

SalSphere® Aqua Skin

A technology to naturally hydrate for healthy skin.

SalSphere® Aqua Skin is based on natural ingredients that protect the skin hydration and activate the water flow system for cells.

UNIQUE FEATURES

- UTILIZES THE POWER OF HUMECTANTS** and osmosis to hydrate the skin while absorbing water from the air and the deeper layer of the skin.
- UNIQUE TECHNOLOGY** that activates the aquaporin mechanism to channel water from the deeper layers of the skin.
- ENCAPSULATION AND TIME-RELEASE SYSTEM** enables a higher loading of glycerin without the tacky feel on skin.

Common treatments for dry skin include humectants such as glycerin, which attracts and retains moisture from the air through absorption. Major drawbacks of utilizing glycerin are the tacky feel it imparts on skin and the irritation it causes. SalSphere® technology resolves these challenges and combines ingredients to provide optimal hydration and nourishment for the skin.

HOW THE TECHNOLOGY HELPS YOU

SalSphere® Aqua Skin is a sub-micron sphere delivery system rating from 0.1-0.3 microns in diameter. It has a hydrophobic core infused with humectants and caffeine and a hydrophilic shell imparted with polysaccharides from natural seaweed (Figure 1).



FUNCTIONAL INGREDIENTS

Urea is an effective humectant that moisturizes and smooths the skin. It repairs the skin barrier function by regulating epidermal barrier structure.¹

Caffeine stimulates aquaporins, water channels in the skin cells of the deeper dermis.² Caffeine opens up these water channels to bring moisture into the skin cells.

Seaweed is packed with polysaccharides, vitamins, minerals, amino acids, and potent antioxidants. This natural skin aid also has anti-inflammatory properties.

The core of SalSphere® Aqua Skin slowly releases the humectants and caffeine to provide skin-friendly, long-lasting hydration (Figure 2).

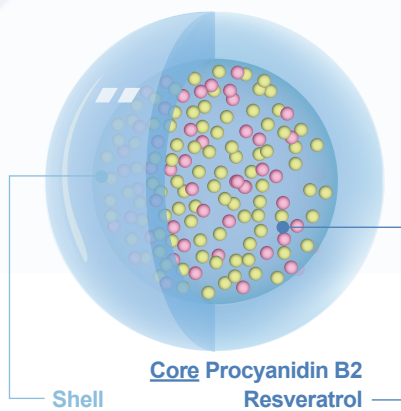


Figure 1: The structure of SS NAA in which the active ingredients are encapsulated in the core.



SalSphere® Aqua Skin raw



1 Cream



2 Lotion

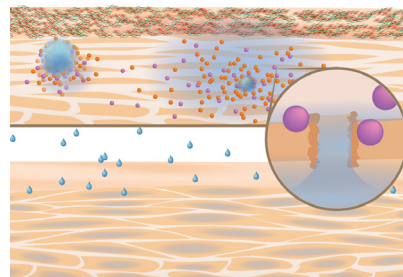


Figure 2: SalSphere® Aqua Skin breaks down within the skin.

SalSphere® Aqua Skin

Natural technology to reduce signs of aging.

LONG-LASTING MOISTURE ON SKIN

The level of moisturization imparted on skin by a lotion containing SalSphere® Aqua Skin was compared to a benchmark lotion (Figure 3). Measurements taken by a Corneometer over 24 hours. While the moisture level resulting from the benchmark product provides minimal moisturization at 6 hours, SalSphere® Aqua Skin is able to sustain the skin's moisture level at significant levels 24 hours after application.

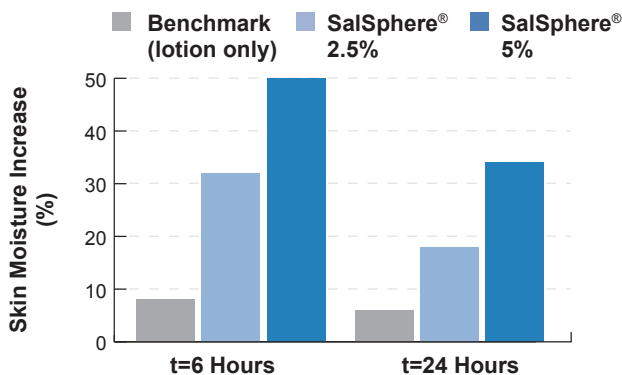


Figure 3: Comparison of skin moisture using benchmark lotion, SalSphere® Aqua Skin at 2.5%, and SalSphere® Aqua Skin at 5%.

NOTICEABLY SMOOTHER, SILKIER SKIN

In a consumer perception test, volunteers (n=12) applied three lotions: a lotion containing SalSphere® Aqua Skin, the same lotion base containing free, non-encapsulated seaweed, and just the lotion base itself. Each volunteer evaluated the aesthetics of the lotions on skin over a six hour period (Figure 4).

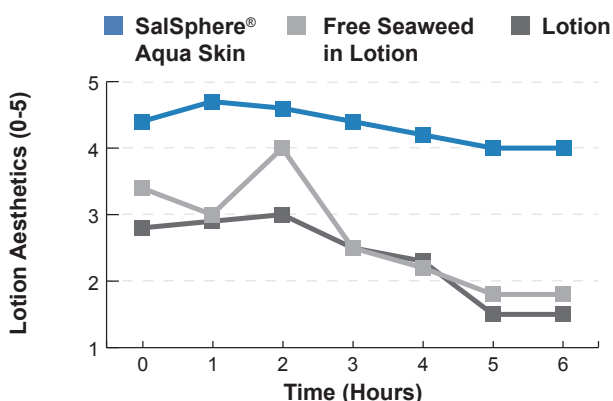


Figure 4: A consumer perception test evaluating the aesthetics of SalSphere® Aqua Skin in a lotion compared to free seaweed lotion and the lotion base alone.

FORMULATION

Ingredients	(W/W %)
SalSphere® Aqua Skin	5
SalScent®	2
Salvona Pre-Mix W #5018	30
DI Water	62
Preservative	1

References

- Susanne Grether-Beck, Ingo Felsner, Heidi Brenden, Zippora Kohne, Marc Majora, Alessandra Marini, Thomas Jaenicke, Marina Rodriguez-Martin, Carles Trullas, Melanie Hupe, Peter M. Elias, and Jean Krutmann. Urea uptake enhances barrier function and antimicrobial defense in humans by regulating epidermal gene expression. *Journal of Investigative Dermatology* Jun: 132 (6): 1561-1572.
- V. Rawlings, A. Davies, M. Carlomusto, S. Pillai, K. Zhang, R. Kosturko, P. Verdejo, C. Feinberg, L. Nguyen, P. Chandar. Effect of lactic acid isomers on keratinocyte ceramide synthesis, stratum corneum lipid levels and stratum corneum barrier function. *Archives of Dermatological Research*. 1996; 288 (7): 383-390.
- E.A. Jewell-Motz, Ph.X., J.R. Kaczvinsky, Ph.D., K.M. Lammers, M.S., S. Xie, Ph.D., R.M. Osbourne, Ph.D. Modulation of Aquaporins to Deliver Consumer Benefits: Applications for Skin Care. P&G Beauty.

TECHNICAL DATA

Appearance @ 20°C	Opaque paste
Applications	Leave-on skin care products such as creams and lotions
Color	White to off-white
Odor	Characteristic
pH (1% Solution)	6.5 ± 1.0
Shelf Life (months)	18
Usage Level (wt%)	2.5-10
Storage (°C)	Closed container at 12-32°