

## ***The Effect of Steeping Robusta Coffee Grounds (Coffea Canephora) on Post-Prandial Blood Sugar Levels in Diabetes Mellitus Rats***

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### ***ABSTRACT***

*Diabetes mellitus is a chronic disease characterized by the pancreas being unable to produce enough insulin or the body's ineffectiveness in using insulin. One way of non-pharmacological therapy for DM is by consuming coffee, this is because coffee contains chemical compounds that can be estimated to increase glucose absorption and metabolism. This study aims to determine the effect of knowing the Robusta coffee powder brew on post-prandial blood sugar levels in DM rats. The study used a True Experimental design with a Pretest-Posttest Control Group Design approach. 28 male Wistar rats aged 2-3 months with a body weight of 200-250 grams were divided into four groups: K- which was only given Ratbio feed, K+ group which received Ratbio feed and one injection of low-dose streptozotocin (30 mg/kgBW) which would be isolated for three days, and two treatment groups which were also given standard Ratbio feed, induced with low-dose streptozotocin, and Robusta coffee powder infusion for 14 days at a dose of 4.6 ml/day (treatment 1) and 9.2 ml/day (treatment 2). Data analysis was performed using the One Way Anova test followed by the Post Hoc test, and the Paired T-test. The results showed that there was no significant difference in the K- ( $p = 0.159$ ) and K+ ( $p = 0.575$ ) groups, but there was a significant difference in the P1 and P2 groups ( $p = 0.000$  for both). Thus, it can be concluded that giving Robusta coffee powder infusion can significantly reduce postprandial blood sugar levels, even though these levels have not reached the normal range.*

**Keywords:** *steeping robusta coffee powder, post-prandial blood sugar, diabetes mellitus*