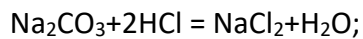


Answer on Question #80142 - Chemistry - Physical Chemistry

Question:

A solution containing Na_2CO_3 and NaOH requires 300ml of 0.1 N HCl using phenolphthalein as an indicator. Methyl orange is then added to the above titrated solution when a further 25ml of 0.2N HCl is required. the amount of NaOH present in solution is?

Solution:



$$n(\text{HCl}) = c \cdot V = 0.1 \cdot 0.3 = 0.03 \text{ mol};$$

$$n(\text{HCl}) = n(\text{NaOH}) = 0.03 \text{ mol};$$

$$n(\text{HCl})_2 = c \cdot V = 0.2 \cdot 0.025 = 0.005 \text{ mol};$$

$$n(\text{HCl})_{\text{total}} = 0.035 \text{ mol};$$

$$w(\text{NaOH}) = 0.03 / 0.065 = 0.4615 = 46.15\%.$$

Answer provided by AssignmentExpert.com