

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

(M)

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

(m)

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

(X)

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

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

NaCl

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

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

KI

$$25.4 \cancel{\text{g}} \left(\frac{1 \text{ mol}}{166 \cancel{\text{g}}} \right) = 0.15301 \text{ mol}$$

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