

POSTLAB QUESTIONS 6.A

1. Identify the substrate, the enzyme, and the product involved in this experiment.

2. Was the control lacking the substrate or the enzyme?

3. In Step 3, why is it necessary to let the test tubes stand for 5 minutes in their various temperatures?

4. Based on your results, what was the optimum temperature for catechol oxidase activity?

5. What effect did a hot water bath have on enzyme activity? Why?

6. Using your results argue for or against the following statement: Enzymes function equally and efficiently at all temperatures.

7. Why does lemon juice applied to slices of apples or bananas prevent darkening of the fruits?

POSTLAB QUESTIONS 6.B

1. Identify the substrate, the enzyme, the inhibitor, and the product involved in this experiment.

2. What is the purpose of tube 1?

3. What was the effect of an inhibitor on enzyme activity?

4. The enzyme catechol oxidase has a copper ion that forms part of its active site. Knowing this, what do you suggest as the mechanism of action for the inhibitor to affect enzyme activity?

POSTLAB 6.C

1. Based on your results, what was the optimum pH for catechol oxidase activity?

2. What effect does a high or low pH have on enzyme activity? Why?

3. Based on your observations, why do cytoplasm and many blood fluids have a pH measure near 7?