Immediate and Long-Term Effects

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Tradename: AcquaSeal® Algae

Code: 20852

CAS #: N/A

Test Request Form #: 3607

Lot #: NC170831-I

Sponsor: *Active Concepts, LLC; 107 Technology Drive Lincolnton, NC 28092*
Study Director: *Maureen Danaher*
Principal Investigator: *Jennifer Goodman*

Test Performed:
Immediate and Long-Term Effects 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, an Immediate and Lon-Term Effects Study was conducted to evaluate the positive cumulative effects **AcquaSeal® Algae** application has on a set of skin properties.

Study Principle

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

Materials

A. **Equipment:** Nova Impedance Meter; Courage Meter FR 700; Minolta Chroma Meter; Cutometer 575
B. **Products**: Placebo (Table 1)

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Table 1. Ingredient List (INCI Names) of Placebo

Placebo
Deionized Water
Magnesium Aluminum Silicate
Xanathan Gum
Acrylates/C10-30 Alkyl Acrylate Crosspolymer
Butylene Glycol
Disodium EDTA
Caprylic/Capric Trigylceride
Octyl Palmitate
Cetearyl Alcohol
PEG-8 Stearate
PEG-100 Stearate
Triethanolamine 99%
Water
Phenoxyethanol
Potassium Sorbate
Methylisothiazolinone
Butylene Glycol

Methods

15 volunteers participated in this study to evaluate the immediate impact of **AcquaSeal® Algae** on skin properties. Participants completed the following two studies with different protocols:

A. Single Use Study: **AcquaSeal® Algae** was formulated into a lotion base at 2.0% and applied to one half of participant's face. The other half of the participant's face was treated with the lotion base alone. Several skin parameters were assessed after one hour (Table 3). Participants were instructed not to apply any cosmetic products or sunscreen on their face for at least three days prior to starting the study. Participants were also equilibrated in a controlled environment room for thirty minutes prior to the start of the study. Skin Hydration was assessed with the DPM value of the Nova Impedance Meter as per manufacturer's instructions. Measurements were made in triplicate and averages. Two skin parameters, Skin Slip and Overall Feel, were self-assessed on a scale of 0-10. Friction was assessed with a Courage Meter FR 700 as per manual instructions for measuring skin friction using a 16mm head. Data was acquired as AFU and converted with proprietary software to a 1-10 scale, where 1 was a synthetic skin treated with dimethicone to dramatically reduce slip or friction and 10 was the skin mimic treated with a sucrose/water solution to maximize resistance. Measurements are essentially arbitrary with respect to specific numbers and all results should be viewed comparatively.

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B. Long-Term (Four Week) Clinical Study: After an initial one week dry out phase with no cosmetic application, participants applied a 2.0% **AcquaSeal® Algae** lotion to half of their face twice a day for four weeks. The average participant age for this study was 52 years. The placebo was applied to the other half of their face throughout the study. Evaluations were made prior to the start of study and after four weeks of application. At the four-week evaluation, assessments were made at least six hours after the product was applied. Hydration was assessed with the NOVA meter (DPM value) as per manufacturer's instructions. All measurements were done in triplicate. Superficial facial lines (SFLs) were assessed by trained graders using the method of Packman. In this method, a total wrinkle or SFL is determined based upon the summation of the number of wrinkles which are classified as fine (1), moderate (2), or deep (3) by a multiple weight factor for each wrinkle class. Clinical grading of overall skin condition was done via expert graders on a 0-10 point scale as above using a visual linear 0-10 scale. Clarity (luminosity L value) was assessed with the Minolta Chroma Meter. Skin Firmness was assessed with a Cutometer 575 using the ration of Ue/Ur as a measure of firmness.

Results

Applying 2.0% **AcquaSeal® Algae** improved skin hydration, clarity, lines and wrinkles, flakiness, overall skin appearance, reduced skin friction, and provided a positive perceived skin feel.

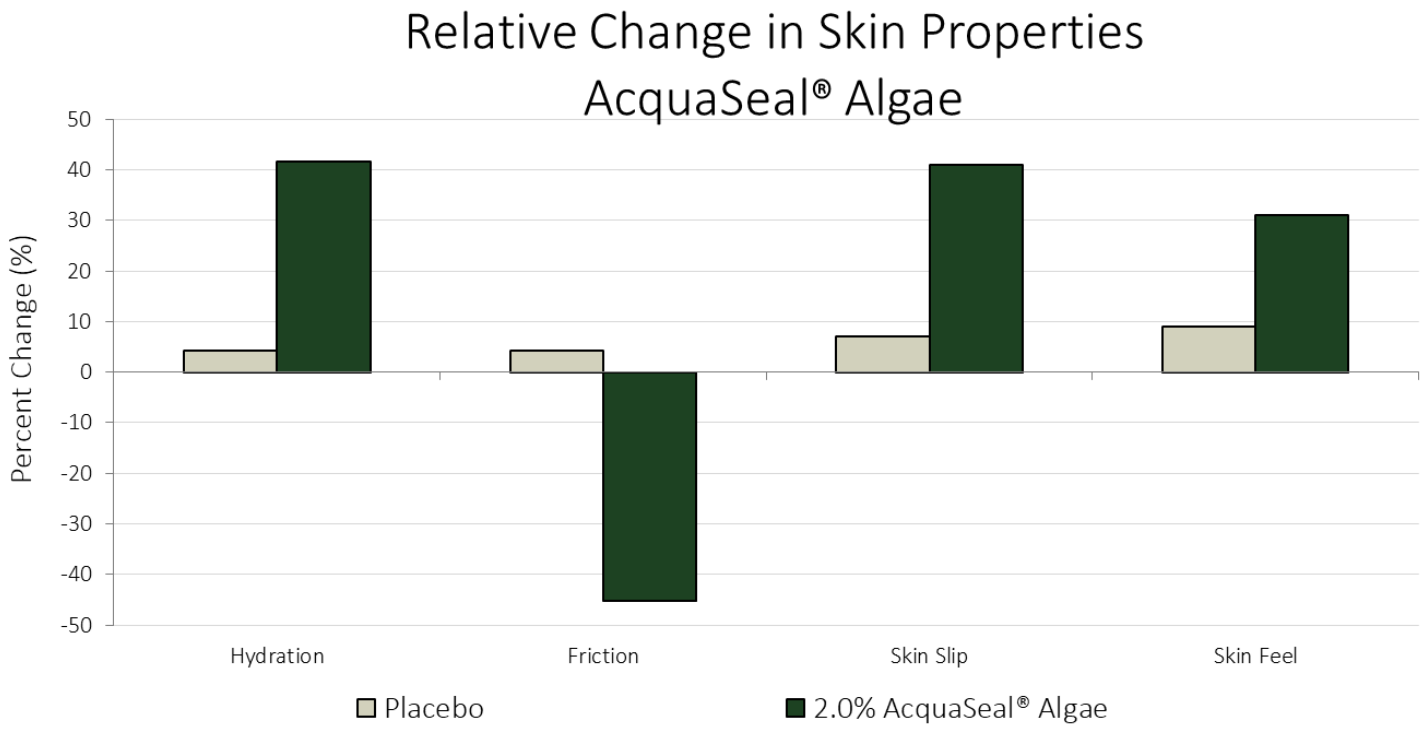

Figure 1. Single Use Application Results after One Hour.

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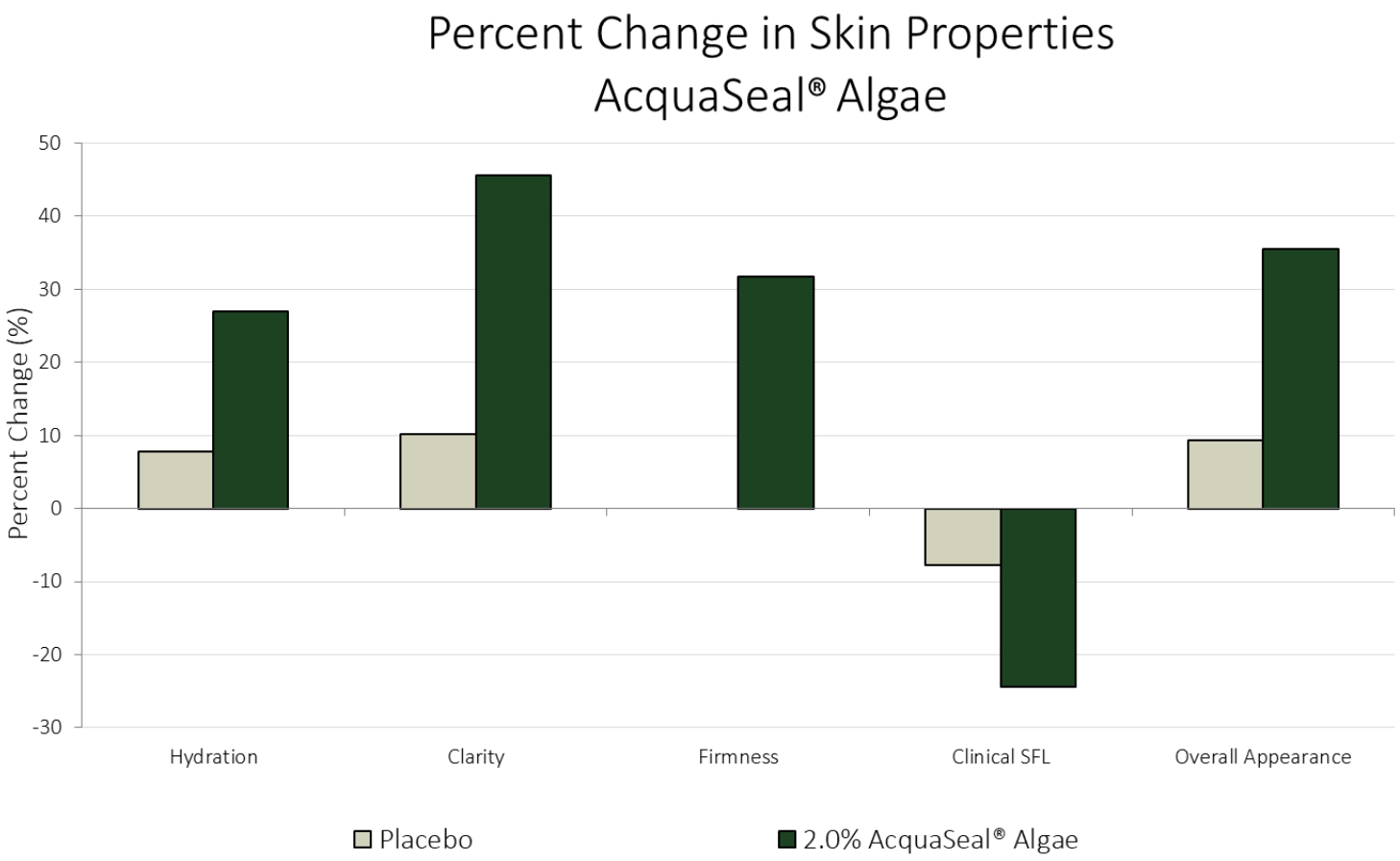

Figure 2. Long-Term Application Results after Four Weeks.

Discussion

Based on the results in both the Single-Use and Long-Term Application Studies, **AcquaSeal® Algae** is capable of exhibiting both short term and long-term skin benefits. Short term use of 2.0% **AcquaSeal® Algae** in a base lotion showed a 41.4% increase in hydration, 44.2% decrease in friction, 40.7% increase in skin slip, and 35.0% increase in skin feel. Long-term use of 2.0% **AcquaSeal® Algae** in a base lotion over four weeks showed a 26% increase in hydration, 44.7% increase in clarity, and 31.2% increase in firmness.

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