



Level of Heavy Metals and the Impact of Anthropogenic Pollution on Some Alternative Springs in Drenica and Mitrovica Zone – Kosova

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Abstract: This paper studies the quality status of drinking water for the five alternative springs in Drenica and Mitrovica zone. There have been determined seven water physical and chemical parameters and the levels of eight heavy metals Fe, Zn, Mn, Cu, Ni, Cd and Pb. In parallel with the determination of physical and chemical values, we have also determined anthropogenic pollution (chemical and technological processes at “FERONIKEL” Smelter in Drenas). The determination of physical and chemical parameters had been carried out immediately after water sampling in springs, while the identification of levels of heavy metals had been made at the National Public Health Institution in Pristine by Spectrophotometer of Atomic Absorption in the flame of low level of the detection expressed in µg/ml or ppm. A calibrating curve on ppm levels of detection had been created for each metal and then the sample absorbance had been made. The research was carried out during the two seasons of summer-winter 2007-2008. The outcomes of physical-chemical parameters obtained for five springs are a result of average values permitted, and as for identified levels of heavy metals, some of them exceed MPV (maximum permitted value) of the WHO’s standards with all springs. Heavy metals result in higher levels than permitted by the World Health Organization (WHO’s) standards are Ni, Pb, Mn and Cr. The excess of permitted levels of the WHO with these springs may be attributed to geomorphologic structure and geochemical phone and anthropogenic pollution (. The fifth up-coming spring examined “Kroi i Fshatit”, located in Zhazhe results in very high levels of Ni, Pb and Mn, and same may not be used for drinking by the Community, even in emergent cases.

Keywords: *heavy metals, geochemical phone, anthropogenic pollution, spectrophotometry of atomic absorption –SAA, springs.*

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