

Author: [ADVANCED](#)

Volume Page

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

ONLINE ISSN : 1881-1361

PRINT ISSN : 0287-4547

Dental Materials Journal

Vol. 29 (2010) , No. 5 p.615-622

[\[PDF \(2176K\)\]](#) [\[References\]](#)**Thin resin coating by dual-application of all-in-one adhesives improves dentin bond strength of resin cements for indirect restorations**[Rena TAKAHASHI](#)¹⁾, [Toru NIKAIDO](#)¹⁾, [Meu ARIYOSHI](#)¹⁾, [Shuzo KITAYAMA](#)¹⁾, [Alireza SADR](#)²⁾, [Richard M. FOXTON](#)³⁾ and [Junji TAGAMI](#)¹⁾²⁾

1) Cariology and Operative Dentistry, Department of Restorative Sciences, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University

2) Global Center of Excellence (GCOE) Program; International Research Center for Molecular Science in Tooth and Bone Diseases. Tokyo Medical and Dental University

3) Department of Conservative Dentistry, King's College London, King's College London Dental Institute at Guy's, King's and St. Thomas' Hospitals

(Received November 4, 2009)

(Accepted June 10, 2010)

Abstract:

This study was evaluated the tensile bond strength (TBS) of resin cements to bovine dentin resin-coated with all-in-one adhesive systems. Each of the dual-polymerizing resin cements; Link Max, Clearfil Esthetic Cement, Bistite II and Chemicace II were used to bond indirect resin disks to bovine dentin, as control, or coated by single-application or by dual-application of an adhesive system from the same manufacturer; G-Bond, Clearfil Tri-S Bond, Tokuyama Bond Force and Hybrid-Coat ($n=10$). After 24-hour water storage, TBSs were measured. The fracture pattern and the adhesive interface were observed using an SEM. Dual-application of the adhesive yielded significantly higher TBSs compared to control and single-application groups for all materials ($p<0.001$). From the limited information of this study, it was concluded that dual-application of all-in-one adhesive systems created a thin coating on dentin, and significantly improved the bond strengths of resin cements.

Key words:[Resin coating](#), [Resin cement](#), [All-in-one adhesive](#)

To cite this article:

Rena TAKAHASHI, Toru NIKAIDO, Meu ARIYOSHI, Shuzo KITAYAMA, Alireza SADR, Richard M. FOXTON and Junji TAGAMI. Thin resin coating by dual-application of all-in-one adhesives improves dentin bond strength of resin cements for indirect restorations . Dent. Mater. J. 2010; 29: 615-622 .

doi:10.4012/dmj.2009-110

JOI JST.JSTAGE/dmj/2009-110

Copyright (c) 2010 The Japanese Society for Dental Materials and Devices

[View "Advance Publication" version \(September 1, 2010\).](#)



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

