

**ANTIFUNGAL TEST OF THE ETHANOL EXTRACT
OF BROTOWALI STEM (*Tinospora crispa*) ON THE GROWTH
OF *Trichophyton rubrum* IN VITRO**

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ABSTRACT

Background: *Trichophyton rubrum* is an infectious dermatophyte fungus which is the most common cause of dermatophytosis. Fungal resistance and the side effects of therapy are problems of antifungal agents. Phytochemical test of brotowali stem extract (*Tinospora crispa*) consist of flavonoids, phenols and triterpenoids which have antifungal effects. This study aimed to examine the effectiveness of brotowali stem extract (*Tinospora crispa*) as antifungal agent towards the growth of *Trichophyton rubrum* in vitro using agar well diffusion method.

Subjects and Method: This was an experimental study using brotowali stem extract with concentration of 10%, 12,5%, 25%, 30%, 40%, 50%, 60%, 75%, and 100%. The dependent variable was *Trichophyton rubrum* growth. The independent variable was brotowali stem extract (*Tinospora crispa*). The data were obtained from the inhibition zone showed in agar well diffusion method in Sabouraud Dextrose Agar media. The data were analyzed using Kruskal-Wallis test.

Results: The average diameter of inhibition zone of each variance (10%, 12,5%, 25%, 30%, 40%, 50%, 60%, 75%, and 100%) were 2.167 mm, 6.367 mm, 7.0 mm, 10.67 mm, 11.9 mm, 13.07 mm, 15.8 mm, 17.96 mm dan 17.13 mm, respectively, and they were statistically significant ($p= 0.001$).

Conclusion: Brotowali stem extract has weak antifungal effectiveness at concentration 10%, 12,5%, 25%, intermediate antifungal effectiveness at concentration 30% and strong antifungal effectiveness at concentration 40%, 50%, 60%, 75% and 100%.

Keywords: antifungal, brotowali stem, well diffusion, *Trichophyton rubrum*

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