

ABSTRACT

STUDY OF PORANG (*Amorphophallus oncophyllus*) GLUCOMANNAN-SUBSTITUTED RICE ANALOGUE ON LIPID PROFILE OF ALLOXANE-INDUCED MICE

By

NABILLA ISTIQAAMH

Porang analog rice is analog rice made from porang tubers and waxy cassava which has a low glycemic index of 43 so it can be consumed by diabetics. This study aims to determine the effect of giving porang analog rice on total cholesterol, LDL, HDL and triglyceride levels in mice induced by alloxan. This study was arranged in a completely randomized design (CRD) with 4 treatments and 6 replications, namely the control (AIN 93M ration). I (ration of AIN 93M), II (ration of porang rice), and III (ration of IR64). Mice treatment I, II, and III were induced by alloxan 140 mg/kg BW intraperitoneally. on day 29, the mice were measured for total cholesterol, High Density Cholesterol (HDL), Low Density Cholesterol (LDL) and triglyceride levels. The data obtained were tested for uniformity using the Bartlett test and the Tuckey test. Furthermore, the data were analyzed by ANARA and BNT test at the 5% level. The results showed that analog rice had a significant effect on total cholesterol, HDL, LDL, and triglyceride levels. Total cholesterol levels produced in mice given analogue rice from porang tubers were 87.33 mg/dL, LDL levels were 20.83 mg/dL, HDL levels were 53.83 mg/dL and the triglyceride levels produced were 142.83. mg/dL.

Keywords: porang analog rice, porang, cholesterol, HDL, LDL, triglycerides

ABSTRAK

KAJIAN PENGGUNAAN BERAS ANALOG YANG DISUBSTITUSI GLUKOMANAN PORANG (*Amorphopallus oncophyllus*) TERHADAP PROFIL LIPID MENCIT YANG DIINDUKSI ALOKSAN

Oleh

NABILLA ISTIQOMAH

Beras analog porang merupakan beras analog yang terbuat dari umbi porang dan ubi kayu *waxy* yang memiliki indeks glikemik rendah yaitu 43 sehingga dapat dikonsumsi oleh penderita diabetes. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian beras analog porang terhadap kadar total kolesterol, LDL, HDL dan trigliserida mencit yang diinduksi aloksan. Penelitian ini disusun dalam Rancangan Acak Lengkap (RAL) dengan 4 perlakuan dan 6 kali ulangan yaitu kontrol (ransum AIN 93M), I (ransum AIN 93M), II (ransum beras analog porang), dan III (ransumberas IR64). Mencit perlakuan I, II, dan III diinduksi aloksan 140 mg/kg BB secara intraperitoneal. Pada hari ke- 29, mencit dilakukan pengukuran kadar total kolesterol, *High Density Kolesterol* (HDL), *Low Density Kolesterol* (LDL) dan kadar trigliserida. Data yang diperoleh diuji keseragamannya dengan menggunakan uji *Bartlett* dan uji dengan uji *Tuckey*, selanjutnya data dianalisis dengan ANARA dan uji BNT pada taraf 5%. Hasil penelitian menunjukkan bahwa beras analog porang berpengaruh nyata terhadap kadar total kolesterol, HDL, LDL, dan trigliserida. Kadar total kolesterol yang dihasilkan pada mencit yang diberi beras analog dari umbi porang sebesar 87,33 mg/dL, kadar LDL sebesar 20,83 mg/dL, kadar HDL sebesar 53,83 mg/dL dan kadar trigliserida yang dihasilkan sebesar 142,83 mg/dL.

Kata kunci : Beras analog porang, porang, kolesterol, HDL, LDL, trigliserida