Title

**Question/Purpose**

* + What is the point of this lab? What are we discovering?

**Hypothesis**

* + “If, then, because” format. The “because” should come from prior research, what you already know, or observations made.

**Materials**

* + Foods with varying nutrients
  + Lugol’s solution (Iodine)
  + Benedict’s solution
  + 5 paper towels
  + 9 test tubes
  + Hot plate
  + 500 mL beaker/ 250 mL water
  + 5 pipettes

**Procedure**-

Part 1: Test each urine sample with Benedict’s solution for the presence of simple sugar. Record negative or positive on your chart.

Part 2: Test each type of food with Lugol’s iodine for the presence of starch. Record negative or positive on your chart.

Part 3: Test each type of food with Benedict’s solution for the presence of simple sugar. Record negative or positive on your chart.

**Variables**- Identify the independent and dependent variables and the controls in the experiment.

Independent variables: Samples of urine

Samples of foods

Dependent variable: Measured by indicating positive or negative result

Controlled variables: (those that stay constant throughout experiment)

Amount of iodine used to test food: 1 drop

Amount of benedict’s used to test sugars: 3 mL

Amount of urine sample in test tube: 5mL

**Data – Copy in data from paper**

|  |  |  |
| --- | --- | --- |
| **Part 1:** | **Urinalysis**  **Initial Color / Final Color** | **Positive/Negative Results**  **+ / -** |
| Sample A |  |  |
| Sample B |  |  |
| Sample C |  |  |
| Sample D |  |  |
|  | **Starch / Iodine test** |  |
| **Part 2:** |  |  |
| Potato |  |  |
| Meat |  |  |
| Apple Juice |  |  |
| Cereal |  |  |
| Milk |  |  |
|  | **Sugar / Benedict’s test** |  |
| **Part 3:** |  |  |
| Potato |  |  |
| Meat |  |  |
| Apple Juice |  |  |
| Cereal |  |  |
| Milk |  |  |

**Analysis**  
Part 1: EXAMPLE: Sample A tested negative for sugar because it did not turn orange in the presence of Benedict’s solution with heat.

Sample B….

Sample C…..

Sample D….

Part 2: Potato tested (positive or negative) for simple sugar because it (changed or did not change) to orange in the presence of Benedict’s solution with heat.

Meat….

Apple juice….

Cereal….

Milk….

Part 3: Potato tested (positive or negative) for starch because it (changed or did not change) to black in the presence of iodine.

Meat….

Apple juice….

Cereal….

Milk…..

**Conclusion - Write in a paragraph. Yes, it will seem repetitive from your analysis. That is ok!**

* + Was your hypothesis for Cindy’s urine sample supported or not supported?
  + Refer back to the original question about her sample on the lab. Answer the question with evidence in complete sentences (how did you know? How much sugar was stated to be in her blood? – 545 mg/dl; normal was 50 -170 mg/dl).

What recommendations could be made for her diet?

* + Was your hypothesis for the tested foods supported or not supported?
  + Use your data to explain why your hypothesis was supported or not supported.
  + Refer back to the original question on the lab. Answer the question with evidence in complete sentences.