

## Leachability of heavy metals and arsenic in soils due to contamination of disposal cement building materials

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Today, concrete is used in everywhere. These concrete structures get moved away when they end their roles, a very small amount of concrete is left and the soil pH rises. Some geological layers inherently contain substantial amounts of heavy metals and previous studies show us that heavy metals in natural sediments sometimes cause soil pollution. Thus, the heavy metals tend to be leached out from these sediments according to the difference of pH conditions. This study focuses to find out the interrelation between the amount of heavy metals and pH differences. The leaching test is carried out using soil and mortar samples with several mixture proportion. The liquid and solid proportion is 1:10. After 6h shaking, the soil water samples were extracted and pH and EC were measured. Then, heavy metal contents were measured using ICP-MS and ICP-AES. Results are as follows; most of heavy metals (Al Fe Mn Se and As) are leached out and the contents are higher in higher pH and lower pH. Therefore, it will be necessary to measure the soil pH condition when concrete and cement materials were used in the structure.

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