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# **ESTIMATION OF EPHEDRINE HCL.**

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## **Preparation of 0.1N solution of HClO<sub>4</sub> and its standardization:**

- **Dissolve 8.5 ml of 72% HClO<sub>4</sub> in about 900 ml glacial acetic acid with constant stirring, add about 30 ml acetic anhydride and make up the volume (1000 ml) with glacial acetic acid and keep the mixture for 24 hour.**
- **Acetic anhydride absorbed all the water from HClO<sub>4</sub> and glacial acetic acid and renders the solution virtually anhydrous.**
- **HClO<sub>4</sub> must be well diluted with glacial acetic acid before adding acetic anhydride because reaction between HClO<sub>4</sub> and acetic anhydride is explosive.**



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## STANDARDISATION OF HClO<sub>4</sub> :

- **To 500 mg of potassium acid phthalate add 25 ml of glacial acetic acid and add few drops of 5% w/v crystal violet in glacial acetic acid as indicator.**
- **This solution is titrated with 0.1 HClO<sub>4</sub>. The colour changes from blue to blue green.**



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## **ASSAY PROCEDURE :**

- **Weigh accurately about 0.17 g of Ephedrine Hydrochloride, dissolve in 10 ml of mercuric acetate solution, warming gently, add 50 ml of acetone and mix.**
- **Titrate with 0.1 M perchloric acid, using 1 ml of a saturated solution of methyl orange in acetone as indicator, until a red colour is obtained. Carry out a blank titration.**
- **Equivalent or I.P factor : 1 ml of 0.1 M perchloric acid is equivalent to 0.02017 g of  $C_{10}H_{15}NO, HCl$ .**



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## **CALCULATIONS:**

$$\% \text{ Ephedrine Hydrochloride} = \frac{\mathbf{X \text{ ml} \times \text{Normality (Calc)} \times 0.02017 \times 100}}{\mathbf{N(\text{Given}) \times \text{Wt. of sample(in gm)}}$$

- $\mathbf{N(\text{Given}) \times \text{Wt. of sample(in gm)}}$
- **Where, X ml = Volume of titrant consumed at end point**

**Normality Calculated = Normality of Perchloric acid after standardisation**

**Normality Given = 0.1 N (theoretically)**



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**THANK YOU**