

Lab Design Worksheet
Are All Students Born Equal?

Purpose: To determine how long it takes for your salivary amylase to chemically break down starch and to compare this time with others to determine if there is variation in our classroom population in - starch breakdown times.

Background Information:

An enzyme present in human saliva called **salivary amylase** begins breaking down the carbohydrate starch in the mouth. Starch is a polymer and can be broken down into its monomers with this enzyme found in our spit. Iodine is an indicator for starch. When iodine is added to a solution that contains starch, the solution will turn blue. If starch is not present when iodine is added, the solution will remain a brownish-orange color.

Lab Design:

In order to examine variation in amylase a population has, we have to collect amylase. Brainstorm some ideas of how you might do this below.

What equipment would you need to measure the amylase in a person's saliva?

What variable would you record in this lab to compare the amounts of amylase people have in their saliva?

What is your independent variable in this experiment? Your dependent variable?

What are you actually measuring in this lab? _____

Write a step-by-step procedure. Think about all the details as you take yourself on a "mental trip" through your lab. Be sure to include the equipment you think you will need.

What is the best way to visually represent the results of this lab? Why would you pick that particular method?