

Date\_\_\_\_\_



**Background:** When a compound decomposes it breaks down into the substances that were combined. In this lab, you will use a catalyst to breakdown Hydrogen peroxide into its element parts—hydrogen and oxygen. You can prove the presence of the gas products by relighting a splint.

**Hypothesis:** *What will happen when raw liver is added to a test tube of hydrogen peroxide?*

1. Wear Safety Goggles and follow all safety rules.
2. Measure 10ml of Hydrogen Peroxide into small graduated cylinder
3. Choose a piece of beef liver and put into a small beaker
4. Make observations before reaction of both peroxide and liver
5. One student record the temperature of peroxide before reaction
6. Put liver into graduated cylinder
7. One student record the temperature of reaction every 30 seconds
8. Make observations during the reaction
9. After lab is complete clean up station and return to your seat and complete questions

Physical properties of peroxide BEFORE reaction:	Physical Properties of liver BEFORE reaction:	Chemical Properties Observed DURING the reaction:
<p>Temperature of the peroxide BEFORE reaction:</p>		

Time in seconds	Temperature in degrees Celsius
0	
30	
60	
90	
120	
150	
180	

- 1) What purpose did the liver serve in the lab?
- 2) Why did the temperature begin to drop toward the end of the reaction?
- 3) What did the sparking splint prove?
- 4) What were the signs of a chemical reaction (change) occurring?
- 5) Is the equation for the lab balanced?  
$$2 \text{H}_2\text{O}_2 + \text{liver catalyst} \longrightarrow 2 \text{H}_2\text{O} + \text{O}_2 + \text{liver catalyst}$$
- 6) Do you think the size, shape, or mass of the liver had any effect on the reaction?
- 7) When did the highest temperature occur? What else was happening at this time? (gas bubbles or not, splint relit or not, . . . ) So therefore, the reaction was endothermic or exothermic?