

ABSTRACT

Nasrurridlo, Ahmad. 2011. **Influence of Corn and Cassava Starch Modified With Enzymes on Blood Glucose Levels Pullulanase Wistar rat (*Rattus novergicus*)**. Supervisor: Ir. Liliek Harianie, M.P and Dr. drh. Bayyinatul Muchtaromah, M. Si

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Starch contained in the wild normally have a low amylose content. It triggers a high glycemic response when consumed. Therefore, the effort required modifications with the pullulanase enzyme to increase levels of amylose starch. This study aims to determine the effect of maize and cassava starch modified with the enzyme pullulanase of blood glucose levels wistar rats (*Rattus novergicus*). This was an experimental study that uses a Completely Randomized Design (RAK) with six treatments and four replications.

The research was conducted in November 2010 until January 2011 at the Laboratory of Animal Physiology Department of Biology, Faculty of Science and Technology, Islamic University of Malang State Maulana Malik Ibrahim. Analysis using Two Way ANOVA and significant effect when treatment is followed by LSD test with significance level of 5%. The treatment used is the provision of maize and cassava starch modified with 12 and 24-hour incubation with control of each starch. Testing blood glucose levels done seelah 30, 60, 90, and 120 minutes after administration of starch.

The results showed that the starch from cassava materials modified by incubation of 12 hours to increase blood glucose levels lower than most other starch materials were tested in the 30th minute. While the control of maize starch increase blood glucose levels higher than most other starches. In the 60th minute, a group of mice who were given permanent control of maize starch showed increased blood glucose levels higher than most other treatment groups. Conversely, groups of rats given cassava starch modified with 12-hour incubation continue to experience increased blood glucose level lowest in 60 minutes. In the 90th minute and 120, all mice blood glucose levels began to decrease gradually and returned to initial levels.