

Supplementary Material

Straightforward synthesis of unnatural poly-oxygenated steroid sapogenins

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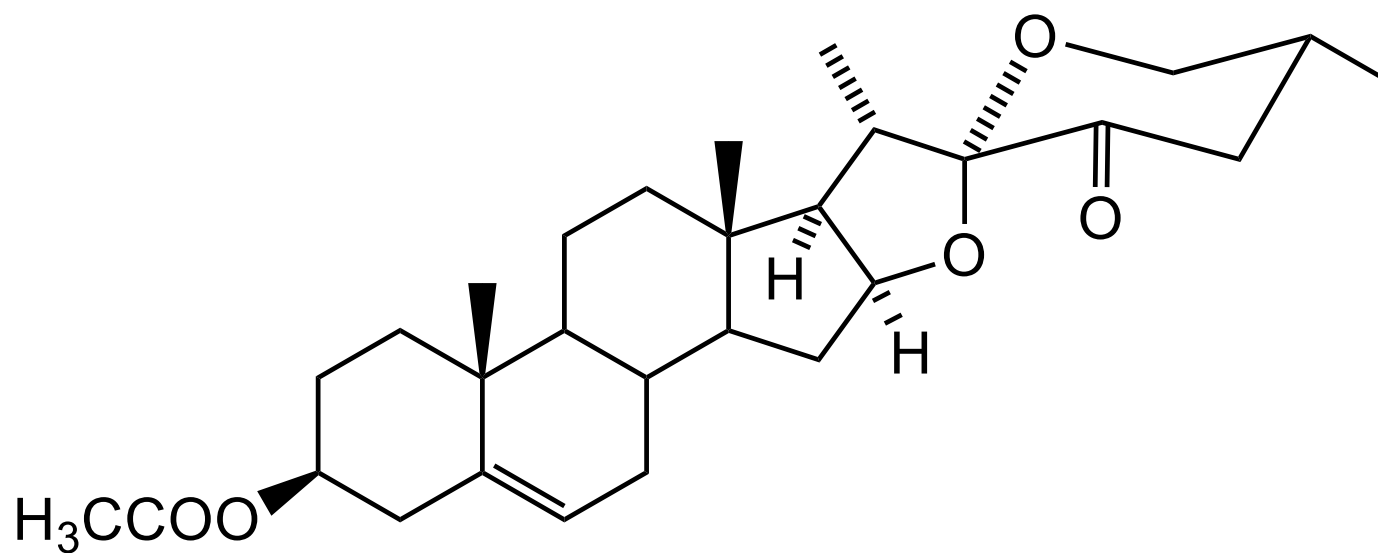
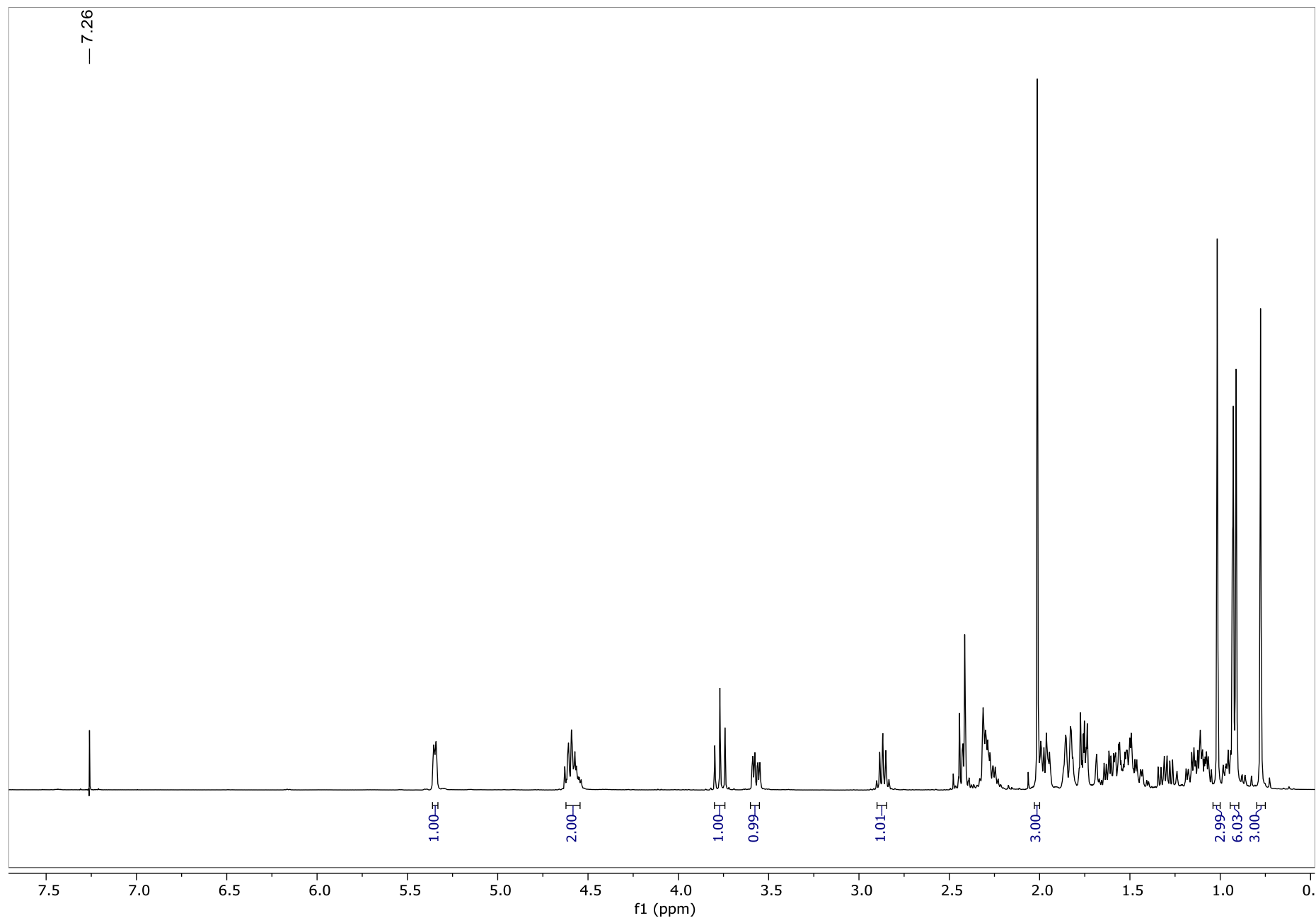


Figure S1. (25*R*)-3 β -Acetoxyspirost-5-en-23-one (2)

Figure S2. ^1H NMR spectrum of compound 2

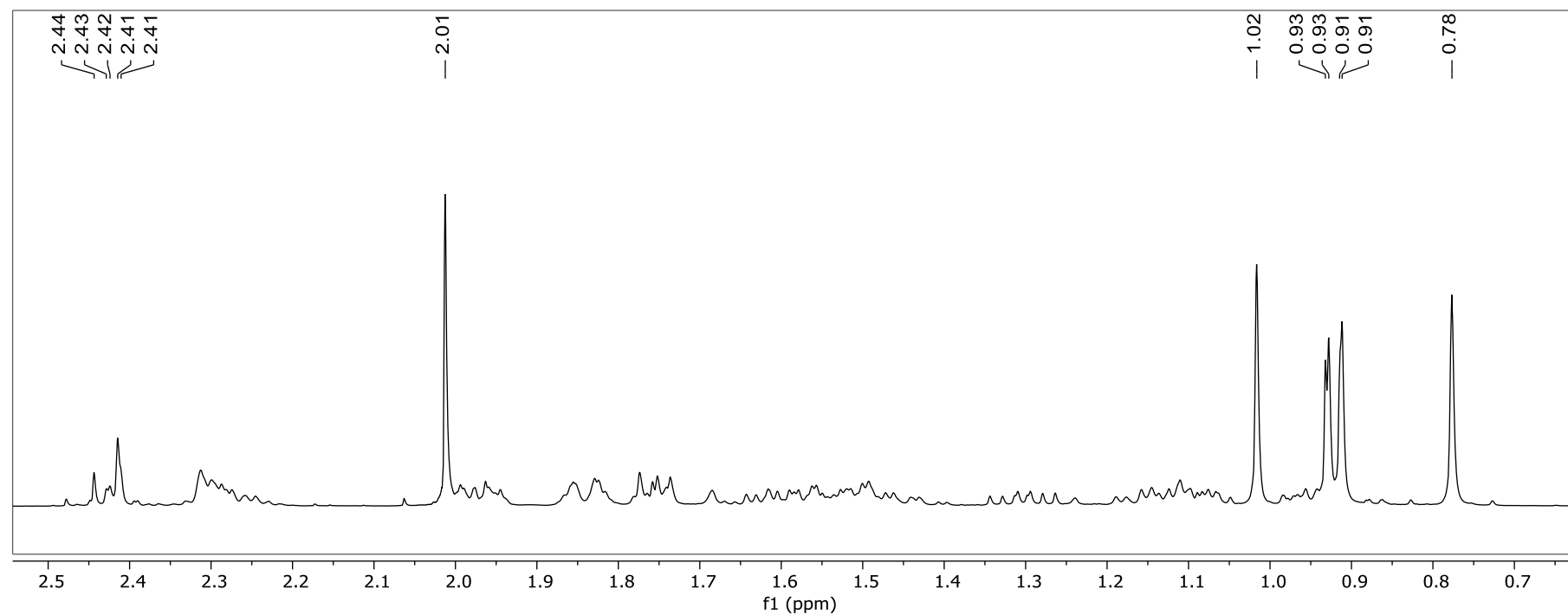


Figure S3. Sections of the ^1H NMR spectrum of compound 2

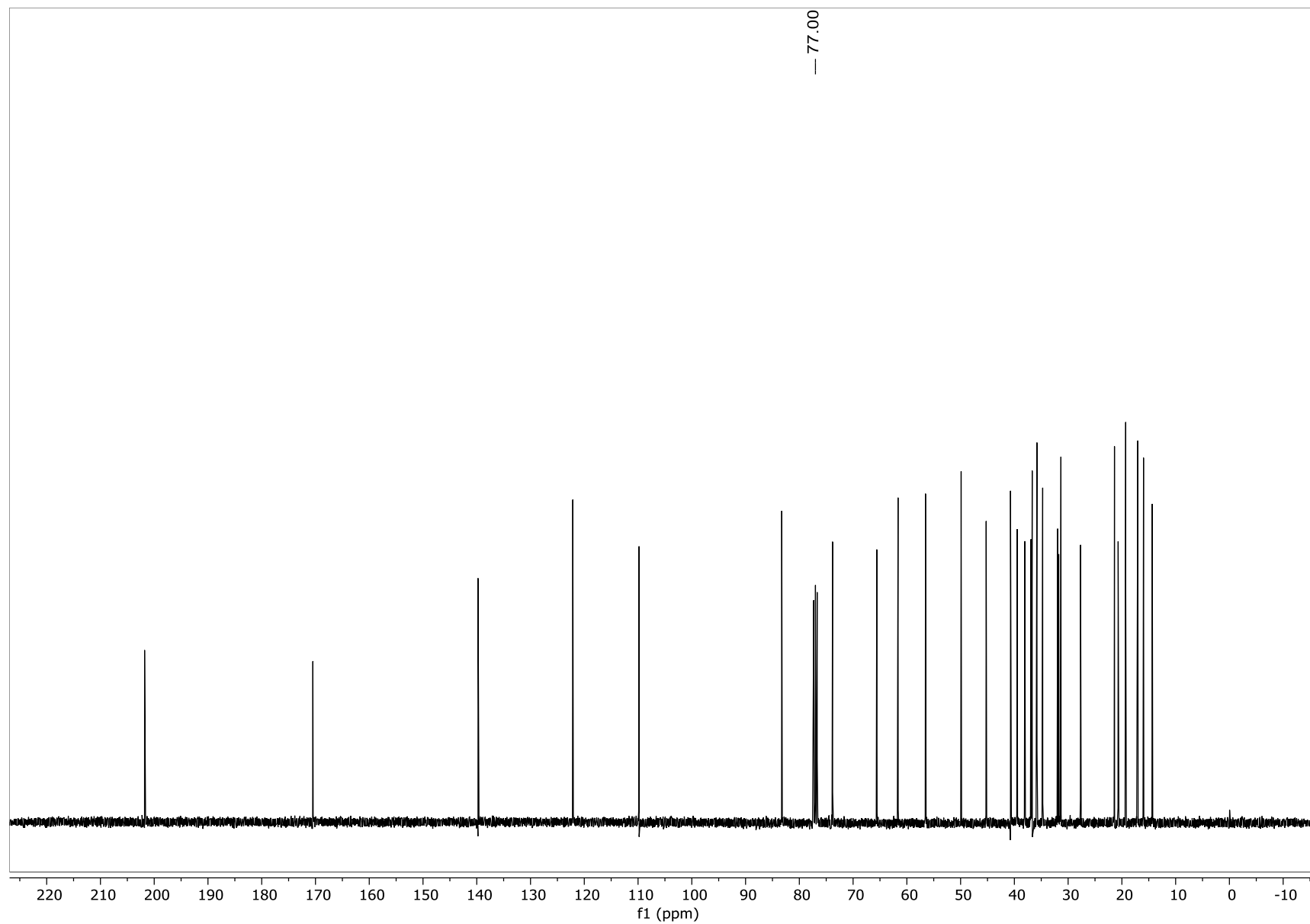
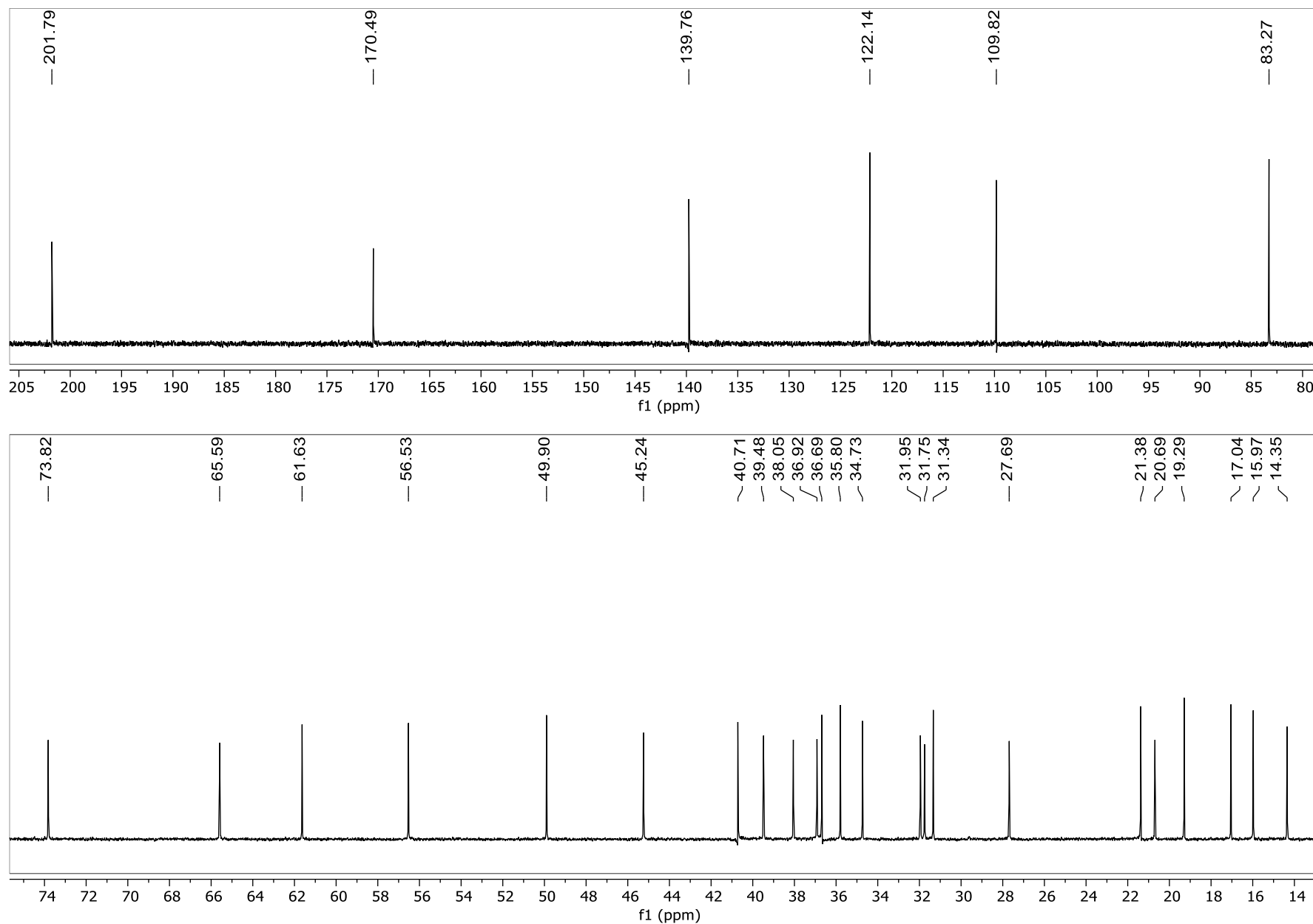


Figure S4. ^{13}C NMR spectrum of compound 2

Figure S5. Sections of the ^{13}C NMR spectrum of compound 2

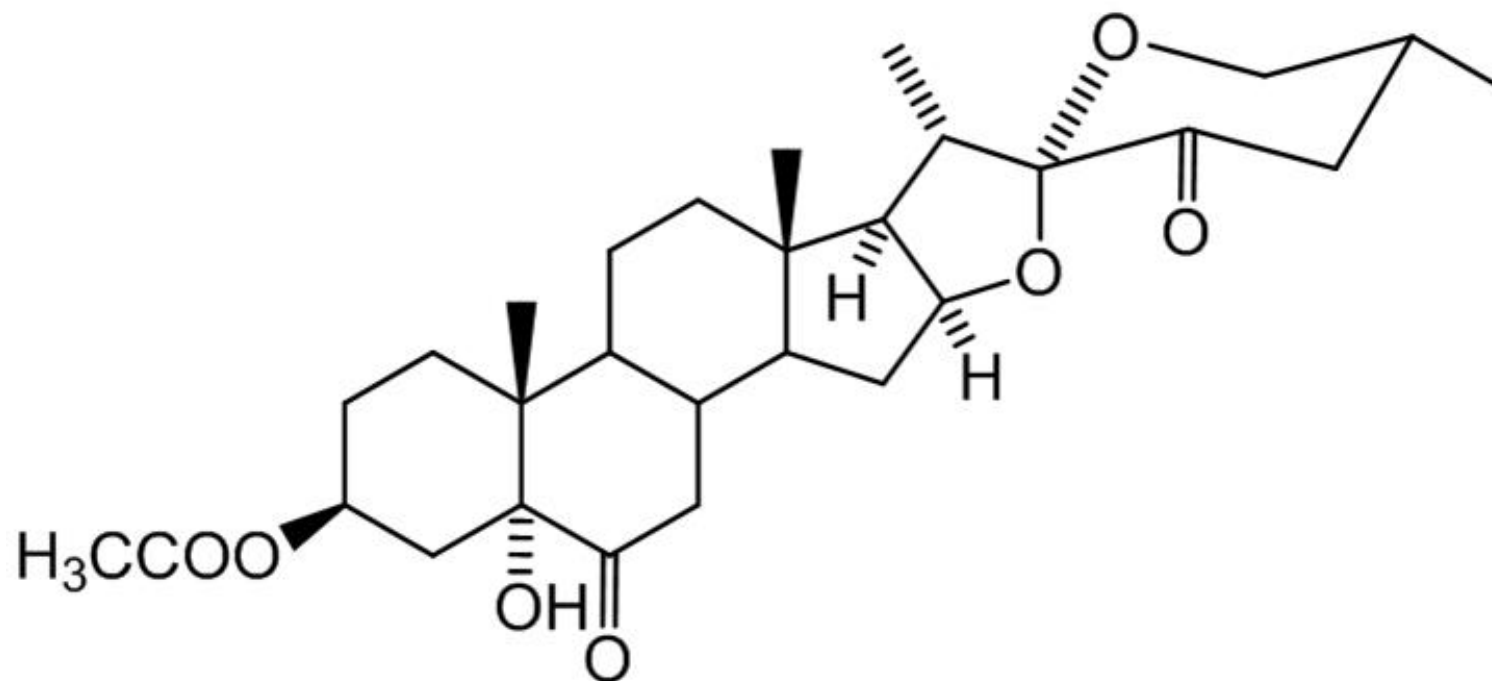
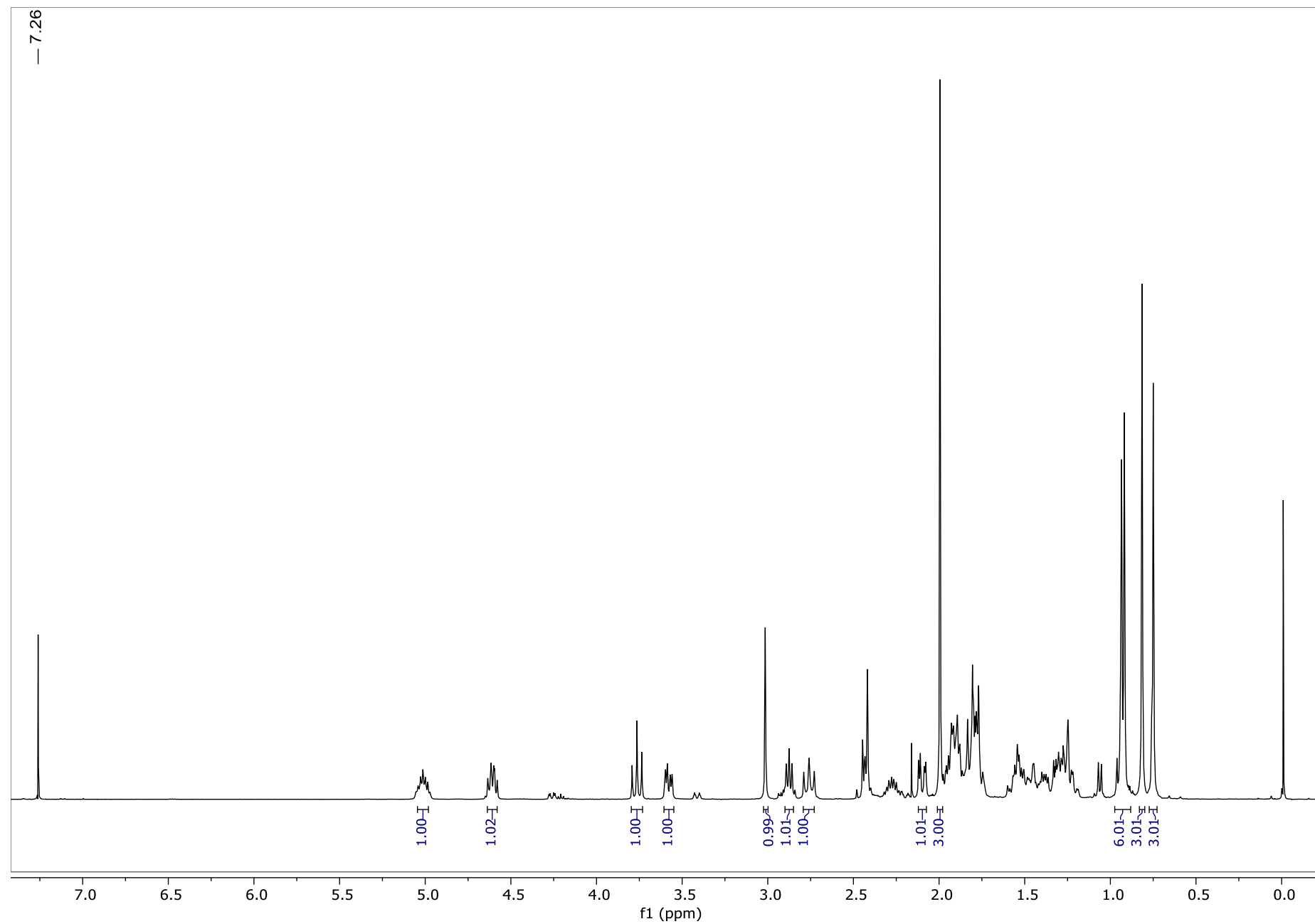
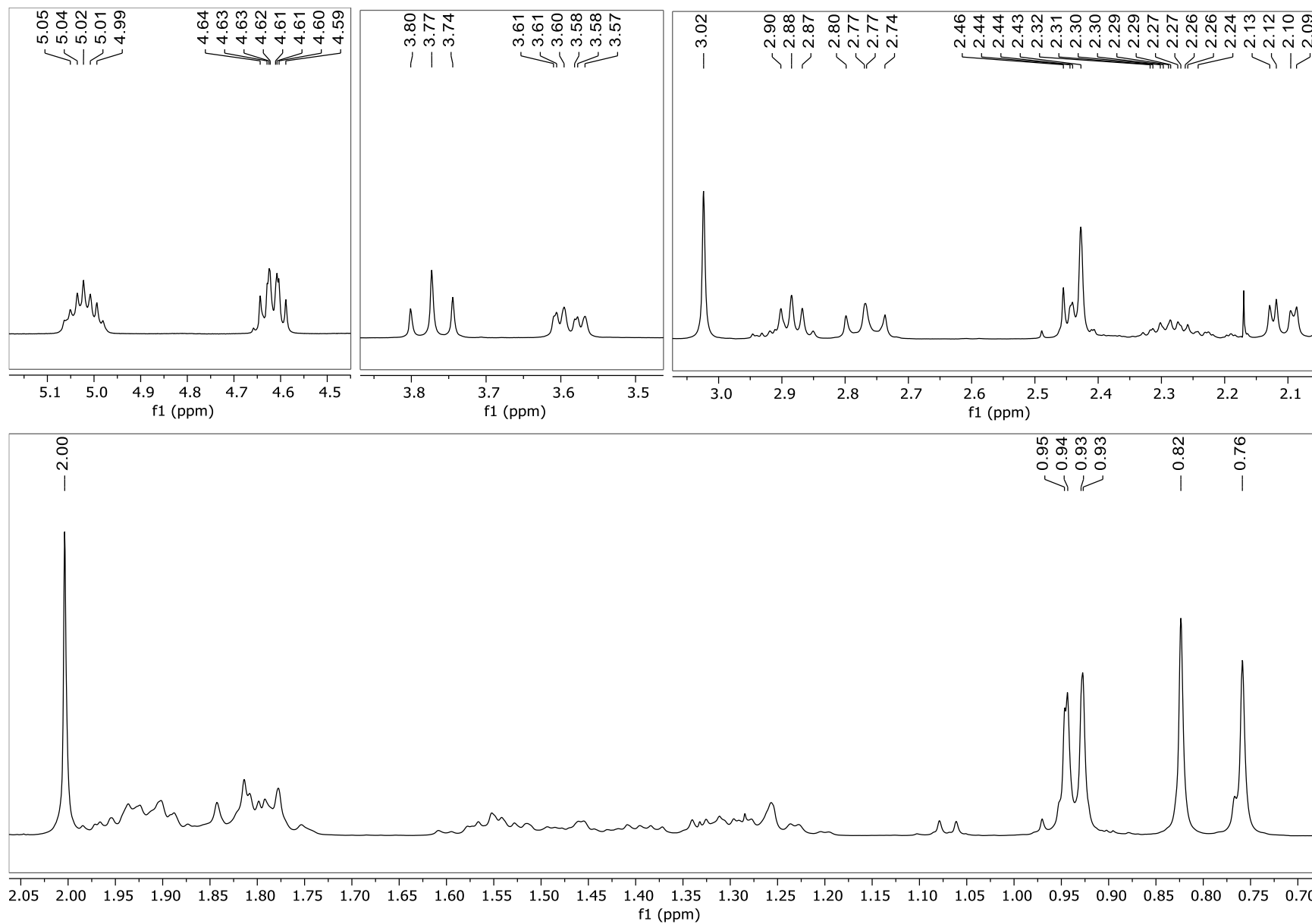


Figure S6. (25R)-3β-Acetoxy-5-hydroxy-5α-spirostan-6,23-dione (3)

Figure S7. ^1H NMR spectrum of compound 3

Figure S8. Sections of the ^1H NMR spectrum of compound 3

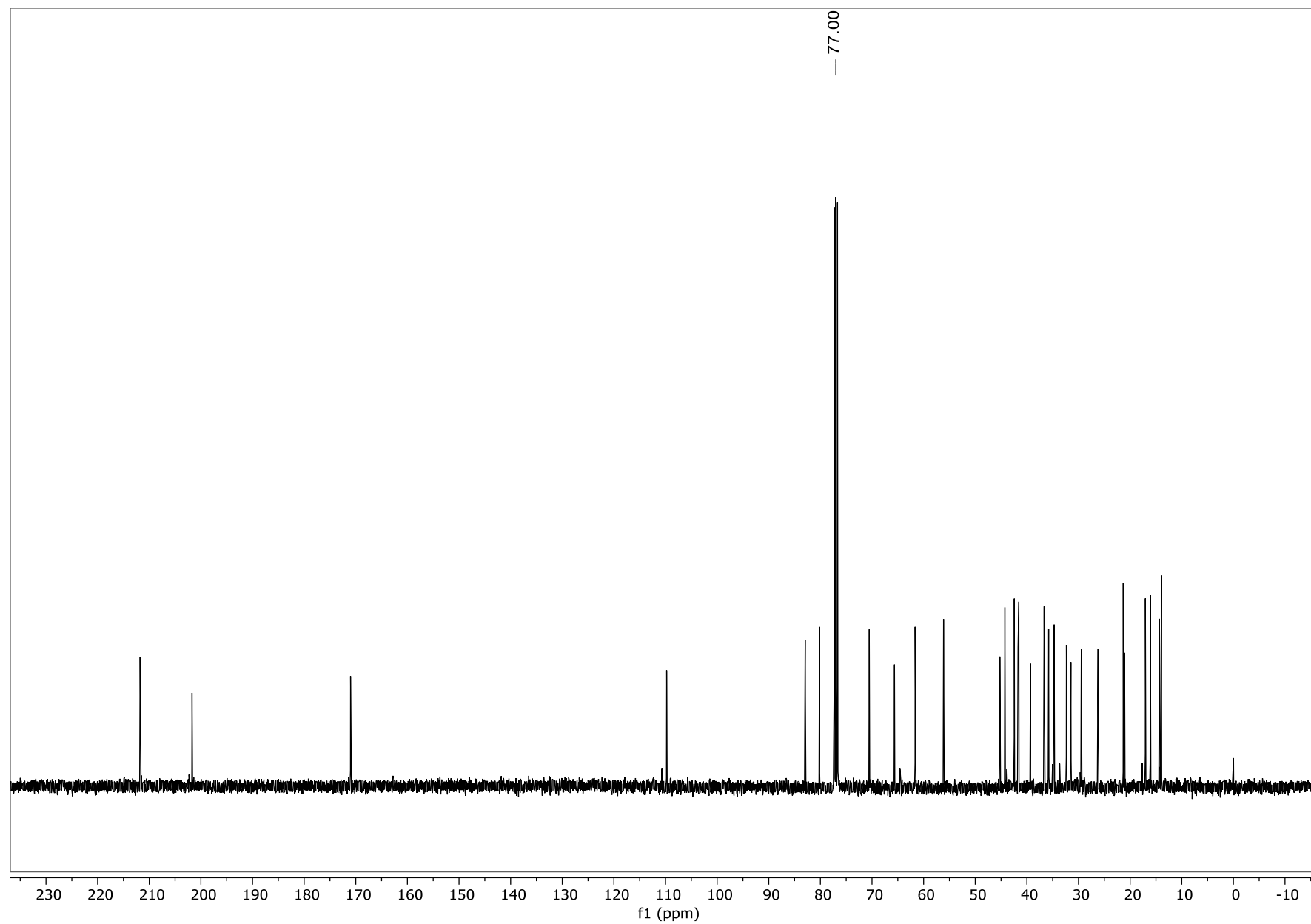
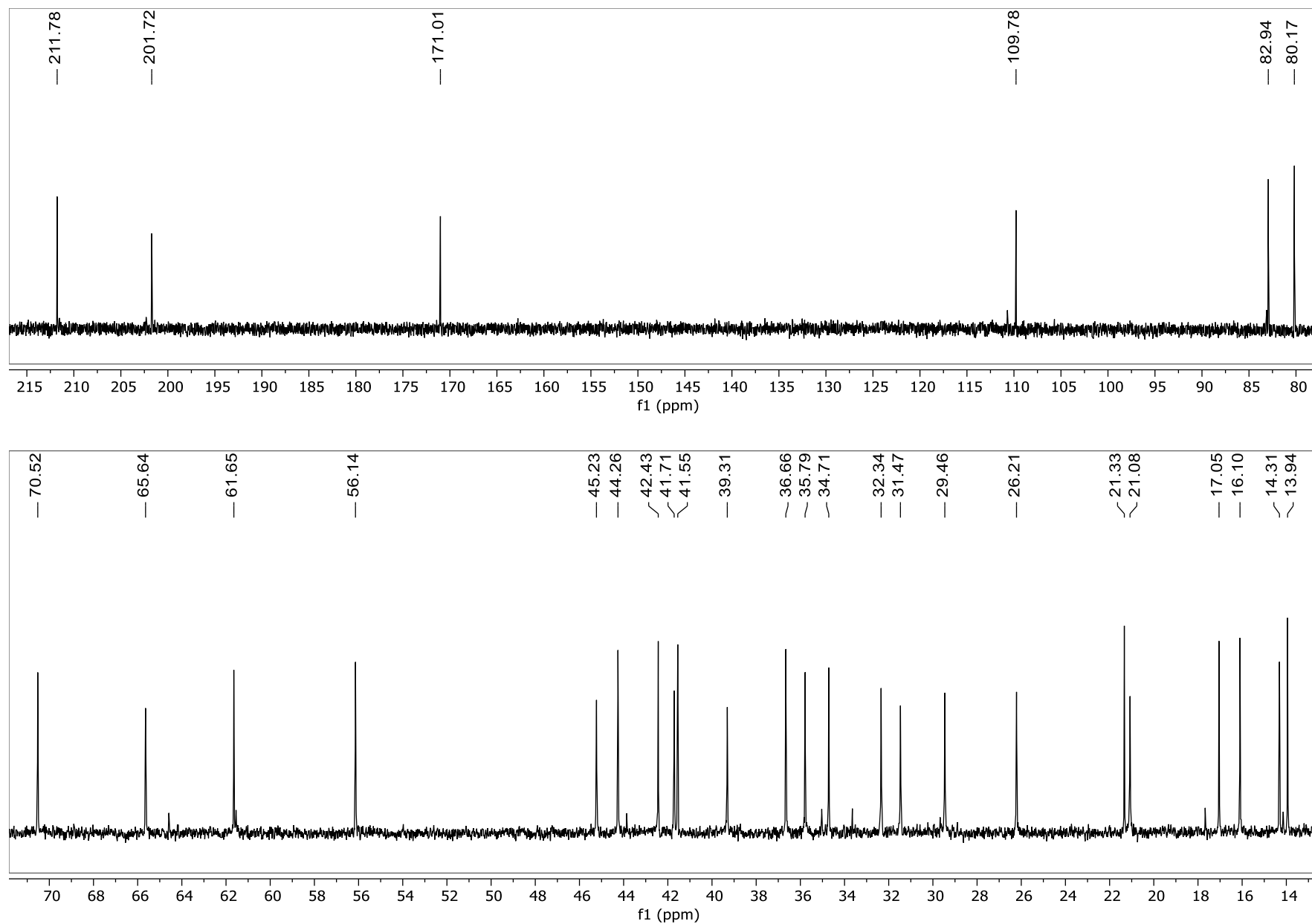


Figure S9. ^{13}C NMR spectrum of compound 3

Figure S10. Sections of the ^{13}C NMR spectrum of compound 3

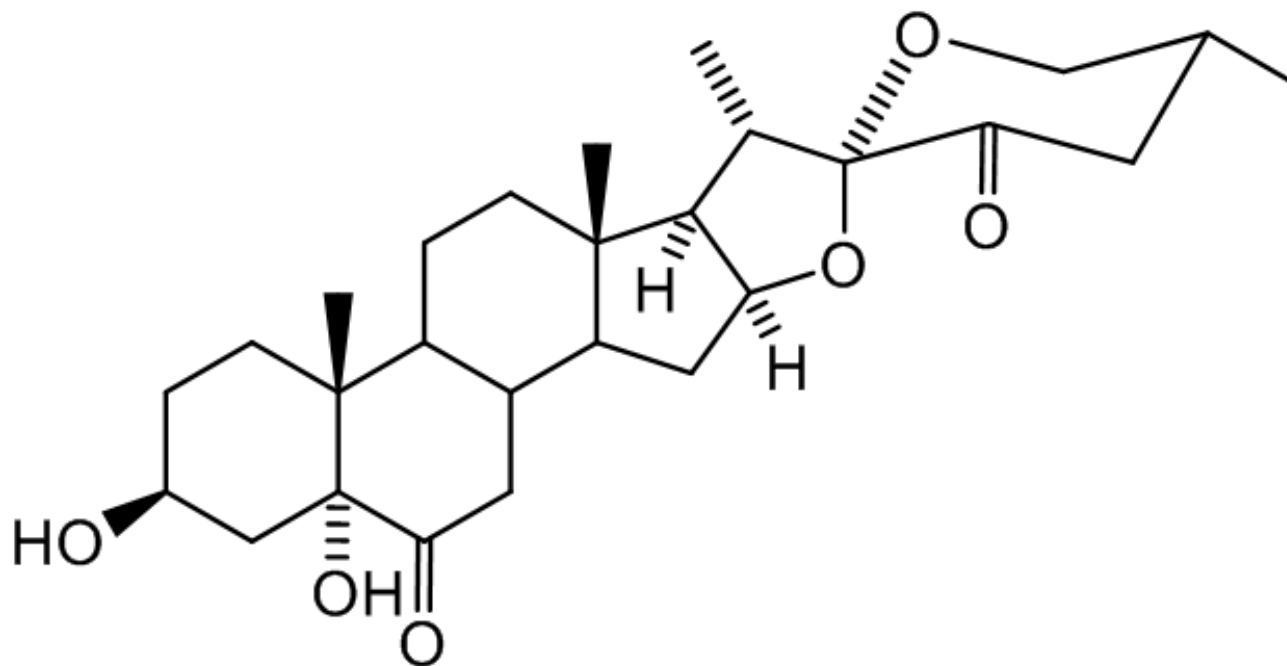
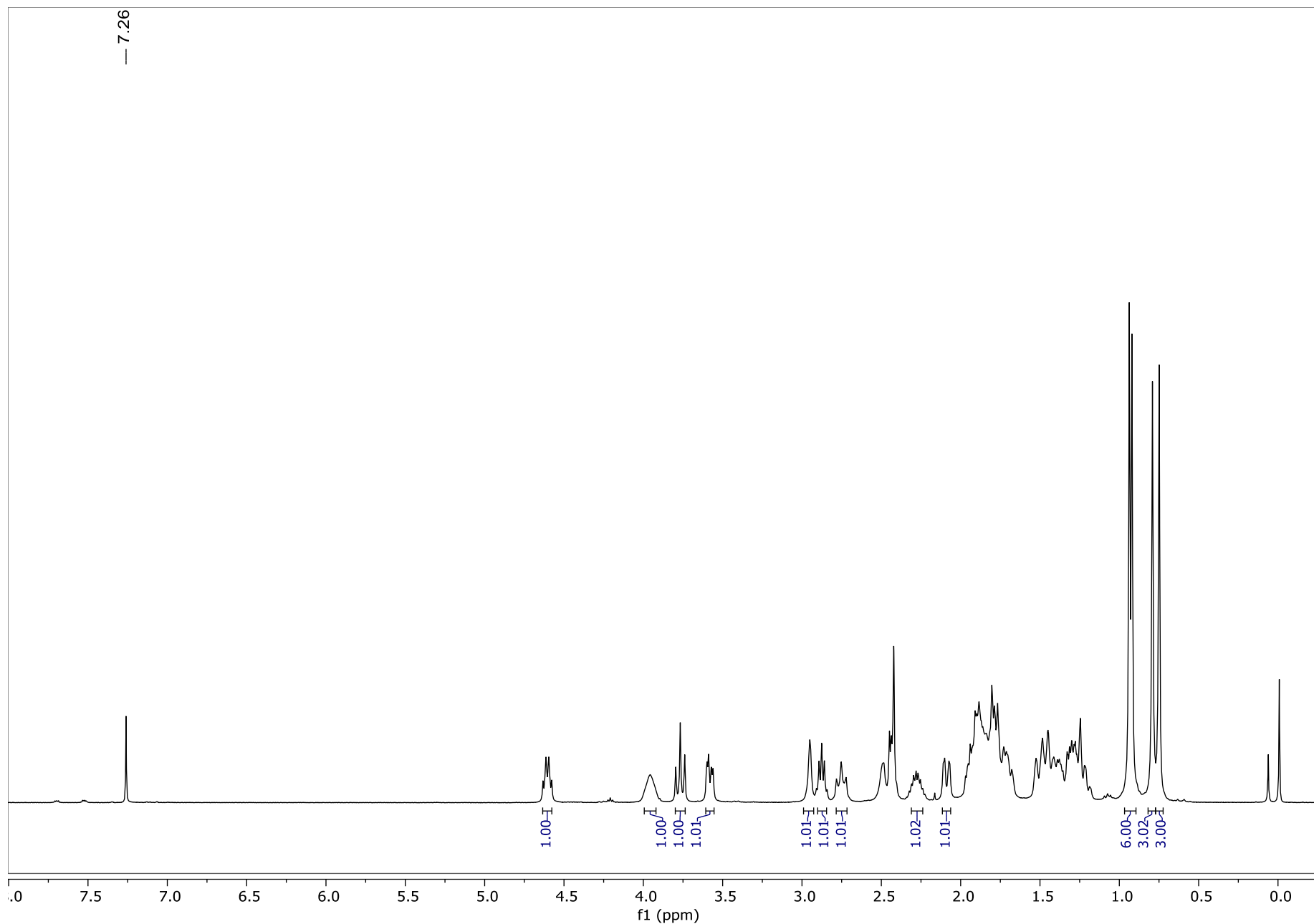
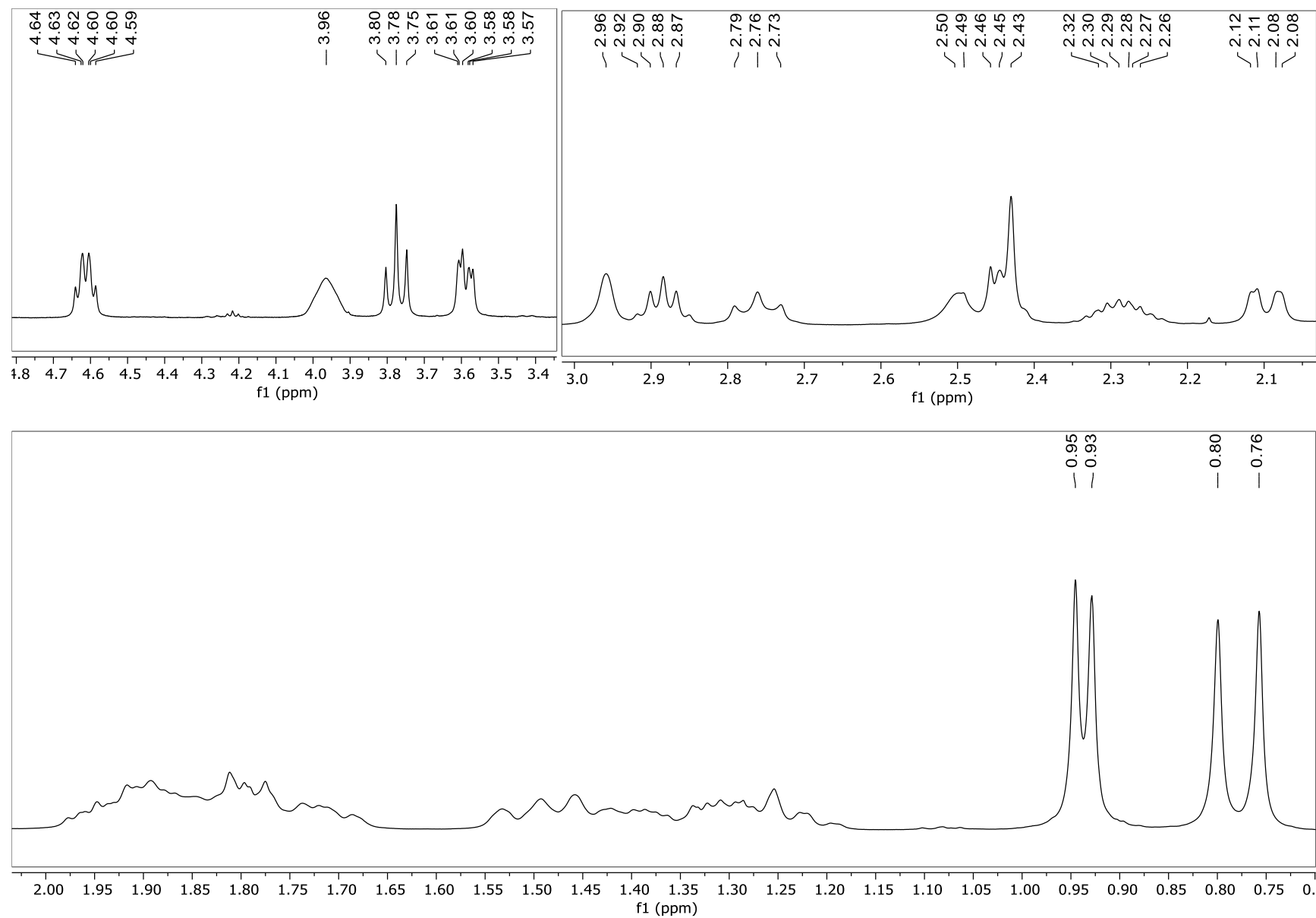


Figure S11. (25*R*)-3β,5-Dihydroxy-5α-spirostan-6,23-dione (4)

Figure S12. ^1H NMR spectrum of compound 4

Figure S13. Sections of the ^1H NMR spectrum of compound 4

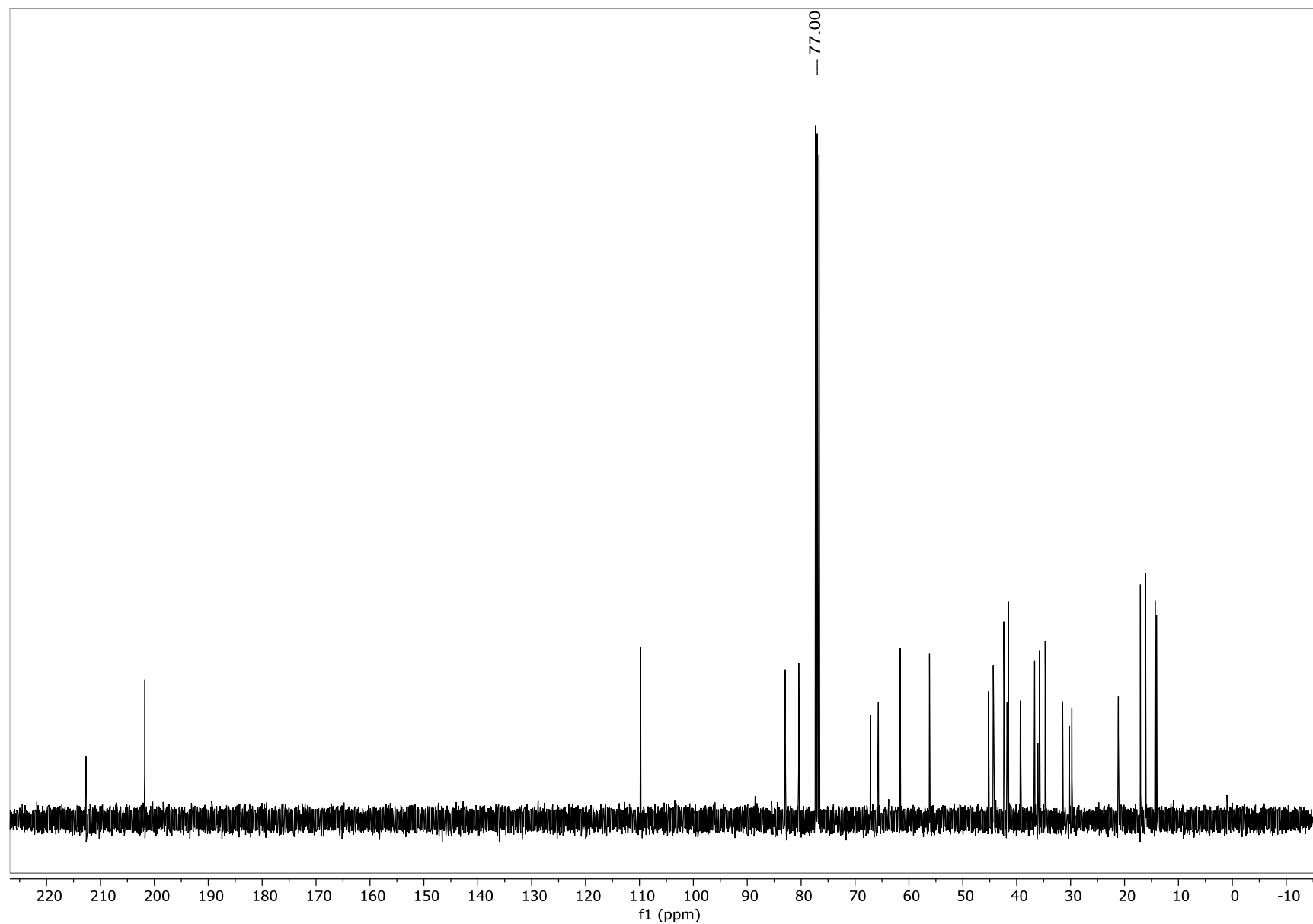
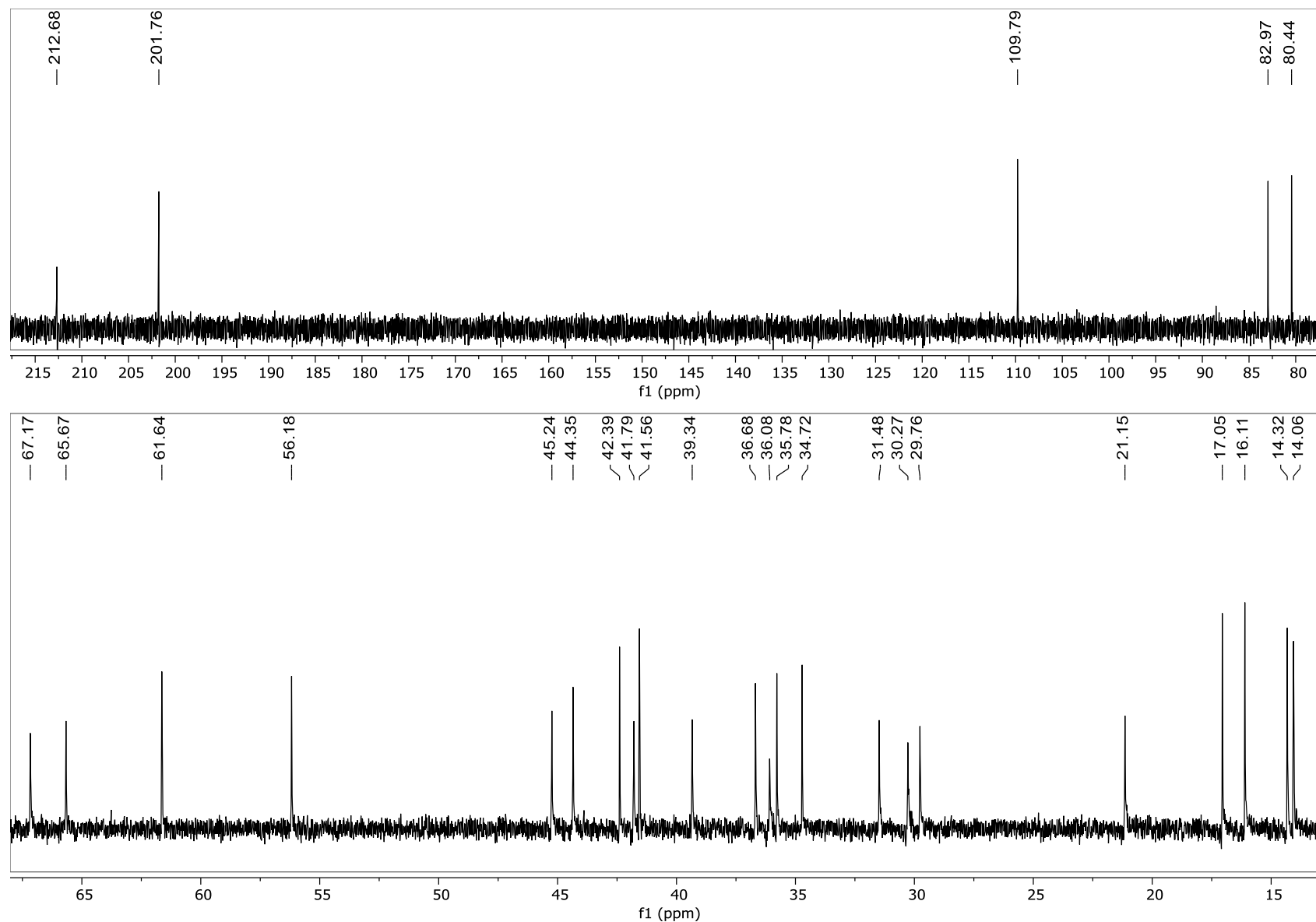


Figure S14. ^{13}C NMR spectrum of compound 4

Figure S15. Sections of the ^{13}C NMR spectrum of compound 4

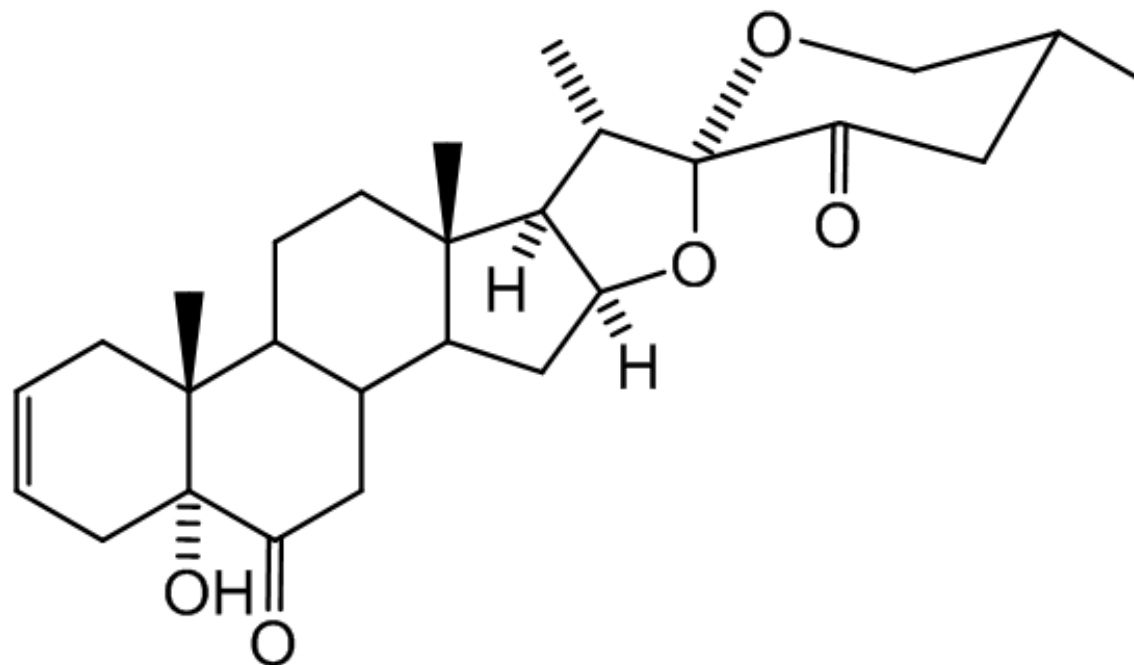
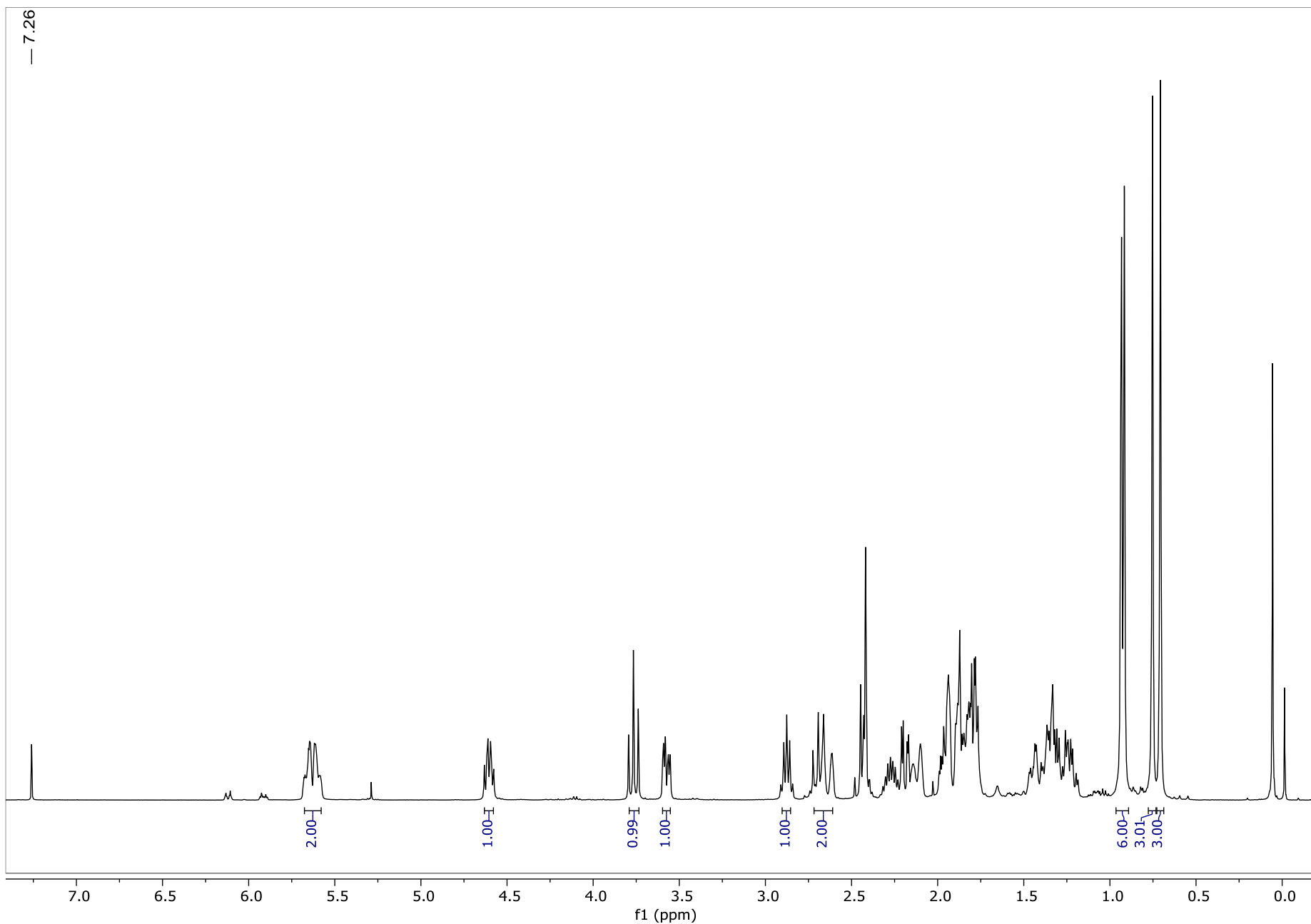
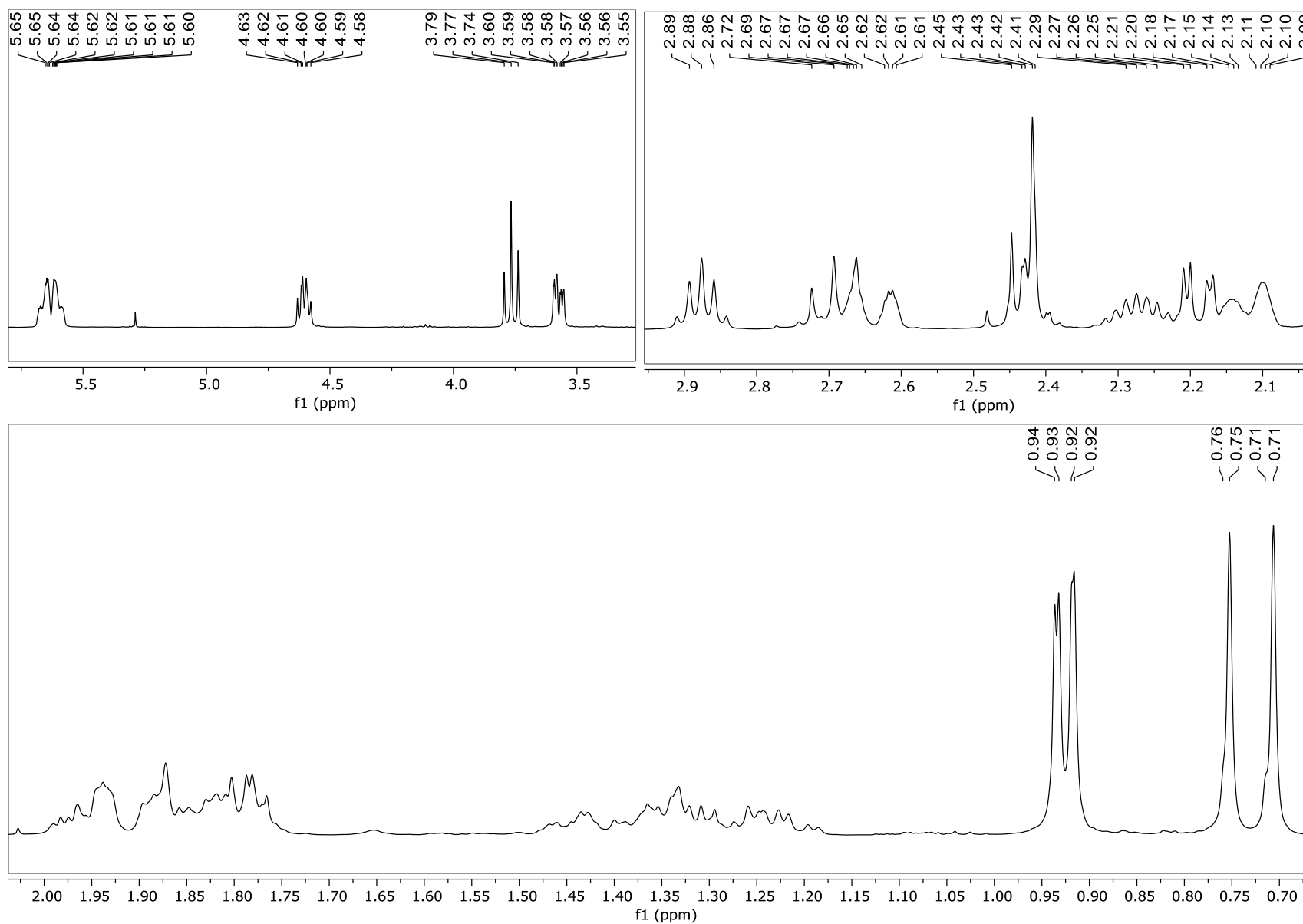


Figure S16. (25*R*)-5-Hydroxy-5 α -spirost-2-en-6,23-dione (5)

Figure S17. ^1H NMR spectrum of compound 5

Figure S18. Sections of the ^1H NMR spectrum of compound 5

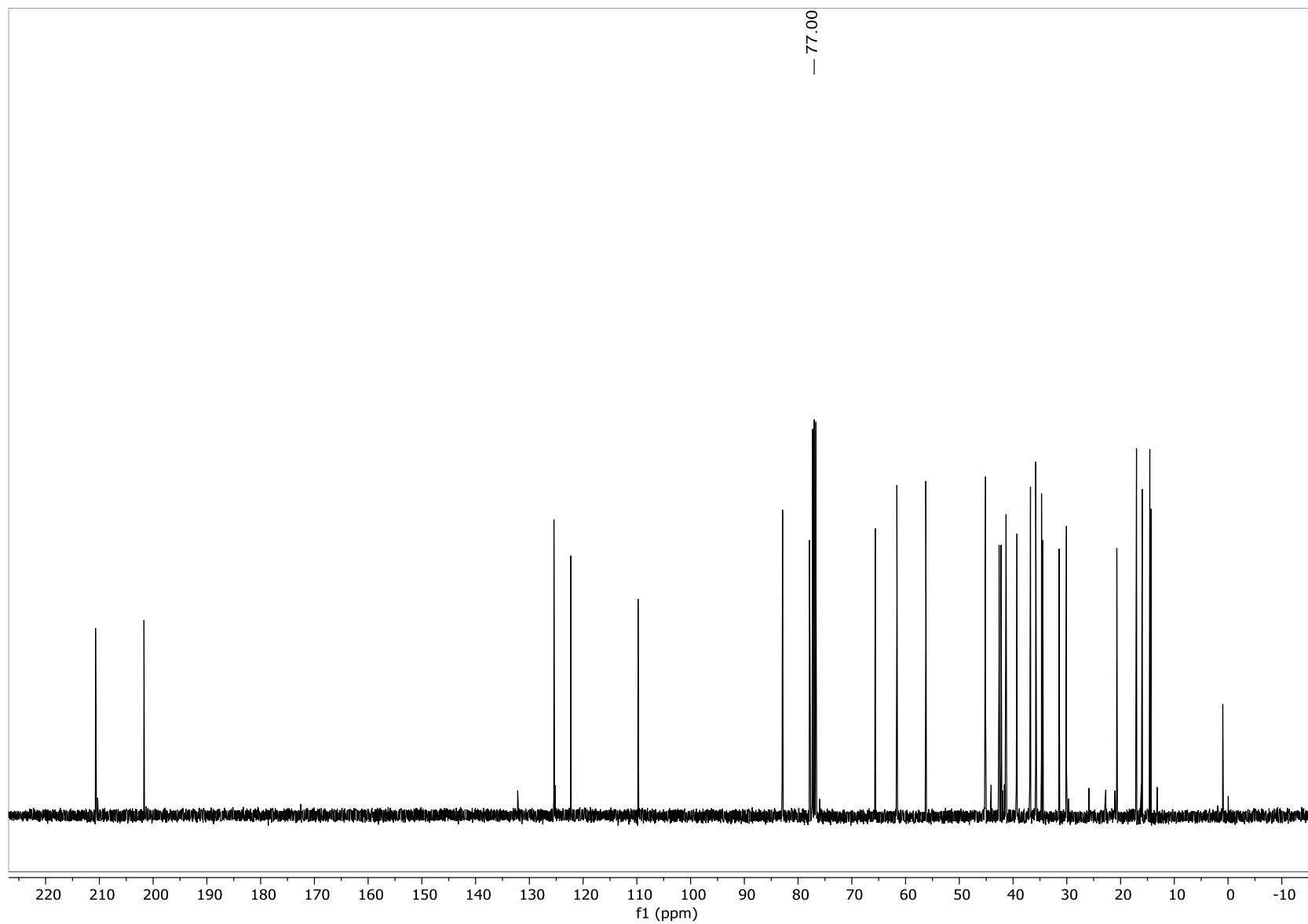
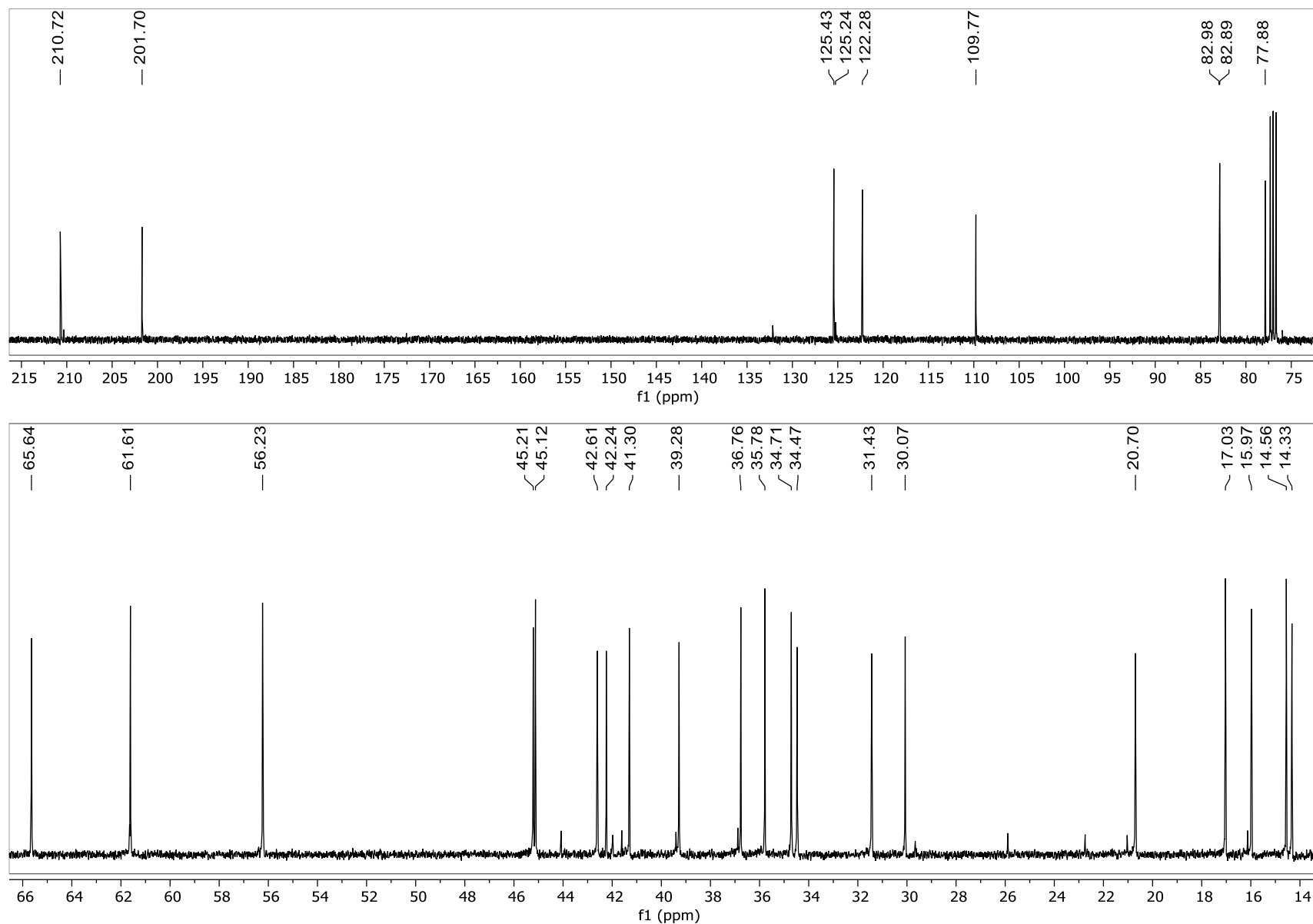


Figure S19. ^{13}C NMR spectrum of compound 6

Figure S20. Sections of the ^{13}C NMR spectrum of compound 5

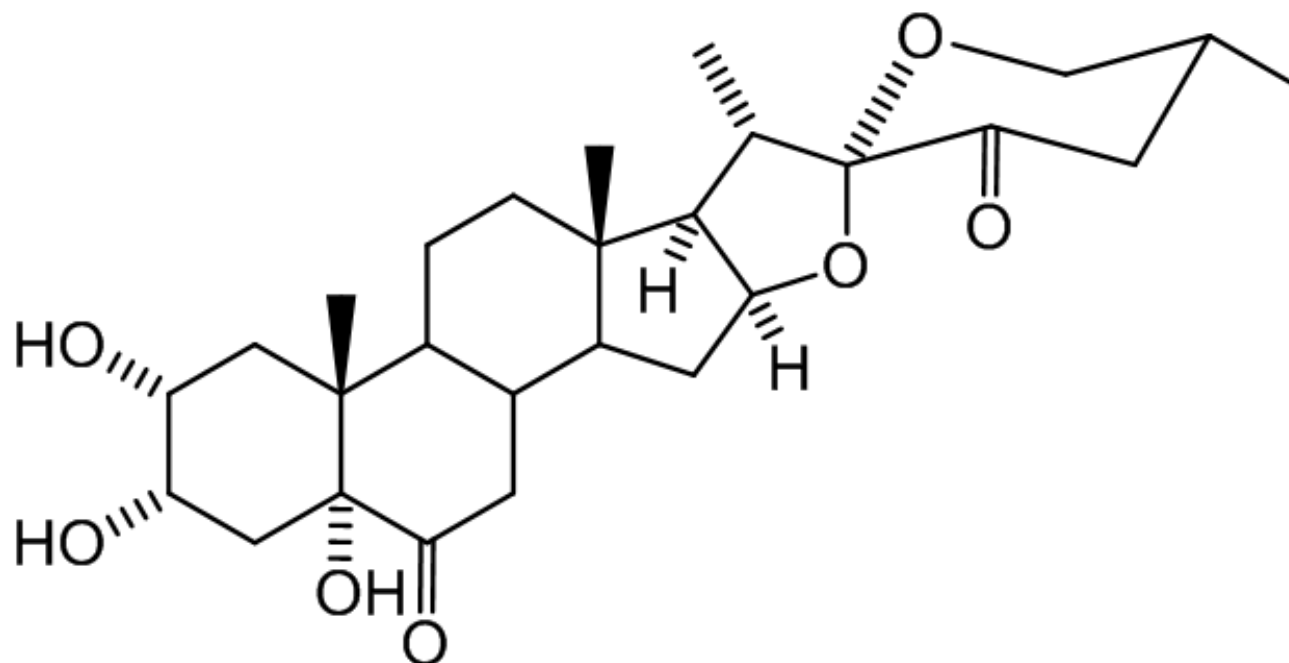
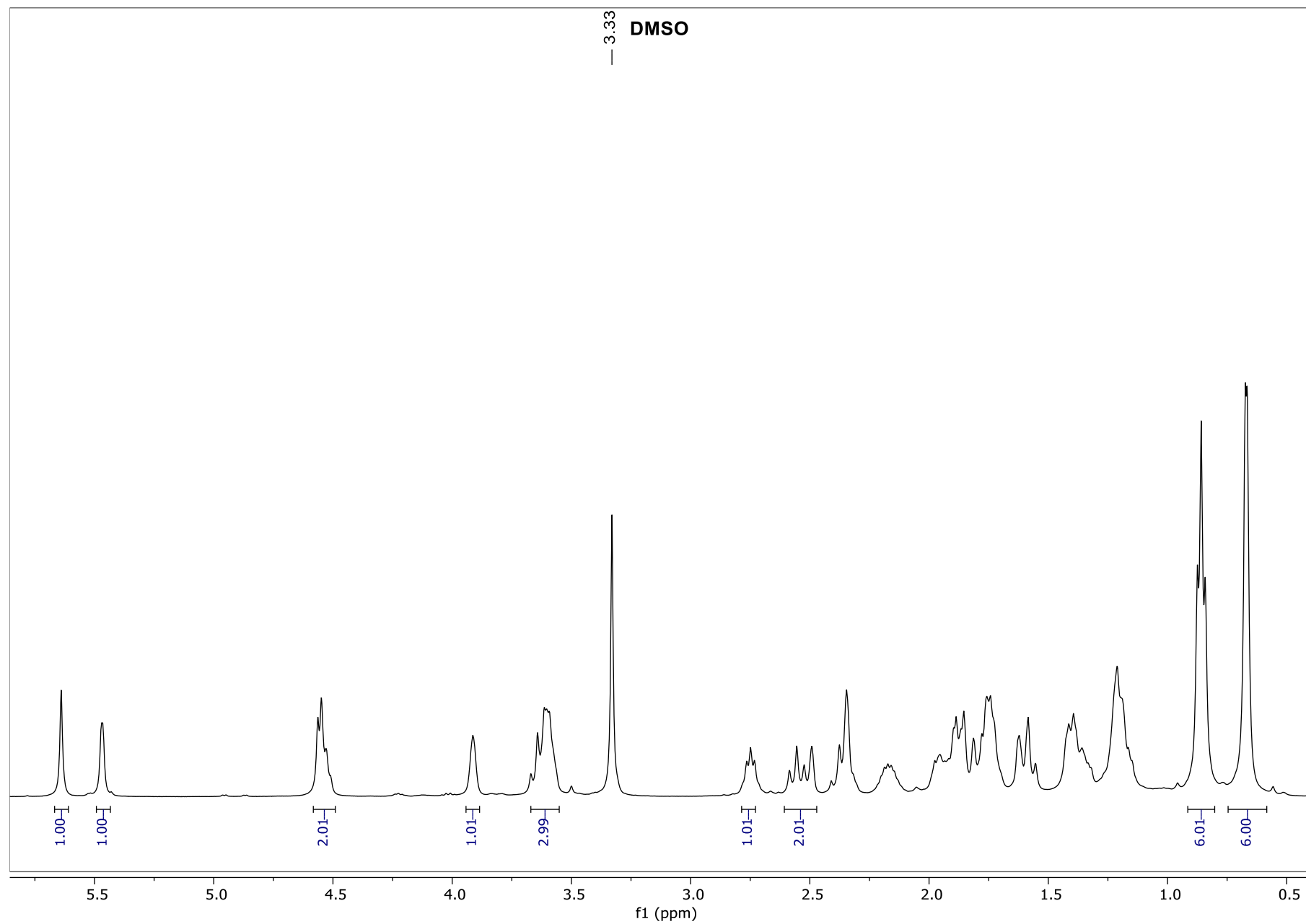
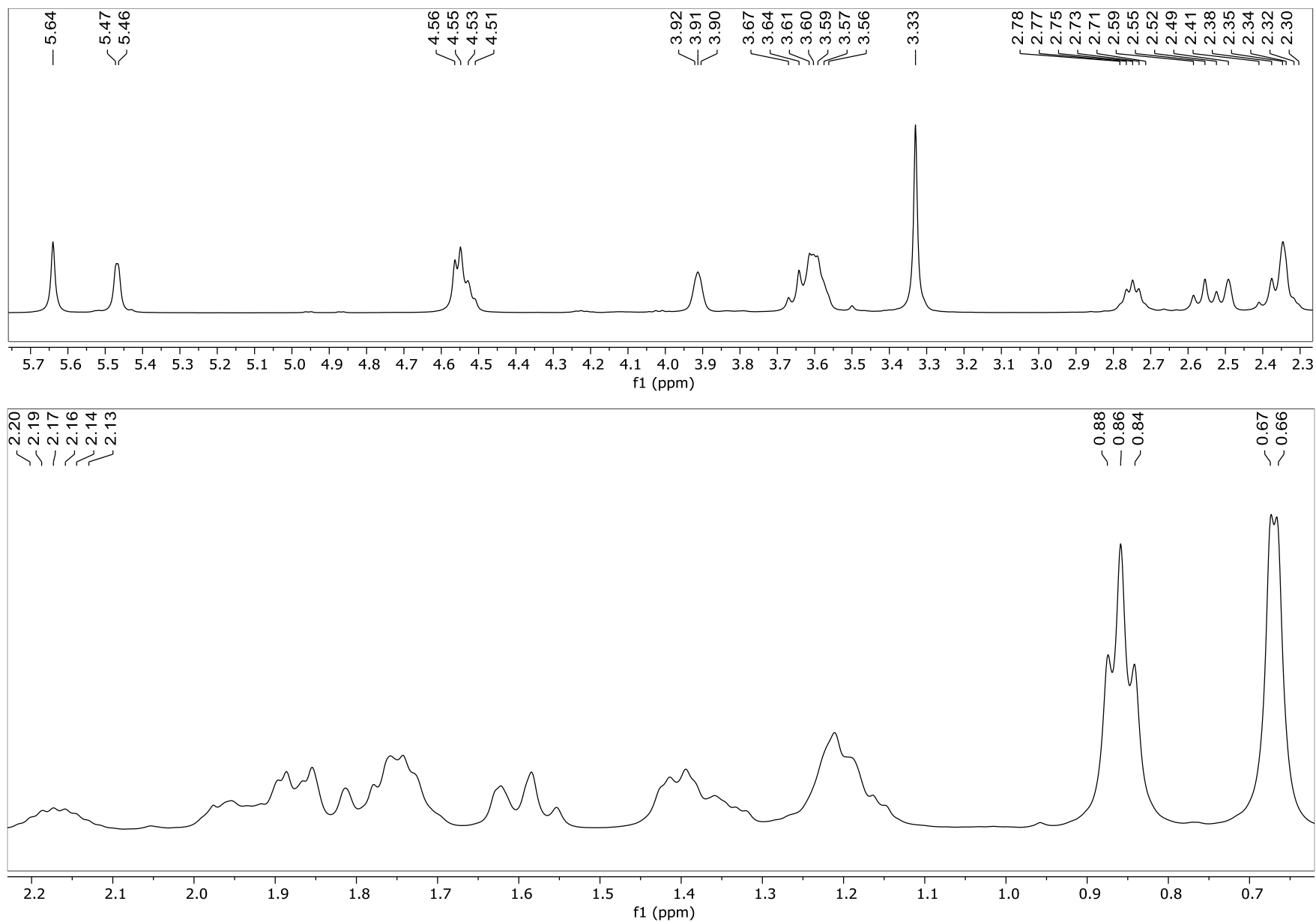


Figure S21. (25*R*)-2 α ,3 α ,5-Trihydroxy-5 α -spirostan-6,23-dione (6)

Figure S22. ¹H NMR spectrum of compound 6

Figure S23. Sections of the ^1H NMR spectrum of compound 6

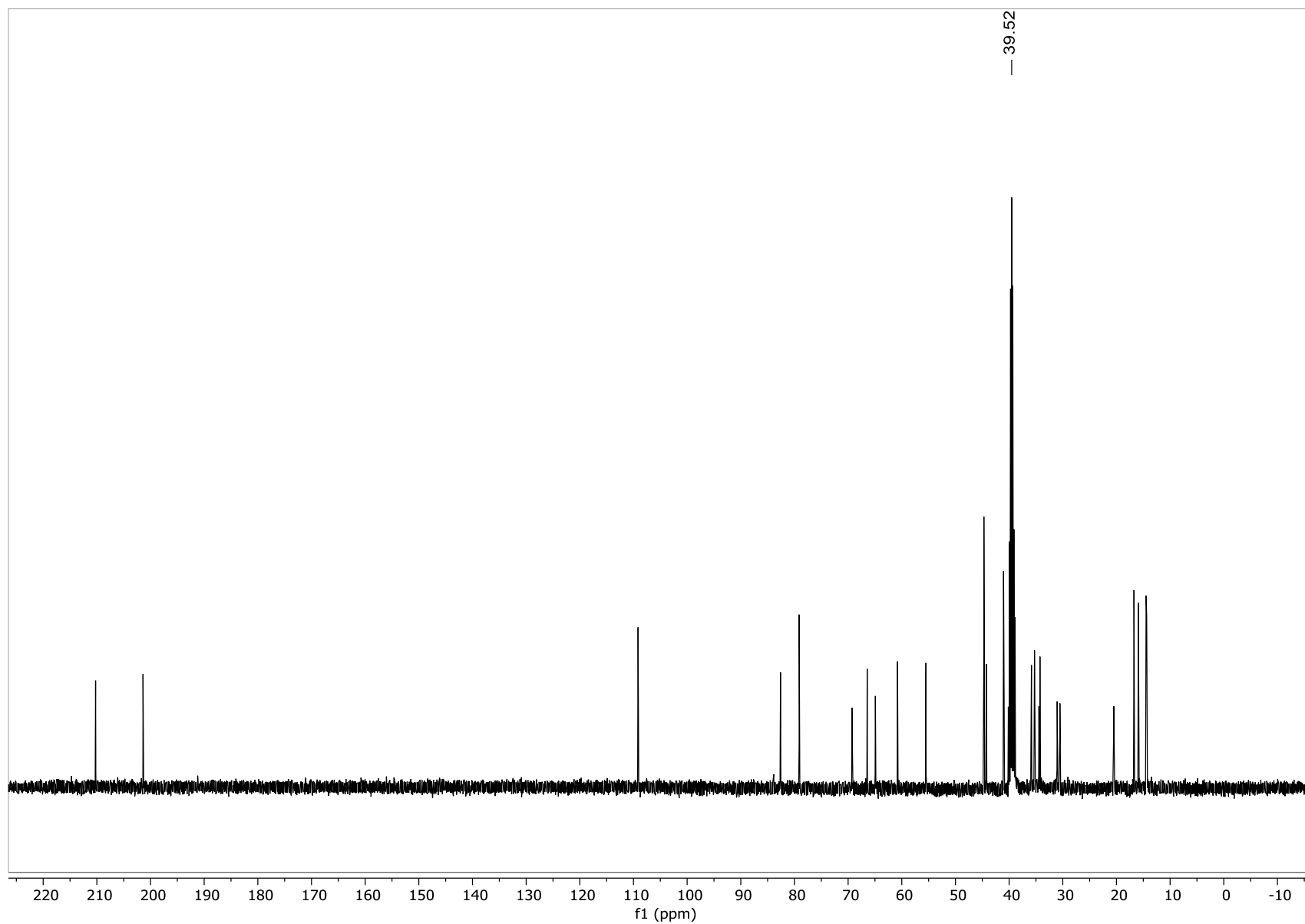
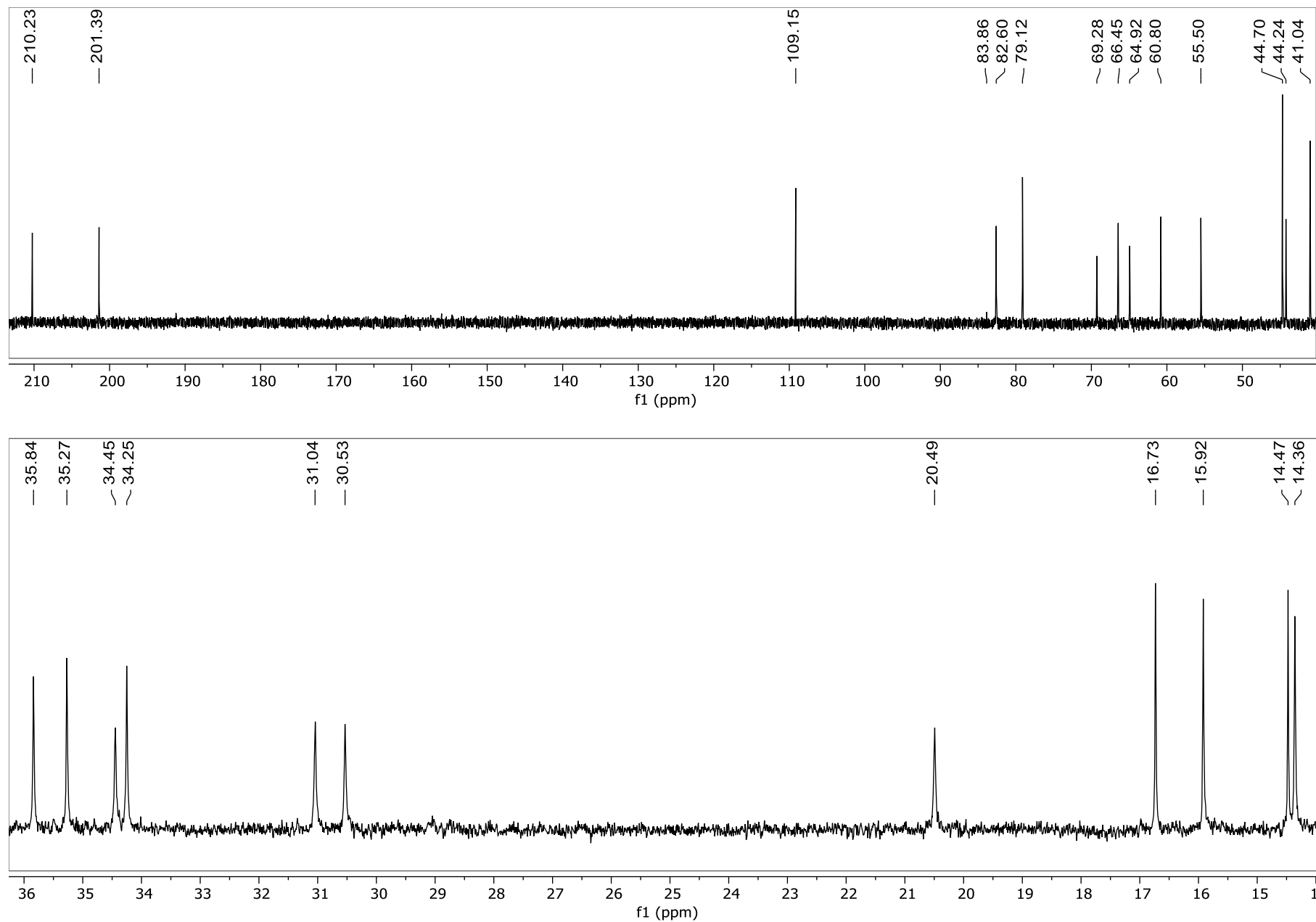


Figure S24. ^{13}C NMR spectrum of compound 6

Figure S25. Sections of the ^{13}C NMR spectrum of compound 6

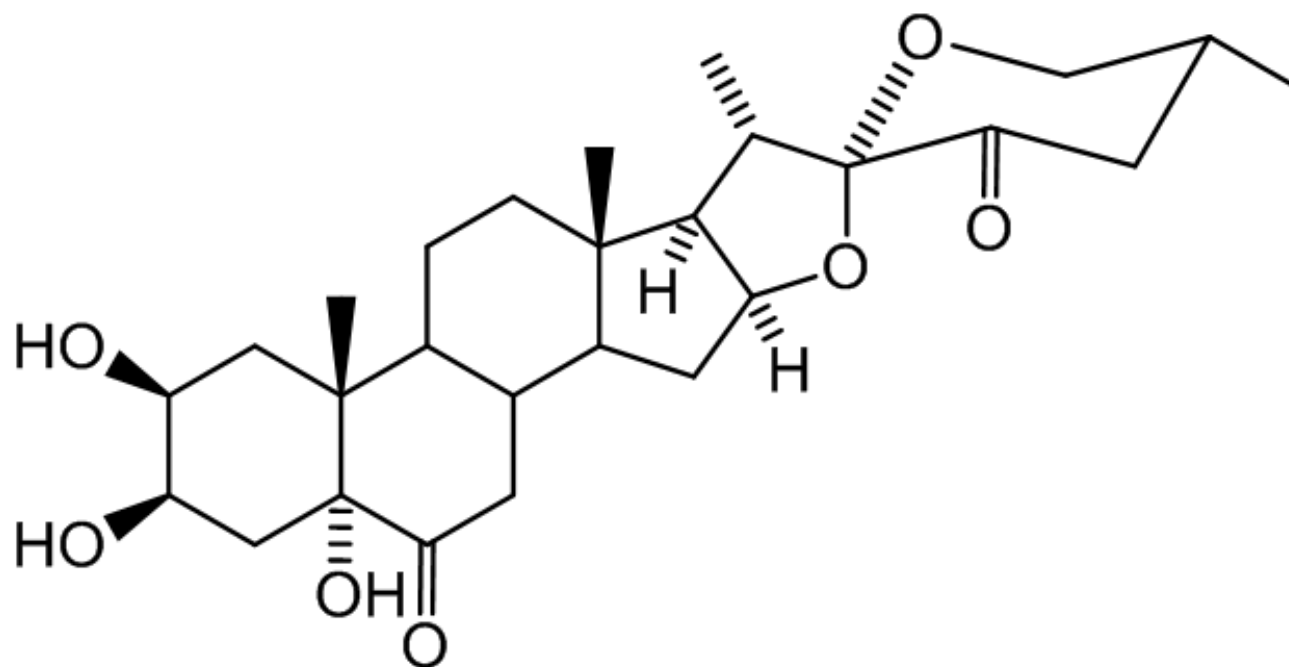
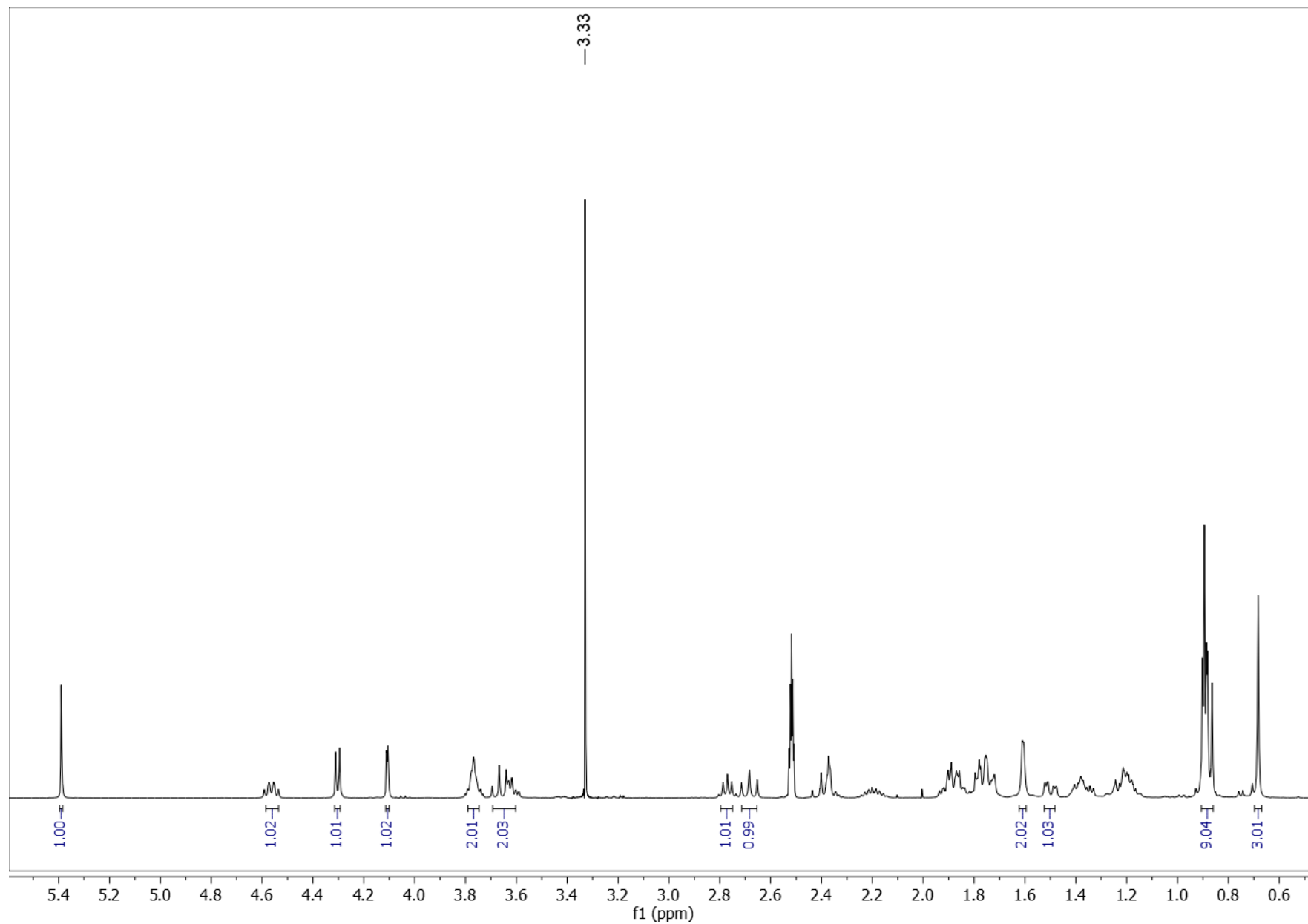
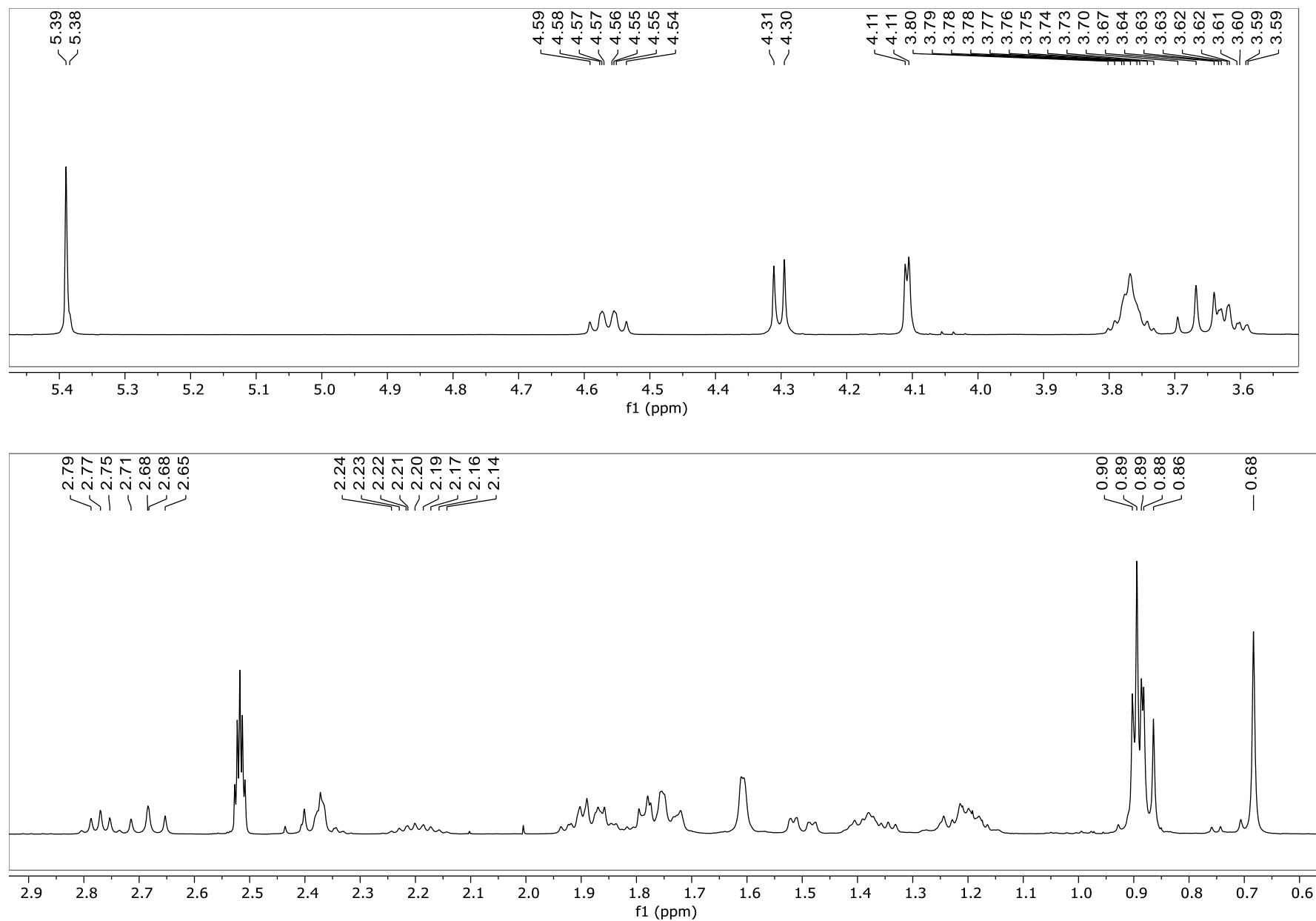
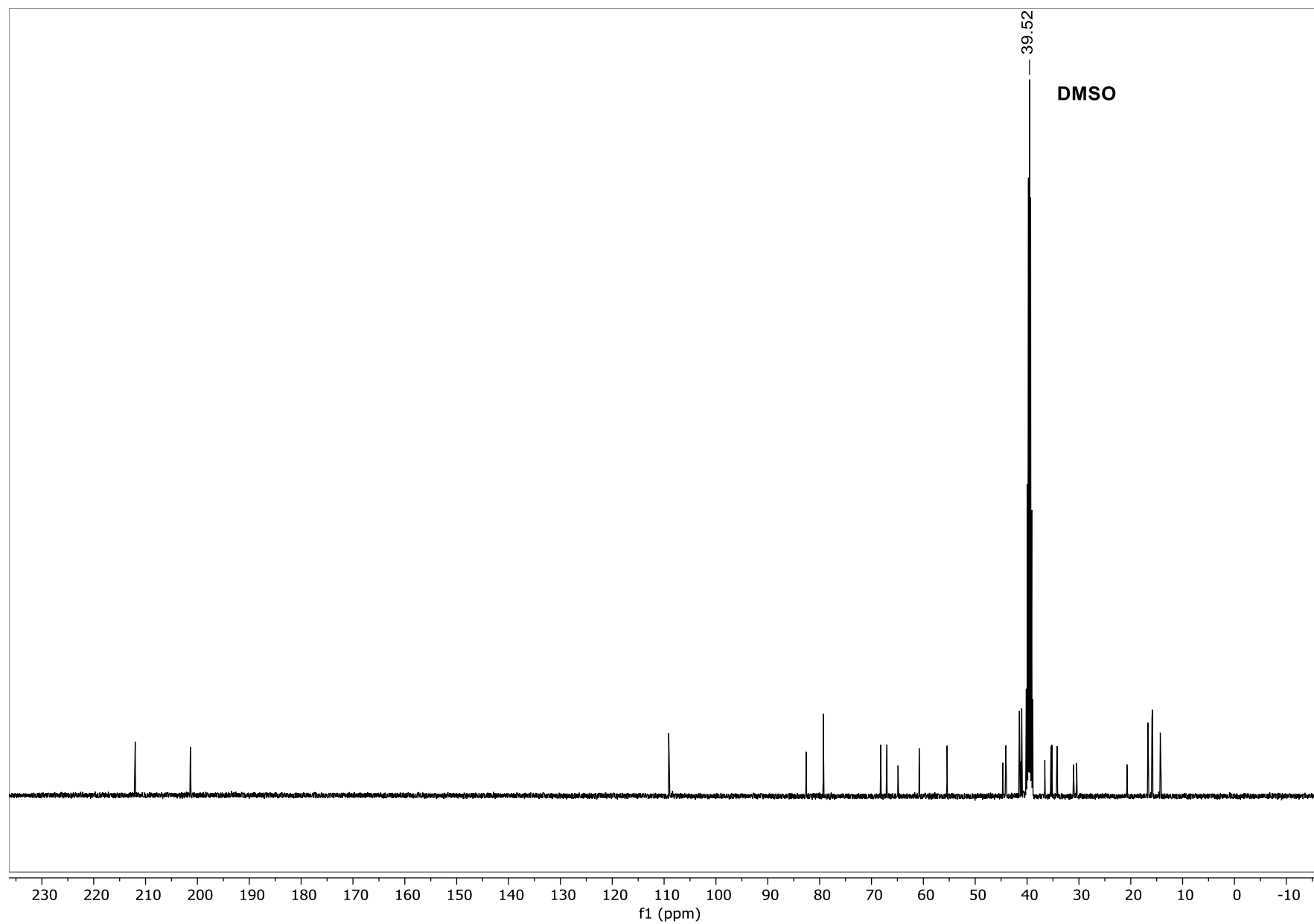
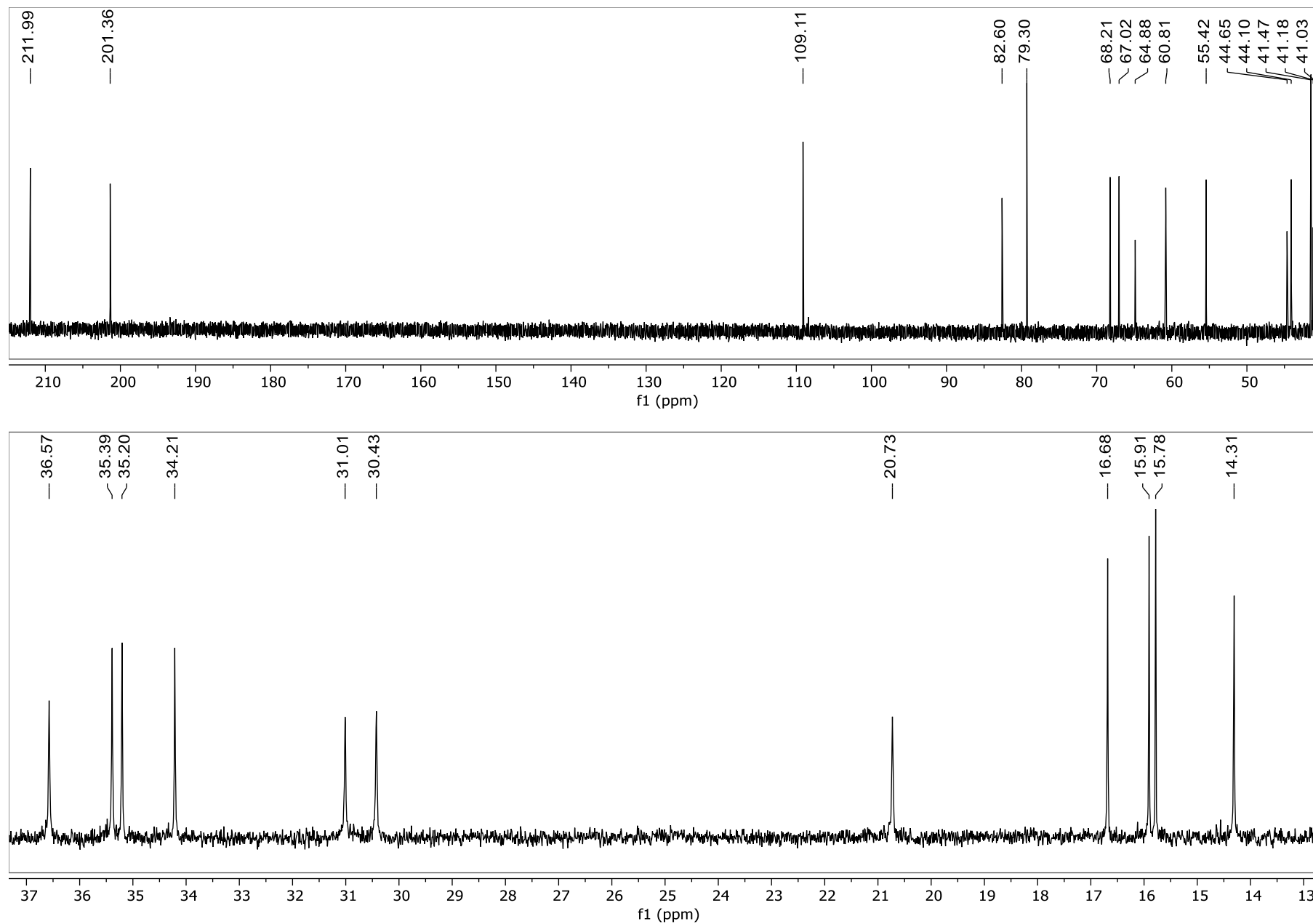


Figure S26. (25*R*)-2β,3β,5-Trihydroxy-5α-spirostan-6,23-dione (7)

Figure S27. ¹H NMR spectrum of compound 7

Figure S28. Sections of the ^1H NMR spectrum of compound 7

Figure S29. ^{13}C NMR spectrum of compound 7

Figure S30. Sections of the ^{13}C NMR spectrum of compound 7