

WIU CENTENNIAL HONORS COLLEGE
Thomas E. Helm Undergraduate Research Day 2022

Abstract

Poster

Major Biology

Faculty Mentor: Mari Aanenson

Microorganism in Western Illinois Drinking Water

ALEXIS RUTHERFORD

In nature, it is common to find microorganisms in water sources such as ponds, lakes, and rivers. To eliminate and keep out such organisms filtration systems have been implemented all around the world to provide drinking water for people. In recent years, Western Illinois University has put in such a filtration system throughout its academic buildings, residence halls, and even the recreation center. The goal of this research project is to test different sources of water across Western Illinois University's campus to see if the filtration system is effective in keeping out large amounts of microorganisms. The research project begins with the collection of water samples from different buildings on campus. These building locations include Corbin's first floor, Thomson's first floor, Stipes's first floor, Memorial's first floor, the University Union's first floor, and other locations. Each collection included the taking of samples from a water fountain and filtered water bottle station. For the tests, each water sample will be used to inoculate petri dishes containing m-FC agar at 44.5°C for 22-24 hours, EMB agar at 35-37°C for 18-24 hours, and Endo agar at 35-37°C for 18-24 hours. When all the cultures have finished growing, the samples will be examined underneath a microscope to identify the different bacteria in each of the samples that were collected. An analysis of variance test is used to determine if the bacterial growth from each sample is different from the mean of all samples. The lab work was done by December 2021.