

Subchronic oral toxicity study of Vegeta in Sprague-Dawley rats

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Abstrak

Tujuan penelitian ini adalah untuk menentukan keamanan dan efek toksik Vegeta yang diberikan secara oral selama 90 hari pada tikus. Delapan puluh tikus strain Spragite-Dawley dibagi secara acak menjadi 4 kelompok. Tiap kelompok terdiri dari 20 tikus, 10 jantan dan 10 betina. Tiap kelompok masing-masing mendapat Vegeta 0,25 g/kg BB; 0,50 g/kg BB; 1,00 g/kg BB (dilantkan dalam akuades). dan kelompok kontrol mendapat 5,00 ml/ kg BB akuades secara oral memahii xoude lambung selama 90 hari. Berat badan dan tingkah laku tikus tiap hari dievaluasi. Pada hari ke 90 hewan coba didekapitasi, sampel darah diambil untuk dinilai kadar hemoglobin, leukosit, SGPT, SCOT, kreatinin, dan ureitn. Organ dalam juga diambil, ditimbang dan diperiksa secara mikroskopis. Hasil menunjukkan bahwa Vegeta dosis 0,25 g/kg BB; 0,50 g/kg BB; dan 1,00 g/kg BB tidak mempengaruhi berat badan, fungsi hati dan fungsi ginjal dibandingkan kelompok kontrol. Dibandingkan dengan kelompok kontrol, tidak didapatkan perbedaan signifikan dalam nilai hemoglobin, tetapi jumlah leukosit meningkat pada kelompok yang mendapat 1,00 g/kg BB Vegeta, yang kemungkinan disebabkan oleh infeksi. Berat otak dan limpa tikus jantan, dan berat paru dan jantung tikus betina pada kelompok Vegeta berbeda dibandingkan kelompok kontrol. Tetapi karena perbedaan berat tidak dose related dan tidak didapatkan kelainan mikroskopis yang spesifik dibandingkan kelompok kontrol, ini menunjukkan bukan merupakan efek toksik Vegeta. Nilai No observed effect level (NOEL) Vegeta 90 hari pemberian secara oral pada tikus jantan dan betina strain Sprague-Dawley adalah 1,00 g/kg BB. (Med J Indones 2006; 15:223-8).

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The objective of this study was to determine the safety and toxic effect of Vegeta giving orally for a period of 90 days in rats. Eighty rats of Spragite-Dawley strain were randomly divided into 4 groups. Each group consists of 20 rats, 10 male and 10 female rats. Each group received 0.25 g/kgBW; 0.50 g/kgBW; 1.00 g/kgBW Vegeta (in aquades solution) respectively, and the control group received 5 mL/kgBW aquadest, given orally by gastric tube for 90 days. The rat's body weight and behavior were daily evaluated. On the 90th day, the rats were decapitated and the blood samples were withdrawn for evaluation of Hemoglobin, leucocyte, SGPT, SCOT, creatinine, and ureum concentration. Visceral organs were also removed, being weighted and were examined microscopically. The results showed that Vegeta with dose of 0.25 g/kgBW; 0.50 g/kgBW, and 1.00 g/kgBW did not affect body weight, liver and renal function compared to control group. There was no significant difference for hemoglobin value compared to control group, but the number of leucocyte increased in 1.00 g/kgBW Vegeta dose group, which was possibly caused by infection. In Vegeta group, there was different spleen and brain weight in male rats, and different lung and heart weight in female rats compared to the control group. However, since it was not dose-related and there was no specific abnormality in microscopic examination compared to the control group, it was not indicated as Vegeta toxic effect. The No observed effect level (NOEL) value of Vegeta for 90 day oral administration in male and female rats of Sprague-Dawley strain was 1.00 g/kgBW. (Med J Indones 2006; 15:223-8).