

ABSTRAK

Candida glabrata merupakan penyebab Vulvovaginal Candidiasis (VVC) tersering kedua dengan prevalensi yang terus meningkat. Daun manukan (*Rhinacanthus nasutus* L. Kurz) diketahui mengandung berbagai senyawa metabolit sekunder, terutama golongan naftokuinon seperti rhinacanthin, yang berpotensi sebagai agen antifungi. Penelitian ini bertujuan mengevaluasi aktivitas antifungi ekstrak etanol 96% daun manukan terhadap *Candida glabrata* melalui pengukuran diameter zona hambat serta penentuan *Minimum Inhibitory Concentration* (MIC) dan *Minimum Fungicidal Concentration* (MFC). Penelitian menggunakan metode *true experimental* dengan rancangan *posttest control group design*. Uji aktivitas antifungi dilakukan menggunakan metode difusi sumuran. Tahap awal penelitian diawali dengan optimasi konsentrasi ekstrak 4%, 5%, 6%, 10%, 12%, dan 14%. Berdasarkan hasil optimasi, konsentrasi ekstrak ditingkatkan menjadi 20%, 25%, dan 30% sebagai konsentrasi perlakuan. Penentuan MIC dan MFC dilakukan menggunakan metode dilusi. Ketokonazol 2% digunakan sebagai kontrol positif, sedangkan DMSO 10% sebagai kontrol negatif. Hasil penelitian menunjukkan rata-rata diameter zona hambat pada konsentrasi 20%, 25%, dan 30% berturut-turut sebesar $8,43 \pm 0,74$ mm; $12,59 \pm 0,47$ mm; dan $18,61 \pm 0,56$ mm. Analisis menggunakan uji *Kruskal–Wallis* menunjukkan perbedaan yang signifikan antar kelompok perlakuan ($p < 0,05$), yang dilanjutkan dengan uji *Mann–Whitney* dan menunjukkan perbedaan bermakna pada setiap pasangan kelompok ($p < 0,05$). Nilai MIC ekstrak etanol 96% daun manukan terhadap *Candida glabrata* diperoleh pada konsentrasi 6,25%, sedangkan nilai MFC belum diperoleh pada rentang konsentrasi yang diuji. Disimpulkan bahwa ekstrak etanol 96% daun manukan memiliki aktivitas antifungi terhadap *Candida glabrata* dengan menghambat pertumbuhan jamur, namun belum menunjukkan aktivitas fungisidal pada konsentrasi hingga 50%.

Kata Kunci: *Rhinacanthus nasutus* L. Kurz, *Candida glabrata*, Aktivitas Zona Hambat, *Minimum Inhibitory Concentration* (MIC), dan *Minimum Fungicidal Concentration* (MFC).

ABSTRACT

Candida glabrata is the second most common cause of Vulvovaginal Candidiasis (VVC), with a steadily increasing prevalence. Manukan leaves (*Rhinacanthus nasutus* L. Kurz) contain various secondary metabolites, particularly naphthoquinones such as rhinacanthin, which have potential antifungal activity. This study aimed to evaluate the antifungal activity of a 96% ethanol extract of manukan leaves against *Candida glabrata* by measuring the inhibition zone diameter and determining the Minimum Inhibitory Concentration (MIC) and Minimum Fungicidal Concentration (MFC). The study employed a true experimental method with a posttest-only control group design. Antifungal activity was evaluated using the agar well diffusion method. The initial stage involved optimization at extract concentrations of 4%, 5%, 6%, 10%, 12%, and 14%. Based on the optimization results, the concentrations were increased to 20%, 25%, and 30% for the antifungal assay. MIC and MFC were determined using the broth dilution method. Ketoconazole (2%) was used as the positive control, while DMSO (10%) served as the negative control. The mean inhibition zone diameters at extract concentrations of 20%, 25%, and 30% were 8.43 ± 0.74 mm, 12.59 ± 0.47 mm, and 18.61 ± 0.56 mm, respectively. Kruskal–Wallis analysis showed significant differences among the treatment groups ($p < 0.05$), and Mann–Whitney analysis confirmed significant differences between each pair of groups ($p < 0.05$). The MIC was 6.25%, whereas the MFC was not obtained within the tested concentration range. In conclusion, the 96% ethanol extract of manukan leaves exhibited antifungal activity against *Candida glabrata* by inhibiting fungal growth but did not demonstrate fungicidal activity at concentrations up to 50%.

Keywords: *Rhinacanthus nasutus* L. Kurz, *Candida glabrata*, Inhibition Zone Activity, Minimum Inhibitory Concentration (MIC), Minimum Fungicidal Concentration (MFC).