

#81778 Chemistry, Other

What would the molarity of the final solution be if  $(1.150 \times 10^{-2})$  L of  $(2.53 \times 10^0)$  M HCl is placed in a  $(6.0000 \times 10^2)$  mL volumetric flask and diluted to the mark with distilled water?

**Answer:**

The amount of moles of the reactant must be the same in both solutions:

$$0.015 \cdot 2.53 = 600 \cdot X$$

$$0.029 = 600 \cdot X$$

$$C_M(\text{HCl}) = X = 0.00005 \text{ M}$$

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