Chemistry CP

Name:

Percent Solutions

Section:

In this chapter, you learned that molarity is a common method of describing solution concentration. Another method of expressing the concentration of a solution is to state the percentage by mass of the solution that is solute. Unless otherwise specified, a solution concentration expressed in percent is interpreted by chemists to mean grams of solute per 100 g of solution. For example, a 10% solution of dextrose contains 10 g of dextrose in a total 100 g of solution. These concentration units are frequently used in pharmacies and hospitals.

Problems for you to try:

1. What mass of $LiCl_2$ would be found in 100. g of 12.5% solution?

2. What mass of $MgSO_4$ should be dissolved in sufficient water to make 400. g of 6.85% solution?

3. A pharmacist needs to prepare a medicinal ointment. She mixes 10.5 g of solid B with 65.8 g of ointment base R. What is the percentage of B by mass in the ointment? (hint: part/total)

4. How would you prepare 350. grams of a 15.0% by mass aqueous solution of calcium nitrate?