Prelab Assignment: Mole Ratios and Reaction Stoichiometry

1. Write balanced equations for the two reactions you will perform in this lab.

   Reaction A: _____

   Reaction B: _____

2. Your goal in this lab is to experimentally verify the mole-to-mole ratios between a certain reactant and a certain product in both reactions.

a. Identify the two substances in Reaction B. _____

b. What is this theoretical mole-to-mole ratio in Reaction B? _____

3. In Reaction A, you will react a pre-weighed sample of sodium bicarbonate with acid. In Reaction B, you will use sodium carbonate instead of the bicarbonate.

a. Name the "container" that you will perform both reactions in. _____

b. What is the purpose of the watch glass?

4. How will you know when enough acid has been added to the sodium bicarbonate (in Reaction A) or sodium carbonate (in Reaction B), and that the reactions are complete?

5. After mixing the reactants together, you will then use a Bunsen burner to heat the contents of the reaction "container". When should you stop heating?

6. Once heating is complete, you will then weigh the substance that remains in the reaction "container".

a. What is the name of this substance? _____

b. The mass of this substance could be described as your (circle one):   experimental yield
                                                                  theoretical yield
                                                                  percent yield