

Name _____

HYDRATES

Many compounds crystallize from a water solution with

_____ adhering to the particles of the crystal.

These compounds are called _____.

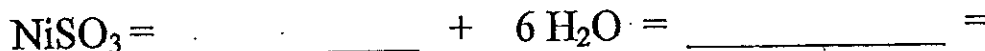
They usually contain a specific ratio of _____ to _____

It is possible to _____ these compounds to drive off the
_____ and then calculate the ratio. What is formed is called the
_____.

Example: $\text{NiSO}_3 \cdot 6 \text{H}_2\text{O}$

The _____ shows that _____ molecules of water adhere to
_____ formula unit.

To calculate the formula mass of the compound, add the



Hydrates

Problem:

We have a 10.407 g sample of hydrated barium iodide. After heating to drive off the water, the sample weighs 9.520 grams.

1. How many grams of water were driven off? _____
2. Convert grams of anhydrous salt to moles of Barium Iodide _____
3. Convert grams of water to moles of water _____
4. determine the ratio: $\frac{\text{moles of water}}{\text{moles of barium iodide (anhydrous)}} =$
5. write the formula

Find the formulas for the following hydrates if the amounts of anhydrous salts and water are as follows:

0.391 g Li_2SiF_6 , 0.0903 g water _____

0.737 g Magnesium Sulfite, 0.763 g water _____

2.734 g Iron (II) Sulfate, 2.270 g water _____