

UJI AKTIVITAS ANTIJAMUR EKSTRAK KULIT BUAH NAGA MERAH (*HYLOCEREUS POLYRHIZUS*) TERHADAP PERTUMBUHAN JAMUR *TRICHOPHYTON RUBRUM* SECARA IN VITRO

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Abstrak

Tingginya prevalensi mikosis superfisialis berkaitan dengan banyaknya kasus resisten obat antijamur. Penemuan senyawa antijamur baru melalui senyawa aktif yang terkandung pada suatu tanaman dapat menjadi solusi alternatif untuk mengatasi masalah resistensi tersebut. Limbah kulit buah naga merah berpotensi sebagai agen antijamur karena diketahui mengandung senyawa aktif fenolik dan flavonoid yang tinggi. Penelitian ini bertujuan untuk mengetahui aktivitas ekstrak etanol kulit buah naga merah dalam menghambat pertumbuhan jamur *Trichophyton rubrum*. Penelitian eksperimen ini dilakukan secara in vitro menggunakan metode difusi sumuran. Kelompok perlakuan ekstrak kulit buah naga merah terdiri dari konsentrasi 12,5%, 25%, 50% dan 100%. Ketokonazol digunakan sebagai kontrol positif dan akuades sebagai kontrol negatif. Hasil penelitian menunjukkan bahwa kulit buah naga merah dapat menghambat pertumbuhan jamur *T. rubrum* terlihat dari zona hambat yang terbentuk di sekitar sumuran. Konsentrasi 12,5% menghasilkan zona hambat terkecil yaitu 8,46 mm, konsentrasi 25% menghasilkan 9,68 mm, konsentrasi 50% menghasilkan 10,57 mm, dan konsentrasi 100% menghasilkan zona hambat terluas yaitu 17,57 mm. Data penelitian dilakukan analisa secara statistik menggunakan uji *Kruskal-Wallis*. Uji post hoc *Mann-Whitney* menunjukkan perbedaan secara bermakna didapatkan antar dua kelompok masing-masing karena nilai sig. lebih kecil dari 0,05 kecuali pada konsentrasi 25% terhadap konsentrasi 12,5% dan 50%. Ekstrak kulit buah naga merah memiliki aktivitas antijamur bersifat fungistatik terhadap jamur *T. rubrum*. Konsentrasi ekstrak kulit buah naga merah dinilai kurang efektif karena hasil zona hambat yang masih jauh dibawah zona hambat kontrol positifnya yaitu ketokonazol.

Kata kunci: antijamur, zona hambat, kulit buah naga merah, *Trichophyton rubrum*

ANTIFUNGAL ACTIVITY EXAMINATION OF PITAYA PEEL EXTRACTS TOWARDS THE GROWTH OF *TRICHOPHYTON RUBRUM* IN VITRO

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Abstract

The high prevalence of superficial mycoses was associated with antifungal drug resistance. The new antifungal discovery can be an alternative solution to overcome the resistance problem by utilizing active compounds contained in a plant. Red dragon fruit peel waste has the potential as an antifungal agent because it contains high levels of phenolic and flavonoids. This study aims to determine the ethanol extract activity of red dragon fruit peel in inhibiting the growth of *Trichophyton rubrum* fungus. This experimental research was conducted in vitro using the well diffusion method. The red dragon fruit peel extract concentration consist from 12.5%, 25%, 50%, and 100%. Ketoconazole was used as positive control and aquades as negative control. The result showed that the red dragon fruit peel could inhibit the growth of *T. rubrum* fungus, seen from the inhibition zone formed around the well. The dragon fruit peel concentration of 12.5% produced the smallest inhibition zone, which is 8.46 mm, a concentration of 25% produced 9.68 mm, a concentration of 50% produced 10.57 mm, and a concentration of 100% produced the widest zone of inhibition, which is 17.57 mm. The research data were analyzed statistically using the *Kruskal-Wallis* test. The *Mann-Whitney* as post hoc test showed that significant differences were obtained between the two respective groups because the sig value was smaller than 0,05 except at the concentration of 25% toward the concentration of 12.5% and 50%. Red dragon fruit peel extract has fungistatic antifungal activity against *T. rubrum*. The concentration of red dragon fruit peel extract is considered less effective because the results of the inhibition zone are very lower than ketoconazole.

Keywords: Antifungal, Peel of red dragon fruit, inhibitory zone, *Trichophyton rubrum*