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Pollution with Heavy Metals in the River Lepenc and Agricultural Areas from Cement Factory in Elez Han "Sharrcem"

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Abstract: In this work, we determinate the concentration of heavy metals as; Zn, Pb, Cu, Fe, Ni and Mn in water, sludge of river Lepenc and agricultural areas around the river. The first sampling point, M_1-Soil, values as presented; Pb; 0.516 mg/kg, Zn; 0.394 mg/kg, Cu; 0.248 mg/kg, Ni; 0.142 mg/kg, Fe; 0.963 mg/kg and Mn; 0.516 mg/kg, while M_1-Water, presented values; Pb; 0.049 mg/dm^3, Zn; 0.169 mg/dm^3, Cu; 0.168 mg/dm^3, Ni; 0.060 mg/dm^3, Fe; 0.537 mg/dm^3 dheMn; 0.025 mg/dm^3,whereas M_1-Sludge, values appear, Pb; 0.621 mg/kg, Zn; 0.791 mg/kg, Cu; 0.267 mg/kg, Ni; 0.902 mg/kg, Fe; 0.675 mg/kg and Mn; 0.384 mg/kg. In second sampling point, M_2-Soil, values as presented; Pb; 0.700 mg/kg, Zn; 0.547 mg/kg, Cu; 0.379 mg/kg, Ni; 1,024 mg/kg, Fe; 1,241 mg/kg and Mn; 0.627 mg/kg while the M_2-Water, presented value, Pb; 0.094 mg/dm^3, Zn; 0.190 mg/dm^3, Cu; 0.196 mg/dm^3, Ni; 0.074 mg/dm^3, Fe; 0.573 mg/dm^3 dheMn; 0.035 mg/dm^3,whereas, in the M_2-Sludge, as reflected values; Pb; 0.789 mg/kg, Zn; 0.803 mg/kg, Cu; 0.275 mg/kg, Ni; 0.984 mg/kg, Fe; 0.691 mg/kg and Mn; 0.393 mg/kg. Also, the third sampling point, M_3-Soil, values as presented; Pb; 0.435 mg/kg, Zn; 0.447 mg/kg, Cu; 0.273 mg/kg, Ni; 1.011 mg/kg, Fe; 1.125 mg/kg and Mn; 0.546 mg/kg, for, M_3-Water, values such as: Pb; 0.058 mg/dm^3, Zn; 0.172 mg/dm^3, Cu; 0.181 mg/dm^3, Ni; 0.067 mg/dm^3, Fe; 0.549 mg/dm^3 and Mn; 0.029 mg/dm^3 , and M_3-Sludge, values presented; Pb; 0.695 mg/kg, Zn; 0.797 mg/kg, Cu; 0.270 mg/kg, Ni; 0.938 mg/kg, Fe; 0.683 mg/kg and Mn; 0.388 mg/kg.

Keywords:*Cement`Sharrcem' ElezHan, heavy metals, water, sludge, soil, Lepenc.*

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