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.