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"Gh. Asachi" Technical University of Iasi, Romania

BIOMONITORING: A GOOD OPPORTUNITY FOR EXTENSIVE INFORMATION ON THE HEAVY METAL CONTENT OF THE ATMOSPHERE (MOSSES)

Raluca Mocanu*, Simona Cucu – Man

Department of Analitycal Chemistry, Faculty of Chemistry, "Al.I.Cuza" University, 11 Carol I Blvd., Iasi, Romania

Abstract

The environmental pollution has become major contemporary problem, which must be kept under control. Only heavy metals from the atmosphere have been selected to be presented, from a huge number and categories of pollutants affecting the environment. They may be accumulated on different materials like: soil, peat, sediments and biological materials. The surface of these materials makes possible the investigation of long-term variation of atmospheric heavy metal concentration. Use of biological materials is the basis for establish a biomonitoring network on a large areas, for a long number of years. Biomonitoring,as a continuous observation of an area with the help of bioindicators will allow a qualitative survey and a quantitative estimation of heavy metals presence in the atmosphere. From the extremely large number of biomonitors (higher plants,fungi,lichens etc.) mosses have been selected as an example of a good bioindicator. Moss biomonitoring has many advantages common to other bioindicators,but some advantages make it gain ground on the later and on physical and chemical methods:costless,mosses have no roots and conducting system which allows to detect mainly heavy metals from the atmosphere, very simple handling, sampling and digestion of sample, an efficient uptake etc. The heavy metal content can be evaluated by means of currently used instrumental methods in trace analysis. The widely large application of moss monitoring speakes about above-mentioned advantages and on the future of this method.

Keywords: biomonitoring, mosses, heavy metals, atmosphere

* Author to whom all correspondence should be addressed: e-mail rmocanu@ch.tuiasi.ro