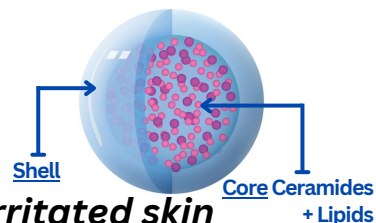


# SalSphere® Skin Repair

*Deep skin hydration treatment for severely dry and irritated skin*



## Dry and Inflamed Skin

Atopic dermatitis is a common skin disorder characterized by inflammation, redness, itching, and lesions that can make the skin crusty and scaly. Pharmaceutical and OTC treatments of atopic dermatitis generally include the use of corticosteroids. Continued use of such steroids, however, can often lead to undesirable side effects.

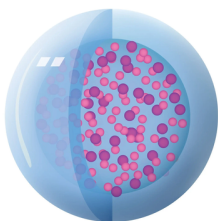
## How Can We Treat This?

Lipids such as ceramides, conjugated linoleic acid, and palmitic acid are non-steroidal solutions to repairing the skin barrier, thereby reducing water loss, restoring balance and natural moisturizing factors in the skin to alleviate the symptoms of atopic dermatitis.

Conjugated linoleic acid (CLA) is a key agent in skin repair because of its specific ability to decrease inflammatory cytokines within the stratum corneum. Unfortunately, CLA is prone to oxidation and readily loses its potency when used in an unencapsulated medium.

## Unique Natural Delivery

SalSphere® Skin Repair is a sub-micron technology that encapsulates special functional lipids that helps to rebuild cell membranes. It gives the skin vital nutrients to strengthen the bilayers and keep the epidermis and external barrier fully functioning, defend against bacteria and fungi, and reduce water loss.



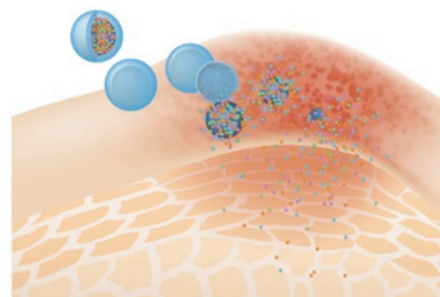
**Fig 2:** The sub-micron structure of SalSphere® Skin Repair, with the ceramides, palmitic acid, and CLA infused within the core.



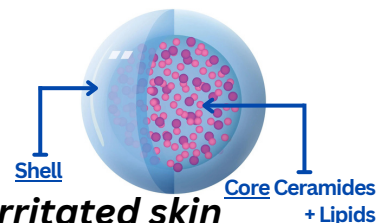
## Why Do You Need this Technology?

SalSphere® Skin Repair improves the barrier properties that help seal moisture in the skin. Effective and long-lasting hydration helps the skin repair itself, heals the area naturally, and is a natural alternative to steroid treatment for dermatitis.

Ceramides and palmitic acid are other functional ingredients found in high and effective levels within SalSphere® Skin Repair. The use of all of these actives promotes healing by rebuilding the skin, enhancing and restoring its natural barrier properties, thus regulating its ability to retain moisture.



**Fig 1:** A diagram illustrating the mechanism of release of SalSphere® Skin Repair at the sites of inflammation characteristic of atopic dermatitis. The timed release of actives derives from adhesion to the lipid domains on the skin, allowing the lipophilic core containing potent skin repairing actives to deliver its therapeutic benefit efficiently and efficaciously.



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## Technical Data Sheet

**Table 1:** Specifications and Characteristics of SalSphere® Skin Repair

Property	Specification
Appearance	Opaque Cream
Color	Off-White to Light Beige
Odor	Characteristic
pH (1% Soln)	5.0-7.0

### INCI - 8417-18

**Active ingredients:** Hydroxypropyl Bispalmitamide MEA, Isomerized Safflower Acid, Palmitic Acid

**Others:** Water, *Butyrospermum Parkii* (Shea) Butter, Polyglyceryl-2 Stearate, Glyceryl Stearate, Stearyl Alcohol, Propanediol, Pentylene Glycol, Phenethyl Alcohol

### How to Use

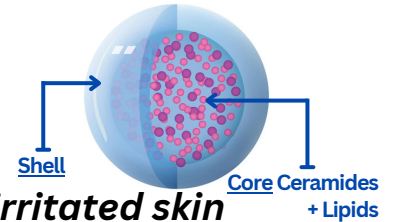
The product disperses quickly into emulsion-based formulas at room temperature. Recommended use level of SalSphere® Skin Repair is 2.5-10.0%.

**Table 2:** Repairing Cream Gel with SalSphere® Skin Repair

Skin Brightening Cream Gel	
INCI	%WT
Water	Q.S.
<i>Zea mays (corn) starch</i>	2.00
<i>Propanediol</i>	2.00
<i>Xanthan gum</i>	0.50
<i>Isostearyl Isostearate</i>	8.50
<i>Glyceryl Stearate</i>	3.50
<i>C14-22 Alcohols (and) C12-20 Alkyl Glucoside</i>	2.00
<i>Cetearyl Alcohol</i>	1.25
<i>Helianthus annuus (Sunflower) Seed Oil</i>	1.00
<i>Cocos Nucifera (Coconut) Oil</i>	1.00
<i>Butyrospermum Parkii (Shea) Butter</i>	0.50
<i>Squalane</i>	4.00
<i>C13-15 Alkane</i>	4.00
<b>SalSphere® Skin Repair 8417-18</b>	3.00
Preservative	Q.S.
<b>Total</b>	<b>100.00</b>

Regulatory compliance:



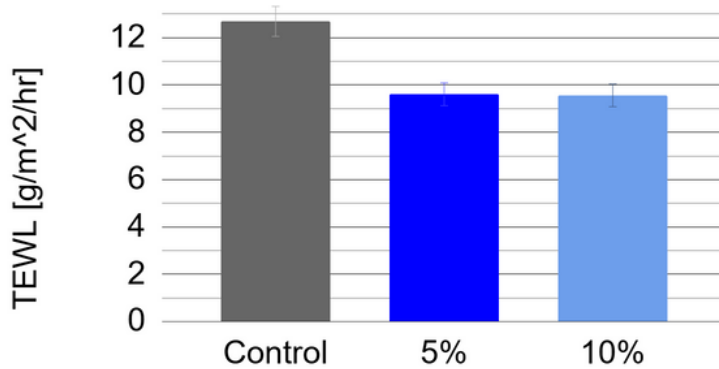


# SalSphere® Skin Repair

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## In Vivo Data

### TRANSEPIDERMAL WATER LOSS



**Figure 3:** Transepidermal water Loss of Control Cream versus cream enhanced with 5% and 10% SalSphere® Skin Repair

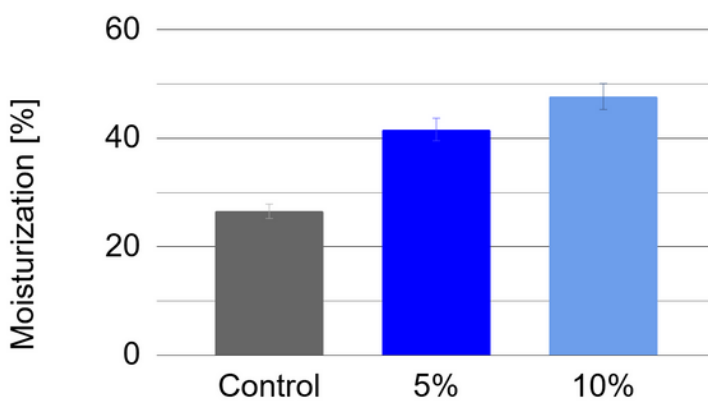
Transepidermal Water Loss (TEWL) measures the amount of water evaporating from the skin over a period of time. This measurement can be indicative of skin barrier health.

A healthier skin barrier should retain water, leading to lower TEWL. The opposite is true for an unhealthy skin barrier.

SalSphere® Skin Repair offers barrier repair to reduce TEWL after 8 hours, with a statistically significant decrease in TEWL when the technology is used in a cream base at 5% (p=0.05).

This measurement highlights the benefit of using SalSphere® Skin Repair for skin barrier repair.

### MOISTURIZATION



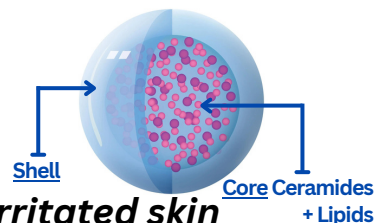
**Figure 4:** Moisturization of Control Cream versus cream enhanced with 5% and 10% SalSphere® Skin Repair

Moisturization of the skin is important for skin health and to reduce incidences of dry, irritated, or flaky skin.

Higher moisturization correlates to healthier skin.

SalSphere® Skin Repair offers a significant moisturization increase after 8 hours, with a statistically significant increase in moisturization at 5% and 10% use compared to the control, highlighting the efficacy of the technology (p=0.05).

There was also a statistically significant increase in mositurization between 5% and 10% technology, suggesting that adding more SalSphere® Skin Repair increases moisturization (p=0.05).



## SalSphere® Skin Repair

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### Substantiation

Ingredient	Description	Substantiation
Hydroxypropyl Bispalmitide MEA (Ceramide)	“Ceramides are like the glue that holds your skin cells together –like mortar is to bricks, with the bricks being your skin cells. Like we just learned above, they help keep your skin barrier balanced and intact— sealing moisture in and keeping harmful irritants out.”	<a href="https://www.cerave.com/skin-smarts/strength-of-ceramides/what-are-ceramides#:~:text=What%20Do%20Ceramides%20Do%20For,and%20keeping%20harmful%20irritants%20out.">https://www.cerave.com/skin-smarts/strength-of-ceramides/what-are-ceramides#:~:text=What%20Do%20Ceramides%20Do%20For,and%20keeping%20harmful%20irritants%20out.</a>
Isomerized Safflower Acid (CLA)	“As an omega-6 fatty acid, CLA plays a crucial role in skin health, helping to maintain the skin's barrier, preserving moisture, and protecting the skin from harmful environmental factors.”	<a href="https://nefertemnaturals.com/blogs/news/exploring-cla-conjugated-linoleic-acid-the-hidden-gem-in-skincare?srsltid=AfmBOopy9BOumpYYo7P9BbKxgaDxnTMs5ncgaK6oHw6Z4RkTcjl35Ec">https://nefertemnaturals.com/blogs/news/exploring-cla-conjugated-linoleic-acid-the-hidden-gem-in-skincare?srsltid=AfmBOopy9BOumpYYo7P9BbKxgaDxnTMs5ncgaK6oHw6Z4RkTcjl35Ec</a>
Palmitic Acid	“it builds up the lipid barrier of the skin and protects it from external factors like microbes and dirt. It reduces infections like eczema and acne.”	<a href="https://www.lesielle.com/us/palmitic-acid-in-skincare-what-is-inci-1207#:~:text=Along%20with%20other%20essential%20fatty,conditioners%2C%20creams%2C%20and%20lotions.">https://www.lesielle.com/us/palmitic-acid-in-skincare-what-is-inci-1207#:~:text=Along%20with%20other%20essential%20fatty,conditioners%2C%20creams%2C%20and%20lotions.</a>
SalSphere	Proprietary Encapsulation Mechanism	<a href="https://salvona.com/">https://salvona.com/</a>

Regulatory compliance:

