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Cu(II) complexes with heterocyclic Schiff bases of 2-amino benzoxazole and acetophenone derivatives: Synthesis, characterization and biological activity

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Two heterocyclic Schiff bases (named- CO, HO) have been developed from 2-amino benzoxazole and 2-chloro or 2-hydroxyacetophenone. Then, these have been used for complexation with $CuCl_2.2H_2O$ salt to prepare Schiff base metal complexes *via* thermal reflux method. Molar conductivity measurement, magnetic moment determination, spectral techniques including FTIR, ^1H NMR and mass spectrometry have been utilized for detailed characterization of the synthesized compounds. Biological assessment has been carried out employing agar well diffusion process to check the bio-efficacy of the synthesized compounds against selected microbes, *E. coli* and *B. subtilis* (bacteria) and, *C. albicans* (fungus). It is concluded from the findings that ligand CO has higher potential amongst all the synthesized compounds.

Keywords: 2-Aminobenzoxazole, Heterocyclic Schiff bases, Metal complexes, Antifungal potential, Antibacterial potential