



CLOCK REACTION

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a **CHOKING HAZARD**. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- Hydrogen Peroxide (3%)
- Tincture of Iodine (2%)
- 100 mg Vitamin C Tablets
- 3 Transparent Plastic Cups
- Distilled Water
- Liquid Starch

INSTRUCTIONS

STEP 1: Crush a 100 mg vitamin C tablet and then dissolve the powder in 2 oz of distilled water. Describe and classify the solution by its observable properties.

STEP 2: In a different transparent plastic cup, mix 1 tsp of the vitamin C and water, 1 tsp of tincture of iodine, and 2 oz of water. Label this cup "A." Describe and classify the solution by its observable properties.

STEP 3: In a different cup, mix together 2 oz of water, 3 tsp of hydrogen peroxide, and $\frac{1}{2}$ tsp of liquid starch. Label this cup "B." Describe and classify the solution by its observable properties.

STEP 4: Mix cup "A" with cup "B" by carefully pouring one cup into the other and observe. What happens? Describe and classify the solution by its observable properties. Does mixing cup "A" with cup "B" result in a new substance?

EXPLANATION

Due to more than one chemical reaction, which is a change that results in one or more new substances, the two colorless liquids turn dark blue.



SCIENCE BACKGROUND

Matter is anything that has mass and takes up space. Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. Measurements of a variety of properties can be used to identify materials. When two or more different substances are mixed, a new substance with different properties may form. This is considered a chemical reaction, which is a change that results in one or more new substances. A physical reaction does not result in a new substance.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- ✓ I can conduct an investigation to determine whether the mixing of two or more substances results in a new substance.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter
5 – Structure and Properties of Matter

