Synthesis, Characterization and Study of Electrical Properties of Al (III) and Fe (III) Chelates of Schiff-Base Derived from 2, 5-Dihydroxy benzaldehyde and 2-Aminophenol

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Abstract

New Aluminum (III) and Iron (III) chelates of Schiff base derived from 2, 5-dihydroxy benzaldehyde and 2-aminophenol synthesized. The prepared Schiff-bases were characterized by IR, UV-Visible and CHN. They show the formation of 1:1 (M:L) ratio of the formula $[ML(OH)(H_2O)_2].nH_2O$, in which Metal represents A(III) and Fe(III) ions and n is equal to 3 for Al and 1 for Fe chelates. These chelates found to be octahedral geometry by the analysis. The electrical properties of the prepared Schiff-bases were studied and the maximum value of the conductivity was $2.317*10^{-4} ohm^{-1}.cm^{-1}$ after doping with I_2.