DILUTION AND STRENGTHS OF SOLUTIONS

A drug when dissolved in a solution and the strength of the solution may be expressed as:

- ➤ grams per liter
- ➤ mg/ml
- ➤ ratio strength
- ➤ percentage

Ratio

1) How many ml of a 1:1000 solution of adrenaline is required to administer 0.5mg of adrenaline to a client with anaphylactic shock?

   Sol: Step 1: 1 gm in 1000 ml
   Step 2: 1 mg in 1000 ml

   Step 3: substitute the values in standard formula

   $$\frac{0.5 \times 1000}{1000}$$

   Therefore, 0.5 mg in 0.5 ml

   Ans = 0.5 ml

Percentage

2) The physician has ordered to administer 180mg of 2% drug. How much is to be given in ml?

   Sol: Step 1: 1% is 1 gram in 100 ml solution

   Step 2: $\dfrac{180 \text{ mg}}{2 \text{ gram}} \times 100 \text{ ml}$ **Step 3:** $\dfrac{180 \text{ mg}}{2000 \text{mg}} \times 100 \text{ ml}$

   Ans = 9 ml

References:

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