

ABSTRAK

EFEK NEFROPROTEKTIF EKSTRAK DAUN SUKUN (*Artocarpus altilis*) TERHADAP KERUSAKAN GINJAL MENCIT (*Mus musculus* L.) YANG DIINDUKSI KARBON TETRAKLORIDA (CCl₄)

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Ginjal berperan penting dalam menjaga homeostasis tubuh melalui proses ekskresi. Paparan karbon tetraklorida (CCl₄) sebagai zat nefrotoksik dapat menyebabkan kerusakan ginjal melalui mekanisme stres oksidatif, inflamasi, dan nekrosis sel. Daun sukun (*Artocarpus altilis*) mengandung senyawa bioaktif seperti flavonoid dan fenol yang bersifat antioksidan dan berpotensi melindungi ginjal. Penelitian ini bertujuan untuk mengetahui efek nefroprotektif ekstrak daun sukun terhadap ginjal mencit (*Mus musculus* L.) yang diinduksi CCl₄. Penelitian menggunakan Rancangan Acak Lengkap dengan 25 ekor mencit jantan yang dibagi menjadi lima kelompok: kontrol normal, kontrol negatif, dan tiga kelompok perlakuan (125, 250, dan 500 mg/kg BB) selama 14 hari. Parameter yang diamati meliputi index somatik ginjal dan gambaran histopatologinya. Hasil menunjukkan bahwa induksi CCl₄ menyebabkan kerusakan ginjal, dan dosis 500 mg/kg BB memberikan efek nefroprotektif terbaik. Analisis Oneway ANOVA menunjukkan perbedaan nyata antar perlakuan ($p < 0,05$). Dengan demikian, ekstrak daun sukun berpotensi sebagai agen nefroprotektif alami.

Kata kunci : *Artocarpus altilis*, nefroprotektif, CCl₄, kerusakan ginjal, mencit.

ABSTRACT

NEPHROPROTECTIVE EFFECT OF BREADFRUIT (*Artocarpus altilis*) LEAF EXTRACT ON RENAL DAMAGE IN CARBON TETRACHLORIDE (CCl₄) INDUCED MICE (*Mus musculus* L.)

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The kidney plays an essential role in maintaining body homeostasis through excretory processes. Exposure to carbon tetrachloride (CCl₄) as a nephrotoxic agent can induce renal damage through oxidative stress, inflammation, and cellular necrosis. Breadfruit (*Artocarpus altilis*) leaves contain bioactive compounds such as flavonoids and phenolic compounds that exhibit antioxidant properties and have potential protective effects on the kidney. This study aimed to evaluate the nephroprotective effect of breadfruit leaf extract on the kidneys of CCl₄-induced mice (*Mus musculus* L.). This study employed a Completely Randomized Design using 25 male mice divided into five groups: normal control, negative control, and three treatment groups receiving breadfruit leaf extract at doses of 125, 250, and 500 mg/kg body weight for 14 days. The observed parameters included renal somatic index and histopathological features of the kidney. The results showed that CCl₄ induction caused renal damage, and the dose of 500 mg/kg body weight demonstrated the best nephroprotective effect. Statistical analysis using One-way ANOVA revealed significant differences among treatment groups ($p < 0.05$). In conclusion, breadfruit leaf extract has potential as a natural nephroprotective agent.

Keywords : *Artocarpus altilis*, nephroprotective, CCl₄, kidney damage, mice.