Skin Barrier Recovery

Jojoba esters are a functional and naturally derived ingredient(s) that can barrier recoveries as the lotion containing petrolatum, up to 78% and 79%, respectively) and better than the vehicle (5%, p<0.01).

The objective of this study was to determine if JE LMP, JE MMP, and JE HMP, incorporated into a oil/water emulsion, can increase barrier recovery when skin is post-treated following SLS exposure. TELW measurements were then repeated 30 minutes following chamber removal.

Figure 1: The inclusion of 2% jojoba esters statistically significantly (p<0.001) increased percent improvement in SLS-induced TELW over the vehicle, and performed statistically equivalently to 5% petrolatum.

Figure 3: The addition of 2% jojoba esters produced statistically significant increases (p<0.001) in barrier recovery over the vehicle and untreated skin at the 24, 48, and 72 hours time points. JE MMP and JE HMP also performed statistically significantly (p<0.05) better than 0.5% bisabolol.

Figure 5: The inclusion of 2% jojoba esters statistically significantly (p<0.05) increased percent barrier recovery over the vehicle, and performed statistically equivalently to 5% petrolatum.

Conclusions

The data indicate that naturally-derived jojoba esters can have a profound effect on the skin's barrier function. Three distinctive jojoba esters improved barrier function as well as increased barrier recovery from SLS damage with efficacy similar to petrolatum. It was not surprising that jojoba esters also inhibited inflammatory action: Habashy et al. were able to show in 2005 that jojoba seed oil was anti-inflammatory in a number of standard models for inflammation.7

References / Footnotes

3. LMP = Floraesters 20, MMP = Floraesters 30, and HMP = Floraesters 60.
4. Tewameter is a product of Courage + Khazaka Electronic GmbH, (Koln, Germany).
5. Mexameter is a product of Courage + Khazaka Electronic GmbH, (Koln, Germany).
6. MSE is pre-treated prior to SLS exposure.

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Skin Barrier Protection with Jojoba Esters

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