

Ethnomedicinal Plants Alovera and Its Medicinal Importance

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ABSTRACT

Aloevera (Aloe barbadensis miller.) It belongs to Asphodelaceae (Liliaceae) family, it is a shrub it is a succulent plant species of the genus Aloe. Alovera is native to south africa, but it is grown all over the world. It grows mainly in the dry region of Africa, Asia America and Europe. In India it is cultivated all over, it is commonly found in Gujarat Rajasthan Mumbai and South India. it is mainly grows in tropical and subtropical areas.

It is used to treat various diseases due to its medicinal properties. The alovera has been used for more than 2000 years.

The earliest documentation of alovera mentioned the whole plants for their advantageous medicinal properties.

The alovera plants like cactus plant species, it is a large evergreen shrub in Asphodelaceae (Liliaceae) family. it is perennial plant that grows 3 feet tall in tubular shape, and it can grow upto 20 inches long and 5 inches wide, with various tiny teeth.

Alovera flowers is yellowish which carries lots of seeds. Alovera plants can mature in 3 to 4 years. More than 400 types of alovera plants found with variety of height and texture, some examples like tiger aloe, lace Aloe, blue aloe etc.

Whole plant is used to treat various ailments, like constipation, piles, gastric, heart burn and all stomach related problem. It is also used for sun burn, skin diseases, and beauty care, it's some benefits are inflammatory, infections, and healing properties.

The efficacy of aloe vera gel to treat burn wounds, genital herpes, and seborrheic dermatitis have been shown in clinical trials other hand, internal consumptions for the treatment of stomach related problems. Several clinical trials are being conducted to further evaluate the use of aloe vera gel for a variety of disorders, as well as to further confirm traditional uses of the plant extract.

Alovera is used to make lots of medicinal products, as well as Beauty products, like alovera gel alovera hair sirum, alovera face cream, alovera juice, alovera soap, alovera shampoo, alovera burning cream alovera sunscreen, and many more.

The present study of alovera plants is complete about its cultivation, structure, distribution and medicinal uses.

1. Introduction

The name aloe vera was derived from the Arabic word "Alloeh", meaning a "shining bitter substance" and vera came from the Latin word "vera", meaning "true". For years, aloe vera has been widely used in several cultures – Egypt, Greece, Mexico, India, China, and Japan. The plant belongs to the Asphodelaceae (Liliaceae) family that thrives in dry regions in Asia, Europe, America, and Africa. Alovera plants is a stemless or very short stemmed plant growing to 60–100 cm (24–39 in) tall. The leaves are thick and fleshy, green to grey-green, with some varieties showing white flecks on their upper and lower stem surfaces. The leaves are about 2 inches wide and grow upto 20 inches long and have small soft gray teeth along the edges. Alovera flowers is yellowish in the shape of a tube and it can be 3 feet tall it holds aloe seeds.

It is cultivated for agricultural and medicinal uses the species is also used for beauty care and grows easily indoors as potted plants. In pots, the species requires well-drained, sandy potting soil and bright, sunny conditions.

Aloe vera is a succulent plant species of the genus Aloe. An evergreen perennial it originates from the Arabian Peninsula but grows wild in tropical, semi tropical and arid

climate around the world. Alovera is cultivated all kind of soils, but well drained soils with organic matter is most suitable. It is found to grow in hot humid and high rainfall conditions, it grows well in bright sunlight. Aloe vera is commonly known as Barbados or Curacao.

Now a days alovera is a frequently used in the field of medical science and cosmetology. It is used in alternative medicine with more than 400 various plant species of aloe vera, it has been popular in Indian medicine for the treatment of many conditions for a long history.

Alovera contains many vitamins, minerals, and other active ingredients that give it many health benefits.

Each aloe vera leaf has three main layers. There is an inner gel containing 99% water, and the remaining part made of amino acids, glucomannans, sterols, lipids, and vitamins. The middle layer is made of latex, which is a yellow sap containing glycosides and anthraquinones. Lastly, the outer layer is composed of 15 to 20 cells dubbed as rind. It works by protecting the inner part of the leaf and at the same time, synthesizes proteins and carbohydrate. plant has gained an immense popularity for its beauty care skin care health benefits and medicinal properties.

It act as a natural fighter against all classes of infections, it is an important effective antioxidant helps in treating all digestions related problem like, constipation, piles, heartburn, gastric diabetes, reumatism, pain, asthma,cancer, AIDS. It also acts as a laxative beauty enhancer and produced that effect on lowering blood sugar level in diabetics and maintain the blood sugar.

Alovera has been used extensively by human kind to treat various ailments. Many people keep alovera plant in their kitchen for medicinal use. It is used to make a sweet dish called petha.

2. Medicinal Properties

Antibacterial, anti-inflammatory, Antifungal, antiseptic, stomachic, appetizer, carminative.it is used for stomach cramps, gastric, heart burn, constipation and piles. It had been sometimes used for healing wounds as an antibacterial. Alovera juice is used to take with awla juice for strong digestive system.

1. Alovera has antioxidant properties and reduces blood glucose levels. Thus it is useful for diabetics.
2. Alovera reduces total cholesterol levels. Thus it is useful for heart disease patients.
3. Alovera reduces blood pressure.
4. Alovera is also used to prepare juice, It helps to cooling internal organs and control pimples boils and blister, it is also help to blackish hair.
5. It has been used for gastric disorders, constipation, piles, common headaches, heart burn, and stress.
6. It is used as mouth wash for reducing tooth ache
7. Alovera gel is used to treat skin related problem it is also used as a beauty products.
8. It has immanue boost up properties.

3. Health benefits of alovera in our daily life

Healing properties:- The alovera is popular medicinal plants that has many medicinal properties. The leaves juice is a stomach tonic. The latex of the plants is used to make many beauty products as well as skin care products. It's flavoured is



Alovera fig1.

Alovera contain 75 potentially active constituents vitamins enzymes minerals, sugars, lignin, saponins, salicylic acids and amino acids. Vitamins: It contains vitamins A (beta-carotene),

also used to prepare various types of hair oil , shampoo,and soap.

Constipation:- alovera juice can be made with leaves, this juice can act as laxative and is suggested by doctors to used for treating some of the symptoms such as constipation and diarrhea.

Heart burn:- alovera juice and alovera pills is used to treat heart burn if a person suffers from heart burn who used alovera juice in his /her daily routine, then heart burn ailments completely cured.

Gastric:- alovera juice may be safe and effective treatment for gastroenterology reflux. It is called Ramban stomach tonic in local language. It is also used as a immanue booster.

Skin irritations:- alovera gel has inflammatory and antibacterial properties that provides a natural and healthy glow to skin, it is used to treat rashes, skin itching, pimples, boils and blister, alovera extract is also used to cure cuts and wounds.

Mouth infections:- alovera extract is also ingredients in toothpaste because of anti-inflammatory and antibacterial properties.

Eye disorders:- alovera extract is also used to make eyedrops it is very effective, it's cure night blindness,and other blindness problem.

Skin disorders:- alovera extract is used to make alovera gel and type of onitment it's hepls to cure pimples, boils, suntan etc. It is also used in the treatment of burning skin and many other skin disorders. Alovera gel can make with the help of alovera pulp it is very easy to make and used. Pure gel is get from plants directly and ready to use also available in the market.

4. Botanical Description Of Alovera.

A.Aloe vera is a stemless or very short-stemmed plant growing to 60–100 cm (24–39 in) tall, spreading by offsets.The leaves are thick and fleshy, green to grey-green, with some varieties showing white flecks on their upper and lower surfaces. margin of the leaf is serrated and has small white teeth.



Alovera fig.2

C and E, which are antioxidants. It also contains vitamin B12, folic acid, and choline.

The flowers are produced in summer on a spike up to 90 cm (35 in) tall, each flower being pendulous, with a yellow tubular corolla 2–3 cm (0.8–1.2 in) long. Like other Aloe species, Aloe vera forms arbuscular mycorrhiza, a symbiosis that allows the plant better access to mineral nutrients in soil.

Aloe vera leaves contain phytochemicals under study for possible bioactivity, such as acetylated mannans, polymannans, anthraquinone C-glycosides, anthrones, and other anthraquinones, such as emodin and various lectins.

5. Other species of Alovera

- Aloe barbadensis Mill.
- Aloe indica Royle
- Aloe lanzae Tod.
- Aloe maculata Forssk. (illegitimate)
- Aloe perfoliata var. vera L.
- Aloe rubescens DC.
- Aloe variegata Forssk. (illegitimate)
- Alovera Mill. (illegitimate)
- Aloe vera var. lanzae Baker
- Aloe vera var. littoralis J.Koenig ex Baker
- Aloe vulgaris Lam.
- Aloe barbadensis var. chinensis Haw.
- Aloe chinensis (Haw.) Baker
- Aloe elongata Murray
- Aloe flava Pers.
- Aloe vera var. chinensis (Haw.) A. Berger

It is known as Aloevera in English, ghritkumari in Hindi. Other names of alovera is gwarpati, korphad, bhamas, chalkumari, kalabanda, kathalayi, kattar vasha.



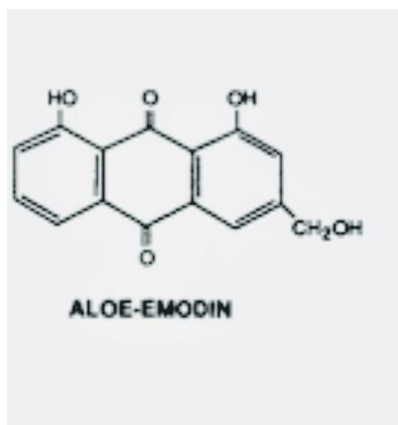
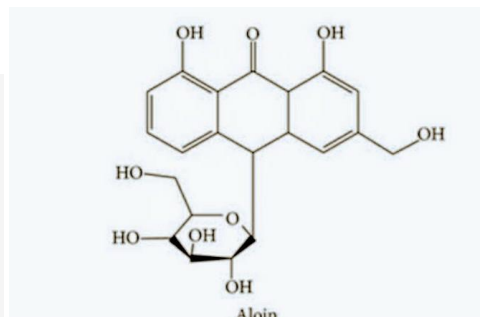
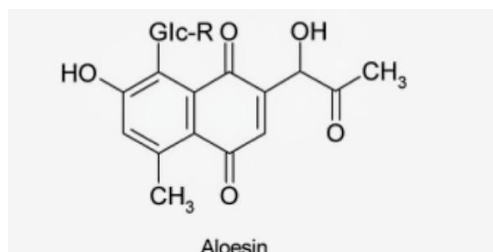
Alovera (Aloe barbadensis miller). Fig 3

Aloe Vera is a popular house plant has a long history as a multi-purpose folk remedy, commonly known as Aloe Vera. The plant can be snapped off and placed on cuts and burns for immediate relief. Aloe vera is a clump, forming succulent that has fleshy gray green leaves.

Parts used:- Pulp, and juice of leaves.

Taste:- Alovera taste is may be in the name of the plant itself. The word "Aloe" is derived from the Arabic term "alloe", meaning "shining bitter substance". The word "Vera" is derived from the word Latin for "truth", veritas. Alovera is slightly bitter in taste.

Chemical constituents:- Carbohydrates, Protein, abesin, Mallic, acid, Tannins amino acids, Anthraquinones, saponins, steroids, salicylic acid, chromosome, vitamins, vitamins A, vitamins B12, vitamins E.



Aloesin

Molecular formula C₁₉H₂₂O₉

Molecular Weight: 394.4 g/mol.

Aloesin is a chromone derivative isolated from aloe vera. It has many biological effects, such as wound and burn healing properties, and antioxidant, free radical scavenging, anti-

inflammatory, and immunomodulatory effects. Aloesin has been shown to be a potent and selective inhibitor of tyrosinase. It exhibited direct inhibitory effects on melanogenesis. Aloesin treatment showed pigmentation suppression in a dose-dependent manner. Thus, aloesin may be used as an agent that inhibits melanin formation induced by UV radiation. Aloesin is thought to be one of the active ingredients in regards to the anti-diabetic activity of Aloe. Aloesin exerts its anticancer effect through the MAPK signaling pathway. It is a novel therapeutic drug for ovarian cancer treatment.

Aloin.

Molecular formula C₂₁H₂₂O₉

Molecular weight 418.39 g/mol

Aloin comes from a thin layer of yellow sap that separates the outer rind from the inner gel-like portion of the leaf and acts as the laxative component. It is used as a stimulant laxative, treat to constipation by inducing bowel movements.

Aloe- emodin

Molecular formula C₁₅H₁₀O₅

Molecular weight 256.25g/mol.

Aloe emodin is found in the gel. It is an anthraquinone derivative present in the roots or rhizomes of rhubarb. Emodin has various medical applications, including anti-cancer, anti-oxidation, anti-inflammation or allergy, antibacterial, anti-diabetes, and antiviral activities.

Actions:-Depurative, Carminative, Digestive, Tonic, Antiinflatmic, Diuretic, Purgative, antiseptic, Antipyretic, Antifungal, Antigastric.

Used for : - Piles, Constipation, Stomachache, skin burn, Pimples and acne.

6. Components with its properties.

Alovera contains more than 70 potentially active constituents: vitamins, enzymes, minerals, sugar, amino acid, salicylic acid amino acid, saponins.

- **Vitamins:-** alovera also contains essential vitamins like vitamin A (beta carotene), vitamin E, vitamin B₁₂, folic acid.
- **Enzymes:-** alovera contains 8 types of enzymes i.e. alliasse, alkaline phosphatase, amylase, bradykinase, carboxy-peptidase, 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:-** alovera contains 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:-** alovera contains monosaccharides (glucose and fructose) and polysaccharides: (glucomannans / polymannose). These are derived from the mucilage layer of the plant and are known as mucopolysaccharides. Recently, a glycoprotein with anti-allergic properties, called alprogen and novel anti-inflammatory compound, C-glucosyl chromone, has been isolated from Aloe vera.

- **Anthraquinones:-** It provides 12 anthraquinones, which are phenolic compounds traditionally known as laxatives. Aloin and emodin act as analgesics, anti-bacterials and anti-virals.
- **Proteins:-** it also contains salicylic acid that poses anti-inflammatory and antibacterial properties lignin, an inert substance, when included in topical preparations, enhances penetrative effect of the other ingredients into skin saponins that are the soapy substance from about 3% of the gel and cleansing and antiseptic properties.
- **Fatty acids:-** It provides 4 plant steroids; cholesterol, campesterol, β -sisosterol and lupeol. All these have anti-inflammatory action and lupeol also possesses antiseptic and analgesic properties.
- **Hormones:-** alovera contains Auxins and gibberellins that help in wound healing and have anti-inflammatory action.
- **Carbohydrates:-** it also contains glycoprotein with antiallergic properties, called alprogen and novel anti-inflammatory compounds.
- **Others:-** alovera contains 20 out of the 22 human required amino acids and 7 out 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.

7. Alovera used in therapy.

The useful parts of aloe are the gel and latex. The gel is obtained from the cells in the center of the leaf; and the latex is obtained from the cells just beneath the leaf skin. Aloe gel might cause changes in the skin that might help diseases like psoriasis. It has antioxidant and antibacterial properties. Aloe vera is known for its antibacterial, antiviral, and antiseptic properties. This is part of why it may help heal wounds and treat skin problems.

We are listed common used of Alovera.

1. Alovera used to improve digestive health.
2. it promotes oral health.
3. Alovera is used to treat anal fissure.
4. it is used to clear pimples and acne.
5. It is used to relieve sunburn.
6. Alovera helps to heal wounds.
7. It is also used to treat constipations and piles.
8. It contains hair nourishment properties like minerals, and different type of vitamins that helps to treat hair fall problem.
9. Alovera is used as Ramban ausadhi for heart burn, gastric, acidity, and other stomach related ailments.

Side effects

Alovera is unsafe in some conditions, some people allergic to alovera extract that cause redness and rashes on skin. It is best to apply it to a small area first to test for possible allergic reaction.

Alovera extract is unsafe for pregnant women it cause cramps, and some time its effect on nourishing infant.

It is also prevent to use for a new born baby, and a breast feeding mother.

Thus alovera extract used some time bad effects that's why its required an advance clinical studies to proved good effect as well as side effects.

8. Conclusions

Alovera is mainly used as a medicinal extract, it is used for the treatment of various ailments and diseases,as well as Beauty products.

This plant is seems to be able to speed wound healing by improving blood circulation through the area, and preventing cell death around a wound. Alovera is certainly a very good source of natural medicinal properties.

It also appears that aloe gel has properties that are harmful to certain types of bacteria and fungi. Aloe latex contains chemicals that work as a laxative. Alovera fight more than 80 diseases, it's solved more than 150 beauty problems, alovera pulp is used in different kind of home remedies.

Alovera is a shrubs that human ailments as well as animals.it is used to boost up immune system.

Various products made by alovera extract, one of the most popular products is alovera gel, it is all in one type lotions it is used as mostouriser, it is used as primer it also used to treat acne pimples.alovera gel is beneficial for hair growth.

Present study about alovera is smoothly shows how much important plant is for human being it contains lots of ethnomedicinal components which very important for healthy lifestyle.

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