Group #:_____Include the names of all members of group

Review Lab: Iodine Clock Reaction

Problem: Can you prepare solutions with specified concentrations, so that when mixed, a yellow-orange color will appear in about 60 seconds?

Procedure:

1. Make 225. mL of 0.10 M sulfuric acid by diluting 2.0 M H_2SO_4(aq) with the appropriate amount of water. Add 25 mL of 3% hydrogen peroxide solution and mix. Measure out five 50.0 mL samples of this Mixture "A" and place in separate containers.

Calculation:

1. How many mL of 2.0 M H_2SO_4(aq) is needed to make 225. mL of 0.10 M sulfuric acid?
   Show work here:

Procedure:

2. Prepare 15.0 mL of 0.321 M potassium iodide solution and pour into a 250 mL beaker. Add 10. mL of 2% starch solution. Dissolve 5.04 x 10^{-4} mole of $Na_2S_2O_3 \cdot 5H_2O$ in this mixture, then dilute with water to a final volume of 250. mL. This is Mixture "B".

Calculation:

2a. How many grams of potassium iodide are needed to make 15.0 mL of 0.321 M solution?
   Show work here:

2b. How many grams of $Na_2S_2O_3 \cdot 5H_2O$ is equal to 5.04 x 10^{-4} mole of this compound?
   Show work here:

Procedure:

3. Measure out a 50.0 mL sample of Mixture "B", add to one of the samples of Mixture "A", and stir. Begin recording the time from the moment that they were mixed, and note how long it takes for the solution to change color. Repeat this process with 4 more samples of Mixture "B".