ABSTRACT

LARVACIDE EFFECTS OF LEAF EXTRACT ALOE VERA (ALOE VERA) AGAINST THIRD INSTAR LARVA OF Aedes Aegypti

By

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Cases of dengue fever in Indonesia has increased every year. Dengue is an infectious disease caused by dengue virus and transmitted by Aedes aegypti. Dengue prevention is done by controlling the chemical environment and if done continuously can cause resistance. This danger can be minimized by using natural larvacide the leaf Aloe vera (Aloe vera).

This study to determine the effectiveness of the LC50 and LT50 leaf extract Aloe vera (Aloe vera). The study design used was experimental, using completely randomized design. Treatment trials were divided into 6 groups, namely 0% (negative control), 0.25%, 0.5%, 0.75%, 1%, and abate 1% (positive control). Research using samples of 480 larvae and divided into 20 larvae for each group in a 200ml solution with varying concentrations, and performed 4 times repetition. Test used was one-way ANOVA (p <0.05) and Post-hoc Bonferroni (p <0.05) as well as probit test to calculate LC50 and LT50.

From the results, average number of larvae that died of 31.25% at a concentration of 0.25%, 41.25% at a concentration of 0.5%, 80% at a concentration of 0.75% and 98.75% at a concentration 1%. Based on these results the most effective concentration of the concentration of 1%. LC50 value was 2.041% in the 20th minute; 1.900% in the 40th minute; 1.685% in the 60th minute; 1.135% at minute 120; 0.720% at minute 240; 0.400% at minute 480; 0.245% in minute-1440, and 0.131% at minute 2880. LT50 value was 730.421 minutes at a concentration of 0.75% and 178.647 at a concentration of 1%.

Keywords: Aedes aegypti, Aloe vera (Aloe vera) and larvacide