

ABSTRAK

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Latar Belakang : Biji kurma pada beberapa penelitian menunjukkan aktivitas anti nefrotoksik dikaitkan dengan jumlah antioksidan dan senyawa fenolik. Penelitian ini bertujuan untuk mengetahui karakteristik biji kurma serta aktivitas anti nefrotoksik biji kurma berdasarkan penurunan kadar kreatinin dan ureum ginjal.

Metode : Penelitian ini menggunakan rancangan *pre-posttest with controlled group design*. Analisis farmakognosi simplisia biji kurma menggunakan metode eksplorasi. Subjek uji 25 tikus jantan galur wistar dibagi menjadi 5 kelompok, yaitu kontrol sehat, kontrol negatif, dan 3 kelompok perlakuan EEBK dosis 150, 300, dan 600 mg/kgBB. Tikus diinduksi EEBK setiap hari dan karagenan 1% 2x seminggu selama 14 hari. Pengambilan darah dilakukan pada hari ke-1 dan ke-15 untuk pengukuran kadar kreatinin dan ureum. Serum darah diuji menggunakan kit metode *Jaffe* dan *Berthelot*. Kadar kreatinin dan ureum dianalisis menggunakan uji *paired T test* dan uji *one way ANOVA*.

Hasil : Hasil penelitian menunjukkan bahwa simplisia biji kurma berbentuk lonjong beralur dengan P: 2,6-2,8cm dan L: 1-1,125cm Terdiri dari jaringan endokarpium, mesokarpium, epikarpium, parenkim, kolenkim, sel-sel batu dan endosperma. Serta, hasil analisis fisiko-kimia simplisia biji kurma telah memenuhi standar simplisia yang baik menurut MMI. EEBK dapat menurunkan kadar ureum dan kreatinin secara signifikan pada semua dosis. Dosis terbaik dalam menurunkan kadar ureum adalah dosis 150 mg/kgBB dengan penurunan 10,8 mg/dl dan kreatinin 600mg/kgBB dengan penurunan 0,132mg/dl.

Kesimpulan : Simplisia biji kurma memenuhi standar simplisia yang baik menurut MMI dan EEBK memiliki aktivitas anti nefrotoksik berdasarkan penurunan kadar ureum dan kreatinin ginjal.

Kata Kunci : Ekstrak etanol biji kurma, analisis farmakognosi, kreatinin, ureum.

ABSTRACT

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Background : Several studies have shown that date palm seeds have anti-nephrotoxic activity associated with the number of antioxidants and phenolic compounds. This study aimed to determine the characteristics of date palm seeds and anti-nephrotoxic activity of date palm seeds based on a decrease in kidney creatinine and urea levels.

Method : This study used a pretst and posttest with controlled group design. Pharmacognosic analysis was carried out using exploration method. This study used 25 male white rats Wistar strain which divided into 6 groups, namely healthy control, negative (carrageenan 1%), and three treatment groups EEBK dose 150, 300, 600mg/KgBB. Mice were induced EEBK every day and carrageenan 1% twice a week for 14 days. Blood collection for measurement of creatinine and urea levels was carried out on days 1 and 15. Blood serum in the group was tested invitro using the kit creatinine with *Jaffe* method and kit urea with *berthelot* method. Creatinine and urea levels were analyzed using *paired* T test and *one way* ANOVA test.

Result : The results showed that simplicia oval-shaped date palm seeds grooved with P: 2.6-2.8cm and L: 1-1.125cm. Consisting of endocarpium tissue, mesocarpium, epicarpium, parenchyma, colenchyma, stone cells and endosperm. The results physico-chemical analysis of date seed have fulfilled good simplisa strandards according to MMI. EEBK was able to reduce creatinine and urea levels significantly at all dosages, the best to reduce urea levels was 150 mg/kgBB and 600 mg/kgBB for creatinine levels.

Conclusion : Date seed have fulfilled good simplisa strandards according to MMI and EEBK was anti-nephrotoxic activity based on a decrease in kidney creatinine and urea levels.

Keyword: Ethanol extract date palm seeds, pharmacognosic analysis, creatinine, urea.