Lab Report 3

Purpose: Understanding properties of enzyme action.

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

1. 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 +
Tube #4: 3 ml cream + 3 ml distilled water + pinch bile salts

2. Gently shake each tube for 30 seconds to mix in the bile salts. Incubate all four tubes in a37□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.

3. 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.

Results:

Tube	Color	pH	Odor	Time
#1	Lavender (dark at the bottom)	7	none	10 min.
#2	Blue (dark at the bottom)	8	Light odor	10 min.
#3	gray/blue	7	cadaver	10min.
#4	lavender	6	Rotten cheese	25min.

Discussion: The longer the tubes were left incubating, the darker ¾ tubes turned. Tube 3 and 4 had a pinch of bile salt which resulted in the odor being horrendous. Tube 1 and 3 both had pancreatin which was close to pH 7.8 like in the small intestines.

Conclusion: Pancreatic lipase has an important role in fat break down, which is why it needs support from bile salts.