



Intisari

Penelitian ini dilakukan di lima lahan pertanian sekitar TPA Troketon, Pedan, Klaten dengan tujuan mengetahui kandungan logam berat Pb dan Cd dalam air, tanah, dan tanaman serta mengetahui hubungan sifat fisika dan kimia tanah terhadap kandungan logam. Pengambilan sampel tanah dilakukan secara *random sampling* dengan kedalaman 0-20 cm dan 20-40 cm dari permukaan tanah. Pengambilan sampel air dilakukan pada kolam Instalasi Pengolahan Lindi (IPL), sedangkan sampel tanaman diambil juga menggunakan metode *random sampling*. Hasil penelitian menunjukkan kandungan logam Pb dan Cd air embung yang digunakan sebagai pengairan lahan telah melebihi baku mutu logam Pb dan Cd. Kandungan logam Pb dan Cd dalam tanah belum melebihi batas normal. Kandungan Pb dalam tanaman belum melebihi baku mutu dan Cd dalam tajuk telah melebihi baku mutu sayuran dan olahannya. Kandungan logam dalam tanah di lahan pertanian sekitar TPA Troketon dipengaruhi oleh Ph ($R^2 = 0,3942$), KPK ($R^2 = 0,381$), dan kandungan lempung ($R^2 = 0,5486$), akan tetapi kurang terpengaruh oleh kandungan bahan organik ($R^2 = 0,0308$).

Kata kunci : air lindi, kadmium, logam berat, timbal



Abstract

This research was carried out on five agricultural lands around TPA Troketon, Pedan, Klaten with the aim of knowing the content of the heavy metals Pb and Cd in water, soil and plants as well as knowing the relationship between physical and chemical properties of soil and metal content. Soil samples were taken by random sampling with a depth of 0-20 cm and 20-40 cm from the ground surface. Water samples were taken at the Leachate Treatment Plant (IPL) pond, while plant samples were also taken using the random sampling method. The results of the research show that the Pb and Cd metal content of embung water used for land irrigation has exceeded the quality standards for Pb and Cd metals. The metal content of Pb and Cd in the soil has not exceeded normal limits. The Pb content in plants has not exceeded the quality standard and the Cd in the canopy has exceeded the quality standard for vegetables and their processed products. The metal content in the soil on agricultural land around TPA Troketon is influenced by Ph ($R^2 = 0,3942$), CEC ($R^2 = 0,381$), and clay content ($R^2 = 0,5486$), but is less affected by the organic matter content ($R^2 = 0,0308$).

Keywords : cadmium, heavy metal, lead, lechate