Lab 4 – Enzymes Name:

Today you will be working with an enzymatic reaction. Enzymes function to catalyze reactions. To investigate enzyme action, you will examine a chemical reaction in which a substrate will react to form a product.

Enzyme speeds up this reaction

Substrate → Product

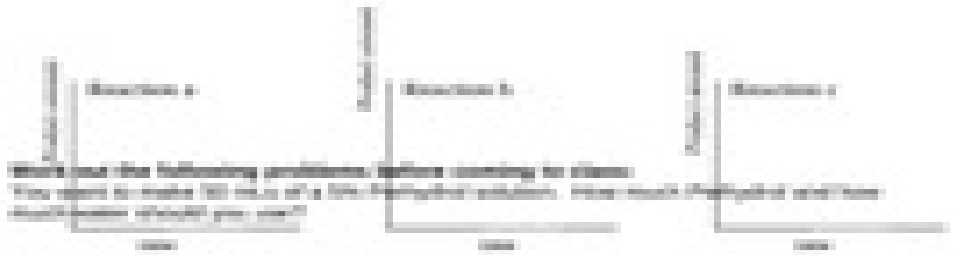
Before coming to class:
Define an enzyme, substrate, and product.

How does the name of an enzyme indicate its function?

Will the processes or reactions occur without enzymes being present?

What is the function of lysozyme?

You can measure the reaction by examining the movement of a substrate/substance from substrate to product. The rate of reaction will be presented as level of product over time. The reaction may occur quickly or slowly. Sketch a reaction that is fast (a), slow (b) and average (c) on the graphs below.



Work out the following problems before coming to class:
You want to make 50 mL of a 20% Poly(vinyl alcohol) solution. How much Poly(vinyl alcohol) and how much water should you use??

You want to make 25mL of a 0.5M NaBH4 catalyst solution. How much water and how much catalyst should you use? (MW = 0.05 g)

In lab today:
Provide three examples of reactions that benefit from the presence of enzymes.