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### Abstract

[SANTANA, Fernanda Ribeiro](#) et al. Influence of method and period of storage on the microtensile bond strength of indirect composite resin restorations to dentine. *Braz. oral res.* [online]. 2008, vol.22, n.4, pp. 352-357. ISSN . doi: 10.1590/S1806-83242008000400012.

This study evaluated the influence of the method and period of storage on the adhesive bond strength of indirect composite resin to bovine dentin. Ninety bovine incisors were stored in three different solutions: 0.2% thymol, 10% formalin, and 0.2% sodium azide, during 3 periods of storage: 7 days, 30 days and 6 months, resulting in 9 groups (n = 10). The roots were cut off and the buccal surface was ground with #600-grit silicon carbide paper. The surface was conditioned with 37% phosphoric acid for 15 s and a composite resin restoration (TPH Spectrum) was fixed using a one-bottle adhesive system (Adper Single Bond) and a dual-cured resinous cement (Rely X ARC) under a load of 500 g for 5 minutes. The samples were serially cut perpendicular to the bonded interface to obtain slices of 1.2 mm in thickness. Each slab was trimmed with a cylindrical diamond bur resulting in an hourglass shape with a cross-sectional area of approximately 1 mm<sup>2</sup>. The microtensile bond strength ( $\mu$ TBS) testing was performed in a testing machine (EMIC 2000 DL) at a 0.5 mm/minute crosshead-speed until failure. After fracture, the specimens were examined under SEM to analyze the mode of fracture.  $\mu$ TBS Means were expressed in MPa and the data were analyzed by two-way ANOVA (3X3) and the Tukey test ( $\alpha = 0.05$ ). The storage times of 7 and 30 days produced no significant difference irrespective of the solution type. The formalin and thymol solutions, however, did have a negative influence on bond strength when the teeth were stored for 6 months.

Keywords : Composite resins; Tensile strength; Thymol; Formaldehyde; Sodium azide; Dentin.

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