

# Quiz 4

Name: ~~XXXXXXXXXX~~

Reg. NO. ~~XXXXXXXXXX~~

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① Given the following set of data:

- Volume of 0.20 M HCl used to dissolve antacid tablet = 10 mL
- Volume of 0.10 M NaOH used to titrate the excess acid = 15 mL  
 $1.5 \times 10^{-3}$
- Mass of antacid tablet = 0.13 g

Calculate the neutralization Capacity of the tablet ( $\frac{\text{mol HCl}}{\text{g}}$ )

(Two significant Figures)

$$n_{\text{HCl}} = M \cdot V = 0.20 \cdot 10 \cdot 10^{-3} = 2 \times 10^{-3} \text{ mol}$$

$$\frac{2 \times 10^{-3}}{0.13} = 0.015$$

0.015

②  $\frac{V_1}{15.0 \text{ mL}}$  of sulfuric acid  $\text{H}_2\text{SO}_4$  soln was titrated with 28.0 mL of 0.12 M NaOH soln to produce  $\text{Na}_2\text{SO}_4$ . Calculate the concentration of sulfuric acid in  $\frac{\text{g}}{\text{L}}$  of solution (Molar Mass of  $\text{H}_2\text{SO}_4 = 98.0 \frac{\text{g}}{\text{mol}}$ )

(Two significant Figures)

M = —

$$2 \cdot V_1 \cdot M_1 = V_2 \cdot M_2$$

$$2 \cdot \frac{15}{1000} \cdot M_1 = \frac{28}{1000} \cdot 0.12$$

$$M_1 = 0.112 \text{ mol/L}$$

$$M = \frac{m}{V} = \frac{\frac{m}{\text{m.m}}}{V} = \frac{m^{\text{g}}}{\text{m.m}^{\text{mol}}} \times \frac{1}{V} =$$

③ what is the Name of The experiment Today?

Reach Analyse