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Phytochemical Screening and Antibacterial Activity of Jackfruit Seed Extract (*Artocarpus heterophyllus* Lamk.) Against *Salmonella typhi* In Vitro

Ami Febriza⁽¹⁾, Salwa Amalia Kartika⁽²⁾, Asdar⁽³⁾

(1) Department of Physiology, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Makassar, Makassar, South Sulawesi, 90221, Indonesia,

(2) Bachelor of Medicine Study Program, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Makassar, Makassar, South Sulawesi, 90221, Indonesia,

(3) Department of Surgery, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Makassar, Makassar, South Sulawesi, 90221, Indonesia

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Abstract

Salmonella typhi infection remains a public health concern, necessitating natural treatment alternatives. This study aimed to evaluate the antibacterial activity and identify the active compounds of jackfruit seed (*Artocarpus heterophyllus* Lamk) ethanol extract against *S. typhi* in vitro. Antibacterial activity was tested using the well diffusion method at extract concentrations of 25%, 50%, 75%, and 100%, with chloramphenicol and 10% DMSO as positive and negative controls. All extract concentrations produced significant inhibition zones (mean: 19.83 mm to 31.42 mm; $p<0.05$). Phytochemical screening revealed flavonoids, alkaloids, steroids, and saponins as the active compounds. Antibacterial efficacy increased with concentration and was comparable to chloramphenicol (mean: 33.49 mm). These results indicate that jackfruit seed extract holds promise as a natural antibacterial agent against *S. typhi*.