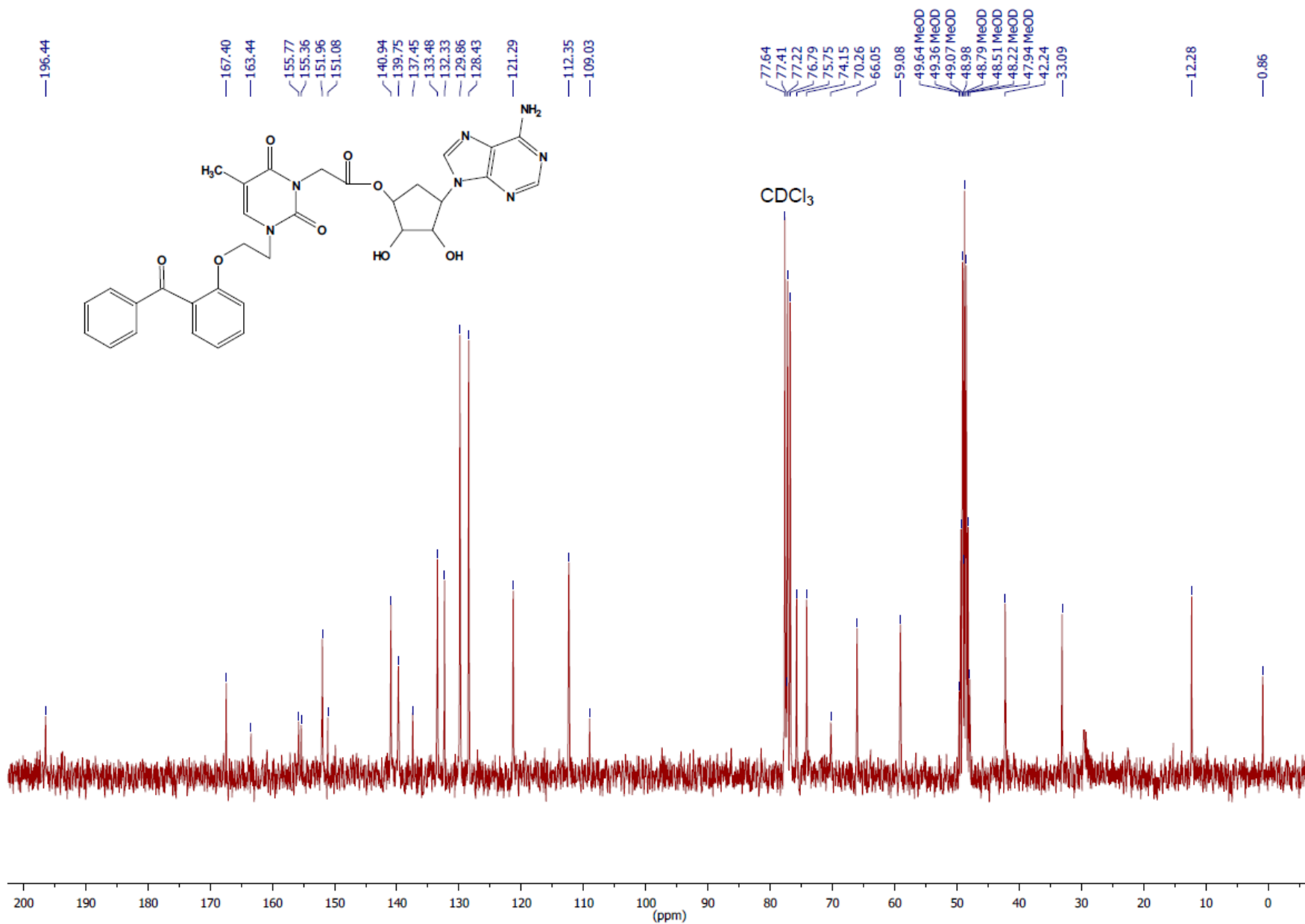


Figure S52. ^{13}C NMR spectrum of compound **3b** (in $\text{CDCl}_3:\text{CD}_3\text{OD}$ at 100 MHz)

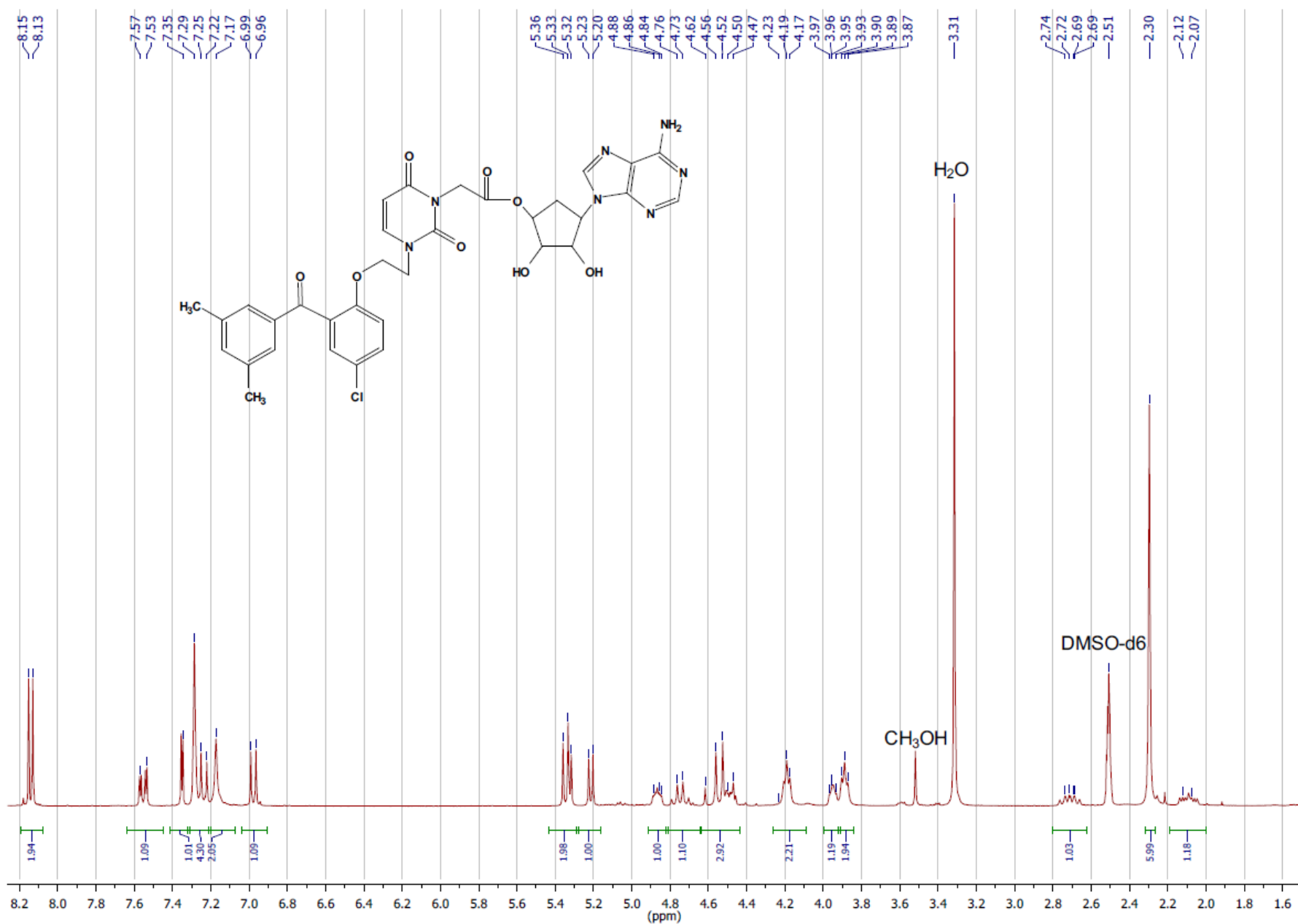


Figure S53. ¹H NMR spectrum of compound 3c (in DMSO-d₆ at 400 MHz)

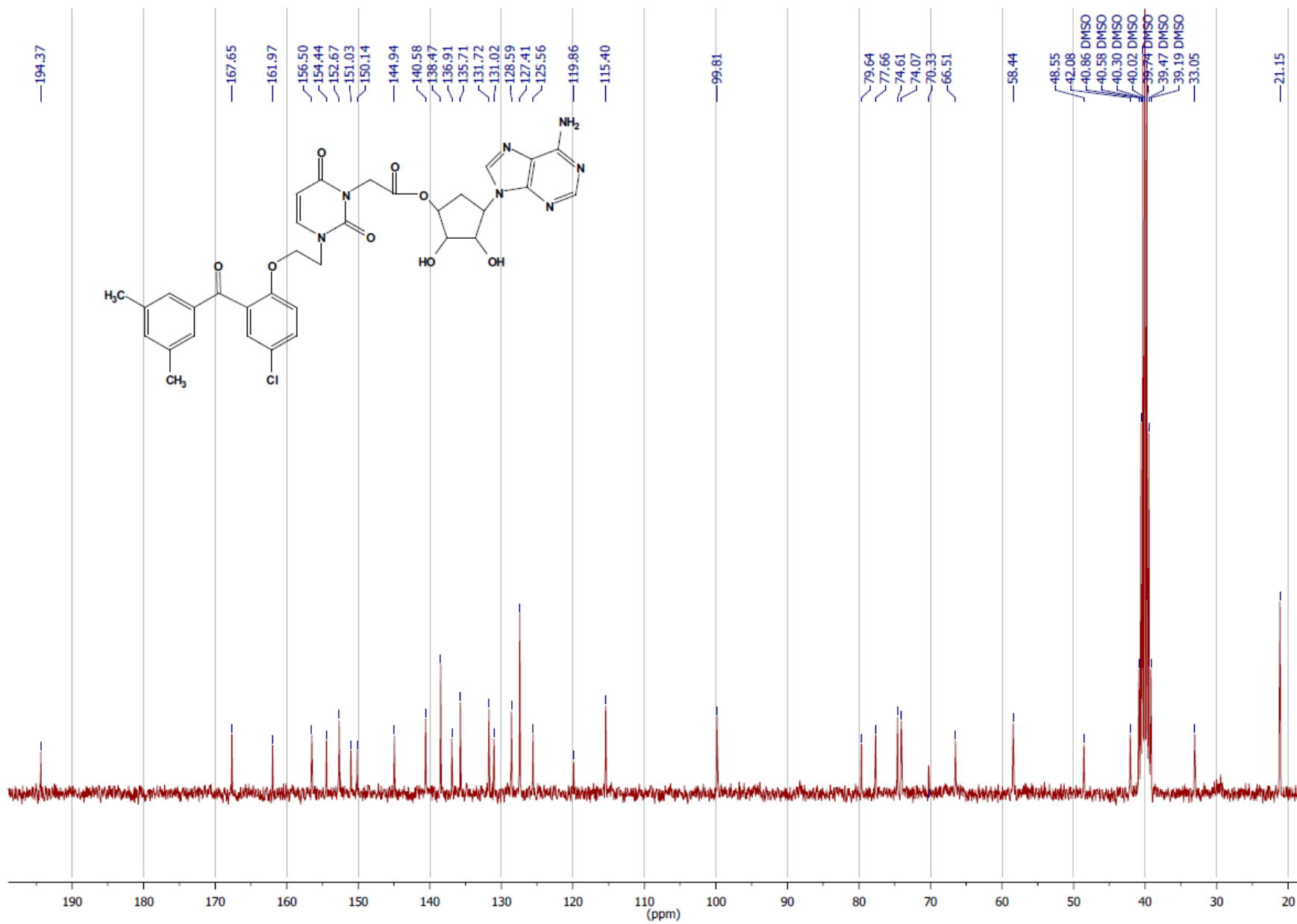


Figure S54. ^{13}C NMR spectrum of compound 3c (in $\text{DMSO-}d_6$ at 100 MHz)

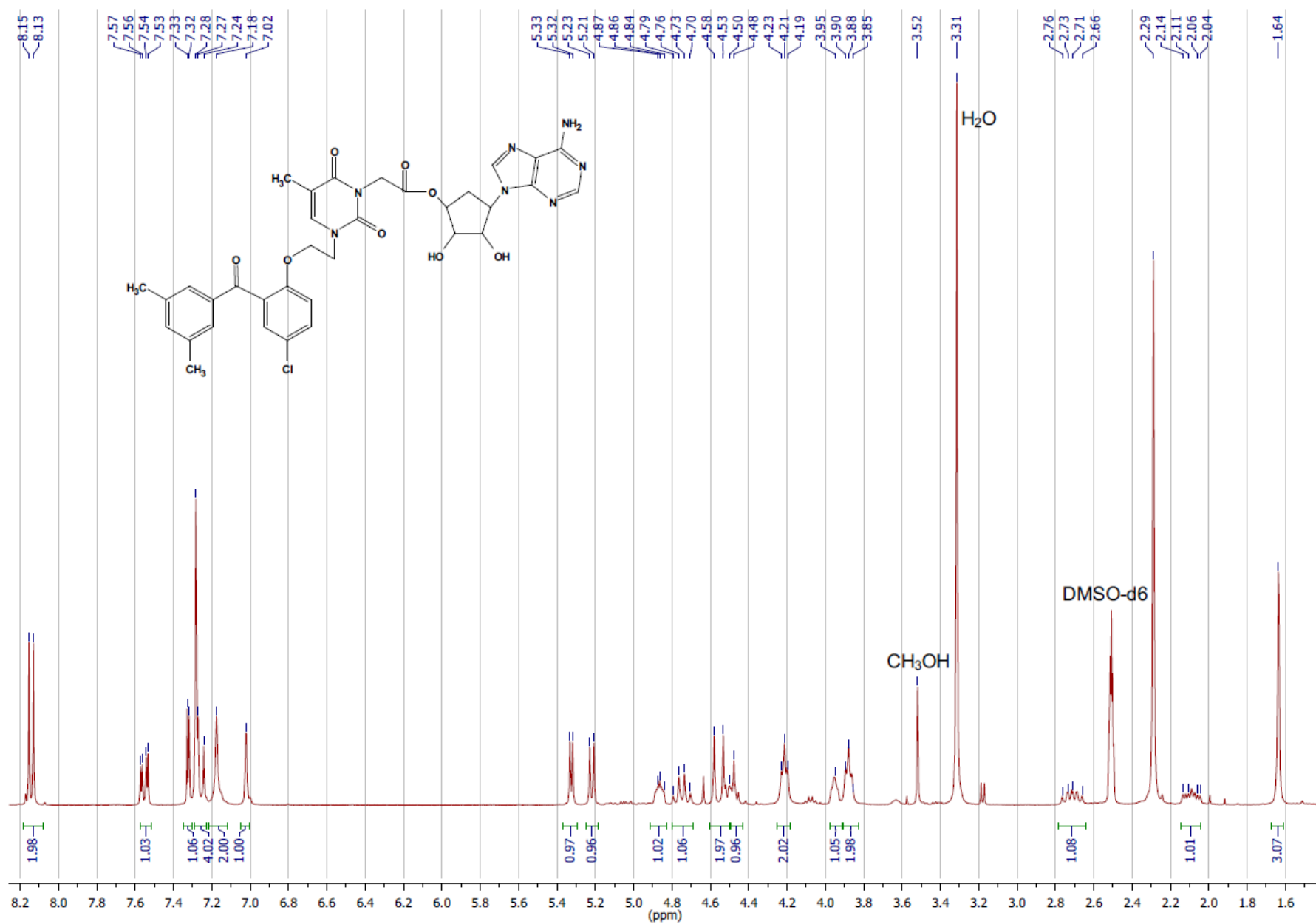


Figure S55. ¹H NMR spectrum of compound **3d** (in DMSO-d₆ at 400 MHz)

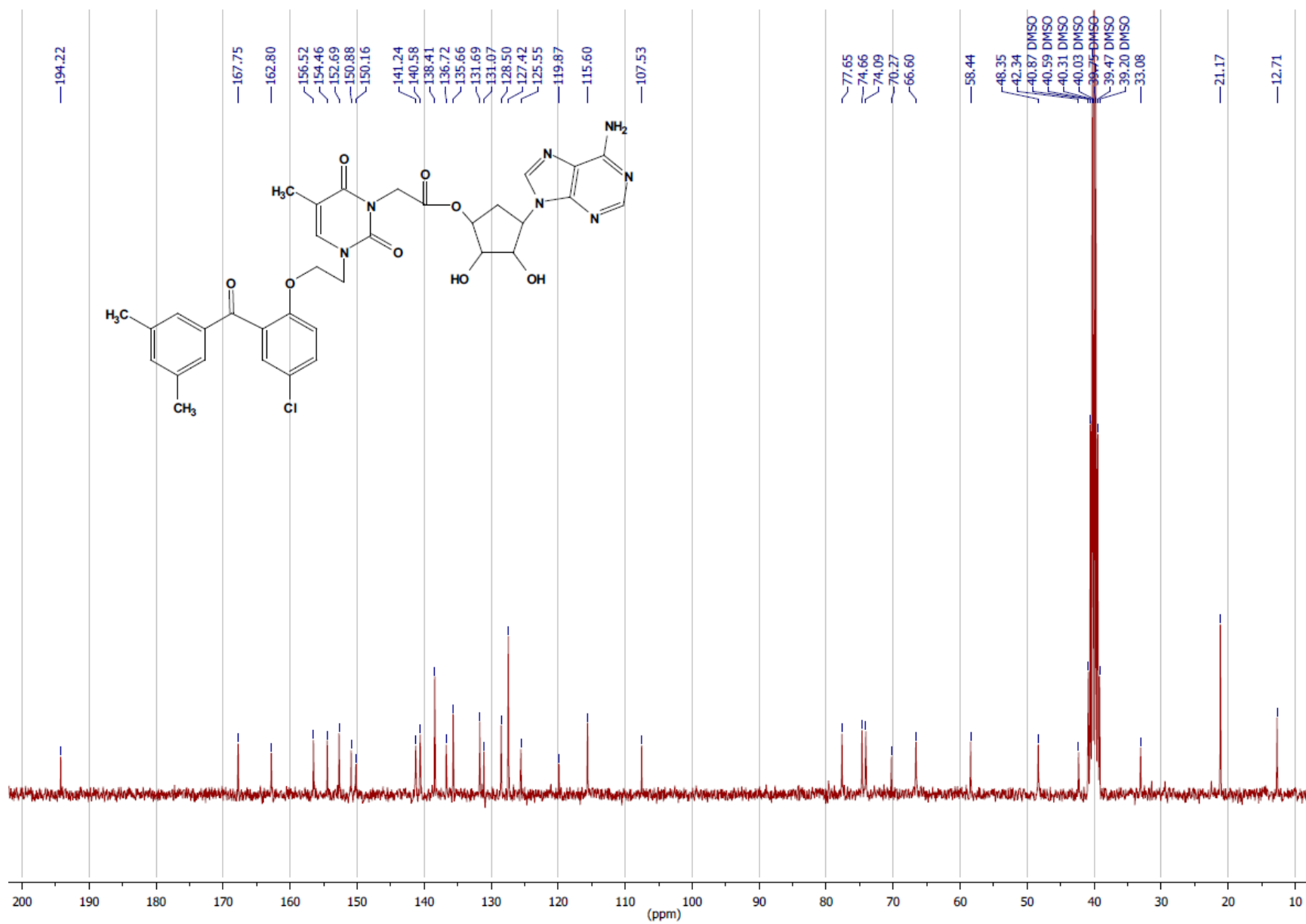


Figure S56. ^{13}C NMR spectrum of compound **3d** (in $\text{DMSO-}d_6$ at 100 MHz)