

INTISARI

Telah dilakukan penelitian tentang efek hepatoprotektif infusa simplisia daging buah makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) pada mencit jantan terinduksi CCl₄. Penelitian bertujuan memperoleh informasi kebenaran dan besarnya kisaran dosis efektif hepatoprotektif infusa simplisia daging buah makuto dewo pada mencit jantan terinduksi CCl₄.

Penelitian ini merupakan penelitian eksperimental murni yang dikerjakan mengikuti rancangan acak lengkap pola searah. Sejumlah 35 ekor mencit jantan dibagi menjadi 7 kelompok masing-masing 5 ekor. Pemberian dilakukan secara per oral sekali sehari. Kelompok I (kontrol positif) diberi CCl₄ dosis 3,92 ml/kgBB. Kelompok II (kontrol negatif) diberi aquadest 20,22 g/kgBB selama 6 hari berturut-turut. Kelompok III diberi infusa simplisia daging buah makuto dewo dosis 3,9312 g/kgBB selama 6 hari berturut-turut. Kelompok IV – VII (perlakuan) berturut-turut diberi infusa simplisia daging buah makuto dewo dosis 1,1648; 1,7472; 2,6208; dan 3,9312 g/kgBB selama 6 hari berturut-turut, kemudian pada hari ke-7 diberi CCl₄ dosis 3,92 ml/kgBB. Selanjutnya semua mencit diambil darahnya pada rentang waktu 48 jam setelah pemberian per oral terakhir di bagian sinus orbitalis mata untuk ditetapkan aktivitas GPT serumnya. Mencit dikurbankan dan diambil hatinya untuk dibuat preparat histologi, kemudian diskoring menurut tingkat kerusakan hati.

Data aktivitas GPT serum dan berat hati relatif dianalisis menggunakan uji Kolmogorov Smirnov untuk melihat distribusi data. Jika distribusi data normal, uji dilanjutkan dengan analisis varian satu arah dengan taraf kepercayaan 95% dan uji Scheffe. Data skoring histopatologi hati dianalisis dengan uji Kruskal Wallis dan uji Mann Whitney. Data berat badan kelompok kontrol negatif dan kelompok perlakuan dianalisis dengan analisis *split-plot* dilanjutkan uji Scheffe. Data persen efek hepatoprotektif dianalisis dengan analisis probit untuk mencari kisaran ED₅₀.

Hasil penelitian menunjukkan bahwa infusa simplisia daging buah makuto dewo dengan dosis 1,1648; 1,7472; 2,6208; dan 3,9312 g/kgBB yang diberikan secara per oral mampu menurunkan aktivitas GPT-serum berturut-turut sebesar 32,2652%; 35,1218%; 68,2180%; dan 84,6004% terhadap kontrol positif CCl₄. Penurunan tersebut secara statistik bermakna ($p < 0,05$). Hasil analisis skoring menunjukkan perbedaan bermakna ($p < 0,05$) terhadap kelompok kontrol positif CCl₄. Hasil analisis berat badan mencit tidak menunjukkan perbedaan bermakna ($p > 0,05$) terhadap kontrol negatif. Hasil analisis berat hati relatif mencit tidak menunjukkan perbedaan bermakna ($p > 0,05$) terhadap kontrol positif CCl₄. ED₅₀ hepatoprotektif infusa simplisia daging buah makuto dewo sebesar 1,9128 (1,7106-2,1180) g/kgBB.

ABSTRACT

An experimental study on the hepatoprotective effect of infusa of makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) dried fruit flesh had been conducted on male mice induced by CCl₄. The experiment was intended to obtain factual information and the range of hepatoprotective effective dose of infusa of makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) dried fruit flesh on male mice induced by CCl₄.

A pure experimental study was done following the direct sampling design and was analyzed by one-way variant. Thirty five male mice were divided into seven groups with the same number. The injection was done orally once a day. The first group (positive control group) was given CCl₄ solution with the dose of 3.92 ml/kgBW. The second group (negative control group) was given aquadest with the dose of 20.22 g/kgBW for 6 days respectively. The third group was given infusa of makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) dried fruit flesh with the dose of 3.9312 g/kgBW for 6 days respectively. The fourth to seventh groups were treatment groups, which were given infusa of makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) dried fruit flesh with the doses of 1.1648; 1.7472; 2.6208; 3.9312 g/kgBW respectively for 6 days. Then, on the seventh day, they were given CCl₄ with the dose of 3.92 ml.kgBW. At 48 hours after the last orally injection, all mice's blood was sampled at the eyes sinus orbitalis to determine the activity level of their SGPT level by a kinetic method of GPT-ALAT. The mice were sacrificed and their livers were taken to be made histological blood smear, then they were scored based on their stage of hepatic destruction

SGPT activity data and relative liver weight data were analyzed based on Kolmogorov Smirnov tests to know data distribution. If data distribution was normal, analysis continued by one-way variant analysis at 95 % significance level, and by Scheffe test. Liver histopathology scoring data were analyzed using Kruskal Wallis and Mann Whitney non-parametric statistical test. Body weight data of negative control group dan treatment group were analyzed by split-plot analysis and continued by Scheffe test. Hepatoprotective percent effect data were analyzed by probit analysis to determine median effective dose (ED₅₀) range.

The result of study showed that the infusa of makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) dried fruit flesh with the doses of respectively 1.1648; 1.7472; 2.6208; and 3.9312 g/kgBW which were given orally could decrease SGPT activity level to respectively 32.2652%; 35.1218%; 68.2180%; and 84.6004% towards the positive control group. The decline was statistically significant ($p < 0.05$). Whereas, scoring analysis result demonstrated significantly difference ($p < 0.05$) toward the positive control group. The body weight analysis result showed unsignificantly difference ($p > 0.05$) towards the negative control group. The relative liver weight of mice analysis result showed unsignificantly difference ($p > 0.05$) towards the positive control group. The hepatoprotective median effective dose (ED₅₀) of infusa of makuto dewo (*Phaleria macrocarpa* (Scheff.) Boerl.) dried fruit flesh is 1.9128 (1.7106-2.1180) g/kgBW