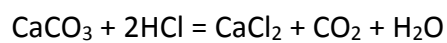


Answer on Question #62155, Chemistry / General Chemistry

1. How many milliliters of 0.811 M HCl are needed to react with 82.4g of CaCO₃?

Solution:



$$n(\text{CaCO}_3) = \frac{82.4 \text{ g}}{100 \text{ g/mol}} = 0.824 \text{ mol}$$

$$n(\text{HCl}) = 0.824 \times 2 = 1.648 \text{ mol}$$

On 1L of HCl solution – 0.811 mol HCl

On X L of HCl solution - 1.648 mol HCl

$$X = \frac{1 \times 1.648}{0.811} = 2.032 \text{ L} = 2032 \text{ ml.}$$

Answer: 2031ml of HCl solution.