



Enfuselle® products containing sunscreen agents provide broad-spectrum protection against UV light.

Title of study:

Broad-spectrum Protection Provided by Enfuselle Products Containing Sunscreen Agents.

Abstract:

The effectiveness of the Enfuselle sunscreen containing products in delivering broad-spectrum protection was determined in-vitro using a spectrophotometric method. This broad-spectrum protection is provided by a combination of sunscreen agents without the need for the inclusion of avobenzone, which has been shown to undergo degradation upon exposure to sunlight.

This broad-spectrum claim was also demonstrated despite the fact that the Enfuselle SPF 15 for Body and SPF 30 for Body contain lower levels of sunscreen agents than conventional suncare products on the market today. The suncreening effectiveness of these latter products, despite the lower level of sunscreen agents employed, is the basis for the patent issued by the U.S. Patent Office for these products.(U.S. Patent No.6,015,548)

The Enfuselle products containing sunscreen agents, namely the **Enfuselle Time Repair A.M.® SPF 15** and **SPF 30 for Body**, have all been shown to exhibit broad-spectrum protection from the ultraviolet wavelengths of sunlight using a spectrophotometric method. This method, which measures the amount of ultraviolet (UV) light absorbed by the formulation applied to a substrate that is transparent to UV light, is used to determine the critical wavelength where 90% of the absorbance of the formulation is reached. This critical wavelength is then compared to the same value for other formulations that have been documented to exhibit significant absorbance of UV light across the entire UV wavelengths in clinical tests.

According to the acceptance criteria for this test, any formulation exhibiting a critical wavelength greater than 340 nm can be labeled as exhibiting broad-spectrum UV protection. The accuracy of the measured critical wavelength is plus/minus 5 nm. Therefore, for a measured critical wavelength of 350 nm, the actual critical wavelength is somewhere between 345 and 355 nm.

The resulting critical wavelength values, which were measured at an independent testing laboratory for the Enfuselle products containing sunscreens, are as follows:

Time Repair A.M. SPF 15 – **355** nm

SPF 30 for Body – **349** nm

All of these Enfuselle products exhibit critical wavelengths of greater than 340 nm and are appropriately described as being broad-spectrum sunscreen products

Conclusion:

Enfuselle products containing sunscreen agents provide broad-spectrum protection against UV light. This protection is achieved without avobenzone. However, it is important to realize that the Enfuselle Time Repair A.M. SPF 15 does contain titanium dioxide and zinc oxide which play a role in the delivery of the broad-spectrum protection for this important Enfuselle skincare product.

Reference:

Data on File, Shaklee Corporation.