Lesson 84: Percent Composition Notes

Example Problem: Find the % by mass of oxygen in water.

Percentage by mass of element in a compound =
(mass of element in 1 mol of compound ÷ molar mass of compound) x 100%

(*after completing lab #1*)
Find the % of carbon in sodium bicarbonate ($NaHCO_3$).

Find the % composition of aluminum oxide. (This means to find the % of each element in the compound.)

Empirical Formula: simplest _____ number _____ of

_____ in a _____ .

Example problem: Find the empirical formula for a compound containing 56.6 g of K, 8.7 g of C, and 34.7 g of O.

Lesson 84: Percent Composition Notes (cont.) Chemistry with Lab

Step #1: Convert each mass into moles of the element.

Step #2: Divide each by the smallest to find a simple whole number ratio.

Ex. Problems: Work on separate paper.

_____ % Na

_____ % S

_____ % O

(Hint: When % are given, assume you have 100g of the compound, and the % changes to grams.)

P_xO_y

_____ g sample

_____ g P

(Hint: After step 2, if the ratio is still not whole numbers, multiply both subscripts by a number, such as 2, to get rid of fractions, such as 0.5.)

The Chemistry Quiz

CR1. _____   CR2. _____   1. _____   2. _____   3. _____

4. _____   5. _____