

IDENTIFIKASI DAN UJI TOKSISITAS ASAM TANAT DALAM EKSTRAK DAUN KETAPANG (*Terminalia catappa* L.)

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RINGKASAN

Tanin terhidrolisis selama ini telah diketahui mempunyai berbagai manfaat dalam bidang farmasi. Salah satu jenis tanin terhidrolisis yang cukup bermanfaat adalah asam tanat. Telah dilakukan penelitian sebelumnya yang menunjukkan bahwa asam tanat mempunyai aktivitas sebagai antikanker. Tanaman Ketapang (*Terminalia catappa* L.) sudah sejak dulu diketahui sebagai tanaman yang memiliki berbagai khasiat pengobatan dan termasuk dalam golongan tanaman yang mengandung tanin terhidrolisis. Namun penelitian terhadap tanin terhidrolisis yang berupa asam tanat dalam tanaman tersebut belum pernah dilakukan. Penelitian ini bertujuan untuk mengidentifikasi asam tanat dalam ekstrak daun Ketapang dan membandingkan toksisitas asam tanat dalam ekstrak dengan asam tanat standar.

Tahap pertama dalam penelitian ini adalah pemisahan dan identifikasi asam tanat. Pemisahan senyawa dilakukan melalui metode soklet dengan pelarut *n*-heksana dan dilanjutkan dengan pelarut aseton-air (7:3). Identifikasi asam tanat meliputi uji golongan kimia, analisa dengan KLT dan HPLC. Toksisitas asam tanat yang terdapat dalam ekstrak dan asam tanat standar diuji menggunakan metode *Brine Shrimp Lethality Test* dan hasilnya diolah menggunakan program *Finney Computer* untuk mendapatkan harga LC_{50} .

Berdasarkan hasil analisa KLT dan HPLC diketahui bahwa ekstrak aseton-air mengandung asam tanat. Dari hasil uji toksisitas diketahui harga LC_{50} ekstrak aseton-air sebesar 15,42435 ppm dan asam tanat standar sebesar 26,71531 ppm. Berdasarkan harga LC_{50} tersebut diketahui bahwa asam tanat dalam ekstrak aseton-air lebih toksik daripada asam tanat standar

SUMMARY

Hydrolyzable tannins have been known having various benefit in the field of pharmacy. One type of hydrolyzable tannins which is useful enough is tannic acid. A previous research has indicated that tannic acid has activity as anticancer agent. Ketapang trees (*Terminalia catappa* L.) have known since long time as plants owning various medication ability and included in plant faction containing hydrolyzable tannins. However researchs of hydrolyzable tannins which specially on tannic acid in that plant have not been done. This research is aimed to identify tannic acid in extract of Ketapang leaves and to compare the toxicity of tannic acid in extract with standard tannic acid.

First step in this research was separation and identification of tannic acid. Compound separation had been done through soxhlet method with *n*-hexane solvent and continued with acetone-water (7:3). Identification of tannic acid had been done by analysis with chemical faction test, TLC and HPLC. At the second step, toxicity of tannic acid in extract and standard tannic acid had been tested by *Brine Shrimp Lethality Test* method and the result was analyzed using *Finney Computer* program to get LC₅₀ value.

From the result of analysis with TLC and HPLC have known that acetone-water extract contains tannic acid. By *Brine Shrimp Lethality Test* and *Finney* method have known LC₅₀ value. It was 15.42435 ppm for acetone-water extract and 26.71531 ppm for standard tannic acid. It shows that tannic acid is more toxic in acetone-water extract than standard tannic acid.

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