

INORGANIC CHEMISTRY (BS-ADP 7th Semester)

Module Code:	Chem-410
Module title:	Reagents and Solvents
Name of Scheme:	BS-ADP 7th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Compulsory
Module Rating:	2 credits

OBJECTIVES:

The aim of this course is to provide the concepts for better understanding of advance study in inorganic chemistry and other interdisciplinary subject related to inorganic chemistry. The students will learn about stereochemistry and bonding in main group compounds, periodicity and organic reagents used in inorganic analysis.

SYLLABUS OUTLINE:

1. Organic Reagents:

Classification of organic reagents, their selectivity and specificity, methods of preparation of specific compounds and their studies with UV, Visible and IR. Typical reagents used in complexometric titrations involving the use of EDTA. Chelates, classification, stability, preparation and properties. Role of organic Reagents in different analytical techniques.

2. Aqueous and non-aqueous solvents:

Classification of solvents, types of reactions, the dielectric constant, solubilities, electrode potential and electromotive forces. Reactions in water and molten salts. Reactions in non-aqueous solvents, i.e. ammonia, sulfur dioxide, bromine trifluoride and hydrofluoric acid.

RECOMMENDED BOOKS:

1. Hand Book of Organic reagents in Inorganic Analysis by ZAVIX Holzbecher and other 1976 Ellis Hurwod Limited, London.
2. Vogel, Arthur I. A Text-Book Of Quantitative Inorganic Analysis-Theory And Practice. Longmans, Green And Co.; London; New York; Toronto, 2013.
3. Advanced Inorganic Chemistry by F.A. Cotton and G. Wilkineon 1972, Interscience, Publishers, London.
4. Haq Nawaz Bhatti and Rabia Rehman, Advanced Inorganic Chemistry”, Carvan Book House Lahore.
5. Sisler, H.H. 1965. Chemistry in Non-Aqueous Solvents. Chapman & Hall Ltd.
6. House, J.E. 2010. Inorganic Chemistry. Academic Press, USA.