Uji Toksisitas Ekstrak Etil Daun *Sphagneticola trilobata* (L.) J. F. Pruski Terhadap Gambaran Histologi Hati *Mus musculus*

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ABSTRAK

Penelitian ini merupakan penelitian eksperimental yang bertujuan menguji toksisitas ekstrak etil daun *Sphagneticola trilobata* (L.) J. F. Pruski terhadap perubahan berat badan (BB) dan gambaran histologi hati *Mus musculus*. Penelitian menggunakan Rancangan Acak Lengkap metode *Thompson Weil* dengan kriteria hewan uji adalah mencit jantan, berumur 3 bulan dengan BB ± 25g. Hewan uji dibagi menjadi 7 (tujuh) kelompok perlakuan, 4 ulangan berdasarkan perbedaan konsentrasi pemberian ekstrak *S. Trilobata* (K-0 = kontrol, K-I=0,15 mg/kgBB, K-II=1,5 mg/kgBB, K- III=15 mg/kgBB, K-IV=150 mg/kgBB, K-V=1500 mg/kgBB, K-VI=15000 mg/kgBB). Hewan dipuasakan selama 8 jam sebelum pemberian oral dosis tunggal ekstrak etil asetat daun *S. trilobata*. Pengamatan intensif pada tiga jam pertama dilakukan dan dilanjutkan dengan pengamatan selama 14 hari setelah pemberian ekstrak. Hasil penelitian yaitu (a) adanya pengaruh positif ekstrak terhadap perubahan BB *M. musculus* yang ditandai perubahan BB *M. musculus* meningkat 6 – 10 % setelah pemberian ekstrak, (b) nilai LD_{50} diperoleh sebesar 60 mg/Kg BB dan dikategorikan "Toksik/Beracun" dengan kerusakan histologi yaitu (1) degenerasi, (2) nekrosis, (3) fibrosis, (4) peradangan, (5) kongesti sinusoid, dan (6) pelebaran vena sentralis. Penelitian ini menyarankan bahwa penggunaan ekstrak etil asetat daun *S. trilobata* sebagai bahan obat sebaiknya dibawah dosis 60 mg/Kg BB dan perlu diamati sel-sel pada organ lainnya pada dosis LD_{50}.

Kata kunci: Uji Toksisitas, LD_{50}, *Sphagneticola Trilobata*, *Mus musculus*, Histologi Hati

Toxicity Test of *Sphagneticola trilobata* (L.) J. F. Pruski Leaf Extract Etil on Histology Mus musculus

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ABSTRACT

The Research was an experimental study that had objective to investigate the acute toxicity of Sphagneticola trilobata (L.) J. F. Pruski Leaves to wards on body weight (BB) and histologycalof the Mus musculus liver. The study used a Complete Random Design of the Thompson Weil method with the criteria for the test animals were male mice, aged 3 months (BB ± 25g). Testing animals were divided into 7 (seven) treatment groups, 4 replications based on differences in the concentration of *S. trilobata* extract (K-0 = control, KI = 0.15 mg / kg BW, K-II = 1.5 mg / kg BW, K-III = 15 mg / kg BW, K-IV = 150 mg / kg BW, KV = 1500 mg / kg BW, K-VI = 15000 mg / kg BW). The testing animal sfasted for 8 hours before oral administration of a single dose of *S. trilobata* ethyl acetate extract. Intensive observation in the first three hours was carried out and continued with observation for 14 days after administration of the extract. The results of the study are (a) the positive influence of the extract on changes in BW *M. musculus* which is marked by changes in BB *M. musculus* increased by 6-10% after administration of the extract, (b) LD50 values obtained by 60 mg/kg BW and are categorized as "toxic-toxic "with histological damage, including (1) degeneration, (2) necrosis, (3) fibrosis, (4) inflammation, (5) sinusoidal congestion, and (6) central venous dilation. This study suggested that the use of ethyl acetate extract of *S. trilobata* leaves as a medicinal ingredient should be under a dose of 60 mg / Kg BW and cells in other organs need to be observed at LD_{50} dose.

Keywords: Toxicity Test, LD_{50}, *Sphagneticola* Trilobata, *Mus musculus*, Histology of the liver