

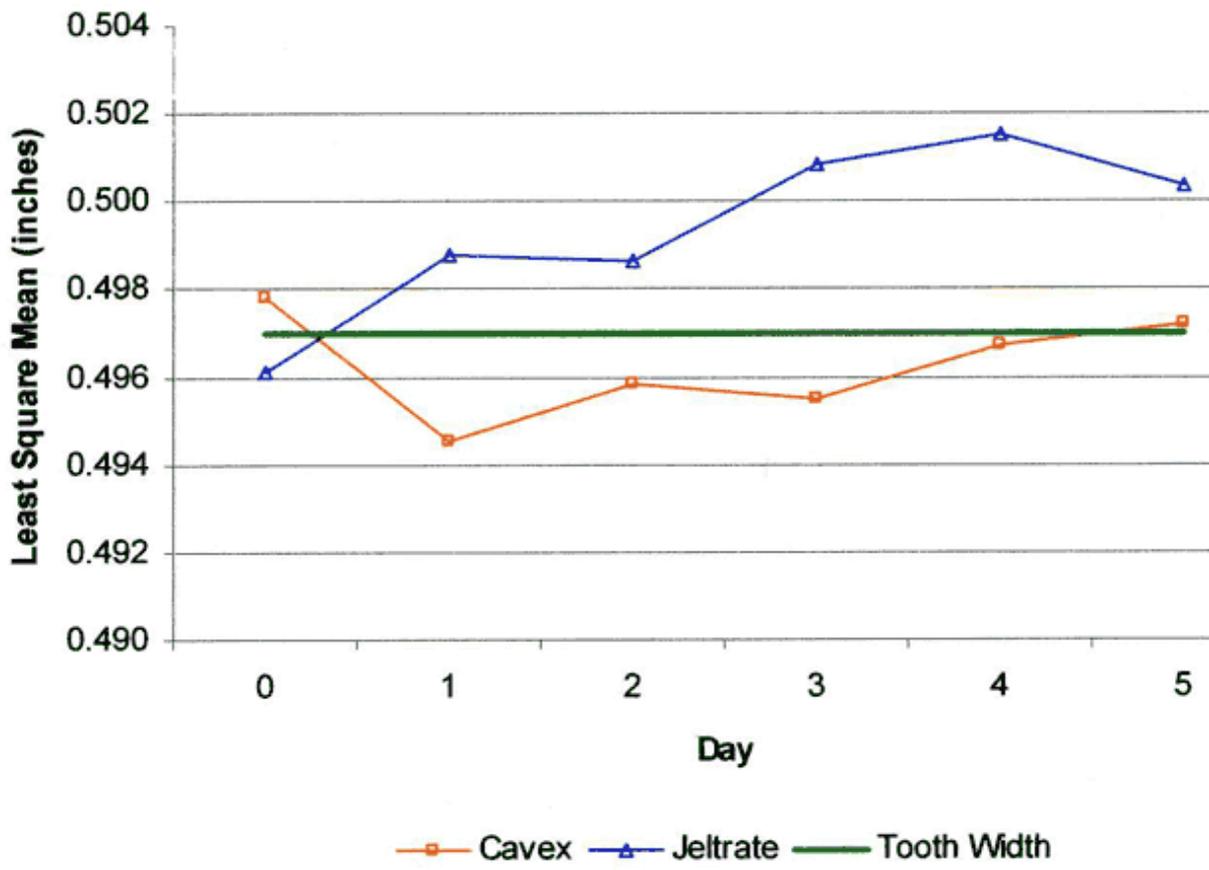
Location: Exhibit Hall D (Miami Beach Convention Center) J. NEHRING, T. IMBERY, C. JANUS, S. AL-ANEZI, and P.C. MOON, Virginia Commonwealth University - VCU/MCV, Richmond, VA

Objective: To evaluate dimensional accuracy of Cavex Color Change (CCC) an irreversible alginate impression material purported to be dimensionally stable for 5 days. Jeltrate Plus (JP) served as the control.

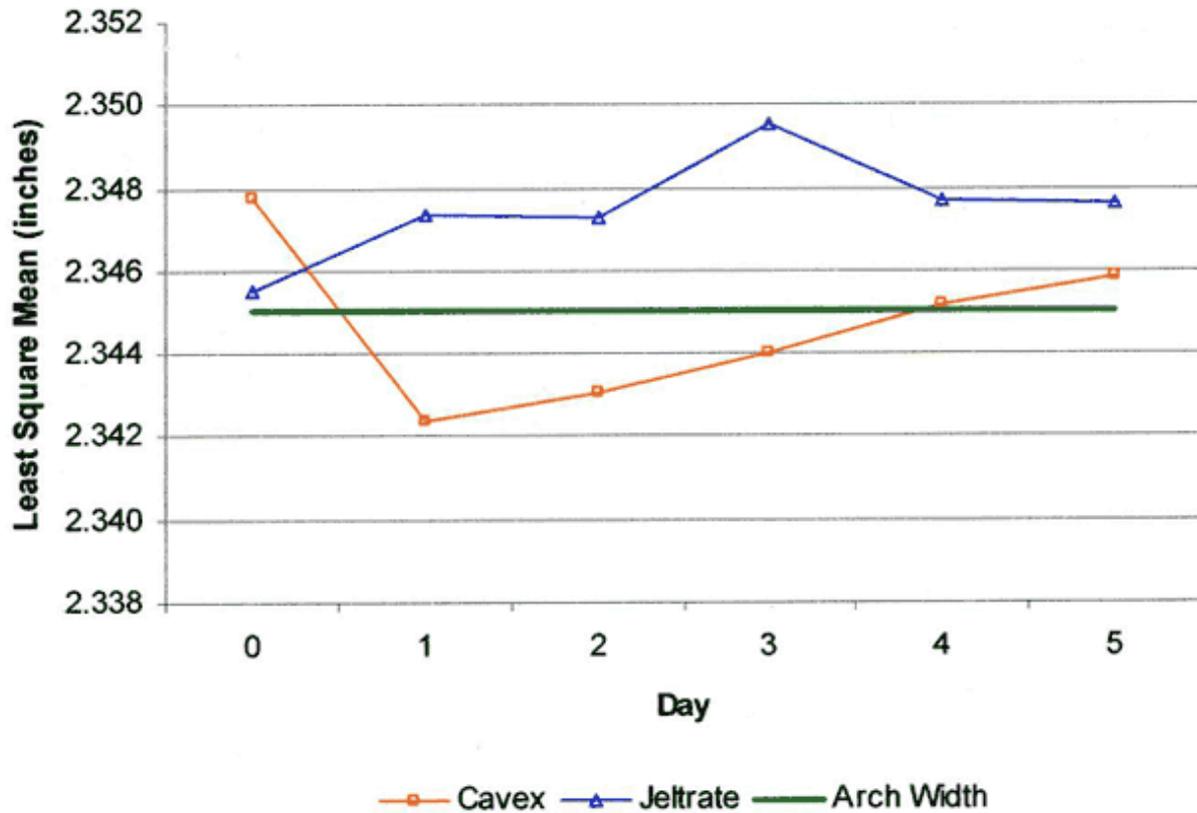
Methods: Ball bearings 3mm in diameter were embedded in dentoform teeth allowing measurements of tooth width (0.497inches) and arch width (2.345inches). Trays modified with impression compound allowed uniform 4mm thickness of impression material. Following manufacturers' powder/water ratios, impression materials were vacuumed mixed, impressions were made of the dentoform (n=5), placed in de-ionized water at 37°C until set and separated from the dentoform. Casts were poured in vacuum mixed Microstone (140grams/40ml water) immediately after removal and at five time periods (1day, 2days, 3days, 4days and 5days). Impressions not immediately poured were stored in zip-locked bags at room temperature. Prior to storage JP impressions were wrapped in wet paper towels whereas CCC impressions were not. Casts were separated from trays after 45minutes and allowed to dry for 24hours prior to measuring to nearest 0.001inch. Tooth and arch widths were recorded by measuring the greatest distance between convexities of ball bearings or their cast reproductions. Measurements were recorded three times and the mean calculated.

Results: Graphs 1 and 2 illustrate Least Square Means (LSM) of tooth and arch widths respectively.

Tooth Width



Arch Width



Conclusion: t tests were used to compare tooth and arch widths to the LSM. With respect to tooth width CCC did not differ from the dentoform when poured immediately or at day 2, 3, 4 and 5. JP did not differ when poured immediately or at day 1, 2 and 5. With respect to arch width CCC did not differ from the dentoform when poured immediately or at day 3, 4 and 5. JP differed from the dentoform only at day 3. ($p < 0.05$)