

Laboratory Report Template

Name: Jesse Wade

Title

What is the name or title of the experiment for your report?

Project 1.2.4 NUTRIENT INVESTIGATION

Problem

What question are you investigating?

What nutrients are in an orange? What nutrients are more prominent?

Hypothesis

What are your predictions? What do you expect the results to be?

I predict that the orange will have sugar and Vitamin C, with minimal to no protein, fat, and carbs.

Materials

- List the supplies needed to conduct the experiment.

Orange, Biuret Reagent, 2.6 DCP, Brown Paper Towel, Iodine, Beaker, Pipette, Benedict, Water Bath

Procedures

Brown Paper Bag

Test 1. Divide a piece of brown paper bag into six equal spaces. Label each space as a testing sample – carbohydrate, sugar, protein, distilled water, or fat.

1. Place a drop of each sample on the correctly labeled space.
2. Set the paper aside, you will follow procedures in Step 3 at the conclusion of all the tests. Any sample containing fat will produce a translucent spot. Hold the paper up to a light source and record your observations in your Laboratory Notebook.

Iodine Solution

1. Using a marking pencil label six test tubes with the following information. Use Figure 1 for proper labeling of testing samples. Name of sample – one test tube for each of the testing samples.

Name of indicator – Iodine Initials of lab partners

2. Add 3ml of each sample to the correctly labeled test tube.
3. Add one drop of iodine solution to the first test tube and observe color changes in the test tube
4. Record your observations in your Laboratory Notebook.
5. Repeat Steps 3–4 for each of the remaining samples.

Benedict's Solution

1. Using a marking pencil label six test tubes with the following information. Name of sample – one test tube for each of the testing samples.

Name of indicator – Benedict's Initials of lab partners

2. Add 3ml of each sample to the correctly labeled test tube.
3. Add 5ml of Benedict's solution to each of the test tubes.
4. Place the test tubes in the water bath provided by the teacher. Make sure the water surrounds the samples in the test tubes.
5. Incubate the test tubes in the water bath for three minutes.
6. Observe changes as they occur and record in your Laboratory Notebook.
7. Using the test tube tongs remove the test tubes from the water bath and return to your workspace.

8. Record color changes and any other observations in your Laboratory Notebook. Biuret Reagent

1. Using a marking pencil label six test tubes with the following information. Name of sample – one test tube for each of the testing samples.

Name of indicator – Biuret Initials of lab partners

2. Add 3ml of each sample to the correctly labeled test tube.
3. Add 3ml of distilled water to each test tube.
4. Add 5 drops of biuret reagent to the first test tube and observe any changes.
5. Record all observations in your Laboratory Notebook.
6. Repeat Steps 4–5 for each remaining sample.

2,6 Dichloroindophenol

1. Using a marking pencil label six test tubes with the following information. Name of sample – one test tube for each of the testing samples.

2. Add 1ml of 2,6 Dichloroindophenol to labeled test tubes.

3. Using a pipette, collect 1ml of one sample solution.

4. Add one drop of solution at a time to the properly labeled test tube. Gently swirl test tube between drops. Stop adding drops of the sample solution when indicator becomes colorless or when you have added 1ml of sample.

5. Record observations and number of drops in your Laboratory Notebook. 6. Repeat Steps 3–5 for each of the remaining samples.

Data Collection

What data did you collect? Use graphs, charts, and illustrations to communicate your results.

Biuret Reagent	No Reaction, little to no protein
Iodine	Slight color change; minimal carbs
Benedict	Yellow- 1% sugar
2.6 DCP	Turned White- A lot of Vit. C
Brown Paper Towel	No Grease, No fat

Analysis of Results

Explain the results and data collected. Be descriptive and complete in your discussion.

In the results, my group found that an orange is made up of sugar, and has a lot of Vit. C and contains little to protein, fat, and/or carbs within the test sample.

Conclusions

Based on the results, what inferences can you make? Describe how your predictions were proven or disproven. What were possible sources of error? What questions arise based on your results?

Our predictions were proven that the orange has mostly sugar and Vit. C within the experiment's results. There were no possible sources of error.