



# Cavilon™

Skin Care Solutions

3M™ Cavilon™ Advanced Skin Protectant

Data on file at 3M (Study EM-05-014080)

## Barrier Effectiveness of 3M™ Cavilon™ Advanced Skin Protectant Compared to 3M™ Touchless Care™ Zinc Oxide Protectant Spray

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### INTRODUCTION

Moisture barriers are intended to provide protection from body fluids. The ability of a moisture barrier to resist wash-off increases its effectiveness and reduces the number of applications needed. When skin is unprotected or inadequately protected, repeated exposure to moisture leads to increased hydration, with an associated increase in electrical conductance.<sup>1</sup> An effective barrier prevents this increase and offers better barrier effectiveness.

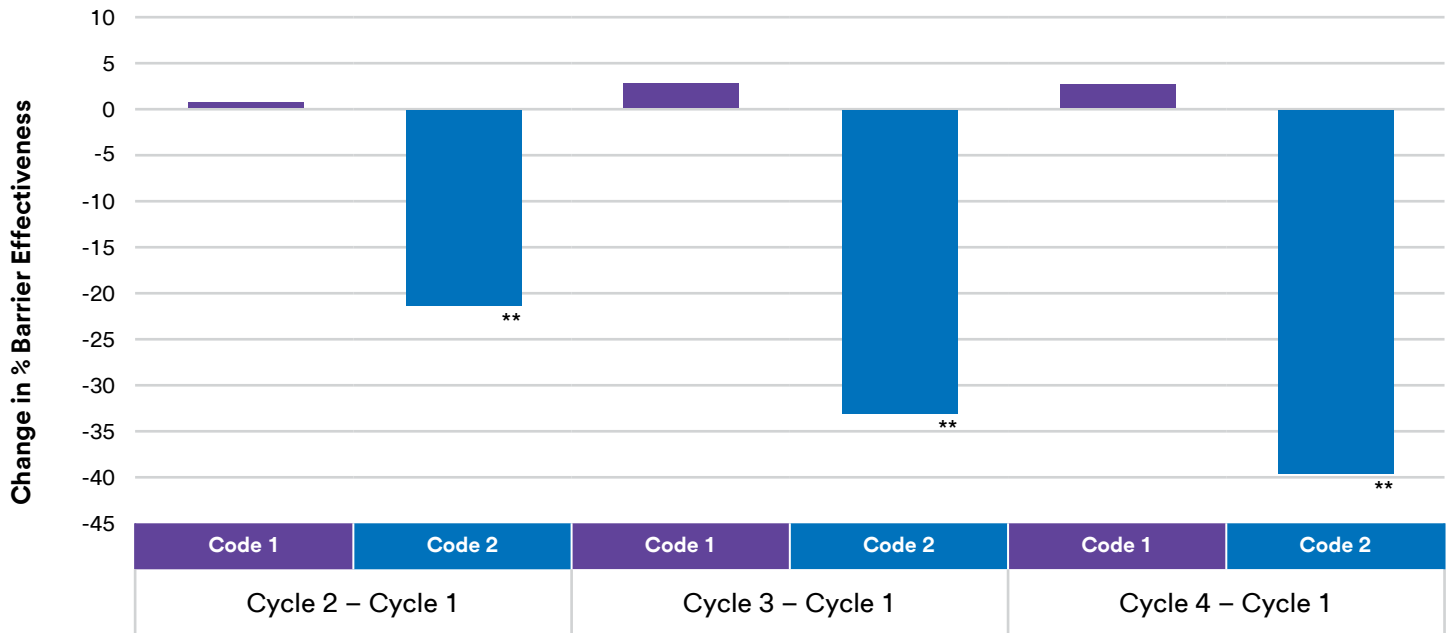
A new skin protectant with extended durability and ability to adhere to wet, weepy denuded skin has been developed. 3M™ Cavilon™ Advanced Skin Protectant is intended to manage Category 2 Incontinence-associated Dermatitis (IAD) and other types of moderate to severe skin damage. It may also be used to protect intact skin at high risk for breakdown.

### METHODS

This study on 32 healthy volunteers compared the barrier effectiveness of Cavilon Advanced Skin Protectant to 3M™ Touchless Care™ Zinc Oxide Protectant Spray. After initial soak, and following sequential wash cycles, the electrical conductance of the skin was obtained using the DermaLab® Moisture Meter. The percent barrier effectiveness was determined by comparing the measurement at each time point to the baseline and expressing the effective barrier still present using the following formula:

$$\% \text{ Barrier Effectiveness @ Time X} = 100 - \left[ \frac{\left( \text{Conductance @ Time X} \right) - \left( \text{Conductance @ Baseline} \right)}{\left( \text{Control Conductance @ Time X} \right) - \left( \text{Control Conductance @ Baseline} \right)} \right] \times 100\%$$

## Change in Mean (SE) % Barrier Effectiveness Between Wash Cycles



**Barrier products tested:**

- Code 1: 3M™ Cavilon™ Advanced Skin Protectant
  - Code 2: 3M™ Touchless Care™ Zinc Oxide Protectant Spray
- \*\* Significant (P<0.01) difference between products.

## RESULTS

Both products demonstrated comparable barrier effectiveness upon application. For Cavilon Advanced Skin Protectant (Code 1) there were no significant changes in barrier effectiveness for the test sites after four cycles; however, the degree of protection provided by the Touchless Care Zinc Oxide Protectant Spray (Code 2) decreased progressively over the wash cycles. The difference between Cavilon Advanced Skin Protectant and the zinc oxide spray product was significant after cycles 2 – 4 (p<0.01).

## CONCLUSION

Data indicated that Cavilon Advanced Skin Protectant is substantially more resistant to repetitive wash-off than Touchless Care Zinc Oxide Skin Protectant Spray and provided better moisture barrier effectiveness.

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**Reference:**

1. Tagami H. Epidermal hydration: Measurement of high frequency electrical conductance. In: Serup J, Jemec GBE, Grove GL, editors. *Handbook of non-invasive methods and the skin*. 2<sup>nd</sup> Ed. Boca Raton, FL; London: CRC Press, 2006. p. 329-336.



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