

**PENGARUH SARI BUAH MARKISA UNGU (*Passiflora edulis var edulis*)
TERHADAP KADAR KREATININ SERUM TIKUS PUTIH (*Rattus
norvegicus*) MODEL DIABETES MELITUS**

ABSTRAK

Latar Belakang: Hiperglikemia kronik pada diabetes melitus (DM) meningkatkan stress oksidatif berupa peroksidasi lipid pada membran sel endotel glomerulus. Penurunan fungsi filtrasi glomerulus yang diakibatkannya selanjutnya dapat meningkatkan kadar kreatinin serum. Buah markisa ungu (*Passiflora edulis var edulis*) mempunyai kemampuan antiinflamasi dan antioksidasi yang berpotensi menghambat peningkatan stres oksidatif.

Tujuan: Untuk mengetahui pengaruh pemberian sari buah markisa ungu (*Passiflora edulis var edulis*) terhadap kadar kreatinin serum tikus putih (*Rattus norvegicus*) model DM.

Metode: Metode penelitian adalah eksperimental dengan *post test only with control group design*. Dua puluh lima ekor tikus putih (*Rattus norvegicus*) dibagi dalam 5 kelompok. Kelompok A sebagai kontrol sehat, kelompok B, C, D dan E merupakan model DM melalui induksi aloksan 120 mg/kgBB. Kelompok C, D, dan E mendapatkan sari buah markisa ungu (*Passiflora edulis var edulis*) selama 21 hari dengan dosis 1,05 mL/200gBB, 2,1 mL/200gBB, dan 4,2 mL/200gBB.

Hasil: Rerata kadar kreatinin serum kelompok A= 1,36±0,30 mg/dL, B= 1,44±0,21 mg/dL, C= 1,96±0,35 mg/dL, D= 2,24±0,43 mg/dL, dan E= 2,16±0,16 mg/dL. Uji *One Way ANOVA* menunjukkan nilai $p=0,000$ ($P<0,05$). Uji *post hoc LSD* menunjukkan hasil perbedaan rerata yang signifikan antara kelompok A dan B dengan kelompok C, D dan E.

Kesimpulan: Pemberian sari buah markisa ungu (*Passiflora edulis var edulis*) tidak berpengaruh positif terhadap kadar kreatinin tikus model DM.

Kata kunci: Diabetes Melitus, Kreatinin Serum, Markisa Ungu, *Passiflora edulis var edulis*.

THE EFFECT OF PURPLE PASSION FRUIT JUICE (*Passiflora edulis var edulis*) ON SERUM CREATININE OF DIABETES MELLITUS MODELS RATS (*Rattus norvegicus*)

ABSTRACT

Background: Chronic hyperglycemia in diabetes mellitus (DM) cause oxidative stress in a form of lipid peroxidation of glomerular endothelial cell membrane. The following decreased in glomerular filtration function then increases serum creatinine level. Purple passion fruit (*Passiflora edulis var edulis*) has antiinflammatory and antioxidative effect which has potential to prevent the increase in oxidative stress.

Aim: This study aimed to know the effect of purple passion fruit (*Passiflora edulis var edulis*) on serum creatinine level of diabetes mellitus rats models (*Rattus norvegicus*).

Methods: The method was experimental study with post test only with control group design. Twenty five males white rats were randomly assigned to 5 groups. Group A as healthy control group, group B, C, D, and E as DM group through induction of 120 mg/kgBW alloxan. Group C,D, and E were orally administered with purple passion fruit juice at dosage of 1,05 mL/200gBW, 2,1 mL/200gBW, and 4,2 mL/200gBW consecutively for 21 days.

Result: Serum Creatinine concentration in group A= 1,36±0,30 mg/dL, B= 1,44±0,21 mg/dL, C= 1,96±0,35 mg/dL, D= 2,24±0,43 mg/dL, and E= 2,16±0,16 mg/dL. One Way ANOVA test showed $p=0,000$ ($P<0,05$). The post hoc LSD test showed significant mean differences between group A, as well as B and group C, D,E..

Conclusions: The purple passion fruit juice (*Passiflora edulis var edulis*) in various dosages did not have positive effects on serum creatinine level of diabetes mellitus model rats.

Keywords: Diabetes Mellitus, Serum creatinine, Purple Passion Fruit, *Passiflora edulis var edulis*.