

If a 50 ml of water contains 15% chlorine, how much water must be added to create a 10% chlorine solution?

Question:

- A. 10 ml
- B. 15 ml
- C. 20 ml
- D. 25 ml

Answer:

$$\text{Amount of chlorine} = \frac{15}{100} \times 50 = 7.5 \text{ ml}$$

Let the final volume of solution = x ml

$$\Rightarrow \frac{10}{100} \times x = 7.5$$

$$\Rightarrow x = 75 \text{ ml}$$

∴ Option D [Ans]

$$\begin{aligned} \text{∴ Extra water added} \\ &= \text{Final Volume} - \text{Initial Volume} \\ &= 75 \text{ ml} - 50 \text{ ml} \\ &= 25 \text{ ml} \end{aligned}$$

