**Identifying Macromolecules -**

**Lipids & Proteins**

**Procedure (GOGGLES MUST BE WORN FOR THE ENTIRE LAB PERIOD!)**

**Lipid Test**

1. Obtain five test tubes. Label each one of the following: distilled water, cooking oil, apple juice, gelatin solution, potato solution.
2. Use a graduated cylinder to transfer 5 mL of distilled water into the test tube labeled “distilled water.”
3. Repeat step 2 with each of the food substances. (Each test tube should contain only one food item.)**DO NOT USE THE SAME TOOLS FOR EACH SUBSTANCE - IT WILL CONTAMINATE THEM.**
4. Add 5 drops of Sudan III stain to each test tube.
5. Gently swirl the contents of each test tube. CAUTION: Use extreme care when handling Sudan III to avoid staining hands or clothing.
6. Sudan III will dissolve in lipids and stain them red. In the Data Table, write what color your substance is and a “+” if lipids are present or a “-“ if lipids are not present. NOTE: Sudan III is very unreliable. If you see dark red specks in your solution then it is more likely that it is a positive test. Just because the solution turns pink does not mean that there are lipids present.
7. Wash the test tubes thoroughly, and turn them upside down in the appropriate container.

**Protein Test**

1. Obtain five clean test tubes. Label each one of the following: distilled water, cooking oil, apple juice, gelatin solution, potato solution.
2. Use a graduated cylinder to transfer 5 mL of distilled water into the test tube labeled “distilled water.”
3. Repeat step 2 with each of the food substances. (Each test tube should contain only one food item.)**DO NOT USE THE SAME TOOLS FOR EACH SUBSTANCE - IT WILL CONTAMINATE THEM**
4. Add 5 drops of Biuret Reagent to each test tube.
5. Gently shake the contents of each test tube. CAUTION: Biuret Reagent contains a strong base. If you splash any on yourself wash it off immediately with water.
6. Biuret Reagent changes color from blue to violet in the presence of protein. In the Data Table, write what color the sample turned and a “+” if protein is present or a “-“ if protein is not present.
7. Wash the test tubes thoroughly, turning them upside down in the appropriate container.