

The Vitamin C Challenge!

What juice do you think has the most Vitamin C in it?

Materials

- eye dropper
- pen
- cranberry juice (can substitute)
- lemonade (can substitute)
- spray starch
- tape
- vitamin C tablet
- 4 plastic cups
- Paper
- Water
- Tincture of iodine

Instructions

1. Label four plastic cups Vitamin C solution, Vitamin C Test, Lemonade and Cranberry Juice (if you want to use different juices, that's fine).
2. Crush the vitamin C tablet and add it to 2 tablespoons water in the Vitamin C Solution cup. Stir.
3. Fill the Vitamin C Test cup 3/4 full of water.
4. Add spray starch until the water looks milky or cloudy.
5. Add 4 drops of iodine.
6. While slowly stirring with a spoon, add drops of the Vitamin C Solution until the color turns from blue to clear.
7. Repeat steps 3 through 6 using the juices and their corresponding cups.
8. Observe. What happen do you think will happen when you added the vitamin C solution to the test cup? Did you have to add more drops?
9. What do you think will happen with the lemonade and the cranberry juice? Which needs more drops to clear the solution? What do you think that means? Which do you think has more vitamin C?

Why does this work?

We can find out how much Vitamin C is in something by looking at how it reacts with iodine. When iodine reacts with starch we get the dark blue color, but when the iodine oxidizes the Vitamin C, the blue color disappears because there isn't as much iodine to react with the starch. The more drops you add, the LESS Vitamin C there is!

You can test anything you want this way! Try testing Tang versus orange juice, or use apple juice, orange soda pop or lemon-lime soda pop to see which has more vitamin C!