

SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL APPLICATIONS OF MONONUCLEAR AZAMACROCYCLIC METAL COMPLEXES

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ABSTRACT

A novel series of mononuclear azamacrocyclic metal complexes using the cobalt (II) chlorides were synthesized by the reaction of 2, 6 dibenzoyl-4-chloro phenols with ethylene diamine by adopting template method. The complexes have been characterized on the basis of micro analytical, IR, and magnetic measurement studies. Spectral studies suggested octahedral geometry around the cobalt. The antimicrobial activity of the complexes has been screened in vitro against bacteria and fungi to access their inhibiting potential. Metal complexes exhibited enhanced antimicrobial activity in comparison to their fragments. In vitro antioxidant activities of these compounds were evaluated and compared with commercial antioxidant ascorbic acid. The results showed good antioxidant activities of these compounds.

KEYWORDS: Azamacrocyclic Complexes, Antibacterial, Antifungal, Antioxidant