

13. SIC PRINCIPLES USED IN THE DEVELOPMENT OF SPECIFIC ACTIVITY PERMITTED IN FOOD PRODUCTS AND HYGIENE ASSESSMENT OF COMPLIANCE WITH THE ESTABLISHED STANDARDS

- 13.1. The standards relate to 90Sr and 137Cs as leading radionuclides of technogenic origin determining the internal radiation dose for food route of entry. Contribution to the dose from entry of 90Sr and 137Cs with basic food products should not exceed 1 mSv/year.
- 13.2. A value of 1 mSv/year is the level of interference exception when trading in food products.
- 13.3. The actual average Russian diet dated 1996 was used in the calculations, the data for 1992—1996 were given for comparison. (Table 1).

Table 1

Per capita Consumption of Food Products, g per day					
PRODUCTS	1992	1993	1994	1995	1996
Bread and bread products (in terms of flour)	286.0	293.0	276.0	279.0	266.0
Milk and dairy products <*>	563.5	586.6	584.5	478.8	450.8
Potato	293.0	309.0	309.0	309.0	296.0
Vegetables and gourds	214.0	210.0	194.0	227.0	214.0
Meat and meat products	158.0	158.0	158.0	145.0	132.0
Fish and fish products	32.9	29.6	23.0	26.3	26.3
Fruit and berries	78.9	85.5	82.2	82.2	85.5
Total	1626.3	1671.7	1626.7	1547.3	1470.6

<*> Without butter.

13.4. For food products which are consumed in minor quantities (by weight) the following assumptions were made:

- The dose due to their consumption is outside the dose of 1 mSv/year;
- Limiting the dose due to the consumption of such individual product shall be up to 1% and a total dose quota for all the products consumed in minor quantities should not exceed 10% (0.1 mSv/year).

13.5. Due to the fact that these Sanitary Rules are intended to limit the radiation of the population in situations of long-term residual radioactive contamination, while calculating the dose coefficient per entry unit for 90Sr the population of Russia with account of its age structure was taken as the reference population for which the radiation doses are calculated. The effective dose coefficient (e) for the population of Russia is 3.6×10^{-8} Sv/Bq.

13.6. To determine the compliance of food products with radiation safety criteria the compliance indicator V was used, the value of which is calculated according to results of measuring the specific activity of 90Sr and 137Cs in the sample:

$$V = (A / N) 90\text{Sr} + (A / N) 137\text{Cs}, \text{ where}$$

A means the measured value of the specific activity of 90Sr and 137Cs in the food product, Bq/kg;

N means the permissible level of specific activity for 90Sr and 137Cs in the same product, Bq/kg.

13.7. Control over the specific activity of food products and the hygienic assessment are carried out in accordance with the effective methodological instructive regulations for taking of samples, analysis, and hygienic assessment for radiation control of strontium-90 and cesium-137 in food products.

ConsultantPlus: note.

_____ The Annex was not submitted for registration to the Ministry of Justice of the Russian Federation.
