Dispose Waste Lubricant in Soil and Fresh Water by Strains of Microorganisms Isolated in Nature

Tran, Uyen

Nhu, Anh

Duong, Hong Minh

Currently, the use of transportation is blooming in every nation, which leads to the rise of waste lubricant emission. Waste lubricant not only does harm to human's health but also causes environmental pollution. Simultaneously, many researches show that microorganisms are able to dispose mineral oil, solve oil spills on sea quite effectively. The purpose of this project is to use microorganisms in waste lubricant treatment. After isolating, purifying and selecting the most effective strains of microorganisms from soil containing waste lubricant in Ho Chi Minh city, Viet Nam, a survey was taken to examine some conditions affecting the strains ability to dispose waste lubricant such as disposing time, waste lubricant concentration. The survey showed that the time of 48 to 96 hours and the waste lubricant from 3% to 5% were the best for the strains growth and their ability to dispose waste lubricant. According to the test reports, the chosen strains reduced waste lubricant and lead amount in contaminated soil and fresh water in a short time. Plants grown on the soil and fresh water containing waste lubricant disposed by chosen strains were better than those on environment having waste lubricant without microorganisms. With this project, the bacteria, yeasts and fungi from nature in Viet Nam can dispose waste lubricant in soil and fresh water in an economical, feasible and time-saving way.

Awards Won: