



## Plaque Removal

in vivo study\*

# Comparison of plaque removal by Sonicare PowerUp Battery versus a manual toothbrush

Nelson M, Souza S, Milleman J, Olson M, Jenkins W, Ward M. Data on file, 2013.

### Objective

To compare the plaque removal efficacy of Sonicare PowerUp Battery toothbrush versus a manual toothbrush.

### Methodology

Methodology: A randomized, examiner-blinded parallel design two-visit clinical study was conducted in a population of healthy volunteers aged 18-65 (mean age 38.6). One hundred thirty two subjects who provided Informed Consent completed the IRB-approved study. All subjects presented to clinic at Visit 1 with 24 (+/- 4) hours of plaque accumulation. Eligible subjects were randomly allocated to one of two treatment groups; Sonicare PowerUp Battery or an ADA reference manual toothbrush for a three-day technique familiarization period. Thereafter, all subjects entered a three-day wash-out phase using only a manual toothbrush. Subjects returned to clinic for Visit 2 at Day 7 with 24 (+/-4) hours of plaque accumulation. A pre-brushing plaque score was assessed upon entry using the Modified Quigley-Hein Plaque Index, followed by supervised brushing per randomization by unblinded study personnel. A second plaque score was assessed post-brushing and subjects were dismissed from study. Safety was assessed via intraoral examination and per subject report during the at-home use period.

### Results

Sonicare PowerUp Battery removed significantly more plaque than a manual toothbrush overall (41.9% versus 23.83%,  $p < 0.0001$ ) and in all sub-regions, including hard-to-reach areas.

### Conclusion

Sonicare PowerUp Battery was superior to a manual toothbrush in removing plaque when assessed over the entire dentition (overall), as well as in hard-to-reach areas. Both products were safe for use.

LS Means, Percent Plaque Reduction  
% of Plaque Reduction

