

THE EFFECT OF SAPPAN WOOD DECOCTION COMBINED WITH LEMON JUICE AND STEVIA SUGAR ON FASTING BLOOD SUGAR LEVELS OF WISTAR RATS

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ABSTRACT

Diabetes mellitus is a chronic metabolic disorder that is progressive and negatively affects the quality of life of sufferers. Along with the growing interest in functional foods, the utilization of local ingredients such as sappan wood (Caesalpinia sappan L.) has begun to receive attention. Sappan wood is known to contain flavonoid compounds and antioxidants that have the potential to reduce blood glucose levels. This study aims to evaluate the effect of sappan wood decoction combined with lemon juice and stevia sweetener on fasting blood sugar levels in Wistar rats with diabetes mellitus. The study used true experimental design with group control design. A total of 24 male Wistar rats aged 2-3 months weighing 150-300 grams were divided into three groups: negative control (K-), positive control (K+), and treatment group (P). The K- group was given standard Rat Bio feed and drinking water ad libitum without induction, while the K+ and P groups were induced with streptozotocin (STZ) at a dose of 35 mg/kgBB. The treatment group received the combined decoction drink intervention as much as 3.2 ml/head/day for 14 days. Data analysis was performed using One Way ANOVA, Kruskal-Wallis, and Wilcoxon tests. The results showed no significant difference in fasting blood sugar levels between groups or between pretest and posttest ($p=0.144$). Thus, it can be concluded that the administration of sappan wood decoction combined with lemon juice and stevia sugar has not shown a significant effect on reducing fasting blood sugar levels in diabetic model rats.

Keywords: *Secang Wood, Lemon, Stevia, Fasting Blood Sugar, Diabetes Mellitus.*