

INTISARI

NIFU, A.D. 2016. UJI TOKSISITAS SUBKRONIK EKSTRAK ETANOL BUAH PINANG (*Areca catechu L.*) TERHADAP KADAR BUN & KREATININ PLASMA PADA TIKUS PUTIH GALUR WISTAR, SKRIPSI, FAKULTAS FARMASI UNIVERSITAS SETIA BUDI, SURAKARTA.

Buah pinang (*Areca catechu L.*) mengandung alkaloid, seperti arekolin, arekolidine, arekain, guvakolin, guvasine, isoguvasine, tanin terkondensasi, tanin terhidrolisis, flavan, senyawa fenolik, asam galat, getah, lignin, minyak menguap dan tidak menguap, serta garam. Penelitian ini bertujuan untuk mengetahui adanya efek toksisitas subkronik ekstrak etanol buah pinang (*Areca catechu L.*) terhadap perubahan kadar *Blood Ureum Nitrogen (BUN)* dan Kreatinin plasma pada tikus putih jantan dan betina.

Metode ekstraksi yang digunakan adalah maserasi dengan pelarut etanol 70%. Penelitian ini menggunakan hewan uji tikus putih jantan dan betina galur wistar sebanyak 60 ekor yang di bagi menjadi 6 kelompok yaitu dosis I (CMC 0,5%), dosis II (34,2 mg/kg BB), dosis III (1500 mg/kg BB), dosis IV (2000 mg/kg BB), satelit 34,2 mg/kg BB, satelit 2000 mg/kg BB selama 28 hari. Data diperoleh pada t awal sebelum hewan uji di oral dan t akhir 28 hari setelah hewan uji di oral, data kelompok satelit di peroleh 14 hari kedepan setelah t akhir. Data hasil pemeriksaan kadar *Blood Ureum Nitrogen (BUN)* dan Kreatinin plasma dianalisis menggunakan *Shapiro-Wilk* dan One Way Anova.

Hasil penelitian menunjukkan bahwa pemberian ekstrak etanol buah pinang secara oral selama 28 hari memberikan efek toksik pada organ ginjal tikus putih jantan dan betina yang dilihat dari hasil pemeriksaan kadar *Blood Ureum Nitrogen (BUN)* dan Kreatinin plasma mengalami peningkatan kadar diatas normal. Peningkatan kadar *BUN* dan Kreatinin tertinggi pada dosis 2000 mg/kg BB.

Kata kunci : *Areca catechu* Linn, toksisitas, kadar *BUN* dan kreatinin plasma.

ABSTRACT

NIFU, A.D., 2016, SUBCHRONIC TOXICITY TEST OF ARECA ETHANOL EXTRACT ON THE LEVEL OF BUN AND PLASMA CREATININE IN WHITE MOUSE WISTAR STRAIN, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Areca (*Areca catechu* L.) contains alkaloid as arecoline, arecolidine, arecaine, guvacoline, guvasine, isoguvanine, condensed tannin, hydrolyzed tannin, flavaniline, phenolic, gallic acid, latex, lignin, evaporated and non-evaporated oil, and salt. This study was aimed to find out the effect of subchronic toxicity of areca ethanol extract on the level change of Blood Ureum Nitrogen (BUN) and Plasma Creatinine in the male and female white mouse Wistar strain.

The extraction method used was maceration with ethanol 70%. This study used 60 male and female white mice which divided into 6 groups. Dose I (CMC 0.5%), dose II (34,2mg/kg BW), dose III (1500mg/kg BW), dose IV (areca extract 2000mg/ kg BW), satellite 6.84mg/kg BW, and satellite 2000mg/kg BW for one month. Data was obtained at the beginning of t before and at the end of the month, satellite was obtained 14 days after day-29 of data collection. The data of *BUN* and Plasma Creatinine examination result was analyzed using *Shapiro-Wilk* and One Way Anova.

The result of the study showed that oral administration of areca extract for one month lead to a toxic effect on kidneys in male and female white mice, observed by the result of the increased level of BUN and Plasma Creatinine above normal at dose 2000mg/kg BW.

Keywords: *Areca catechu* L., subchronic toxicity, level of BUN and Plasma creatinine.