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A Review On Formulation and Evaluation of Herbal Tooth Powder

Rushikesh R. Sonawane[1], Tushar R. Acharya[2], Shivnath K. Adhav[3], Omkar A. Dalvi[4]
Asst Prof. Komal Sabale[5]
Students, Department of Pharmacy[1,2,3,4]
Guide, Department of Pharmacy[5]
Mrs. Saraswati Wani College of Pharmacy, Ganegaon, Maharashtra
Affiliated to Dr Babasaheb Aambedkar Technological University, Lonore, Raigad

Abstract: *Herbal tooth powders are traditional pharmaceutical solid dosage forms formulated from finely divided herbal ingredients intended for maintaining oral hygiene and preventing dental disorders. In this study, an herbal tooth powder was prepared using natural plant materials such as neem, clove, turmeric, guava leaves, babul, amla, and peppermint, all known for their antimicrobial, anti-inflammatory, and antioxidant properties. These ingredients collectively promote gum health, prevent plaque formation, dental caries, and gingivitis, while offering a natural alternative to synthetic toothpastes. The powder was prepared by drying, grinding, sieving, and blending the herbal components to achieve a uniform and fine texture. The formulation was evaluated for its physical characteristics, pH, flow properties, and antibacterial activity. Results indicated good homogeneity, stability, and effective antimicrobial potential against oral pathogens. The study concludes that herbal tooth powder provides an effective, safe, and eco-friendly substitute for conventional chemical-based oral care products, supporting natural oral hygiene and gum vitality.*

Keywords: Herbal tooth powder, oral hygiene, antimicrobial activity, neem, clove, turmeric, natural formulation

I. INTRODUCTION

Herbal tooth Powder are pharmaceutical solid dosage form meet in almost every aspect of pharmacy a both practice and in industry A pharmaceutical Herbal tooth powder is a mixture of finely divided drugs and chemicals in dry form, which are meant for external and internal use. Herbal Drugs and other particle, when they occur in the solid state in the course of being processed into a solid dosage form, usually are in a finely divided condition. A Herbal tooth powder whose state of department is critical in determining its behavior both during processing and in the finished solid dosage form. When the use of Herbal tooth powders as a dosage form has declined, the properties and behavior of finely divided solid materials are of significant importantce in pharmacy. They are available in crystalline or instructured forms. They are considered as the oldest and simplest solid dosage form.

Fig. 1: Herbal Tooth Powder

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HERBAL TOOTH POWDER

Powders are pharmaceutical solid dosage form which is applying to provide cleanliness and Elegancy in clean teeth coating to prevent ,plaque,dental caries gingivitis. This can be achieved by using various dental care gingivitis composition HerbalTooth powder was historically used by the humanistic to clean and whiten teeth or cleaning teeth to fix them when loose, to strengthen the gums, and to prevent tooth inflammation. They made herbal tooth powder from a variety of particles, such as the bones, hoofs, and horns of certain animals, crabs, oyster and egg shells and murex shells.

History

Tooth powder has a long history in India, dating back to ancient times. In Ayurveda, traditional Indian medicine, tooth powders were used to promote oral health and hygiene. These powders were made from natural ingredients like herbs, spices, and minerals. Some ancient Indian texts, such as the Charaka Samhita and the Sushruta Samhita, describe the use of tooth powders for cleaning and strengthening teeth. These powders were often made with ingredients like neem, tulsi, and clove, which are still used today for their oral health benefits.In India, tooth powders were also used for their medicinal properties, such as reducing plaque, preventing gum disease, and freshening breath. The use of tooth powders was an integral part of daily oral hygiene routines, especially among the upper classes.

Over time, the use of tooth powders evolved, and modern toothpastes were introduced. However, many Indians still use traditional tooth powders, often in combination with modern oral care products, to maintain good oral health and hygiene.

Some popular Indian tooth powders include:

- Dabur Lal Dant Manjan
- Vicco Vajaradanti Tooth Powder
- Divya Dant Manjan
- Dasankanti Tooth Powder

These tooth powders often contain a blend of traditional Ayurvedic ingredients and modern formulations to promote oral health and hygiene.

Herbal Tooth Powder Benefits

Using Herbal tooth powder is an excellent way to improve our a overall teeth health. Here are some of the benefits that Herbal tooth powders can offer:

1. Sourced Or Found In Nature:

Herbal tooth powders are made with all-natural particles, making them a safe choice for dental care. Unlike chemical paste, Herbal toothpowder particles are not chemicals. As such, it reduces your exposure to harmful chemicals that are often found in regular paste, such as fluoride or sodium lauryl sulphate.

2. Vitalize Gingiva:

The particles in Herbal tooth powders, such as Muringa,termaric,Guava leaves,Babul, Bakul, and Anantmul, are known to vitalize gums and help prevent gum disease. In particular, Babul bark herbal powder has been used for centuries as a natural tooth cleaner and gum-vitilizing agent. It has anti-inflammatory properties, and it can also prevent gum bleeding.

3. Prevents Tooth Decompose And Cures Other Oral Problems:

Herbal tooth powders are also believed to prevent tooth decompose and cure other oral problems like pyorrhea, swollen gums, bleeding gums, plaque, dentat care gingivitis, bad breth and inflammation of the gums. One of the

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known Herbal tooth powders particle is Amla known for its high vitamin C content and its ability to kill bacteria that cause gum disease, cavities, and bad breath. It also helps vitilize the teeth and prevent premature tooth decay.
In addition, herbal tooth powder benefits are useful for tackling bad breat, plaque, dental caries gingivitis, and oral odor and providing relief from toothaches. Moreover, several herbal particles included in Vicco dant manjan, vithoba dantmanjan powder, like termarice

Advantages of Herbal Tooth Powder

Natural particles: Herbal tooth powders often contain organic and chemical-free particles, reducing exposure to harsh substances.
Antimicrobial development: Multiples herbs, such as neem ,termaric,guava leaves,clove and clove, have antibacterial developments that can help reduce plaque ,dental caries gingivitis,bad breath and prevent gum infections.
Blending and Cleaning: particles like baking soda , black salt and activated charcoal can effectively remove stains and whiten teeth or clean teeth.
Demote Sensitivity: herbal tooth powders are designed to be gentle on teeth and gums, reducing sensitivity.
Eco- Friendly: Natural particles and minimal packaging can make herbal tooth powders a more eco-friendly option.

Disadvantages of Herbal Tooth Powder

Irritation: Some particles, like baking soda, can be irritation and potentially damage tooth enamel if used excessively.
Variable conclusiveness: The effectiveness of herbal tooth powders can vary depending on the particles and composition.
Lack of Fluoride: Multiple herbal tooth powders do not contain fluoride, which is essential for blocking tooth decay.
Potential Allergens: Some individuals may be allergic to certain herbs or particles used in herbal tooth powders.
Unpleasant Taste: Some herbal tooth powders can have a strong or unpleasant taste.
Regulatory Oversight: The safety and quality of herbal tooth powders can vary depending on the manufacturer and regulatory oversight, moringa, Anantmul, Amla, Guava leaves Bakul, and Lavang, are known for their strong antimicrobial properties. As such, they help to fight off bacteria and other harmful organisms that cause gum inflammation, bad breath, and other oral health problems.

TYPES Of TOOTH POWER

1) Antibacterial and anti-inflammaotory tooth powder
2) Whitening and stain removal tooth powder
3) Gum care tooth powder
4) Natural breath fresheners
5)Ayurdant herbal tooth powder
6) Uncle Harry's tooth powder
7)Eco verde's organic tooth powder

Market Overview of Herbal Tooth Powder:

Growth Trend: The global market for herbal oral care products, including herbal tooth powders, is growing due to increasing awareness about natural alternatives to chemical-based oral care products.
Consumer Preferences: Rising demand for organic and natural products, driven by health-conscious consumers, has boosted the popularity of herbal tooth powders.
Geographical Demand: Herbal tooth powder is particularly popular in regions like India, Southeast Asia, and parts of Europe, with a growing presence in Western markets.
Key Ingredients: Common ingredients include neem, clove, mint, activated charcoal, and turmeric, known for their antibacterial, anti-inflammatory, and whitening properties.

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Customer Acceptance:

Health-Conscious Consumers: Acceptance is high among customers seeking chemical-free or eco-friendly options, especially those with sensitive teeth or gum issues.

Traditional Appeal: In markets like India, where traditional practices like using neem and salt for oral care have been prevalent for centuries, herbal tooth powders are often seen as a return to more natural, age-old remedies.

Challenges: Some customers are skeptical about effectiveness compared to commercial toothpaste, while others may find the texture or taste of tooth powders unfamiliar.

Growing Trust: With better product education and rising evidence of the benefits of herbal ingredients, customer trust and acceptance are increasing.

Here are some common active ingredients used in tooth powders:

1. Neem (Azadirachta indica): Known for its antibacterial and anti-inflammatory properties, neem helps reduce plaque, prevent gum disease, and freshen breath.

2. Clove (Syzygium aromaticum): Clove oil has analgesic and antibacterial properties, which can help relieve tooth pain and reduce bacterial growth in the mouth.

3. Baking Soda (Sodium bicarbonate): A mild abrasive, baking soda helps remove plaque, surface stains, and neutralize acid in the mouth.

4. Activated Charcoal: Activated charcoal can help absorb and remove stains, plaque, and toxins from the teeth, promoting a brighter smile.

5. Turmeric (Curcuma longa): Curcumin, a compound in turmeric, has anti-inflammatory and antioxidant properties, which may help reduce inflammation and promote healing in the gums.

6. Peppermint (Mentha piperita): Peppermint oil can help freshen breath, reduce inflammation, and ease digestive issues.

7. Babhul (Acacia nilotica): Babhul is known for its antibacterial and anti-inflammatory properties, which can help prevent gum disease and promote oral health.

8. Sage (Salvia officinalis): Sage has antibacterial and anti-inflammatory properties, which may help reduce plaque, prevent gum disease, and freshen breath.

9. Myrrh (Commiphora molmol): Myrrh has anti-inflammatory and antimicrobial properties, which can help reduce inflammation and prevent infection in the mouth.

10. Essential Oils (e.g., tea tree oil, eucalyptus oil): Certain essential oils have antimicrobial and anti-inflammatory properties, which can help promote oral health and freshness.

These ingredients can help promote oral health, reduce plaque and stains, and freshen breath. However, it's essential to choose tooth powders that are formulated for our specific oral health needs and to follow proper usage instructions.

Preparation Method:

1. Dry the herbs (if not using pre-powdered herbs):
Sun-dry neem leaves, mint leaves, clove, babool bark, and licorice root until crisp.
Ensure they are completely dry to avoid spoilage.
2. Grind each ingredient into a fine powder using a grinder or mortar and pestle.
3. Sift the powders through a fine sieve to remove any coarse particles.
4. Mix all powders together in a clean, dry bowl in the proportions listed.
5. Store in an airtight container, preferably glass or BPA-free plastic.
6. Label the container with the date.

II. CONCLUSION

Natural plant compounds are a valuable resource for managing bacterial infections. Thus, a herbal tooth powder was created for the current study and tested for antibacterial activity, yielding outstanding results. The components used in

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this work were chosen and screened for their antimicrobial properties and ability to preserve oral hygiene, as demonstrated by their efficacious tooth powder results. It is deemed safe to use our herbal tooth powder twice daily.

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