

Synthesis and Biological Activities of Metal Complexes

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ABSTRACT:

Transition metal (II) complexes, $[ML_2(H_2O)_2]$ 1–4, were synthesized by the reaction of $MCl_2 \cdot nH_2O$ ($M = Cu, Ni, Co, Mn$) and the schiff base ligand. Schiff base were synthesis by condensation of 2-hydroxy Aceto phenone with aromatic amines. Synthesized complexes were characterized by elemental analysis, FT-IR spectra and TGA. The Schiff base ligand and its complexes have been tested in vitro antibacterial activity against bacteria, viz. Escherichia coli MTCC – 443, Pseudomonas aeruginosa MTCC – 1688, Bacillus subtilis MTCC – 441, Staphylococcus aureus MTCC – 96 and fungal strain Aspergillus niger MTCC – 282. It has been found that the complexes have higher activity than the corresponding schiff base ligand in comparison with the same bacterial and fungal strains.

Keywords : Transition metal (II) complex; Schiff base; antibacterial activity