

## DAYA LARVASIDA EKSTRAK KLOOROFORM DAUN CENGKEH

### (*Syzygium aromaticum* (L.) Merrill & Perry) TERHADAP LARVA

#### *Aedes aegypti*

WATI

### INTISARI

**Latar Belakang:** Nyamuk *Aedes aegypti* merupakan vektor utama penularan penyakit Demam Berdarah Dengue (DBD). Untuk menurunkan angka DBD, maka perlu dilakukan pengendalian terhadap vektor. Penggunaan insektisida untuk mengendalikan *Aedes aegypti* sudah menunjukkan resistensi sehingga dicari alternatif lain, yaitu dengan pengembangan larvasida botanikal.

**Tujuan:** Mengkaji daya larvasida ekstrak kloroform daun cengkeh (*Syzygium aromaticum*) terhadap larva *Aedes aegypti* dengan mengukur  $LC_{50}$  dan  $LC_{90}$ .

**Metode:** Penelitian ini menggunakan desain kuasi eksperimental. Uji larvasida menggunakan 10 larva *Aedes aegypti* dalam 100 ml air dengan 7 konsentrasi ekstrak kloroform daun cengkeh (*Syzygium aromaticum*) yang berbeda, 500 ppm; 540 ppm; 583,2 ppm; 629,9 ppm; 680,2 ppm; 734,7 ppm; dan 800 ppm.

**Hasil:** Konsentrasi letal 50% ( $LC_{50}$ ) ekstrak kloroform daun cengkeh (*Syzygium aromaticum*) terhadap larva *Aedes aegypti* adalah 601,217 ppm. Konsentrasi letal 90% ( $LC_{90}$ ) ekstrak kloroform daun cengkeh (*Syzygium aromaticum*) terhadap larva *Aedes aegypti* adalah 861,167 ppm.

**Kesimpulan:** Ekstrak kloroform daun cengkeh (*Syzygium aromaticum*) memiliki daya larvasida terhadap larva *Aedes aegypti*. Peningkatan konsentrasi ekstrak kloroform daun cengkeh (*Syzygium aromaticum*) akan meningkatkan kematian larva *Aedes aegypti*.

**Kata kunci:** Larva *Aedes aegypti*, Larvasida, Daun cengkeh, *Syzygium aromaticum*, Ekstrak kloroform

## LARVICIDAL EFFECT OF CHLOROFORM EXTRACT OF CLOVE

### LEAVES (*Syzygium aromaticum* (L.) Merrill & Perry) AGAINST *Aedes*

#### *aegypti* LARVAE

WATI

#### ABSTRACT

**Background:** *Aedes aegypti* mosquito is the main vector of Dengue Hemorrhagic Fever (DHF) transmission. To reduce the number of DHF, it is necessary to control the vector. The use of insecticides to control *Aedes aegypti* has shown resistance so that other alternative are sought, by developing botanical larvicide.

**Objective:** Assessing the larvicidal effect of chloroform extract of clove leaves (*Syzygium aromaticum*) against *Aedes aegypti* larvae by measuring LC<sub>50</sub> and LC<sub>90</sub>.

**Method:** This research uses quasi-experimental design. This research used 10 *Aedes aegypti* larvae in 100 ml of water with 7 different concentrations of chloroform extract of clove leaves (*Syzygium aromaticum*), 500 ppm; 540 ppm, 583.2 ppm; 629.9 ppm, 680.2 ppm; 734.7 ppm; and 800 ppm.

**Result:** The lethal concentration 50% (LC<sub>50</sub>) of the clove leaf (*Syzygium aromaticum*) chloroform extract on *Aedes aegypti* larvae was 601.217 ppm. The lethal concentration 90% (LC<sub>90</sub>) of the clove leaf (*Syzygium aromaticum*) chloroform extract against *Aedes aegypti* larvae was 861.167 ppm.

**Conclusion:** Chloroform extract of clove leaves (*Syzygium aromaticum*) has larvicidal effect against *Aedes aegypti* larvae. Increment of the concentration from chloroform extract of clove leaves (*Syzygium aromaticum*) causes higher mortality of *Aedes aegypti* larvae.

**Keywords:** *Aedes aegypti* larvae, Larvacide, Clove leaves, *Syzygium aromaticum*, Chloroform extract