

# Starch-Iodine Test

D. Garner, C.H. Crisosto, P. Wiley, and G.M. Crisosto

## I. Materials required

### A. Iodine-potassium iodide solution

1. Dissolve 29.05 grams (about 3 teaspoons) of potassium iodide crystals in 1 1/8 cups clean water in a 1-liter (quart) container.
2. Swirl until crystals dissolve.
3. Add 7.25 grams (about 3/4 teaspoon) iodine and swirl until all iodine dissolves.
4. Dilute the solution with water to make one liter (quart).
5. Protect the solution from light to prevent the chemicals from degrading i.e., put in an opaque container or wrap the container with aluminum foil, or store in a dark cabinet. A fresh solution should be made each season.

## II. Procedure

**A. Cut the fruit in half at the equator-- midway between and perpendicular to the axis passing through the calyx-end and the stem-end of the apple.**

**B. Dip one of the cut surfaces in the iodine-potassium iodide solutions and soak for 30 seconds.**

**C. Rinse for 5 seconds in tap water**

**D. Evaluate according to the following scale developed for Granny Smith:**

**0** = 25% of the area within the core line is white, all of the cortex is blue.

**1** = 50% of the area within the core line is white, all of the cortex is blue.

**2** = 100% of the area within the core line is white, all of the cortex is blue.

**3** = 100% of the area within the core line is white, 25% of the cortex area is white (usually patchy).

**4** = 100% of the area within the core line is white, 50% of the cortex area is white (usually patchy).

**5** = 100% of the area within the core line is white, 75% of the cortex area is white (usually patchy).

**6** = 100% of the surface is white.