

INTISARI

Kekasaran permukaan restorasi resin komposit dipengaruhi oleh beberapa faktor antara lain jenis matriks, ukuran *filler*, dan lingkungan rongga mulut. Restorasi resin komposit selalu berhubungan dengan cairan dalam rongga mulut antara lain saliva dan minuman. Minuman susu fermentasi probiotik memiliki pH rendah yang dapat menyebabkan pelepasan monomer pada matriks resin komposit dan menyebabkan terjadinya peningkatan kekasaran pada restorasi resin komposit. Tujuan penelitian ini adalah mengetahui pengaruh perendaman minuman fermentasi probiotik terhadap kekasaran permukaan resin komposit berbasis Bis-GMA dan UDMA.

Subjek penelitian terdiri dari 30 spesimen resin komposit berdiameter 5 mm dan tinggi 2 mm dibagi menjadi dua kelompok. Kelompok pertama yaitu 15 spesimen resin komposit berbasis Bis-GMA dan kelompok kedua yaitu 15 spesimen resin komposit berbasis UDMA. Direndam dalam minuman susu fermentasi probiotik selama 6 jam yang setara dengan pemakaian 1 tahun. Kekasaran permukaan spesimen diukur dengan *surface roughness measuring instrument*.

Hasil penelitian menunjukkan rerata perubahan kekasaran permukaan pada kelompok 1 dan 2 berturut-turut $0,101 \pm 1,965$ dan $0,284 \pm 1,018$. Hasil uji t berpasangan menunjukkan bahwa tidak terdapat pengaruh susu fermentasi probiotik terhadap perubahan kekasaran permukaan resin komposit berbasis Bis-GMA maupun resin komposit berbasis UDMA ($p > 0,05$)

Kata kunci: resin komposit, Bis-GMA, UDMA, susu fermentasi probiotik, kekasaran permukaan

ABSTRACT

Surface roughness of composite resin restoration is influenced by several factors, such as the type of matrix, the size of the filler, and the oral environment. Composite resin restorations are always contacted with oral fluids such as saliva and beverages. Probiotic fermented milk has a low pH that may cause release of monomers in the composite matrix and result in increase composite resin restorations surface roughness. The purpose of this study was to determine the effect of probiotic fermented milk to the surface roughness of Bis-GMA and UDMA resin-based composites.

Subjects consists of 30 composite resin specimens (ϕ 5mm and height 2mm) divided into two groups, group I consist of 15 specimens of Bis-GMA resin-based composites and group II consist of 15 specimens UDMA resin-based composite were soaked in probiotic fermented milk for 6 hours which is equivalent for clinically use in 1 year. Values of surface roughness was measured with the surface roughness measuring instrument.

*The result of the study showed that the mean of surface roughness between two groups were 0.101 ± 1.965 and 0.284 ± 1.018 respectively. Results of paired *t* test showed that there is no influence of probiotic fermented milk to changes the surface roughness of Bis-GMA and UDMA resin based composites ($p > 0,05$).*

Keywords: composite resin, Bis-GMA, UDMA, probiotic fermentation milk, surface roughness