Sequential Extraction Of Heavy Metals Based On Sediment Grain Size

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Surface sediments from the Lower Sakarya River were analysed for their metal concentrations based on grain size. For this purpose, a four step sequential extraction procedure was used to elucidate the amount of metal released at each stage. Studies using a four-stage sequential extraction procedure for the determination of extractable heavy metals in sediments of various rivers in Turkey [1-3] were mainly focused on sediments without mentioning grain size. However, this study directly focused on the sediments with different grain size.

In this work, the samples were taken along the river for 12 months period and analysed monthly for metal analysis. The sediment samples were separated according to particle size [4] and analysed for metal levels. The BCR protocol fractionates the metals as acid soluble, exchangeable, reducible, and oxidisable. Determination of Cd, Co, Cr, Cu, Fe, Mn, Ni, Pb and Zn metals was performed by flame atomic absorption spectrometry (FAAS). The obtained results will be presented in 6th Aegean Analytical Chemistry Days.

References