In Vitro Sun Protection Factor Evaluation of Sunscreens Containing Rutin and its Derivative

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SUMMARY. This research aimed at determining spectrophotometrically (290 to 320nm) the in vitro Sun Protection Factor (SPF) of sunscreens developed with rutin (R) or succinate rutin (SR), in association or not with UVB filter. Formulations were developed based on phosphate-base O/W emulsions, with (B) or not (A) the presence of polyacrylamide/C13-14 isoparaffin/laureth-7 (PIL), in accordance with the following associations: (a) control; (b) 1.0 % SR; (c) 0.1 % R; (d) 7.5 % ethylhexyl methoxycinnamate (EHMC); (e) 7.5 % EHMC + 0.1 % RS; (f) 7.5 % EHMC + 0.1 % R. It was verified a statistical significative elevation of the SPF from 13.93 ± 0.02 (Af ) to 16.63 ± 0.27 (Bf ) and also in relation to 15.53 ± 0.14 (Bd). According to the results, the EHMC had distinct behavior depending on the presence of bioactive substance and viscosity agent, thus, rutin obtained better profile as a SPF booster in these experimental conditions with the presence of PIL.

KEY WORDS: Bioactive substance, Rutin, Succinate rutin, Sunscreen, SPF.

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