FLORAESTERS K-20W® JOJOBA IMPROVES SUNSCREEN WATER RESISTANCE

CS 15-066

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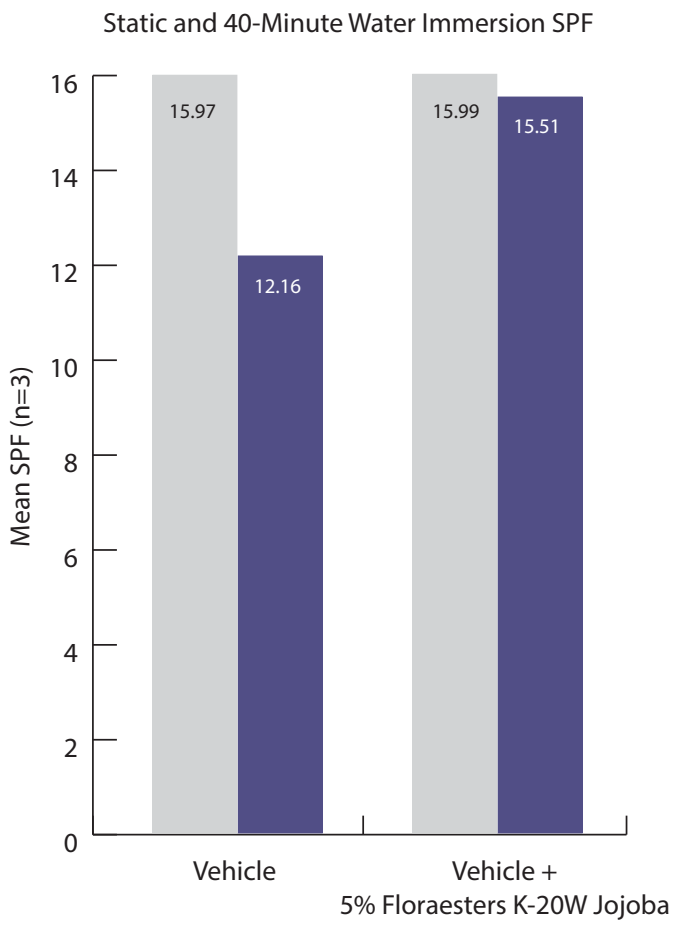
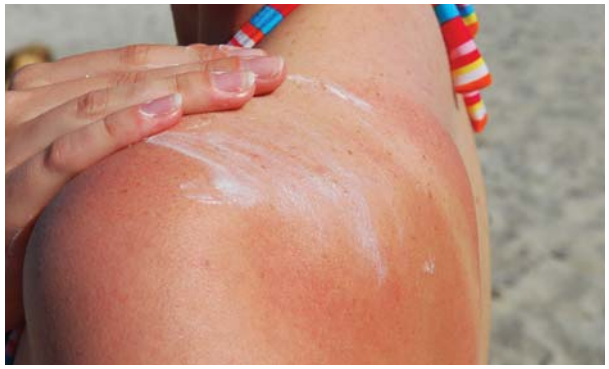
Incorporating Floraesters K-20W Jojoba within a Sunscreen Formula Resulted in Improved SPF Following 40-Minute Water Immersion





Floraesters K-20W Jojoba, when added to a sunscreen formula, resulted in improved water resistance when tested on three subjects after a 40-minute water immersion.

The Minimum Erythema Dose (MED) is the lowest UV dose required to produce perceptible erythema. The MED for each subject was measured and used to determine the proper UV exposure during testing of the sunscreen formulas. The static SPF value was calculated using the MED of sunscreen protected skin (MED_p) relative to the MED of unprotected skin (MED_u) on each subject using the following equation: MED_p/MED_u. For the 40-minute immersion test, subjects sat with the testing site submerged in a water bath for two 20-minute immersion periods prior to UV exposure, and SPF was calculated in the same manner as above.

The graph to the left shows the SPF values for sunscreen formulations with and without Floraesters K-20W Jojoba, for both the static and 40-minute water immersion SPF testing.

After 40 minutes of water immersion, the sunscreen formula containing 5% Floraesters K-20W Jojoba had a 28% higher SPF and maintained an SPF rating of 15 (which was not seen in the vehicle formula).

Floratech Ingredient: Floraesters K-20W Jojoba

Vehicle (%wt/wt): Water (q.s.), C12-15 Alkyl Benzoate (8.0%), Titanium Dioxide (and) Dimethicone (7.5%), Ethyl Macadamiate (5.0%), Potassium Cetyl Phosphate (3.0%), Sunflower Seed Oil Sorbitol Esters (2.0%), Cetearyl Alcohol (1.0%), Glycerin (1.0%), Polyhydroxystearic Acid (1.0%), Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Propylparaben (and) Isobutylparaben (0.8%), and Triethanolamine (0.2%).

The clinical study of Floratech® test formulation (CTL_15-059) was conducted by Suncare Research Laboratories, LLC on two separate panels, with a total of seven male and female subjects aged 47-68 for static and 40-minute water immersion SPF testing. Testing was conducted according to the US FDA Final Rule; 21 CFR Parts 201 and 310. The erythema evaluations were conducted by a trained evaluator under controlled temperature and humidity conditions. The water bath was maintained at a temperature of 25-32°C. This study was double-blind and randomized. The xenon arc solar simulator was Model 16S (Solar Light Co., Philadelphia, PA). (Clinical Study 15-059 report available upon request.)

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