

# Evaluation of a Sonic Brush, Cleanser, and Clay Mask on Deep Pore Cleansing and Appearance of Facial Pores Through a New Image Analysis Software Methodology

Koski N., Henes E., Jauquet C., Wisuri K., Rapaka S., Tadlock L.  
Pacific Bioscience Laboratories; Redmond, WA, USA

8425

## INTRODUCTION

Pacific Bioscience Laboratories, Inc. has developed a sonic brush which utilizes oscillations of more than 300 motions/second. It gently and effectively cleanses the skin better than one can by hand. In response to customer demand for cleansing of pores and hard-to-reach areas of the face, a regimen consisting of sonic brush, deep-pore brush head (DPBH), deep pore cleanser (DPC), and clay mask [CM (with fruit acids)] was developed. This regimen was evaluated for cleansing efficacy and pore refinement utilizing a new image analysis software methodology for evaluation of visual pores.

## OBJECTIVE

To evaluate the efficacy of a sonic DPBH, new deep-pore cleanser DPC, and clay mask (CM) through evaluation of the cleanliness of hard to reach areas of the face (i.e., dermatoglyphics, around nose, pores, etc.) and appearance of pore size.

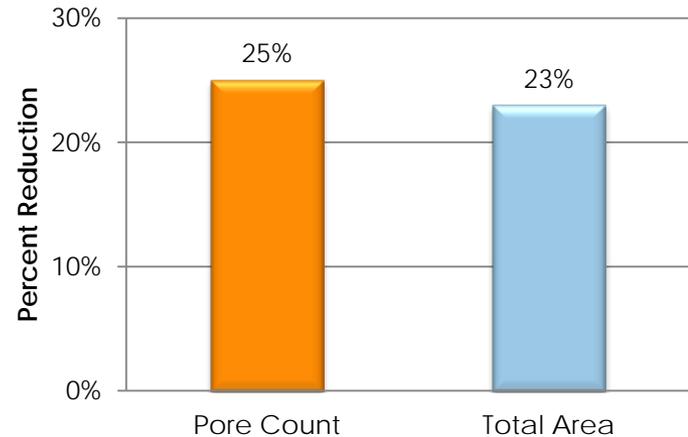
## METHODOLOGY

30 subjects were enrolled in a 2 week study assessing a deep pore regimen on pore clarity. The primary inclusion criteria included women between the ages of 18 and 65 with large pores on their cheeks. Photographs (VISIA CR) were taken at baseline, after first use, after 1 week, and 2 weeks of using the sonic brush with the brush head designed for deep pore cleansing, cleanser, and clay mask. Participants were instructed to cleanse their face with the sonic brush and deep pore cleanser once or twice per day. The participants were also instructed to apply a thin layer of mask twice a week, allowing it to dry for 15 minutes. The mask was removed with the sonic brush and water. Pore Size and Total Area (Area of pores/region assessed) were evaluated from VISIA CR photographs using the Vaestro Image Analysis Toolkit, v 2.0 (Canfield, Fairfield, NJ).

## RESULTS

The measured pore count reduced significantly after the baseline (BL) treatment, week 1 treatment, and week 2 treatment when compared to BL [210.0, 157.2, 148.6, 137.8 ( $p < 0.01$  for BL, week 1, and week 2, respectively)]. The measured total area of pores reduced significantly after BL treatment, week 1, and week 2 treatments when compared to BL [54.9, 41.9, 39.3, 37.44 ( $p < 0.01$  for BL, week 1, and week 2, respectively)]. There was a 25% reduction in pore count and 23% reduction in total pore area after first use, when compared to baseline.

### Percent reduction in pore count and total pore area after first use of the Deep Pore Regimen



**Figure 1.** Average percentage reduction in pore count and total area after 2 weeks of using the Deep Pore regimen.



**Figure 2.** Reduction in the appearance of pore size in a subject at baseline (top) and following 2 weeks post-treatment (bottom).

## CONCLUSIONS

The sonic brush with deep pore brush head and deep pore cleanser are more effective at cleansing hard to reach areas of the face than manual cleansing. When combined with the addition of a pore-refining CM, the clarity and appearance of pores is improved through objective assessment of pores using a new image analysis software methodology.

## REFERENCES

1. Henes EM, Akridge R, Ortblad K. Assessing the gentleness of a sonic skin care brush for daily use. *J Am Acad Dermatol.* 2006;54:AB46, P403.
2. Akridge R, Ortblad K, Henes E. Clinical efficacy of a new sonic skin care brush for facial cleansing. *J Am Acad Dermatol.* 2006;54:AB50,P417.
3. Gabard B, Treffel P Chapter 55, Transepidermal Water Loss in "Measuring the Skin", Agache P., Humbert P. Editors, Springer-Verlag; Berlin, Germany 2004.
4. Peterson GC, Henes E, Pilcher K, Ortblad K, Akridge R. A novel fluorescent makeup methodology use to measure the cleansing efficacy of a sonic skin care brush. *J Am Acad Dermatol.* 2007;56:AB38, P412
5. Henes E, Ortblad K, Kearney M, Koski, N, Citron R, Akridge R. Evaluation of a novel sonic brush head to deeply cleanse pores. *J Am Acad Dermatol* 2012;66:AB20, P 5561.
6. Ortblad K, Henes E, Kearney M, Koski, N, Citron R, Akridge R. Long-term efficacy and safety of a novel sonic brush head to deeply cleanse difficult areas of the face. *J Am Acad Dermatol* 2012;66:AB28, P 5080.