

Abstract

THE EFFECT OF MANGO PEEL (*Mangifera Indica L.*) BREWING ON FASTING BLOOD SUGAR LEVELS IN WISTAR RATS (*Rattus Norvegicus*) INDUCED BY ALLOXAN

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Background: Diabetes is a disease caused by metabolic disorders in the pancreas, leading to inadequate insulin production. This condition causes an increase in blood sugar levels in the blood, a condition known as hyperglycemia, which impacts fasting blood sugar levels. This study aims to determine the effect of mango peel (*Mangifera Indica L.*) brewing on fasting blood sugar levels in alloxan induced Wistar rats (*Rattus Norvegicus*)

Methodology: This research employed a true experimental pre-test and post-test design with the control group. A total of 24 rats were divided into six groups: healthy control (A), negative control (B), arumanis mango peel brew 100mg/200gBW (C), manalagi mango 100mg/200gBW (D), indramayu mango 100mg/200gBW (E), and glibenclamide 0,09mg/200gBW (F). Fasting blood sugar levels were measured using a glucometer, and the data were analyzed using One Way ANOVA and Duncan's post hoc test.

Results: The results showed that mango peels were effective in reducing fasting blood sugar levels. The mean pretest-posttest difference with the same dose is arumanis mango peel $120.50 \pm 7,594$ mg/dL, manalagi mango peel $140.75 \pm 5,058$ mg/dL, and indramayu mango peel $165.75 \pm 2,500$ mg/dL.

Conclusion: The administration of Indramayu mango peel brew at a dose of 100 mg/200gBW proved to be the most effective in reducing fasting blood sugar levels.

Keywords: Fasting Blood Sugar Level, Mango Peel, Wistar Rats

Abstrak

PENGARUH SEDUHAN KULIT MANGGA (*Mangifera Indica L*) TERHADAP KADAR GULA DARAH PUASA PADA TIKUS WISTAR (*Rattus Norvegicus*) YANG DIINDUKSI ALOKSAN

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Latar Belakang: Diabetes merupakan penyakit yang disebabkan oleh gangguan metabolisme pada pancreas, yang mengakibatkan produksi insulin tidak mencukupi. Kondisi ini menyebabkan peningkatan kadar gula darah dalam darah, yang dikenal sebagai hiperglikemia dan kondisi ini mempengaruhi kadar gula darah puasa. Penelitian ini bertujuan untuk mengetahui pengaruh seduhan kulit mangga (*Mangifera Indica L*) terhadap kadar gula darah puasa pada tikus wistar (*Rattus Norvegicus*) yang diinduksi aloksan.

Metodologi: Penelitian ini menggunakan desain *true experimental pretest-posttest with control group*. Sampel terdiri dari 24 tikus yang dibagi ke dalam 6 kelompok: kontrol sehat (A), kontrol negative (B), seduhan kulit mangga arumanis (C), mangga manalgi (D), mangga indramayu (E), dan glibenklamid (F). pengukuran gula darah puasa dilakukan dengan glucometer, dan data dianalisis menggunakan *One Way ANOVA* serta *uji post hoc Duncan*.

Hasil penelitian: Hasil penelitian menunjukkan bahwa seduhan kulit mangga efektif menurunkan kadar gula darah puasa. Hasil rerata selisih pretest-posttest dengan dosis yang sama adalah kulit mangga arumanis 120.50 ± 7.594 mg/dL, kulit mangga manalagi 140.75 ± 5.058 mg/dL, dan kulit mangga indramayu 165.75 ± 2.500 mg/dL.

Kesimpulan: Pemberian seduhan kulit mangga indramayu dengan dosis 100 mg/200gBB terbukti paling efektif dalam menurunkan kadar gula darah puasa.

Kata Kunci : Kadar Gula Darah Puasa, Kulit Mangga, Tikus Wistar