



[Start](#) | [Browse by Day](#) | [Author Index](#)

138573 Microhardness of the new developed GlassCarbomer cement

Friday, July 16, 2010: 3 p.m. - 4:15 p.m.

Location: Exhibit Hall (CCIB)

K. GORSETA, D. GLAVINA, D. NEGOVETIC VRANIC, and I. SKRINJARIC,
University of Zagreb, School of Dental Medicine, Zagreb, Croatia

Objectives: GlassCarbomer material (GLC) represent a new generation of dental glass material developed from glass-ionomer cement (GIC). Setting mechanism of the GlassCarbomer is influenced with heat application. The aim of this study was to investigate microhardness of glasscarbomer material heated with two different polymerization units. Methods: Material comprised two groups of 5 cylindrical specimens (2mm in diameter and 2mm in thickness) made of GlassCarbomer (GlassCarbomer Products, Netherlands) and heated with Bluephase 16i (Ivoclar Vivadent, Liechtenstein) and Elipar Freelight (3 M Espe, Germany). The specimens were stored in 100% humidity for 24h and the microhardness test with Vickers indenter was performed. Upper and lower surface of the specimens were tested. Obtained data were analyzed with ANOVA and Tukey tests ($\alpha = 5\%$). Results: The specimens heated with Elipar Freelight showed significantly higher value in the microhardness of the upper surface (58,44; $p = 0,0000358$). There were no significant difference in the microhardness for the lower surface of the specimens heated with different polymerization units. Values for hardness of upper and lower surface did not show significant differences regardless of the type of applied polymerization unit. Conclusion: It could be concluded that amount of heat is directly associated with the quality of setting of the GlassCarbomer material.

See more of: [Clinical Research: Cements](#)

See more of: [Dental Materials 4: Clinical Trials](#)