

Starch lab



**ASSIGN  
BUSTER**

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Introduction: In this lab we learned the concept and procedure of synthesizing starch. We also learned the effects of pH and temperature on the reaction rates of amylase.. In the process of the synthesis lab we learned phosphorylation using a potato, which was what we synthesized. The phosphorylation took place after the addition of primer. There are two different types of starches used are amylose and amylopectin.

To test for the presence of starch, the Starch Test is used. This is a simple test in which iodine is added to a given solution. If a polysaccharide such as starch is present then the iodine ion will lodge itself in the polysaccharide chain and give it a black-blue color. If iodine added to a solution turns black-blue than starch is present. If the solution remains the color of iodine, reddish-orange, there is no starch present, a negative test.

In our experiment we scale the color we see in comparison to the neutrals to test for the amount of starch. Discussion: This lab gives a better understanding of biosynthesis of starch. As you can see with our data we had some discrepancies in tubes where glucose was present no starch should have been found however we have "+" in a few of the time slots this could be do to the interpretation of color or some spill over.

Since we were trying to get exact times the drops could have splattered over into another part of the dish and contaminated some of the other tubes overall our data is fairly accurate however tube 7 had the most phosphorylation because it turned from blue to black over time. Some of the other tubes although had the presence of starch did not alter much over

time in fact most stayed the same. Additionally it is concluded the pH and temperature greatly effect the reaction rate of enzymes.