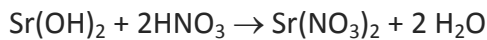


Answer on Question #82417, Chemistry/ General Chemistry

If 23.9 mL strontium hydroxide solution neutralized 31.5 mL nitric acid solution, what is the concentration of the acid?

Solution

As concentration of the strontium hydroxide solution is not given we can take this value as x mol/L.

Then concentration of an acid is:

$$\frac{23.9 \times 10^{-3} \text{L} \times x \frac{\text{mol}}{\text{L}} \times \frac{2 \text{ mol HNO}_3}{1 \text{ mol Sr}(\text{OH})_2}}{31.5 \times 10^{-3} \text{L}} = 1.517 \times x \frac{\text{mol}}{\text{L}}$$

Now if the concentration of the strontium hydroxide is known, for example, 1.71 mol/L, then concentration of the nitric acid is $1.517 \times 1.71 \text{ mol/L} = 2.59 \text{ mol/L}$.

Answer: 2.59 mol/L

Answer provided by www.AssignmentExpert.com