**CONCENTRATION**

PART A: Percentage by Mass

% by mass = mass of solute x 100 *or* mass of solute  
 mass of solution 100 g solution

Examples

1. 10 g of KBr is dissolved in 100 g of water. Calculate the % by mass of KBr in the solution.

2. The solubility of a KNO3 solution is 28.0% by mass. How many grams of KNO3 are there in 250 g of solution?

PART B: Concentration (moles per Litre)

Concentration = moles of solute (mol) c = n  
 volume of solution (L) V

Examples:

1. What is the concentration, in mol/L, of a solution formed by dissolving 28.0 g NaCl in water to make 225 mL of solution?

2. What mass of solute would be needed to make 425 mL of a 6.00 mol/L NaNO3 solution?