

A one dimensional PAGE studies on puntius javanicus liver proteome affected by copper toxicity

Abstract

Observations on the effects of copper on the liver proteome of *Puntius javanicus* based on the one dimensional PAGE was carried out. The liver was dissected from each fish, which was separately treated with different concentrations of copper sulfate ranging from 0.1 to 5.0 mg/L. The livers were extracted and one dimensional PAGE was performed under nonreducing (native) and reducing (SDS)-PAGE. Several bands were resolved in the native PAGE with probable candidates for the effect of copper observed showing an increased in the expression and downregulation strongly associated with increasing copper concentrations. This study showed that high concentrations of copper significantly alters *P. Javanicus* liver at the proteome level, and preliminary screening based on one dimensional PAGE is considered rapid and simple to assess the toxicity effect of copper before more advanced and extensive assesment with a second dimensional PAGE is carried out.