Polysaccharides	Lugol's iodine test	Purple/Black	Yellow/Orange
Protein	Biuret test	Pink, violet	light blue
Lipids	paper test	Translucent	Opaque

- Dehydration Synthesis: Removing a water molecule and adding a monomer onto a growing molecule
- Hydrolysis: Using water to break off a monomer
- Enzyme

Unit 3 Cell

- o Made of Proteins
- Act as catalysts-lower the activation energy needed to start a reaction.
- Have a precise 3D shape
- \circ Only catalyze one type of reaction
- Substrate-the specific molecule(s) that an enzyme acts upon
- Active site -- the place on the enzyme where the binds.
- Types of reaction
 - Endothermic: Products have more energy than reactants
 - Exothermic: Products have less energy than reactants
- Things that stop the reaction
 - Competitive inhibitors shaped like substrate and block the active site
 - Non-competitive inhibitors bind to a ten or away from active site, but change the shape of active site (the substrate can't bind).
- If there is a share in temperature, etc. sal concentration, an enzyme carry inture (lose its <u>3D</u> phape) and can no longer function.

Prokaryotes	Eukaryotes	
Oldest cell (3.5 billion years)	More recent (1.5 billion years)	
No nucleus	Have nuclei and organelles	
Smallest and simplest	More complex	
Include bacteria	Make up plants, animals, fungi, etc	

- Cell organelles (entry 40)
- Cell membranes
 - Two rows of phospholipids arranged so that the polar heads are on the surface and nonpolar tails in between.
 - o Micelle: Phospholipids form a micelle into a monolayer in water