

# AI-01344 Baking Soda

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Explain the invention of baking soda. When was baking soda discovered, how? What the used it for in 1900. What are the current usage for baking soda aside from kitchen use.

Baking soda, also known as sodium bicarbonate ( $\text{NaHCO}_3$ ), has a fascinating history!<sup>1</sup> Here's a breakdown of its invention, discovery, uses in the 1900s, and current applications beyond the kitchen:

## Invention and Discovery:

- **Ancient Times:** While not "invented" in the modern sense, people have been aware of naturally occurring sodium carbonate for millennia. Ancient Egyptians used "natron," a mixture containing sodium carbonate, as a cleaning agent and in mummification as far back as 3500 BC.
- **1790s:** French chemist Nicolas Leblanc was the first to isolate sodium bicarbonate in the 1790s.
- **1840s:** The widespread production and use of baking soda became possible in the 1840s, with the development of more efficient manufacturing processes. In 1846, the Arm & Hammer Company began marketing baking soda to the masses, making it readily available to households.

## Uses in 1900:

By the early 1900s, baking soda was a common household staple with various uses:<sup>5</sup>

- **Baking:** Its primary use was as a leavening agent in baking. When combined with an acid (like sour milk or molasses), it produces carbon dioxide gas, causing baked goods to rise.
- **Cleaning:** Baking soda was used as a general cleaning agent for scrubbing surfaces, deodorizing, and removing stains.
- **Personal Care:** It was used in homemade toothpastes and as an antacid to relieve heartburn and indigestion.

### **Current Uses Beyond the Kitchen:**

Today, baking soda's versatility extends far beyond the kitchen:

- **Cleaning and Deodorizing:** It remains a popular natural cleaner for various household tasks, including:
  - Scrubbing sinks, ovens, and countertops
  - Deodorizing refrigerators, carpets, and trash cans
  - Cleaning laundry and removing stains
- **Health and Personal Care:**
  - Relieving heartburn and indigestion (as an antacid)
  - Soothing insect bites and skin irritations
  - Making homemade toothpaste and mouthwash
  - Exfoliating skin

- **Gardening:**
  - Testing soil pH
  - Controlling fungal growth on plants
  - Sweetening tomatoes
- **Other Uses:**
  - Fire extinguisher (for small grease fires)
  - Neutralizing odors in pet areas
  - Cleaning car batteries

Baking soda's wide range of applications stems from its chemical properties.<sup>20</sup> It's a mild alkali, meaning it can neutralize acids, and it has abrasive, deodorizing, and leavening properties.<sup>21</sup> This makes it a valuable and versatile substance for various household, health, and other purposes.