



X-Ray Diffraction Studies on Some Complexes of Schiff Base Derived from 3-Chloro-N'-[(1E)-1-(Pyridin-3-yl) Ethylidene]-1-Benzothiophene-2-Carbohydrazide

Razak Gafoor Sab¹ and B. H. M.Mruthyunjayaswamy^{2*}

1. Department of Chemistry, HKES SLN College of Engineering, Y-Camp, Raichur-584135, Karnataka, **INDIA**

2. Department of Studies and Research in Chemistry, Gulbarga University, Gulbarga-585106, Karnataka, **INDIA**

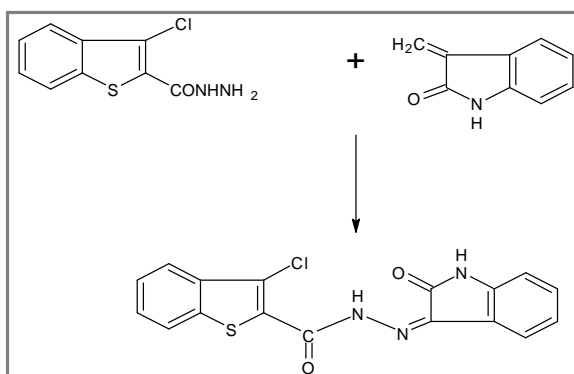
Email: ustadrazak@gmail.com

Accepted on 24th August, 2019

ABSTRACT

Complexes of Co (II), and Fe (III) with the Schiff base derived from 3-chloro-n'-[(1e)-1-(pyridin-3-yl) ethylidene]-1-benzothiophene-2-carbohydrazide has been synthesized and characterized on the basis a detailed study of X-Ray diffraction has been undertaken. The synthesized ligand and complexes are coloured, amorphous, solid and highly insoluble in aqueous and common organic solvents. On the basis of X-Ray diffraction data, a hexagonal or tetragonal crystal system has been proposed for the complexes. The diffraction data were also used to index the compounds and for determination of various parameters.

Graphical Abstract



Synthesis of ligand.

Keywords: Carbohydrazide, Schiff base, X-Ray diffraction.