

**Wojtkowska, M., Bogacki, J. Use of Speciation Analysis for Monitoring Heavy Metals in the Bottom Sediments of the Utrata River. *Ochrona Srodowiska* 2012, Vol. 34, No. 4, pp. 43–46.**

**Abstract:** Some heavy metals found in the bottom sediments of the Utrata River were analyzed for mobility. Tessier's sequential extraction procedure was carried out using air-dried sediments with grain diameters greater than 90  $\mu\text{m}$ . Concentrations of Cu, Pb, Zn, and Cd in particular extracts were measured by means of the FAAS technique. Among the heavy metals examined, the most toxic one, namely cadmium, was characterized by the highest mobility. Zinc and lead tended to form complexes with mobile fractions, which is an indication of their potential for desorption to water. Copper, which occurred in great amounts in complexes with the organic fraction, exhibited the lowest mobility. Taking into account the percentage of two metals with the highest mobility in the total heavy metal content, the bio-availability of the heavy metals examined was arranged in the following order: Cd>Zn>Pb>Cu. The data obtained will be used in further research on the migration of the deposited heavy metals within the water depths–bottom sediments system.

**Keywords:** Heavy metals, bottom sediments, sequential extraction procedure, pollution.