



**A New Mannich Base Derived by Three Component
Condensation of Benzamide, Benzaldehyde and Morpholine:
Synthesis, Coordination Mode and Biological Activities of
VO^{IV}, Mn^{II} and Fe^{II} Metal Chelates**

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Abstract: Mannich bases play an active role for the formation of hydrazone derivatives. Mannich base was prepared by condensation of benzamide, benzaldehyde and morpholine. The synthesized base was reacted with VO^{IV}, Mn^{II} and Fe^{II} metal ions to form complexes. They were characterized by elemental analysis, IR, ¹H & ¹³C NMR, UV-Vis, EPR, mass spectral studies and magnetic measurements. The complexes are non-electrolytic in DMSO. The presence of coordinated water molecules in these complexes was indicated by IR spectra and TG analysis. It was found that, all the complexes exhibited octahedral geometry. In addition, they were screened for their antimicrobial activity against different bacterial and fungal strains.

Keywords: Anti tubercular activity, Stoichiometry, Electron paramagnetic resonance, Disc diffusion method.

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