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 56.6g of K, 8.7g of C, and 34.7g of O.

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 sheet of 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._____