



DIY Natural Cleaning Products

Common Ingredients and Why They Work

BAKING SODA is the common name for sodium bicarbonate (NaHCO_3). Baking soda has a pH of 8. As a base, it dissolves organic compounds like dirt, grease and other sticky stains. The mineral structure of baking soda provides a gentle abrasive to clean without leaving scratches behind.

BORAX, also known as sodium borate, is a naturally occurring mineral that forms when salt lakes evaporate or as the byproduct of mining. Borax is more alkaline than baking soda, making it more effective at removing some fat proteins and softening hard water.

VINEGAR is a dilute solution of acetic acid ($\text{HC}_2\text{H}_3\text{O}_2$), produced by bacteria during fermentation. Vinegar has a pH of 2. As an acid, it breaks down minerals from hard tap water that form unsightly stains on sinks, tubs and counters.

ESSENTIAL OILS have grease-cutting and stain-fighting abilities in addition to antimicrobial properties that kill germs and bacteria. Because of these properties, essential oils can be used as a natural alternative to in commercial cleaning products while also adding appealing scents to a clean home!

Important Tips

- Never combine ammonia-based cleaners with chlorine bleach or products containing bleach, such as powdered dishwasher detergent. The fumes they'll create are extremely dangerous.
- Before doing any mixing, read the product labels first.
- Always label any bottles of DIY cleaners with all the ingredients inside. In case a child or animal gets into it, it's important to know what the mixture contains.
- Avoid using ammonia on aluminum. It can darken it and cause pitting.
- Don't use acidic cleaners on granite, as they will etch the stone, and proceed cautiously on stainless steel. Some manufacturers recommend against using vinegar on their appliance surfaces.

Simple Recipes to Try

AIR FRESHENER: Add $\frac{1}{2}$ cup of hot water to a spray bottle, then add 3 chopped sage leaves, $\frac{1}{2}$ cup of distilled white vinegar and $\frac{1}{4}$ teaspoon of salt. Let sit in a cool, dark place for 12 hours before using.

ALL-PURPOSE CLEANING SPRAY (with vinegar): Combine $\frac{1}{2}$ of hot water, $\frac{1}{4}$ cup of white vinegar, 10 drops of grapefruit essential oil, 5 drops of lavender essential oil and 5 drops of lemon essential oil in a spray bottle.

ALL-PURPOSE CLEANING SPRAY (without vinegar): Combine 2 tablespoons of vodka, $\frac{3}{4}$ cup of distilled water (regular tap water can cause streaking), 10 drops of lavender essential oil and 5 drops of tea tree essential oil in a spray bottle.

GLASS CLEANER: In a large bowl, combine $\frac{1}{2}$ cup of hot water and $\frac{1}{2}$ cup of rubbing alcohol. Whisk in 2 tablespoons of cornstarch. Transfer to a spray bottle and spritz onto windows, mirrors, or glass before wiping clean with a towel or cloth.

GROUT CLEANER: Combine 3 tablespoons of lemon juice, 2 tablespoons of vinegar, 3 tablespoons of baking soda and $\frac{1}{2}$ cup of warm water in a spray bottle. Spray on grout and allow to sit for five minutes before scrubbing.

