



Name _____

Observing Energy in Chemical Reactions

Problem: To observe heat energy changes in chemical reactions.

Predict: What kind of energy change will you observe in these reactions?

1. *Hydrogen Peroxide + Potato:*

2. *Hydrogen Peroxide + Yeast:*

3. *Hydrogen Peroxide + Liver:*

Materials:

Thermometer	Forceps	Safety Goggles
Test Tube or Beaker	Test Tube Rack	Spoon
50 mL Hydrogen Peroxide	Small Piece of Potato	Graduated Cylinder
Small Piece of Liver	Water	

Procedure:

1. Put the thermometer in the test tube. Record the starting temperature.
2. Add a small piece of potato.
3. Pour 10 mL of hydrogen peroxide into the test tube. Feel the bottom of the test tube. Record your descriptive observations in the data chart.
4. When the reaction is finish, record the ending temperature.
5. Rinse the test tube and thermometer with water and repeat with $\frac{1}{2}$ spoon of yeast and 10 mL of hydrogen peroxide. Record the starting & ending temperatures.
6. Rinse the test tube and thermometer with water and repeat with a small piece of liver and 10 mL of hydrogen peroxide. Record the starting & ending temperatures.

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Questions:

1. Describe the energy change during each reaction. Use data to support what you say.

2. How are endothermic reactions different from exothermic reactions? Use a **diagram** to help explain your answer.