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Characteristics of concentration correlations for the pairs of

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Some important naturally occuring a and b radionuclides in seventeen brands of drinking water samples collected in Italy were determined. The mean activity concentrations (mBq L-1) of the radionuclides in the water samples were almost in the order: 26 ± 36 (234U) > 21 ± 30 (238U) > 8.9 ± 15 (226Ra) > 4.8 ± 6.3 (228Ra) > 4.0 ± 4.1 (210Pb) > 3.2 ± 3.7 (210Po) > 2.7 ± 1.2 (212Pb) > 1.4 ± 1.8 (224Ra) > 1.1 ± 1.3 (235U) > 0.26 ± 0.39 (228Th) > 0.0023 ± 0.0009 (230Th) > 0.0013 ± 0.0006 (232Th). Based on the HCO3- concentrations and the radionuclide concentrations in the analysed waters, correlation analyses were made, and statistical positive correlations were found among the pairs of 228Ra/226Ra, 226Ra/HCO3-, 228Ra/HCO3-, 210Po/238U, 210Po/226Ra, 228Th/232Th, 228Th/228Ra, 228Th/HCO3- and 210Po/210Pb in drinking water.

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