



**Synthesis, spectral characterization and antimicrobial activity studies of some complexes of Schiff base derived from (E)-3-chloro-N'-(2-oxoindolin-3-ylidene) benzo[b]thiophene-2-carbohydrazide**

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**ABSTRACT**

*Complexes of Cu(II), Ni(II), Zn(II), Mn(II), Fe(II), Cd(II) and Hg(II) with the Schiff base derived from 3-chlorobenzo(b)thiophene-2-carbohydrazide and Indoline-2,3-dione has been synthesized and characterized on the basis of elemental analysis, electrical conductance, ESR, XRD, IR, FAB-MASS, <sup>1</sup>HNMR, electronic spectra and magnetic susceptibility measurements. The Schiff base behaves as tridentate ligand coordinating through ONO donor site and forms the complexes of the types ML<sub>2</sub>. (H<sub>2</sub>O)<sub>n</sub> (where, L= Schiff base, M=Metal). The complexes are non-electrolytes, monomers and octahedral in nature. The ligand and its complexes have been screened for their antimicrobial activity.*

**Keywords:** Carbohydrazide, Schiff base, ESR, XRD, Antimicrobial activity.

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