

Science at Home

Materials Needed:

- ¹/₂ cup hydrogen peroxide
- Squirt of dish soap
- Food coloring (optional)
- 1 Tbsp bread yeast
- Warm water
- Glass jar/beaker
- Small bowl

Chemical Change and Exothermic Reactions with Yeast and Hydrogen Peroxide

- 1. Pour hydrogen peroxide into glass jar/beaker then squirt a bit of dish soap into the container and swish a bit to mix around
- 2. Add food coloring to the mixture (optional)
- 3. In a separate container, mix yeast with 3 tablespoons of very warm water, allow yeast to dissolve
- 4. Pour the two mixtures together and watch what happens!
- 5. If you hold the jar, can you feel it heat up just a little?

Science Behind the Science You See

When the hydrogen peroxide and yeast are mixed a chemical in the yeast reacts to break apart the hydrogen peroxide very rapidly. This forms oxygen gas and water. The dish soap helps to ensure that all the oxygen created by the reaction doesn't just immediately escape but rather gets caught in the soap bubbles. It takes energy to break apart the hydrogen peroxide, but it also releases energy when the oxygen and water are formed. Since the amount of energy released is greater than the energy used in the reaction it is exothermic and the temperature of the mixture will increase.

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