

Chem II - Seminars

(Unclear ->)

Joe C

Big Idea - lab conclusions; procedures
lab date

Hydrates Lab Write-Up

Evaluating Conclusions
BS Idea

Since we know more about moles and hydrates, let's perform an experiment that deals with calculating the percent water in a hydrate. This will be your 1st Lab Report assignment. After performing the lab and collecting data, you will need to write a formal lab report per the guidelines that you received earlier. Each of you needs to write one.

Problem: How much water is in a certain amount of copper (II) sulfate pentahydrate?

Observations: What color is the solid? How much are you going to use? What is the correct chemical formula of copper (II) sulfate pentahydrate? How can you find the mass of water theoretically and experimentally? Should they be the same? What may cause them to be different?

Hypothesis: (Using the amount used in the experiment, calculate the mass of water that SHOULD be in the solid.)

Materials: Bunsen burner, crucible, copper (II) sulfate pentahydrate, clay triangle, scoopula, balance, matches, ring, ring stand, stirring rod

- Procedure:**
1. Mass a clean and dry crucible.
 2. Obtain some copper (II) sulfate pentahydrate and place it in your crucible. Record the combined mass.
 3. Set up a clay triangle/Bunsen burner setup, and place the crucible on the triangle.
 4. Heat for 6-7 minutes. Take off, let cool, and find the mass.
 5. Heat for another 6-7 minutes. Take off, let cool, and find the mass.
 6. Repeat one more time. If mass is still decreasing immensely, keep heating. If mass is leveling off, stop the experiment.
 7. Calculate the mass of anhydrous copper (II) sulfate and water that was released.
 8. Calculate percent water in the hydrated sample.
 9. Compare this value with the theoretical percent water in the sample.
 10. Clean up lab station.

What could you ask to analyze the procedures or make them reflect/think on procedures?

Data: Create your own data table with all necessary values. This will go in your report. Also in your report, include ALL calculations. What was your experimental error? Also, calculate moles of anhydrous copper (II) sulfate and moles of water that left. Compare the two amounts and find a ratio of water-to-anhydrous moles.

Conclusion: What was the theoretical percent water in your sample? What was the experimental percent water in the sample? Were the two similar or far from each other? If far from each other, what happened in lab that caused this error? What could you have done to reduce the amount of error in lab? How can finding percent water in a hydrate be useful in science and the future?

hydrate

organizing

30p15

score -

maybe 2 spec

Do those Q's lead to brief declarations?

maybe more open - what conclusion can you make about -

CK	2+
EC	2
VBS	1