

## ABS Pomegranate Sterols (10247) Moisturization Study

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### Abstract

Observed changes in epidermal hydration are often quantified by measuring changes in electrical conductance of the stratum corneum via impedance measurements. A DPM 9003 NOVA Impedance meter was used to observe improvements in moisturization following treatment with ABS Pomegranate Sterols.

### **Materials and Methods**

A panel of 10 male and female subjects between the ages of 22 and 41 was assembled to determine the moisturizing improvements of ABS Pomegranate Sterols over the course of a 28-day study. Subjects participated in a 3 day dry-down phase before the on set of the study. 5% ABS Pomegranate Sterols (lot: SNO90622-1) was incorporated into a lotion which was used as the test vehicle, the same lotion without ABS Pomegranate Sterols was used as the control. Both the lotion containing ABS Pomegranate Sterols and unloaded vehicle were applied to randomized 2cm<sup>2</sup> patches on the subjects' left or right volar forearm twice daily for the duration of the study. On day 0, moisturization measurements were taken of the subjects forearm prior to applying either lotion. Repeat measurements were then taken weekly until the study was completed. Results for both the control and test treatment were compared to the initial impedance values that were taken on day 0.



#### Results

Figure 1. Mean impedance measurement results for lotion containing 5% ABS Pomegranate Sterols compared to control lotion and untreated site.

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Figure 2. Percent Improvement in hydration properties for ABS Pomegranate Sterols compared to control lotion and untreated site.

	ABS Pomegranate	
	Sterols	Untreated Site
Mean	125.5	99.3333
Variance	854.3605927	33.3821729
Observations	10	10
Pearson Correlation	0.29897169	
Hypothesized Mean Difference	0	
df	9	
t Stat	2.95003537	
P(T<=t) one-tail	0.008109999	
t Critical one-tail	1.833112923	
P(T<=t) two-tail	0.016219998	
t Critical two-tail	2.262157158	

Table 1. Statistical analysis comparing results for ABS Pomegranate Sterols to the results for the Untreated Site.

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	ABS Pomegranate	Control
	Sterols	Lotion
Mean	125.5	105.7333
Variance	854.3605927	36.36363468
Observations	10	10
Pearson Correlation	0.339430256	
Hypothesized Mean Difference	0	
df	9	
t Stat	2.251063735	
P(T<=t) one-tail	0.025457347	
t Critical one-tail	1.833112923	
P(T<=t) two-tail	0.050914695	
t Critical two-tail	2.262157158	

Table 2. Statistical analysis comparing results for ABS Pomegranate Sterols to results for the control lotion.

#### Discussion

The results indicate that ABS Pomegranate Sterols is an effective hydrating ingredient. After 21 days, 5% ABS Pomegranate Sterols was observed to improve hydration by 24% compared to baseline hydration values. The comparison to the control lotion showed that after 21 days, test sites treated with ABS Pomegranate Sterols had a 19% improvement in hydration. Data analysis confirms that the results are statistically significant. These findings suggest that ABS Pomegranate Sterols is useful in topical applications which are intended to moisturize the skin.

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