



**Cr (III), Mn(III), Fe(III) And Co(III) Complexes of Schiff Bases  
Derived From 3-(Substituted Aryl)-4-Amino-5-Hydrazino-1,2,4-Triazole  
And 2-Hydroxynaphthaldehyde**

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**ABSTRACT**

*A series of trivalent chromium, manganese, iron and cobalt complexes with Schiff bases (LH<sub>2</sub>), derived from 3-(substituted aryl)-4-amino-5-hydrazino-1,2,4-triazole and 2-hydroxy-naphthaldehyde, of the type [M(L)X(H<sub>2</sub>O)] [M= Cr, Mn, Fe, Co; X= Cl (for Cr and Fe) or CH<sub>3</sub>COO (for Mn and Co)] have been synthesized in ethanol. The complexes were characterized by analyses, electrical conductance, magnetic moment and spectral (U.V.-vis., IR and <sup>1</sup>H NMR) data. The presence of coordinated water molecule in these complexes has been inferred from TG studies. Tentative structures of the complexes have been proposed. The antifungal activity of the ligands and complexes were evaluated against *Aspergillus niger*, *Colletotrichum capsici*, and *Curvularia pallescens*. The complexes are found to be more potent against all species of fungi as compared to free ligands. The activity has been compared with the structural features of compounds.*

**Keywords:** Schiff bases, Chromium, Manganese, Iron, Cobalt, UV-vis., IR, Antifungal activity.

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