

Name: \_\_\_\_\_

Hour: \_\_\_\_\_ Date: \_\_\_\_\_

## Chemistry: *Aluminum – Copper (II) Chloride Reaction*

**Directions:** *In this laboratory, you will make both quantitative and qualitative observations about the chemical reaction between aluminum and a copper (II) chloride solution.*

**Materials / Equipment:** 150 mL beaker  
thermometer  
plastic spoon  
copper (II) chloride crystals  
aluminum foil

**Safety Precautions:** You must wear safety glasses at all times.  
Be careful not to get any chemical in your eyes or mouth.  
Wash your hands when finished.

**Procedure:**

1. Put 25 mL of water into the beaker.
2. Record the temperature of the water.
3. Add a small amount of copper (II) chloride (about the size of two peas) to the water and stir.
4. Take the temperature of the water / copper (II) chloride solution and write down any qualitative observations that you can.
5. Place a piece of loosely-crumpled aluminum foil into the solution and let the mixture sit for about three minutes. You may stir gently once or twice.
6. Take the temperature of the mixture and, again, write down any qualitative observations that you can.
7. Clean up your lab area according to your teacher's instructions.

**Data:**

Temperature of water: \_\_\_\_\_

Temperature of water / copper (II) chloride solution: \_\_\_\_\_

Qualitative observations of water / copper (II) chloride solution:

- 1.
- 2.
- 3.
- 4.
- 5.

Temperature of mixture: \_\_\_\_\_

Qualitative observations of mixture:

- 1.
- 2.
- 3.
- 4.
- 5.