

Spectrophotometric Investigation of Cu (II) and Fe (III) Schiff Base Complexes based on 2-hydroxybenzilidene-4-Methoxybenzene

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Abstract

Metal complexes of 2-hydroxybenzilidene-4-methoxybenzene with Fe (III) and Cu (II) ions in neutral 96% ethanolic solution have been prepared and studied. Ligand to metal ratio for the complexes has been investigated using mole ratio method. The unstable 2:1 complexes absorb light in the region 200-600nm. Formation constants have also been determined.

The spectrophotometric investigation of the metal complexes indicated that it is possible to detect 4×10^{-6} M of Cu (II) and 2.5×10^{-6} M of Fe (III) ions with linear calibration curves up to 4×10^{-5} for both ions. No interferences with most transition metal ions were detected under our experimental conditions.