

## **Effect of Rosella Combination Red Guava Juice on Fasting Blood Sugar in Diabetes Mellitus Rats**

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### **ABSTRACT**

Diabetes mellitus is a long-term metabolic disorder characterized by increased blood sugar levels above normal limits. Rosella combination red guava juice is a functional food product that contains antioxidants, one of which is flavonoids. This study aims to determine the effect of giving rosella combination red guava juice on fasting blood sugar in diabetes mellitus rats. This study is of *the True Experimental* type with a *Pretest-Posttest with Control Group* approach. This study used 18 male wistar rats aged 2-3 months with a body weight of 200-250 grams. The rats were divided into 3 groups, namely the negative control group (K-) was given standard *Rat Bio* feed, the positive control group (K+) induced HFD + fructose for 4 weeks, intraperitoneally induced STZ with a dose of 35 mg/kgBB, the treatment group (P) induced HFD + fructose for 4 weeks, STZ induction, was given rosella combination guava juice at a volume of 1.4 ml/rat/day. The results of *the pretest* and *posttest fasting blood sugar* test showed that there was a significant difference in fasting blood sugar (*Pretest*) between the K- and K+ groups ( $p=0.002$ ) and the K- with P groups ( $p=0.009$ ), there was no difference in fasting blood sugar (*Posttest*) between the (P) and the (K+) group ( $p=0.937$ ). The results of the *pretest* and *posttest fasting blood sugar difference* test showed that group (P) and group (K+)  $p=0,937$  were not significantly different. The administration of red guava juice in combination with rosella had no effect on fasting blood sugar in diabetes mellitus rats.

**Keywords:** Red guava juice combination rosella, diabetes mellitus, fasting blood sugar levels