

**ISOLASI DAN IDENTIFIKASI SENYAWA AKTIF
DALAM EKSTRAK n-HEKSANA DAUN KETAPANG
(*Terminalia catappa* L.)**

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RINGKASAN

Senyawa obat dapat diproduksi dengan berbagai cara, yaitu isolasi langsung dari bahan alam, sintesis sempurna dari bahan sederhana, atau sintesis sebagian, dari senyawa alam yang berstruktur hampir sama dengan senyawa obat. Daun ketapang (*Terminalia catappa* L.) mengandung banyak senyawa yang dapat dijadikan sebagai obat tradisional, antara lain obat penyakit liver, obat diare, obat sakit kepala, obat penyakit kulit, antioksidan, dan pencegah kanker. Penelitian lebih lanjut untuk mengetahui keberadaan dan aktivitas senyawa aktif di dalam daun ketapang perlu dilakukan, sehingga pemanfaatan daun ketapang sebagai obat menjadi lebih luas. Penelitian ini dilakukan untuk mengisolasi, mengidentifikasi dan menguji aktivitas senyawa-senyawa aktif dalam ekstrak n-heksana daun ketapang.

Senyawa aktif dapat diisolasi dari daun ketapang dengan maserasi menggunakan metanol, dan diekstraksi partisi dengan pelarut n-heksana. Pemisahan senyawa dalam ekstrak n-heksana dengan kromatografi kolom menghasilkan 6 fraksi, yaitu fraksi A, B, C, D E, dan F. Aktivitas senyawa dalam ekstrak n-heksana diketahui dengan metode *Brine Shrimp Lethality Test* (BSLT). Senyawa-senyawa dalam fraksi E ekstrak n-heksana yang aktivitasnya paling tinggi, dianalisis menggunakan kromatografi gas-spektrometri massa (GC-MS).

Fraksi E ekstrak n-heksana daun ketapang berpotensi sebagai antikanker dengan harga LC₅₀ sebesar 21,18148 ppm. Data spektrogram massa dari fraksi paling aktif (fraksi E) dalam ekstrak n-heksana daun ketapang menunjukkan senyawa yang terkandung di dalamnya antara lain asam palmitat, asam linolenat, dan asam stearat.

SUMMARY

Medicinal substances can be produced in several ways, which are by direct isolation from natural products, complete synthesis from simple material or partial synthesis from a natural product whose chemical structure is almost likely medicinal substances. Ketapang (*Terminalia catappa L.*) leaf is believed to contain many compounds which can be used as drugs for liver, stomachache, headache, skin diseases, antioxidant, and preventing cancer. A further study on the existence and activity of active compounds in Ketapang leaf needs to broaden its utilization as drugs. The objectives of this study were to isolate, identify and test the activity of active compounds in n-hexane extract of Ketapang leaves.

The active compounds were isolated from Ketapang leaves by maceration using methanol, and then were partially extracted with n-hexane as solvent. Compounds separation by using column chromatography yielded 6 fractions, which are A, B, C, D, E, and F fractions. Activity of compounds in n-hexane extract was analyzed by Brine Shrimp Lethality Test (BSLT) method. Compounds in E fraction from n-hexane extract having highest activity were analyzed by using Gas Chromatography – Mass Spectroscopy (GC-MS).

The research data showed that E fraction from n-hexane extract of Ketapang leaves was potential as anticancer with the LC_{50} value of 21.18148 ppm. From the mass spectrogram of the most active fraction (E fraction), it could be concluded that E fraction from n-hexane extract of Ketapang leaves contained palmitic, linolenic, and stearic acids.

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