



Novel metal complexes of flavone Schiff base: Synthesis, characterization, antioxidant and DNA binding studies

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Abstract

A new flavone based Schiff base ligand and its Co(II), Cu(II) and Ni(II) complexes had been prepared. Structural studies were done by the detailed analysis of elemental, magnetic and spectral data. These information demonstrated [MLCl₂] type composition for the complexes. The mode and extend of interaction between the synthesized metal complexes and DNA was studied by means of fluorescence quenching study, absorption spectra and viscosity measurements. These studies unveiled that the type of binding is intercalative and the extent of binding is greater for copper complexes than others. An antioxidant screening test revealed that complexes have greater activity than corresponding ligand. The order of activity is Cu > Co > Ni > L. In short the Cu(II) complex shows higher DNA binding ability and antioxidant activity.

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Keywords

Flavone; Schiff base; CT-DNA; Intercalative binding; Antioxidant activity

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