

HEAVY METALS IN URBAN PARK SOIL: A STUDY IN THE CITY OF SÃO PAULO, BRAZIL

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Urban soils are less studied than agricultural soils because only a small fraction is used for food production. However this type of soil is receiving an increasing focus of attention. The majority of the population in developing countries lives or works in urban areas, and as such have direct contact with this type of soil through, for example, use of public-access recreational areas such as parks or ornamental gardens. Metals in urban soils have been shown to be very useful tracers of environmental pollution. These soils play an important role in maintaining the environmental quality as they can act as both source and sink for pollutants that can affect human health. In urban areas where public gardens and parks are exposed to significant pollution levels, dust from the ground may have toxic effects as a consequence of inhalation or ingestion by humans. Metal contamination is an important environmental question in São Paulo, a metropolis with about 18 million inhabitants. There is little information concerning this subject. In the present study, the concentration of the elements As, Ba, Cr, Cu, Pb, Sb and Zn, were determined in surface soil samples (0-5cm and 0-20cm) from four public parks located in the Northern and Eastern regions of São Paulo city. The preliminary results obtained in this study indicated that soils of the São Paulo public parks present concentration levels of these elements higher than the values considered as reference values for soils in São Paulo, according to the Environmental Protection Agency of the State of São Paulo (CETESB) guidelines. The concentrations obtained suggest an anthropogenic source and indicate potential damage to the city's soil quality.