

Materials

- Empty bottles/jars/containers
- Dry Yeast
- Warm Water
- Dish Soap
- 3% Hydrogen Peroxide
- Measuring Cup & Spoons
- Goggles/Safety Glasses
- Large Tub/Tray
- Food Coloring

Overview

Yeast contains an enzyme called Catalase that breaks down hydrogen peroxide (H_2O_2) into oxygen gas and water. The oxygen gas gets trapped by the soap, and you get a large foamy solution that squirts out of the top of the bottle!

Enzymes are catalysts, or substances that control how quickly chemical reactions occur. The reactions keep all plants and animals functioning. Enzymes help living things do things like digestion and growing new cells.

The Catalase in our bodies is why hydrogen peroxide bubbles when you put it on a cut or scrape -- the same chemical reaction your elephant toothpaste demonstrated happens.

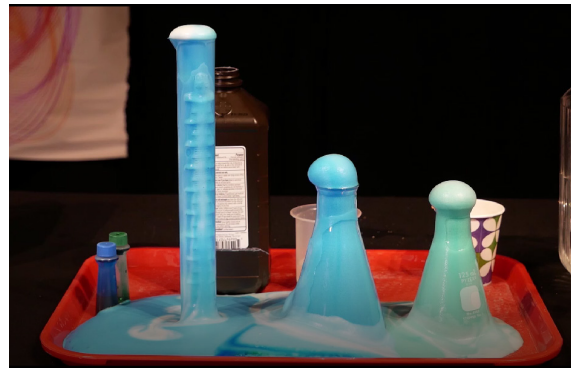
Elephant Toothpaste

Activity Instructions

Mess-0-Meter



“Have Towels Ready”



Procedure

Make sure to put on your Goggles first!

1. Measure a 1/2 cup of Hydrogen Peroxide, pour it in your container.
2. Measure a 1/4 cup of Dish Soap, and mix it with the Hydrogen Peroxide by gently stirring.
3. Squeeze droplets of Food Coloring down the side of your container.
4. Measure 1 Tablespoon of Dry Yeast, and put in a separate cup/container.
5. Add warm water (NOT HOT) to the Dry Yeast, and stir until the Yeast dissolves and makes the mixture a little thicker than water.
6. Pour the Yeast and Water mixture into the Hydrogen Peroxide and Dish Soap mixture.

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