

Preparation and Evaluation of Herbal Hair Serum

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Abstract: Nowadays, cosmetics are becoming more high demand in daily life and it was used frequently by many of people per year. Mankind uses various products to enhance beauty and elegance to look young and charming. Cosmetics thus play a vital role in human life. Now days, herbal cosmetic are widely used because of the belief that they have fewer side effects and better safety. Hair is one of the primary parts of the body which acts as a protective appendage. The main objective of the present work is to develop an herbal hair serum for general purpose (daily use) using various herbs and compared it with the marketed preparation this evaluate the characteristics of cosmetic serum and to identify the best formulation of cosmetic serum. Hair growth elongation was subsequently photographed Cosmetics are being employed on an oversized scale for its various utilities in day-to-day life..

Keywords: cosmetics

I. INTRODUCTION

The importance of cosmetics has increased as many people want to stay young and attractive Cosmeceuticals refers to the combination of the cosmetics industry with the pharmaceutical industry. Cosmetics companies produce cosmetics and pharmaceutical ones produce medicines. Cosmeceuticals are skincare products that combine cosmetics and medicines Cosmetics today have become an essential, unavoidable necessity to an increasing number of individuals; they are now a part of the daily routine of every next individual, and huge amounts are being consumed every year [1]. Considering and examining the history of cosmetics, it is believed that cosmetics began in the Stone Age, mainly by Egyptians [2]. When considering the utilisation of cosmetics in the contemporary era, the primary and evident purpose is to safeguard the body against various natural elements, such as sunlight, rain, insects and more. One of the primary reasons for the widespread use of cosmetics in modern society is to ensure personal hygiene. Cosmetics serve the purpose of enhancing and promoting attractiveness through makeup, as well as providing skin and hair care. This is particularly important in protecting against various pollutants, sunlight and other environmental factors. These factors have the potential to cause damage or deterioration to the skin and hair. Hence, cosmetology is intended to be applied to the human body or any parts for beautifying cleansing, making it look attractive, promoting, or modifying its appearance [4]. Numerous self-care products are available in the market for different purposes, including lotion, creams,moisturisers, shampoos, soap, oils, etc. This chapter will cover the basics of cosmetics, how components impact the formulation of a cosmetic, the many ingredients that make up a cosmetic formulation, and the selection criteria used to make these choices. This chapter will provide comprehensive information about cosmetics, their ingredients and the part they play in creating an ideal cosmetic.

WHAT ARE THE COSMETICS:-

Cosmetics are a category of health and beauty products that are used to care for the face and body, or used to accentuate or change a person's appearance. Cosmetics are not only employed to modify appearance of an individual, but are also used for care of skin and body, besides to add fragrance . Although, cosmetics are known for skin and body care, there are various types of cosmetics with specific and significant purpose. Cosmetics are products used to enhance or alter the



appearance of the face, body, or hair. They include a wide range of items designed for personal care, beauty enhancement, and hygiene. Cosmetics play both aesthetic and functional roles and have been used across cultures for centuries.

IMPORTANCE OF COSMETICS: -

Cosmetics are used to enhance one's appearance. Cosmetics have been available for few millennia. Egypt is the first country to employ cosmetic preparations. Eye colouring or some material for producing pleasing odour were the main cosmetics in use as per ancient Egyptian history. In modern days, both men and women are leaning the ear heads towards fashion and have become beauty-conscious. In order to fulfil the needs of users; cosmeceuticals are manufactured in either hypoallergenic or natural form. The importance of cosmetics in skincare cannot be overstated. Cosmetics help to improve the overall health and appearance of the skin. They provide hydration, nourishment, and protection to the skin, which is essential for maintaining healthy skin. Cosmetics also help to address specific skin concerns, such as acne, wrinkles, and hyperpigmentation. Cosmetics play a vital role in skincare routines. They offer a range of benefits that can help improve the overall health and appearance of the skin. One of the primary benefits of using cosmetics in skincare is that they can help protect the skin from environmental damage. Cosmetics that contain antioxidants, such as vitamin C and E, can help neutralize free radicals that can cause damage to the skin.

- Help to improve the overall health and appearance of the skin.
- Help to address specific skin concerns, such as acne, wrinkles, and hyperpigmentation
- Can help to improve our mood and boost our self-esteem.
- Can help to neutralize the appearance of various imperfections, including redness and age spots
- Can be used to show off your personality as well as your

01. HAIR SERUM: -



Fig No 01. Hair Serum

Hair serum is a liquid product that coats the surface of your hair. Unlike hair oil, it enhances the curliness and smoothness of the hair. Also, it smooths frizz, adds shine, and protects your hair from environmental aggressors. In addition, they are very easy to use and are typically applied after washing the hair and before styling it.

ADVANTAGES OF HAIR SERUM: -

- Hair serum can effectively smoothen, soften and make your hair silky.
- It protects the hair from environmental aggressors.
- Act as both pre styling treatment and finishing product.
- It can be used before or after using heat styling.
- Controls frizz. If your hair is weak and damaged, it may look frizzy or dry.
- Boosts smoothness.



- The anti-frizz effect of hair serum also helps improve the smoothness of hair serum.
- Hair serum is also reducing the tangles and promote the shine.
- To enhances the straightness and curls.
- It protects against the damage.

02. PLANT PROFILE:- ALOE VERA POWDER –

Serums are typically water-based formulas. Since, aloe also has high water content, and is of course rich in vitamins and antioxidants—it can rejuvenate your skin and improve its texture too. Regular use of burn plant as a serum can make your skin radiant and youthful

- Synonym:- Aloe barbadensis
- Biological Source: - aloe is obtained from the dried juice of the leaves of aloe barbadensis miller
- Organoleptic properties: -
- Colour: - slightly yellow or translucent
- Odour: - odourless
- Chemical constituents: - Lupeol, Salicylic Acid, Urea, Nitrogen, Cinnamomic Acid, Phenol and Sulfur
- Uses: - 1. helps an itchy scalp

2. Soothes burns and heals wounds



Fig No: 2 Aloe vera

➤ Rose Petals: -

Rose petals are highly beneficial for the hair, especially when blended with other therapeutic ingredients like oil, rosemary oil, and honey. It deeply nourishes and moisturizes the skin while improving hair quality and making them strong.

Synonym: - Rose bud

Biological Source: - Species Cultivars and Hybrid Are All Widely Grown for Their Beauty and Often Are Fragrant. Roses Are Acquired Cultural Significance in Many Society

Organoleptic properties: - Colour: red

Odour: -fruity and musky scent

Chemical constituents: - Geraniol, Linalool, Flavonoids, Tannins, Phenolic Acid

Uses: -

Anti-Depressant Anti plasmodic

Increase the bile production Anti-bacterial and antiseptic





Fig No: 03 Rose Patels

➤ **Black Pepper: -**

Black pepper is rich in water-soluble vitamin that helps cleanse your hair, remove the dead skin and thereby keep dandruff treed. The antioxidants help the scalp get enough nourishment that's necessary for moisturizing your scalp and for balanced sebum production. Pro tip: you'll be able to buy our Scalp oil which contains black pepper.

Synonym: - Piper Nigrum

Biological Source: - Obtained from small dried berries (peppercorns) of the vine piper nigrum

Organoleptic properties:

Colour: - Dark Brown Black

Odour: - Aromatic

Chemical constituent:- Carbohydrate, proteins, fibres, piperine, potassium caryophyllne

Uses: - Good for Your Hair Depression

Treats Skin Problem



FIG NO 04. Black pepper

□ **Amla Powder: -**

One broadly recognises Amla powder as a hair growth remedy. The vitamin E content in Amla enhances blood circulation to the scalp, providing hair follicles with a fresh oxygen supply. Applying Amla powder topically may help

Synonym: - Emblica officinalis

Biological Source: - This is consisting of dried, as well as fresh fruits pericarp of the plant Emblica officinalis Gareth Phyllanthus emblica Linn. Belonging to family Euphobiaceae. It contains not less than 1.0% w/w of Gallic acid calculated on dry basis



Organoleptic Properties :

Colour :- The green colour changes to light yellow or brick red in maturity

Odour :- Odourless

Chemical Constituents:- Emblicanin A and B, Punigluconin, Pedunculagin, Chebulinic acid (Ellagitannin), Phyllantine, Gallic acid Proline.

Uses:-

Fresh amla: These are available in season in Indian stores. You can eat amla slices raw with salt and spices, like in India or you can mix a teaspoon of honey. Honey balance the tart taste of amla.

Amla oil: This oil helps to strengthen the hair, prevents premature graying and stop hair fall

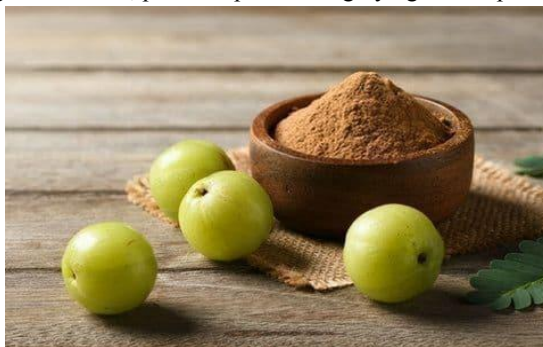


Fig No 05. Amla Powder

03. FORMULATION:-

SR.NO	Ingredient	Quantity Taken (For 25ml)
1	Aloe vera powder	3.75ml
2	Rose petal	3.75ml
3	Black pepper	0.75ml
4	Almond oil	0.36ml
5	Amla powder	7.5ml
6	Methyl paraben	1.26ml
7	Distilled water	Qs

Table No 01:- Formulation

04. MATERIALAND METHOD:-

1. All fresh herbs, aloe Vera powder, rose petal extract, black pepper, Amla powder specifically counted and allocated in 20ml of methanol
2. Then it macerated for the 7 days in air tight container..
3. After the maceration process the extract of all herbs are get filter out.
4. Then all these filtered extracts get specifically mixed and with specifically amount of almond oil and also sufficient quantity of distilled water
5. Subsequently, the set serum was kept in a spray bottle.



05. ROLE OF INGREDIENT

Ingredient	Role
Aloe vera powder	Repair dead skin on the scalp
Rose petal	Antidandruff, conditioner
Black pepper	Hair growth stimulant
Almond oil	Fungal infection depression
Amla powder	Increases blood circulation in scalp
Methyl paraben	Preservative
Distilled water	Vehicle

Table No.2. Role of Ingredient

9. EXPERIMENTAL WORK:-

1. All fresh herbs, aloe Vera powder, rose petal extract, black pepper, Amla powderspecifically counted and allocated in 20ml of methanol.
2. Then it macerated for the 7 days in air tight container.
3. After the maceration process the extract of all herbs are get filter out.
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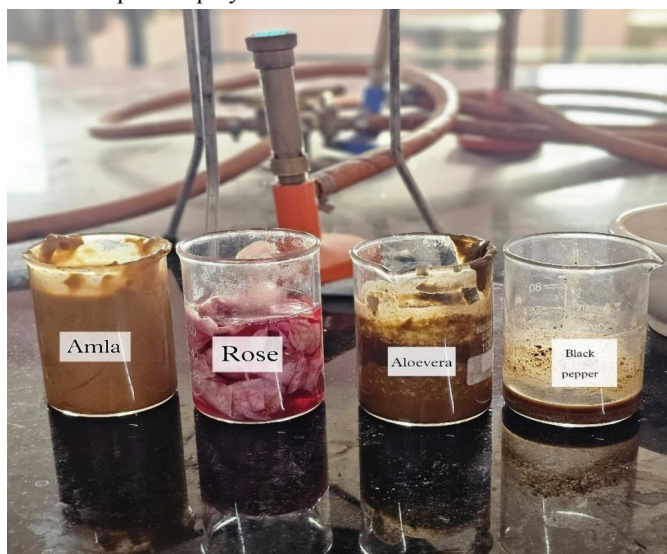


Fig No 06. Amla, Rose, Aloe vera, Black pepper

06. EVALUATION OF HERBAL HAIR SERUM:-

1. Physical Appearance: The physical appearance, colour, and feel of the set herbal hair serum are visually tested
2. Homogeneity Test: A clean and dry object glass was smeared with the hair serum and cover glass was sealed .The appearance under the light of some coarse particle /homogeneity was investigated .Herbal hair serum ws tested by visual examination for homogeneity and tested for some humps.
3. pH Test: pH of formulation was determined by using pH paper and neutral pH was obtained by adding citric acid solution
4. Skin Irritation Test :-It is carried out by applying the serum on skin and tested for any redness or itching after 2 hours.



5. Sensitivity Test: - It is carried out by applying the serum on the skin and is exposed to sunlight and tested for any rashes or itching after 10 mins
6. Spreadability: -Spreadability was measured by the place the formulation between to slides and keep a suitable weight above of plate and measured the spreadable

10. OBSERVATION TABLE:-

Parameters	Marketed Preparation	Formulation Preparation
Physical Appearance		
Colour	Yellowish	Pale brown
Odour	Pleasant	pleasant
Appearance	viscous	Less viscous
PH	4.5	5.5
Irritancy	No irritation	No irritation
Sensitivity	No irritation	No irritation
Texture	Smooth	Slightly gritty

Table No 3: - Observations Table

12.RESULT

Sr.no	Parameters	F1	F2
1	Physical appearance		
	(a) Colour	Yellowish	Yellowish
	(b) Odour	Pleasant	Pleasant
	(c) Appearance	viscous	Viscous
2	Texture	Gritty	Gritty
3	Sensitivity	No irritation	No irritation

Table No. 04 Result



Fig No 07: Herbal Hair Serum

11. CONCLUSION:-

It has been shown that herbal hair serum provides various essential nutrients needed to preserve the proper function of the sebaceous glands and support the growth of natural hair. In the personal hygiene and health care system, the use of herbal cosmetics has changed by several folds. Therefore, the herbal cosmeceutical individual care or personal health care industry, which is actually concentrating and paying extra care on the production of herbal- based cosmetics, has a considerable clamor.



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Conflict of interest:

The authors have no relevant affiliations with any organization or entity with conflict with the subject matter or financial interest or materials discussed in the manuscript.

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