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Naturally existing ²¹⁰Po in human and dog hair samples

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More than 100 samples of human hair and 15 samples of dog fur were collected from Pomeranian area for polonium analysis. The ²¹⁰Po concentration in analyzed hair samples ranged from 0.33±0.02 to 12.84±0.80 mBq.g⁻¹ dw (mean value is 3.41 mBq.g⁻¹).

The highest ²¹⁰Po activity values were found in hair sample collected from men had rich fish diet and smoked about 20 cigarettes per day. The lowest ²¹⁰Po concentration was found in hair sample collected from a lady who did not consume fish and did not smoke cigarettes. The lowest amounts were also found in children's hair (0.43±0.03 and 0.84±0.08 mBq.g⁻¹ dw) who did not eat much fish and lived at homes free of cigarettes. In the case of a child living at home where exposed at cigarettes this concentration was much higher -4.02 ± 0.37 mBq.g⁻¹ dw.

Among dogs fur the highest ²¹⁰Po concentration was found in 7 years old dachshund dog – 4.48 ± 0.54 mBq.g⁻¹ dw, but the lowest ²¹⁰Po concentration was found in 3 years old staffordshire bull terrier bitch –1.96\pm0.26 mBq.g⁻¹ dw.

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