UJI TOKSISITAS AKUT DAN TERTUNDA FRAKSI ETIL ASETAT BAWANG DAYAK (*Eleutherine bulbosa* (Mill.) Urb) TERHADAP MENCIT PUTIH JANTAN

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PADANG

2018

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ABSTRAK

Pengujian toksisitas akut dan tertunda fraksi etil asetat bawang dayak telah dilakukan. Sebanyak 48 ekor mencit putih jantan berusia 2-3 bulan dengan berat badan 20-30 gram digunakan sebagai hewan uji. Hewan dibagi menjadi 6 kelompok, yaitu 1 kelompok kontrol dan 5 kelompok perlakuan yang diberi fraksi etil asetat bawang dayak dengan dosis 800, 1600, 3200, 6400, 12800 mg/kg BB berturut-turut secara oral. Jumlah hewan yang mati dalam kelompok pada 1, 2, 3 dan 24 jam dihitung serta gejala toksik yang muncul selama 3 jam dicatat. Pada mencit yang hidup, diamati perubahan berat badan, konsumsi makan dan minum hewan selama 14 hari. Pada akhir percobaan, hewan uji dimatikan dan ditentukan rasio organ hati, ginjal dan jantungnya. Data dianalisa menggunakan analisa probit untuk LD_{50}, ANOVA Dua Arah untuk perubahan berat badan, konsumsi makan, minum, dan ANOVA Satu Arah untuk rasio organ hati, ginjal, dan jantung (signifikansi diambil pada $P<0,05$). Hasil penelitian menunjukkan bahwa nilai LD50 1 jam, 2 jam, 3 jam, dan 24 jam fraksi etil asetat bawang dayak berturut-turut yaitu 15277,593; 10273,630; 8472,320; dan 5316,409 mg/kg BB dan gejala toksik yang menyertai kematian mencit antara lain diare, terengah-engah, tremor, penurunan aktivitas motorik dan kepekaan terhadap bunyi. Hewan yang diberikan fraksi etil asetat mengalami penurunan konsumsi makan, minum, dan perlambatan perkembangan kenaikan berat badan, secara bermakna ($P<0,05$). Semua hewan uji tidak menunjukkan perubahan rasio organ hati, ginjal, dan jantung secara signifikan ($P>0,05$). Ini menunjukkan bahwa fraksi etil asetat bersifat toksik ringan dan menghasilkan efek toksisitas tertunda.

Kata Kunci: toksisitas akut dan tertunda, LD_{50}, bawang dayak, fraksi etil asetat

ACUTE AND DELAYED TOXICITY STUDY OF ETHYL ACETATE FRACTION OF (*Eleutherine bulbosa* (Mill.) Urb) IN MALE ALBINO MICE

ABSTRACT

Acute and delayed toxicity study of ethyl acetate fraction of Dayak Onion (red bulb) has been carried out. A number of 48 male albino mices aged of 2-3 months, weight at 20-30 gram were used as experimental animals. The mices were divided into 6 groups, group 1 as control and other group were treated with ethyl acetate fraction orally at doses at 800, 1600, 3200, 6400, and 12800 mg/kg respectively. The number of dead mice in 1, 2, 3, and 24 hours were recorded, and other toxic symptoms were recorded. The body weight, food and water intake were also recorded on mices that survived from the toxic effect for 14 days. At the end of the experiment, the mices were sacrificed and their ratio of liver, kidney, and heart were measured. The data were analyzed using Probit analysis for LD_{50}, Two Way ANOVA for the body weight, food and water intake, and One Way ANOVA for the ratio of liver, kidney, and heart of mices (significance post taken at P<0,05). The results showed that the 1, 2, 3, and 24 hours LD50 of ethyl acetate fraction of *Eleutherine bulbosa* (Mill.) Urb were 15277,593; 10273,630; 8472,320; and 5316,409 mg/kg BB respectively. The animal also performed diarrhea, panting in breath, tremor, decreasing motoric activity and sensitivity to sound. While body weight, food and water intake were decreased significantly (P<0,05), but there were no significant change in the liver, kidney, and heart ratio (P> 0,1). This indicated that ethyl acetate fraction of *Eleutherine bulbosa* (Mill.) Urb is slightly toxic and produced delayed toxicity effect.

Keywords: acute and delayed toxicity, LD50, *Eleutherine bulbosa* (Mill.) Urb, ethyl acetate fraction.