

ABSTRACT

LARVACIDAL EFFECTIVENESS TEST OF THE LEGUNDI'S LEAF (*Vitex trifolia*) EXTRACT FOR LARVAE OF *Aedes aegypti*

by

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Popular control efforts of Dengue Hemorrhagic Fever (DHF) that is conducted with chemical control (synthetic insecticides) can cause poisoning in humans so we need safer botanical insecticides such as compounds derived from plants *legundi* (*Vitex trifolia*). Phytochemical content of *legundi*'s leaf extract include saponins, flavonoids, and alkaloids that can act as stomach poisons also fumigans that resulting in the death of the larvae. This study aims to investigate the larvacidal effectiveness of *legundi*'s leaf extract (*Vitex trifolia* L.) against third instar larvae of *Aedes aegypti*.

The research was conducted at the Laboratory of Zoology, Department of Biology and Chemistry Laboratory, Department of Chemistry, *FMIPA* Lampung University in November to December 2012. This research uses Completely Randomized Design (CRD) with total of sample are 600 larvae that contains 6 treatment groups, each group containing 25- third instar larvae of *Aedes aegypti* and 4 times repetitions and then the concentrations of *legundi*'s leaf extract are

0%, 0.25%, 0.5%, 0.75% and 1% also abate 1% as a positive control. Data were obtained and tested using *Kruskall-Wallis* test and post hoc test of Mann-Whitney to find out the differences at each concentration.

At concentrations of 1%, the test larvae mortality reached 95% in 4320 minutes. Found in Mann-Whitney test, effectiveness of *legundi*'s leaf extract 1% to abate no differences ($p > 0.05$). LC50 values shows a decreasing in concentration with increasing time value (480-2880 minutes) is 0.837% to 0.346%. While the LT50 values shows increasing in the time required concentration (0.5% -1%), from 2233.197 to 321.181 minutes. The results showed that the *legundi*'s leaf extract has larvacidal effectiveness for larvae of *Aedes aegypti*.

Keywords: *Vitex trifolia*, *legundi*'s leaf extract, *Aedes aegypti*, larvacide