

## Aloe vera

Class : Angiosperms

**Order** : Asparagales

Family : Asphodelaceae

Genus : Aloe

Species : A. vera

## **Photochemical Constituents'**



| Name of the<br>Active component | Active components present in Aloe vera with properties                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vitamins                        | Vitamin A (beta-carotene), C and E, - antioxidants. It also contains vitamin B1, B2, B6 & B12, folic acid, and choline.  *Antioxidants protect the body by neutralizing free radicals.                                                                                                                                                                                                                                                                                                                     |
| Enzymes                         | Aliiase, alkaline phosphatase, amylase, oxidase, bradykinase, carboxypeptidase, catalase, cellulase, lipase, cylooxygenase, and peroxidase.  *Bradykinase helps to reduce excessive inflammation when applied to the skin topically, while the other enzymes help in the breakdown of sugars, proteins and fats.                                                                                                                                                                                           |
| Minerals                        | Calcium, chromium, copper, selenium, magnesium, manganese, potassium, sodium and zinc. *Some of the minerals are essential for the proper functioning of various enzyme systems in different metabolic pathways and few acts as antioxidants.                                                                                                                                                                                                                                                              |
| Sugars                          | Monosaccharides (glucose and fructose) and polysaccharides (glucomannans/polymannose).  *The most prominent monosaccharide is mannose-6-phosphate, and the most common polysaccharides are called glucomannans [beta-(1,4)-acetylated mannan].  *Acemannan, a prominent glucomannan has also been found. Recently, a glycoprotein with anti allergic properties, called alprogen and novel anti-inflammatory compound, C-glucosyl chromone, has been isolated from <i>Aloe vera</i> gel <sup>15,16</sup> . |
| Organic acids                   | Sorbate, salicylic acid, uric acid *salicylic acid possesses anti-inflammatory and antibacterial properties.                                                                                                                                                                                                                                                                                                                                                                                               |
| Anthraquinones                  | Aloin, barbaloin, isobarbaloin, anthranol, aloetic acid, aloe-emodin, ester of cinnamic acid, resistannol, chrysophannic acid and emodin,  * Acts as laxatives.  *Aloin and emodin act as analgesics, antibacterials and antivirals.                                                                                                                                                                                                                                                                       |

## **Medicinal and Therapeutic uses:**

The Aloe vera plant has been used in folk medicine for more than 2000 years, and it remains an important component of traditional medicine in many contemporary cultures, such as China, India, the Caribbean, and Japan.

Anti-inflammatory and Anti Ulcer action

Anti bacterial and Anti fungal activities

Antitumor activity

Moisturizing and anti-aging effect

Antiseptic effect

Healing properties