

Name: _____
Date: _____ Per: _____

Mr. Leal
3/14/2013

Solution Chemistry – Molarity 2

Vocab:

1. Aqueous:

2. Homogenous:

3. Heterogeneous:

4. Molar Mass:

5. Mass Percent:

When solving Molarity problems for grams, the symbol for Molarity (M) is still changed into mol/L. The volume is multiplied by the Molarity and molar mass. Please write this equation below:

_____ x _____ x _____ x _____ = **grams solid**

Example

Determine the number of grams of a sodium chloride needed to make 900. mL of 0.500 M NaCl solution:

$$900. \text{ mL} \times \frac{0.500 \text{ mol NaCl}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{58.5 \text{ g NaCl}}{1 \text{ mol NaCl}} = 26.3 \text{ g NaCl}$$

Practice problems:

1. Determine the number of grams of potassium chloride needed to make 500. mL of 0.025 M solution KCl:

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- Determine the number of grams of calcium hydroxide needed to make 250. mL of 1.25 M solution.
- Determine the number of grams of magnesium fluoride needed to make 1.50 L of 0.286 M solution of magnesium fluoride:
- Determine the number of grams of Iron (III) Oxide needed to make 225 mL of 0.0075 M solution of Iron (III) Oxide:
- If your solution's final volume is 32.55 mL and the Molarity is 2.25 M sucrose, how many grams of sucrose did you add?
- Solutions A is 32.55 mL of 1.25 M sucrose and Solution B is 125 mL of 2.25 M sucrose. You added Solution A to Solution B. Determine how many grams of sucrose you had in Solution A, Solution B, and the total grams in your final solution? Also, determine the final solution's Molarity.