

## Characteristics of heavy metals and metalloids included in natural sediments in the Kanto Plain, Japan

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In order to evaluate the various characteristics of the heavy metals and metalloids contained in the natural sediments distributed over the Kanto Plain, Japan, we examined the leachabilities of arsenic (As), lead (Pb), iron (Fe), chromium (Cr), manganese (Mn), etc. for natural sediments which has no effect of anthropogenic contamination. All the analysis samples were obtained on the Arakawa lowland, the Nakagawa lowland and the Oomiya upland which are located in central part of the Saitama Prefecture. We measured the total contents and the leachabilities of these heavy metals for a total of about 200 samples (25 sites) collected in the depth from 0m to 50m. Chemical compositions of the specimens were determined using X-ray fluorescence spectrometry (XRF) while the solution water chemistry was analyzed using Inductively Coupled Plasma Mass Spectrometry (ICP/MS). In this paper, we will discuss the leachabilities of these heavy metals and metalloids to solution through the leaching test base on the background mentioned above.

Keywords: Heavy metal, Arsenic, Lead, Water-rock interaction, leaching, sediments