

20CY110 ORGANIC CHEMISTRY LAB - 1

Hours Per Week :

L	T	P	C
-	-	4	2

Course Description and Objectives:

The main objective of this course is to develop knowledge on basic techniques of organic chemistry lab. Students are able to apply this knowledge in identification, synthesis, purification and separation of various organic compounds.

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes
1.	Understand the basics techniques of organic chemistry lab and analyze the purity of organic compounds.
2.	Apply TLC and column chromatography in identification, separation and purification of compounds.
3.	Analyze reaction mechanism and synthesize different chemical compounds like soap, drugs, polymers and dyes.
4.	Apply the knowledge of extraction principles in separation of various chemical compounds from various medicinal plants.

A. Basic laboratory techniques

1. Melting point, crystallizations
2. Boiling point, distillations

B. Identification and Purification of Organic Compounds

3. Determination of R_f using TLC for a mixture of compounds.
4. Purification of mixture of organic compounds by column chromatography

C. Preparation of Organic Compounds

1. Preparation of Benzoic acid and its ester.
2. Preparation of Soap.
3. Preparation of Aspirin/Paracetamol.
4. Preparation of Azodye.
5. Preparation of Polystyrene.
6. Preparation of Nylon 6,6.
7. Synthesis of Indigo Blue.

D. Extractions

1. Extraction of Organic Compound from the dried leaves of *Azadirachta indica* (Neem)
2. Extraction of Organic compound from dried fruit of *Phyllanthus emblica* (Amla)
3. Extraction of Organic compound from dried roots of *Curcuma longa* (Turmeric)

Test Books:

1. A.I. Vogel, Textbook of Practical Organic Chemistry, 5th edition.