

SalSphere® Resveratrol (SS RE)

A natural solution for younger-looking skin, wrinkle reduction, skin lightening, and protection from environmental stress.

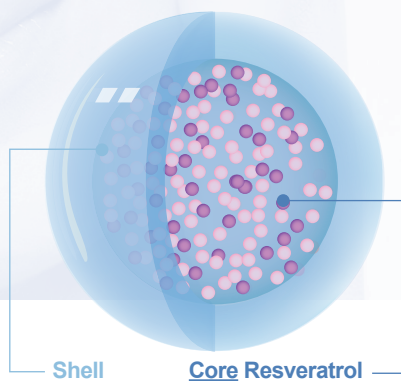


Figure 1: The sub-micron structure of SS RE.



Resveratrol, a polyphenol commonly found in the skin of grapes, is a powerful antioxidant that possesses multiple anti-aging benefits for the skin, protecting skin cells from the harmful effects of free radicals¹ and brightening the skin². It also has a powerful capacity to reduce signs of inflammation.

In many cases, the visible signs of skin aging, such as wrinkling, dryness, and discoloration, are caused by or exacerbated by UV exposure. Resveratrol has been shown to possess some protective shield.

The biggest challenges in formulating skin care products with resveratrol are its poor solubility and in-vivo bioavailability. Resveratrol is metabolized very quickly, usually within 30-60 minutes after administration. SS RE was designed to increase its stability, bioavailability, and overall efficacy.



SS RE raw



UNIQUE FEATURES

- 1 STABLE FORM OF POLYPHENOL**
Stabilizes resveratrol for topical application. Protected from oxidation and would not change color to dark brown.
- 2 ENHANCED BIOAVAILABILITY**
The carrier provides superior skin deposition, which extends the release and bioavailability at the target area.
- 3 FORMULATION-READY**
Allows formulation with ease; no need to pre-dissolve.

HOW THE TECHNOLOGY HELPS YOU

SS RE is composed of sub-micron spheres that encase resveratrol (Figure 1).

The encapsulation is a way to circumvent the issues with stability and bioavailability.

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ENHANCED STABILITY	Free resveratrol is not soluble in water at practical concentrations, and it turns dark brown in a formula. SalSphere® technology effectively shields resveratrol from oxidative forces. SS RE is formulation-ready and remains light in color (Figure 2).	
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Figure 2: Within 3 days at 42°C, the free resveratrol (A) discolors, while SS RE (B) remains stable.

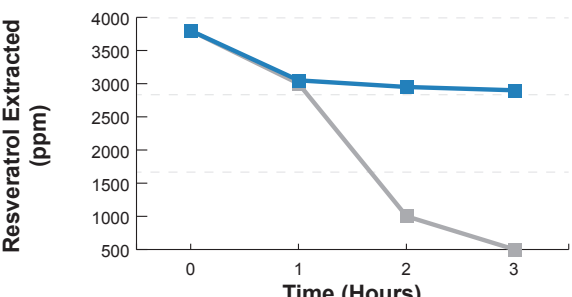
BIO-AVAILABILITY	SS RE demonstrates a greater residence time on skin when compared to the free, which enables resveratrol to be bioavailable and effective for longer (Figure 3).	
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Figure 3: SS RE maintains a higher level on skin vs. free. The lotion contained 1% resveratrol. Resveratrol content on human skin was analyzed via alcohol extraction, followed by HPLC.

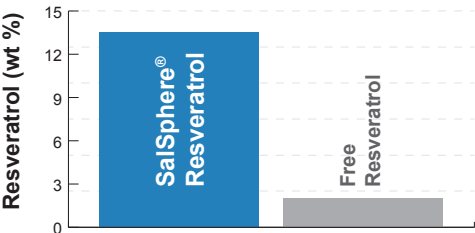
TARGETED DELIVERY	The SalSphere® structure allows for better adhesion to the skin when using a rinse-off product (Figure 4).	
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Figure 4: A rinse-off product containing SS RE deposited almost 7 times more resveratrol onto the skin than a product containing free resveratrol.

FORMULATION	SS RE should be added to a lotion at 25°C, at the final stage of the formulation. Best results on skin are achieved when combining with gentle exfoliation and hydration.	TECHNICAL DATA	Appearance @ 20°C	Opaque paste												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Ingredients</th> <th style="text-align: left;">(W/W %)</th> </tr> </thead> <tbody> <tr> <td>SalSphere® Resveratrol</td> <td>5</td> </tr> <tr> <td>SalSphere® Skin Smoothing</td> <td>5</td> </tr> <tr> <td>SalScent®</td> <td>2</td> </tr> <tr> <td>Salvona Pre-Mix CW #5018</td> <td>30</td> </tr> <tr> <td>DI Water</td> <td>57</td> </tr> <tr> <td>Preservative</td> <td>1</td> </tr> </tbody> </table>	Ingredients		(W/W %)	SalSphere® Resveratrol	5	SalSphere® Skin Smoothing	5	SalScent®	2	Salvona Pre-Mix CW #5018	30	DI Water	57	Preservative	1	Applications
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SalSphere® Skin Smoothing	5															
SalScent®	2															
Salvona Pre-Mix CW #5018	30															
DI Water	57															
Preservative	1															
		Color	Off-white to beige													
		Odor	Characteristic													
		pH (1 % solution)	7 ± 1													
		Shelf Life (months)	12													
		Usage Level (wt%)	5-10													
		Storage (°C)	Closed container at 12-25°													

*This technology is using natural-identical source of resveratrol. We also carry technology in natural source.

References

- Baxter RA. Anti-aging properties of resveratrol: review and report of a potent new antioxidant skin care formulation. J Cosmet Dermatol. 2008 Mar, 7 (1): 2-7.
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- Sogutlu G, Karabulut AB, Ara C, Cinpolat O, Isik B, Piskin T, Celik O. The effect of resveratrol on surgery induced peritoneal adhesions in an experimental model. Cell Biochem Funct. 2007 Mar-Apr; 25 (2): 217-20.