INTISARI

Resin komposit *nanofiller* merupakan bahan restorasi gigi yang banyak digunakan karena memiliki nilai estetis yang tinggi. Dalam rongga mulut, resin komposit berkontak dengan berbagai makanan dan minuman, salah satunya minuman kopi-lemon. Minuman kopi-lemon mengandung pigmen tanin dan bersifat asam sehingga dapat menyebabkan perubahan warna. Tujuan penelitian ini adalah mengetahui pengaruh lama kontak resin komposit *nanofiller* dalam minuman kopi-lemon terhadap perubahan warna.

Penelitian dilakukan dengan enam sampel resin komposit *nanofiller* 3M ESPE FILTEK XT Z350 berbentuk persegi dengan ukuran 12 mm dan tebal 2 mm. Sampel direndam dalam akuades dengan suhu 37^{o}C selama 24 jam. Sampel dikeringkan dan dilakukan pengukuran warna sampel dengan metode CIE L*a*b* sebelum perlakuan dengan alat *chromameter*. Sampel direndam dalam minuman kopi-lemon hingga 7 hari, kemudian dilakukan pengukuran setelah perendaman 3, 5, dan 7 hari. Selisih pengukuran sebelum perlakuan dan pengukuran 3, 5, dan 7 hari dihitung untuk mendapatkan data perubahan warna (ΔL*a*b*). Data perubahan warna selanjutnya dianalisis menggunakan uji *One Way* ANOVA.

Nilai rerata dan standar deviasi ΔL*a*b* setelah perendaman 3, 5, dan 7 hari secara berurutan adalah 4,17±0,61, 5,79±0,67, dan 8,50±0,47. Hasil uji *One Way* ANOVA menunjukan bahwa terdapat pengaruh signifikan lama kontak resin komposit *nanofiller* dalam minuman kopi lemon terhadap perubahan warna ($p<0,05$). Uji *post-hoc* LSD menunjukkan perbedaan yang bermakna antar kelompok. Kesimpulan penelitian ini adalah lama kontak resin komposit *nanofiller* dalam minuman kopi lemon berpengaruh terhadap peningkatan perubahan warna.

Kata Kunci :Resin Komposit *Nanofiller*, Minuman Kopi-Lemon, Perubahan Warna.

ABSTRACT

Nanofiller composite resins are widely used in dental restorations for their aesthetic value. In the oral cavity, composite resin comes into contact with various foods and beverages, such as the coffee-lemon drink. This coffee-lemon drink contains tannin pigments and is acidic, which can cause color changes. This study aims to determine the effect of contact time of nanofiller composite resin in coffee-lemon drink on color change.

*The research used six samples of square-shaped nanofiller composite resin (3M ESPE FILTEK XT Z350), each with a size of 12 mm and 2 mm in thickness. The samples were immersed in distilled water at 37°C for 24 hours. The samples were dried and color measurements were taken using the CIE Lab method before treatment with a chromameter. The samples were then immersed in the coffee-lemon drink for up to 7 days, with measurements taken after 3, 5, and 7 days of immersion. The difference between pre-treatment measurements and those after 3, 5, and 7 days was calculated to obtain color change data (ΔL*a*b*) and were analyzed using one-way ANOVA.*

*The means and standard deviations of ΔL*a*b* after 3, 5, and 7 days of immersion were 4.17±0.61, 5.79±0.67, and 8.50±0.47, respectively. The one-way ANOVA test showed that the duration of contact of nanofiller composite resin in the coffee-lemon drink had a significant effect on color change ($p<0.05$). The post-hoc LSD test indicated significant differences between groups. The conclusion of this study is that the duration of contact of nanofiller composite resin in the coffee-lemon drink significantly affects the increase in color change.*

Keywords: Nanofiller Composite Resin, Coffee-Lemon Drink, Color Change.