

ACTIVITY OF TORCH GINGER (*Etlingera elatior*) ROOTS ETHANOL EXTRACT AS LARVACIDAL AGENT AGAINST *Culex quinquefasciatus* LARVAE

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Abstract

Background: *Culex quinquefasciatus* is the vector that transmit *Wuchereria bancrofti* that cause lymphatic filariasis. This disease is considered as an endemic in Indonesia. But control using synthetic pesticides is proven to be harmful for human and the ecosystem. Some mosquitoes have also developed a resistance. There is a need to search for a new, safer insecticides. Torch ginger (*Etlingera elatior*) are known to have larvacidal potentials. In this research, ethanol extract of *E. elatior* roots were used to test for larvacidal activity against *Cx. quinquefasciatus* larvae.

Objective: To find out if ethanol extract of *E. elatior* roots have larvacidal activity against *Cx. quinquefasciatus* larvae.

Methods: Varying concentrations of ethanol extract of *E. elatior* roots are introduced to larvae of *Cx. quinquefasciatus* for 24 hours under standardized laboratory condition. Result is calculated with probit analysis.

Results: The LC₅₀ and LC₉₀ of the torch ginger roots extract are 2967.163 ppm and 13699.23 ppm (2,97 mg/ml and 13,7 mg/ml), respectively.

Conclusion: The ethanol extract of *E. elatior* roots have larvacidal activity against *Cx. quinquefasciatus* larvae in laboratory setting, but it is considered not effective due to the high concentration of LC₅₀.

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