UG Sem-III

Inorganic Practical

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Estimation of Iodine in given table salt solution using sodium thiosulphate solution

Standardization of sodium thiosulphate solution by standard potassium dichromate solution

1. Take a clean burette and rinse it with sodium thiosulphate solution, support it with a burette clamp. Close the stopcock and with the help of a funnel fill sodium thiosulphate solution to just above the zero mark. Open the stopcock to remove any air bubbles in the tip.

2. In a 250 mL conical flask, take 5 mL potassium dichromate by using a graduated pipette. Add 2.5 mL of KI solution and 2.5 mL conc. HCl. Shake the mixture and keep in dark covering the mouth of the flask with a watch glass for 5 minutes.

3. Wash the watch glass and side of the flask with sufficient distilled water and add 40 mL more distilled water to the mixture.

4. Place a white paper below the burette and place the titration flask and run the thiosulphate solution from the burette rapidly until the brown colour of the solution fades to straw-yellow colour.
5. Add 3-5 drops freshly prepared starch solution, the colour of the solution turns deep blue. Titrate the solution again with continuous stirring until the blue colour just disappears leaving a bright green solution.
6. Repeats the same titration for 3 times so that at least the concordant reading are observed.

Estimation of Iodine by standard solution of $Na_2S_2O_3$ solution

1. In a 250 mL conical flask, take 10 mL salt solution by using a graduated pipette
2. Add 1mL (2N) H_2SO_4 solution and 5 mL of KI solution and keep the mixture in dark covering the mouth of the flask with a watch glass for about 3 minutes.
3. Wash the watch glass and side of the flask with sufficient distilled water and add 10 mL more distilled water to the mixture.
4. Add 3 drops of freshly prepared starch solution, the colour of the solution turns deep blue. Titrate the solution with continuous stirring until the blue colour fades to faint green colour or colourless.
5. Repeats the same titration for 3 times so that at least the concordant reading are observed.

Note: Strength of $K_2Cr_2O_7$: 0.002(N)

Atomic mass of Iodine : 126.9 g/mol