Whitening Efficacy of Wand Applicator Containing 4.5% Hydrogen Peroxide

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Objectives: Compare clinical tooth-whitening efficacy of a wand-applicator containing 4.5% hydrogen peroxide (Test) as compared to an identical wand-applicator containing 0.0% hydrogen peroxide (Control) over a 3-week period of nightly product use.

Methods: This two-cell study had a randomized, double-blind, parallel-group design. Healthy adult subjects with a Vita Extended BleachedGuide shade of 17 or darker were enrolled. The six maxillary anterior teeth were evaluated. All subjects brushed twice daily with a manual toothbrush and non-whitening fluoride toothpaste during the study. The test and control products were applied once nightly and worn overnight. After an evening brushing, all subjects applied the test or control product on 6 maxillary anterior teeth before going to sleep based on the manufacturer instructions. At baseline, 1-week, 2-week and 3-week timepoints, a visual shade assessment was performed using the Vita Extended BleachedGuide shade guide (29-tabs).

Results: Eighty subjects complied with the protocol and completed the study. No subjects were withdrawn, and no adverse events were noted. At baseline, there was no significant difference between the groups with respect to gender, age or tooth shade. Relative to the control group, the test group showed a statistically significant reduction of 3.19 in baseline-adjusted mean tooth shade after 1 week of product use, a reduction of 4.67 after 2 weeks of product use, and a reduction of 5.38 after 3 weeks of product use.

Conclusions: The results of this clinical study showed that a whitening wand-applicator containing 4.5% hydrogen peroxide provided a statistically significant greater tooth shade improvement compared to a placebo wand applicator containing 0% hydrogen peroxide over 1, 2 and 3 weeks of nightly product use.

Results of 4wk Antibacterial Study for Dual Zinc Containing Toothpaste

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Objectives: The objective was to evaluate the antibacterial effects of brushing with a dual zinc plus arginine dentifrice with taurate/betaine surfactants toothpaste as compared to a 1450ppm sodium fluoride toothpaste on the oral surfaces of the mouth (plaque, tongue, cheek, gum surface and in saliva) 12 hours post-brushing (overnight) after 2 and 4wks of product use.

Methods: A phase III, randomized, double-blind, single-center study was conducted on healthy male and female subjects (18-70 years). Subjects with a baseline whole mouth scores of 1.5 or more (Turesky modification of Quigley-Hein Index) and gingival scores of 1.0 or more (Löe-Silness Index). Subjects brushed twice daily for 2min with assigned dentifrice for 4wks. Antibacterial efficacy was assessed via oral plaque, tongue, cheek, gum surface and saliva bacteria scores by the same examiner for each group.

Results: Ninety-seven (97) subjects completed the study. After 4wks of product use, subjects in the Test group exhibited statistically significant reductions ($p<0.001$) in bacteria vs. baseline and vs. Negative Control Group on all tested oral surfaces and saliva. Subjects assigned to the Test group showed a 42.5% reduction in dental plaque bacteria compared to baseline and a 41.1%reduction compared to subjects assigned to the Negative Control Group.

Conclusions: The results of this randomized and double-blind clinical study supports the conclusion that 12 hours post-brushing (overnight) after 2 and 4 weeks with a Test toothpaste containing zinc oxide, zinc citrate, arginine and 1450 ppm fluoride as sodium fluoride in a silica base provides a significant reduction in oral dental plaque, saliva, tongue, gum and cheek bacteria as compared to a non-antibacterial fluoride toothpaste containing 1450 ppm fluoride as sodium fluoride in a silica base.