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## Leachability of heavy metals from contaminated sediments of the To Lich and Kim Nguu river systems in Hanoi, Vietnam

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**Abstract:** We have assessed the leaching of heavy metals from the contaminated sediments of the To-Lich and Kim Nguu river systems in Hanoi, Vietnam. We used different solutions such as distilled water (pH 5.5), nitric acid (HNO<sub>3</sub>), acetic acid (CH<sub>3</sub>COOH) and Ethylene diamine tetra acetic acid (EDTA) in a batch leaching test. The average concentrations of heavy metals leached were: (1) using H<sub>2</sub>O: 63.4% of Cd, 10.6% of Cr, 5.3% of Cu, 33.6% of Ni, 1.6% of Pb and 6.2% of Zn; (2) using HNO<sub>3</sub>: 67.2% of Cd, 10.6% of Cr, 5.0% of Cu, 34.1% of Ni, 1.3% of Pb and 5.5% of Zn; (3) using CH<sub>3</sub>COOH: 65.0% of Cd, 12.7% of Cr, 5.1% Cu, 45.2% of Ni, 1.2% of Pb and 5.4% of Zn; and (4) using EDTA: 70.5% of Cd, 15.6% of Cr, 17.0% of Cu, 59.5% of Ni, 7.2% of Pb and 33.0% of Zn. The EDTA had high heavy metal leachability compared to water, acetic acid, and nitric acid. The average potential leachability decreased in the following order: Cd > Ni > Cr > Cu = Zn > Pb. The leachability exhibited a tendency to decrease with increasing organic matter for heavy metals other than Cr and Zn.

**Keywords:** *Sediment, leaching, heavy metals*[\[PDF \(594K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

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