

# ***DIFFERENCES OF ADDITIONAL SUGAR SOLUTION AND PALM SUGAR SOLUTION ON BLOOD SUGAR LEVELS DURING MALE WISTAR RATS (*Rattus Norvegicus*)***

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## ***ABSTRACT***

*Sugar is a simple carbohydrate because it dissolves in water and is directly absorbed by the body to be converted into energy. The types of sugar used in this study were granulated sugar and palm sugar with varying doses. The purpose of this study was to determine the difference between giving a solution of granulated sugar and a solution of palm sugar on blood sugar levels while in male wistar rats (*Rattus norvegicus*). This type of research is pure experimental (true experimental laboratory design) with pretest posttest research design with control group design. The sample in this study were 25 male wistar rats (*Rattus norvegicus*), which were grouped into 5 groups. The treatment groups, namely P1 and P2, were given palm sugar at a dose of 4.5 grams/day and granulated sugar at a dose of 4.5 grams/day. Meanwhile, P3 and P4 were given palm sugar at a dose of 2.25 grams/day and granulated sugar at a dose of 2.25 grams/day and the control group (K) without treatment. The first blood sampling (pre-test) was carried out after adaptation and before being given treatment. The administration of a solution of granulated sugar and palm sugar solution was carried out for 28 days, followed by a blood sugar examination (post-test). Blood sugar examination data were analyzed using the One Way Anova test and the Paired T-Test. The results showed that there was a significant difference in blood sugar in the P2 group ( $p < 0.05$ ), increasing blood sugar before treatment from 111 mg/dl to 123.40 mg/dl. The highest increase in blood sugar levels was in treatment group 1 where the results of examination of blood sugar levels before treatment were 112.20 mg/dl and after treatment increased to 126.80 mg/dl. The conclusion of this study was that a dose of 4.5 ml/day of palm sugar increased blood sugar the highest in rats.*

**Keywords:** *Granulated Sugar, Palm Sugar, Temporary Blood Sugar*