

Hydrate Lab Calculations

-For all of the calculations show all five of these steps

- ① equation in words
- ② fill in ~~exper~~ quantities
- ③ do any addition/subtraction
- ④ do any multiplication/division
- ⑤ report answer w/ correct sig figs.

Part 1 A) Experimental mass % H_2O - trial 1

ex: ① words

$$\frac{(\text{mass hydrate}) - (\text{mass hydrate} - \text{mass dish})}{(\text{mass hydrate})}$$

⋮

B) EXP. mass % H_2O trial 2

C) Average of two trials

$$\frac{\text{Trial 1\%} + \text{Trial 2\%}}{2}$$

Part 2:

Find the theoretical mass % H_2O
in $CuSO_4 \cdot 5H_2O$ (use the P.T.)

Part 3: Determine % error
- compare the theoretical & exp. values.

$$\frac{|\text{Theoretical} - \text{Exp Avg.}|}{|\text{Theoretical}|} (100) = \% \text{ error.}$$

Part 4: Now try to discuss error

Remember:

- Specific sources of error
- how does it impact the data
- how does that impact the results.