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Synthesis, Spectral, Magnetic, Thermal and Antibacterial Studies of Cu(II) and Ni(II) Complexes of Schiff base Derived from 5-chloro-2-hydroxybenzophenone and p-Phenylenediamine

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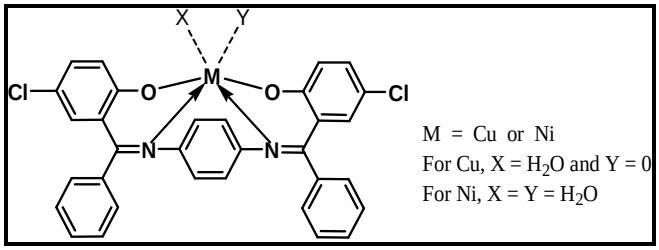
ABSTRACT

The complexes of Cu(II) and Ni(II) ions have been synthesized with Schiff base ligand derived by the condensation of 5-chloro-2-hydcoxybenzophonone and p-phenylenediamine in acidic medium. The synthesized compounds were investigated using different physicochemical techniques such as elemental analysis (C, H, N and Cl), FT-IR, ^{1}H NMR, diffuse reflectance spectroscopy, magnetic moment measurements and thermogravimetric analysis. The synthesized complexes have been assigned square planar geometries. The antibacterial activity of the Schiff base and its metal complexes have been also been tested, showing that the complexes are more active than the free Schiff base.

Graphical Abstract



Suggested geometrical structure of Metal complex of CHBPPD

Keywords: Schiff base complex, Transition metal complexes, spectral and Thermal studies, antibacterial activities.