

## 2318 Effect of Polishing Systems on Surface Loss of Composite Resins

Friday, July 16, 2010: 3 p.m. - 4:15 p.m.

Location: Exhibit Hall (CCIB)

[R. RAMIREZ](#)<sup>1</sup>, A. KAPLAN<sup>2</sup>, N. ORELLANA<sup>1</sup>, and V. SETIÉN<sup>1</sup>, <sup>1</sup>Universidad de Los Andes, Merida, Venezuela, <sup>2</sup>School of Dentistry, University of Buenos Aires, Ciudad de Buenos Aires, Argentina

**Objectives:** The aim of this study was to determine the surface loss of twelve composite resins polished with three different finishing systems: one based on silicon-impregnated rubber and two based on silicon rubber and aluminum oxide. **Methods:** Fifteen samples, 25 x 2 x 2 mm, A2 shade, were prepared for each material as follows: G1 Filtek Z350® (3M/ESPE), G2 TPH3® (Dentsply Caulk), G3 Tetric N Ceram® (Ivoclar/Vivadent), G4 Amelogen® (Ultradent), G5 EsthetXHD® (Dentsply Caulk), G6 Heliomolar® (Ivoclar/Vivadent), G7 ICE® (SDI), G8 Filtek Z100® (3M/ESPE), G9 Brilliant® (Coltène Whaledent), G10 Point 4® (Kerr SDS), G11 Premisa® (Kerr SDS), G12 Grandio® (VOCO). They were prepared using incremental technique and lightcuring each increment for 40 seconds (Curing Light XL3000 (3M) at 550 mW/cm<sup>2</sup>). Each group was randomly divided into three subgroups of 5 samples depending on the finishing system: J: Jiffy Polisher® (Ultradent), S: Super - Snap® (Shofu) and A Astropol/Astrobrush® (Ivoclar/Vivadent). Samples were stored in distilled water 24 hs at 37° C. Height in each sample was measured in three points before and after polish using a digital micrometer (Mitutoyo Corporation/Japan). Samples were polished for 30 seconds (10 sec per grit), using constant speed and pressure and refrigeration. Results were statistically analyzed using two-way ANOVA at two levels: resin and polishing system, and Tukey test. **Results:** both resin and polishing system had significant effect (p<0,01). Surface loss obtained (mm) was: G12: 0,035( 0,022), G1: 0,036(0,0164), G8: 0,036 (0,022), G6: 0,04 (0,022), G2: 0,040(0,0243), G3:0,0454(0,0175), G7:0,05(0,028), G10:0,053; (0,018), G11:0,0561(0,0184), G9:0,062(0,0253), G4 :0,075(0,019), G5:0,079(0,0861). Loss (mm) for each finishing system was: S: 0,0442(0,0199), A:0,0464(0,025), J:0,0605(0,0491). **Conclusions:** under the experimental conditions of this study, it can be concluded that resins have a different behavior when polished with the evaluated systems. Besides, Jiffy produced the highest surface loss regardless the type of resin.

See more of: [Surface Hardness, Roughness and Polish](#)

See more of: [Dental Materials 7: Polymer-based Materials-Physical Properties and Performance](#)