

Percent Composition

Formula Mass

Formula mass -

Mass of CaS

Formula Mass

Formula mass - the sum of the atomic masses of all the atoms in the compound

Mass of KMnO_4

There are ____ atoms of Oxygen. You must multiply the mass by ____.

Check your Understanding

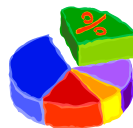
What is the formula mass of sodium chloride, NaCl?

Check your Understanding

What is the formula mass of sodium sulfate, Na_2SO_4 ?

Percent Composition

Percent Composition -



Percent = _____

So...

Percent composition of a compound or molecule = _____ $\times 100$

Percent Composition

Example: What is the percent is Calcium CaS?

Formula Mass of CaS

$$\text{Ca} = 40.08$$

$$\text{S} = \underline{32.06}$$

$$= 72.14$$



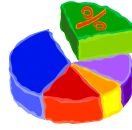
$$\frac{\text{Mass of element}}{\text{Formula Mass of compound}} \times 100$$

% Ca

Percent Composition

What is the percent composition of Potassium in Potassium Permanganate (KMnO_4)?

Molar Mass of $\text{KMnO}_4 = 158.04$



% K

$$\text{K} = 1(39.10) = 39.10$$

$$\text{Mn} = 1(54.94) = 54.94$$

$$\text{O} = 4(16.00) = \underline{64.00}$$

$$\text{MM} = 158.04$$

Steps...

- Write formulas **CORRECTLY**
_____ (if needed)
- Look up _____ on Periodic Table
(round to hundredths)
- _____ mass together to find
_____ of compound.
- Calculate _____ composition. _____
the mass of _____ by the
_____ of the compound (change the
decimal to a percentage or multiply by 100)

Another Example

What is the percent composition of lead in lead IV carbonate?

Check Your Understanding

What is the percent composition of sodium in sodium chloride?

Check Your Understanding

What is the percent composition of sodium in sodium sulfate?