

The Effect of Red Guava Juice Combined with Rosella on Triglyceride Levels in HFD + STZ-Induced Rats

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ABSTRACT

Diabetes is a chronic metabolic disease characterized by elevated blood glucose levels (or blood sugar), which is also associated with triglyceride levels. Triglyceride levels are categorized as normal if <150 mg/dl and high if ≥ 150 mg/dl. One of the efforts to reduce triglyceride levels can be carried out by consuming functional drinks such as red guava juice combined with roselle, which contains antioxidants in the form of flavonoids. The aim of this study was to determine the effect of red guava juice combined with roselle on triglyceride levels in rats induced with HFD + STZ. This study used a True Experimental method with a Pretest-Posttest Control Group Design. A total of 24 male Wistar rats aged 2–3 months, weighing 200–250 grams, were used. The rats were divided into three groups: the negative control group (K–) was given standard Rat Bio feed and drinking water, the positive control group (K+) was given a high-fat diet and induced with a single dose of STZ 35 mg/kgBW, and the treatment group (P) was given a high-fat diet and induced with a single dose of STZ 35 mg/kgBW, then intervened with red guava juice combined with roselle at a dose of 1.4 ml/day. The difference analysis showed a significant difference among groups, with K– and K+ showing a p-value = 0.003. It can be concluded that administration of red guava juice combined with roselle did not have an effect in reducing triglyceride levels.

Keywords: Diabetes Mellitus, Flavonoid, Red Guava, Roselle, Triglyceride