

SEASONAL VARIATIONS AND SOURCES OF HEAVY METALS IN URBAN AREA

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Abstract: According to World Health Organization (WHO) air pollution caused by particulate matter (PM), is identified as one of the leading risk factors of mortality in the world. Various heavy metal elements are constituents of ambient PM, and most of them are toxic and chemically very stable, which means that transport and dispersion of PM can expand their impact far from their source of origin. In this paper seasonal variations and sources of heavy metals in atmospheric particle matter (PM₁₀) were investigated. The study was conducted in time period 2014-2018 at four different locations in urban area in city of Bor, Serbia. The PM₁₀ samples collected during warm and cold seasons were analyzed for four heavy metals: Lead (Pb), Arsenic (As), Nickel (Ni) and Cadmium (Cd). Sources of metal elements have been investigated by Principal Component Analysis (PCA).

Keywords: heavy metals, seasonal variation, PCA