

**PROFIL BIOKIMIA DARAH AKIBAT PEMBERIAN
EKSTRAK AKAR BURDOCK (*Arctium lappa L.*)
PADA TIKUS PUTIH (*Rattus norvegicus*)**

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ABSTRAK

Burdock (*Arctium lappa L.*) merupakan tanaman herbal yang mengandung senyawa aktif seperti flavonoid, lignan, dan asam fenolat yang berperan sebagai antioksidan, antiinflamasi serta hepatoprotektif. Penelitian ini bertujuan untuk mengetahui profil biokimia darah akibat pemberian ekstrak akar burdock pada tikus putih (*Rattus norvegicus*). Penelitian menggunakan metode eksperimental dengan 8 ekor tikus jantan dan betina yang dibagi menjadi empat kelompok: kontrol negatif (aquadest), serta tiga kelompok perlakuan dengan dosis 150 mg/kgBB, 300 mg/kgBB, dan 450 mg/kgBB yang diberikan secara oral selama 28 hari. Pemeriksaan profil biokimia darah dilakukan pada hari ke-36 mencakup parameter: albumin, total protein, globulin, glukosa, ureum, amilase, kolesterol, ALT, ALP, total bilirubin, kreatinin, dan kreatin kinase. Hasil penelitian menunjukkan bahwa sebagian besar parameter biokimia masih berada dalam rentang normal, namun terdapat perubahan signifikan pada beberapa kelompok. Kadar ureum, amilase, dan total bilirubin relatif stabil, sedangkan kadar total protein, globulin dan ALP cenderung lebih tinggi pada tikus betina. Kadar glukosa, kolesterol dan ALT meningkat pada hampir seluruh kelompok perlakuan, mengindikasikan kemungkinan gangguan metabolisme karbohidrat dan lipid. Peningkatan kadar kreatinin pada beberapa kelompok menunjukkan kemungkinan efek nefrotoksik. Pemberian ekstrak akar burdock menunjukkan pengaruh terhadap profil biokimia darah, terutama pada parameter metabolisme glukosa, lipid, dan fungsi hati. Diperlukan penelitian lanjutan untuk mengkaji mekanisme kerja dan keamanan penggunaan jangka panjang dari ekstrak akar burdock.

Kata kunci: *Arctium lappa L.*, tikus putih, profil biokimia darah, ekstrak akar burdock.

**BLOOD BIOCHEMICAL PROFILE DUE TO ADMINISTRATION
OF BURDOCK (*Arctium lappa L.*) TO WHITE
RATS (*Rattus norvegicus*)**

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ABSTRACT

Burdock (*Arctium lappa L.*) is a medicinal plant that contains active compounds such as flavonoids, lignans, and phenolic acids, which act as antioxidants, anti-inflammatory agents, and hepatoprotective substances. This study aimed to evaluate the blood biochemical profile following the administration of burdock root extract in white rats (*Rattus norvegicus*). The study was conducted experimentally using eight male and female rats, divided into four groups: a negative control group (aquadest) and three treatment groups receiving doses of 150, 300, and 450 mg/kgBB orally for 28 days. Blood biochemical parameters were examined on day 36, including albumin, total protein, globulin, glucose, urea, amylase, cholesterol, ALT, ALP, total bilirubin, creatinine, and creatine kinase. The results showed that most biochemical parameters remained within the normal range, although significant changes were observed in some groups. Urea, amylase, and total bilirubin levels remained stable, while total protein, globulin, and ALP levels tended to be higher in female rats. Elevated glucose, cholesterol, and ALT levels in most treatment groups indicated potential disturbances in carbohydrate and lipid metabolism, while increased creatinine levels in some groups suggested possible nephrotoxic effects. Administration of burdock root extract influenced the biochemical blood profile, particularly related to glucose and lipid metabolism as well as liver function. Further studies are needed to explore the underlying mechanisms and evaluate the long-term safety of burdock root extract.

Keywords: *Arctium lappa L.*, white rats, blood biochemical profile, burdock root extract.