

# Surgical Gloves:

Leveraging the moisturising effects of aloe



The ability of aloe vera to help soothe and moisturise the skin has been well-known for centuries. Focusing on these properties, Medline introduced the first surgical gloves containing aloe more than 10 years ago.



## A study to evaluate the moisturising effects of aloe

Medline used an independent organisation to evaluate the moisturising effects of aloe.<sup>1</sup> Healthy males and females, aged 20 to 49, who felt they had dry skin, wore either Medline's surgical gloves containing aloe or those without aloe for three hours. The back of each hand was assessed for water content in the stratum corneum and transepidermal water loss 15 minutes after removing the gloves.



## Water content in the stratum corneum

Water content in the stratum corneum is the amount of water contained in the stratum corneum, the outermost layer of the skin, which is about 10 to 20  $\mu\text{m}$  in thickness. Water content in the stratum corneum depends greatly on natural moisturising factors and intercellular lipids that serve as a barrier. If you have dry skin, it is important to keep your skin moisturised because your levels of natural moisturising factors are reduced, having a significant impact on the softness and texture of the stratum corneum.



The mean change from baseline in water content in the stratum corneum was +4.32 (a.u.), after three hours of wearing **aloe-containing gloves**.



The mean change from baseline in water content in the stratum corneum was +1.86 (a.u.), after three hours of wearing **non-aloe-containing gloves**.

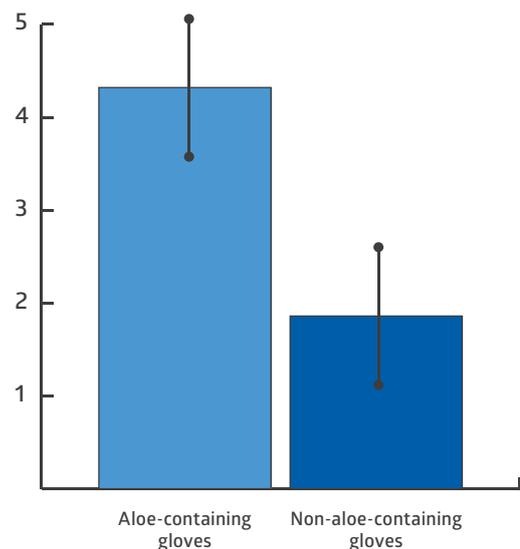


A p-value is used in hypothesis testing to quantify the statistical significance of the hypothesis to be proven. The smaller the p-value, the higher the level of statistical significance of the tested hypothesis. In general, a p-value of less than 0.05 leads to the conclusion that the tested hypothesis is true. A level of significance of  $\alpha=0.05$  was used in this study as well. The ends of the bars in the graph represent the maximum and minimum values.

Aloe-containing gloves kept the hands more moisturised.

## Change from baseline in water content in the stratum corneum\*

p-value: 0.024 (a.u)



\*The higher the value, the more moisturised the skin.

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# Transepidermal water loss

Transepidermal water loss, one of the parameters measured to examine skin dryness, is the very small amount of water that evaporates through the stratum corneum without being mediated by sweat. The skin plays an important role as a barrier between the inside of the body and the outside environment. Impaired barrier function of the stratum corneum results in loss of water from the body, making your skin prone to dryness.



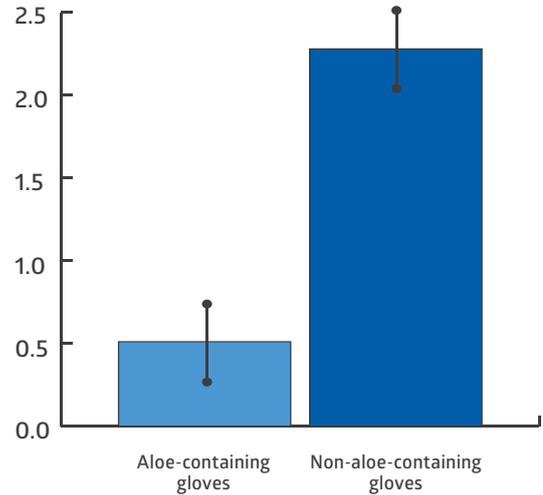
The mean change from baseline in transepidermal water loss was +0.51 (g/m<sup>2</sup> h), after three hours of wearing **aloe-containing gloves**.



The mean change from baseline in transepidermal water loss was +2.28 (g/m<sup>2</sup> h), after three hours of wearing **non-aloe-containing gloves**.

## Change from baseline in transepidermal water loss\*

p-value: 0.002 (g/m<sup>2</sup> h)

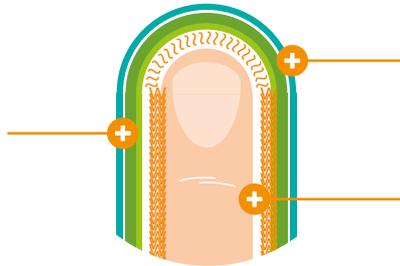


Aloe-containing gloves reduced water evaporation.

\*The lower the value, the better the barrier function that the stratum corneum provides.

## Medline's surgical gloves: How the aloe coating works

Extract 100% pure organic aloe vera gel directly from the plant.



Freeze-dry the aloe and uniformly coat the inside of the gloves with it.

Your body heat dissolves and releases the aloe, keeping your hands moisturised.

## Medline's surgical gloves with aloe

If you want natural rubber gloves, choose **Signature Latex Green**.



MSG55xx

If you want latex-free gloves, choose **SensiCare® PI Green**.



MSG92xx



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These gloves are class IIa sterile medical devices intended to be used by healthcare professionals. Before use, please consult instructions and precautions on the corresponding labelling.

1. Data based on the results of a double-blind study conducted by EBISU Skin Research Center, Inforward, inc. in December 2018.

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