



Plaque Removal

in vivo study*

Comparison of plaque removal by Sonicare DiamondClean and Oral-B TriZone SmartSeries 5000 with SmartGuide

Maclure R, Moore F, Defenbaugh J, Souza S, Jenkins W, Ward M, Liu T, Nelson M. Data on file, 2012.

Objective

To compare the plaque removal efficacy of Sonicare DiamondClean and Oral-B TriZone SmartSeries 5000 power toothbrushes.

Methodology

One-hundred nine healthy subjects aged 18 to 65 (mean age, 39.4 years) completed a randomized, cross-over single-blind clinical trial to assess the plaque removal efficacy and safety of Sonicare DiamondClean and Oral-B TriZone SmartSeries 5000 power toothbrushes. Study participants were non-smoking manual toothbrush users who presented with a Lobene and Soparker Modified Plaque Index score of 1.8 following 24 hours abstinence from oral hygiene. Eligible subjects were enrolled in the study and randomly allocated to a sequence of power toothbrush product use for a three-day acclimation period followed by a three-day manual toothbrush washout. Subjects returned to the clinic for efficacy and safety assessment at Day 7 (+/- 1 day), having observed 24 (+/- 4) hours oral hygiene abstinence. Subjects underwent a plaque evaluation by the blinded examiner and a safety assessment, followed by supervised product use for two minutes and a post-brushing plaque and safety examination. Thereafter, subjects were allocated the second power toothbrush per randomization and repeated the at-home acclimation and washout procedures. Subjects concluded the study at Day 14 (+/- 1 day) following plaque and safety examinations, as at Visit 3. Statistical analysis of the primary endpoint was performed utilizing a mixed-model F-test.

Results

Sonicare DiamondClean removed significantly more plaque overall (p-value=0.0008) than Oral-B TriZone SmartSeries 5000. Differences were more pronounced in hard-to-reach areas (posterior interproximal; p-value=0.0006). Both toothbrushes were safe for use.

Conclusion

Sonicare DiamondClean was found to remove significantly more plaque than Oral-B TriZone SmartSeries 5000 when assessed over the entire dentition as well as hard-to-reach areas.

% of Plaque Reduction

