



Study on Acute Toxicity of Bifenthrin to *Clarias batrachus* (Linn.)

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Abstract: The present investigation, acute toxicity of the fungicide, Bifenthrin, was carried out under experimental condition to adult *Clarias batrachus* (Linn.). The 96 h LC₅₀ with 95% confidence limits of *Clarias batrachus* is 3.464 (3.032-3.779) $\mu\text{g l}^{-1}$. The LC50 values for 24, 48, 72 and 96 hours exposure to Bifenthrin are 5.093 $\mu\text{g/l}$, 4.659 $\mu\text{g l}^{-1}$, 3.893 $\mu\text{g l}^{-1}$ and 3.464 $\mu\text{g l}^{-1}$. None of the unexposed control fish died. Mortality rate between each concentration and mortality rate between 24-96 h depending on time was correlated. Significant relationship ($p < 0.05$) was recorded between mortality rate and exposure times (24, 48, 72 and 96 h) at all concentrations. Similarly, significant variation was observed between mortality rate of fish at all the exposure doses at all the exposure times ($p < 0.01$). The exposed fish showed abnormal behavioral responses depending on dose of bifenthrin and duration of exposure. The bifenthrin-based Marker pesticide was therefore classified as strongly toxic to fish.

Keywords: Acute toxicity, Bifenthrin, *Clarias batrachus*, 96 h LC₅₀, Behavioral responses
