Exp 1. Standardization of Sodium Hydroxide (NaOH) Solution with Standard oxalic Acid ($C_2H_2O_4 \cdot 2H_2O$) Solution.

Name : Jannatul Ferdous Umama, ID: 20-42616-1

Section : R.

Method : Acid based titration

Experimental Data :

Strength of oxalic acid solution

$$= \frac{\text{Weight taken (in gm)} \times 0.1}{0.63} \text{ (N)}$$

$$= \frac{0.63 \times 0.1}{0.63} \text{ N.}$$

$$= 0.1 \text{ N}$$

Table : Standardization of supplied NaOH solution against standard oxalic acid solution by acid-base titration

No of reading	Vol. of NaOH (in mL)	Vol. of Oxalic acid (burette reading) (in mL)			Mean (in mL)
		Initial	Final	Difference	
1	10	0.00	8.50	8.50	8.50 + 8.60 + 8.50 / 3 = 8.533
2	10	8.50	17.10	8.60	
3	10	17.10	25.60	8.50	

Calculations :

The strength of supplied NaOH Solution :

$$V_{NaOH} \times N_{NaOH} = V_{oxalic\ acid} \times N_{oxalic\ acid}$$

$$N_{NaOH} = \frac{8.53 \times 0.1}{10} = 0.0853N$$

$$= 0.09 \ (N)$$

Results : The strength of Supplied NaOH solution is 0.09 (N).