

Lab3-Properties of Enzyme Action

Bio125

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The purpose of this experiment was to understand the digestion of fat. For this I needed to observe some aspects of the action of pancreatic lipase and bile salts on lipids.

3-C: Digestion of fat with pancreatic lipase and bile salts

Procedure. Add just enough litmus powder to a container of dairy cream to produce a medium blue color. Pour 3 ml of the litmus cream into 4 separate test tubes. Into two additional test tubes pour 3 ml of 2% pancreatin. Preincubate the litmus cream and the pancreatin separately in a 37°C water bath for 5 minutes. Then prepare four test tubes as follows.

Tube #1: 3 ml cream + 3 ml pancreatin

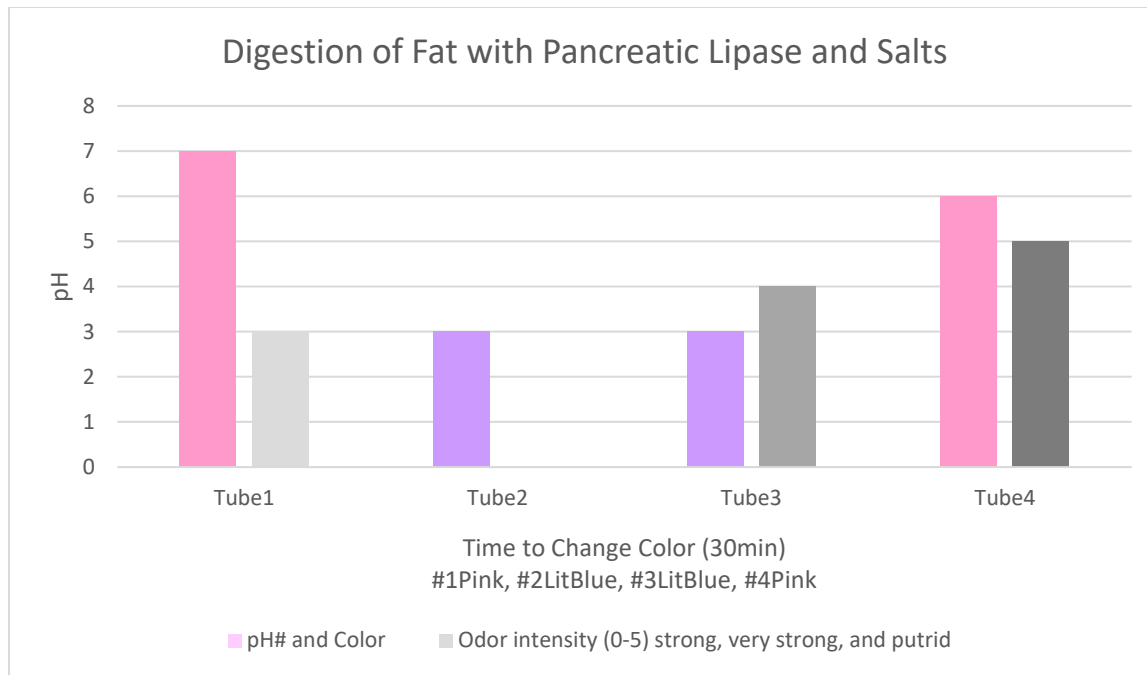
Tube #2: 3 ml cream + 3 ml distilled water

Tube #3: 3 ml cream + 3 ml pancreatin + pinch of bile salts

Tube #4: 3 ml cream + 3 ml distilled water + pinch bile salts².

Gently shake each tube for 30 seconds to mix in the bile salts. Incubate all four tubes in a 37°C water bath for 1 hour, checking every minute for the first 5 minutes or until the first tube changes color, then every 15 minutes for the rest of the hour. Record the time and number of the tube. Continue checking for the remainder of the hour. Remove the tubes from the water bath. Test the pH of each tube using pH paper and note the odor and color of each tube. NOTE: Blue litmus will turn pink in an acid environment

3-C



Summarize results. At the end, the result was not entirely accurate as I expected it to be. That must have happened because of the incubation time. I did it only for thirty minutes instead of one hour. That is why tube #1 turned pink with its pH of 7 and tube #4 turned pink with its pH of 6.

I learned how the digestion of fat works and how it affects the pH, how pancreatin helps break down fats, proteins, and carbohydrates. Also, the roll of bile salt breaking large molecules into smaller molecules to help absorption.