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[\[Image PDF \(609K\)\]](#) [\[References\]](#)**Effect of Hydrofluoric Acid Etching on Shear Bond Strength of an Indirect Resin Composite to an Adhesive Cement**[Sayaka HORI](#)¹⁾, [Hiroyuki MINAMI](#)¹⁾, [Yoshito MINESAKI](#)¹⁾, [Hideo MATSUMURA](#)²⁾
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Abstract:

This study evaluated the effect of 1% hydrofluoric acid (HF) treatment on the bonding of an adhesive cement (Panavia F 2.0) to an indirect resin composite (Estenia C&B). Pairs of composite disks (10 and 8 mm in diameter by 3 mm thickness) were prepared. Adhesive surfaces were pretreated with either airborne particle abrasion or HF etching before being soaked for 30 seconds, five minutes or 10 minutes, with or without application of silane coupling agent. Adhesive specimens were fabricated by cementing a pair of treated disks. Shear bond strength was determined before and after 50,000 times of thermocycling (4 and 60°C). All data were statistically analyzed using two-way ANOVA and Bonferroni's test ($\alpha=0.05$). Bond strength achieved with five minutes of HF etching (18.3 ± 1.1 MPa) was significantly higher ($P=0.0025$) than that obtained with airborne particle abrasion followed by application of silane coupling agent (14.3 ± 1.8 MPa) after thermocycling.

Key words:[Hydrofluoric acid](#), [Indirect resin composite](#), [Adhesion](#)[\[Image PDF \(609K\)\]](#) [\[References\]](#)

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