

ABSTRAK

DBD adalah penyakit yang disebabkan virus dengue dan ditularkan dari orang ke orang melalui gigitan nyamuk *Aedes aegypti*. Upaya pengendalian dapat dilakukan menggunakan insektisida alami dari tanaman yaitu daun sirih. Daun sirih mengandung senyawa *saponin, flavonoid, tanin, eugenol, kavicol, alkaloid* dan minyak atsiri. Penelitian ini bertujuan mengetahui efektivitas ekstrak daun sirih hijau (*Piper betle L*), sirih kuning (*Piper betle*) dan sirih merah (*Piper crocatum*) sebagai repelen daya tolak nyamuk *Aedes aegypti*. Penelitian dilaksanakan di Laboratorium Entomologi Dinas Kesehatan Provinsi Jawa Timur pada bulan April 2022. Teknik pengumpulan data yang dilakukan secara eksperimental. Sediaan spray konsentrasi 10%,15%,17%,20% disemprotkan pada punggung tangan yang dipaparkan 25 ekor nyamuk betina *Aedes aegypti*, pemaparan dilakukan selama 5 menit dalam waktu 6 jam dengan setiap 1 jam sekali tangan dimasukkan kembali. Penelitian ini dilakukan dengan 4 kali replikasi. Hasil penelitian didapatkan persentase repelen daya tolak tertinggi terjadi pada konsentrasi 20% yaitu pada sirih hijau (*Piper betle L*) sebesar 95%, sirih kuning (*Piper betle*) sebesar 94%, dan sirih merah (*Piper crocatum*) sebesar 91%. Hasil penelitian dilakukan analisa data uji alternatif yaitu *Kruskall wallis* karena data tidak berdistribusi homogen kemudian dilanjutkan dengan uji *Post Hoc* untuk mengetahui mana saja perbedaan yang signifikan antar kelompok perlakuan. Didapatkan nilai uji *Kruskall wallis* nilai $p < (0,05)$ yaitu Sig. 0,000 yang mengartikan adanya perbedaan daya tolak terhadap nyamuk *Aedes aegypti*.

Kata kunci : *Piper betle L, Piper betle, Piper crocatum, Aedes aegypti, Repelen*

ABSTRACT

DHF is a disease caused by the dengue virus and is transmitted from person to person through the bite of the *Aedes aegypti* mosquito. Control efforts can be carried out using natural insecticides from plants, namely betel leaf. Betel leaf contains *saponins*, *flavonoids*, *tannins*, *eugenol*, *kavicol*, *alkaloids* and essential oils. This study aims to determine the effectiveness of green betel leaf extract (*Piper betle L*), yellow betel leaf (*Piper betle*) and red betel leaf (*Piper crocatum*) as repellent for *Aedes aegypti* mosquitoes. The research was carried out at the Entomology Laboratory of the East Java Provincial Health Office in April 2022. The data collection technique was carried out experimentally. Preparation of spray concentration 10%, 15%, 17%, 20% was sprayed on the back of the hand exposed to 25 female *Aedes aegypti* mosquitoes, the exposure was carried out for 5 minutes within 6 hours with every 1 hour the hand was reinserted. This research was conducted with 4 times of replication. The results showed that the highest percentage of repelling repellent occurred at a concentration of 20%, namely in green betel (*Piper betle L.*) by 95%, yellow betel (*Piper betle*) by 94%, and red betel (*Piper crocatum*) by 91%. The results of the study were analysis of alternative test data, namely *Kruskall Wallis* because the data were not homogeneously distributed, then continued with the *Post Hoc* test to find out which were the significant differences between the treatment groups. The value of the *Kruskall Wallis* test was obtained, the value of $p < (0.05)$ was Sig. 0.000 which means there is a difference in repulsion to the *Aedes aegypti* mosquito.

Keywords : *Piper betle L, Piper betle, Piper crocatum, Aedes aegypti, Repellent*