

Conversion Factors & Units to Memorize for Chem 309

$$\begin{aligned}1.00 \text{ in} &= 2.54 \text{ cm} \\1.00 \text{ lb} &= 453.5 \text{ g} \\1.000 \text{ kg} &= 2.205 \text{ lb} \\1.000 \text{ L} &= 1.057 \text{ qt} && (0.946 \text{ L} = 1.00 \text{ qt}) \\1.00 \text{ atm} &= 760. \text{ mmHg} = 760. \text{ torr}\end{aligned}$$

$$\begin{aligned}1 \text{ kilo} &= 10^3 \text{ base unit} \\1 \text{ deci} &= 10^{-1} \text{ base unit} && (10 \text{ deci} = 1 \text{ base unit}) \\1 \text{ centi} &= 10^{-2} \text{ base unit} && (10^2 \text{ centi} = 1 \text{ base unit}) \\1 \text{ milli} &= 10^{-3} \text{ base unit} && (10^3 \text{ milli} = 1 \text{ base unit}) \\1 \text{ micro}^* &= 10^{-6} \text{ base unit} && (10^6 \text{ micro} = 1 \text{ base unit})\end{aligned}$$

$$*1 \text{ micro} = 1\mu = 1 \text{ mc}$$

$$10^3 \text{ micro} = 1 \text{ milli} \qquad (1 \text{ micro} = 10^{-3} \text{ milli})$$

$$1 \text{ cm}^3 = 1 \text{ mL} = 1 \text{ cc}$$

Metric base units:

- g = gram
- m = meter
- L = liter
- s = second

English units:

- lb = pound
- oz = ounce
- pt = pint
- qt = quart
- gal = gallon

Ounce vs Fluid Ounce
oz is a mass unit and fl oz
is a volume unit in the
English system.

$$\begin{aligned}8 \text{ fluid oz} &= 1 \text{ cup} \\2 \text{ cups} &= 1 \text{ pt} \\2 \text{ pt} &= 1 \text{ qt} \\4 \text{ qt} &= 1 \text{ gallon}\end{aligned}$$