

Herbal Hand Wash Composition Enriched with *Michelia Champaca* L Leaves Extract

Shivraj Patil¹, Mithila Nikam², Samira Mistry³, Kshitija Mule⁴

^{1,2,3,4}B.Pharm, Adarsh College of Pharmacy, Vita, Maharashtra, India (415311)

Abstract

Herbal Drugs -Herbs are usually made from parts of plants obtained from sources that have good medicinal value. Main products include flowers, leaves, bark, roots, and stems. Plants play an important role in human life and help maintain good health.

Hand Wash – Hand washing is a very important process in daily life and should be done when necessary.

Keywords: Herbs, Herbal Hand Wash, *Michelia Champaca* L, Tulsi, Soapnut.

Introduction

Herbal Hand Wash

Herbs are known to have antibacterial properties, using herbs in hand sanitizers helps kill germs and bacteria, the ingredients used are herbs and hand sanitizers, they are natural and safe and help relieve and eliminate skin problems This happens. . It helps restore skin elasticity, and contains anti-wear ingredients as men's sports, so it has the same design, is non-irritating, and has better cleaning power.

Objective

The main objective of my research is developing Herbal Hand Wash that formulation mainly consist of Active Pharmaceutical ingredient *Michelia Champaca* L. Leaves extract And another Ingredients are Tulsi Leaves extract, Aloevera Gel, Soapnut Powder, Methyl Paraben and Sodium Lauryl Sulphate.

Ingredients of Herbal Hand Wash

1. *Michelia Champaca* L Leaves

Michelia Champaca Plant are Evergreen plant . Size upto 50 meter tall Or height diameter contain 200 cm that Straight and cylindrical.Surface of Bark is Smooth, grey or greyish white. Inside Bark are Fibrous. Fruting carpels are dorsal suture It used with forming a fleshy Syncarp. Seeds are hanging with funicle. Plant contain fruits through Out the Year.

Synonyms- *Michelia Champaca* L, *Michelia Sericea* pers(6).

Family- Magnoliaceae

Kingdom – Plantae

Genus – *Magnolia*

Species- *M.Champaca* Binomial name-*Magnolia Champaca* (L) Baill. Example –Plerre(7).

***Michelia Champaca* L Leaves Extraction Method**

Michelia champaca L leaves were separated, washed with water, dried in shade. Methanol extract was

prepared from *Michelia Champaca* L leaves powder. 10g of fine powder of *Michelia Champaca* L leaves is diluted with 40ml of methanol for 2-4 days and then filtered.

Compound and Composition of *Michelia Champaca* L leaves –

Compound	Composition
Naphthalene methanol	7.70 %
Acetic acid	6.68 %
2,3 butanediol	6.46 %
5 - Dodecyne	3.61 %
Pimaric acid	3.08 %
Succinamic acid	2.78 %
Benzoic acid	2.66 %
Hydroquinone	1.12 %
Phenol	6.25 %

2. Tulsi Leaves

Tulsi is an aromatic herb Perennial plant.tulsi Known for its detoxifying, purifying and antibacterial properties.tulsi kills 99.99% of germs to help protect your hands. Tulsi now, farm history is marketed for its essential oil. It is a small, versatile plant, 30 to 75 cm high. All Tulsi is used medicinally in places, especially its fresh and dried leaves. Leaves are sharply angled All steroidal margins are hairy on both sides and dotted with small glands.

Bionomical name: *ocimum tenuifloram/Ocimum sanctum*

Division: magnoliophyta

Class : Magnoliopsida

Order : Lameness

Genus: *Ocimum*

Uses of Tulsi

Tulsi leaves have a broad spectrum of antibacterial activity, including activity against a variety of human and animal pathogens, and are also used in the manufacture of oral antiseptics and purifiers and in wound healing.

Extraction Method of Tulsi leaves

Tulsi leaf samples were separated, washed with drinking water and completely dried in the shade. An alcoholic extract was prepared from tulsi powder. 10 g of tulsi powder is diluted with 40 ml of ethanol, stored for 2-4 days and then filtered.

3. Aloe vera

Introduction: Aloe gel obtained form parenchyma leaves of *Aloe Barbiodensis* . It Contain mucilaginous Tissue.

Synonyms: Kumari,Musabbar

Biological Source: Aloe Conatin dried juice obtained from transversely Cut leaves of various species,

examples: *Aloe Barbiodensis* Miller,*Aloe Perryi* Beaker,*Aloe African* Miller

Family- Liliaceae

Chemical Constituents

Aloe mainly contain- Anthraquinone glycoside.

Another constituents Aloe Conatin, aloetic acid, aloesone, choline, Choline salicylate, chrysamminic acid etc.

Uses: Aloe gel used as moisturizing purpose and Protective .

Extraction Method

1. Make transverse section on Leaves, collect the latex in the beaker And discard.
2. Now scrap the mucilaginous pulp by scrapping with a knife.
3. Blend this whole pulp make it uniform.
4. Strain this solution through muslin cloth and filter.
5. Centrifuge the filtrate, decant supernatant.
6. Add acetone with stirring to precipitate the gel, keep this mixture Overnight.
7. Again centrifuge and collect the residue.
8. Re-dissolve this residue in warm water to obtain clear Aloe gel.

4. Soapnut Powder

Synonym

Biological Source: It is consist of pods of *Sapindus trifoliatus*, *Sapindus mukorassi*.

Family: Sapindaceae

Description: It is a shrub with linear pods, the dried powder of the pods is brown in colour and have soap like properties.

Chemical Constituents

It contains Saponins (10-11.5), Mucilage, Gums, Proteins.

Saponins contain sapindosides A, B, C and D, diosgenin, gitogenin, chlorogenin and rusogenin.

Uses: It is used as detergent, hair cleanser, hair growth promoter, anti dandruff agent and foaming agent.

5. Methyl Paraben

IUPAC Name- Methyl 4-hydroxy benzoate.

Molar mass – 152.15 g/mol

Appearance – colorless crystals or white crystalline powder.

Uses -

1. As a preservative.
2. It is also used as antifungal agent.
3. Moisturizers.
4. Some deodorants

6. Sodium Lauryl Sulphate –

It is also called as SLS and alkyl ether sulphate. It is surfactant that Produce effect on surface it touches . It is a foaming agent.

Molar mass – 421 g/mol (288.38+44.05n).g/mol.

SLS is anionic surfactant . They are desired from coconut and palm Kernel oil it is a mixture of sodium alkyl sulphates and mainly they Lauryl.

Uses-

1. Fat emulsifier.
2. Wetting agent.
3. Detergent in cosmetics.
4. Used as creams properly disperse the ingredients and research Purpose protein biochemistry .

Formulation Table –

Ingredients	Formulation No-1	Formulation No-2	Formulation No-3	Category
Michelia Champaca L leaves Extract	5 ml	10 ml	15 ml	Antimicrobial Agent
Tulsi Leaves Extract	5 ml	10 ml	15 ml	Antimicrobial Agent
Aloevera Gel	10 ml	20 ml	30 ml	Thickening agent
Soapnut Powder	2 gm	4 gm	6 gm	Foaming Agent
Methyl Paraben	0.2 gm	0.4 gm	0.6 gm	Preservative
Sodium Lauryl Sulphate	2.5 gm	5 gm	7.5 gm	Surfactant
Water	Quantity Sufficient	Quantity Sufficient	Quantity Sufficient	Vehicle
Perfume	Quantity Sufficient	Quantity Sufficient	Quantity Sufficient	Fragrance

Procedure of Herbal Hand Wash

It is a blend of methanol extract of Michelia Champaca L leaves and methanol extract of Tulsi leaves. Mix this mixture with aloe vera gel and enough water heated to 70 °c. Then add the soapnut powder. Then add the desired amount of sodium lauryl sulphate while stirring moderately. Methyl paraben is added last. Stir the solution and make it homogeneous at room temperature. Fill the Hand Wash in Suitable container.

Evaluation Parameters –

1. **Appearance:** It was determined visually.
2. **Colour:** It was determined visually. Pale green colour observed.
3. **Odour:** It was determined manually. Aromatic odour observed.
4. **Foam Test:** 0.5 g of the formulation sample was dispersed in 25 ml of distilled water, then transferred to a 50 ml graduated cylinder with a stopper, shaken continuously for 1 minute, and the height of the foam was measured. Foam height was found to be 3 cm.
5. **PH Test:** The PH of the sample was examined by using Brookfield viscometer. PH was observed.
6. **Stability Test:** This was a stability study in which Herbal hand wash. Sample were stored for a week under various temperature conditions, including 40 degrees Celsius. No color change or phase separation was observed during the stability study.

7. **Foam Retention:** 25 ml of Herbal Hand wash was taken into a 100 ml graduated cylinder and shaken ten Times. The volume of foam at 1 minute interval for minute was recorded foam Retention Should be stable at least 5 min.

Conclusion

Michelia Champaka L, Tulsi and Aloevera Hand Wash extracts were successfully developed using the antibacterial and antimicrobial evaluation parameters presented below.

Evaluation Parameters	Result Obtained
PH	5.4
Colour	Pale Green
Odour	Aromatic
Stability	Stable
Washability	Easily Washable
Foam Retention	Stable
Foam Height	3 cm

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