



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Jonathan J. Woolley	Project Number J1438
Project Title The Effects of Light, Temperature, and Volume on Yeast Enzyme Activity	
Abstract Objectives/Goals The goal of my experiment was to find out which variable of different types of light, temperatures, and starting volume affected the amount of yeast enzyme activity. Methods/Materials For the experiment i used one microwave oven, one spoon, one sharpie, twelve clear plastic cups, 810ml of apple juice, twenty-seven tsp. of yeast, one lamp, ice, one regular light bulb, and one UV light bulb. To do the experiment i labeled nine cups one through nine and then put 15ml of apple juice in cups one, four and seven, 30ml in cups two, five, and eight, and then 45ml in the other three cups. After that i put ice in the remaining cups and put those cups under cups one, two, and three. Then i put cups seven through nine in the microwave for twenty seconds each, after that i put one tsp. of yeast in each cup and put that under a lamp with a regular light bulb. After twenty minutes i recorded my observations and rinsed out all the cups and put the apple juice in them and heated them up again etc. and then i put it under the UV light, and then repeated under no light at all. Results The results i found were that the temperature affected the activity the most with the hotter the temperature, the more activity. I also found that the starting volume and the different types of light did not affect the enzyme activity very much. Conclusions/Discussion To conclude, i realized that if i wanted to create more enzyme activity, then i would heat it up, and that it would not matter very much at all if i had a certain type of light or volume	
Summary Statement My project is about how much yeast enzyme activity is produced by three different variables.	
Help Received father helped me learn regression analysis	