



Formulation And Evaluation Of Polyherbal Handwash

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Abstract: This abstract presents the formulation and evaluation of polyherbal handwash. With the growing concern for hygiene and the desire for natural products, the demand for polyherbal hand sanitizers has increased. In this study, polyherbal handwash was formulated using a combination of natural extracts known for their antimicrobial properties. The formulation comprised extracts of False Ashoka, which were carefully selected for their potential to combat germs while being gentle on the skin. The formulated polyherbal handwash underwent rigorous evaluation to assess its efficacy and safety. The antimicrobial activity of the handwash was evaluated against a panel of common bacteria and fungi using standard methods. The results demonstrated significant inhibition of microbial growth, highlighting the effectiveness of the herbal extracts. Further evaluations were conducted to assess the handwash's physical properties, including pH, viscosity, and sensory attributes. Additionally, skin compatibility tests were performed to ensure the product's safety and non-irritating nature. Overall, the formulated polyherbal handwash exhibited potent antimicrobial activity and favorable physical characteristics, making it a promising alternative to conventional hand sanitizers. Its natural ingredients provide a potential solution for individuals seeking effective hygiene products derived from herbal sources.

Keywords: False Ashoka, Alovera juice, Antimicrobial

I. INTRODUCTION

Hand washing also known as hand hygiene, is the act of cleaning one's hands with soap or hand wash and water to remove viruses/bacteria/microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the hands. Drying of the washed hands is part of the process as wet and moist hands are more easily recontaminated. If soap and water are unavailable, hand sanitizer that is at least 60% (v/v) alcohol in water can be used instead, unless hands are visibly excessively dirty or greasy. Hand hygiene is central to preventing the spread of infectious diseases in home and everyday life settings.

The World Health Organization (WHO) recommends washing hands for at least 20 seconds before and after certain activities. These include the five critical times during the day where washing hands with soap is important to reduce fecal-oral transmission of disease: after using the toilet (for urination, defecation,

menstrual hygiene), after cleaning a child's bottom (changing nappies), before feeding a child, before eating and before/after preparing food or handling raw meat, fish, or poultry.

When both hand washing and using hand sanitizer are not available, hands can be cleaned with uncontaminated ash and clean water, although the benefits and harms are uncertain for reducing the spread of viral or bacterial infections.

However, frequent hand washing can lead to skin damage due to drying of the skin. Moisturizing lotion is often recommended to keep the hands from drying out; dry skin can lead to skin damage which can increase the risk for the transmission of infection.



2. EXPERIMENTAL METHOD

- False Ashoka were separated and washed with water and dried properly dried leaves were separated.
- Grind the leaves powder it.
- A total 10 gm of finely powder of neem diluted with 100ml of methanol for 4 days.
- The alcoholic decoction was subjected to filtration to obtain a clear filtrate

3. Drug profile

Sr.NO	Herbs	Uses
1.	False Ashoka	Antimicrobial Anti-inflammatory Wound healing
2	Lemon	Antioxidant Anti-inflammatory
3	Aloevera	Protect skin from sunburn. Wound healing. Skin moisturizing



4. METHOD OF FORMULATION

- Composition of 100ml. formulation of poly herbal handwash:

Sr no.	Ingredient	Quantity	Action
1	False Ashoka Extract	30ml	Antimicrobial agent
2	Alovera juice	15ml	Soothing Properties
3	Glycerin	5ml	Gelling agent
4	Rose oil	7ml	Fragrance
5	Distilled water	30ml	-
6	Sodium lauryl sulphate	5gm	Foaming agent
7	Xanthum gum	5gm	Thickening agent
8	Methyl Paraben	0.3gm	Preservatives

9	Lemon	13 ml	Antiseptic Agent
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◆ Method of preparation of polyherbal handwash:

1. Take 15ml aloe vera juice + 10ml glycerine + 15ml False Ashoka extraction were added and mixed well in beaker.
2. Add 5gm sodium lauryl sulphate + 7ml rose oil + 0.3gm methyl paraben + 5gm xanthum gum + 13ml lemon and 30 ml water mix it well.
3. Stir well and when all the component become homogenous mixture then transfer it in a well tight container.

4. EVALUATION OF POLYHERBAL HANDWASH

1. Colour :

The colour of hand wash was dark green.

2. Viscosity test :

Viscosity of cream was done by using brooke field viscometer. Standard: 55-65 cp
Result: 63 cp

3. Stability test :

The stability of polyherbal hand wash liquid was carried out by storing measured amount of liquid at room temperature for one week. During stability studies no change in colour and no phase separation were observed in the formulated hand wash.

4. pH:

5ml Of Sample Of polyherbal hand wash was taken and dissolved It Into 50 ml distilled water. The pH of solution was taken in Standardized Digital pH meter.

5. .Foam height :

5ml of formulation taken and dispersed in 50ml distilled water in measuring cylinder. Cover the cylinder with hand shaken for 10 time. The total volume of the foam content after 1 minute shaking were recorded.

6. Odour:

The odour of handwash was refreshing.

7. Consistency:

The consistency of handwash was determined to be liquid.

8. Anti-Microbial test:

The Formulation (Poly herbal hand wash) has antimicrobial activity against Gram positive bacterium *S. aureus*, *B. Subtilis* and Gram negative bacterium *E.coli*.

5. RESULT AND DISCUSSION

- Evaluation Parameter :

Sr no.	Parameters	Observation (F-3)
1	pH	6.42
2	Colour	Dark Green
3	Odour	refreshing
4	Stability	Stable
5	Foam Height	8 cm
6	Viscosity	63 cp
7	Consistency	Liquid
8	Anti microbial test	The Formulation (Poly herbal hand wash) has antimicrobial activity against Gram positive bacterium <i>S. aureus</i> , <i>B. Subtilis</i> and Gram negative bacterium <i>E. coli</i> .

6.CONCLUSION

A lot of soaps and hand wash are in the market cosmetics are widely used. Now a days people prefer organic product eatier a number of herbs and roots were used in Ayurveda herbs and roots are main contain. The experiment that were conducted and the findings were it gives anti-bacterial, anti- microbial, anti-inflammatory, anti saptic and would clean all the aspects.

The formulation and evaluation of the polyherbal hand wash incorporating False Ashoka, aloe vera ,rose oil proved successful. The hand wash exhibited desirable physical characteristics, including a pleasant appearance, fragrance, and suitable pH and viscosity. Furthermore, it demonstrated significant antimicrobial efficacy against tested microorganisms. User perception evaluations indicated high levels of satisfaction in terms of cleansing efficacy, fragrance, and overall experience. Thus, it can be concluded that the herbal hand wash formulation is an effective and well-accepted alternative to conventional hand washes, offering natural antimicrobial properties while providing a refreshing and pleasant sensory experience.

7.FINAL FORMULATED POLYHERBAL HANDWASH



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