



Chromium(III), Manganese(III) and Iron(III) Complexes of Macrocyclic Schiff bases derived from 2,6-diaminopyridine and β -diketones

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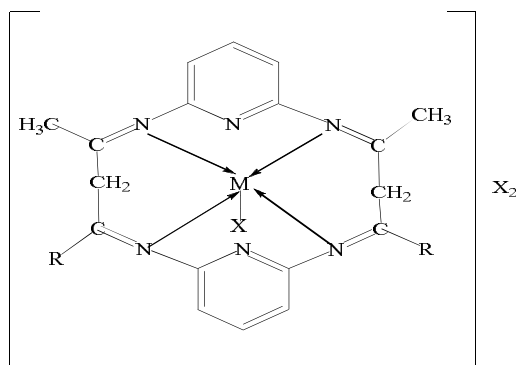
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ABSTRACT

A new series of trivalent chromium, manganese and iron complexes with Macrocyclic Schiff bases, have been prepared by the in-situ synthesis of 2, 6-diaminopyridine and β -diketones, of the type $[MX(\text{mac.})]X_2$, $[M = \text{Cr(III)}, \text{Mn(III)} \text{ or } \text{Fe(III)}]$; mac = macrocyclic Schiff base] in ethanol. The complexes were characterized by analyses, electrical conductance, magnetic moment and spectral (UV-Vis, IR, and ^1H NMR) data. Tentative structures of the complexes have been proposed. The antifungal activities of the complexes were evaluated against *Aspergillus niger*, *Colletotrichum falcatum* and *Curvularia pallescens*. Manganese(III) complexes show maximum activity as compared to other metal ion complexes.

Graphical Abstract



Keywords: Schiff bases, Chromium, Manganese, Iron, UV-Vis, IR, Antifungal activity.