

ABSTRAK

Glass Ionomer Cement (GIC) merupakan bahan restorasi yang dapat menyerupai warna gigi dan sering digunakan secara luas pada bidang konservasi gigi seiring berkembangnya waktu. GIC memiliki sifat mekanik dan ketahanan erosi yang rendah apabila berkontak dengan minuman berkarbonasi yang mengandung asam sehingga menyebabkan kekasaran permukaan. Penelitian ini bertujuan untuk mengetahui perbedaan perubahan kekasaran permukaan GIC dari berbagai merek Fuji IX, Fx Ultra, Tehnodent, dan Shangchi setelah perendaman minuman berkarbonasi.

Penelitian ini menggunakan sampel berbentuk silinder dengan diameter 10 mm dan tebal 2 mm. 24 sampel terdiri dari: 6 sampel Fuji IX, 6 sampel Fx Ultra, 6 sampel Tehnodent, dan 6 sampel Shangchi yang masing-masing diberi perlakuan perendaman pada minuman berkarbonasi. Perubahan kekasaran permukaan diukur dengan mengurangi nilai kekasaran permukaan setelah dan sebelum perendaman. Data dianalisis menggunakan uji *Oneway Annova*.

Hasil penelitian menunjukkan rerata perubahan kekasaran permukaan tertinggi pada kelompok sampel Fx Ultra 4,809 μm . Berdasarkan Uji *Oneway Annova* sig. 0,026 ($p < 0,05$), menunjukkan terdapat perbedaan perubahan kekasaran permukaan yang signifikan pada keempat kelompok.

Kesimpulan dari penelitian ini, terdapat perbedaan perubahan kekasaran permukaan pada kelompok sampel Fuji IX, Fx Ultra, Tehnodent dan Shangchi setelah dilakukan perendaman pada minuman berkarbonasi.

Kata Kunci: *Fuji IX, Fx Ultra, Tehnodent, Shangchi, Perubahan Kekasaran Permukaan, Minuman Berkarbonasi*

ABSTRACT

Glass Ionomer Cement (GIC) is a restorative material that its color similar to teeth and is often used widely in the field of tooth conservation. GIC has low mechanical properties and erosion resistance with acidic carbonated drinks causing surface roughness. The aim of this study was to determine the comparison of surface roughness changes GIC from various brands of Fuji IX, Fx Ultra, Tehnodent, and Shangchi after submersed in carbonated drinks.

This study used a cylindrical sample with a diameter of 10 mm and a thickness of 2 mm. 24 samples consist of: 6 samples of Fuji IX, 6 samples of Fx Ultra, 6 samples of Tehnodent, and 6 samples of Shangchi, each of which was treated with immersion in carbonated drinks. Change in surface roughness is measured by reducing the surface roughness value after and before immersion. Data were analyzed using the Oneway Anova test.

The results showed the highest mean change in surface roughness in the sample group Fx Ultra was 4.809 μm . Based on the Oneway Anova test of sig. 0.026 ($p < 0.05$), it shows that there are significant differences in changes in surface roughness in the four groups.

The conclusion of this study, there are differences in changes in surface roughness in the sample groups Fuji IX, Fx Ultra, Tehnodent and Shangchi after immersion in carbonated drinks.

Keywords: *Fuji IX, Fx Ultra, Tehnodent, Shangchi, Change of Surface Roughness, Carbonated Drinks*

