

## EFEK EKSTRAK ETANOL CIPLUKAN (*Physalis angulata L.*) TERHADAP KADAR KREATININ TIKUS WISTAR JANTAN MODEL DIABETES

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### ABSTRAK

**Latar Belakang** – Diabetes melitus (DM) dapat menyebabkan suatu kondisi hiperglikemik kronik. Kondisi ini menyebabkan peningkatan produksi ROS yang berlebih di jaringan ginjal sehingga menyebabkan kerusakan pada sel ginjal. Kerusakan pada ginjal dapat ditandai dengan peningkatan kreatinin serum

**Tujuan** – Mengetahui efek pemberian ekstrak etanol Ciplukan (*Physalis angulata L.*) berbagai dosis terhadap kadar kreatinin tikus Wistar jantan model diabetes.

**Metode Penelitian** – Penelitian ini merupakan penelitian eksperimental dengan pendekatan *posttest only with control group design* menggunakan 30 tikus Wistar jantan. Tikus dibagi menjadi lima kelompok A,B,C,D, dan E Perlakuan dilakukan selama 28 hari pemberian ekstrak etanol Ciplukan dan kadar kreatinin serum diukur menggunakan metode Jaffe dengan reagen DiaSys *Creatinine FS*. Analisis kadar kreatinin serum dilakukan dengan uji *One Way ANOVA*.

**Hasil** – Hasil analisis *One Way ANOVA* adalah terdapat perbedaan kadar kreatinin serum yang tidak signifikan antar kelompok dengan nilai  $p=0,292$  ( $p<0,05$ ). Kelompok kontrol sehat, kontrol sakit dan kelompok perlakuan memiliki rentang kadar kreatinin dalam batas normal, yaitu 0,3-1,0 mg/dl.

**Kesimpulan** – Pemberian ekstrak etanol Ciplukan (*Physalis angulata L.*) berbagai dosis tidak memiliki efek positif terhadap kadar kreatinin serum tikus Wistar jantan (*Rattus norvegicus*) model DM.

**Kata Kunci** : kreatinin, ekstrak etanol ciplukan, diabetes melitus, ROS (*Reactive Oxygen Species*), tikus Wistar jantan

**THE EFFECT OF ETHANOL EXTRACT OF CIPLUKAN (PHYSALIS  
ANGULATA L.) ON CREATININE LEVELS IN MALE WISTAR RATS AS A  
DIABETES MODEL.**

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**ABSTRACT**

**Background** – Diabetes mellitus (DM) can lead to a chronic hyperglycemic condition. This condition causes excessive production of reactive oxygen species (ROS) in kidney tissues, resulting in kidney cell damage. Kidney damage can be indicated by an increase in serum creatinine levels.

**Objective** – To determine the effect of administering ethanol extract of Ciplukan (*Physalis angulata L.*) at various doses on serum creatinine levels in male Wistar rats with a diabetes model.

**Methods** – This experimental study employed a post-test only with control group design using 30 male Wistar rats. The rats were divided into five groups: A, B, C, D, and E. Treatment was conducted over 28 days with ethanol extract of Ciplukan administration, and serum creatinine levels were measured using the Jaffe method with DiaSys Creatinine FS reagent. Serum creatinine level analysis was performed using a One-Way ANOVA test.

**Results** – The One-Way ANOVA analysis showed no significant differences in serum creatinine levels between groups, with a  $p$ -value of 0.292 ( $p < 0.05$ ). The healthy control group, disease control group, and treatment groups had serum creatinine levels within the normal range of 0.3-1.0 mg/dl.

**Conclusion** – Administration of ethanol extract of Ciplukan (*Physalis angulata L.*) at various doses did not have a positive effect on serum creatinine levels in male Wistar rats (*Rattus norvegicus*) with a diabetes model.

**Keywords:** creatinine, ethanol extract of Ciplukan, diabetes mellitus, ROS (Reactive Oxygen Species), male Wistar rats.