

Chemistry Lab 7 proc

Ensure all equipment is as clean as possible.

Record all observations and changes, and measure all masses and important volumes.

Barium Chloride

1. Measure 0.7–0.8 grams of $\text{BaCl}_2 \cdot 2\text{H}_2\text{O}$ into a small beaker, and record the mass.
2. Add 25 mL of deionized water and stir until dissolved
 - Crushing large chunks may be required
3. Rinse the solution into a 50.0 mL flask
 - At least 3 washes are needed
4. Add deionized water until the mark a neck of the flask is reached, then mix well.

Na_3PO_4

1. Weigh 1.0–1.1 grams of $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$ into a small beaker, and record the mass.
2. Repeat the Barium Chloride steps, however note that Na_3PO_4 will not dissolve as easily.

Combine about 38 mL each of the solutions into a clean beaker, rinsing out the graduated cylinders multiple times to guarantee all of the solution has been added. Ensure that the actual volume added is recorded, with proper sig figs. Note any observations when mixing. Label and save the remaining solutions.

Digestion

Purifying the solid produced from the reaction

- Put a stirring rod in the beaker
- To help control the amount of water evaporating out of the beaker, cover it with a watch glass
- Heat the mixture to $75 - 90^\circ\text{C}$ ($167 - 194^\circ\text{F}$) over a low heat flame.
 - Do not leave the thermometer in the beaker.
- Now would be a good time to break out the analysis packet

Digestion II

- After half an hour, turn the burner off, remove the stirring rod, and let the mixture sit and cool for 10 minutes.

- The precipitant and supernatant should separate.
- Pour some of the supernatant into a small beaker for later use
 - DO NOT GET ANY SOLID IN HERE
- Vacuum filter out the solid material, remembering to weigh the filter paper beforehand
 - Place it on a glass and wait a week to dry
- Pour the supernatant into two clean beakers, and test adding the original solutions to the beakers. Record any observations.

Waste

Everything is dangerous and should go into the waste beaker. Rinse everything out afterwards.