

INTISARI

Perubahan warna pada gigi maupun gigi tiruan dapat mempengaruhi rasa percaya diri seseorang dalam berpenampilan. Salah satu penyebab perubahan warna pada gigi dan gigi tiruan adalah terbentuknya stain ekstrinsik akibat konsumsi kopi. Tujuan penelitian ini untuk mengetahui kemampuan pasta gigi minyak atsiri daun salam konsentrasi 0,5% sebagai pembersih stain ekstrinsik kopi pada gigi dan material gigi tiruan.

Total subjek penelitian adalah 60 ($n=5$ untuk setiap kelompok kontrol dan kelompok perlakuan). Pengambilan foto subjek dilakukan sebelum penelitian (F1), setelah induksi stain (dengan 20 gram kopi dalam 150 ml air suhu 85°C tanpa gula, dilakukan selama 21 hari, dan diganti setiap 24 jam) (F2) dan setelah penyikatan dengan mesin penyikat gigi otomatis selama 70 detik (F3). Pembersih stain ekstrinsik terdiri atas 3 jenis pasta gigi (pasta gigi kontrol negatif tanpa bahan aktif, pasta gigi minyak atsiri daun salam 0,5%, dan pasta gigi *gold standard* sebagai kontrol positif).

Pengukuran perubahan warna (ΔE) dilakukan pada foto F3 dan F2 menggunakan metode CIELAB. Data dianalisis menggunakan uji *two-way* ANOVA dan uji LSD ($\alpha=0.05$). Hasil uji *two-way* ANOVA menunjukkan jenis pasta gigi berpengaruh terhadap pembersihan stain ekstrinsik kopi pada permukaan gigi dan gigi tiruan, serta jenis permukaan berpengaruh terhadap pembersihan stain ekstrinsik kopi oleh pasta gigi minyak atsiri daun salam (*Syzygium polyanthum* (Wight) Walp.). Hasil uji LSD menunjukkan bahwa perbedaan tidak signifikan antara pasta gigi minyak atsiri daun salam dan pasta gigi *gold standard* dalam pembersihan stain ekstrinsik kopi pada gigi dan plat nilon valplast. Kesimpulan penelitian ini adalah pasta gigi minyak atsiri daun salam berpotensi untuk membersihkan stain ekstrinsik kopi pada gigi maupun material gigi tiruan.

Kata kunci: gigi, gigi tiruan, stain ekstrinsik, *Syzygium polyanthum* (Wight) Walp.

ABSTRACT

Discoloration of teeth and dentures can affect an individual's appearance and self-esteem. One common cause of teeth and denture discoloration is the consumption of staining agents such as coffee. This study aimed to determine the ability of 0.5% concentration of bay leaf essential oil toothpaste (*Syzygium polyanthum* (Wight) Walp.) as a coffee extrinsic stain removal on teeth and denture materials.

Total subjects were 60 (n=5 for each control and treatment group). Photos of teeth and denture materials were taken before examination (F1), after stain induction (with 20g coffee in 150ml, 85°C water, without sugar for 21 days, replaced every 24 hours) (F2), and after brushing with a toothbrush machine for 70 seconds (F3). Three types of toothpaste (negative control without active ingredient, 0,5% bay leaf essential oil toothpaste, gold standard as positive control) were used as cleansers.

Color change measurements (ΔE) were obtained by F3 and F2 photos using CIELAB method. Data were analyzed using *two-way* ANOVA and LSD tests ($\alpha=0.05$). According to *two-way* ANOVA test, the type of toothpaste has an effect on the removal of coffee-induced extrinsic stains on teeth and dentures and the type of surface has an effect on the removal of coffee-induced extrinsic stains using bay leaf essential oil toothpaste. There were no significant different between bay leaf essential oil toothpaste and gold standard toothpaste as a coffee extrinsic removal on teeth and thermoplastic nylon according to LSD test. Conclusion of this study is that bay leaf essential oil toothpaste shows the potential to remove coffee-induced extrinsic stains on teeth and dentures.

Keywords: dentures, extrinsic stain, *Syzygium polyanthum* (Wight) Walp., teeth