

Author: [ADVANCED](#)

Volume Page

Keyword: [TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1881-1361

PRINT ISSN : 0287-4547

Dental Materials Journal

Vol. 25 (2006) , No. 3 p.626-631

[\[Image PDF \(1125K\)\]](#) [\[References\]](#)**Effect of Surface Condition of Dental Zirconia Ceramic (Denzir) on Bonding**[Motohiro UO^{1\)}](#), [Göran SJÖGREN^{2\)}](#), [Anders SUNDH^{3\)}](#), [Mitsunari GOTO^{1\)}](#), [Fumio WATARI^{1\)}](#) and [Maud BERGMAN^{2\)}](#)

1) Department of Biomedical Materials and Engineering, Graduate School of Dentistry, Hokkaido University

2) Department of Dental Materials Science, Faculty of Medicine, Umeå University

3) Cad.esthetics AB, SE-931 27 Skellefteå, Sweden and National Dental Health Service, County Council of Västerbotten

(Received June 13, 2006)

(Accepted July 30, 2006)

Abstract:

Ytria partially stabilized zirconia (YPSZ) ceramics are suitable for dental and medical use because of their high fracture toughness and chemical durability. The purpose of this study was to examine the bonding behavior of a dental YPSZ ceramic, Denzir. After being subjected to various surface treatments, Denzir specimens were bonded to each other using an adhesive resin composite, glass ionomer, or zinc phosphate cement. Bonding strength was then determined by the shearing test. No significant differences ($p > 0.05$) were observed between SiC- and Al₂O₃-blasted specimens. In all surface treatments, the shear bond strength significantly ($p < 0.05$) increased in the order of adhesive resin composite cement > glass ionomer cement > zinc phosphate cement. Moreover, silanization with methacryloxy propyl trimethoxysilane slightly increased the bonding strength of the adhesive resin composite cement.

Key words:[Bonding strength](#), [Surface treatment](#)

[\[Image PDF \(1125K\)\]](#) [\[References\]](#)



Download Meta of Article [\[Help\]](#)

[RIS](#)

[BibTeX](#)

To cite this article:

Motohiro UO, Göran SJÖGREN, Anders SUNDH, Mitsunari GOTO, Fumio WATARI and Maud BERGMAN. Effect of Surface Condition of Dental Zirconia Ceramic (Denzir) on Bonding . Dent. Mater. J. 2006; 25: 626-631 .

doi:10.4012/dmj.25.626

JOI JST.JSTAGE/dmj/25.626

Copyright (c) 2009 The Japanese Society for Dental Materials and Devices



[Japan Science and Technology Information Aggregator, Electronic](#)

