ISSN: 2320-831

International Journal of Pharmacy and Analytical Research (IJPAR)

IJPAR /Vol. 14 / Issue 4 / Oct - Dec -2025

www.ijpar.com

DOI : https://doi.org/10.61096/ijpar.v14.iss4.2025.1280-1287

Research

A REVIEW ON ALOE VERA AS A HEALING AGENT

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Published on: 18.12 2025

Published by:
Futuristic Publications

Abstract

"To Prepare and Evaluate Aloe vera Crack cream" was the primary goal of the project. Method: After the plant was verified, the dried juice or latex extracted by cutting the bases of the Aloe barbadense Miller leaves was collected. The leaves were then cleaned, shade-dried, and used for more research. A mechanical grinder was used to ground the dried juice sample to extract the liquid. The antibacterial activity of extracts with varying concentrations of Aloe barbadense Miller was examined against Staphylococcus aureus. Aloe barbadense Miller's leaf extract shown antibacterial efficacy against Staphylococcus aureus and other microorganisms. We draw the conclusion that Aloe barbadense Miller extract can cure bacterial infections and is effective against them.

Keywords: skin, health and beauty, aloe vera.

INTRODUCTION:

One of the earliest known therapeutic plants, aloe vera (Aloe barbadense Miller) has been prized for its restorative, calming, and revitalizing qualities throughout history. Aloe gel has been used for thousands of years, making it a plant with both cultural and therapeutic value. In ancient Egypt (c. 1500 BC), aloe vera was referred to as the "Plant of Immortality." Aloe is used to cure burns, wounds, and skin conditions, according to the Ebers Papyrus, an Egyptian medical document. Aloe is said to have been a part of the everyday beauty routines of Queens Cleopatra and Nefertiti. Aloe was used as a wound-healing ointment and for skin conditions in Mesopotamia and Sumer. In Greece and Rome, aloe was hailed by doctors such as Dioscorides and Pliny the Elder as a potent remedy for skin diseases, wounds, and ulcers. One of the earliest known therapeutic plants, aloe vera (Aloe barbadense Miller) has been prized for its restorative, calming, and revitalizing qualities throughout history. Aloe

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HISTORY:

For thousands of years, aloe vera has been used medicinally in Greece, Egypt, India, Mexico, Japan, and China, among other countries. One Cleopatra and Nefertiti, two Egyptian monarchs, utilized it as part of their daily beauty regimens. It was used to cure soldiers' wounds by Christopher Columbus and Alexander the Great. John Goodyew's translation of Dioscorides' medical work De Materia Medica in A.D. 1655 was the first-time aloe vera was mentioned in English. 2. Aloe vera was used as a laxative in the United States by the early 1800s, but its successful treatment of severe and chronic radiation dermatitis in the middle of the 1930s marked a sea change. With a history spanning more than 6,000 years, aloe vera has one of the most impressive and lengthy histories in natural medicine.

Aloe vera was known as the "plant of immortality" by the ancient Egyptians, who lived from approximately 4000 to 1500 BCE. As early as 2100 BCE, it was engraved on stone tablets. Aloe was employed extensively in embalming procedures and as a skin care remedy by queens such as Cleopatra and Nefertiti, who were rumoured to use its gel on a regular basis to keep their skin looking young and radiant.
Mesopotamia and Sumerian Era (c. 2000 BCE): Mesopotamian clay tablets document the therapeutic use of aloe, emphasizing its use for infections, skin ailments, and stomach issues.
Ancient India and Ayurveda: In early Ayurvedic writings, aloe vera was referred to as "Kumari" (meaning "young girl") in India, signifying its restorative properties for women's health and appearance. It was recommended to treat burns, heal wounds, improve digestion, and balance the body's doshas.

Aloe was commended in Chinese herbal therapy for its ability to treat digestive problems and fungal illnesses circa 200 BCE. They referred to it as the "elixir of harmony."
Aloe's health advantages were recorded in the medical writings of physicians like Dioscorides and Pliny the Elder throughout the Greek and Roman Civilization (c. 200–100 BCE). It was used as a laxative and to treat mouth sores, stomach problems, and wounds.
During the Middle Ages (5th–15th Century), aloe became a mainstay in monastery medicine after traveling to Europe via Arab traders. It was frequently used as part of early cosmetic preparations and to treat wounds and skin irritations.

Modern Era (16th–20th Century): Aloe vera made its way to the Americas because of the growth of international trade. It was brought to South and Central America by Spanish missionaries, and local populations used it as part of their traditional medicine. Aloe gel was widely utilized in Western medicine by the 19th century to treat stomach issues and skin burns. Aloe vera properties Aloe vera Family Properties: The Liliaceae Aloe vera, Aloe Barbados, Aloe indica, and Aloe barbadense are the botanical names. Popular names include Barbados aloe, Curacao aloe, Indian aloe, Kumari, Ghirita, Garapata, Lu hui, and aloe vera.

Described: Growing to a height of 80–100 cm, this stemless or extremely short-stemmed plant spreads via offsets and shoots of roots. The oblong, thick, meaty, green to grey-green leaves have a serrated surface. margin. Each flower is pendulous and grows on a spike up to 90 cm tall, with a Corolla, yellow, tubular, 2-3 cm long. There is a gel in the tissue in the middle of the aloe leaf that produces aloe vera gel or aloe gel. Among the many substances found in aloe vera are the following. Acids that are antibacterial, anti-helminthic (anti-parasitic worms), promote skin tissue damage recovery, and ulcers. Amino Acids - required for repair and growth. Aloe vera contains twenty of the twenty-two.

essential amino acids. Enzymes are catalysts that make it possible for chemical processes to occur. The anti-tumour actions of lectin. The main structural elements of living cells are lipids. There are notable amounts of calcium, magnesium, potassium, and sodium, among other minerals. Salicylates and lactates have analgesic effects. Phenolics: moderate antimicrobials and antiseptics. Polysaccharides are long-chain carbohydrates that are broken down by enzymes into smaller ones. Nitrogen and urea have a pain-killing effect. Eight of the thirteen recognized vitamins are found in vitamins.

HEALTH BENEFITS :

Health Benefits of Aloe Vera

1. Throughout history, aloe vera has been utilized to promote the healthy operation of the digestive system, mostly because to its calming, cleaning, and tissue-maintenance qualities.
2. It is generally known that aloe vera gel helps with digestion, blood and lymphatic circulation, and the function of the kidneys, liver, and gall bladder.
3. At least three anti-inflammatory fatty acids included in aloe vera support the healthy operation of the colon, small intestines, and stomach.
4. It naturally alkalizes digestive secretions and guards against excessive acidity, which is a common cause of digestive disorders.
5. concentrates of aloe vera juice are rich in vital enzymes that promote liver and digestive processes.
6. The synergistic effect of Aloe vera juice used in combination with a few other herbs does wonders as a liver-cleansing agent.
7. Saponins, which is provided by nature to cleanse and flush out waste products and toxins.
8. More medicinal uses of Aloe vera are described in the following sections. Aloe vera could be used to reduce the burning sensation
   vera supplements also contain a rare natural ingredient called
   of burns and blisters.
9. Applying the pure gel of Aloe vera would quell the sting of herpes. Juice or gel of Aloe vera is used to reduce warts, psoriasis and eczema.
10. Today, skin doctors prescribe skin gels and creams made from Aloe era. The fresh juice of Aloe vera is used to cure and heal rashes, vaginal infections, foot sores and fungus attack of various types.
11. It is one of the home remedies for these problems. Aloe vera is used in hair loss treatment.
12. The enzyme content of Aloe vera prevents hair loss by protecting the scalp against any diseases.
13. Aloe vera also helps in the reduction of dandruff. You can mix the juice of Aloe vera with.
14. Before shampooing your hair, massage your scalp with coconut milk and wheat germ oil.
15. It consistently promotes hair growth. Research on aloe's potential medical use is still ongoing.
16. Vera in the prevention and treatment of cancer and AIDS. There are numerous indicators in the treatment of cancer.

17. that medications containing aloe vera aid in WBC activation and the promotion of the coconut milk and wheat germ oil and massage your scalp before shampooing your hair.
18. It consistently promotes hair growth. Research on aloe's potential medical use is still ongoing.
19. Vera in the management and recovery of cancer and AIDS. There are numerous indicators in the treatment of cancer.
20. those medications containing aloe vera aid in WBC activation and in fostering.
21. Non-cancerous cell growth. When individuals with HIV eat aloe vera on a regular basis.
22. aids in boosting the body's immunity. Aloe vera juice combined with milk.
23. taken to treat kidney infections. Aloe vera is a common component of yogurt in Japan. In India, continuously it helps in hair re-growth. There is on-going research in the medical use of Aloe.
24. vera in the prevention and treatment of cancer and AIDS. There are numerous indications that medications containing aloe vera aid in the activation of white blood cells.
25. the stimulation of non-cancerous cell development in the treatment of cancer. Those who are HIV positive might boost their immunity by taking regular dosages of aloe vera.
26. Aloe vera juice combined with milk is taken to treat kidney infections. Aloe vera is a common component of yogurt in Japan. In India, Aloe vera is used to make certain food dishes. Aloe vera was used as medicine by the people.
27. The world of old The Greeks think that the island of Socotra was subjugated by Alexander the Great,
28. island in the Indian Ocean, due to the abundance of aloe vera plants growing there.
29. Aloe vera is extensively utilized for immune system stimulation, to reduce inflammation.
30. Providing dietary supplements and tending to burn and injuries. The ancient world The Greeks believe Alexander the Great conquered the island of Socotra.
31. island in Indian Ocean, because this island had ample growth of Aloe vera plants.
32. extensively utilized for immune system stimulation, to reduce inflammation.
33. Providing nutritional supplements and tending to burn and cuts. Widely used for the following: Boosting of the immune system, As an anti-inflammatory for
34. treating cuts and burns, Providing nutritional supplements.

FUNCTION:

Vitamins, enzymes, minerals, carbohydrates, lignin, saponins, salicylic acids, and amino acids are among the 75 potentially active ingredients found in aloe vera.

1. **Vitamins**: It has antioxidant vitamins A (beta-carotene), C, and E. Choline, folic acid, and vitamin B12 are also present.

2. **Enzymes**: It has eight enzymes: cellulose, lipase, peroxidase, carboxypeptidase, catalase, alkaline phosphatase, amylase, brady kinase, and aliases. When administered topically, Brady kinase helps to lessen excessive inflammation.
3. **Minerals**: It offers calcium, manganese, potassium, sodium, copper, selenium, magnesium, and zinc. Few of them are antioxidants, and they are necessary for the correct operation of numerous enzyme systems in diverse metabolic pathways.
4. **Sugars**: It contains polysaccharides (glucomannans and polyominoes) as well as monosaccharides (glucose and fructose). These are called mucopolysaccharides and are obtained from the plant's mucilage layer.
5. **Glucomannans** (beta-1,4 acetylated mannan) are the most prevalent polysaccharides. Ace Mannan is a well-known glucomannan that has also been identified. C-glucosyl chromone, a new anti-inflammatory molecule, and alp Rogen, a glycoprotein with anti-allergic qualities, have been extracted from aloe vera gel. 6.**Anthraquinones**: It contains twelve anthraquinones, which are phenolic substances that have historically been used as laxatives. Emodin and aloin have antiviral, antibacterial, and analgesic properties.
7. **Fatty acids**: It contains lupeol, cholesterol, camp sterol, β-sitosterol, and four plant steroids. All of these have anti-inflammatory properties, and lupeol has antimicrobial properties as well. as well as analgesic qualities.
8. **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 anti-bacterial

MECHANISM OF ACTION:

Healing properties: Following topical and oral Aloe vera, fibroblast activity and proliferation are stimulated by the interaction of growth factor receptors with the mannose-rich polysaccharide glucomannan and the growth hormone gibberellin. This leads to a considerable increase in collagen production. In addition to increasing the wound's collagen content, aloe gel also altered the composition of the collagen (making it more type III) and strengthened the degree of collagen cross-linking. As a result, it boosted the breaking strength of the resultant scar tissue and accelerated wound contraction. There have been reports of enhanced synthesis of dermatan sulphate and hyaluronic acid in the granulation tissue of a wound that is healing after oral or topical.

Effects on skin exposure to UV and gamma radiation: It has been reported that aloe vera gel protects the skin from radiation damage. The precise function of aloe vera gel is unknown, however once it is applied, the skin produces metallothionein, an antioxidant protein that scavenges hydroxyl radicals and stops the skin's superoxide dismutase and glutathione peroxidase from being suppressed. It stops UV-induced suppression of delayed type hypersensitivity by lowering the synthesis and release of immunosuppressive cytokines produced from skin keratinocytes, such as interleukin-10 (IL-10).

Anti-inflammatory action: Aloe vera decreases the synthesis of prostaglandin E2 from arachidonic acid and inhibits the cyclooxygenase pathway. C-glucosyl chromone, a new anti-inflammatory molecule, was recently extracted from gel extracts.

Effects on the immune system: Alp Rogen prevents calcium from entering mast cells, which stops mast cells from releasing histamine and leukotriene through antigen-antibody interaction. Ace Mannan stimulates the synthesis and release of interleukin-1 (IL-1) and tumour necrosis factor from macrophages in mice, which in turn started an immune attack that led to necrosis and regression of the cancerous cells in a study conducted on mice that had previously had murine sarcoma cells implanted. Several low-molecular-weight substances can also prevent activated human neutrophils from releasing reactive oxygen free radicals.

Laxative effects: In recent studies, a polysaccharide fraction has shown to inhibit the binding of benzopyrene to primary rat hepatocytes, thereby preventing the formation of potentially cancer-initiating benzopyrene-DNA adducts. An induction of glutathione S-transferase and an inhibition of the tumour-promoting effects of phorbol myristic acetate has also been reported which suggest a possible benefit of using aloe gel in cancer chemoprevention

Moisturizing and anti-aging effect: Mucopolysaccharides serve to bind moisture to the skin. Aloe stimulates fibroblasts, which generate collagen and elastin fibres, making the skin more elastic and less wrinkled. It also has a cohesive effect on the superficial peeling epidermal cells, binding them together and softening the skin. The amino acids soften tough skin cells, and zinc acts as an astringent, tightening pores. Its moisturizing properties have also been investigated in the treatment of dry skin caused by industrial exposure, where aloe vera gel gloves benefited the skin.

CONCLUSION:

Aloe vera is a very important medical plant known for its numerous therapeutic and cosmetic applications. It is high in vitamins, minerals, amino acids, and bioactive substances, and has healing, moisturizing, anti-inflammatory, antibacterial, and antioxidant effects. Its gel is commonly used for skin care, wound healing, burns, and crack heel treatment, while the juice promotes digestive and immunological health. Aloe vera remains an important ingredient in modern herbal medicine, pharmacology, and cosmetology because to its natural, safe, and beneficial properties.

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