



## 24 Hour Moisturization Study

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**Tradename:** AcquaSeal® Algae

**Code:** 20852

**CAS #:** N/A

**Test Request Form #:** 3723

**Lot #:** NC170831-I

**Sponsor:** Active Concepts, LLC; 107 Technology Drive Lincolnton, NC 28092

**Study Director:** Maureen Danaher

**Principle Investigator:** Jennifer Goodman

**Test Performed:**

24 Hour Moisturization/Hydration Assay

### Introduction

An *in-vivo* study was conducted over a period of 24 hours to evaluate the moisturization benefits of **AcquaSeal® Algae**. Twenty (M/F) subjects between the ages of 23-45 participated in the study. Results indicate that this material is capable of significantly increasing moisturization on the skin after 24 hours than the control.

### Materials

A. Equipment: DermaLab Skin Combo (Hydration/ Moisture Pin Probe)

### Methods

The moisture module provides information about the skin's hydration by measuring the conducting properties of the upper skin layers when subjected to an alternating voltage. The method is referred to as a conductance measurement and the output is presented in the unit of uSiemens (uS). A moisture pin probe is the tool used to gather hydration values.

Twenty volunteers M/F between the ages of 23 and 45, known to be free of any skin pathologies participated in this study. A DermaLab Corneometer was used to measure the moisture levels on the subject's volar forearms. The Corneometer is an instrument that measures the amount of water within the skin. The presence of moisture in the skin improves conductance, therefore results in higher readings than dry skin. Hence, the higher the levels of moisture, the higher the readings yielded from the Corneometer. Baseline moisturization readings were taken when the study commenced (t=0).

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Following initial measurements, all subjects were asked to apply 2 mg of each test material on their volar forearms. Measurements were taken immediately after application of test materials and then again 24 hours after the application of the test materials. The experimental material consisted of 2.0% **AcquaSeal® Algae** in a base lotion.

For added perspective, measurements of an untreated test site and a site treated with a base lotion (Cetaphil Moisturizing for All Skin Types) were recorded.

### Results

**AcquaSeal® Algae** showed very high moisturizing capabilities at a 2.0% concentration. Please note each value is an average of three consecutive readings per test site.

Moisturization		T = 0	T= 24 Hours	Moisturization		T = 0	T= 24 Hours
Panelist 1	Experimental	126	97	Panelist 11	Experimental	81	92
	Base Lotion	126	105		Base Lotion	64	47
	Untreated	110	93		Untreated	60	77
Panelist 2	Experimental	116	119	Panelist 12	Experimental	79	89
	Base Lotion	67	100		Base Lotion	48	54
	Untreated	101	84		Untreated	97	91
Panelist 3	Experimental	113	91	Panelist 13	Experimental	94	98
	Base Lotion	93	87		Base Lotion	52	73
	Untreated	84	85		Untreated	48	110
Panelist 4	Experimental	76	106	Panelist 14	Experimental	97	103
	Base Lotion	45	48		Base Lotion	76	55
	Untreated	42	45		Untreated	68	97
Panelist 5	Experimental	71	68	Panelist 15	Experimental	140	152
	Base Lotion	101	45		Base Lotion	123	133
	Untreated	43	39		Untreated	111	126
Panelist 6	Experimental	102	109	Panelist 16	Experimental	105	110
	Base Lotion	54	58		Base Lotion	97	53
	Untreated	52	84		Untreated	84	81
Panelist 7	Experimental	115	110	Panelist 17	Experimental	101	105
	Base Lotion	116	108		Base Lotion	56	45
	Untreated	100	58		Untreated	50	78
Panelist 8	Experimental	106	114	Panelist 18	Experimental	98	105
	Base Lotion	65	79		Base Lotion	87	85
	Untreated	60	95		Untreated	84	99
Panelist 9	Experimental	85	95	Panelist 19	Experimental	103	105
	Base Lotion	75	86		Base Lotion	65	56
	Untreated	52	54		Untreated	102	98
Panelist 10	Experimental	91	101	Panelist 20	Experimental	106	112
	Base Lotion	64	66		Base Lotion	55	54
	Untreated	52	78		Untreated	65	110

Figure 1. Panelist moisturization readings.

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Averages	T = 0	T = 24 Hours
Experimental (2.0% AcquaSeal® Algae in Base Lotion)	50.05	50.5
Base Lotion	40.3	39.1
Untreated	34.8	35.75

Figure 2. Average moisturization readings.

Percent (%) Change	T = 0	T = 24 Hours
Base Lotion vs. Untreated	15.8	9.4
Experimental (2.0% AcquaSeal® Algae in Base Lotion) vs. Untreated	43.8	41.3
Experimental (2.0% AcquaSeal® Algae in Base Lotion) vs. Base Lotion	24.2	29.2

Figure 3. Percent change in moisturization.

## Comparative Moisturization

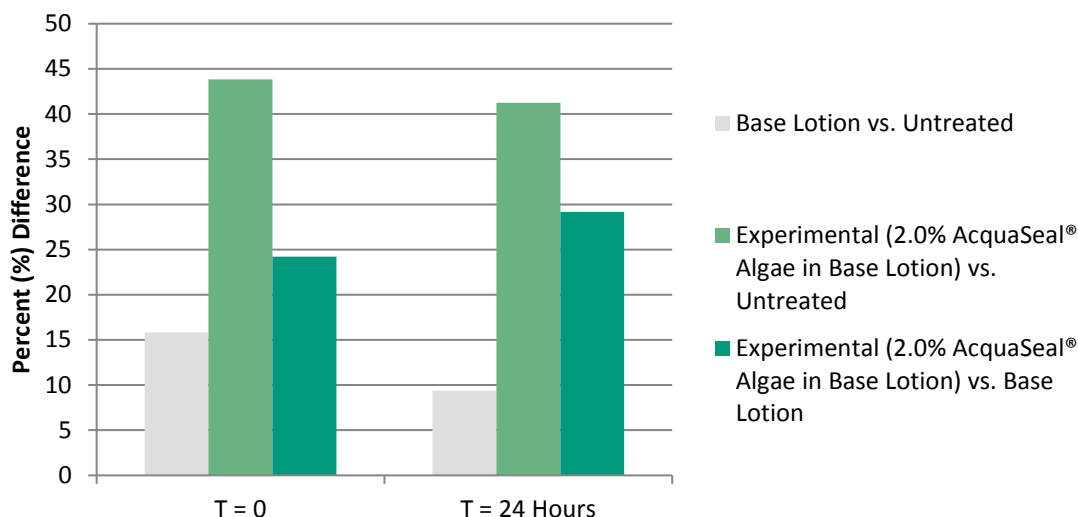


Figure 4. Comparative moisturization increase.

## Discussion

As evidenced in the 24 hour efficacy study of **AcquaSeal® Algae** on the skin, moisture levels were improved by 41.3% after 24 hours when compared to the untreated control. When compared to the base lotion, **AcquaSeal® Algae** improved moisturization by 29.2% after 24 hour. Results indicate that **AcquaSeal® Algae** is capable of increasing moisturization more effectively than the base lotion after 24 hours.