



# Understanding pH in Hair Care Products

## What is pH?

pH (potential hydrogen) is a measurement of how acidic or alkaline a substance is, on a scale from **0 to 14**.

- **Acidic:** pH **below 7** (e.g., vinegar, lemon juice)
- **Neutral:** pH **7** (e.g., pure water)
- **Alkaline (Basic):** pH **above 7** (e.g., baking soda, soap)

For **hair care products**, the right pH balance is important for **healthy hair and scalp**.

- The scalp's natural pH is around **4.5 to 5.5** (slightly acidic).
- Hair products should stay within this range to **prevent dryness, irritation, and damage**.

## Why pH Matters in Hair Care?

- ✓ **Maintains hair's natural moisture barrier**
- ✓ **Prevents frizz and breakage**
- ✓ **Helps hair cuticles lay flat for smoothness and shine**
- ✓ **Prevents scalp irritation and dandruff**

## How to Test pH in Hair Care Products?

### 1. Using pH Strips

pH strips are **paper strips** that change color when dipped into a liquid solution.

#### Steps:

1. Take a small amount of your product and dilute it with **distilled water** (especially for thick creams or butters).
2. Dip the pH strip into the liquid and wait **a few seconds**.
3. Compare the color change to the **pH scale chart** provided with the strips.

### 2. Using a pH Meter

A pH meter gives **more accurate** readings than strips.

#### Steps:

1. **Calibrate the pH meter** (using buffer solutions if needed).
2. Dip the meter into the liquid solution.
3. Wait for the **stable reading** to appear on the screen.
4. Adjust the pH if needed (e.g., **add citric acid to lower pH or baking soda to increase it**).

## Adjusting pH in Hair Care Products

- **To Lower pH (More Acidic):** Add a few drops of **citric acid or lactic acid**.
- **To Increase pH (More Alkaline):** Add **baking soda or sodium hydroxide** in small amounts.

By maintaining the correct pH, your products will be **gentle, effective, and safe** for regular hair care.