



"Gh. Asachi" Technical University of Iasi, Romania

CONCENTRATION OF HEAVY METALS IN SEDIMENTABLE POLLUTANT POWDERS

Vasile Viman, Mariana Dobra *

North University of Baia Mare, 62/A Dr. Victor Babes Street 430083 Baia Mare, Romania

Abstract

The estimation of the pollution level and of the dangers presented by this phenomenon, implies some analyses in which the concentrations of heavy pollutant metals should be determined in samples of dusts from the air, samples of soil and plants. The analytical techniques used must have low detection limits, the lowest matrix effects possible and they must allow the determination, as precise as possible, of the major components as well as of the minor ones and in traces. The methods that respond to these requirements are from the category of atomic absorption spectrometry (AAS) or inductively coupled plasma atomic emission spectrometry (ICP-AES). The area in which the researches were done is characterized by the existence of some industrial units of extraction of some ores which contain as major components Pb, Cu, Zn and as minor components or in traces Cr, Mn, Ni, Co, Ag, Au, Al, Fe. The presence of these metals in the air, water and soil has negative effects on human health, plants and animals.

Keywords: heavy metals, AAS, ICP-AES, speciation

* Author to whom all correspondence should be addressed: Phone: 0040262/422778, Fax: 0040262/276153, e-mail: mdobra@ubm.ro