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ONLINE ISSN : 1881-1361

PRINT ISSN : 0287-4547

Dental Materials Journal

Vol. 28 (2009) , No. 3 p.362-367

[\[PDF \(292K\)\]](#) [\[References\]](#)**Effects of food-simulating liquids on the mechanical properties of a silorane-based dental composite**[Cemal YESILYURT^{1\)}](#), [Oguz YOLDAS^{2\)}](#), [Subutay Han ALTINTAS^{3\)}](#) and [Adem KUSGOZ^{4\)}](#)

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(Received October 27, 2008)

(Accepted November 28, 2008)

Abstract:

The purpose of this study was to investigate the effects of food-simulating liquids (FSL) on the hardness and flexural strength (FS) of a new silorane-based composite and to compare it with methacrylate-based composites (MBCs). Four restorative materials (Filtek Silorane, P60, Z250, and Supreme XT) were used. Specimens for the FS and hardness measurements were fabricated in customized molds. Immediately after polymerization, the materials were stored in the following dietary simulating solvents at 37°C for 1 week: distilled water, 0.02 N citric acid, heptane, and 75% aqueous ethanol solution. After conditioning, the FS and hardness values were measured. Data were subjected to ANOVA/Scheffé's test at a significance level of 0.05. The hardness and FS of Filtek Silorane were not significantly affected by FSL ($p>0.05$). Conversely, the hardness of MBCs significantly decreased after conditioning in water and ethanol ($p<0.05$). Similarly, the FS values of MBCs were significantly affected after conditioning in ethanol.

Key words:[Food-simulating liquids](#), [Silorane](#), [Hardness](#), [Flexural strength](#)

To cite this article:

Cemal YESILYURT, Oguz YOLDAS, Subutay Han ALTINTAS and Adem KUSGOZ.
Effects of food-simulating liquids on the mechanical properties of a silorane-based dental composite . Dent. Mater. J. 2009; 28: 362-367 .

doi:10.4012/dmj.28.362

JOI JST.JSTAGE/dmj/28.362

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