



A Review On Natural Herbal Hair Dye

Snehal Pachpute, Tanuja Nagare, Harshda Nandkhile, Sachin Nawale

HSBPVT's,GOI, Faculty of pharmacy, Kashti, Shrigonda, 414702, Maharashtra, India.

ABSTRACT:-

Herbal hair dyes are natural alternatives to synthetic dyes, formulated using plant-based ingredients. These dyes have been used for centuries in various cultures, with plants such as henna, indigo, and cassia playing a prominent role in hair colouring traditions. The modern resurgence of interest in herbal hair dyes is driven by concerns about the potentially harmful chemicals in synthetic dyes and a growing demand for sustainable and eco-friendly personal care products. Hair colouring or hair dying is the Practices of the changing the hair colour. The main reason of hair colouring is to recover white & grey hair. Today most of the Peoples are very careful about their health & beauty and hairs play an important role. In comparison to herbal hair dyes Synthetic dyes are reported to cause skin or various skin related diseases. The Manufacturing process of synthetic hair dyes is also hazardous to the peoples health & the fear of side effect of synthetic dyes has limited its use by customers through out world wide. The natural dyes are act as mordants because they contain tannins. Tannins build affinity between dyes & hair, and this improve colour and fastness of dye. Hair dyes includes dyes modifiers, alkalizers, wetting agents, Fragrance & other Chemicals used in the small amount that gives special qualities to hair such as softening texture or give desired action to dye. The drugs obtained from the Plant sources are easily available, less expensive, safe and efficient with less side effects. The active constituent also prevents the hair from damage caused by Long hair. These natural herbals are henna, clove, Reetha, tea, walnuts, coffee, butterfly pea, bhringraj etc. Herbal hair colour is used in varicoloured maladies resembling as dandruff, untimely graying and head lice etc. Herbal hair dyes work on the problem of the Hair loss, Scalp damage and hair cuticle which are safe for use. These natural substances offer a spectrum of colours ranging from deep browns to vibrant reds, providing users with a diverse palette for hair colouring. Unlike synthetic dyes that often contain harsh chemicals like ammonia and parabens, herbal hair dyes are free from such additives, making them a gentler option for both the hair and scalp.

KEYWORDS:-

Formulation, Evaluation, herbal hair dye, Antiseptic property.

INTRODUCTION:-

From child to old all humans desire to look beautiful is human weakness and is as old as the origin of human being itself. In current all the human beings are very careful about their beauty. And to look beautiful humans take care of all parts of body and also various products are available in market to make body attractive. Products available in market may be natural, synthetic or semi synthetic. To look attractive human hairs play an important role in this. People with 60 to 70% struggle with the problem of balding and graying of hair [1,2].

As compared to the chemical based hair dyes, which cause skin related diseases, natural herbal dyes are being preferred nowadays. Herbal drugs without any adverse effects are used for healthy hair. Nearly 70% of human beings above 50 years struggle with the problem of balding and graying of hair. [3] Useful products can be derived from any part of the plant like bark, leaves, flowers, seeds etc. Plant products have been part of phytomedicines since times immemorial. A need was felt

to formulate a product containing only plant products, which is safe for use and does not have the problems of staining skin during use and hypersensitive reactions.[4] In the present investigation the formulations are developed to get natural black colour using combination of different plant materials. The dye was prepared based on experiences of several people who were using different plant products for colouring their hair without having any problems of irritancy, allergy or sensitivity. [5]

The need of herbal based natural medicines is increasing fastly due to their natural goodness and lack of side effects. Amla, bhringraj, Henna, Jatamansi, Reetha, Methi, lohbbhasma, Orange peel powder, Brahmi, shikakai, are well known ayurvedic herbal drugs traditionally used as hair colorant and for hair growth.[6] Many different extracts from plant were used for the purpose of hair dyeing in Europe and Asia before the invention of morden hair dyes. Indigo, known as initial fabric dye, could be mixed with henna to make different light brown to black shades of hair dye. Use of these chemicals can result in unpleasant side effects, such as skin irritation, allergy, hair breakage, skin discoloration, unexpected hair colour etc. [7] In india, henna has been traditionally for coloring palms and hairs. There are so many herbs like bhringraj, jatamansi, amla, methi, reetha, shikakai, are used as some major constituents in hair care preparations mainly meant for dyeing hair. [7] Drugs from the plant sources are easily available, are less expensive, safe and efficient and rarely have side effects.

BENEFITS OF HERBAL HAIR DYES :-

- 1. Natural ingredients:** Herbal hair dyes are formulated with botanical extracts, such as henna, indigo, and amla, which are gentle on the hair and scalp compared to synthetic chemicals found in traditional dyes.
- 2. Reduced allergic reactions:** Herbal hair dyes are less likely to cause allergic reactions or scalp irritation due to their hypoallergenic nature, making them suitable for individuals with sensitive skin or allergies.
- 3. Nourishing properties:** Many botanical ingredients used in herbal hair dyes, such as henna and amla, contain natural conditioning agents that help nourish and strengthen the hair, leaving it soft, shiny, and more resilient.
- 4. Long-lasting colour:** While herbal hair dyes may require more frequent application compared to synthetic dyes, they often provide long-lasting colour that gradually fades without harsh lines or roots.

PLANT-DERIVED DYES:-

- Catechu or Cutch tree (brown)
- Gamboge tree resin (dark mustard yellow)
- Chestnut hulls (peach to brown)
- Himalayan rhubarb root (bronze, yellow)
- Indigofera leaves (blue)
- Kamala seed pods (yellow)
- Madder root (red, pink, orange)
- Myrobalan fruit (yellow, green, black, source of tannin)
- Pomegranate rind (yellow)
- Teak leaf (crimson to maroon)

HERBAL HAIR DYES:-

There are many herbal plants used for hair colouring. Some herbs are available worldwide, but some are traditionally planted and found only in Thailand or neighbouring countries.

1.AMLA



Common names: Alcana, Cypress shrub, Egyptian Rivet, Henna Tree, Inai, Kokkhau, Krapin, Madayanti, Mehadi, Henna is used as a hair dye since from ancient times. In Henna principle coloring agent is lawsone (a pigment which is red in colour) in a concentration of 1 to 1.5% w/w. [24]

Henna consists of fresh and dried leaves of plant *Lawsonia inermis* belong to family Lythraceae. Other constituents present in henna are gallic acid and resin, sugar. It is used as a dye alone or in combination for treatment of hair. It is also used in shampoos, conditioners. Due to presence of carbohydrates in henna the paste has suitable consistency for adherence to hair. Henna imparts orange red colour and lawsone which is active compound of henna shows antibacterial and antifungal properties. It also prevents premature hair fall by balancing pH of scalp [26]. It is also used in jaundice, skin disease, Smallpox. [25]

Amla



Berries obtained from amla enhances the absorption of calcium, helping to make healthier bones, teeth, nails, and hair. It maintains the hair color and prevents premature graying, strengthens the hair follicles. Amla is the richest and concentrated form of Vitamin C along with tannins found among the plants. Whole fruit is used as an active ingredient in hair care preparations. The Vitamin C found in the fruit binds with tannins that protect it from being lost by heat or light [27, 28]. This fruit is also rich in tannins, minerals such as Calcium, Phosphorus, Fe, and amino acid. The fruit extract is useful for hair growth and reduces hair loss [29]. Amla has antibacterial and antioxidant properties that can help promote the growth of healthy and lustrous hair [30].

REETHA



Its fruit is rich in vitamin A, D, E, K, saponin, sugars, fatty acids, and mucilage. Reetha extract is useful for the promotion of hair growth and reduced dandruff [31]. Extract of fruit coat acts as a natural shampoo, therefore is used in herbal shampoos in the form of hair cleanser [32]. Reetha as soapnuts or washing nuts plays an important role as natural hair care products since older times. This plant is enriched with saponins, which makes the hair healthy, shiny, and lustrous when used on regular basis [33].

SHIKAKAI



It contains Lupeol, Spinasterol, Lactone, Hexacosanol, Spinasterone, Calyctomine, Racimase-A Oleanolic acid, Lupenone, Betulin, Betulinic acid, Betulonic acid. The extract obtained from its pods is used as a hair cleanser and for the control of dandruff [34]. Shikakai or acacia concinna, has a rich amount of vitamin C, which is beneficial for hair. Shikakai naturally lowers the pH value and retains the natural oils of the hair and keeps them lustrous and healthy. It is also effective in strengthening and conditioning hair. Amla, reetha, and shikakai compliments each other, therefore, they are mixed to have healthy and lustrous hair. All of these ingredients come in two forms, one as dried fruit and the other in powdered form. Amla, Reetha, and Shikakai suit all hair types and help prevent split ends, hair fall, dandruff, greying of hair, and other hair-related problems, to make hair soft and silky [35].

BHRINGRAJ



Petroleum ether extract of bhringraj initiates a greater number of hair follicles [48]. The oilbased extract of leaves has been used traditionally for improving hair growth and for imparting natural color to grey hair. NeelibhringaadiTailam, mentioned in Ayurveda is suitable for promoting hair growth and for providing natural color to grey hair [49]. Bhringraj is used in the preparation of various oil, shampoo, hair dye , etc. [50-52].

INDIGO



Indigo dye is an organic compound with dark blue crystallized powder extracted from plants. It is usually used for cotton yarn for a production of blue jeans and is occasionally used for hair coloring. Although last of herbal hair colorants rarely exhaust antipathetic reaction, indigo powder was reported as a criminal of antipathetic contact dermatitis together with henna and black tea in a 50-year-old male size case. [41]

COFFEE



Coffee, beyond its role as a morning pick-me-up, is gaining recognition for its potential benefits in herbal hair dyes. When incorporated into these formulations, coffee acts as a natural dyeing agent, offering subtle, earthy tones ranging from deep browns to rich blacks. Rich in antioxidants and caffeine, coffee not only adds color to the hair but also promotes scalp health and hair growth. Its caffeine content stimulates the hair follicles, encouraging blood circulation and thereby supporting healthy hair growth. Additionally, coffee is believed to help in neutralizing odors and enhancing shine, leaving the hair looking lustrous and refreshed. As a natural ingredient, coffee is often favored by individuals seeking to minimize exposure to synthetic chemicals found in traditional hair dyes. Its versatility and potential cosmetic benefits make coffee a valuable addition to herbal hair dye formulations, aligning with the growing trend towards natural and sustainable beauty solutions.

USES OF HAIR DYE:-

The herbal hair dye contains all the goodness of natural ingredients. Apart from acting as a hair dye, because of the perfect blend of herbals, also acts as a hair growth promoter, hair nourisher, conditioner, and anti-dandruff agent as well. Henna acting as the base powder, acts as the universal hair dye as it is used for its colouring properties throughout the globe. It is also beneficial in the removal of excess oil from the scalp and conditions the hair well. Reetha restores the health of dull, dry, and damaged hair. Bhringraj aids in improving the circulation of blood flow at the root of the hair by providing more nutrients to support hair growth. The extract of jatamansi is helpful in the growth of hair. It is beneficial for smooth, silky, and healthy hair too. Shikakai is packed with vitamins A, C, D, and K, which together form a powerful antioxidant. This antioxidant is probably the only thing your hair needs to cleanse the scalp of the sebum buildup, unclog pores, kill infection-causing bacteria and stimulate hair growth. Regular use of hibiscus flower juice can easily restrict hair fall control, dandruff, and graying of hair even when you are touching 50 years of age. This is an age-old remedy for all those people who have been struggling for healthy hair that is free from grey hair. It also contains essential fatty acids, which strengthen hair follicles and provides shine and new life. The sufficient amount of vitamin C in amla helps to halt pre-mature greying. It is a great hair conditioner and also remover of dandruff. Tea imparts perfect colour to the hair in combination with other herbs. It is good for the growth of hair and fights against dandruff. Coffee for hair strengthens hair by improving the overall quality and texture of it.

1. Retains Hair health
2. Conditions hair
3. Minimum Environmental Impact
4. Free from harsh chemicals such as ammonia, peroxide, and PPD (p- phenylenediamine)
5. Nourishes hair follicles.

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