

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Determining the Formula of a Hydrate

Objective: To find the empirical formula of a hydrate by driving off the water molecules.

Materials: Name of hydrate used: \_\_\_\_\_

Equipment:

Bunsen burner, matches, test tube, ring stand, test tube clamp, beaker, scoopula, evaporating dish, tongs, clay triangle, wire gauze

Procedure:

Using a method of your choice, setup the appropriate pieces of equipment for driving water out of a hydrate.

Repeat until no time is left.

Enter your data into the computer at some time before next class.

Data Table:

Record the necessary masses for computing the mass of water and anhydrous salt for each trial.

Calculations:

Formula:

- a. Calculate the mass of water in the hydrate.
- b. Calculate the mass of anhydrous salt for each trial.
- c. Find the ratio of moles of water to moles of salt for each trial.
- d. Perform a Q-Test.
- e. After examining the data, calculate the average of the data pieces that remain and write a general formula for the hydrate. You may represent the number of water molecules as a rounded figure to the tenths place.