SOIL CONTAMINATION AND SOIL PROPERTIES ANALYSIS IN UITM PAHANG

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ABSTRACT

SOIL CONTAMINATION AND SOIL PROPERTIES ANALYSIS IN UITM PAHANG

Soil contamination can be caused by many factors, but the main contributer to this problem is man made waste. This research project is important as it gives an information to people about contaminated soils in UiTM Pahang and the main factors that contribute to the contamination problems. In this research, four soil samples were taken from four different places in UiTM Pahang which are Tasik UiTM Pahang, Ladang UiTM Pahang, Nursery UiTM Pahang and Kem Sri Gading UiTM Pahang to determine the biological quality of the soil. Several techniques have been done to analyse the quality of each soil. The methods that were used in this research are standard total coliform fermentation technique, most probable number (MPN), multiple tube test and streak plate method. Soil physical and chemical properties were also investigated to carry out the factors that contributed to soil contamination. Parameters that were studied in this experiment are pH, temperature, water content, air content and humus content of the soil. Among all of the four places, Tasik UiTM Pahang is estimated to have the highest amount of coliform bacteria, thus concluded it as the most contaminated site in UiTM Pahang because there might be polluted substances in the lake that tend to cause the growth of coliform bacteria. The results obtained proved that Tasik UiTM Pahang is contaminated because pH with 5.4 and temperature with 30°C were suitable for growth of coliform bacteria. The water content (15.79%), air content (13.7%) and humus content (2.63%) showed that the condition of soil from Tasik UiTM Pahang is optimum for bacteria's growth. Soil at Kem Sri Gading UiTM Pahang is assumed to has the lowest amount of coliform bacteria because the physical properties of the soil is not suitable for growth of coliform bacteria. Eventhough the value of pH (5.36), temperature (35°C) and water content (42.24%) are optimum for coliform bacteria's growth, but the humus content (2.59%) and air content (4.9%) for Kem Sri Gading was low.