EFFECT OF DRUMSTICK (*MORINGA OLEIFERA* LAM) LEAVES ETHANOL EXTRACT ON *ANOPHELES ACONITUS* L. THIRD INSTAR LARVAE MORTALITY

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ABSTRACT

Background: Synthetic insecticides may have the negative effect to nature. Many studies suggested the applications of botanical larvicides as an alternative replacement for synthetic insecticides. This study aimed to examine the effect of *Moringa oleifera* Lam leaves ethanol extract on the *Anopheles aconitus* L. third instar larvae mortality.

Subjects and Method: This was a laboratory experimental with post-test only control group design conducted at Salatiga, Central Java, in November 2016. A total of 150 *Anopheles aconitus* L. third instar larvae was selected by convenience sampling method and divided into 6 groups in which contained replication of 25 larvae. One negative control group was added 100 ml distilled water. The other treatment groups were 1 mg/ 100 ml, 10 mg/ 100 ml, 20 mg/ 100 ml, 30 mg/ 100 ml, and 40 mg/ 100 ml of *Moringa oleifera* Lam leaves ethanol extract. Each test group was repeated four times. The dependent variable was mortality of the larvae. The independent variable was different concentrations of *Moringa oleifera* Lam leaves ethanol extract. The observation of larvae mortality was conducted after 48 hours of exposure with extract. The data were analyzed by Kruskal-Wallis.

Results: Mean of the mortality of *Anopheles aconitus* L. third instar larvae was different in each group, and it was statistically significant ($p = 0.008$).

Conclusion: *Moringa oleifera* Lam leaves ethanol extract has effect on mortality of *Anopheles aconitus* L. third instar larvae.

Keywords: *Moringa oleifera* Lam, *Anopheles aconitus* L., ethanol extract, mortality

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