

Name ____Darius Bowers_____
Lab Day and Time __B 8:00_____

This assignment is to be completed INDIVIDUALLY.

1) Hypothesis: State the hypotheses for your experiment. "If... and then". (3)

If the temperature of the environment rises, and the H₂O₂ molecules will begin to move more quickly and collide more frequently, then the catalase reactions substrate concentration will increase to a certain extent.

2) Figure: In the space below, please insert your figure (graph and captio). Make sure to average the measurements across the different trials for each of the variables you tested, and plot those averages along with error bars. Be sure to include a caption (see page your manual for a refresher). Beneath the caption include any qualitative observations. (10)

<https://sites.google.com/a/uca.edu/bio1/graphing>

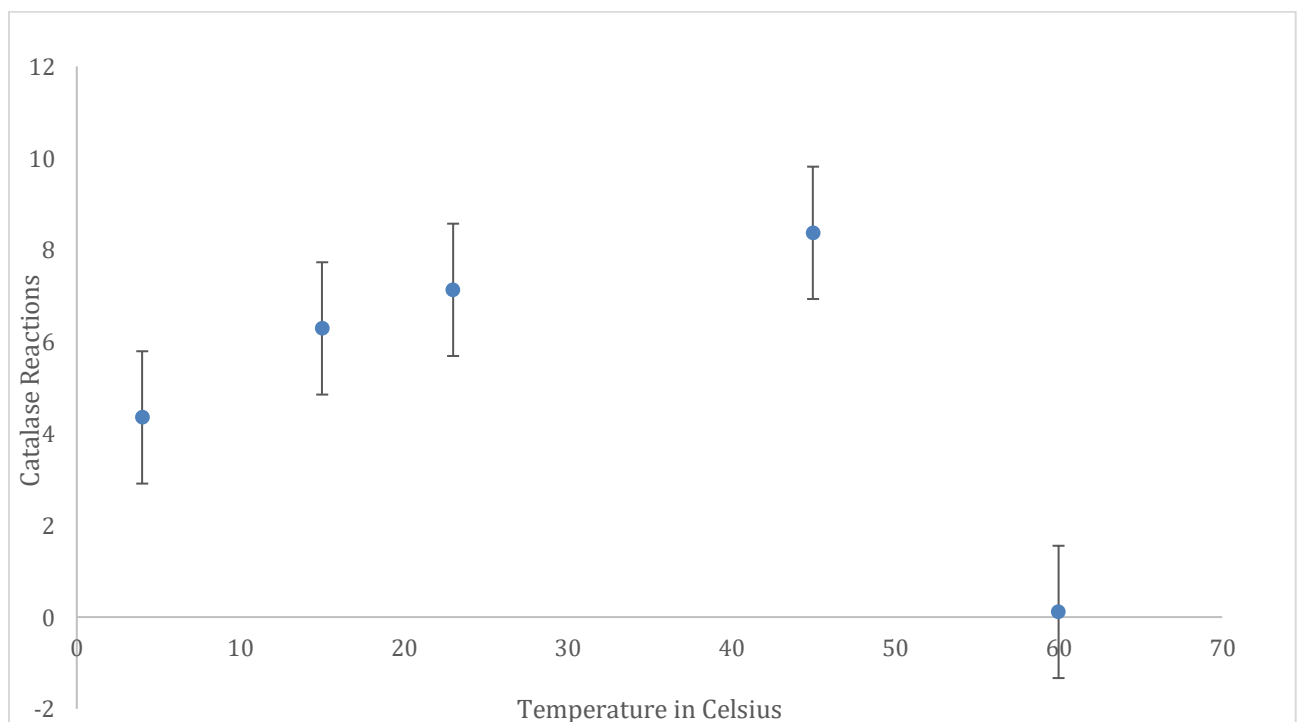


Figure 1. Effect of Temperature on Enzyme Reaction Rates (mean±SE).

There was a 92% increase in Catalase reactions from 4 degrees to 45 degrees. Then there was a approximately a -100% decrease in reactions form 45 degrees to 60.

3) Conclusion: Write a paragraph summarizing your interpretation of the results, and a conclusion. Be sure to indicate whether the results supported your hypothesis, explain why your data happened from a molecular standpoint and what it means. Also describe what experiment you would conduct next, and include a hypothesis for that experiment. (7)

The results supported my hypothesis as the catalase reactions increased as the temperature increased until about 45 degrees Celsius. This is because raising the temperature too much will cause the process to not work properly. On a molecular standpoint the molecules were sped up as the temperature was increased which in turn increased the reaction rate. The experiment I would conduct next would be testing an enzyme under different ph levels to see the change in reaction rates. The hypothesis would be if an enzyme is put under different ph levels and the enzyme would not work under a ph that's too low or a ph that's too high, then the enzyme would perform correctly under an specific ph level.