

**Nongstoin College**  
**Nongstoin**  
**Department of Chemistry**



**A REPORT ON THE EDUCATIONAL FIELD VISIT**

**Title of the Programme:** EDUCATIONAL FIELD VISIT

**Department:** CHEMISTRY

**Date & Duration:** 14<sup>th</sup> MAY 2022/9:00 AM

**Number of participants:** 11

**Name of the Organizing Committee:** Dr. O. Risuklang Shangpliang, Shankupar Rynjah, Dr. Ibanphylla Syiemlieh and Dr. Donkupar Kharbani

Apart from confining the teaching and learning skills within the four walls of the classrooms and laboratories, an educational field trip is an innovative element viewed as a crucial component to teach students the skilfulness and content that they need to be successful, whereby they are exposed to the application part of the subject.

On the 14<sup>th</sup> of May 2022, the Department of Chemistry was privileged to conduct an educational field trip to *umRupa*, a small-scale industry owned by The Marwein Group of Industries Private Limited, located at Kynshi Bangla, which is approximately 37 km away from Nongstoin College, Nongstoin.

In a world of competition and with the increase of unemployment of the youths, as mentioned by the Director of the Um-Rupa, Sir S. Marwein, discipline, hard work, and patience were the key factors to becoming successful in the future. He further added on how to set up small-scale industries from scratch and to be an entrepreneur to be able to stand on their own feet. Our students are highly grateful and in debt to the director for his inspiration, ideology, open-handedness, and support.

The Director, along with the experts demonstrated the various standard protocols and processes involved in the technique of spring water purification to commercial package drinking water. A few of the stepwise techniques that the beneficiaries have well-read and observed are highlighted below:

Purifying

The first step is sedimentation, where the gravel/mud and other particles are filtered with the help of gravity. The second step is to filter through activated carbon and then pass through reverse osmosis via a filtration membrane so as to separate the finer particles that escaped from the second step of the filtration. Thirdly Ozone/UV-rays were used to disinfect certain water bacteria such as *E.coli* etc. Some minerals like sodium bicarbonate and antiscalant were added in the fourth step. The fifth step is to check and maintain the pH value (6.5 - 7.8). Before the packing process, the last step is to check the water sample in the Laboratory to cross-check if all the above processes were systematically and accurately performed. It may be mentioned that the whole process of purification can be accomplished using a water treatment machine occupying an area of 10-15 Sq. feet positioned in a well-sophisticated room.

  
Principal  
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### Packaging

For packaging, a computerized machine was employed whereby small plastic bottles were inflated using heat and compressed air. These bottles were then carried by mechanical pulley and the processed purified water was then filled up to 500 ml. These filled bottles were then tightly capped with the company brand name (umRupa). For every product manufactured, the date of manufacture and expiry tenure is necessary. Similarly, computerized laser labeling was used whereby the manufactured and expiry date was mentioned so as to ensure that the packet drinking water was safe to consume.

### Marketing

Depending on the needs and demand of the product, The Packages were shipped and dispatched to the customer in various locations in the state.

It may be concluded that the recent educational field visit to Um-Rupa has not only helped the students to know about the application of chemistry in industries but has greatly impacted them from the Entrepreneurship point of view as well. The department is looking forward to more exposure tours to enable the students to develop their interest in the subject concern.

The field visit conducted by the department was a successful one.



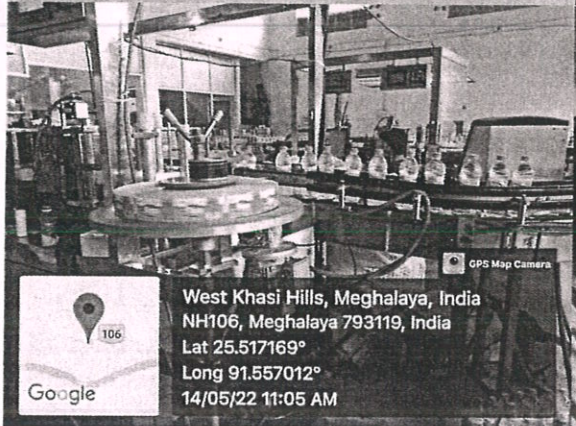
Head

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Nongstoin College



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**Educational Field Visit to *umRupa*  
Marwein Group of Industries Private Limited  
Kynshi Bangla, Eastern West Khasi Hills**



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