

UJI AKTIVITAS ANTIDIBETES FRAKSI *n*-BUTANOL DAN FRAKSI SISA DAUN ARBEI (*Rubus rosifolius* Sm.) TERHADAP KADAR GLUKOSA DARAH MENCIT PUTIH JANTAN YANG DIINDUKSI ALOKSAN

ABSTRAK

Diabetes melitus merupakan gangguan metabolik kronis yang ditandai dengan peningkatan kadar glukosa darah akibat ketidakcukupan sekresi insulin. Penelitian ini melihat pengaruh fraksi *n*-butanol dan fraksi sisa daun arbei (*Rubus rosifolius* Sm.) terhadap kadar glukosa darah mencit diabetes karena pada daun arbei diduga mengandung isolasi senyawa murni *quercetin*, *pamolic acid*, *termotic acid*, dan *euscaphic acid* yang berpotensi sebagai antidiabetes. Mencit diinduksi aloksan 150 mg/KgBB secara intraperitoneal, setelah mencit dinyatakan diabetes dibagi dalam 7 kelompok yaitu kontrol negatif (aquadest), kontrol positif (Na CMC 0,5%), kontrol pembanding (glimepiride 0,0052 mg/20gBB), serta fraksi *n*-butanol dan fraksi sisa dengan dosis 15 mg/KgBB dan 30 mg/KgBB. Perlakuan berlangsung 15 hari. Kadar glukosa darah diukur pada hari ke-15 dengan spektrofotometer menggunakan metode *glucose oxidase para amino peroxidase* (GOD-PAP), sedangkan konsumsi pakan, berat badan, dan volume urine diukur pada hari ke-0, 5, 10, dan 15. Hasil ANOVA satu arah menunjukkan dosis berpengaruh signifikan ($P < 0,05$) terhadap kadar glukosa darah, dimana fraksi sisa dosis 15 mg/KgBB dan 30 mg/KgBB menunjukkan kadar glukosa darah terendah, masing-masing 49,62 mg/dL dan 47,60 mg/dL, nilai ini sebanding dengan kontrol pembanding dan negatif.

Kata kunci: Aloksan, Diabetes melitus, Fraksi *n*-butanol, Fraksi sisa, *Rubus rosifolius* Sm., Kadar glukosa darah.

ANTIDIABETIC ACTIVITY TEST OF *n*-BUTANOL FRACTION AND RESIDUAL FRACTION OF ARBEI LEAF (*Rubus rosifolius* Sm.) ON BLOOD GLUCOSE LEVELS IN ALLOXAN-INDUCED MALE WHITE MICE

ABSTRACT

Diabetes mellitus is a chronic metabolic disorder characterized by increased blood glucose levels due to insufficient insulin secretion. This study looked at the effect of the *n*-butanol fraction and the residual fraction of arbei leaves (*Rubus rosifolius* Sm.) on blood glucose levels in diabetic mice because arbei leaves are thought to contain isolated pure compounds of *quercetin*, *pamolic acid*, *thermotic acid*, and *euscaphic acid* which have potential as antidiabetics. Mice were induced alloxan 150 mg/KgBB intraperitoneally, after the mice were declared diabetic, they were divided into 7 groups, namely negative control (aquadest), positive control (Na CMC 0.5%), comparison control (glimepiride 0.0052 mg/20gBB), as well as *n*-butanol fraction and residual fraction with doses of 15 mg/KgBB and 30 mg/KgBB. The treatment lasted 15 days. Blood glucose levels were measured on day 15 with a spectrophotometer using the *glucose oxidase para amino peroxidase* (GOD-PAP) method, while feed consumption, body weight, and urine volume were measured on days 0, 5, 10, and 15. The results of one-way ANOVA showed that the dose had a significant effect ($P < 0.05$) on blood glucose levels, where the residual fraction doses of 15 mg/KgBB and 30 mg/KgBB showed the lowest blood glucose levels, 49.62 mg/dL and 47.60 mg/dL, respectively, this value is comparable to the comparison and negative controls.

Keywords: Alloxan, Blood glucose level, Diabetes mellitus, *n*-butanol fraction *Rubus rosifolius* Sm., Residual fraction.