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 (NaHCO₃).

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._______

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