

SPROUT 

MEDICINAL PLANTS

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the frame, creating a modern, layered effect. The rest of the background is plain white.

Herbalism

The term herbal medicine is commonplace nowadays and has a general image of being an organic and healthy way of treating diseases or to promote good health.

Herbal medicine in a nutshell is the ability to synthesize a wide variety of chemical compounds that are used to perform important biological functions, and to defend against attack from predators such as insects, fungi and herbivorous mammals.

Many of these phytochemicals have beneficial effects on long-term health when consumed by humans, and can be used to effectively treat human diseases

These are a few examples of some you
can get in Brunei

What is Aloe Vera?



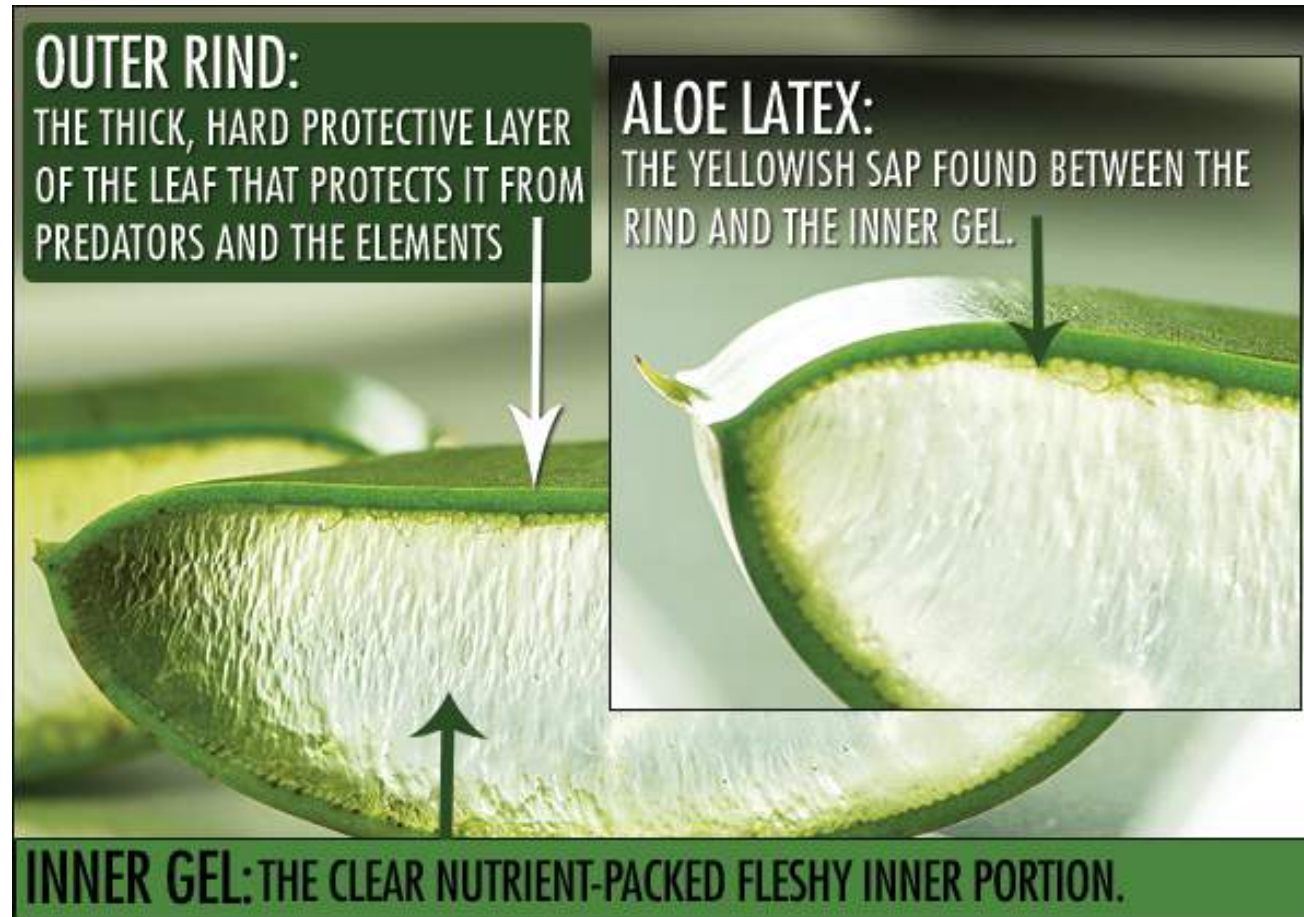
Aloe Vera Uses

- ▶ It's used in traditional Indian medicine for constipation, skin diseases, worm infestation and infections.
- ▶ In Chinese medicine, it's often recommended in the treatment of fungal diseases.
- ▶ Western world, it has found widespread use in the cosmetic, pharmaceutical and food industries.
- ▶ In fact, the manufacturing of aloe vera is one of the largest botanical industries in the world.

Extracting the gel inside the aloe vera is an easy way to utilize its medicinal properties



But Also Aloe Vera Latex is useful

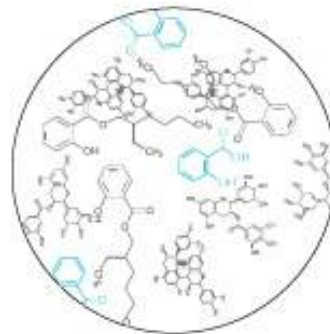
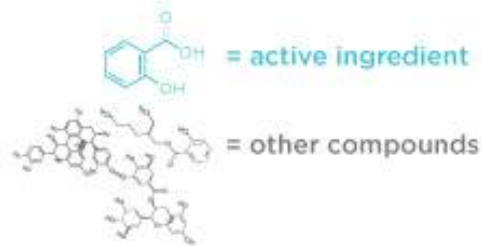


Active components

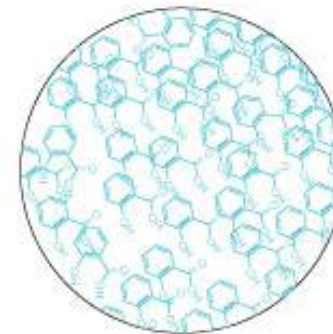
In phytopharmaceutical or herbal medicine, the active ingredient is the component in the plant that is biologically active ingredient that is doing the health effects. Using the plant in itself usually works but when its concentrated in manufacturing it would have stronger effects.

FutureDerm[®] ACTIVE INGREDIENTS

While some whole plants, like aloe vera, have varied soothing properties for the skin when applied as a whole, the best treatments for the skin are typically active ingredients, not whole plant extracts.



PLANT EXTRACT
(diluted active ingredient)



ACTIVE INGREDIENT
(much more effective)

Aloe Vera Active Components

- ▶ **Vitamins:** It contains vitamins A (beta-carotene), C and E, which are antioxidants. It also contains vitamin B12, folic acid, and choline. Antioxidant neutralizes free radicals.
- ▶ **Enzymes:** It contains 8 enzymes: amylase, alkaline phosphatase, amylase, bradykinase, carboxypeptidase, catalase, cellulase, lipase, and peroxidase. Bradykinase helps to reduce excessive inflammation when applied to the skin topically, while others help in the breakdown of sugars and fats.
- ▶ **Minerals:** It provides calcium, chromium, copper, selenium, magnesium, manganese, potassium, sodium and zinc. They are essential for the proper functioning of various enzyme systems in different metabolic pathways and few are antioxidants.
- ▶ **Sugars:** It provides monosaccharides (glucose and fructose) and polysaccharides: (glucomannans/polymannose). These are derived from the mucilage layer of the plant and are known as mucopolysaccharides. 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 antiallergic properties, called alprogen and novel anti-inflammatory compound, C-glucosyl chromone, has been isolated from Aloe vera gel.

Anthraquinones: It provides 12 anthraquinones, which are phenolic compounds traditionally known as laxatives. Aloin and emodin act as analgesics, antibacterials and antivirals.

Fatty acids: It provides 4 plant steroids; cholesterol, campesterol, β -sitosterol and lupeol. All these have anti-inflammatory action and lupeol also possesses antiseptic and analgesic properties.

Hormones: Auxins and gibberellins that help in wound healing and have anti-inflammatory action.

Others: It provides 20 of the 22 human required *amino acids* and 7 of the 8 essential amino acids. It also contains salicylic acid that possesses anti-inflammatory and antibacterial properties. Lignin, an inert substance, when included in topical preparations, enhances penetrative effect of the other ingredients into the skin. Saponins that are the soapy substances form about 3% of the gel and have cleansing and antiseptic properties.

Cutting Aloe Vera and Application



Melastoma Malabathricum Kuduk-Kuduk



How do we use this plant?

Grinding the leaves



Melastoma Malabathricum - Uses

- ▶ Treatment of stomach aches, digestion problems and diarrhea.
- ▶ The ground up leaves are applied to compress cuts, wounds and swellings.
- ▶ Strong decoction (alot) of leaves is applied to painful joints
- ▶ Sores caused by stinging insect hairs to extraction of the hairs

ACTIVITY TIME!