## Effects of Dietary Copper Supplementation on the Freshwater Prawn, Macrobrachium rosenbergii

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**Abstract :** The present study was performed to assess the effects of dietary copper (Cu) on growth, biochemical constituents, digestive enzyme activities, enzymatic antioxidant and metabolic enzymes of the freshwater prawn, Macrobrachium rosenbergii post larvae (PL). The Cu was supplemented at 0, 10, 20, 40, 60 and 80 mg kg-1 with the basal diets. Cu supplemented diets were fed to M. rosenbergii PL for a period of 90 days. At the end of the feeding experiment, 40 mg kg-1 Cu supplemented feeds fed PL showed significant (P < 0.05) improvement in survival, growth, digestive enzyme activities and concentrations of biochemical constituents. However, PL fed with 60 to 80 mg Cu kg-1 showed negative performance. Activities of enzymatic antioxidants, metabolic enzymes and lipid peroxidation in the muscle and hepatopancreas showed insignificant alterations (P > 0.05) up to 40 mg kg-1 Cu supplemented feeds fed PL. Whereas, 60 and 80 mg of Cu kg-1 supplemented feeds fed PL showed significant alterations on these antioxidants and metabolic enzymes levels. It indicates that beyond 40 mg Cu kg-1 diets were produced some toxic to M. rosenbergii PL. Therefore, the present study suggests that 40 mg Cu kg-1 can be supplemented in the diets of M. rosenbergii PL for regulating better survival and growth.

Keywords : antioxidants, biochemical constituents, copper, growth, Macrobrachium rosenbergii

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1