

090
Chemistry Department -

B. Sc. First Semester

Skill Enhancement Course

Paper: Good Laboratory Practices

Learning Outcomes:

After completing this course, the learner will be able to:

- Apply practical skills in science courses with understanding of general laboratory practices.
- Apply various techniques to study chemical compounds, salts.
- Explore various research issues and their solutions.

Keywords:

Laboratory calculations, calibration procedures, use of glasswares, safety aspects in preparations.

UNIT- I: General Laboratory Practices

Preparation of solutions. Molarity and Normality of common acids and bases. Dilutions, percentage solutions. Molar, Molal and Normal solutions. Knowledge about common toxic chemicals and safety measures in handling.

UNIT-II: Instrument- Techniques and Laboratory preparation procedures.

Identification and cleaning and drying of glasswares. Types of titration: acid-base titration, complexometric titration, redox titration, iodometric titration, iodimetric titration. Distillation : Simple distillation, fractional distillation and vacuum distillation. Preparations of crystals from given salts.

Suggested Readings:

1. Seiler, J. P. (2005). Good Laboratory Practices: the why and how, Springer-Verlag Berlin and Heidelberg GmbH & Co. K; 2nd ed.
2. Garner, W. Y., Barge M. S., Ussary. P. J. (1992). Good Laboratory Practice Standards: Application for field and Laboratory studies. Wiley VCH.

Ajay
Dr. Sant Anshu Pandey
Chemistry Department