SYNTHESIS, CHARACTERIZATION AND BIOLOGICAL PROPERTIES OF ZINC (II)-EMBELIN COMPLEX

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The present study describes, preparation, characterization and biological properties (antioxidant & and hemolytic activity) of zinc (II)-embelin complex. Zinc nitrate from commercial source and embelin (extracted & purified from Embelia ribes) at 1:2 ratio were used for the preparation and the yield of the complex was 60%. The characterization studies (FT-IR) revealed, shift in wavelength of C=O stretching frequency. With regard to biological properties, assessment of antioxidant profile using DPPH radical revealed, the parent compound embelin displayed 50% inhibition of DPPH radical at 26 µg/ml, whereas the complex showed only 41% inhibition at 150 µg/ml. Results on hemolytic activity emphasize, 50% RBC lyses was observed at 38 µg/ml concentration for the complex, whereas, it was 109 µg/ml for the parent compound, embelin. The results of the study infers though zinc and embelin individually demonstrated potential biological activities, however, when they were in the form of complex the biological activities were found inferior.

Keywords: Diphenyl picrylhydrazyl radical - Scavenging activity, Embelin, Hemolytic activity, Thermal analysis, Zinc (II)-embelin complex.