Module 4 Notes

$$\frac{\text{Solute}}{\text{Solvent}} = \frac{\text{g}}{\text{mL}} = \frac{\text{mL}}{\text{mL}} = \frac{\text{g}}{\text{g}} = \frac{\text{P}}{100}$$

Percent Concentrations – Examples

1. How many grams of sodium chloride are needed to prepare 350 mL of a 0.225% saline solution?

2. 320 mL of a solution contain 80 mg of a pure drug. Express the strength of this solution as a percent.

3. Two liters of a solution contain 60 grams of a pure drug. Express the strength of this solution as a ratio and as a percent.

4. How many sodium chloride crystals would you need to prepare 300 mL of a 0.9% sodium chloride solution?

5. How many grams of amino acids are contained in 500 mL of an 8.5% amino acid solution?

6. How many milliliters of a 1:30 acetic acid solution will contain 20 grams of acetic acid?

7. You are preparing 2 liters of a 1:50 solution of Lysol. How many milliliters of Lysol will you need? How many milliliters of water will you need?

Diluting Solutions: $V_1C_1 = V_2C_2$

(want/ordered) (have in stock)

8. How many mL of a 5% stock solution are needed to prepare 500 mL of a 0.25% solution?

9. How would you prepare 200 mL of a 25% solution from a 35% stock solution?

10. How would you prepare 1 liter of a 0.45% solution from a 1:3 stock solution?