Chemistry Lab 6 week 1 proc

BRING ALUMINUM CAN

Getting rid of the can

1. Ensure aluminum can is clean, and using scissors, cut out a large strip of aluminum from the can (about 0.75 - 1g)
   - DO NOT CUT YOURSELF
2. Set up a hot water bath in the fume hood with the 400 mL beaker and a hot plate
   - Ensure that the 150 mL beaker will fit in the bath without water spilling into it
3. Use steel wool to get rid of the plastic coating and paint on the can, then weigh the aluminum.
4. Cut the aluminum into smaller pieces and then place it in the 150 mL beaker.
5. Move to the fume hood and add 35 mL of 2.0 M KOH to the 150 mL beaker, then use a watch glass to cover the beaker immediately.
6. Set the beaker and watch glass combo into the hot water bath, then take off the glass
   - Stir every few minutes
   - Make sure the fume hood sash is down or you could set something on fire
7. When the aluminum is gone/gas formation has stopped, you may remove the 150mL beaker with tongs. Allow it to cool, then proceed to the next step

Gravity filtration

1. Fold the filter paper multiple times in half, then unfold it to flute it.
2. Place the paper in the filter, then wet the paper with distilled water.
3. Place a clean 250mL Erlenmeyer flask under the funnel.
4. Slowly pour liquid down the funnel, separating the filtrate from the precipitate.
5. Rinse the beaker with DI water and repeat step 4 three times.
6. Dispose of the filter paper with gloves

Making alum

1. In the fume hood, very slowly pipet the provided 9.0 M H_2SO_4 into the filtrate.
   - White precipitate will form, this is aluminum hydroxide
2. Continue adding H_2SO_4.

- Many vapors and a lot of heat will be formed

3. Everything you need to make alum has shown up. Cool the mixture to room temperature, then place it in an ice bath.
   - Crystals will start forming
4. Set up another vacuum filter, weighing the filter paper, and, after swirling the alum mixture, put it through the filter.
   - It helps to use a glass rod to help crystals into the filter.
   - Once poured, add cold ethanol to the beaker and swirl to help free more crystals, and put that through the filter.
5. After letting the solid dry for a few minutes, remove the filter and place it on a clean watch glass or petri dish with known mass. Weigh the mixture and calculate the alum's mass.