

**SYNTHESIS, CHARACTERIZATION AND ANTIOXIDANT
STUDIES OF COPPER(II) COMPLEX WITH SCHIFF
BASES DERIVED FROM 4-HYDROXYBENZALDEHYDE**

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ABSTRACT

SYNTHESIS, CHARACTERIZATION AND ANTIOXIDANT STUDIES OF COPPER(II) COMPLEX WITH SCHIFF BASES DERIVED FROM 4- HYDROXYBENZALDEHYDE

Three Schiff base ligands were successfully synthesized by condensation reaction of 4-hydroxybenzaldehyde with benzylamine, *o*-phenylenediamine and ethylenediamine in 1:1 and 2:1 ratio yielding 4-hbba, 4-hbopd and 4-hben, respectively. Metal complex of Cu(II) has been isolated with the 4-hbba ligand and all of the synthesized compounds are characterized by infrared spectroscopy, ^1H NMR, magnetic susceptibility and molar conductivity. It is proposed that the synthesized complex $[\text{Cu}(4\text{-hbba})(\text{OAc})_2]_2 \cdot x\text{H}_2\text{O}$, has a tetrahedral geometry. The synthesized compounds have been screened for antioxidant properties by comparing their activities with vitamin C, where the ligands 4-hben and 4-hbopd are found to possess some antioxidation activities.