DEFINITION BY METHODS OF MATHEMATICAL SIMULATION OF THE CONVERSION COEFFICIENT FOR THE ESTIMATION OF THE RADIOACTIVE CONTAMINATION OF SOILS BY ^{137}Cs

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The coefficient of conversion the doze rate at the centre of boreholes model to specific activity of soil by methods of the mathematical modelling is determined. This conversion coefficient can be used as coefficient of infinite environments for the estimation of radioactive contamination of soils as a result of accident on Chornobyl NPP. The calculation is carried out by two methods (analytical and software MicroShield, version 5.05) for the borehole model which represents the annular cylinder. The concrete is chosen as material of the cylinder's body. The source of gamma-radiation is ^{137}Cs, which evenly is distributed in total volume of the cylinder. The calculation results were compared among themselves and to the data received experimentally on the borehole model. The outcome analysis has shown that the distinction of conversion coefficients determined by methods of mathematical modelling and the experimental method do not exceed 10 %.