



# Herbal Tooth Powder: A Review

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## ABSTRACT

There are many different herbal tooth powders with a variety of substances on the market. As a result, new approaches emphasising these factors are helpful for standardising herbs and their formulations. Customers thought utilising toothpowders made of herbs was safe, efficient, and less poisonous. There are 10 billion bacteria in the mouth cavity, some of which are harmful to the buccal cavity's cleanliness. Traditional herbal toothpowder is used to treat many oral diseases such gum disease, tooth erosion, tooth sensitivity, and toothaches in addition to cleaning teeth. By employing clove, neem stem, stevia leaf, mustard oil, salt, and amla to create a herbal tooth powder, this study aims to provide consumers an alternative. The most prevalent infections are those of the oral cavity. Dental caries, an infectious illness that damages and infects enamel and dentine, is contagious. In order to maintain oral hygiene, such as breath freshness and prevent tooth decay, tooth powder is used in conjunction with a toothbrush. The goal of this effort was to create a tooth powder that may be used as a tool for good oral hygiene and to combat the negative effects of traditional tooth powder made from synthetic substances. The teeth powder was created utilising a variety of herbal components that include cooling, antiseptic, and antibacterial effects.

**KEYWORDS:** Natural Ingredients, Oral Hygiene Clove, Cinnamon, Neem, Amla, Stevia, Mentha.

## INTRODUCTION

Maintaining proper oral hygiene is crucial for maintaining one's look, self-perception, and confidence. Tooth powder encourages good oral health, acts as an abrasive to assist remove food particles and dental plaque from the teeth, and aids in the prevention of illnesses of the teeth and gums such gingivitis, cavities, and discoloured teeth. The main dental concerns include plaque, calculus, and gum disorders<sup>1</sup>. It may be avoided and treated by thorough brushing with the use of efficient tooth powder and dental pastes since it is mostly brought on by bacterial activity and mineralized deposition, which results in plaque and calculus<sup>2</sup>. Maintaining proper oral hygiene is crucial for maintaining one's look, self-perception, and confidence. The crown and the root are the two components that make up a tooth. The toughest tissue in the tooth, enamel, covers the tooth's crown. Enamel is the outer surface of the tooth. Apart from hydroxylapatite, the main component of enamel is water, followed by keratin. As it has been around for centuries, many people consider herbal tooth powder to be a crucial component of any teeth-cleaning routine<sup>3</sup>. Due to the negative side effects of the use of some hazardous chemicals in the majority of commercially available toothpaste and powders, which has created an alarming situation, especially among the younger population<sup>3</sup>, natural products have recently been

investigated more thoroughly as promising agents for the prevention of oral diseases, especially plaque-related diseases like dental caries. Everyone should maintain regular dental hygiene in order to maintain excellent health. Using different dental care preparations or dentifrices will help you achieve this. Dentifrices are products used to clean the surfaces of teeth, keep them glossy, and maintain the gums' and teeth's health. These formulations may be anticipated to assist in preventing the development of unpleasant odours, and as a result, they could also serve as mouth fresheners<sup>4</sup>. The likelihood of having good overall health is increased by having good oral health. The simplest, least expensive, and most traditional formulations are tooth powders. They are anticipated to perform tasks including cleaning teeth, preventing the development of dental plaque and removing it, polishing teeth, reducing the risk of tooth decay and periodontal disease, preventing or lessening mouth odour, and freshening breath, among other things.<sup>5</sup> Using tooth powder may whiten teeth and keep breath fresh. It can help with disguising and eliminating. Herbal toothpowder contains a lot of calcium, trace minerals, and antibacterial herbs. The calcium and trace minerals assist to restore dental enamel, while the herbs have antibacterial properties and encourage gum blood flow. With its superior quality and extended shelf life, herbal tooth powder is well regarded. A teeth-cleaning product comprised nearly entirely of natural materials is known as herbal tooth powder. Toothpaste and tooth powder have the same ingredients, with the exception that toothpaste also contains a humectant, water, and binding agents. Cleaning the accessible surfaces is the main purpose of tooth powder<sup>6</sup>.

#### INDIAN EXTRACT FOR HERBAL TOOTH POWDER

S.NO.	Ingredients	Uses
1	Clove powder	Dental analgesics
2	Cinnamon powder	Analgesics
3	Neem powder	Antiseptics
4	Baking soda	Neutralizes acid
5	Amla powder	Source of vitamin c
6	Stevia powder	Sweet taste
7	Pink Himalayan salt	Relief from toothache
8	Mentha powder	Freshness



Fig: - Herbal Toothpowder

## **PROCEDURE**

Step 1. All the plant material were dried and grinded.

Step 2. All the required herbal powder for tooth preparation were weighed individually.

Step 3. The crude ingredients were collected and these ingredients were size reduced using hand driven mixer individually.

Step 4. All the ingredients were mixed thoroughly by mixer to form a homogenous powder.

Step 5. Then this fine powder was passed through sieve no. 80 to get the sufficient quantity of fine powder.

Step 6. Then it was packed and labelled suitably.

## **Method of preparation**

### **Drying**

All the powder are in dry form and grinded.

### **Weighing**

All the required herbal powders for tooth preparation were weighed individually.

### **Size reduction**

The crude ingredients were collected and these ingredients were size reduced using hand driven mixer individually.

### **Mixing**

All these fine ingredients were mixed thoroughly by mixer to form a homogenous fine powder.

### **Sieving**

Then this fine powder was passed through sieve no.80, to get the sufficient quantity of fine powder.

## Evaluation Parameters for Herbal Tooth Powder

### ORGANOLEPTIC CHARACTERS

The sample was evaluated for organoleptic characters using parameters like appearance, colour, odour and taste.

#### **Colour:**

The prepared tooth powder was evaluated for its colour. The colour was checked visually.

#### **Odour:**

Odour was found by smelling the product.

#### **Taste:**

Taste was checked manually by tasting the product.

#### **Particle Size**

Particle size was assessed using the sieving method utilising I.P. Standard sieves by mechanically shaking for 10 minutes. Particle size is a parameter that affects many qualities including spread ability, grittiness, etc.

#### **Foamability**

By adding a little amount of the preparation to water in a measuring cylinder, noting the initial volume, and shaking the cylinder ten times, the product's foamability was assessed. Foam's last volume was recorded.

#### **Moisture Content**

The tooth powder (10gm) was weighed, dried at 105° C in the oven, and then chilled. The method presented (8) is used to calculate the weight loss and record it as a percentage of moisture content.

$\% \text{ Moisture content} = \frac{\text{Original sample weight} - \text{Dry sample weight}}{\text{Original Sample weight}} \times 100$

#### **Bulk Density**

The bulk density of the powder is the ratio of the mass of an untapped powder sample and its volume including the contribution of the inter-particulate void volume. It is expressed in gram/ml.

$\text{Bulk density} = \text{Untapped density} - \text{tapped density.}$

#### **Angle of repose**

It is defined as the maximum angle possible in between the surface of pile of powder to the horizontal flow.

### **Conclusion**

Controlling bacterial infections requires the use of natural plant compounds. As a consequence, herbal tooth powder was created and tested for antibacterial activity in the current investigation, and the findings were outstanding. The substances utilised in the current work were examined and chosen based on their ability to

maintain oral hygiene and have an anti-microbial impact, as was indicated by the effectiveness of the tooth powder. The components used in the current study were evaluated and chosen for their ability to keep dental health and have an antibacterial impact, which can be attributed to the formulation of successful toothpastes. Any herbal toothpaste is thought to be safe to use twice daily and has no negative side effects. Instead, it gives excellent freshness and keeps bad odours at bay. Using herbal tooth powder is a dependable, safe, and affordable method to keep oral health. The study found that natural tooth powder is better and has fewer adverse effects than synthetic powder, which is worth highlighting in dentistry research. The specially made teeth powder can maintain oral and dental health while also exhibiting anti-microbial action against pathogens.

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