

Synthesis of Novel Heterocyclic Structures *via* Reaction of Isocyanides with *S-trans*-enones

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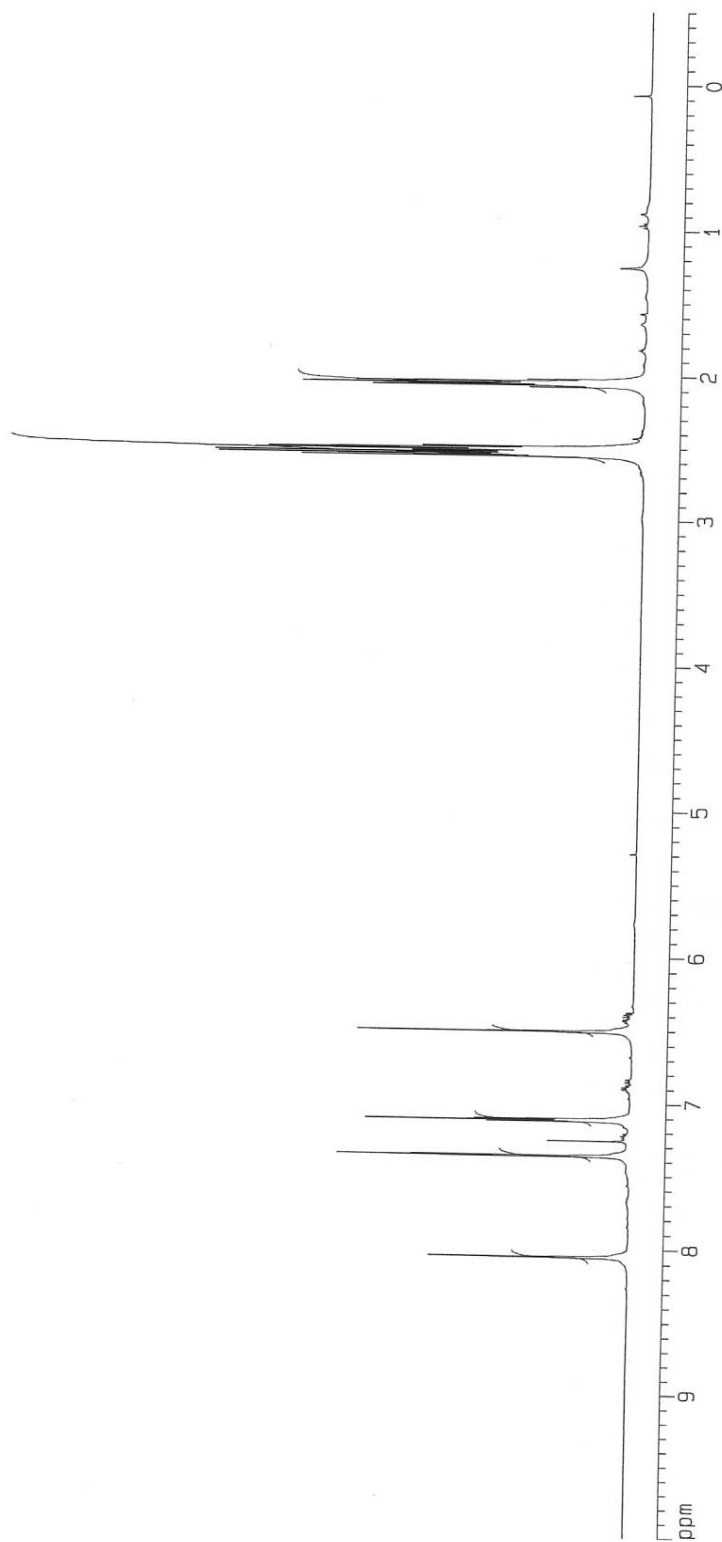
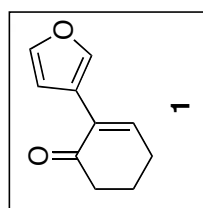


Figure 1: ^1H NMR Spectrum of Compound 1

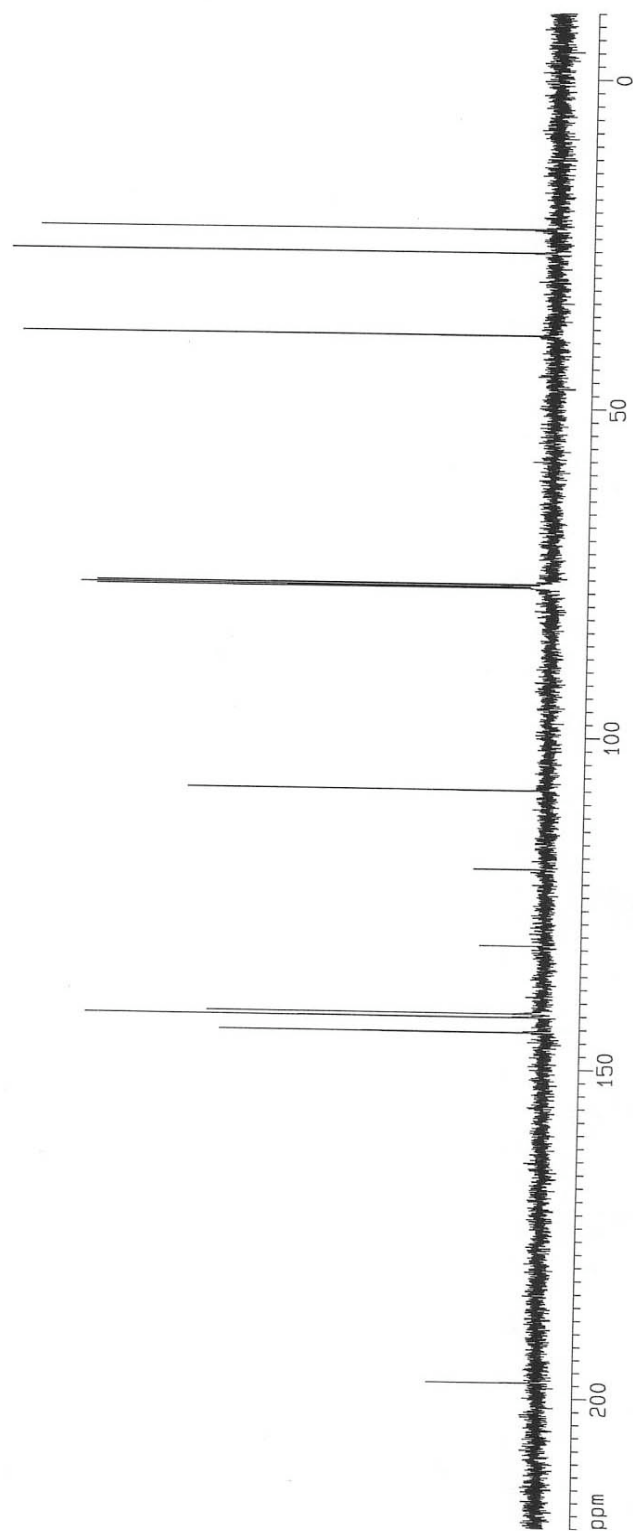


Figure 2: ^{13}C NMR Spectrum of Compound 1

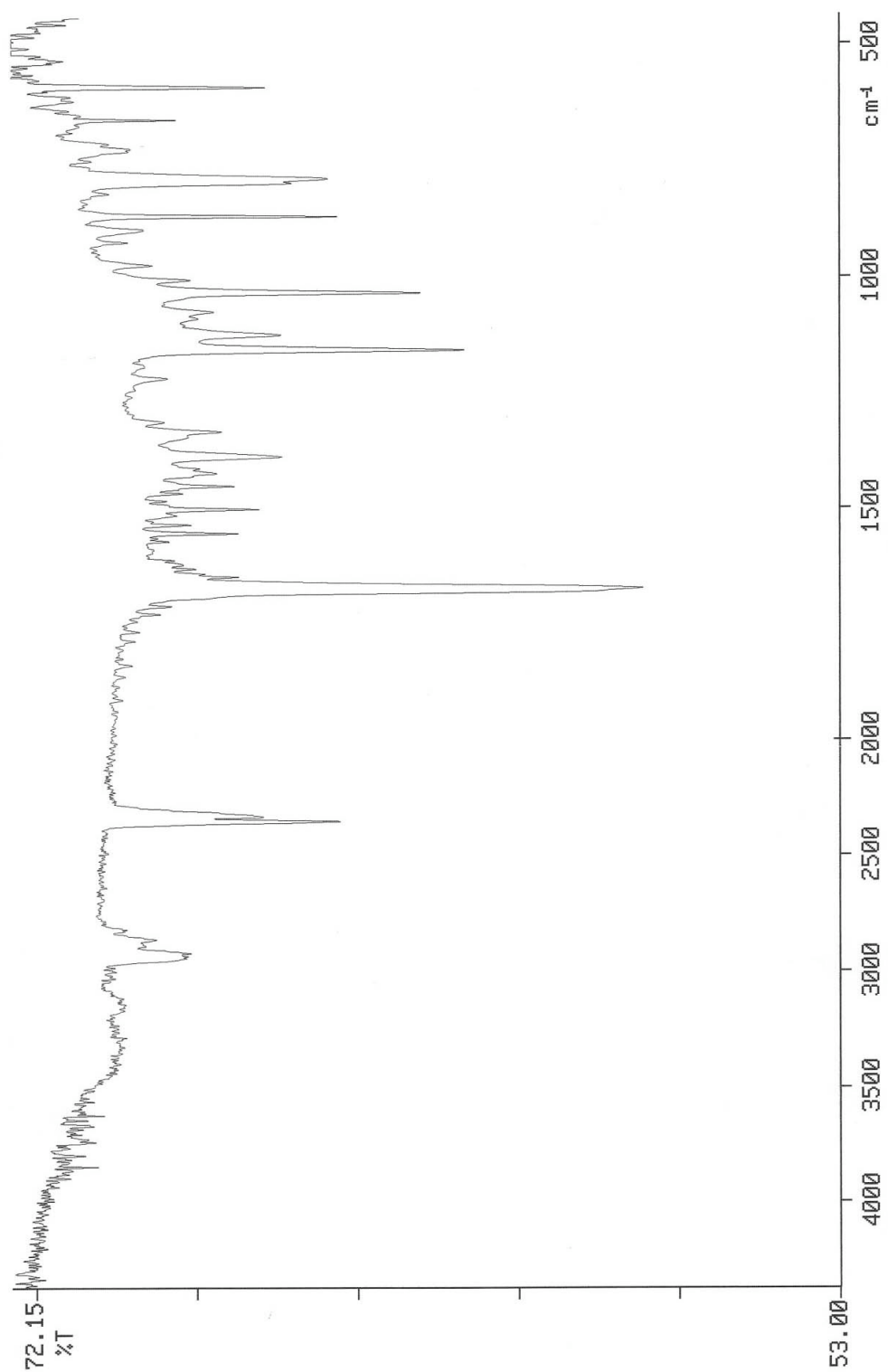


Figure 3: FTIR Spectrum of Compound 1

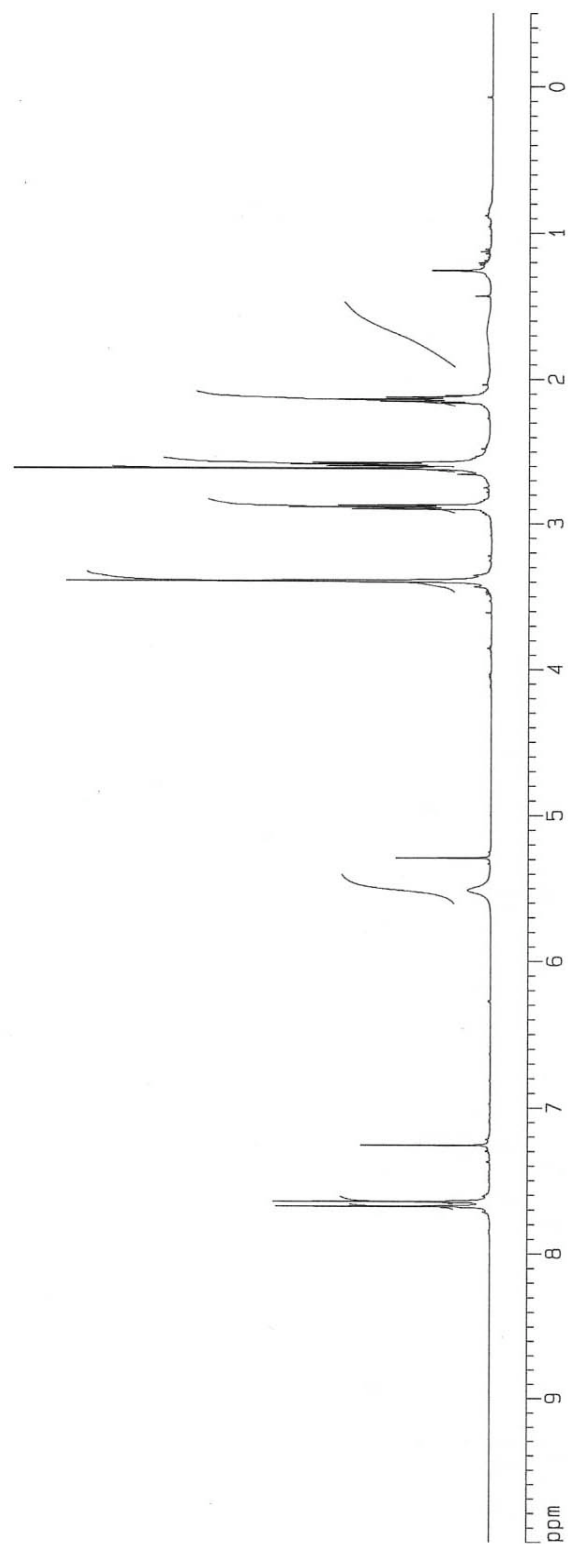
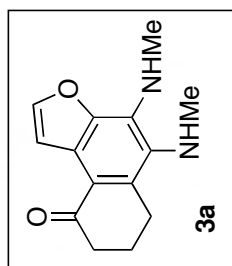


Figure 4: ^1H NMR Spectrum of Compound 3a

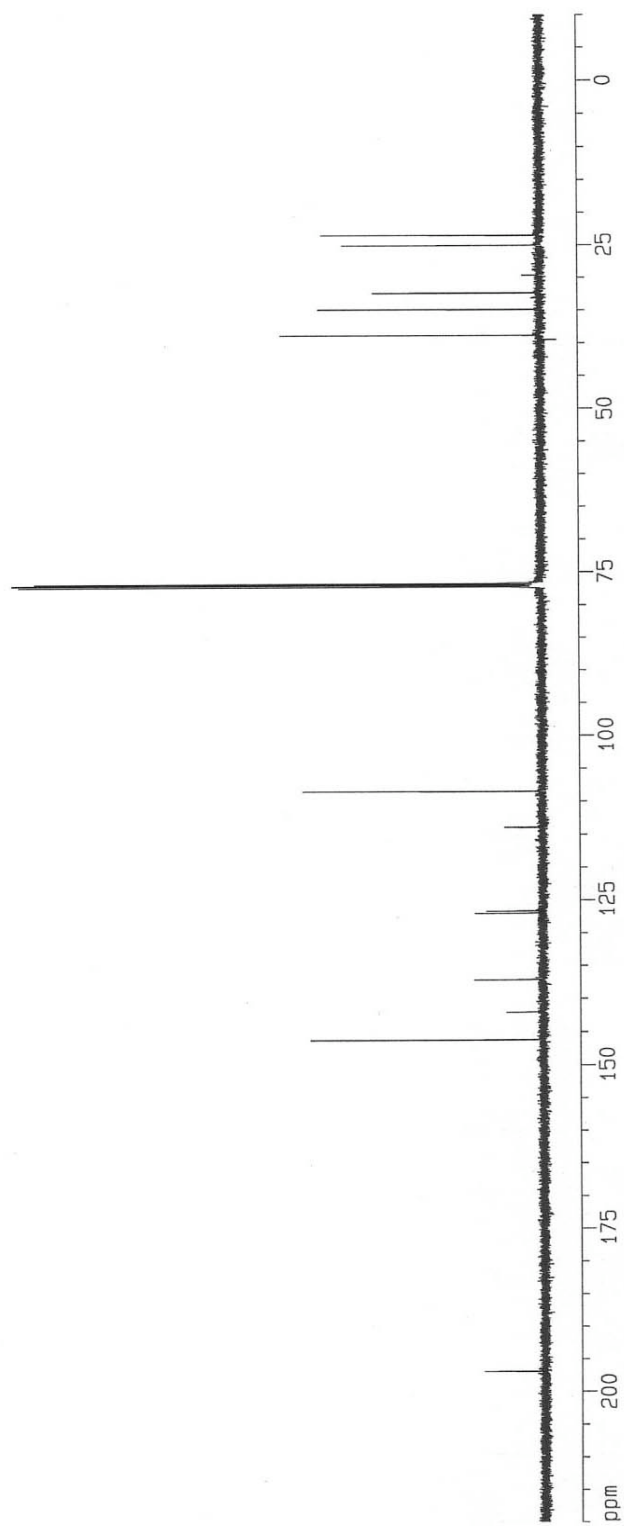


Figure 5: ^{13}C NMR Spectrum of Compound 3a

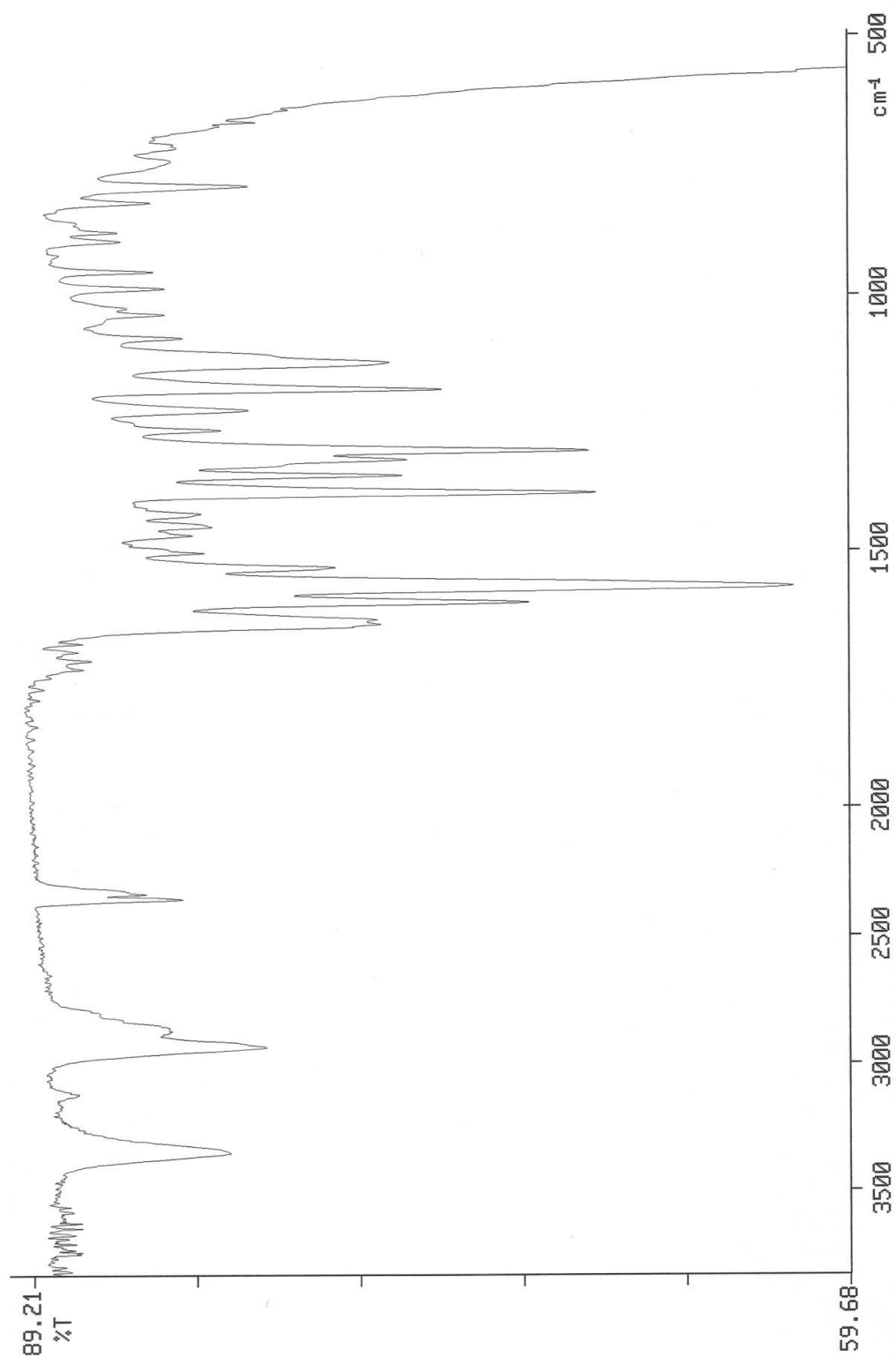


Figure 6: FTIR Spectrum of Compound 3a

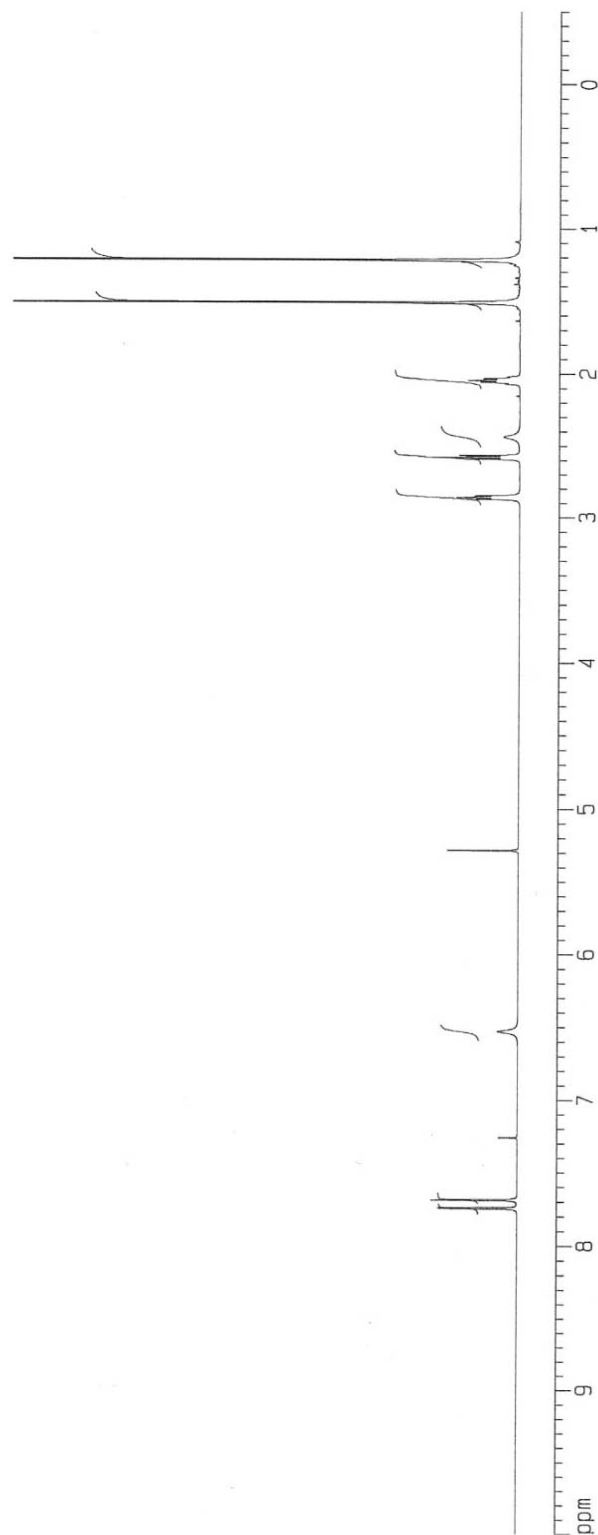
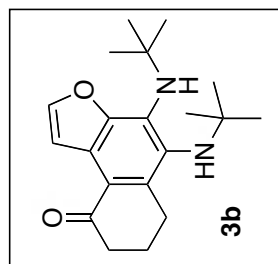


Figure 7: ^1H NMR Spectrum of Compound 3b

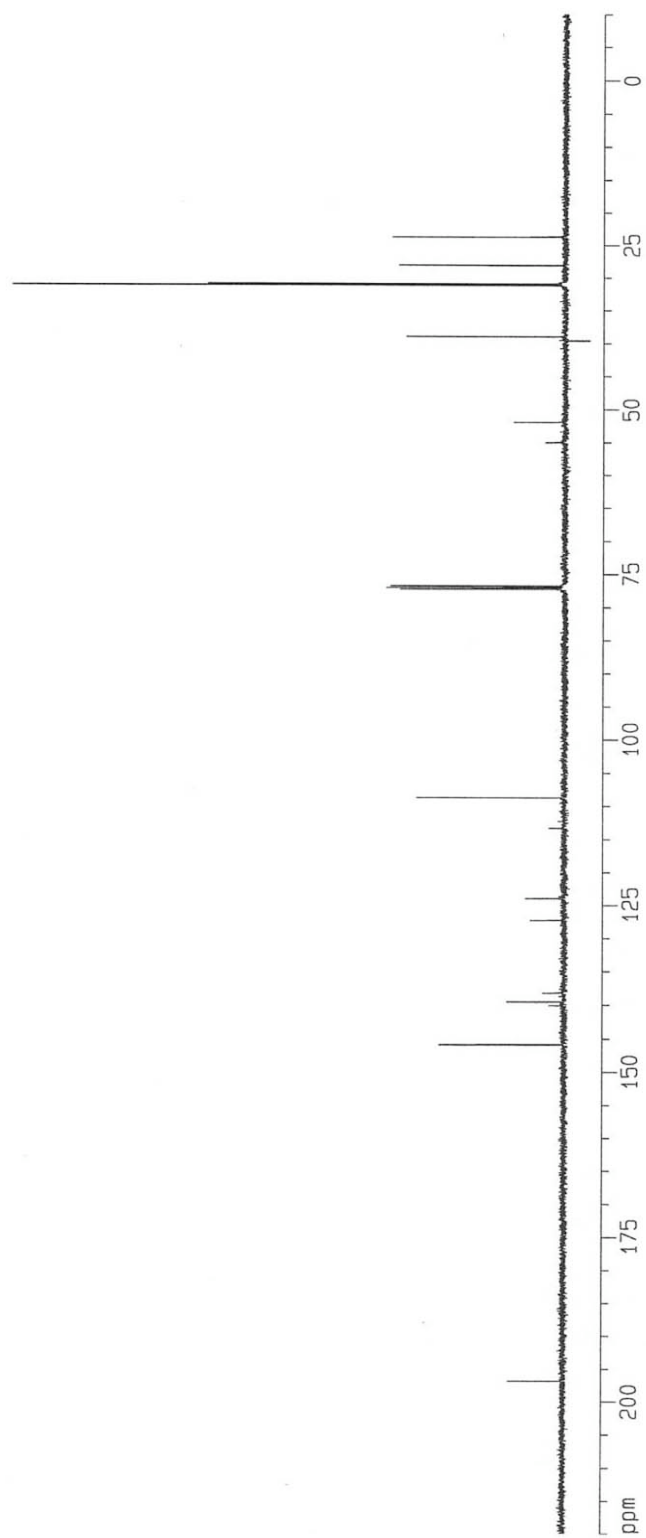


Figure 8: ^{13}C NMR Spectrum of Compound 3b

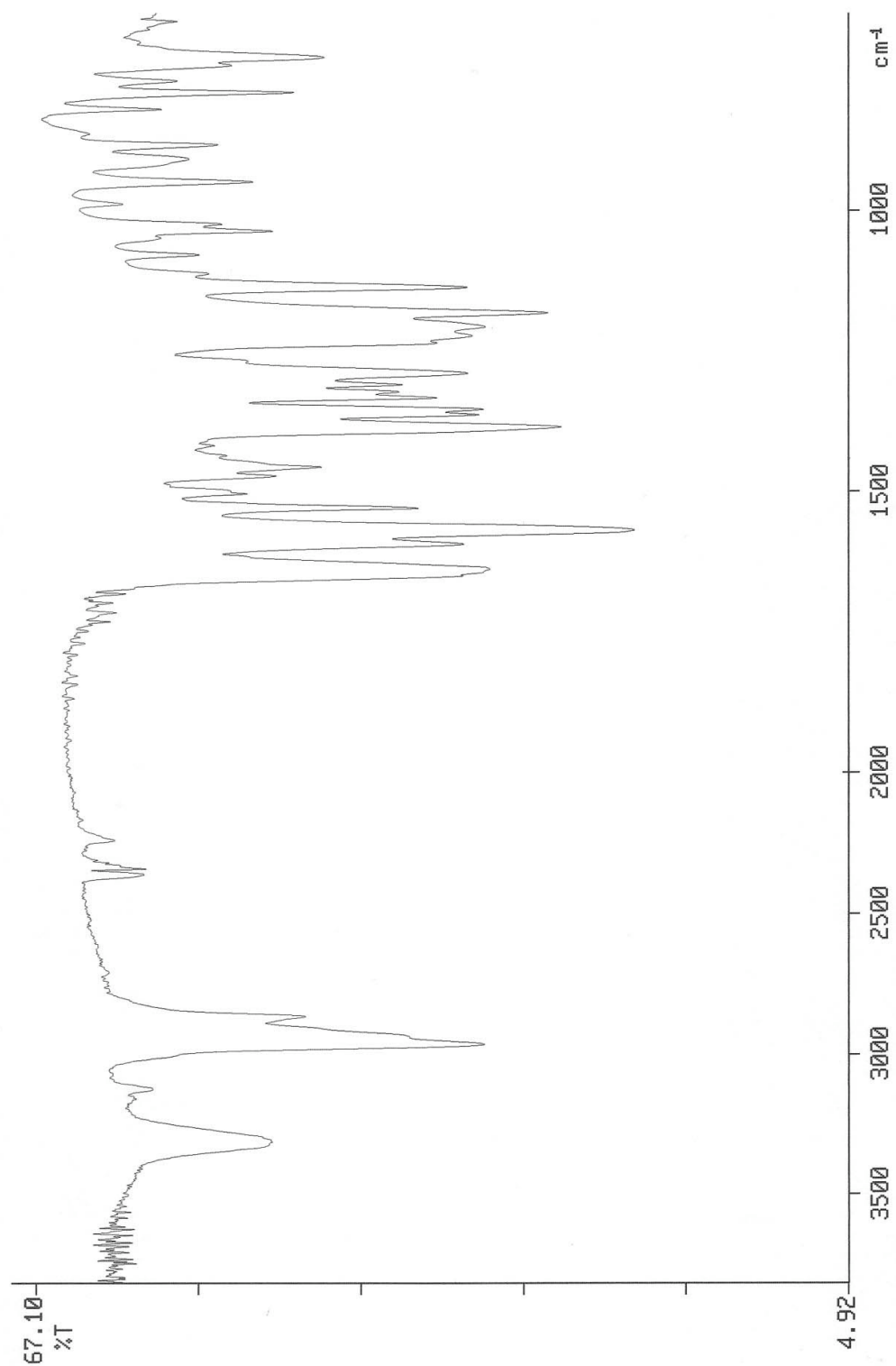


Figure 9: FTIR Spectrum of Compound 3b

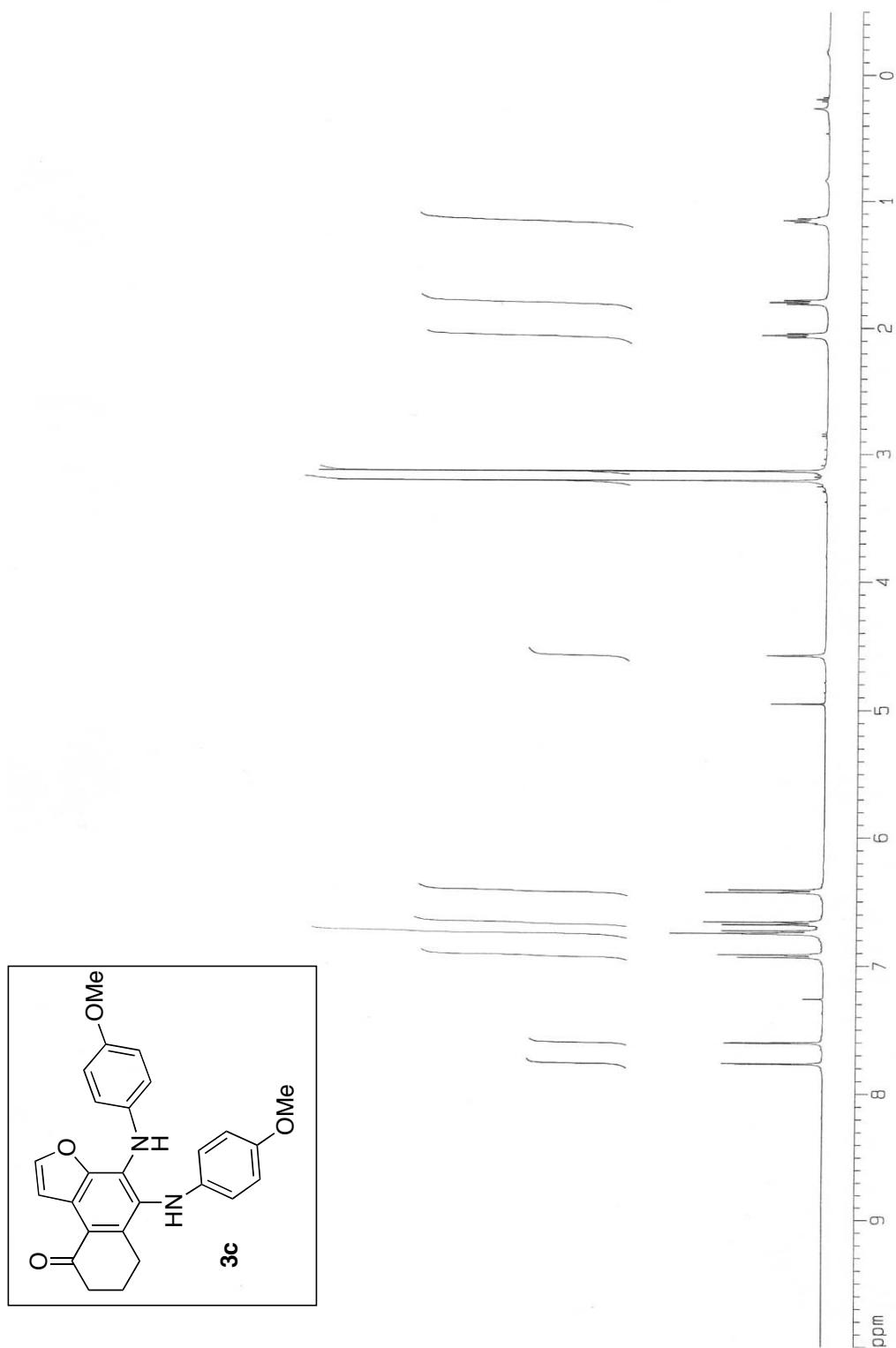


Figure 10: ^1H NMR Spectrum of Compound 3c

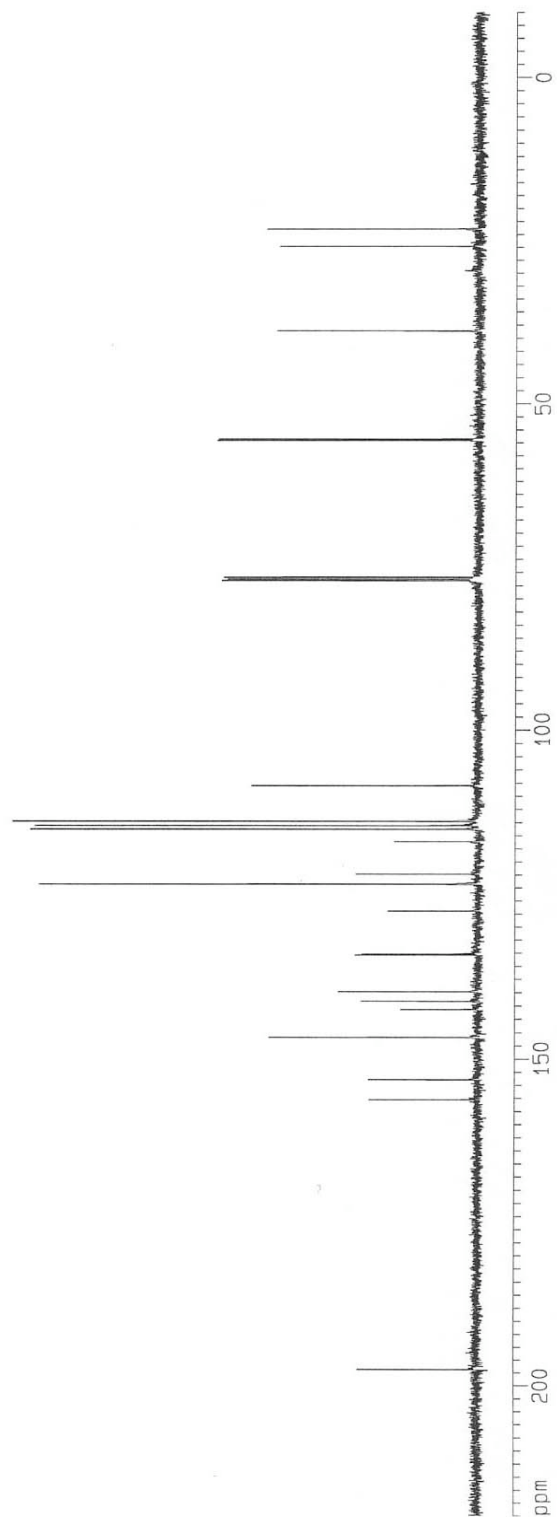


Figure 11: ^{13}C NMR Spectrum of Compound 3c

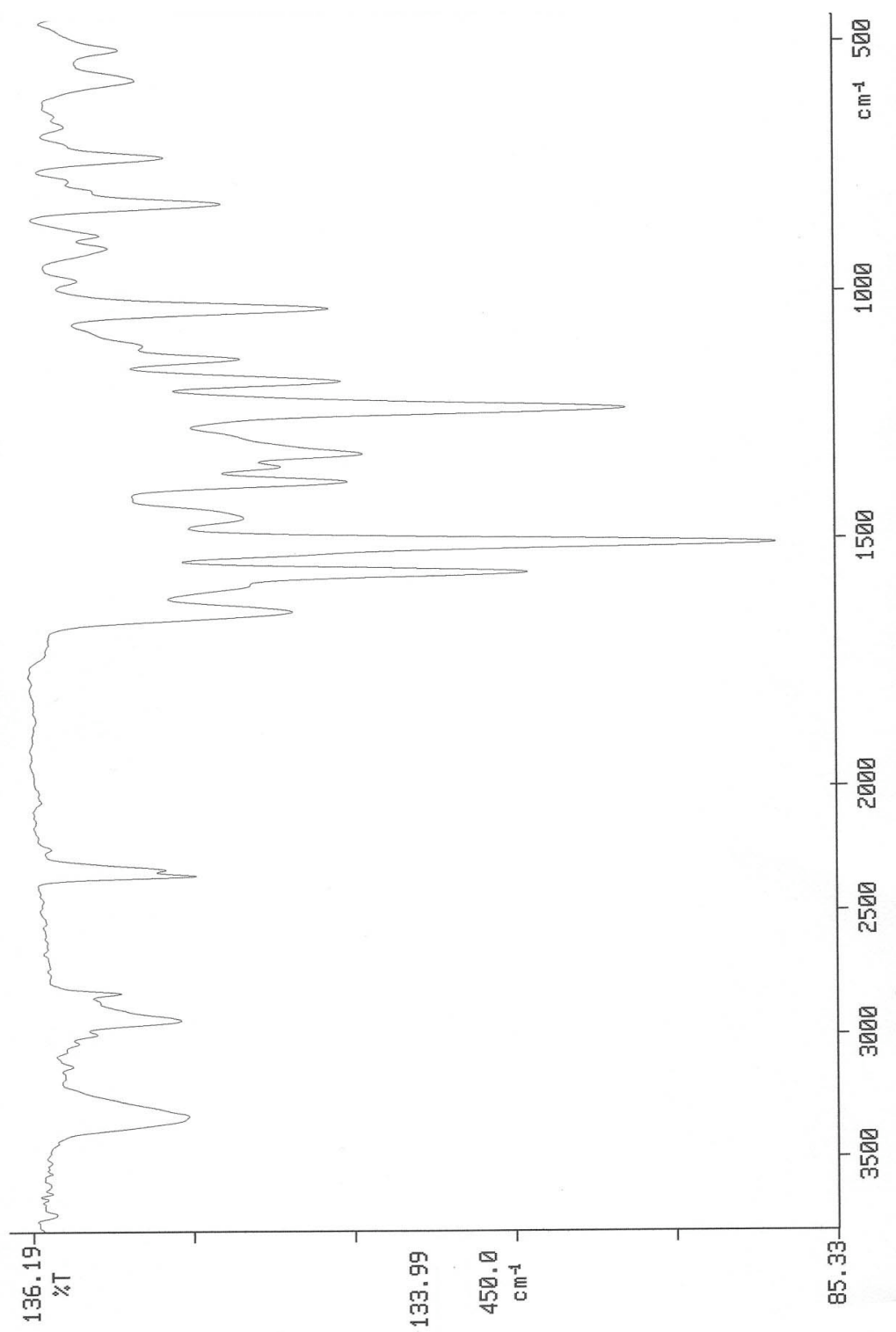


Figure 12: FTIR Spectrum of Compound 3c

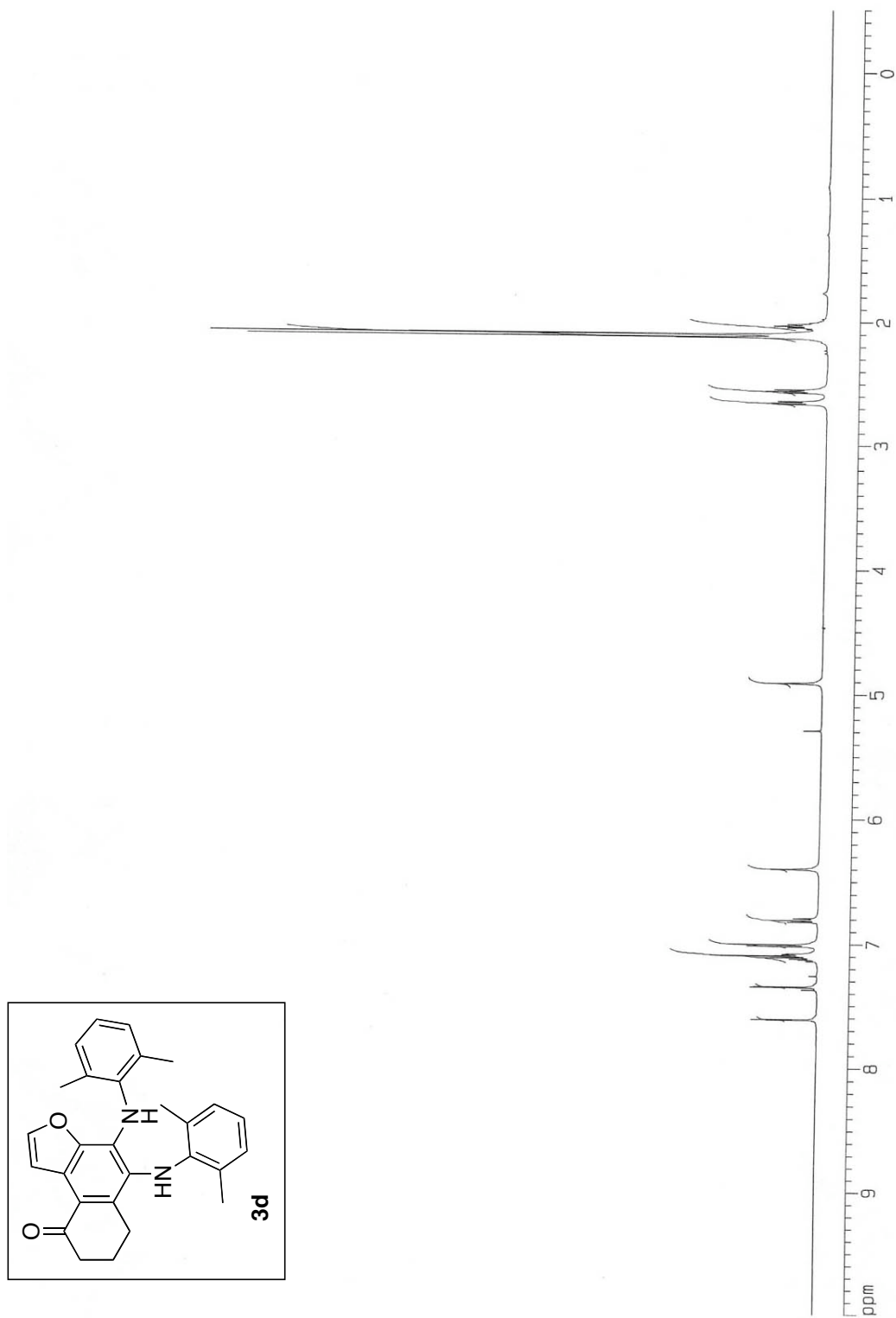


Figure 13: ^1H NMR Spectrum of Compound 3d

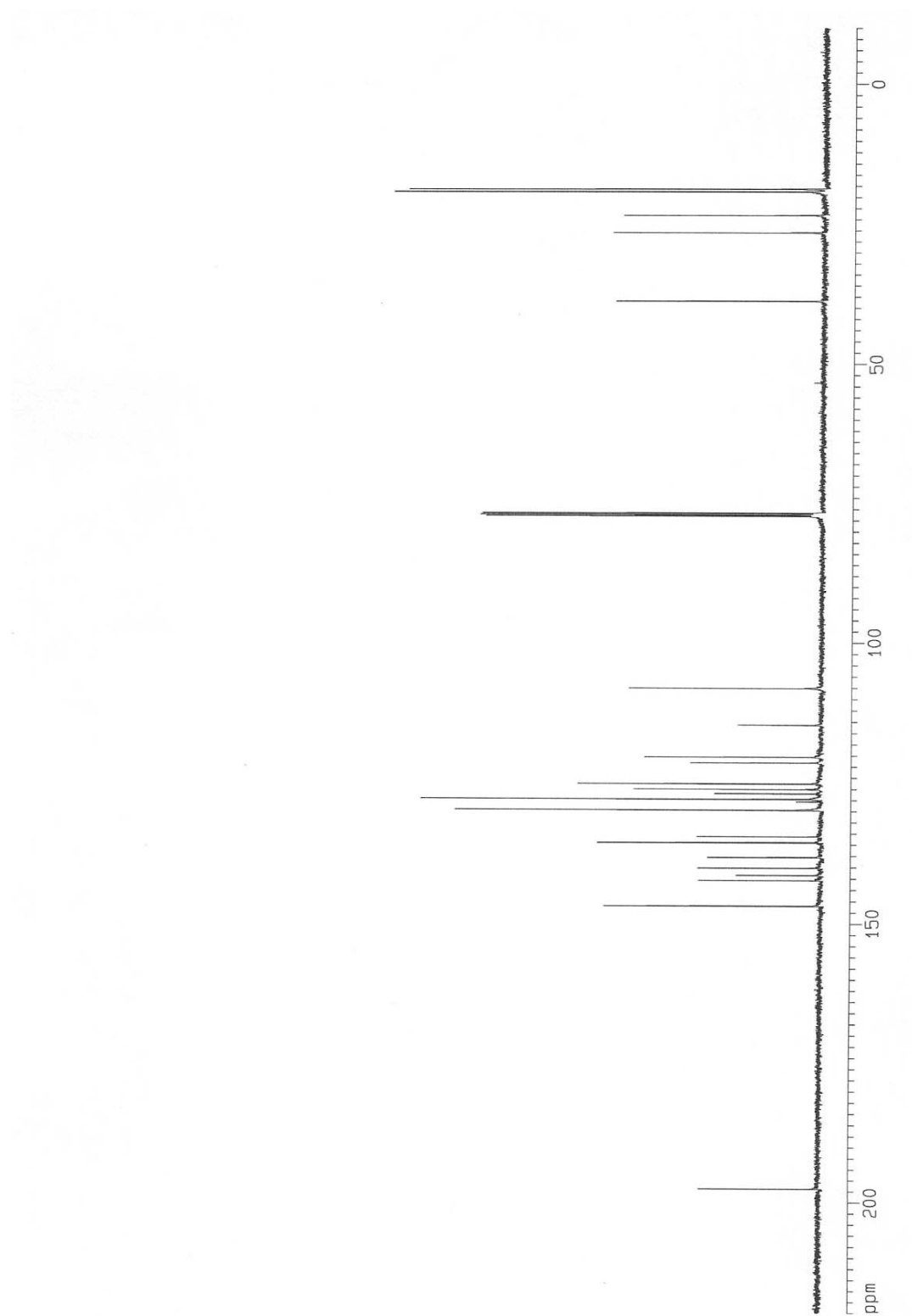


Figure 14: ^{13}C NMR Spectrum of Compound 3d

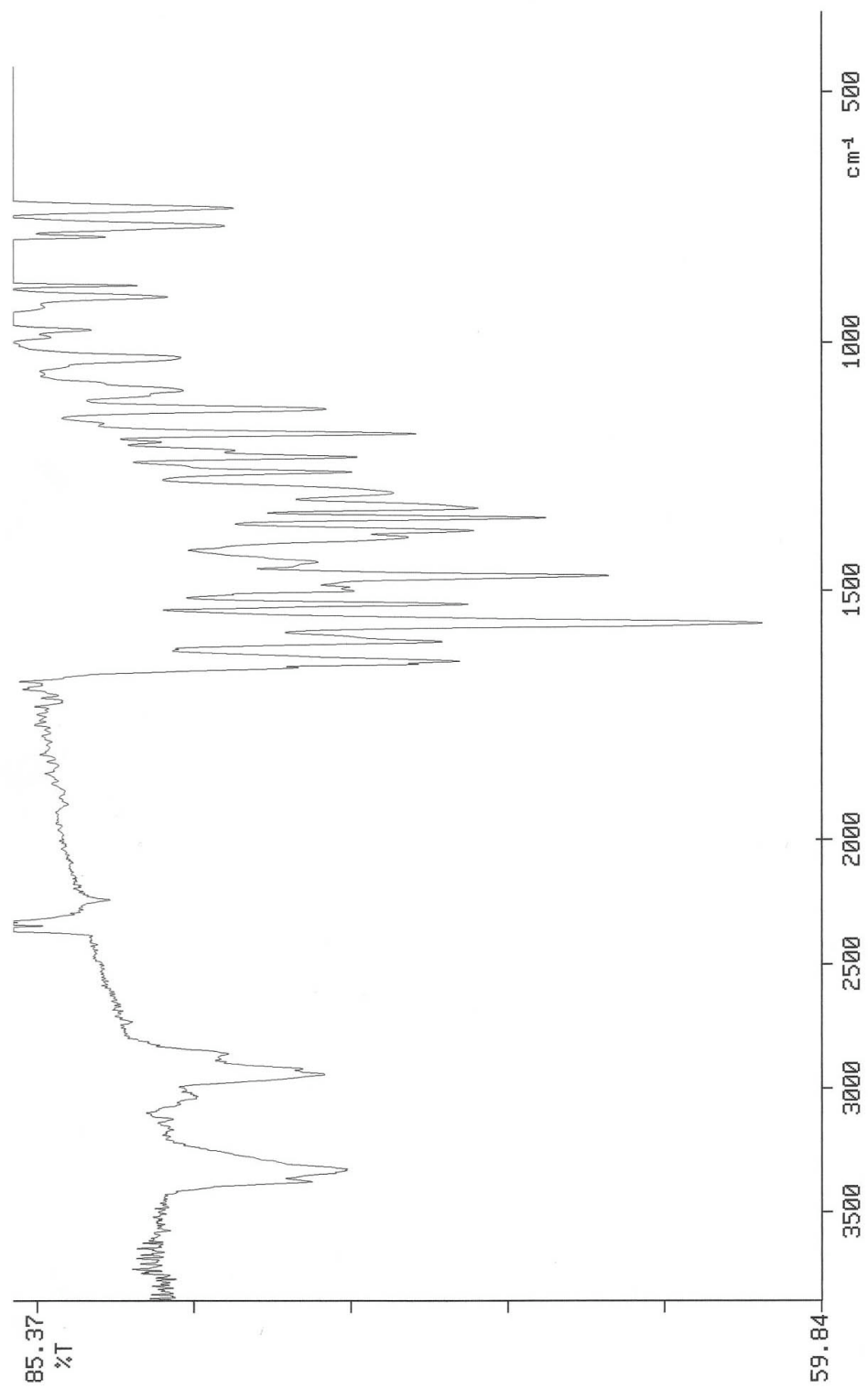


Figure 15: FTIR Spectrum of Compound 3d

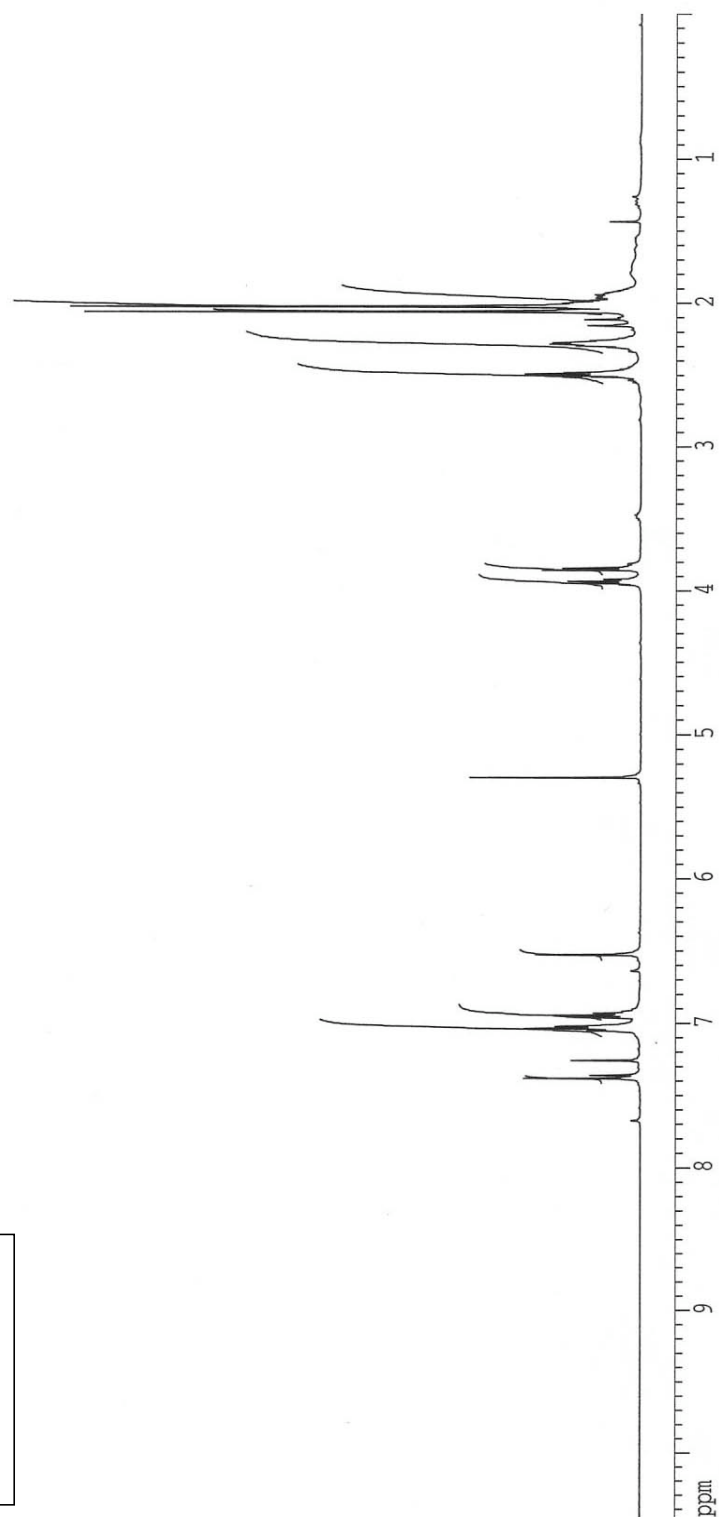
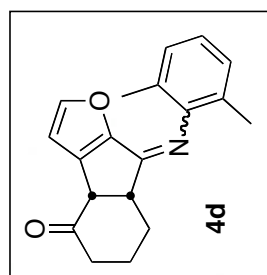


Figure 16: ^1H NMR Spectrum of Compound 4d

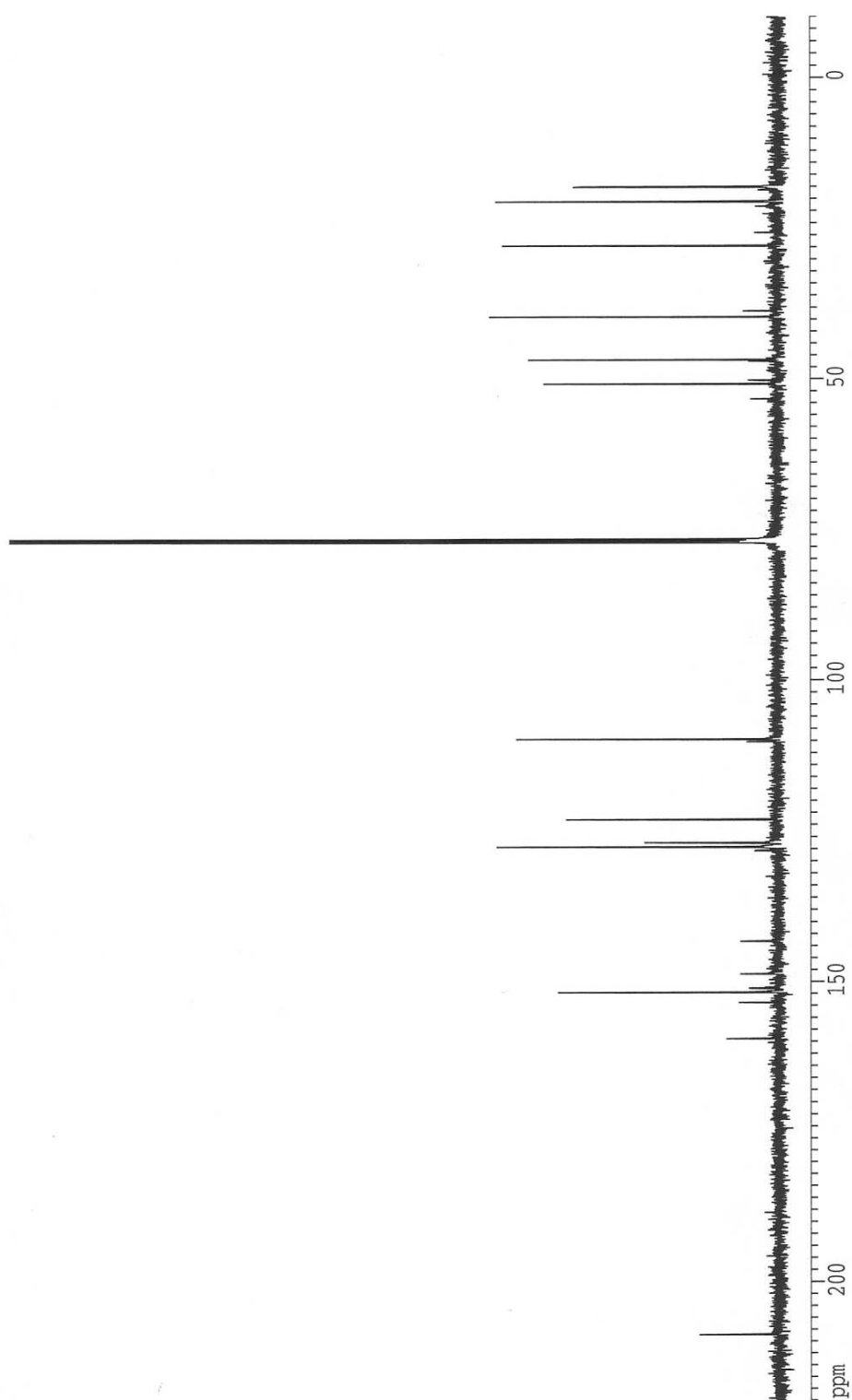


Figure 17: ^{13}C NMR Spectrum of Compound 4d

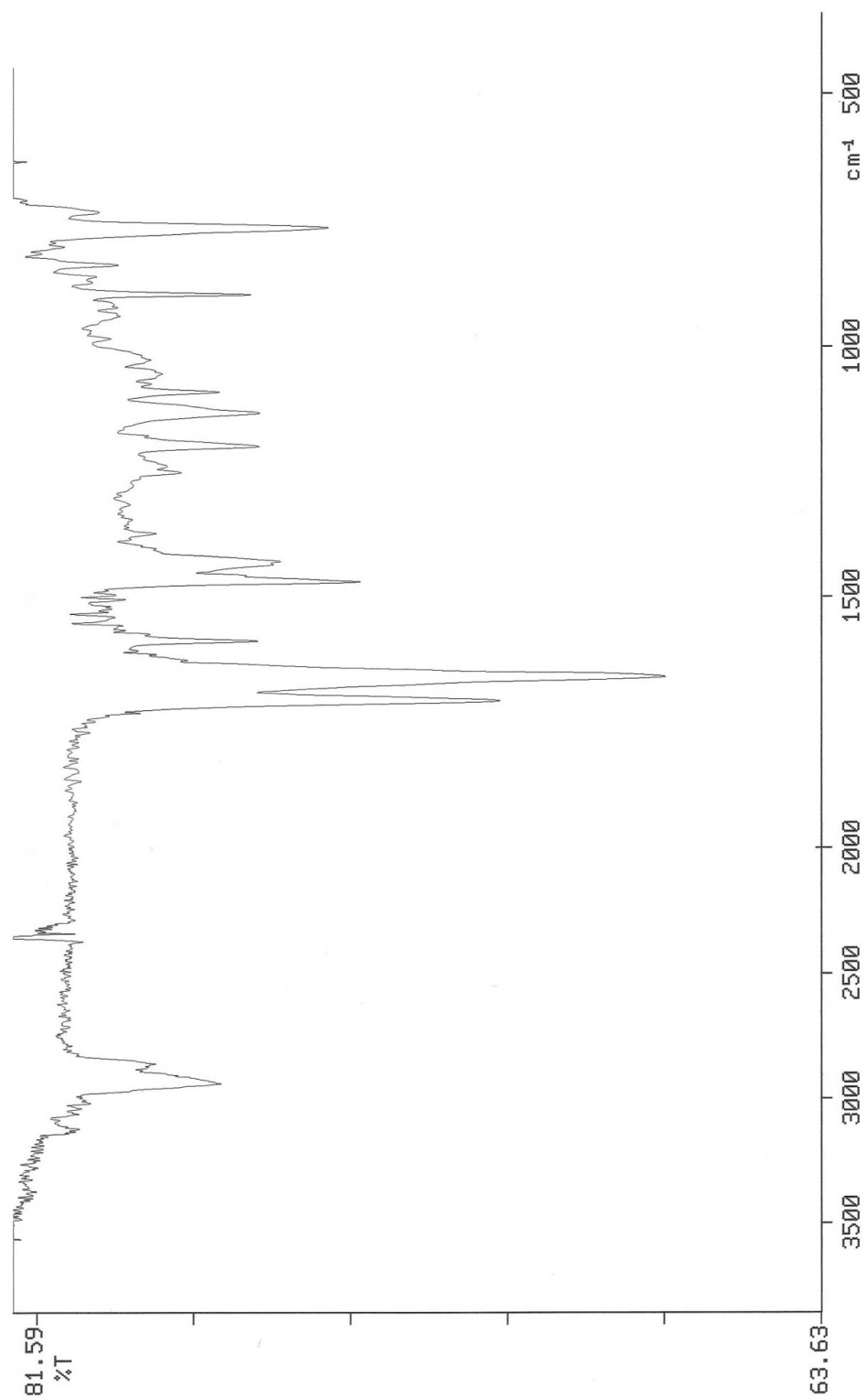


Figure 18: FTIR Spectrum of Compound 4d

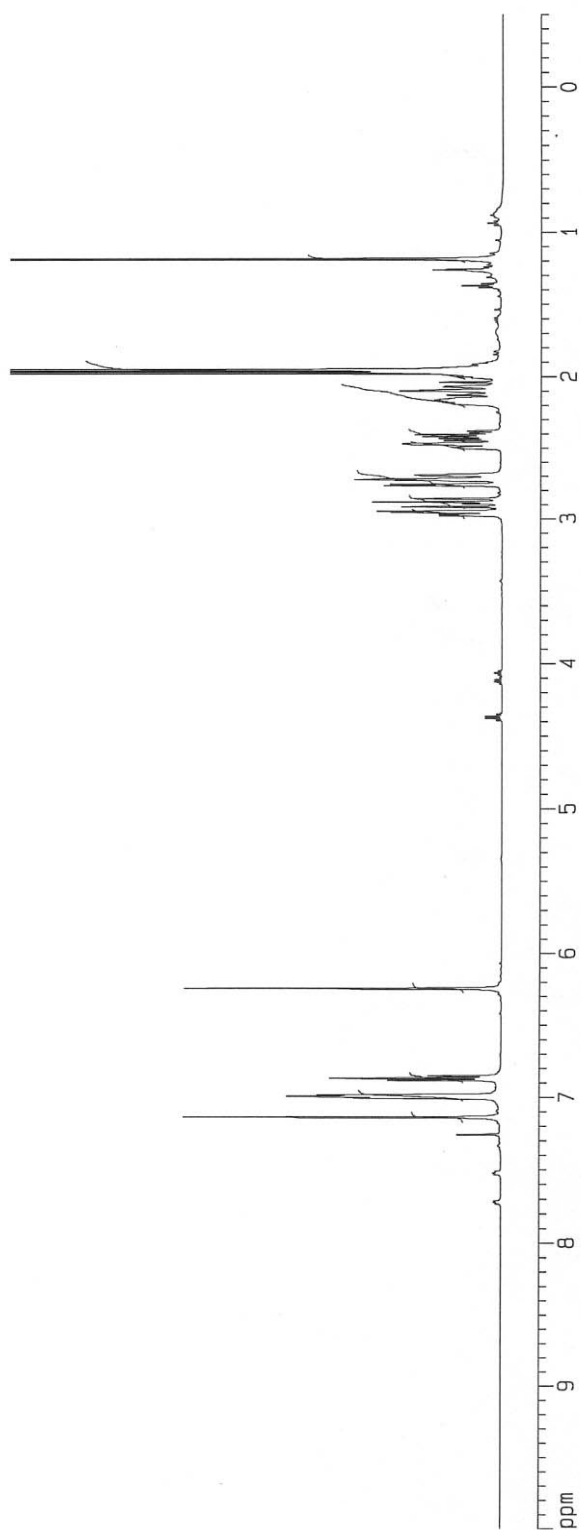
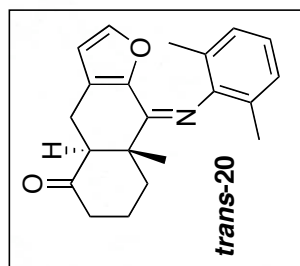


Figure 19: ^1H NMR Spectrum of Compound *trans*-20

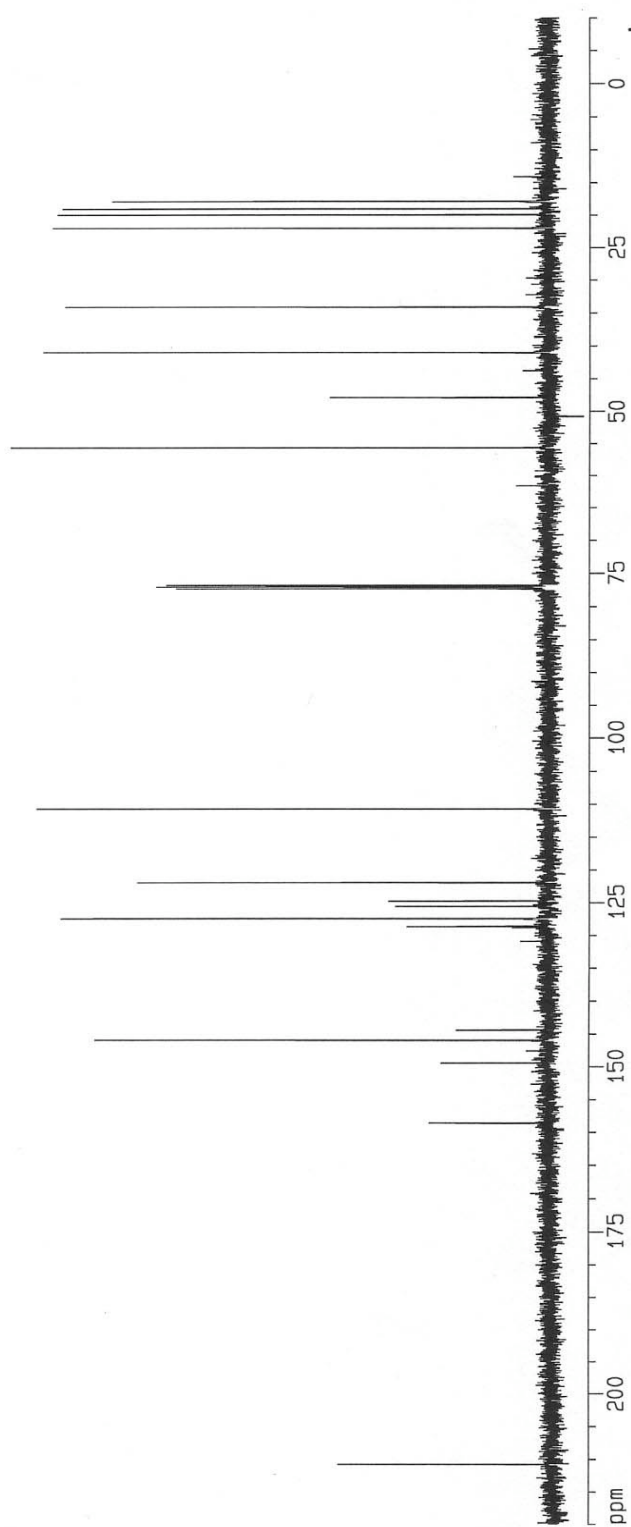


Figure 20: ^{13}C NMR Spectrum of Compound *trans*-20

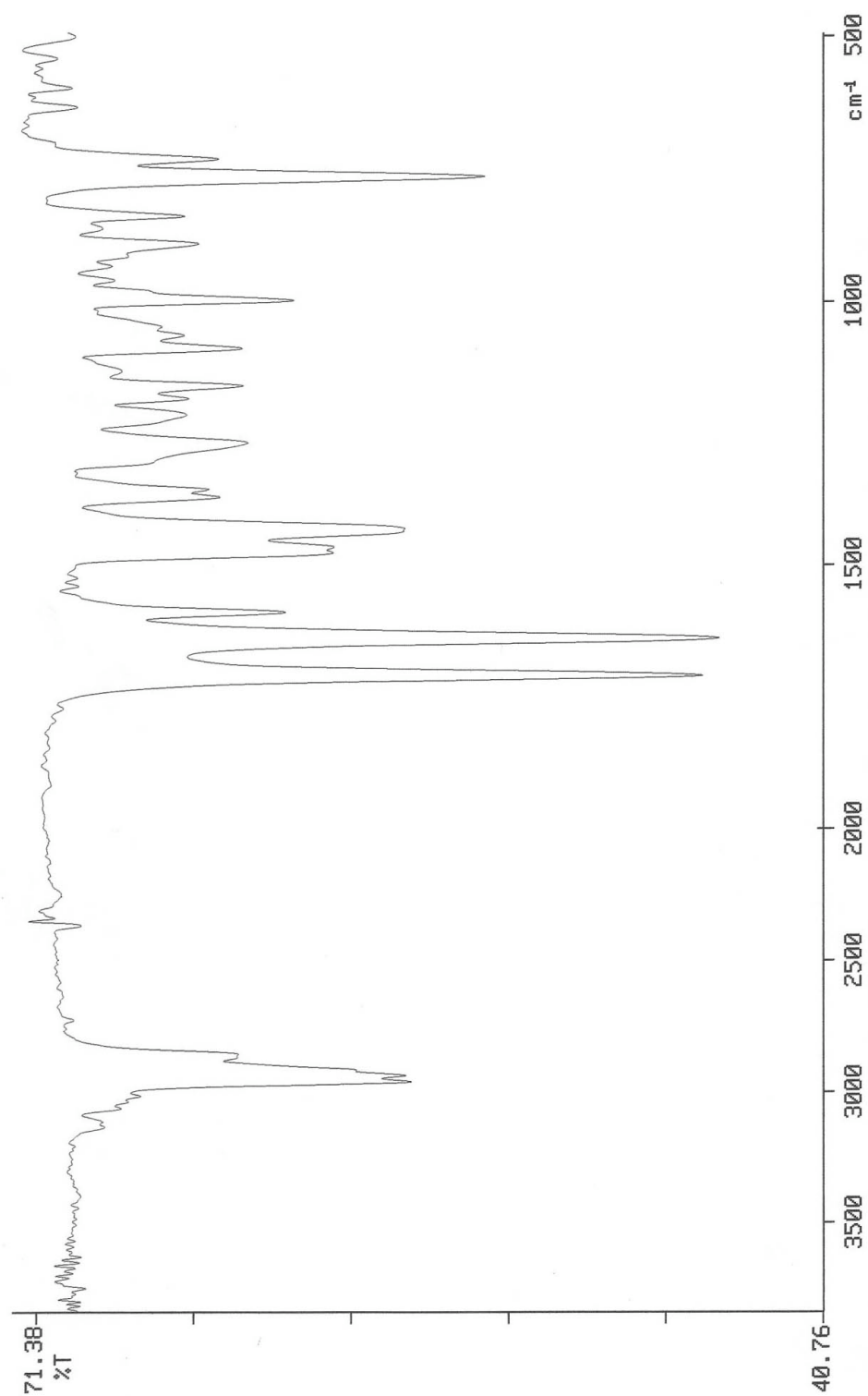


Figure 21: FTIR Spectrum of Compound *trans*-20

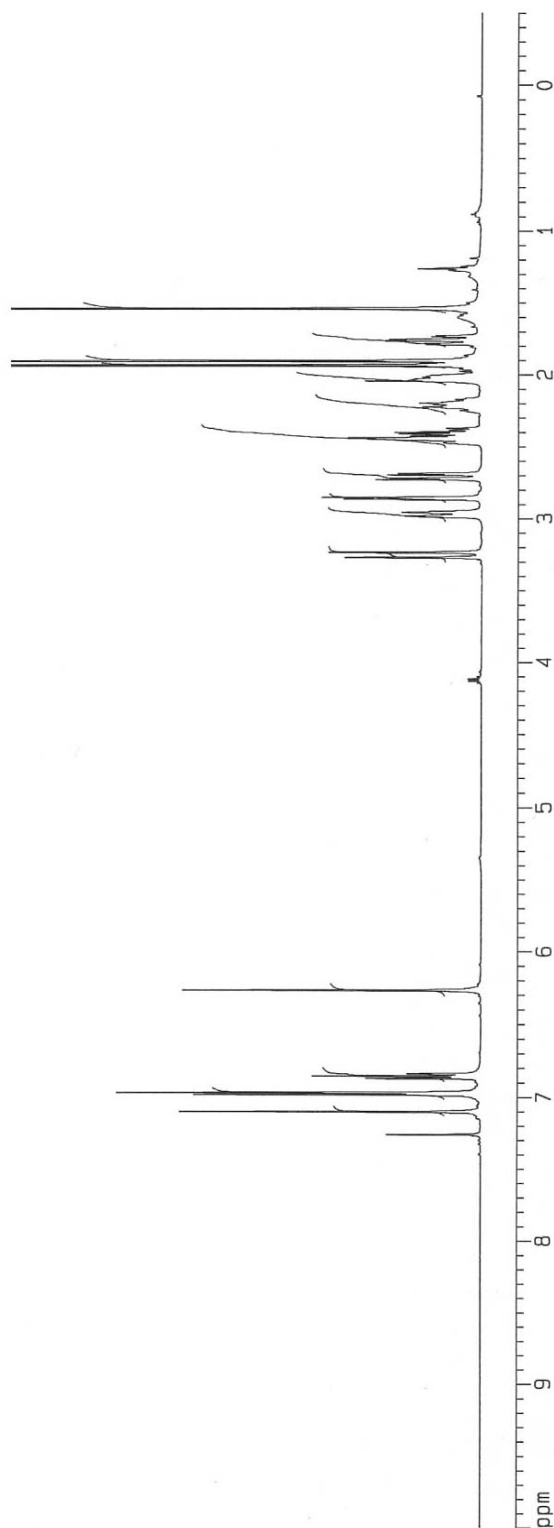
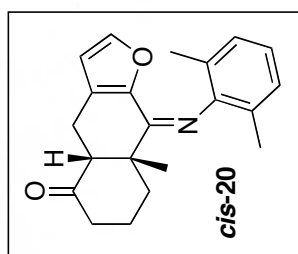


Figure 22: ^1H NMR Spectrum of Compound *cis*-20

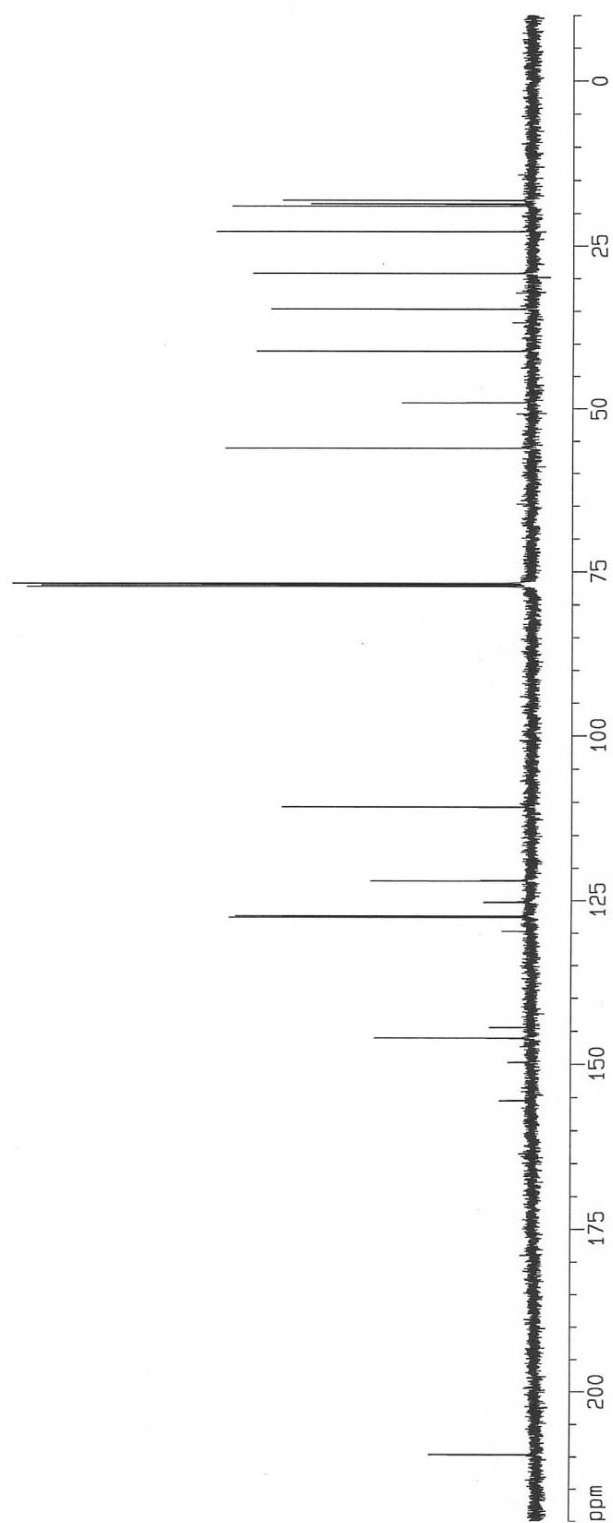


Figure 23: ^{13}C NMR Spectrum of Compound *cis*-20

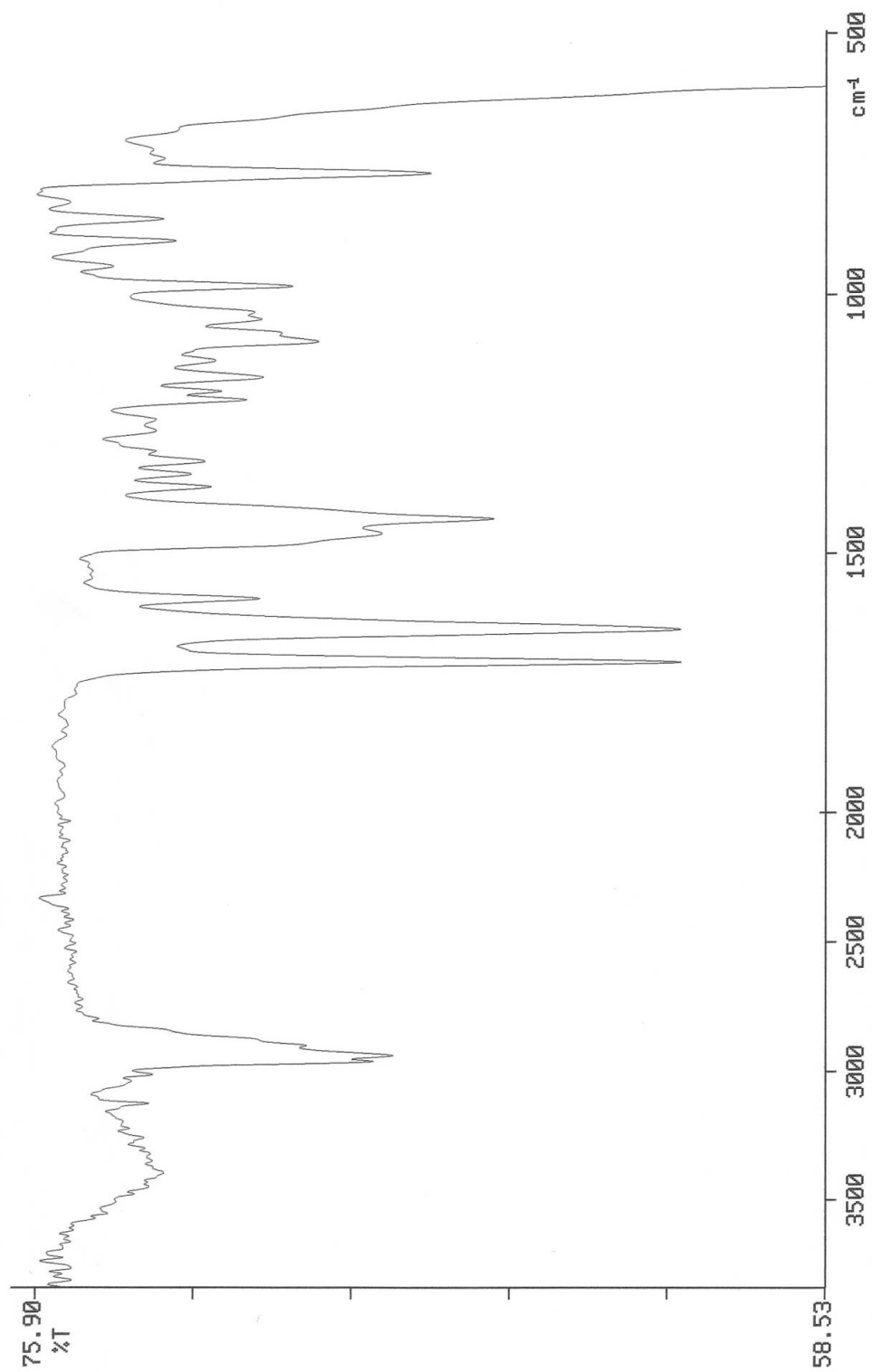


Figure 24: FTIR Spectrum of Compound *cis*-20

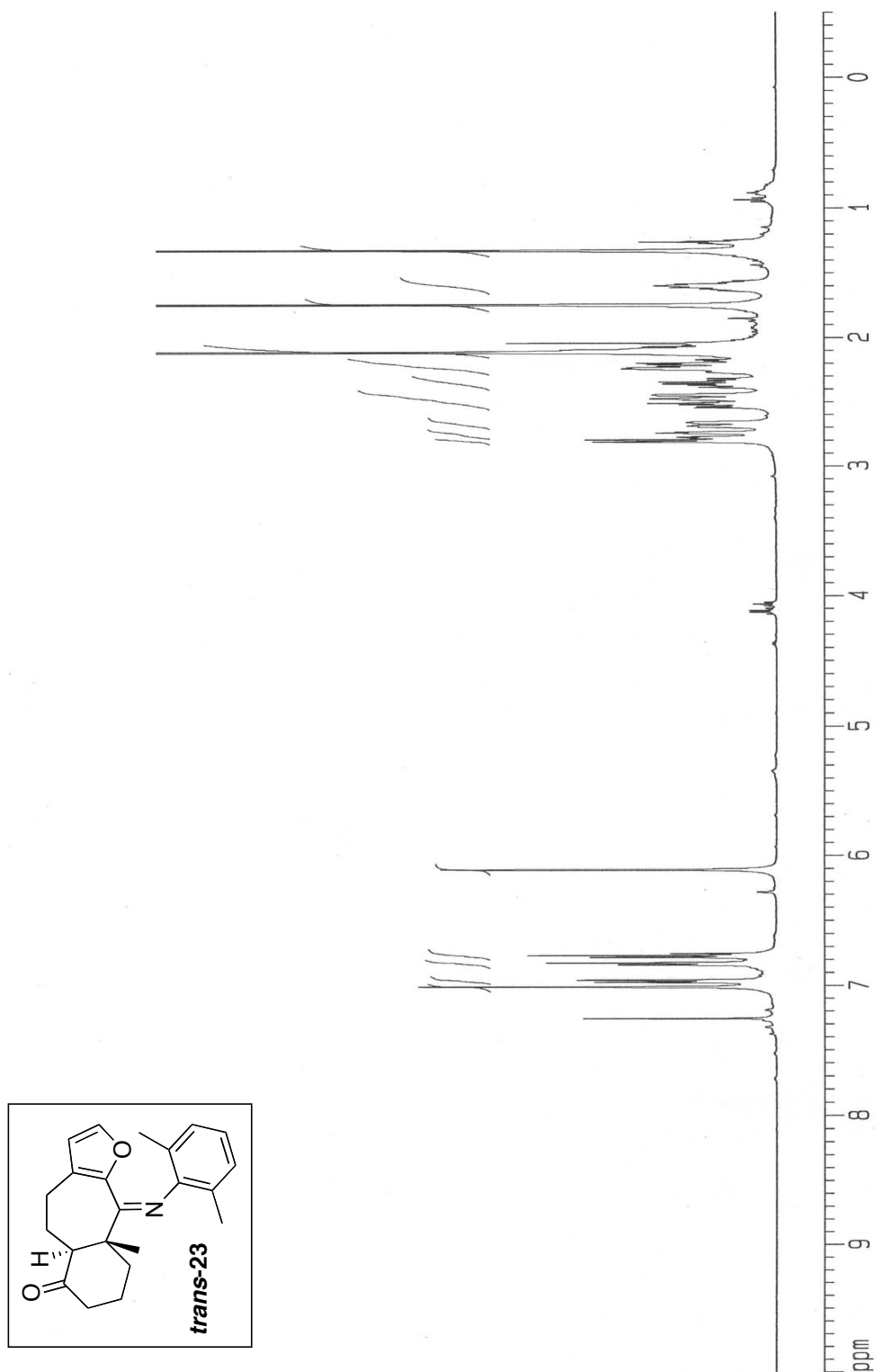


Figure 25: ^1H NMR Spectrum of Compound *trans*-23

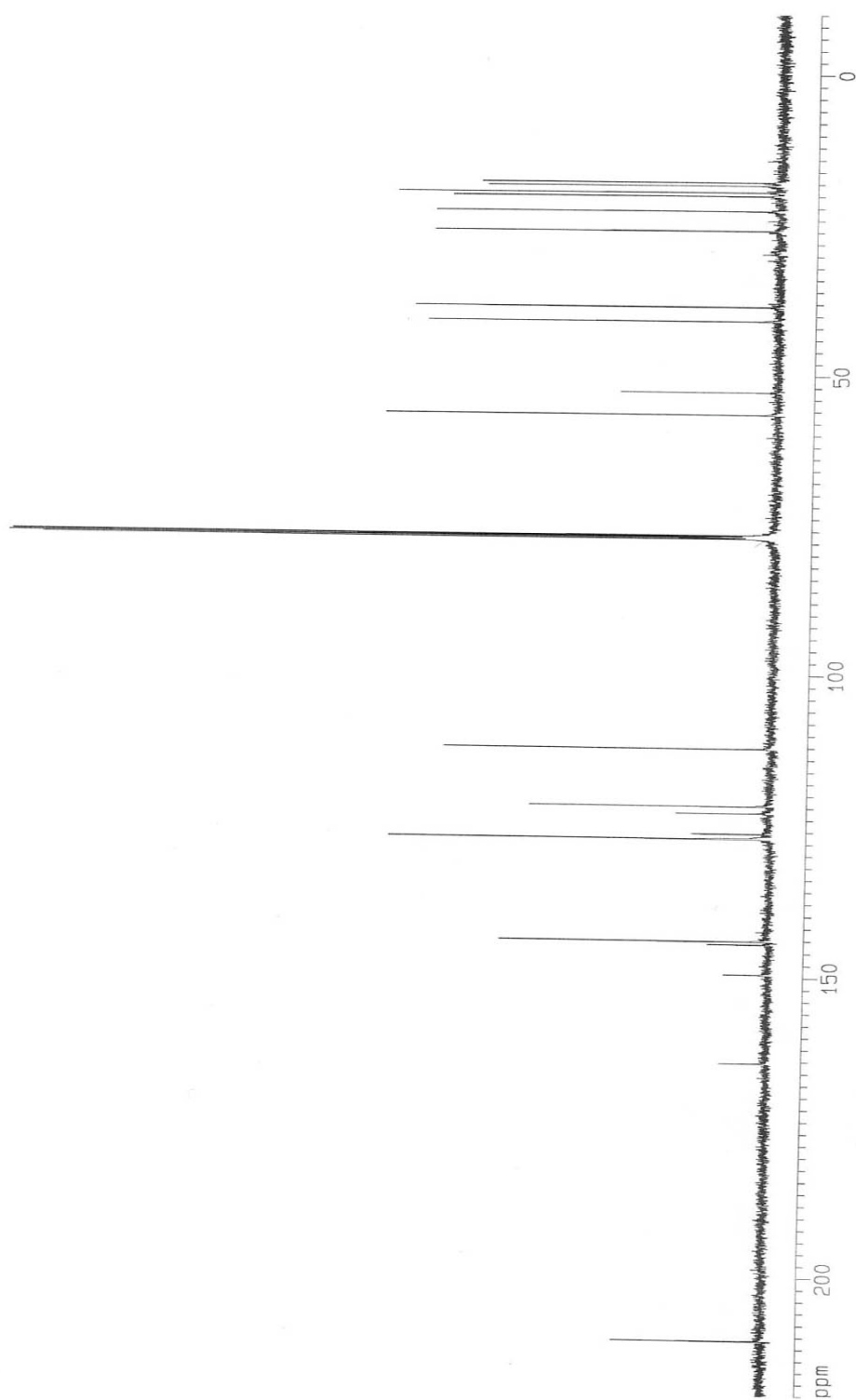


Figure 26: ^{13}C NMR Spectrum of Compound *trans*-23

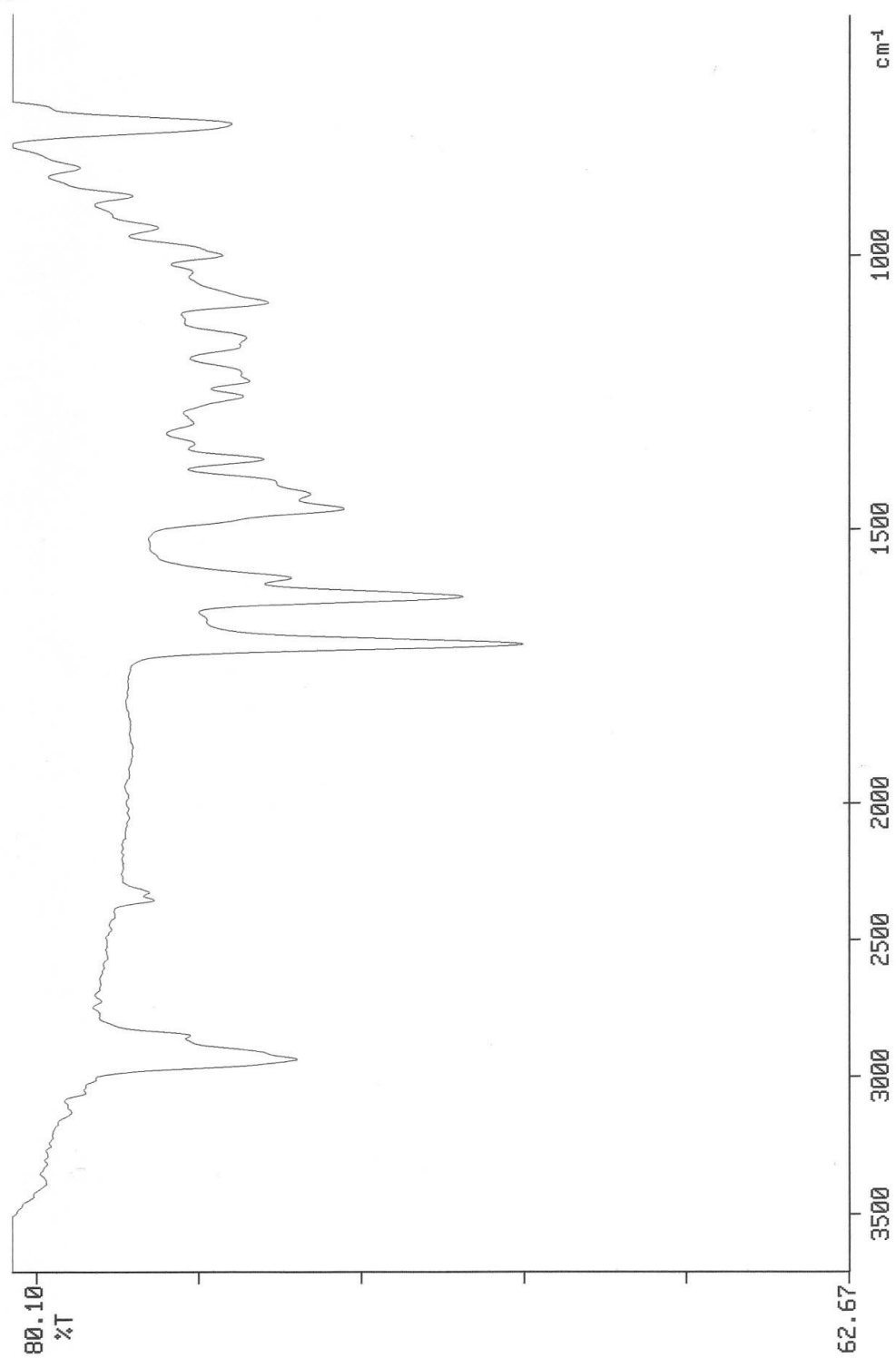


Figure 27: FTIR Spectrum of Compound *trans*-23

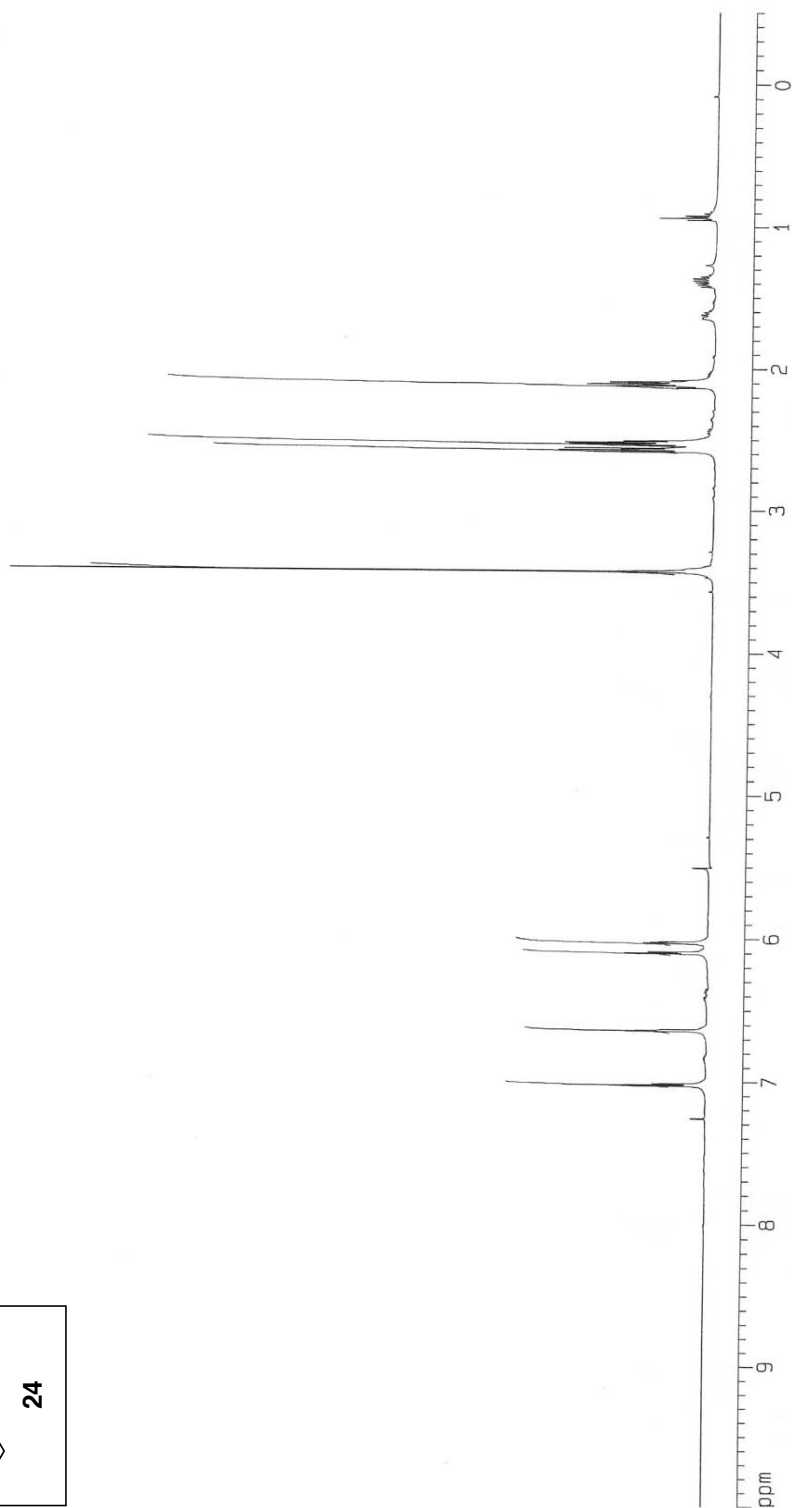
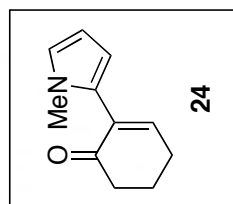


Figure 28: ¹H NMR Spectrum of Compound 24

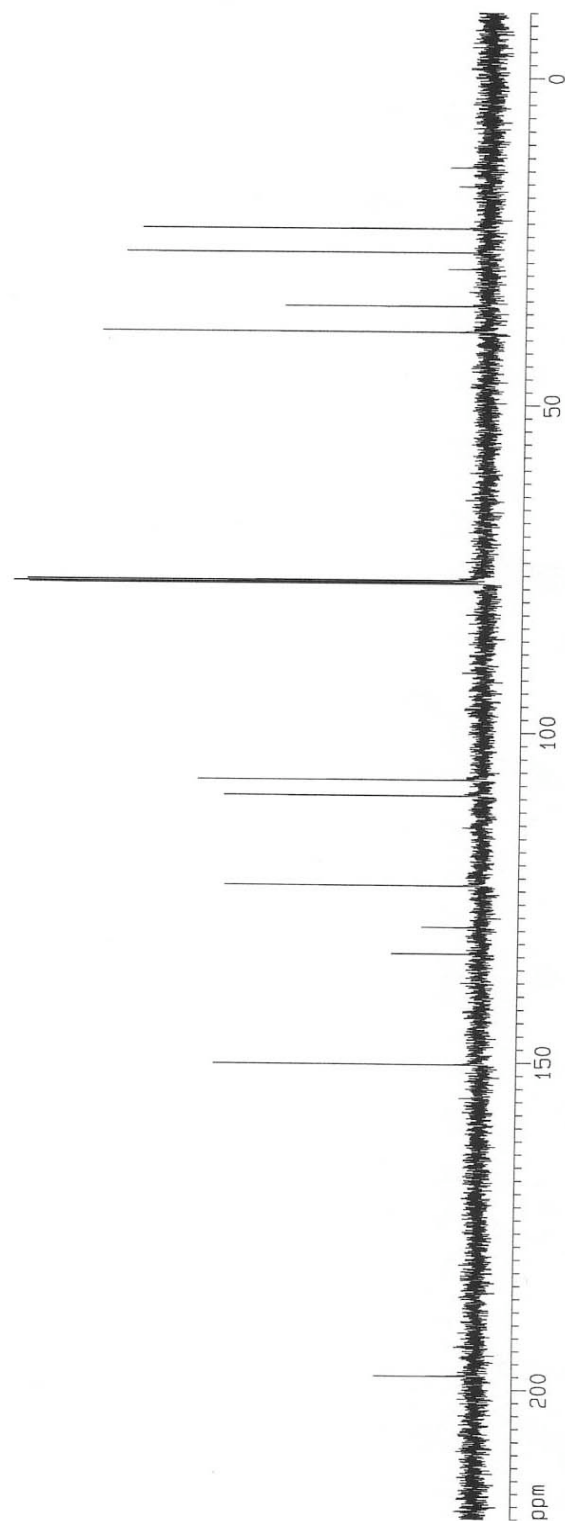


Figure 29: ^{13}C NMR Spectrum of Compound 24

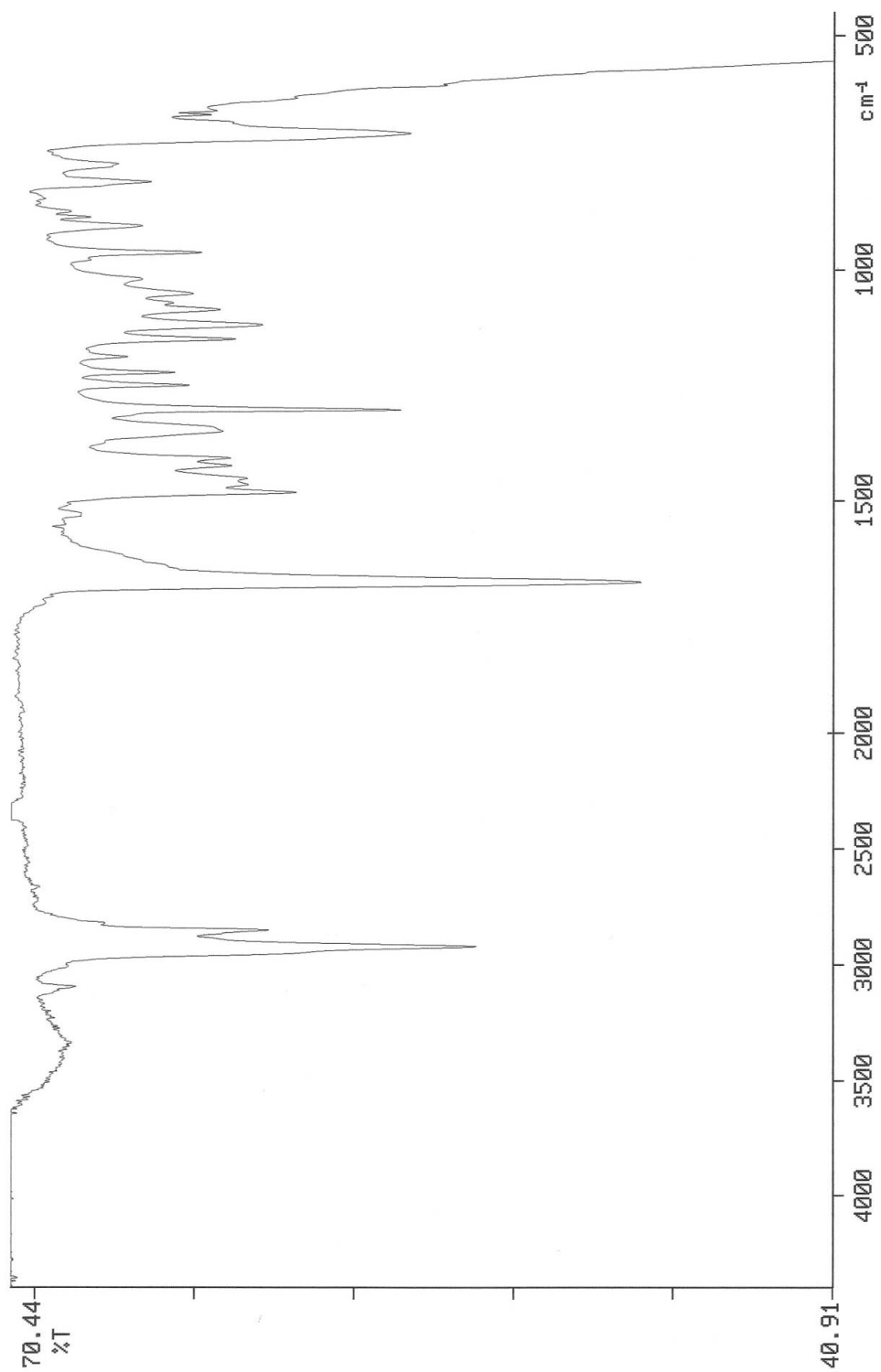


Figure 30: FTIR Spectrum of Compound 24

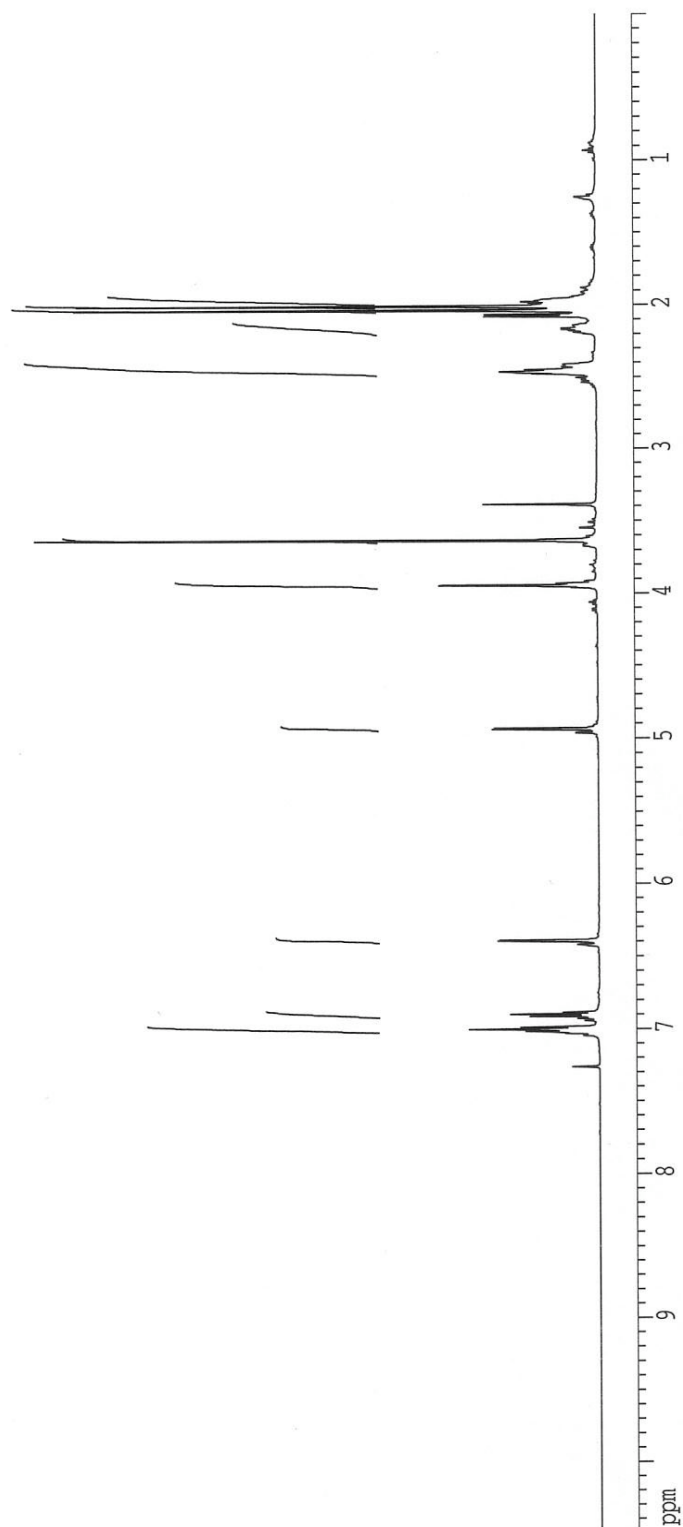
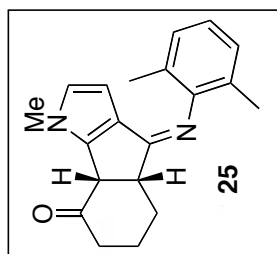


Figure 31: ^1H NMR Spectrum of Compound 25

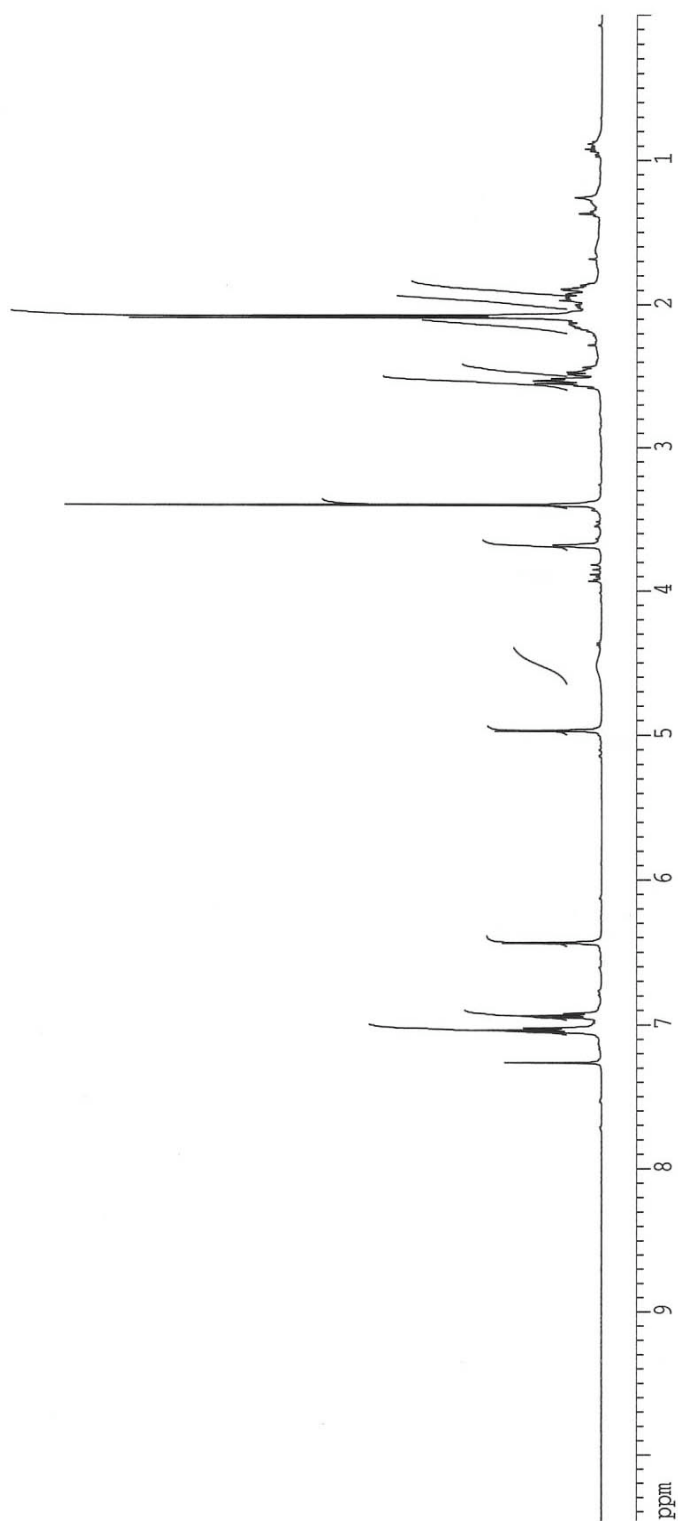
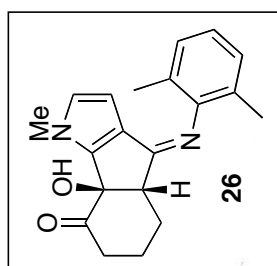


Figure 32: ^1H NMR Spectrum of Compound 26

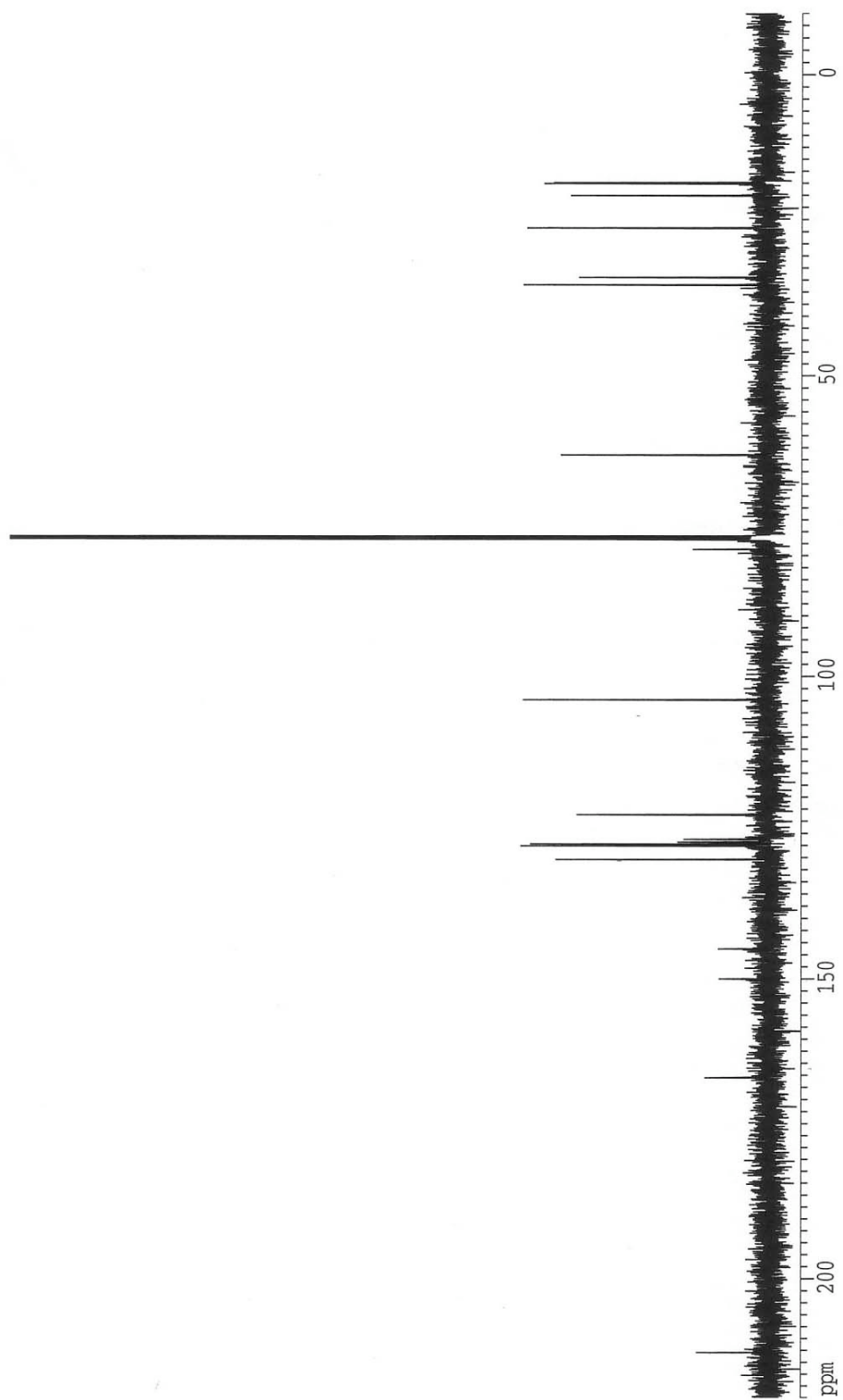


Figure 33: ^{13}C NMR Spectrum of Compound 26

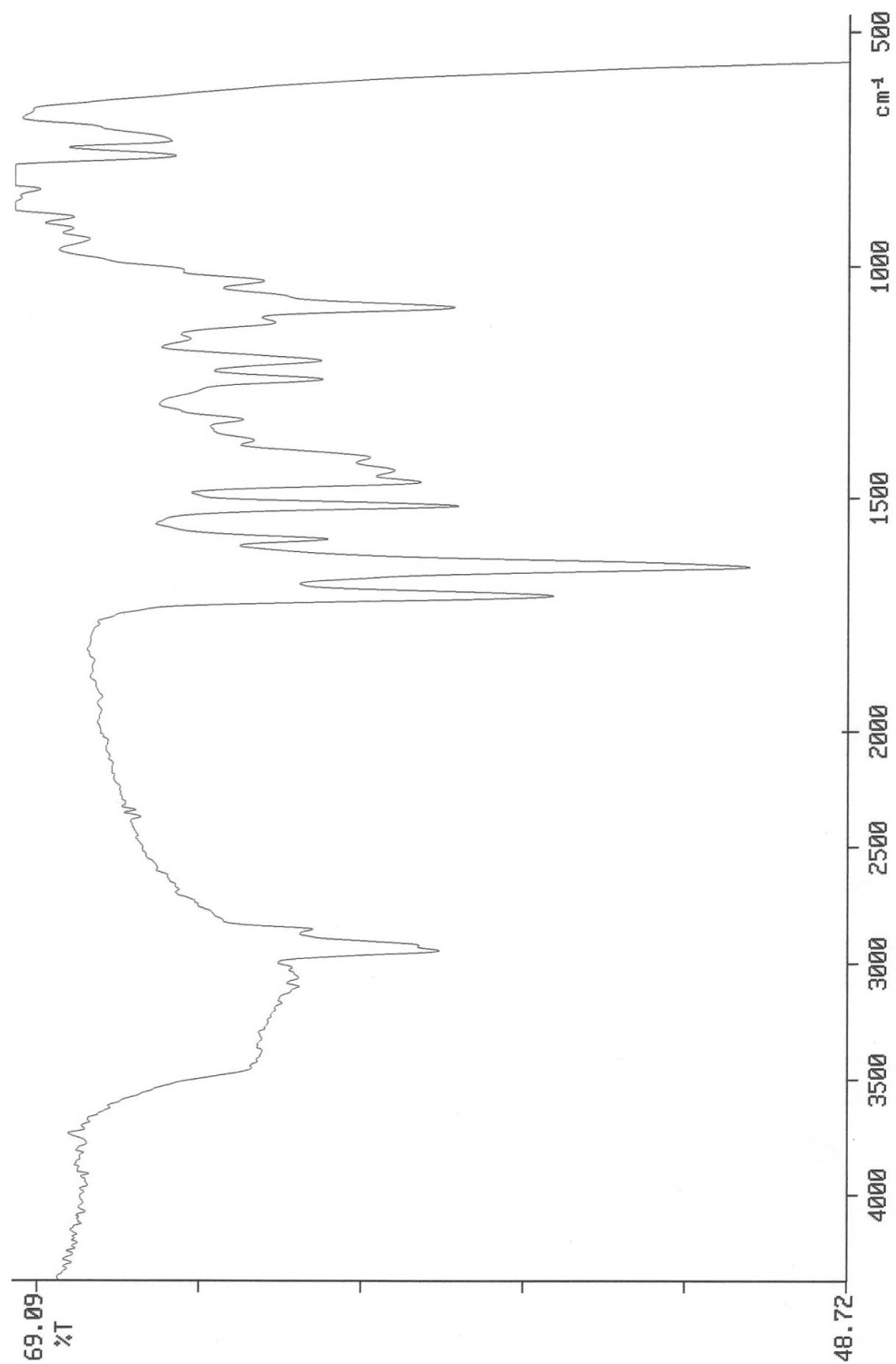


Figure 34: FTIR Spectrum of Compound 26

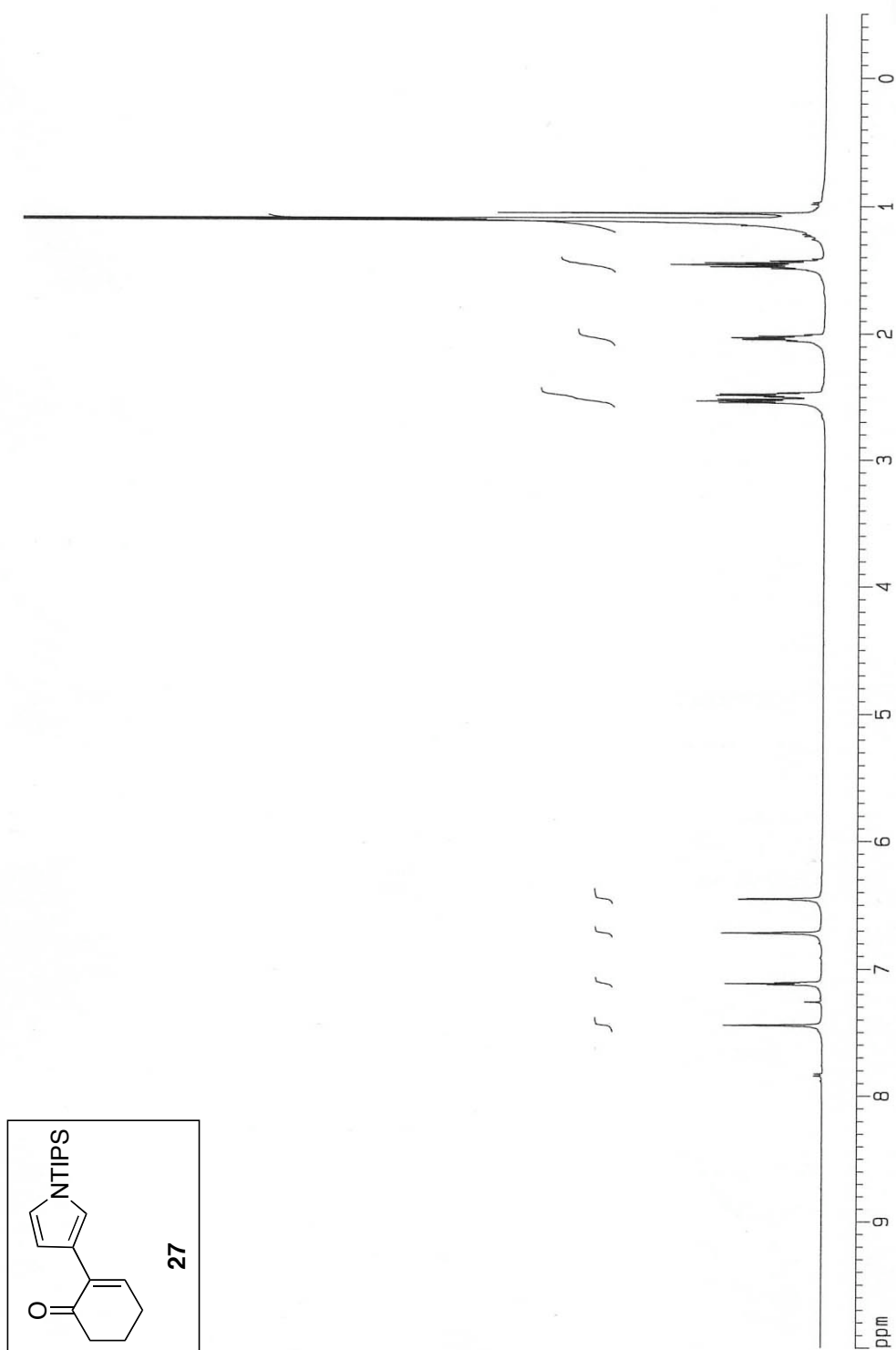


Figure 35: ¹H NMR Spectrum of Compound 27

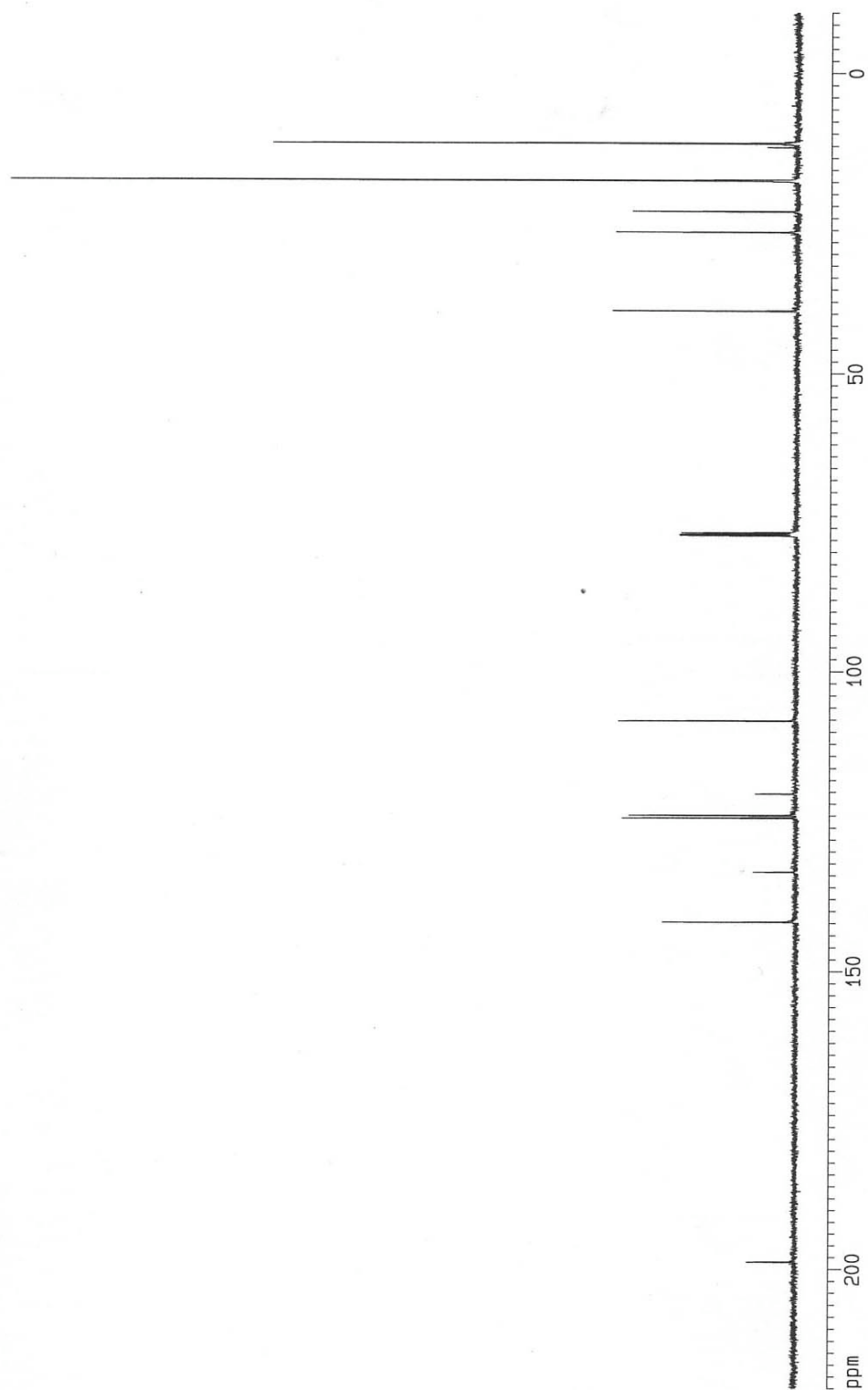


Figure 36: ^{13}C NMR Spectrum of Compound 27

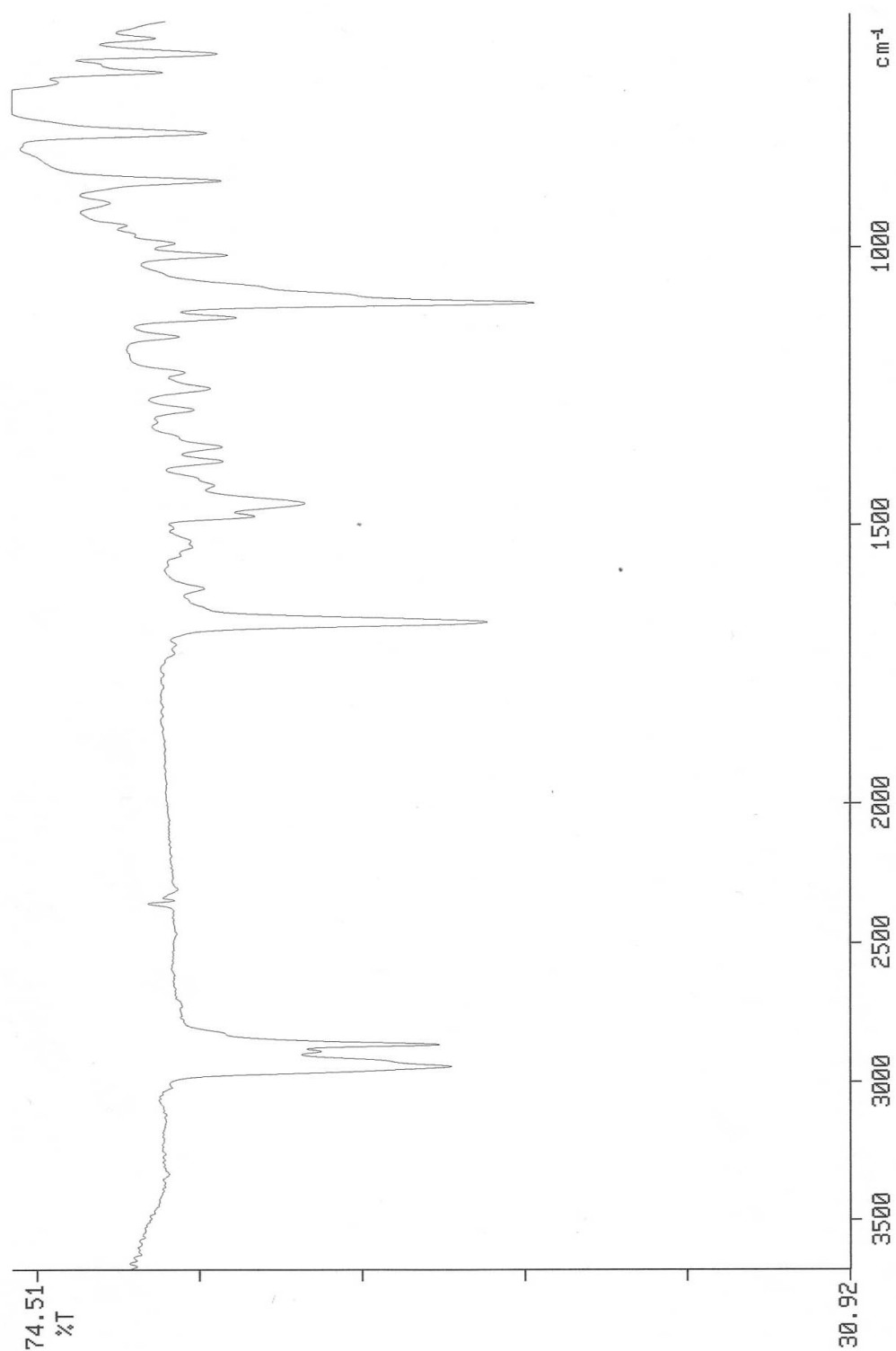
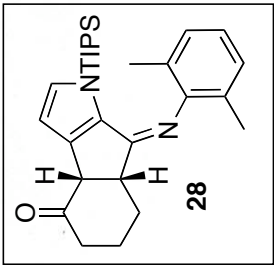


Figure 37: FTIR Spectrum of Compound 27



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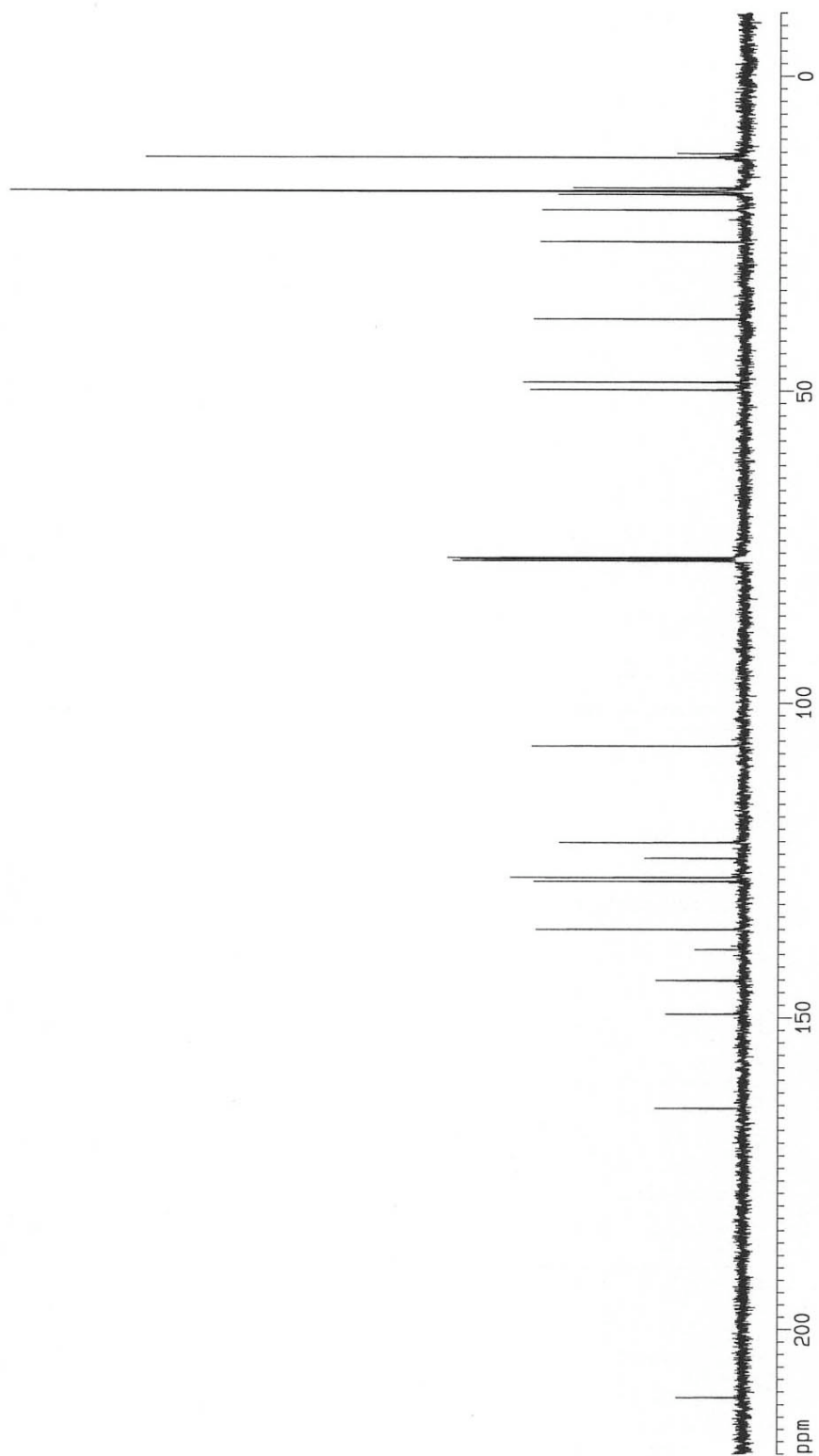


Figure 39: ^{13}C NMR Spectrum of Compound 28

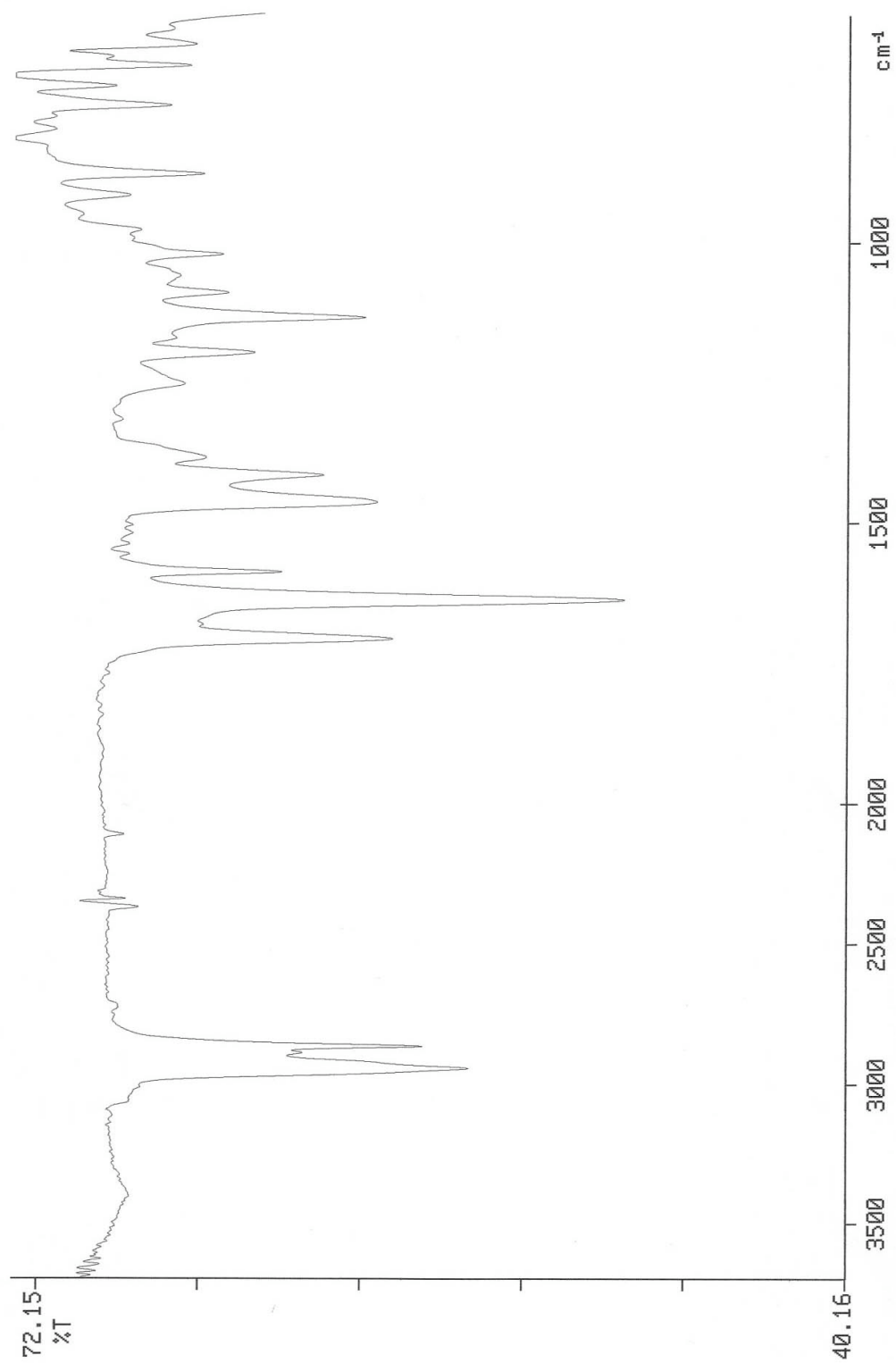


Figure 40: FTIR Spectrum of Compound 28

