

## Production of Herbal Cosmetic for Hair Care: Highly Commercially Used Plant *Lawsonia inermis*

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### Original Research Article

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**Abstract:** In the present era Herbal Science has emerged as a major focus for trade as there has been a worldwide acceptance of herbal products. However new innovations and an increased willingness to adopt new techniques are required for wider acceptance of such herbal products globally. Synthetic dyes are easily available and have created a comfortable niche in today's ever-growing market. However, a huge market for herbal products exist which needs attention. The present study is the production of herbal cosmetic for hair care by using other antioxidant plant and found that the formulation of heena and beetroot is found to be the best hair colour as compare to heena and indigo as beet root contain highly antioxidant properties.

**Keywords:** Formulation, antioxidant herbal, synthetic dye, cosmetic etc.

### INTRODUCTION

India has a rich heritage of using medicinal plants in traditional medicines such as Ayurveda, Siddha and Unani besides folklore practices. *Lawsonia inermis* syn. *Lawsonia alba* (Henna) is a sole species in the genus in the family Lythraceae. Henna has been found to exhibit Antibacterial, Antifungal and Dermatological properties. It is useful in coloring of skin, scalp and nails etc. Henna has also shown antidiarrhoeal, diuretic, emmanagogue and abortifacient prophetically and is found to be practically non-toxic. *Lawsonia Inermis* as a Natural Dye of Various Therapeutic Uses has reviewed Jiny Varghese K, Silvipriya KS, Resmi Jolly C [1] that hair care plant is reported to possess immunomodulatory, antiviral, antibacterial, antifungal, nootropic, antifertility, hepatoprotective, tuberculostatic activity, antimitotic, analgesic and anti-inflammatory, anticarcinogenic and antioxidant properties.

Henna is an important source of phytochemicals of immense medicinal and pharmaceutical significance such as naphthoquinone derivatives, aliphatic components, triterpenes, sterols, phenolic derivatives, coumarins, xanthenes, flavonoids, gallic acid, hennotannic acid and mannitol which are effective as immunomodulators and other allied agents.

### MATERIALS AND METHODS

#### Collection of plant materials

- Heena (*Lawsonia inermis* Linn.),
- Tea Powder (*Camellia sinesis*),
- Indigo (*Indigofera gambies*),
- Cinnamon (*Cinnamomium zeylanicum* Briyn),
- Methi (*Trigonella foenum-groecum*),
- Beetroot (*Beta vulgaris*).
- All the plants were collected from the sanjeevini nursery found in Bhopal.

#### Collection of unpigmented hair

The human hairs were collected from barber shops from which white hairs were separated and used for study.

#### Washing drying and pulverizing

The dried plant parts were washed with water to remove the adhering materials. The plant parts were then dried in an oven at 40O C for 24 hours and finely powdered with the help of a grinding machine.

The procedure is followed by modifying the method given by Tomar and Sethiya. Here the combination that is taken are heena and indigo (Table-1) and heena and beetroot (Table-2). These all combination are taken in different proportions and rest of the plant powder are added into it 10% of the total amount.

**Preparation of dye**

Here in table 4 different proportions of heena and indigo are taken along with other plant which is 10% of the total amount. Similarly in Table-2 heena and beet root is taken. The paste were prepared in water and kept in iron container for 8 hrs. Groups for different formulations were prepared and formulations were applied to the hair and kept for 3 hrs. The hairs were washed after 3hrs with Ritha solution which is normally used in herbal shampoo.

**RESULTS AND OBSERVATION**

**Evaluation of hair dye**

**Effect of dye on hair colour**

The pastes were prepared in water and kept in iron container for 8 hrs. Groups for different formulations were prepared and formulations were applied to the grey hair and kept for 3 hrs. The hairs were washed after 3hrs with Ritha solution which is normally used in herbal shampoo. The hairs after washing were pasted on white sheet and covered with cellophane. The colored hair were exposed to sunlight for 7 days and again washed as per previous method.



**Fig-1: The hair sample taken from barber**

**Table-1: Formulations of suitable combination for Heena and Indigo**

S. No	Ingredients	F1	F2	F3	F4	F5	F6
1	Henna	50%	75%	25%	12.5%	37.5%	87.5%
2	Indigo	50%	25%	75%	87.5%	62.5%	12.5%
3	Cinnamon	10%	10%	10%	10%	10%	10%
4	Green Tea	10%	10%	10%	10%	10%	10%
5	Methi	10%	10%	10%	10%	10%	10%

\* Except Heena and Indigo rest of the plant powder are added into it 10% of the total amount

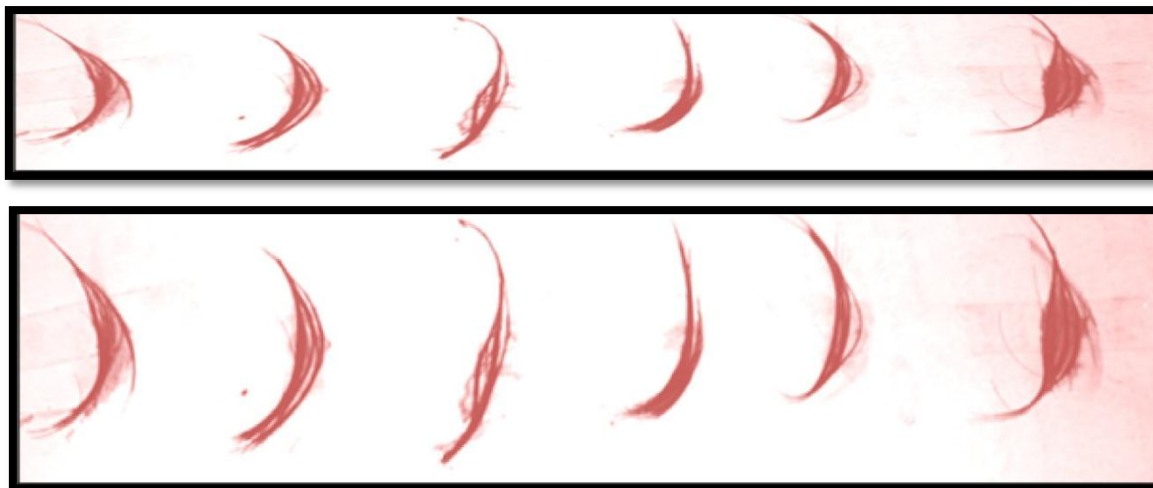


**Fig-2: Formulation of heena and indigo**

**Table-2: Formulations of suitable combination for Heena and Beetroot**

S. No	Ingredients	F1	F2	F3	F4	F5	F6
1	Henna	50%	75%	25%	12.5%	37.5%	87.5%
2	Beetroot	50%	25%	75%	87.5%	62.5%	12.5%
3	Cinnamon	10%	10%	10%	10%	10%	10%
4	Green Tea	10%	10%	10%	10%	10%	10%
5	Methi	10%	10%	10%	10%	10%	10%
6	Reetha	10%	10%	10%	10%	10%	10%

\* Except Heena and Indigo rest of the plant powder are added into it 10% of the total amount



**Fig-3: Formulation of heena and beetroot**

### **CONCLUSION**

For the formulation of herbal dye heena, beetroot and indigo is taken with the other plant which make hair smooth and shiny. It has been seen the formulation of heena beetroot show better result than the formulation of heena indigo. The hair quality was same because of other plant which is use in the same proportion in both the formulation (as shown in the fig).

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