UJI EFEKTIVITAS EKSTRAK ETANOL DAN FRAKSI ETIL ASETAT DAGING BUAH SUKUN (*Artocarpus altilis* (Parkinson) Fosberg) TERHADAP PENURUNAN KADAR GULA DARAH PADA MENCIT DIABETES

ABSTRAK

Diabetes melitus ditandai dengan hiperglikemi yang disebabkan adanya defisiensi maupun resistensi insulin atau keduanya. Penelitian ini dilakukan untuk melihat pengaruh ekstrak etanol dan fraksi etil asetat daging buah sukun (*Artocarpus altilis* (Parkinson) Fosberg) dan lama pemberian terhadap penurunan kadar gula darah mencit diabetes karena diduga didalam tanaman ini terdapat senyawa isolasi murni seperti asam klorogenat, quersetin, flavanol, flavonol, asam kuinat, asam sinamat, dan leucoanthocyanin yang berpotensi sebagai antidiabetes. Metode pengukuran kadar gula darah menggunakan tes gula darah sewaktu. Seluruh mencit diberikan aloksan secara intraperitoneal, setelah dinyatakan diabetes mencit dibagi menjadi 6 kelompok yaitu kelompok kontrol positif (Suspensi Na-CMC 0,5%), pembanding (Suspensi Glimepirid 2 mg), kelompok ekstrak etanol dan fraksi etil asetat dengan 2 variasi dosis yaitu 50mg/kgBB dan 100mg/kgBB. Mencit diberi perlakuan selama 15 hari dengan mengukur kadar gula darah pada hari ke-5, 10 dan 15 serta penimbangan berat pakan dan berat badan disetiap harinya. Data hasil penelitian dianalisis menggunakan metode ANOVA 2 Arah kemudian dilanjutkan dengan uji lanjut Duncan. Dari hasil statistik dosis ekstrak etanol dan fraksi etil asetat serta lama pemberian berpengaruh signifikan terhadap persentase penurunan kadar gula darah mencit diabetes dengan P=0,000. Nilai persentase penurunan kadar gula darah paling besar terjadi pada kelompok ekstrak etanol dosis 100mg/kgBB tetapi nilai ini tidak berbeda nyata dengan kelompok uji lainnya yaitu berada pada kisaran -41% hingga -45%. Rata-rata persentase penurunan kadar gula darah pada hari ke-5, 10 dan 15 berturut-turut yaitu -44.00, -41.53% dan -44.81%.

Kata kunci: Diabetes melitus, *Artocarpus altilis* (Parkinson) Fosberg, berat pakan, berat badan, aloksan.

TEST OF THE EFFECTIVENESS OF ETHANOL EXTRACT AND ETHYL ACETATE FRACTION OF Breadfruit (*Artocarpus altilis* (Parkinson) Fosberg) FRUIT ON REDUCING BLOOD SUGAR LEVELS IN DIABETIC MICE

ABSTRACT

Diabetes mellitus is characterized by hyperglycemia, which is caused by insulin deficiency, insulin resistance, or both. This study was conducted to examine the effect of ethanol extract and ethyl acetate fraction of breadfruit (Artocarpus altilis (Parkinson) Fosberg) flesh and the duration of administration on reducing blood glucose levels in diabetic mice. It is suspected that this plant contains pure isolated compounds such as chlorogenic acid, quercetin, flavanols, flavonols, quinic acid, cinnamic acid, and leucoanthocyanin, which have potential as antidiabetic agents. The blood glucose levels were measured using a random blood glucose test. All mice were injected intraperitoneally with alloxan, and after confirming diabetes, the mice were divided into six groups: a positive control group (0.5% Na-CMC suspension), a comparator group (2 mg Glimepiride suspension), ethanol extract and ethyl acetate fraction groups with two dose variations, namely 50 mg/kgBW and 100 mg/kgBW. The mice were treated for 15 days, and their blood glucose levels were measured on the 5th, 10th, and 15th days, along with daily monitoring of food and body weight. The research data were analyzed using two-way ANOVA, followed by Duncan's post-hoc test. The statistical results showed that the dose of ethanol extract and ethyl acetate fraction, as well as the duration of administration, had a significant effect on the percentage reduction of blood glucose levels in diabetic mice with P=0.000. The highest percentage reduction in blood glucose levels occurred in the ethanol extract group at a dose of 100 mg/kgBW, although this result was not significantly different from the other test groups, with reductions ranging between -41% and -45%. The average percentage reduction in blood glucose levels on the 5th, 10th, and 15th days was -44.00%, -41.53%, and -44.81%, respectively.

Key words: Diabetes mellitus, *Artocarpus altilis* (Parkinson) Fosberg, feed weight, body weight, alloxan.