

# Poster Presentations

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## *Effect of Bleach on Microleakage of Class V Composite Restorations*

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Popular forms of tooth bleaching are achieved in a variety of ways including office applied, office prescribed or over-the-counter treatments.

**Objective:** This study was undertaken to test the hypothesis that bleaching agents of various forms will not affect microleakage composite restorations.

**Methods:** Standardized Class V cavities were prepared on the buccal and lingual surfaces of 60 extracted human molars and filled with Scotchbond 1 and Filtek Z250 following the manufacturer's instructions. The teeth were randomly divided into 4 groups including a placebo control group (PL), which was not bleached, and 3 different bleaching procedures: in-office applied Opalescence Extra Boost (OPXB); in-office prescribed (with tray) Opalescence 20 % PF (OP20PF); and in office prescribed Crest Whitestrips Supreme (CWSS) whitening strips, respectively. Teeth were cycled in a regimen including a pre-test period (artificial saliva/pooled human saliva soaks with 2x/day NaF dentifrice treatment); test bleaching period (21 days, saliva + dentifrice treatment + bleaching exposure in cycles) and 7 days post bleach recovery (saliva + dentifrice treatment). Bleaching treatments were segmented to 0 hours for PL; 42 hours for CWSS, 42 hours for OP20PF and 45 minutes with OPXB. Nail varnish was applied to insulate non restored surfaces to dye prior to immersion in a 0.1% rhodamin-Bisothiocyanate for 24h at 37° C. After thorough rinsing with tap water the specimens were embedded in MA resin and sectioned with a water cooled microtome saw. Microleakage was evaluated at the coronal (enamel) and apical (dentin) restoration margins at 40x using a stereo microscope.

**Results:** Microleakage (%) occurred in all groups as follows: (PL) 9, (CWSS) 9, (OP20PF) 5 and (OPXB) 8. Exact Kruskal-Wallis p values were determined for dentin = 0.57 and enamel = 0.91. **Conclusion:** **Bleaching with various whitening treatments had no significant effect on microleakage of Class V composite restorations.**

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## *Extrinsic Stain Removal Efficacy of a Dual-phase Dentifrice*

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**Objectives:** To evaluate the extrinsic stain removal benefit of a sodium hexametaphosphate containing dual-phase dentifrice. **Methods:** This was a parallel groups, examiner-blind, randomized and controlled clinical trial in which the dual-phase dentifrice (Crest® Vivid White™) was compared with a negative control (Colgate® Cavity Protection™). A total of 203 healthy adults with natural stain on their anterior teeth were enrolled into the study. Following baseline examination, subjects were randomly assigned to one of the two treatment groups based on baseline Lobene composite scores, smoking status (yes/no), tea/coffee consumption (yes/no), and gender. Subjects brushed twice daily, at least one minute every time (including 30 seconds on the facial and lingual surfaces of the anterior teeth) over 6 weeks. Clinical examinations including extrinsic stain evaluation and oral soft tissue examination were conducted at BL, week 3 and 6. Extrinsic stain removal was evaluated on the anterior teeth by dental examiners using Lobene stain index. **Results:** Of the 200 subjects who were randomized to treatment, 195 were available for the 3-week examination and 193 subjects completed the study. The dual-phase dentifrice exhibited statistically significant ( $P < 0.01$ ) reduction in Lobene stain composite scores when compared to the negative control dentifrice at week 6. Adjusted mean Lobene composite reduction for the dual-phase dentifrice group (0.32) was twice as big as the negative control group (0.16). Change in Lobene stain extent (area) contributed primarily to the overall composite score reduction. Both examiners observed similar stain removal benefit for the dual-phase dentifrice. All test products were well tolerated over the 6-week treatment period. **Conclusions:** **The research demonstrated the superior extrinsic stain removal efficacy of the dual-phase dentifrice relative to a negative control dentifrice.**