

Semester - II

18CHP212 INORGANIC CHEMISTRY PRACTICAL –II 4H 2C
(QUANTITATIVE ANALYSIS AND COMPLEX PREPARATIONS)

Instruction Hours/week:L: 0 T:0 P:4 Marks: Internal:40 External: 60 Total:100

Scope

This Practical deals with the quantitative analysis of metals volumetrically and gravimetrically. Further it deals with quantitative analysis using chromatographic methods. On successful completion of the course the student can work in the chemical industry and pharmaceutical company as a quality control officer, chemist etc.

Objectives

On successful completion of the course the students should have

1. Learnt about the quantitative analyses and chromatography.
2. Learnt the estimation metals in a mixture by volumetric and gravimetric analysis.

Methodology

Blackboard teaching and Demonstration.

Contents

- Analysis of mixture of ions – volumetry and gravimetry. Any four Complexometric titration- estimation of zinc, nickel, magnesium and calcium ions using Eriochrome black-T or murexide indicator.
- Titrimetry: Oxidation using ceric and vanadium salts.
- Chromatography: Column, Paper and Thin layer chromatography.
- Titrations in non aqueous solvents.
- Preparation, analysis and study of co-ordination complexes (any 5).

SUGGESTED READINGS:

Text Books:

1. Lepse, P. A., & Peter, L. B. (1986). *Lab Manual for Lingren's Essentials of Chemistry*. New Delhi: Prentice Hall.
2. Mendham, J. R., Denney, C., Barnes, J. D., & Thomas, M. (2002). *Vogel's Textbook of Quantitative Chemical Analysis* (VI Edition). Singapore: Pearson Education Ltd.
3. Ramanujam, V. V. (2004). *Inorganic Semi-micro Qualitative Analysis* (III Edition). Chennai: The National Publishing Company.

Reference Books:

1. Siddhiqui, Z. N. (2002). *Practical Industrial Chemistry* (I Edition). New Delhi: Anmol Publications Pvt. Ltd.
2. Venkateswaran, V., Veeraswamy, R., & Kulandaivelu, A. R. (2004). *Basic Principles of Practical Chemistry* (II Edition). New Delhi: S. Chand Publications.