



Code	Subject Title	Cr. Hrs	Semester
CHEM-304	Inorganic Chemistry Lab	2	V
Year	Discipline		
3	Chemistry-I, II		

SYLLABUS OUTLINE:**1. Chromatographic Techniques:**

- (a) Separation of metal ions by paper chromatography and their identification with the help of locating agents and comparison of R_f values.
- (b) Separation of anions by paper chromatography and their identification.

2. Aqueous acid-base Titrations:

- (a) Estimation of SO_2 and SO_3 in air and discharged from an industrial process.
- (b) Estimation of CO_2
- (c) Estimation of oxalic acid and H_2SO_4 in a mixture.
- (d) Estimation of H_3BO_3 and NaH_2BO_3 in a mixture.
- (e) Determination of %age composition of a mixture containing H_3BO_3 and CH_3COOH .

3. Precipitation Titrations:

Estimation of following anions with the help of adsorption indicators:

- (i) Chloride (ii) Bromide (iii) Sulphate (iv) Chloride and Iodide in a mixture.

RECOMMENDED BOOKS:

1. J. Bassett, R. C. Denny, G. H. Jeffery and J. Mendham, Vogel's Text Book of qualitative Inorganic Analysis, the English Language Book Society and Longman, New York, (2008)
2. Quantitative Analysis Chemistry, James S. Pritz, George H. Sehenk, 2001 Alby and Becon Inc. London.
3. Theory and practice of chromatography by Prof. Dr. Javed Iqbal (2002).
4. Instrumental analysis by Gary D. Christian and James E.O., Reilly, 2007, Allyn and bacon Inc., London.
5. Hand Book of Organic reagents in Inorganic Analysis by ZAVIX Holzbecher and other 1976 Ellis Hurwod Limited, London.