Objectives: This randomized, examiner-blind, parallel-group, clinical trial evaluated the efficacy and safety of a whitening pre-brushing mouthrinse compared to a strip control. Methods: 48 subjects were randomly assigned to the 2% hydrogen peroxide pre-rinse (Listerine® Whitening Pre-Brush Rinse) or 10% hydrogen peroxide strips (Crest® Whitestrips® Premium Plus). Following the manufacturer’s instructions, the pre-rinse group rinsed with 15 mL twice daily for 16 days (one 473 mL bottle), while the control group wore strips for 30 min twice daily over a 10 day period. Efficacy and safety were evaluated at Baseline and again at Days 2, 3, 11, and 17. Tooth color (L*a*b*) was measured objectively from standardized digital images of the maxillary anterior teeth, while safety was assessed from clinical examination and subject report. Results: The study population (63% female) ranged in age from 19-62 years. After 1 day’s use, the mean (SD) for Δb* yellowness was –0.43 (0.49) for the strip group, compared to –0.04 (0.31) for the peroxide rinse group. Outcomes were similar for ΔL* brightness, with only the strip group exhibiting significant (p < 0.0003) color improvement from baseline at this initial timepoint. The strip group continued to exhibit significant (p < 0.0003) color improvement from baseline at 17 days, while the peroxide rinse showed no evidence of color improvement with continued use. At Day 17, mean (SE) Δb* was 1.8 (0.15) for the strip group compared to 0.2 (0.16) for the peroxide rinse. Groups differed significantly (p < 0.001) for Δb*, as well as other color parameters. Minor tooth sensitivity and oral irritation were the most common adverse events. Conclusion: One day use of hydrogen peroxide whitening strips yielded significantly greater whitening than 1 bottle of peroxide rinse used over a 16 day period.

Objectives: The popularity of direct-to-consumer whitening systems has spurred numerous introductions into that marketplace. This clinical study evaluated tooth whitening of a new hydrogen peroxide-containing tab strip relative to a marketed strip control. Methods: A total of 60 healthy adults were randomized to hydrogen peroxide tab strips (Oral-B® Rembrandt Whitening Strips) or 10% hydrogen peroxide whitening strips (Crest® Whitestrips® Premium). Participants were supplied with the manufacturer’s usage instructions, which specified 30 minutes wear time per application, QD for 5-days for the tab strips, and BID for 7-days for the control. Efficacy was measured objectively as L*a*b* color change using digital images of the maxillary anterior teeth at Baseline, Day 6, and Day 8. Results: Subjects ranged in age from 18 to 60. Adjusting for baseline tooth color and age, Day 6 adjusted means (SE) for Δb* were –0.87 (0.12) for the experimental group compared to –1.66 (0.12) for the control. At respective ends-of-treatment, adjusted means (SE) for Δb* were –0.87 (0.12) for the tab strips compared to –1.74 (0.12) for the whitening strip control. For ΔL*, end-of-treatment, adjusted means (SE) were 0.71 (0.13) for the tab strip compared to 1.84 (0.12) for the control. Groups differed significantly (p < 0.001) head-to-head at Day 6 and at end-of-treatment favoring the positive control for all color parameters. Both products were well tolerated. Conclusion: Use of the 10% hydrogen peroxide positive control provided superior whitening versus a new hydrogen peroxide whitening tab strip.