

ABSTRAK

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Program Studi : Kedokteran Gigi

Judul : Perbedaan Kekasaran Permukaan Resin Komposit Nanohibrid dan Nanofil Setelah Perendaman Larutan Obat Kumur Beralkohol

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Tujuan: Penelitian ini bertujuan untuk mengetahui perbedaan kekasaran permukaan resin komposit nanohibrid dan nanofil setelah perendaman larutan obat kumur beralkohol. **Metode:** Eksperimental laboratoris secara in vitro dengan desain penelitian *pretest-posttest group design*. Sampel resin komposit nanohibrid dan nanofil berbentuk silindris dengan diameter 10 mm dan ketebalan 2 mm sebanyak 24 sampel dibagi menjadi 4 kelompok. Sampel kedua resin komposit lalu direndam dalam saliva buatan selama 24 jam dengan suhu 37°C. Sampel kedua resin komposit selanjutnya direndam dalam larutan obat kumur Listerine Original Mouthwash dan Hexadol selama 12 jam dengan suhu 37°C. Pengujian kekasaran permukaan resin komposit nanohibrid dan nanofil diukur menggunakan alat *Surface Roughness Tester*. Data dianalisis menggunakan uji *Paired T-Test* dan uji *Two Way Anova*. **Hasil:** Perbedaan kekasaran permukaan resin komposit nanohibrid dan nanofil sebelum dan setelah perendaman kedua obat kumur beralkohol secara statistik signifikan. Hasil uji statistik menunjukkan bahwa terdapat pengaruh baik dari jenis resin komposit, merk obat kumur beralkohol maupun interaksi antar keduanya terhadap kekasaran permukaan resin komposit. **Kesimpulan:** Terdapat perbedaan kekasaran permukaan resin komposit nanohibrid dan nanofil setelah perendaman larutan obat kumur beralkohol.

Kata kunci: *nanohibrid, nanofil, obat kumur beralkohol, kekasaran permukaan*

ABSTRACT

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Program Studi : Dentistry

Judul : The Differences of Surface Roughness on Nanohybrid and Nanofilled Composite Resins After Immersin in Alcohol Containing Mouthwash

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Objective: This study aims to determine the differences of surface roughness on nanohybrid and nanofilled composite resins after immersion in alcohol containing mouthwash. **Methods:** In vitro laboratory experiment with pretest-posttest group design. Twenty-four samples of cylindrical nanohybrid and nanofilled composite resin with 10 mm diameter and 2 mm thickness were divided into 4 groups. Both composite resin were immersed in artificial saliva for 24 hours at 37°C. Both groups of resin composite was then immersed in Listerine Original Mouthwash and Hexadol mouthwash for 12 hours at 37°C. Surface roughness of nanohybrid and nanofilled composite resins was using *Surface Roughness Tester*. Data were analyzed using *Paired T-Test* and *Two Way Anova*. **Result:** The difference of surface roughness on the nanohybrid and nanofiled composite resins before and after immersion of the two alcohol containing mouthwashes was statistically significant. The statistical test results showed that there was an influence both from the type of composite resin, alcohol containing mouthwash and the interaction between the two on the surface roughness of the composite resin. **Conclusions:** There are differences showed on the surface roughness of the nanohybrid and nanofilled composite resins after immersion in alcohol containing mouthwash.

Key words: *nanohybrid, nanofilled, alcohol containing mouthwash, surface roughness*