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Formulation and Evaluation of Antiseptic Herbal Cream of *Blumea lacera*

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ABSTRACT

Herbal cream have various studies have been done to assess the antiseptic potential of *Blumea Lacera* and Turmeric. *Blumea Lacera* have Activity of antiseptic and antioxidant. Antiseptic a substance that Prevents or arrests the growth or action of micro-organisms either by inhibiting their activity or by destroying them. For all above problem ayurvedic has a fast acting solution in a form of cream which has herbal medicines with antiseptic potential. Another traditional use minor burns and cuts. This cream is not only useful in antiseptic but also to normalize skin colour by erasing scars naturally. The prepared formulations were evaluated based on number criteria including, physical parameters, PH test, wash ability test, phase separation test.

Keywords: Antiseptic, *Blumea Lacera*, Herbal Cream, Semisolid Dosage form.

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INTRODUCTION

Cream are semi-solid dosage forms and intended for topical application on skin. The objective of the study is formulation and evaluation of the antiseptic herbal *Blumea Lacera* cream. In o/w cream are dispersed in water and w/o cream are dispersed in oil. In herbal cream are used herbal ingredients like Turmeric, *Blumea Lacera*. Herbal drugs are also available in the herbal cream which is semisolid preparation. These preparations are used for the located effect produced at site after their application by drug penetration into underlying skin/mucous membrane. The choice of these ingredients is based on their individual properties, like antiseptic property enzymes action and there multipurpose effect.^{1,2,3}

Blumea Lacera one of the Rabi weed of India of family *Asteraceae* is one of the Rabi weed of India this plant is commonly known as Buradi in India. Its annual herb is with the strong odor of Turpentine.^{1,2,3}

Kingdom: Plantae:²

Sub-kingdom: Tracheobionta.

Division: Magnoliophyta.

Class: Magnoliopsida.

Sub class: *Asteriadae*.

Order: Asterales.

Family: *Asteraceae*.

Genus: *Blumea*.

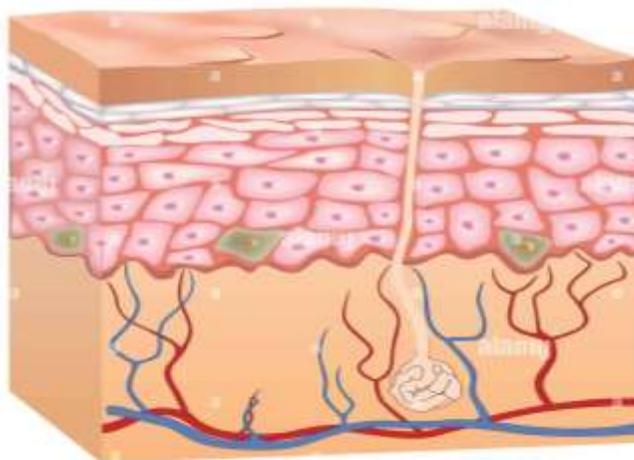
Species: *Lacera*.

Human skin (Anatomy and Physiology):^{4,5}

Skin is the largest organ in the body and cover the body's entire external surface. Surface integumentary system) made up of 3 layers (Epidemic, dermis and hypodermic). Skin's structure made up intricate network that server as body's initial barrier from pathogens. It also has some other functions like sensation, heat regulation, control of evaporation, aesthetic and communication, storage and synthetic, water resistance.

- **Sensation:** Contains variety of nerve ending that react to heat and cold, touch, pressure, vibration, etc.
- **Heat regulation:** Skin contains a blood supply for than its requirement which allows precious control of energy loss by radiation, conversation and condition.
- **Fluid loss:** Skin provide relatively dry and semi impermeable barrier to fluid loss.

- **Aesthetic and communication:** Other see our skin and can assess our mood, physical state and attractive ness.
- **Storage and synthetic:** Storage centre lipids and water as well as means synthetic of vitamin D by action of UV.
- **Water resistance:** Act as water resistant barrier so essential nutrients aren't washed out.



Uses:

- Minor burns and scalds
- Chapped skin
- Wound treatment
- Sunburn
- Spots
- Cuts
- Shaving cuts
- Infections

Advantages:

- Soothes
- Heals wounds
- Protects against infection
- Insect bites.
- Stings.
- Itches.
- Minor burns.
- Sunburn.



Figure 1: Photograph of *Blumea Lacera* (Burm.f) DC. Tree and its parts

Excipients and herbal ingredients used with their roles:

Table 1: Excipients and herbal ingredients

Sr. No.	Ingredients	Uses
1.	<i>Blumea Lacera</i>	Antifungal, antibacterial
2.	Turmeric	Glow your skin and antiseptic, anti-inflammatory
3.	Liquid paraffin	Lubricant agent
4.	Bees wax	Emulsifying agent
5.	Cetostearyl alcohol	Emulsion stabilizer
6.	Rose water	Fragrance

MATERIAL AND METHODS:^{6,7,8}

Blumea Lacera, Turmeric were collected from local market of Nashik and cetrimide, cetostearyl alcohol, liquid paraffin, purified water are collected from SMBT Institute of Diploma Laboratories.

Methods:

Preparation of *Blumea Lacera*:

Maceration process for *Blumea Lacera*:

This is an extraction procedure in which Fine powdered drug, either leaves or stem bark, is placed inside a conical flask container; the Close with stopper on top until completely covered the drug. Then the air dried powder was further used to obtain the ethanolic extract by the cold maceration process. 100g of powder with 500ml of ethanol was kept for 7 days with frequent stirring, after 7 days the mass was passed for filtration and the ethanolic extract was separated.

The extract and the nano extract separately were incorporated into the molten simple cream base and allowed to congeal by stirring. After the cream was formulated, they were packed in separately.

Ethanollic Exact of *Blumea Lacera* collected and use as active Ingredient for formulation which is done by using cream base. The formulation at laboratory scale was done. The cream was formulated by changing the ratio of extract. Various formulation (F1, F2, F3, F4) were developed by using a suitable ratio of extract. The formulation was evaluated for number of parameters such as pH, viscosity, spread ability, wash ability, stability testing were evaluated.

Preparation of extract:

Preparation of Turmeric extract:

Take 2 g turmeric powder in 20ml distilled water and shaken in 250ml volumetric flask heated in water bath at 80c to 100c for 10 to 15 min. Then filtered it and turmeric extract is obtained.^{9,10}

Method of preparation:

Slab method:

The components are mixed until a uniform mixture is form, put this cream on the slab add few drops of distilled water if necessary and mix the cream in a geometric manner on the slab to give mix all ingredients properly. This method is called slab method of preparation of cream.

Formulation of the cream:

Table 2: Formulation of the cream

Ingredients	F1	F2	F3	F4
<i>Blumea Lacera</i> extract	1.0 ml	2.0 ml	3.0 ml	4.0 ml
Turmeric extract	2.0 ml	2.0 ml	2.0 ml	2.0 ml
Liquid paraffin	5.0 ml	5.0 ml	5.0 ml	5.0 ml
Bees wax	1.0 gm	1.0 gm	1.0 gm	1.0 gm
Cetostearyl alcohol	0.5gm	0.5gm	0.5gm	0.5 gm
Rose water	Q.S.	Q.S.	Q.S.	Q.S.

EVALUATION PARAMETERS:^{11, 12, 15}

Physical evaluation:

Physical parameters, such as color, appearance and consistency, are examined for people with visual Impairment

Wash-ability:

The product will be painted by hand and was observed under running water.

pH test:

Using a digital pH meter calibrated at constant temperature, the pH of 1% of the hydro transpiration is calculated.

Spread-ability:

Spread-ability indicate the limit of the area in which the gel spreads easily on the skin or the affected part. The biological availability of the functionality to create a gel also depends on the value of the extension. By slides spread-ability two seconds, put the second slide to slide out of jail, it shows below a certain weight. Reduce the time needed to separate the two slides, a good spread-ability.

Antimicrobial Activity:

Compound shows good antimicrobial activity against gram –ve and gram +ve bacteria as compared with standard Gentamicin. The zones of inhibition of poly herbal formulations were in between 23-28 mm which can be comparable with standard formulation 24-29 mm. The antibacterial activity could be due to different classes of compounds present in leaves extracts, such as alkaloids, flavonoids, phenols and tannins. The use of semisolid formulations can increase the residence time of drugs on the skin and consequently enhance bioavailability. Poly-herbal cream prepared by incorporating ethanolic extracts of leaves were effective can be used as antibacterial agent for the treatment of wounds and burns.^{13,14,15}

RESULTS AND DISCUSSION:

Evaluation parameters: The cream was prepared and evaluated for its different physical parameters shown in Table 3.

Table 3: Evaluation Parameters

Sr. no.	F1	F2	F3	F4
Colour	White	Light Green	Green	Dark Green
Odour	Aromatic	Aromatic	Aromatic	Aromatic
Texture	Smooth	Smooth	Smooth	Smooth
State	Semi-solid	Semi-solid	Semi-solid	Semi-solid
Irritancy test	Irritancy	Irritancy	No irritancy	No irritancy
Wash ability test	Stigness	Easily washable	Easily washable	Easily washable
Phase separation test	Phase separation	Phase separation	No phase separation	No phase separation
PH test	5.2	5.7	6.4	6.9
Spreadability test	Easily spread	Easily spread	Easily spread	Easily spread

The antimicrobial studies were conducted by using gram –ve and gram +ve bacteria as compared with standard Gentamicin. The zones of inhibition of poly herbal formulations were in between 23-28 mm which can be comparable with standard formulation 24-29 mm, as shown in figure 2.

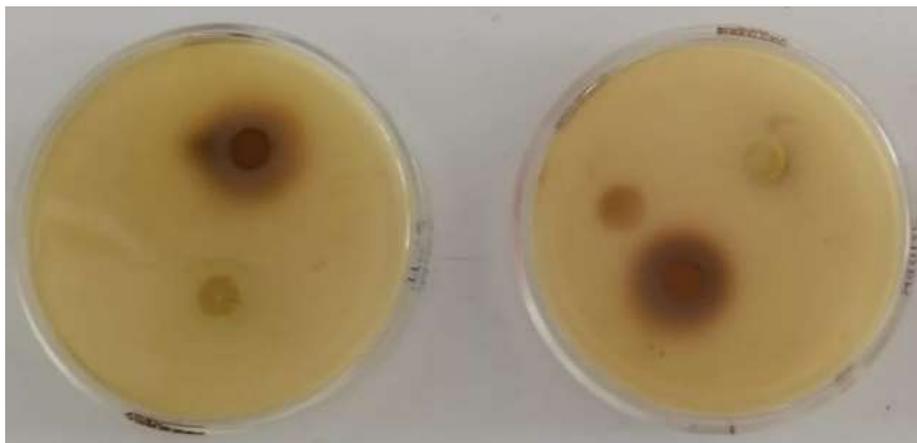


Figure 2: Zone of Inhibition

The herbal cream of the *Blumea Lacera* extract was prepared by using slab method. The physicochemical parameters were studied and it's show the satisfactory result. As per the results of antimicrobial test we are suggesting that the Formulation (F4) is better for the wound healing as compare to other formulations.

CONCLUSION:

As per above results of herbal Antiseptic cream we comes to the end that the use of Herbal cream of *Blumea Lacera* is suitable for wound healing. As per the result and discussion in table no 03: Formulation of the cream, the F4 is comparatively good formulation then the others.

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