



Synthesis, Characterization Antibacterial and Antifungal Activity of Some Mixed Ligand Complexes of Zinc (II) Formed with 1-Methoxycarbonyl-1-Cyanoethylene-2, 2- Dithiolate and Various Nitrogen Donors

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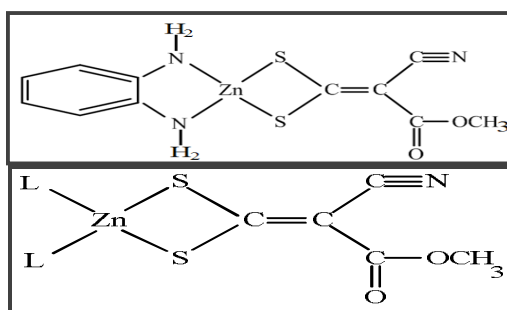
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Accepted on 10th August, 2018

ABSTRACT

*This chapter describes introduction of mixed ligand dithiolate complexes of zinc, synthesis of mixed ligand complexes of Zn(II) with dithiolate (1-methoxy carbonyl-1-cyano ethylene -2,2- dithiolate) and nitrogen donors like pyridine, α -picoline, β -picoline, γ -picoline, orthophenylenediammine and characterization by elemental analysis, molar conductance, IR, NMR spectroscopy and thermogravimetric analysis (TGA). These complexes are of non electrolyte nature as expected. Thermogram of $[Zn(S_2C=C(CN)COOMe)(OPD)].3H_2O$ suggest that water present in the complex is not coordinated to metal. The antibacterial and antifungal properties of these complexes have been screened against bacteria *E.coli*, *B.subtilis* and fungi *Aspergillus niger* and *Aspergillus fumigates*.*

Graphical Abstract



The structure of mixed ligand complexes of dithiolate of zinc(II).

$C_6H_4N_2$ = O-Phenylene diammine, L= Pyridine, α -Picoline, β -Picoline, γ -Picoline

Keywords: Zn(II), Dithiolate, Mixed Ligand, Nitrogen donor.