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QUICK, PAIR, SHARE CHEMISTRY 12

The following data were collected during a titration. The Nitric acid was measured in a 10.00 mL pipette and the Barium hydroxide was placed in a 50.00 mL Burette.

Volume of HNO <sub>3</sub>	10.00 mL
Final volume of Ba(OH) <sub>2</sub>	25.01 mL
Initial volume of Ba(OH) <sub>2</sub>	1.05 mL
Concentration of HNO <sub>3</sub>	0.235 M

Determine the unknown concentration of Ba(OH)<sub>2</sub>



$$\begin{array}{r} 25.01 \\ - 1.05 \\ \hline \end{array}$$

$$23.96 \text{ mL Ba(OH)}_2$$

$$\boxed{0.02396 \text{ L} \times \text{unknown}}$$

$$0.01000 \text{ L} \times \frac{0.235 \text{ mol HNO}_3}{1 \text{ L}} \times \frac{1 \text{ mol Ba(OH)}_2}{2 \text{ mol HNO}_3} \times \frac{1}{0.02396 \text{ L}}$$

$$= \boxed{0.0490 \text{ M Ba(OH)}_2}$$