

A Review on Anti – Acne Herbal Face Wash

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Abstract: *Since natural medicines are thought to be safer and have less adverse effects than synthetic ones, they are more widely accepted. Global demand for herbal formulations is rising. The creation and assessment of a herbal face wash with neem leaf aqueous extract is the focus of this study. lemon juice, honey, aloe vera gel, turmeric oil, and sodium lauryl sulfate, rose water, glycerin, xanthum gum, and methyl paraben ,While there are numerous topical herbal acne treatments available in the market, we suggest creating pure herbal formulations devoid of any artificial component. According to published reports, the plants have strong antibacterial, antioxidant, and anti-inflammatory properties.*

Keywords: Herbal face wash, Anatomy of Skin, Anti-Acne, Herbal drug, Aloe vera

I. INTRODUCTION

Definition: A face wash is a particular kind of facial cleanser used to rid the skin of impurities such as oil, dirt, makeup, and dead skin cells. You can also try using a facial cleanser to get rid of them, albeit it may not work as well. The next wave of skin care is called cosmetics. Cosmetic is a word that comes from the Greek word "cosmetics," which means "pertaining to cosmetics" or "beautifying substance or preparation".

There are several types of acne: nodular, pustular, cystic, comedonal, and popular. Comedone acne is classified into two types: blackheads and whiteheads, and it is non-inflammatory. While blackheads (open comedo) appear as open pores holding dark-colored skin roughage made up of melanin, sebum, and follicular cells, white heads (closed comedo) appear as fresh or white-colored, raised lumps. Papules are raised, firm, red lesions that are frequently smaller than 5 mm in diameter. Pustules are confined skin elevations filled with purulent substance. Solid, raised lesions affecting deeper dermis and subcutaneous tissue are cysts and nodules. Nodules are more than 5 mm in diameter, while cysts are smaller than 5 mm.

Acne is caused by a variety of physiological causes. These include the multiplication of hair follicles, an increase in sebum production brought on by elevated testosterone levels and the colonization of bacteria, such as propionibacterium acnes and staphylococcus epidermidis. Differentiation in target cell sensitivity, biological markers, neuro-endocrine, genetic, and environmental factors are among the novel concepts that have emerged to assist better understand its pathophysiology. There are numerous synthetic and herbal compounds that are said to have a very positive impact on acne vulgaris.

They may have different mechanism like

- Control sebum secretion.
- Antibiotics which inhibits Propionibacterium acnes and Staphylococcus epidermidis, the main causative organism of acne.
- Keratolytic which removes the keratin layer and prevents the trapping of sebum under the skin.
- Anti-inflammatory which prevents the worsening of condition due to inflammation or redness etc
- The market offers a variety of contracts for futures for different medicinal substances.

ANATOMY OF SKIN

Even though you may not think of the skin as an organ, it is made up of tissues that work together as a cohesive structure to perform a variety of essential functions. The skin and the tissues that support it make up the integumentary system, which provides general protection to the body. The several layers of cells and tissues that make up the skin are held to the underlying structures by connective tissue. The deeper layer of skin is well vascularized, with many blood

vessels present. Along with many sympathetic and autonomic nerve fibers that support brain-to-brain communication, it also has a lot of sensory fibers. The following are the three layers of skin:

- Epidermis
- Dermis
- Subcutaneous (hypodermis)

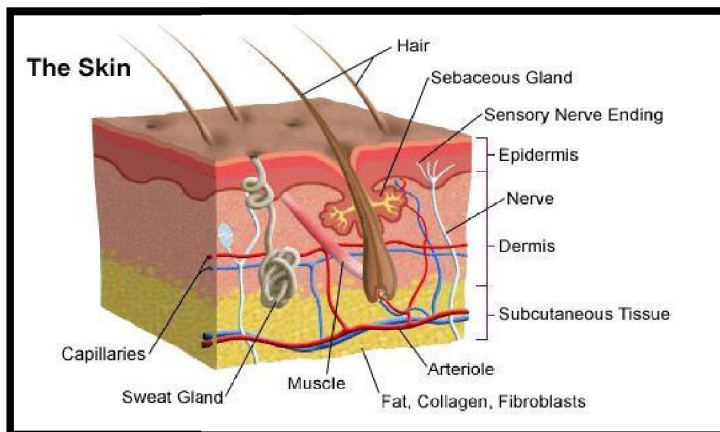


Fig: ANATOMY OF SKIN

TYPES OF ACNE

Numerous skin lesions, each with its own unique appearance and set of symptoms, are caused by the common ailment acne. Whiteheads, blackheads, papules, pustules, cystic acne, and other forms are among the various types of acne.

- Whiteheads
- Blackheads
- Papules
- Pustules(Pimples)
- Nodules
- Cysts

II. MATERIAL AND METHODS

Collection of Material

Aloe Vera leaves, Neem Leaves, Turmeric, and Honey, Lemon collected from local market and Xanthan gum, Sodium lauryl sulphate, Methyl paraben, rose water are collected from DSP COP Institute of B. pharmacy Laboratories

Table 1 Herbal Drugs and their Uses

Sr. No	Name of Crude drugs/ Medicinal plant	Chemical constituents	Uses
1	Neem	Azadirachtin, nimbin, nimbolinin	Antiseptic, it is use in the treatment and prevention of acne
2	Aloe Vera	Salicylic acid, Cinnamon acid.	Hydrating agent, Ant wrinkles
3	Turmeric	Curcuminoids	Antimicrobial agent, Anti-inflammatory, Antioxidant
4	Honey	Pigments, vitamins	Antioxidant
5	Xanthan Gum		Non-Toxic Thickener and stabilizer
6	Rose Water	Citronellol, Geraniol	Cooling agents, Emollient agents, flavoring agents
7	Lemon Juice	Limonene	Natural Ph Adjuster

INGREDIENTS USED IN FORMULATION
NEEM LEAVES



Fig: Neem leaves

- Scientific name: *Azadirachta indica*
- Order: Rutales
- Family: Meliaceae
- Species: *indica*
- Genus: *Azadirachta*

Biological source:

- It consists of dried leaves of *Azadirachta indica*
- Belonging to family Meliaceae.

Benefits of Neem for Skin:

- Heal wound
- Purifies the blood
- Moisturizes the skin
- Reduce scars
- Treats uneven skin tone

Components of Neem:

- Nimbin, nimbanene, 6-desacetylnimbinene, nimbandiol, nimbolide, ascorbic acid, n-hexacosanol, amino acids, and nibiol are among the components found in neem leaves.

Uses:

- Skin toner, Lightens skin blemishes, Remove blackheads.

ALOE VERA



Fig: Aloe Vera Leaf

- Scientific name: Aloe vera
- Order: Asparagus
- Family: Asphodelaceae
- Kingdom: Plantae
- Botanical name: Aloe barbadensis miller

The use of aloe vera on the face is beneficial because of its:

- It protects the skin from the harmful effects of radiotherapy.
- It contains 98% water, which hydrates, soothes, and hydrates the skin.
- It soothes rashes and sunburns by cooling
- It makes the skin more supple instead of stiff and hard.
- After application, a thin layer of emollient should remain on the skin

Active components of Aloe Vera:

- Amino acids, lignin, saponins, minerals, vitamins, enzymes, and carbohydrates are a few of the 75 potentially active ingredients in aloe vera. Vitamins: It contains antioxidant vitamins A(beta-carotene), C, and E. Vitamin B12, folic acid and choline are also present.

Uses:

- Aloe vera can be applied topically to soothe skin irritations such as sunburns, insect bites.

TURMERIC OIL



Fig: Turmeric Oil

- Synonym: Curcuma Longa, Indian saffron.
- Family: Zingiberaceae
- Odour :Aromatic
- Colour : Yellow
- Taste : Bitter

Turmeric Benefits for Skin:

- Hydrates the stratum corneum of the skin.
- Improves the skin barrier function.
- Provides anti-irritant protection for the skin.
- Accelerates wound healing.
- Eliminate dry skin.

Components of Turmeric Oil:

- Turmeric oil is a natural chemical substance extracted from vegetable oil.

- E. Peppermint Oil

Biological source:

- Turmeric consists of dried ,as well as fresh
- rhizomes of plant is known as curcuma longa linn

Uses:

- Reduce acne, Glowing skin, Lightens skin

HONEY



Fig: Honey

Benefits of Raw Honey for Skin and Face:

- Deeply Hydrates Skin, cleans pores, Lightens Scars, Gently Exfoliates, Helps fight bumps
- Helps reduce wrinkles

Components of Honey:

- Good standards of measurement include honey, which is primarily sugar, and specific vitamins, minerals, iron, zinc, and antioxidants. Honey is utilized as an antibacterial, antioxidant, and inflammatory in addition to being a natural sweetener.

Uses:

- Light humectant and nutrient used as a thickening agent to give body to facial masks, creams and lotions

ROSE WATER



Fig: Rose Water

Benefits OF Rose Water for Face:

- Balances natural oils in the skin
- It can help reduce the appearance of temporary redness
- Natural Hydration
- It has antioxidant properties
- It can help prevent fine lines and wrinkles

Active Components of Rose Water:

Rose water has anti-inflammatory qualities and is high in vitamins A, C, E, and B.

Table 2: Ingredients used with their properties

Name of ingredients	Quantity
Neem Extract	4ml
Aloe Vera Gel	5gm
Turmeric Extract	3ml
Honey	3ml
Xanthan Gum	0.25gm
Rose Water	100ml
Lemon Juice	5drops
sodium lauryl sulfate	2gm
methyl paraben	0.02gm
Glycerin	5ml

Additives used in face wash:

Thickening agents

An object that may raise a liquid's viscosity without significantly altering its other characteristics is called a thickening agent or thickener. When *Xanthomonas campestris* bacteria strains are fed a solution of glucose obtained from corn, soy, dairy, or wheat, they produce xanthan gum, an ingredient used as a thickener, stabilizer, and emulsifier.

Preservative

To stop mold and dangerous bacteria from growing. A methyl ester of p-hydroxybenzoic acid is methyl paraben. It is an antibacterial preservative found in foods, medications, and cosmetics that is stable and non-volatile.

Foaming Agents

Sodium lauryl sulphate (SLS) is an ingredient found in personal hygiene and cosmetic products. A powerful anionic surfactant for removing oily stains and residues is sodium lauryl sulfate formula.^[7,4,11]

ACNE:

Acne, or skin inflammation, is a skin disease caused by abnormalities in the sebaceous organs. In actuality, skin outbreak vulgaris, or "normal skin inflammation," is the most prevalent type.[17,14,27]The skin's reaction to the pollution causes the redness. When dead skin cells and organ oil combine, hair follicles get blocked and oil accumulates behind the blocked entrance.[20,25]Then, microorganisms on the skin could multiply swiftly. It is noticeable when the skin swells and turns red due to this pollution. Skin breakouts typically affect the upper arms, back, chest, and face. Due to increased chemical exposure, skin eruptions are typical during adolescence, the transitional period between childhood and adulthood.

Although it affects a significant portion of the population in their twenties and thirties, skin breakouts are most common in teenagers.

Mechanism:

When oil and dead skin cells clog the hair follicle, skin breakouts occur. The main cause of pimples on smooth skin is the accumulation of oil in the pores. A lot of oil was provided by this smooth skin.

Causes of Acne:

- Treatments for hormonal changes brought on by puberty or pregnancy
- During puberty, acne is more common in teenagers and young adults. The hormones in the body fluctuate a lot throughout this time.
- Acne lesions include whiteheads, blackheads, little lumps, nodules, and cysts.
- the changes in hormone levels that occur in women throughout their periods.
- It is possible to irritate the acne lesions by picking, prodding, or lightly rubbing them.
- Avoid applying pressure on the acne at all costs.
- Genetics might contribute to acne or exacerbate it in some individuals.

Symptoms of Acne:

Skin irritation could show up on any piece of your body. It usually affects the shoulders, back, neck, chest, and face. There's no doubt that you will see brown or white pimples if you have skin irritation. The two zits and whiteheads are referenced in "come downs." Because zits open near the skin's surface, they seem black. They seem white because the white heads are closed just below the skin's surface. Although clogged pores and whiteheads are the most common forms of skin irritation, other ailments can also manifest. Papules, or continuous skin scarring, are more common in pustules, knobs, and abscesses.

Advantages of Face Wash:

- It facilitates the removal of dead skin cells so that the old ones can be replaced by new ones.
- It also helps to maintain the health and freshness of the skin.
- Makes the skin appear vibrant. Excess oil and dead skin cells clog pores, giving the look of fatigue and causing blackheads and whiteheads in acne.
- Eliminating dead skin cells will delay the aging and wrinkling process of your skin.

III. CONCLUSION

Because they are thought to be safer and have fewer adverse effects than synthetic ones, natural therapies are more widely accepted. The need for herbal formulations is rising globally. The attempt to create a herbal face wash with aqueous extracts of neem leaves, liquorice root, turmeric rhizomes, and nutmeg seeds is excellent.

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