



The Herbal Hair Dye

Dipali Govind Dhumal¹, Mohini Bhosale², Omkar Gotmukhle³, Mr. Raghunath Sakhare⁴

^{1,2,3} Student of Latur College of Pharmacy, Hasegaon .

⁴Assistant Professor at latur College of Pharmacy, Hasegaon.

ABSTRACT:

The synthetic hair dye involves the chemicals which results in unwanted effects like irritation, breakage of hair, Grey skin discolouration & cancer, so they are inconvenient to consumer so there is a need of safe, harmless herbal hair dye extract from plant sources. The word herbal is a symbol of safety the herbal hair dye is a cosmetic product used for the colouring hairs. It is classified as temporary, semipermanent, & Permanent The ingredients used in herbal hair dye helps to promote longer shiny stronger hair.

Prevent premature greying. The herbal hair dye has shown there no hair damage, scalp irritation so it Proves that it is the key alternative for the Synthetic hair dye.

Keywords - Herbal hair dye, Temporary, Semipermanent, Permanent.

Introduction:

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 naturally occurring herbal drugs without any adverse effect are used for healthy hair. The natural dyes are the colours obtained From plants, animals or insects matter without any chemical processing many plants like Acacia arabica, Juglans regia Pterocarpus indicus, Lawsonia inermis, Pilocarpus jaborandii, Phyllanthus embilica, Aloe barbadensis, Hibiscus rosasinensis, Uncaria gambir, Terminalia bellirica, Tinospora cordifolia, Saussurea lappa, Nardostachys, Jatamansi, Juglans regia, innamomum zeylanicum, centella asiatica, etc are used as main ingredients in the hair care preparation mainly in herbal hair dye.

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.

Types of hair dyes:

a) Temporary Hair Dye:

1. A temporary dye will colour the hair for temporarity.
2. The colour dye is does not penetrate into the hair.
3. It will wash out in one or two shampoo.
4. The temporary dye only coat the shaft of the hair , providing colouring of the hair.
5. Crayons, powders etc are used for temporary colour.
6. Crayons are used directly rubbed on hair or applied with the help of brush.

b) Semipermanent Hair Dye:

- semipermanent colour is a artificial colour that will wash out in 4-8 week.
- The semipermanent dye coated on the outside of the hair shaft.

- It is one part solution that is not mixed with developer so it can not lighten the hair.
- The performance of the colourants can be increased by the inclusion of solvent.
- Shampoo is the commonly used base.
- Most of the semipermanent colourants dye stuffs which gives natural affinity for the hair.

c) **Permanent Hair Dye :**

1. It is most commonly used hair product.
2. Permanent hair colour is the permanent as the name suggest.
3. Permanent colour penetrates into the hair shaft and changes hair colour permanently.
4. A permanent hair colour is the two part solution i.e colour & developer and it can lighten or darken the hair.
5. They can cause hair damage.
6. Permanent hair colour is very effective on mixed i.e white or black hairs.


Advantages of herbal hair dye:






- Herbal dyes are not harmful to environment or consumer because of its natural origin.
- Herbal dyes gives a natural shades & help to achieve soft, soothing look.
- No chemical reaction involved during dye preparation.
- Herbal dyes will not cause harm or health problems.
- Herbal dyes having no disposal problem.



Disadvantages of herbal hair dye:

- Herbal hair dyes are difficult to standardiz or blend.
- Herbal hair dyes are difficult to produce because of its availability of raw material.
- Herbal dye preparation is a lengthy dyeing preparation.
- Herbal dyes having inadequate degree of fixation.
- Natural herbal dyes having poor reproducibility of shade.

Ingredients of the herbal hair dye:

Common name and botanical name	Picture	Chemical constituents	Uses
Henna: Lawsonia inermis		Lawsone, glycoside Gallic acid, flavonoid, white resin.	Antibacterial, antifungal, or treating grey hairs, colouring agent.

<p>Shikakai: Acacia</p>		<p>Saponin,acacia acid,natural sugars, Spinasterol.</p>	<p>Strengthen the hair roots,promot hair growth.</p>
<p>Amla: Phyllanthus embillica</p>		<p>Vitamin C, Tannins.</p>	<p>Promote hair growth, prevent grey hair,stop hair fall.</p>
<p>Hibiscus: Hibiscus rosasinensis</p>		<p>Alkaloids, Flavonoids,amino acids,beta carotin</p>	<p>Enhance natural hair colour,make hair stronger, prevent hair from greying.</p>
<p>Aloe: Aloe vera</p>		<p>Tannins, carotenoids, Isoflavones</p>	<p>Nourishes the hair, natural and mordant.</p>
<p>Tea: Camellia sinesis</p>		<p>Tannins, carotenoids, Isoflavones.</p>	<p>Conditioner, antioxidant,mordant, darken the hair.</p>

Bringraj: Eclipta alba		Flavonoids, steroids, Terpenoids	Natural hair tonic
Reetha: Sapindus mukorossi		Saponin, sugars, mucilage	Control hair fall, remove dandruff from scalp.
Black catechu: Senegalia catechu		Flavonoids, alkaloids, epicatechin	Enhance hair volume, shin and colour the hair.
Jatamansi: Nardostachys jatamansi		Sesquiterpens, Coumarin, liganin, Alkaloids	Control hair fall, promote hair growth.

Method of hair dye preparation:

Weighing:

Weight the ingredients for the batch, for small batches the small amount of ingredient is necessary and for large batches large amount of ingredient is necessary.

Mixing:

After checking and weighing the ingredients, the ingredients are simply mixing. The ingredients are totally mixed with each other.

Filling:

The finished batch of hair product is then delivered to filling area then measure the amount of hair dye into bottles.

Packaging:

From the filling area, plastic bottles are taken. At the packaging line the bottles are packed completely and label them with full information, then product is taken to storage area or warehouse for await distribution.

Applications of herbal hair dye:

- 1) Help in covering grays hair without any side effects:

The best use of herbal hair dye is that it help in coverage of gray hair without causing any side effects. Therefore the herbal hair dye are usually considered as safest hair colour in nature, they are free from any harmful chemicals Hydrogen peroxide, PPD, Ammonia are various chemicals which cause damage to hairs & also rupture the hair quality.



For better hair growth:

One can apply the custard apple fruit paste on the hair to have long, thick, shiny hairs. This helps in reduce the hair fall & minimize the occurrence of inflammation. When the paste is applied on the hair, nutrients are better absorbed, it promotes the thickness of hair & hair follicles are nourished well.



- 2) cures existing hair problems: The natural hair dye is herbal in nature therefore with its organic nature it helps to cure existing hair problems like dandruff, hair fall, split hairs end, etc. The herbal hair dye is safe & restore the damaged hair from its former condition.



- 3) nourishes hair strands from its core:

The most important benefit of the herbal hair dye is boost and nourish the hair without any compromise due to its organic nature, safe herbal nutrients, herbal hair dye is the best colouring dye of hair.



Global hair dye market:

TOTAL GRAY COVERAGE PERMANENT HAIR COLOR

The global permanent hair dye market is growing at a CAGR of 7.71%.

TDS/TD FORMULATION

Global TDS/TD formulation hair dye market contributed the highest revenue of 44.31% in 2016.

Market Growth:

2021 value: \$19.33 billion 2022 value: \$20.98 billion 2027 value: \$ 36.2 billion

Result:

The herbal hair dye contains all the goodness of the natural ingredients. The herbal hair dye act as a hair growth promoter, hair nourisher, conditioner, anti dandruff agent. The natural ingredients used in herbal hair dye restrict hair fall control, greying of hair, provide shine, strengthen hair. The antioxidants in herbal hair dye need to clean the scalp, kill infection causing bacteria & stimulate the hair growth. The regular use of herbal hair dye provide smooth hair & show super effect due to natural ingredients. It is non toxic, non habit forming properties and no chemical so it also lead to increase the shelf life of herbal hair dye.

Reference:-

- 1) https://www.researchgate.net/publication/338424896_Development_and_evaluation_of_herbal_hair_dye_formulation
- 2) <https://images.app.goo.gl/oQ8ihVCbR4RB6bi6A>
- 3) <https://images.app.goo.gl/oyCe5yvub859HMMn8>
- 4) <https://images.app.goo.gl/9JrN3s647nYuo5KM7>
- 5) <https://images.app.goo.gl/TZzomTjMtYEdpUas7>
- 6) <https://images.app.goo.gl/3upbAMyiYsT2dDHJ7>
- 7) <https://images.app.goo.gl/nFDZWtcD7o92qPqy9>

- 8) https://www.google.com/imgres?imgurl=https%3A%2F%2F1.rgstatic.net%2Fpublication%2F286774070_Evaluation_of_organic_hair_dye_formulation_by_an_environment_friendly_process%2Flinks%2F6220e07f19d1945aced2e44e%2Flargepreview.png&imgrefurl=https%3A%2F%2Fwww.researchgate.net%2Fpublication%2F286774070_Evaluation_of_organic_hair_dye_formulation_by_an_environment_friendly_process&docid=xK40dLKdKTD4M&tbnid=PPk129HtnlRHmM&vet=1&source=sh%2Fx%2Fim
- 9) <http://www.cosmeticsinfo.org/search/node/>
- 10) 10. 1s0.www.herbalremedies.com
- 11) 11. Simone Aparecida da França, Michelli Ferrera Dario. Victoria Brigatto Esteves, André Rolim Baby and Maria Valéria Robles Velasco Review on Types of Hair Dye and Their Mechanisms of action, *Cosmetics* 2015, 2, 110-126
- 12) 12. J.B.Wilkinson and R.J.Moore, *Harry's Cosmeticology*, Chemical Publishing Newyork Seventh edition
- 13) <http://www.annmariegianni.com/7-ways-to-color-your-hair-naturally>
- 14) <http://www.fda.gov/Cosmetics/ProductsIngredients/Products/ucm143075.htm>
- 15) Wenninger, J.A.; Canterbury, R.C.; Mcewen, G.N.J. *International Cosmetic Ingredient Dictionary and Handbook*, 8th ed.: Cosmetic, Toiletry and Fragrance Association: Washington, DC, USA, 2000.
- 16) Naser Zaid A. et al, *Int J Pharm Pharm Sci.* 2013, 5, 2, 485-488.
- 17) Aparecida, S., Ferrera, M., Brigatto, V., Rolim, A., *Cosmetics.* 2015, 2, 2, 110-126.
- 18) Boga, C., et al. *Dyes and Pigments.* 2013, 97, 9-18. [4] Kapoor, V. P. *Natural Product Radiance.* 2005 4, 4, 306 314.
- 19) *Natural colorants and dye In Pharmacognosy and phytochemistry.* 1" Ed. India: Career publication 2004; 1: pp. 98-117.
- 20) Balsam MS Edward sagarin, *cosmetics science and technology.* John Wiley & Sons 1972.
- 21) Upadhyay VP. Mishra A. K. *Workshop on selected medicinal plants.* 1985. In:Ministry of Commerce, Chemexcil :Bombay 1985.
- 22) Fatima A, Alok S, Agrawal P, Singh P, Verma A., *Benefits of herbal extract in cosmetics :A review.* *Int J Pharm Sci Res* 2013;4(10):3746-60.
- 23) Dahanukar S, Thatte U. *Ayurveda Revisita* 3rd Ed. 2000.
- 24) Tuner DM. *Natural product source material used in the pharmaceutical industry :The Galxo experience* *J.Ethanopharmacol*1996;51(1-3):39-43.
- 25) Gopalan C,Sastri BV,Balasubraminam SC.*Nutritive value of Indian foods*1991.20)AmbastaST.*useful of plant of India* 1986.