

# Enzyme lab report introduction

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Enzymes are proteins that increase or decrease the rate of chemical reactions. They are generally globular proteins and are around 62 amino acids residues in size. What enzymes do is determined by their 2-dimensional shape. A lot of enzymes are bigger than the substrate they act on, but only a little part of the enzyme involved directly with the catalysis.

Without enzymes the chemical reactions in the body, would be so slow, the body would shut down. And cell reactions would take too much energy that our body won't be able to provide. Like a wrench that stays the same after unscrewing a lot of bolts, so does an enzyme keep working after it finishes a chemical reaction. This reaction helps increase the efficiency of enzymes, because they can be used over and over again. Enzymes are really specific, each enzyme only works with particular kinds of molecules, called substrates. Enzymes can also speed up the same chemical reaction going backwards.

Enzymes may break a molecule into two pieces, but will put it back together only if it's provided with the two pieces. There are basically two theories to suggest how enzymes and substrates fit together. These are the lock and key mechanism and the induced fit mechanism. The lock and key mechanism says that the structure of the substrate fits exactly to the structure of the active site. The induced fit mechanism says that the active site of the enzyme can change itself a little to help the substrate fit nicely.