

ABSTRAK

Aedes sp. merupakan vektor dari virus dengue yang menyebabkan penyakit Demam Berdarah Dengue (DBD). Salah satu alternatif pengendalian vektor adalah dengan menggunakan biolarvasida dari buah Cabai Jawa (*Piper retrofractum* Vhal.), karena cabai jawa mengandung senyawa toksik yang dapat yaitu flavonoid, tanin, steroid, saponin dan terpenoid. Penelitian ini bertujuan untuk: 1) mengetahui konsentrasi ekstrak buah cabai jawa terhadap mortalitas larva nyamuk *Aedes sp.* 2) mengetahui konsentrasi ekstrak buah cabai jawa yang paling berpengaruh terhadap mortalitas larva nyamuk *Aedes sp.* 3) memanfaatkan sebagai sumber belajar biologi berupa brosur. Penelitian bersifat eksperimen kuantitatif menggunakan Rancangan Acak Lengkap (RAL) dengan perlakuan ekstrak buah cabai jawa dengan konsentrasi 0,4%, 0,6%, 0,8%, dan 1% serta kontrol negatif berupa aquades dan kontrol positif berupa abate. Pengulangan dilakukan sebanyak 4 kali dengan tiap unit perlakuan berisi 20 larva *Aedes sp.* Pengamatan dilakukan selama 12 jam dengan interval waktu 2 jam. Uji efektivitas ekstrak ditinjau dari larva yang mengalami mortalitas. Data yang diperoleh kemudian di analisis menggunakan uji anava non-parametrik. Hasil penelitian menunjukkan terdapat pengaruh variasi konsentrasi ekstrak buah cabai jawa terhadap mortalitas larva nyamuk *Aedes sp.* perlakuan dengan konsentrasi 1% memberikan pengaruh yang lebih baik terhadap mortalitas larva nyamuk *Aedes sp.* Hasil penelitian ini dapat dijadikan sebagai sumber belajar biologi SMA kelas X materi Keanekaragaman Hayati dalam bentuk brosur pembelajaran.

Kata kunci : *Aedes sp.*; ekstrak buah cabai jawa; mortalitas larva

ABSTRACT

Aedes sp. is a vector of the dengue virus that causes Dengue Hemorrhagic Fever (DBF). One alternative for vector control is to use biolarvicides from Javanese chili (*Piper retrofractum* Vhal.), because Javanese chili contains toxic compounds such as flavonoids, tannins, steroids, saponins and terpenoids. This study aimed to: 1) determine the concentration of Javanese chili extract on the mortality of *Aedes sp.* 2) determine the concentration of Javanese chili extract that has the most influence on the mortality of *Aedes sp.* 3) use as a source of learning biology in the form of brochures. This research was a quantitative experiment using Completely Randomized Design (CRD) method with Javanese chili fruit extract treatment with concentrations of 0.4%, 0.6%, 0.8%, and 1% as well as negative control in the form of distilled water and positive control in the form of abate. Repetition was carried out 4 times with each treatment unit containing 20 larvae of *Aedes sp.* Observations were made for 12 hours with an interval of 2 hours. The effectiveness test of the extract was evaluated from the larvae that experienced mortality. The data obtained were then analyzed using a non-parametric ANOVA test. The results showed that there was an effect of variations in the concentration of Javanese chili extract on the mortality of *Aedes sp.* treatment with a concentration of 1% gave a better effect on the mortality of *Aedes sp.* The results of this study can be used as a source for learning biology in class X for Biological Diversity in the form of a learning brochure.

Key words: *Aedes sp.*; Javanese chili fruit extract; larval mortality