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SELECTING ALOE VERA FOR COSMETICS/COSMECEUTICALS AND SHAMPOOS

AT A GLANCE



- Select Aloe vera that still has its biological properties.
- Avoid Aloe Vera that has been heat dried, which denatures the plant properties.
- It is very important to select Aloe vera that has a molecular size under 500 Daltons.
- Select Aloe vera that is made for the cosmetic/shampoo industries, not food and dietary supplement industries. They have different requirements and goals.
- Aloe vera that has published polysaccharide concentrations, the main indicator of strength.

Nowadays, the health benefits provided by *Aloe vera* are vastly known, being present in diverse treatment plans that go from purely cosmetic and beauty procedures to more clinically based ones.

NOT ALL ALOE IS SUITED FOR SKINCARE

Through scientific research, numerous studies have demonstrated the positive effects this plant has, especially for the skin wellbeing. Thanks to its increased hydrating, moisturizing, and elastin and collagen-producing properties, *Aloe vera* is capable of helping solve different skin conditions; including facial wrinkles, aging spots, increased pigmentation, dry skin, among others. However, the correct *Aloe vera* must be used to produce the desired results. ([1](#), [2](#), [3](#)).

In addition, its anti-inflammatory and immunomodulatory effects help the body defend itself from bacterial, fungal, and viral activity, increasing the afterward self-healing process evidenced in burns and wounds ([2](#), [4](#), [5](#), [6](#)).

To benefit from all of the *Aloe vera* health benefits, use an extract that has retained its bioactive properties, and is less than 500 Daltons in size.



Following established guidelines.

The International Aloe Science Council (IASC) has established specific standards of product strength, considering the minimum required for an *Aloe vera* juice to be 1% total Aloe solids in *Aloe vera* purified leaf juice and 0.5% total Aloe solids for inner leaf juice ingredients ([7](#)).

Following IASC guidelines and regulations, use products that guarantees no less than 10% of Aloe strength by dry weight for inner leaf and no less than 8% by dry weight for purified leaf.

Polysaccharides: the measure of greatness.

Experts on the matter assure that the above-mentioned beneficial properties are directly linked with the *Aloe vera* polysaccharides type, composition, and concentration. Biochemically, these elements are long-chained sugars that can be found in all plant. However, *Aloe vera* contains a special type of polysaccharide called Acemannan, which is in charge of providing many of the Aloe positive health effects.



Today, for purely commercial reasons, many of the products commercialized use denatured and diluted mixes of *Aloe vera*. It is understandable why commercial aloe is diluted, or has larger molecules, is because it's primary and largest industries are the food, juice and, dietary supplements industries. All of which have different needs than the cosmetic industry.

Denaturation (heat or alcohol) affects the quality of the final product, reducing both the polysaccharides concentration to the minimum accepted levels and, cosmeceutical benefits ([7](#)).

Molecular weight matters.

Another scientific fact considers the molecular weight of these polysaccharides as an indicator of good quality. Polysaccharides come in a variety of lengths or molecular weights, measured in Kilo Daltons (kDa).

Most of the *Aloe vera* providers, or manufacturers, include only the heavier (>2000 kDa) polysaccharides, trying to mimic natural or native Aloe by providing more of the largest molecules. The thought being, bigger is better. However, this cannot be further from the truth.

It has been scientifically demonstrated that the polysaccharides with most bioactive benefits are within the medium (50 - 400 kDa) spectrum. (10).

ALOE VERA 10X-D

The diagram illustrates the skin's barrier function. On the left, large green spheres representing high-molecular-weight polysaccharides are shown sitting on the surface of the skin, unable to penetrate. On the right, small green spheres representing medium-molecular-weight polysaccharides are shown penetrating through the skin layers. The skin layers are labeled: Stratum corneum, Epidermis, Dermis, and Fibroblasts. Within the Dermis, collagen fibers and elastin fibers are also labeled. The text 'Small molecules penetrate skin' is positioned above the right diagram, and 'Large molecules sit on skin' is above the left diagram.

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Most aloe

Most aloe is over 2000 daltons,
too large to be absorbed by our skin

Aloe vera 10x-D

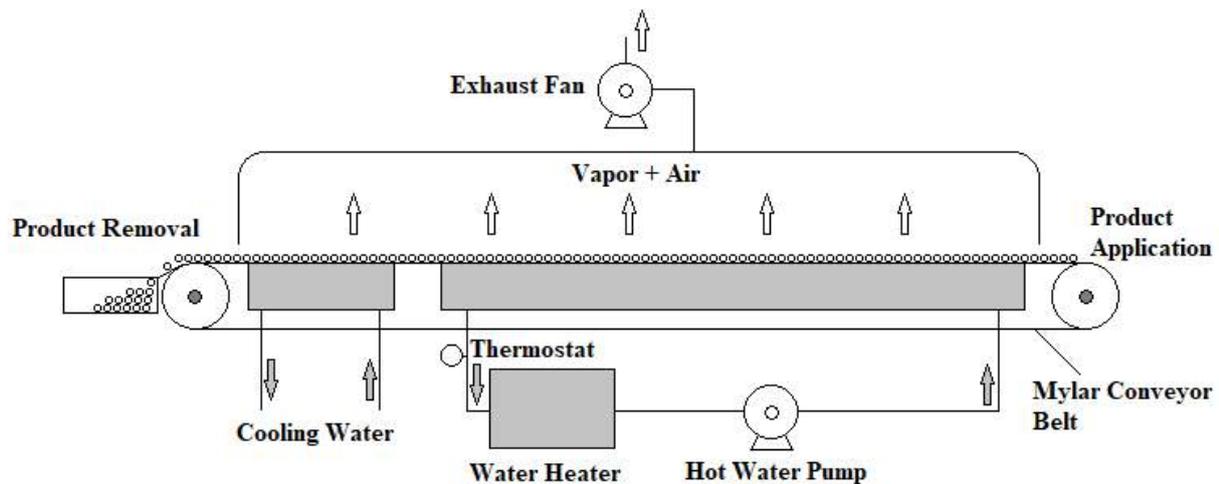
Aloe vera 10X-D 50-400 daltons,
the perfect size molecules or skincare
molecules

ANTI-AGING EXTRACTS

500 DALTON RULE

“The 500 Dalton rule for the skin penetration of chemical compounds and drugs”

“Human skin has unique properties of which functioning as a physicochemical barrier is one of the most apparent. The human integument is able to resist the penetration of many molecules. However, especially smaller molecules can surpass transcutaneously. They are able to go by the corneal layer, which is thought to form the main deterrent... the molecular weight (MW) of a compound must be under 500 Dalton to allow skin absorption. Larger molecules cannot pass the corneal layer... all known topical drugs used in transdermal drug-delivery systems are under 500 Dalton” (10).



Most beneficial dehydration technology used.

In order to provide a good quality *Aloe vera*, appropriate processing techniques must be employed. The best skincare Aloe uses what is called “refractance window dehydration” technology capable of removing moisture from *Aloe vera* without removing any of its desirable properties (8).

By using the special properties of water, this technology utilizes infrared thermal energy, which gently removes only the water in the selected plant, while self-regulating the intensity of the energy provided as the plant dries. By evaporating only the water, this process leaves behind all of the necessary nutrients for making a high-quality product at a lower temperature and price. This is a critical step that few manufacturers follow. Non-denatured Aloe vera retains its bioactive properties that are highly beneficial to skincare products.

Patented MAP process.

Considering these statements, our product not only offers the retention of good quality *Aloe vera* polysaccharides without any denature or dilution whatsoever, but also enhances its performance by 300% through the unique and patented MAP (Modified Aloe Polysaccharide) process.

Using this and the above-mentioned processing technique, we at Anti-Aging Extracts assure you a final *Aloe vera* extract that contains all the natural, most bioactive polysaccharides of the plant, without leaving any beneficial element out of the mix. And if this would not be enough, we increase its potency by 3 times.

Including our vastly superior *Aloe vera* extract will surely increase the efficiency and potency of your finished product, standing out from the crowd of mediocre products.

Besides, unlike others, our production process assures you a safe and standardized product that complies with IASC. (7, 9).

Do not take *Aloe vera* for granted. Choose good quality instead. Choose Anti-Aging Extracts *Aloe vera*.

CONCLUSION

Our Aloe Vera;

- Is made for cosmeceuticals
- Has the correct molecular size for cosmeceuticals
- Has the highest levels of polysaccharides in the industry
- The patented dehydration process preserves the botanical properties that are so highly beneficial to your products

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