

Determination the Lethal Concentration (Lc₅₀ 96H) of Diazinon and Machety (Butachlor) on (*Vimba vimba persa*)

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Abstract

The acute toxicity of Diazinon insecticide and Machete (Butachlor) herbicide were studied according to standard methods of O.E.C.D (1989) and statistic condition during 4 days (96 hours). During the Experiment period, different water factors such as: pH, water hardness, temperature and dissolved oxygen were determined, with 7 to 8.2, 240 mg.L⁻¹, 25 ± 1°C, and 7ppm respectively. In this investigation, the sample size was 180 pieces of *Vimba vimba persa* fish (1 to 2gr) and blank. The fish under 5 treatments with 3 replications were used as the control. Each of 10 fish were transferred to each of 20-liter aquariums. First, preliminary experiments were tested several times in order to determine the case fatality. The results figured out that the rate of acute toxicity (Lc₅₀ 96h) for Diazinon and machety (Butachlor) on 1 to 2 grams *vimba vimba persa* fish were, 0.09 and 0.61 mg.L⁻¹, respectively. Finally, the Lc₁₀, Lc₅₀ and Lc₉₀ were measured using the Probit Analysis Statistical method, as 0.069, 0.091 and 0.120 mg.L⁻¹ for the Diazinon insecticide and 0.58, 0.61 and 0.66 mg. L⁻¹ for machety (Butachlor) herbicides. According to the standard, levels of toxic pesticide and herbicide are classified in the range of "very toxic" foe *vimba vimba persa* fish (1-2gr).

Keywords: *Insecticide, Herbicide, Diazinon, Butachlor, Vimba vimba persa, Lc₅₀96h.*
