

FOOD STARCH TEST

Get ready for a colorful food investigation! In this experiment, you'll become a food detective, using iodine to reveal hidden starches in your favorite snacks with a surprising color change.

INSTRUCTIONS:

STEP 1: Place small pieces of each food item on plates.

STEP 2: Apply a few drops of iodine with a Q-tip on each food.

STEP 3: Observe any color changes, with dark blue or black indicating starch presence.

STEP 4: Discuss starch as an important carbohydrate in nutrition.

Materials

Foods
(potatoes, bread, apples, corn)
Iodine solution
Q-tips
Plates or small dishes



THE SCIENCE

The science behind this experiment is rooted in a chemical reaction between iodine and starch. Starch is a type of carbohydrate that plants use to store energy, and it is a major source of dietary energy for humans and animals.

When iodine solution comes into contact with starch, it reacts to form a deep blue or purple color. This happens because the iodine molecules fit inside the helical structure of the starch chains, creating a new, colorful complex. This reaction is an easy way to test for the presence of starch, as foods containing starch (like potatoes, bread, and pasta) will change color, while foods without starch will not. It's a simple yet fascinating way to explore how chemistry helps us understand what's in our food!

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Use this worksheet to process and evaluate your observations.



<u>FOOD ITEM</u>	<u>COLOR OF IODINE REACTION</u>

Which foods showed a color change, and what color did they turn?

Did any food samples not change color? Why do you think that is?

How could you use this test to determine if a food is a good source of carbohydrates?

How might this test be helpful in the food industry or nutrition science?

