

Herbal Mouthwash: Botanical Breath Freshner

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Abstract: Herbal mouthwashes are becoming increasingly popular as a natural alternative to traditional oral care products, providing a variety of oral hygiene benefits. These mouthwashes often contain plant-based chemicals recognized for their antibacterial, antifungal, and anti-inflammatory effects. Neem, tea tree oil, clove, and peppermint are some of the most commonly utilized herbs, and they all help to improve breath, gum health, and plaque formation. Herbal mouthwashes are frequently free of harsh chemicals and synthetic additives, making them a safer choice for people who want a more natural approach to oral health. This abstract discusses the effectiveness, safety, and possible benefits of herbal mouthwashes, as well as the scientific data that supports their usage in everyday dental care regimens.

Keywords: Herbal mouthwashes

I. INTRODUCTION

Mouthwash is an antiseptic aqueous solution used to clean the mouth and teeth or freshen up the breath. It is most often used for control of plaque and other dental problems. It is a medicated liquid that is held in the mouth and swished around by the perioral muscles to get rid of oral pathogens.

Mouthwashes come in two different varieties:

1. Chemical
2. Herbal

Herbal mouthwash carries a natural ingredients called phytochemical that consists of desired anti-microbial impact. Natural mouthwash will become greater famous they paintings without alcohol, artificial preservatives, taste, or colors. As it consists of herbal herbs that have herbal cleaning and recovery assets to teeth and gums. Many natural mouthwashes contain herbs with antimicrobial property which include Neem, Yavanisatva Nagavalli Gandhapurataila, Pilu, Bibhitaka, Ocimum, Etc.

There has been an increasing evidence contraindicating the use of alcoholic mouthwash, like those containing cetylpyridinium chloride (CPC) (Chowdhury et al., 2013). There have been tremendous efforts towards replacing the commonly used mouthwash with safer products made of natural ingredients that can provide similar or even better oral protection but with minimal adverse effects. Several mouthwash companies are trying to reduce the amount of harmful chemicals in their mouthwash ingredients by replacing them with more natural components inspired by homemade recipes.

Nowadays, the majority of people are choosing natural herbal products for the prevention or treatment of diseases. Plants being an abundant source should be considered in various pharmacological formulations.⁷ Ayurvedic medicinal plants are used in various treatments, as there are no or minimal side effect.

History of mouthwash:

The importance of mouth and teeth cleanliness has been recognized from the earliest days of civilization to the 21st century. As far as we have come in creating dental solutions that are effectively treat and prevent various types of oral diseases, the mouthwash rinses our ancestor used to maintain a healthy smile were just as widely used as some of the around today The first known references to mouth rinsing are in Ayurveda and Chinese medicine around 2700 BC. Mouthwash is chemotherapeutic agent used as effective home care system by the patient to oral hygiene. In the Greek and Roman periods, mouth rinsing following mechanical cleansing became common among the upper classes and Hippocrates recommended a mixture of salt, alum and vinegar.

Ancient Egyptians are known to be responsible for the first artistic drawing that emphasizes the importance of beauty and hygiene. An unclean body was thought to be impure. Pedanius Dioscorides, A Greek physician and surgeon (40-90) whose writings served as a medical textbook, suggested for treatment of bad breath a mouthwash mixture of the following.

Greek physician Pedanius Dioscorides, formulated a mouthwash mixture of decocted from the olive tree leaves, milk, wine and oil, pomegranate peelings, nutgalls and vinegar, this was how ancient mouth washes were prepared using traditional methods and herbs.

The Romans included a secret ingredient in their mouthwash: human urine. They imported urine from Portuguese people because they thought it had more strength. It is observed that in 18th century urine served as a key active ingredient due to the presence of ammonia that rendered the oral cavity free from oral pathogens especially sulphur producing organisms. Before Europeans came to Americas, Native North American and Mesamerican cultures used mouthwashes, often made from plants such as *Coptis trifolia*.

In 1892, German Richard Seifert invented mouthwash product Odol, which was produced by company founder Karl August Lingner (1861-1916) in Dresden.

II. METHODS AND MATERIALS

Sr.no.	List of material
1.	Peppermint
2.	Clove
3.	Ajwain
4.	Guava
5.	Basil
6.	Neem
7.	Turmeric
8.	Pomegranate
9.	Tea
10.	Lemon Grass oil

Sr.no	List of Equipment
1.	Measuring cylinder
2.	Beaker
3.	Conical flask
4.	Petri dish
5.	Ph meter
6.	Incubator

Need of herbal mouthwash :

- 1) To enhance dental hygiene.
- 2) It aids in the management of dental plaque.
- 3) It is applicable to gum diseases.
- 4) Used to eradicate bacteria in the mouth.
- 5) It masks bad breath and freshens the breath.
- 6) It's crucial to use mouthwash to avoid gum disease.
- 7) It is utilized for cleaning septic tanks.
- 8) It reduces inflammation and pain.
- 9) Managing halitosis and mucositi

III. HERBS USED AS MOUTHWASH

1. **Peppermint:** Peppermint incorporates high menthol content, and is usually used as tea and for flavouring dessert, confectionery, chewing gum, and toothpaste. The oil also contains menthone and methyl esters, particularly methyl acetate. It is the oldest and preferred flavor of mint flavoured confectionery. Peppermint could also be used in shampoos and soaps, which give the hair a minty scent and gives a cooling sensation on the skin. Peppermint oil is a flexible oil: it's analgesic, anti-inflammatory, antiviral, digestive, anti-septic, an astringent, carminative and anti-spasmodic. Peppermint essential oil is used to treat migraine, bronchitis, sinusitis, indigestion, nausea, irritable bowel syndrome, irregular periods and nervous conditions. It is also very useful within the treatment of cold and flu.



Figure 1: Peppermint Plant

2. **Clove:** Cloves are used as a carminative to increase acid within the stomach and to spice up peristalsis. Cloves are said to be a natural anthelmintic. The essential oil is used in aromatherapy when stimulation and warming are needed, especially for gastrointestinal system problems. Topical application over the stomach or abdomen are said to warm the canal. Clove oil, applied to a cavity during a decayed tooth, also relieves toothache.



Figure 2: Clove buds

3. **Ajwain:** Ajwain is used as an antiseptic. It's used for cleaning wounds and treating skin infections. Oil of Ajwain is additionally utilized in toothpaste and perfumery. Ajwain leaves are crushed and applied on infections. Ajwain seeds are utilized in prevention of bad breath. Thymol from Ajwain seeds is additionally utilized in various mouthwashes. Regularly chewing of Ajwain seeds alongside fennel seeds prevents bad breath.



Figure 3: Ajwain plant

4. Guava Leaves: Chewing fresh guava leaves also stops bleeding from gums alongside bad breath. Most antimicrobial mouthwashes substances as contain antiseptic ingredients to deal with germs that commonly cause mouth infections. Phytochemical studies shows the guava leaves bioactive components like tannins, tri terpenes, phenols, flavonoids, essential and stuck oils, sabinins, lectins, carotenoids, etc.



Figure 4 :Guava leaves

5. Neem: The leaves, twigs, and seeds of neem have been used in India and South Asia to clean the teeth and fight bacterial and fungal infections. Neem extract gel is appropriate for treating gingivitis and oral infections because it inhibits the formation of plaque and the growth of bacteria.



Figure 5: Neem plant

6. Basil: Tulsi/Basil in Ayurveda having many medicinal properties and a wide therapeutic range. The leaves are quite effective for the ulcer and infections in the mouth. The anti-inflammatory and anti-infectious properties of Tulsi make it a powerful treatment for gum disease. The leaves are quite effective for the ulcer and infections in the mouth. It is also useful in pyorrhea and other gum disorders. The anti-inflammatory and anti infectious properties of tulsi make it a powerful treatment for gum disease.



Figure 6: Basil plant

7. Turmeric: Turmeric mouthwash (10mg curcumin extract dissolved in 100 ml of water with a peppermint flavoring agent added) was found to be as effective as a solution made from chlorhexidine gluconate (CHX), the gold standard compound for plaque build up in dentistry.



Figure 7: Turmeric

8. Oil Pulling Therapy: Oil pulling or oil swishing, is a traditional Indian folk remedy that involves swishing oil in the mouth. Approximately one tablespoon of oil (sesame, sunflower and coconut oils are the most recommended) for 15–20 minutes on an empty stomach. Saline or saltwater gargling is also an age old proven and effective mouthwash, which is still widely used by almost all people.



Figure 8: Oil Pulling Therapy

9. Pomegranate (Punicagranatum): Pomegranate is currently finding important applications in the field of dental health. Pomegranate containing mouthwash may fight dental plaque and tartar formation by inhibiting the activities of the microorganisms that cause plaque. It has anti-inflammatory properties that may help soothe irritated tissues.



Figure 9: Pomegranate

10. Green Tea: It can be used as a gargle or mouthwash to treat dental decay, halitosis, laryngitis, mouth sores, plaque formation, sore throat, thrush, and tonsillitis. It effectively reduces plaque accumulation and is free from side effects as of chemical mouthwashes.



Figure 10: Green tea leaf




11. Lemon grass oil: The cymbopogon citrus have anti-bacterial, antiinflammatory, and also superoxide scavenging property 11, 12. It also reduces the bacterial load and decreases the inflammation and also reduces the oxidative stress of the tissue. The lemon grass oil mouthwash can be used as an adjunct along with the non surgical therapy.

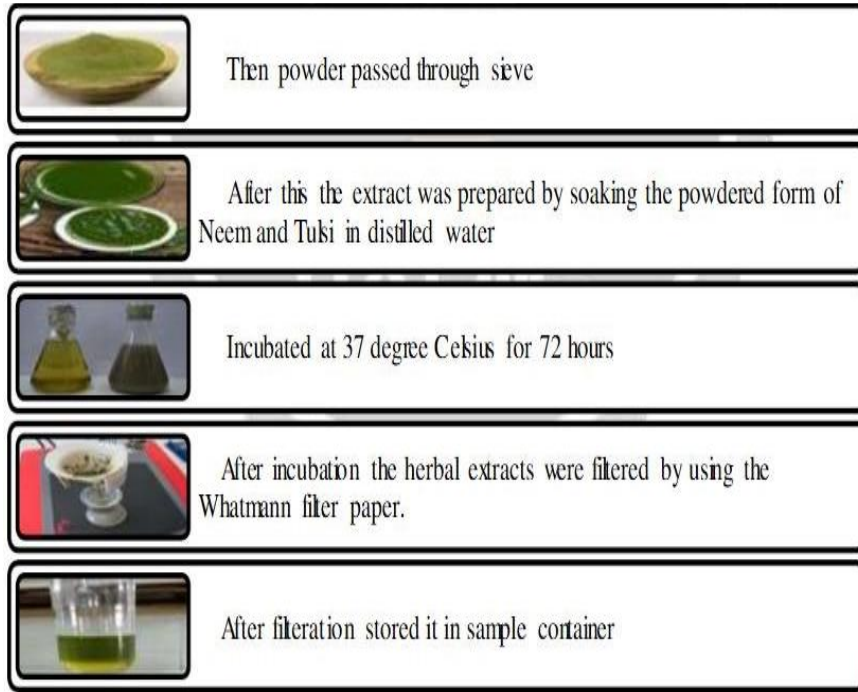


Figure 11: Lemon grass oil

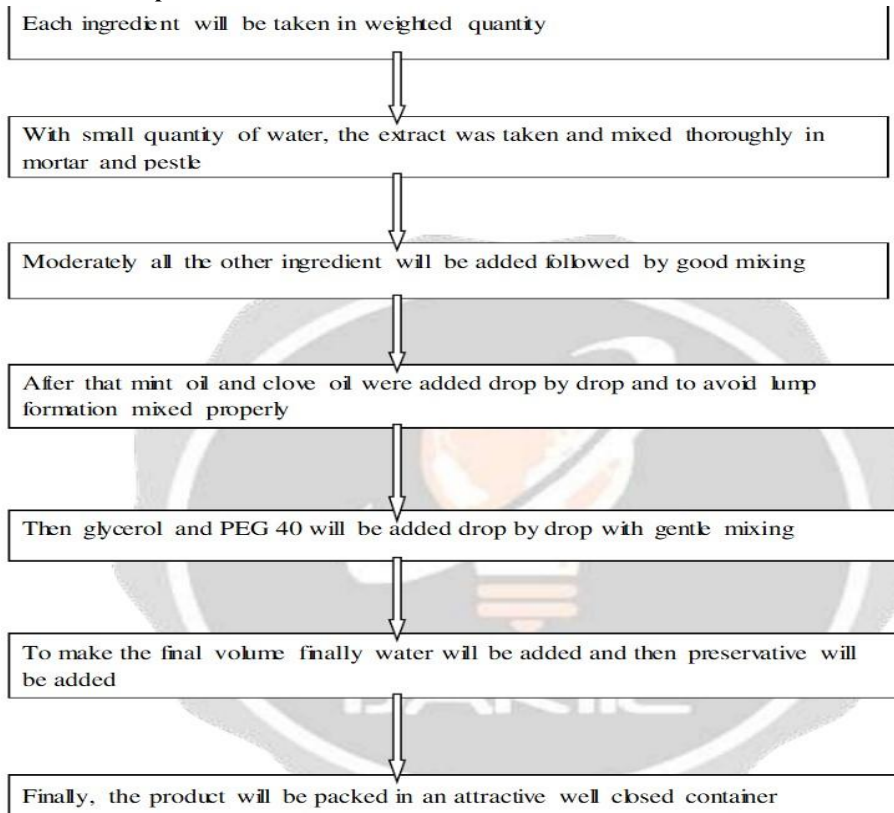
1. Preparation of Herbal Mouth Wash

1. Extraction preparation

	<p>All the leaves which were collected from plants were washed with sterile water.</p>
	<p>Dry the leaves in oven at 60-70°C for 48 hours.</p>
	<p>Triturate the leaves individually</p>



Methods of Mouthwash Preparation



Marketed Formulation:

Sr no	Brand name	Key ingredients	Part used	Category
1	Himalaya Herbals Active fresh mouthwash	Fennel oil, Mint	Dried seed oil, Leaves	Antimicrobial property, Fresh breath
2	Sylveco herbal mouthwash	Peppermint oil, Sage, clove, rosemary	Leaves, Aqueous extract, Clove bud	Breath freshner, Anti-inflammatory, Prevention of caries
3	K P Namboodiris Herbal fresh mouthwash alcohol free	Menthol, Clove, Tea tree, Ginger, Nutmeg, Cardamom	Leaves, Buds	Breath freshner, Antimicrobial
4	Bioayurveda Basics	Tulsi, Turmeric, Neem, Lemon	Leaves powder, Leaves, Extracts	Antibacterial, Prevent plaque
5	Amarantha herbal mouthwash	Amarantha, Nimba, Gandhapura leaf	Leaf extract	Freshness
6	Listrine naturals	Eucalyptol, Menthol, Thymol	Oils and extracts	Antiseptic, Antiplaque. Antigingivitis
7	Biomed sensitive mouthwash	Plantin, brich leaf, oak bark, bromelain, red grape	Extracts	Reduce sensitivity, Remove dental plaque

IV. SUMMARY AND CONCLUSION

These herbal mouthwashes can go a long way toward helping patients get rid of dental problems like decay, gingivitis, sensitive teeth, root infections, foul breath, enamel erosions, and a host of other oral health difficulties. Furthermore, we can guarantee that mouthwash compositions don't contain any dangerous components. The herbal mouthwash is superior than the chlorhexidine mouthwash because it doesn't have any harmful side effects, like dry mouth, altered taste perception from extended use, or discoloration of natural teeth. The existence of terpenoids, alkaloids, tannins, phenolic compounds, and flavonoids is confirmed by the phytochemical tests. The natural herbs used in the current formulations have been shown in medical studies to potentially prevent gum disease and tooth decay, among other oral cavity issues.

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