

FORMULATION AND EVALUTION OF HERBAL HAND WASH BY USING NATURAL INGREDIENTS BY SIMPLE METHOD

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Abstract- The main aim to present work is to formulate and evaluate poly-herbal hand wash by using aloe-vera, lemon juice. Inorder to make formulation has less side effects and better cleaning of hands. The hands are primary sites for the infection. Microbial infection is critical Issue in children and employer in pharmaceutical industry. So the use of hand wash is more in industrial site The formulated hand wash have found to be good in physical parameter with good cleaning of hands. Therefore it brings up the use of antiseptic for hand washing purpose. The prepared handwash evaluated by the different parameter namely as colour, odour, pH, viscosity and stability. Hands are primary mode of transmission of microbes and infections. Hand-washing is critical in food production, food service and also important in healthcare setting, homes and day care preparations. The present research was aimed to evaluate the antibacterial efficacy of various herbal oils such as Cinnamon oil, Eucalyptus oil, menthol oil and lavender oil and found that cinnamon oil showed better antibacterial activity. Also the research was carried out to formulate and evaluate the poly herbal Hand wash gel containing Cinnamon oil.

Keywords: herbal hand wash, tulsi, vitamin c, Aloe vera ,citrus Limon, essential oil.

Introduction:

The herbal medicine is also known as botanical treatment or phytomedicine. Herbal medication refers to the uses of any plant seeds, root, leaves, bark, flower and aerial part for medicinal purpose. Herbal medicine have been the treatment and care of numerous disease. Skin being the most exposed part of our body requires protection from skin pathogen. To defend the skin from harmful micro-organism to avoid spreading disease. Hand washing is extremely significant precautions. Hand hygiene is the single most important simplest and least expensive mean of preventing nasocomial infection. Hand washing is main purpose of cleaning hands with removing soil, dirt, pathogenic microorganisms and avoid transmitting of transient microorganisms. Hygiene is basically defined as the branch of science which is involved in knowledge and practice related to promotion of health.

Herbal medicines having numerous therapeutic uses like healing wounds, treating inflammations because of infection, skin lesions, leprosy, diarrhea, scabies, venereal diseases, snake bite, and ulcers, etc. Hands are the primary mode of transmission of microbes and infections. Hand washing is the act of germless hands to remove soil, dirt, pathogenic microorganisms, and avoid transmitting of transient microorganisms.

Advantages of herbal cosmetic:-

1. Herbal cosmetic have been using for beauty from the ancient times.
2. It is considered best for the skin and hair care because of their lack of side effects.
3. It is gaining the popular day by day in the world.
4. Following are the some advantages of using Natural cosmetics.

safe to use:-

Compared to the beauty products Natural cosmetic are safe to use.

Are hypoallergenic, and tested and proven by dermatologist to be safe to use anytime.

No side effects:-

The synthetic beauty product can irritate skin and causes pimples they might block skin pores and make skin dry or oily the natural ingredients are used assure to no side effects.

Animal testing not required:-

Some cosmetic are initially tested on animal to ensures that they are safe and effective to use for human.

however, natural cosmetic need not be tested on animal.

These natural formulations are tested by experts in laboratories using equipment with no animal involved.

Natural products:-

The name itself suggests that herbal cosmetics are natural and free from synthetic chemicals, which otherwise may prove to be toxic to the skin.

Instead of traditional synthetic products, different plant extracts are used in these products.

Inexpensive:-

Natural cosmetics are not that expensive.

In fact, some of these products are more affordable than synthetic ones.

An estimate of demonstrated about 80% of world population depends upon natural products for their health care.

compatible with skin type:-

Natural products are suitable for all skin type, whether it be dark or fair.

Natural cosmetics like foundation, eye shadow and lipstick can be safely used irrespective of the skin tone.

Advantages of Herbal Hand wash:-

- 1) No side effects.
- 2) Bacteria on our hands can be minimized.
- 3) It also helps to clear antiseptic and fungal problem faced by the skin.
- 4) It also helps to remove dirt and oil effectively from the skin.
- 5) Easier access compared to using soap and water.
- 6) The easiest way to get rid of microorganism.
- 7) Hand wash prevents germs from entering into our body.

Material used in herbal hand wash:-

1) TULSI:



scientific classification of tulsi:

Kingdom : plantae

Division : magnoliophyta

Class : Magnoliopsida

Order : Lamiales

Genus : Ocimum

Binomial name : Ocimum tenuiflorum/ Ocimum sanctum

Nepali name : Tulsi

Medicinal use of Tulsi:

To treat ring worm and other skin diseases like Leucoderma, a paste made from Tulsi leaves is applied to the affected area.

Saffron and Tulsi leaves are combined with chickenpox to investigate the condition.

In cases of normal glucose, the ethanolic extract of Tulsi leaves results in a significant drop in blood sugar.

2 ALOEVERA :



- Kingdom : Plantae
- Order : Asparagales
- Division : Spermatophyta
- Subdivision : Angiospermae
- Class : Monocotyledoneae
- Family : Liliaceae
- Genus : Aloe
- Species : Barbadesis Mill

Aloe is the dried juice collected by incision from the basis of the leaves of various Species of aloe.

Aloe perry Baker, aloevera linn, or Aloe barbandes is belonging to family liliaceae, Aloe perry Baker is found in socotra and zanzibar Islands and in their neighbouring areas and so the obtain from these Species is known as soothing and zanzibar.

Aloevera linn also known as vulgaris or Aloe barbandesis. aloe is an perennial growing to 0.8 by 1m at slow rate.

The plant prefers light (sandy) and medium soil.

Can grow nutritionally poor soil.

The plant prefer acid basic and neutral soil.

It cannot grow in shade it requires dry or moist soil and can tolerate drought.

They are xenophobic plant .it can be propagated by seeds.

Seeds are shown in the spring in warm green house.

Uses:

1. Relieves the burned skin caused by skin.
2. Smooth and glowing skin can be achieved with the help of Aloe.
3. It is an outstanding skin moisturizer

Medicinal use of Aloevera :

- It contains healthful plant compounds
- It has antioxidant and antibacterial properties
- It accelerates wound healing
- It reduces dental plaque

3. LEMON



Scientific classification of Citrus limon:-

Kingdom : plantae
 Family : Rutaceae
 Order : sapindales
 Genus : citrus
 Species : c.limon

The Limon citrus Limon is a species of small evergreen tree in the flowering plant Family Rutaceae native to South Asia, primarily eastern India.

It is obtained from the ripe or nearly ripe fruit of citrus Limon belonging to the family rutaceae.

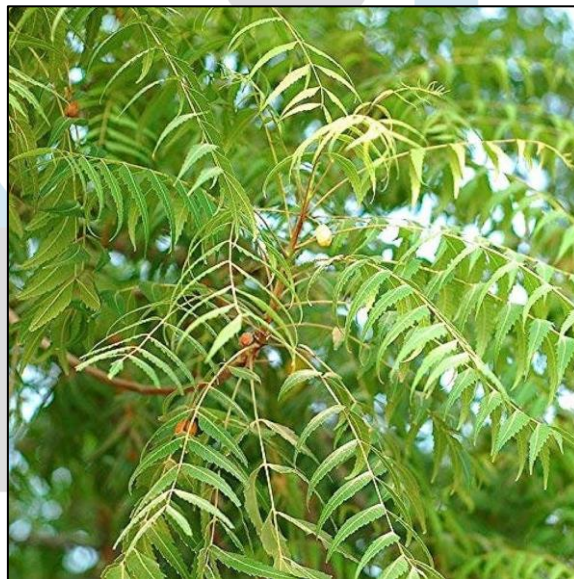
The main raw material of citrus Limon is the fruit particularly essential oil and juice is obtained from it. Citrus Limon fruit juice has traditionally been used as a remedy for survey before the discovery of vitamin c

Chemical Constituents:-

Terpenes oil 90%
 Limonene
 Terpenolene
 Citral
 Citonellal Linolool

Uses:

- The oil used in pharmacy and cosmetic formulation as, a flavour or aroma Corriganas, well as natural preservative
- Flavouring agent and in perfumery.
- Terpeneless lemon oil is 20 times stronger than Lemon Oil.

4.NEEM:

1. *Synonym:* Margosa
2. *Biological Source:* It consists of all aerial parts of plant known as Azadirachta indica
3. *Family:* Meliaceae
4. *Geographical Source:* It is found in India, Pakistan, Banglades, Shri Lanka, Thialand, Malaysia, Mauritius, Fiji, South Africa and East Africa.

Benefits of neem:

1. Helps destroy harmful bacteria
2. Helps destroy cancerous cells
3. Treats Acne
4. Treats Fungal Infections
5. Useful in Detoxification
6. Increases Immunity

5)EUCALYPTUS OIL:-



Eucalyptus oil is made from leaves of selected eucalyptus tree species.

The trees belong to the plant family *Myrtaceae*, which is native to Australia, Tasmania and nearby islands.

There are more than 500 eucalypti species, but essential oils of *Eucalyptus salicifolia* and *Eucalyptus globulus* (which is also called fever tree or gum tree) are retrieved for their medicinal properties.

Uses:

- Herbal medicine
- Repellent and biopesticide
- Flavouring and fragrance
- Industrial
- Cleaning

Formulation table:

Ingredients	Quantity	Action
Tulsi Extracts	8ml	Antimicrobial Agents
Citrus Lemon	4ml	Antiseptic
Aloe-vera gel	6ml	Healing Agents
neem	3ml	Fungal Infections
Eucalyptus Oil	0.5ml	Cooling Agents
Glycerin	12ml	Moisturizing Agents
Methyl paraben	0.3ml	preservatives
Water	Up to 60m	

Procedure :-

- Methonolic extract of Tulsi leaves is mixed with 4ml citrus Limon juice in 20ml.of water.
- Then add aloe-vera twice and add extract of sapindus mukoros is to produce sufficient foaming capacity.
- Then add desired quantity of glycerin and eucalyptus oil with moderate stirring.
- At the end add preservative in sufficient quantity.
- The solution is mixed, made homogeneous under room and further utilized for screening of the activity

Evaluation parameters:-

A)physical evaluation:-

- 1.Ph
- 2.colour
- 3.viscosity
4. Stability

i)Appearance:-It was determined visually.

ii)PH :-The pH was determined using digital pH meter and the pH of herbal wash was found to be 5.2

iii)Colour:-It was determined visually.

IV) Odour :- it was determined manually.

V) Stability studies:- The stability of herbal hand wash gel was carried out by storing measured amount of gel at different temperature i.e. 25°C, 37°C, 40°C for one week during stability studies no change in colour and no phase separation were observed in the formulated hand wash.

2. Foam height:

1ml of sample of herbal hand wash taken and dispersed in 50ml distilled water.

Then transferred it into 500ml stoppers measuring cylinder, volume make up to 100ml with water.

25 stroke was given and stand till aqueous volume measured upto 100ml and measured the foam height.

3. Foam Retention:

50ml of herbal hand wash was taken into a 250ml graduated cylinder and shaken ten times.

The volume of foam at 1 minute interval for 1 minute was recorded. Foam Retention should be stable at least 5min.

Conclusion:

The neem extract herbal handwash was successfully developed with antibacterial properties and enhanced quality with aloe-vera juice as soothing agent, carbopol 934 as gelling agent. Sodium lauryl sulphate as surfactant, glycerine as moisturizing agent, Rose oil for fragrance.

The formulated hand wash was evaluated for different parameters like pH, colour, foaming efficiency, viscosity and stability.

The hand wash was found to be stable in terms of physical parameters with good cleansing property

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