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Synthesis and Characterisation of Novel Yttrium Schiff Base Complexes of Subsituted Diamines

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Abstract: *The present study involves synthesis of Schiff Base ligands of substituted Diamines followed by complexation and formation of coordination complexes with metal, Yttrium (I). The analytical techniques used for characterisation of Schiff bases and their complexes were: Elemental Analysis, Spectral Analysis by UV Visible spectroscopy, IR and H^1 NMR. The complexes were also characterized using Thermal Analysis (TGA). Newly synthesized complexes are proposed to be of the general type [Y(I)L(W)]Cl] (L= ligand (Schiff base) synthesized from condensation of 1-phenyl-3-methyl-4-R-5-pyrazolone with two diamines, W= coordinated water where R= acetyl/benzoyl). Ligand: Metal stoichiometry was observed to be 1:1. All new complexes are proposed to have square pyramidal geometry; wherein coordinated water is at axial position.*

Keywords: Yttrium, Schiff base ligands, Azomethine group, Square pyramidal geometry