

Manipulation of Enzymes and Enzymatic Processes

Conclusion

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1 In conclusion, the purpose of this experiment was to conduct two experiments in order to examine how enzyme concentration affects the rate of a reaction and also how reactant and product concentration can affect the direction of an enzymatic reaction. These goals were accomplished by conducting the salivary amylase experiment and phosphorylase experiment, respectfully.

2 The experiment with salivary amylase revealed that increasing the concentration of an enzyme decreased the time needed for the reaction to reach its end point. This understanding of how enzymes affect reactions in organic material, specifically how salivary amylase helps break down starch, is useful for better understanding of and treatment for a variety of conditions. 3 Salivary amylase is most associated with the breakdown of starch in carbohydrates, making it a centerpiece of study for diabetes and obesity research. Additionally, salivary amylase also binds to bacteria in the mouth and on teeth, which has implications for dentistry, like excess plaque and the development of cavities in the teeth (Scannapieco, Torres, & Levine, 1993). 4

5 The experiment with phosphorylase also showed how further research into its properties has the potential to enhance medical research. The experiments confirmed that the direction of an enzymatic reaction depends on the concentration of the reactants and products (Starr, Evers, & Starr, 2011). A high concentration of reactants drives the reaction forward; a high concentration of products drives the reverse reaction (Starr, Evers & Starr, 2011). Additionally, 6 factors such as temperature and pH level also impact whether or not a reaction occurs. The ability of phosphorylase to both degrade and synthesize starch has been a source of research for the development of a variety of treatments such treatments as phosphorylase inhibitors for type 2 diabetes, and treatments for fetal lung maturation (Rannels, Rannels, Sneyd, & Loten, 1991).

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1

First paragraph summarizes the goals of the lab.

2

A summary of the outcomes of each experiment are given.

3

Writer notes the larger implications of the new knowledge.

4

In-text citations appear throughout the report, especially in the introduction, discussion, and conclusion sections.

5

A summary of the outcomes of each experiment are given.

6

Writer notes the larger implications of the new knowledge.