FORMULATION AND EVALUATION OF HERBAL LIPSTICK USING PIGMENTS OF BUTEA MONOSPERMA FLOWER

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ABSTRACT

Lipstick is the cosmetic used to colour the lips. It enhances the appearance of the lips. Lipstick is used for the purpose to improve appearance, look attractive and protection of lips for many types damaging UV rays etc. Herbal Lipstick is a cosmetic product containing pigments, oils, fragrance, preservatives, colors, texture and protection to the lips. It has become an almost universal constituent of ladies’ handbags. Moist lips, dry lips, shiny lips, smooth lips, all are simple matters of cosmetic application Herbal lipsticks are gaining popularity because natural cosmetics are safe. In market hundreds of shades of colors are available to satisfy the demand by the women’s in form like liquid as well as stick on lips. Herbal lipsticks having minimum side effects.

It contains natural ingredients or nutrients it is safe to use that keep lips healthy. Lipstick containing synthetic colorants which are made up of harmful chemicals and it is very harmful for our skin. Continuous use for long time of synthetic colours may cause serious health problems like skin discoloration, lip cancer, skin irritation, etc. lipstick demonstrate many types of negative effect like-allergy, nausea, dermatitis, and drying of the lips and more serve/used even fatal. So, the demand of the cosmetics containing herbal ingredients increased universally because it is safe.

Keywords: Natural, Herbal Lipstick, Cosmetics, Ingredients, Formulation, Colour, Evaluation.

1. INTRODUCTION

Lipsticks are used to impart an attractive colour & glossy moisture appearance to the lips. Lipstick is a cosmetic product which contains pigments, oils, waxes & emollients that apply texture, colour & protection to the lips. Herbal lipsticks having minimum side effects. It contains natural ingredients or nutrients it is safe to use that keep lips healthy.

A good lipstick should have persuading characteristics and be acceptable to consumer, such as having a suitable texture and antioxidant properties. Bases, oils, emollient and colorant are among the variety of components that contribute to properties of fine lipstick1. There are a wide range of herbal cosmetic products to satisfy the needs of women for beautifying purpose. In contrast to the synthetic the herbal cosmetics are safe on human health2. This limitation thus leads the use of natural colorants in production of lipstick. Natural colours
Herbal lipstick is a type of lipstick that is made from natural ingredients derived from plants, herbs, and fruits. Unlike traditional lipsticks that may contain synthetic chemicals and dyes, herbal lipsticks use natural ingredients that are free from harmful toxins. Herbal lipsticks typically contain ingredients such as beeswax, shea butter, cocoa butter, jojoba oil, coconut oil, and essential oils. These ingredients provide nourishing benefits to the lips, helping to keep them soft and hydrated. In addition to their natural ingredients, herbal lipsticks come in a variety of shades that are created using plant-based pigments. These pigments are derived from fruits, plants and vegetables such as Butea monosperma flower, beetroot, pomegranate, and raspberry, and provide vibrant, long-lasting color. Herbal lipsticks are a great option for anyone looking for a natural, eco-friendly alternative to traditional lipstick.

The Butea monosperma flower is also known for its medicinal properties. Various parts of the plant are used in traditional medicine to treat a range of ailments, such as inflammation, digestive issues, skin diseases, and respiratory problems. The tree is also valued for its timber, which is used in construction and furniture-making. The leaves and flowers of Butea monosperma are also used in traditional dyeing, with the flowers producing a yellow-orange color and the leaves producing a green color.

1.1 HISTORY OF LIPSTICK

The use of lipstick dates back to ancient civilizations. The ancient Sumerians, for example, used crushed gemstones to decorate their lips, while the Egyptians used a mixture of red ochre, iron oxide, and beeswax to create a red pigment for their lips. Lipstick became increasingly popular during the Greek and Roman empires, with women using a combination of sheep sweat and crocodile excrement to create a red tint for their lips.

Men began using colours for adornment in approximately 3000 BC in order to attract the animals they wanted to hunt. Generally, the concept and construct of “cosmeceuticals” was first articulated by Raymond Reed (1961), the founder of the US Society of Cosmetic Chemists. It originated from the Greek term “kosmikos”, which means “decorating talent”. Later, in 1984, Albert Kligman used the word “cosmeceuticals” referring to the compounds that have both cosmetic and medicinal properties. Many herbs and floras have been used in the manufacture of cosmetics for the purposes of beauty and protection from external influences.

The natural chemicals in cosmetics do not harm the human body; instead, they provide it with nutrients and minerals. Lipsticks, in particular, have been used by humans for over 500 years. Lipstick was first discovered as a rough fragment of brick in ancient Mesopotamia. Colouring lips is an ancient tradition that dates to the prehistoric period. Lipstick was first introduced in France in 1869 as a cosmetic product made from animal fat and beeswax. The availability of lipstick in the form of cylindrical metal tubes was introduced in 1915. Presently, lipstick has become an essential product for many consumers. There is an extensive choice of colour shades and textures. This can be observed from the fact that lipstick is being marketed in hundreds of shades of colours to satisfy the increasing demand.

During the 20th century, lipstick became an iconic symbol of femininity and glamour, with popular actresses and singers sporting bold, bright shades. The introduction of new synthetic pigments and ingredients also allowed for a wider range of colors and finishes. Today, lipstick remains a popular cosmetic item, with countless shades and formulas available to suit every preference and skin tone. From ancient civilizations to modern times, lipstick has played a significant role in beauty and fashion.
1.2 IDEAL CHARACTERISTICS

- It should be non-irritant.
- It should have required plasticity.
- It should non-toxic.
- It should be stable (physically and chemically).
- It should not dry on storage.
- It should be free from gritty particle.
- It should be long lasting.
- Its appearance should be smooth, shiny and free from sweating.
- It should have pleasant taste, odor and flavor.
- It should not melt or harden within reasonable variation of climatic temperature.

The pigments used in lipstick formulation include Synthetic as well as Natural. In current scenario lipsticks create of much health related problem because of their harmful chemical. It also becomes the lips blackish in color. It is very dangerous to consume this kind of synthetic dye by the user. It may cause cancer in a very severe form. Because of this kind of adverse effect in the present investigation we can formulate an herbal lipstick from butea monosperma flower extract which may create very less or zero side effects.

1.3 BENEFITS OF HERBAL LIPSTICK

- Safe and simple to use
- Lightens dark lips
- Made with natural and organic pigments
- Hydrating heals cracked and chapped lips
- Soft, smooth and nourishes the lips
- Provides extra moisture and prevents dryness
- Lower the risk of allergy and no side effects
- Affordable and non-expensive
- Helps in regeneration of new cells to moisturize lips
- Protects from harmful colour pigments in make-up
- Natural finish with inviting shine and healthy look

1.4 CLASSIFICATION OF LIPSTICK

Lipsticks can also be classified based on their ingredients, such as synthetic or herbal. Here is a breakdown of the classification of synthetic and herbal lipsticks:

**Synthetic Lipsticks:**

Synthetic lipsticks are those made from synthetic or chemical ingredients. They may contain artificial colors, fragrances, preservatives, and other chemicals. Synthetic lipsticks are often formulated to provide long-lasting wear, bold pigmentation, and a variety of finishes. They may not be suitable for those with sensitive skin or allergies.
Herbal Lipsticks:

Herbal lipsticks are those made from natural ingredients derived from plants and herbs. They may contain nourishing ingredients like plant oils, butters, and waxes, as well as natural pigments derived from fruits and vegetables. Herbal lipsticks may also incorporate medicinal herbs known for their healing properties, such as chamomile, aloe vera, and calendula. They are often marketed as a safer and healthier alternative to synthetic lipsticks.

In summary, the classification of lipsticks can be based on their formula, finish, purpose, or ingredients, with synthetic and herbal lipsticks being two major categories based on the type of ingredients they are made from.

1.5 METHOD OF DEVELOPMENT OF LIPSTICK

The development of lipstick involves several steps, including formulating, mixing, filling, and packaging.

- **Formulating:**
  The first step in creating lipstick is to formulate the desired shade and texture. This involves selecting and combining various ingredients, such as waxes, oils, and pigments, in specific ratios to achieve the desired color, texture, and moisturizing properties.

- **Mixing:**
  Once the formula has been developed, the ingredients are melted and mixed together in a large vat. This process is usually done at high temperatures to ensure that all the ingredients are thoroughly combined.

- **Filling:**
  After the mixture has been mixed and cooled to the desired temperature, it is ready to be filled into lipstick tubes. The tubes are typically made of plastic or metal and can be either straight or tapered. The mixture is poured into the tubes using a machine, and the excess is wiped off to create a smooth, even surface.

- **Packaging:**
  Once the lipstick has been filled into the tubes, it is then packaged for sale. This includes labeling, branding, and packaging the tubes in boxes or other types of packaging. Some lipstick brands may also add additional features such as fragrance, sun protection, or other active ingredients to enhance the product’s performance.

The development of lipstick involves careful attention to detail and a keen eye for color and texture. Each step of the process, from formulating to packaging, is critical to creating a high-quality, effective lipstick product.

2. LITERATURE REVIEW

2.1 Swatha krutika V et al, Formulation and evaluation of natural lipstick from coloured pigment of Beta vulgaris Taproot (2014)

Out of the six formulations prepared, consistency was uniform in four formulations. Different formulations were prepared so as to optimize the drawback which was seen in the previous formulation. Evaluation tests were performed to all formulations. From both consistency and quality control tests point of view Formulation-6 (F6) was found to be the best formulation out of the six lipsticks that are formulated.
2.2 P. S. Pandit et al, Colour extraction from butea monosperma (palash) Flowers (2016)

For colour extraction from Butea monosperma flower at ambiant conditions 50% methanol water based v/v solution performs better with solvent extraction steeping method.

2.3 Chirag panchal et al, FORMULATION AND EVALUATION OF HERBAL LIP JELLY USING PIGMENTS OF BUTEA MONOSPERMA FLOWER (2015)

Here Herbal Lip Jelly prepared from the extract of Butea monosperma which is previously used for the wound healing activity, anti microbial activity along with topical safety which give an ideal formulation for cosmetics which is having similar organolaptic properties as compared to marketed one and having no side effects. Thus we can move towards use of natural pigments to prepare many cosmetics like lipsticks, lip rouges, nail paints etc. Hence the use of natural pigments in the formulation of cosmetics is step towards healthy cosmetics.

2.4 Nuha Rasheed et al, Formulation and Evaluation of Herbal Lipsticks (2020)

Study concluded that herbal lipstick can be successfully formulated using different natural ingredients such as Bees wax, Carnauba wax, Castor oil, Coconut oil, Olive oil, Vanilla, Strawberry and Rose essence, Cinnamon bark powder, Turmeric powder, Beetroot powder, Cocoa powder, Pomogranate juice, Carrot juice, Tomato juice, Vitamin E and lemon juice. These are better options compared to synthetic coloring agents which may cause different and hazardous side effects. Consumers can take safe and effective advantage of herbal lipsticks after thorough clinical trials.

2.5 Ragu Nath Muthuswamy et al, Anatomical investigation of the flower of Butea monosperma Lam. (2015)

The pharmacognostic evaluation of the transverse section and powder formof B. monosperma flowers was conducted; and the presences of important elements in the powder were established. The macro and microscopic profile of the flower can be used as standard data for identification of B. monosperma species from its adulterants and its substitutes.

2.6 Manprit Kaur, Palash: Sources, Macroscopical Characters and Uses(Your artical Library)

About the pharmacognosy study of the whole plant of the butea Monosperma.

3. AIM AND OBJECTIVE

AIM:

Formulation and Evaluation of Herbal Lipstick Using Pigments of ButeaMonosperma Flower.
OBJECTIVE:-

➢ To formulate a lipstick that is safe, effective, and suitable for all skin types.
➢ For the Purpose of Beautification of Lips and to use in treatment of different Lip problems.
➢ To promote the benefits of using a natural and eco-friendly lipstick to consumers.
➢ Pigmentation: The bright red color of the Butea monosperma flower is used as a natural pigment in lipstick. It provides a rich and vibrant red color to the lips.
➢ Moisturization: Butea monosperma flower extract is rich in flavonoids and phenolic compounds that have moisturizing properties. The use of this extract in lipstick helps to keep the lips soft and hydrated.
➢ Sun protection: The flower extract contains natural sun-protecting agents that help to protect the lips from harmful UV rays. This is especially important since the skin on the lips is thinner and more delicate than other parts of the body.
➢ Anti-aging: Butea monosperma flower extract is also known for its anti-aging properties. It contains antioxidants that help to fight free radicals and prevent premature aging of the lips.
➢ Overall, the use of Butea monosperma flower in lipstick helps to provide color, moisture, sun protection, and anti-aging benefits to the lips.

4. PLAN OF WORK

4.1 Selection of Herbal Pigment For Formulation of Lipstick

4.2 Extraction of Pigment

4.3 Method of Formulation

4.4 Evaluation Parameter

4.1 Selection of Herbal Pigment For Formulation of Lipstick

Butea monosperma flower was selected as herbal pigment for formulation of lipstick.

4.1.1 Drug Profile

Fig No. 1: butea monosperma flower
Synonyms: Palash flower, Butea Gum tree, Tesu, Suparni, Paladulu.

Biological Source: Palash consists of dried seed, fruit, leaves and flowers of Butea monosperma Lam. (B. frondosa Koenig).

Family: Papilionaceae.

Geographical Source: It is found in greater parts of India, Burma and Sri Lanka.

Macroscopical Characters: Flower: – Bright orange red, large, in rigid.

Chemical Constituents:
- Butrin, butein,
- Flavonoids, steroids.
- Coreopsin,
- Isocoreopsin,
- Sulphurein
- Monospermoside and isospermoside,
- Chakones and aurones (Bright colour).

Pharmacological Activities:
Butea monosperma shows various biological and pharmacological activities such as antimicrobial, antifertility, anticonvulsive, antihelmintic, antidiarrhoeal, antimicrobial, wound healing, antigiardiasis and hepatoprotective, antihypertensive, antitumor, anti-diabetic, anti-inflammatory, free radical scavenging activity.

Uses:
Butea monosperma is used as an astringent antidiarrheal antisynergic febrifuge aphrodisiac purgative anthelmintic properties. It is used for timber, resin, fodder, medicine, and dye. The bark and the flowers and the leaves and the gum and even the seeds are used to prepare herbal remedies. The gum from the tree, called kamarkas in Hindi, is used in certain food dishes. The gum is also known as Bengal Kino, and is considered valuable by druggists because of its astringent qualities, and by leather workers because of its tannin.

4.1.1 Benefits of Butea Monosperma for Lips

- Moisturizing properties: Butea monosperma contains natural emollients that can help moisturize and hydrate the skin. Applying products containing Butea monosperma to the lips may help prevent dryness, chapping, and cracking.

- Soothing effect: The plant may have soothing properties that could help alleviate discomfort or irritation on the lips. It may provide a gentle, calming effect on the skin, potentially reducing redness or inflammation.

- Anti-inflammatory potential: Butea monosperma contains certain bioactive compounds that exhibit anti-inflammatory properties. Inflammation on the lips, such as that caused by sunburn or mild allergic reactions, could potentially be reduced with the use of Butea monosperma-based products.

- Sun protection: Butea monosperma has been found to contain compounds that offer natural sun protection. While it cannot replace dedicated sunscreen, using lip products with Butea monosperma extract might provide an additional layer of protection against harmful UV rays.
Antioxidant activity: Butea monosperma contains flavonoids and phenolic compounds, which possess antioxidant properties. Antioxidants help protect the skin from damage caused by free radicals, potentially reducing the signs of aging and maintaining the health of the lips.  

4.2 Extraction of Pigment:

- **Identify the mature flowers**: Look for fully grown flowers that have bloomed and have a deep red or orange color. Collect fresh Butea Monosperma flowers and remove the petals from the rest of the flower.

- **Harvest the flowers**: Cut the flowers from the tree using a sharp knife or pruning shears. It is best to harvest the flowers early in the morning before the heat of the day causes the flowers to wilt.

- **Dry the flowers**: Spread the flowers in a thin layer on a clean, dry surface and allow them to dry in the sun for several days. Stir the flowers occasionally to ensure even drying. Alternatively, you can use a dehydrator or oven set to a low temperature to dry the flowers.

- **Store the flowers**: Once the flowers are completely dry, store them in an airtight container in a cool, dry place away from direct sunlight.

- **Use the flowers**: To use the Butea monosperma flowers, you can grind them into a powder and mix it with orange oil to make a paste or extract.

4.3 Method of Formulation:

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Excipients</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Bees wax</td>
<td>Glossy/Hardness</td>
</tr>
<tr>
<td>2.</td>
<td>Paraffin wax</td>
<td>Glossy/Hardness</td>
</tr>
<tr>
<td>3.</td>
<td>Carnauba wax</td>
<td>Additive</td>
</tr>
<tr>
<td>4.</td>
<td>Butea monosperma</td>
<td>Colouring agent</td>
</tr>
<tr>
<td>5.</td>
<td>Lanolin</td>
<td>Emollient</td>
</tr>
<tr>
<td>6.</td>
<td>Castor oil</td>
<td>Blending agent</td>
</tr>
<tr>
<td>7.</td>
<td>Orange oil</td>
<td>Perfuming agent</td>
</tr>
<tr>
<td>8.</td>
<td>Coconut oil</td>
<td>Antibacterial</td>
</tr>
<tr>
<td>9.</td>
<td>Isopropyl myristate</td>
<td>Emollient</td>
</tr>
<tr>
<td>10.</td>
<td>Propylene glycol</td>
<td>To increase moisture retention in skin</td>
</tr>
</tbody>
</table>
Herbal Ingredients of Lipsticks:

Bees Wax:

It is a purified wax separated from the honeycomb of bees, Apismellifera which belong to the Family, Apidae. Beeswax is composed of 70% ester myricylpalmitate. It is yellowish brown in colour, solid, with a honey-like odour. Under cold conditions it becomes brittle; when bleached, it becomes yellowish-white solid with a faint characteristic odour. The melting point of beeswax is 62°C-65°C. Beeswax helps in the incorporation of water to form an emulsion.

Paraffin Wax:

It is derived by distillation of petroleum. It is a mixture of solid hydrocarbons consisting mainly of n-paraffins and, to some extent, their isomers. So, it also called hard paraffin wax. Physically, the paraffin wax is colourless, odourless or a white, translucent, wax-like solid, which is slightly greasy to touch. Paraffin wax melts at 50°C-57°C.
Carnauba Wax:

This is obtained from the leaves of the Brazilian wax palm, Copernicacerifera, which belongs to the Palmae family. Carnauba wax is available in various grades. The highest grade is light-brown to pale-yellow in colour. It is in the form of moderately coarse powder or flakes, with a characteristic bland odour. The melting range of this wax is 81°C - 86°C. It is a hard wax and is used in the manufacture of candles, wax varnishes, leather and furniture polishes.

Butea Monosperma:

Butea monosperma contains a natural pigment called "butein" that is responsible for its vibrant orange-red color. Butein is a flavonoid, which is a type of plant compound known for its antioxidant and pigmentation properties. It is used as a natural dye and colorant in various industries, including textiles and cosmetics.

Fig No. 4 : carnauba wax
Fig No. 5 : butea monosperma
Lanolin:

Lanolin is a natural substance that is commonly used in various skincare and cosmetic products, including lipsticks. Lanolin acts as an emollient, which means it helps to moisturize and protect the skin. In lipstick, lanolin is often included as an ingredient to provide hydration and to prevent the lips from drying out.

Castor Oil:

Oil is obtained from the seeds of Ricinus communis belonging to the family, Euphorbiaceae. It has a slight odour; the oil is either yellow in colour or colourless. It consists of a mixture of glycosides, in which 80% of ricinoleic acid is the major constituent. At 0° C it forms a clear liquid. It is used as an emollient, in the preparation of lipsticks, hair oils, creams and lotions.
Orange Oil:

Orange oil is a natural ingredient commonly used in cosmetics, including lipsticks. It is derived from the peel of oranges and is known for its pleasant citrus scent.

Coconut Oil:

This oil is obtained from the dried solid part of the endosperm of the coconut - Cocosnucifera, family Palmea. It is a white or pearl-white unctuous mass in winter and colourless in summer.
Isopropyl Myristate:

Fig No. 10: isopropyl myristate

Isopropyl myristate is a commonly used ingredient in cosmetics, including lipstick. It acts as an emollient, which means it helps to soften and soothe the skin. Isopropyl myristate can help to moisturize and condition the lips, preventing them from becoming dry or chapped.

Propylene Glycol:

Fig No. 11: propylene glycol

Propylene glycol is a common ingredient found in many cosmetic and personal care products, including lipstick. In lipstick, propylene glycol is primarily used as a moisturizing agent and a solvent. It helps to keep the lipstick formula soft and smooth, making it easier to apply and providing a creamy texture. Propylene glycol also helps prevent the lipstick from drying out and enhances its ability to retain moisture, which can be beneficial for the lips.
4.3.2 General Manufacturing Procedure

- First, the raw ingredients for the lipstick are melted and mixed separately because of the different types of ingredients used.
- One mixture contains the solvents, a second contains the oils, and a third contains the fats and waxy materials. These are heated in separate stainless steel or ceramic containers.
- The solvent solution and liquid oils are then mixed with the colour pigments.
- After the pigment mass is prepared, it is mixed with the hot wax.
- The mixture is agitated to free it of any air bubbles. Then it is poured into tubing moulds, cooled, and separated from the moulds.
- After final touch-up and visual inspection, the lipstick is ready for packaging.
- Mixture is ground using a mill, grinding the pigment to avoid a "grainy" feel to the lipstick.
- After the pigment mass is ground and mixed, it is added to the hot wax mass until a uniform colour and consistency is obtained. The fluid lipstick can then be strained and moulded, or it may be poured into pans and stored for future moulding.

*Fig No. 12: formulation base*
*Fig No. 13: formulation with pigment*
4.1.1 Preparation of Different Formulations

**Formulation**: This formulation is prepared as per the optimized formula given in Table 2 using the general method of preparation and subjected for evaluation tests.

*Table 2: Ingredients used in general formulation along with their respective quantities.*

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<tr>
<th>Sr. No.</th>
<th>Ingredients</th>
<th>Quantity (In gm)</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
<th>F7</th>
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<tr>
<td>1</td>
<td>Bees Wax</td>
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<td>3</td>
<td>2.8</td>
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<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>2</td>
<td>Paraffin Wax</td>
<td></td>
<td>1</td>
<td>1.2</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>3</td>
<td>Carnauba Wax</td>
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<td>0.3</td>
<td>0.5</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>4</td>
<td>Butea Monosperma</td>
<td></td>
<td>-</td>
<td>-</td>
<td>5.1</td>
<td>4.3</td>
<td>3.5</td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td>lanolin</td>
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</tr>
<tr>
<td>6</td>
<td>Castor Oil</td>
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<td>2.3</td>
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<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<tr>
<td>7</td>
<td>Orange Oil</td>
<td></td>
<td>-</td>
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<td>5.5</td>
<td>5</td>
<td>4.5</td>
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<tr>
<td>8</td>
<td>Coconut Oil</td>
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<td>0.3</td>
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<td>0.3</td>
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</tr>
<tr>
<td>9</td>
<td>Isopropyl Myristate</td>
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<tr>
<td>10</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>8.6</td>
<td>9.3</td>
<td>8.6</td>
<td>20.2</td>
<td>18.4</td>
<td>17.1</td>
<td>15.8</td>
</tr>
</tbody>
</table>

*Fig No. 14 : formulation 1  Fig No. 15 : formulation 2  Fig No. 16 : formulation 3  Fig No. 17 : formulation 4*
Fig No. 18: formulation 5

Fig No. 19: formulation 6
4.4 Evaluation Parameter

It is very essential to maintain a uniform standard for herbal lipstick, keeping this view in mind the formulated herbal lipsticks was evaluated on the parameters such as melting point, breaking point force of application, surface anomalies etc.

- **Colour and Texture:**
  Formulated lipsticks were checked for colour, glossy and smooth texture.

- **pH:**
  The pH of formulated herbal lipsticks was determined using a pH paper.

- **Melting Point:**
  Determination of melting point is important as it is an indication of the limit of safe storage. The melting point of formulated lipstick was determined by capillary tube method, the capillary was filled and keep in the capillary apparatus and firstly observed the product was slowly melted. After sometimes observation product was completely melted. The above procedure was done in 3 times and the melting point ratio was observed in all formulations.

- **Breaking Point:**
  Breaking point was done to determine the strength of lipstick. The herballipstick was placed horizontally in the socket away from the edge of support. The weight was gradually increased by a specific value (10gm) at specific interval of 30 second and weight at which breaks was considered as the breaking point\(^{17}\).

- **Force of Application:**
  It is test for comparative measurement of the force to be applied for application. A piece of coarse brown paper kept on a shadow graph balance and lipstick was applied at 45° angle to cover a 1 sq. Inch area until fully covered. The pressure reading is an indication of force of application.

Fig No. 20 : formulation 7
Solubility Test:
The formulation herbal lipstick was dissolved in various solvents to observe the solubility.

Skin Irritation Test:
It is carried out by applying product on the skin for 10 min and observed.

Perfume Stability:
The formulation herbal lipstick was tested after 30 days, to record fragrance.

Aging Stability:
Prepared herbal lipstick was stored at refrigerator temperature (40 °C), room temperature (20 to 250 °C), and high temperature (30 to 400 °C) for 1 h. Various parameters such as bleeding, streaking, catering, and blooming were observed.

Surface anomalies:
This test is for determining the surface defects, such as no formation crystals on surfaces, no contamination by molds, fungi, etc.

Result:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Evaluation Parameter</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
<th>F7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Colour And Texture</td>
<td>White</td>
<td>White</td>
<td>White</td>
<td>Dark Reddish Orange</td>
<td>Reddish Orange</td>
<td>Reddish Orange</td>
<td>Reddish Orange</td>
</tr>
<tr>
<td>2</td>
<td>PH</td>
<td>5.5</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>5.5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Melting Point (°C)</td>
<td>55-60</td>
<td>59-61</td>
<td>60-61</td>
<td>50-60</td>
<td>59-61</td>
<td>50-60</td>
<td>60-63</td>
</tr>
<tr>
<td>4</td>
<td>Breaking Point (gm)</td>
<td>31</td>
<td>31</td>
<td>30</td>
<td>32</td>
<td>31</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>5</td>
<td>Force of Application</td>
<td>Good</td>
<td>Easy</td>
<td>Good</td>
<td>Good</td>
<td>Easy</td>
<td>Easy</td>
<td>Good</td>
</tr>
<tr>
<td>6</td>
<td>Solubility</td>
<td>Soluble in Methanol</td>
<td>Soluble in Methanol</td>
<td>Soluble in Methanol</td>
<td>Soluble in Methanol</td>
<td>Soluble in Methanol</td>
<td>Soluble in Methanol</td>
<td>Soluble in Methanol</td>
</tr>
<tr>
<td>7</td>
<td>Skin Irritation</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>Perfume Stability</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Good</td>
<td>Good</td>
<td>Best</td>
<td>Excellent</td>
</tr>
<tr>
<td>9</td>
<td>Aging Stability</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Smooth</td>
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<tr>
<td>10</td>
<td>Surface Anomalies</td>
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<td>No Defect</td>
<td>No Defect</td>
<td>No Defect</td>
<td>No Defect</td>
<td>No Defect</td>
<td>No Defect</td>
</tr>
</tbody>
</table>
The study was undertaken within aim to develop herbal lipstick from coloured pigment of Butea Monosperma Flower. Many formulation where made to develop herbal lipstick. Out of seven formulation prepare, F7 (seventh) formulation give appropriate colour, perfume, stability to product quality, which concluded as best product of formulation i.e. F7(fig7). To minimised side effects of Herbal Lipstick all formulation are formulated & evaluated for every formulation. To overcome the defects in previous formulation further changes are taken correspondingly to next formulation. From both consistency & quality control test of view F7 was declared to be best formulation out of seven formulated herbal lipstick.

7. Conclusion

Study concluded that herbal lipstick can be successfully formulated using different natural ingredients such as bees wax, Castrol oil, coconut oil, orange oil, lanolin, paraffin wax, Butea Monosperma Flower pigment will be better option for synthetic coloring agents which may arise different side effects. With emerging new era having redish orange shade with delicious orange fragrance taste to woman, Consumers can take safe and effective advantage of this herbal lipstick after thorough clinical trials.

8. Reference

16. Nagori BP, Solanki R, Kalyani GA. A review on Butea monosperma (Lam.)