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[\[Image PDF \(673K\)\]](#) [\[References\]](#)**Effect of 4-MET- and 10-MDP-based Primers on Resin Bonding to Titanium**[Youhei TSUCHIMOTO](#)¹⁾, [Yasuhiro YOSHIDA](#)²⁾³⁾, [Atsushi MINE](#)¹⁾, [Mariko NAKAMURA](#)⁴⁾, [Norihiro NISHIYAMA](#)⁵⁾, [Bart VAN MEERBEEK](#)⁶⁾, [Kazuomi SUZUKI](#)²⁾³⁾ and [Takuo KUBOKI](#)¹⁾

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Abstract:

The purpose of this study was to investigate the effect of a 4-MET- and 10-MDP-based primer on the bond strength of two resin cements (SuperBond C&B, Sun Medical; Panavia Fluoro Cement, Kuraray) to titanium (Ti). Ti plates were treated with six experimental primers consisting of, respectively, 10-MDP and 4-MET in concentrations of 0.1, 1 and 10wt%, or were kept untreated (control). The highest tensile bond strength of Panavia Fluoro Cement to Ti was obtained when the Ti surface was pre-treated with 10wt% 10-MDP and was significantly higher than that when a lower concentrated 10-MDP-based primer or any 4-MET-based primer was used. On the contrary, no significant difference in tensile bond strength of SuperBond C&B was found for the untreated and six pre-treated Ti

surfaces, although pre-treatment with each 10-MDP-based primer resulted in a higher tensile bond strength as compared to any 4-MET pre-treatment. Altogether, the data obtained strongly suggest that 10-MDP is effective to improve the adhesive performance of resin to titanium.

Key words:

[Titanium](#), [10-MDP](#), [4-MET](#)

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