ABSTRAK

Yanti Hotlinarti Simanjuntak, Nim 4202610002 (2024). Skrining Fitokimia Metabolit Sekunder Dan Uji Toksisitas Ekstrak Kulit Kayu Kemenyan Toba (*Styrax Sumatrana*)

Telah dilakukan analisis metabolit sekunder serta uji toksisitas ekstrak kulit kemenyan Toba (*Styrax sumatrana*). Analisis metabolit sekunder dilakukan secara maserasi dengan pelarut n-heksana (non-polar), etil asetat (semipolar) dan etanol (polar) hingga tidak terjadi perubahan warna lebih lanjut akibat maserasi. Selanjutnya ekstrak yang dihasilkan dipekatkan menggunakan evaporator dan kemudian ditentukan golongan metabolit sekunder menggunakan metode skrining fitokimia. Uji toksisitas dilakukan dengan metode *Brine Shrimp Lethal Test* (BSLT) dengan bioindikator larva *Arthemia salina* Lech dengan variasi konsentrasi 25, 50, 100, 500 dan 1000 ppm. Pengujian dilakukan dengan tiga kali pengulangan yang masing-masing berisi 10 larva. Hasil uji skrining fitokimia pada ekstrak n-heksana adalah tidak terdeteksi adanya metabolit sekunder, pada ekstrak etil asetat diperoleh konsentrasi alkaloid dan flavonoid yang rendah, terpenoid pada konsentrasi tinggi dan pada ekstrak etanol diperoleh konsentrasi alkaloid dan flavonoid yang sedang. sedangkan saponin, terpenoid dan tanin berada dalam konsentrasi tinggi. Berdasarkan hasil uji toksisitas, ekstrak n-heksana masuk kategori toksik (LC_{50} = 37,65 ppm), ekstrak etil asetat (LC_{50} = 18,44 ppm) masuk kategori sangat toksik, dan ekstrak etanol (LC_{50} = 10,7 ppm) termasuk dalam kategori sangat toksik.

Kata Kunci : *Kulit Kemenyan, Metabolit Sekunder, Toksisitas*

ABSTRACT

Yanti Hotlinarti Simanjuntak, Nim 4202610002 (2024). Secondary Metabolite Phytochemical Screening And Toxicity Test Of Toba Frankincense Tree Bark (*Styrax Sumatrana*)

Analysis of secondary metabolites and toxicity testing of Toba frankincense (Styrax sumatrana) bark extract have been carried out. Analysis of secondary metabolites was carried out by maceration with the solvents n-hexane (non-polar), ethyl acetate (semipolar) and ethanol (polar) until no further change in color occurred as a result of the maceration. Next, the resulting extract was concentrated using an evaporator and then the secondary metabolite group was determined using the phytochemical screening method. The toxicity test was carried out using the Brine Shrimp Lethal Test (BSLT) method with Arthemia salia Lech larvae as a bioindicator with varying concentrations of 25, 50, 100, 500 and 1000 ppm. The test was carried out in three repetitions, each containing 10 larvae. The results of the phytochemical screening test on the n-hexane extract were that no secondary metabolites were detected, in the ethyl acetate extract low concentrations of alkaloids and flavonoids were obtained, terpenoids were in high concentrations and in the ethanol extract there were high concentrations of flavonoids and alkaloids while saponins, terpenoids and tannins were in high concentrations. Based on the results of the toxicity test, the n-hexane extract was in the toxic category (LC_{50} = 37.65 ppm), the ethyl acetate extract (LC_{50} = 18.44 ppm) was in the very toxic category and the ethanol extract (LC_{50} = 10.7 ppm) was in the very toxic category.

Keywords: Fra*nkincense Bark, Secondary Metabolites, Toxicity*