

STRUCTURAL STUDIES ON CU (II), FE (III) AND UO₂ (II) COMPLEXES WITH PYRAZINE-2-CARBOXYLIC ACID HYDRAZIDE AND ITS DERIVATIVES

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ABSTRACT

Transition metals and their complexes have evolved great interest due to their biological potential^(1,2) unusual structural aspects, unique stereo and magneto chemistry (3) Azomethine constitute one of the most important class of biologically active ligands providing potential binding sites through nitrogen and sulphur/oxygen donor atoms. The different modes of bonding produce appreciable changes in the biochemical properties of the metal derivatives which are prepared and are of tremendous interest due to the current focus in the study of sulphur nitrogen donor ligands and their complexes. Our continuing interest in the synthesis of biologically active. Complexes, led us to further synthesise and characterize a new class of unsymmetrical Cu (II), UO₂ (II) and Fe(III) complexes during the course of the present investigation employing pyrazine-2-carboxylic acid hydrazide and its derivatives. Nature of electron donating or withdrawing groups at ortho and/ or para positions of the benzene ring may also affect the isomer shift^(14, 15). This is because disubstitution in the benzene ring may affect the nature of (Fe-O) bond to some extent. Similar variations have been observed in alkyl phosphine and phosphite substituted pentacyano ferrate complexes⁽¹⁶⁾. It is well known that δ -values and metal-ligand stretching vibrations are affected 'by the substitution of alkyl or halide group in the ligand.

KEYWORDS: Pyrazine-2-Carboxylic Acid Hydrazide Cu (II), Fe (III) and UO₂ (II) Complexes

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