

DIY FIZZY BATH BOMBS

Experiment

WHAT YOU NEED:

- 1/2 cup baking soda
- 1/4 cup citric acid in powder form
- 1/4 cup cornstarch
- 2-1/5 tablespoons Epsom salts
- 1-1/4 tablespoons olive or almond oil
- 1-3/4 teaspoons water
- 1/4 teaspoon fragrance oils
- 1/8 teaspoon borax
- Plastic mixing bowl
- Gloves
- Jar with lid or other airtight container
- Molds or ice cube trays

Some bath products fizz and make bubbles when added to water. Ever wonder why? Try this experiment to find out. (Adult supervision recommended.)

WHAT YOU DO:

1. Put the gloves on and combine the baking soda, citric acid, corn starch, and Epsom salts together in a bowl. Mix well and set aside.
2. Combine the oils, water, and borax in a jar. Cover it with the lid and shake vigorously to mix the ingredients well.
3. Slowly add the liquid mixture to the dry mixture, a few drops at a time, stirring continuously and quickly to minimize fizzing. When fully mixed, the mixture will be very dry and crumbly.
4. Pack the mixture into molds or ice cube trays and let rest for two days. *(You can also use metal tealight candle holders with the candles removed.)*
5. After two days, carefully remove the mixture from the molds. If using metal tealight holders, have an adult help you use scissors to cut the metal away from the bath bomb. Take one of the finished bath bombs and drop it in water. What happens?



WHAT HAPPENED:

A bath bomb is really showing how acids and bases react when mixed together. In this experiment, the baking soda is the base and the citric acid is, well, the acid. But the reaction of this acid-base combination can be controlled by the other ingredients in the bath bomb.

The cornstarch and Epsom salts both act as liquid absorbers to help keep the baking soda and citric acid from reacting with each other when liquids are added. They are also helpful if you live in a place with high humidity. The borax acts as both a preservative and an emulsifier, stabilizing the acid and the base and keeping them from reacting with each other before entering the water.

Water is the catalyst for the reaction to occur because it dissolves the solids and allows the ions in the acid and the base to move and collide with each other, causing a chemical reaction to occur. A catalyst is something added to a chemical mixture that speeds up the chemical reaction time. This reaction forms carbon dioxide, a gas, which rises to the surface of the bathwater in the form of bubbles. The oils and the fragrances are useful as a liquid to help form the bath bombs as well as leave the skin smooth and scented.