

# Micro-Shear Bond Strength of Infiltrated and Machined Lithium Disilicate Ceramics Treated with One-Step Self-Etching Adhesives

**Objectives:** evaluate the micro-shear bond strength in lithium disilicate ceramics with different manufacturing process treated with two one-step self-etching adhesives.

**Methods:** For manufacturing the test specimens (4 groups, 5 specimens each) infiltrated and machined lithium disilicate ceramics discs were prepared (IPS Emax 2). The discs were placed in polyvinyl chloride (PVC) tubes, and two different adhesive systems were applied to the disc surfaces according to the experimental groups (Group MG: machined lithium disilicate + Gluma 2Bond, Group MB: machined lithium disilicate + and Bond2.0, Group IG: Infiltrated lithium disilicate + Gluma 2Bond, and group IB: infiltrated lithium disilicate + Bond2.0), immediately beams of Filtek Z350 Flow resin were constructed using tygons as molds over the ceramic discs. The micro-shear bond strength (MSBS) was tested using a universal testing machine with a crosshead speed set at 0.75 mm/min until failure occurred. The MSBS values were calculated in Megapascals. The data was analyzed with one-way ANOVA test and the level of significance was set at 5%.

**Results:** The MSBS were different between all groups. MG group showed the highest values ( $26.48 \pm 5.74$ ), the difference was statistically significant from the other groups ( $p < 0.05$ ).

**Conclusions:** CAD/CAM, Dental ceramics, Micro-shear bond strength, Glutaraldehyde.

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**SESSION INFORMATION**

Poster Session

Bond Strength & CAD/CAM Ceramics