

Heavy metals in human hair and teeth. The correlation with metal concentration in the environment.

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Streszczenie

Biological samples were collected simultaneously with environmental quality investigations. Studies of metal levels in biological (hair and teeth) and environmental (soil and air) samples were performed in Zwardoń during 1991/1992. Zwardoń is a small mountain resort village, situated on the border pass of Zwardoń, in the close proximity of the southwestern border of Poland. Heavy metal levels in soil, air, and chemical metals forms in the soil were examined. Pearson's product correlation in soil (for total concentration of heavy metals and each chemical form) in hair and in teeth was calculated to investigate bioavailability of heavy metals in human organism. We received essential correlations simultaneously between: Pb vs Mn in exchangeable form of metal in soil, in teeth and in soil (total); Cd vs Zn and Mn vs Co in organically bound form in soil and in teeth and soil (total); and Cu vs Zn in all investigated samples (teeth, hair, soil total, and organically bound form in soil); Mn vs Co and Cr vs Mn in residual form in soil, in teeth, and in soil (total) and between Co vs Ni for hair, soil (total), and residual form in soil.

Adres publiczny

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