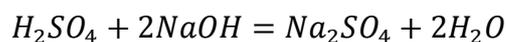


A 25.00-mL sample of H<sub>2</sub>SO<sub>4</sub>(aq) requires 22.65 mL of the 0.5510 M NaOH for its titration. Assuming that sulfuric acid behaves as a strong acid with respect to both ionizable hydrogen atoms, what was the concentration of the sulfuric acid (H<sub>2</sub>SO<sub>4</sub>)?

Solution:



$$n(H_2SO_4) = \frac{1}{2}n(NaOH)$$

$$n(NaOH) = 0.5510 \times 0.02265 = 0,01248015 \text{ (mole)}$$

$$n(H_2SO_4) = 0,01248015/2 = 0,006240075 \text{ (mole)}$$

$$C_M(H_2SO_4) = 0,006240075/0.025 = 0,2496 \text{ M}$$

Answer: 0.2496 M