PREPARATION AND CHARACTERIZATION OF Co(II), Ni(II) AND Cu(II) COMPLEXES OF A LIGAND CONTAINING 1,3,4-THIADIAZOLE GROUPS

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The thiadiazole ring is associated with diverse biochemical activities probably by virtue of incorporating a toxophoric -N=C=S- linkage, the importance of which has been well stressed in many pesticides 1, 2. Actually various 2-amino/substituted-amino-1,3,4-thiadiazoles and their Schiff bases have recently received significant importance because of their diverse biochemical properties 3, 4, 5, 6. Enantiomerically pure 1,2-diols are also used as valuable intermediates in the organic synthesis of biochemically active compounds and natural products 7, 8. They are readily transformed into chiral epoxides, aziridines, and amino alcohols 9. Moreover, the 1,2-diol functionality is found in a number of synthetic and pharmaceutical intermediates 10, 11, 12, 13, 14. In addition, complexes containing azo groups are used in the medicinal and pharmaceutical fields 15. The diverse and interesting biological activity reported 16. To be shown by the thiadiazolo pyrimidine nucleus led us to synthesise the title compounds 1,3,4-thiadiazolo[3,2-a]-pyrimidin-6-ones. Heterocycles have been put to much use in disperse dye chemistry, which it has been claimed was the first area to foster the industrial exploitation of heteroaromatic amines. Numerous heterocyclic dyes are now marketed to the extent that no manufacturer can profess to produce a full range of disperse dyestuff without handling colorants based on heteroaromatic diazo or coupling components.

In the present paper, we have investigated the preparation and characterization of various transition metal complexes of novel chiral compound. Since this ligand has not been reported in the literature our paper deals with in synthesis and characterization, as well as their complexes with Co(II), Ni(II) and Cu(II).

References