

First Name _____ Last Name _____ Date _____ Period _____

CARBOHYDRATES IDENTIFICATION IN FOOD LAB:

Which of the following breakfast/lunch items from the CV cafeteria do you predict will test positive for monosaccharides (the monomers of carbohydrates/sugars)? For complex sugars (starch)? Write your predictions below.

Benedict's Test for Monosaccharides:

When testing your food item, it is important to ascertain what a positive test for monosaccharides using Benedicts looks like:

Making your standard: Since we know that glucose is a monosaccharide (single sugar) we will use glucose as our standard of comparison. Add 1 small scoop (the size of a pea) of glucose to a test tube. Label it glucose with a sharpie. Then add 5 mL water to the glucose test tube. Next 10 drops of Benedict's solution to the glucose/water solution.

Do the same in the second test tube except substitute the food item for glucose. Do this with all food items. For a drink, add 5mL of the drink (measure in graduated cylinder) and no water.

Make a control test tube with only water and Benedict's solution.

Place all test tubes in the hot water bath in the lab area and heat for 5 minutes.

Observe what happened to the color, and record your observations below:

What conclusions can you draw about the content of monosaccharides (single simple sugars like glucose) in the school lunch. Give your rationale (reasoning) for your conclusions.

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Iodine Test for the Polysaccharide Starch:

Before testing the food items, it is important to ascertain what a positive test for starch with iodine looks like:

To make your starch standard, place a drop of iodine in one of the wells of the white sample tray. Then place a small pea/small bean sized amount of starch in the little white tray and a drop of iodine on top.

What does a positive test for starch look like?

Next, test the CV food item provided with iodine in different wells and record your results below:

What conclusions can you draw about the content of polysaccharides (complex sugars) in the school lunch. Give your rationale (reasoning) for your conclusions.

After testing for both monosaccharides like glucose and polysaccharides like starch, what recommendations do you have for the people who plan out school menus? Give your rationale (reasoning).