

## ABSTRAK

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Judul : Gambaran Kekasaran Resin Akrilik *Heat Cured* Terhadap Minuman Bersoda Selama 5 dan 8 Hari

**Latar Belakang:** Gigi Tiruan Lengkap (GTL) berfungsi menggantikan permukaan pengunyahan dengan basis gigi tiruan berbahan resin akrilik heat cured. Bahan ini dipilih karena estetik, terjangkau, mudah diperbaiki, dan diaplikasikan. Seiring meningkatnya konsumsi minuman bersoda setiap tahun, kandungan asam di dalamnya diduga dapat mempengaruhi kekasaran permukaan resin akrilik tersebut. **Tujuan:** Mengetahui pengaruh perendaman resin akrilik heat cured dalam minuman bersoda terhadap kekasaran permukaan serta meninjaunya dari sisi Islam. **Metode Penelitian:** Penelitian ini merupakan studi eksperimental laboratoris dengan sampel plat resin akrilik heat cured ukuran 10x20x3 mm, terdiri dari 7 kelompok: kontrol, perendaman 5 dan 8 hari dalam coca-cola, bintang zero, serta aquadest. Pengujian kekasaran permukaan dilakukan dengan Surface Roughness Tester, lalu dianalisis menggunakan uji Kruskal Wallis. **Hasil:** Nilai kekasaran permukaan berkisar antara 0.22–0.30  $\mu\text{m}$  dengan rata-rata 0.26  $\mu\text{m}$ . Hasil uji statistik menunjukkan nilai  $P = 0.079$  ( $P > 0.05$ ), artinya tidak terdapat perbedaan signifikan antar kelompok. **Kesimpulan:** Perendaman resin akrilik heat cured dalam minuman bersoda selama 5 dan 8 hari tidak memberikan pengaruh signifikan terhadap kekasaran permukaan secara statistik. Dari sudut pandang Islam, pemeliharaan kebersihan dan kesehatan gigi tiruan tetap penting selama tidak bertentangan dengan prinsip syariah.

**Kata Kunci:** Resin akrilik *heat cured*, minuman bersoda, aquadest, *Surface roughness tester*.

## **ABSTRACT**

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*Title : Description of Heat Cured Acrylic Resin Roughness Against Carbonated Drinks for 5 and 8 Days*

**Background:** Complete Dentures (CD) are used to replace the masticatory surface with a denture base made of heat-cured acrylic resin. This material is commonly chosen due to its aesthetic qualities, affordability, ease of repair, and application. With the increasing annual consumption of soft drinks, the acidic content in these beverages is suspected to affect the surface roughness of heat-cured acrylic resin. **Objective:** To determine the effect of immersion of heat-cured acrylic resin in soft drinks on surface roughness and to review it from an Islamic perspective. **Research Method:** This study is a laboratory experimental research using heat-cured acrylic resin plates sized 10x20x3 mm. Samples were divided into seven groups: control, immersion for 5 and 8 days in Coca-Cola, Bintang Zero, and aquadest. Surface roughness was tested using a Surface Roughness Tester and analyzed using the Kruskal-Wallis test. **Results:** Surface roughness values ranged from 0.22–0.30  $\mu\text{m}$ , with an average of 0.26  $\mu\text{m}$ . Statistical analysis showed a *P*-value of 0.079 ( $P > 0.05$ ), indicating no significant difference between the groups. **Conclusion:** Immersion of heat-cured acrylic resin in soft drinks for 5 and 8 days does not significantly affect surface roughness. From an Islamic perspective, maintaining the cleanliness and health of dentures remains important as long as it does not conflict with Sharia principles.

**Keywords:** Heat-cured acrylic resin, carbonated drinks, distilled water, Surface roughness tester.