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## MONITORING AND STATISTICAL ASSESSEMENT OF HEAVY METALS IN SOIL AND LEAVES OF *Populus Nigra L*

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### Abstract

In this article we present the results of the study concerning the relationship between the concentration of trace elements (lead, chromium, cadmium, cobalt, copper, zinc and nickel) in soil and in the leaves and bark of *Populus nigra L*. The samples were collected in the period May 2010 – October 2010 in two areas from the Romanian North Littoral of Black Sea. The concentrations of the trace elements in soil, leaves and bark were determined using Flame Atomic Absorption Spectrometry (FAAS). Statistical analyses have been performed to detect the difference of mean accumulation in leaves, bark and soil and the linear dependence between the concentrations of elements in leaves (respectively bark) and soil. The result didn't shows significant differences of trace metals concentration in the monitored sites. The values of the concentration factors (CF) emphasize a higher heavy metals accumulation in bark compared to leaves, especially in the month of May. They also prove low translocation from soil to plant leaves in the study areas.

*Key words:* concentration factor, determination coefficient, pollution, statistical analysis

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