

The Effect of Giving Porang Flour Substitution Biscuits on Post Prandial

Blood Glucose Levels of White Rats (*Rattus norvegicus*)

Diabetes Mellitus

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ABSTRACT

*Diabetes Mellitus or high blood sugar is a disease in a group of metabolic disorders characterized by hyperglycemia characterized by defects in insulin secretion, insulin action, or both. One therapy that can be done is medical nutrition therapy in the form of consumption of high-fiber foods that can have an effect on lowering blood glucose in people with diabetes mellitus. One of the high-fiber foods is porang flour substitute biscuits made with 40 grams of porang flour and 60 grams of wheat flour. The purpose of this study was to determine the effect of giving porang flour substitute biscuits on reducing post prandial blood glucose levels in white rats (*Rattus norvegicus*) with diabetes mellitus. strain. This type of research is True experimental with Pretest-Posttest Control Group Design approach. This study used 24 rats aged 2-3 months weighing 180-250 grams which were divided into 3 groups, namely negative control, positive control, and treatment. The negative control group was healthy rats fed the standard Ratbio diet. The positive control group was rats with diabetes mellitus who were given standard Ratbio feed. While the treatment group was rats with diabetes mellitus who were given standard feed Ratbio and biscuits substituted with porang flour as much as 2.3 grams/head/day. The results showed that there was a difference. There was no difference in blood glucose levels 2 hours post prandial between the negative control group pretest-posttest ($p = 0.261$), the positive control group pretest-posttest ($p = 0.237$) but there was a difference in blood glucose levels 2 hours post prandial pretest-posttest treatment group ($p = 0.008$). Thus, it can be concluded that there is an effect of giving porang flour substitution biscuits on the blood glucose levels of white rats (*Rattus norvegicus*) with diabetes mellitus.*

Keywords : *Porang flour substitution biscuits, Diabetes mellitus, Blood glucose levels 2 hours post prandial.*