FLINN SCIENTIFIC

Name_____

Laboratory Report

Mass of silver nitrate	
Mass of copper wire (initial)	
Observations—Reaction of copper and silver nitrate	
Mass of filter paper (step 10)	
Mass of leftover copper wire	
Appearance of leftover copper wire	
Mass of filter paper plus silver (step 21)	

1. Calculate the mass and moles of copper wire that reacted in this experiment.

2. Calculate the mass and moles of silver metal produced in the reaction.

3. Determine the mole ratio—the ratio of the number of moles of silver to the number of moles of copper.
   Note: Round the result to the nearest whole number.

4. Use the silver/copper mole ratio to write the balanced chemical equation for the reaction of copper and silver nitrate.

5. Did all of the silver nitrate react in this experiment? Calculate the percent yield of silver based on the amount of $AgNO_3$ used in the experiment and explain your reasoning.

6. What factors might account for the answer to Question 5?

7. Identify the limiting and excess reactants in this experiment.

8. Silver is a precious metal. The price of silver fluctuates daily as it is traded on the open market. Look up the current market value of silver in the financial section of the daily newspaper or on the Internet and record the price. **Note:** The price of metals is usually quoted per Troy ounce, where 1 Troy ounce = 31.1 grams.

9. Calculate the current market value of the silver produced in this experiment.