

## ABSTRAK

Dalam penelitian ini dilakukan pemanfaatan serai dapur (*Cymbopogon Citratus*) sebagai biolarvasida nyamuk *Aedes aegypti* yang merupakan vektor penyakit demam berdarah. Kasus penyebaran demam berdarah di Indonesia masih memiliki angka penyebaran yang cukup besar. Tujuan penelitian ini untuk mengetahui kandungan metabolit sekunder ekstrak etanol serai dapur, mengetahui kandungan metabolit sekunder minyak atsiri serai dapur, mengetahui aktivitas biolarvasida ekstrak etanol serai dapur terhadap nyamuk *Aedes aegypti* dan mengetahui aktivitas biolarvasida minyak atsiri serai dapur terhadap nyamuk *Aedes aegypti*. Penelitian ini dilakukan melalui beberapa tahapan kegiatan, yaitu ekstraksi, destilasi uap, skrining fitokimia, analisis GCMS, uji aktivitas biolarvasida ekstrak dan minyak atsiri serai dapur terhadap larva nyamuk *Aedes aegypti* dan uji statistik. Pada tahap ekstraksi digunakan etanol sebagai pelarut untuk mendapat ekstrak etanol serai dapur dan destilasi uap untuk mendapatkan minyak atsiri serai dapur. Hasil skrining fitokimia didapatkan bahwa ekstrak etanol serai dapur memiliki kandungan utama senyawa tanin dan saponin. Sementara itu hasil analisis GCMS menunjukkan minyak atsiri serai dapur memiliki kandungan utama sitronela 21,50 % dan alfa-pinene 20,58% disamping kandungan lain yaitu sitral, limonen, kamfen, neril asetat, tiogeraniol dan germakren. Adapun hasil uji aktivitas biolarvasida minyak serai dapur menunjukkan bahwa pada konsentrasi 504 mg/L menyebabkan 50% kematian larva nyamuk *Aedes aegypti* dalam 4 jam. Sementara itu ekstrak etanol serai dapur tidak menunjukkan aktivitas biolarvasida terhadap nyamuk *Aedes aegypti*. Pada hasil yang diperoleh diketahui bahwa minyak atsiri serai dapur dapat berpotensi sebagai biolarvasida terhadap nyamuk *Aedes aegypti*.

**Kata Kunci:** Biolarvasida, *Aedes aegypti*, Ekstrak serai dapur, Minyak atsiri serai dapur, sitronelal, alpha-pinene

## ABSTRACT

In this research, the utilization of lemongrass (*Cymbopogon Citratus*) as *Aedes aegypti* mosquito biolarvacide. *Aedes aegypti* mosquito is a vector of dengue fever. The case of dengue fever spread in Indonesia still has a fairly large spread rate. The purpose of this study is to know secondary metabolite content from ethanol extract of lemongrass, secondary metabolite content from essential oil of lemongrass, biolarvacide activity from extract ethanol of lemongrass to *Aedes aegypti* and biolarvacide activity from essential oil of lemongrass to *Aedes aegypti*. This research was conducted through several stages of activity, such as extraction, distillation, phytochemical screening, GCMS analysis, biolarvacide activity test of ethanol extract of lemongrass and lemongrass essential oil to *Aedes aegypti* larva and statistical test. At the extraction stage, ethanol is used as a solvent to extract the lemongrass and distillate to obtain the essential oil of lemongrass. The result of phytochemical screening was found that the ethanol extract of lemongrass has the main content of tannin and saponin compound. Meanwhile, the GCMS analysis showed that the essential oil of lemongrass content contained 21,50% and alpha-pinene 20,58% in addition to other content of citral, limonene, champhene, neryl acetate, thiogeraniol and germachren. As for result of activity test of biolarvacide of lemongrass oil known that at concentration 504 mg / L at four hours cause 50% death on larva of *Aedes aegypti*. Meanwhile, ethanol extract of lemongrass did not show the biolarvacide activity against *Aedes aegypti*. In the results obtained note that the essential oil of lemongrass can potentially as biolarvacide against *Aedes aegypti* mosquitoes.

**Key word:** Biolarvacide, *Aedes aegypti*, lemongrass extract, lemongrass essential oil, citronella, alpha-pinene