# Recycle, Reuse & Revelation of hair care secret with Bael leaves

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Abstract: Aegle mamelon or Indian Bael leave has lots of hidden medicinal secret which people are not familiar to. It has so many medicinal properties like anticancerous, antibacterial, anticariogenic and many more. But rarely people know about its magical properties in hair care which includes anti-dandruff, hair growth promoter, prevent premature greying, calms the inflamed scalp, and improve hair texture and conditions hair.

The main purpose of this study is to develop a hair care product with an active which people know about but do not know about its benefits in hair care. This study formulated a HAIR CARE SPRAY which has Bael leaves (A. Mamelon) as its active with highlighting its hair growth promotion and antidandruff properties. This study has an active as aqueous extract of bael leaves and hair spray formulation with the active.

Key words: Bael Leaves, Antibacterial, Anti-cancerous, Anti-dandruff, premature greying, Hair Growth promoter, Hair spray

## INTRODUCTION

Hair is a beauty enhancing feature, which is been taken care of a lot. Especially in India women's usually have long and thick hair. Maintaining the hair, needs hair care routine and good diet. In India women's do preform many home remedies to treat hair problems. As there are many products in market for hair care but now-a-days everyone needs natural and organic products to use. There are many natural materials which helps in improving or treat the hair problem. As the life style is very busy now people need instant results and with less mess. Hair spray is one of the products which helps in good results without any mess and also need less efforts and time to apply.

#### Hair spray

Hair spray in this study helps to treat the problem by spraying it on the scalp and hair. It has the active in aqueous form which helps in quick and deep abortion. This spray helps in deeper treating the problem like hair loss, dandruff and hair growth.

Bael (Aegle marmelos) is a medicinally treasured tree species from the 250000 living plant species on earth. It has different names in different region like bel Patra, Vivam, bilvapathram, bel, etc. in India. This tree is mostly planted near Lord Shiva temple and is worshiped by the devotees. This leaves are been plucked and are been worshiped to lord Shiva with them. This plant has many ayurvedic medicine properties used from ancient time in India and some south Asia region. This plant has its hair care properties too which were not that highlighted till now this property of the leaf is been focused in this study.

This study highlights the hair growth and antidandruff properties of it. It promotes the hair growth because it has vital nutrients and antioxidants which nourishes the hair and scalp, this helps in decreasing hair loss and encouraging the healthy hair growth. It also has antifungal, anti-inflammatory and antibacterial properties which helps in combat scalp condition and reduce the dandruff.

The leaves which are been used in the study were sourced from the temple of Lord Shiva and then cleaned and dried. As the leaf which are been used are Nirmalya (purified) which are not used later, they were collected from the temple and then used for the study which made the study a recycle based study too.

## **METHODOLOGY**

## Aqueous Extraction

The leaves were first collected from the temples and the cleaned and washed properly. Then they were dried in Sun for 6 to 7 days. After that the dried leaves were crushed into powder with the help of mixer grinder. Then took the power in a beaker with distilled water in the ratio of 1:6. And it was heated

in water bath till 2 hours. Then the filtrate was filtrated with the help of filter paper or cotton cloth. Then store the solution in a glass container with 0.1% of preservative.









Fig (1) Extraction

Fig (2) Bael leaves powder

Fig (3) Bael leaves Fig (4) Bael leaves extract

#### Formulation

Ingredient	Role of ingredient	Percentage
Phase A		
Propylene Glycol	Humectant	1-2%
EDTA	Chelating agent	0.1-0.5%
Glycerin	Humectant	2-3%
Water	Solvent	10-12%
Phase B		
Bael leaves extract	Active	5-7%
Phase C		
Citric acid	Ph. adjuster	0.1-0.5%
Perfume	Fragrance	0.1-0.5%
Preservative	Preservation	0.1-0.5%

# Procedure

Take a beaker and add Phase A (PG, EDTA, GLYCERIN, WATER) in it one by one and mix it well. Then add Phase B in it slowly with continues

hand stirring. After that add Phase C in it one by one according to the need and stir well. Then stored in a clean and dry container.



Fig (5) Hair Care Spray



Fig(6) Final Product

#### METHOD TO USE

The hair spray can be used by both men and women. For best result use it overnight.

Spray it on the scalp by sectioning the hair and leave the spray overnight or for at least 2 hours.

Only for scalp no need to apply it on hair length.

#### CONCLUSION

The study says that the bael leaves have many beneficial properties for hair. And can been used in hair care products to improve hair quality and reduce hair loss and dandruff. This study shows how the waste leaves can be used in cosmetic product. This product will treat the hair loss, dandruff, inflammation on scalp. Since all the ingredients are safe to use and the active also has beneficial properties, it makes the hair spray safe and also helps in treating the dandruff, improve hair loss and makes the hair healthy and shine.

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