



Formulation & Evaluation of Heena Herbal Dye

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Abstract: Herbal hair dye has gained significant popularity in year a naturel alternative to traditional chemical-based hair colouring products. This abstract amins to provide an overview of herbal hair dye, highlighting its composition, benefits, and limitations. Herbal hair dye refers to hair colouring product that are derived from natural plant- based scores, such as roots, leaves, flowers, and fruits. These dyes are aften free from harsh chemicals, ammonia, and synthetic ingredients, making them a popular choice for individuals seeking a more natural approach to hair colouring. The composition of herbal hair dyes varies depending on the plant materials used, but commonly utilized ingredients include Heena, indigo chamomile, amla, coffee, and various herbal extracts. These natural components contain pigments that can impart colours to the hair, ranging from reds and browns to darker shades. One of the primary benefits of herbal of herbal hair dye is its gentle and non-damaging nature. Unlike chemical dyes, herbal dyes do not penetrate the shaft deeply, reducing the risk of damage, dryness, and breakage. Additionally, many many herbal ingredients possess nourishing properties that can enhance the overall health and shine on the hair.

Keywords: herbal hair dye, natural hair colour, plant – based dyes, hair care, sustainable beauty.

1. INTRODUCTION

Herbal hair dye has emerged as popular choice for individual seeking a naturel and less Damaging alternative to traditional chemical- based hair colouring products. Derived from Various pant-based sources, herbal hair dyes offer a range of benefits, including gentle Coloration, nourishment, and reduced risk of allergic reaction. In this introduction we will explore some key ingredients commonly found in herbal hair dyes namely henna, hibiscus, Reatha, coconut shell, amla, curry leaves, ShikaKai, neem, onion seed, tea tree oil.

HEENA: -

The plant of Heena has a natural colouring pigment used to dye skin, fingernails, hair textiles like lather, silk, and wool. It may also be used for implement body art. An active ingredient in henna plants identified as “lawsone” is orange – reddish dye that attaches to the protein keratin of human skin to colour it. Heena, scenically identified as *Lawsonia inermis*, has a long – established history of application owing to its natural dyeing properties. The chemical composition of Heena comprises a cluster of organic compounds to as law sone or Henn tannic acid, which is accountable for the dyeing effect. The Heena plant ‘s leaves are the main source of these chemical constituents.

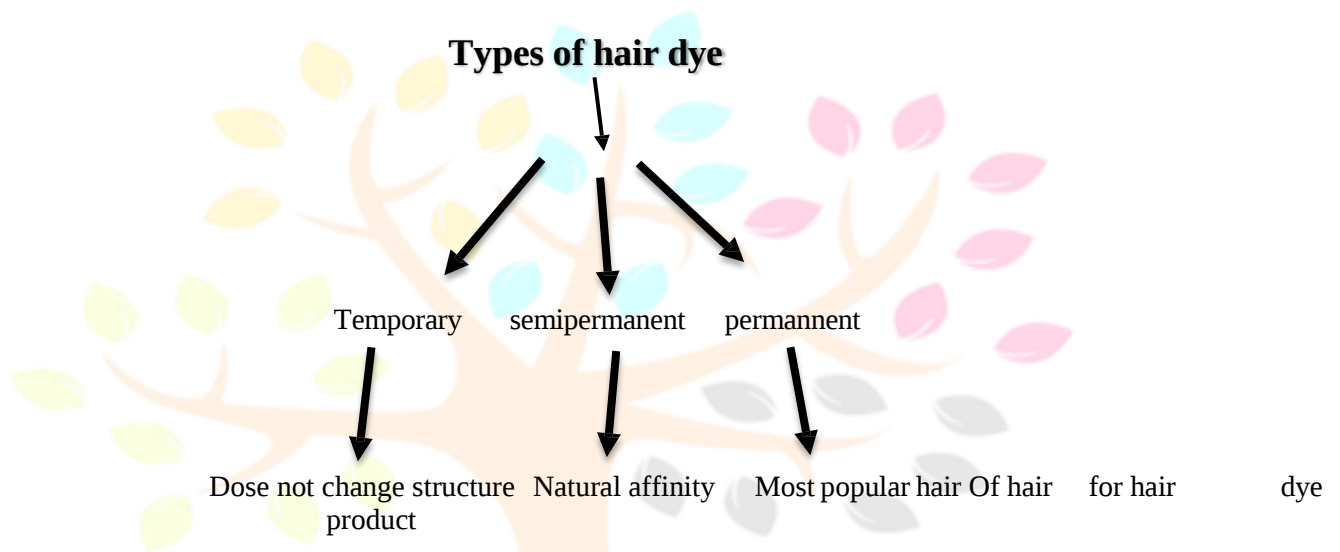


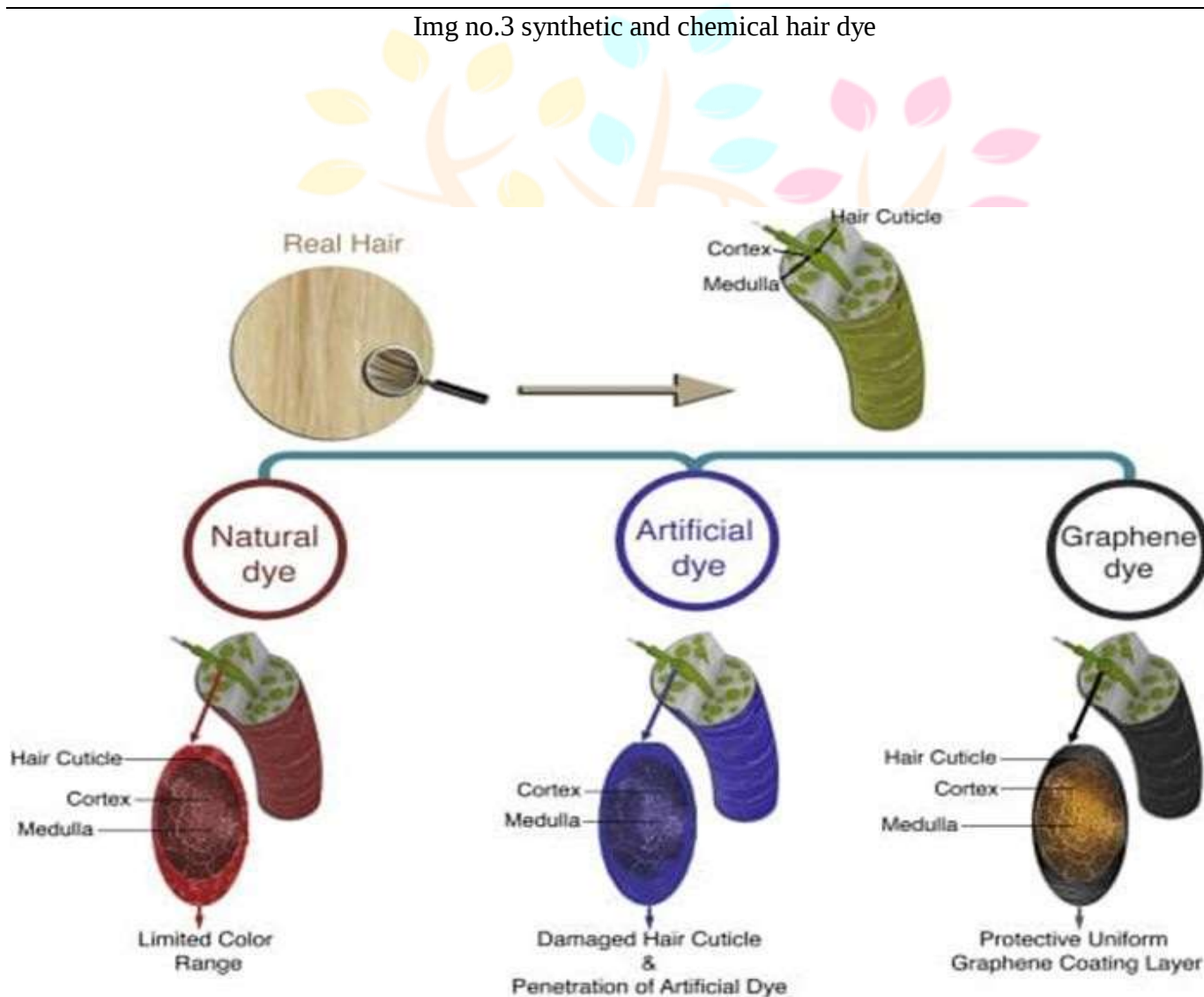
Fig. no 1. Types of hair dye



Img NO. 2 Types of hair dye.

sr. no	SYNTHETIC HAIR DYE	CHEMICAL INGREDIENTS
1	Godrej expert rich cream	Hydrogen peroxide
2.	Loreal paris Excellence cream hair colour	para- phenylenediamine (PPD)
3.	Revlon top speed hair colour	para- phenylenediamine (PPD)
4.	Schwarzkopf essential ammonia	Resorcinol
5.	B blunt salon secret cream hair colour	sodium sulphite
6.	streaks ultra lights highlighting	potassium persulphate

Img no.3 synthetic and chemical hair dye



Img no .4 mechanism of hair dye

2. MATERIALS AND EQUIPMENTS

2.1 materials:

Table no.1: materials of herbal hair dye

Sr. No	Materials
1.	Heena powder
2.	Hibiscus
3.	Reetha
4.	Sikakai
5.	Amla
6.	Neem
7.	Curry leaves
8.	Coconut seed
9.	Onion seed
10.	Vitamin E capsule
11.	Almond oil



Img. No.5: neem

synonym – aristhth
chemical constituents- nimbin
use- antibacterial
Family –Mellaceae



img. No 6: Heena

synonym- Egyptian privet.
Family - lythraceae
chemical constituents'- lawsone
use – antifungal property



Img. No:7 hibiscus rosa

hibiscus boryanus DC.
family- malvaceae.
chemical constituents- tannins
use- antioxidant



img.no 8 curry leaves synonym-

synonym- sweet neem leaves
family - rutaceae
chemical constituents -lanolol
Uses- vitamin. complex



Img No.9 Reetha

synonym- Sapindus, mukorossi
Sapindaceae
chemical constituents' sugars
uses: Useful in hair growth



img no.10 Amla

synonym – Embolic myrobalan Family:
Family - phyllanthaceae
chemical constituents'-vitamin c
use -hair growth



Img no: 11 coconut shell

layer
Family - arecaceae
chemical constituents -pentose
use- cleansing



img no: 12 sikakai synonym-hard out

synonym- soap pod
family – Mimosaceae
chemical constituents-tannins
use -control hair fall



img no.13 onion seed



img no.14 almond oil synonym-nigella seed

family- Amaryllidaceae
chemical constitute- crude protein
uses-

synonym -
family-
chemical constitute- use -battles dandruff

2.2 Equipment:

Table No.2 Equipment for herbal dye.

Sr.no	Equipment
1.	Mortar and pestle
2.	PH meter
3.	Sebiometer
4.	Cardiometer



Img.15 motor plaster

2. METHOD OF PREPARATION

To formulation and characterization of herbal hair dye



Pre formulation of herbal hair dye.



Formulation and evaluation of herbal hair dye.



Fabrication and evaluation of herbal hair dye via utilizing variety of herbal extract.



Formulation and evaluation of herbal hair dye by using natural ingredients by simple method

4. FORMULA

Table no.3 formulation for herbal dye.

Sr. No	Name of ingredients	F1	F2	F3	F4
1.	Heena powder	6 g	6g	5g	7g
2.	Reetha	4g	5g	4g	2.5g
3.	Neem powder	1g	1g	2g	2.5g
4.	Coconut seed	1g	3g	1g	3g
5.	Onion seed	4g	1g	4g	3g
6.	Hibiscus	1g	3g	1g	2g
7.	Amla powder	2g	2g	2g	2g
8.	Shikakai	2g	1g	3g	2g
9.	Curry leaves	1g	6g	1g	2g
10.	Almond oil	4g	4g	4g	2g
11.	Vitamin E Capsule	4g	4g	3g	2g

5. FORMULATION

Take particular ratio of ingredients



Using particular ratio of indigo, Heena, hibiscus, curry leaves, Neem, Reetha



These ingredients are weighed and pass through the sieve.



Then all ingredients are mixed uniformly.



Hair dye is prepared.





Img no. 16

For the preparation of herbal hair dye, we have selected then all the ingredient are mixed uniformlity different ingredients such as indigo, Henna, Hibiscus, rosa, Curry leaves, Neem, Black catechu, and black tea. This all ingredients are collected from the market in powdered form. All these ingredients are weighed and they are passed through seive to get the uniform size.

6. EVALUATION

6.1 Organoleptic evaluation:

Organoleptic characteristic for various sensory character like odour, texture was carefully noted down.

Table. No 4. Organoleptic evaluation of herbal dye

Srno.	Parameters	Results
1.	Odour	Characteristics
2.	Appearance	Powder
3.	Texture	Fine

6.2 phytochemical evaluation:

Table No. 5. Phytochemical evaluation

Sr.no	Parameter	Results
1	Foam test	Present
2.	Fehling test	absent
4.	Hargest test	Present
5.	Molis test	Present



Img no.17 pH meter

CONCLUSION

An herbal hair pack dye dying the hair in almost gentle manner. The advantages of herbal based cosmetics are their nontoxic nature. It nourishes the skin of the scalp and hair. This hair formulation provides vital nourishment to the skin. It helps to treat dandruff by removal of excess oil from scalp. Frequent use of this pack leads to manageable, frizz free coloured hair. Pollution, ageing, stress and harsh climates badly affect the quality of hair. In this research, we found effective properties of the herbal hair pack and further studies are needed to be performed to explore more useful benefits of this herbal hair pack. Natural remedies are widely accepted with open hands nowadays as they are safer with minimal side effects as compared to the chemical-based products. Herbal formulations are great demand to fulfil the needs of the growing world market. It is a noticeable attempt to formulate the herbal hair pack containing the goodness of powders of different plants, which are excellent for hair care.

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