

DEPARTMENT OF CHEMISTRY				CLASS: I B.Sc. Chemistry				
SEM	Course type	Course Code	Course Title	Credits	Contact Hours/week	CIA	Ext	Total
II	Major core practical	20U2CMP1	Inorganic Qualitative Analysis	3	3	40	60	100

Course Objectives:

1. To encourage more hands-on training to undergraduate students by adding more individualized practical exercises
2. To demonstrate basic laboratory technique of qualitative analysis
3. To develop the intellectual and psychomotor skills of the students by imparting knowledge in qualitative analysis of Inorganic compounds

Inorganic Qualitative Analysis

- Qualitative analysis of a mixture containing two cations and two anions of which one will be an interfering ion.
- Semi micro methods using the conventional scheme with hydrogen sulphide will be adopted.
- *CATIONS TO BE STUDIED:* Lead, Copper, Bismuth, Cadmium, Iron, Aluminum, Zinc, Manganese, Cobalt, Nickel, Barium, Calcium, Strontium, Magnesium and Ammonium.
- *ANIONS TO BE STUDIED:* Carbonate, Sulphate, Nitrate, Chloride, Bromide, Fluoride, Borate, Oxalate, and Phosphate.

Books for Reference

1. Vogel, Text Book of Qualitative Chemical Analysis, 5th edn., ELBS/ Longman England, 1989
2. V.V. Ramanujam, Inorganic Semimicro qualitative analysis, National Publishing company, Madras, 1974
3. V. Venkateswaran , R. Veeraswamy, A.R. Kulandaivelu, Basic Principles of Practical Chemistry, S. Chand & Co., New Delhi, 1997.
4. O. P. Pandey, D. N. Bajpai, S. Giri, Practical Chemistry, ISBN: 9788121908122, 9788121908122, Revised edition, S Chand & Co Ltd.

Web Resources

1. https://www.academia.edu/10186454/SEMI_MICRO_QUALITATIVE_ANALYSIS_OF_SIMPLE_INORGANIC_SALT
2. <https://www.thoughtco.com/qualitative-analysis-in-chemistry-608171>

Course Learning outcomes: After complete successful of this course, the student will be able

CLOs	CLO statement	Knowledge level
CLO1	To demonstrate the basic laboratory techniques of qualitative analysis of Inorganic salts containing two cations and two anions	K4
CLO2	To demonstrate mastery of basic Inorganic chemistry laboratory analysis.	K4
CLO3	To identify the interfering acid radicals, eliminate interfering anion and to perform a systematic analysis and identify the cations	K4
CLO4	To interpret analytical results	K4
CLO5	To make scientific claims that is supported by their results and other observations.	K4

PO and CLO Mapping:

	PO 1	PO 2	PO 3	PO 4	PO 5
CLO1	3	2			
CLO2	3	2			
CLO3	3	2			
CLO4	3	2			
CLO5	3				

PSO and CLO Mapping:

	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6	PSO 7
CLO1					3	3	3
CLO2					3	3	3
CLO3					3	3	3
CLO4					3	3	3
CLO5					3	3	3

3-Advance application; 2-Intermediate level;1-Basic level

Internal Component

Title of Analysis	No of hours
Inorganic qualitative analysis	90

Name of the Course Designer:

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2. Dr. S.V. Karthikeyan