

ABSTRAK

EFEK PEMBERIAN MINYAK ATSIRI DARI UMBI RUMPUT TEKI (*Cyperus rotundus L.*) TERHADAP GAMBARAN HISTOPATOLOGI GINJAL TIKUS PUTIH (*Rattus norvegicus*) GALUR *Sprague dawley* YANG DIINDUKSI ETANOL

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Latar Belakang: Etanol adalah cairan jernih yang cepat diserap oleh tubuh. Efek konsumsi etanol dapat menyebabkan kerusakan organ misal ginjal. Kerusakan ginjal bisa diatasi dengan senyawa antioksidan. Antioksidan yang dapat digunakan misalnya minyak atsiri umbi teki. Penelitian ini bertujuan untuk mengetahui apakah minyak atsiri umbi teki dapat memberikan efek terhadap gambaran histopatologi ginjal tikus putih (*Rattus norvegicus*) galur *Sprague dawley* yang diinduksi etanol.

Metode: Penelitian ini merupakan ekperimental menggunakan 25 ekor tikus putih galur *Sprague dawley* yang dibagi ke dalam 5 kelompok, yaitu kontrol negatif (K1) tikus tanpa perlakuan, kontrol positif (K2) diberikan etanol 43% dosis 0,0116 ml/grBB, kelompok perlakuan 1 (P1) diberikan etanol 43% dan atsiri dosis 0,025 ml/hari, kelompok perlakuan 2 (P2) diberikan etanol 43% dan atsiri dosis 0,05 ml/hari, dan kelompok perlakuan 3 (P3) diberikan 43% dan atsiri dosis 0,1 ml/hari dalam waktu 14 hari.

Hasil: Hasil penelitian menunjukkan rata-rata skor kerusakan ginjal pada K1: 0,08, K2: 2,32, P1: 2,16, P2: 1,95, P3: 1,72. Data yang diperoleh diuji dengan *Kruskal-Wallis* didapatkan perbedaan bermakna $p=0,001(p<0,05)$. Kesimpulan penelitian ini adalah terdapat efek minyak atsiri umbi teki terhadap gambaran histopatologi ginjal tikus putih (*Rattus norvegicus*) galur *Sprague dawley* yang diinduksi etanol.

Kata Kunci: *Cyperus rotundus L.*, Etanol, ginjal, histopatologi, minyak atsiri umbi teki

ABSTRACT

EFFECTS OF GIVING VOLATILE OIL FROM NUT GRASS TUBERS (*Cyperus rotundus* L.) TO HISTOPATHOLOGY OF KIDNEY FROM SPRAGUE DAWLEY WHITE RATS (*Rattus norvegicus*) THAT WERE INDUCED ETHANOL

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Background: Ethanol is clear liquid that quickly absorbed in our body. The effect of ethanol consumption can cause damage to organs such as the kidneys. Kidney damage can be cured by antioxidant compounds for example essential oils of nut grass tubers. This research was done to know whether essential oils of nut grass tubers can give effect to histopathology of kidney from sprague dawley white rats (*Rattus norvegicus*) that were induced ethanol.

Methods: This was an experimental research using 25 Sprague dawley white rats that were divided into 5 groups, namely negative control (K1) without treated rats, positive control (K2) that were given 43% ethanol with dosage 0.0116 ml/gram of weight, group 1 (P1) were given ethanol 43% and volatile oil with dosage 0.025 ml/day, group 2 (P2) were given ethanol 43% and volatile oil with dosage 0.05 ml / day, and treatment group 3 (P3) was given 43% and volatile oil with dosage 0,1 ml/day as long as 14 days.

Results: The results showed that average score of kidney damage at K1 was 0.08, K2: 2.32, P1: 2.16, P2: 1.95, P3: 1.72. Data were tested with Kruskal-Wallis and got significant difference with $p = 0.001$ ($p < 0.05$). The conclusion of this research is there are effects from essential oils of nut grass tubers to histopathology of sprague dawley white rats (*Rattus novergicus*) that were induced ethanol.

Keywords: *Cyperus rotundus* L., Essential oil of nut grass tubers, ethanol, histopathology, kidney,