

Formulation and Evaluation of Herbal Face Wash

Mr. Padre Pawan Vishnu¹, Prof. Joshi M. M.², Dr. Khanage S. G.³

UG Student, Rashtriya College of Pharmacy, Hatnoor Maharashtra, India¹

Assistant Professor, Rashtriya College of Pharmacy, Hatnoor Maharashtra, India²

Principal, Rashtriya College of Pharmacy, Hatnoor Maharashtra, India³

Abstract: Herbal formulations have enlarging demand in the world market as a source of food, cosmetics, and medicinal purposes. The aim of this study is to formulate and evaluate the herbal face wash. There are three forms of herbal face wash i.e., gel, cream and liquid-based face wash. We have studied on liquid-based herbal face wash. Ingredients required in this formulation are extracted by the Maceration extraction method. Turmeric (*Curcuma longa*), Aloe Vera (*Aloe barbadense* Linn), Lemon (*Citrus Limon*) source of vitamin C, Neem (*Azadirachta indica*) are very helpful and do not have any side effects. All herbal ingredients are easily available in the surrounding area.

All the plants that have been used in this article have better antioxidant, antimicrobial, and anti-inflammatory properties. There are a number of formulations available on the market with different variety of active pharmaceutical ingredients for the treatment of acne and others skin problems especially for face. Changing environmental conditions and many pollutants, especially UV rays, are harmful for the human body. They're damaging our skin, so cosmetics are part of taking care of the skin and body parts. As we know that face is sensitive part of body The Neem has more medicinal properties, leaves and their chemical constituents have been demonstrated to exhibit anti-inflammatory, anti-hyperglycemic, antiulcer, anti-malaria, antifungal, antibacterial, antimutagenic, and anti-carcinogenic properties. This is a study to evaluate the dermal safety and efficacy of the herbal formulation. There was a remarkable decreasing in the oiliness of the facial skin and an associated minimization of arising facial problems. Few subjects also noticed improvements in skin complexion. The present work deals with Preparation of Extracts, preparation & evaluation of the herbal face wash. It is essential to evaluate the formulation to check their efficiency and effectiveness by using above parameters color, Oduor, appearance, consistency, Washability, PH & Spread ability. Formulation showed no lumps along with easy Washability, good Spread ability and neutral PH. This study presents the formulation and evaluation of a herbal face wash designed to meet the growing demand for natural and safe skincare products. The formulation process involved selecting a blend of herbal extracts known for their skin-friendly properties, along with appropriate surfactants, thickeners, and preservatives to ensure stability and efficacy. Physicochemical characteristics such as pH, viscosity. and foamability were evaluated to assess product quality. Additionally, sensory analysis was conducted to gauge user preferences regarding fragrance, texture, and overall experience. Microbiological tests were performed to confirm product safety. The results indicated that the formulated herbal face wash exhibited desirable properties, including balanced pH, suitable viscosity, and satisfactory foam formation.

Sensory evaluations revealed positive consumer acceptance, with preferences for natural fragrance and smooth texture. Microbial studies confirmed the product's microbial safety for consumer use. Overall, the formulated herbal face wash offers a promising option for individuals seeking natural and effective skincare solutions. Acne and pimples are treated using herbal face washes. Herbal Facewash eliminates excess oil without eliminating nutrients from the skin and contains rich plant-based components like feverfew (*Tanacetum parthenium*) and neem.

Azadirachta indica). The building blocks of finished herbal medicines are known as herbal preparations. These can be comminuted or powdered herbal ingredients as well as extracts, tinctures, and fatty oils of herbal materials. The demand for herbal formulations is rising on the global market. Establishing the herbal face wash with aqueous neem leaf, tulsi leaf, and orange peel extracts is a very commendable effort. The herbal face wash formulation was more effective than the commercial face wash. Since all of the ingredients in this composition are herbal, they are safe for the skin and trustworthy.

Keywords: Acne, Dark Circles, Pimple, Tan, Herbal face wash, Hydro alcoholic, Turmeric, Acne vulgaris, UV rays, anti-inflammatory, Anticarcinogenic

I. INTRODUCTION

1. Face Wash Definition:

A face wash is a type of facial cleanser That is specifically designed to remove makeup, Dirt, oil, deadskin cells, and other impurities from the skin of the face. A face wash can also be used to get rid of them, but itseffectiveness might not be 100%.

or

A face wash is a facial care product designed to remove makeup, dead skin cells, oil, dirt, and other pollutants from the skin. By doing so, it helps unclog pores and prevents skin conditions such as acne. A face wash is typically used as part of a comprehensive skincare regimen, along with toners and moisturizers.

Cosmeceuticals are the future generations of skin Care. The term cosmetic derived from Greek word 'Cosmetics' which mean pertaining to cosmetics or Beautifying substance or preparation.

The word 'cosmesis' (Gr. Kosmesia) used for two things: the preservation Restoration or bestowing of body beauty, the surgical Correction of disfigured physical effect. Acne, or acne vulgaris, is a skin problem that starts When oil and dead skin cells clog skin pores. It is also Blackheads, blemishes, whiteheads, pimples, or zits. Severe Acne can mean pimple that cover the face, neck, chest, and back. Or it can be bigger, solid, red lumps that are painful (cysts). Acne occurs most commonly during adolescence, Affecting an estimated 80–90% of teenagers.

Lower rates Is reported in some rural societies. It usually gets better After the teen years. Some women who never had acne Growing up will have it as an adult, often right before their Menstrual-periods. About 4% continue to have difficulties into their forties.

Formulation and Evolution of Herbal Face Wash The skin, especially the face, plays a crucial role in human personality. It serves as a sensitive and representative parameter of an individual's health. Cosmetics are developed to address various skin concerns, including reducing wrinkles, fighting acne, and controlling oil secretion.

The items that are used to wash your face without drying it out are called face washes. The term "cleanser" is another prevalent name for it. It has been discovered that this product is suitable for all skin types. 12 A cleanser removes dirt, makeup, and extra oil from your face. These contaminants are oil soluble. A facial wash can also be used to get rid of them, but its effectiveness might not be 100%. Ordinary soaps might cause facial skin to dry out because it is so fragile.

A face wash is a gentle cleanser that effectively moisturises the horny layer of the skin without causing any harm to the skin and performs the essential task of keeping skin clean, sterile, smooth, and fresh. So that the skin seems vibrant and youthful, 3-6 A face wash is a facial care solution used to clean the skin.

on the face of makeup, dead skin cells, oil, grime, and other forms of pollutants. This aids in pore cleaning and shields the skin from conditions like acne. A cleanser, toner, andmoisturiser can all be used as part of a skin care routine.

Skin care preparation for face:

- Face pack and masks
- Face washes
- Cleansing creams and lotion
- Compact powder

The skin being largest organ of the body, accounts about 15% of the total adult body weight. It performs many vital functions including protection against external physical, chemical and biologic assailants as well as prevention of excess water loss from the body and a role in thermoregulation.

Acne develops more in females than in males, which shows the earlier onset of puberty in females. and the severity of the diseases vary depending on the various factors. It is a chronic inflammatory disorder of the pilosebaceous units.

Typical lesions of acne include comedone, inflammatory papules and pastules. Nodules and cysts scarring & psychological distress. Comedonal acne isnon inflammatory and divided into 2 types a) whiteheads and b) blackheads, white heads (closed comedo) present as fresh or white colored, raised bumps whereas blackheads. (open comedo) present as open pores containing dark colored skin roughage consisting of melanin, sebum and Toincular cells.

Skin is made up of following three layers:-

1. Epidermis
2. Dermis
3. Subcutaneous Tissue (Hypodermis)

The skin and its Accessory structures make up integumentary System, which provides the body with overall Protection. The skin is made of multiple layers of cells and tissues, which are held to underlying structures by connective tissue. The deeper layer of skin is a well vascularized (has numerous blood vessels). It also has numerous sensory, and autonomic and sympathetic nerve fibers ensuring communication to and from the brain

The skin is the largest organ of the body, accounting for about 15% of the total adult body weight performs many vital functions, including protection Against external physical, chemical, and biologic assailants, as well as prevention of excess water loss from the body and a role in there more gulation.

The Herbs have been selected on the basis of a traditional system and scientific justification with modern uses.

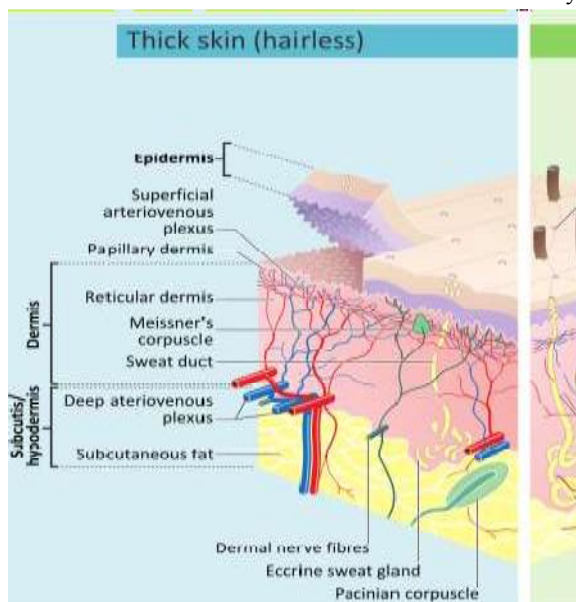


Fig.1.Skin structure

Layers of Skin

1. Epidermis:- The epidermis, which has a thickness of around 0.2 mm, is the word for the skin's outermost layer. In this stratum, veins and capillaries are absent.

The position of the body affects the epidermis' thickness. Keratinocytes and dendritic cells make up the majority of the epidermis' cells. Melanocytes, Langerhans cells, and other types of cells are also present. The layer of the epidermis is often referred to as the metabolically active tissue.

The epidermis is an elastic layer on the outside that is continually being regenerated.

It includes the following:

1.1 Keratinocytes:-

the main cells of the epidermis formed by cell division at its base. New cells continually move towards the surface. As they move, they gradually die and become flattened.

1.2 Corneocytes:-

the flattened dead keratinocytes that together make up the very outer layer of the epidermis is called the stratum corneum or horny layer. This protective layer is continually worn away or shed.

1.3 Melanocytes:-

produce the pigment melanin that protects against UV radiation and gives skin its colour.

The outermost layer is classified into five sub layers and these are

- 1) Stratum corneum
- 2) Stratum lucidum
- 3) Stratum granulosum
- 4) Stratum spinosum
- 5) Stratum basale

1) Stratum corneum: Stratum corneum refers to the epidermis' outermost sublayer. It also goes by the name "horny cell layer," and it is between 8 and 15 micrometers thick. The layer, which has a hexagonal form, aids in protecting skin from severe dryness. Its primary ingredient, "ceramide," has a significant role in water retention.

2) Stratum lucidum: Stratum lucidum is composed as thin clear layer of dead skin cells. It is found only in areas of thick skin on the palms of the hands and soles of the feet.

3) Stratum granulosum: The layer, which has a 3 m thickness, is also known as a granular cell layer. There are two to four layers of granular cells. As more keratin fibers are inserted into the cells, the shape of the cells becomes flatter.

4) Stratum spinosum: It is also called prickle cell layer having thickness ranges from 50- 150µm. It consists of number of cells, which may differ in shape and structure.

5) Stratum basal: The deepest and sublayer of the epidermis, stratum basal is made up of a single layer. Keratinocytes are formed in the stratum basal and travel upward to the surface. The term "turnover" refers to the mobility of keratinocytes. It takes days for this process to complete one cycle, and keratinocytes also undergo structural and functional modifications. This layer, also known as the basal cell layer, contains 8% of the water in the epidermis

2. Dermis:-

2.1 Sweat glands:-

The dermis is the inner layer that includes the following:

2.2 Sweat glands:-

produce sweat those travels via sweat ducts to openings in the epidermis called pores. They play a role in temperature regulation.

2.3 Hair Follicles:-

are pits in which hairs grow. Hairs also play a role in temperature regulation.

2.3 Sebaceous glands:-

produce sebum (an oil) to keep hairs free from dust and bacteria. Sebum and sweat make up the 'surface film'.

Most of the dermis is made up of collagen and elastin as well as fibroblasts. This layer has several functions.

1) In the dermis there are blood vessels and the lymphatic vessels that nourish the skin and eliminate waste products or toxins.

2) Sweat glands are present in the dermis. They create sweat through your pores, removing impurities as cool your body.

3. Subcutaneous Tissue:-

The deeper subcutaneous tissue is made of fat and connective tissue.

1)The deepest layer of skin is the layer of fat that connects your bones to your muscles and bones. It goes deep that the active ingredients in your skincare products can never reach.

2) The subcutaneous layer is like a thermostat. It protects the body and can also be used as a source of energy in a pinch.

3) Fat also acts as a filter, protecting your muscles, bones and organs from damage.

4) Finally, the subcutaneous layer contains additional blood vessels, nerve endings, hair follicular roots and the deepest oil-producing sebaceous glands.

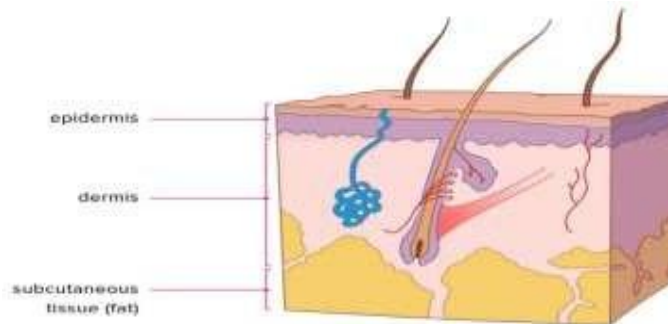


Fig .2 Skin layer

Functions Of Skin:-

The skin of human body has various functions. Some of these are below:

Protection: one of the main functions of the skin protection from invasion by microbes, chemicals, physical agents

Sensory function: free nerve ending on the skin are sensitive to pain, touch, heat and cold, resulting either voluntary or reflex activities.

Excretion: skin excrete sodium chloride in sweat, urea when kidney function is impaired and atomic substance

Regulation of body temperature: regulation of body temperature about 36.9°C with variation of 0.5°C and 0.75°C is one of the important functions of skin

Production: production of vitamin D from the sunlight

4.Objective of the herbal face wash:-

- 1.The primary objective of this project is to formulate A herbal face wash using natural ingredients and evaluate its properties.
2. The face wash is intended to have antioxidant, antibacterial, and antiseptic properties, which are necessary to keep the skin smooth and attractive.
3. It helps to remove dead skin cells that helps new skin cells replace old one.
- 4.It helps to keep skin fresh and healthy.
5. It makes the skin to look radiant.
- 6.The mixture of dead skin cells and excessive oil clog pores, which can lead to acne white heads, blackheads and total weary appearance.

5.Advantages Of Herbal Face Wash:-

1. It helps to remove dead skin cells that helps new skin cells replace old one.
2. It helps to keep skin fresh and healthy.
3. It makes the skin to look radiant.
4. The mixture of dead skin cells and excessive oil clog pores, which can lead to acne white heads, blackheads and total weary appearance. Exfoliating the pores regularly, avoids all the above skin problems.
5. Removing dead skin cells that means your skin will develop wrinkles at a slower pace.
6. Keep the skin hydrated, soft, supple, and youthful looking.
7. Stimulate blood circulation, boosting blood flow to your face for glowing skin.
8. Make the skin younger and help to fight any signs of aging.
9. Help other skin care products penetrate properly into the skin.

Face washes may be used to impart cleansing, anti-wrinkle, anti-acne, moisturising, and skin fairness properties. Skin lightening substances are thought to work by preventing the development of melanin in melanocytes, therefore reducing the amount of melanin, on the metabolism and production of melanin in the skin.

Due to their low toxicity to melanocytes, ingredients that suppress the development of melanin, such as propanediol, evodia rutaecarpa fruit extract, arbutin, kojic acid, and vitamin C and its derivatives, are used in whitening cosmetics."

They are thought to function in at least four different ways, including restoring normalcy, increasing sebum production into pores to prevent obstruction, eliminating the propionibacterium acnes bacteria, having anti-inflammatory properties, and affecting hormone levels. Because of the numerous negative impacts that using synthetic medications has on one's health, natural materials are increasingly being used in product composition.

Although marigold, licorice, and orange peel are among the most potent antioxidants and free radical scavengers, they also have a very favourable effect on acne thanks to their anti-microbial, anti-inflammatory, and anti-oxidant properties. Benzoyl peroxide, antibiotics (topically or orally), retinoids, antiseborrheic drugs, anti-androgen drugs, hormonal therapies, salicylic acid, alpha hydroxyl, azelaic, nicotinamide, and keratolytic soaps are some of the remedies for acne.

6. Forms of Face Wash:-

1. Gel based face wash.
2. Cream based face wash.
3. Liquid based face wash.
4. Face wash in powder form.

Aim: Formulation And Evaluation Of Herbal Face Wash

These Different Types Of Face Wash Available In The Market Include.

Oily skin face wash.

Dry skin face wash.

Normal skin face features of the face wash.

7. Function Of The Face Wash:

Oily skin requires cleansers with herbs and botanicals, which will clean the pores and reduce oil buildup.

It should be stable and have a good appearance.

During application, it should not have an oily or greasy feel.

After the evaporation of water, the cream residue should not become viscous.

It should spread easily without dragging.

8. Properties Of Face Wash:-

It should soften when applied to the skin.

It should be stable and look good appearance.

It should spread easily without dragging.

After evaporation of the water, the creamy residue must not become viscous.

There must be no greasy feeling during application.

Should leave a fine emollient film on the skin after use.

Its physical action should be to flush the skin and open the pores rather than to absorb.

9. Uses Of Face Wash: -

To remove impurities, germs and makeup for every day.

Anti-aging.

It helps other product to penetrate properly into the skin.

For cleansing the skin. Es of face wash:

It helps other product to penetrate properly into the skin.

For cleansing the skin.

Stimulates their generation of the s skin cells and their renewal.

Help to Maintain the Skin's Natural balance ,keeping it Soft ,supple,and Healthy

10. Herbal Drug and Excipient Profile:-

Turmeric Rhizome

Botanical name:- *Curcuma Longa*.

Family:- Zingiberaceae.

Uses:- Antibacterial, antifungal and it protects the skin from Many skin infections and also adds glow to the face Turmeric is also Known to reduce scarring.

Vitamin, enzyme, minerals, sugars, lignin, saponin, salicylic acid and amino acid are the chemical constituents.

The rhizomes are used fresh or boiled in water and dried, after which they are ground into a deep orange-yellow powder commonly Used as a coloring and flavoring agent in many Asian cuisines, especially for curries, as well as for dyeing, characteristics imparted by the principal Turmeric constituent, curcuminin

Properties:-

Turmeric is an amazing ingredient for skin care. It can resolve a number of skin problems, including acne, skin darkening, skin pigmentation, rashes etc. It has been used since ages to boost the health and glow of the skin.

Turmeric works wonderfully for skin brightening and lightening Plus it contains an anti oxidant compound known as curcumin, and curcumin comes with multiple skin benefits. It fights off acne, acne scars, and also reduce skin pigmentation.



Fig .N:-3 Turmeric Rhizome Powder

Aloe Vera

Botanical name:- *Aloe berbadensis* Linn (*Aloe Vera*).

Family: - Liliaceae.

Uses:-It is used as a moisturizing agent.

Recently, the anti-fungal properties of aloe Vera leaves were investigated by Casian.

Aloe Vera is a stemless or very short-stemmed succulent plant growing to 60–100 cm (24–39 in) tall, spreading by offsets.

Vitamins, enzymes, minerals, sugars, lignin, saponin, salicylic acid, and amino acids are chemical constituents. The principal active composition of aloe is aloin Aloe Vera gel improves skin integrity.

Properties:-

The anti inflammatory properties of aloe vera help to reduce redness in acne, burns and even wounds It also enhanced skin cell production and healing properties, speed up the wound and acne scar healing In addition to that, it reduces blistering and itchiness.

Aloe vera has many skin benefits right from making your skin glowy to keeping it soft and supple. With so many of others benefits, its time to include aloe vera face wash in your daily skincare regime.

Here are some of the aloe vera face washes you might consider buying. Aloe vera is a magical plant that is used in such a large number of skin and hair care items. Apart from having medicinal properties, aloe vera is stacked with a lot of nourishing benefits as well.

Aloe has antioxidant properties that prevent skin cell damage. It has a moisturizing effect on dry skin and helps reduce irritation of skin.



Fig .No.4 Aloe Vera gel

Lemon juice

Biological name:- Citrus limon.

Family:- Rutaceae

Uses:- To lighten skin and reduce blemish marks on the skin.

It is also quite effective for treating acne and pimples on face. It acts as an adjuster in cosmetics. Also having good properties to relieve constipation and is the best source of vitamin 'C'.

Properties:-

As a rich source of vitamin C and citric acid, lemons are known for their detoxifying effects, especially when you add a few freshly cut wedges to your drinking water. Because of the health benefits of eating lemons, there is a growing popularity for using lemons as a natural treatment for skin conditions, like age spots and acne.

Some proponents of using lemon on the skin say that the citrus fruit is a natural method of increasing collagen in facial skin. Collagen is a protein that naturally breaks down with age, which can then result in fine lines and wrinkles.

As an antioxidant, vitamin C may help prevent free radicals that can damage collagen, leaving you with smoother skin.

Because of its acidic nature and anti-microbial properties, lemon is said to work wonders in fighting skin breakouts like acne, pimples and blackheads by cleaning dirt and oil from deep within. It further helps in tightening the skin pores to give you a smooth skin.



Fig .No.5 Lemon juice

Neem

Botanical Name: - Azadirachta indica

Family:- Meliaceae

Uses:- Antibacterial, anti-fungal, anti-inflammatory, antiseptic, Antihistamine as well as germ-killing qualities and highly beneficial for oily and acne prone skin. Antihistamine as well as germ-killing qualities.

Treatment On Eczema, Ringworm Infection, scabies, psoriasis.

Constituents are Flavonoids, Alkaloids, Azadirone, Nimbin, Nimbidin, Terpenoid, Steroids.

A moderate sized to fairly large evergreen tree, attaining a height of 12-15m with stout trunk and spreading branches, occurring Throughout the country up to an elevation of 900m. Its fruits and seeds are the source of Neem oil.

Properties:-

Neem is a natural healer, so it can soothe and calm irritated skin.

Neem-containing face washes can help reduce redness and irritation while also leaving skin feeling peaceful.

Neem-based face cleansers have a lot of antimicrobial qualities. This not only clears up acne but also shields skin from aggressors outside that could harm it. In this approach, acne-causing bacteria are both treated and kept from growing



Fig.No.6 Neem

11. Various Additives Used In Face Wash :-

Humectant:- Humectants are substances That have a natural ability to attract and Retain moisture, making them ideal ingredients for face wash products.

By helping to maintain the skin’s natural moisture balance, humectants can help prevent dryness, flakiness, and other common skin issues.

Preservatives:- Preservatives are substances Used to prevent the growth of Microorganisms in various products, such as food, cosmetics, and pharmaceuticals.

Methyl Paraben and propyl paraben are among the Preservatives that can be associated with This potential danger.

Foming agent:- A foaming agent is a substance that is added to a liquid to create a foam or front Foaming agents work by decreasing the surface tension of the liquid, allowing air to be trapped in the mixture, and creating bubbles.

These bubbles then expand and create a foam or froth on the surface of the liquid.

12.Material And Method:-

Raw Herbs Collection Material:-

All crude drugs were collected from Rashtriya Collage of Pharmacy, Hatnoor medicinal Garden and The plant material collected was identified and authenticated by Prof.Waghmare S.U. (HOD) and Prof.Joshi M.M Quality Assurance Rashtriya College of Pharmacy, Hatnoor.

The materials used in the formulation of the Herbal Face Wash is given in the table .

Ingredients Used With Preparation Of Herbal Face Wash:-

| Name Of ingredients | Quantity | Uses |
|---------------------|----------|---------------|
| Turmeric | 1.5gm | Antibacterial |

| | | |
|-----------------|--------|--------------------|
| Aloe vera | 1.25ml | Antioxidant |
| Lemon juice | 0.5ml | Antioxidant |
| Neem | 2.5ml | Anti-inflammatory |
| Methyl paraben | 1.5ml | Preservative |
| Glycerine | 0.5ml | Moisturizing agent |
| Distilled Water | Qs | Vehicle |
| Rose oil | QS | Flavor |

Table no.1

13.Experiment Work /Methodology:-

Take 1.5gm of turmeric powder in a beaker, then in this beaker may be added 1.25ml of aloe vera ,2.5ml of Neem, and rose water of Qs (Quantum satis) then all are mixed for 2 to 3 minutes. The double heat method gives for melting 0.5ml of Glycerine, so give it a span on induction add some water, then small content takes in water and add 0.5ml of Glycerine in the container, and it melts. After melting, add mix. Lemon juice 0.5ml, All the ingredients in the melt and mix them Finally, heat stop and add lavender essential oil to the preparation solution, which will be given in a small container for the face wash. The final face wash is ready, and it is packed in the bottle

14.Evaluation Of Herbal Face Wash:-

| Sr. No | Parameter | Marketed Formulation | Formulated.B |
|--------|-----------------|----------------------|--------------|
| 1 | Colour | Yollowish | Lite Yollow |
| 2 | Consistency | Liquid | Liquid |
| 3 | Wash Ability | Good | Good |
| 4 | pH | 7.6 | 5.6 |
| 5 | Viscosity | 1690cps | 1520cps |
| 6 | Spreadability | 2.16 | 1.15 |
| 7 | Irritation Test | Non Irritant | Non Irritant |

Table no.2

Colour:- Colour of formulation are light yellowish colour while compare with marketed formulation having yellowish colour.

Consistency:- Both are same like liquid

Wash Ability:- The product was applied on hand and showed under running water

pH:- The pH of Formulation is 5.6 and pH of marketed Formulation is 7.6

Viscosity:- Formulation viscosity is 1520cps and marketed viscosity is 1690cps

Spreadability:- Spreadability indicate that the face wash is easily spreadable by small amount of shear. Spreadability y of marketed face wash 2.16 The formulation spreadability is 1.15sec.

II. RESULT AND DISCUSSION

The results of evaluation are displayed in Table no.3 Formulation was Lite Yellow in color, whereas, marketed formulation was yellowish in color. Formulation was found to have liquid consistency. The formulations were found homogenous, easily washable. The formulated face wash has slightly pH(5.6) which is compatible with normal physiology.

| Sr.no | Parameters | Observation |
|-------|---------------|-------------------|
| 1 | Colour | Yollow |
| 2 | Consistency | Liquid |
| 3 | pH | 5.6 |
| 4 | Spreadavility | Easily spreadable |
| 5 | Washability | Good |

| | | |
|---|--------------|---------|
| 6 | Viscosity | 1520cps |
| 7 | Form ability | Good |

Table no.3

III. CONCLUSION

A formulated herbal face wash containing turmeric powder extract, aloe Vera extract, and Neem extract was successfully developed using Glycerine as a Moisturizing agent. The formulation was subjected to various evaluations, including color, consistency, pH, spreadability, washability, and foam ability, which yielded acceptable results. Herbal formulations are more acceptable in the belief that they are safer with fewer side effects than synthetic ones.

REFERENCES

- [1]. Vishal Prajapati¹, Shashikant Maury^{2*}, Dr. Mohd Wasiullah³, Piyush Yadav⁴ Department of Pharmacy, Prasad Institute of Technology, Jaunpur (222001), U.P., India. Associate Professor, Prasad Institute of Technology, Jaunpur (2001), U.P., India. Principal, Department of Pharmacy, Prasad Institute of Technology, Jaunpur (222001), U.P., India. Principal, Department of Pharmacy, Prasad Polytechnic, Jaunpur (222001), U.P., India
- [2]. Khade Swati S¹, Uchale Tushar P², Gosavi Akshata A³, Gunjal Abhishek⁴, Avanti R. Thanage⁵ Students, Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra, India 1,3,4,5 Student, Nandkumar Shinde College of Pharmacy, Vaijapur² Khadeswati276@gmail.com
- [3]. Khandagale Ganesh Sarjerao*¹, Dr. L.D. Hingne*², Prof. T.P. Akhare*³, Aditya Pharmacy College Beed. 431122 Maharashtra, India.
- [4]. Shaikh Arfat Shaikh Nazeer, Rohit Prataprao Patil, Mrunal Anil Patil, 1, 2, and Dr. Uttamrao Mahajan College of B Pharmacy, Chalisgaon, Dist. Jalgaon, 424101
- [5]. Martha Srinivas*¹, Dumpty Supriya*², and Dr. Anoop Singh*¹ Associate Professor, Department of Pharmaceutics, Joginpally B.R. Pharmacology College, Yenkapally (V), Moinabad (M), Hyderabad-Telangana, India.
- [6]. Mr. Tejas L. Takale¹, Mr. Ajay S. Surwase², Mr. Akshay A. Pathade³, Mr. Kunal Hake⁴ 1-3Student, 4 Assistant Professor Mahadev Kanchan College of Pharmaceutical Education and Research Uruli Kanchan Tal-Haveli, Dist. Pune, 412202. Maharashtra, India.
- [7]. Department of Pharmaceutical Sciences, Joginpally B.R. Pharmacology College, Yenkapally (V), Moinabad (M), Hyderabad, Telangana, India. Supervisor, Department of Pharmaceutical Sciences, Bhagwant University, Ajmer, Rajasthan, India.
- [8]. JINCY V. VARGHESE¹, ATHIRA P², SANDRA T. S³, SRUTHI K. B⁴, STELLA JOSE⁵ Assistant Professor, Department of Pharmaceutics, 2345B pharm students, Nehru of Pharmacy, Pampady, Thrissur
- [9]. Shaikh Arfat Shaikh Nazeer¹, Rohit Prataprao Patil², Mrunal Anil Patil³, 1,2,3Dr Uttamrao Mahajan College of B Pharmacy, Chalisgaon Dist. Jalgaon, 424101
- [10]. Fouqiya Butool, C. Rekha, A. Gnaneswar Rao. Clinical Study on Serum Zinc Levels in Patients with Acne Vulgaris. Asian J. Research Chem. 2013; 6 (5): 464-466.
- [11]. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S, "Formulation and Evaluation of Poly-herbal Face wash gel", World Journal of Pharmacy and Pharmaceutical sciences. 2015; 4 (6): 585-588,
- [12]. Singh HP, Samnhotra N, Gullaiya S, Kaur I, "Anti-acne synergistic Herbal face wash gel Formulation, Evaluation, and Stability study", World Journal of Pharmaceutical Research. 2015; 4 (9): 1261-1273.
- [13]. Preparation and evaluation of herbal Anti-Acne gel Article Jun 2013 UPBS Yamini K Yamini T. Onesimus.
- [14]. text book of Industrial pharmacy Jan 20025 R Rani Hiremanth Rani, S. R. and Hiremanth, Text book of Industrial pharmacy, Drug delivery systems & Cosmetics & Herbal drug technology: Universities press (India) Ltd, 2nd Edition, (2002).
- [15]. Cosmetics a practical manual Jan 2005 126-129 Saraf Saraf Sh Saraf S., and Saraf Sh., Cosmetics a practical manual, Pharmamed press, 2nd edition. (2005), 126-129,
- [16]. Kapoor V P. herbal cosmetics for skin and hair care, national botanical research institute 2005; 4(4):306-313

- [17]. 19. P.K.mane herbal face wash gel of cynodont dactylon having antimicrobial, anti-inflammatory action Dr.D.y. Patel Institution of Pharmaceutical Science Research 2020; 3[1]:36-43.
- [18]. P.P. sharma cosmetics-formulation, manufacturing and quality control" by Vandana publication third edition page no. 142
- [19]. Kubo I, Muroi H, Kubo A, "Naturally occurring anti-acne agents", J Nat Prod. 1994; 57 (1): 9-1
- [20]. Sowmya K.V., Darsika C.X., Grace F., Shanmuganathan S., "Formulation & Evaluation of Poly-herbal Face wash gel", World Journal of Pharmacy & Pharmaceutical sciences, 2015; 4(6): 585-588.
- [21]. Singh H.P., Samnhotra N., Gullaiya S., Kaur I, "Anti-acne synergistic Herbal face wash gel Formulation, Evaluation, & Stability study", World Journal of Pharmaceutical Research, 2015; 4(9): 1261-1273.