

Experiment, Water of Hydration

Ah... Thales of Miletus

Name _____ Per_____

Purpose: to measure the Water of Hydration of $\text{CuSO}_4 \cdot X \text{H}_2\text{O}$
and find its hydrated formula.

You MUST show all your math calculations!!

Procedure:

1. Weigh an empty 150mm test tube _____g
2. Fill the tube about half-full with hydrated $\text{CuSO}_4 \cdot X \text{H}_2\text{O}$ crystals.
3. Weigh the filled tube _____g
4. Mass of the hydrated crystals (3-1) _____g
5. With GOGS ON, carefully heat the tube until all water ceases to evolve.
6. Allow to cool, and weigh _____g
7. Find the mass of the dehydrated crystals (6-1) _____g
8. Find the mass of the water that came off (4-7) _____g

Showing your Hup, Two, Three, Fours on the back:

9. Get moles of the dry CuSO_4 crystals. $\text{mol} = m/\text{MM}$ _____mol
10. Get moles of the water of hydration. $\text{mol} = m/\text{MM}$ _____mol
11. Get ratio of mol of H_2O / mol of CuSO_4 _____
12. Write the formula for the hydrate $\text{CuSO}_4 \cdot \text{---} \text{H}_2\text{O}$
13. Please bring back the crystals for re-cycling.
14. Write a critique of the lab. on the back.