Chemistry 20

Lesson 22 – Precipitate Activity

Instructions:

- You are supplied with solutions of sodium carbonate and calcium chloride. Pour approximately 20 mL of the sodium carbonate into a clean dry reaction beaker. Using a pipet, transfer exactly 10.0 mL of the 0.50 mol/L solution of calcium chloride into the sodium carbonate solution. **Be sure to rinse the pipet with distilled water before transferring any chemical.**

- Collect the precipitate by filtration (see p. 802-803).

- Determine the experimental yield, the theoretical yield, and the % error.

To complete the activity, do the following:

1. Title - appropriate.

2. Purpose - State what is achieved by doing the lab.

3. Background Information - Define the following terms:
   solution
   reactant
   product
   precipitate
   filtrate

4. Experimental design -- state the
   a) manipulated variable
   b) responding variable

5. Write a procedure.

6. Observations (list or chart of data).

7. Conclusion.
   A. Analysis.
      a. Provide a stoichiometric calculation of the theoretical yield.
      b. Determine the experimental yield.

   B. Evaluation
      a. Calculate the percent error.
      b. Give at least 2 possible sources of error.
      c. For the filtrate:
         - What ion(s) remain in the filtrate?

One lab write up per group of two.