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

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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*.