Concentration: (w/v) [g/mL]

(w/v): Weight to Volume Ratio

example: how much NaCl [g] do I need to prepare a 250 mL solution with a 0.15 g NaCL/50 mL concentration

$$C = \frac{m_{NaCl}}{\cancel{V_{total}}}$$

$$\frac{0.15\ g\ NaCL}{50\ mL} = \frac{m}{250\ mL}$$

$$m_{NaCl} = 250\ \cancel{mL}\left(\frac{0.15\ g\ NaCL}{50\ \cancel{mL}}\right) = \boxed{0.75\ g_{NaCl}}$$

example: how much solvent do I need to prepare a 0.15 g NaCL/200 mL concentration given 0.48 g of NaCL

$$C = \frac{m_{NaCl}}{\cancel{V_{total}}}$$

$$\frac{0.15\ g\ NaCl}{200\ mL} = \frac{0.48\ g\ NaCl}{\cancel{V_{total}}}$$

$$V_{total} = \frac{(200\ mL)(0.48\ \cancel{g\ NaCl})}{(0.15\ \cancel{g\ NaCl})} = \boxed{640\ mL}$$