

10247.

ABS

Pomegranate Sterols

Aesthetic Modifier

Moisturization

Collagen Enhancement



VEGAN



SEPHORA
CLEAN



CREDO
CLEAN



GLOBALLY
COMPLIANT



COSMOS
COMPLIANT



ISO 16128



PRODUCT
PASSPORT



THE FEATURES.

For more than 8,000 years, pomegranates have been celebrated as a symbol of vitality and renewal, and today this super fruit continues to inspire modern beauty innovations. Rich in sterols derived from the seed oil, ABS Pomegranate Sterols provide a natural solution for enhancing barrier function, improving hydration, and supporting healthy skin and hair. Sustainably upcycled from unused pomegranate pericarp and seeds, this ingredient is created through a cradle-to-cradle process that minimizes waste while maximizing performance, making it an ideal choice for brands looking to deliver effective results with a story consumers recognize and trust.

INCI: Punica Granatum Sterols

TECHNICAL DATA SHEET.

ABS Pomegranate Sterols

THE STORY.

Pomegranates are more than just a super fruit, but a symbol of wellness and longevity with a history that stretches back over 8,000 years. Native to the region spanning Persia to Northern India and cultivated across the Mediterranean, this iconic fruit has long been valued for its rich nutrients and rejuvenating properties. Today, pomegranates are widely recognized in food, beverage, and personal care industries, making them an ingredient that consumers immediately associate with natural, botanical wellness.

In cosmetics, pomegranates offer a compelling combination of familiarity and efficacy. ABS Pomegranate Sterols harnesses the skin-loving benefits of this ancient fruit, providing a functional active that deeply moisturizes while supporting the skin's barrier function. Brands can leverage this ingredient as a modern, natural alternative to synthetic or animal-derived materials, such as petrolatum or lanolin, delivering hydration and moisturization.

ABS Pomegranate Sterols is a perfect example of how nature's design can provide a one-two punch: quenching the skin while reinforcing resilience.



THE SCIENCE.

ABS Pomegranate Sterols delivers dual-action benefits for skin and hair by enhancing hydration and stimulating collagen synthesis through well-documented biochemical mechanisms. Pomegranate sterols, extracted from the cold-pressed seeds of *Punica granatum*, are rich in bioactive lipids that function as effective emollients and occlusives. These sterols integrate into the stratum corneum, forming a semi-permeable barrier that reduces transepidermal water loss (TEWL) and enhances skin hydration. This mechanism is supported by studies demonstrating that pomegranate extracts can decrease TEWL and improve barrier function, thereby mitigating dryness and roughness associated with compromised skin integrity.¹ The lipid composition of pomegranate sterols includes essential fatty acids and sterols that mimic the skin's natural lipids, promoting moisture retention and reinforcing the skin's protective barrier. This natural composition allows the replacement of synthetic occlusives like petrolatum and lanolin, offering a more sustainable and skin-compatible alternative.²

Beyond hydration, pomegranate sterols contribute to skin elasticity by supporting collagen synthesis. Research indicates that pomegranate extracts can modulate signaling pathways involved in collagen production, enhancing collagen fiber density and improving skin structure.³ The antioxidant properties of pomegranate sterols also play a role in protecting collagen from oxidative damage. By neutralizing free radicals and reducing the activity of matrix metalloproteinases (NMPs), which degrade collagen, pomegranate sterols help maintain the integrity of the extracellular matrix, supporting skin firmness and reducing the appearance of fine lines and wrinkles.⁴

In summary, ABS Pomegranate Sterols offer a scientifically validated, natural alternative to synthetic and animal-derived ingredients, providing comprehensive benefits for skin and hair care formulations. Their unique combination of hydration enhancement and collagen-supporting properties makes them a valuable component in developing effective, sustainable personal care products.

THE TECHNICAL DETAILS.

INCI. Punica Granatum Sterols

CAS. 949109-75-5

EINECS. N/A

EUROPE. Compliant

USA. Compliant

CHINA. Compliant

Origin. Botanical

Natural Antimicrobial. None

Preservatives. None

Solvents Used. None

Appearance. White to Very Light Yellow Waxy Paste

THE FORMULATION TIPS.

pH Stability. 4 - 7

Temperature Stability. Product may change appearance if exposed to cold temperatures. If this happens, please gently warm to 45-50°C and mix until normal appearance is restored.

Use Level. 0.50 - 5.00%

Ionic State. Nonionic

Alcohol Compatibility. Incompatible with Alcohol

Solubility. Oil Soluble

Pro Tips. It is recommended that this product is added to the batch in cooldown to maintain appearance

THE BENEFITS OVERVIEW.

Immediate Moisture 24-hr Moisturization Assay
24-hr TEWL



Collagen Enhancement High Resolution Ultrasound
Skin Imaging Assay



Long-Term Moisture Moisturization Assay



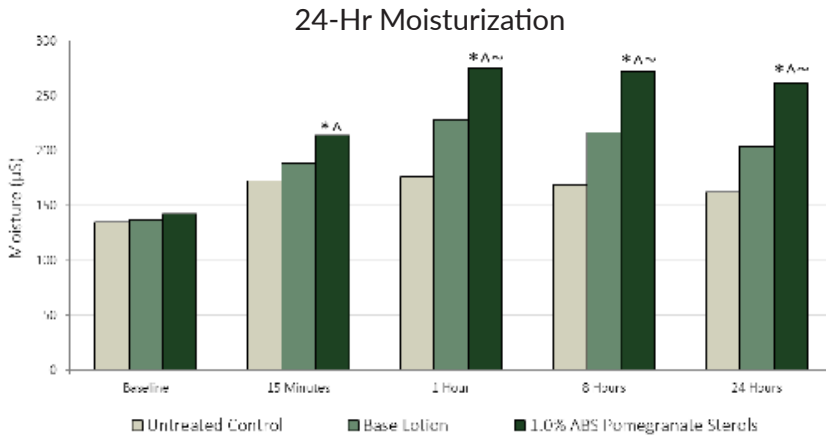
Stylist Approved Salon Half-Head Study



THE EFFICACY.

Immediate Moisture

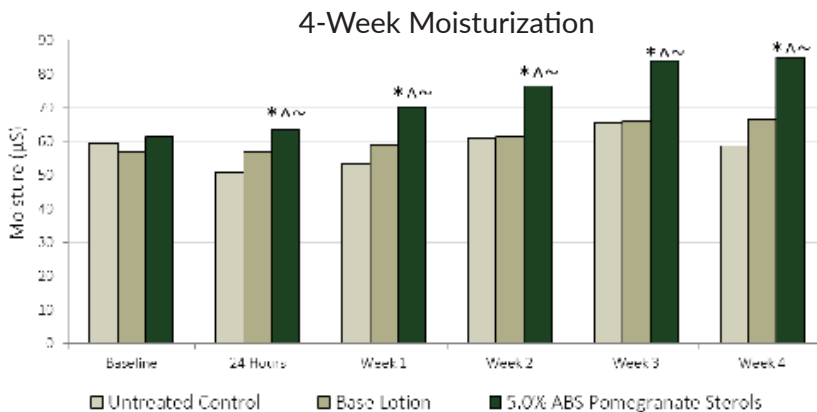
To evaluate the immediate hydrating potential of ABS Pomegranate Sterols, a 24-hr Moisturization Assay was conducted on 16 healthy volunteers ages 20-45. Using a conductance-based hydration probe, baseline and post-application moisture levels were measured at four time points over 24 hours on three randomized test sites on the forearm. Participants applied 0.2 g of each treatment once, with Cetaphil® Moisturizing Cream serving as the base lotion control, and no dry-down phase to better reflect real-world consumer use.



Increased skin moisturization by +94%

Long-Term Moisturization

To evaluate the long-term hydrating potential of ABS Pomegranate Sterols, a four-week Moisturization Assay was conducted on 10 healthy volunteers ages 22-41 with Fitzpatrick skin types I-IV. Participants applied 0.2 g of each test material twice daily to three randomized sites on the forearm, with Cetaphil® Moisturizing Cream serving as the base lotion control. Skin hydration was measured weekly using a conductance-based probe to evaluate changes over time.



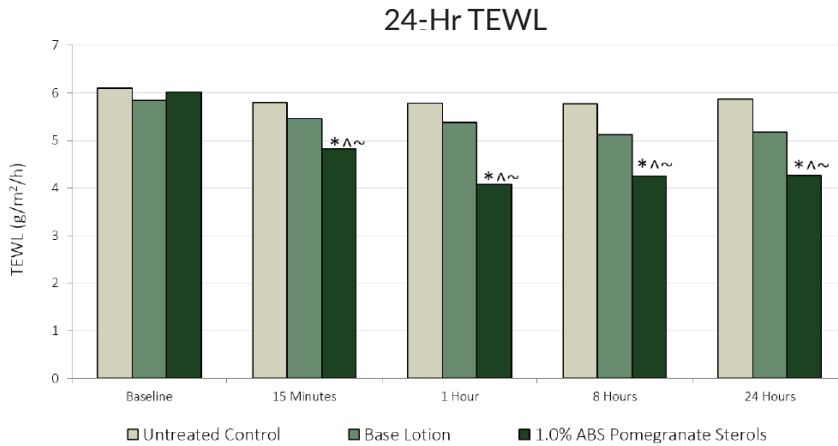
Augmented skin moisture by +38%

ABS Pomegranate Sterols

THE EFFICACY CONTINUED.

Moisture Retention

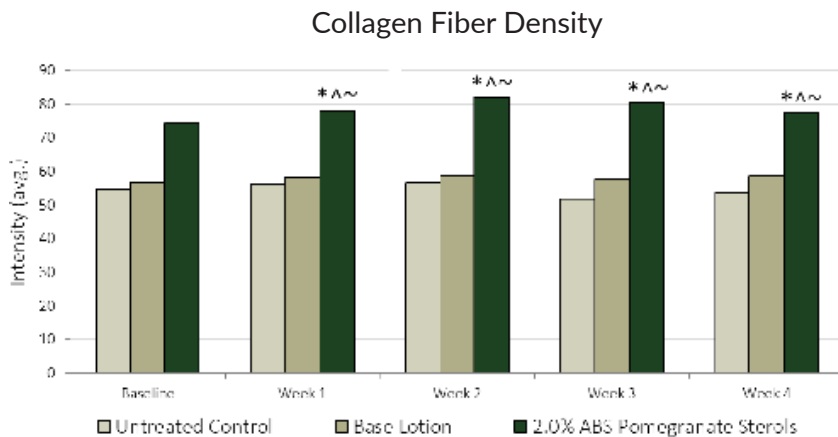
To evaluate the moisture retention capabilities of ABS Pomegranate Sterols, a 24-hour Transepidermal Water Loss (TEWL) Assay was conducted on 16 healthy volunteers ages 20-45. Participants applied 0.2 g of each test material once to three randomized forearm sites, with Cetaphil® Moisturizing Cream serving as the control. TEWL was measured at four time points using a humidity-based probe, allowing for assessment of immediate and short-term barrier support under real-world application conditions.



**Reduced TEWL
by -32% after
1 hour**

Collagen Enhancement

To evaluate the effect of ABS Pomegranate Sterols on collagen fiber density, a four-week High Resolution Ultrasound Skin Imaging Assay was conducted on 10 healthy individuals ages 23-45 with Fitzpatrick skin types I-III. Participants applied 0.2 g of each test material twice daily to three randomized forearm sites, with Cetaphil® Moisturizing Cream as the control. Ultrasound imaging was used weekly to assess changes in collagen density, providing insight into the ingredient's ability to support skin structure and a more youthful appearance.



**Increased
collagen fiber
density by +10%
after 2 weeks**

ABS Pomegranate Sterols

THE EFFICACY CONTINUED.

Stylist Approved

A Salon Half-Head Study was conducted to evaluate the perceived hair benefits of ABS Pomegranate Sterols in a shampoo and conditioner on wet and dry hair. These results indicate ABS Pomegranate Sterols improves the perceived benefits with wet and dry hair when added to shampoo and conditioner at recommended use levels. Collectively, ABS Pomegranate Sterols demonstrates visual and perceived hair characteristics which contribute to a healthier looking hair appearance.



Baseline

Base Shampoo and Base Conditioner

2.0% ABS Pomegranate Sterols

Improves dry combability by +21%



Baseline

Base Shampoo and Base Conditioner

2.0% ABS Pomegranate Sterols

Enhances smoothing by +27%

References:

1. Dimitrijevic J, Tomovic M, Bradic J, Petrovic A, Jakovljevic V, Andjic M, Živković J, Milošević SD, Simanic I, Dragicevic N. Punica granatum L. (Pomegranate) Extracts and Their Effects on Healthy and Diseased Skin. *Pharmaceutics*. 2024 Mar 26;16(4):458. doi: 10.3390/pharmaceutics16040458. PMID: 38675119; PMCID: PMC11054180.
2. Benedetti G, Zabini F, Tagliavento L, Meneguzzo F, Calderone V, Testai L. An Overview of the Health Benefits, Extraction Methods and Improving the Properties of Pomegranate. *Antioxidants (Basel)*. 2023 Jun 27;12(7):1351. doi: 10.3390/antiox12071351. PMID: 37507891; PMCID: PMC10376364.
3. Ren Q, Qu L, Yuan Y, Wang F. Natural Modulators of Key Signaling Pathways in Skin Inflammation. *Clin Cosmet Investig Dermatol*. 2024 Dec 18;17:2967-2988. doi: 10.2147/CCID.S502252. PMID: 39712942; PMCID: PMC11663375.
4. Tranchida N, Molinari F, Franco GA, Cordaro M, Di Paola R. Potential Role of Dietary Antioxidants During Skin Aging. *Food Sci Nutr*. 2025 May 1;13(5):e70231. doi: 10.1002/fsn3.70231. PMID: 40321615; PMCID: PMC12046069.

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