
Practical Plan

Name of the college: Govt. College of Arts, Science and Com. Sanquelim, Goa

Name of Faculty: Varsha Sail	**Subject:** Chemistry	
Paper code:CHC-109, Inorganic Chemistry	**Program: T.Y. BSc**	**Division: A**
Academic year: 2024 - 2025	**Semester: VI**	**Total Practicals/Labs: 10**

Credits:02

Course Objectives: Principle and techniques of different volumetric estimation

Expected Course Outcome: Student should be able to carry out volumetric estimation, theory and do the calculations involved in the estimation

Student Learning Outcome: Student are introduced to different types of volumetric estimation. They understand the theory involved in the estimation. And are trained to use the apparatus correctly to get accurate result and also do the calculation involved.

Month	Practicals/Labs Scheduled Date	No. of Practicals/Labs planned	List of Experiments	Reference books
December	9th	4hr	Batch -I Preparation of Tetraaminecopper(II) sulphate complex and Preparation of Trisethylenediaminenickel(II) chloride complex	G.H. Jeffery, J. Bassett, J. Mendham, R. C. Denney, Vogel's Textbook of Quantitative Chemical Analysis, 5th Edn. ELBS **Reference books :** 1. J. Mendham, R. C. Denney, J.D. Barnes, M. Thomas, B. Sivasankar, Vogel's Textbook of Quantitative Chemical Analysis, 6th Edn. Pearson 2. S. Ratan, Experiments in Applied Chemistry, 3rd Edn. S.K. Kataria & Sons 3. O. P. Pandey, D. N. Bajpai and S. Giri, Practical Chemistry, Revised Edn. S. Chand.
	10th	4 Hr	Batch II-Tetraaminecopper(II) sulphate complex and Preparation of Trisethylenediaminenickel(II) chloride complex	
	16th	4 Hr	Batch -I Estimate the amount of Ni by EDTA..	
	17th	4 Hr	Batch II Estimate the amount of Ni by EDTA..	
January 2025	6th	4 Hr	Batch -I Estimate the amount of copper from Tetraaminecopper(II) sulphate complex by iodometry.	
	7th	4 Hr	Batch II Estimate the amount of copper from Tetraaminecopper(II) sulphate complex by iodometry	
	13th	4 Hr	Batch -I. Estimate volumetrically the amount of cobalt in $CoCl_2.H_2O$ by EDTA method using hexamine indicator.	
	14th	4 Hr	Batch II Estimate volumetrically the amount of cobalt in $CoCl_2.H_2O$ by EDTA method using hexamine indicator.	
	20th	4 Hr	Batch -I To estimate aluminium by back titration using zinc sulphate	
	21th	4 Hr	Batch -II. To estimate aluminium by back titration using zinc sulphate.	

	27st	4 Hr	Batch -I Determine the strength in grams per litre of a given $AgNO_3$ solution being provided N/30 NaCl solution by Mohr's Method.
	28th	4 Hr	Batch -II Determine the strength in grams per litre of a given $AgNO_3$ solution being provided N/30 NaCl solution by Mohr's Method.
February 2025	3rd		Batch -I Estimation of Fe(III) by dichromate method in the given solution of ferric alum by using $SnCl_2$.
	4th	4 Hr	Batch -II Estimation of Fe(III) by dichromate method in the given solution of ferric alum by using $SnCl_2$.
	10th	4 Hr	atch -I To estimate amount of ferrous(Fe^{2+}) and ferric(Fe^{3+}) ions in the given solution containing ferric chloride and ferrous sulphate by using potassium dichromate.
	11th	4 Hr	Batch -II To estimate amount of ferrous(Fe^{2+}) and ferric(Fe^{3+}) ions in the given solution containing ferric chloride and ferrous sulphate by using potassium dichromate.
	17th	4 Hr	Batch -I To estimate amount of ferrous(Fe^{2+}) and ferric(Fe^{3+}) ions in the given solution containing ferric chloride and ferrous sulphate by using potassium dichromate.

	18th	4 Hr	Batch -II To estimate amount of ferrous(Fe^{2+}) and ferric(Fe^{3+}) ions in the given solution containing ferric chloride and ferrous sulphate by using potassium dichromate.
	24th	4 Hr	Batch -I Volumetric estimation of Nitrite in the given solution of sodium nitrite using $KMnO_4$
	25th	4 Hr	Batch -II Volumetric estimation of Nitrite in the given solution of sodium nitrite using $KMnO_4$
March 2025	3rd	4 Hr	Batch -I Determination of alkalinity of a given mixture of OH^-. and CO_3^{-2} using phenolphthalein and methyl orange indicator
	4th	4 Hr	Batch -II Determination of alkalinity of a given mixture of OH^-. and CO_3^{-2} using phenolphthalein and methyl orange indicator
	10th	4 Hr	Batch -I. Estimation of manganese in presence of iron in ferromanganese by EDTA titration.
	11th	4 Hr	Batch -II. Estimation of manganese in presence of iron in ferromanganese by EDTA titration.

	17th	4 Hr	Batch –I Repetitions	
	18th	4 Hr	Batch –II-repetition	
	24th	4 Hr	Batch –I Journal certification	
	25th	4 Hr	Batch –II- journal certification	
	31st	4 Hr	Batch –I- exam	
April 2025	1st	4 Hr	Batch –II Exams	
	7th	4 Hr	Batch –I Exams	
	8th	4 Hr	Batch –II Exams	