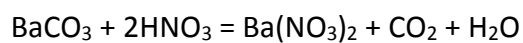


Question #59542, Chemistry / General chemistry

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

Solution



$$M(\text{BaCO}_3) = 197 \text{ (g/mol)}$$

$$n(\text{BaCO}_3) = m/M = 6.80 / 197 = 0.0345 \text{ (mol)}$$

$$n(\text{HNO}_3) = 0.0345 * 2 = 0.069 \text{ (mol)}$$

$$V(\text{HNO}_3) = n/c = 0.069/0.525 = 0.131 \text{ (l)}$$

Answer

$$V(\text{HNO}_3) = 131 \text{ ml}$$