Effect of Red Guava Juice Combined with Rosella on Random Blood Glucose of Diabetes Mellitus Rats

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ABSTRACT

Diabetes is a metabolic dysfunction characterized by high blood sugar levels due to changes in protein, lipid and carbohydrate metabolism. The combination of red guava and rosella is applied in the form of juice which contains antioxidants in the form of flavonoids which can be an alternative functional drink to lower blood glucose. This study aims to determine the effect of red guava juice combined with rosella on random blood glucose of diabetes mellitus rats. This study used True Experimental method with Pretest-Posttest Control Group Design. This study used 24 male Wistar rats aged 2-3 months, weighing 200-250 grams. The rats were divided into 3 groups, namely the negative group (K-) given standard Rat Bio feed and drinking water, the positive group (K+) given HFD and STZ induction with a single dose of 35 mg/kgBB, and the treatment group (P) given HFD and STZ induction with a single dose of 35 mg/kgBB, intervened with rosella combined red guava juice at a dose of 1.4 ml/mouse/day. The results of the test of random blood glucose levels pretest and posttest data showed that there were differences in random blood glucose levels (pretest) between groups K- with K + and groups K- with P (p=0,003), there were differences in random blood glucose levels (posttest) between groups K + with P and groups K + with K- (p=0,015), there were differences in random blood glucose levels (pretest and posttest) in group P (p=0,031), and there was no difference in the difference in random blood glucose levels group K + with P (p=0,522). The conclusion of this study is that there is no effect of giving red guava juice combined with rosella on random blood glucose of diabetes mellitus rats.

Keywords: Diabetes Mellitus, Flavonoids, Red Guava, Rosella, Random Blood Glucose