



The Level Concentration of Heavy Metals in Water and Soil around the Landfill Waste in Kishnica Before and After Treatment

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Abstract: In this work we have determined the concentrations of heavy metals in soil, water and waste after flotation process around the landfill in Kishnica with SAA method at June 2010, after landfill coverage with soil. Also we have compared the concentration of heavy metals in this region, by taking samples in the same sample places were taken and measured at year 2004 with SAA method. Samples of waste after flotation process were taken in the area with high indication of pollution, in three positions: in north site of landfill, in front of flotation factory and one in south site of landfill. In landfill waste, we found that the concentration of heavy metals were: Pb 4.480 -11.150 mg/kg ; Zn 2.900-8.700 mg/kg; Cu 6.180-10.20 mg/kg; Cd 3.700-5.200 mg/kg; The concentration of heavy metals in soil, near the landfill, in the football area, in the Graçanica entrance and in the agricultural area, differ as following: Pb 1.000-3.700 mg/kg; Zn 2.000-3.200 mg/kg; Cu 2.000-4.180 mg/kg and Cd 1.500-3.800 mg/kg. Samples for water analysis were taken in five different positions in the river Graçanka. The concentrations of heavy metals in water were: Pb 0.080-11.04 mg/dm³; Zn 0.480-5.700 mg/dm³; Cu 0.760-10.20 mg/dm³ and Cd 0.460-5.020 mg/dm³. According to the experimental results obtained in this work we can conclude that: The level concentration of heavy metals in landfill compared with level concentration of heavy metals measured at 2004 have a little change, except for level in water analysis that are higher at 2010 because mine now is active. Waste after flotation process and water in discharge tube, discharge with high concentration of heavy metals. These metals will have a negative influence on the contamination of water, and soil. From these results we have found that the concentration of heavy metals in these environmental areas (water, soil and waste after flotation process) were higher even after landfill coverage, but also compared with the standards of water, soil and waste product from ores.

Keywords: *Heavy metals, waste, flotation process, water, soil, Kishnica, Prishtina, Kosovo*

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