

# FORMULATION AND EVALUATION OF FACIAL HERBAL SCRUB BY USING SESAME SEED

**Salas Satpute , Vaishnavi Katmande , Prof. Sangram G. Nagargoje**

Student B . Pharmacy final year , Rashtriya College Of Pharmacy , Hatnoor .  
Associate Professor, Rashtriya college of pharmacy Hatnoor , Sambhaji Nagar .

## OBJECTIVE:

To formulate and evaluate facial herbal scrub by using sesame seeds.

## ABSTRACT ;

The growing preference for natural remedies is driven by their perceived safety and fewer side effects compared to synthetic alternatives, resulting in increased global demand for herbal formulations. Among these, herbal cosmetics stand out as a safe option for routine use, offering minimal side effects. Cosmeceuticals, a subset of herbal cosmetics, exert biological effects on the skin. Typically, they contain plant-based ingredients known for their antimicrobial, antioxidant, and anti-aging properties. The current study focuses on formulating and assessing an herbal face scrub. The formulation includes sesame, neem, orange peel, saffron, rose water, carbopol, propylene glycol, magnesium sulfate, GMS powder, stearic acid, sesame oil, triethanolamine, and methylparaben, sodium lauryl sulphate as active ingredients. This product leverages natural ingredients to fight acne, reduce wrinkles, and balance oil production, embodying the principles of herbal or natural cosmetics.

## Key words:

Facial herbal scrub, antioxidant, antibacterial, anti-inflammatory, sesame seeds, orange peels powder, rice powder, tulsi powder, Multipurpose scrub.

## METHODS:

The scrub was prepared by using the that is sesame seeds powder, rice powder, orange peel powder, turmeric, tulsi powder, rose water, vitamin E oil, glycerin. The scrub was prepared by homogenous mixing of all the excipients together. We have develop three batches of our herbal facial scrub, namely F1, F2 and F3. All of the batches were assessed based on various factors, including viscosity, pH, and appearance.

## INTRODUCTION :

The Greek term "kosmtikos," which means to have authority, order, or ability in decorating, is where the English word "cosmetic" originates. As they were developed, the history of man is a continuous tale of the development of beauty care products. The man in 3000 BC used colour for enrichment and to entice (1-3). The man survived attacks from the same monsters that he wanted to pursue by colouring his skin and adorning his body for protection to make

an opponent dread him (whether man or animal). Cosmetic goods are created using herbs with skin beneficial properties. Extracts obtained using a variety of techniques are used to make herbal cosmetics. To get the clear aesthetic benefits, herbal active phytochemicals are added to the products (4-6). A significant arrangement of unending skin health management perfection may be found in the writing, unani, clinical, and medical equipment. A spice should contain properties such as those that are anti-oxidant, relaxing, germicide, emollient, anti-seborrheic, anti-karyolitic, and anti-microorganism. The term "cleaning agent" is frequently used to describe the face wash. Face washes and cleansers clean the face of oil, grime, and pollution. Cleansers are substances that remove excess oil, makeup, and dirt from your skin. Individuals' skin and hair beauty are influenced by their health, lifestyle, regular jobs, climatic conditions, and upkeep (7 8). Pre-Christian Hellenistic era, when historians first made note of the use of plant ingredients in fragrances and cosmetics. Aloe vera gel was a skin treatment lotion utilised by Queen Cleopatra, a symbol for the pinnacle of cosmetics and beauty. "Natural History," contained an intriguing section on fragrances and odour-producing chemicals. In the 16th century, Cornelius Celsus, a Roman physician who lived from B.C. 7 to A.D. 53, talked on the state of skin cleanser. (9-10) Natural cosmetics and herbal cosmetics both have similar definitions. Herbal cosmetics are described as products that have been created using a variety of legal cosmetic ingredients as the base and one or more herbal ingredients to deliver specific cosmetic benefits solely. The natural components of botanicals have no negative effects on human health; instead, they provide the body with nutrients and other beneficial minerals. (11) Because they can function as both cosmetics and medications, herbal cosmetics are in high demand nowadays. Skin care products are a crucial component in boosting people's confidence. Historically, it was believed that women bought more skin care products than men did, but today Situation Men are equally concerned with their appearance.[12] This idea of beauty, attractiveness, and appearance causes a surge in this industry. Because men's skin is texture of the customer's skin.[13] There are many different sorts of cosmetics, and each one affects the skin in a different way. Skin attributable to a number of factors and these can be successfully treated with the application of scrubs. Two different types of scrubs are used on the skin, including face body scrub and scrub. The only difference between these two is how much sugar and oil are put to each. Face scrub uses a lot of oil, which makes it less abrasive It removes dead skin cells from the skin and exfoliates it. Scrub can be applied to any skin type. Only the essential oil utilised as an ingredient in the scrub will change depending on the kind of skin. Skin is divided into three categories, including such as sensitive skin, dry skin, and oily skin.[14] Regular usage of scrubs reveals new skin cells and leaves skin shining and smoother since dead skin cells are removed. One of the essential components in the creation of facial scrubs is a mild abrasive agent. Scrubs can either be applied directly to the skin or with a little cosmetic pad. It is advised to use a gentle motion when applying the scrub gel, which helps to boost oxygen supply to the skin's surface and promote blood circulation.[15]

Cosmetics encompass a wide array of products designed to cleanse, beautify, enhance attractiveness, or alter appearance.[1] Throughout history, various herbs have been utilized for their cleansing and beautifying properties. The facial skin, being a prominent indicator of overall health, receives particular attention. Cosmetics are available in various forms, each designed to fulfill a specific function for the skin. The use of scrubs, for instance, can effectively combat dullness and restore radiance, often impacted by a range of factors.[2] A facial scrub serves as a cosmetic, beauty product, or treatment aimed at cleansing and exfoliating the skin. Scrubs play a crucial role in skin care by removing dirt, dead skin cells, excess oil, blackheads, and whiteheads, thereby enhancing skin appearance and promoting a healthier complexion .

Scrubs are versatile and can be used on any skin type. The essential oils used in scrubs may vary depending on the skin type. With regular use, scrubs contribute to a glowing and smoother complexion by effectively removing dead skin cells, thereby revealing fresher, newer skin cells underneath.[4] For individuals with dry skin, it's essential to opt for facial scrubs containing moisturizing and hydrating ingredients to prevent further dryness and promote skin hydration. Those with sensitive skin should choose gentle scrubs to avoid irritation or adverse reactions. Conversely, individuals with oily skin benefit from exfoliants that help prevent pimples, dullness, and breakouts while also controlling excess oil production.[5] Depending on skin type, it's generally advised to use facial scrubs two to three times a week. However, for beginners, weekly use is recommended to allow the skin to adjust. Individuals with dry or sensitive skin should limit exfoliation to once or twice a week to prevent irritation. Recommended products for acne-prone skin are one containing salicylic acid and a dermatologist-grade 4% glycolic and polyhydroxy acid complex. These components aid in exfoliating the skin and clearing acne, leading to a smoother complexion.[6]

## **BENEFITS OF SKIN EXFOLIATION**

1. Exfoliation:-Scrubbing eliminates dead skin cells from the skin's surface, enhancing cell turnover and unveiling fresher, more youthful skin beneath.
2. Unclogging pores:- Scrubs help to clear out pores, preventing the buildup of dirt, oil, and other impurities that can lead to acne and blackheads.
3. Improves skin texture:- Regular exfoliation with a scrub can lead to smoother, softer skin by sloughing off rough patches and promoting an even skin texture .
4. Enhance absorption:-Scrubs remove the layer of dead skin cells, enhancing the absorption of skincare products and allowing them to penetrate deeper into the skin for improved effectiveness.
5. Stimulates circulation:- Massaging the skin with a scrub promotes blood circulation, which can result in a healthy, radiant complexion .

6. Helps with ingrown hairs:-Scrubbing helps prevent and treat ingrown hairs by eliminating dead skin cells, thereby reducing the chances of hairs getting trapped under the skin's surface

7. Promotes skin radiance:-Regular scrubbing can make the skin appear brighter and more radiant by removing dull, lifeless skin cells and uncovering the natural glow beneath.

8. Prevents signs of aging:-By ensuring that the skin exfoliates, it helps erase fine lines and wrinkles by promoting cell turnover and collagen strength.

### **Ideal Scrub Characteristics :**

It is accepted that a perfect scrub has the following qualities:

- It should be Non toxic
- Possess small gritty particles
- Mild abrasive
- Non irritating
- Non sticky Able to remove dead skin cell

### **Advantages:**

1. Rejuvenation of the skin
2. Deals with flaky skin
3. Removes dead skin
4. Imparts glow to the skin
5. Removes scar

### **Disadvantage:**

Chemicals and hard-scrubbing motions may irritate the skin and result in redness and inflammation. People with delicate skin may experience allergic reactions to the ingredients in synthetic scrubs. Excessive cleaning can leave pores open, exposing skin to both UV radiation and debris. Your skin becomes more vulnerable to infections and tanning as a result.

### **USES OF HERBAL SCRUB**

Exfoliates death skin cell.

Improve the overall texture.






Prevents future breakouts.

Fades away mark.

Prevents ageing.

## MATERIALS USED:

All the materials used in this preparation were purchased from

Common name	Part used	Figure
Sesame	Seeds powder	
Rice	Rice powder	
Turmeric	Turmeric powder	
Orange peel	Orange powder	
Tulsi	Tulsi powder	

local market and botanical garden.

### 1.SESAME SEEDS



SYNONYMS -*Sesamum indicum*

FAMILY - Pedaliaceae. GENUS -*Sesamum*

**BIOLOGICAL SOURCES** - Native to Sub-Saharan Africa and of Indian origin. Sesame plants is often called as **QUEEN OF OIL SEEDS**. Sesame seeds are used in a variety of methods to promote healthy skin, including as a cleanser, moisturiser, sunblock, anti-aging agents, and acne treatments. Sesame seeds offer an instant glow to their naturals while healing dry skin damage. face exfoliants It is renowned for its restorative qualities and for preventing dry, rough skin. Minerals including calcium, magnesium, zinc, iron, and phosphorous are found in vitamin B and vitamin E-rich foods. It is perfect for using skin hair for external purposes.

### **BENEFITS OF SESAME SEEDS**

1. Sesame seeds also have sun protective properties of SPF
2. Sesame seeds have Anti-Fungal properties ,AntiBacterial properties thus keep healthy skin .
3. Sesame seeds improves blood circulation to the skinand also prevent skin cancer
4. Sesame seeds prevent dryness and roughness of skin .
5. Sesame seeds are used in prevention and healing properties .
6. Sesame seeds provides moistures and nourishment to the skin .
7. Sesame seeds are Rich in Vitamin –B and Vitamin-E which contain minerals like calcium magnesium ,zinc iron and phosphorous .
8. Sesame seeds help the skin remain warm and moist .
9. Sesame seeds are rich in Anti-Inflammatory properties ,that are vital in healing.

### **SKIN NOURISHMENT**

Due to its nutritive elements and sun protective propertives its is said to be ideal for the external care of the skin. It is known for its anti – inflammatory ,antibacterial , anti –fungal properties and thus keep the skin healthy form bacterial and fungal infection . It also nourishes the skin and improves blood circulation to the skin surface . The ssame seeds effect is so gentle that it is said to be ideal for massaging the tender skin of babies . Sesame seeds provides moistures and nourishment to the skin .It cure dryness ,roughness ,acne, ,itching,of the skin .

### **TO REVERSE SUN DAMAGE**

Due to its sun protective properties ,it help to soothe sun damage skin and protects the skin from the damage caused by ultraviolet radiation . It protect the skin from dark patches and also protects the youthful properties of the skin .It is said that sesame seed uded to prevent . problem ,including skin cancer .

## 2. RICE



— This Photo by Unknown Author is licensed under CC BY-NC

Synonyms - Grain

FAMILY – Poacean

SPECIES – O.Sativa

KINGDOM- Plantae - Poales Rice flour benefits for skin include being a superb exfoliator in addition to its anti-aging and skin

brightening characteristics. The small particles of crushed rice help scrub away dead skin cells without being too harsh on the skin. This rice absorbs extra oil and is also used to treat acne. in order to effectively cleanse and exfoliate skin without irritating it.used in organic scrubs .

### **Benefits of Rice**

- 1) Uv protection
- 2)Dark Circles
- 3) Exfoliating agent
- 4)Skin whitening
- 5) Wrinkles and pimples.

### 3.TURMERIC POWDER



SYNONYM–Cardamon.

**BIOLOGICAL SOURCES-** Cardamon A common condiment and colouring ingredient is turmeric. Other names for it include "golden spice" and "yellow root." The anti-inflammatory properties of turmeric are demonstrated in a disappearing cream base made with sandalwood and turmeric. Usually, turmeric is combined with water or honey to a It is applied straight to the skin and has a pasty consistency.[17,18,19]

### 4.Orange peel



Synonyms - (Citrus sinensis)

The citrus fruit orange provides a variety of nutrients, including calcium, potassium, magnesium, and vitamin C. It guards against oxidative stress, skin dehydration, and free radical damage. Additionally, it prevents wrinkles, ageing, acne, and blemishes and has an instant glow quality.[20]

## 5. TULSI LEAVES



KINGDOM – Plantae

ORDER – Lamiales

GENUS – Ocimum

SPECIES – *O. Tenuiflorum*

TULSI is QUEEN OF HERBS It is highly effective in protecting our body and prevent by fungal or bacterial infection on face or body . Tulsi works like wonders to give you acne causing bacteria and disinfects the pores . Additionally basil leaves are also helpful in purifying blood that helps get rid of acne as well as as other skin infections Tulsi also aids dark spots and fight against aging ,breakouts scars and dull spots .lighten the skin , reduces the hyperpigmentation and improves the skin complexion .

### Benefits of tulsi leaves

- 1) Tulsi leaves are used to treat skin problems like acne, blackheads and premature ageing.
- 2) Tulsi is used to treat insect bites.

## 6. Vitamin E Capsule



Synonyms - Tocopherol

Biological sources -Vegetable oil Vitamin E is a nutrient your body needs to support your immune system and help your cells to regenerate. It also has antioxidant and antiinflammatory properties that make getting enough essential to your everyday health Vitamin E is most commonly known for its benefits for skin health and appearance. It can be applied topically to your face to reduce inflammation and make your skin look younger. Vitamin E oil can be used on your face as an overnight anti-aging treatment. Since vitamin E has a thick consistency, it's best to apply it before bed so that it can fully absorb. Typically, you can apply a serum or oil mixture containing vitamin E as an all-over treatment on your face. This is different than using vitamin E to spot-treat a blemish, using a beauty treatment mask for a cream and apply it all over your pre-washed face. It acts as a serum and provides enough moisture to your face during nightbrief period of time, or taking an oral supplement that contains vitamin E .Vitamin E capsules Known for its moisturizing properties, Vitamin E capsules can work as great overnight creams. You can mix a few drops of Vitamin E oil with a drop of your regular night cream and apply it all over your pre-washed face. It acts as a serum and provides enough moisture to your face during night.

## 7. ROSE WATER



This Photo by Unknown Author is licensed under [CC BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/)

SYNONYM – Odoriferous BIOLOGICAL SOURCES – rosepetals Rose water is used in soothes skin irritation ,Reduces skin redness It contain antioxidants ,helps to prevent and treat infection . You could uses it with tea tree oil to help with an itching scalp .Roses oil moistures your skin and soft them add glow and shine Rose water is also good sources of vitamin C and lycopene which have anti oxidant activity .

ROSE WATER: GLYCERIN: Vitamin E Oil: The QUEEN OF HERBS is TULSI. It is quite good at shielding our bodies from infection . by bacteria or fungi on the face or body. Tulsi is a miracle worker when it comes to killing acne-causing bacteria and cleaning the pores. Additionally, basil leaves are advantageous for cleansing blood, which aids in the treatment of acne and other skin problems. Tulsi also helps with dull spots, black spots, and the battle against ageing.Lightening the skin, reducing hyperpigmentation, and enhancing skin tone. Rose water is used for a variety of things, including calming skin irritability, soothing sore

throats, reducing skin redness, assisting in the prevention and treatment of infections, containing antioxidants, enhancing mood, calming headaches, and soothing stomach issues.[21] According to reports, glycerin serves as a denaturant, fragrance component, hair conditioner, humectant, oral care agent, oral health-care medicine, skin protectant, skin conditioner—humectant, and viscosity-decreasing agent in cosmetics.[22] Vitamin E oil may have various benefits for the skin, especially in people with dry or itchy skin, and eczema. It may also prevent wrinkles, heal, wounds, and make scars less visible. Vitamin E oil is obtained from vitamin E and can be used topically or as an ingredient in creams, lotions, and gels.. Vitamin E is a group of fat -soluble vitamins effect. Antioxidants fight free radicals which are electrons that have been linked to a wide range of health conditions, from cancer to premature aging. Many supporters of vitamin E oil argue that it is potent antioxidant, but research on its benefits is mixed.

## **MATERIAL AND METHODS: METHODS OF COLLECTION OF CRUDES DRUGS:**

### **1. Collection of Sesame seeds**

We gathered sesame seeds from the botanical garden. These seeds were given a two-day soak in water before being crushed and put through a sieve

### **2. Collection of Rice powder**

After being soaked in water for two to three days, the rice was crushed, squeezed, and passed through sieve number 60.

### **3. Collection of tulsi leaves**

Powder We gathered fresh tulsi leaves from the botanical gardens. They took three to five days to dry out in the shade. then carefully ground to create powder Flow through sieve number.60

### **4. Collection of orange peel powder**

1. Peel your oranges and reserve the skins.
2. Dehydrate the orange peels in the sun or alternatively in a dehydrator for up to 24 hours.
3. Place the dehydrate orange peels in blender and combine until they become a fine powder.
4. Store in the fridge until you are ready to use.
5. Others ingredients like turmeric , vitamin E oil were collected from local market. Sesame powder 10gm, rice powder 10gm, orange peel powder 5gm, tulsi powder 5gm, turmeric powder 5gm, mix all the ingredients in Rose water Add measured quantity of powdered herbs in its vitamin E oil as a preservatives and also add glycerin by drop wise.. All the ingredients were mixed vigorously using spatula for 40-60 mins.

## Preparation of herbal facial scrub For the preparation of herbal scrub

For the preparation of herbal scrub , I have selected important ingredients such as Sesame seeds ,Turmeric, Rice powder, Orange peel powder, Tulsi, Rose water were collected from local market and other botanical garden. We have to take each ingredients and convert in to the fine powder .The conversion of fine powder is done by the help of grinder .With the help of sieves we have to separate out the particles of the same size each herbal ingredients.

### EVALUATION TEST

To evaluate the quality of prepared formulation , several quality test were performed .

- 1 . Colour – the colour of the face scrub was check by visually .
2. Odour – the formulation was evaluated for its odour by smelling it
3. Consistency – It was determined manually
4. pH – pH of solution was formulated measured by using a calibrating digital pH meter at constant temperature .
5. Washability – Formulation were applied on the skin easily remove by washing with water were checked manually
6. Spreadability – The spread ability of the gel was found manually by applying on the skin with the hand or face gently rub which easily spread through the face

### RESULT AND DISCUSSION:

#### Physical observation

The scrub was observed for the color, order,texture

Sr no	Parameter	F1	F2	F3
1	Colour	Yellowish Green	Yellowish Green	Yellowish Green
2	Odour	Pleasant	Pleasant	Pleasant
3	Texture	Gritty	Gritty	Gritty

Table:-2 Physical observation

#### Wash-ability observation

The scrub was applied on the hand and observed under the running are observed as

SN	Formulation	Wash ability
01	F1	Easy washable
02	F2	Easy washable
03	F3	Easy washable

Table:-3 Wash-ability observation

**Ph observation :**

The pH meter was calibrated using standard buffer solution. About 0.5gm of cream was weighed and dissolved in 50ml of distilled water and its PH was measured using digital PH meter its result as listed below

SN	Formulation	Ph
01	F1	6
02	F2	7
03	F3	7.2

Table:-4 PH Observation

Spread ability observation:

The spreadability test observed as

SN	Formulation	Spread ability
01	F1	Easily spreadable
02	F2	Easily spreadable
03	F3	Easily spreadable

Table :- 5 Spread ability observation

**Irritability observation**

Through the visual assessment and test, Irritability was observed as

SN	Formulation	Irritability
01	F1	Non - irritability
02	F2	Non - irritability
03	F3	Non - irritability

Table:-6 Irritability observation

**RESULT :**

All the three formulations F1, F2 and F3 showed good appearance, PH, adequate viscosity, was observed. Additionally, during the irritancy study, the formulations F1, F2, and F3 did not cause redness, erythema, or irritation, and they were simple to wash. All the three formulations F1, F2, F3 were stable at room temperature .

## CONCLUSION

The scrub was made using a variety of powdered, crude medications, and it was evaluated using a number of different parameters. Its formulation has good consistency, superior results, and no negative effects. The results of the investigation indicate that the developed herbal formulation produced positive outcomes. Above the mentioned we are made three formulations when used or applied three formulation we are observed F1 formulations are better result than other F2 and F3 formulations.

## REFERENCES 1.

1. Hughes, G.R., J.Soc. Cosmet. Chem., 1959, X, 159.
2. Encyclopaedia. Britannica, 14th Edn; 1929.
3. Kapoor.V.P., Herbal Cosmetics for Skin and Hair Care, Natural Product Radiance, p 306-314
4. Mamillapalli V., et al. "Formulation, Phytochemical, Physical, Biological Evaluation of Polyherbal Vanishing Cream, and Facewash". Research Journal of Pharmaceutical Dosage Forms and Technology 12 (2020): 139-149.
5. Priyan S., et al. "Algal polysaccharides: Potential bioactive substances for cosmeceutical applications". Critical Reviews in Biotechnology 2.39 (2019): 99-113.
6. Yadav R., et al.
7. Wall.F.E., Balsam M.S., Sagarin.E., (eds), Cosmetics: Science and Technology. Jhon Wiley and Sons, Chichester, 1974.
8. Robert Brown. The Natural way in cosmetics and skin care. Chemical market reporter. Issue: July 13, 1998 available in (<http://ask.elibrary.com.html>).
9. Robert Baran, Howard I Maibach, TextBook of Cosmetics Dermatology, Taylor and Francis Publishers, 2005, 3rd Edn, p 50-51.
10. Issue of natural Foods merchandiser, 211
11. Asada K, Ohara T, Muroyama K, Yamamoto, Murosaki S. Effects of hot water ex-tract of Curcuma longa on human epidermal keratinocytes in vitro and skin conditions in healthy participants: A randomized, double-blind, placebocontrolled trial. J Cos-met Dermatol, 2019;18(6):1866- 1874.
12. Chanchaal, D, S.Swarnlata, Novel approaches in herbal cosmetics. J. Cosmet. Dermatol, 2008; 7: 89-95.
13. Kumar, A., S. Barboota, S.P. Agarwal, J.Ali, A.Ahuja, Treatment of acne with special emphasis on herbal remedies expert. Rev. Dermatol., 2008; 3: 111-122.

14. Garg, A., Agarwal, D. and Garg, S. Spreading of semisolid formulation. Pharm Tech., 2002; 9: 89-105.
15. Harish N. M., Prabhakara Prabhu, and Subrahmanyam E. V. S. Formulation and evaluation of in situ gels containing clotrimazole for oral candidiasis. Indian J Pharm Sci., 2009; 71(4): 421-427. © 2023 IJNRD | Volume 8, Issue 6 June 2023 | ISSN: 2456-4184 | IJNRD.ORG
16. Chein, Y.W., Transdermal Drug Delivery, in: Swarbick J. editor, Novel Drug Delivery Systems, second edition, New York: Marcel Dekker, 2005; 1: 301-380.
17. Sakshi Ecavade : 21 Mind -Blowing Benefits of Fenugreek Seeds for Skin, Hair and Health, April 19,2022
18. <https://www.mapsofindia.com/my-india/india/21-mind-blowing-benefits-of-fenugreek-seeds-for-skin-hair-and-health>
19. Kate MacDonnell: 9 Coffee Benefits for Skin & Hair, Feb 25,2022
20. Mary P. Lupo. Antioxidants and Vitamins in Cosmetics. Clin Dermatol 2001; 19: 467–473.
21. Mane P.K : Formulation and Evaluation Of Peel-Off Gel Formulation Containing Fenugreek , Pharmaceutical Resonance 2021;3(2)
22. E.R.H.S.S Ediriweera, N.Y.S Premarathna : Medicinal and cosmetic uses of Bees Honey-A Review, AYU 2012;33(2):178-182 International Journal of Novel Research and Development ([www.ijnr.org](http://www.ijnr.org))
20. Rhode DL. The beauty bias: The injustice of appearance in life and law. Oxford University Press; 2010 May 6.
21. Rosen M. Delivery system handbook for personal care and cosmetic products: technology, applications and formulations. William Andrew; 2005 Sep 23.
22. Devi M, Thalkari AB, Thorat VM. Overview of Herbal Cosmetics. Research Journal of Topical and Cosmetic Sciences. 2022;13(1):27-34.
23. Keller E. Aromatherapy Handbook for Beauty, Hair, and Skin Care. Inner Traditions/Bear & Co; 1999.
24. Goodman G. Cleansing and moisturizing in acne patients. American journal of clinical dermatology.

#### Copyright & License:

© Authors retain the copyright of this article. This work is published under the Creative Commons Attribution 4.0 International License (CC BY 4.0), permitting unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.