**% Yield Lab**

**Purpose:**

To calculate the theoretical and actual yield for the reaction of lead (II) nitrate and potassium iodide, in this double displacement reaction.

**Materials:**

- 2 beakers

- erlenmeyer flask

- funnel

- stirring rod

- filter paper

- water bottle

**Procedure:**

1. Measure the mass of 1 piece of filter paper and record.

2. Place an empty beaker on the scale and hit tare. Measure approximately 0.5g of the solid potassium iodide and record the exact value.

3. Repeat above step with the second beaker and lead (II) nitrate.

4. Add approximately 50 mL of water to each beaker and stir until dissolved.

5. Combine the two beakers into one.

6. Rinse any remaining reactant from the beaker transferred over.

7. Fold the filter paper and place into the funnel. Place the funnel onto the flask and carefully filter the solid product.

8. Rinse any of the product left in beaker into the filter paper.

9. Once filtering is complete, place the filter paper onto a piece of paper towel and let dry overnight.

***Day Two*** - determine the mass of the dried product on the filter paper

(total mass = product + filter paper)

**Calculations:**

1. Formulate and balance the chemical reaction equation for the reaction.

2. Use your measured masses of lead (II) nitrate & potassium iodide to determine the theoretical yield of your product.

3. Obtain the actual yield of your product and calculate the percent yield.

**Discussion:** Discuss lab and explain possible sources of error.

**Conclusion:** Refer to purpose.