

# A Review on Understanding Halitosis: Causes, Types, and the Role of Mouth Fresheners

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## **Abstract**

Bad breath, or halitosis, is a common condition with significant social and psychological implications. Mouth fresheners, available in various forms such as sprays, chewing gums, lozenges, and rinses, offer a quick solution for managing this issue. This review provides a comprehensive analysis of the types, mechanisms, and effectiveness of mouth fresheners in tackling bad breath. It explores the role of natural and synthetic ingredients, including essential oils, antibacterial agents, and zinc compounds, in neutralizing odor-causing compounds and improving oral hygiene. The review also delves into traditional practices, emerging trends like probiotic and eco-friendly products, and the impact of mouth fresheners on the oral microbiome. While mouth fresheners provide immediate relief, their efficacy in addressing the root causes of halitosis remains limited, necessitating a holistic approach to oral care.

**Keywords-** Halitosis, Bad Breath, Mouth Fresheners

## INTRODUCTION

In order to avoid bad breath and to offer instant therapeutic effects, mouth fresheners and bad breath masking tools are commonly utilized. Mouth fresheners come in a variety of forms, including sprays, granules, powders, and strips. The dried or watered herbal ingredients used to make herbal mouth fresheners serve as a nutritional and flavour masking agent. A disagreeable mouth the primary sign of poor oral health is Odor. Additives for oral hygiene products are utilized to provide users a significant cooling sensation, especially to mask unpleasant Odors. More than 400 microorganisms that create Odors live in the cavity of the mouth or respiratory system. Mouth rinses, fresheners, floss for dentistry, chocolate products, and regular flossing are all recommended to avoid bad breath. It's stated that bad Odors make individuals feel queasy in social situations, personal settings, or near to other people. Halitosis is largely caused by tobacco use, drinking, and smoking, in addition to dental problems and poor oral hygiene. Famine or overeating can also cause halitosis. The nutritional mouth Examples of fresheners with both economical and health benefits include flaxseed and fatty acids known as omega-3. The well-known antiviral, antifungal, anti-allergic, and chemo preventative qualities of herbal leaves are attributed to a range of physiologically active compounds. The condition is also known as mouth malodour, and it is typified by an unpleasant Odor emanating from the oral cavity. The primary symptoms are anxiety and social awkwardness. Even though halitosis may appear straightforward and be disregarded, it is terrible and has long-term consequences. Nonetheless, oral foul breath affects 50% of individuals worldwide. According to medical studies, making herbal mouth fresheners using natural herbs can enhance dental health and avoid bad breath. These mouth fresheners may be used to eliminate bacteria, treat cavities, deodorize, and astringently. Herbal mouth fresheners are intended to reduce inflammation, inhibit germs, and alleviate irritation and discomfort in the mouth. Bacteria in an unclean mouth are the primary cause of bad breath. Therefore, employing an herbal mouth freshener with antibacterial properties helps people's teeth. Mouth fresheners and saliva washes are the second most well-known ways to distribute antimicrobial ingredients, after toothpaste. The primary benefit of the herbal solution is the lack of hazardous ingredients in the preparation. Herbs that increase immunity and help heal tooth infections are commonly available and affordable. According to the 2003 the World Health Organization Report, oral health is a vital and significant aspect of general health. Thus, the traditional usage of herbal mouth fresheners removes the infectious agent from the mouth due to their antibacterial qualities. Herbal mouth fresheners without chemicals provide the best results when compared to traditional tooth spray.

## BACKGROUND

The illness, which is characterized by an unpleasant and undesirable Odor in the mouth, is brought on by a number of different types of food, bacterial tongue coating, systemic issues, and other periodontal disorders. Halitosis has been a concern throughout history. Numerous herbs and spices were used to treat illness by ancient cultures including the Greeks and Egyptians. Some people in the Renaissance believed it to be a code of conduct or spiritual failing. Medical study in the 19th century led to a better understanding of foul breath. It is now understood that bad breath in the mouth is a complicated problem that involves both poor dental health and underlying medical issues. The technical term "bad breath" is derived from the ancient Latin phrase "halitus," which means breath, and the Greek word "osis," which indicates abnormal or diseased. The names for halitosis—foul breath, breath malodour, and factor for the business or fetor per ore—are confusing to the general public. A condition known as oral malodour gradually reduces a person's confidence and social interactions.

- **Mouth Fresheners-**

In order to avoid mouth Odor and give an instant therapeutic effect, mouth fresheners are commonly used as bad breath maskers. It prevents cavities, keeps teeth clean, reduces the risk of malignancies,

enhances dental health, improves breath, relieves colds and coughs, helps people lose weight, and more. Herbal medicine has had a significant impact on the evolution of dental treatment in the dental community. Among the many herbs commonly used in dentistry are clove, the oil of tea tree, water made from coconuts, German rosemary, or just rosemary cranberries, licorice, neem, and others.

➤ **Herbal mouth fresheners have the following advantages over synthetic ones:**

Herbs include naturally occurring compounds called phytochemicals, which have potent antibacterial and anti-inflammatory qualities. They work sans the use of chemical-based Flavors, colours, alcohol, or preservatives.

- **Absence of synthetic chemicals:**

Since herbal drugs don't include artificial colouring, flavouring, or preservatives—all of which are used for oral hygiene—they are recommended for mouth fresheners.

- **Abundant in Essential Oils:**

All herbal medicines include essential oils with potent antiviral properties, anti-inflammatory, antifungal, and antibacterial properties.

- **Organic Ingredients:**

Mint, a number of mouth fresheners are made using readily accessible natural herbs that refresh breath, such as cardamom, clove, fennel, etc.

- **Advantage for Digestion:**

After meals, most herbal components help to calm the stomach and facilitate digestion.

- **Not compulsive:**

Synthetic mouth fresheners include cocaine and other addictive substances. Herbal substitutes are therefore safer for regular use.

➤ **Disadvantages-**

- Respiratory issues
- Addiction and dependency
- Respiratory issues

### Ingredients used in Mouth Fresheners



➤ **Caffeine-**

Caffeine is an ingredient in several mouth fresheners that can help with breath and energy. Mouth fresheners that boost vitality.

➤ **Arecanut-**

Chewing areca nut is thought to have a cognitively stimulating effect in addition to its well-known gastric and salivary stimulating properties. According to an old Ayurvedic remedy, chomping on areca nut using betel nut products root extract is a healthful approach to fight bad breath.

➤ **Cardamom-**

In the fight against oral microbes, cardamom helps. One of the simplest and most aromatic spices, cardamom, helps fight mouth bacteria. Among other health-promoting ingredients, the spice includes flavonoids, ether extracts, ignited oil (cineole), magnesium, potassium, and phosphorus.

➤ **Fennel-**

Fennel seeds are among the most often used and favoured natural Odor fresheners in Indian homes. Consuming a few adorned or unprocessed fennel seeds in your mouth after a meal gives you a short energy boost and helps keep your breath fresh. These tiny seeds also offer some medicinal advantages.

**Evaluation Parameters of Mouth Freshener:**

❖ **Viscosity:**

Brookfield's viscometer is used to assess the formulation's density in order to determine the product's performance, flow properties, and sustainability during administration. The exactitude of the measurement on the chosen spindle scale of the viscometer was used to measure viscosity.

❖ **Spray Angle:**

The way forward is sprayed five centimetres above white regular paper. The spray angle along the outer border and the centre rod tip is measured at four different points. This average is then used to determine the spray angle. The measurable angle wherein a liquid drop appears on a solid surface is known as the degree of contact. This technique is used to quantify a substance's wettability on a solid surface.

❖ **PH:**

The product's pH is measured using a pH meter and a beaker containing the herbal swallowing enhancer mixture.

❖ **Check for Microbial Development:**

The saliva freshener's formulation was assessed for microbiological growth using the streak plate agar method. The starting point becomes contaminated in the absence of antibiotics using the procedure known as the streak plate, and the control part is similarly made. For 24 hours, these infected agar plates are maintained at 37°C in an incubator. Following plate removal, the growth of bacteria is analysed and contrasted with the control.

❖ **Activity of Antibacterial in Vitro:**

To perform the in vitro evaluation test, Streptococcus mutans colonies are acquired. Both the Zone of Impairment (ZOI) and Lowest Inhibitory Concentrations (MIC) are measured using the agar well diffusion method. A readymade sanguine agar plate is injected with the Streptococcus mutans strains. A 6mm agar deep cutter is used to cut four wells once the bacteria have dried. Each six micron well contains 20 µ ml, 40 µ ml, 60 µ ml, and 80 micro ml of the mouth freshener that was manufactured. To enable the passive dispersion of the breath freshener and the agar media used for culture, it is kept unbroken. The stainless-steel plates are incubated at 37 degrees Celsius while the zone of impact is measured and calculated in millimetres. The typical diameter of the inhibition zone.

**MARKETED PRODUCTS**

S.No	Marketed Product	Therapeutic Uses
01	Urban Platter Digestive Anar dana Goli	Mouth Freshener / mukhwas to relish your cravings
02	Mr. Merchant Rajasthani Mukhwas, Traditional Mouth Freshener	Relish the delicious combination of sweet and mint in every bite that will refresh your mouth.
03	Delight Foods Premium Calcutta Meetha Paan Mukhwas Mouth Freshener	Meetha Paan Mukhwas Mouth Freshener
04	Fisherman's Friend Mouth Freshener, Refreshing and Cool Lozenges	Refreshing and Cool Sugar Free Mint lozenges for a super fresh and ever pleasant breath
05	Mr. Merchant Paan Shots	Paan Shot is an instant and refreshing Chewable Pan mouth freshener
06	Jyoti Ben's Mukhwas - Roasted Fennel Seeds (Saunf) With Dhana Dal	Saunf is the delightful and flavourful taste
07	Mr. Merchant Mango Slice	A delicious, fun Mouth Freshener / mukhwas to relish your cravings for tingling taste and mouthwatering aroma.

**FUTURE PROSPECTS-**

Over the forecast period, rising alcohol and tobacco use as well as more knowledge of oral hygiene are key variables that are anticipated to fuel interest in mouth fresheners. Sales of mouth fresheners are expected to increase as a result of this aspect, supporting the market's growth. The global market for mouth fresheners is anticipated to rise in size as people become more conscious of their significance of practicing proper oral hygiene. It is projected that the availability of a wide variety of mouth fresheners will boost demand in the near future. The mouth freshener market is projected to increase from a projection of USD 18,150.3 million in 2022 to USD 33,436.16 million by 2032, with a compound annual growth rate (CAGR) of 6.3%. The growing awareness of oral hygiene between adults and children globally is driving the mouth freshener market share. Oral health problems including discoloured teeth and bad breath can be brought on by alcohol, tobacco, and smoking. These are significant factors that influence the overall demand for breath fresheners, which should increase sales of these goods in the future.

**CONCLUSION**

Bad breath continues to be a concern for people worldwide, leading to social discomfort and anxiety. Mouth fresheners, especially herbal formulations, are a helpful tool for managing this issue since they offer both immediate relief and therapeutic benefits. In the past, halitosis has been treated using herbs and spices. Thanks to advancements in medical study, we now understand that halitosis is a

complicated issue caused by a number of lifestyle factors, such as poor diet and smoking, severe illnesses, and poor dental hygiene. Compared to synthetic mouth fresheners, herbal ones provide a number of benefits, including long-lasting freshness, digestive perks, and natural ingredients devoid of harmful chemicals. Scientific methods must be applied to evaluate parameters including visually examining the product's viscosity, pH equilibrium, and microbiological activity in order to ensure the effectiveness and quality of herbal mouth fresheners. These techniques offer useful advice on how to combat bad breath and enhance general oral care.

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