

### Comparison of plaque reduction by Philips Sonicare 1100, 2100, 3100 Series\* power toothbrush versus manual toothbrush

Amini P, Imtiaz U, Li J, Ward M, Nelson M, Ambers J

Silverstone Research Group, Las Vegas, NV, USA, 2021

#### Objective

To compare the reduction in surface plaque by the Philips Sonicare 1100-3100 Series\* power toothbrush (PTB) handle, paired with the C1 SimplyClean and C2 Optimal Plaque Control brush heads to manual toothbrush (MTB) following 14 days of home use, and to evaluate the safety of the test products.

#### Methodology

In this randomized, three-arm, parallel, single-blinded, single-center study, eligible subjects were routine manual toothbrush users aged 18-59, non-smokers, with a minimum of 20 scorable teeth and a minimum plaque score of  $\geq 1.8$  per Lobene and Soparker Modified Quigley-Hein Plaque Index (MPI) following 3-6 hours of plaque accumulation. Enrolled subjects were randomized to three groups. The PTB+C1 BH group was given a Philips Sonicare 1100-3100 Series\* PTB with C1 SimplyClean brush head; the PTB+C2 BH group was given a Philips Sonicare 1100-3100 Series\* PTB with C2 Optimal Plaque Control brush head; and the MTB group was given a Colgate Classic Adult MTB. All groups performed toothbrushing twice daily with Crest Cool Mint Gel toothpaste following manufacturer's instructions. The use of any other oral hygiene products was prohibited during the study period. All subjects received MPI assessment at Baseline, and following two weeks of home use of the study products. Subjects presented to clinic for both visits with 3-6 hours of plaque accumulation. Safety was assessed by intraoral exam and per subject report.

#### Results

##### Demographics

In total, 240 subjects were enrolled and randomized, and 239 subjects completed the study. There were no statistically significant differences in demographics or baseline characteristics between the three groups.

#### Efficacy

Modified Plaque Index (MPI), Least Square Means (SE), Overall

	PTB+C1 BH	PTB+C2 BH	MTB
n	80	79	80
Baseline	3.00 (0.024)	3.03 (0.025)	3.00 (0.024)
Reduction from Baseline			
Week 2	0.80 (0.034)**	0.86 (0.034)**	0.26 (0.034)
Percent reduction from baseline			
Week 2	26.39% (1.127)**	28.31% (1.135)**	8.74% (1.126)

\*\*Pairwise comparisons were statistically significant versus MTB treatment group, p-value < 0.0001

#### Safety

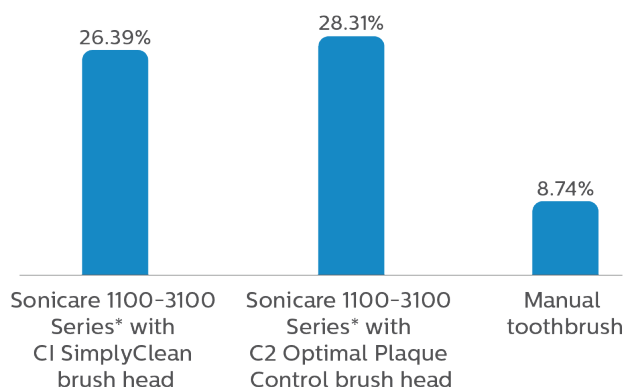
There were no serious adverse events. One adverse event of mild severity related to the study product occurred in the PTB+C1 BH group.

#### Conclusion

The Philips Sonicare 1100-3100 Series\* powered toothbrush with either C1 SimplyClean brush head or C2 Optimal Plaque Control brush head is statistically superior to manual toothbrush in reducing surface plaque after 14 days of home use. All study products were safe for use.

Figure 1:

Modified Plaque Index (MPI), Overall, Least Square Mean Percent Plaque Reduction from Baseline to Week 2



\* Philips Sonicare 1100 Series, 2100 Series, 3100 Series, Sonic Pro 10, Sonic Pro 30

© 2021 Koninklijke Philips N.V. (KPNV). All rights reserved. PHILIPS and the Philips shield are trademarks of KPNV. SONICARE and the Sonicare logo are trademarks of KPNV.