

ABSTRACT

THE LARVICIDAL PROPERTIES OF VETIVER (*Vetiveria zizanioides*) ESSENTIAL OIL ON THE MORTALITY OF *Aedes aegypti* MOSQUITO LARVAE

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**ABSTRACT**

**Background:** *Aedes aegypti* is an important vector for vector-borne diseases, especially Dengue. *Aedes aegypti* mosquito can be found in most part of Indonesia, and can live in both urban and rural area. *Vetiveria zizanioides* essential oil has active compound that can potentially be an alternative for existing larvicide.

**Objectives:** To find the larvicidal effect of Vetiver essential oil, and determine it by calculating the LC50 and LC90, as well as to find out the dose-effect relationship of Vetiver essential oil.

**Methods:** *Aedes aegypti* larvae which is on the 5<sup>th</sup> day of age is exposed to varying concentration of Vetiver essential oil and exposed for 24 hours. Then the result is calculated using probit analysis.

**Results:** Increased concentration of Vetiver essential oil results in increase of larvae mortality percentage. The LC50 is at 187 ppm and the LC90 is at 344 ppm.

**Conclusion:** The Vetiver essential oil shows larvicidal activity on *Aedes aegypti* larvae.

**Keywords:** *Vetiveria zizanioides*, essential oil, *Aedes aegypti* larvae, LC50, LC90