

Hands on Training
Department of Environmental Science
St. Edmund's College

Program: Determination of Total Hardness of water samples (Under STAR College Scheme)

Date: 12.08.2022

Time: 2pm

Venue: Department of Environmental Science Laboratory

Teacher: Dr. Jasmine T. Sawian

No. of students: 31

Method: Titrimetry

The Department of Environmental Science under the DBT Star College Scheme conducted practicals on the Determination of Total Hardness of water samples for the B.Sc. (H) 5th semester students.

The students were first introduced to the concept of hardness of water and the contributors of hardness in water. They were then explained about the types of water hardness – temporary and permanent, and the significance of the presence of ions in water impacting the quality of water. The students were then explained and shown the apparatus and method for carrying out the experiment. They were provided with water samples from two different sources. The experiment on water hardness was measured by titration with ethylenediaminetetraacetic acid (EDTA). All the students successfully carried out and completed the experiment.

Outcome of the Programme

- Students are made aware of the source, importance and reactions of hardness in water samples.
- Demonstration on titrimetric apparatus, glassware and titration techniques.

- Hand-on practice on the determination of hardness by titrimetric method.
- Students are made aware of color change and end-point of reactions.
- Discussed environmental significance of hardness in water samples.