

SalSphere® Severe Acne Relief (SS SAR)

Targets the multiple underlying conditions effecting and associated with acne.

SS SAR is a technology for teenagers struggling with severe acne. Severe acne is characterized by multiple pimples and red, irritated skin. This underlying phenomenon is characterized by conditions, such as overproduction of sebum and inflammation. Traditional formulations typically don't address these multiple aspects and causes of acne, but offer Salicylic Acid or BPO-based formulations. SS SAR technology offers a comprehensive solution by encapsulating multiple ingredients to address the multiple causes of acne.

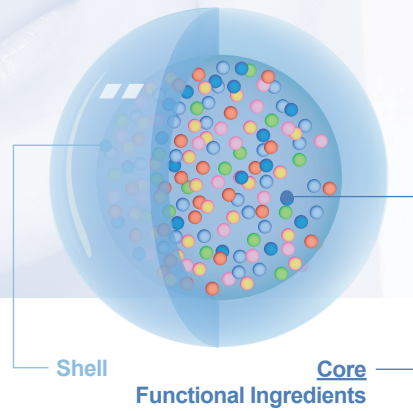


Figure 1: The sub-micron structure of SS SAR where the ingredients are infused within a core surrounded by adhesive shell for longer deposition on the skin.



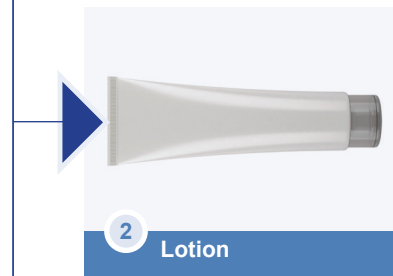
UNIQUE FEATURES

- 1 ALL-IN-ONE SOLUTION**
Single system that ultimately addresses multiple symptoms associated with acne. It delivers optimal exfoliation, controls sebum, reduces scars and blemishes, and moisturizes skin all at the same time.
- 2 EASY TO FORMULATE WITH**
One system that contains all the required ingredients in a clear water soluble system compatible with different formulation bases.
- 3 COST EFFECTIVE**
Reduces time spent on formulation, purchasing, and managing inventory of multiple ingredients.

FUNCTIONAL INGREDIENTS

SS SAR incorporates a complex of functional ingredients into a single system.

	Ingredient Group	Function
1	Salicylic acid	Exfoliation, anti-acne
2	Benzalkonium chloride, green tea extract	Anti-microbial
3	Shea butter, seaweed extract, palmitic acid	Skin hydration
4	Conjugated linoleic acid (CLA), green tea extract, chamomile extract	Reduce irritation
5	Palmitoyl tripeptide-5, ascorbic acid (Vitamin C)	Rejuvenation, antioxidant
6	Hydrolyzed corn starch, silica, clay, zinc PCA	Sebum control



SalSphere® Severe Acne Relief (SS SAR)

A technology that simultaneously targets the multiple underlying conditions associated with acne.

CONTROL SEBUM WITHOUT DRYING

SS SAR reduces sebum from oily skin without causing dryness. SS SAR reduced sebum nearly to the ideal level, compared to the free ingredients (Figure 2).

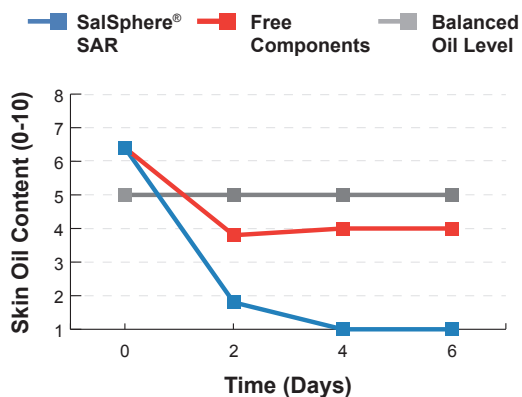


Figure 2: Oil level of SS SAR vs free components during *in-vivo* study (n=3). Levels taken using Hydr8 Digital Skin Analysis System (Epicureanist, LLC). SS SAR is targeted to the pimples.

In the same study, volunteers' skin was also measured for moisture content (Figure 3).

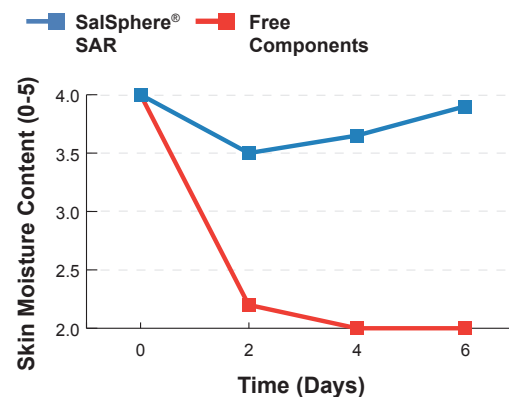
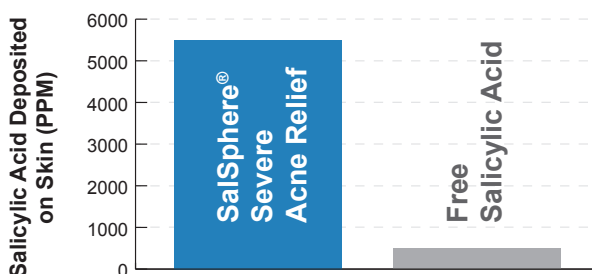


Figure 3: Moisture content of SS SAR vs free during *in-vivo* study (n=3). Levels taken using Hydr8 Digital Skin Analysis System (Epicureanist, LLC).

IMPROVED RETENTION ON SKIN

When used in a wash, SS SAR deposits almost 10 times more salicylic acid onto skin (Figure 4) compared to free Salicylic Acid. As the SalSphere dissolves in the pimple, the ingredients slowly release at the location, reducing side effects like dry skin.

Figure 4: Salicylic acid remaining on skin post-rinse after treatment with a 2% SA (wt%) facewash formulation during *in-vivo* study (n=3).



FORMULATION

SS SAR can be added at any stage of the formulation process at temperature below 40°C. For formulas using carbomers as thickeners, SS SAR must be added before the neutralization of the carbomer. Suggested carbomer concentrations are from 0.5-1.5% W/W to provide a serum to a gel structure respectively. pH of final formula has to be minimum of 4.5.

Anti-Blemish Gel

Ingredients	(W/W %)
Sodium Carbomer	1.0
DI Water	96.8
SalSphere® Severe Acne Relief	1.6
Preservative	0.6

TECHNICAL DATA

Appearance @ 20°C	Translucent liquid
Applications	Topical skin care and acne treatment suitable for cleansers, masks, lotions, creams, and gels
Color	Light to dark amber
Odor	Characteristic
pH (1% Solution)	2-4
Shelf Life (months)	36
Usage Level (wt%)	Cosmetic: Up to 1.67 OTC: 1.67-6.67 Rx: Over 6.67
Storage (°C)	Closed container at 12-32°