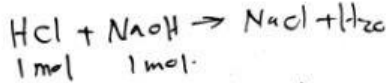
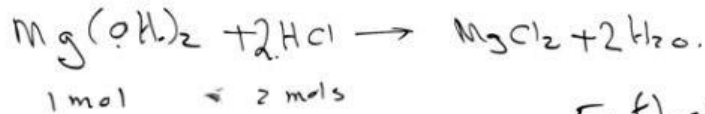
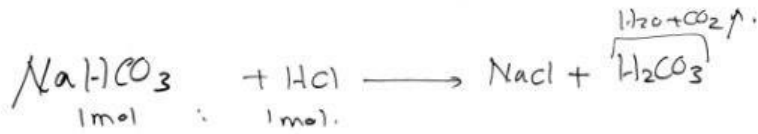


EXP # 6 Anti-acid Analysis

Back Titration



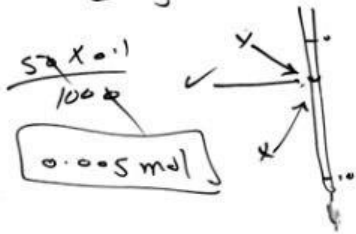
#mols of NaOH = #mols of HCl.

$$(M)(V)_{\text{NaOH}} = (M \times V)_{\text{HCl}}$$

$$0.1 \times 8.7 = (M_{\text{HCl}})(10 \text{ ml})$$

$$M_{\text{HCl}} = \frac{0.1 \times 8.7}{10} = 0.087 \text{ M}$$

E. flask.



0.003

⊖ NaHCO₃

- ① 1 g.
- ② Add 50 ml of 1M HCl.

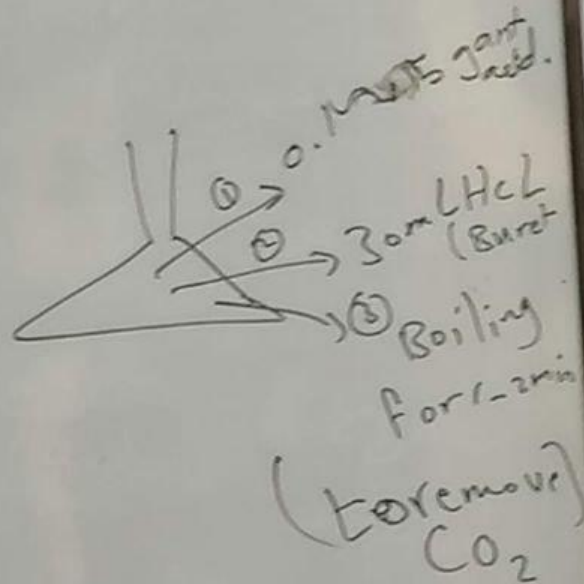
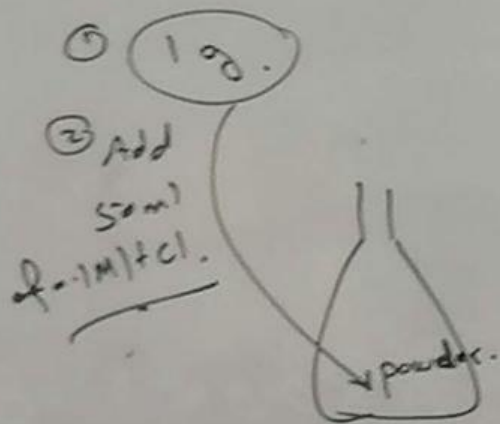


Analysis

Back Titration

Indicator: phenolphthalein
acidic yellow basic blue

① NaHCO_3



$$\textcircled{4} \text{ mol of antacid per gram} = \frac{5 \times 10^{-3}}{0.13} = 0.0039$$

% effective antacid

Indicator: phenolphthalein
 acidic yellow basic blue

$$\textcircled{1} \text{ mass of antacid} = 0.13 \text{ (g)}$$

Exp #5

Anti-acid Analysis

Back Titration

$$\textcircled{2} \text{ volume of HCl} = 30 \text{ mL}$$

$$\textcircled{3} \text{ Molarity of HCl} = 0.108 \text{ M}$$

$$\textcircled{4} \text{ Molarity of NaOH} = 0.08 \text{ M}$$

$$\textcircled{5} \text{ volume of NaOH Initial} = 0.00 \text{ mL}$$

$$\textcircled{6} \text{ " " " Final} = 33.5 \text{ mL}$$

$$\textcircled{7} \text{ " " " used} = V_f - V_i = 33.5 \text{ mL}$$

$$\textcircled{1} \text{ mole of HCl added} = M_{\text{HCl}} \times V_{\text{HCl}}$$

$$= 0.108 \times \frac{30}{1000}$$

$$\textcircled{2} \text{ mole of NaOH} = M_{\text{NaOH}} \times V_{\text{NaOH used}}$$

$$= 0.08 \times \frac{33.5}{1000} = 0.0027$$

$$\textcircled{3} \text{ mole of antacid} = \text{mole of HCl} - \text{mole of NaOH}$$

$$= 0.0032 - 0.0027 = 0.0005 = 5 \times 10^{-3}$$