

Pollution with Heavy Metals in Wells and Land around Battery Factory in Gjilan, after the Processes of Technological Waste Material

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Abstract: In this work, we determinate the concentrations of heavy metals in the soil of the factory yard, agricultural and factory lands around of this site and wells in this yard, which are used in technological processes in the factory, the SAA method on May, 2013. In first sampling points (M₁-Soil), presented values, Pb; 0.014 mg/kg, Zn; 0.628 mg/kg, Cu; 0.196 mg/kg, Cd; 13.71 mg/kg, Ni; 0.158 mg/kg, Cr; 0.076 mg/kg, Fe; 0.573 mg/kg and Mn; 0.025 mg/kg. For the second sample place (M₂-Soil), values, Pb; 0.018 mg/kg, Zn; 0.635 mg/kg, Cu; 0.189 mg/kg, Cd; 13.6 mg/kg, Ni; 0.161 mg/kg, Cr; 0.081 mg/kg, Fe; 0.583 mg/kg and Mn; 0.019 mg/kg. The third sample place (M₃-Farmland), as shown values, Pb; 0.015 mg/kg, Zn; 0.605 mg/kg, Cu; 0.180 mg/kg, Cd; 6.10 mg/kg, Ni; 0.148 mg/kg, Cr; 0.051 mg/kg, Fe; 0.521 mg/kg and Mn; 0.011 mg/kg. In samples of well waters for the first sampling point, (M₁-Well-1), are presented as values, Pb; 0.178 mg/dm³, Zn; 0.293 mg/dm³, Cu; 0.248 mg/dm³, Cd; 0.019 mg/dm³, Ni; 0.142 mg/dm³, Cr; 0.048 mg/dm³, Fe; 0.314 mg/dm³ dhe Mn; 0.025 mg/dm³. In the second sampling point (M₂-Well-2), we have had values; Pb; 0.168 mg/dm³, Zn; 0.285 mg/dm³, Cu; 0.230 mg/dm³, Cd; 0.011 mg/dm³, Ni; 0.122 mg/dm³, Cr; 0.036 mg/dm³, Fe; 0.301 mg/dm³ dhe Mn; 0.018 mg/dm³. In third sample place (M₃-Well-3); Pb; 0.185 mg/dm³, Zn; 0.297 mg/dm³, Cu; 0.253 mg/dm³, Cd; 0.021 mg/dm³, Ni; 0.145 mg/dm³, Cr; 0.051 mg/dm³, Fe; 0.318 mg/dm³ dhe Mn; 0.028 mg/dm³.

Keywords: *Battery Factory, Gjilan, Heavy Metals, Well, Pollution, Waste.*

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