

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

Program: Water Quality Assessment – 3 (Under STAR College Scheme)

Date: 18.05.2022

Time: 2pm

Venue: Department of Environmental Science Laboratory

Teacher: Dr. Jasmine T. Sawian

No. of students: 12

Objective: To introduce and familiarize students of the Arts stream on techniques of Water Quality Sampling (Part 3)

The Department of Environmental Science under the DBT Star College Scheme conducted practicals on the Determination of Water Quality Assessment for the students of B.A. (H) 6th semester, Department of Geography.

The parameters chosen for the third part of the training included –

- Determination of Hardness of water
- Determination of Calcium content of water
- Determination of Magnesium content of water

The students were first introduced to the concept of hardness, calcium and magnesium of water and their sources 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. Similar explanation were given on calcium and magnesium content in water. The students were then explained and shown the apparatus and method for carrying out

the experiments. They were provided with water samples from two different sources. The experiments were determined by titration method. All the students successfully carried out and completed the experiments.

Outcome of the Programme

- Students are made aware of the importance of water quality and sources of pollution.
- Hand-on practice on collection and sampling of water.
- Learned the measurement of hardness, calcium and magnesium content in water.
- Demonstration on titrimetric apparatus, glassware and titration techniques.
- Learned titrimetric method of sampling.
- Students are made aware of color change and end-point of reactions.
- Discussed environmental significance of the parameters in water.
- Discussed how Sampling may be used to test the finished water for regulatory purposes.