Kekasaran Permukaan Basis Gigi Tiruan Setelah Perendaman dalam Larutan Cuka Pempek = Surface roughness of denture base after immersion in fishcake vinegar solution

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Abstrak

Latar Belakang: Pempek merupakan makanan khas kota Palembang yang biasanya dikonsumsi bersama dengan larutan cuka pempek. Larutan cuka pempek mengandung asam asetat, ion klor dan fluor yang dapat menyebabkan kekasaran permukaan pada bahan basis gigi tiruan.
Tujuan: Menganalisis pengaruh larutan cuka pempek terhadap kekasaran permukaan basis gigi tiruan resin akrilik heatcured, nilon termoplastik, dan cobalt-chromium alloy.
Metode: Spesimen plat resin akrilik heat-cured dan nilon termoplastik berukuran 15 x 10 x 1 mm sedangkan spesimen cobalt-chromium alloy berbentuk silinder dengan diameter 7,7 mm dan tinggi 17,5 mm. Masing-masing kelompok spesimen berjumlah 10 buah. Setiap spesimen direndam dalam larutan cuka pempek pada suhu 37oC selama 4 hari. Kekasaran permukaan diukur dengan menggunakan Profilometer sebelum dan sesudah dilakukan perendaman.
Hasil: Dari hasil uji statistik (p<0,05), menunjukkan bahwa terjadi perubahan kekasaran permukaan yang bermakna pada spesimen plat resin akrilik heat-cured, nilon termoplastik, dan cobalt-chromium alloy setelah perendaman dalam larutan cuka pempek selama 4 hari.
Kesimpulan: Larutan cuka pempek mempengaruhi kekasaran permukaan pada plat resin akrilik heat-cured, nilon termoplastik dan cobalt-chromium alloy setelah perendaman selama 4 hari. Perubahan kekasaran permukaan terbesar terjadi pada plat nilon termoplastik sedangkan perubahan kekasaran permukaan terkecil terjadi pada cobalt-chromium alloy.
<hr>Background: Fishcake is a typical food of Palembang city that is usually eaten with fishcake vinegar. Fishcake vinegar contains of acetic acid, chlorine and fluorine ion which cause surface roughness on the denture base material.
Objective: To analyze the effect of fishcake vinegar in surface roughness of heatcured acrylic resin, nylon thermoplastic, and cobalt-chromium alloy.
Method: Specimen plate of heat-cured acrylic resin and nylon thermoplastic was made in form of 15 x 10 x 1 mm, while the specimen cobalt-chromium alloy was used in cylinder form with a diameter of 7.7 mm and a height of 17.5 mm. Each group of specimens consist of 10 pieces. Each specimen was immersed in fishcake vinegar at 37°C for 4 days. Surface roughness was measured using a profilometer before and after immersion.
Result: Statistical analysis (p<0,05) showed that there is a significant change in surface roughness of heat-cured acrylic resin, nylon thermoplastic, and cobalt-chromium alloy after immersion in fishcake vinegar for 4 days.
Conclusions: Fishcake vinegar affects the surface roughness of heat-cured acrylic resin, nylon thermoplastic and cobalt-chromium alloy after immersion for 4 days. The highest surface roughness changes occured in thermoplastic nylon while the lowest surface roughness changes occured in cobalt-chromium alloy.