Depth profiles of heavy metal in the accumulated soil at the Hŏedong Reservoir

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According to the properties of the accumulated soil, the contents of heavy metal atoms adsorbed in the soil may be different. Several factors, especially pH and specific property of the soil, affect the amount of heavy metal atoms in the soil.

Sampling has done at 50-m intervals of drift along the water channel at the Hŏedong Reservoir in Pusan. Three sampling points were selected, each point was digged to 190-cm depth, sampled each 5-cm depth. After each sample was air dried, digested in aqua regia and then analyzed with ICP.

Zn, Pb, Cd, Mn, Fe, Cu, and Cr were determined, average contents of Pb(ppm/%Fe), Cd(ppm/%Fe) and Cr(ppm/%Fe) were observed to 13.5($\pm$2.0), 2.1$\pm$(0.1), and 4.5($\pm$0.3), respectively. At each sampling point, maximum content of heavy metal atoms of the farthest point along water channel was observed from 5-cm to 25-cm depth, the mid point was from 45-cm to 65-cm depth. But the nearest point did not show any specific trend. The depth profiles of Zn, Pb, Cd, Fe, Cu, and Cr showed very similar trends, but that of Mn showed different trends to the former ones.

According to the distribution of each metal atoms along the depth, we examined correlation among some heavy metal atoms for distribution level and with pH of each sampling point

In addition, we studied effects of contents of total nitrogen for sampling point