

# Summary of Concentration Expressions

Weight/volume Ratio

$$\left[ \frac{\text{g}}{100\text{mL}} \right]$$

Percentage

weight per volume

$$\left[ x\% (w/v) = \frac{x\text{g}}{100\text{mL}} \right]$$

volume per volume

$$\left[ x\% (v/v) = \frac{x\text{mL}}{100\text{mL}} \right]$$

weight per weight

$$\left[ x\% (w/w) = \frac{x\text{g}}{100\text{g}} \right]$$

Parts

$$3:2:1 \Rightarrow 7 \text{ total}$$

$$\left[ x\text{pph} = x\% (w/v) \right]$$

$$\left[ x\text{ppm} = x\text{mg/L} \right]$$

$$\left[ x\text{ppb} = x\mu\text{g/L} \right]$$

Molarity

$$\left[ xM = \frac{x\text{mole}}{\text{L}} \right]$$

\* need to know FW to convert to [weight/volume]

Method 1 For dealing with mixtures: Convert all solutes concentration expressions into one base concentration expression. For this course I have chosen weight/volume ratio as my base.