Name
Date **Period**

Grade:

EXPERIMENT 3
LABORATORY TECHNIQUES

PRELAB QUESTIONS:

1. Write a word equation for the reaction that you will perform during this experiment.

2. Name the reactants in the equation in question #1.

3. Name the products in the equation in question #1.

4. Which of the products is dissolved in water?

NAME _____ PERIOD_____

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Experiment 3
Laboratory Techniques

Data

1a. Volume printed on side of beaker mL, cm^3

1b. Diameter of beaker cm Height of beaker cm

1c. (1) Radius of beaker cm (Radius = 1/2 diameter)

(2) Area of beaker cm^2 (Area = πr^2)

(3) Volume of beaker cm^3 (Volume = Height x Area)

1d. Volume of beaker mL

1e. Explain what the printed size on the side of the beaker really means.

2a. Mass of empty beaker g

2d. Mass of beaker + copper (II) chloride g

2e. Mass of copper (II) chloride g

3a. Volume of distilled water added mL

6a.

6b.

7b. Mass of aluminum g

8c.

9a. Mass of filter paper g

9c. Mass filter paper + copper g

9d. Mass of copper g

9e.

CONCLUSION QUESTIONS

1. Calculate how many grams of aluminum it would take to produce one gram of copper. g of aluminum / G of copper produced (7b) divided by (9d)
2. Describe the filtrate in Part III step 9. Explain any difference in color between the filtrate and the copper (II) chloride solution.
3. Write a balanced equation showing what happened when you added aluminum to copper (II) chloride. Label the reactants and products.
4. A number of SI units were used in this experiment. Review the procedure and make a list of all the units that you used in your measurements.
5. Calculate the expected mass of copper produced in this reaction using the following problem.

$$\frac{\text{mass Al}}{27.3\text{g}} = \frac{\text{expected mass Cu}}{63.5\text{g}}$$

6. Calculate your percent error for this experiment based on the results you obtained in 9d and problem 5 above.

Discussion

Conclusion