



A REVIEW ON THE HERBAL CURE : ALOE VERA AND HAIR FALL

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ABSTRACT :

Aloe Vera has been used for centuries in traditional medicine. Recent scientific investigations reveal its potential therapeutic applications in hair fall, including irritable bowel syndrome (IBS), peptic ulcers, and inflammatory bowel disease (IBD). This review consolidates evidence regarding Aloe Vera's pharmacological actions, clinical efficacy, mechanisms, and future perspectives. Hair loss is often distressing and can have a significant effect on the patient's quality of life. Antigen effluvium is the abnormal diffuse loss of hair during the growth phase caused by an event that impairs the mitotic activity of the hair follicle, most commonly chemotherapy. Physician support is especially important for patients in this situation.

Keywords - Anti-inflammatory, Hair follicles, *Reduces dandruff*

INTRODUCTION

Aloe vera, a succulent plant with a long history of medicinal use, possesses a range of bioactive compounds that support various health benefits, making it a valuable natural resource. Its gel, extracted from the inner leaves, is particularly known for its wound-healing, anti-inflammatory, and moisturizing properties, as well as its potential role in managing conditions like diabetes and improving digestion. Herbal therapies like Aloe Vera are emerging as complementary treatments. Aloe Vera exhibits anti-inflammatory, antioxidant, immunomodulatory, and mucosal healing effects, making it a promising hair fall.

Aloe Vera: Botanical and Historical Overview Aloe Vera (*Aloe barbadensis* Miller) is a perennial succulent belonging to the liliaceous family, and is called the healing plant or the silent healer. As a result of its use as folk medicine, it is claimed that aloe Vera has wound and burn healing properties, and anti-inflammatory, and immunomodulatory effects. Aloe Vera is used in a variety of commercial products because of these therapeutic properties. The plant's diverse applications in both traditional and modern medicine, along with its increasing popularity in the cosmetic industry, underscore its significance for human health and well-being.

CAUSES OF HAIR FALL:-

- Genetics
- Hormonal changes
- Medicinal condition
- Life style
- Fungal infection
- Stress full life
- Environmental condition



Fig. no. - 1 hair fall

Hair fall

Hair fall is a part of natural hair balance and when this balance between natural hair growth and hair fall interrupts, it is known as hair fall. The objective of the study was to observe the effect of hair growth-promoting product on hair growth, density, and thickness by taking phototrichogram using Casita-Nova.

Cultivation and Harvesting

Aloe Vera is relatively easy to cultivate. It thrives best in warm climates with plenty of sunlight and well-drained, sandy soil. The plants require minimal watering and are highly drought-resistant, although they do not tolerate frost. Leaves are typically harvested when the plant is mature, about 2–3 years after planting. Care must be taken during harvesting to avoid damaging the plant and to maintain the quality of the gel. After harvesting, the aloe leaves are processed quickly to prevent degradation. Processing methods include cold pressing and stabilizing the gel with preservatives to retain its bioactivity.

Materials and Method***Materials of Aloe Vera***

It is a succulent plant of the genus aloe, it is widely distributed, and is considered an invasive species in many world regions. An evergreen perennial, it originates from the Arabian Peninsula, but grows wild in tropical, semi tropical and arid climates around the world. It can grow up to 30 to 50 cm long and have 10 cm width at the base.

Essential oils :-

Terms = Aloe Vera is derived from the Arabic word 'Aloe', meaning a 'shining bitter substance' and Vera came from the Latin word 'Vera' meaning 'true'.

Benefits

- Anti dandruff
- Hair growth
- Hair stress

Categories

There are 7 categories

Stone aloe – Aloe particular

- Climbing aloes - Aloe cellars
- Cape aloe – Aloe furor
- Coral aloe – Aloe striate
- Lace aloe – Aloe arietta
- Candelabra – Aloe arborescence
- Spider aloe – Aloe homilies

Essential oils :- To potentially promote faster hair growth, focus on a healthy lifestyle, including a balanced diet rich in protein and nutrients, regular scalp massages, and avoiding heat styling and harsh chemicals. Consider incorporating hair growth supplements and addressing underlying health conditions that might be affecting hair growth.

1. Coconut oil
2. Cedar wood oil
3. Lavender oil
4. Rosemary oil
5. Eucalyptus oil

Other excipients

An ingredient in a drug is a non-activity ingredient, meaning it's not the primary therapeutic component, but rather a component that helps to deliver the active ingredient.

1. **Anti oxidants**
2. **Stabilizers**
3. **Solubilizing agent**
4. **Faming agent**

5. **Surfactants**
6. **Cleansing agent**
7. **Coloring agent**

METHODS

Phytochemical extraction

The process of separating bioactive compounds from plant materials using suitable solvents and techniques. The aim is to isolate beneficial compounds such, tannins, spooning, glycosides, terpenoids, and polyphenols as alkaloids, flavonoids, which may have medicinal or therapeutic value.

The cell walls to release intracellular compounds into a **solvent**, where the compounds dissolve based on their polarity Vera extracts (the samples obtained under the optimal extraction conditions in every employed extraction technique for achieving the highest polyphenol content). The final step was the determination of physicochemical properties of the selected extracts.

Hair growth and aloe Vera

1. **Improved Scalp Health:**

Infection reduce the aloe Vera scalps irritated handling environment for growth.

2. **Hair follicles stimulation**

- enzymes that may help stimulate hair follicles and promote and Aloe Vera contains nutrients hair growth.
- Increase the blood circulation

Anti-Inflammatory

Properties Aloe compounds inhibit COX pathways and reduce pro inflammatory cytokines, helping in ulcerative colitis and other inflammatory conditions.

Hair follicles

Fatty acids and enzymes might help reduce inflammation and offer a cleansing effect Minerals like zinc and potassium hair follicles properly

Anti dandruff

it can be effectively managed and controlled. This involves using medicated shampoos, maintaining a healthy scalp, and addressing potential triggers like stress and diet. While some natural remedies may offer temporary relief, the most effective solutions often include medical treatments and consistent hygiene practices

Extraction Methods

SOXHLETATION METHOD:-

The process heats the solvent, which then condenses and drips back onto the plant material, Soxlet extraction is a commonly used method for extracting compounds from Aloe vera leaves. This method involves continuously extracting the plant material with a solvent, often ethanol, in a Soxhlet apparatus. allowing for efficient extraction of soluble compound.

Aloe Barbadensis Extract, also known as Aloe barbadensis leaf extract or aloe Barbadensis is a common ingredient in cosmetics derived from the Aloe Vera plant. Aloe Barbadensis Extract is a rich source of bioactive compounds such as polysaccharides, antioxidants, vitamins, and minerals.

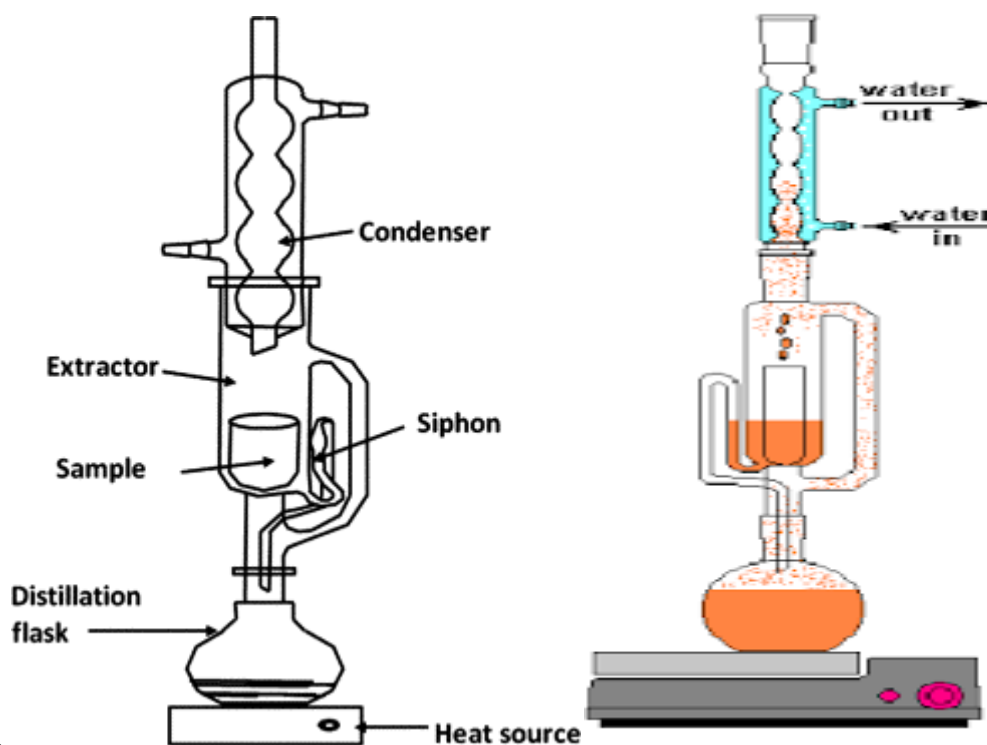


Fig. no. 2 SOXHLATION METHTHOD

Process of Extraction

- The finely ground crude drug is put in a porous bag or "thimble" made of powerful filter paper that is put in the Soxhlet apparatus chamber in this technique.
 - The flask Extracting solvent is heated and condensed in condenser by its vapors.
 - The condensed Extracting drips into and extracts the crude drug through contact into the thimble
- When the chamber liquid level increases to the top of the siphon pipe, the chamber siphon liquid material comes in the flask. About 20 gems of powder was filled in a thimble separately
- The individual thimble was placed in extractor region of Soxhlet apparatus
 - subjected to extraction with 200 ml of methanol, petroleum ether ethanol and water successively up to 48 hrs. in each solvent. Each of solvent extract was concentrated separately using rotary evaporator.
 - After concentration the extracts were preserved at 10°C in refrigerator for further
 - phytochemical analysis. It is only used as a batch process on a tiny scale, but it becomes much more
 - economical and feasible when transformed into a medium or large-scale ongoing.

Result

The Soxhlet extraction apparatus is commonly used for extracting bioactive compounds from plant materials like *Aloe Vera*. When using this method for *Aloe Vera*, the result typically includes a *concentrated extract* that contains a variety of photochemical, depending on the *solvent* used and the *extraction time*. Here's a breakdown of what you get.

Discussion

Aloe Vera appears to offer multiple benefits in the management of hair fall ,

- primarily due to its anti-inflammatory, wound-healing, and antimicrobial properties. Its ability to modulate cytokine levels and reduce oxidative stress suggests it helps restore the normal function of the hair fall However, the efficacy of *Aloe Vera* is influenced by the preparation method (gel vs. • latex) and dosage.

While *Aloe Vera* gel is generally safe and effective for reducing inflammation and promoting healing, *Aloe latex* — rich in anthraquinones — can cause cramping, diarrhea, and electrolyte imbalance if misused. Despite promising results, limitations exist. Some clinical trials had small sample

• sizes, short durations, and lack of standardized Aloe preparations, leading to variability in outcomes. Furthermore, long-term safety data are limited, especially concerning the chronic use of Aloe latex.

Conclusion

Aloe Vera presents a promising complementary therapy for hair growth. Its multifaceted pharmacological actions support symptom relief, mucosal healing, and immune modulation. Further research is essential to establish standard treatment protocols and confirm long-term safety. Aloe Vera has shown promising therapeutic effects in the management of various hair loss due to its anti-inflammatory, antioxidant, immunomodulatory, and wound-healing properties. Studies suggest that Aloe Vera gel can help in conditions like irritable bowel syndrome (IBS), ulcerative colitis, and peptic ulcers by soothing mucosal irritation, promoting tissue repair, and regulating gut micro biota.

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