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Study of Skin Penetration Testing Methods

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Modeling of penetration through the skin is a complex challenge. The success of topical and transdermal therapy is correlated to the techniques used for the evaluation of the preparations, which facilitate the optimization of the skin penetration of the API. Human skin tests give the most relevant information; however, because of the high cost, it is a generally accepted approach to choose simpler methods in the early stages of formulation development. In my PhD work, I study different *in vitro* tests which are used and reliable tool for evaluating products [1, 2]. Although there are many methods for following up skin penetration/permeation the different techniques are not fully equivalent but complement each other. Different types of vertical Franz diffusion cells, the Skin-PAMPA method and Raman mapping have been compared. The models can make rapid screening and faster optimization possible especially in the early stage of development. The selection of the most suitable *in vitro* model should be based on availability, facility of use, cost, and the respective limitations.

References:

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