

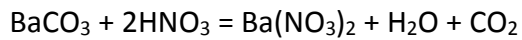
Answer on Question #59541 - Chemistry – General Chemistry

Question

How many mL of 0.525 M HNO₃ are needed to dissolve 6.80 g of BaCO₃?

Answer:

Reaction equation is:



The number of moles of barium carbonate is:

$$n = \frac{m}{M} = \frac{6.80}{197.34} = 0.034 \text{ mol}$$

The number of moles of HNO₃ needed is 0.034*2 = 0.068 mol. Then the volume of nitric acid solution is:

$$V(\text{HNO}_3) = \frac{n}{C} = \frac{0.068}{0.525} = 0.130 \text{ L} = 130 \text{ mL}$$

Answer: 130 mL