Name of Principal Investigator: Dr. Preeti Mangala

Broad Subject: Chemistry

Area of Specialization: Inorganic-Coordination Chemistry

<u>Funded Research Project</u>

Major / Minor : Minor

Details :

Funding Agency	Fund Allocation	Period of Project	Status of Project	Date of completion
UGC MRP(S)-554/2007(X Plan)/KABA021/UGC-SWRO	Rs.75,000	2007-2009	completed	07-07-2009

Project Title : Study of biological aspects of alkali and alkaline earth metal complexes and using them as ligands with transition metal ions.

Summary of the findings : Several mixed-complexes of copper(II), zinc(II) of general formula ML_2Q have been isolated where M = Cu(II) or Zn(II), L = glycine and Q = 8-hydroxyquinoline, 5,7-diiodooxine, 5,7-dinitrooxine and oxine N-oxide complexes were synthesized by refluxing the metal chelates of glycine with alkali (Na or K) and alkaline earth (Ca or Mg) metal ligated oxine and its derivatives, N-N oxide in non-aqueous medium. On cooling, adducts were separated. These were filtered, washed and dried in electric oven at 120°C. The transformation temperature of the complexes was considerably higher than that of the ligated alkali and alkaline earth metal showing their greater stability with the chelated complexes. The IR spectra of the above mixed-ligand complexes indicates the presence of H bonding in them, the coordination of the metal with Q has taken place through O-atom of C=OH group as well as through N-atom of quinoline ring of the ligand. The probable structure has been suggested on the basis of Uv& IR spectra and μ_{eff} values.

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