



## Rusty Nail Lab

Name \_\_\_\_\_

In a chemical reaction, elements are rearranged resulting in the formation of different elements and compounds. How can you tell when a chemical reaction occurs?

**Purpose:** To observe a chemical reaction and form conclusions from a reaction of iron and copper II sulfate?

**Materials:**

beaker graduated cylinder iron nail test tubes \*copper (II) sulfate solution

**\* Caution: Copper (II) sulfate solution is poisonous. Handle it with care and wash your hands thoroughly after lab. Wear eye protection.**

**Procedure:**

1. Gently slide iron nails in two different test tubes. Use 2 beakers as holders.
2. Pour 10 ml copper (II) sulfate solution into each test tube.
3. Observe nail and solution and record observations.
4. Fill the beakers with about 100 ml of water.
5. Warm, but DON'T BOIL one of the beakers over the Bunsen burner or hot plate.
6. Leave the other beaker at room temperature
7. Leave in for 5-10 minutes. Remove the nail and place it on the paper towel.
8. Observe the nail and solution. Record observations in data table.
9. When you complete the lab, pour the liquid from your tubes in the waste beaker.

**Observations/ Data:**

<u>Observation Room Temperature Tube</u>	<u>Nail Color</u>	<u>Solution Color</u>
Before Reaction		
After Reaction		
<u>Observation Heated Tube</u>	<u>Nail Color</u>	<u>Solution Color</u>
Before Reaction		
After Reaction		

**Conclusion:** [Answer the following in complete sentences on the back.]

1. Describe what you think happened in this lab.
2. What evidence of a chemical change did you observe?
3. What are the reactants and products in this reaction?
4. What element caused the  $\text{CuSO}_4$  solution to change color?

Conclusion:

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