



Sunscreen Formulations Containing Rice Bran or Soybean Oil: Rheological Properties, Spreadability and *In Vitro* Sun Protection Factor

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SUMMARY. The presence of rice bran or soybean oil at different concentrations (3 and 5 %) in gel-creams containing benzophenone-3 (BZ-3) was evaluated. Gel-creams were prepared with Carbopol Ultrez® (polymer) at 0.5 % (w/w). The influence of rice bran or soybean oil was evaluated on the pH values, rheological behavior, spreadability and *in vitro* sun protection factor (SPF). All formulations showed a cream-like aspect and pH between 6.5 and 7.0. Rheological analysis showed pseudoplastic Non-Newtonian behavior for all formulations according to the Herschel-Bulkley model, regardless of the presence of the oil. However, formulations containing BZ-3 showed higher shear rates and smaller spreadability factors than blank formulations. On the other hand, formulations with higher concentration of vegetable oil showed higher spreadability factors and smaller shear rates than formulations without it. The presence of oil showed no influence on the SPF values of gel-creams.

KEY-WORDS: Benzofenone-3, Gel-cream, Rice bran oil, Soybean oil, Vegetable oils.

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