**Lab Stoichiometry
Iron II or Iron III**

Write and balance the following equations. If 2.00 g of iron completely reacts with the copper II sulfate, how much copper would be produced in each of the reactions below.

Copper II sulfate and iron produce copper and iron II sulfate

Copper II sulfate and iron produce copper and iron III sulfate

Procedure:

1. Weigh a 150 ml beaker and record its mass
2. Place 7.00g of copper II sulfate in the beaker
3. Add 50 ml of water to the beaker
4. Carefully heat and stir the mixture in the beaker. The solution should be hot, but not boiling. After all the crystals dissolve, remove the beaker from the burner
5. Add 2.00 g of iron fillings slowly to the hot copper II sulfate solution while stirring. Record observations
6. Allow the beaker to cool for 10-15 minutes
7. Pour off (decant) the solution into a different beaker. Make sure not to disturb the copper in the beaker
8. Add a small amount of water (10-15 ml) to the copper and stir
9. Let the copper settle to the bottom of the beaker and decant again
10. Place the beaker on a hot plate on low for several minutes to remove any excess water
11. Mass the beaker with the dried copper

Data:

Mass filter paper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass filter paper with copper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass of copper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Percent yield \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_