

## Titration – II: Estimation of Dissolved Oxygen

S. No.	Volume of water sample (mL)	Burette reading (mL)		Volume of sodium thiosulphate (mL)
		Initial	Final	
1.	100 mL	0 mL	9.8 mL	9.8 mL
2.	100 mL	0 mL	9.8 mL	9.8 mL
3.				
Concordant value				9.8 mL

## Calculation:

Volume of sodium thiosulphate  $V_2 = 9.8$  mL (From Titration – 2)

Strength of sodium thiosulphate  $N_2 = 0.01$  N (From Titration – 1 calculation)

Volume of water sample taken  $V_1 = 100$  mL

Strength of given water sample  $N_1 = ?$

$$V_1 N_1 = V_2 N_2$$

$$N_1 = \frac{V_2 \times N_2}{V_1}$$

$$= \frac{9.8 \times 0.01}{100} \text{ N}$$

Amount of dissolved oxygen (ppm) = normality  $\times$  equivalent weight of  $O_2 \times 1000$  mg/L of the given water sample.

$$= \frac{9.8 \times 10^{-4}}{100} \text{ N} \times 8 \times 1000 \text{ mg/L}$$

$$= 7.84 \text{ ppm.}$$

Result: Amount of dissolved oxygen in the given water sample = 7.84 ppm.

## Evaluation of Result:

Sample number	Experimental value	Actual Value	Percentage of error	Marks awarded