Enzyme Notes

Key

What is an enzyme?

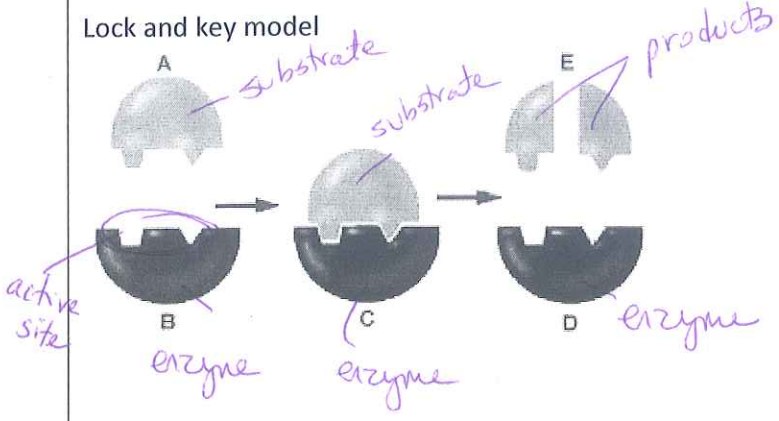
- Type of organic compound
  Protein
- Enzymes and activation energy
  enzymes lower the activation energy needed to start a reaction
- Enzymes and overall reaction rate
  overall an enzyme will increase the rate
- Suffix for enzymes
  -ase
  (ex: Catalase/Nuclease)

Enzyme and Substrate

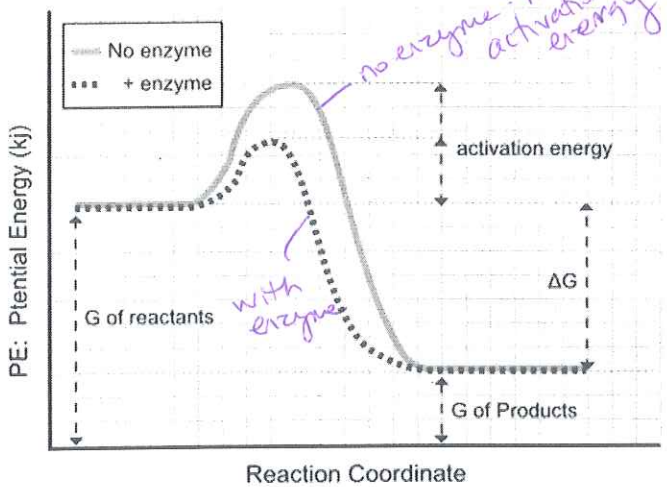
- Lock and key model
  highly specific fit
- Induced fit model
  enzyme slightly molds to fit the substrate
- Enzymes
  reused for more reactions
- Substrates
  broken down by the enzyme into the product

Figure and Pictures

Lock and key model



Enzyme Graph – Enzyme and activation energy



Denaturing an enzyme

Ways to denature an enzyme:

- change the temp. (cooking)
- add acid or base (change pH)
- add salt/sugar (change active site)

What happens to an enzyme during the process?

Enzyme structure changed so that active site can no longer hold substrate.

Enzyme no longer functions.

Can be reactured when conditions return to normal.