



FORMULATION AND EVALUATION OF POLYHERBAL HAIR DYE

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ABSTRACT

Formulations known for their favorable effects on hair health and color consisting of several herbal constituents are combined to create polyherbal hair colors. People searching for safe, natural substitutes for conventional chemical-based hair colors frequently favor these dyes. The variety of plants incorporated into the formulation of polyherbal hair dyes is its main benefit. These herbs have been carefully chosen for the unique qualities that when combined, nourish the hair, encourage hair development, and improve the color of the hair. work together to improve hair color, encourage hair development, and nourish the hair. Henna, amla, shikakai, bhringraj, and neem are a few typical herbs found in polyherbal dyes; each has special properties that maintain, strengthen, and add gloss to hair. Because they are gentler on the scalp and hair than synthetic dyes, polyherbal hair dyes are known to lower the risk of allergic responses or other damage. Additionally, by giving the hair and scalp vital nutrients and antioxidants, the natural chemicals in polyherbal dyes can help enhance overall hair health.

Keywords: Hair Dye, Colouring Agent, Shikakai, Neem, Bhringraj, Polyherbal, Hair Growth.

INTRODUCTION

Typically, polyherbal hair dyes are made from a mixture of natural components like henna, amla, shikakai, bhringraj, and neem, each of which adds certain qualities to the dye. Henna well-known for its conditioning qualities and capacity to give hair a naturally reddish tone. Amla, which is high in vitamin C, strengthens hair follicles, encourages hair growth, and delays the onset of gray hair. Shikakai Adds luster and promotes hair health by acting as a mild scalp cleanser. Bhringraj Bhringraj, which is well-known for its restorative qualities, aids in hair nutrition, decreases hair loss, and promotes hair growth. Neem possesses antibacterial and antifungal qualities that aid in preserving the health of the scalp and preventing dandruff. In addition to offering brilliant color and nourishment for the hair and scalp, the combination of these herbs in a polyherbal hair dye gives a natural and holistic approach to hair coloring. The advantages of utilizing a polyherbal hair color over conventional dyes would be emphasized in this introduction, with special attention paid to the herbal constituents' nourishing and soothing qualities. Certain polyherbal hair dyes may contain additional advantageous herbal compounds in addition to the previously listed herbal substances. Plants such as Rosemary, Fenugreek, Hibiscus, and Brahmi. These herbs contribute their own special qualities to the mixture, such as enhancing scalp health, encouraging hair development, and enhancing hair shine. Brahmi is well

renowned for its ability to soothe the scalp and possibly lessen hair loss. Because of its high vitamin and antioxidant content, hibiscus encourages hair development and reduces split ends. Fenugreek may help prevent dandruff and strengthen hair follicles. Because of its stimulating properties on hair follicles, rosemary oil is frequently added to promote healthy hair growth. In addition to offering a complete solution for people wishing to color their hair, the combination of several different herbs in polyherbal hair dyes also provides nourishment and care.

ADVANTAGES

Due to their many benefits, polyherbal hair dyes are a preferred option for people seeking a more natural method of hair coloring. The following are the main benefits of using polyherbal hair dye

1. Organic Substances Because they don't include harsh chemicals like ammonia or parabens, polyherbal hair dyes are kinder to the hair and scalp. Instead, they are manufactured from a blend of natural herbs.
2. Filling Qualities The nourishing properties of the herbal constituents in polyherbal dyes nourish the hair and enhance its strength, gloss, and health. They may aid in enhancing the hair's general state.
3. Stimulation of Hair Growth Numerous herbs found in polyherbal hair dyes, including amla, bhringraj, and brahmi, are well-known for their ability to stimulate healthy hair development.
4. Scalp Health: The herbal elements in polyherbal dyes help to promote a healthy environment for hair development, reduce dandruff, and soothe inflammation on the scalp.
5. Coverage and Color In addition to offering brilliant color options, polyherbal hair dyes are an efficient way to conceal gray hair. They provide a synthetic color substitute that seems more natural.
6. Durable Impacts Because of the nourishing qualities of the herbal ingredients, polyherbal hair dyes can have a long-lasting effect on the health, texture, and gloss of hair even though the color may fade over time.
7. Personalization By varying the ratios of several herbs to get the appropriate color shade and hair treatment results, certain polyherbal hair dyes enable customisation.

For individuals looking for a more all-natural and holistic approach to hair coloring, polyherbal hair dyes are a recommended option because of these benefits.

MATERIAL AND METHOD

We've chosen a variety of herbal components, including henna, reetha, amla, and shikakai powder, to make our herbal hair color. Each component was tested for weight and pass. We've chosen a variety of herbal components, including henna, reetha, amla, and shikakai powder, to make our herbal hair color. Every component was weighed and sent through sieve number 24. All of the elements are combined evenly to create a homogenous mixture that will result in a dye that is powder form.

Material

1. Herbal ingredients: Depending on the color and qualities you want for your hair, you can use herbs like henna, indigo, chamomile, rosemary, or others.
2. Water or liquid base: This can include apple cider vinegar, herbal tea, or just plain water.
3. A spoon and basin for mixing.

4. Cheesecloth or a strainer (to remove any plant).
5. To protect your cloth, wear gloves and an old towel or cape.
6. You might choose to use petroleum jelly or barrier cream to protect your skin and hairline. Using the sieve No. 24. To get ready for the uniform All of the ingredients are combined in an even manner to create the dye powder.

FORMULATION

You can mix several herbal substances that are well-known for their nourishing and coloring qualities to produce a polyherbal hair dye formulation. This is an example of a polyherbal hair coloring formulation in detail.

Sr.no	Ingredients	Quantity
1.	Heena	100gms
2.	Amla	60gms
3.	Reetha	20gms
4.	Shikakai	20gms
5.	Hibiscus	20gms
6.	Coffe	20gms
7.	Jatamasi	20gms
8.	Bhringraj	20gms
9.	Tea	20gms

Ingredients

1. Henna powder (*Lawsonia inermis*): used for conditioning and natural red tones
2. *Emblica officinalis*, or amla powder, can strengthen and darken hair.
3. Indigo powder (*Indigofera tinctoria*): ideal for tones that are blue-black
4. Coffee arabica powder: for highlighting and darkening
5. *Hibiscus rosa-sinensis* powder: used for reddening highlights and conditioning
6. Bhringraj powder (*Eclipta alba*): this powder helps to maintain the color and encourage hair growth
7. Aloe vera gel: for its hydrating qualities and as a basis
- 8.

Formulation

1. Mix equal parts of henna, amla, indigo, coffee, hibiscus, and bhringraj powders in a bowl
2. Add enough aloe vera gel to create a smooth paste consistency. The gel helps bind the powder And provides moisture to the hair.
3. Let the mixture sit for a few hours to allow the herbal ingredients to release their color and Properties.
4. Apply the paste to clean, dry hair, ensuring full coverage from roots to tips.
5. Let the dye set for two to three hours, or longer if you want more color.
6. Use plenty of water to thoroughly rinse the hair until it runs clear.

7. To preserve the color and nourish the hair, you can choose to use a gentle herbal shampoo and conditioner afterward.

This combination of polyherbal hair dye blends the nourishing qualities of amla, hibiscus, and bhringraj with the coloring powers of henna, indigo, and coffee to create a natural and herbal substitute for chemical hair dyes.

DRUG PROFILE:-

1. Henna

- Synonyms: Mehndi
- Chemical Constituents: Lawsone
- Biological Source: *Lawsonia inermis*
- Uses: Natural hair dye, skin cooling agent



Lawsonia inermis, popularly known as henna, is a famous natural component used for its conditioning and coloring effects in polyherbal hair dyes. It comes from the henna plant's leaves and has been used for ages to color hair burgundy or crimson. Henna is frequently used with other herbal extracts, such as amla, bhringraj, indigo, coffee, or hibiscus, in polyherbal hair dyes to produce a wide variety of hues and improve the dye's overall efficacy. Henna and other botanical extracts are combined to create polyherbal hair dyes that not only offer a popular alternative for people searching for a natural and mild hair dye because it not only has a vivid color but also strengthens and nourishes the hair.

2. Amla

- Synonyms: Indian gooseberry
- Chemical Constituents: Vitamin C, tannins
- Biological Source: *Emblica officinalis*
- Uses: Hair growth promoter, scalp nourisher



Indian gooseberry, or amla, is another important component of polyherbal hair dyes. Amla helps nourish the hair and scalp since it is high in antioxidants and vitamin C. Amla is frequently utilized in polyherbal dyes because to its ability to treat hair, encourage hair growth, and enhance its sheen. Amla adds further benefits, such better hair structure and strength, when mixed with other herbal extracts like henna, bhringraj, or indigo, increasing the dye's overall efficacy.

3. Reetha

- Synonyms: Soapnut
- Chemical Constituents: Saponins
- Biological Source: Sapindus mukorossi
- Uses: Natural cleanser, hair conditioner



Soapnut, or reetha, is another useful component of polyherbal hair dyes. Reetha's inherent cleansing qualities make it a popular ingredient in hair care products. Reetha aids in thoroughly cleaning the scalp and hair with polyherbal

dyes by getting rid of debris and extra oil. Incorporating reetha with other herbal extracts such as henna, amla, bhringraj, or indigo helps preserve the health of the scalp and guarantee a gentle and nutritious application of hair dye. Reetha is a valuable ingredient in natural hair color formulations because of its role in fostering clean and healthy hair, which is highlighted by its inclusion in polyherbal hair dyes.

4. Shikakai

- Synonyms: *Acacia concinna*
- Chemical Constituents: Saponins
- Biological Source: *Acacia concinna*
- Uses: Hair cleanser, strengthener



Acacia concinna, popularly known as shikakai, is an excellent addition to polyherbal hair color formulas. Shikakai is well known for its capacity to encourage healthy hair development and for its mild cleaning qualities. Shikakai contributes to the health of the scalp, lessens dandruff, and gives hair a natural sheen when used in polyherbal dyes. Shikakai improves the texture and nourishes hair while boosting the overall efficacy of the dye when mixed with other herbal extracts like henna, amla, reetha, or indigo. Shikakai's use in polyherbal hair dyes emphasizes how crucial it is to having clean, vivid, and healthy hair after coloring.

5. Hibiscus

- Synonyms: Rose mallow
- Chemical Constituents: Flavonoids, anthocyanins
- Biological Source: *Hibiscus rosa-sinensis*
- Uses: Hair conditioner, growth stimulant



Hibiscus is another useful component of polyherbal hair dyes; it is also referred to as “Gudhal” in Hindi. Hibiscus is well known for its capacity to encourage hair development and for moisturizing hair. Hibiscus contributes to the natural sheen, strength, and resistance to hair loss in polyherbal hair dyes. Hibiscus improves hair texture, nourishes the scalp, and keeps the color of the dye more effective when coupled with other herbal extracts such as henna, amla, shikakai, or indigo. Hibiscus is used in polyherbal hair dyes, which emphasizes how important it is to have strong, healthy hair after coloring.

6. Coffee

- Synonyms: Not specific to hair care
- Chemical Constituents: Caffeine
- Biological Source: *Coffea arabica* or *Coffea robusta*
- Uses: Hair growth stimulant, shine enhancer



Coffee, or “kapi” as it is called in Hindi, can make an intriguing addition to hair dyes made from polyherbs. Coffee is a popular option for people who want to darken their hair color because of its inherent darkening qualities. Coffee can assist give hair color more depth and richness when added to polyherbal colors, especially for deeper tones. It can also aid to boosting the overall color and luster of the hair when coupled with other herbal components like henna Reetha,, indigo, shikakai, or amla. It’s important to remember that different people have different types and hues of hair, therefore the effects of coffee on hair may vary. If you want to darken your hair color, adding coffee to polyherbal hair dyes can be a natural and interesting coloring alternative.

7. Jatamansi

- Synonyms: Muskroot
- Chemical Constituents: Nardostachys jatamansi oil
- Biological Source: Nardostachys jatamansi
- Uses: Calming, hair growth promoter



Jatamansi, a valuable herb that is also referred to as “Muskroot” in English, is a component in polyherbal hair dyes. Jatamansi is well renowned for its ability to relax and soothe the scalp. Jatamansi has a calming effect throughout the coloring process, helps reduce scalp irritation, and encourages hair growth when used in polyherbal dyes. By nourishing the hair and scalp and promoting healthier, more vibrant hair, jatamansi can increase the overall advantages of the color when mixed with other herbal extracts like hibiscus, henna, amla, or shikakai. The inclusion of Jatamansi in polyherbal hair dyes highlights the herb’s capacity to support the health and wellbeing of hair.

8. Bhringraj

- Synonyms: False daisy
- Chemical Constituents: Ecliptine
- Biological Source: Eclipta alba
- Uses: Hair growth promoter, anti-graying



The famous herb bhringraj, sometimes referred to as “False Daisy,” is utilized in polyherbal hair coloring. Bhringraj is renowned for its ability to nourish hair, encourage hair growth, and stop hair loss. Bhringraj can strengthen hair follicles, provide shine, and enhance general hair health when added to polyherbal hair dyes. Bhringraj is a significant addition to polyherbal hair dye formulas since it can be combined with other herbal substances like henna, amla, shikakai, and Jatamansi to create a potent blend that not only colors hair naturally but also offers several benefits to the scalp and hair.

9. Tea

- Synonyms: Not specific to hair care
- Chemical Constituents: Catechins
- Biological Source: Camell



Tea's natural coloring qualities make it a good choice for use in polyherbal hair dyes, especially herbal teas like black or chamomile. For example, black tea can help darken hair and give luster. Conversely, chamomile tea can naturally lighten hair. These herbal teas can be steeped and added to the polyherbal dye mixture to boost the coloring results and offer extra advantages for the scalp and hair.

RESULT AND DISCUSSION

Result

The henna, amla, indigo, coffee, hibiscus, bhringraj, and aloe vera gel in the polyherbal hair coloring you described can be good for your hair in a number of ways. Achieving a bright and natural-looking hair color, nourishing your hair, raising moisture levels, increasing conditioning, guaranteeing long-lasting color, and giving a safer substitute for chemical hair dyes are a few possible outcomes.

Discussion

These herbal substances act in concert to provide your hair numerous benefits when mixed together in a hair dye formulation. Amla, hibiscus, and bhringraj help strengthen and feed the hair follicles, while henna, indigo, and coffee add to the color's richness and depth. Aloe vera gel is essential for conditioning and hydrating hair, leaving it silky and easy to handle. In addition to giving your hair the color you want, this polyherbal hair dye helps to keep your hair healthy and vibrant overall. This formulation is a better option for hair coloring because the natural components help reduce the hazards that come with artificial dyes.

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