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Optimization of Sunscreen Emulsions Using a Factorial Design Study

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***SUMMARY*. Emulsions are formulations of choice in the production of sunscreens, however different aspects besides sun protection factor (SPF) must be considered for the final quality of these products. In this sense, the aim of this study was to evaluate by application of a 2^3 factorial design the influence of the types and amounts of self-emulsifying bases and types of emollients in aspects such as pH, conductivity, droplet size, spreadability factor and sun protection factor in the emulsions sunscreen. Data of the factorial design showed that some of the parameters in this study can be optimized by qualitative and quantitative changes in the composition of the emulsions. So the tool factorial design was useful in optimizing of sunscreen emulsions in this study.**

KEY WORDS: Emulsion optimization, Factorial design, Sunscreen emulsions.

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