

ABSTRACT

THE EFFECT OF ETHANOL EXTRACT OF CORIANDER SEEDS (*Coriandrum sativum* L.) ON GASTRIC HISTOPATHOLOGICAL STRUCTURE OF MALE WHITE RAT SPRAGUE-DAWLEY STRAIN INDUCED BY PARACETAMOL

By

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Background: Excessive use or misuse of paracetamol can cause damage to the gastric mucosa due to inhibition of prostaglandin synthesis and increased oxidative stress. Such damage can be prevented by substances with gastroprotective effects. This study aimed to investigate the effect of ethanol extract of coriander seeds (*Coriandrum sativum* L.) on gastric histopathological structure of male white rat *Sprague-Dawley* strain induced by paracetamol.

Methods: This study is a laboratory experimental study with a randomized controlled design using a post-test only control group involved 25 male *Sprague-Dawley* rats. The rats were divided into 5 groups: K(N) was given only food and water, K(-) was given paracetamol 0.36 mg/gBW, and P1, P2, and P3 were given coriander seed extract at doses of 62.5; 125; and 250 mg/kgBW along with paracetamol at 0.36 mg/gBW.

Results: The results of the *Mann-Whitney* statistical test analysis obtained a significant difference ($p < 0.05$) between the negative group (K-) which was only given 0.36 mg/gBW of paracetamol and groups P1, P2, and P3 which were given coriander seed extract at doses of 62.5; 125; 250 mg/kgBW and 0.36 mg/gBW of paracetamol.

Conclusions: : There is an effect of administering ethanol extract of coriander seeds (*Coriandrum sativum* L.) on the histopathological structure of the stomach of male white rats of the *Sprague-Dawley* strain that induces paracetamol.

Keywords: Antioxidant, Coriander Seeds, *Coriandrum sativum* L., Gastroprotective, Paracetamol

ABSTRAK

EFEK PEMBERIAN EKSTRAK ETANOL BIJI KETUMBAR (*Coriandrum sativum* L.) TERHADAP STRUKTUR HISTOPATOLOGI LAMBUNG TIKUS PUTIH JANTAN GALUR *SPRAGUE-DAWLEY* YANG DIINDUKSI PARASETAMOL

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Latar Belakang: Penggunaan yang berlebihan atau penyalahgunaan parasetamol dapat menyebabkan kerusakan mukosa lambung akibat penghambatan sintesis prostaglandin dan peningkatan stres oksidatif. Kerusakan tersebut dapat dicegah dengan penggunaan bahan yang memiliki efek gastroprotektif. Tujuan penelitian ini untuk mengetahui efek pemberian ekstrak etanol biji ketumbar (*Coriandrum sativum* L.) terhadap struktur histopatologi lambung tikus putih jantan galur *Sprague-Dawley* yang diinduksi parasetamol.

Metode: Penelitian ini merupakan studi eksperimental laboratorium dengan desain acak terkontrol menggunakan rancangan *post-test only control group design* yang menggunakan 25 ekor tikus putih jantan galur *Sprague-Dawley*. Tikus dibagi menjadi 5 kelompok: K(N) hanya diberi pakan dan minum, K(-) diberi parasetamol 0,36 mg/gBB, serta P1, P2, dan P3 diberi ekstrak biji ketumbar dengan dosis berturut-turut 62,5; 125; 250 mg/kgBB dan parasetamol 0,36 mg/gBB.

Hasil: Hasil analisis uji statistik *Mann-Whitney* didapatkan perbedaan bermakna ($p < 0.05$) antara kelompok negatif (K-) yang hanya diberikan parasetamol 0,36 mg/gBB dengan kelompok P1, P2, dan P3 yang diberikan ekstrak biji ketumbar dosis 62,5; 125; 250 mg/kgBB serta parasetamol 0,36 mg/gBB.

Kesimpulan: Ada efek pemberian ekstrak etanol biji ketumbar (*Coriandrum sativum* L.) terhadap struktur histopatologi lambung tikus putih jantan galur *Sprague-Dawley* yang diinduksi parasetamol.

Kata Kunci: Antioksidan, Biji Ketumbar, *Coriandrum sativum* L., Gastroprotektif, Parasetamol