

096. The Effectiveness of Cardamom Seed Extract (*Amomum compactum*) Against Urea Creatinine and Histopathology Obese Rat Kidney

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ABSTRACT

Background: There are several factors that can cause kidney damage, one of which is obesity. Obesity itself can cause complex metabolic disorders that can affect kidney physiology. The biological activity of flavonoid components in *A. compactum* showed that cardamom extract had high anti-inflammatory and antioxidant activity. This study aimed to analyze the effect of Cardamom Seed Extract (*Amomum Compactum*) on urea creatinine and histopathology obese rat kidney. **Methods:** This study was a true experimental with post tests only of control group design and was conducted from July to August 2022 at Pusat Study Pangan dan Gizi (PSPG), Gadjah Mada University. A total of 30 Wistar rats were used in this study and which randomly divided into normal control, negative control, 45 mg dose cardamom, 90 mg dose cardamom, 180 mg dose cardamom groups. Obesity was obtained by high fat and high carbo diet. At the end of the study, the rats will be terminated and urea, creatinine was examined, renal histopathology changes were observed using hematoxylin and eosin stain. **Results:** There was differences in urea levels between groups K and P1, P2, P3; P1 and P2, P1 and P3, and P2 and P3 ($p < 0.005$). There was differences in creatinine levels between groups K and P1, P2, P3; P1 and P2, and P1 and P3 ($p < 0.005$). There was a significant difference in renal histology between groups normal control, negative control, and P1 ($p < 0.001$). **Conclusion:** Cardamom seed extract is effective in reducing urea creatinine levels and improving histopathology obese rat kidney.

Keywords: Cardamom; Urea; Creatinine; Obesity; Renal Histology

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