Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Bioplastics Lab 1: Making a BioPlastic POST OBSERVATIONS**

**Use your iPad to take a picture of your four bioplastics. Be sure the labels are visible. Record your observations from Lab 1 and answer the questions below.**

|  |  |  |
| --- | --- | --- |
| **Trial** | **Observations** (transparency, color, texture, thickness, flexibility/brittleness, how easily the sample came out of the drying dish, presence or absence of flaws such as tears or bubbles, etc) | |
| **Your Group’s Samples** | **Class Comparison** |
| 1. Corn Starch  + HCl  + NaOH |  |  |
| 2. Corn Starch  + HCl  + NaOH  + Glycerol |  |  |
| 3. Corn Starch  + NaOH  (no HCl) |  |  |
| 4. Corn Starch  + HCl  (no NaOH) |  |  |

**Analysis:**

1. Are your group’s samples consistent with the class results? If not, look back at the Lab 1 procedure and determine what error(s) may have been made.
2. Consider Trial 1 to be the control in this experiment. (The other three trials had either 1 addition or 1 subtraction made to Trial 1’s protocol.)
   1. Based on your results, how does the addition of glycerol affect the properties of the plastic?
   2. Based on your results, how does the absence of HCl affect the properties of the plastic?
   3. Based on your results, how does the absence of NaOH affect the properties of the plastic?
   4. Look back at the Lab 1 “Background” section. Do your observations and analysis make sense? You may want to add to your responses using this background information.
   5. Which trial’s procedure seemed to make the most ‘plasticy’ bioplastic?