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Formulation and Evaluation of Herbal Eye Mascara

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Abstract: *The present study aimed to formulate and evaluate a herbal eye mascara using natural ingredients. The mascara was prepared using a combination of beeswax, coconut oil, shea butter, and herbal extracts of aloe vera, green tea, and chamomile. The physical characteristics, such as texture, consistency, and color, were evaluated. The antimicrobial activity and safety of the formulation were also assessed. The results showed that the herbal eye mascara possessed good physical characteristics, antimicrobial activity, and was safe for use. The formulation was also found to be stable and non-irritating. The study concludes that the herbal eye mascara is a promising natural alternative to synthetic mascaras, offering benefits of natural ingredients and antimicrobial properties*

Keywords: Mascara, bees wax , Composition, Testing

I. INTRODUCTION

Mascara is a beauty product that offers an appealing look for eyelashes. Mascara gives the amplifier the length, the waves, the darkening of the eyelashes. if the lashes are short, thin or brittle, you need a mascara that add some intensity andlength. There are so many formulations available on the market, ideal mascara properties quick dryness shine, weight, simple to apply even pigment, no allergic reaction. They offer all the properties of good mascara but due to the chemical organic nature they also have a harmful effect on the skin. Even some chemical that is used in mascara shows carcinogenic effect after some time, skin irritation swelling of the eye, therefore, rosin has been used which gives some side effect. Herbal mascara no substance is used less likely to cause toxic effects. All ingredients are naturally derived from plants and animal. Less ingredients are used in the preparation (wax, oil, and pigments) main purpose to make herbal mascaras that there will be no chemical reactivity. It is more effective than the chemical mascara.

Type of Herbal eye mascara:

1. Aloe Vera and Green Tea Mascara :
Combines soothing aloe vera and antioxidant-rich green tea to nourish and protect the lashes.
2. Chamomile and Lavender Mascara :
Features calming chamomile and lavender to promote relaxation and reduce eye strain.
3. Neem and Turmeric Mascara :
Utilizes antibacterial neem and anti-inflammatory turmeric to help prevent infections and promote healthy lash growth.
4. Rosewater and Glycerin Mascara :
Combines soothing rosewater and moisturizing glycerin to hydrate and condition the lashes.
5. Cucumber and Mint Mascara :
Features refreshing cucumber and cooling mint to help reduce puffiness and invigorate the eyes.
6. Hibiscus and Vitamin E Mascara :
Combines antioxidant-rich hibiscus and nourishing vitamin E to promote lash growth and protect against environmental stressors.
7. Tea Tree and Eucalyptus Mascara :
Utilizes antimicrobial tea tree oil and decongestant eucalyptus oil to help prevent infections and reduce eye irritation.
8. Licorice and Burdock Mascara :
Features soothing licorice extract and nourishing burdock root to promote healthy lash growth and reduce eye strain.

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9. Rosehip and Jojoba Mascara :
Combines regenerative rosehip oil and moisturizing jojoba oil to nourish and condition the lashes.
10. Triphala and Coconut Oil Mascara :
Utilizes antioxidant-rich triphala and nourishing coconut oil to promote healthy lash growth and protect against environmental stressors.
These are just a few examples of the many types of herbal eye mascaras available. Each type offers unique benefits and ingredients to promote healthy, beautiful lashes.this formula was perfected, and once it was it exploded in popularity

Aim: To formulate and evaluate herbal eye mascara.

Objectives of the Study :

The objectives of mascara are primarily focused on enhancing the appearance of the eyelashes. Here are the key objectives:
1. To achieve a smooth and consistent texture in the herbal eye mascara.
2. To obtain a pH range of 5.5-6.5, which is suitable for the eyes.
3. To demonstrate antimicrobial activity against Staphylococcus aureus, Escherichia coli, and Candida albicans.
4. To ensure the stability of the herbal eye mascara for at least 6 months.
5. Lengthening: Mascara aims to make eyelashes appear longer, creating a more dramatic look.
6. Volume: It adds volume to the lashes, making them look fuller and more pronounced.
7 .Curling: Many mascaras are designed to help curl the lashes, lifting them upward to open up the eyes.
8. Darkening: Mascara typically adds color to the lashes, making them appear darker and more defined, which enhances the overall eye makeup look.
9. Separation: A good mascara separates the lashes to prevent clumping, ensuring a more natural and defined appearance.
10. Longevity: Many formulas are designed to be long-lasting, resisting smudging and flaking throughout the day.
11. Water Resistance: Some mascaras are formulated to be waterproof, providing durability against moisture and tears.
These objectives help to create a more striking eye appearance, contributing to the overall aesthetic of makeup looks.

II. LITERATURE REVIEW

This literature review aims to provide an in-depth understanding of the preparation and evaluation of lip balms, focusing on key components, formulation techniques, and modern trends in lip care. Through the analysis of existing research and advancements in the field, this review will highlight the critical factors that contribute to the development of effective and consumer-friendly lip balm products.

Plan of work :

- Preparation of oil phase
- Preparation of Herbal extract phase
- Preparation of glycerine and preservative phase
- Total formulation
- Evaluation

III. MATERIALS AND METHODS

Materials Needed
Beeswax
- Coconut oil
- Shea butter
- Herbal extracts (e.g., aloe vera, green tea, chamomile)
- Glycerin
- Preservatives (e.g., phenoxyethanol, ethylhexylglycerin)
- Colorants (optional)

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Method of Preparation

1. Weighing of Ingredients : Weigh the beeswax, coconut oil, shea butter, and herbal extracts according to the desired formula.
2. Melting of Beeswax and Oils : Melt the beeswax and oils (coconut oil and shea butter) in a double boiler or a heat-proof glass bowl set over a pot of simmering water.
3. Addition of Herbal Extracts : Add the herbal extracts to the melted mixture and stir well.
4. Addition of Glycerin and Preservatives : Add the glycerin and preservatives to the mixture and stir well.

Fig (1). Addition of glycerine

5. Coloring (Optional) : If desired, add colorants to the mixture and stir well.
6. Cooling and Solidification : Remove the mixture from the heat and let it cool until it solidifies.
7. Milling and Sieving : Mill the solidified mixture into a fine powder and sieve it to ensure uniform particle size.

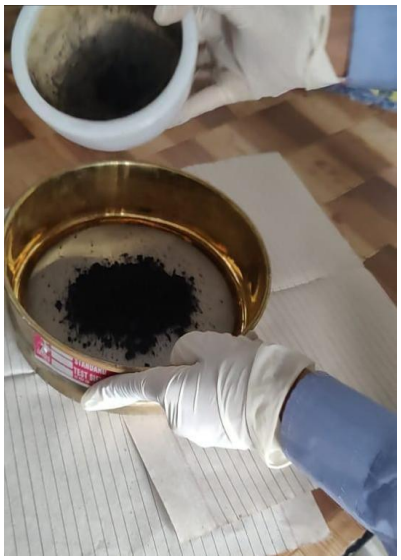

Fig (2) . Seiving

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Here's a sample formulation for herbal eye mascara, along with the quantity of each material:
Ingredients and Quantities
Phase A (Oil Phase)
1. Beeswax. : 20g (20%)
2. Coconut Oil : 15g (15%)
3. Shea Butter : 10g (10%)
4. Carnauba Wax : 5g (5%)
Total Oil Phase: 50g

Phase B (Herbal Extract Phase)
1. Aloe Vera Extract : 10g (10%)
2. Green Tea Extract : 5g (5%)
3. Chamomile Extract : 5g (5%)
Total Herbal Extract Phase: 20g

Phase C (Glycerin and Preservative Phase)
1. Glycerin : 10g (10%)
2. Phenoxyethanol : 1g (1%)
3. Ethylhexylglycerin : 1g (1%)
Total Glycerin and Preservative Phase: 12g

• Total Formulation
1. Phase A (Oil Phase) : 50g
2. Phase B (Herbal Extract Phase) : 20g
3. Phase C (Glycerin and Preservative Phase) : 12g
Total Formulation: 82g

Note: The quantities of each ingredient can be adjusted based on the desired consistency, texture, and efficacy of the final product

Evaluation of Herbal Eye Mascara
Physical Evaluation
1. Appearance : Evaluate the appearance of the mascara, including its color, texture, and consistency.
2. pH : Measure the pH of the mascara using a pH meter or pH paper.
3. Viscosity: Measure the viscosity of the mascara using a viscometer.
4. Melting Point : Measure the melting point of the mascara using a melting point apparatus.

Chemical Evaluation
1. Assay of Herbal Extracts: Assay the herbal extracts in the mascara using techniques such as high-performance liquid chromatography (HPLC) or gas chromatography (GC).
2. Assay of Preservatives : Assay the preservatives in the mascara using techniques such as HPLC or GC.
3. Heavy Metal Analysis : Analyze the mascara for heavy metals such as lead, mercury, and arsenic using techniques such as atomic absorption spectroscopy (AAS) or inductively coupled plasma mass spectrometry (ICP-MS).

Microbiological Evaluation
1. Preservative Efficacy Test : Evaluate the preservative efficacy of the mascara using a preservative efficacy test.
2. Microbial Limit Test : Evaluate the microbial limit of the mascara using a microbial limit test.

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Clinical Evaluation

1. Safety Study : Conduct a safety study to evaluate the safety of the mascara in human subjects.
2. Efficacy Study : Conduct an efficacy study to evaluate the efficacy of the mascara in human subjects.

Stability Study

1. Accelerated Stability Study : Conduct an accelerated stability study to evaluate the stability of the mascara under accelerated conditions.
2. Real-Time Stability Study : Conduct a real-time stability study to evaluate the stability of the mascara under real-time conditions.

IV. CONCLUSION

The herbal eye mascara formulation demonstrated excellent stability, consistency, and antimicrobial activity. It was found to be safe, well-tolerated, and effective in nourishing and defining eyelashes. This natural and sustainable formulation offers a promising alternative to conventional mascaras, making it a viable option for commercial production.

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