



Apple Activities



Apple Chemistry

A. Starch

Apples naturally contain a carbohydrate known as starch. As apples ripen, the amount of starch decreases as it turns to sugar. Starch is converted to sugar near the core of the apple first, and next to the skin last. Apples are ripe when most of the starch becomes sugar. An iodine test is a simple way to see whether an apple is ripe.

Experiment: The Starch-Iodine Test

You will need:

- brown iodine
- a small paintbrush
- an apple
- a knife

Instructions:

Cut the apple in half and brush some iodine onto the cut surface. If there is starch in the apple, parts of the apple become a dark purple colour. The amount of purple found on the apple after completing this test indicates the amount of starch remaining in the apple. If the apple has only a little bit of purple, it is probably ripe and ready to eat.

You may want to do a starch-iodine test on a potato, too. Potatoes are high in starch and will turn mostly purple. Compare the starch in a potato to the starch in an apple.

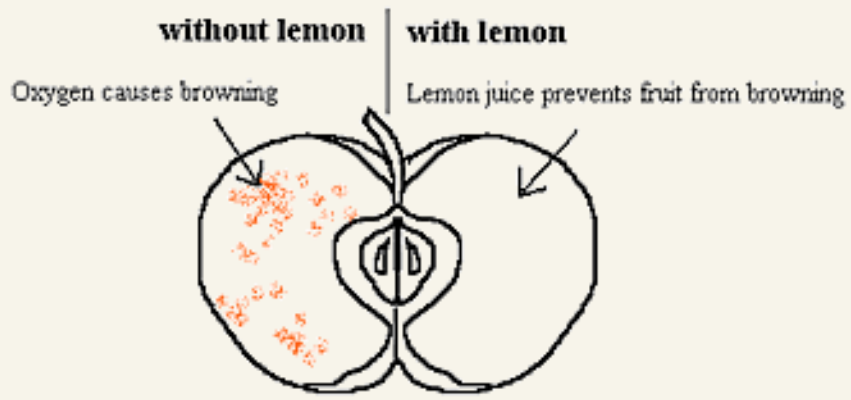
Note: Do not use apples that have been kept in storage for this experiment, because most of their starch has already disappeared!

B. Browning

Why does a cut apple turn brown?

When peeled fruit is sliced, oxygen in the air reacts with natural chemicals in the fruit to make it turn brown. There are two ways to avoid this: 1) the easiest is to eat the fruit right away; 2) you can toss the cut up fruit in a little bit of orange or lemon juice. Orange and lemon juice contain Vitamin C, and Vitamin C is a natural antioxidant and prevents oxygen from turning the fruit brown.





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