

Abstract

The present work extended our knowledge on the binding of metals like Fe (III) and Mn(II) with fulvic acid (FA). Complexes were synthesized by dissolving 6 mg of FA, 1N KCl, respective metal solutions containing 20 μ g of metal ml⁻¹, pH was adjusted to 7 and volume was made up to 100 ml. Reaction mixtures were shaken at 150 rpm, for 1 hour at room temperature. Elemental analysis, FT-IR, Uv-vis and fluorescence spectroscopic investigations demonstrated the participation of functional groups; OH, C=O and COOH in the coordination of metal cations. Stability of Fe-FA and Mn-FA solutions was largely determined by precipitation of Fe-FA and Mn-FA complexes.

Key words: Fulvic acid (FA), iron (Fe) complex, manganese (Mn) complex.