

Uji bioaktivitas ekstrak lamun *cymodocea rotundata* asch. & *schweinf.* dan *thalassia hemprichii* (ehrenb. ex solms) asch. sebagai larvasida nyamuk *aedes aegypti* l. = Bioactivity test of *cymodocea rotundata* asch. & *schweinf.* and *thalassia hemprichii* (ehrenb. ex solms) asch. seagrass extract larvicide of *aedes aegypti* l. mosquito

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Abstrak

ABSTRACT

Lamun memiliki banyak senyawa aktif dan potensial di bidang kesehatan dan pengobatan. *Cymodocea rotundata* dan *Thalassia hemprichii* dikoleksi dari Pulau Pramuka TNKpS dan Karang Sewu TNBB. Sampel kemudian dipisahkan berdasarkan daun, rimpang dan akar. Setiap bagian dibuat menjadi simplisia dan diekstraksi menggunakan metanol (1:3; b/v). Semua ekstrak dikarakterisasi menggunakan HPLC dan diuji aktivitas larvasida terhadap larva instar III *Aedes aegypti*. Sebanyak 25 larva instar III *Aedes aegypti* dipindahkan ke 250 mL botol sampel yang berisi 100 mL ekstrak 1%. Terdapat dua kontrol yaitu akuades dan abate 1%. Mortalitas larva dicatat pada 12, 24 dan 48 jam. Ekstrak daun *T. hemprichii* memiliki persentase mortalitas tertinggi yaitu 100% pada 12 jam. Konsentrasi LC50 ekstrak daun *T. hemprichii* yaitu 0,56%. Hasil kromatogram organ spesies *C. rotundata* dan *T. hemprichii* menunjukkan tidak ada perbedaan. Dari hasil tersebut disimpulkan bahwa ekstrak daun *T. hemprichii* memiliki aktivitas yang paling potensial sebagai larvasida *Ae. aegypti*.

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ABSTRACT

Seagrass contains bioactive compounds that are potential to be developed in health and medicinal application. *Cymodocea rotundata* and *Thalassia hemprichii* was collected from Pramuka Island TNKpS and Karang Sewu TNBB. Samples were cut into different parts i.e. leaf, rhizome, and root. Each part was dried as a powdered simplisia and extracted using methanol (1:3; w/v). All the extracts were characterized using HPLC and tested as larvicide against the larvae of *Aedes aegypti*. Batches of 25 early 3rd instar larvae of *Ae. aegypti* were transferred into 250 mL sample bottles containing 100 mL 1% extract. There are two control groups: abate (1%) and aquadest. The mortality of larvae was observed after 12, 24, and 48 hours. The leaves extract of *T. hemprichii* showed the highest mortality 100% after 12 h with LC50 concentration 0.56%. Chromatogram results from different species of *C. rotundata* and *T. hemprichii* showed a similar pattern of peaks. The results suggested that leaves extract of *Thalassia hemprichii* have the highest potential to be used as a larvicide against *Ae. aegypti* larvae.