

## عنوان مقاله:

Effects of Skin Penetration Enhancers in Topical Antiaging Products Containing  $\alpha$ -Hydroxyacids and Hyaluronic Acid

## محل انتشار:

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## نویسندگان:

Narges Shokri

Hamid Akbari Javar

Rozhin Ghadermazi

## خلاصه مقاله:

Background: Transdermal drug delivery has several advantages and has been vastly investigated over the last decades. Chemical enhancers improve the quantity of drug penetration through the skin. Objectives: In this study, some conventional solvents and surfactants were used as enhancers to promote dermal penetration of  $\alpha$ -hydroxyacids (AHA) and hyaluronic acid (HA). Materials and Methods: A total of ۴۲ different formulations containing AHA or HA as the active ingredient and a solvent or surfactant as the enhancer were prepared. The experiments for determination of transdermal absorption of AHA or HA for each formulation were performed using a diffusion cell and a slice of chicken skin as model at ۳۲ . After ۱.۵ or ۱۲ hours, samples from the medium were collected and analyzed for AHA or HA concentration. Results: After ۱.۵ and ۱۲ hours, the maximum permeated amount of AHA were ۸۹.۸ and ۳۴۲.۵ mg, respectively, which related to the formulations with liquid paraffin. After ۱.۵ and ۱۲ hours, the maximum permeated amount of HA were ۵۷.۳ and ۷۰.۶ mg, respectively, which related to the formulations with glycerol. Conclusions: The most effective enhancer for AHA and HA were liquid paraffin and glycerol, respectively. The most effective surfactant for both AHA and HA was Tween ۸۰. The effects of the enhancers were increased by prolonging the exposure time

## کلمات کلیدی:

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