



Synthesis, Characterization, Antioxidant and Antimicrobial Evaluation of a Series of Co(II), Ni(II), Cu(II) and Zn(II) Metal Complexes with Bidentate Schiff base : 4-[[3-(4-chlorophenyl)-1-phenyl-1H-pyrazol-4-ylmethylene]-amino]-3-mercapto-6-methyl-5-oxo 1,2,4-triazine

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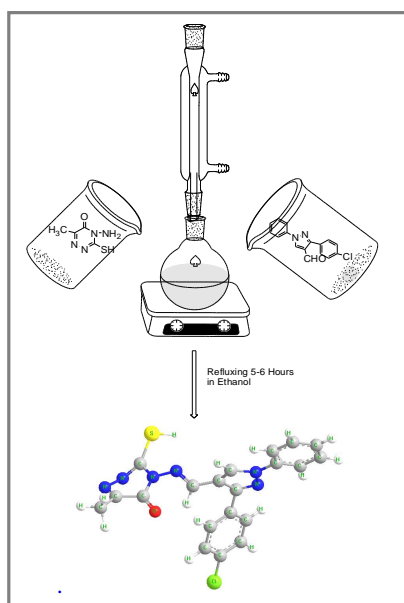
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ABSTRACT

Some new metal complexes of Co(II), Ni(II), Cu(II) and Zn(II) with Schiff base derived from 4-amino-3-mercapto-6-methyl-5-oxo-1,2,4-triazine with 3-(p-chlorophenyl)-1-phenyl-1H-pyrazole carboxaldehyde were synthesized and characterized by elemental analysis, spectroscopic techniques (IR, ¹H-NMR, Electronic, Fluorescence, ESR), cyclic voltammetry, magnetic moment measurements, thermal studies and kinetic calculations. With the help of above mentioned techniques an octahedral geometry for Co(II), Ni(II) and Zn(II) complexes and a square planar geometry of Cu(II) complexes have been proposed. Conductance measurements suggest non-electrolytic nature of metal complexes. The ligand and its metal complexes were screened in vitro for antibacterial and antifungal activities. Also, in vitro antioxidant activity of ligand and its metal complexes was assayed by radical scavenging activity (DPPH).

Graphical Abstract



Keywords: Metal complexes, Antifungal, Antibacterial, Fluorescent, Antioxidant.
