

ABSTRAK

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POTENSI EFIKASI SAWI PUTIH (*Brassica pekinensia L*) SEBAGAI BIOLARVASIDA TERHADAP LARVA *Aedes aegypti* (Kajian Saponin, Tanin, Alkaloid, dan Flavonoid Pada Sawi Putih (*Brassica pekinensia L*))

v + 52 Halaman + 8 Gambar + 7 Tabel + Lampiran

Pengendalian DBD dengan cara kimia secara umum paling banyak dilakukan oleh masyarakat, namun jika dilakukan secara terus menerus akan berdampak pada resistensi vektor dan pencemaran lingkungan. Ditinjau dari efek samping yang ditimbulkan perlu dilakukan sebuah inovasi dengan membuat larvasida alami dari zat toksik tumbuhan yang dapat berperan sebagai racun perut *Aedes aegypti*, salah satunya sawi putih. Tujuan penelitian ini untuk menganalisis perbedaan bahan aktif pada Sawi Putih (*Brassica pekinensia L*) sebagai biolarvasida terhadap larva *Aedes aegypti*.

Penelitian ini merupakan eksperimen murni dengan menggunakan desain penelitian *post test only control design*. Objek penelitian ini menggunakan larva *Aedes aegypti* instar III sebanyak 1.225 ekor dengan ekstrak bahan aktif saponin, tanin, alkaloid, flavonoid dan konsentrasi sebesar 0%,24%,34%,40% dengan replikasi 3 kali. Data dianalisis menggunakan uji probit, ANOVA *one away* dan Post Hoc LSD.

Hasil penelitian menunjukkan adanya potensi bahan aktif sawi putih terhadap kematian larva *Aedes aegypti* ($p = 0,000$). Persentase rata-rata kematian larva konsentrasi 24%, 34%, 40% pada bahan aktif saponin sebesar 23%, 32%, 55%, tanin 41%, 48%, 58%, alkaloid 41%, 60%, 66%, flavonoid 45%, 64%, 68%. Bahan aktif sawi putih mampu membunuh larva *Aedes aegypti* dengan LC_{50} pada bahan aktif saponin sebesar 40%, tanin 34%, alkaloid 29%, flavonoid 27%.

Disimpulkan bahwa bahan aktif sawi putih (*Brassica pekinensia L*) efektif membunuh larva *Aedes aegypti*, disarankan bagi instansi terkait ataupun masyarakat dapat memanfaatkan sawi putih dalam membunuh larva *Aedes aegypti* sebagai biolarvasida yang ramah dan aman bagi lingkungan dalam bentuk cairan yang diaplikasikan pada TPA luar ruangan.

Kata kunci : *Aedes aegypti*, biolarvasida, sawi putih (*Brassica pekinensia L*), DBD

ABSTRACT

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POTENTIAL EFFICACY OF WHITE MUSTARD (*Brassica pekinensia L*) AS A BIOLARVICIDE AGAINST *Aedes aegypti* LARVAE (Study Of Saponins, Tannins, Alkaloids, and Flavonoids In White Mustard (*Brassica pekinensia L*))

vi + 52 Page + 8 Image + 7 Tables + Attachments

Controlling dengue chemically is a common way done by ordinary people, but if continued will have an impact on vector resistance and environmental pollution. Given the side effects caused, it is necessary to create natural larvicides by using plant toxic substances that have a stomach poisoning effect on *Aedes aegypti* mosquitoes, one of which is chicory. The purpose of this study was to analyze the differences in the active components of chicory (*Brassica pekinensia L*) as a biolarvacide against *Aedes aegypti* larvae.

This study was a pure experiment, using a posttest-only control design. The objects of this study were 1225 larvae of *Aedes aegypti* instar III, and the extracted active ingredients were saponins, tannins, alkaloids, and flavonoids at concentrations of 0%, 24%, 34%, and 40%, and repeated three times. The Data were analyzed using probit test, one away ANOVA, and Post Hoc LSD.

The results showed that chicory has the potential as an active ingredient around the death of *Aedes aegypti* larvae ($p=0.000$). the average percentage of mortality of larvae concentration of 24%, 34%, 40% and the content of active substances saponins 23%, 32%, 55%, tannins 41%, 48%, 58%, alkaloids 41%, 60%, 66%, flavonoids 45%, 64%, 68%. The active content of chicory can kill LC_{50} against *Aedes aegypti* larvae the active ingredients are saponins 40%, tannins 34%, alkaloids 29%, and flavonoids 27%.

Conclusion the active ingredient of chicory (*Brassica pekinensia L*) is effective against *Aedes aegypti* larvae, and it is recommended that related agencies or the public can use chicory to kill *Aedes aegypti* larvae environmentally friendly and safe as a biolarvacide in liquid form suitable for outdoor landfills.

Keywords : *Aedes aegypti*, biolarvacide, white mustard (*Brassica pekinensia L*), bonebreak fever