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210Po and 210Pb in fur of domestic animals

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The aim of the study was to determine ^{210}Po and ^{210}Pb in fur samples collected from 15 breeds of dogs *Canis familiaris* living in the northern Poland.

The average values of analyzed radionuclides in analyzed dog fur ranged from 0.46 ± 0.02 mBq·g⁻¹ to 15.05 ± 1.13 mBq·g⁻¹ for ^{210}Po and from 0.31 ± 0.03 mBq·g⁻¹ to 9.82 ± 0.53 mBq·g⁻¹ for ^{210}Pb . The highest activities of ^{210}Po and ^{210}Pb were measured for small long-haired dog Maltese while the lowest in small long-haired Yorkshire terrier and Poodle toy. The values of the $^{210}\text{Po}/^{210}\text{Pb}$ activity ratio were calculated from 0.82 ± 0.09 for Yorkshire terrier to 5.16 ± 0.45 for Bolognese.

Generally, both ^{210}Po and ^{210}Pb radioisotopes accumulation did not depend on dog sex. Higher values of ^{210}Po and ^{210}Pb were found in long and rough-haired dogs. Further, our experiments showed the hair from dogs living in villages contained more ^{210}Pb than dogs living in the cities and dogs eating dry food accumulate more ^{210}Po in their hair in comparison to fresh or mixed food eating dogs.

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