

The Effect of White Dragon Fruit Juice with Rambutan Honey Addition on Blood Glucose Levels in Diabetic Rats

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ABSTRACT

Diabetes mellitus (DM) is a metabolic disorder characterized by high blood glucose levels (hyperglycemia) due to impaired insulin secretion, insulin function, or both. Decreasing blood glucose levels can be improved by administering functional beverages made from white dragon fruit juice with the addition of rambutan honey containing 13.20 mg of vitamin C and 4.27 mg of flavonoids. The purpose of this study was to determine the effect of white dragon fruit juice with the addition of rambutan honey on blood glucose levels in diabetic rats. This study used a true experimental design with a pretest-posttest control group design. The sample consisted of 24 male Wistar rats divided into three groups: normal rats (K-), rats induced with STZ (K+), and rats induced with STZ and given white dragon fruit juice with the addition of rambutan honey at a dose of 13.63 ml/200gBW (P). The intervention was given for 14 days. Blood glucose levels were measured using the GOD-PAP method. Data were analyzed using the Shapiro-Wilk test, One Way Anova, Paired T-test, and Post Hoc test. The results showed significant differences in blood glucose levels between groups before treatment ($p = <0,01$), significant differences in blood glucose levels between groups after treatment ($p = <0,01$), significant differences in blood glucose levels before and after treatment in the treatment group ($p = <0,01$), and significant differences in blood glucose levels between the treatment group (P) and the control group (K+) ($p = <0,01$). Administration of white dragon fruit juice with the addition of rambutan honey affects blood glucose levels in diabetic rats, but the decrease does not reach normal values.

Keywords: *Blood Glucose Levels, White Dragon Fruit Juice, Rambutan Honey, Diabetic Rats.*