**Abstract**

Nanotoxicology was a new branch of science which dealt with the fate of the nanoparticles in the environment and its harmful effects on nontarget organisms. The metallic copper (CuSO4) is a well known toxicant to aquatic organisms especially to fishes. As the size of the metal decrease to nano level, its surface to volume ratio would increase. This resulted in drastic changes in its physical, biochemical, catalytic and toxicity properties. In the view of the above context the present study was aimed to compare the toxicity of copper and nano form of copper in a freshwater fish *Labeo rohita* using certain biomarkers.