

PHARMACEUTICAL ANALYSIS – BP102T

UNIT: IV REDOX TITRATIONS

CLASS:35

TOIPC: CERIMETRY

Cerimetry/Cerimetry:**Principle:**

Ceric ammonium sulphate $\text{Ce}(\text{SO}_4)_2 \cdot 2(\text{NH}_4)_2 \text{SO}_4 \cdot 2\text{H}_2\text{O}$ is strong oxidizing agent and can be replaced with KMnO_4 in such type of titrations where we can use ceric ammonium sulphate as a titrant that titrations are known as cerimetry/cerimetry titrations

Preparation of 0.1M ceric ammonium sulphate:

Take 66 gm of ceric ammonium sulphate and dissolve in the mixture of H_2SO_4 and water with the ratio of 30:500 by gentle heat then cool and filter if any turbid is present and dilute to 1000ml with distilled water.

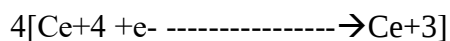
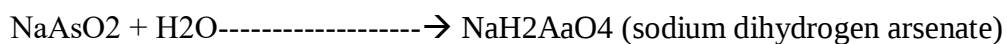
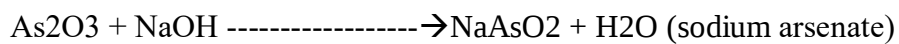
Standardization of Ceric ammonium sulphate:

Dissolve 0.2 gm of As_2O_3 which is previously dried at 105° for 1 hour in 25 ml of 8%w/v NaOH and add 30ml H_2SO_4 make up to 100ml with distilled water.

Add 0.1ml ferroin solution and 0.15ml osmium tetroxide in a dried conical flask.

All the contents of the conical flask are titrated with ceric ammonium sulphate until pale pink colour turns to blue.

This indicates the completion of the reaction



Applications:

It is used for the determination of following compounds

- Ferrous fumarate
- Ferrous gluconate
- Ferrous sulphate
- Ascorbic acid
- Paracetamol

Very Short Answer Questions

1. What is cerimetry

Short Answer Questions

1. Explain in detail about cerimetry and its applications