

OBJECTIVE

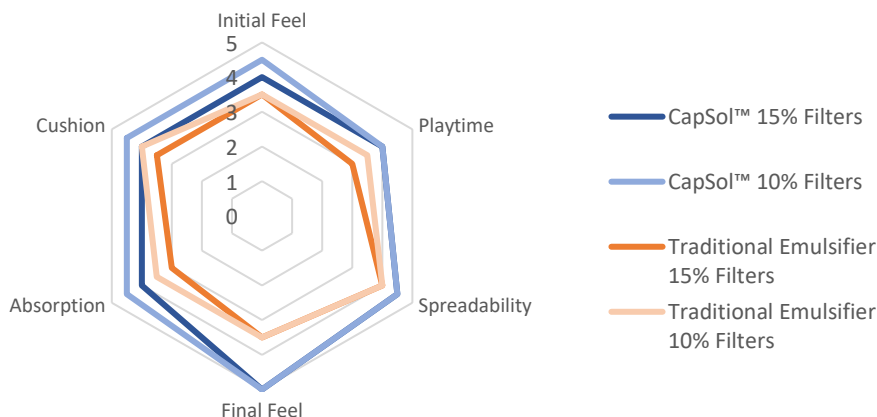
The purpose of this study is to evaluate the sensorial characteristics of sun care preparations containing Carthamus Tinctorius (Safflower) Oleosomes (CapSol™) and organic sunscreen filters. Effectiveness of the test materials was evaluated by a panel of sensory experts. The Carthamus Tinctorius (Safflower) Oleosomes containing preparations were compared by their sensorial attributes to both similar preparations containing traditional emulsifiers and retail products of similar SPF.

Study A: The sensory panel studies were conducted using 10% CapSol™ in two different emulsion systems: Part A-using 10% chemical (organic) sunscreen actives; Part B-using 15% chemical (organic) sunscreen actives. The CapSol™ emulsions were then compared sensorially to formulations containing a traditional emulsifier blend (Cetearyl Alcohol (and) Dicetyl Phosphate (and) Ceteth-10 Phosphate).

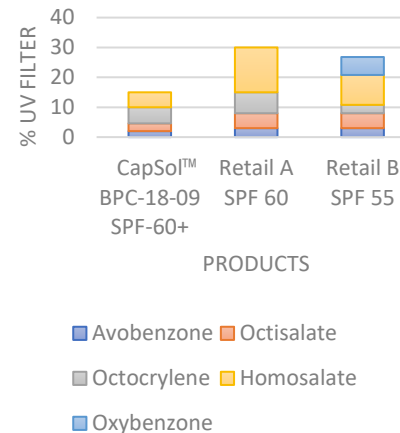
The sensorial evaluation was conducted considering the following attributes:

- **Initial feel** - stage where the product is first applied to skin
- **Spreadability** - ease of movement of product over skin
- **Cushion** - initial sense of bounce or body during pickup and initial feel
- **Playtime** - the amount of time the product can be moved around skin before it begins to absorb
- **Absorption** - how well the product absorbs into the skin
- **Final feel** - last stage after product is fully dry; comprises both feel when touched and feel of film left behind

Sensorial Comparison: CapSol™ vs. Traditional Emulsifier



Retail Comparison: UV Filter Levels



Sensorial Comparison: CapSol™ vs. Retail



Study B: The sensory panel studies were conducted comparing a sunscreen preparation containing CapSol™, in vivo tested for an SPF 60+, versus two retail products, SPF 60 and SPF 55.

Summary:

Study A: The preparations containing Capsol™ overall had a better sensorial profile when compared to preparations containing the traditional emulsifier blend. The most considerable difference was absorption and final feel. The traditional emulsifier blend, by its nature, provided a film that was not readily absorbed and contributed to a less pleasant final feel.

Study B: The preparation containing Capsol™ overall had a better sensorial profile when compared to retail products of similar SPF. The reason is twofold: the Capsol™ preparation performs well when compared to systems containing traditional emulsifiers, and secondly the Capsol™ preparation contained approximately half the UV filters of the retail products which contribute negatively to the sensorial profile of the finished product.