

Thesis Title            Effects of Triphenyltin Hydroxide on the  
                                 anatomy and chromosomes of catfish

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#### ABSTRACT

The study of the effects of triphenyltin hydroxide (TPTH) on chromosome, anatomy and morphology of the F<sub>1</sub> hybrid catfish (*Clarias gariepinus* x *Clarias macrocephalus*) was performed under the recycling water exposure system. The fishes were divided into 4 groups; control, control solvent (Dimethylsulfoxide, DMSO), TPTH at 1 ppb and TPTH at 3 ppb respectively. The results showed that TPTH caused adverse effect on chromosomes of catfish. The fish which exposed to TPTH at 1 ppb caused chromosome deletion (5.33%) and non-specific chromosome aberration (18%). The percentages of non-specific chromosome aberration was higher (23.33%) when treated with TPTH at 3 ppb.

However, the difference is not significant ( $p < 0.05$ ). The percentages of chromosome deletion occurred in both TPTH treated groups were also not significantly different. However, the behavior of fishes treated with 3 ppb TPTH was different from the other groups in various ways, for example, difficulty in balancing, swimming perpendicular to surface water, decreased ability to respond and reduce feeding. The growth rate of these treated fishes were also significantly lower than the fishes in other groups ( $p < 0.01$ ). TPTH produced no observable effects on the anatomy and morphology of the hybrid catfishes.