

## **The Impact of Mining Industrial Processes of "Trepça" Complex in the Quality of Rivers Trepça and Sitnica**

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**Abstract:** Mitrovica is a city that lies in northern part of Kosovo, and it is also recognized as the biggest center with the largest metallurgic and mining complex Trepça in Europe. The Mining activities in Mitrovica have resulted with a dramatic environmental pollution. These are processing until 2000, and the existence of three tailing dams contributed to the dissemination of hazardous material in air, soil and water. As a result of uncontrolled water, discharged of industrial processes such as: discharged water from mining and flotation in Stan Terg and First Tunnel, Metallurgy and zinc battery factory in Mitrovica, rain waters from industrial landfills, water from drainage channels that flow directly into rivers without prior treatment, even that they show serious problem regarding to pollution of Trepca and Sitnica rivers, adding a high level of a heavy metals concentration which exceed international standards. The main objective of the present investigation was to evaluate and to analyze the impact of these industrial processes in the quality of water of Trepça and Sitnica rivers. The Atomic Absorption Spectrometry (Shimadzu AA-6300) was applied for the determination of lead, zinc, cadmium, copper and iron levels in Trepça Flotation Laboratory. It was found that the level of lead (0.6434 mg / L), zinc (2.08 mg / L), copper (0.1374 mg / L), iron(0.7132 mg / L) and cadmium (0.015 mg / L) concentration is relatively high. The pollution of rivers with heavy metals represents a permanent threat to flora, fauna and the population who are living in the region. Therefore, in conclusion, the study presents recommendations for possibility of eliminating or reducing the concentration of heavy metals.

**Keywords:** *heavy metals, river pollution, Atomic Absorption Spectrometry.*

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