**Converting to Moles with solutions**

**All solutions are made of some soluble compound that is dissolved in water.**

**Molarity (M) is the concentration of the solution. The higher the number is the more concentrated the solution.**

**Example:**

**How many grams of Calcium Sulfate would you need to make 1 L of a 2.75 M solution of CaSO4?**

**The number next to the “M” tells you how many moles are in 1 L of solution (2.75 moles = 1 L).**

**Molar mass of CaSO4: 40.08 + 32.06+ (15.99 x4) = 136.1**

**Grams needed = 136.1 x 2.75 = 374.27 g CaSO4**

**Reactant in “excess”: is the reactant in a chemical reaction that is opposite to the limiting reactant.**

**Inhibitor: is a substance that slows down a chemical reaction without changing the products themselves (opposite of a catalyst).**

**Example: Food Preservatives.**