

INTISARI

Telah dilakukan penelitian efek hepatoprotektif infus daging buah makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) pada mencit jantan terinduksi karbon tetraklorida (CCl_4) dengan tujuan untuk mendapatkan data dan bukti adanya efek hepatoprotektif serta mengetahui besarnya kisaran dosis efektif hepatoprotektif infus daging buah makuto dewo akibat perlakuan hepatotoksin CCl_4 .

Penelitian ini dilakukan mengikuti jenis penelitian rancangan acak lengkap pola searah. Tiga puluh lima ekor mencit jantan galur Swiss, umur 2 sampai 3 bulan, berat badan 20 sampai 30 gram, dibagi menjadi tujuh kelompok sama banyak. Kelompok I diberi aquadest dosis 25 g/kgBB selama 6 hari berturut-turut sebagai kontrol negatif. Kelompok II diberi CCl_4 dosis hepatotoksik yaitu 3,92 ml/kgBB sebagai kontrol CCl_4 . Kelompok III hanya diberi infus daging buah makuto dewo dosis 28,66 g/kgBB selama 6 hari berturut-turut sebagai kontrol infus daging buah makuto dewo. Kelompok IV sampai VII diberi infus daging buah makuto dewo dengan dosis berturut-turut 2,51; 5,66; 12,74; dan 28,66 g/kgBB selama 6 hari berturut-turut dan pada hari ke-7 diberi CCl_4 dosis hepatotoksik. Pemberian dilakukan secara peroral. Setelah 48 jam, mencit kelompok I, II, III, IV, V, VI, dan VII diambil darahnya pada bagian sinus orbitalis mata untuk ditetapkan aktivitas GPT-serumnya dengan metode kinetik GPT-ALAT. Selanjutnya mencit dikorbankan dan diambil hatinya untuk dibuat preparat histopatologi, kemudian dilakukan skoring menurut tingkat kerusakannya, lalu dianalisis dengan uji statistik non parametrik Kruskal Wallis dan Mann Whitney. Data GPT-serum dan berat hati relatif diolah menggunakan uji Kolmogorov Smirnov untuk melihat distribusinya, selanjutnya dilakukan analisis varian satu jalan dan uji LSD dengan taraf kepercayaan 95%. Data berat badan diolah menggunakan uji statistik analisis *Split-plot*. Selanjutnya dihitung dosis efektif tengah (ED_{50}) dengan analisis probit.

Hasil penelitian menunjukkan infus daging buah makuto dewo kelompok IV sampai VII memiliki efek hepatoprotektif pada hati mencit secara bermakna ($p < 0,05$). Hasil analisis skoring menunjukkan kelompok IV sampai VII, secara histologi berbeda tidak bermakna ($p > 0,05$). Hasil analisis berat hati relatif dan berat badan kelompok I, II, III, IV, V, VI, dan VII berbeda tidak bermakna ($p > 0,05$). Nilai ED_{50} hepatoprotektif infus daging buah makuto dewo adalah 3,76 g/kgBB.

ABSTRACT

Hepatoprotective-effect study of the makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) fruit flesh water extract has been conducted on male mice induced by carbon tetrachloride (CCl₄). The study aimed at obtaining the scientific data and the evidence of the extract as hepatoprotective agent on the mice. The study was also conducted in order to determine the dose range of the extract with hepatoprotective potency against the hepatotoxin of CCl₄.

The study was done according to completely randomized design and analyzed by one way variant. Thirty-five male Switzerland strain mice, two to three month age, twenty to thirty gram weight, were divided into seven groups, each consisted of the equal numbers. Group I, aquadest control group, was given with aquadest 25 g/kgBW for 6 consecutive days, as the negative control group. Group II, CCl₄ control group, was given with CCl₄ 3.92 ml/kgBW. Group III was given only with 28.66 g/kgBW extract for 6 consecutive days, as makuto dewo control group. Group IV, V, VI, and VII were performed with the makuto dewo fruit flesh water extract also for 6 days at the sequent doses of 2.51; 5.66; 12.74; and 28.66 g/kgBW respectively and followed by CCl₄ on the 7th day. All treatments, were administered orally. After 48 hours, blood of each mice in all groups was sampled at sinus orbitalis by the eyes and determined its SGPT-activity level by GPT-ALAT kinetic method. In addition the mice were sacrificed and their livers were taken for histological-photomicrograph preparation. Scoring was determined based on the stage of hepatic destruction and analyzed using Kruskal Wallis and non parametric Mann Whitney statistic. The SGPT-activity data and the liver weight were evaluated using one way variant analysis followed by LSD test at 95% significant level and also using Kolmogorov Smirnov test to depict the distribution. The data of the body weight were calculated using analysis *Split-plot* statistical test. Later, median effective dose (ED₅₀) was calculated by probit analysis.

The result showed in group IV to VII decreased SGPT-activity level significantly ($p < 0,05$). Scoring analysis demonstrated that the histological response was not clinically significant ($p > 0,05$) among group IV to group VII. The analysis result of the relative liver weight in all groups was not different significantly ($p > 0,05$).

Median effective dose (ED₅₀) as hepatoprotective of the makuto dewo fruit flesh water extract was 3.76 g/kgBW.