



## Sodium Bicarbonate – A Natural pH Balancer for Oral Health

### Overview

Sodium Bicarbonate, commonly known as baking soda, is a natural compound with well-documented oral health benefits. It is widely recognized for its ability to **neutralize acids**, reduce plaque accumulation, and freshen breath — making it a trusted ingredient in both conventional and natural oral care formulations.

### Why It's Included in DentiMints

In the DentiMints formulation, sodium bicarbonate plays several key roles:

- **Balances oral pH** to prevent acid-related enamel erosion
- **Neutralizes acids** produced by bacteria and acidic foods
- **Helps reduce plaque formation** by disrupting bacterial adhesion
- **Supports fresh breath** by reducing the acidic environment in which odor-causing bacteria thrive

These properties make it ideal for waterless, on-the-go oral care, where rinsing isn't an option but maintaining a clean, healthy oral environment is still essential.

### Mechanism of Action in Oral Health

Sodium bicarbonate works as a **buffering agent**, neutralizing the acids produced by carbohydrate-fermenting bacteria like *Streptococcus mutans*. These acids are responsible for enamel demineralization and bad breath. By keeping the oral environment closer to a neutral pH, sodium bicarbonate helps protect enamel and discourage harmful bacterial growth.

It also has **mild abrasive properties**, which can assist in removing surface debris and enhancing the effectiveness of other ingredients in the formulation.

### Supporting Research

- A 2017 review in the *Journal of the American Dental Association* (JADA) concluded that sodium bicarbonate effectively neutralizes plaque acids and contributes to plaque removal when used in toothpaste.
- Studies have shown that baking soda-based oral care products support overall oral cleanliness without causing significant enamel abrasion.
- Sodium bicarbonate mouth rinses are frequently recommended for individuals with dry mouth or high caries risk due to its buffering capacity and safety.

## **Conclusion**

Sodium Bicarbonate is a foundational oral care ingredient that offers both preventive and protective benefits. In DentiMints, it supports a balanced oral pH, discourages harmful bacterial activity, and helps keep the mouth feeling clean and refreshed — all without requiring brushing or rinsing.