

Problem Set - Percent Composition #1 - Questions

**Major Steps in Calculating Percent Composition:**

- 1) Identify each element present in the molecule and write it on a separate line.
- 2) Beside each element write its **Atomic Masses, AM**, of each element as well as the **Number of Atoms, #**, of that element in the molecule.
- 3) Calculate the **Molecular Weight, MW**, of the compound.
- 4) Calculate the **Percent Composition, %**, for each element.
- 5) Check your significant figures.
- 6) Check that your percentages add up to 100!

$$\% = (\# \times \text{AM} / \text{MW}) \times 100$$

Note #1: Show all work for all questions.

Note #2: Use the number of significant figures in your final answer that is justified by the number of significant figures of the data you were given.

Determine the Percent Compositions of the following molecules:<sup>1</sup>

1.  $\text{C}_2\text{H}_5\text{F}$
2.  $\text{C}_3\text{H}_5\text{O}$
3.  $\text{C}_5\text{H}_5\text{N}$
4.  $\text{C}_6\text{H}_{12}\text{O}_6$
5.  $\text{NaCl}$
6.  $\text{C}_6\text{CrO}_6$
7.  $\text{C}_{10}\text{H}_{10}\text{Fe}$
8.  $\text{MgO}$
9.  $\text{Na}_2\text{SiO}_3$

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<sup>1</sup> Note: Use the Atomic Masses from the table on the inside front cover of the text book.