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Review on Formulation and Evaluation of Herbal Hand Wash

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Abstract: *Herbal medicine has a significant historical use, and this certainly applies to many products used as traditional herbs. The hands of health workers are the main sources of transmission of infection to patients. Therefore, the use of antiseptics for hand washing is increased. Herb medicines are used in many ways, including fever, diarrhea, cough, influenza, etc. The current research therefore focuses on hand washing gels made of Neem (Azadirachta indica) and Citrus Limon (L.), which include the methanol extract of lemon juice, glycerine and diluted with sufficient amounts of distilled water. Hand washing is analysed using various parameters such as colour, smell, pH, viscosity, etc. The results showed that herbal hand washing formulas are more effective in reducing the number of organisms on the hands than commercial anti-septic hand washing gels and can therefore be used as hand washing gelswithout side effects.*

Keywords: Herbal hand wash, Formulation, Evaluation, Neem and Lemon Extracts, Skin pathogens

I. INTRODUCTION

Since hand hygiene is the most important means of transferring bacteria and infections, it is the most important means of avoiding harmful bacteria and preventing infections. Hand hygiene is the only mostimportant, easiest and expensive way to prevent nosocomial infection1.Infected hands can be a vector of microorganism transmission. When food processors contaminate their hands, the pathogenic microorganisms responsible for the outbreak spread from the food processors to others, and these microorganisms come into contact with foods or beverages by hand. Consumers may be exposed to these microorganisms after intake and cause gastrointestinal diseases. Hand contact with food ready for consumption is a very important mechanism by which pathogens enter food supply. In the case of foodhandlers who are used to touching raw or uncooked raw or other forms of raw foods, they are identified as a specific risk group, and according to folklore, the antimicrobial properties of some Indian medicinalplants have been reported, with few reports available on the inhibitory effects of certain pathogens andfungi. Plants are inherited as a source of medicine and are an important part of India's health system. Inthese medical systems in India, most doctors make and distribute their own formulas, which is why proper documentation and research are required.

Hand washing: Hand washing involves simple soaps and antimicrobial water, and in practice, it varies greatly from quick hand washing to very extensive washing. The purpose of handwashing in hospitals is to eliminate pathogens and prevent their transmission. In most medical environments, the absence of hand washing is unacceptable, and many doctors and nurses regularly forget to wash their hands beforetouching patients. Research has shown that handwashing and other simple methods can be used. The infection rate associated with catheters in the bloodstream can be reduced by 66%. The skin is one of the most exposed parts of the body and must be protected against pathogens. Handwashing is a very important precaution to protect the skin from harmful microorganisms and prevent the spread of many infectious diseases. The right use of fingernail brushes to clean the hands and fingertips is the best way to eliminate transitional microbes.6 Washing the hands removes visible dirt from the hands and reduces the number of harmful microbes. Pathogenic bacteria and viruses E. Coli and salmonella are transportedby humans, animals, and equipment and can be transmitted to food.

ADVANTAGES:

- Prevent disease and infection spreading to others.
- The aroma of herbal hand washing keeps the skin clean and fresh.

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- It also helps to effectively remove skin dirt and oil.
- It prevents people from contracting diseases such as diarrhea and influenza.
- It also helps to treat skin infections and fungal infections.
- No side effects.
- Bacteria in our hands can be reduced to a minimum.
- It also helps to solve skin antimicrobial and fungal problems.
- It also helps to remove dirt and oil from the skin effectively.
- Easy access than soap and water.
- The easiest way to eliminate microorganisms.
- Hand washing prevents germs from entering the body.
- It is easy to apply and has no side effects.

DISADVANTAGES:

- Regular use of polyherbal washing can cause irritation.
- After expiry, herbal handwashing may cause unwanted side effects. Causes of Dermitis, eczema.

Skin function:

- Absorption
- Secretion Protection and Excretion
- The heating control

It is known that sensing plants and herbs contain therapeutic components that remove these components and add them to the washing machine to make the washing machine safe and healthy. It gives the skin soft texture and soft appearance. Traditional washing products can be achieved. The herbal scent of washing hands keeps the skin fresh. When herbal washing, light foaming doesnot irritate the skin and improves the reduction of skin elasticity.

II. MATERIALS

1. Agents: Antimicrobials are natural or synthetic substances that kill or inhibit the growth of microorganisms. For example, Neem, Turmeric, Clove, Garlic.
2. Foaming agents: Foaming agents are substances that promote the formation of foam such as solvents and blowing agents. In small quantities, the superfluous agent reduces the surface tension of the liquid, inhibits bubble cohelix, and increases the stability of the collider. For example, Ritha, Quassia bark, Mentha piperta.
3. Softening Agents: Softening Agents are one of the finishing agents that gives softness to the hand, better handling and quality. Glycerine, almond oil, olive oil, etc. IV.
4. Preservatives and fragrances: Preservatives used to maintain good preservatives for herbal washing. For example, you can add the scents of Purinasa Dava (Thimol), Ajvan Dava (Menthehol), Bhimsen Kapoor: Rose water, lemon, lavender.
5. Herbal dye: The most well-known vegetable dyes are Henna, Indigo, Cassia Obovata and Amla.
6. Vehicles: In this herbal handwash, the vehicle is distilled water and rose water.

ANTIMICROBIAL ACTIVITY OF NEEM

Antimicrobial activity of Azadirachta indica and Escherichia coli is performed using diffusion methods of Agar well. Plant ethanol extract, water extract and methanol extract can be used at different concentrations: 200 mg/ml, 100 mg/ml, 50 mg/ml, 25 mg/ml, 12.5 mg/ml, 6.25 mg, 3.125 mg and 1.56mg, respectively. These three extracts showed a very high antimicrobial activity, although the ethanol extract was more active than the methanol extract and the water extract. In three extracts, the minimum

inhibitory concentration (MIC) is 1.56 mg/ml and 6.125 mg/ml. Compared to standard antibiotics, the extracts of ethanol and methanol showed the strongest inhibition of these organisms. Chemical analysis of plants has revealed the

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presence of alkaloids, savonine, tannins, glycosides, steroids, terpenoids and sugar reduction. Consequently, leaf extracts from Azadirachta indica are recommended for the treatment of human infections associated with these organisms.9

METHOD OF PREPARATION

- Polyherb wash with a gel agent attached to distilled H2O.
- Antimicrobials and foaming agents dissolve under gentle heating.
- After heating, after heating, keep 50% reserve for addition.
- The softening agent was mixed with continuous water stirring.
- Add colours.
- Add perfumes and preservatives.
- Finally, store in a well-closed container and in a container with an appropriate label.

EVALUATION PARAMETERS: 10,11,12.

Physical evaluation:

- Colour: visual determination.
- Odour: manual determination.
- The look: visually determined.
- Homogeneity: visually determined.
- Fragrance test: the acceptance based on individual observations. Acceptance of fragrance is apossible opinion.

The scent is good, just as the scent of the hand-washing machine is good.
The fragrance is not good enough to be compared with reference hand washing.

Chemical parameters:-

- Microbiological analysis using the cup plate method: This method is used to measure the microbiological properties of herbal soap.
- PH determination: PH determination is done by standard digital pH meters. A gram of herbal handwashing samples is taken and dissolved in 100 ml of distilled water. The pH of the hand washing was adjusted with a solution of 40% sodium hydroxide.
- Viscosity: The viscosity of herbal hand washing can be determined with the help of a digital Brookfield viscosity detector.
- The height of the foam: a 0.5 gm herbal handwash sample is collected and distributed in 25 mlof distilled water. Then transfer to a 500 ml stopper measurement cylinder and add 50 ml water. 25 strokes are given, the water volume is measured up to 50 ml, and the foam height is measured above the water volume.
- Foam storage: 50 ml of Herbal Handwash is put in a 200 ml gradation cylinder and pumped 10 times. The foam volume is recorded for four minutes at a one-minute interval.

III. CONCLUSION

This study found that compounds can be extracted and incorporated into soap bases to produce superiorantiseptic soaps with significant activity with low side effects or no side effects. Thus, new methods exist for fighting antibiotic resistance and ensuring a safer and healthier life by microbes free of charge. Although the elimination of 100% is impossible, it is possible to reduce a significant number through natural economics and safety. The hand is the hand of the hand. Main sources of skin, respiratory and gastrointestinal diseases. Bar soaps are contaminated by various diseases and bacteria and can spread bacteria. In this complex world, liquid hand washing is more common than bar soap, and the advantage of liquid hand washing is that soap is non-contaminated and non-contaminated. With each new pump on the market, there are different types of hand washing that claim to kill harmful bacteria at a remarkable speed within a short time. To do this, you need to determine the effectiveness of hand washing. The average percentage and log reduction of the organism determines the number of hands that are in operation.

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