

Answer on Question #63333, Chemistry / General Chemistry

1. A chemist adds 10.3 mL of 0.1M NaOH to 25.0 mL of an unknown concentration of HCL until the solution changes color, indicating that all of the acid has been neutralized. How many moles of NaOH were added to the HCL?

Solution:

$$C_M = 0.1 \text{ mol/L}$$

$$C_M = \frac{n}{V}$$

$$n = C_M \times V$$

$$10.3 \text{ mL} = 0.0103 \text{ L}$$

$$n = 0.1 \text{ mol/L} \times 0.0103 \text{ L} = 0.00103 \text{ mol}$$

Answer: $n(\text{NaOH}) = 0.00103 \text{ mol}$.

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