Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hour \_\_\_\_\_\_\_\_

Percent Composition – Practice Worksheet 1

The percentage composition of a compound or molecule indicates the mass that each element in the compound or molecule contributes to the TOTAL formula or molecular mass. Take, for example, CO2. What percent of the total mass of this molecule is due to the mass of the Carbon atom? What percent of the total mass of this molecule is due to the mass of the 2 oxygens? How can we find out? Let’s start with what we already know how to do. Let’s find the molecular mass of this molecule!

**NOTE – you can use “u” for atomic mass units instead of g here.**

C = 12.01g (or u)

O = 2 x 16.00g (or u)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Molecular mass = 44.01g (or u)

Percent Composition:

% Carbon = Mass of carbon X 100% so 12.01u X 100% = 27.3%

Molecular mass 44.01u

% Oxygen = Mass of 2 oxygen X 100% so 32.00u X 100% = 72.7%

Molecular mass 44.01u

**NOTE: If Carbon contributes 27.3% of the mass of CO2 and Oxygen contributes 72.7% of the mass of CO2, these percentages should add up to 100%, right?**

**ALWAYS CHECK YOUR MATH AT THE END! 27.3% + 72.7% = 100% CO2**

**Yipppeee! I did it correctly 😊**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hour \_\_\_\_\_\_\_\_

Percent Composition – Practice Worksheet 1 (pg. 2)

You give it a try! – Find the percent composition of each element in the compounds below. Show your work!

1. NiI2 - Nickel (II) Iodide
2. Ca (CN)2 – Calcium Cyanide (Carbon with Nitrogen)
3. Al2S3 – Aluminum Sulfide

**\*Check your math – Do your values add up to 100%?**