



Study of Schiff Base Complexes of Mn(II), Co(II), Ni(II), Cr(III), Cu(II), Zn(II) and Cd(II) as Microbial Growth Inhibitors

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ABSTRACT

The amino acid ligand [1-(2,4-dihydroxy-phenyl)-ethanone-(S)-alpha-amino-4-hydroxybenzenepropanoic acid] (DHPEAHP) was prepared by the reaction of 1-(2,4-dihydroxy-phenyl)-ethanone (DHPE) with (S)-alpha-amino-4-hydroxybenzene propanoic acid (AHP). The complexes of this ligand have been prepared using metal acetates of Mn(II), Co(II), Ni(II), Cr(III), Cu(II), Zn(II) and Cd(II) under reflux in methanol. The products were found to be crystalline solid. The complexes have been characterized by analytical, FT-IR, diffused reflectance, magnetic susceptibility measurements and Thermogravimetric analysis. All the compounds were screened for antibacterial activity against some clinically important bacteria, such as E. coli, S. typhi, S. aureus, P. aeruginosa and K. pneumonie by using nutrient agar medium and antifungal activity against C. albicans and A. niger species by using potato dextrose agar medium. The MIC values of the complexes were determined by the serial dilution techniques.

Keywords: Amino acid, DHPEAHP, antibacterial, antifungal, MIC value.
