

Formulation and Evaluation of Herbal Cream

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Abstract

Herbal face cream is used to treat acne and pimples. Containing rich plant-based ingredients, herbal face cream removes excess oil without removing nutrients the skin. This formulation containing beetroot, lavender oil, Shea butter, Raspberry seed oil and rose oil this ingredient have their own special benefits for oily skin. Experimental work for making this formulation used ingredients are collected and making their extraction with various extraction methods. Prepared formulation was evaluated for various parameters like pH, consistency, viscosity, spread ability.

Result : Table were evaluated for pH, viscosity, color, odor, spread ability, wash ability, etc. The herbal containing face cream is more better than the synthetic that contain chemical with less side effects. Conclusion from this formulation study it is concluded that herbs contains like beetroot, lavender oil, Shea butter, Raspberry seed oil and rose oil that are more suitable than synthetic face cream with less side effects.

CHAPTER:1 INTRODUCTION

Pharmaceutical Technology

Pharmaceutical technology refers to the application of scientific and engineering principles in the development, manufacturing, and formulation of pharmaceutical products. It encompasses various processes and techniques used to design, produce, and deliver medications to patients.

The field of pharmaceutical technology plays a crucial role in the development of safe and effective drugs. It involves the integration of various disciplines such as pharmacy, chemistry, biochemistry, microbiology, and engineering. Pharmaceutical technologists are responsible for translating drug discovery research into tangible products that can be used for diagnosis, treatment, and prevention of diseases.

Here are some key areas and concepts within pharmaceutical technology:

- 1. Drug Discovery and Development:** This involves the identification and development of new drug candidates. It includes target identification, lead generation, lead optimization, and preclinical testing before advancing to clinical trials.
- 2. Formulation Development:** Formulation scientists work on developing the optimal composition and dosage form of a drug, considering factors like stability, bioavailability, and patient compliance. They determine the best route of administration (e.g., oral, injectable, topical) and develop dosage forms such as tablets, capsules, creams, or inhalers.
- 3. Drug Delivery systems:** Pharmaceuticals technology focuses on designing delivery systems that control the release of drugs in body, ensuring optimal therapeutic effects. These systems can include

nanoparticles, implants, transdermal patches, and controlled- release formulations.

4. **Manufacturing and Quality Control:** Pharmaceutical technologists oversee the manufacturing processes to ensure consistent and high-quality production of drugs. They develop efficient manufacturing methods and employ quality control techniques to monitor drug purity, potency, and safety.
5. **Regulatory Compliance:** Pharmaceutical technology operates within a framework of regulations and guidelines to ensure the safety, efficacy, and quality of pharmaceutical products. Technologists need to be knowledgeable about regulatory requirements and engage in activities such as documentation, validation, and compliance with good manufacturing practices (GMP) and good laboratory practices (GLP).
6. **Biopharmaceutics:** This area focuses on understanding how drugs are absorbed, distributed, metabolized, and excreted in the body. Factors like drug solubility, permeability, and bioavailability are considered to optimize drug formulation and delivery.
7. **Pharmaceutical Analysis:** Analytical techniques are employed to characterize and quantify drugs and their components. These techniques include chromatography, spectroscopy, and various chemical and physical tests to ensure the quality and purity of pharmaceutical products.

Pharmaceutical technology is a dynamic field that constantly evolves with advancements in science and technology. Its primary goal is to improve patient care by developing innovative drug formulations, enhancing drug delivery systems, and maintaining stringent quality standards throughout the drug development and manufacturing process²⁻⁵.

THE SKIN⁶

INTRODUCTION OF SKIN

The skin is the largest organ of the body.

The skin protects us from microbes and the elements, helps regulate body temperature, and permits the sensations of touch, heat, and cold.

Types of skin:

- 1) Normal skin:
 - No acne problem
 - Neither too dry nor extra oily
 - Not sensitive
- 2) Oily skin:
 - Presence of blackheads
 - Acne
 - Pimples
- 3) Acne-prone skin:

Regular outbreaks of acne. Appearance of more whiteheads.

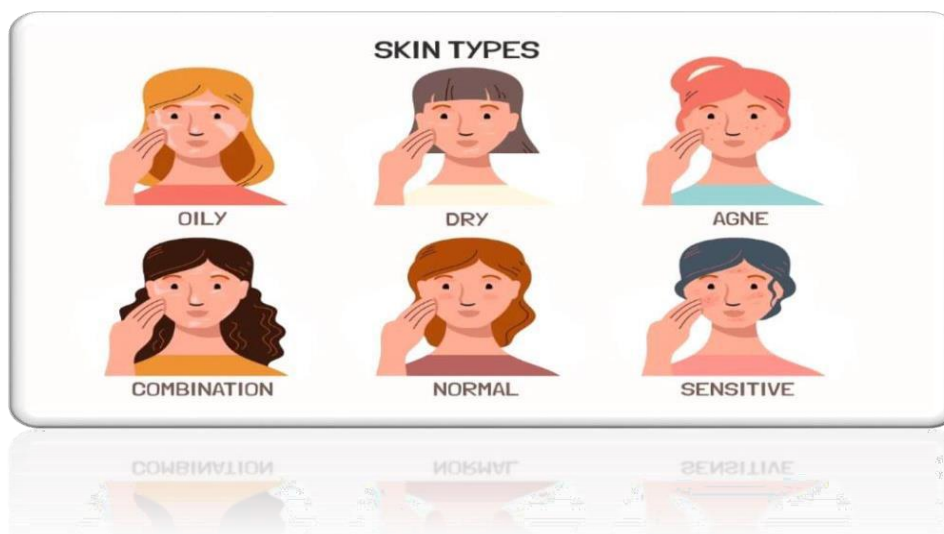


Fig.1: Skin types

Herbal Cream is used to treat acne and pimples. Containing rich plant-based ingredients like Beetroot, Lavender oil which are used to prevent the acne and pimple problems.

CAUSES OF ACNE:

Everybody wants to get fair and charming skin. Now a day, Acne, black head, pimples, dark circle are common among youngsters and person who suffers from it. According to Ayurveda, Skin problems are normally due to impurities in blood. Accumulated toxins in the blood during improper food and lifestyle are causing skin related diseases. Various herbs, medicines are described in Ayurveda for blood purification. Herbs like Manjistha, green tea leaf, aloe Vera gel, rose water are good example of blood purifier!!!

The skin is the largest organ of the body, accounting for 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. The skin is continuous, with the mucous membranes lining the body's surface. To keep skin healthy, clear and glossy, a balanced nutrition is required. Apart from the balanced nutrition, hormonal changes especially during the puberty in both sexes cause many changes in the body. Among various changes, Acne vulgaris is the most common. Acne vulgaris is a common skin condition with substantial cutaneous and psychologic disease burden. The pathogenesis of acne is a result of multifaceted processes within the pilosebaceous unit resulting in bacterial overgrowth and inflammation. This condition typically develops at the time of the pubertal transition when changes in the body's hormonal milieu alter pilosebaceous gland function.

CREAM:

Creams are the topical preparations which can be applied on the skin. Creams are defined as "viscous liquid or semi-solid emulsions of either the oil-in-water or water-in-oil type" dosage forms which consistency varies by oil and water. Creams are used for cosmetic purposes such as cleansing, beautifying, improving appearances. protective or for therapeutic function. These topical formulations are used for the localized effect for the delivery of the drug into the underlying layer of the skin or the mucous membrane. These

products are designed to be used topically for the better site specific delivery of the drug into the skin for skin disorders.

Creams are considered as a pharmaceutical product as they are prepared based on techniques developed in the pharmaceutical industry; unmedicated and medicated creams are highly used for the treatment of various skin conditions or dermatoses. Creams can be ayurvedic, herbal or allopathic which are used by people according to their needs for their skin conditions. They contain one or more drugs substances dissolved or dispersed in a suitable base. Creams may be classified as o/w or w/o type of emulsion on the basis of phases. The term 'cream' has been traditionally applied to semisolid formulated as either water-in-oil (e.g.: cold cream)⁸.

Types of skin creams:

They are divided into two types:

- Oil-in-Water (O/W) creams which are composed of small droplets of oil dispersed in a continuous phase, and an emulsion in which the oil is dispersed as droplets throughout the aqueous phase is termed an oil-in-water (O/W) emulsion.
- Water-in-Oil (W/O) creams which are composed of small droplets of water dispersed in a continuous oily phase. When water is the dispersed phase and an oil the dispersion medium, the emulsion is of the water-in-oil (W/O) type.

HERBAL CREAM

The Herbal Approach for a proper skincare will be generally based on three steps:

- Cleanse
- Nourish
- Moisture

Whatever the skin type this following three essential steps which are responsible for external care of the skin and provide constant protection from effects such as like stress environment and skin natural process of cell degradation decay.

In order to help the skin look young and radiant.

Epidermal stimulation to achieve new cell growth

- Improve capillary blood flow

Penetrating moisture and nutrients to replenish all layers of skin. Antioxidant properties for cellular reservation and repair¹⁰.

Marketed available formulation of Herbal cream:

- **Earthuevedic Anti-Acne Cream:**



Fig.2: Earthuevedic Anti acne cream

Ingredients
Neem Cardamom Aloevera Turmeric Cinnamon

- **Khadi Herbal Cream:**



Fig.3: Khadi Herbal Cream

Ingredients
Sunflower oil Neem oil <u>Aloevera Ext</u> Olive oil Almond oil

- **Skin Tatva Herbal Cream:**



Fig.4: Skin Tatva Herbal Cream

Ingredients
Turmeric
Amla
<u>Licarise</u>

- **Oshea Herbal Cream :**



Fig.5: Oshea Herbal Cream

Ingredients
Turmeric
Cinnamon
Neem

- **Sruthi Neem Cream:**



Fig.6: Sruthi Neem Cream

Ingredients
Neem Extract

CHAPTER 2: REVIEW OF LITERATURE

**Anton Slavov¹, Vasil Karagyozev², Petko Denev³, Maria Kratchanova³ and Christo Kratchanov³,
Antioxidant Activity of Red Beet Juices Obtained after Microwave and Thermal Pretreatments¹².**

Beetroot

Beets contain a significant amount of vitamin A and C and also calcium, iron, phosphorus, potassium, protein and carbohydrates. Beets are also high in folate, dietary fiber and antioxidants. They are high in betaine which is prescribed to lower toxic levels of homocysteine. The highest level of vitamins and other nutrients are available when the vegetables are eaten raw. The beets green are high in vitamin A. The beet remains flavourful, tender and juicy even when the root is large. Some have a slightly clove-like aroma and are sweet. One of the many beetroot benefits for skin include reducing pigmentation and blemishes thanks to the vitamin C in it. It also helps even out the skin tone and moisturizes the skin, keeping it soft and supple. As Beetroots contain vitamin C, many people believe that it can help you treat pigmentation. Many studies have found that the vitamin C found in beetroot can help decrease melanin formation and treat hyperpigmentation. Beetroot can help replenish the dead skin cells as it has potassium & vitamin C in it. It also stimulates the blood flow in the body. Regularly applying beetroot juice can help you eliminate dark circles under your eyes caused by stress which is a very common problem.

Ispiryan, Audronė & Viškelis, Jonas & Viskelis, Pranas. (2021). Red Raspberry (Rubusidaeus L.)

Seed Oil: A Review. Plants¹³.

Raspberry Seed oil

Research has demonstrated that people with higher levels of antioxidants have fewer and less pronounced wrinkles than those with low levels. This oil is of particular interest to medical experts (and us natural product enthusiasts) because it naturally contains sun protective compounds in addition to its beneficial antioxidants.

Raspberry seed oil is a very lightweight gentle moisturizing solution. Unlike other emollients, it does not clog pores and encourages natural water retention in the cells. This keeps them looking full, giving a more youthful appearance and reduces the appearance of fine lines and wrinkles. RSO is also noncomedogenic, meaning it will not clog your pores. Use it to moisture your face without blocking your pores. Additionally, raspberry oil's sunprotective qualities offer added benefit to people looking for a mild, non-irritating moisturizer with a sun protection factor (SPF).

Raspberries contain antimicrobial properties that are powerful enough to stop the growth of harmful bacteria such strains such as salmonella and E. coli (Escherichia coli). Although there is no substitute for proper oral hygiene, raspberry seed oil might be beneficial in destroying harmful bacteria found in the mouth. It might also assist in healing painful and inflamed gums that have been irritated by the plaque deposits. RSO can also moisturize and soften the skin as well as reduce skin irritations such as itching, swelling and redness.

RSO is gaining increasing attention by cosmetics industry. It is used as an ingredient in body and face moisturizers because of its high concentrations of Vitamins A and E. These vitamins are essential for the maintenance and repair of skin cells. The oil works by creating a lipid barrier that stops skin from losing natural moisture. Retaining moisture helps to keep skin cells looking young and full. Raspberry oil can be used as a base for makeup applications. It adds adding hydration, sun protection and nourishing vitamins.

The primary factors that contribute to premature aging of the skin include UV from the sun, illness, smoking and drinking. Raspberry seed oil is packed with carotenoids a plant derived source of Vitamins A and E. These compounds are widely used in many anti-aging skin care products to help promote youthful skin. Vitamin A is a popular antioxidant and ingredient in anti-aging skincare products because it adds moisture, reduces the appearance of wrinkles and smooth skin texture. Vitamin E is another highly praised antioxidant in the anti-aging industry. It helps to protect cells from oxidative damage and assists with maintaining collagen structure.

Oomah et al. reports that RSO can be used as a broad-spectrum UV protectant and provide protection against both UV-A and UV-B. However, not many other SPF tests on raspberry seed oil have been made, but the interest in RSO has accelerated. Meanwhile, a very recent research by Ácsová et al. in 2021 has revealed that the oil may not be as effective as concluded in Oomah et al. research. In the latest study SPF values of the RSO in vitro was 0.4, in vivo 26, and it is significantly lower than the values reported in the controversial studies. Ácsová et al. showed that the overestimated SPF values of RSO was determined by authors who did not strictly followed Mansur's original methodology.

It is sure that RSO can make a great addition to an organic product because of its abundant amount of antioxidants, including Vitamin E, which helps to block free radicals. Not to mention plenty of the incredibly beneficial micronutrients called polyphenols. Therefore, with the growing demand for natural sunscreen products, it would be useful to conduct in-depth research to substantiate or refute one or

another author.

Alander, J., 2004, Shea butter-a multifungle ingredients for food and cosmetics, Lipid Technology¹⁴.

Shea butter:

Shea butter is fat that's extracted from the nuts of the shea tree. It's solid at warm temperatures and has an off-white or ivory color. Shea trees are native to West Africa, and most shea butter still comes from that region.

Shea butter has been used as a cosmetic ingredient for centuries. Its high concentration of vitamins and fatty acids combined with its easy-to-spread consistency — make it a great product for smoothing, soothing, and conditioning your skin. Shea butter is technically a tree nut product. But unlike most tree nut products, it's very low in the proteins that can trigger allergies. In fact, there's no medical literature documenting an allergy to topical shea butter. Shea butter doesn't contain chemical irritants known to dry out skin, and it doesn't clog pores. It's appropriate for nearly any skin type. Shea butter is typically used for its moisturizing effects. These benefits are tied to shea's fatty acid content, including linoleic, oleic, stearic, and palmitic acids. Shea butter comes from the nuts of karité trees that grow in the Sahel region extending from West to East Africa, from Guinea and Senegal to Uganda and South Sudan.

Navindgikar, Nikhil & Kamalapurkar, K. & Chavan, Prashant. (2020). Formulation And Evaluation Of Multipurpose Herbal Cream¹⁵.

Rose oil:

Rose essential oil contains a complex array of vitamins, minerals and antioxidants with smoothing and moisturizing properties. Rose Oil can be used to lighten the skin. It improves the skin tone and brightens the complexion. It also helps reduce blemishes, acne scars, and dark spots. Rose oil is a natural astringent and helps to tone and tighten the skin. This is perfect for those with oily skin, as it will help to reduce sebum production, a leading cause of acne. Along with rose oil, our vegan skin care professionals utilize aloe, witch hazel, and arnica for our pH balancing toner to even skin tone and minimize pores. If you have acne, you might be tempted to reach for acne treatments, which can be extremely drying and irritating. As mentioned, rose oil has antiseptic and astringent properties, which makes it a more gentle way of fighting the bacteria that cause acne. Our clean skincare experts are dedicated to designing the best rose oil for face moisturizers and gentle face cleansers to combat acne.

L.V Vigneshwaran et al formulation and evaluation of herbal face cream with green tea extract department of pharmaceutics sreeabirami College of Pharmacy, 2022, pp3¹⁶.

Lavender Oil:

Lavender oil increases the activity of antiseptic agents such as octenidine dihydro chloride against methicillin-resistant strains of *S. Aureus*.

Lavender oil is an essential oil derived from the lavender plant. It can be taken orally, applied to the skin. Lavender oil works to kill bacteria, and this can prevent and heal acne breakouts. It unclogs pores and reduces inflammation when you put it on your skin.

To use lavender oil for acne, dilute it in coconut oil or another carrier oil and apply it to your skin after

washing your face.

CHAPTER 3

AIM AND OBJECTIVE

Aim:

The aim of the study is Formulation and Evaluation of the Herbal Cream.

The main goal is to make more effective herbal cream compare to another Products.

Objective:

To formulate and evaluate herbal cream using Beetroot, Raspberry seed oil, Lavender oil, Shea butter to give beneficial effects.

To set formula for herbal cream by using different herbs. To formulate herbal cream by using proper procedure .

To evaluate formulated product by using different tests like , PH test, Spreadability ,color, odor, state, consistency etc.

Benefits:

Different parts of the plant and plant extracts are used in herbal products. Natural cosmetics are suitable for all skin types.

They do not provide allergy reaction. It is used to control the acne problems.

It provide Anti-Microbial effect and Anti-Bacterial effect. It is used for Natural Glow.

CHAPTER 4: HERBAL INGREDIENTS PROFILE

(1) Beetroot¹⁷:

Fig.7: Beetroot

Kingdom : Plantae

Bionomical Name : Sea Beet

Family: Amaranthaceae

Genus: Beta

Synonyms : Beta vulgaris **Species:** B. Vulgaris **Morphological Characteristics:**

Beetroot is a order of member of the order of the chenopodeaceae: large root size and high sugar content. It origin form the sea beet.

Benefits :

- Hydrates and moisturizes skin
- Helps fight acne
- Helps reduce pigmentation
- Soothes redness and irritation
- Protects skin against UV damage

(2) Lavender oil¹⁸:

Fig.8: Lavender oil

Kingdom: Plantae

Family: Lamiebceae

Synonyms : Balasam, ambergris, attar, flaxcltive mask magrrh.

Division: Clude – Asterids

Order: Lamiales

Genus: Lavandaloo L.
Species: Lavandalangastifolia and lavandulahybrida

Morphological Characteristics:

Gray-Green leaves are simple , narrow and elongated in most cultivated species although some have harder to other or serrated leaves.

Benefits:

- Lavender Oil For Acne. Lavender oil is one of the best essential oils to treat acne,boils.
- Soothes Eczema & Dry Skin Conditions. According to The Illustrated Encyclopedia of
- Anti-inflammatory Properties. Lavender oil has anti-inflammatory and analgesic properties, ...
- Antifungal Properties.
- Glowing skin thanks to the anti-inflammatory properties, lavender oil known forevening out skin tone and adding a natural glow to the skin.
- It heals Acne, wound healing , heals sunburns, insort Repellant reduces Anxiety.

(3) Raspberry seed oil¹⁹:

Fig.9: Raspberry seed oil

Kingdom: Plantae Family: Rosaceae

Synonyms : Other common name as incase wild black raspberry , black caps raspberry ,Thimble berry and Scotch Caps Genus: Rubus

Species: Rubusideus l

Morphological Characteristics: Raspberry seed oil is a deeper, slightly roseyellow color with hints of green. It has Anti-inflammatory , Anti-aging , Anti-oxidants.

Benefits:

The oil works by creating a lipid barrier that stops the skin from using moisture.

Chapter : 5 MATERIALS & METHODS

- **Collection of Materials:**

Table no 1: Collections of materials

1	Beetroot	Beetroot was collected from the Kakanpur chokdi.
2	Lavender oil	Lavender oil was collected from the chemistry lab of B-pharmacy college Rampura, Kakanpur.
3	Raspberry Seed oil	Raspberry seed oil was collected from Amazon onlinesite.
4.	Rose Oil	Rose oil was collected from the chemistry lab of B-pharmacy college Rampura, Kakanpur.
5.	Shea Butter	Shea Butter was collected from Amazon online site.

- **Compounds of Herbal Cream Formulation:**

Table no 2: Compounds of Herbal Cream Formulation

Sr. No	Ingredients	Roles
1.	Beetroot	Anti-acne
2.	Lavender oil	Anti-Bacterial
3.	Raspberry Seed Oil	Anti-aging

4.	Rose Oil	As a Fragrance
5.	Shea Butter	Smoothing agent
6.	Beeswax	Emulsifying agent
7.	Methyl Paraben	Preservative
8.	Liquid Paraben	Lubricating agent
9.	Borax	Emulsifying agent

• **Composition of Herbal Cream Base:**

Table no 3: Composition of Herbal Cream Base

Srno	Name of Ingredients	F1	F2	F3	F4
1	Beetroot Powder	-	-	0.3 gm	1 gm
2	Beetroot juice	1.5 ml	1.5 ml	2 ml	1.5 ml
3	Raspberry seedoil	1 ml	1 ml	1 ml	0.5 ml
4	Shea Butter	1.2 gm	1.2 gm	1.2 gm	1.2 gm
5	Rose oil	1.2 ml	1 ml	1.2 ml	0.5 ml
6	Lavender oil	1.2 ml	1.2 ml	1.2 ml	0.5 ml
7	Beeswax	3.6 gm	3.6 gm	3.6 gm	4 gm
8	Methyl Paraben	0.3 gm	0.3 gm	0.3 gm	0.3 gm
9	Water	As Req	As Req	As Req	As Req
10	Liquidparaben	10 ml	10 ml	10ml	10ml
11	Borax	0.2 gm	0.2 gm	0.2 gm	1 gm

Preparation of Herbal Cream:

Step 1 Heat liquid paraffin & Beeswax in a borosilicate glass beaker at 75 C and maintain the heating temp. (Oil Phase)

Step 1 Heat liquid paraffin & Beeswax in a borosilicate glass beaker at 75 C

and maintain the heating temp. (Oil Phase)



Step 2 Another beaker add borax, methyl paraben in distilled water.

and to get a clear solution. (Aqueous phase)



Step 3 Then slowly add aqueous phase in to oil phase.





Step 4 Then add a measured amount of Beetroot, lavender oil, rose oil, raspberry oil, Shea butter and stir vigorously until it forms a smooth cream



Step 5 It's give a smooth texture to the cream and to mix all the ingredients properly.



Step 6 This method Are know as the slab technique all extemporaneous method of preparation of cream.

CHAPTER 6: EVALUATION OF HERBAL CREAM:

1) Physical Evaluation:

- In this test the cream was observed for color, odour, texture state.



Fig. 10: Physical Evaluation

2) Spreadability:



Fig.11: Spreadability

Spreadability: 9.2 cm Standard Value: 9.0-31.0 gm/cm

Adequate amount of sample is taken between two glass slides and a weight of 100gm is applied to the slides for 5 minutes. Spreadability can be expressed as.

3) Saponification value:

- 2gm of substance refluxed with 25ml of 0.5 N alcoholic KOH for 30min, to this 1ml of phenolphthalein added and titrated immediately, with 0.5N HCl, note the reading as 'a'. Repeat the operation omitting the substance being examined.

4) Acid value:



Fig.12: Saponification value

Saponification value: 190.7

Standard Value : 172 to 199.32

- 0gm of substance is dissolved in an accurately weighed 50ml mixture of an equal volume of alcohol and solvent ether, the flask was connected to a reflux condenser and slowly heated, until the sample was dissolved completely, to this 1ml of phenolphthalein was added and titrated with 0.1N KOH until faintly pink color appears after shaking for 30 seconds.

Acid value = $n \times 5.61 / w$ Where, n = the no. of ml of 0.1 N KOH solution. w = the weight of the substance in grams.

$$= 8 \times 5.62 / 10$$

$$= 4.4$$



Fig.13: Acid value

Acid value: 6.4
Standard value: 5.6-6.8

5)pH Test:

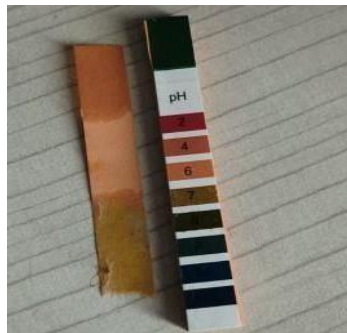


Fig.14: pH Test

pH Value: 6.2
Standard value : 5.6-6.8

- Take one strip from the case.
- Dip it into the solution.
- Half second later, take out the paper.
- Using the color chart included, compare the color change of the paper.

Removal

The ease of removal of the creams applied was examined by washing the applied part with tap water

16) Solubility :



Fig.15:solubility

- Soluble in water.
- Insoluble in Alcohol.

- Insoluble in Ether.

Anti-bacterial activity of extract:

Cup plate method :

The cup plate method, also known as the agar well diffusion method, is a widely used technique to assess the antibacterial activity of extracts or compounds. Here's a general overview of how the cup plate method can be used to determine the antibacterial activity of an extract.

Preparation of agar plates:

Prepare a nutrient agar medium and pour it into sterile petri dishes to solidify. Make sure the agar plates are completely solidified before proceeding.

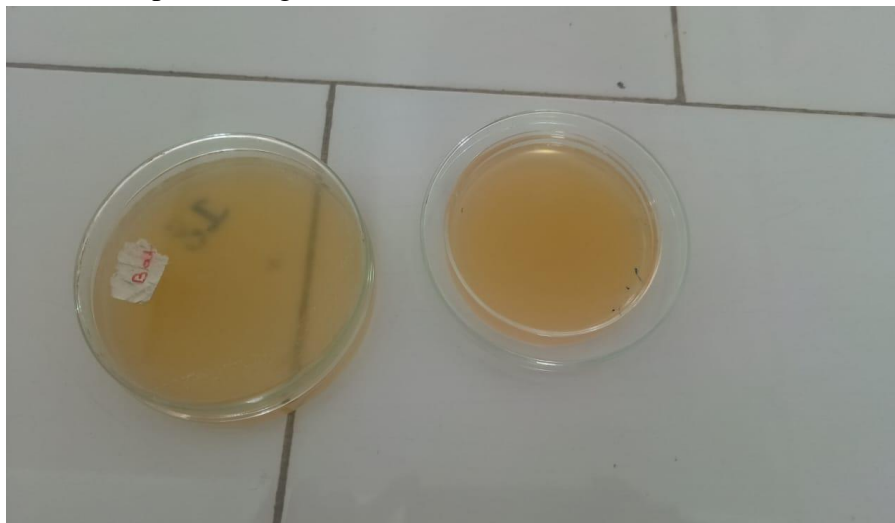


Fig.16: Preparation of agar plates

Inoculation of bacterial culture:

Using a sterile loop or swab, streak the surface of the agar plate with the Soil.

Preparing extract solutions:

Prepare different concentrations of the extract by dissolving it in an appropriate solvent (such as water). Ensure that each concentration is standardized and labeled properly.

Adding extract solutions:

Carefully add the 1 ml of each extract concentration into the respective wells, ensuring that the extract does not spill onto the agar surface.

Incubation:

Allow the plates to stand at room temperature for a few minutes to allow the extract to diffuse into the agar. Then, incubate the plates upside down at an appropriate temperature for a specific duration, usually overnight.

Evaluation of results:

After incubation, examine the plates for the presence of zones of inhibition, which appear as clear areas around the wells. These zones indicate the antibacterial activity of the extract. Measure the diameter of the zones using a ruler or caliper.

Plate No	Zone of inhibition in mm
Plate 1	4 mm

Plate 2	7 mm
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Fig.16: Evaluation of results

CHAPTER:7 RESULT AND DISCUSSION

Evaluation Parameters:

Evaluation parameter of 4 herbal cream formulation was tested and gives the result which is shown below.

1). Physical Evaluation

Table no 4: Physical Evaluation

Sr No.	Parameter	F1M	F2M	F3M	F4M
1.	Colour	Slight Yellow	Cream	Slight pink	Light Pink
2 .	Odor	Rose	Rose	Rose	Rose
3.	Texture	Smooth	Smooth	Smooth	Smooth
4.	State	Semisolid	Semisolid	Semisolid	Semisolid

2).Spreadability:

Table no 5: Spreadability

Sr No.	Formulation	Spreadability
1.	F1M	6.3
2.	F2M	6.5
3.	F3M	6.7
4.	F4M	6.2

3) Saponification value:

Table no 6: Saponification value

Sr No.	Formulation	Saponification value
1.	F1M	190.74
2.	F2M	191.33
3.	F3M	190.75
4.	F4M	190.74

4) Acid value:

Table no 7: Acid value

Sr No.	Formulation	Acid value
1.	F1M	4.5
2.	F2M	4.3
3.	F3M	4.6
4.	F4M	4.4

5) pH Test:

Table no 8: pH Test

Sr No.	Formulation	pH Test
1.	F1M	7.3
2.	F2M	7.1
3.	F3M	7.3

6) Removal:

Table no 9: Removal

Sr No.	Formulation	Removal Test
1.	F1M	Easily Remove
2.	F2M	Easily Remove
3.	F3M	Easily Remove
4.	F4M	Easily Remove

Result of Anti-microbial Activity:

Formulation (FM):

Table no 10: Formulation (FM)

Sr no.	cup size	Cup size with zone of inhibition	Zone of inhibition	Std(mean)
1.	-	-	-	-
2.	-	-	-	-
3.	8mm	32mm	32mm	33.5
4.	8mm	34mm	34mm	33.5

CHAPTER: 8 CONCLUSION

Natural remedies are more acceptable in belief that they are safer with fewer side effects than the synthetic ones. Herbal formulations have growing demand in the world market. It is a very good attempt to establish the herbal face cream containing beetroot, lavender oil, Shea butter, Raspberry seed oil and rose oil. This study revealed that the developed herbal formulations are comparatively better than other formulations. The herbal cream is one of the most well recognized acne treatments, herbal face cream used as an anti-acne, glowing, prevent from dark spots. Preferably they are used for oily and dry skin physiology. It provides numerous essential nutrients to the required for maintaining the normal skin functioning. It also promotes the natural glow to the skin. The herbal face cream was prepared from various herbs like beetroot, lavender oil, Shea butter, Raspberry seed oil and rose oil and other agents as beeswax, methyl paraben, liquid paraben, borax. The various parameters like colour, pH, consistency, washability, irritability and spreadability were checked and evaluated. Hence, from the present investigation it was found that the formulated herbal face cream was found to be more efficient as compared to the marketed face cream. First time developed beet root anti-acne cream compared to other market products. Marketed products we can see almost use ingredients like neem, turmeric, green tea but in formulated herbal cream use beet root.

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