

Isolasi, uji antioksidan dan toksisitas menggunakan artemia salina leach dari fraksi aktif ekstrak metanol daun Jambo-Jambo [Kjelbergiodendron celebicus (Koord) Merr.] = Isolation, antioxidant assay and toxicity using brine shrimp lethality test from active fraction of methanolic extract of Jambo-Jambo [Kjelbergiodendron celebicus (Koord) Merr. Leaves]

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Abstrak

**ABSTRAK**

Keunikan biodiversitas pegunungan Mekongga telah menarik perhatian banyak peneliti. Tim konservasi dari Amerika dan Indonesia telah menemukan sejumlah tanaman mengandung zat yang memiliki aktivitas antikanker. Penelitian ini bertujuan untuk mengidentifikasi senyawa kimia yang menyebabkan tanamantanaman lain memiliki potensial sebagai antikanker berdasarkan uji pendahuluan terhadap aktivitas antioksidan dan efek toksik, salah satunya adalah Jambo-Jambo [Kjelbergiodendron celebicus (Koord) Merr.]. Aktivitas antioksidan dilakukan berdasarkan kemampuan meredam radikal bebas 1,1-difenil-2-pikrilhidrazil (DPPH), sedangkan efek toksik dilakukan dengan metode Brine Shrimp Lethality Test (BSLT). Daun Jambo-Jambo diekstraksi dengan pelarut metanol dan dipartisi menggunakan pelarut n-heksana, etil asetat, butanol dan metanol. Hasil pengujian menunjukkan bahwa ekstrak metanol mempunyai potensi toksik terhadap larva Artemia salina dengan nilai LC50 243,5 ppm dan aktivitas antioksidan senilai IC50 12,59 ppm. Isolasi dilakukan terhadap fraksi etil asetat menggunakan kromatografi kolom silika dan kromatotron. Senyawa murni yang diperoleh diidentifikasi struktur kimianya menggunakan Spektrofotometer UV-Vis, IR, NMR dan LCMS. Didukung dengan data hasil penapisan kimia, diduga senyawa tersebut golongan flavonoid yang mempunyai berat molekul 478.

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**ABSTRACT**

The unique biodiversity of Mekongga mountains have attracted many researches. Conservation team from US and Indonesia have discovered a number of plants growing on Mekongga mountains which have anticancer activity. This study is aimed to identify chemical compounds which have anticancer activity based on preliminary testing of the antioxidant activity and toxic effects, one of them is Jambo-Jambo [Kjelbergiodendron celebicus (Koord) Merr.]. The antioxidant activity of Jambo-jambo leaves was measured by its ability to scavenge free radical 1,1-diphenyl-2-picrylhydrazyl (DPPH), whereas the toxic effect was analyzed by Brine Shrimp Lethality Test (BSLT). Jambo-Jambo leaves was extracted using methanol solvent and its methanolic extract was partitioned using

the n-hexane, ethyl acetate, butanol and methanol. Test results showed that the LC50 and IC50 value of its methanolic extract was 243,5 and 12,59 ppm. The ethyl acetate fraction which showed the best activity was isolated using silica column chromatography and chromatotron. Pure compounds was obtained by the chemical structures were identified using Spectrofotometer UV-Vis, IR, NMR and LCMS. Supported by data on the results of chemical screening, the compounds were suspected as flavonoid compound which has molecular weight 478.</i>