

Laboratory #5: Properties of Enzyme Action

Purpose:

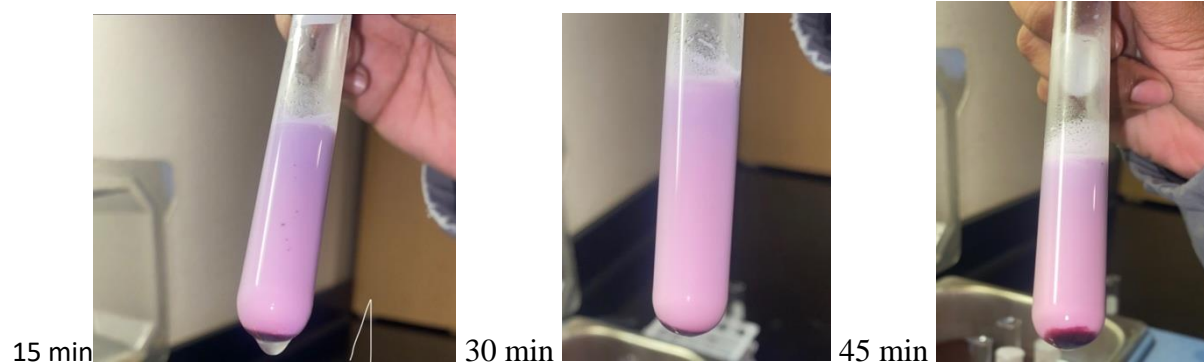
The purpose for this lab is to get a better understanding of enzymes and their biomechanical reactions. Enzymes provide temporary binding and act as catalysts due to their complex molecular configuration. They are categorized as proteins and are subjected to denaturing, which breaks down the weak hydrogen bonds.

Procedures:

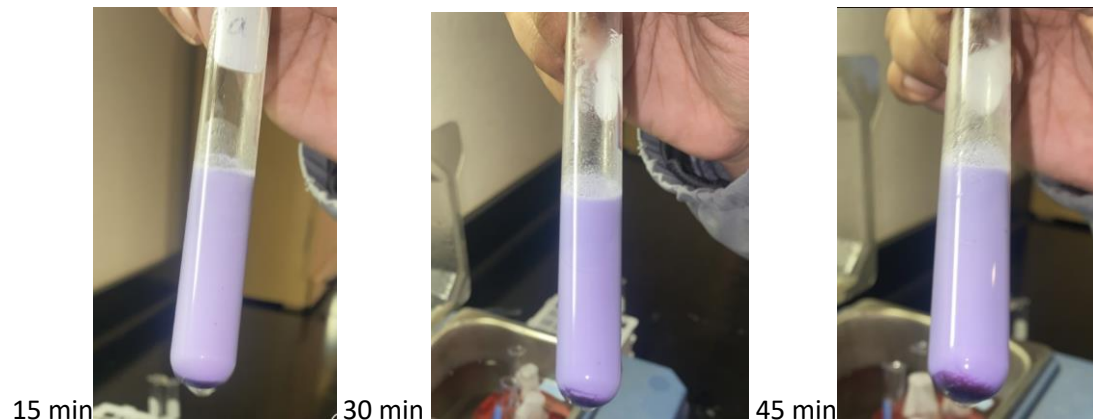
1. Pour 3ml of litmus cream into 4 separate test tubes
2. Pour 3ml of 2% pancreatin into two out of the 4 test tubes
3. Add a pinch of bile salt to one test tube with pancreatin and to one w/o
4. Shake each test tube for at least 30 seconds
5. Place test tubes in a 37°C water bath for 5 min, check every 15 min for an hour
6. Remove test tubes and test for PH levels

Results:

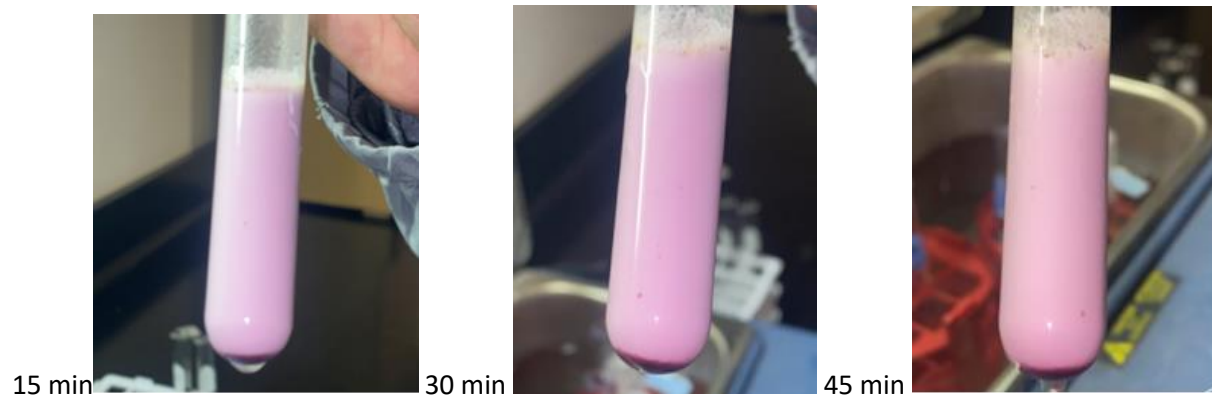
Test tube #1: 3ml cream + 3ml pancreatin



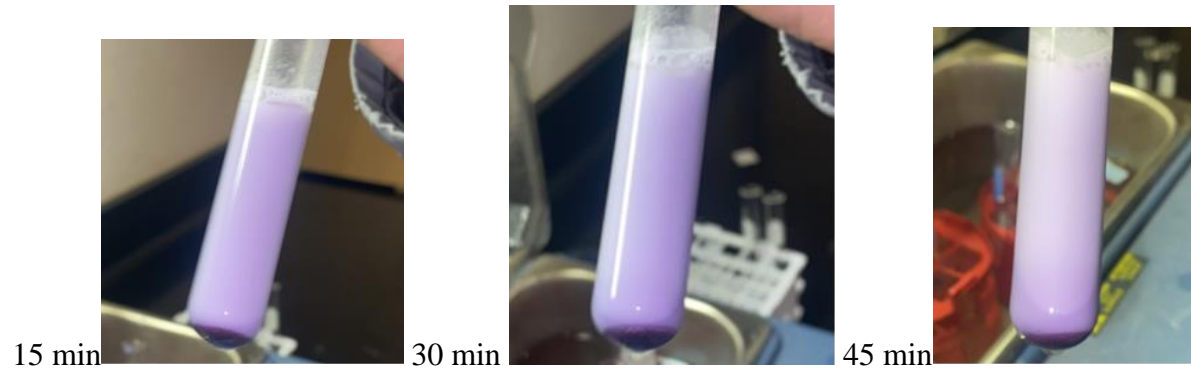
Test tube #2: 3ml cream + 3ml distilled water



Test tube #3: 3ml cream + 3ml pancreatin + pinch of bile salt



Test tube #4: 3ml cream + 3ml distilled water + pinch of bile salt



All 4 test tubes after 60 minutes:



Tube	Color	pH	Odor	Time to change color
#1	Light pink/purple	6	Milk	15 min
#2	Dark blue/purple	8	No distinct odor	30 min
#3	Pink/purple	6	Rotten cheese	30 min

#4	Dark/light purple	7	Cheese	45 min
----	----------------------	---	--------	--------

Discussion:

For this lab results, we could see the 4 different ways of enzyme and their biochemical change with the different liquids that we added to them. Two out of the 4 test tubes that had the 3ml of pancreatin were a light purple/pink color, and the other two were more of a dark purple. The reason for the change in color when using is because pancreatin is something that replaces digestive enzymes when the body does not have enough of its own, while bile salts emulsify fats that help lipase hydrolyze fats. Bile salt gave us a chemical change, it gave a distinct odor compared to the once we didn't add the bile salt to.

Conclusion:

To conclude, I would say that I now have a better understanding of how enzymes work and how they initiate and accelerate specific chemical reactions without being changed up or used up. One thing that would give a drastic change would be denaturing, which in this case we used pancreatin and that gave us the change in color in our lab. Bile salt also had a chemical reaction and made the liquid in the test tubes have a bad odor.