



Integrated Bachelors & Masters Programmes
B.Sc. Chemistry, Semester I

Course Code	IS01CCHE52	Title of the Course	Chemistry Practicals-I
Total Credits of the Course	1	Hours per Week	2 hrs

Course Objectives:	<ol style="list-style-type: none">1. To learn about the kinetics, order and concept of ionic strength and know how to apply them to explain and interpret the observations in other areas of chemistry and related filed.2. To have exposure to unit processes involved in the synthesis of organic compounds.
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Course Content		
Sr. No.	Description/Aim	Weightage* (%)
1.	To determine the specific reaction rates of the hydrolysis of the esters by H ⁺ ion at room temperature.	100
2.	To study the effect of acid strength on hydrolysis of the esters.	
3.	To study the rate of acid-catalyzed iodination of acetone in the presence of excess acid and acetone at 298.15 K.	
4.	To study the influence of ionic strength on reaction between potassium persulphate and potassium iodide solution	
5.	Hydrolysis	
6.	Nitration	
7.	Bromination using brominating solution (green method)	
8.	Addition reaction (of unsaturated compounds like crotonic acid)	

Teaching-Learning Methodology	Laboratory practicals with demonstration of the procedure related to each practicals.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%





SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar, Gujarat
(Reaccredited with 'A' Grade by NAAC (CGPA 3.25))
Syllabus with effect from the Academic Year 2022-2023

2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to

1.	Handle chemicals and glasswares properly
2.	Work independently in the laboratory obeying good laboratory practices and safety norms
3.	Carry out hydrolysis, nitration, bromination and addition reaction of organic compounds
4.	Able to learn about the kinetics and order of various chemical reactions.

Suggested References:

Sr. No.	References
1.	R. C. Das and B. Behera , Experimental Physical Chemistry, Tata McGraw Hill, 2000
2.	J. B. Yadav, Advanced Physical Chemistry, Goel Publishing House, Meerut, 2001.
3.	V. D. Athawale, P. Mathur, Experimental Physical Chemistry, New Age International Publishers, 2001.
4.	A. I. Vogel, A text book of practical organic chemistry including organic qualitative analysis, 3 rd Edition, Longman publication, 1974.
5.	V. K. Ahluwalia, R. Aggarwal, Comprehensive Practical Organic Chemistry: Preparation and Quantitative Analysis, University Press, 2000.

On-line resources to be used if available as reference material

On-line Resources: <https://swayam.gov.in/>

