

## Answer on Question#71842 – Chemistry – Organic chemistry

**Question:** Calculate the final concentration if 2.00 L of 3.00 M NaCl, 4.00 L of 1.50 M NaCl and 4.00 L of water are mixed. Assume there is no volume contraction upon mixing.

**Solution:**

$$\begin{aligned}C_M(\text{NaCl final}) &= \frac{n(\text{NaCl final})}{V(\text{solution})} = \frac{2.00\text{L} \times 3.00 \frac{\text{mol}}{\text{L}} + 4.00\text{L} \times 1.50 \frac{\text{mol}}{\text{L}}}{2.00\text{L} + 4.00\text{L} + 4.00\text{L}} = \frac{12 \text{ mol}}{10 \text{ L}} \\ &= 1.2 \frac{\text{mol}}{\text{L}} = 1.2\text{M}\end{aligned}$$

**Answer:** 1.2 M.

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