Enzyme Concentration

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Enzymes play a vital role in the human body. One most notably, in the digestive system, where they digest any starch you had previously consumed. Which lends itself to the problem, what would be the optimum enzyme concentration in which amylase, digests the starch in the quickest amount of time? Therefore the purpose of my experiment is to determine what enzyme concentration of amylase will digest the starch the quickest. My hypothesis states that the optimum enzyme concentration will be 2.5 mL of amylase. The procedure is as follows, first obtain six test tubes and label with various enzyme concentrations. Afterwards add one single drop of iodine to each of the spot plate's twelve wells. Obtain your first test tube and add 1 mL of pH 6.5 buffer. Then using a plastic starch pipet add 1 mL of the starch into the test tubes. After precisely 30 seconds after you added the starch, use a glass dropper to transfer one drop from the test tube solution to the first iodine well on the spot plate. Repeat this step every 5 minutes until the well ultimately turns yellow or before an hour is completed. Repeat these steps for the rest of the test tube concentrations. The results proved that the greater the enzyme concentration, the faster the starch will be digested. As demonstrated by the 2.5 mL enzyme concentration digesting the starch the fastest in 600 seconds. While on the other hand the 0.5 mL enzyme concentration, didn't even achieve starch digestion within the hour, and assumed 4,000 seconds for digestion. In conclusion, I do accept my hypothesis that 2.5 mL concentration was the optimum enzyme concentration of amylase out of these concentration tested.

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