DO NOT WRITE ON THIS PAPER!

Topic: The Mole; Stoichiometry
Content Standard(s):

Formula of a Hydrate

Record all data and observations on the Laboratory Report Worksheet for *Formula of a Hydrate*.

Materials:

- Ring Stand
- Ring
- Wire Gauze
- Pipet with sealed end
- $BaCl_2 \bullet x\ H_2O$ (Solid)
- Tirrill Burner

Procedure:

1. Obtain a glass pipet with a sealed end.

2. Record its mass in your data table.

3. Carefully add some hydrated barium chloride crystals using a wood splint. Please perform this activity over the container so any spilled crystals can easily be cleaned up.

4. Record the mass of the pipet with the hydrated crystals inside. Be careful not to spill any solid going from your laboratory station to the balance. If you do spill, clean up any crystals immediately!

5. Slowly heat the pipet while it is on the wire gauze on top of a ring. Heat from the closed end toward the open end (move the heat constantly to heat evenly). Continue heating the crystals until they have changed in appearance (from shiny crystals to powdery white substance). **There should be no water droplets anywhere on or in the pipet.**

6. Let the pipet cool!!! Then record the mass of the pipets with the anhydrous (without water) solid after heating.

7. Shake out as much of the solid as you can into the trash. Soak the pipet in water for a few minutes and flush out the remaining solid (Use a wood splint to aid you in the process of removing the solid from the pipet)

8. Repeat this procedure, one trial per person per lab group.