



## Synthesis, Cyclic Voltammetric and Biological Studies of 2-Acetyl-1-Naphthol Sulfadiazine and its Cu(II) Complex

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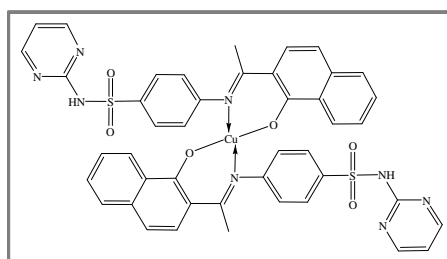
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### ABSTRACT

Schiff base ligand 2-acetyl-1-naphthol sulfadiazine (2-Ac-1-NapSD) and its new Cu(II) complex were synthesized. The nature of bonding and structural features of the 2-Ac-1-NapSD and Cu(II) complex were characterized by the elemental analysis, IR spectra and <sup>1</sup>HNMR spectra. Electrochemical properties of the 2-Ac-1-NapSD and Cu(II) complex were investigated at glassy carbon electrode in dimethylformamide (DMF) and methanol solvent using cyclic voltammetry at different scan rates. The effect of change in pH, solvent and sweep rates is evaluated. Kinetic parameters are calculated from cyclic voltammetric measurements and biological studies of the ligand and copper complex were carried out against various bacteria and fungi.

### Graphical Abstract:



Copper(II) complex of 2-Ac-1-NapSD Schiff base.

**Keywords:** 2-Acetyl-1-Naphthol Sulfadiazine, Cu(II) Complex, Cyclic Voltammetry, Biological Studies.