



Vital Repair+® in Enfuselle® Formulations Provides Antioxidant Activity

Title of study:

Antioxidant Activity of Vital Repair+ from Enfuselle Formulations When Applied to Human Skin.

Abstract:

A test of three of the Enfuselle skincare formulations clearly demonstrates that each formulation exhibits significant antioxidant activity when applied to the surface of intact human skin. The level of antioxidant activity was found to be significantly greater than that of control treated skin without the patented Vital Repair+ complex (U.S. Patent No.6,036,946). These results clearly demonstrate that the Vital Repair+ present in the Enfuselle skincare formulations exhibits antioxidant activity as demonstrated in the human skin cell cultures.

The effectiveness of the patented Vital Repair+ antioxidant complex included in the Enfuselle skincare products was demonstrated in human cell cultures. However, this does not unequivocally ensure this same effectiveness when applied to human skin. Therefore, a test was conducted to show this efficacy on human skin.

It is well documented that when beta carotene is exposed to long wavelength ultraviolet (UVA, 320 to 400 nm) radiation, as found in sunlight, it undergoes a free radical reaction during which it changes from an orange color to a pale yellow color. Shaklee scientists used this knowledge to demonstrate the effectiveness of the patented Vital Repair+ from the Enfuselle formulations. Solutions of beta carotene were applied to the forearms of human subjects and allowed to dry completely. The Enfuselle formulations were then applied to selected sites on top of the beta carotene treated sites. All test sites were then exposed to UVA light. The changes in the color of the test sites were then monitored using a Minolta(TM) Chromameter throughout the UVA exposure period.

The color changes in the treated and control sites were exposed to six (6) different intensities of UVA light. Based upon the Chromameter data gathered from this test, the following conclusions were drawn. When compared to control test sites not treated with the Enfuselle formulations, the Vital Repair+ delivers the following effectiveness against UVA induced free radical reactions:

Up to **twice** the antioxidant effectiveness at low UVA doses

Up to **three times** the antioxidant effectiveness at high UVA doses

Conclusion:

This test clearly demonstrates that the patented Vital Repair+ (U.S. Patent No.6,036,946) protects the skin from UVA induced color change of beta carotene which is known to occur through a free radical pathway. Therefore, the antioxidant activity of the Vital Repair+ to protect the surface of human skin against free radical damage has been demonstrated.

Reference:

Data on File, Shaklee Corporation.