7.3: Percent Sugar Report Sheets

Name (first and last):

Lab Partner (first and last):

Date of experiment:

Lab Notes and Observations:

Respond to the prompts below. (0.5 points each)

1. Describe how you prepared each of standard sugar solutions solution including any calculations.
    a. 20.0% (w/v)

    b. 15.0% (w/v)

    c. 10.0% (w/v)

    d. 5.0% (w/v)

Data Table 1: (2.5 points)

All volume data should be +/-0.1 mL, be sure to read your graduated cylinder correctly.

Solution	Trial 1 Resting Position	Trial 2 Resting Position	Trial 3 Resting Position	Average Resting Position
0.0% (w/v) sugar solution				
5.0% (w/v) sugar solution				
10.0% (w/v) sugar solution				

15.0% (w/v) sugar solution				
20.0% (w/v) sugar solution				

Data Table 2: (1.5 points)

All measurements should be +/-0.1 mL.

Solution List your drinks in the boxes below	Temp °C	Trial 1 Resting Position	Trial 2 Resting Position	Trial 3 Resting Position	Average Resting Position
Drink 1					
Drink 2					
Drink 3					

Graph: (3 points)

Use excel to plot the **% sugar solutions on the y axis** and the resting position of each in **milliliters on the x axis.**

Include the following components.

- Include axis labels
- Include the equation of the line (the **trendline)** and include and r2 value.
- Look at the **correlation coefficient, the r2** value of your line, it should be at least 0.9. If it is less than that you may want to redo the solutions that are not in line.
- You will use this graph and/or the line equation to determine the % sugar in your "unknown" solutions, the soft drink products.

Include your graph when you submit this lab.

Results: (1.5 points)

Use the equation of your trendline to determine the average % sugar in your soft drinks. Show your calculations here

Drink 1:

Drink 2:

Drink 3:

Table 3: (1.5 points)

Copy the result you obtained for each unknown sugar here.

List which drink is drink 1, drink 2, etc.

Solution List the drink type in the boxes below	Average Resting Position (from table 2)	% Sugar Content
Drink 1		
Drink 1		
Drink 1		

Questions for analysis:

Always answer using your own words. You should cite any resources used, but resist copying exactly. Use complete sentences.

1. How does this resting position of the pipette and the % sugar in the solutions relate to the density of your sugar solutions? (Hint: Your graph will be very helpful for this question.) (1.5 points)
2. Common table sugar is sucrose. What two monosaccharides make up sucrose? Describe what type of glycosidic linkage between the two sugars. (2 points)
3. List 3 source of healthy carbohydrates and explain why they are healthy. (1.5 points)

Reflection: (3 points)

Look at the ingredient list of several common types of processed food items that may be in your home or wander through a grocery store (or even look up on the internet).

Do some research on HFCS (high fructose corn syrup). Use two resources to address the following issues in an essay below.

- What is high-fructose corn syrup (HFCS)?
- Where is it often used?
- What recommendations you would make to someone if you were their health professional about consuming foods containing HFCS?

Use at least ***2 different*** sources. Always cite your sources.

If you use Wikipedia, ***go to at least two of the listed resources at the bottom of the article*** to get further support for your claims about HFCS.

You can attach your reflection to your report sheets.
