HEAVY METAL DETERMINATION FROM SOIL SURFACE NEAR A CONSTRUCTION SITE

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ABSTRACT

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This study aimed to determine the concentration of selected heavy metals (Cd, Cr, Pb, Zn) in urban soil samples of new large shopping place in Bandar Tun Abdul Razak Jengka. A total of 15 samples were collected from five sampling points. This study also aimed to evaluate health risk assessment (HRA) of heavy metals on adults from different pathways. All of the concentration of heavy metal selected lie above control soil which are Cd (0.011 $mgkg^{-1}$), Cr (0.28 $mgkg^{-1}$), Pb (0.33$mgkg^{-1}$) and Zn (0.21 $mgkg^{-1}$). Hazard Index (HI) and Lifetime Cancer Risk (LCR) were used to determine both non-carcinogenic and carcinogenic risks. The HRA found to be at the safe level indicating no non-carcinogenic and carcinogenic risks that may affect human health. Further study should be done to evaluate other metal element such as As and Cu that may contribute to human health problem due to high concentration accumulated.