



A REVIEW ON HERBAL SHAMPOO

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ABSTRACT

The main object of this present study is to prepare and evaluate an herbal Shampoo and determine physiochemical function that emphasizes on safety, Efficacy and quality of the product Herbal Shampoo is the natural haircare product Which is use to remove grease, dirt, dandruff and promote hair growth, Strenthness and darkness of the hair. It is also supply softness, smoothness, and Shines for the hair. Various drugs are used for the pre mixture of cosmetics Shampoo. Such drugs shows different side effects such as hair loss, high scaling, Scratching, discomfort, nausea and headache. Therefore an experiment is made to prepare herbal shampoo that is free from side effects. (1) The aim of the present study is to Formulate and evaluate herbal Anti dandruff Shampoo containing natural ingredients with an Emphasis on safety and efficacy.(2)

KEYWORDS- . Cosmetic, Herbal shampoo, aloe Vera, dandruff, Hibiscus rosa-sinesis, Acasia concinna, sapindus mukorossi, Azadirachta indica and Glyccerrhiza glabra.

INTRODUCTION-

Herbal Shampoo are probably the most widely used cosmetic products for cleansing Hairs and scalp in our daily life Herbal shampoos are the cosmetic preparations That with the use of traditional ayurvedic herbs are meant for cleansing the hair And scalp just like the regular shampoo. They are used for removal of oils, dandruff, , environmental pollutions etc. shampoo is a type of cosmetic mixture that uses herbs from plants as

an alternative to the synthetic Shampoo available in the market. The herbal shampoo is important, as people today prefer herbal products than chemical ones for they proved to enhance.(1)Shampoos are most probably used as cosmetics. Shampoos are most likely utilized as beautifying agents and are a viscous solution of detergents containing suitable additives preservatives and active ingredients(3). It is a harmless, chronic condition that occurs when scalp becomes dry or greasy and produces white flakes of dead skin that appear in hair or on shoulders. People most often think of it as anything that produces a flaky scalp. (7)A good shampoo should almost immediately form abundant foam irrespective of the type of water used Or the nature of soil or fat to be removed from hair. Concept foam formation is not related to the Cleansing effect, but people psychologically always prefer a high foam product. Some good shampoos Are found to have side effects like drying effect on the hair. This leaves the hair too dry to handle or Comb. hence proper conditioning of the hair is also an important consideration, some shampoos cause Irritation to the eye and a lasting corneal cloud. These should be (19)

Definition Herbal shampoo Shampoos are most probably used as beautifying It is a hair care product that is used for cleanse scalp and hair in our daily life. Shampoos are most likely utilized as beautifying agents and are sticky solution of detergents containing suitable additives preservatives and active Ingredients. It is usually applied on wet hair,Massaging into the hair, and cleansed by rinsing with water. The purpose of using herbal shampoo is used to remove dirt that is make up on the hair without stripping out much of the sebum. Many artificial shampoos are present in the current market both medicated and non medicated , however, shampoo popularized due to natural origin which is safe , increases consumers demand and free from side effects (16).HS is defined as a preparation of a surfactant (surface active material) in suitable form liquid solid or powder which when used under the conditions specified will remove surface grease, dirt and skin debris from the hair shaft and scalp without affecting adversely the hair, scalp or health of the user. HS has so many types are powder, liquid, lotion, cream, jelly, aerosol, specialized HS (Conditioning, Anti-dandruff, Baby, Two Layers). But the future of HS is going to be herbal Shampoo It contains all the natural ingredients with herb extract. It helps hairs to improve their standard of moisture, shine, growth, thickening, strength of hair roots. (17)Shampoos are may be the most widely used the cosmetic product for cleansing hairs and scalp in your daily life. A shampoo is Shampoos are may be the most widely used the cosmetic product for cleansing hairs and scalp in your daily life. A shampoo is basically a solution of a detergent containing suitable additives for other benefits such as hair conditioning, lubrication, medication etc . Nowadays many synthetic, herbal , medicated and non-medicated shampoos are available in the market [Ishii – 1997] . But popularity of the herbal shampoos among consumers is on rise because of their belief . The herbal shampoos are safe and free from side effect . Herbal shampoos is widely unstable product all over the world it has been used for many years .chemical herbal shampoos are prepared with several chemicals which can care hairs problems but also responsible for damage of hairs. Some international research has said that the chemicals of herbal shampoos also responsible for cancer herbal shampoos are defined as preparation of a surfactant in suitable

form liquid, solid or powder which when used under the condition specified will remove surface grease, dirt & skin debris from the hair shaft & scalp [Arora.P-2011]. Herbal shampoos have so many types are powder, liquid, lotion, cream, jelly, aerosol and specialized herbal shampoos (conditioning, antidandruff). Herbal shampoos contain all the natural ingredients with herb extract. It helps hair to improve their quality of moisture, growth, thickening, strength of hair roots. The most important thing is that herbal shampoos have no any side effect. The herbal shampoos are better in performance & safer than the synthetic shampoos. Herbal shampoos are totally natural no any other artificial chemical are added. Herbal shampoos won't irritate the skin or scalp. By using herbal shampoos we can stop the hair loss. Hairs are the basic part of human beauty. People are using herbs for cleansing, beautifying & managing hair since ancient era. The large amount of people used herbal product which are less expensive and have less side effects. As for as ancient time people used natural extract and resources for health care and cosmetic purposes. They are large number of medicinal plant which are beneficially effect on hair and are commonly used (4)

History- Indian subcontinent In the Indian subcontinent, a variation of herbs and their extracts have been used as shampoos since ancient times. A very effective early Shampoo was made by boiling Sapindus with dried Indian gooseberry (amla) and a selection of other herbs, using the strained extract. Sapindus, also known as soapberries or soapnuts, a tropical tree widespread in India, is called ksuna. In ancient Indian texts and its fruit pulp contains saponins which are a natural surfactant. The extract of Soapberries creates a lather which Indian texts called phenaka. It leaves the hair soft, shiny and manageable. Other products used for hair cleansing were shikakai (Acacia concinna), hibiscus flowers, ritha (Sapindus mukorossi) and arappu (Albizia amara). Guru Nanak the Founder and the first Guru of Sikhism, made references to soapberry tree and soap in the 16th century (1)

Human hair

Parts of the Hair

Dermal papillae: The dermal papilla is responsible regulating the hair cycle and hair growth, and is also comprised of androgen receptors that are sensitive to the presence of DHT

Matrix: The matrix surrounds the dermal papillae and contains all the active ingredients for hair growth and for the development of the different parts of the hair, particularly the outer root sheath, the inner root sheath and the hair shaft. Combined, the matrix and the dermal papillae make up the hair

USE OF INGREDIENTS

1) Soap Nut Extract(6)

-Stops Hair fall

Prevents Dandruff.

Fight against scalp Infection



Figure 2- Soap Nut Extract

2 Amla Extract (6)

Strengthen the scalp and Hair.

Reduce Hair Loss.

Stimulate Hair Growth.

Prevent or treat dandruff and dry scalp.

Improve overall appearance of Hairs.

Prevent or treat fungal and Bacterial hair and scalp infections



Figure 3- Amala Extract

(3) Shikakai Extract (6)

Prevents Grays.

Add more shine to the Hairs.

Cleanses Hair.

Crubs Hair Loss.

Prevents Lice,Psoriasis,Eczema & Scabies.

Prevents Splits ends



Figure 4- Shikakai Extract

4) Aloe vera-

Strengthens.

Calms an itchy scalp.

Deeply Cleans Oily hairs.

Promote hair growth.

Smooth natural curls.

Reduce frizzing



Figure 7- Aloe Vera



5. Rose Oil (6)

- i. It repairs hair damage
- ii. Improves Growth of hairs
- iii. Reduces the dandruff
- iv. Gives fragrance to the shampoo



6) **Lemon Juice (6**

i. Add More shine.

ii. Get rid of dandruff

iii. Split ends

iv. Reduces Hair fall(5,6)



7) **Reetha (2)** :Sapindus Mukorossi-Sapindaceae, Soapnuts is also called as Arishtak in Ayurveda And “Soap nut tree” in India. It is well known for Its traditional medicinal uses and is commonly used As a hair cleanser. Anti-dandruff agentIs an anti hair loss shampoo,the Natural antifungal and anti bacterial which may Helps in anti dandruff. It can be used on a daily basis to provide nourishment to the hair scalp and promote hair regrowth. Reetha helps to control dandruff and promotes hair growth due to its Tridosha stabilize property



8)Ginger

Zingiberaceae, the Anti septic properties of ginger helps in treating Dandruff effectively by getting rid of infections on the scalp. One of the main cause for dandruff is imbalance in PH. Ginger balances the PH of the scalp that finally helps in hair growth.(2)



9)Curry leaves : *Murraya Koenigii-Rutaceae*, Curry Leaves help to control dandruff. Its antifungal Properties help in reducing dandruff and itchiness Leaving you with a clean scalp and healthy hair. Curry leaves moisturize your scalp, promote hair Growth, and prevents dandruff. Curry leaves are Rich in cell reinforcements that saturate the scalp While disposing the dead hair follicle, helps in Preventing hair fall, premature hair graying, and Dandruff.(2)



10) Senna Extract (6)

Strong Hairs

Great Conditioner

Combats Hair Loss





11)Gelatin (6)

Gelatin Can improve hair thickness and growth.

Gelatin supplement or placebo for 50 weeks to 24 people with alopecia.

It gives thickness to hairs.

For strengthening of Hairs

MATERIALS AND METHODS:

Collection of material :

TABLE 1:- Details of the plant materials study(12)

Sr no	Common name	Botanical name	Parts used	Category
1	Hibiscus	Hibiscus rosa-sinensis	Flower	Conditioning agent
2	Amla	Emblica officinalis	Fruit	Anti-dandruff agent
3	Shikakai	Acacia concinna	Powder	Detergent
4	Soapnut	Sopindus indica	Fruit	Detergent
5	Cassia	Cassia auriculata	Leaves	Antidandruff agent
6	Bring raj	Eclipta prostrata	Leaves,flower	Hair growth
7	Aloe vera	Aloe barbadensis	Leaf	Coolant

MATERIAL:

Material	Quantity
Reetha extract	2.5 g
Amla extract	2.5 g
Sheekakai extract	2.5 g
Sidr extract	2 g
Lemon juice	1 mL
Methyl paraben	1 mL of 0.05% solution
Gelatin solution	q.s
Citric acid	q.s
Essential oil	0.1 mL

Types of shampoo

Shampoos are of the following types:

Powder Shampoo

Liquid Shampoo

Lotion Shampoo

Cream Shampoo

Jelly Shampoo

Aerosol Shampoo

Specialized Shampoo

Conditioning Shampoo

Anti- dandruff Shampoo

Traditional shampoo

Herbal shampoo

Solid shampoo

1.Traditional Shampoo The most common hair care cosmetic product is the shampoo. Arora et al. reported that can be described, primarily, as a cosmetic preparation, packed in a form convenient forUse, generally applied for cleaning hair and scalp from dirt, residues of previously applied hairStyling products and environmental pollutants.

2.Herbal Shampoo nterestingly, there is a large number of plants having beneficial effects on hair and being commonly used in shampoos for their content of vitamins, amino acids, sugars, glycosides,phyto-hormones, bioflavonoids, fruit acids and essential oils useful protocols for the artificial soiling of hair, various cleaning processes and the analysis of the lipids remaining on the hair by gas chromatography (10)

Ingredients	Medicinal uses
Neem	Antibacterial agent
Soap nut extract	Foaming agent
Amla extract	Antidandruff agent
Shikakai extract	Detergent
Hibiscus	Conditioning agent
Bhringraj extract	Hair growth
Aloe vera	Moisturizing agent
Gelatin	Gelling agent
Lemon juice	Antimicrobial

3 solid shampoo Solid shampoos present some additional advantages compared to the traditional ones.In particular, they are easy to transport and can be used for a longer time, thanks to more Microbiological stability than liquid formulations.

4 .Powder shampoo :It is available in the form of Dry powder, initially it was prepared from dry Soaps, but nowadays dry synthetic detergents are Used fortheir preparation. Powder shampoo is Prepared where addition of water or other solvent Reduces the activity of the components, especially In case of medicated shampoo. Nowaday these Shampoos are not used due to the difficulty Experienced in their application.

Ingredients	Biological sources	Uses
Amla fruit	ripe fruits of E. officinalis	Hair darkening Hair growth promoter
Neem	Dried leaves of A. indica	Anti-dandruff agent Anti-bacterial agent
Shikakai fruit	Dried pods of A. concinna	Foaming agent Anti-dandruff agent

Tulsi	Dried leaves of O. sanctum	Anti-dandruff agent
Bahera	Dried fruits of T. bellirica	Hair darkening Hair growth promoter
Brahmi	Dried leaves of C. asiatica	Support Health of Hair
Henna	Dried leaves of L.inermis	Hair conditioner

5.Liquid shampoo : These are clear liquid mixture that are most widely used. They are Usually made by using detergent of low cloud Point. Some of these shampoo may be transparent.

SLS	40%	Cleansing and foaming agent
Nacl(to desired viscosity)	2-4%	Thickener
Water	Upto100%	Vehicle
Perfume,color, preservatives	q.s	Fragrance

6) Cream shampoo :These are called as lotion Shampoos which are modification of clear liquid Cream shampoos. solubilising agents such as magnesium stearate is also used to dissolve the Added opacifier. (9,2,8)

SLS	38%	Cleansing and foaming agent
Cetyl alcohol	7%	Moisturizer
Water	Upto 100%	Vehicle
Color,perfume	q.s	Fragrance
Preservatives	q.s	Prevent the microbial growth

7)Jelly shampoo :These are transparent and thick Usually produce by incorporating a gelling agent,e.g., cellulose).There is great use in hair salon And beauty parlors. The principle ingredient is detergent which can be used either alone or in combination with soap. by altering the proportion Of detergent, gel of required consistency can be Obtained. Addition of methyl cellulose to clear Liquid shampoo and its successive thickening also show rise to gel shampoo.

Alkyl dimethyl benzalkonium choride	15%	antimicrobial agent
TLS(40%)	28%	Baby shampoo
Coconut ditethanolamide	7%	stabilise the foam
HPMC	1%	Foam enhancer and stabilizer, thickener, emulsion stabilizer

Water	Upto 100%	Vehicle
Color,perfume, preservatives	q.s	Fragrance, prevent the microbial growth

8).Aerosol shampoo :They are called aerosol Shampoos because they are packed in aerosol Containers. Their formulation, preparation and Packing is complex as an additional propellant Is included. The propellant added must be united and should not reduce the activity of Shampooing ingredients. The container space is Provided with a valve. Shampoo comes out foam When the valve is pressed.consequently also called as Foam type shampoo.

TLS	60%	Baby Shampoos,
Coconut ditethanolamide	2%	stabilise the foam
Water	Upto 90%	Vehicle
Propellent	10%	Cleaner
Color,perfume, preservatives	q.s	Fragrance, prevent the microbial growth

ADVANTAGES OF SHAMPOO:

- Cleansing properties
- Improving hair hygiene.
- Treating scalp conditions
- Treatment for dry scalp
- Treatment for hair loss.
- Treatment for greasing or oily hair.
- Relieves itch and irritation
- Repairs damaged hair.
- Shampoo keeps hair silky or smooth.
- Keeps your hair beautiful and blossomed.

Pure and Organic Ingredient

Free from Side Effects

No Surfactants eg:- SLS

No Synthetic Additives

No Animal Testing

Earth And Skin Friendly (6,2)

FUNCTION OF HEARBAL SHAMPOO-

1. Lubrication
2. Conditioning
3. Hair Growth
4. Maintenance of Hair Colour
5. Medication (6)

BENEFITS OF HEARBAL SHAMPOO-

1. More Shine
2. Less Hair Loss
3. Long Lasting Colour
4. Stronger and More Fortified Hairs
5. All Natural, No Chemicals
6. Wont Irritate Skin or Scalp
7. Keep Healthy Natural Oils (2)



Composition of shampoo

Principal surfactant

Secondary surfactant

Antidandruff agents

Conditioning agents

Pearlescent ageagent

Sequestrants

Thickening agents

Colours, perfumes and preservatives(11)

Principal surfactant Surfactant are cleaning agents that substituted soap They act through the weakening of the physicochemical adherence forces that bind impurities and residues to the hair. Surfactant dissolve these impurities preventing them from binding to the shaft or the scalp. The cleansing ability of a shampoo depends on how well it remove grease as well as the type and amount of surfactants used.(13)

Conditioner agent

Conditioner are used to decrease friction, detangle the hair, minimize frizz and improve combability. Conditioner act by neutralizing the electrical negative charge of the hair fiber by adding positive charges and by lubricating the cuticle that reduces fiber hydrophilicity.

Functions of the conditioners

Improve combability

Mimetize the hair natural lipid outer layer

Restore hydrophobicity

Seal the cuticle

Avoid or minimize frizz, friction: Neutralize the negative charged net

Enhance shine, smoothness and manageability (13)

Colour perfumes and preservatives (14)

As most of the surfactants typically used in shampoos have a straw/yellow color, the variety of colors that can be achieved are limited. Green, yellow and orange are easier to obtain than pastels The other cover when adding color to a shampoo is the stability of the color. Blue tend to turn green, reds tend to turn orange and greens tend to turn yellow. These color changes can occur whether the shampoo is exposed to UV light or can occur just from heat and aging.

Secondary surfactants: improved detergency, foam and hair condition. Conditioning agents: Lanolin, mineral oil, fenugreek, herbal extracts, Henna egg derivatives.(20)

Characterization of Herbal Shampoo:

1. **pH:** 1% shampoo solution was used to determine the PH by using the PH meter.
2. **Percent of Solid:** Weighed a clean dry evaporating dish and recorded the initial weight of evaporating dish. 4Gm of shampoo Formulation (not the 1% solution) was taken in the evaporating dish. Weigh the dish and shampoo and record Initial weight of shampoo and dish. Calculated the exact weight of the shampoo only and recorded the initial Weight of shampoo only. Place the evaporating dish with shampoo on the hot plate until the liquid portion has Evaporated. After drying, weighed the dish and shampoo solid and results were noted

3. **Foam formation:** (Shake Test) Took 50 ml of the 1% shampoo solution in 250 ml graduated cylinder and recorded the volume. Then cover the Cylinder with hand and shaken 10 times. The total volume of the contents was recorded after shaking. Calculate The volume of the foam and recorded the size of the bubbles.
4. **Foam quality and retention:** Immediately behind the shake test, time was recorded. Recorded the volume of foam at 1 minute intervals for 5 Minutes.
5. **Surface tension:** Shampoo was taken in the beaker and then slowly added distilled water. After thorough mixing of shampoo and Water the surface tension was uniform by using stalagmometer.
6. **Skin irritation test:** the solution of prepared shampoo on skin and kept for 5 minutes and observed for redness of skin and Irritation there, were no any red colouration and the irritation to the skin.
7. **Visual stability:** To prepared shampoo was tested for the visual stability for 21 days at room temperature with relative humidity 65+_5, and observed for color change and PH There were no changed in color and PH of shampoo within 21 Day and no any phase separation between oil and water.
8. **Viscosity:** Viscosity was determined by using the Ostwald viscometer. 8
9. **Dirt dispersion test:** To 10 ml of purified water two drops of cleanser were included and taken in a wide-mouthed test tube. To the Formulated shampoo, added one drop of Indian ink and shaken for 10 min after closing the test tube with a Stopper. The volume of seal in the froth was measured and the result was graded in terms of none, slight, medium, or heavy Testing of wetting-Wetting time was calculated by noting the time required by the canvas paper to sink Completely. A duck paper weighing 0.44 g was cut into a disc of diameter measuring 1-inch. Over the shampoo (15)

Conclusion:

The main purpose behind this formulation was to develop a stable and effective shampoo by including all types of additives which are added in this formulation. By using herbal natural extracts we can reduce the side effects of shampoo. Herbal shampoo is more safer than synthetic shampoo. The PH of the shampoo was adjusted to 5, to retain mantle of scalp which is acidic. Shiny hair having a smooth texture and clean-cut end is generally perceived to be Healthy. Use of Conditioning agents (synthetic) reduces the protein or hair loss. To Provide the effective conditioning effects, the present study involves the Use of shikakai, amla, and other plant extracts instead of synthetic . There is a strong need to change the consumer perception of a good shampoo and the onus lies with formulators.

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