

Question #81554

How many milliliters of 12.0 M HCl(aq) are needed to prepare 380.0 mL of 1.00 M HCl(aq)?

Answer:

To prepare 380 ml of 1.00 M solution is needed 31.67 milliliters of 12.0 M HCl(aq).

Calculation:

$$C_1V_1 = C_2V_2 \quad (1)$$

By the formula (1), the volume of the required 12.0 M HCl solution is equal to:

$$C_M = \frac{0.380 * 1.00}{12.0} = 0.03167 \text{ l} = 31.67 \text{ ml}$$

Answer provided by www.AssignmentExpert.com