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[\[PDF \(666K\)\]](#) [\[References\]](#)**Shear Bond Strength of a New Fluoride-releasing Orthodontic Adhesive**[Rogelio José SCOUGALL VILCHIS<sup>1\)</sup>](#), [Seigo YAMAMOTO<sup>1\)</sup>](#), [Noriyuki KITAI<sup>2\)</sup>](#),  
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**Abstract:**

This study evaluated the shear bond strength of stainless steel brackets bonded to enamel with a new fluoride-releasing orthodontic adhesive system. A total of 140 extracted human bicuspid were randomly divided into four groups. Group I (Transbond XT) was a control group in which enamel was etched with phosphoric acid. For the remaining groups, enamel was conditioned with a self-etching primer (SEP): Group II (Transbond Plus), Group III (BeautyOrtho Bond), and Group IV (BeautyOrtho Bond + Salivatect). Stainless steel brackets were bonded to all tooth samples. After which, the samples were stored, thermocycled, tested, and statistically analyzed. Besides bond strength evaluation, the adhesive remnant index (ARI) was also evaluated. The shear bond strengths of Groups II, III, and IV were significantly lower than Group I, and Group II was significantly greater than that of Group III. Concerning ARI scores, no significant differences were found between the groups. Further, no enamel fracture was observed during shear bond test with the new SEP.

In conclusion, when enamel was conditioned with the new SEP, the mean values of shear bond strength yielded were lower than when it was etched with 37% phosphoric acid.

Nonetheless, these mean values were higher than the average suggested by Reynolds as optimum for clinical treatment.

**Key words:**

[Self-etching primer](#), [Shear bond strength](#), [Adhesive remnant index](#)

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