

$$\text{Molarity (M)} = \frac{\# \text{ mol solute}}{\# \text{ L solution}}$$

$$\text{molality (m)} = \frac{\# \text{ mol solute}}{\# \text{ kg solvent}}$$

$$\text{mole fraction (X)} = \frac{\# \text{ mol sub. of int.}}{\text{total \# mol}}$$

$$\text{Mass percent of solute} = 100\% \left(\frac{\text{mass of solute}}{\text{mass of solution}} \right)$$

$$\text{mass of solution} = \text{mass of solute} + \text{mass of solvent}$$

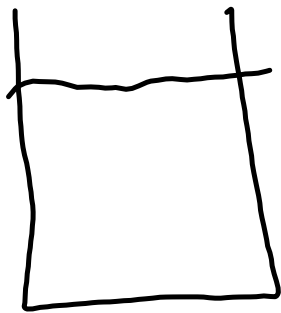
$$25.7 \text{ g} \text{ NaCl} \left(\frac{1 \text{ mol}}{58.44 \text{ g}} \right) = 0.43977 \text{ mol}$$

$$\frac{0.43977 \text{ mol}}{0.153 \text{ L}} = 2.87 \text{ M}$$

KI

$$25.4 \text{ g} \left(\frac{1 \text{ mol}}{166.0 \text{ g}} \right) = 0.15301 \text{ mol}$$

$$\frac{0.15301 \text{ mol}}{0.963 \text{ kg}} = 0.159 \text{ m}$$



1.75 M Na_2CO_3

$$\text{Molarity} = \frac{\# \text{ mol } \text{Na}_2\text{CO}_3}{\# \text{ L solution}}$$

$$\text{molality} = \frac{\# \text{ mol } \text{Na}_2\text{CO}_3}{\# \text{ kg } \text{H}_2\text{O}}$$