



## Benefit of Light vs No Light

in vivo study

# Clinical Study to Compare Two In-Office Whitening Systems

Gallagher A<sup>1</sup>, Maggio B<sup>1</sup>, Bowman J<sup>1</sup>, Felix H<sup>2</sup>, Clinical Study to Compare Two In-Office (Chairside) Whitening Systems. J Clin Dent 13:219-224, 2002.

### Objective

To compare the efficacy of two in-office whitening systems: Discus Dental Zoom! Chairside System (25% hydrogen peroxide whitening gel) and Opalescence Xtra Boost Kit (38% hydrogen peroxide whitening gel).

### Materials

- 25% hydrogen peroxide whitening gel (Zoom! Discus Dental, Inc., Culver City, CA, USA)
- 38% hydrogen peroxide whitening gel (Opalescence Xtra Boost Kit, Ultradent, South Jordan, UT, USA)

### Methodology

Twenty-two healthy adults over the age of 18 were enrolled in a single-center, examiner-blind, randomized trial. At the outset of the study, all subjects had a tooth shade greater than or equal to A3 (Vita Shade guide, Vita Zahnfabrick GmbH, Sackingen, Germany) for a minimum of four of the six maxillary anterior teeth. Whitening procedures were completed using three applications per treatment according to the manufacturers' instructions. Immediately following completion of the whitening treatment, Vita Shade assessments of the maxillary anterior teeth and chromameter shade assessments were recorded. Patients were questioned on their level of tooth sensitivity and the condition of the oral soft tissue was examined. The same procedures were performed on post-treatment Day 7.

### Results

Both products achieved a statistically significant whitening from baseline ( $p < 0.0001$ ) following treatment. After Day 7, mean changes of -7.8 and -6.8 shades were observed for the Zoom! System and the Opalescence Xtra Boost Kit respectively. The Zoom! Chairside System was an average of 1 to 2 shades better than the Opalescence Xtra Boost Kit at all time points. Results were directionally better at Day 2 ( $p < 0.08$ ) and significantly better at Day 7 ( $p < 0.0025$ ).

### Conclusion

Both products produced whitening of between 6 and 9 shades. However, the Zoom! System provided approximately 1 to 2 shade guide improvement over the Opalescence Xtra Boost Kit. These differences were significant at all time points. The improved whitening performance of these single-visit in-office kits was similar to home-based systems that bleach teeth continuously for 14 days. There were no statistical differences in induced sensitivity between the two products.

### Tooth Color Change

Changes in Mean Number of Shade Changes from Baseline

