



Preperation & Evaluation of Herbal Sanitizer

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INTRODUCTION:-

Hand sanitizers have been proven effective in reducing the spread of microbial infections and viruses like covid-19. which made people infected, facing moderate respiratory illness. Currently one of the major strategies to deal with COVID-19 and reduce community transmission of infections is the frequent use of hand sanitizers due to it's antibacterial and hygienic properties. There are many companies which are making cheaper sanitizers with easily available herbal ingredients like Aloe Vera gel, Guava essential oils etc. with Glycerin. The mass production of this types of herbal sanitizer can be very effective for large scale use of sanitizers by common people. These are easy to made and have less chances of adverse skin effects like irritation and allergic reactions. The preventive Protocols to cope with COVID-19 are just supportive in order to minimize the spread of this disease as the best approach. Frequent and reliable hand washing is one of the many Approaches adopted to prevent the transmission of the virus. Secondary bacterial or fungal infection can be considered as one of the most common and serious complications related to viral infections, especially in the elderly. The use of hand sanitizers is increasingly widespread during the current pandemic as an effort to break the chain of virus spread and to comply with health protocols set by the government. Hand sanitizer is used when water and soap for hand washing is not available or because of the effectiveness and the ease of carrying the product. Here are we using Aloe Vera because Aloe Vera has potent antibacterial, antifungal, and antiviral properties. The antimicrobial effects of Aloe Vera have been attributed to the plant's natural anthraquinones which have demonstrated in vitro inhibition of Mycobacterium tuberculosis and Bacillus subtilis. Aloe juice has been found to be bacteriostatic against Staphylococcus aureus, Streptococcus pyogenes and also Salmonella paratyphi. [8] It has been used for its medicinal properties since ages. The Egyptians used it to heal battle wounds and treat infections. The Greeks used it for relieving blisters, burns and leg ulcers as well as healing bowel and stomach disorders. Early records of Aloe Vera use appears in the Ebers Papyrus from 16th century BC in both Discorides De Materia Medica and Pliny the Elder's Natural History written in the mid-first century along with Juliana Anicia Codex produced in 512 AD. Formulations and preparations of hand sanitizers by herbal plants have been proved effective against pathogens and results have also been compared and found effective with alcohol based formulations of hand sanitizers. These herbal formulations have been considered safe for human health as far as to environment.

PLAN OF WORK

- Collection of ingredients
- Washing & Cleaning
- Boil guava leaves until it reaches syrup
- Mixing of all ingredients gently as per procedure
- Homogeneous liquid formed at last are (Hand Sanatizer)

Population & Sample

1.A Chakraborty¹, A Mukhopadhyay¹, A Sur¹ and Dr. S Gosh et al :-

In this article I have reviewed that the -Novel Corona Virus has spread to 188 countries around the world which made the people infected, facing moderate respiratory illness. Currently one of the major strategies to deal with COVID-19 and reduce community transmission of infections is the frequent use of hand sanitizers. However, a large section of common mass is

unable to buy them due to higher price. Therefore, an approach has been presented here to produce cheaper sanitizers with easily available herbal ingredients like Aloe Vera gel, boiled water, surgical spirit, Glycerin etc.

2. DS Paulson, EJ Fendler, MJ Dolan (1999) et al :-

Acc. To this article - Hand transmission of microbes by health care workers is a primary cause of nosocomial infections in both long-term and acute care facilities. Compliance with effective hand washing and hand sanitization regimens can break this cycle.

3. RU Pendlington, E Whittle, JA Robinson et al :-

Ethanol is a major component of many aerosol sprays and consumer products that are designed to contact the skin. It is theoretically possible that small amounts of ethanol from alcohol-based sprays can be absorbed across the skin or inhaled during spraying.

4. Rilda Gumala, Tuty Anggraini, Kurnai Harlina Dewi et al :-

Use hand sanitizer more widespread during the current pandemic -19 Covid as an effort to break the chain of the virus and to meet health protocols set by the government. This study applied red ginger essential oil and aloe Vera gel in the manufacture of a good and standardized hand sanitizer, obtaining the interaction effect of adding red ginger essential oil and aloe vera gel to hand sanitizer products.

5. TY Hendrawati 2015 et al :-

The Use of aloe Vera gel as the hand sanitizer vehicle was due to its natural moisturizing and Germ-retarding abilities, as well as the competence of inhibiting some bacterial strains and also Aloe Vera plant gel formulated as a moisturizer and its effectiveness against microbial contamination.

6. X Fatima Grace, Sowmya K.V., Darsika C., Arul Jothy, S. Shanmuganathan 2015 et al :-

The main aim for the preparation of a poly herbal hand sanitizer is for "hand hygiene". It is a vital principle in the prevention, control, and reduction of any acquired infection. Mainly hand sanitizer can stop the chain of transmission of micro organisms and other bacteria from hand to different parts of our body. Hand hygiene is important and one of the most critical steps in food production, food service as well as in homes and other day care preparations. Hand sanitizer avoids adverse effects like itching, irritation, dermatitis etc.

7. Dwi Atmanto^{1, a} and Neneng Siti Silfi Ambarwati^{1, b} (2021). et al:-

The purpose of this study was to determine the acceptance of students after being given training in making hand sanitizers. This research is a descriptive quantitative study with the lesson study method. The data obtained from surveys and observations. There are 31 students. The knowledge given to students is about making hand sanitizers and sanitizers for practicum equipment with glycerin, hydrogen peroxide, alcohol, and the aroma of plant extracts. The research strategy is the application of learning methods through discussion, training, and evaluation.

8. Prakash P Athiban, Bikash Jyoti Borthakur, [...], and B Swathika. (2012) et al :-

The aim of this study was to evaluate the antimicrobial efficacy of Aloe vera and to determine its effectiveness in decontaminating gutta percha cones.

9. Dr. Madhuri Alankar Sawai, (2014) et al :-

Aloe vera is one of the plant species which has multiple uses to mankind. It has been widely used for ages as an alternative medicine and also as a cosmetic product. Because of its rejuvenating, soothing and healing properties, it has been used for various medical ailments like peptic ulcers, digestive problems, skin irritation and various skin lesions. Also, it has been found to be beneficial in oral problems like aphthous ulcers, gingivitis and periodontitis and various fungal and viral diseases.

10. Huda Ahmed Alghamdi, (2021) et al :-

Indigenous medicinal plants enriched with flavonoids, alkaloids, poly-phenolic compounds carry antiseptic, disinfectant and antimicrobial activities. During old era, plant extracts were used as strong antiseptics and disinfectants to get ride from microbes. We aimed to present the herbal formulations and preparations for human health hazards free hand sanitizers based on indigenous medicinal plants with reported effective results against infectious microbes along with least toxic impact on environment. Easily available plants formulations safe to human health and environment are presented with easy procedure for their preparations.

OBJECTIVES

- To explore origin of herbs used for sanitizer.
- To understand the use of herbal plants for manufacturing of sanitizer.
- To understand quality,safety and efficacay of using herbal products for sanitizer preparation.
- To find out whether or not herbal products should be used in the contemporary society.
- To explore the many aspects of the rich traditional herbal sanitizer.
- To investigate public convections about effectiveness of herbal sanitizer.
- To apply knowledge gained during the course in evaluating the usefulness of herbal sanitizer.

REFERENCES

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