Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ *Biology*

**Testing for Organic Compounds Virtual Lab**

**Introduction:** Cells contain many organic molecules. These molecules are essential to life processes. Many of them are acquired from the food we eat. In this lab, you will study carbohydrates, proteins, and fats (lipids).

Instructions: Click on the following website.

[**http://www.occc.edu/biologylabs/Documents/Organic%20Compounds/Organic%20Compounds.htm**](http://www.occc.edu/biologylabs/Documents/Organic%20Compounds/Organic%20Compounds.htm)

As you complete the lab, type in your answers to the bolded questions. DO NOT CUT & PASTE. Use your own words! When you have completed the lab, save and submit the completed lab from the Assignment Upload tab at [www.rustscience.com](http://www.rustscience.com). Make sure you put your name & Organics Lab in the subject header of the email.

1. **Carbohydrates**
   1. Click on the “Carbohydrates” link
   2. **What is a monosaccharide?**
   3. **Draw an example of a monosaccharide molecule below.**
   4. **What indicator is used to test for simple sugars?**
   5. Follow the instructions to complete the test.
   6. **What color is the indicator BEFORE the glucose is added?**
   7. **What color is the indicator AFTER the glucose is added?**
   8. **From performing a test with Benedict’s solution indicator, how can one tell if a sample contains glucose?**
   9. Continue to follow the links.
   10. **What color is the iodine BEFORE starch is added?**
   11. **What color is the iodine AFTER starch is added?**
   12. **From performing a test with iodine as an indicator, how can one tell if a sample contains starch?**
   13. Continue to follow the links.
2. **Proteins**
   1. Click on the “Proteins” link
   2. **What indicator is used to test for proteins?**
   3. Follow the instructions to complete the test.
   4. **What color is the indicator BEFORE the protein is added?**
   5. **What color is the indicator AFTER the protein is added?**
   6. **From performing the test with biuret reagent indicator, how can one tell if a sample contains protein?**
   7. Continue to follow the links.
3. **Lipids**
   1. Click on the “Fats” link
   2. **What indicator is used to test for lipids?**
   3. Follow the instructions to complete the test.
   4. **What color is the indicator BEFORE the vegetable oil is added?**
   5. **What color is the indicator AFTER the vegetable oil is added?**
   6. **Where does all the color sit in the test tube? Why is this?**
   7. **From performing the test with the Sudan IV indicator, how can one tell if a sample contains fats?**
   8. Continue to follow the links.
4. Foods
   1. Click on the “Food” link
   2. Click on the foods one at a time to test for which organic compounds are found in those foods. Record your findings below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **FOOD** | **CARBOHYDRATE**  **(SIMPLE SUGARS)** | **CARBOHYDRATE**  **(STARCH)** | **PROTEIN** | **LIPID** |
| Potato |  |  |  |  |
| Orange Juice |  |  |  |  |
| Nuts (Almonds) |  |  |  |  |
| Eggs |  |  |  |  |
| Fish (Salmon) |  |  |  |  |
| Milk |  |  |  |  |

1. **Analysis & Conclusions**
2. People with diabetes are instructed to avoid foods that are rich in carbohydrates. How could your observations in this investigation help you decide whether a food should be served to a person with diabetes.
3. A very thin slice is removed from a peanut and treated with Sudan IV stain. Then a drop of Biuret solution is added to the peanut slice. When you examine the peanut slice under a microscope, patches of red and blue-violet are visible. What conclusions can you draw from your examination of the peanut slice?