

## ABSTRACT

### THE EFFECTIVENESS OF TUMERIC RHYZOME (*Curcuma domestica Val*) ETHANOL EXTRACT AS LARVACIDE FOR THIRD INSTAR LARVAE OF *Aedes aegypti*

By

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There are about one million cases of DHF was reported by World Health Organization every year, with 20 thousands mortality cases each year. The number of DHF cases in Indonesia has reached 65 thousands with mortality case reaching the number of 595 cases in the period of 2011. Morbidity rate of DHF in Province of Lampung in 2012 was 68,44 in 100000 people. Some substances contained in herbs were often used as natural herbicide, due to its minimal side effect. Those components were essential oil and curcumin which contained in tumeric rhyzome (*Curcuma domestica Val*).

This research aims to determine the effectiveness, the value of effective concentration,  $LC_{50}$ ,  $LT_{50}$  of ethanol extract of tumeric rhyzome (*Curcuma domestica Val*). This study was an experimental study with randomized control trial method using post test only with control group design. The result was the average number of death larvaes are 45% at 0,2% concentration, 64% at 0,4% concentration, 72% at 0,6% concentration, 82% at 0,8% concentration and 90% at 1% concentration.  $LC_{50}$  value in all observation is 0,376% and  $LT_{50}$  value in all observation is 2121,4 minute.

The tumeric rhyzome (*Curcuma domestica Val*) ethanol extract is effective as natural larvacide. Effective concentration in 0,4%, 0,6%, 0,8 and 1% concentration.  $LC_{50}$  value found is 0,376 and  $LT_{50}$  value found is 2121,4 minute.

**Keywords:** *Aedes segypti*, Dengue Hemorrhagic Fever, Larvacide, Tumeric Rhyzome (*Curcuma domestica Val*)