

Pengaruh perendaman larutan nanas terhadap kekerasan permukaan resin komposit bulk-fill = Effect of pineapple solution immersion on surface hardness of bulk-fill composite resin

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Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh perendaman larutan nanas terhadap kekerasan permukaan resin komposit bulk-fill. Enam puluh spesimen resin komposit Tetric@N-Ceram Bulk-Fill shade IVB berdiameter 6 mm dan tebal 3 mm dibagi menjadi dua kelompok perlakuan, yaitu perendaman dengan aquades sebagai kontrol dan larutan nanas pH: $3,8 \pm 0,1$ ($n= 30$). Sebelumnya seluruh kelompok direndam terlebih dahulu dalam aquades selama 24 jam dalam inkubator bersuhu 37oC sebagai baseline. Kemudian masing-masing kelompok tadi akan direndam kembali dalam larutan selama 1 hari, 3 hari dan 7 hari ($n= 10$). Kekerasan permukaan diukur menggunakan HMV-G Series Vickers Micro Hardness Tester Shimadzu@dengan indenter Knoop. Setiap spesimen akan diindentasi dengan beban sebesar 50 gf, sebanyak 5 kali indentasi. Hasil penelitian menunjukkan bahwa terdapat perbedaan bermakna ($p<0,05$) antara perendaman 1 hari, 3 hari dan 7 hari pada kelompok perendaman larutan nanas dengan uji One-way ANOVA. Disimpulkan bahwa larutan nanas dapat menurunkan kekerasan permukaan resin komposit bulk-fill.

This study aims to determine effect of pineapple solution immersion on surface hardness of bulk-fill composite resin. Sixty specimens of Tetric@N-Ceram Bulk-Fill composite resin shade IVB, 6 mm in diameter and 3 mm thick were divided into two groups, with immersion in aquades as a control and pineapple solution pH: $3,8 \pm 0,1$ ($n= 30$). Before immersion, all specimens were immersed in aquades for 24 hours and were saved in incubator at 37oC as a baseline. Each group of immersions would be divided into three groups, with immersion for 1 day, 3 days and 7 days ($n= 10$). The surface hardness was measured using HMV-G Series Vickers Micro Hardness Tester Shimadzu@with Knoop Indenter. Each specimen was indented with load of 50 gf for 5 times. The results showed that there were statistically significant differences ($p < 0.05$) between pineapple solution immersion for 1 day, 3 days and 7 days with One-way ANOVA test. It can be concluded that pineapple solution can reduce surface hardness of bulk-fill composite resin.