

ABSTRAK

Ekstrak teh hijau (*Camellia sinensis*) memiliki sifat anti-*Candida* utamanya dari kandungan polifenol serta katekin. Pada konsentrasi 25%, ekstrak teh hijau mampu menghambat pertumbuhan *Candida albicans* dengan intensitas kuat. Tujuan penelitian ini adalah untuk mengetahui bagaimana efektivitas ekstrak teh hijau 20%, 25%, dan 30% terhadap penurunan jumlah pelekatan *Candida albicans* pada plat resin *cold cured* alat ortodonti lepasan.

Penelitian eksperimental laboratoris telah dilakukan pada 20 alat ortodonti lepasan dengan komponen basis resin akrilik *cold cured*, Adam's *clasp*, *simple spring*, *finger spring*, dan *labial arch*. Alat ortodonti lepasan direndam dalam larutan kontrol akuades dan *chlorhexidine* 2%, serta ekstrak teh hijau 20%, 25%, dan 30% selama 10 menit. Data hasil pengukuran ditabulasi, selanjutnya dilakukan uji normalitas dan homogenitas, dilanjutkan dengan uji *one-way* ANOVA dan uji LSD. Hasil penelitian menunjukkan bahwa terdapat perbedaan rerata *Candida albicans* pada alat ortodonti lepasan setelah direndam dalam ekstrak teh hijau 20%, 25% dan 30% dibanding kontrol negatif akuades steril, serta ekstrak teh hijau 20% dan 25% dibanding kontrol positif *chlorhexidine* 2% ($p < 0,05$), namun pada kelompok ekstrak teh hijau 30% dibanding *chlorhexidine* 2% tidak terdapat perbedaan yang signifikan ($p > 0,05$).

Berdasarkan hasil penelitian, disimpulkan bahwa ekstrak teh hijau (*Camellia sinensis*) dengan konsentrasi 30% memiliki efektivitas lebih tinggi daripada konsentrasi 20% dan 25%, dan konsentrasi 25% memiliki efektivitas lebih tinggi dibandingkan konsentrasi 20% dalam menurunkan jumlah pelekatan *Candida albicans* pada plat resin akrilik *cold cured* alat ortodonti lepasan.

Kata kunci: Ekstrak teh hijau, Alat ortodonti lepasan, *Candida albicans*, Efektivitas

ABSTRACT

Green tea extract (*Camellia sinensis*) has anti-*Candida* properties mainly from polyphenols also catechins. At a concentration of 25%, green tea extract can inhibit the growth of *Candida albicans* with strong intensity. The purpose of this study was to determine how the effectiveness of green tea extract 20%, 25%, and 30% to reduce the amount of *Candida albicans* on cold cured acrylic resin plate of removable orthodontic appliances.

Laboratory experimental research has been done on 20 removable orthodontic appliances with cold cured acrylic resin base, Adam's clasp, finger spring, simple spring, and labial arch. The removable orthodontic appliances were immersed in aquadest and chlorhexidine 2% as control variable, and green tea extract 20%, 25%, and 30% for 10 minutes. The data is tabulated, then normality and homogeneity test is performed, followed by one-way ANOVA and LSD test. The results showed that there were differences in the average of *Candida albicans* on removable orthodontic appliances after immersion in green tea extracts 20%, 25% and 30% compared to negative control (aquadest), also green tea extracts 20% and 25% compared to positive control (chlorhexidine 2%) ($p < 0.05$), but on the green tea extract 30% group compared to chlorhexidine 2% there was no significant difference ($p > 0.05$).

Based on this study, it was concluded that green tea extract (*Camellia sinensis*) in 30% concentration had higher effectiveness than 20% and 25%, and a concentration of 25% had higher effectiveness than 20% on reducing the amount of *Candida albicans* on cold cured acrylic resin plate of removable orthodontic appliances.

Keywords: Green tea extract, Removable ortodontic appliances, *Candida albicans*, Effectiveness