

P10: Synthesis and characterisation of a new schiff base ligand derived of the 4,'4(daimino) diphinyl ether ethane, methane and their complex with transition metal

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Abstract:

Schiff bases are widely used as ligands to coordinate various metal ions because of their high solubility of their complexes. These compounds with several donors atoms have potential analytical applications in water treatment, due to their ability to readily form transition metals complexes. These complexes species are also involved in enzymatic reactions and present in proteins from conjunctive tissue. They can also be used as selective membranes or as inhibitors to prevent corrosion.

Our work is dedicated for the synthesis, characterisation and the study of the electrochemical survey of a new Schiff base ligand and their complexes of Cu (II), Co (II), Ni (II) and Cd (II). First ly, we have synthesized the ligands and their complexes. And then those products were characterised by usual spectroscopic methods so as IR, UV-vis, RMN and elementa analyses. An electrochemical survey, by cyclic voltammetry for the ligand and its complexes, has been achieved in organic midiun, DMF-TBAHFB 0.1M, on a platin electrode of 2 mm of diameter. In this study we observed:

- the catalytic effect of metals salts activated by structure and the nature of product prepared.
- the effect of substituted (x) in the oxidation and the reduction of these compounds.

Key word: Schiff bases, organic electrochemistry, coordination complex, cyclic voltammetry