

Aloe Vera Research Paper

Aloe Vera is a great hydrating ingredient that has been used for centuries. It is most famously known for its soothing effects on sun-burnt skin. With the observed effects that Aloe Vera has, it has become a very popular ingredient for cosmetic companies to incorporate into their skincare products for the soothing and moisturizing benefit. For Three Ships, there are multiple products that feature Aloe Vera. The Purify Gel Cleanser is a great gentle cleanser that does not leave your skin stripped of its natural moisture. The Aloe Vera used by Three Ships is sustainably sourced and has no traces of hydroquinone or anthraquinone.

APPEARS INS



ALOE VERA HAS BEEN THE CORNERSTONE OF NATURAL SKINCARE INGREDIENTS

There are hundreds of species of Aloe Vera in the world; however, the most commonly used species, and the one that Three Ships uses, is Aloe Barbadosensis. The Aloe Vera plant has triangular, fleshy leaves with serrated edges, yellow tubular flowers, and fruits that contain numerous seeds. Aloe Vera consists mainly of water with some active constituents like glucomannans, amino acids, lipids, sterols and vitamins. The inner fillet of the Aloe Vera is what Three Ships uses in the Purify Cleanser. Aloe Vera has also been known to have yellow sap which is removed for cosmetic, health, and safety regulations. The main component of the Aloe Vera used in the skincare industry is the fresh inner fillet gel of the Aloe Vera leaf which is further processed to get rid of latex residue, anthraquinone and hydroquinone compounds.



Traditionally, Aloe Vera is first organically grown and matured before the leaves are plucked and harvested. Then the leaves are hand filleted, discarding the green fibrous skin of the Aloe Vera that holds the latex residue. Once the inner fillet is isolated, it is then macerated into a pulp and concentrated to specification to create Aloe Vera concentrate.

The Aloe Vera concentrate is then pasteurized at a high enough temperature to remove any unwanted bacteria, but low enough to not denature any of the desired compounds. In order to mix well in formulation, the concentrate is spray-dried on organic rice powder, where it can be easily incorporated into product formulations. The exact process of extraction method for the Aloe Vera powder that Three Ships sources is proprietary information.

ALOE VERA REDUCES INFLAMMATION, HYDRATE & PLUMP SKIN

Aloe Vera contains vitamins A (beta-carotene) and E, which are antioxidants. Antioxidants work to neutralize oxidative stress. Oxidative stress can cause free radical damage which may result in hyperpigmentation and fine lines.

Aloe Vera also contains minerals and enzymes. The enzymes have been shown to help to reduce excessive inflammation when applied to the skin topically, while also helping in the breakdown of sugar molecules and fats. The minerals help support the enzymes, as they are essential for the proper functioning of enzyme systems in different metabolic pathways. The sugar molecules in Aloe Vera are found in the mucilage layer, which is part of the inner fillet gel of the aloe plant.

These molecules are known to act as humectants. Humectants are molecules that like to attract water molecules. This helps to hydrate and plump the skin. There are also several sugar molecules in Aloe that have anti-inflammatory properties.

SCIENTIFIC STUDY

Studies on the Moisturizing and Anti-Aging Effect of Aloe

One study looked into the effects of the moisturizing and anti-aging effects of Aloe Vera and focused on the role of mucopolysaccharides, a sugar molecule that helps bind moisture into the skin. This sugar is derived from the inner fillet gel of the Aloe Vera leaf, specifically the mucilage layer. All participants in the study were factory assembly-line workers with repeated superficial skin trauma.

The participants wore a glove coated with Aloe Vera made from the mucilage layer in one hand and one without in the other hand for 30 days. The researchers saw noticeable improvements after 3.5 days, and it was observed that the Aloe Vera gel gloves improved the skin integrity, decreasing the appearance of fine lines and erythema (redness).

Overall, Aloe Vera is a soothing, moisturizing agent. There are many benefits to the inner fillet gel of the Aloe Vera plant. The inner gel is made up of 99% water and 1% of bioactive ingredients that have positive effects when applied topically on the skin. Aloe Vera can be found in multiple Three Ships products, like the Purify Gel Cleanser. The Aloe Vera used in Three Ships' products is in a concentrated powder form, which is made from the pulp of the inner fillet gel that has been concentrated, pasteurized, and then spray dried onto rice powder. This form of Aloe Vera makes it easier to incorporate into skincare products.