

### Practical Plan

Name of the college: Government College of Arts, Science & Commerce, Sanquelim, Goa		
Name of Faculty: Dr. Dattaprasad D. Narulkar	Subject: Chemistry	
Paper code: CHC-203 Inorganic Chemistry - I	Program: S.Y.BSc.	Division:
Academic year: 2024 - 2025	Semester: IV	Total Practical/Labs: 15 (30 hours)
Credits: 1		
Course Objectives: <ul style="list-style-type: none"><li>• To apply the fundamental theoretical aspects of qualitative inorganic analysis.</li><li>• 2. To use various titrimetric techniques to estimate the analytes.</li><li>• 3. To use gravimetric methods to estimate metal ions.</li><li>• 4. To prepare inorganic coordination compounds.</li></ul>		
Expected Course Outcome: At the end of the course students will be able: CO1: perform a qualitative analysis of inorganic mixtures. CO2: prepare coordination compounds of transition elements. CO3: determine unknown concentration of analytes using volumetric and gravimetric procedures.		
Student Learning Outcome: At the end of the course students will be able: LO1: to acquire the knowledge and skill of basic volumetric and gravimetric estimations. LO2: to get hands on experience on the purification techniques for organic compounds. LO3: to get hands on experience on the identification of chemical nature of organic compounds.		

Month	Practical/Labs Scheduled Date	No. of Practical /Labs planned	List of Experiments	Reference books
December	10/12/2024	1	Estimation of the amount of nickel in the given nickel sulphate solution (EDTA method).	Ref 1 and 2
	17/12/2024	1	Estimation of Fe (II) ions by titrating it with $K_2Cr_2O_7$ using the internal indicator.	Ref 1 and 2
January	07/01/2025	1	Estimate the amount of Ni as bis(dimethylglyoximate) nickel (II) in the given solution of nickel chloride using counter poise method.	Ref 1 and 2
	14/01/2025	1	Preparation of chrome red	Ref 1 and 2.
	21/01/2025	1	Preparation of tris-(ethylenediamine)nickel (II)chloride	Ref 1 and 2
	28/02/2025	1	Estimation of Mn as manganese pyrophosphate present in the given manganese sulphate solution.	Ref 1 and 2
	04/02/2025	1	Semi-micro qualitative analysis - I	Ref 1 and 2
February	11/02/2025	1	Semi-micro qualitative analysis - I	Ref 1 and 2
	18/02/2025	1	Semi-micro qualitative analysis - II	Ref 1 and 2
	25/02/2025	1	Semi-micro qualitative analysis - II	Ref 1 and 2
	04/03/2025	1	Semi-micro qualitative analysis - III	Ref 1 and 2

March	11/03/2025	1	Semi-micro qualitative analysis - III	Ref 1 and 2
	18/03/2025	1	Semi-micro qualitative analysis - IV	Ref 1 and 2
	25/03/2025	1	Semi-micro qualitative analysis - IV	Ref 1 and 2
April	01/04/2025	1	Repeat Practical	
	08/04/2025	1	Repeat Practical	

#### References

1. Vogel's Text book of Qualitative analysis
2. Vogel's Textbook of Quantitative Analysis

* Assessment Rubrics	
Component	Max Marks
ISA	15
Practical	25
Semester End Exam	60
Total	100