

Student Worksheet 6.3A

Extra Practice Questions: Concentration

Use concentration as a conversion factor to calculate the quantity requested in each question below. Communicate your problem-solving approach, including units and correct certainty.

1. Cow's milk contains 4.5 g of lactose per 100 mL of milk. What mass of lactose is present in 250 mL (one glass) of milk?
2. A 10% W/V salt solution is used for making pickles. What mass of salt is present in 750 mL of this solution?
3. A 250 mL measuring cup of cleaning solution contains 1.2 mol of dissolved ammonia. What is the molar concentration of this solution?
4. Fish require a concentration of about 4.5 ppm (4.5 mg/L) of dissolved oxygen in water. What volume of water would contain 100 mg of oxygen?
5. What volume of concentrated, 14.6 mol/L phosphoric acid would contain 2.00 mol of solute?
6. What mass of table salt is needed to prepare 1.20 L of 5.20 mol/L solution?
7. What is the molar concentration of zinc nitrate if 94.2 g of solute is dissolved to make 2.00 L of solution?