

UNIVERSITY OF MADRAS
B.Sc. DEGREE PROGRAMME IN CHEMISTRY
 SYLLABUS WITH EFFECT FROM 2023-2024

Title of the Course	QUALITATIVE INORGANIC ANALYSIS						
Paper No.	Core VI(CC6)						
Category	Core	Year	II	Credits	5	Course Code	224C31
		Semester	III				
Instructional hours per week	Lecture	Tutorial	Lab Practice		Total		
	-	-	5		5		
Prerequisites	General chemistry						
Objectives of the course	To develop the skill on systematic analysis of simple inorganic salts and mixture of salts.						
Course Outline	<p>Semi - Micro Qualitative Analysis</p> <ol style="list-style-type: none"> 1. Analysis of simple acid radicals: Carbonate, sulphide, sulphate, thiosulphate, chloride, bromide, iodide, nitrate 2. Analysis of interfering acid radicals: Fluoride, oxalate, borate, phosphate, arsenate 3. Elimination of interfering acid radicals and identifying the group of basic radicals 4. Analysis of basic radicals (group wise): Lead, copper, bismuth, cadmium, tin, antimony, iron, aluminium, arsenic, zinc, manganese, nickel, cobalt, calcium, strontium, barium, magnesium, ammonium 5. Analysis of a mixture - I to VIII containing two cations and two anions (of which one is interfering type) 						
Skills acquired from this course	Knowledge, Problem solving, Analytical ability, Professional Competency, Professional Communication and Transferable skills.						
Recommended Text	<p>Reference Books: V. Venkateswaran, R. Veeraswamy and A. R. Kulandivelu, Basic Principles of Practical Chemistry, Sultan Chand & Sons, New Delhi, second edition, 1997.</p>						
Website and e-learning source	https://www.vlab.co.in/broad-area-chemical-sciences						
Course Learning Outcomes (for Mapping with POs and PSOs)							

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On successful completion of the course the students should be able to

CO 1: acquire knowledge on the systematic analysis of Mixture of salts.

CO 2: identify the cations and anions in the unknown substance.

CO 3: identify the cations and anions in the soil and water and to test the quality of water.

CO4: assess the role of common ion effect and solubility product

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S	S	S	S	S	S	S	M	S	M
CO2	M	S	S	S	M	S	S	M	M	M
CO3	S	S	S	M	S	S	S	M	S	M
CO4	S	S	S	S	S	S	S	M	M	M

CO-PO Mapping (Course Articulation Matrix)

CO /PO	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO1	3	3	3	3	3
CO2	3	3	3	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3
Weightage	12	12	12	12	12
Weighted percentage of Course Contribution to Pos	3.0	3.0	3.0	3.0	3.0

Level of Correlation between PSO's and CO's