

A REVIEW ON HERBS USED IN HERBAL SHAMPOO

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Article Received on 04/08/2022

Article Revised on 25/08/2022

Article Accepted on 15/09/2022

ABSTRACT

Shampooing is the most common form of hair treatment. Shampoos are primarily been used for cleaning the hair and scalp. The purpose of this review is to gather information related to herbal shampoo. In the present scenario, herbal shampoo is showing better performance and safer than the synthetic ones, and is more popular to consumers for cleansing and nourishing purpose, shampoos are widely used by many people as it contains cleansing agents. Many herbal crude drugs are used in shampoo formulation like hibiscus, shikakai, aloe vera, amla, reetha, olive oil, soap nut, moringa, bhringraj, etc. The present review emphasizes the safety and efficacy of natural products in shampoo preparation. Many drugs are used for the preparation of shampoo which shows side effect like hair loss, scratching, discomfort, nausea, headache, skin irritation. Therefore, an attempt is made to produce the natural plants details which will be used as a ingredient in herbal shampoo formulation.

KEYWORDS: Herbal shampoo, cleansing, hair loss, formulation.

INTRODUCTION

Shampoo are products which remove surface grease and dirt from the hair shaft and scalp. The cleansing or detergent action of a shampoo is primary function. However, the foaming qualities of a wash has main act in acceptability.^[1] Shampoo is of various types, like powder shampoo, liquid shampoo, lotion shampoo, solid gel shampoo, medicated shampoo, etc. Shampoo is individual of best widely used for hair products current, based on their synthetic elements in addition to herbaceous elements. Depending upon the nature of the ingredients they may be simple or plain shampoo, antiseptic or antidandruff shampoo and nutritional shampoo containing vitamin, amino acids, proteins.^[2] The main aim of wash is to remove the undesired particles such as soil, lubricate, skin mites, dandruff, tangible toxins and other contamination particles from hair without falling much of sebum (oily secretion).^[3] Now-a-days many synthetic, herbaceous, medicated and non-medicated shampoos are available marketing but recognition of herbaceous shampoo between customers is on rise by way of being natural origin and are safe and free from after effects.^[4] The pH of the shampoo is kept slightly below 7(acidic) to prevent the breaking of the disulphide bonds in the hair keratin, the questions accompanying synthetic shampoo are their extreme artificial synthetic character, weak degradability, non-flexibility for everyday custom and by all means the high price. shampoo available in the markets generally contain a chemicals like surfactants, most often Sodium lauryl sulphate and Sodium laureth sulphate, for the foaming

and cleansing action but continuous use of these shampoo makes hair brittle and causes dryness to the scalp, leads to hair loss, dryness of hair after prolong used and leaves the hair too dry to handle with comb, produce irritations to the eyes and scalp, formation of dandruff which is one of the most common embarrassing scalp disorder.^[5]

Herbal formulation is studied as alternative to artificial shampoo, efficient are large quantity, of curative plants that are proclaimed to have advantageous effect on haircut and are usually used for the formulation of shampoo, it holds all the natural ingredients accompanying herb extract.^[6] There are best numbers of plants that are stated to have advantageous belongings on hair and usually used in shampoos. Herbal shampoo helps hairs to devise their characteristic of dampness, shine, progress, thickening, strength of hair roots, anti-dandruff characteristic. The main advantages of herbal shampoo are that it has no side effects.^[6] These herbal shampoos are generally used to remove the dandruff, to add the natural color to hair, to remove the extra oil content of the hair, for the healthy growth of the hair, to remove the dust, dirt, scales of the scalp, to prevent hair falling, to remove lice and nits, to impart softness and smoothness to the hair shaft, etc. it is assumed that they can penetrate to the hair shafts, stimulate the sebaceous glands and enhance the blood circulation and impart greater strength to the hair root and the shaft.^[7] A wide range of active principles of various plants including vitamins, hormones, phyto- hormones, amino acid, essential oil and enzymes

are being considered useful in cosmetic formulations.^[8]

CHEMICAL SHAMPOO Vs HERBAL SHAMPOO

- * Number of commercially available shampoos are loaded with chemicals that are hazardous to skin and health, while herbal shampoos hold all the natural ingredients accompanying herb extract.^[7]
- * Most common synthetic ingredients base shampoos are an ingredient called a surfactant, most often Sodium lauryl sulphate and Sodium laureth sulphate, for the foaming and cleansing action but continuous use can cause hair brittle and caused dryness to the scalp, while herbal shampoos are used to prevent hair fall, imparts softness and strength the hair root.^[8]
- * Some chemical shampoos on prolong used may cause irritation to the eye and lasting corneal clouds, skin irritation is another marketed parameters.^[9]
- * Healthy hair and good looking without any side effect can be achieved by replacing synthetic ingredients of shampoo by herbs.
- * Nowadays natural products dominate over the synthetic products since it has no side effects. This is the reason that the herbal products are popular among the consumers. Synthetic hair products have chemicals which may give short term growth and shine to hair loss.
- * Herbal shampoo performs all actions like clear sebum, dirt, dandruff, promotes hair growth, strengthens, and darken hair without affecting or damaging hair.^[10]
- * The synthetic shampoo contains cationic, anionic and non-anionic surfactants mix in this surfactant having good foaming character but its toxic and caused irritation of eye, on using hard water the surfactants leave a deposit of sodium, calcium and magnesium salts on the hair shaft. So, these chemical shampoos are found to have side effects like drying effect on the hair.^[11]

BENEFICIAL HERBAL INGREDIENTS IN NATURAL SHAMPOOS

- * Herbal shampoo is formulated to strengthen the hair follicles by delivery essential oils and nourishment all through the roots and follicles.
- * Stimulates the formation of the new and healthy hair roots and promotes healthy hair growth.^[12]
- * Natural herbs present in the shampoos removes excess oil from the scalp and help to prevent dandruff which is a clinical condition cause by Malassezia species, herbs are widely used as remedial agents as they are easily available at low cost and are safe and effective.^[13]

Hibiscus (*Hibiscus rosea*) is one of the most popular flowers used in hair care. Both the leaves and flowers of hibiscus plant have a healing property, it belongs to the family Malvaceae, most commonly used to prevent hair loss and hair growth promoters.^[14]

Heena (*Lawsonia inermis*) which belongs to the family Lythraceae, contains medicinal properties like anti-bacterial and anti-fungal activity, which nourishes hair and scalp and promotes hair growth, it is having a cooling property, it is used to enhance the natural hair color.

Neem (*Azadirachta indica*) actively cleanses and strengthen hair follicles, it belongs to the family Meliaceae, having anti-bacterial activity. Leaves part of the plant is used as medicinal property.

Amla (*Embllica officinalis*) is rich in fatty acids that moisturize the hair, reduce dandruff and prevent dry scalp, it controls hair loss, it belongs to the family Euphorbiaceae. The dried fruit or fresh fruit is used as an herb.

Shikakai (*Acacia concina*) is an excellent natural shampoo, conditioner and hair mask, it is most commonly used for hair fall and prevent dandruff due to its cleansing and antifungal properties, it belongs to the family Leguminosae. It provides shine to the hair as well as prevents greying of hair. Shikakai is the most commonly used herbs for the preparation of herbal shampoo.^[15]

Retha (*Sapindus mukorossi*) contains saponins that act as foaming agents. Fruit part of the plant is used as herbal shampoo, it belongs to family Sapindaceae. It can be used as a natural cleanser for washing hair, it is also used to prevents hair loss.^[16]

Aloe vera (*Aloe barbadensis*) is a dried juice collected by incision from the leaves. It belongs to family Liliaceae, it stimulates hair growth and gives shinier and softer to hair.^[17]

Guava leaves (*Psidium guajava*) strengthen the hair follicles, promotes thicker hair, stronger, shinier and healthier hair growth. Leaves part of the plant is used for herbal shampoo preparation. It belongs to the family Myrtaceae.^[18]

Drumstick (*Moringa oleifera*) is a nutrients rich property, its vitamins and minerals also supply the hair with the essential nutrients needed for additional care of thin and weak hair. It repairs and strengthens the hair follicles, reduce hair fall. It belongs to the family Moringaceae.

Olive (*Olea europaea* or *Olea ferruginea*) is rich with natural fatty acids, especially oleic acid. Oleic acid is very efficient for moisturizing and nourishing hair strands. It is a hair growth promoter and have smoothening property. The fruit part of the plant is used for the preparation of herbal shampoo, it belongs to family Oleaceae.^[19]

Bhringraj (*Eclipta prostrata*) it helps in activating the dead hair follicles and promote hair growth, it is also

having anti-dandruff property. Leaves part of the plant is used in herbal shampoo preparation, it belongs to the family *Astraceae*.^[20]

Holy basil (*Ocimum sanctum*) prevents the hair loss by strengthen the hair follicles, it is also used to treat dandruff and itching and prevents premature greying of hair. It belongs to the family *Lamiaceae*. It is having anti-microbial property.

Senna (*Cassia senna*) is used to improves the scalp condition and treat dandruff. Leaves part of the plant is used to combats hair loss and strengthen the hair. It belongs to the family *Leguminosae*. Senna is having a good conditioning property, smoothens the hair.^[21]

Fenugreek (*Trigonella foenum*) seeds is used for herbal shampoo preparation, it belongs to the family *Leguminosae*. It helps in hair growth, prevents hair loss and dandruff, promotes thick and healthier hair.^[22]

Marigold (*Calendula officinalis*) fresh or dried flowers extract are used, it strengthens the hair and promotes hair growth. It belongs to the family *Astraceae*.^[23]

Rambutan (*Nephelium lappaceum*) belongs to the family *Sapindaceae*. The leaves of rambutan are traditionally used for hair care, it prevents hair fall and promotes hair growth.^[24]

Ashwagadha (*Withania somnifera*) is anti-oxidant rich herb, it belongs to the family *Solanaceae*. It helps in improving the blood circulation, rejuvenating the scalp and reducing dandruff, it strengthens the hair and prevents premature greying, reduces the hair fall.^[25]

Orange peel (*Citrus aurantium*) nourishes the hair, moisturize the scalp and protects the hair from harmful pollution. It belongs to family *Rutaceae*. It is having anti-bacterial property; it strengthens the hair and prevents hair damage and used to prevents dandruff.^[26]

Liquorice (*Glycyrrhiza glabra*) root helps to cure all sort of problems such as dandruff, hair loss, hair fall and chemical damage due to excess hair colouring. It belongs to the family *Fabaceae*. It nourishes the scalp and heal hair damage.

Acacia (*Acacia arabica*) is used as an emulsifying agent. It belongs to family *Leguminosae*. It is rich in vitamins and antioxidants, it nourishes and rejuvenates hair, promotes shiny hair, prevents dandruff and lice.^[27]

Sandalwood (*Santalum album*) belongs to family *Santalaceae*. Stem and root part of the plant is used to give smooth and silky hair. It provides an ease to the uncomfortable itchy, flaky scalp and fight dandruff. It is also having anti-microbial property.

Curry leaves (*Murraya koenigii*) is a nutritional

shampoo, having anti-dandruff property, the leaves may also help to remove dead hair follicles. It belongs to family *Rutaceae*. It also reduces thinning of hair and also used to treat premature greying.^[28]

Almond oil (*Prunus amygdalus*) contains important fats and fatty acids that are good for hair. It belongs to family *Rosaceae*. The oil also acts as cleansing agents, it reduces scalp inflammation and help get rid of dandruff, it strengthens the hair and treat hair loss.^[29]

Jujube (*Ziziphus spins*) leaves, bark and fruit are naturally high in saponin. It has anti-microbial activity; it belongs to family *Ziziphaceae*. It promotes hair growth and maintain scalp health.^[30]

Lemon (*Citrus limon*) is a natural cleanser, as it is rich in vitamin C it promotes hair growth. It belongs to family *Rutaceae*. The fresh fruit or dried fruit can be used to prevent dandruff and it maintain scalp health; it does not dry out the hair.

Soya milk (*Glycin max*) improves thickness of the hair and tensile strength of hair. It belongs to family *Fabaceae*. Soya milk make hair shinier and healthy look, it also prevents hair fall.^[31]

Mustard (*Brassica juncea*) oil is high in fats including omega-3 fatty acids. It may help to reduce inflammation in the scalp and skin, it is used to protect or improve hair root health for stronger and thicker hair. It belongs to family *Brassicaceae*. It nourishes the hair and promotes hair growth.^[32]

Harda (*Terminalia chebula*) belongs to family *Combretaceae*. It helps to control hair loss, harda is rich in vitamin C, iron, manganese, copper, selenium and helps in hair growth, it is a hair growth promoter.^[33]

Nagarmotha (*Cyperus rotundus*) is used to treat scalp disorder. It belongs to family *Cyperaceae*. The dried fruit of nagarmotha is used for treating dandruff, revitalizing dull, regular used of nagarmotha oil improves hair texture, shine and stimulate hair growth. It also prevents hair fall and premature greying.

Ellu (*Sesamum indicum*) seed is rich with number of nutrients the hair needs. Regular used of sesame oil on hair and scalp promotes hair growth and shiner. It belongs to family *Pedaliaceae*.

Avarampoo (*Cacia auriculate*) leaves are used for hair growth promoter. It belongs to the family *Fabaceae*. It deeply cleanses hair, it is well known for hair fall control, it is also used to treat dandruff and scalp conditions.^[34]

Chigare (*Albizia amara*) nourishes and improves strength of hair. It is having anti-fungal property. It promotes the hair growth. It belongs to family *Mimosaceae*. It gives soft and lustrous to hair, prevents dandruff.^[35]

Bahera (*Terminalia balerica*) belongs to the family Comretaceae. It is a hair growth promoter and controls dandruff. It helps to remove excess oil and keeps the scalp dry to prevent the growth of dandruff.

Lavender oil (*Lavendula angustifolia*) prevents itchy scalp and fights dandruff. It belongs to the family Laiaceae. It is also having anti-bacterial property; it may kill or prevent lice. It is a hair growth promoter.^[36]

Rosemary oil (*Rosamarinus officinalis*) stimulates hair growth, prevents premature greying and dandruff. It also prevent dry or itchy scalp. It belongs to family Lamiaceae. Rosemary oil has anti-inflammatory properties, which reduce inflammation and irritation on the scalp.^[37]

Karpura (*Cinnamomum officinalis*) belongs to family Lauraceae. On applied to the scalp may stimulate circulation. Promote hair growth and reduce hair loss. It also has anti-fungal properties, which may treat dandruff.

Banyan (*Ficus benghalensis*) gives lustrous effect on hair. It belongs s to family Moraceae. It improves scalp health and reduces hair fall and makes hair strong from roots.^[38]

Eucalyptus oil (*Eucalyptus globulus*, *E. polybractea*, *E. viminalis*, *E. smithii*) stimulates hair follicles, improves hair health, promotes hair growth, relieves itchy scalp and treat lice. It is having anti-microbial property. It belongs to family Myrtaceae.^[39]

Spinach (*Spinacia oleracea*) is rich in antioxidants which helps to avoid hair damage. It improves hair growth and reduces hair loss by increasing blood circulation to scalp and stimulating hair follicles.^[40]

Neeliamari (*Indigofera tentoria*) belongs to family Fabaceae. It promotes hair growth, and prevents the scalp from being too oily, too dry and prevent dandruff.^[41]

Jatamansi (*Nardostachys jatamansi*) oil helps to promote hair growth, control dandruff and prevent premature hair greying. It belongs to family Valerianaceae.^[42]

Garlic (*Allium sativum*) is used to prevent hair loss (alopecia) and minimize dandruff and stimulate hair growth. It belongs to the family Alliaceae.^[43]

Urad (*Vigna mungo*) is used as saponifying agent and nourishes hair. It belongs to family Fabaceae. This can be used on scalp to help strengthen and lengthen hair as well as manage dandruff.^[44]

Peppermint (*Mentha piperita*) improves hair growth, prevent hair loss, cooling properties, freshened smell and tingly sensation on the scalp. Belongs to the family Laminaceae. Mint shampoo has antiseptic properties and

helps to relief an itchy scalp, prevents dryness of the hair.^[45]

Rose (*Rosa damascene*) has anti-inflammatory properties, it softens the hair, reduce dandruff, oiliness and helps with scalp issue. It belongs to the family Rosaceae.^[46]

Pomegranate (*Punica granatum*) prevents dandruff and combat hair loss; it darkens hair colour. It belongs to family Lythraceae.^[47]

Kurunthotti (*Sida cordifolia*) belongs to family Malavaceae. It is having anti-dandruff property, reduce hair fall and also to improve condition of hair.^[48]

Soap roots (*Acanthophyllum squarrosum*) is used as a detergent. It belongs to family Caryophyllaceae. It softens the hair naturally, prompt hair growth, provide natural shine and soothes dry scalp.^[49]

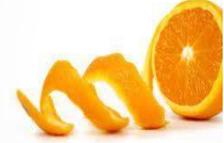
Vetiver (*Chrysopogon zizanioides*) has cooling property, it is having anti-bacterial property, it is also used as perfumery agents. It belongs to family Poaceae. It gives thicker and shiner hair, prevents dry scalp, removes hair lice and prevents premature greying.^[50]

The various crude drugs with its properties which can be used in herbal shampoo formulation is tabulated in Table 1.

Table 1: List of Crude drugs can be used as a ingredient in Herbal Shampoo formulation.

SI NO.	PLANT	PART	BOT. NAME	FAMILY	USES	REF	IMAGE
1	HIBISCUS	Leaf	<i>Hibiscus rosea</i>	Malvaceae	Prevent hair loss and hair growth promoter	[14]	
2	HENNA	Leaf	<i>Lawsonia inermis</i>	Lythraceae	Strong dying property, Anti-bacterial and Anti-fungal activity	[15]	
3	NEEM	Leaf	<i>Azadirachta indica</i>	Meliaceae	Antibacterial agent	[15]	
4	AMLA	Fruit	<i>Emblica officinalis</i>	Euphorbiaceae	It controls hair loss, Antidandruff	[15]	
5	SHIKAKAI	Powder	<i>Acacia concinna</i>	Leguminosae	Detergent	[15]	
6	REETHA	Fruit	<i>Sapindus mukorossi</i>	Sapindaceae	Foaming agent	[16]	
7	ALOEVERA	Leaf	<i>Aloe barbadensis</i>	Liliaceae	Healing or soothing property	[17]	

8	GUAVA LEAVES	Leaf	<i>Psidium guajava</i>	Myrtaceae	Strengthen the hair follicles Promote thicker, stronger, shiner and healthier hair growth	[18]	
9	DRUM STICK	Pulp	<i>Moringa oleifera</i>	Moringaceae	Nutrient rich property	[19]	
10	OLIVE	Fruit	<i>Olea europaea</i> or <i>Olea ferruginea</i>	Oleaceae	Hair growth promoter Soothing property	[19]	
11	BHRINGARAJ POWDER	Leaf	<i>Eclipta prostrata</i>	Asteraceae	Antidandruff	[20]	
12	HOLY BASIL (TULSI)	Leaf	<i>Ocimum sanctum</i>	Lamiaceae	Antimicrobial agent	[21]	
13	SENNA	Leaf	<i>Cassia senna</i>	Leguminosae	Great conditioner Stronger hairs Combats hair loss	[21]	
14	FENUEGREEK	Seeds	<i>Trigonella foenicum</i>	Leguminosae	Promote thick and healthy hair	[22]	
15	MARIGOLD	Flower	<i>Calendula officinalis</i>	Asteraceae	Hair growth promoter	[23]	

16	RAMBUTAN	Fruits	<i>Nephelium lappaceum</i>	Sapindaceae	Prevents hair falls and promotes hair growth	[24]	
17	BRAHMI	Leaf	<i>Centella asiatica</i>	Umbelliferae	Support health of hair	[25]	
18	ASHWAGANDHA	Roots and stem	<i>Withania somnifera</i>	Solanaceae	Control hair fall Promotes hair health	[25]	
19	ORANGE PEEL	Outer part of pericarp	<i>Citrus aurantium</i>	Rutaceae	Antidandruff Antibacterial agent	[26]	
20	LIQUORICE	Root	<i>Glycyrrhiza glabra</i>	Fabaceae	Nourishes the scalp Heal damage	[27]	
21	ACACIA	Exudation Of branches	<i>Acacia arabica</i>	Leguminosae	Emulsifying agent	[27]	

22	SANDALWOOD	Stem & Root	<i>Santalum album</i>	Santalaceae	Antidandruff, Antimicrobial Agents	[28]	
23	CURRY LEAVES	Leaf	<i>Murraya koenigii</i>	Rutaceae	Antiseptic Antidandruff Nutritional Shampoo	[28]	
24	ALMOND OIL	Seeds	<i>Prunus amygdalus</i>	Rosaceae	Treat hair loss Strengthens the hairs	[29]	
25	JUJUBE	Leaf	<i>Ziziphus spina</i>	Ziziphaceae	Antimicrobial activity	[30]	
26	LEMON	Dried Fruit	<i>Citrus limon</i>	Rutaceae	Antidandruff Natural cleanser pH modifier	[31]	
27	SOYAMILK	Whole soyabean	<i>Glycin max</i>	Fabaceae	Improving thickness Tensile strength of hair	[31]	

28	MUSTARD	Seeds	<i>Brassica juncea</i>	Brassicaceae	Hair nourishment	[32]	
29	HARDA {myrobalan}	Dried ripe fruits	<i>Terminalia chebula</i>	Combretaceae	Hair growth promoter	[33]	
30	NAGARMOTHA	Dried ripe fruits	<i>Cyperus rotundus</i>	Cyperaceae	Scalp disorder	[34]	
31	ELLU	Seed	<i>Sesamum indicum</i>	Pedaliaceae	Hair nourishment	[34]	
32	AVAR AMPOO	Leaves	<i>Cacia auriculate</i>	Fabaceae	Hair growth promoter	[34]	
33	CHIGARE	Leaves	<i>Albizia amara</i>	Mimosaceae	Hair growth promoter Nourishes and improves strength of the hair It has anti-fungal properties	[35]	

34	BAHERA	Dried ripe fruit	<i>Terminalia balerica</i>	Combretaceae	Hair growth promoter	[36]	
35	LAVENDER OIL	Flower	<i>Lavendula angustifolia</i>	Laiaceae	Hair growth promoter Anti-dandruff Prevent itchy scalp	[36]	
36	ROSEMARY OIL	Shrub	<i>Rosamarinus officinalis</i>	Lamiaceae	Stimulates hair growth Prevent pre-mature greying and dandruff Prevent dry or itchy scalp	[37]	
37	KARPURA	Leaf	<i>Cinnamomum camphora</i>	Lauraceae	Anti-dandruff	[38]	
38	BANYAN	Root	<i>Ficus bengha lensis</i>	Moraceae	Lustrous effect on the hair	[38]	
39	EUCALYPTUS OIL	Leaves	<i>Eucalyptus globulus</i> <i>Eucalyptus polybractea</i> , <i>Eucalyptus viminalis</i> <i>Eucalyptus smithii</i>	Myrtaaceae	Anti-microbial agents	[39]	
40	SPINACH	Leaves	<i>Spinacia oleracea</i>	Amaranthaceae	Promote hair growth	[40]	

41	NEELIAMARI	Shrub	<i>Indigofera tinctoria</i>	Fabaceae	Promote hair growth	[41]	
42	JATAMANSI	Dried root and Rhizomes	<i>Nardostachys jatamansi</i>	Valerianaceae	Promote hair growth	[42]	
43	GARLIC	Bulb	<i>Allium sativum</i>	Alliaceae	Prevent hair loss	[43]	
44	URAD	Seeds	<i>Vigna mungo</i>	Fabaceae	Saponifying agent Nourishes hair	[44]	
45	PEPPERMINT	Leaves	<i>Mentha piperita</i>	Lamiaceae	Improves hair growth Prevent hair loss Cooling properties Freshened smell and Tingly sensation on the scalp	[45]	
46	ROSE	Flower	<i>Rosa damascene</i>	Rosaceae	Reduce oiliness Anti-dandruff and Anti-inflammatory	[46]	
47	POMEGRANATE	Fruit	<i>Punica granatum</i>	Lythraceae	Combat hair loss Prevent dandruff Darkens hair colour	[47]	

48	KURUNTHOTTI	Leaves	<i>Sida cordifolia</i>	Malvaceae	Anti-dandruff activity	[48]	
49	SOAP ROOTS	Root	<i>Acanthophyllum squarrosum</i>	Caryophyllaceae	Used as detergent	[49]	
50	VETIVER	Root	<i>Chrysopogon zizanioides</i>	Poaceae	Coolant Anti-bacterial agent Perfumery agent	[50]	

CONCLUSION

In this study, an attempt has been made to bring out a wholly natural shampoo with no artificial color or preservatives. For this we had to keep the shampoo in powder form to increase the longer shelf life. It is suggested to make the powder form into a paste before use, with warmwater to increase the consistency. This makes washing the hair easy and at the same time maintain the natural form of the herb. To maintain good lathering effect, the herbs with high saponin content were selected to not only cleanses the hair but also to make the hair feel thicker, silky and smooth. The test of antidandruff were done in vivo with the help of volunteers while the anti-lice were done in vitro. The in vivo study showed the shampoos had different effects and are suitable for different type of hair. In our study shampoo with *Lawsonia inermis* hairs medicinal properties like antibacterial and antifungal activity which promotes hair growth, *Embilica officinalis* which is rich in fatty acid, reduce dandruff and prevent dry scalp, *Aloe barbadensis* stimulate hair growth and shiner and softer to hair, *Ocimum sanctum* which prevents hair loss by strengthen hair follicles, *Withania somnifera* which is antioxidant rich herb, improves blood circulations and prevent premature greying, *Brassica juncea* oil is high in fats including omega-3 fatty acids, it reduce inflammation in the skin and scalp, *Rosamarinus officinalis* prevents dry or irritation on the scalp. *Chrysopogon zizanioides* has cooling property also uses perfumery agents, removes hair lice and prevents premature greying.

REFERENCES

- Nasrin Aghel, Eskandar Moghimipour and Azadeh Raies Dana. Formulation of a Herbal Shampoo using Total Saponins of *Acanthophyllum squarrosum*. International Journal of Pharmaceutical Research, 2007; 6(3): 167-172.
- Sachin Dubey, Neelesh Nema and S.Nayak. Preparation and Evaluation of Herbal Shampoo Powder. Ancient Science of Life, 2004; 26(1): 38-44.
- Rhea Jacob, Sakthivel, K.M., Kannan. N. and Guruvayoorappan.C. Formulation of Cost- Effective Herbal Shampoo Powder. A Comparative Study with Market Shampoo. International Journal of Current Research, 2015; 7(2): 12645-12649.
- M. Madhusudhan, M.Krishnaji Rao, G.V. Radha and S.Ganapathy. Use of Traditional Herbs for the Formulation if Herbal Powder Shampoos and their Evaluation. Plant Archives, 2021; 21(1): 845-856.
- Utane. R, Deo S and Itankar P. Preparation of Herbal Shampoo by Green Method and their Characterization. International Journal of Researches in Social Sciences and Information Studies, 2017; 5: 254-258.
- Khaloud Al Badi, Shah A. Khan. Formulation, Evaluation and Comparison of the Herbal Shampoo with the Commercial Shmapoos. BENI-SEUF University Journal of Basic and Applied Sciences, 2014; 3: 301-305.
- Girish Kumar E, Pradeep Kumar G, Sasikalaof K and Sivadasan K.K. Plants used in Traditional Herbal Shampoos (Thaali) of Kerela, India: A Documentation. Asia Pacific Journal of Research, 2014; XXIV: 56-63.
- Pooja Arora, Dr. Arun Nanda, Dr. Maninder Karan. Shampoos based on Synthetic Ingredients Vis-à-vis Shampoos based on Herbal Ingredients: A Review. International Journal of Pharmaceutical Sciences Review and Research, 2011; 7(1): 41-46.
- Golhani D, Pandey V, Shukla A, Shukla R. Formulation and Comparative Evaluation of Herbal Shampoo with Marketed Products. Mintage Journal of Pharmaceutical and Medical Sciences, 2015; 4(3): 3-6.
- Rimjhim Arora, Rathore Kamal Singh, Bharakatiya Meenakshi. Formulation and Evaluation of Herbal Shampoo by Extract of some Plants. The Pharmaceutical and Chemical Journal, 2019; 6(4): 74-80.
- Sajid A, Mulani, Nitin Mali, Firoj A. Tmaboli, Yogesh S Kolekar, Anagha S Ajagekar, Shubham J Kamble, Srushti S Dhanal, Manish Wani. Formulation and Evaluation of Dry Herbal Powder Shampoo. International Journal of Pharmaceutical Chemistry and Analysis, 2021; 8(3): 112-117.
- Pawan Maurya, Shashikant Maury, Piyush Yadav, Manoj Kumar Yadav, Suraj Maurya, Satyam Jaysawal. A Review article on: Herbal Shampoo. Journal of Emerging Technologies and Innovation Research, 2021; 8(5): 366-375.
- Gaganpreet kaur, Priyanka Kriplani, Ashwani Dhingra, Bhawna Chopra, Geeta Deswal. Formulation and Evaluation of Anti-dandruff Polyherbal Powder Shampoo. Journal of Quality Assurance and Pharma Analysis, 2016; 2(1): 115-121.
- Priya D. Gaikwad, Kamini V. Mulay, Madhavee D. Borade. Formulation and Evaluation of Herbal Shampoo. International and Evaluation of Herbal Shampoo, 2020; 9(3): 29-31.
- Vijayalakshmi A, Snageetha S, Ranjith N. Formulation and Evaluation of Herbal Shampoo. Asian Journal of Pharmaceutical and Clinical Research, 2018; 11(4): 121-124.
- Gholve, Sachin Nadarde, Sunil Hindole, Omprakash, Bhusunure, Prasad Bhosale and Sanjay Thnote. Formulation and Evaluation of Polyherbal Anti-dandruff Powder Shampoo. World Journal of Pharmaceutical Research, 2015; 4(10): 1714-1731.
- Imran Patel, Ahnya Talathi. Use of Traditional Indian Herbs for the Formulation of Shampoo and their Comparative Analysis. International Journal of Pharmacy and Pharmaceuticals Sciences, 2016; 8(3): 28-32.
- Neelam Joshi, Kalpana Patidar, Rakesh Solanki, Vandana Mahawar. Preparation and Evaluation of Herbal Hair Growth Promoting Shampoo. Journal of Green Pharmacy, 2018; 12(4): 1-5.

19. Hiba Yateem, Michel Hanania and Nida Mosleh. Formulation and Evaluation of Herbal Shampoo Containing Olive Leaves Extract. *International Journal of Development Research*, 2018; 8(10): 23173-23176.
20. P.Vinod Kumar, P. Venkateswara Rao, R.Prince, K. Terejamma, T. Chaitanya, Prassna Kumar Desu. Formulation and Evaluation of Herbal Anti-dandruff Shampoo from Bhringraj leaves. *ARC Journal of Pharmaceutical Sciences*, 2018; 4(2): 29-33.
21. Suyog Sunil Bhagwat. Formulation and Evaluation of Herbal Shampoo. *International Journal of Creative Research Thoughts*, 2020; 8(9): 2860-2869.
22. Jyoti Gahlawat, Devender Sharma, Gajendra Singh Thakur, Jitendra Chobdar, Vivek Sharma. Formulation and Evaluation of Poly herbal Liquid Shampoo. *European Journal of Biomedical and Pharmaceutical Sciences*, 2019; 6(7): 149-154.
23. Revansiddapa M, Sharadha R and Abbulu K. Formulation and Evaluation of Herbal Shampoo Containing Rambutan Leaves Extract. *Journal of Pharmacognosy and Phytochemistry*, 2018; 7(4): 764-767.
24. Mahendran Sekar and Haleeda Aqeela Merican Noordin Nararuddin Merican Noordin. Formulation and Evaluation of Herbal Shampoo Containing Rambutan leaves Extract. *International Journal of Pharma and Bi0-Sciences*, 2016; 7(4): 146-151.
25. Gaurav Lodha. Formulation and Evaluation of Polyherbal Shampoo to promotes Hair Growth and Provides Anti-dandruff action. *Journal of Drug Delivery and Therapeutics*, 2019; 9(4-A): 296-300.
26. K. Sravanthi, N. Kavitha, K.Sowmya, S. Naazneen, U.Vaishnavi, CH. Anil. A Review of Formulation and Evaluation of Herbal Anti-dandruff Shampoo. *International Journal of Pharmaceutical Research and Applications*, 2019; 6(3): 1300-1311.
27. Sonu Prajapati, Pragya Sharma, Raghvendra Dubey, Dr. Summet Dwivedi. Formulation and Evaluation of Two in One Herbal Conditioning Shampoo Containing Extract of *Allium cepa* and *Trigonella foenum graecum*. *World Journal of Pharmaceutical and Life Sciences*, 2017; 3(2): 68-71.
28. Vinayak M. Chavan, Kundan J.Tiwari Kiran A. Suryavanashi, Aditya S. Bhor. Formulation and Evaluation of Herbal Shampoo. *American Journal of Pharmtech Research*, 2019; 9(5): 88-96.
29. Rahathunnisa begum and Afzalunnisa begum. Preparation and Evaluation of Herbal Hair Oil. *International Journal of Research and Analytical Review*, 2019; 6(1): 266-269.
30. Ali Heyam Saad, Rasool Bazigha Kadhim. Formulation and Evaluation of Herbal Shampoo from *Ziziphus spina* leaves Extract. *International Journal of Research in Ayurveda and Pharmacy*, 2011; 2(6): 1802-1806.
31. Shalini Sharma, UM Upadhyay, Siddhi U Upadhyay, Tanvi Patel, Pratiksha Trivedi. Herbal Armamentarium for the Culprit Dandruff. *International Journal of Phyto Pharmacy Research*, 2013; 4(1): 23-28.
32. Abujam Nganthoi Devi, Zakariya Noorani, Gaurav Kumar Sharma. A Review on Cosmetic Preparation of Hair. *International Journal of Trend in Scientific Research and Development*, 2018; 2(4): 2456-6470.
33. Simanchal Panda, Monalisa Nayak, Nita Biswas. Formulation and Evaluation of Herbal Powdered Shampoo. *Journal of Pharmaceutical Advance Research*, 2018; 1(3): 186-189.
34. Usha Veerachari, Dr. A.K. Bopaiah. Phytochemical Investigation of the Ethanol, Methanol, Ethyl Acetate Leaf Extract of *Cassia* species. *International Journal of Pharmacy and Biological Sciences*, 2012; 3(2): 260-270.
35. Rao R. Screening of Some Herbal Preparations for Hair Care. *International Journal of Advances in Pharmacy, Biology and Chemistry*, 2016; 5(2).
36. Dhayanithi S, Enjamamul Hoque, Pallavi N, Dr. Kavitha PN and Dr. Saraswathi. Formulation and Evaluation of Herbal Shampoo Powder. *National Journal of Pharmaceutical Sciences*, 2021; 1(2): 88-89.
37. Dr. S.Manohar Babu and S.Lalshmisavithri. Formulation and Evaluation of Aloe vera Gel Shampoo. *International Journal of Pharmaceuticals Drug Analysis*, 2021; 9(3): 172-179.
38. N. Rajesh Kumar, T.Dineshkumar, K.Harihaaran, A.V.Navaneetha Krishnan, C. Pavitharani, S. Subash, P.Manikandan and M.Surendra Kumar. Formulation and Evaluation of Herbal Baby Shampoo. *Journal of Pharmaceutical Research International*, 2022; 34(9B): 26-33.
39. Patel Naziya Rafik, Mohita Swapnali Arun, Shaha Rutuja Rajendra. Formulation and Evaluation of Onion Hair Nourishing Shampoo. *Journal of Drug Delivery and Therapeutics*, 2018; 8(4): 335-337.
40. D.K. Sastrawidana, G.A. Pradnyana. Preparation and Characteristics of Herbal Shampoo from Goatmilk and Natural Extract. *IOP Conference Series: Journal of Physics: Conf. Series*, 2019; 1317: 012033: 1-5.
41. Kunnathur Murugesan Sakthivel. Formulation and Assessment of Effective Polyherbal Powder Shampoo in Comparison with Marketed Shampoos. *International Journal of Pharmaceutical Research*, 2020; supplementary, 1: 1370-1377.
42. Namita, Nmisha. Formulation and Evaluation of Herbal Shampoo having Anti-microbial Potential. *International Journal of Pharmacy and Pharmaceutical Sciences*, 2013; 5(3): 708-712.
43. Swarnlata Saraf, Sunil M.Hargude, Chanchal Deep Kaur and Shailendra Saraf. Formulation and Evaluation of Herbal Shampoo Containing Extract of *Allium sativum*. *Research J. Topical and Cosmetic Sci.*, 2011; 2(1): 18-20.
44. Deeksha, Rishabha Malviya, Pramod K. Sharma, Dharmendra Singh and Akanksha Sharma. Formulation of Herbal Shampoo against Head Louse (*Pediculuc humanus capitis*). *The Open Biology Journal*, 2020; 8: 74-80.

45. M. Madhusudhan, M. Krishnaji Rao, G.V. Radha and S. Ganapathy. Use of Traditional Herbs for the Formulation of Herbal Powdered Shampoos and their Evaluation. *Plant Archives*, 2021; 21(1): 845-856.
46. Firoj A. Tamboli, Yogesh S Kolekar, Anagha S Ajagekar, Shubham J Kamble, Srushti S Dhanal, Anil Kumar J Shinde. Formulation and Evaluation of Herbal Powder Shampoo. *International Journal of Pharmaceutical Chemistry and Analysis*, 2021; 8(3): 112-117.
47. Tanya Malpani, Manali Jeithliya, Nanadini Pal and Payal Puri. Formulation and Evaluation of Pomegranate based Herbal Shampoo. *Journal of Pharmacognosy and Phytochemistry*, 2020; 9(4): 1439-1444.
48. Sarath Chandra, Vipin K.V, Ann Rose Augusthy, Lindumol K.v, Arun Shirwaikar. Development and Evaluation of Anti-dandruff Shampoo based on Natural Sources. *J. Pharm Phytother*, 2013.
49. Nasir Aghel, Eskandar Moghimipour and Azadeh Raies Dana. Formulation and Evaluation of Anti-dandruff Shampoo based on Natural Sources. *Iranian Journal of Pharmaceutical Research*, 2007; 6(3): 167-172.
50. Nagarajan Anitha, Manijandan Kirthik Roshan, Ramakrishnan Shanmathi, Durairaj Brindha. Formulation and Assessment of Effective Polyherbal Powder Shampoo. *International Journal of Pharmaceutical Research* 2020; supplementary, 1: 1370-1377.