

The toxicity effects of fish histopathology on copper accumulation

ABSTRACT

Copper is a significant trace element necessary for the normal growth and metabolism of living organisms. However, this element may become very dangerous if used beyond its limit, turning into continuous metal compounds with the ability to accumulate in water and cause imbalance to the biological system. Aquaculture activities can also be affected due to the increase in environmental pollution. Copper is observed with the ability to cause some deleterious effects on fish by its toxicity, which can be evaluated from the molecular and structural level of the organism. This is because fish is one of the aquatic organisms that are able to accumulate heavy metals in their tissue. Generally, this accumulation is influenced by several factors namely, metal concentration, time of exposure, ways of metal uptake, environmental condition (water temperature, pH) and intrinsic factors (fish age, size). Different organs of fish show different affinity to copper accumulation. Therefore, this review was conducted with the purpose of investigating the harmful effects of copper on fish as a result of the accumulation of copper in fish organs and the histopathological alteration encountered in fish.