

Biologically Active Tetraazamacrocyclic Complexes of Co (II), Ni (II), Cu (II), and Zn (II)

V. T. Kamble, S. N. Ibatte

E-mail:-ibateshyam@gmail.com

Abstract

A new series of macrocyclic complexes of type $[M(C_{14}H_{20}N_4)X_2]$ Where $M=Co(II), Ni(II), Cu(II), Zn(II)$, and $X=Cl^{-1}, NO_3^{-1}, CH_3COO^{-1}$ has been synthesized by [2+2] condensation reaction of ethylenediamine with and acetylacetone in the presence of divalent metal ions. The complexes have been characterized with the help of conductance measurements, electronic, NMR and infrared spectral studies. On the basis of these studies, six coordinate octahedral geometry has been proposed for all the complexes. The complexes were tested for their in vitro antibacterial activity. Some of the complexes showed remarkable antibacterial activity against some selected bacterial strains.

Keywords: IR, NMR, ESR, XRD, TGA-DTA, Antibacterial activity.