

ABSTRAK

Penyakit demam berdarah dengue (DBD) ditularkan oleh vektor yaitu nyamuk *Aedes aegypti* melalui gigitannya. Pencegahan yang umum dilakukan dengan memberantas vektor yang masih berupa jentik menggunakan larvasida kimiawi. Namun larvasida kimiawi dapat menimbulkan resistensi. Alternatif lain dapat dilakukan yaitu menggunakan larvasida dari tumbuhan. Salah satu tumbuhan yang berpotensi sebagai larvasida adalah daun jambu air (*Syzygium aqueum*) karena memiliki senyawa aktif seperti flavonoid, fenolik, dan tannin. Penelitian ini bertujuan melihat efektivitas ekstrak daun jambu air dalam membunuh larva *Aedes aegypti* instar III serta nilai LC₅₀ setelah pengamatan 48 jam.

Penelitian ini dilakukan secara eksperimen pada Desember 2018 hingga Juni 2019 di Laboratorium Parasitologi Jurusan Analis Kesehatan Poltekkes Kemenkes Surabaya. Subjek dari penelitian adalah larva *Aedes aegypti* instar III. Penelitian ini menggunakan 6 kelompok perlakuan yaitu aquadest sebagai kontrol negatif dan abate (temefos 1%) sebagai kontrol positif serta ekstrak daun jambu air dengan konsentrasi 0,5%, 1%, 1,5% dan 2%. Larva direndam ke dalam larutan uji sebanyak 200 ml selama 48 jam. Kemudian diamati dan dilakukan analisa data.

Hasil penelitian menunjukkan terdapat persentase kematian larva uji 0% pada kontrol negatif, 35% pada konsentrasi 0,5%, 43% pada konsentrasi 1%, 51% pada konsentrasi 1,5%, 56% pada konsentrasi 2%, dan 100% pada kontrol positif. Berdasarkan perhitungan yang dilakukan nilai LC₅₀ diperoleh pada konsentrasi 1,4357%.

Kata Kunci: Ekstrak daun jambu air (*Syzygium aqueum*), larva *Aedes aegypti*.

ABSTRACT

Dengue hemorrhagic fever (DHF) is transmitted by vectors, namely the *Aedes aegypti* mosquito through its bite. Prevention is commonly done by eradicating vectors which are still in the form of larvae using sintetic larvacides. However, sintetic larvacides can cause resistance. Another alternative is to use larvacides from plants. One plant that has the potential as larvacide is water apple leaves because it has active compounds such as flavonoids, phenolics, and tannins. This study aims to look at the effectiveness of water apple leaf extract in killing instar III *Aedes aegypti* larvae and LC₅₀ values after 48 hours of observation.

This research was conducted experimentally in December 2018 to June 2019 at the Laboratory of Parasitology, Department of Health Analyst, Health Polytechnic of Health Ministry Surabaya. The subjects of the study were instar III *Aedes aegypti* larvae. This study used 6 treatment groups, aquadest as a negative control and abate (temefos 1%) as a positive control and extract of water apple leaves with concentrations of 0.5%, 1%, 1.5% and 2%. Larvae are soaked in a test solution of 200 ml for 48 hours. Then analyzed and analyzed data.

The results showed that there were 0% mortality of test larvae in negative controls, 35% at concentrations of 0.5%, 43% at concentrations of 1%, 51% at concentrations of 1.5%, 56% at concentrations of 2%, and 100% at positive control. Based on calculations, the LC₅₀ value was obtained at a concentration of 1.4357%.

Keywords: Water apple leaf extract (*Syzygium aqueum*), *Aedes aegypti* larvae.