

Synthesis and Characterization of Copper(II) and Zinc(II) Complexes Containing 1-Phenyl-3-methyl-4-benzoyl-5-pyrazolone

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The synthesis, structure, and physical properties of a series of mononuclear complexes *viz.* [Cu(L)₂] **1**, [CuL₂(CH₃O)₂] **2** and [Zn(L)₂] **3** (where L = 1-Phenyl-3-methyl-4-benzoyl-5-pyrazolone (PMBP)) are presented. The complexes were characterized by elemental analysis, IR and electronic spectroscopy (**1** and **2**), magnetic measurements at room temperature (**1** and **2**) and thermogravimetric analysis. The structures of all the three complexes were determined by single crystal X-ray diffraction studies. The coordination geometry around complexes CuL₂ (**1**) and ZnL₂ (**3**) is slightly distorted square planar while the geometry around Cu(II) of [Cu(L)₂(CH₃O)₂] (**2**) is distorted octahedral with four oxygen atoms of two PMBP ligand occupying the equatorial positions and two methanol molecules occupying the two axial positions.

Key words: PMBP Complex, Crystal Structure, Copper and Zinc Ions