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Synthesis and Characterization of Co(II), Ni(II), Cu(II) and Pd(II) Complexes of *N*-[(1*Z*,2*E*)-2-(hydroxyimino)-1-phenylpropylidene]benzohydrazide

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Abstract: Synthesis and characterization of ligand *N*'-[(1*Z*,2*E*)-2-(hydroxyimino)-1-phenylpropylidene]benzohydrazide and its metal complexes are reported. The ligand is monobasic bidentate/tridentate in nature depending upon the coordinating metal ion. The molar conductivities show that all the metal complexes are non-electrolyte. The bonding and probable structures of the metal complexes are discussed on the basis of spectral and magnetic data. Studies reveal that ligand behaves as tridentate in Ni(II) complex whereas in Co(II), Cu(II) and Pd(II) complexes it acts as bidentate ligand. Ni(II) complex have octahedral geometry while Co(II), Cu(II) and Pd(II) complexes have square planar structure.

Keywords: azomthine, oximino, bidentate, tridentate, metal complexes.

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