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APPENDIX

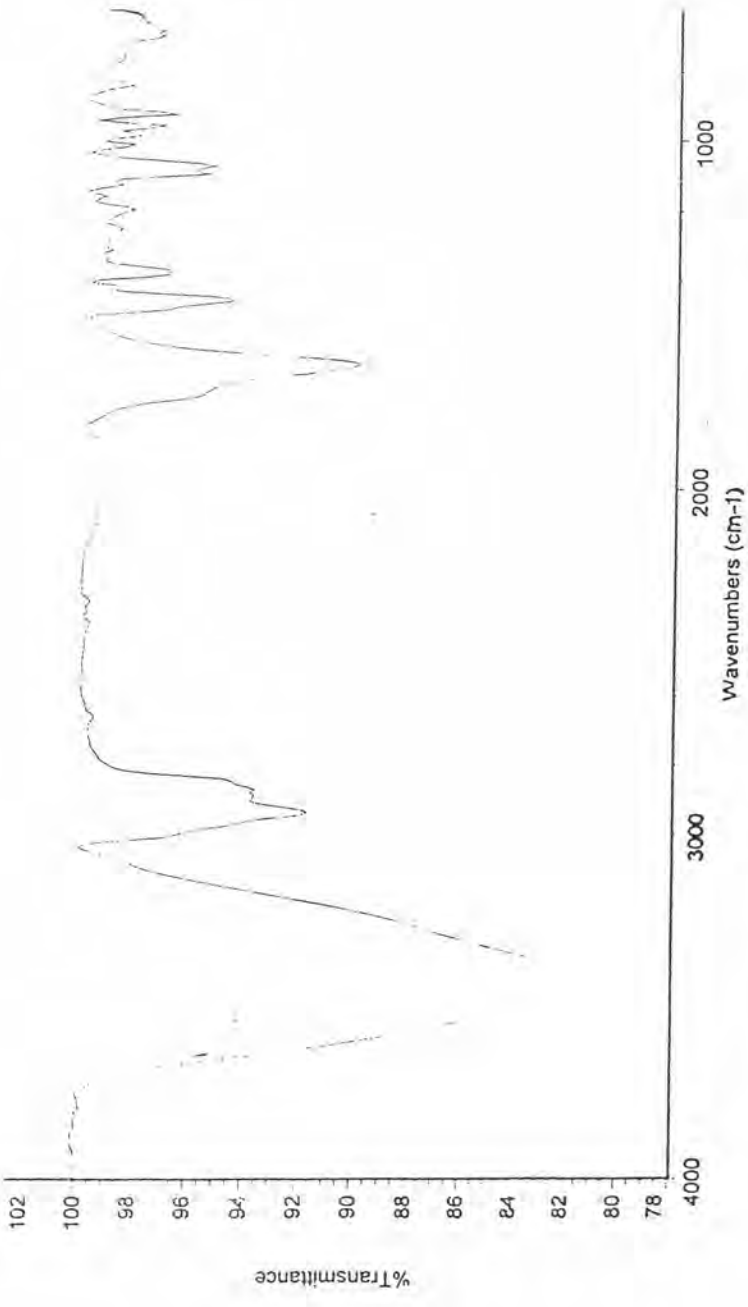

Figure 10: The IR spectrum of compound 1

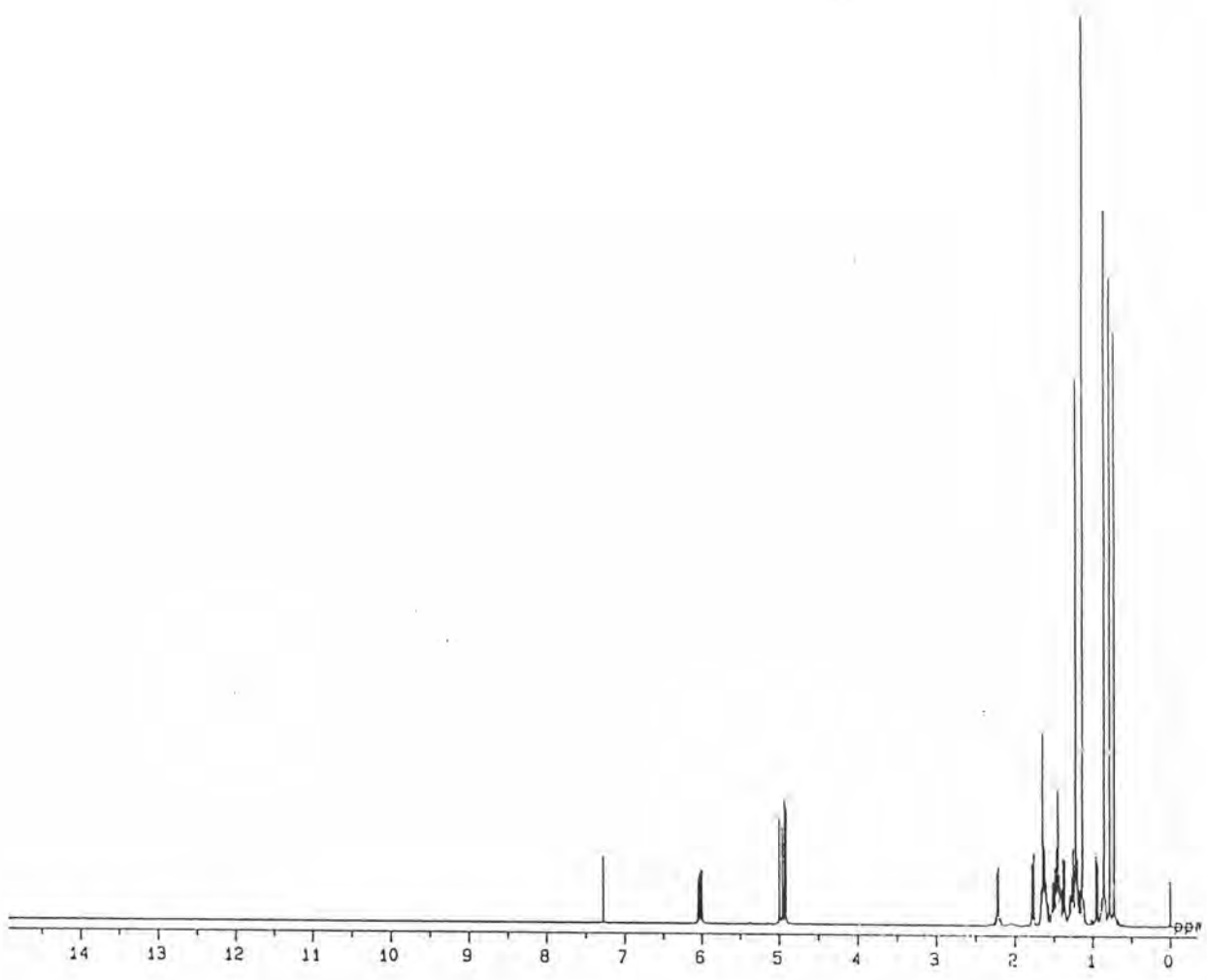

Figure 11: The ^{1}H NMR (500 MH_z) spectrum of compound 1 (in $CHCl_3$)

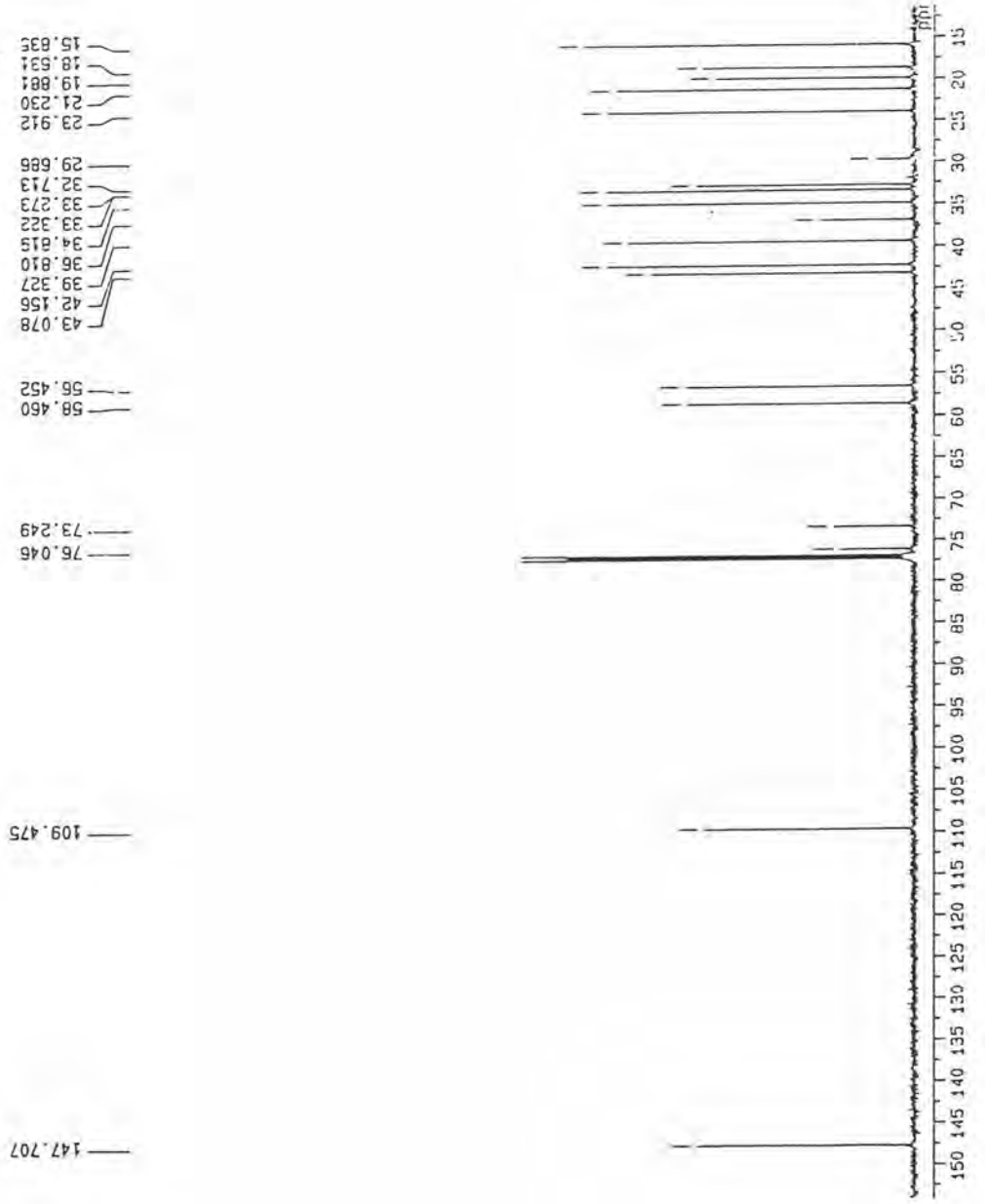

Figure 12: The ^{13}C NMR (125 MH_z) spectrum of compound 1 (in $CHCl_3$)

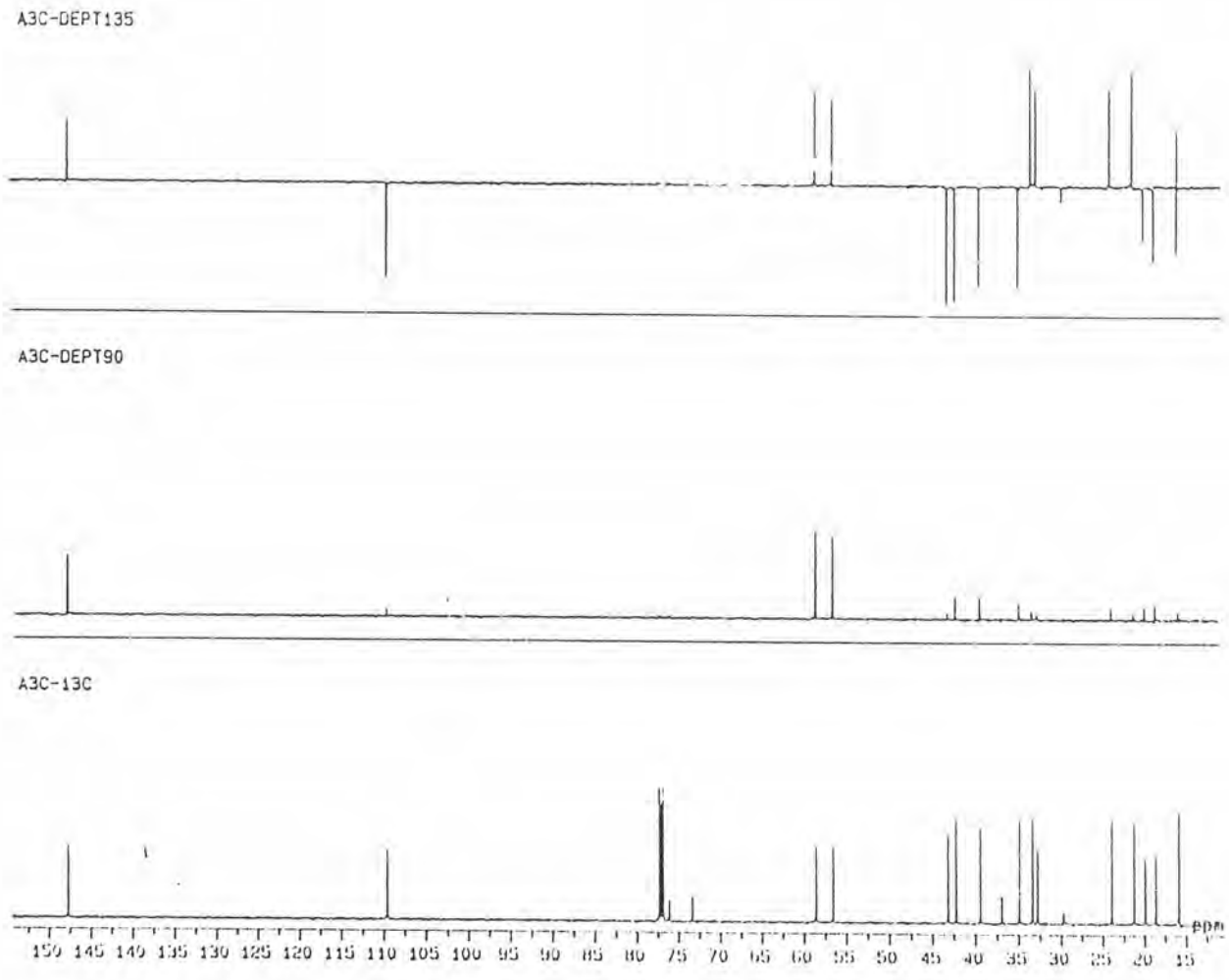

Figure 13: The DEPT (125 MH_z) spectrum of compound 1 (in $CHCl_3$)

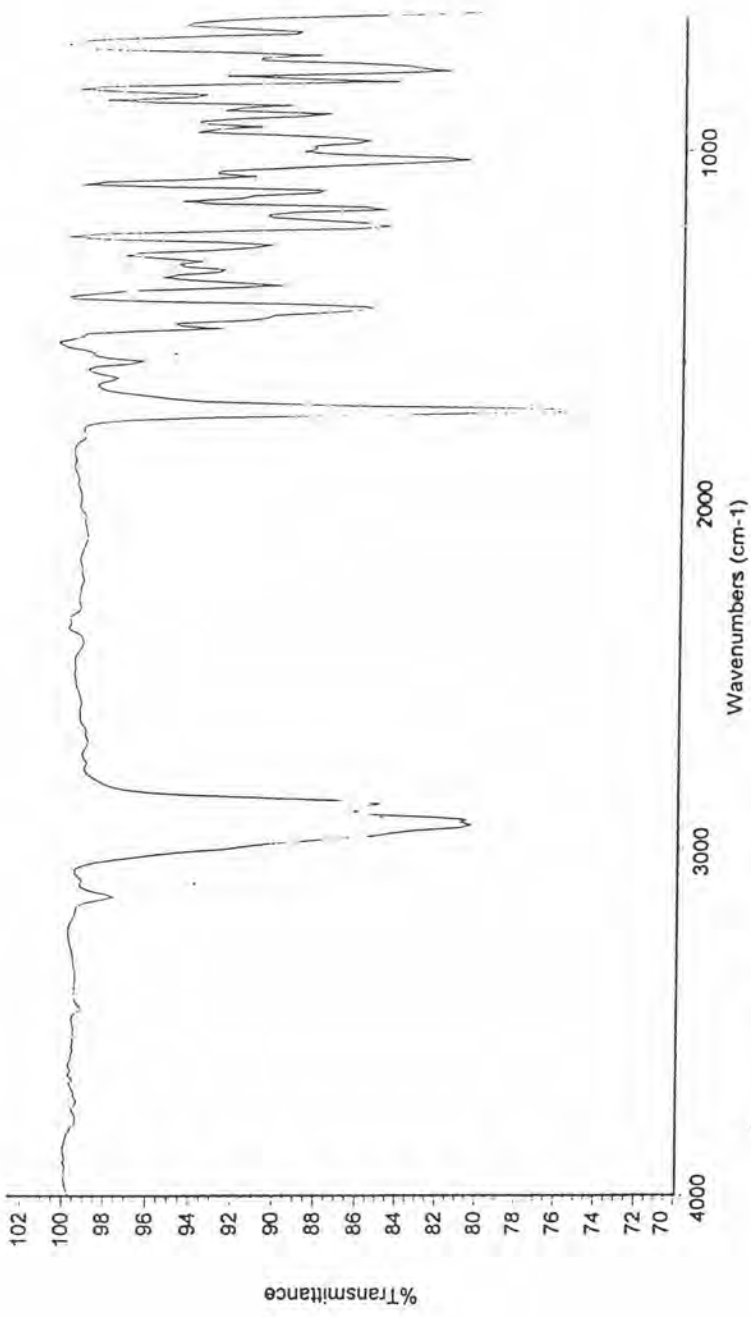

Figure 14: The IR spectrum of compound 2

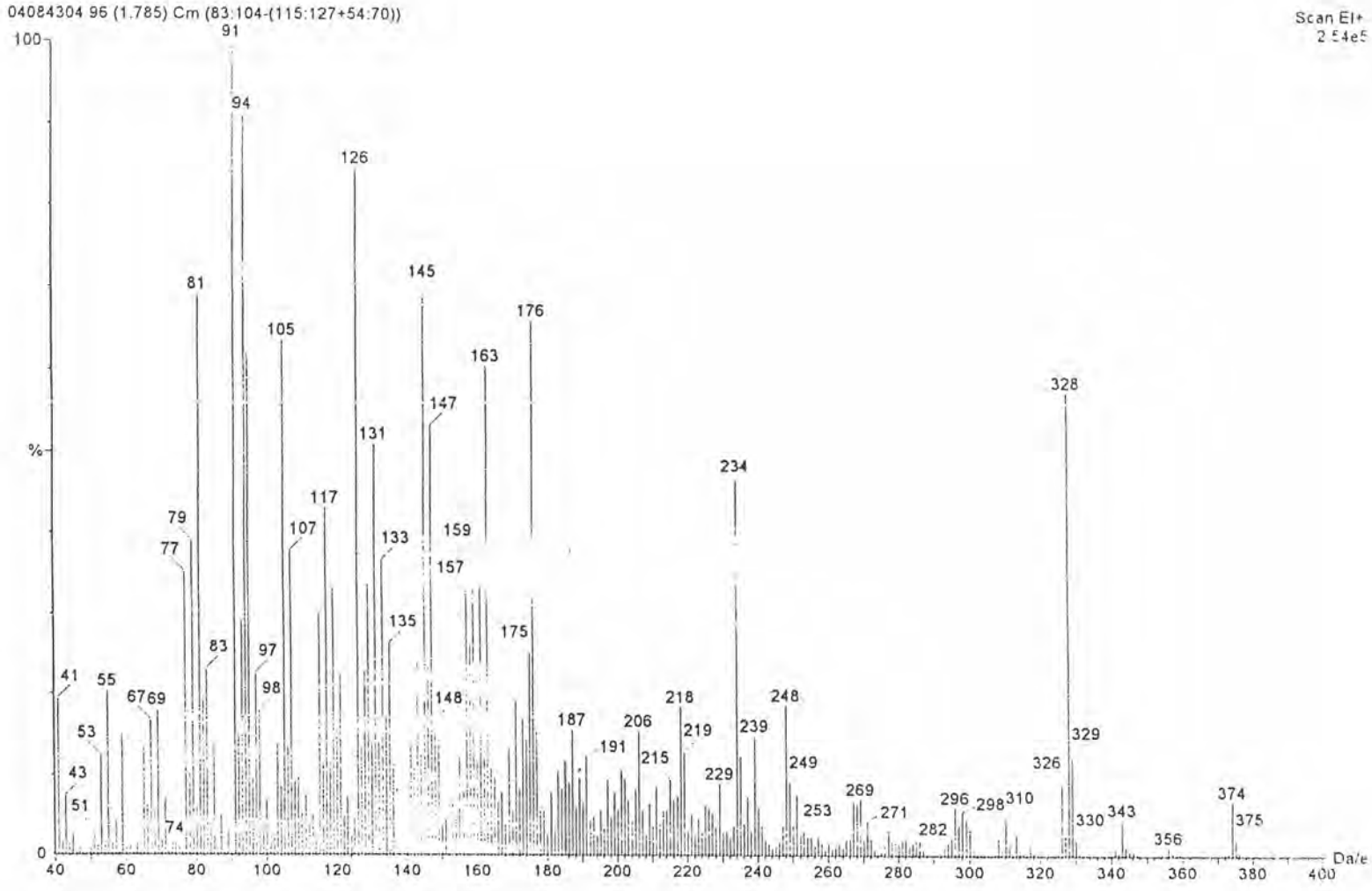

Figure 15: The EI mass spectrum of compound 2

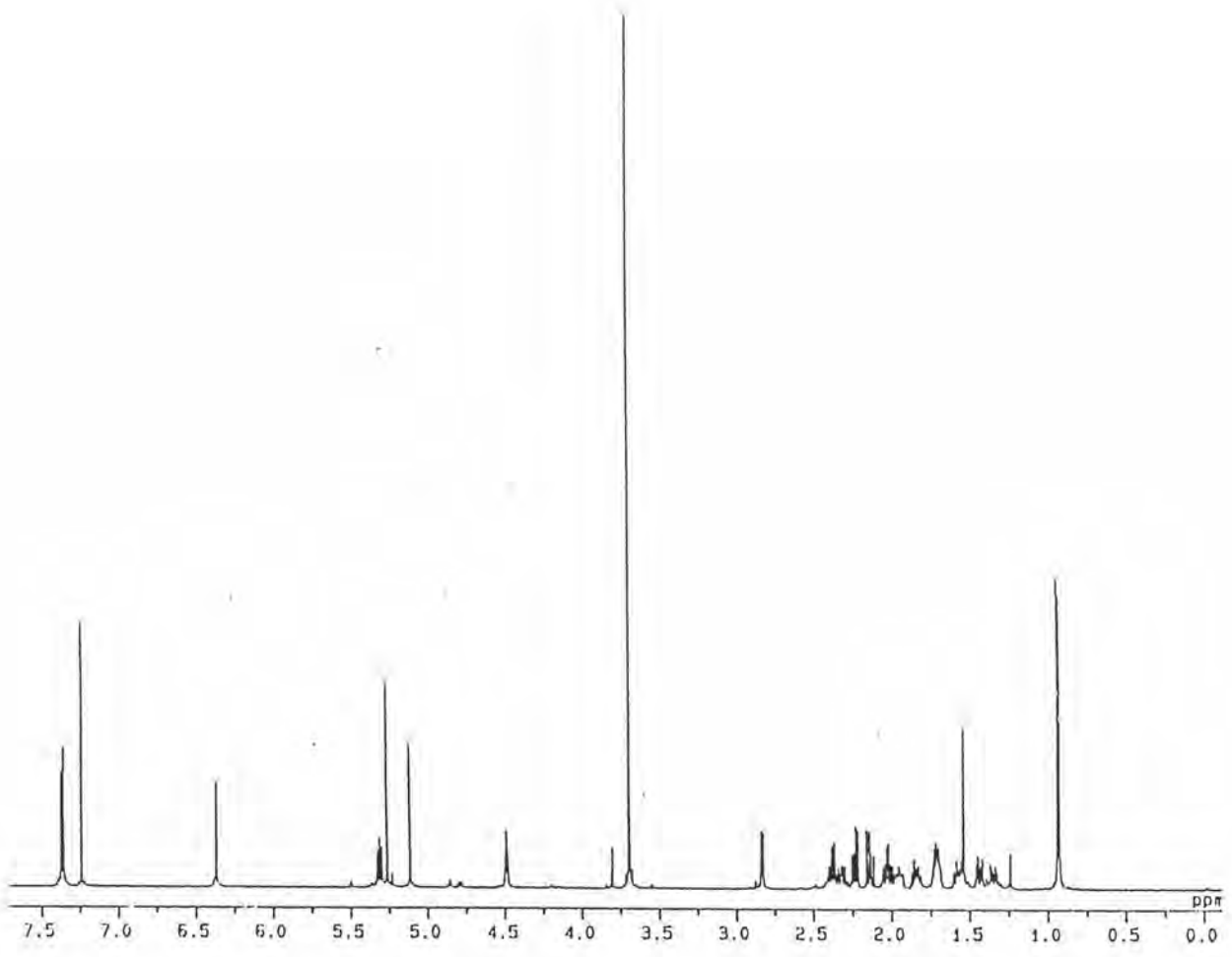

Figure 16: The ^{1}H NMR (500 MH_z) spectrum of compound 2 (in $CHCl_3$)

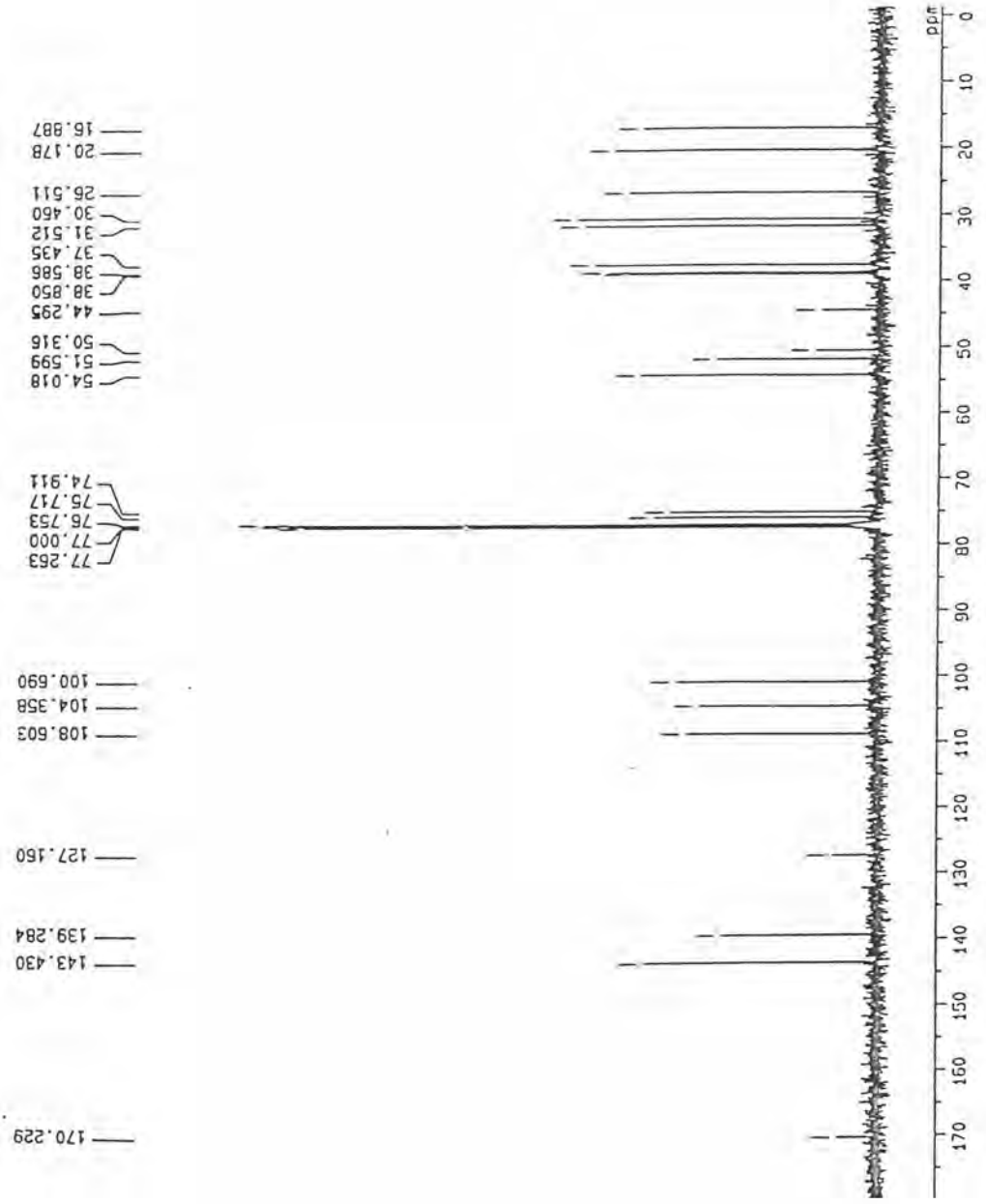

Figure 17: The ^{13}C NMR (125 MH_z) spectrum of compound 2 (in $CHCl_3$)

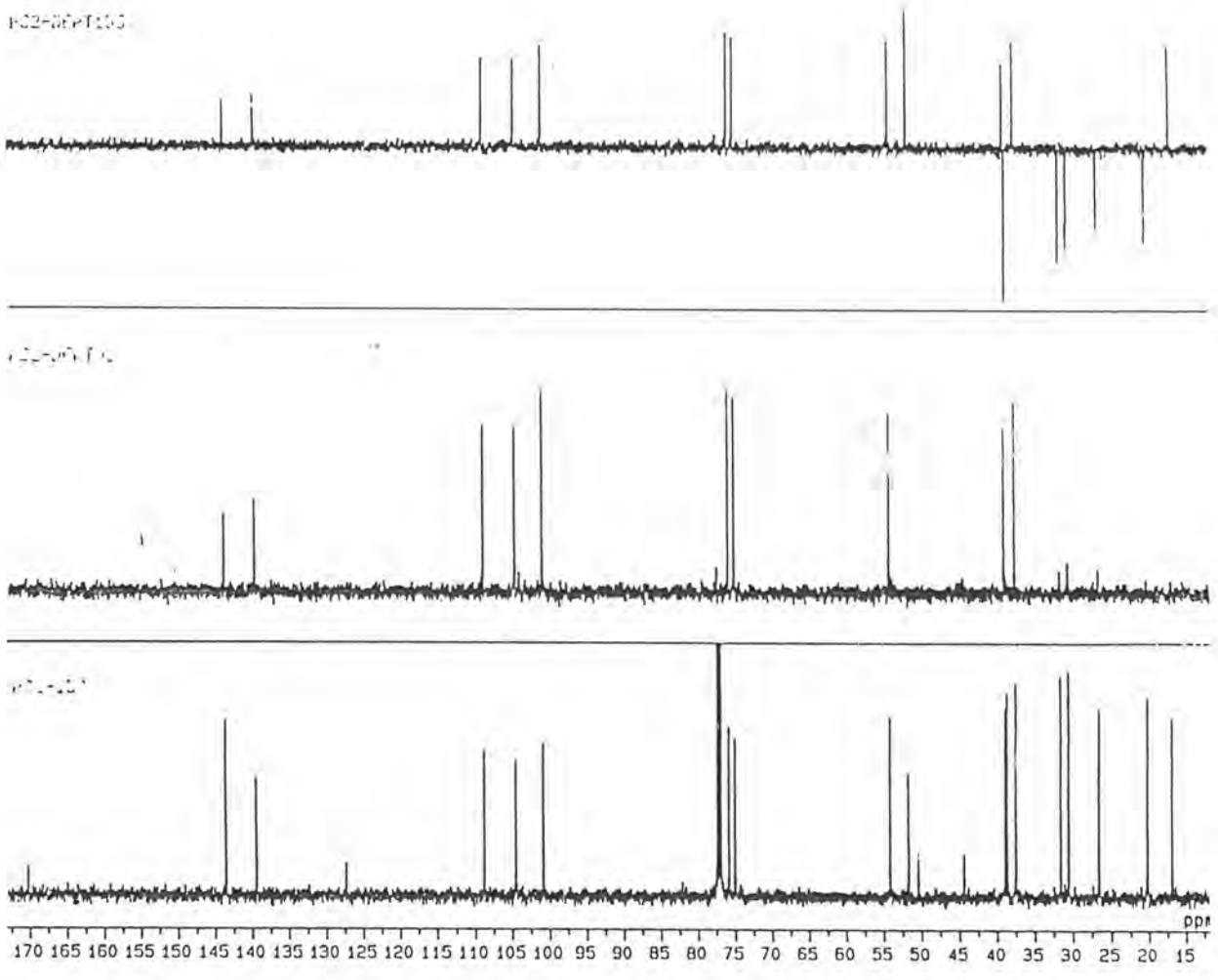

Figure 18: **The DEPT (125 MH_z) spectrum of compound 2 (in $CHCl_3$)**

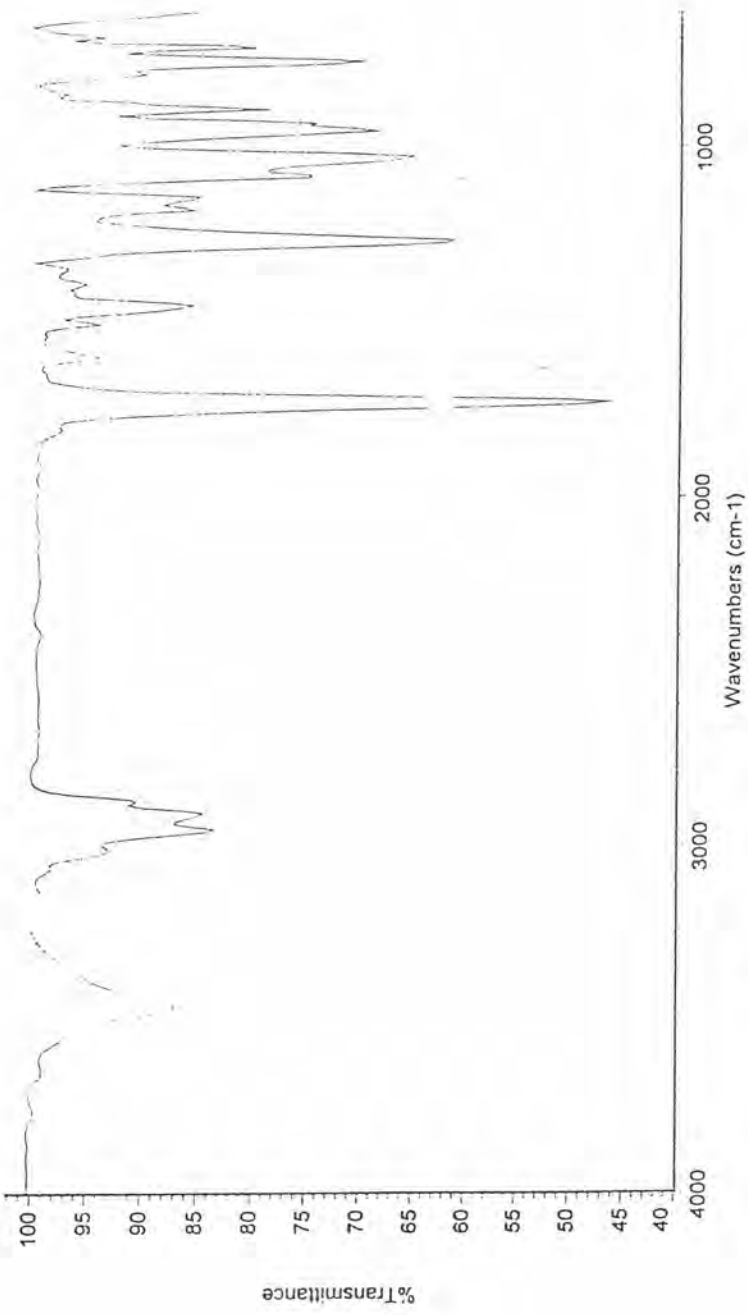

Figure 19: The IR spectrum of compound 3

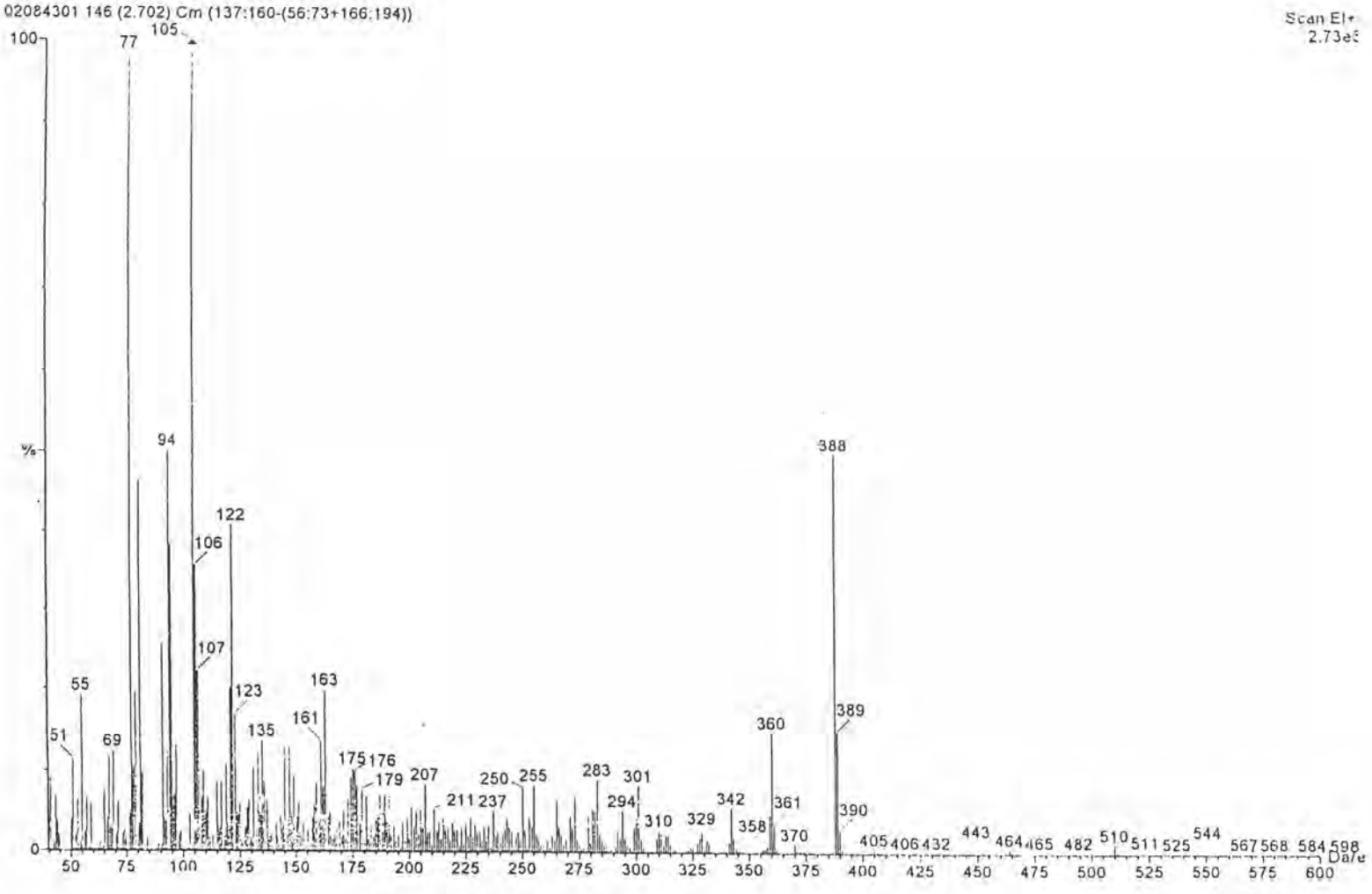

Figure 20: The EI mass spectrum of compound 3

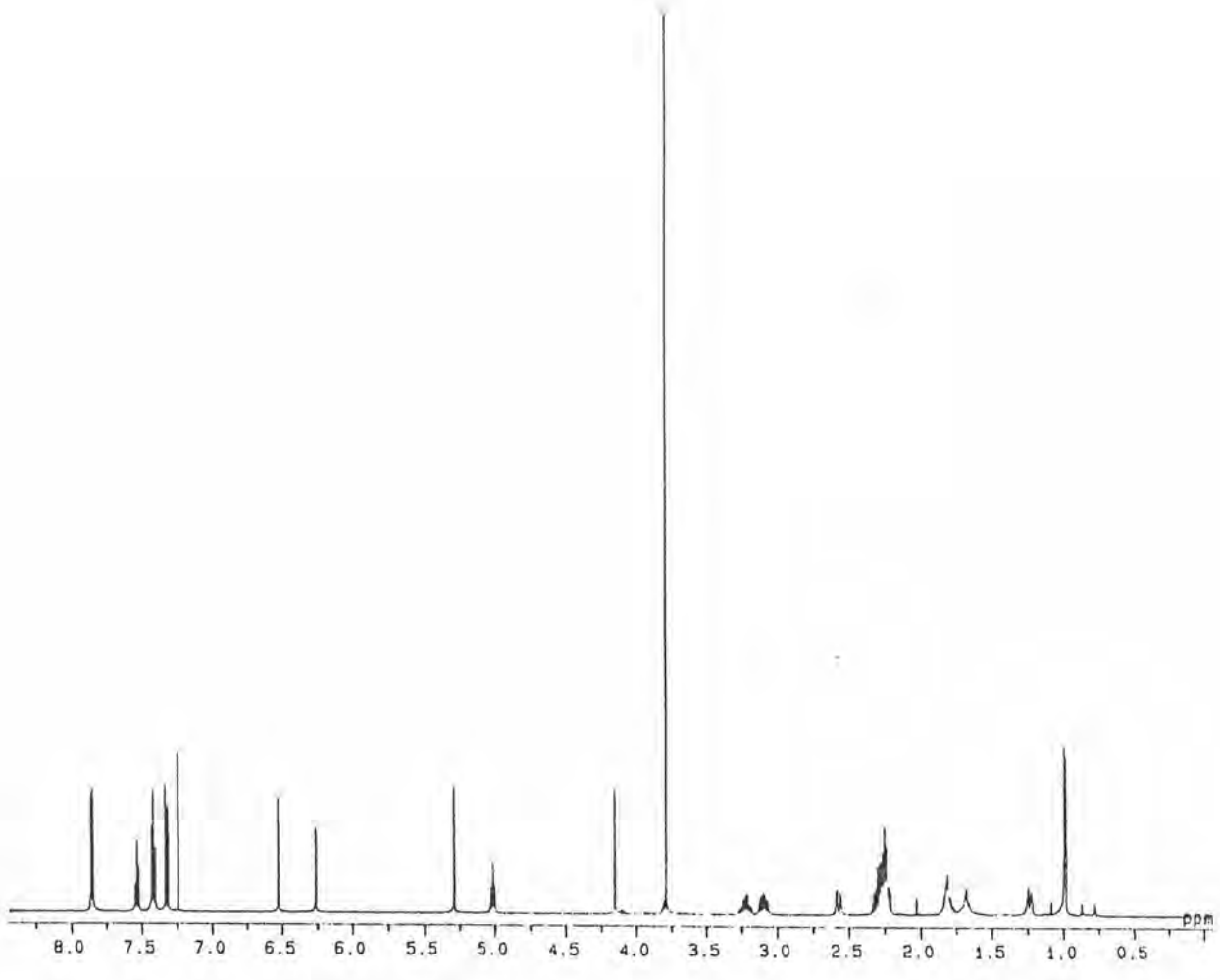

Figure 21: The ^{1}H NMR (500 MH_z) spectrum of compound 3 (in $CHCl_3$)

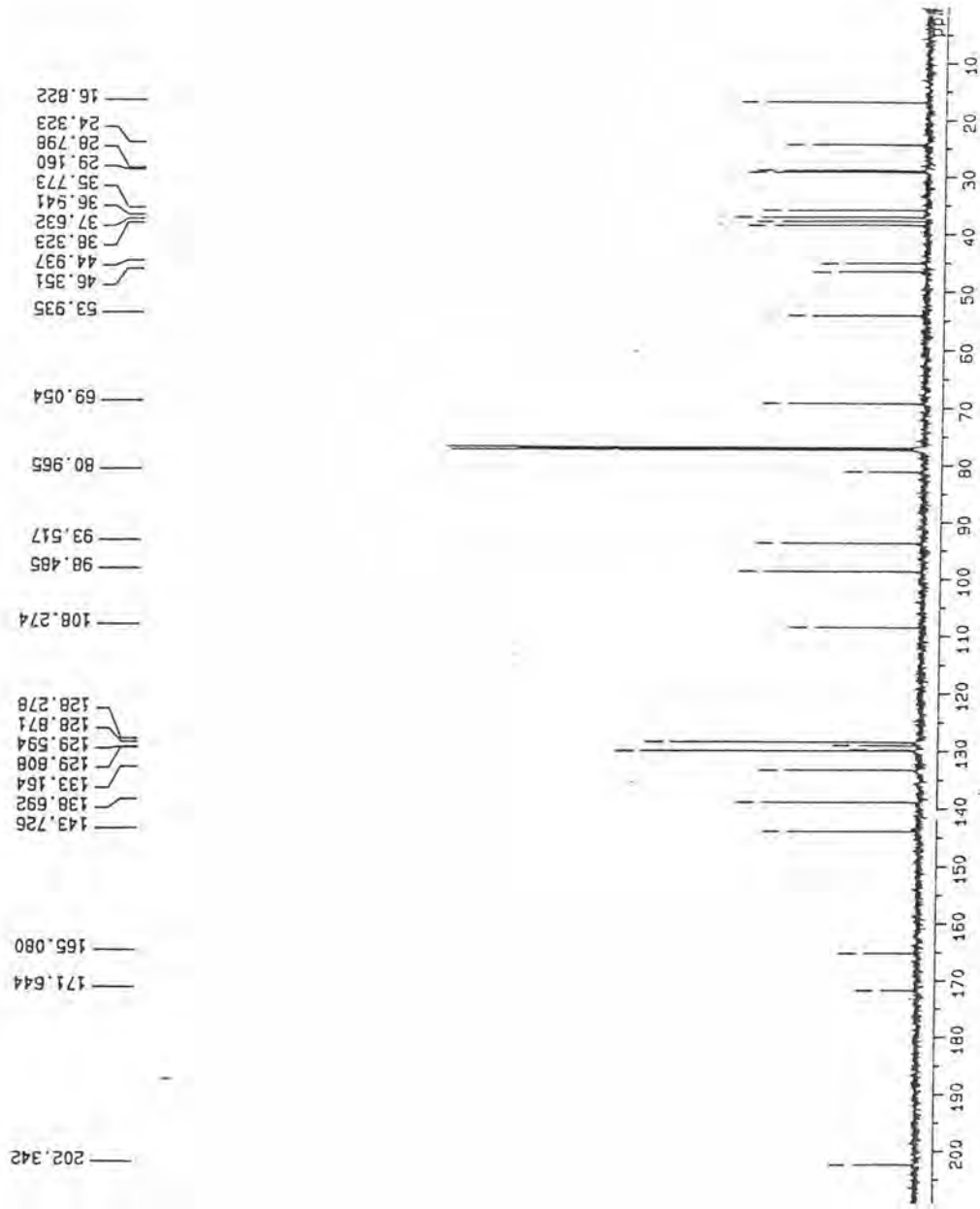

Figure 22: The ^{13}C NMR (125 MH_z) spectrum of compound 3 (in $CHCl_3$)

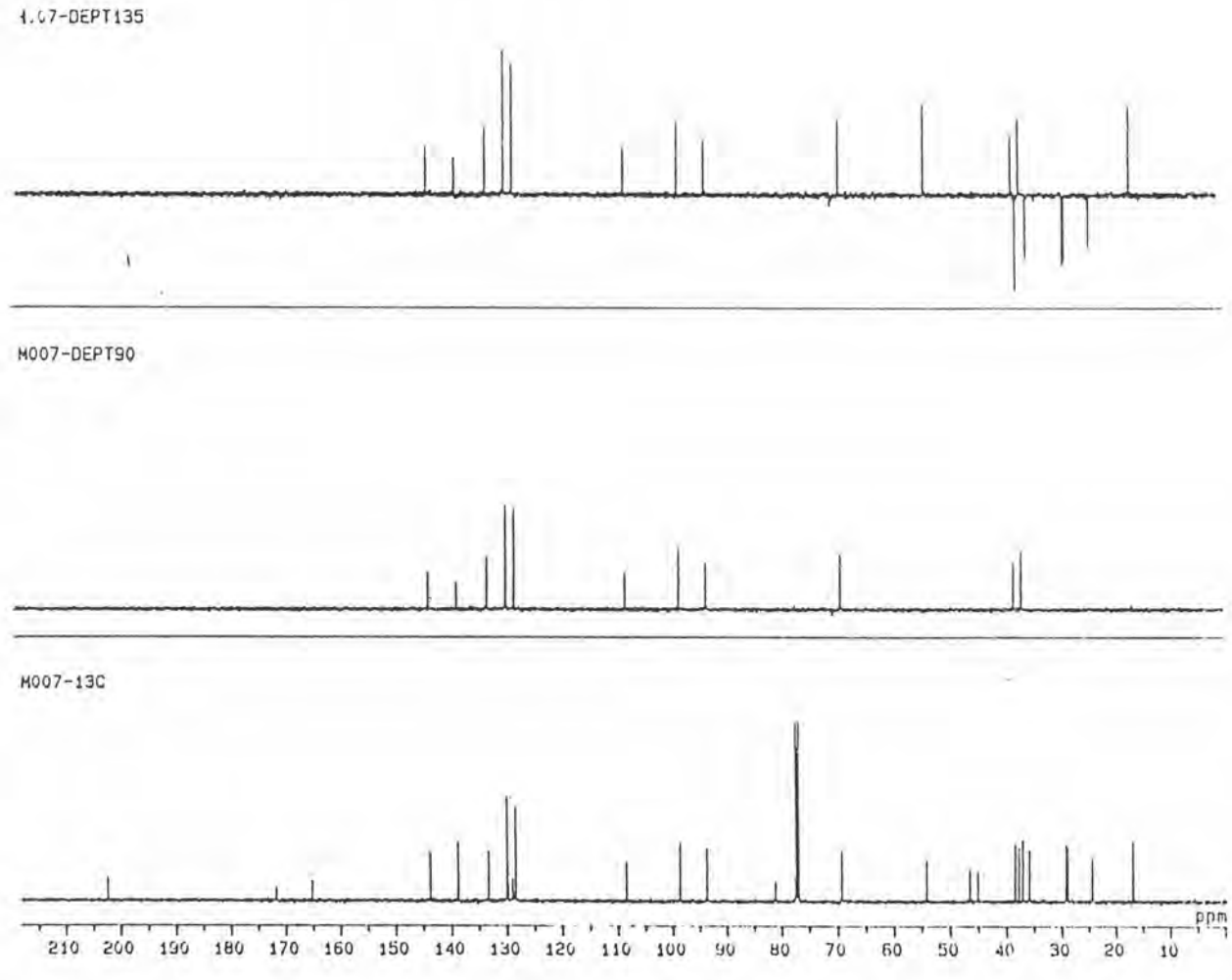

Figure 23: The DEPT (125 MH_z) spectrum of compound 3 (in $CHCl_3$)

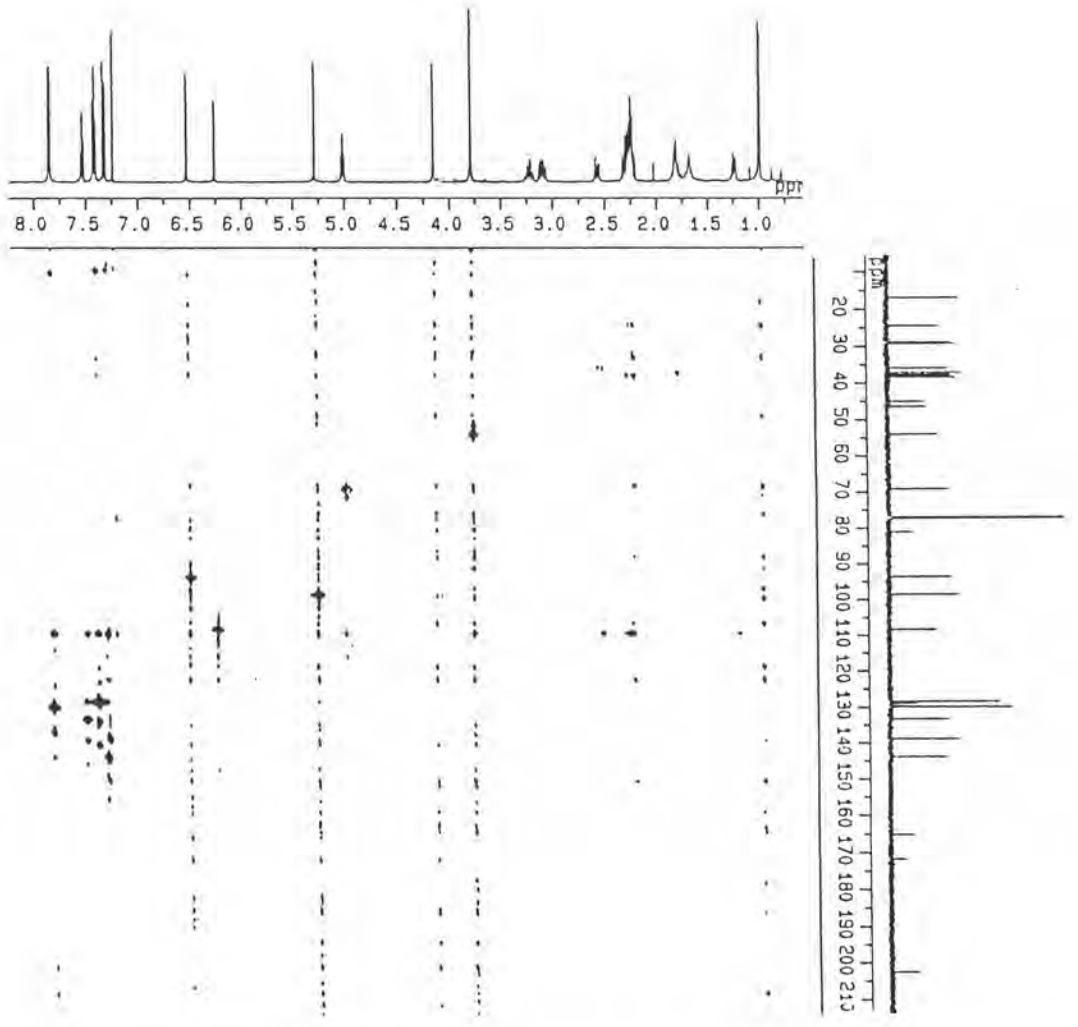

Figure 24: The HMQC (500 MH_z) correlation spectrum of compound 3

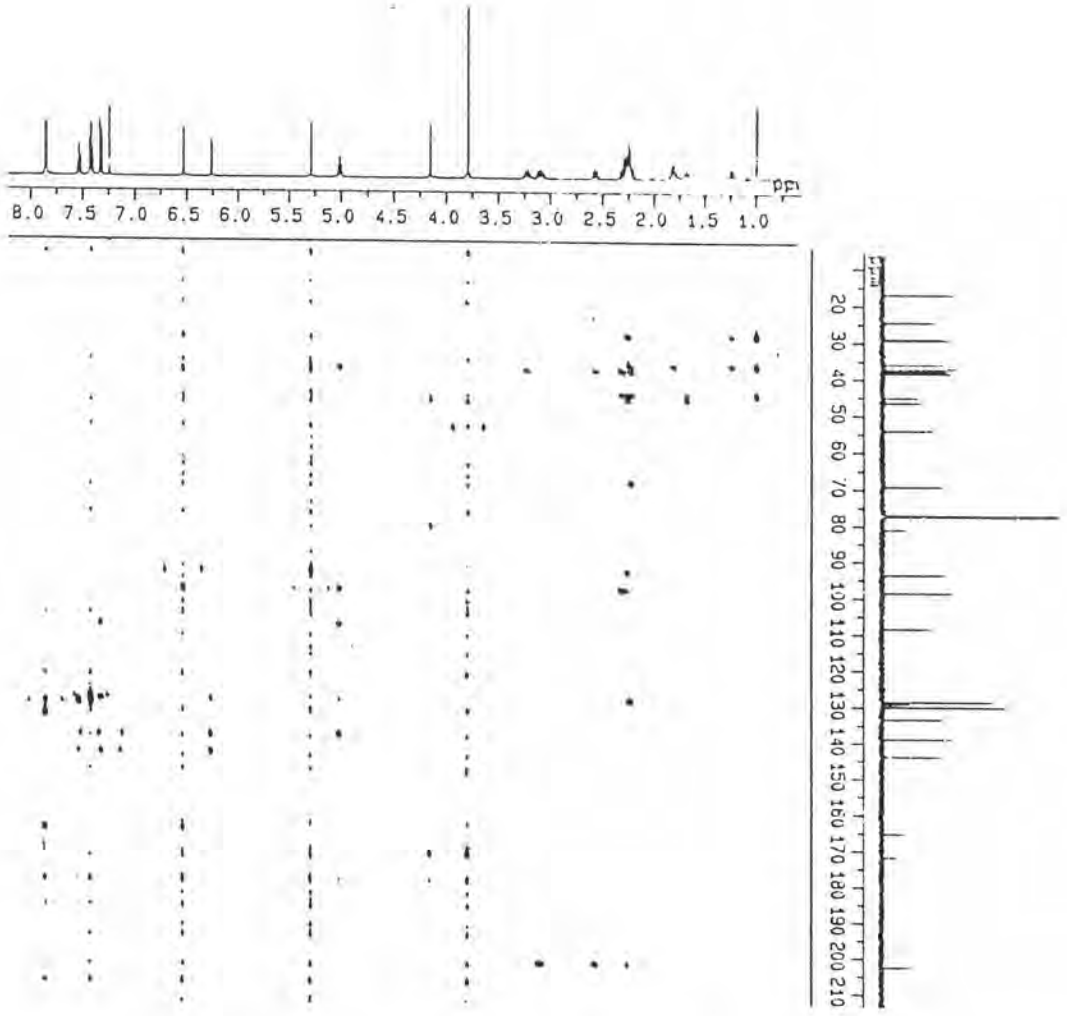

Figure 25: The HMBC (500 MH_z) correlation spectrum of compound 3

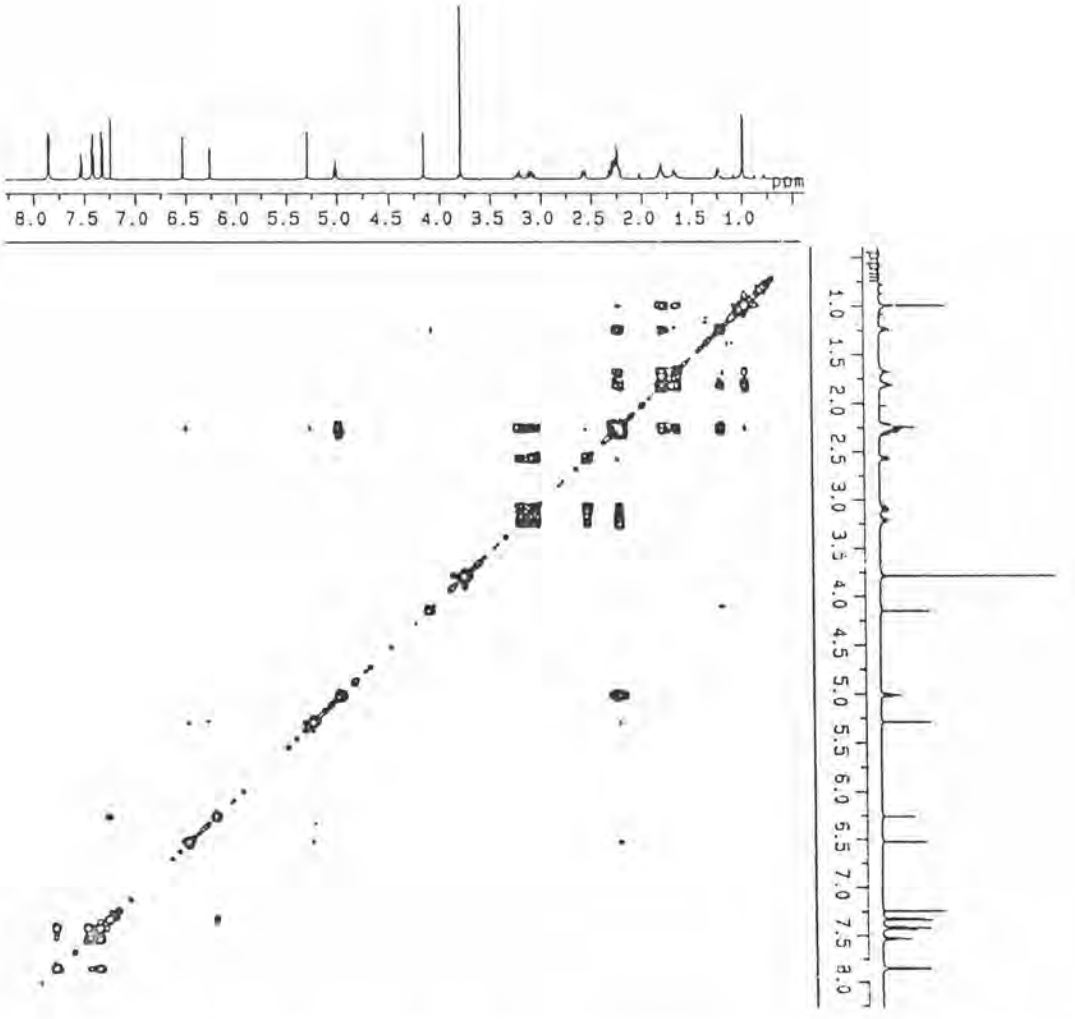

Figure 26: The COSY (500 MH_z) spectrum of compound 3

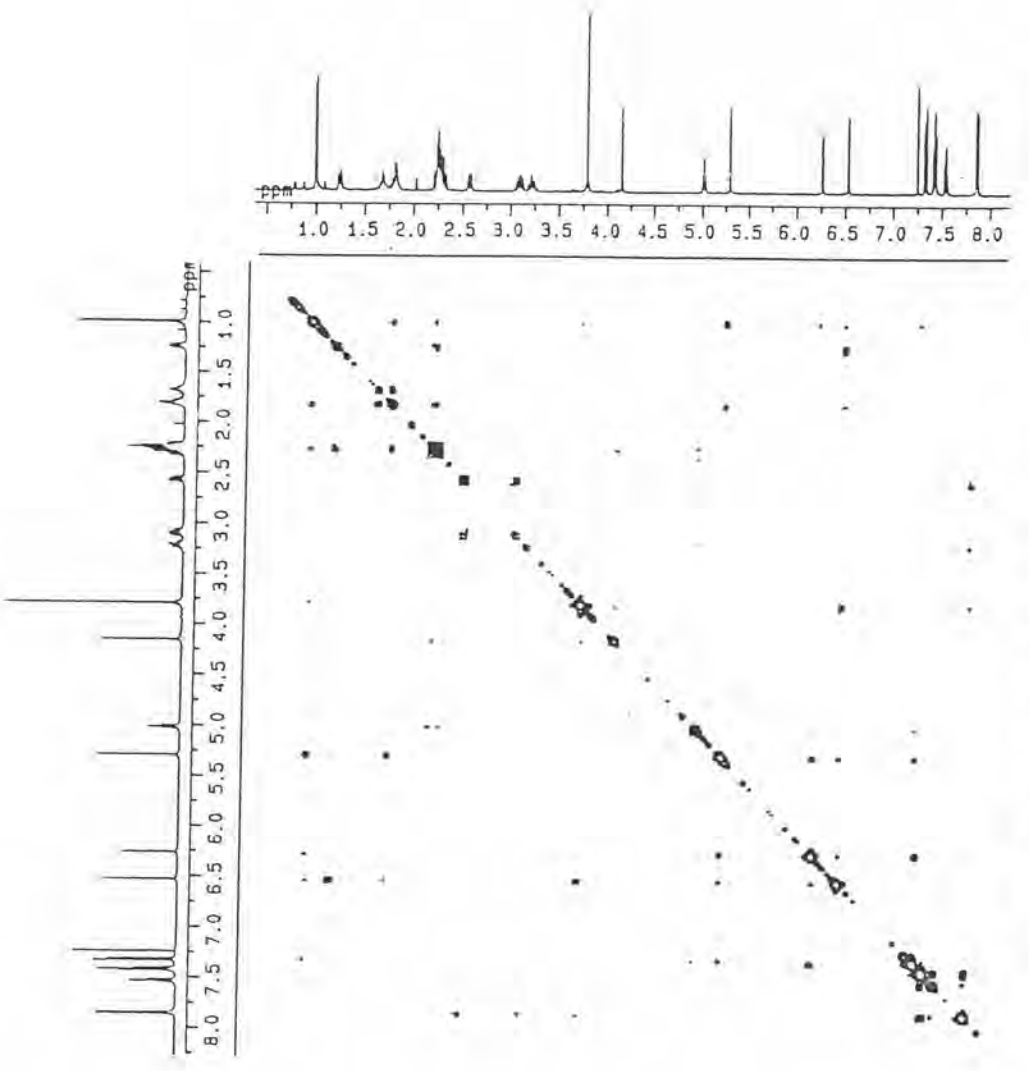

Figure 27: The NOESY (500 MH_z) spectrum of compound 3

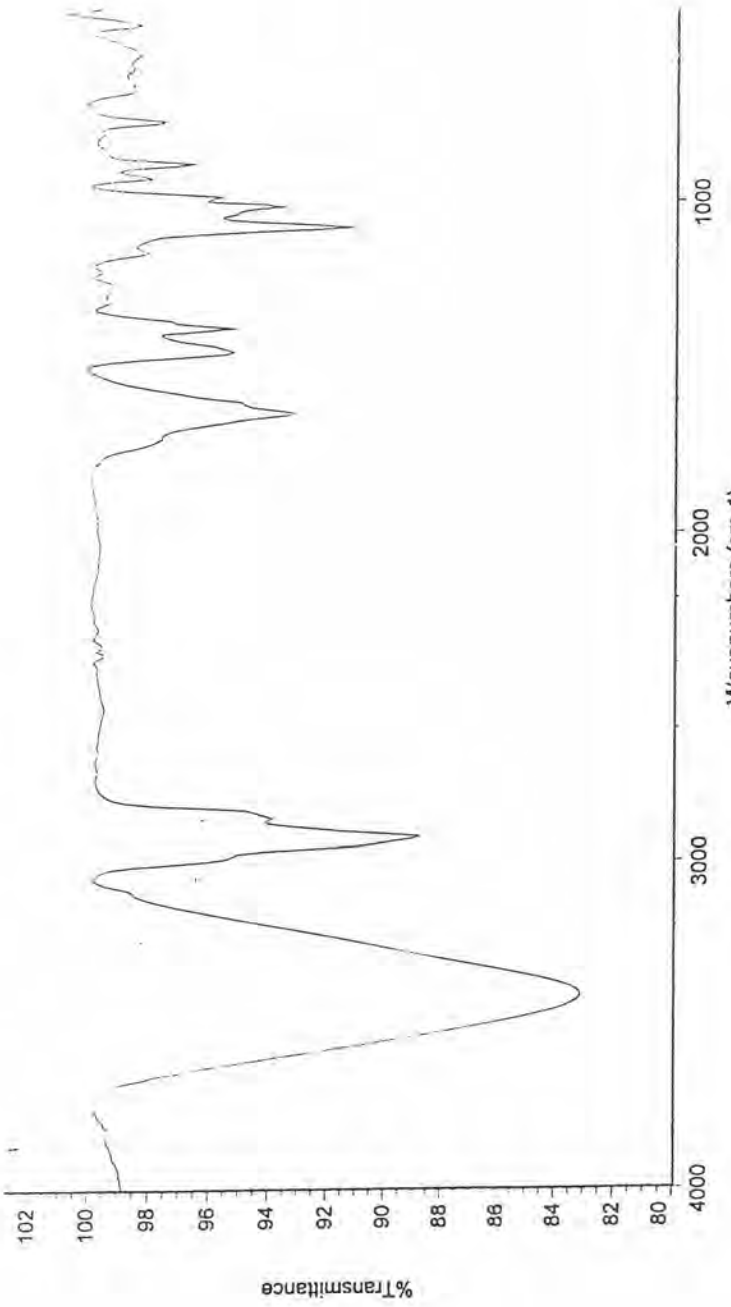

Figure 28: The IR spectrum of compound 4

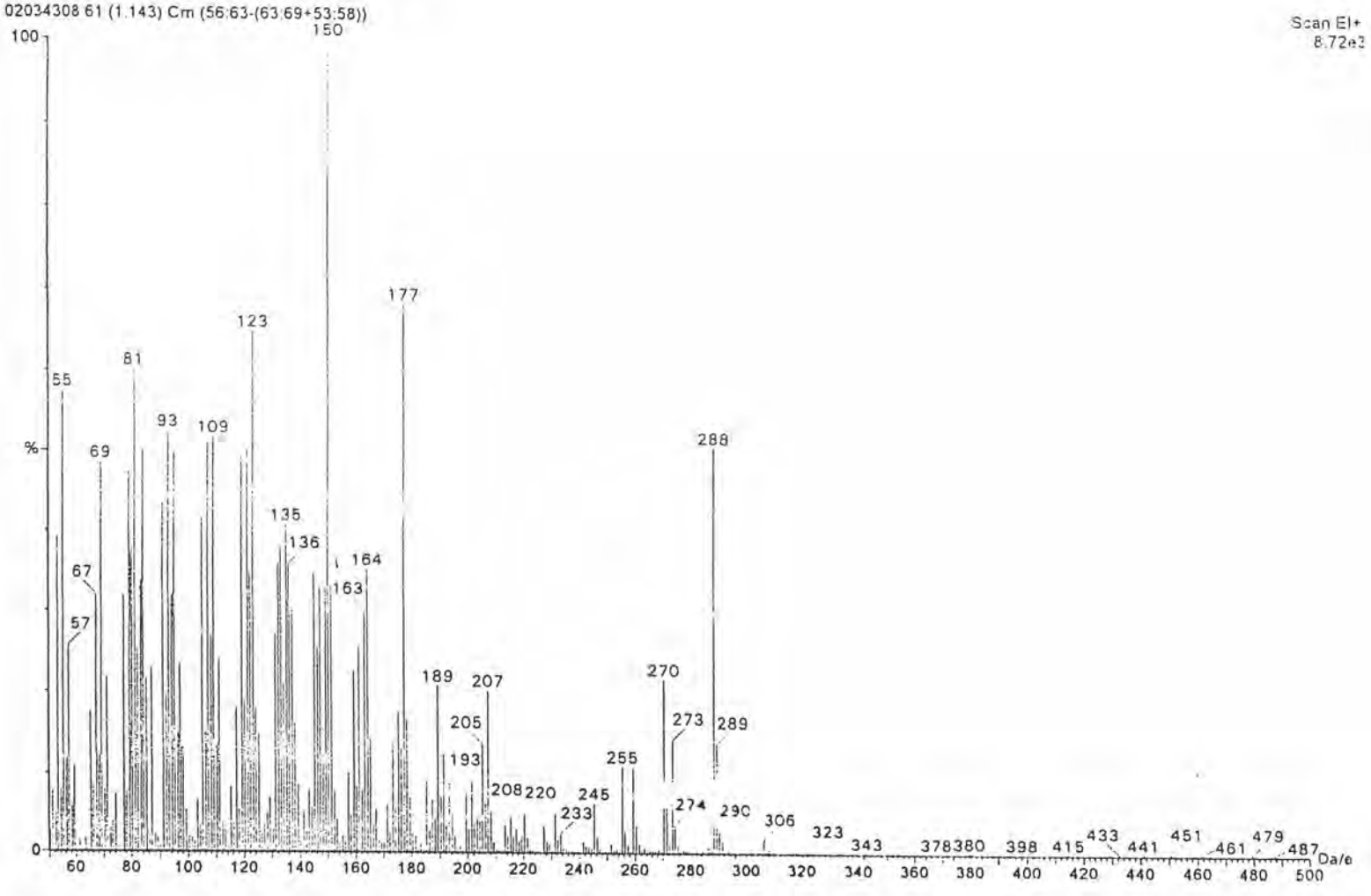

Figure 29: The EI mass spectrum of compound 4

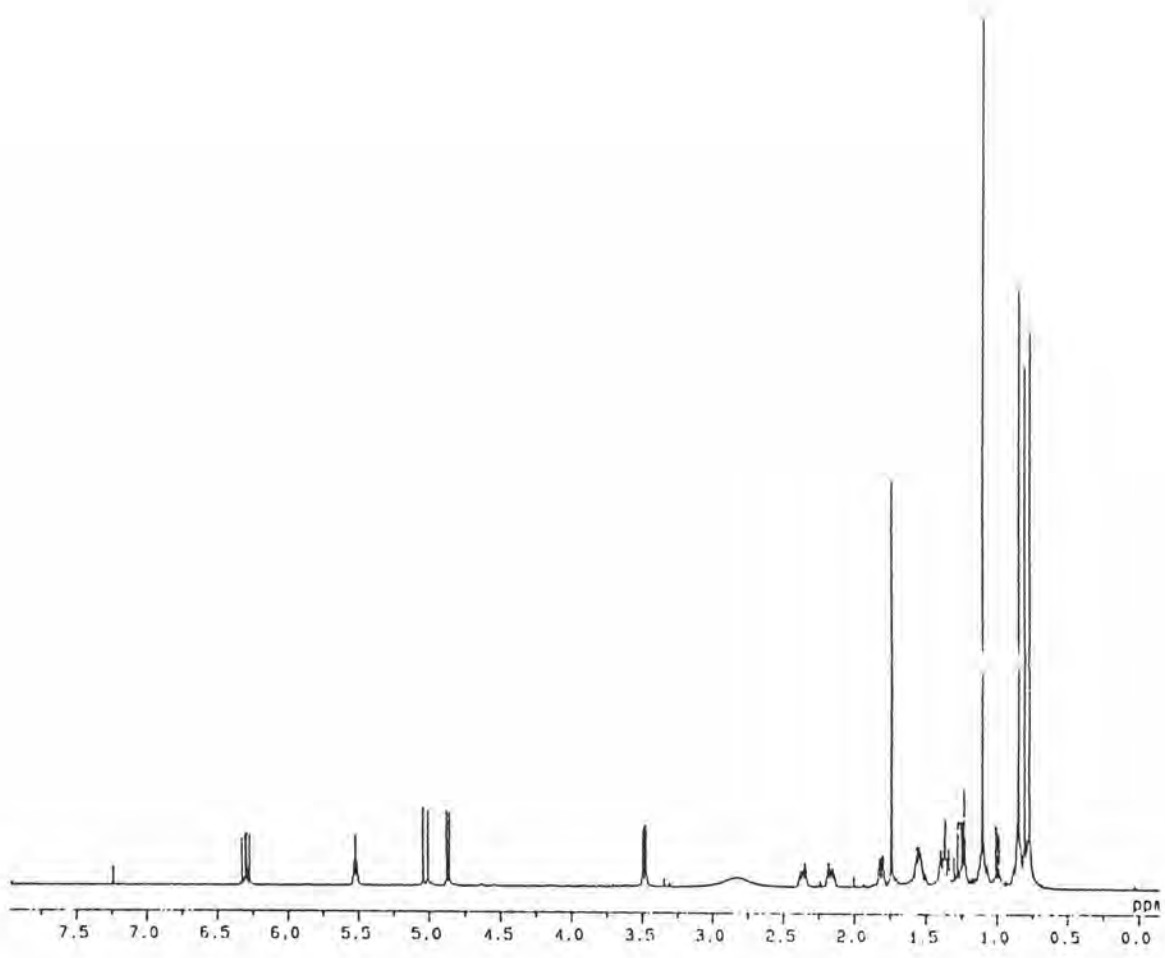

Figure 30: The ^{1}H NMR (200 MH_z) spectrum of compound $\underline{4}$ (in $CHCl_3$)

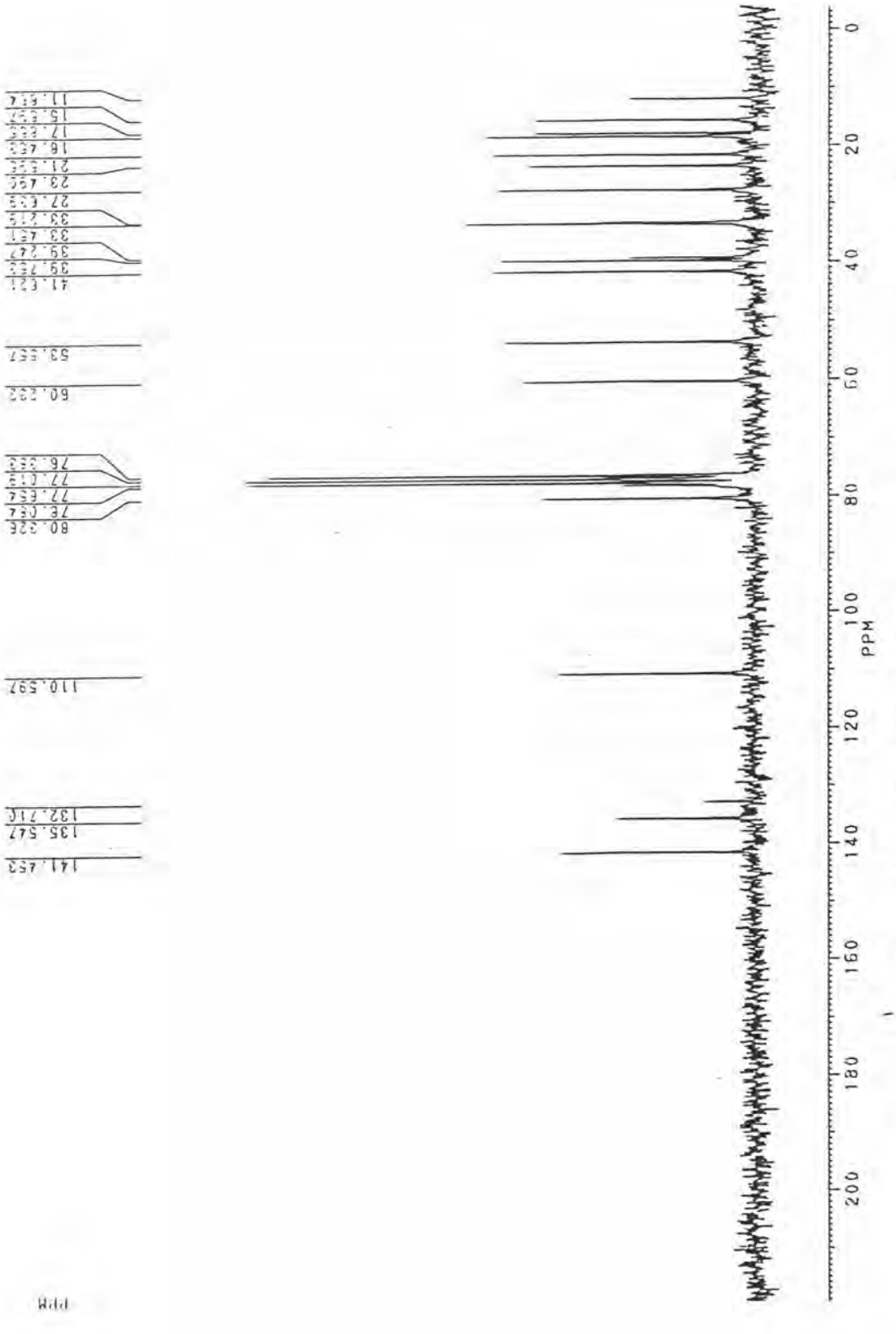

Figure 31: The ^{13}C NMR (200 MH_z) spectrum of compound 4 (in $CHCl_3$)

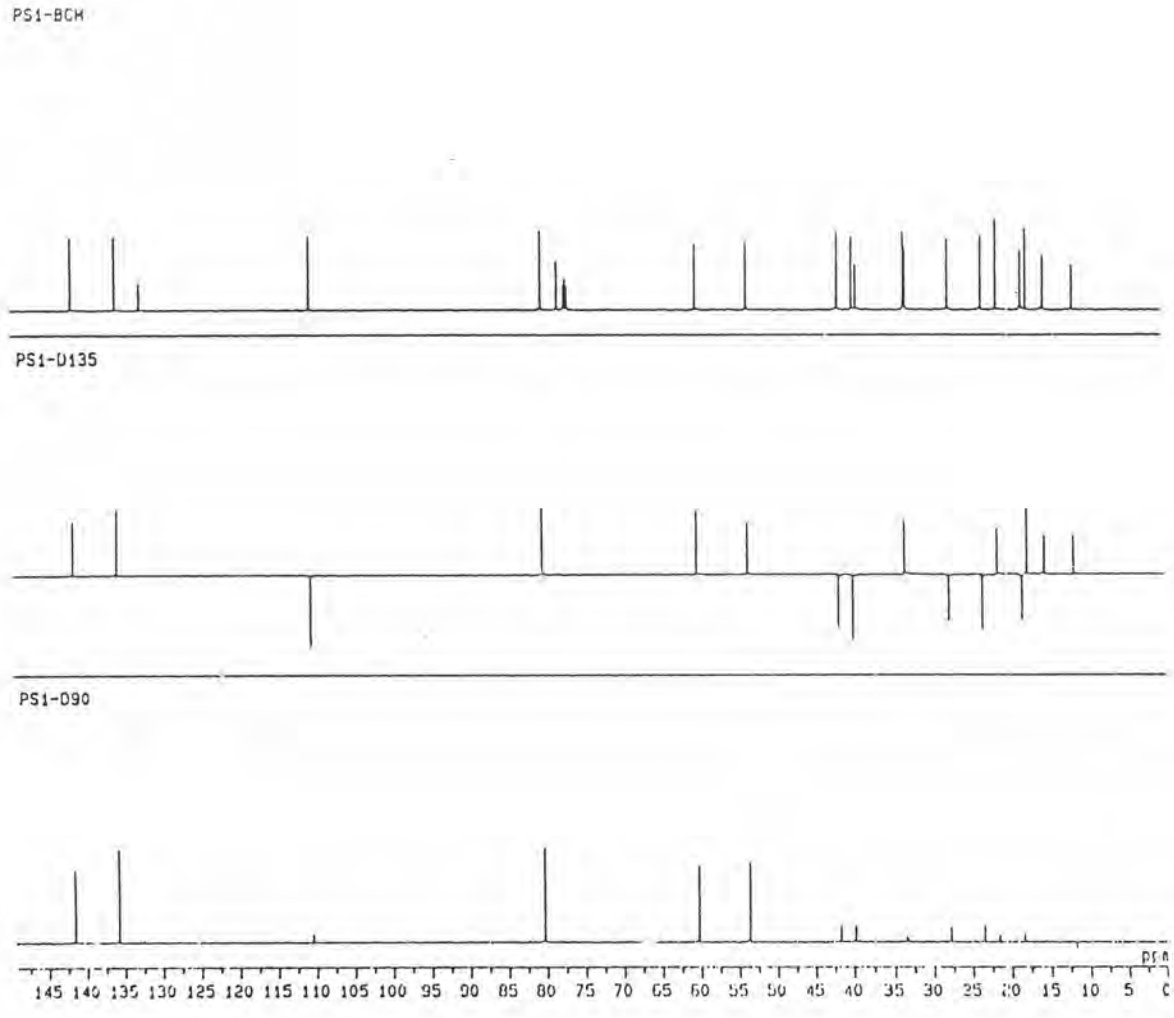

Figure 32: The DEPT (125 MH_z) spectrum of compound 4 (in $CHCl_3$)

VITA

Miss. Kusalin Musikul was born on November 17, 1974 in Nakornpratom, Thailand. She graduated with a Bachelor Degree of Science in Chemistry from Chulalongkorn University in 1998. During the same year, she was admitted into the Master's Degree Program in organic chemistry at Chulalongkorn University. She finishes her Master's Degree in the year 2000.