

**LARVACIDAL EFFECT OF ETHANOL EXTRACT OF TORCH GINGER
(*Etlingera elatior*) LEAVES AGAINST *Culex quinquefasciatus* LARVAE**

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Abstract

Background: Mosquito is a vector of many diseases. One of them is lymphatic filariasis which is transmitted by *Culex quinquefasciatus* in urban and semi-urban areas. One way to control the population of mosquito is through the use of insecticide. However, synthetic pesticide have been proven to cause may harmful effect to the human body. There is a need for the search of safer insecticides. Torch ginger (*Etlingera elatior*) are known to contain insecticidal components. In this research, ethanol extract of *E. elatior* leaves were used to investigate any potential larvacidal effect against *Cx. quinquefasciatus* larvae.

Objective: to find out whether ethanol extract of *E. elatior* leaves have larvacidal effect against *Cx. quinquefasciatus* larvae, whether increasing the dosage concentration of the extract causes increasing larval mortality and the LC₅₀ and LC₉₀ of the extract.

Methods: Varying concentrations of ethanol extract of *E. elatior* leaves introduced to larvae of *Cx. quinquefasciatus* for 24 hours under standardized laboratory condition.

Results: The LC₅₀ and LC₉₀ of the torch ginger leaves extract are 1767.591 ppm and 6744.573 ppm, respectively.

Conclusion: The ethanol extract of *E. elatior* leaves have larvacidal effect against *Cx. quinquefasciatus* larvae in laboratory settings, with increasing concentrations causing increasing mortality, but inefficient since the dose is very high.

Keywords: *Culex quinquefasciatus* larvae, *Etlingera elatior* leaves, larvacidal activity.