

Prelaboratory Questions

1. What information is necessary to determine the percentage of water in a hydrate?
2. How will the water be removed from the hydrate in this experiment?
3. A hydrate has the formula $\text{CoCl}_2 \cdot 6\text{H}_2\text{O}$. What is the percent water in this hydrate?
4. A 1.53 gram sample of a hydrate contains 1.15 grams of calcium chloride and .38 grams of water, what is the formula of the hydrate?

Analysis and Conclusions

- 1-5. Answers for Questions #1-5 in the lab book should go in the Calculations table.
6. Why should the crucible and contents be cooled before finding its mass?
7. Why must at least 2 successive mass readings be equal before finishing each trial.
8. List several possible sources of error in this experiment.

Trial 1

Data Table	
name of salt	
mass of crucible	
mass of crucible + hydrate	
mass after heating #1	
mass after heating #2	
mass after heating #3	
mass after heating #4	

Calculations	
Name of Salt	
Formula of anhydrous salt	
molar mass of anhydrous salt	
mass of hydrate	
mass of anhydrous salt	
mass of water	
% water by mass	
moles of anhydrous salt	
moles of water	
formula of hydrated salt	

Trial 2

Data Table	
name of salt	
mass of crucible	
mass of crucible + hydrate	
mass after heating #1	
mass after heating #2	
mass after heating #3	
mass after heating #4	

Calculations	
Name of Salt	
Formula of anhydrous salt	
molar mass of anhydrous salt	
mass of hydrate	
mass of anhydrous salt	
mass of water	
% water by mass	
moles of anhydrous salt	
moles of water	
formula of hydrated salt	