

Assessing the effectiveness of 'Hands First' Barrier Cream: Phase I laboratory study

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A laboratory-based study was undertaken to determine the effectiveness of 'Hands First, invisible gloves dry feel barrier cream' in preventing the skin of the hands from becoming contaminated with an aqueous solution during a simulated exposure scenario, and to compare the product's effectiveness with other barrier cream products (BC) readily available on the market and one emollient hand cream.

The level of skin protection afforded by five creams was tested using a panel of 5 volunteers. A fluorescent tracer was used as the test substance. The difference in skin protection between the five products was evaluated.

Our findings suggest that Hands First Barrier Cream was the most protective of the four barrier cream products tested in this study, covering between 9-11% more of the participant's hands than the three other BCs tested. However, the control emollient cream seemed to perform better than the barrier creams tested. Given the small difference in protective ratings between the Hands First Cream and the other BCs and the small sample size of this study there is some degree of uncertainty and the results should be interpreted with care. A much larger laboratory study will be needed to establish if the differences observed are statistically significant.

Based on a subjective assessment of the creams by the participants, the control emollient cream was most frequently rated the negative quality of being 'wet/sticky', while the two creams with the least protective effect were most strongly rated on positive qualities 'easily absorbed' and 'pleasant/comfortable'. Hands First Barrier Cream was strongly positively rated for having a 'pleasant/comfortable' feel on the skin and was not rated strongly for any of the negative properties. Physical qualities of BCs such as ease of absorption and wetness and stickiness have been listed among the important qualities of BCs as having an effect on user compliance and safety issues with respect to interference of grip. An overall assessment of BCs needs to take these factors into consideration together with the hydrating or protective effect of the cream.

Although the small sample size puts limitations on the confidence with which these products can be rated against each other, the results suggest that overall Hands First Barrier Cream scored better than the other barrier cream products tested when one considers both protectiveness and desirable properties to users.

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