



Thermogravimetric Analysis of Microwave Assisted Novel Macromolecular Complexes of Metal Surfactants

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ABSTRACT

Copper surfactants derived from common fatty acids are found to be eco-friendly, completely biodegradable and nontoxic with significant antiviral, anticancerous, antifungal and antimicrobial properties. Based upon their widest applicability Performa complexes of copper(II) with binuclear ligands were synthesized. The resulting complexes were characterized by elemental analysis, thermo gravimetric analysis, magnetic moment measurements, ¹H NMR, IR and ESR spectra and all the data were carefully studied. In the present research work a detailed thermal analysis using TGA technique was done in order to determine their energy of activation by applying equations like Coats-Redfern, Horowitz-Metzger, Broido equation. TGA simply measures the amount and rate of change in the weight of a material as a function of temperature or time in a controlled atmosphere.

Keywords: Thermo gravimetric analysis, Copper Palmitate, Benzothiazole, Biocidal, Transition Metal Complexes.
