

Acute Toxic Effects of Zn(SO₄) on Gill and Liver Tissues of Fresh Water Catfish *Clarias batrachus* (L.)

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Abstract : Heavy metals are a major problem because they are toxic and tend to accumulate in living organisms. This study was carried out with the aims of studying on histopathology of Zn(SO₄) toxicity on gill and liver tissues of catfish (*Clarias batrachus*) within the period of 96 h. Totally, 140 fishes with mean weight 50 ± 10 g were stocked in 12 aquariums with capacity of 200 L water and divided in to 3 trails including control, 4 ppm and 8 ppm of Zn with 3 replicates. Tissue samples were fixed by bouin's solution and sectioned in 7 μ m based on histological regular method and stained with Hematoxylin and Eosin (H&E) method for microscopic study within the period of 96 h. Results showed some damaged such as hyperplasia, telangiectasis and edema, necrosis of second filaments, jerky movement, aneurism, hyperemia and fusion of second filaments in gills; and cell atrophy, necrosis, fatty degeneration, hyperemia and bile stagnation at different treatments in comparison with control. Gill and liver tissue damages were severer with the increase of Zn concentration and days. Therefore, Zn had acute toxicity effects on gill and liver tissues in Catfish at 5 and 10 ppm concentrations.

Keywords : gill, liver, histopathology, zinc, *Clarias batrachus*

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