



HOT ICE

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

- Sodium Acetate Hand Warmer
- 2 Plastic Cup
- Vinegar
- Scissors

INSTRUCTIONS

STEP 1: Turn the plastic cup upside down and sit it on a flat surface.

STEP 2: Fill the other cup half of the way with vinegar. Dip your fingers, scissors, and the sodium acetate hand warmer into the vinegar.

STEP 3: Using the scissors carefully cut open the sodium acetate hand warmer without activating the hand warmer.

STEP 4: Slowly pour the sodium acetate onto the bottom of the upside-down plastic cup and observe. Describe and classify the sodium acetate by its observable properties. Make observations to identify the sodium acetate based on its properties.

EXPLANATION

The hand warmer contains a supersaturated solution of sodium acetate. Once the sodium acetate hits the bottom of the upside-down plastic cup a chain reaction happens causing the solution to crystallize. This reaction is exothermic, which gives off heat.



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.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- ✓ I can make observations and measurement to identify materials based on their properties.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

2 – Structure and Properties of Matter | Patterns
5 – Structure and Properties of Matter | Scale, Proportion, and Quantity