Efek antioksidan bekatul terhadap kadar glutation ginjal tikus yang diinduksi dengan karbon tetraklorida = the effect of rice bran antioxidant on glutathione levels in kidney rats induced with carbon tetrachloride

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Abstrak

[Stres oksidatif dihasilkan sebagai akibat dari jumlah ROS (reactive oxygen spesies) yang berlebih di dalam tubuh yang dapat merusak jaringan. Hal ini disebabkan oleh ketidakseimbangan antara oksidan (ROS) dan antioksidan sebagai penangkalnya. Kadar antioksidan di dalam tubuh dapat ditingkatkan dengan cara mengonsumsi makanan yang mengandung zat antioksidan, misalnya bekatul. Oleh karena itu, tujuan dari penelitian ini adalah untuk mengetahui potensi bekatul sebagai antioksidan dengan mengukur kadar GSH pada ginjal tikus diintoksikasi dengan karbon tetraklorida (CCl4). Pada penelitian ini menggunakan 24 tikus jantan galur Sparague Dawley yang dibagi menjadi 6 kelompok. Kelompok kontrol normal (K1) tidak mendapat perlakuan, kelompok kontrol negatif (K2) diberikan CCl4 0,55 mg/kg BB. Perlakuan 1 (P1) dan P2 diberikan bekatul 200 mg/kg BB. P3 dan P4 diberikan bekatul 400 mg/kg BB. Kemudian, kelompok P2 dan P4 diberikan CCl4 dengan dosis 0,55 mg/kg BB. Masing-masing kelompok tersebut dilakukan pengukuran kadar GSH. Setelah itu, dilakukan analisis data dengan menggunakan One Way Anova. Hasil penelitian didapatkan kadar GSH pada K2, P1 dan P2 lebih tinggi dibandingkan kontrol normal dan kadar GSH P3, P4 lebih tinggi dibandingkan kontrol negatif. Peningkatan kadar GSH yang bermakna terdapat pada kontrol negatif serta kelompok bekatul 400 dengan bekatul 200 + CCl4 dengan nilai p< 0,05. Dengan demikian, dapat disimpulkan bahwa bekatul berpotensi sebagai antioksidan apabila dilihat secara grafik, karena kadar GSH pada rata-rata kelompok perlakuan cenderung mengalami peningkatan dibandingkan dengan kontrol normal dan kontrol negatif;Oxidative stress produced as a result of the amount of ROS (reactive oxygen species) are excessive in the body that can damaged tissue. This is caused by an imbalance between oxidants (ROS) and antioxidant as an antidote. Levels of antioxidants in the body can be increased by eating foods that contain antioxidants, such as bran. Therefore, the aim of this study was to determine the potential of rice bran as an antioxidant by measuring the levels of GSH in kidney diintoksikasi rats with carbon tetrachloride (CCl4). In this study using 24 male rats Sparague Dawley strain were divided into 6 groups. Normal control group (K1) untreated, negative control group (K2) is given CCl4 0.55 mg / kg. Treatment 1 (P1) and P2 given bran 200 mg / kg. P3 and P4 are given bran 400 mg / kg. Then, the group P2 and P4 are given CCl4 with a dose of 0.55 mg / kg. Each group measured levels of GSH. After that, data analysis using One Way Anova. The result showed the levels of GSH on K2, P1 and P2 higher

than normal control and GSH levels P3, P4 higher than the negative control. A significant increase in GSH levels found in the negative controls as well as groups with bran bran 400 200 + CCl4 with a value of p <0.05. Thus, it can be concluded that the bran potential as an antioxidant when seen in the chart, because the levels of GSH in the average treatment groups tends to increase as compared with normal controls and negative controls;Oxidative stress produced as a result of the amount of ROS (reactive oxygen species)
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