BIOL 121: Lab 3 Notebook Guide

## \*Note: The text in the gray boxes is intended to help guide your responses. As you work your way through this guide, please fill the gray boxes with your own responses.

## **1. What is your research question?**

## Can chemical indicators be used to predict the glycemic scores of unknown food items?

## **2. Conduct background research.** Background research has already done for you and the data made available in the Pre-Lab and Lab Protocols.

## **3. Construct a hypothesis.**

## What is your hypothesis? Positive results on which tests might indicate higher or lower glycemic index scores? Do we need an Ho?

## What is the rationale for this hypothesis? Why do think this may be the case?

## **4. Design & implement your experiment**

## The protocol for each chemical indicator has been provided. List the steps your group will use to complete the experiment, ex) who will do which test or food item, what order will you use, who will record, etc.

## Why do you need positive and negative controls for this set of experiments?

**Results:** Design a results table for you to fill in as you conduct your experiment. Get approval on your design before beginning your experiment. You will need room for the results of 3 food items and their controls. You can use the table function in word, or design it in excel and paste it in here.

#### Stop here and get approval----------------------------------------------------------------------------------------------------------------------------

## **5. Analyze Data and Draw Conclusions.**

The class data will be collected on the board or on the lab PC. Based on the results of all the class tests, predict the GI score of each food item. You should decide on a single number, and a range, and you should order the unknowns from highest to lowest predicted score.

**\*If you are unsure about the GI scale and range, refer back to figure in the manual in Exercise III.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Predicted | | | Actual | |
| GI Score | GI Range | Order 1-5  (1 = lowest) | GI Score | Order 1-5  (1 = lowest) |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 5 |  |  |  |  |  |

Conclusions & Discussion. Were you right/wrong in your predictions? Why? Which food items are likely the best and worst for diabetics? Which macromolecules are of the most concern?

**6. Communicate Results.** This document will be uploaded into your Post-Lab