










# Iodine Clock

Students will practice at-home chemistry by doing the classic iodine clock experiment!

6th - 8th  
Grade

## Materials

-  Distilled water
-  3 Clear cups
-  Vitamin C tablets each 1000mg
-  Iodine Tincture
-  3% Hydrogen Peroxide
-  Liquid laundry starch
-  Measuring spoons

Click below to see this experiment in action!



## Directions

1. Take one 1000mg vitamin C tablet and crush it up.
2. Place the crushed up vitamin C tablet in a cup and dissolve it in 2 oz of distilled water (if this isn't available, tap water can be used but is not ideal). Label this cup "vitamin C solution".
3. Combine 1 teaspoon of the **iodine tincture** ([click for example](#)), 1 teaspoon of vitamin C solution and 2 oz of water in a new cup. Label this cup "solution A".
4. In a new cup, add 2 oz of water with 3 teaspoons of 3% hydrogen peroxide and ½ teaspoon of liquid starch solution. Label this cup "solution B".
5. Pour solution A into solution B, stir it up with one of the measuring spoons and observe!

## The Science

In this activity, there are actually two chemical reactions that are taking place at the same time. In the first reaction, the iodide ions are reacting with the hydrogen peroxide to produce iodine, which is blue when in contact with starch. At the same time, the vitamin C is quickly reacting and trying to consume the iodine. As a result, the the solution will remain colorless with an excess of iodide ions until all of the vitamin C is used up. Once all of the vitamin C has been used, the solution will turn a dark blue color with the iodine and starch being present. With careful calculation, you can adjust the amount of vitamin C to "time" when the solution will turn blue!

