

CHEQ 1094: WATER OF HYDRATION

Date: _____

Name: _____

Lab Day/Time: _____

Objective

Procedure

As in the Chem 1094 lab manual, pages _____

Data

Table 1. Part I. Mass of water driven off

	Run 1	Run 2
Mass of test tube		
Mass of test tube and (hydrated) sample		
Mass of hydrate sample		
Mass of test tube and sample after first heating		
Mass of test tube and sample after second heating		
Mass of test tube and sample after third heating (if required)		
Mass of water driven off		

Table 2. Part II. Physical observations for hydrated and anhydrous CuSO₄

Substance	Observations <i>record any changes in color or temperature</i>
CuSO ₄ ·5H ₂ O (before heating)	
CuSO ₄ (after heating)	
CuSO ₄ ·5H ₂ O (after adding water)	

Calculations

Show a sample calculation for each of the steps below.

Mass of hydrated sample:

Mass of anhydrous sample (after heating):

Mass of water driven off:

Moles of anhydrous compound:

Moles of water of hydration:

Moles of water per mole of anhydrous compound:

% H₂O by mass in hydrated compound

Results (Part I only)

	Run 1	Run 2
Mass of anhydrous (dry) compound		
Mass of water driven off		
Formula of anhydrous compound (given by instructor)		
Moles of anhydrous compound		
Moles of water of hydration		
Moles of water per one mole of anhydrous compound		
The value of n (by rounding to the nearest whole number)		
The complete chemical formula of the hydrate		
% H ₂ O by mass in the hydrated compound		

Conclusion

Answer the questions posed by the objective.

Questions

Attach any questions assigned by your instructor.