Sensory Analysis Study

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Tradename: AC WonderShroom

Code: 21029

CAS #: 84650-60-2 & 999999-99-4 (or) 68917-13-5 & 999999-99-4 (or) 68917-13-5 & N/A (or) 9057-02-7

Test Request Form #: 11691

Lot #: N240509A

Sponsor: *Active Concepts, LLC; 107 Technology Drive Lincolnton, NC 28092*
Study Director: *Daniel Shill*
Principal Investigator: *Kayla Goodson*

Test Performed:
Sensory Analysis Study

Introduction
Cosmetic products are designed to provide and elicit various sensory effects during application, in addition to the traditional physical beauty attributes and benefits. The physical experience of applying cosmetics is multi-dimensional and influences how consumers perceive products, demonstrating the importance of quantifying the sensory effects of a cosmetic product during application.

Accordingly, a Sensory Analysis Study was conducted to evaluate the physical experience and perceived sensory effects in relation to application of **AC WonderShroom**.

Study Principle
Participants apply products to their skin and quantify various sensory parameters on a rating scale associated with the product application.

Materials
A. **Products**: Base Lotion (Cetaphil® Moisturizing Cream for All Skin Types)

Methods
10 volunteers between the ages of 23 and 45, who were known to be free of any skin pathologies with Fitzpatrick skin types I to IV, participated in this study (Table 1). Detailed methods of the Sensory Analysis are outlined below.

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Table 1. The Fitzpatrick Classification of Skin Types Chart[1]

Fitzpatrick Skin Type Descriptions*	
Skin Type	**Description**
I	Always burns, never tans
II	Burns easily, tans minimally
III	Burns moderately, tans to light brown
IV	Burns minimally, tans to moderate brown
V	Rarely burns, tans to dark
VI	Never burns, least sensitive to changes
*Adapted from The Surgeon General's Call to Action to Prevent Skin Cancer	

After two test sites were identified on the volar forearm, participants were provided the parameter definitions (Table 3). In a randomized order, participants applied 0.2 g of the conditions described below (Table 2). While applying each condition, participants rated each characteristic on a scale from 1 to 10, with 1 indicating the lowest and 10 representing the highest perceived benefit (Table 3). T-tests were performed on the ratings for each parameter to determine differences and significance was accepted at $p \leq 0.05$.

Table 2. Descriptions of the Conditions and Treatments for each Skin Test Site

Skin Test Site	Condition	Treatment / Test Article Application Description
1	Base Lotion	Base Lotion
2	2.0% **AC WonderShroom**	2.0% **AC WonderShroom** in **Base Lotion**

Results

Applying 2.0% **AC WonderShroom** elicited greater perceived effects and higher overall skin comfort compared to the Base Lotion.

Table 3. Sensory Analysis Evaluation Average Ratings and p-values. Asterisks (*) indicate statistically significant differences at $p \leq 0.05$.

Parameter	Description	Base Lotion Ratings	AC WonderShroom Ratings	P-values
Pick-Up	Ability to pick-up product on finger	6.8	8.3	< 0.001*
Cushion Effect	When the movement of the product is lessened	6.8	8.6	0.001*
Slip	Ease of moving product	6.7	9.0	< 0.001*
Spreadability	Ability to diffuse product over the surface of skin	7.2	8.3	0.028*
Drag	Skin friction, light tug during application of product	2.3	1.8	0.047*
Coverage	Degree at which product covers the skin	5.8	7.8	< 0.001*
Velvety	Powdery after-feel	1.4	1.3	0.171
Silky	Smooth after-feel	6.4	7.7	0.001*
Tacky	Sticky after-feel	2.8	2.4	0.111
Overall Skin Comfort	Satisfaction of skin feel	6.8	8.8	< 0.001*

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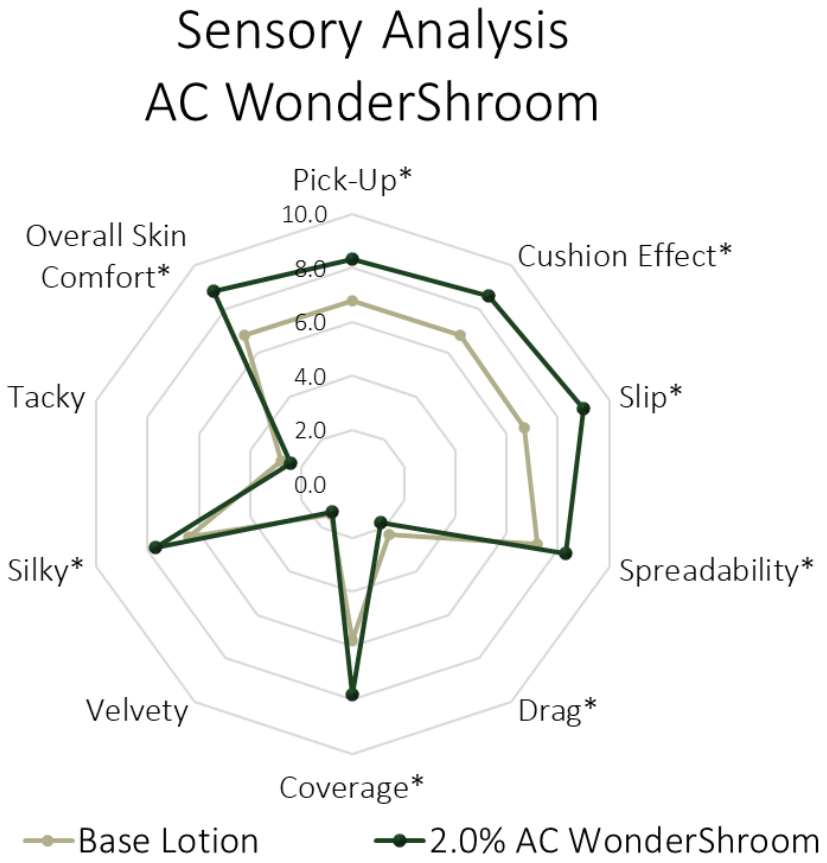

Figure 1. Visual Depiction of Sensory Analysis Ratings. Asterisks (*) indicate statistically significant differences at $p \leq 0.05$.

Discussion

A Sensory Analysis Study was conducted to evaluate the perceived sensory effects of AC WonderShroom compared to a Base Lotion when added to a personal care product applied on the skin.

The Sensory Analysis results reveal several positive physical characteristics of AC WonderShroom when added to a cosmetic product. As shown in Figure 1, 2.0% AC WonderShroom outperformed the Base Lotion in the majority of sensory parameters. However, the Base Lotion was rated as having a higher drag sensation, velvety and tacky feel on the skin compared to 2.0% AC WonderShroom. Additionally, participants indicated 2.0% AC WonderShroom had significantly higher pick-up, cushion effect, slip, spreadability, coverage, silky skin feel, and overall skin comfort when compared to the Base Lotion alone (Figure 1, Table 3). These results indicate 2.0% AC WonderShroom leaves behind desired perceived sensory effects, without a sticky or powdery after-feel.

Taken together, these results indicate AC WonderShroom augments the physical experiences and elicits positive sensory effects during application when added to personal care products at recommended use levels. Collectively, AC WonderShroom evokes a positive skin feel and contributes to the physical experiences of applying cosmetics.

References

1. Sharma AN, Patel BC. Laser Fitzpatrick Skin Type Recommendations. [Updated 2022 Mar 9]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK557626/