

NARULA INSTITUTE OF TECHNOLOGY

Department of Chemistry

The Chemistry Laboratory is situated at Room 111 at the ground floor of the main building of Narula Institute of Technology. The laboratory course is offered as CH191 and CH291 at odd and even semester in each academic year respectively to the 1st year B. Tech students.



Contact hours for the laboratory course are 3 hours/stream/week/group. In the odd semester, 1st year students of Electrical Engineering (EE), Electronics and Instrumentation Engineering (EIE) and Electronics and Communication Engineering take CH191 laboratory course. In the even semester, students of Computer Science Engineering (CSE), Information Technology (IT) and Civil Engineering (CE) take CH291 laboratory course.

The major experiments that are performed by the students in the laboratory are:

1. To Determine the alkalinity in a given water sample.
2. Red-ox titration (estimation of iron using permanganometry)
3. To determine calcium and magnesium hardness of a given water sample separately.
4. To determine the value of the rate constant for the hydrolysis of ethyl acetate catalyzed by hydrochloric acid.
5. Heterogeneous equilibrium (determination of partition coefficient of acetic acid between n-butanol and water)
6. Conductometric titration for determination of the strength of a given HCl solution by titration against a standard NaOH solution.
7. pH- metric titration for determination of strength of a given HCl solution against a standard NaOH solution.
8. Determination of dissolved oxygen present in a given water sample.
9. To determine chloride ion in a given water sample by Argentometric method (using chromate indicator solution)

The laboratory contains following equipments along with regular glass apparatus like burette, pipette, measuring cylinder, round bottom flasks, volumetric flasks, stoppered bottles, conical flasks, for the perusal of students during laboratory experiments:

- a. 2 Hot plates
- b. Magnetic Stirrer
- c. pH- meter
- d. Conductometer
- e. Electronic Digital Balance
- f. Hot air oven

The laboratory also contains 1 refrigerator for storage purpose of chemical which are needed to be stored at cool temperature. Various other liquid and solid chemicals are stored in proper places of the laboratory. A stock register is maintained and regularly updated to keep track of the chemicals used in the laboratory. Detailed records of student performance, examinations are also maintained in the laboratory.