

KILLING POWER OF MOSQUITO COILS BASED ON BASIL LEAF (*Ocimum basilicum*) ON THE *Aedes aegypti* MOSQUITO
(Study on the Effect of Concentration on Mosquito Mortality in 2022)

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ABSTRACT

Dengue fever transmitted by the *Aedes aegypti*. Transmission of this disease can be prevented by using mosquito coils. The chemical active ingredients in mosquito coils can cause health problems. Basil leaves (*Ocimum basilicum*) contain active ingredients of flavonoids, saponins, tannins, and essential oils that are capable to be used as natural insecticides. The use of basil leaf powder is more practical to apply in the community than the manufacture of extracts. The aims of the study was to analyze the killing power of mosquito coils based on basil leaf powder on the *Aedes aegypti* mosquito.

The type of research was a pured experiment with posttest only with control group design. The object of the study used *Aedes aegypti* mosquitoes aged 2-5 days. This study required 25 mosquitoes for each treatment. The treatment group exposed to various concentrations of mosquito coils basil leaf powder 50%, 60%, and 70% with 6 replications for 20 minute and observed the number of mosquitoes that fall every minutes. Mosquito mortality will be counted 24 hours after exposure. Data analysis used probit test and one-way ANOVA.

The quality of the mosquito coil basil leaf powder (*Ocimum basilicum*) met the standards of SNI 06-3566-1994. The results of the One Way Anova test indicate that there was at least one concentration of mosquito coil basil leaf powder (*Ocimum basilicum*) which has a higher killing power of *Aedes aegypti* mosquitoes. The probit test results show that the value of LC50 is 61,763%. The concentration of 70% was the highest concentration that succeeded in killing the most *Aedes aegypti*, with an average of 60%.

This can be concluded that the mosquito coil basil leaf powder only has the ability to kill, but is not quite effective in killing the test mosquitoes. Further research is recommended to combine basil leaf powder with other plants to effectively kill the *Aedes aegypti*.

Key word : Mosquito coils, *Aedes aegypti*, (*Ocimum basilicum*)