



KARPAGAM ACADEMY OF HIGHER EDUCATION
(Deemed University Established Under Section 3 of UGC Act 1956)

COIMBATORE-21
DEPARTMENT OF CHEMISTRY

SYLLABUS

B.Sc Chemistry Semester-VI 2019-2020

17CHU614A BASIC ANALYTICAL CHEMISTRY –PRACTICAL 3H 1C
Instruction Hours/week: L:0 T:0 P:3 Marks: Internal:40 External: 60 Total:100

Course Objectives

The course enables the students to

1. Understand the methods to analyse gasoline, arson accelerants and use of phenolphthalein in trap cases.
2. Analytical tests for testing macronutrients, Iron in food products and caffeine and benzoic acid in soft drinks.

Course Outcome

The course enables the students to

1. Analyse gasoline, arson accelerants and use of phenolphthalein in trap cases.
2. Do analytical tests for testing macronutrients, Iron in food products and caffeine and benzoic acid in soft drinks.

Experiments

Applications (Any one):

- a. To study the use of phenolphthalein in traps cases.
- b. To analyze arson accelerants.
- c. To carry out analysis of gasoline.

Instrumental demonstrations:

- a. Estimation of macro nutrients: Potassium, Calcium, Magnesium in soil samples by flamephotometry.
- b. Spectrophotometric determination of Iron in Vitamin / Dietary Tablets.
- c. Spectrophotometric Identification and Determination of Caffeine and Benzoic Acid in Soft Drink.

Suggested Reading

Text Books:

1. Willard, H.H., Merritt, L.L., Dean, J. & Settoe, F.A. (1988). *Instrumental Methods of Analysis* (VII Edition). Wadsworth Publishing Co. Ltd., USA.

2. Skoog, D.A., Holler, J. & Crouch, S.R. (2009). *Instrumental Analysis*(India Edition). Cengage Learning India Private Limited, New Delhi.
3. Skoog, D.A., West, D.M. & Holler, F.J.(1992).*Fundamentals of Analytical Chemistry*(VI Edition). Fort Worth: Saunders College Publishing.
4. Harris, D. C. (2006). *Quantitative Chemical Analysis*. W. H. Freeman and Company Ltd.
5. Dean, J. A. (1992). *Analytical Chemistry Notebook*. McGraw Hill.

Reference Books:

1. Day, R. A. & Underwood, A. L. (1991). *Quantitative Analysis*. Prentice Hall of India.
2. Freifelder, D. (1982).*Physical Biochemistry* (II Edition).W.H. Freeman and Co., USA.
3. Cooper, T.G. (1977).*The Tools of Biochemistry*.John Wiley and Sons, USA.
4. Robinson, J.W.(1995).*Undergraduate Instrumental Analysis* (V Edition). Marcel Dekker Inc., NewDelhi.