Chemistry 112

Learning Opportunities

April 20 – 24

Atomic mass and Molar mass

This value expressed in grams is equivalent to 1 mole of the atom. The molar mass of Carbon is approximately 12.011 g/mol. Molar masses for atoms are listed on most periodic tables.

To calculate the molar mass of a compound, simply add the atomic masses of the individual atoms in the compound. For example, H_2O has 2 H atoms and 1 O atom, which add up respectively to a molar mass of 18.0 g/mol (1.0 + 1.0 + 16.0). Please see the sample problems and practice problems.

Moles to grams and Grams to moles

Having values for molar mass allows us to convert from moles to grams and from grams to moles. Please see the sample problems and practice problems. $\text{Moles} = \frac{grams}{molar\ mass}$ grams = (moles)(molar mass)

You will need a periodic table for this.

Here is one link, but any periodic table that shows atomic mass will do. Look for a number that is approximately 1.00 for hydrogen and approximately 12.01 for carbon. This is where the atomic mass is for that periodic table. https://sciencenotes.org/wp-content/uploads/2018/05/PeriodicTableMuted2018.pdf

See the documents section of my Teacher's Page or the Chemistry 112 page on Microsoft Teams for a sample problem, practice problems, and material for students working towards credit earned in chem 112: