

ABSTRAK

PENGARUH PEMBERIAN BATANG BROKOLI (*Brassica oleracea* var. *Italica*) TERHADAP BOBOT BADAN, BOBOT TESTIS, DAN GONADO SOMATIK INDEKS TIKUS PUTIH (*Rattus norvegicus*) SPRAGUE-DAWLEY

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Penelitian ini bertujuan mengkaji pengaruh pemberian batang brokoli terhadap bobot badan, bobot testis, dan gonado somatik indeks (GSI) tikus putih jantan galur *Sprague-Dawley*. Pada penelitian ini menggunakan hewan percobaan tikus strain *Sprague-Dawley* jantan, umur 3 bulan, dan mempunyai bobot badan 175 – 183 gram, sebanyak 25 ekor. Hewan percobaan dibagi menjadi 5 kelompok perlakuan yaitu kelompok kontrol negatif (P1) dengan perlakuan aquades, kelompok kontrol positif (P2) dengan perlakuan Letrozole, dan kelompok P3, P4, dan P5 masing-masing diberikan perlakuan brokoli dengan dosis 200, 400, dan 800 mg/200 gr BB/hari. Pemberian intervensi secara per oral selama 21 hari, pengukuran bobot badan dilakukan setiap 7 hari, pada hari ke-21 semua tikus dinekropsi dan dilakukan pengukuran bobot testis. Hasil penelitian menunjukkan bahwa rerata bobot badan P1 $207,00 \pm 2,236$ gram, P2 $207,80 \pm 4,494$ gram, P3 $205,20 \pm 2,588$ gram, P4 $206,60 \pm 2,408$ gram, dan P5 $206,20 \pm 3,194$. Bobot testis P1 sebesar $6,36 \pm 1,21$ gram, P2 $5,24 \pm 0,86$ gram, P3 $5,05 \pm 0,51$ gram, P4 $5,36 \pm 1,30$ gram, dan P5 $5,11 \pm 0,61$ gram. Nilai GSI diperoleh dari hasil perbandingan antara bobot testis dan bobot badan lalu dikalikan 100% dengan nilai P1 sebesar $3,07 \pm 0,60$ %, P2 $2,53 \pm 0,41$ %, P3 $2,46 \pm 0,25$ %, P4 $2,59 \pm 0,63$ %, dan P5 $2,48 \pm 0,29$ %. Hasil analisis statistik menunjukkan bahwa pemberian batang brokoli tidak berpengaruh signifikan ($P > 0,05$) terhadap bobot badan, bobot testis dan GSI. Berdasarkan hasil penelitian dapat disimpulkan bahwa pemberian batang brokoli selama 21 hari tidak berpengaruh terhadap bobot badan, bobot testis dan GSI

Kata kunci: Brokoli, tikus, bobot badan, bobot testis, GSI

ABSTRACT

THE EFFECT OF GIVING BROCCOLI STALK (*Brassica oleracea* var. *Italica*) ON THE BODY WEIGHT, TESTICAL WEIGHT, AND GONADOSOMATIC INDEX OF WHITE RAT (*Rattus norvegicus*) SPRAGUE-DAWLEY

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This study aimed to examine the effect of giving broccoli stalk on the body weight, testes weight, and gonado-somatic-index (GSI) of male Sprague-Dawley rats. In this study using experimental animals male Sprague-Dawley strain rats, aged 3 months, and have a body weight of 175-183 grams, as many as 25 heads. Experimental animals were divided into 5 treatment groups, namely the negative control group (P1) with aquades treatment, the positive control group (P2) with Letrozole treatment, and the P3, P4, and P5 groups were each given broccoli treatment at doses of 200, 400, and 800 mg/200 g BW/day per oral intervention for 21 days. The body weight measurement was carried out every 7 days, on the 21st day all rats were necropsy and testicular weight measurements were taken. The results showed that the average body weight of P1 207.00 ± 2.236 grams, P2 207.80 ± 4.494 grams, P3 205.20 ± 2.588 grams, P4 206.60 ± 2.408 grams, and P5 206.20 ± 3.194 . Testicular weights of P1 were 6.36 ± 1.21 grams, P2 5.24 ± 0.86 grams, P3 5.05 ± 0.51 grams, P4 5.36 ± 1.30 grams, and P5 5.11 ± 0.61 grams. The GSI value is obtained from the comparison between testicular weight and body weight and then multiplied by 100% with a value of P1 was 3.07 ± 0.60 %, P2 2.53 ± 0.41 %, P3 2.46 ± 0.25 %, P4 2.59 ± 0.63 %, and P5 2.48 ± 0.29 %. The results of statistical analysis showed that broccoli administration had no significant effect ($P > 0.05$) on body weight, testicular weight, and GSI. Based on the results of the study, it can be concluded that giving broccoli stalk for 21 days has no effect on body weight, testicular weight, and GSI.

Keywords: Broccoli, rat, body weight, testicular weight, GSI