

ANALYTICAL CHEMISTRY (BS-ADP 5th Semester)

Module Code:	Chem-311
Module title:	Chromatography
Name of Scheme:	BS-ADP 5th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Optional
Module Rating:	2 credits

OBJECTIVES:

This course will help the students in understanding basic chromatographic techniques. Involving separation of complex mixture. The students will be able to understand ion exchange methods. The students will also learn about the basic concepts of chromatography.

SYLLABUS OUTLINE:

1. **Basic Chromatographic Techniques**
Basic principle of chromatography, Classifications of Chromatographic Techniques, Column, Paper and Thin Layer Chromatographic Techniques; their instrumentation, applications and limitations.
2. **Ion Exchange Chromatography:**
Cation Exchange resin, Anion Exchange resin, Cross-linkage, Effect of pH on Amino Acids, Metal ions on Anions/Cations Exchange Columns, Applications of ion Exchange Chromatography.

RECOMMENDED BOOKS:

1. Chromatography by R.K Sharma , Gogel publishing home Meerut
2. Introduction to chromatography by Nasir-ud-din, Published by author
3. Modern analytical chemistry by David Harvey, Roohani-art press, Islamabad
4. Principle and Practice of analytical chemistry by Fillfield, Blackwell Science Ltd
5. Fundamentals of Chromatography by H.G. Cassidy, Inter Science Publisher, London, N.Y.
6. Fundamentals of Analytical Chemistry by Douglas Skoog and Donald M. W. West, Holt Reinchart and Inc, London.
7. Analytical Chemistry by G. D. Christian,