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<br
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 diesktraksi 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 simplicia 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.