

Pengaruh pemberian homogenat bekatul terhadap kadar malondialdehid pada otak tikus yang diinduksi karbon tetraklorida = Effect of rice bran homogenate feeding to malondialdehyde levels of brain in rats induced by carbon tetrachloride

Desi Melia Utami, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20421200&lokasi=lokal>

Abstrak

[Radikal bebas merupakan senyawa reaktif yang memiliki elektron tidak berpasangan pada orbital terluarnya. Peningkatannya dalam tubuh menimbulkan kerusakan oksidatif. Salah satu organ yang rentan adalah otak. Antioksidan endogen tidak cukup menetralkan radikal bebas. Konsumsi antioksidan eksogen dibutuhkan untuk membantu menangkal radikal bebas, salah satunya adalah bekatul. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian bekatul terhadap otak tikus yang diinduksi CCl₄ dengan parameter kadar MDA. Sampel menggunakan 24 ekor tikus jantan Sprague-Dawley berusia 6 ? 8 minggu dengan BB + 100 ? 200 g yang dibagi menjadi 6 kelompok yaitu kontrol normal (P1), kontrol negatif diberi CCl₄ (P2), bekatul 200 mg/kgBB (P3), bekatul 400 mg/kgBB (P4), bekatul 200 mg/kgBB+CCl₄ (P5), bekatul 400 mg/kgBB+CCl₄ (P6). Setelah perlakuan dilakukan pengukuran kadar MDA. Hasil penelitian diperoleh kadar MDA pada P3 dan P4 lebih rendah dibandingkan kelompok kontrol normal. Dan kadar MDA pada kelompok P2 lebih tinggi dibandingkan kelompok kontrol normal. Selain itu, kadar MDA pada kelompok P5 lebih tinggi dibandingkan kelompok kontrol negatif sedang pada kelompok P6 lebih rendah dibandingkan kelompok kontrol negatif. Penelitian diuji dengan One-Way Anova memperoleh perbedaan bermakna dengan nilai $p < 0,05$. Pemberian bekatul 400mg/kgBB pada otak yang diinduksi CCl₄ menurunkan kadar MDA. Hal ini mengindikasikan potensi bekatul sebagai antioksidan.;

Free radical is a reactive compound which has unpaired electron in its outer orbital. Its increased in the body cause oxidative stress. One of the organs which at risk to have oxidative stress is brain. Endogenous antioxidants are insufficient to neutralize free radicals in the body. Consumption of exogenous antioxidant is needed to support neutralizing free radicals, one of them is rice bran. This study was aimed to measure the effect of rice bran extract as antioxidant in rat's brain induced by CCl₄. The parameter used was MDA levels. Samples were 24 male Sprague-Dawley 6-8 year old rats weighted + 100-200 g. Samples were divided into 6 groups. Those were normal control (P1), negative control were given CCl₄ (P2), 200 mg/kg BW rice bran (P3), 400 mg/kg BW rice bran (P4), 200 mg/kg BW rice bran+CCl₄ (P5), 400 mg/kg BW rice bran+CCl₄ (P6). MDA levels were measured after intervention. The result shows MDA levels in P3 and P4 group lower than normal control group. And MDA levels in P2 group higher than normal control group. Moreover, MDA levels in P5 group higher than negative control group and MDA levels while in P6 group lower than negative control group. According to One-Way Anova test result, there was a significant difference with p value < 0.05 . Effect of 400 mg/kg BW rice bran feeding to brain induced by CCl₄ may reduce MDA levels. Those results indicated a potential rice bran as antioxidant., Free radical is a reactive compound which has unpaired electron in its outer orbital. Its increased in the body cause oxidative stress. One of the organs which at risk to have oxidative stress is brain. Endogenous antioxidants are insufficient to neutralize free radicals in the body. Consumption of exogenous antioxidant is needed to support neutralizing free radicals, one of them is rice bran. This study was aimed to measure the effect of rice bran extract as antioxidant in

rat's brain induced by CCl₄. The parameter used was MDA levels. Samples were 24 male Sprague-Dawley 6-8 year old rats weighted + 100-200 g. Samples were divided into 6 groups. Those were normal control (P1), negative control were given CCl₄ (P2), 200 mg/kg BW rice bran (P3), 400 mg/kg BW rice bran (P4), 200 mg/kg BW rice bran+CCl₄ (P5), 400 mg/kg BW rice bran+CCl₄ (P6). MDA levels were measured after intervention. The result shows MDA levels in P3 and P4 group lower than normal control group. And MDA levels in P2 group higher than normal control group. Moreover, MDA levels in P5 group higher than negative control group and MDA levels while in P6 group lower than negative control group. According to One-Way Anova test result, there was a significant difference with p value < 0.05. Effect of 400 mg/kg BW rice bran feeding to brain induced by CCl₄ may reduce MDA levels. Those results indicated a potential rice bran as antioxidant.]