Data and Results Entry Form-5

**EXP.5: ESTIMATION OF COPPER (Cu) CONTAINED IN A SUPPLIED SOLUTION OF COPPER SALT BY IODOMETRIC METHOD.**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, Section: \_\_\_\_\_\_\_\_\_**

**EXPERIMENTAL DATA:**

**(A)** Standardize sodium thiosulphate solution as **Expt. No. 4**.

**Table-1**: *Standardization of supplied Na2S2O3**solution against standard K2Cr2O7 solution by oxidation-reduction titration.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***No. of reading*** | ***Vol. of K2Cr2O7***  ***(in mL)*** | ***Vol. of Na2S2O3***  ***(burette reading) (in mL)*** | | | ***Mean (in mL)*** |
| ***Initial*** | ***Final*** | ***Difference*** |
| 1 | 10 | 0.00 | 10.30 |  |  |
| 2 | 10 | 10.30 | 20.50 |  |

*The* s*trength of K2Cr2O7 solution* =  (N)

*The strength of supplied Na2S2O3 solution* (S): Vthio x Nthio = Vdichromate x Ndichromate

**(B) Estimation of Cu ions:**

**Table-2:** *Determination of the amount of copper in a supplied solution of blue vitriol by iodometric method.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ***No. of reading*** | ***Vol. of Copper salt solution (in mL)*** | ***Vol. of Na2S2O3***  ***(burette reading) (in mL)*** | | | ***Mean (in mL)* (V)** |
| ***Initial*** | ***Final*** | ***Difference*** |
| 1 | 10 | 0.00 | 3.50 |  |  |
| 2 | 10 | 3.50 | 6.80 |  |
| 3 | 10 | 6.80 | 10.20 |  |
| 4 | 10 | 10.20 | 13.55 |  |

**CALCULATIONS:** 2 CuSO4 ≡ I2 ≡ 2 Na2S2O3

1 ml 1N Na2S2O3  ≡ 0.06354 gm of Cu2+

*Amount of copper ions in 10 mL of copper salt solution* = 0.06354 × V × S gm

*Amount of copper ions in 500 mL of copper salt solution* = 0.06354 × V × S × 50 gm

*Observe value of Cu2+ (in 500mL solution)*  =

*Known value of Cu2+ (in 500mL solution)* =

**RESULTS:**

*The amount of copper ions in 500 mL of copper salt solution is …………………..gm*

**PERCENTAGE OF ERROR:**



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