SYNTHESIS AND CHARACTERIZATIONS OF NEW LIGAND AND ITS Cu(II) AND Zn(II)-COMPLEXES DERIVED FROM 2,3-DIAMINOPYRIDINE AND 2-HYDROXY,5-METHOXYBENZEALDEYDE

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Compounds containing azomethine group (–C=N–) in the structure are known as Schiff bases, which are usually synthesized by the condensation of primary amines and active carbonyl groups. Schiff bases have gained importance because of their physiological, pharmacological and chemical activities. These compounds are well known for their properties as anti-bacterial, antifungal, anti-cancer anti-viral agents and complexing reagents.

The Schiff bases involving a pyridine ring have received considerable attention in the literature because of their very important role in biological systems. They may also be used as analytical reagents for metals and as anti-inflammatory agents.

A literature reveals that although a few mono and bis Schiff bases and cyclic products derived from 2,3-diaminopyridine have been prepared. Their metal complexes and biological activity have scarcely been investigated.

In view of this, we describe the synthesis, characterization and electrochemical properties of Schiff bases, copper(II) and zinc(II) complexes derived from 2,3-diaminopyridine and 2-hydroxy,5-methoxybenzealdehyde. These compounds were synthesized in organic solution using stoechiometric reagents either for the ligand or for its complexes. These reactions were conducted under reflux, magnetic stirring and nitrogen atmosphere during two hours. The ligand and its metallic complexes were characterized by physicochemical analyses methods as FTIR, mass spectroscopy, RMN H and UV-Vis and. Their electrochemical behaviours were carried out using cyclic voltammetry with which the metallic centres were easily evidenced by their intrinsic redox systems, Cu(II)/Cu(I) and Zn(II)/Zn.