

INTISARI

Perawatan basis gigi tiruan resin akrilik harus dilakukan secara rutin dan benar. Perendaman gigi tiruan dalam suatu larutan bahan pembersih gigi tiruan diperlukan untuk mencegah penumpukan plak dan pertumbuhan jamur. *Candida albicans* yang merupakan salah satu jenis jamur yang menyerang orofaringeal sehingga dapat menyebabkan penyakit mulut seperti kandidiasis. Dibutuhkan suatu agen antijamur baru untuk melawan *Candida*. Ekstraksi dari daun *Melaleuca alternifolia* atau biasa dikenal dengan *tea tree oil* (TTO) memiliki komponen utama berupa *terpinene 4 ol* yang memiliki efek antimikroba, aktivitas antijamur dan antiinflamasi.

Penelitian ini menggunakan sampel cakram resin akrilik berukuran diameter 10 mm dan ketebalan 2 mm sebanyak 24 buah. Sampel direndam di dalam suspensi *Candida albicans* selama 24 jam, kemudian direndam ke dalam kelompok aquades, dan kelompok *tea tree oil* dengan jenis konsentrasi 5%, 10%, dan 20% selama 1 jam. Sampel lalu dimasukkan ke dalam aquades lalu dikocok dengan *vortex mixer*, dan ditanam di dalam media SDA. Jumlah koloni dihitung menggunakan *colony counter*. Data dianalisis menggunakan uji Saphiro wilk, Levene's *Test*, uji ANAVA satu jalur, dan LSD.

Hasil analisis menggunakan uji ANAVA satu jalur terdapat pengaruh *tea tree oil* terhadap pertumbuhan *Candida albicans* ($p < 0,05$) dan hasil analisis menggunakan uji *Least Significant Difference* (LSD) menunjukkan terdapat perbedaan yang signifikan antara kelompok perendaman aquades dengan kelompok perendaman *tea tree oil* lainnya dan tidak terdapat perbedaan signifikan antara konsentrasi TTO. Kesimpulan penelitian ini adalah perendaman basis gigi tiruan resin akrilik dalam *tea tree oil* selama 1 jam dengan konsentrasi 5% efektif menghambat pertumbuhan *Candida albicans*.

Kata kunci: *Tea tree oil*, *Candida albicans*, resin akrilik.

ABSTRACT

Maintenance of acrylic resin denture bases must be done regularly and correctly. Immersion of the denture in a solution of denture cleaning agent is necessary to prevent plaque buildup and mold growth. *Candida albicans* which is one type of fungus that attacks the *oropharyngeal* so that it can cause oral diseases such as *Candidiasis*. A new antifungal agent is needed to fight *Candida*. Extraction from *Melaleuca alternifolia* leaves or commonly known as tea tree oil (TTO) has a main component in the form of *terpinene 4 ol* which has antimicrobial effects, antifungal and anti-inflammatory activity.

This study used 24 acrylic resin disk samples measuring 10 mm in diameter and 2 mm in thickness. The samples were immersed in *Candida albicans* suspension for 24 hours, then immersed into the distilled water group, and tea tree oil group with 5%, 10%, and 20% concentration types for 1 hour. The samples were then put into distilled water, shaken with a vortex mixer, and planted in SDA media. The number of colonies was counted using a colony counter. Data were analyzed using Saphiro wilk test, Levene's Test, one-way ANOVA test, and LSD.

The results of the analysis using the one-way ANOVA test showed the effect of tea tree oil on the growth of *Candida albicans* ($p < 0.05$) and the results of the analysis using the Least Significant Difference (LSD) test showed that there was a significant difference between the distilled water immersion group and the other tea tree oil immersion groups and there was no significant difference between TTO concentrations. The conclusion of this study is that immersion of acrylic resin denture bases in tea tree oil for 1 hour with a concentration of 5% effectively inhibits the growth of *Candida albicans*.

Keywords: Tea tree oil, *Candida albicans*, acrylic resin.