

The Effect of Aromatherapy Candle as Insecticide from Citrus Extract of Lemongrass (*Cymbopogon*) to Increase *Ae. aegypti* Mortality

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Abstract : Aromatherapy candles are one of the insecticide media that have not been much researched. The active ingredient that is proven to have the effect of insecticide is a citrus extract from lemongrass oil (*Cymbopogon*). Aromatherapy candles are added by citrus compounds to be insecticidal for *Ae. aegypti* mosquito that was related to the infectious disease such as dengue fever. This research aims to find out if aromatherapy candles of citrus compounds have an insecticidal effect on *Ae. aegypti* mosquito. We used true experimental design including posttest only with control group design. The samples are 20 male and female *Ae. aegypti* mosquitos with aged 1-7 days belong to the inclusion criteria. The subjects were divided into 6 groups, consisting of 1 negative control group and 5 treatment groups with variation concentration are 1%; 2%; 3%; 4%; 5%. Each group will be treated for 2 hours and observed death after 24 hours. Replication in each group is done 4 times. The results were then tested statistically using Kruskal-Wallis and probit test. Mean of death in negative control group, and treatment group 1%; 2%; 3%; 4%; 5% respectively 0; 1; 0.25; 0; 1 and 1 mosquito. The Kruskal-Wallis test in the study group found no significant difference ($p = 0.178$). The probit analysis showed that LC50 and LC90 were 20.069% and 31.557%. The aromatherapy candle of a citrus compound has an insecticidal effect on the *Ae. aegypti* mosquito.

Keywords : *Ae. aegypti* insecticide, aromatherapy candle, citrus compound, lemongrass oil (*Cymbopogon*)

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