STOICHIOMETRY/LIMITING REAGENT POST LAB

(Group work after lab is turned in to teacher)

1. Explain why acetone is used as the final rinse for both the Cu wire and the Ag crystals.

2. What is the color of the copper nitrate solution?

Observe the tubes of the soluble copper compounds on the counter, CuCl₂ & CuSO₄. State a hypothesis about the color of soluble copper compounds.

3. You would not have seen a dielectric effect with the silver crystals and glass beaker unless you used rubber gloves. Why?

4. Look up the definition of the dielectric effect in a general science dictionary or physical chemistry book. Please write the definition.

5. Review your chapter on stoichiometry including Dalton's and Proust's laws. Now explain why your answers are no in questions # 3 & 4.

6. If you wanted to conduct a theoretically complete reaction with the 10 cm of Cu wire, how much silver nitrate would you actually need? (show balanced formula and dimensional analysis calculations)
7. In the real world of both life and work why is it essential to calculate problems concerning limited reagents?

8. If 80 grams of ammonium phosphide are added to 80 grams of sodium oxalate determine:
   a. The balanced equation:
   ______________________________________________________________________
   b. The limiting reactant _________________________________________________
   c. The moles of sodium phosphide produced _____________________________
   d. The grams of sodium phosphide produced _____________________________
   e. The moles of ammonium oxalate produced _____________________________
   f. The grams of ammonium oxalate produced _____________________________
   g. Analyzing your data, what is your definition of a limiting reactant? ______
      ______________________________________________________________________
      ______________________________________________________________________
   h. Calculate the moles and then the mass of the excess reactant.

9. Name and describe the four major types of chemical stoichiometry you have or will be covering this quarter.