

# ***INTERNATIONAL JOURNAL OF INSTITUTIONAL PHARMACY AND LIFE SCIENCES***

**Pharmaceutical Sciences**

**Review Article.....!!!**

Received: 08-05-2016; Revised: 12-05-2016; Accepted: 13-05-2016

## **PLANTS USED IN HERBAL SHAMPOO**

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### **Keywords:**

Herbal shampoo, Plants,  
Chemical constituents

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### **ABSTRACT**

Plants used in herbal shampoo, play an important role in the removal of surface grease and dirt from the hair shaft and scalp. Herbal shampoos are rich in herbs that fight scalp infections, strengthen the roots, condition and revitalize the hair and induce hair growth with significantly no side effects observed when compared with synthetic shampoo. The goal of using shampoo is to remove the unwanted build-up in the hair without stripping out so much sebum as to make hair unmanageable. Amla, Shikakai, Reetha, Neem, Aloe vera, Hibiscus, Heena, Bhringraj, Fenugreek are among the common & most frequently used plants in herbal shampoo.

## INTRODUCTION

Shampoo plays an important role in the removal of surface grease and dirt from the hair shaft and scalp. The primary role of shampoo is to carry out cleansing or detergent action. Herbal shampoo was found to be harmless, more effective and economic. However, the foaming characteristic of shampoo plays a significant role in its acceptability with the emerging role of ayurveda, several herbs and florals have been identified for their impacting role in the cosmetic industry. In herbal shampoo basic ingredients are Shikakai, Reetha, Amla, Bhangra, Brahmi, and Hibiscus. Optional ingredients include Fenugreek, Neem, Lime juice, Almond, Mustard oil, Cloves, Cinnamon, and Tea leaves.<sup>[1-2]</sup> Shampoo ingredients are optimized to cleanse, moisturize scalp, prevent possible hair loss, prevent pre-mature grey hair, slightly restore natural black Indian hair color, promote thick hair growth. Modern studies have shown that Fenugreek seed promotes hair growth.<sup>[3-4]</sup>

It has been reported that aqueous extracts of Neem, Acacia, Soapnut, Tulsi, Aloe vera, Lemongrass, have proved major role in the removal of dandruff, hair glossing and treatment of hair scalp problems since ancient times.<sup>[5]</sup> *Sapindus mukorossi* has been used as a herb for treatment of extra salivation, migraine, epilepsy and chlorosis. It also shows insect killing properties. *Phyllanthus emblica* is rich in ascorbic acid and polyphenols. It shows anti-inflammatory and antigenotoxic activity. It is also used as a cosmetic. It is an accepted hair tonic in traditional recipes for enriching hair growth and pigmentation. Aloe vera is widely used in cosmetics and alternative medicine industries, being marketed as variously having rejuvenating, healing, or soothing properties. *Acacia cancellata* is used in herbal preparations from ancient time for hair growth and cleaning.<sup>[7-8]</sup> Hair is one of the external barometers of internal body conditions. Shampooing is the most common form of hair treatment. The primary function of shampoo is aimed at cleansing of the hair necessitated due to accumulated sebum, dust, scalp debris etc. Various shampoo formulations are associated with hair quality, hair care habit and specific problems such as treatment of oily hairs, dandruff and for androgenic alopecia. Shampoos are liquid, creamy or gel like preparations. The consistency of the preparation depends on the inclusion of traditional soaps saturated with glycerides and natural or synthetic fatty alcohols or the thickening agents.<sup>[8-9]</sup>

A wide range of active principles of various plants including vitamins, hormones, phyto-hormones, bioflavonoids, enzymes, tannic acid, fruit acids, amino acids, sugars, glycosides and essential oils, are being considered useful in herbal shampoo formulations. The awareness and need for cosmetics with herbs is on the rise, primarily because it is believed that these products are safe and free from side Effects. Now-a-days, many herbal shampoos are available in the market which contains herbal ingredients such as plant extracts and essential oils. There are large numbers of plants which are reported to have beneficial effects on hair and are commonly used in shampoos.<sup>[10-11]</sup>

### PLANTS USED IN HERBAL SHAMPOO<sup>[12-52],[52-96],[97-118]</sup>

S.No.	Plant Name	Botanical Name	Chemical Constituents	Parts Used
1.	Amla	<i>Phyllanthus emblica</i> (Phyllanthaceae)	Vit. C, Phosphorus, Calcium, Iron, Tannins	Leaves, Fruit, Root, Bark
2.	Aloe vera	<i>Aloe barbadensis</i> (Liliaceae)	Aloin, Vit. A, B, C, E, Sugars, Enzymes, Amino acids	Leaves
3.	Soapnut	<i>Sapindus trifoliatus</i> (Sapindaceae)	Vit. A, D, E, K, Saponin, Sugar, Oelic, Stearic acid	Dried fruit
4.	Hibiscus	<i>Hibiscus rosa-sinensis</i> (Malvaceae)	Delphinidin, Flvones, Esculetin, Amino acid, Glycoside hibiscin,	Leaves, Flowers
5.	Brahmi	<i>Bacopa monnieri</i> (Scrophulariaceae)	Saponins	Whole plant
6.	Bhringraj	<i>Eclipta alba</i> (Asteraceae)	Alkaloids, Flavonoids, Protein, Glycosides	Whole plant
7.	Gotu kola	<i>Centella asiatica</i> (Apiaceae)	Bacoside A& B, Asiatic acid, Fatty acid, Sugars, Resins	Whole plant
8.	Shikakai	<i>Acacia concinna</i> (Mimosaceae)	Oxalic, Citric, Succinic, Tataric acids, Vit. C, Nicotine	Bark, Leaves, Pods
9.	Henna	<i>Lawsonia inermis</i> (Lythraceae)	Gallic acid, Xanthones, Phenols, Anthraquinones glycoside,	Leaves, Roots, Flowers
10.	Fenugreek	<i>Trigonella foenum- graecum</i> (Fabaceae)	Lecithin, Arginine, Vitamins, Coumarin, Lipids, Proteins,	Seeds
11.	Neem	<i>Azadirachta indica</i> Juss (Meliaceae)	Azadirachtin, Nimbin, Azadirone, Nimbicidine, Nimbinol	Leaves, Seeds
12.	Clove	<i>Eugenia caryophyllus</i> (Myrtaceae)	Eugenin, Kempferol, Eugenitin, Oleanolic acid, Gallotannic acid	Buds
13.	Almond oil	<i>Prunus dulcis</i> (Rosaceae)	Palmitic, Oleic, Stearic, Linoleic, Arachidic acids, Vitamins,	Seeds
14.	Orange	<i>Citrus sinensis</i> (Rutaceae)	Vit.C, Pectin, Volatile oil, Hesperdin, Isohesperdin	Peel
15.	Cinnamon	<i>Cinnamomum zeylanicum</i> (Lauraceae)	Cinnamaldehyde, Eugenol, Manitol, Cymene, Starch, Pinene	Bark
16.	Burdock root	<i>Arctium lappa</i> (Asteraceae)	Sesquiterpene lactone, Tannins, Carbohydrate, Inulin, Sterols	Root, Seeds
17.	Baell	<i>Aegle marmelos correa</i> (Rutaceae)	Pectin, Sugar, Tannic acid, Silica, Mucilage, Potassium, Sodium	Fruits
18.	Tulsi	<i>Ocimum santum</i> (Lamiaceae)	Eugenol, Methyl eugenol, Vit. C, Triterpene, Zinc, Manganese	Leaves

19.	Arnica	<i>Arnica Montana</i> (Asteraceae)	Helanalin, Flavonoids, Caffeic acid derivatives, Lactones, Lignans of the furofuran	Roots, Flowers
20.	Soyabean	<i>Glycine max</i> (Leguminosae)	Alphalinolenic acid, Linoleic acid, Oleic , Stearic & Palmitic acids	Seeds
21.	Lemon	<i>Citrus limon</i> (Rutaceae)	Protein, Fat, Citric acid, Vit. C, B, Sodium, Folic acid, Fiber, Zinc	Fruits
22.	Acacia	<i>Acacia Arabica</i> (Lrguminosae)	Arabic acid, Oxidase, Peroxidase, D-galactose, L-arabinose	Stem, Branches
23.	Jatamansi	<i>Nardostachys jatamansi</i> (Valerianaceae)	Nardol, Nardostachone, Resin, Jatamlos, A & B Jatamansic acid	Rhizomes
24.	Lodhra	<i>Symplocos racemosa roxb</i> (Styraceae)	Loturine, Isoloturine, Oleanolic, Ellagic & Betulinic acid, Symposide, Triterpinoids	Stem bark, Flowers, Seeds
25.	Nagarmotha	<i>Cyperus rotundus</i> (Cyoeaceae)	Cyprotene, Cyperene, Cyperol, Terpinoids, Flavonoids	Bark
26.	Liquorice	<i>Glycyrrhiza glabra</i> (Leguminosae)	Glycyrrhizin acid, Mannitol, Fat, Gulcose, Resins, Asparegines, Tannin, Volatile oil	Root
27.	Turmeric	<i>Curcuma longa</i> (Zingiberaceae)	Curcumin, Termerone, Zingiberene, Proteins, Resins	Rhizomes
28.	Olive oil	<i>Olea europaea</i> (Oleaceae)	Oleocanthal, Hydroxytyrosol, Oleuropein, Elenolic acid, Palmatic acid, Vit.E	Whole plant
29.	Lotus	<i>Nelumbo nucifera</i> (Nymphaeaceae)	Nuciferine, Aporphine, Coclaurine, Norcoclaurine	Flowers, Seeds, Roots
30.	Coconut oil	<i>Cocos nucifera</i> (Arecaceae)	Vit. A & K, Iron, Minerals, Sugar, Lauric acid, Amino acids	Fruits
31.	Sesame oil	<i>Sesamum indicum</i> (Pedaliaceae)	Sesamin, Sesamolin, Lipids, Pinoresinol, Lignans, Vit. A&K, Fixed oil	Seeds
32.	Daruharidra	<i>Berberis aristata</i> (Berberidacrae)	Berberine, Quaternary salt of isoquinoline	Root, Bark
33.	Ladies finger	<i>Abelmoschus esculentus</i> (Malvaceae)	Vit. A, C, K, B1, B3, B6, Folic acid, Magnesium, Calcium, Zinc, Fiber	Leaves
34.	Rosary pea	<i>Abrus precatorius</i> (Fabaceae)	Precol, Abrol, Abricin, Abraline, Abridin, Abrusin, Xylose, Protein Choline, Abrusoside A, B, C, D,	Roots, Leaves, Seeds
35.	Acampe orchid	<i>Acampe praemorsa</i> (Orchidaceae)	Alkaloids, Bibenzyl derivatives, Flavonoids, Terpenoids	Root
36.	Vacha	<i>Acrocos calamus linn.</i> (Araceae)	Acorone, Acorenone, Calamone, Calamenol, Calamen, Acoric acid	Rhizomes
37.	Sugar apple	<i>Annona squamosa</i> (Annonaceae)	Squqmocenin, Annotemoyin, Squamocin, Motrilin, Cherimolin	Seeds, Bark, Leaves
38.	Karanj	<i>Millettia pinnata</i> (Fabaceae)	Karanjin, Karanjachromene, Pongamol, Tannin, Protein, Fiber Linoleic acid, Palmitic acid	Leaves
39.	Bakuchi	<i>Psoralia corylifolia</i> (Fabaceae)	Isoporsale, Posralen, Psoralidin, Genistein, Corylin, Psoralidin	Seeds
40.	Gulbel	<i>Tinospora cordifolia</i> (Menispermaceae)	Columbin, Palmatine, Berberine, Tinosporic acid, Tinosporal, Tinosporon, Choline	Stem, Root

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