

APPENDIX

IR Spectrum

Figure 4.3

IR spectrum of Ni₂-HapIH

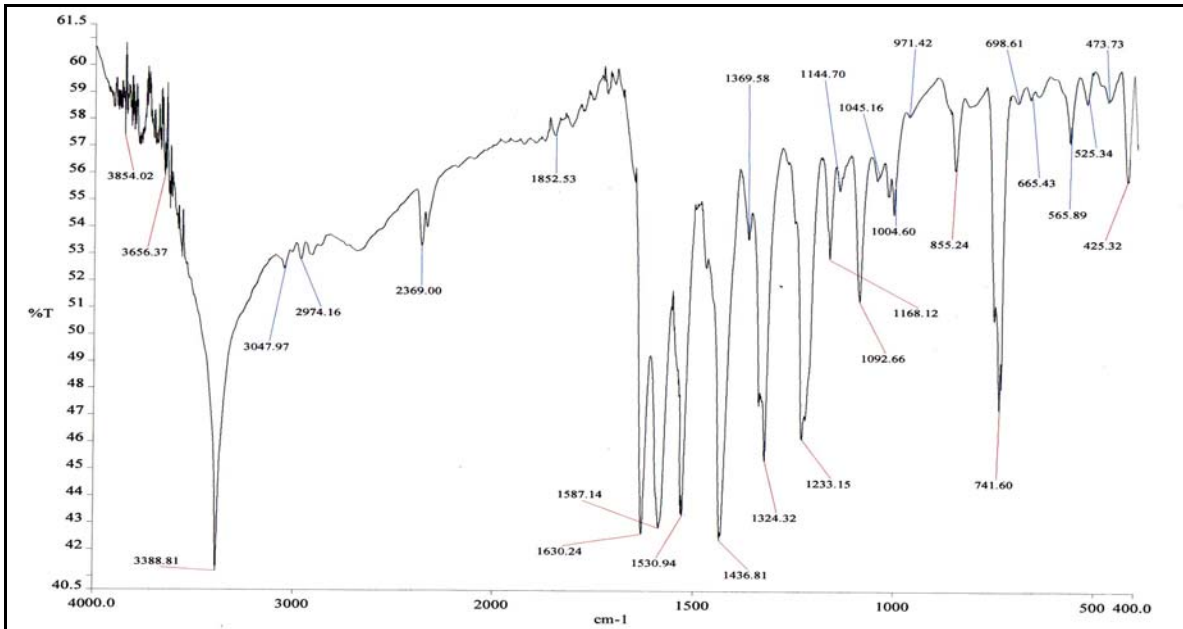


Figure 4.4

IR spectrum of 4-F-2-HapIH

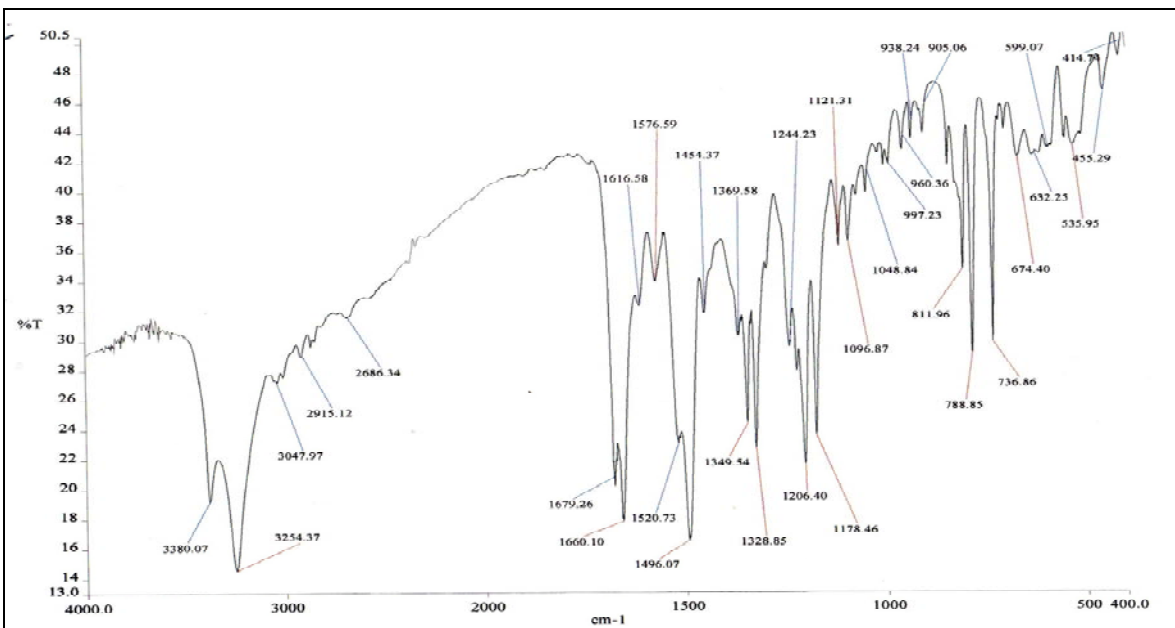


Figure 4.5
IR spectrum of Zn_4F_2 -HapIH

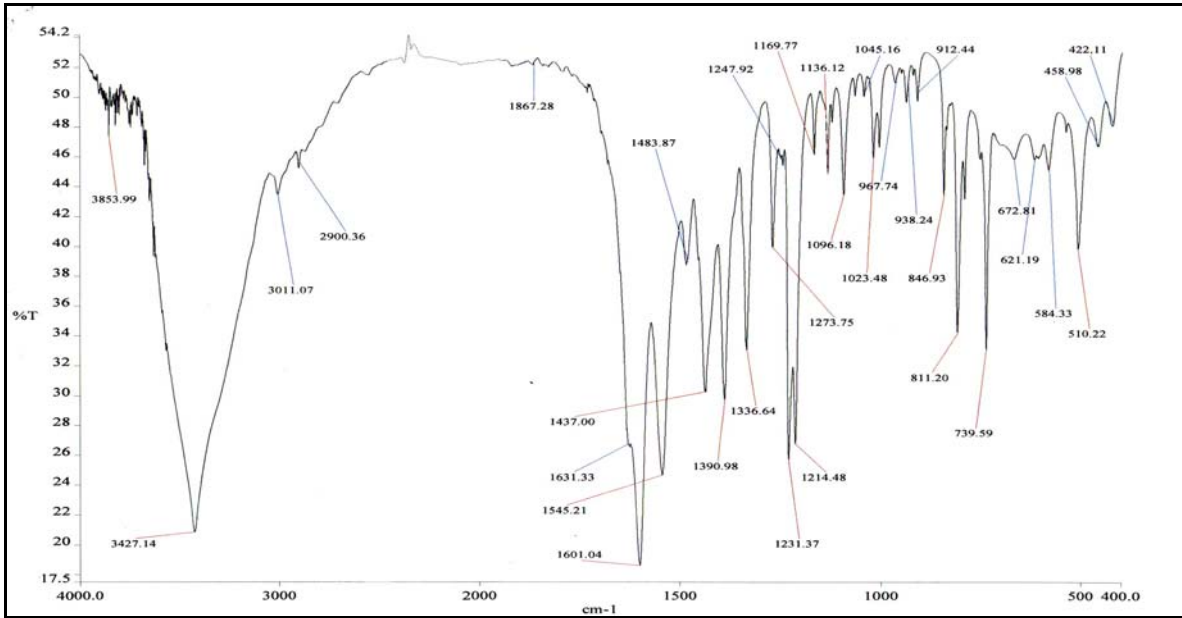


Figure 4.6
IR spectrum of Ni_4F_2 -HapIH

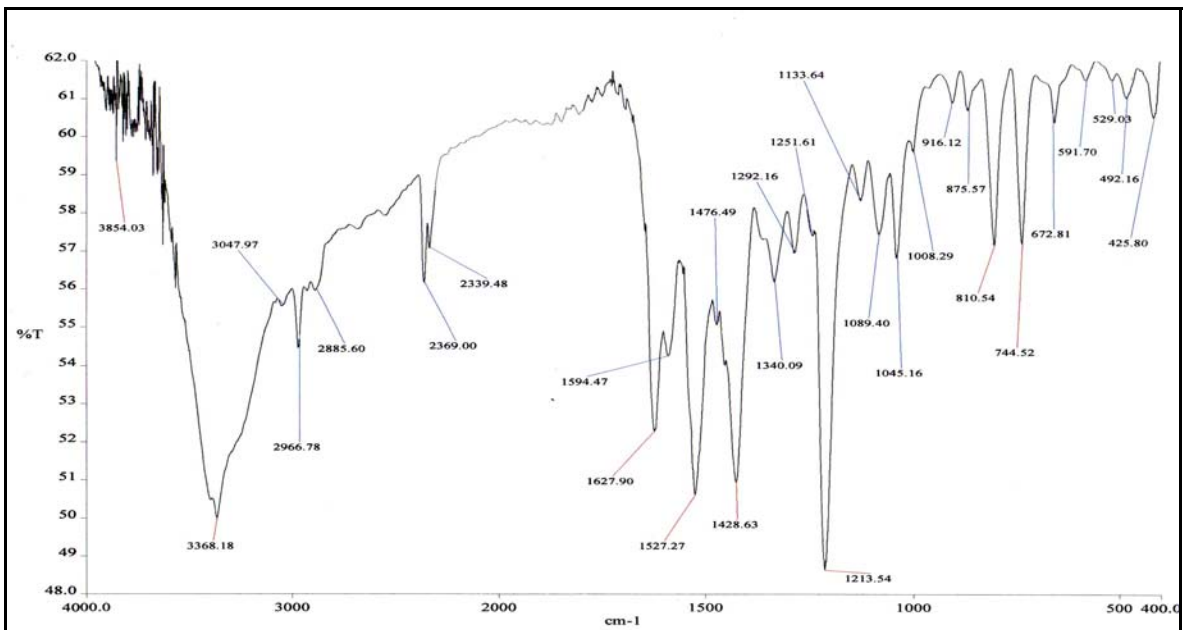


Figure 4.7
IR spectrum of $\text{Cu}_4\text{-F-2-HapIH}$

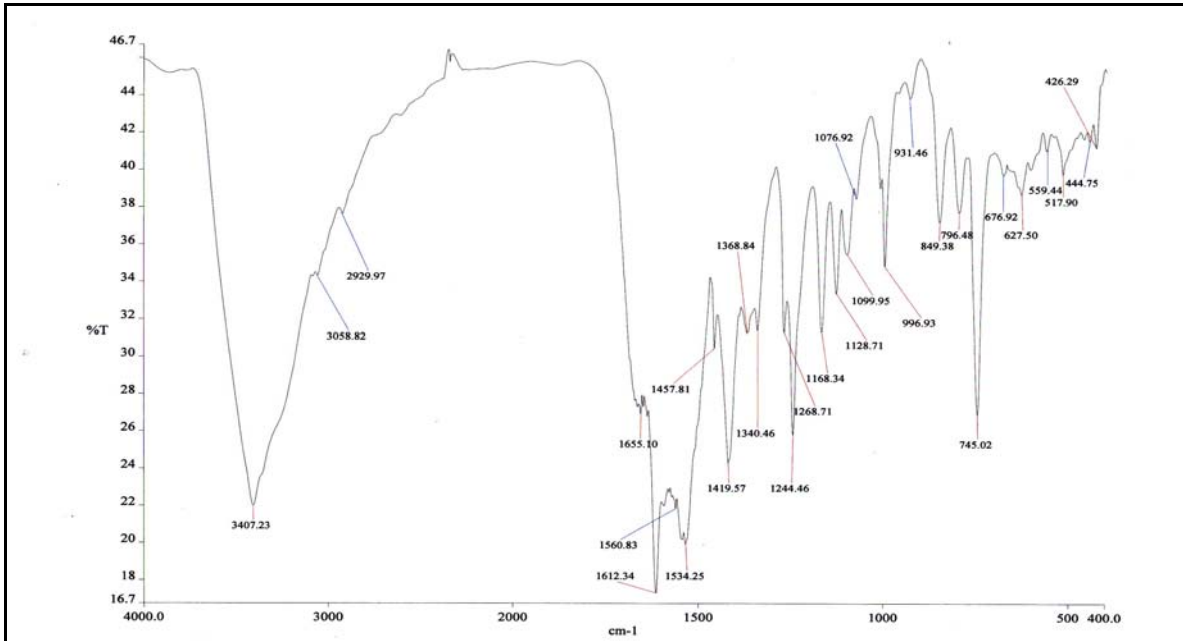


Figure 4.8
IR spectrum of 5- CH_3 -2-HapIH

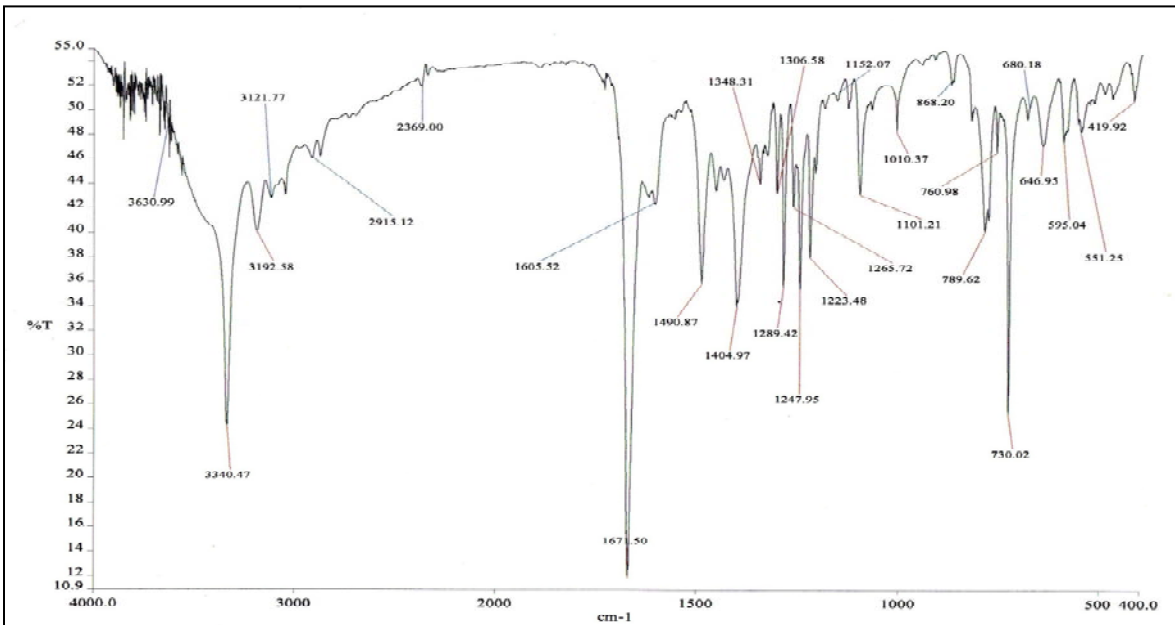


Figure 4.9
IR spectrum of Zn₅-CH3-2-HapIH

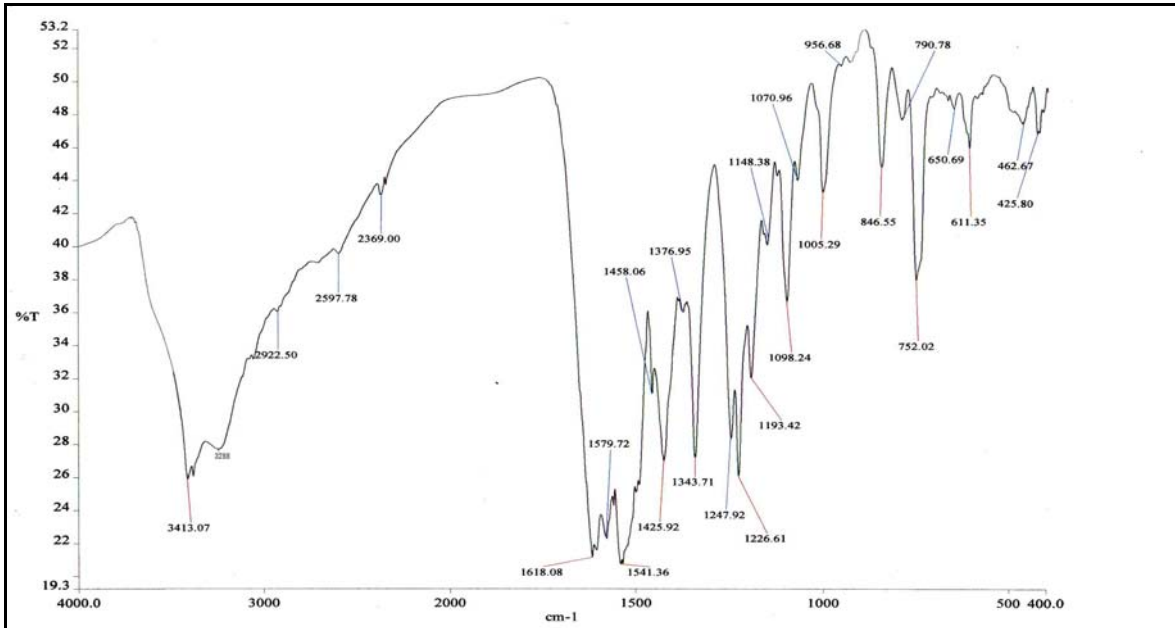


Figure 4.10
IR spectrum of Ni₅-CH3-2-HapIH

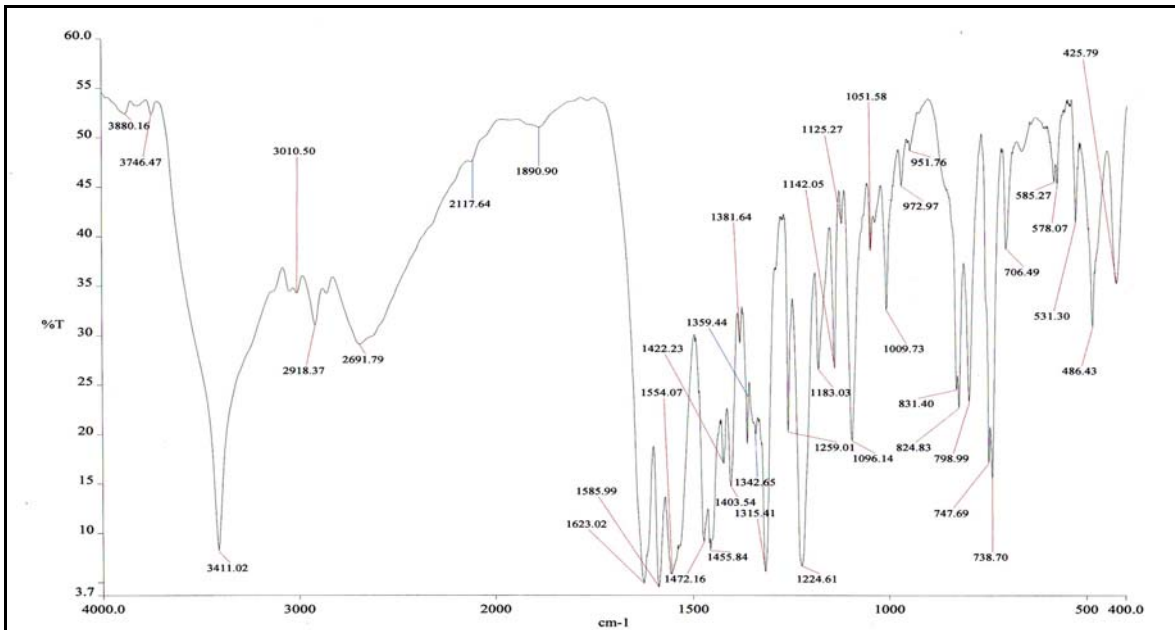
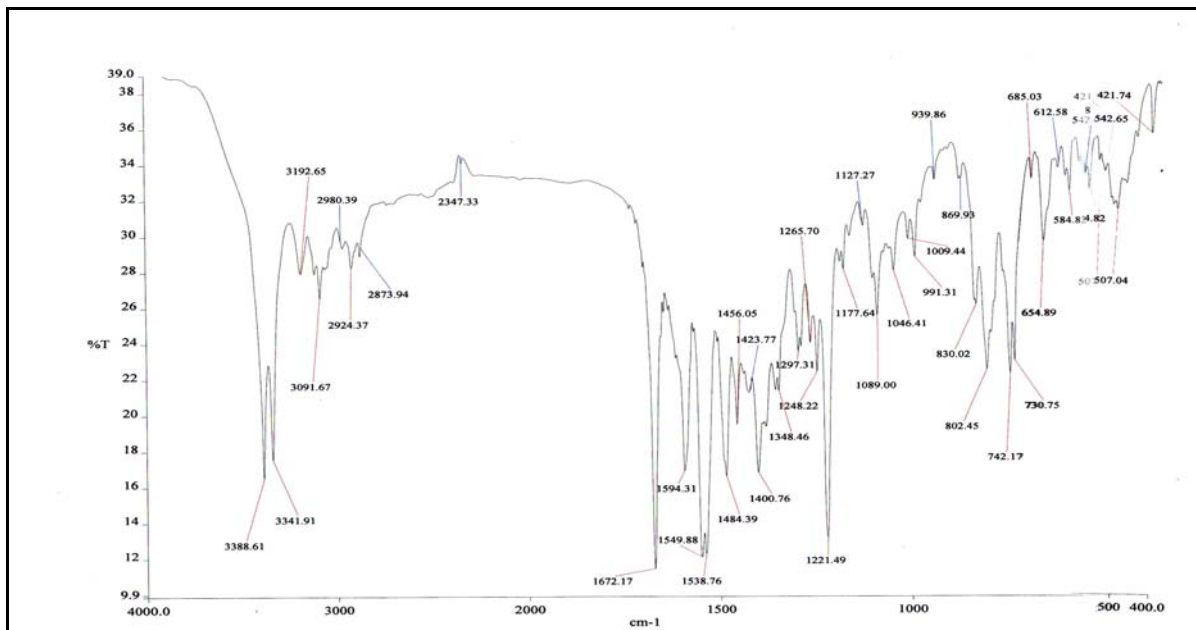


Figure 4.11
IR spectrum of $\text{Cu}_5\text{-CH}_3\text{-2-HapIH}$



NMR Spectrum

Figure 4.14:

^1H NMR Chemical shifts of 4-F-2-HapIH in ppm(δ)

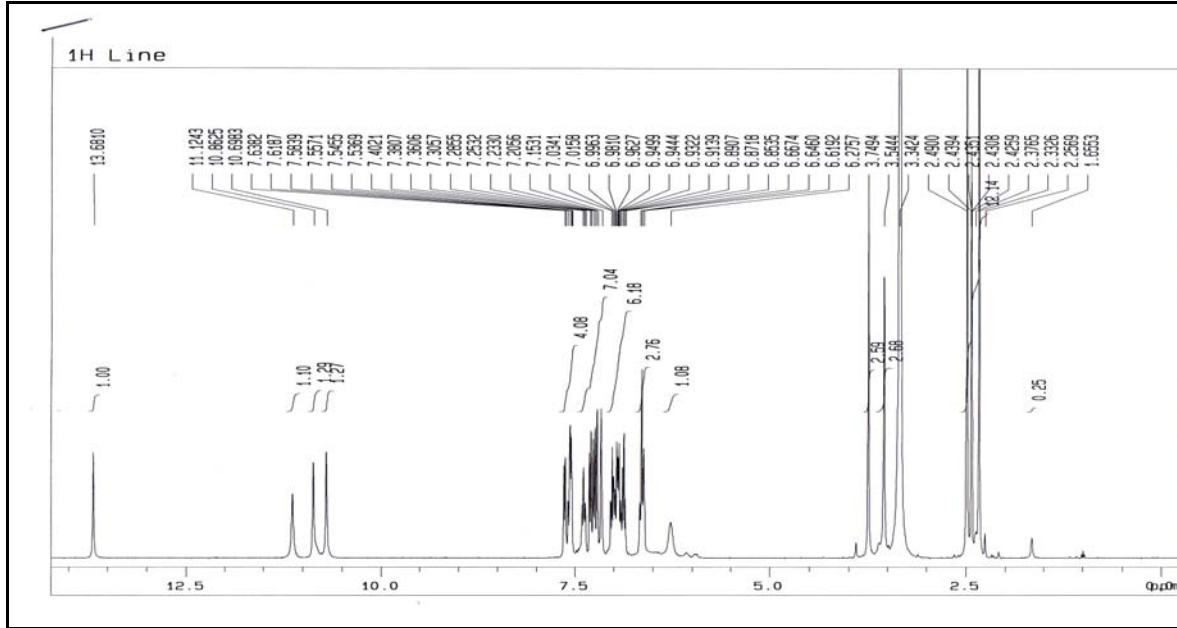


Figure 4.15

Schematic ^1H NMR diagram of 5- CH_3 -2-HapIH in ppm(δ)

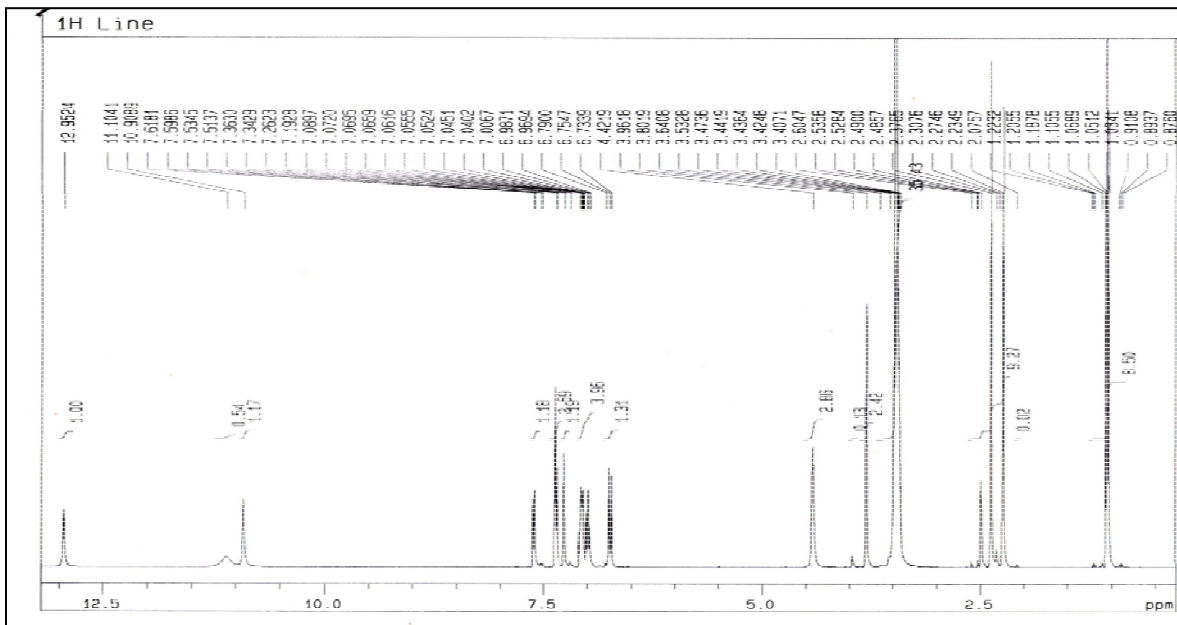
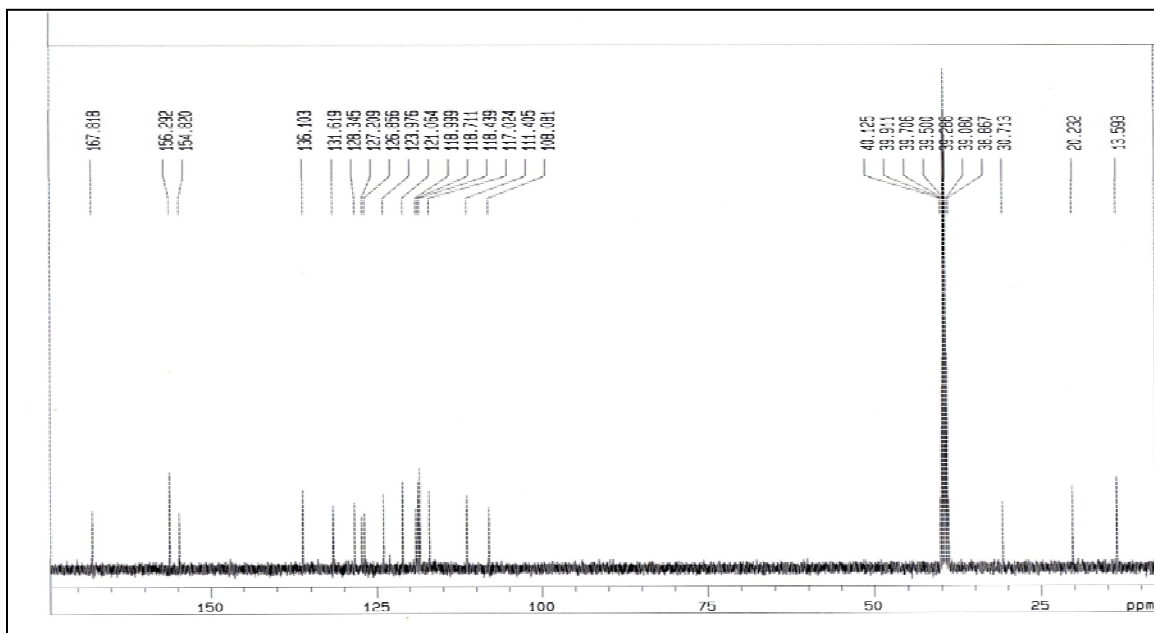


Figure 4.16
Schematic ^{13}C NMR diagram of 5- CH_3 -2-HapIH in ppm(δ)



UV – Visible Spectrum

Figure 4.19
UV visible spectrum of Ni₂-HapIH

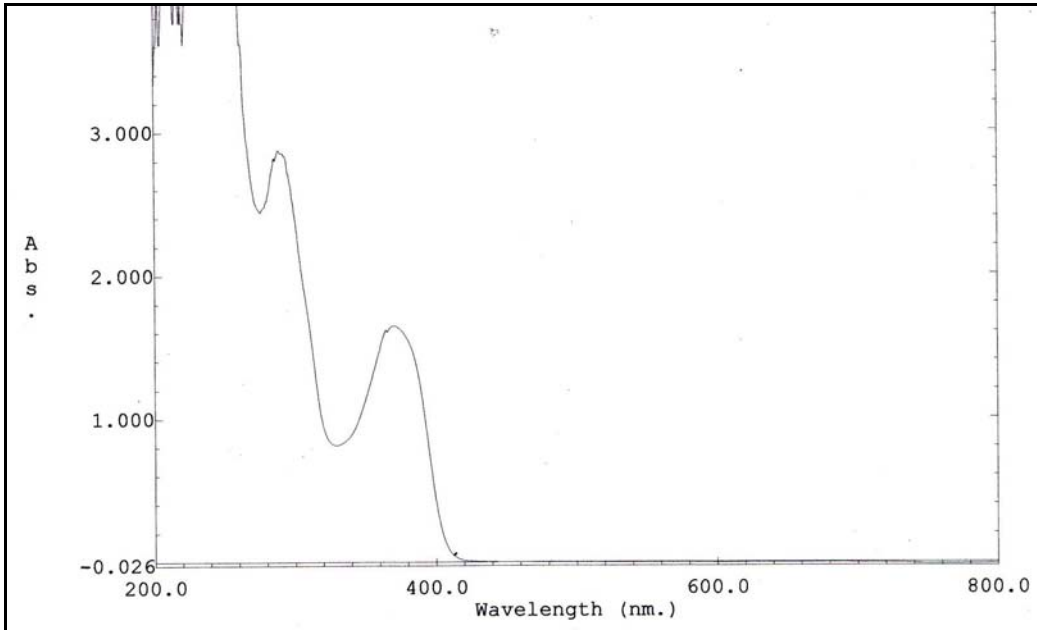


Figure 4.20
UV visible spectrum of Cu₂-HapIH

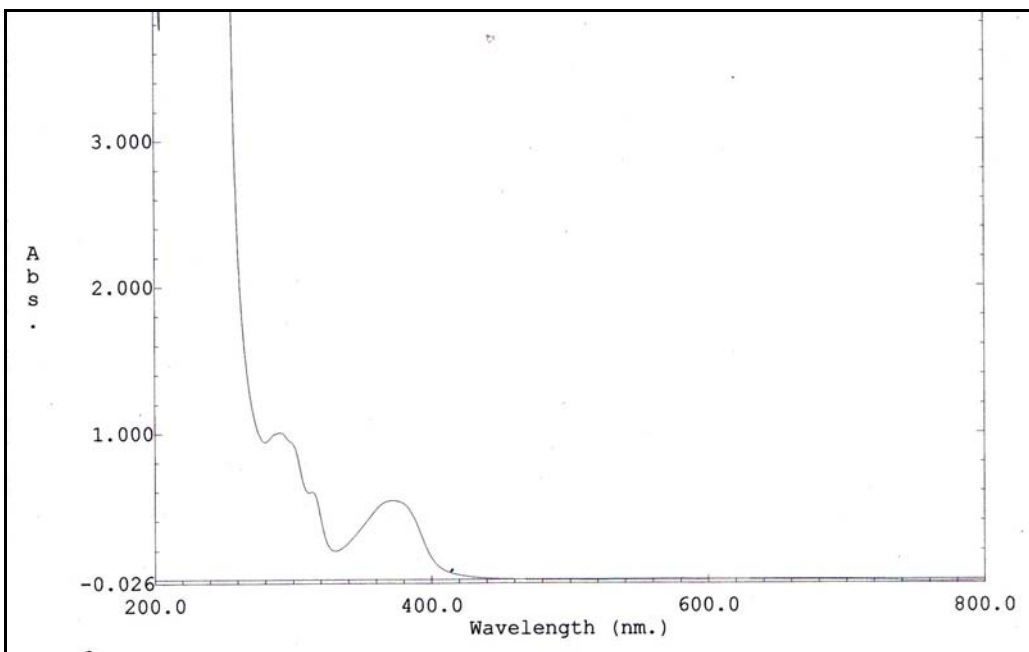


Figure 4.21
UV visible spectrum of 4-F-2-HapIH

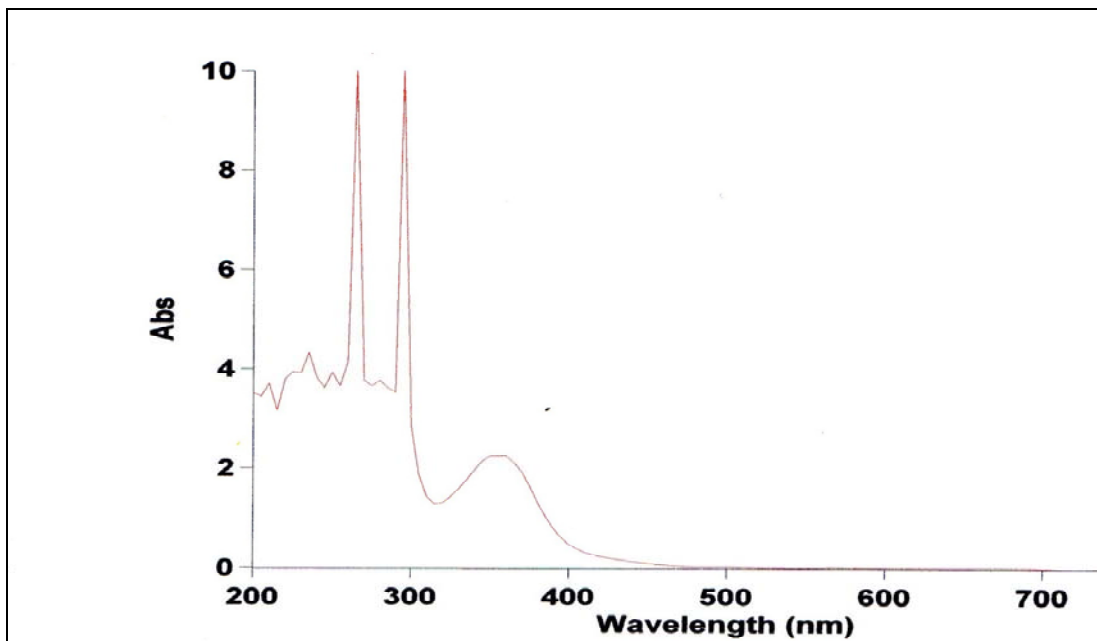


Figure 4.22
UV visible spectrum of Zn₄-F-2-HapIH

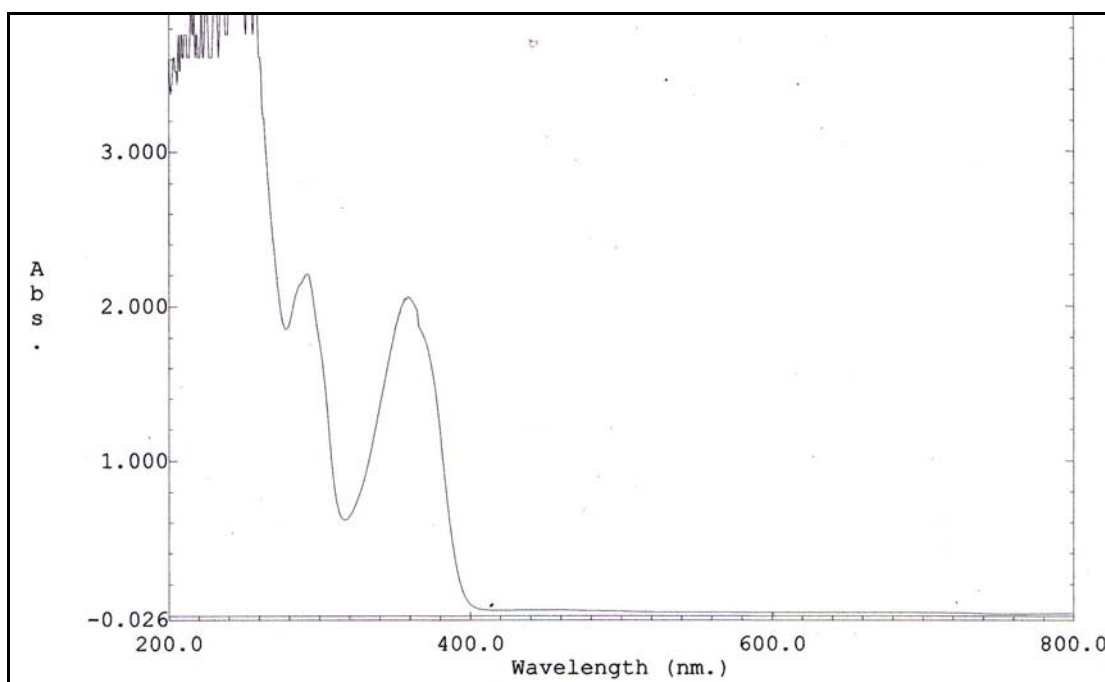


Figure 4.23
UV visible spectrum of Cu₄-F-2-HapIH

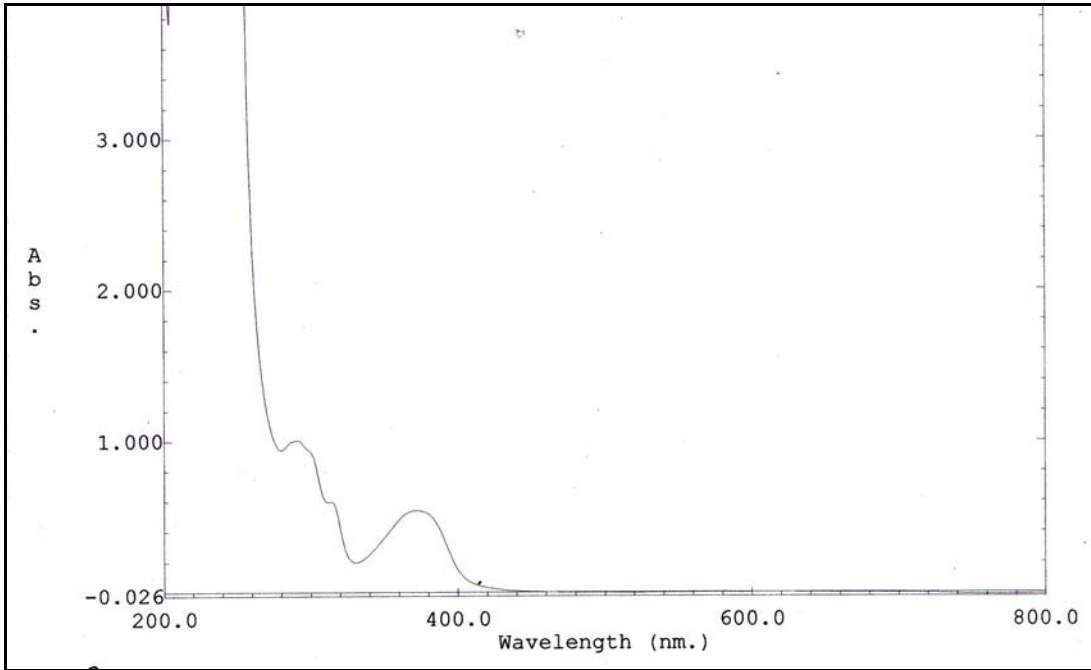


Figure 4.24
UV visible spectrum of 5-CH₃-2-HapIH

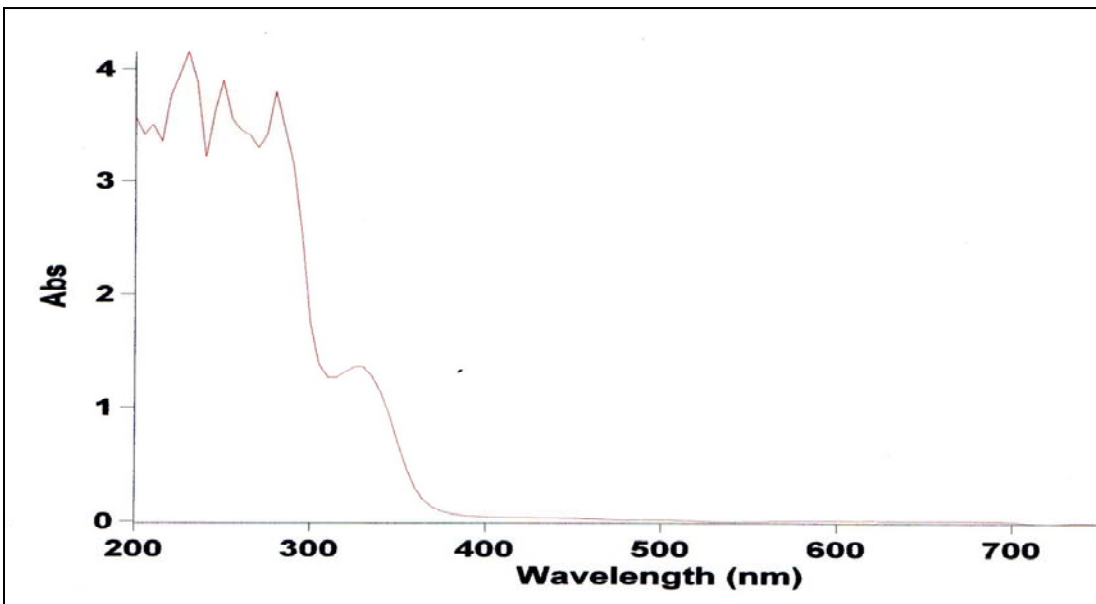


Figure 4.25
UV visible spectrum of $Zn_5-CH_3-2-HapIH_L$

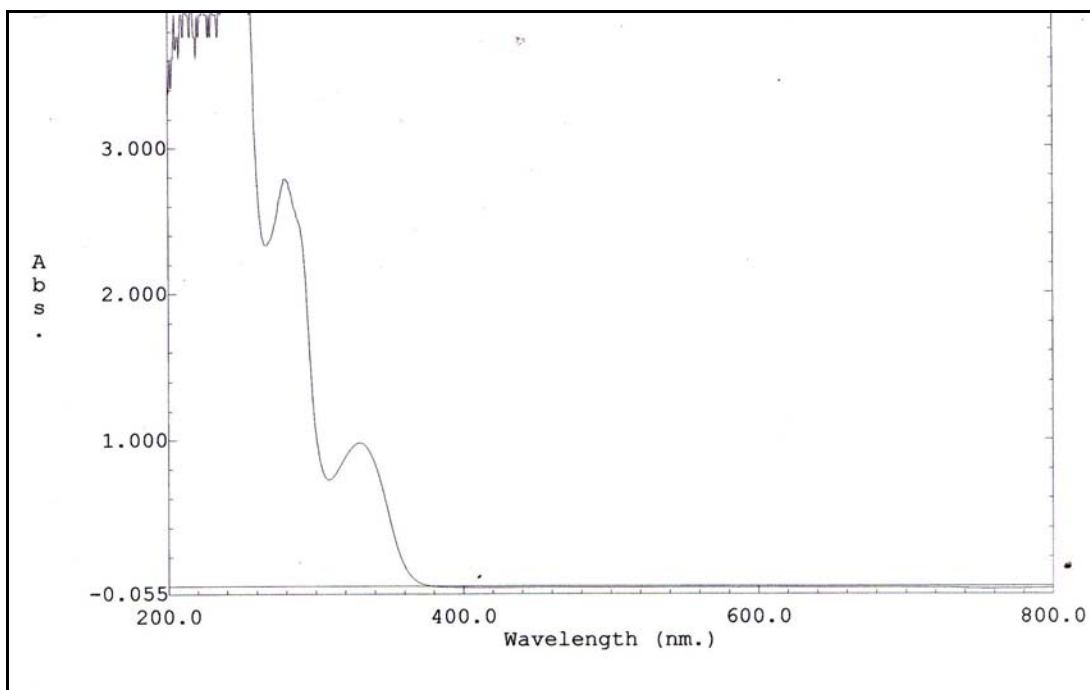


Figure 4.26
UV visible spectrum of $Ni_5-CH_3-2-HapIH$

