



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## Preparation Of Aloevera Gel

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**ABSTRACT :-** Aloevera, commonly known as Barbados or Curaçao Aloe, It is also known as the “lily of desert” or plant of immortality. Many different cultures have a long history of using aloe as a herbal remedy. The succulent plant, which grows in arid and subtropical regions, is most well-known for two different preparations: the thick sap of the leaves, which turns yellow-brown and has potent laxative properties that warn against using it, and the clear, mucilaginous gel, which is frequently used to treat minor burns, especially sunburns. The clear mucilaginous gel has many traditional uses, from oral dosing for diabetes and various gastrointestinal disorders to topical applications to decrease sweating. Clinical trials have demonstrated the effectiveness of aloevera gel in treating burn wounds, genital herpes, and seborrheic dermatitis; however, results for treating psoriasis and type 2 diabetes internally are still pending. Small clinical studies that frequently lack rigorous methodology are the primary source of limitation for the current state of clinical knowledge regarding aloe vera gel. Numerous clinical studies are being carried out to confirm the plant extract’s traditional uses and assess the application of aloe vera gel for a range of illnesses.

**Keywords:** Aloe vera, health and beauty, skin.

### INTRODUCTION :-

In Trinidad and Tobago, aloe vera gel is used as an *ethnomedical* remedy for hypertension. Aloe has been used most frequently in folk medicine to treat burn wounds, with the specific goals being to speed up the healing process, lessen inflammation, and minimize tissue scarring. Dioscorides described the gel, which was used to heal sores, reduce itching, and treat wounds and mouth infections. Aloe vera gel was first used as a home remedy in the United States in the 1930s after a surge in cultivation brought about by reports of its effectiveness on radiation dermatitis; it is still a common plant used for burns and abrasions.

There is still little scientific data supporting aloe vera gel, despite its enormous popularity. Topical application of aloe vera gel is thought to be safe, with only a small number of allergic reactions documented. Clinical trials have demonstrated the effectiveness of aloe vera gel in treating burn wounds, genital herpes, and seborrheic dermatitis; however, results for treating psoriasis and type 2

diabetes internally are still pending. Aloe vera gel's primary uses in cosmetics are still as a skin moisturizer and as an after-treatment for sunburns, both of which have shown promise.

Aloe Vera is a tropical or subtropical plant characterized by Lance-shaped leaves with jagged edges and sharp points. Aloe Vera contains Two major liquid sources, yellow latex (exudates) and the clear Gel (mucilage). The gel consists primarily of water and the rest includes various Vitamins, amino acids, enzymes, hormones, minerals and sugars, most of which Are found in the human body. Aloe leaves secrete a clear gel that when broken Off from the rest of the plant that can be applied topically to heal wounds and Soothe skin. Aloe Vera Gel is one of the product prepared from aloe vera itself. Aloe vera Gel has very good medicine for external use for sun Burning and pain killer. It has various medicinal values which makes very Good commercial value.

Aloe Vera Gel, because of its widespread Popularity, has become an ingredient in a wide variety of cosmetic products, Including night creams, soaps, shampoos, suntan lotions, and cleansers. Aloe Vera is widely used for its healing and restorative properties. Aloe Vera gel is Widely used in the food industry, cosmetic and toiletries industry, and the Pharmaceutical industry. Aloe vera gel is a most important product can Produce from aloe vera leaves. The item has the both consumer and industrial Demand. Increasing use of aloe vera gel in skin care Products is the major driving factor of aloe vera gel market growth. Additionally, aloe vera gel has different type of beneficial properties anti-Inflammatory, acne removing, anti-oxidation, herbal, and several others it Helps to increase the aloe vera gel market. Aloe vera gel is easy to available in Mall, medical stores, etc. most of peoples are rapidly changes their Preferences towards the healthy life style such as using natural ingredient-Based cosmetics in recent years. Aloe vera gel is also a vital product for Constipation. The demand within the global market for aloe vera gel is Projected to escalate at the back of the growing popularity of herbal Cosmetics.

### **DESCRIPTION :-**

The succulent plant aloe vera has thick, meaty, lanceolate-shaped, serrated leaves that have a greenish-grey hue. By cutting the lower leaves of the plant open, aloe vera inner gel can be extracted. The gel should be free of yellow sections and leaf skin. It is clear, tasteless, and odorless. The International Aloe Science Council (IASC), a trade association of multinational aloe growers and marketers, has not set a uniform standard, but certification of the product is contingent upon compliance with specific requirements. Additional preparations include an emulsion with 30% aloe vera and a hydrophilic cream with 0.5% aloe vera gel.

**INGREDIENTS :-**

Sr.no	INGREDIENTS	Quantity
1	Aloevera juice	75 gm
2	Methyl parabin	0.01gm
3	Carbopol 934	0.3 gm
4	Glycerin	0.01ml
5	Sandalwood oil	0.2ml
6	Rose water	0.1 ml
7	Triethalamine	0.020gm
8	Cosgard	20 drops
9	Purified Water	Qs to 100

**USES :-**

External only

- Mild to moderate burns
- As well as erythema
- Genital herpes
- Seborrheic dermatitis

Dosage :-

External only

How to use :-

- For burns: Clear mucilaginous gel (pure aloe vera inner gel or preparations containing 10%–70% aloe inner gel). Gel must be stabilized by pasteurization at 75–80°C for less than 3 minutes and applied on affected area 3 times daily.
- For seborrheic dermatitis: 30% aloe vera in a hydrophilic emulsion twice daily to affected area.
- For psoriasis and genital herpes: Hydrophilic cream containing 0.5% aloe gel 3 times daily to affected area.

**A. ALOE VERA :-**

The botanical name of Aloe vera is Aloe barbadensis miller. It belongs to Asphodelaceae (Liliaceae) family, and is a shrubby or arborescent, perennial, xerophytic, succulent, pea- green color plant. It grows mainly in the dry regions of Africa, Asia, Europe and America.

Aloe is a cactus-like plant that grows in hot, dry climates. It is cultivated in subtropical regions around the world, including the southern border areas of Texas, New Mexico, Arizona, and California.

Historically, aloe has been used for skin conditions and was thought to improve baldness and promote wound healing.

Aloe vera juice is a rich source of antioxidants, which help fight free radicals. This lowers oxidative stress on your body and reduces the risk of chronic conditions such as diabetes, heart disease, and cancer. Aloe vera juice is also an excellent source of: Vitamin C.

Aloe is best used for minor burns and skin irritations and should never be applied to an open wound. Preliminary evidence suggests that aloe gel may improve symptoms of genital herpes and certain skin conditions such as psoriasis.



Uses:-

- It contains healthful plant compounds.
- It has antioxidant and antibacterial properties.
- It accelerates wound healing.
- It reduces dental plaque.
- It helps treat canker sores.
- It reduces constipation.
- It may improve skin and prevent wrinkles.

#### **B. SANDALWOOD OIL :-**

Sandalwood oil is extracted from the heartwood by steam distillation. The average yield of oil ranges from 3.0% to 6.0%. The sweet, powerful, and lasting odor has made sandalwood oil useful in the perfume industry, soaps, candles, incense, folk medicine, and religious and cultural purposes for centuries.





#### Uses :-

- Lower anxiety levels.
- Fight skin cancer.
- Aid wound healing.
- Work as an anti-inflammatory.
- Promote better sleep.
- Protect against free radical.
- Boost skin health.
- Provide antiseptic and antiviral protection.

#### C. ROSE WATER :-

Rose water is A flavored water made by steeping rose petals in water. Additionally, it is the hydrosol portion of the distillate of rose petals, a by- product of the production of rose oil for use in perfume. Rose water is prepared by steeping rose petals in water.

Rose water is an antibacterial. This means that it fights off bacteria that could lead to infections. Using rose water for face and body care can prevent wounds such as burns and cuts becoming infected and it can also be used to reduce the appearance of scars when used in high concentrations.



#### Uses :-

- Cleanses and Brightens Skin.
- Soothes Irritated Skin.
- Balances Natural Oils. ...
- Decongests Skin Pores.
- Moisturizes Skin. ...
- Reduces Under-Eye Puffiness and Dark Circles.
- Slows Down Multiple Signs of Aging.
- Protects Your Skin.

#### PROCEDURE :-

1. Take a fresh aloe vera juice in a beaker heat it for 2 to 3 min. Then keep it aside for cooling.
2. At the same time take another beaker take 0.01 gm methyl paraben and add into 15 ml of purified water. Mix it well And keep this solution for water bath stir it properly.
3. After dissolving the methyl paraben keep it aside for cooling. After cooling add carbopol 934 and stir it by Using magnetic stirrer.
4. Take 35 ml aloe vera juice and add into the methyl paraben. Mix it well.
5. After that add a glycerin and sandalwood oil as a flavoring agent.
6. Add a colouring agent. After that add a triethanolamine as a gelling agent. Stir it properly..the liquid is gets Converts into gel. And aloe vera gel is prepared.

#### MECHANISM OF ACTION :-

1. Effects on skin exposure to UV and gamma radiation: Aloe vera gel has been reported to have a protective Effect against radiation damage to the skin.
2. Moisturizing and anti-aging effect: Mucopolysaccharides help in binding moisture into the skin. Aloe Stimulates fibroblast which produces the collagen and elastin fibers making the skin more elastic and less Wrinkle

3. Antiseptic effect: Aloe vera contains 6 antiseptic agents: Lupeol, salicylic acid, urea nitrogen, cinnamonic Acid, phenols and sulfur. They all have inhibitory action on fungi, bacteria and viruses.
4. Healing properties: Aloe gel not only increased collagen content of the wound but also changed collagen Composition (more type III) and increased the degree of collagen cross linking. Due to this, it accelerated Wound contraction and increased the breaking strength of resulting scar tissue.

### Uses :-

- Mild to moderate burns as well as erythema.
- Genital herpes.
- Seborrheic dermatitis.
- Adjunct therapy of spontaneous fibrosarcomas (determined by clinical trials and/or official monographs and/or empirical use).
- Psoriasis vulgaris.
- Skin moisturizer.
- Type 2 diabetes.
- Malignancies and immunodeficiency viruses in cats.
- Oral lichen planus infections.
- Angina pectoris.
- Ulcerative colitis.
- UV-induced erythema
- Kidney stones.
- Alveolar osteitis.

### Adverse Effects

- Hypersensitivity reactions
- Allergic reactions

### PLAN OF WORK :-

#### Title and Abstract:

- Choose a concise and informative title that reflects the scope of the Project
- Write an abstract that provides a brief overview of the project objectives, methods, and key findings.

#### Introduction:-

- The most significant effect of Aloevera on body.
- They also provide new opportunities to regulate therapeutic releases.

#### Literature Search:

- Conduct an extensive literature search using academic databases, journals, and books.
- Collect and organize relevant information and references.

Conclusion :-

- Summarize the key points and finding from review.

Reference:-

- List of references used in the project

**RESULT :-**Aloe gel were effective in reducing healing time 7 - 14 days aloe cream was more no side effects observed.

PH :- 4.0 to 7.0 . The PH was found 6.6

Spreadability of formulations or gel was found out to be 8.6 cm .

**CONCLUSION :-**

In this project we can preped the aleovera gel and study their preparation. Uses , their action , adverse drug effects. It Seems that the application of Aloe vera, as a complementary treatment along with current method, can improve wound Healing and promote the health. Prmosinglyit may also provide other health benefits, largely due to its antioxidants Property.

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