






Lab Exam Preparation

To prepare for tomorrow's lab exam, make sure you understand the table that we filled in together last class. Here is a brief recap of the different chemical tests you need to be familiar with.

- Barium Chloride** This chemical will form a white precipitate when mixed with a substance that has **sulphate** (SO_4^{2-}) ions.
- Biuret's reagent** This is a substance that will turn from **blue** to **purple** in the presence of **proteins**. 
- Benedict's solution** This is a substance that will turn from **blue** to **red** in the presence of **glucose**. For this test to work, the substances must be heated in a hot water bath. Other colours indicate medium levels of glucose. 

None Traces Some Lots
- Brown paper** Paper towels are used to test for **fat**. They will turn translucent (transparent) when fatty foods are smeared on them. Sometimes, translucency can be caused by water, so it's important to wait a few minutes so that any water in the sample can evaporate. 
- Cobalt chloride paper** This paper will turn from **blue** to **pink** when a substance with **water** is applied to it. 
- Conductivity meter** This device is used to indicate the presence of **ions** (small charged particles) that allow electricity to flow. When you dip it in a substance containing ions, electrons are able to flow from one terminal to the other through the substance, completing an electrical circuit and allowing a light to light up. If it doesn't light up, the substance has no ions. Always make sure to clean the conductivity meter in between tests!
- Flame test** A flame will glow different colours in the presence of different metals. You do not need to memorize the different colours associated with flame tests.
- Iodine** Iodine is a substance that will turn from **orange** to black in the presence of **starch**, which is a polysaccharide (long chain of sugar molecules). 
- Litmus paper**

Blue litmus paper will turn **red** in the presence of an **acid**.
Red litmus paper will stay **red** in the presence of an **acid**.
Blue litmus paper will stay **blue** in the presence of a **base**.
Red litmus paper will turn **blue** in the presence of a **base**.


- Silver nitrate** This chemical will form a white precipitate when mixed with a substance that has **chlorine** (Cl^-) ions.

Warning: Some of the tests you will be conducting should be handled with particular care. You will be working with substances that can irritate your skin and cause injury to your eyes. **Lab goggles and aprons must be worn at all times.** You will lose marks if you are caught without them.