



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

<b>Name(s)</b> Katherine S. Wu	<b>Project Number</b>  22509
<b>Project Title</b> Enzymatic Activity	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective is to determine if temperature fluctuations in the environment will affect the rate of oxygen produced by the enzymatic activity of the enzyme catalase.</p> <p><b>Methods/Materials</b> My main materials were porcine liver, test tubes, hydrogen peroxide, detergent, and oil. The temperature of the environment of liver in a test tube (which contains the enzyme catalase) was changed. One control had no liver in it. After one drop of oil, detergent, and then hydrogen peroxide were dropped into the test tube, the resulting foam was measured with a ruler.</p> <p><b>Results</b> The enzymatic activity peaked consistently at 40 degrees Celsius throughout the three trials conducted.</p> <p><b>Conclusions/Discussion</b> My conclusion is that temperature does have an effect on enzymatic activity, and that enzymatic activity peaks at forty degrees Celsius.</p>	
<b>Summary Statement</b> My project is focused on how temperature affects the rate of oxygen produced by enzymatic activity.	
<b>Help Received</b> My teacher loaned materials for experiment and helped me with several difficulties in my project; my mom and dad took me to the library and printed out the color graphs at their companies.	