

**PUE “INSTITUTE OF RADIATION SAFETY “BELRAD”**

APPROVED

Director of PUE “Institute of Radiation  
Safety “Belrad”

\_\_\_\_\_ A.V. Nesterenko

“ \_\_\_\_ ” \_\_\_\_\_ 20\_\_

**SHORT REPORT**

**UNDER THE CONTRACT No. 36 (ATLAS-2) DATED TO JUNE 25, 2008  
(STAGES 15 AND 16)**

Deputy director  
for international cooperation

\_\_\_\_\_ V.I. Babenko

« \_\_\_\_ » \_\_\_\_\_ 20\_\_

**MINSK**

**2010**

According to the Contract No. 36 dated to June 25, 2008 following actions given in the table 1 were performed in framework of the stages 15 and 16.

Table 1 – Data on the number of measurements and the quantity of the preparation VITAPECT given in framework of the stages 15 and 16 to the Contract No. 36.

Settlement	Date	Number of measurements			Quantity of VITAPECT		Notes
		expected	all	children	expected	actual	
Chechersk gymnasium of Gomel region	03-04.12.2009	280	263	259	560	-	
	17.02.2010	-	-	-	-	560	
	03-05.03.2010	280	271	268	-	-	
	25.05.2010	-	103	102	-	-	Control measurement
Chechersk secondary school No.1 of Gomel region	08-11.12.2009	520	504	492	1040	-	
	17.02.2010	-	-	-	-	1040	
	02-05.03.2010	520	412	402	-	-	
<b>TOTAL:</b>		<b>1600</b>	<b>1553</b>	<b>1523</b>	<b>1600</b>	<b>1600</b>	

Hereafter there is a statistical data processing.

## CHECHERSK, GIMNASIUM

Characteristics	Value	Source
<sup>137</sup> Cs contamination density of the territory	7.75 Ci/km <sup>2</sup>	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	7700 persons	Chechersk executive committee, dated to 01.01.2009
External dose	0.93 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	1.50 mSv/a	-----«-----
Cumulative dose	2.43 mSv/a	-----«-----

According to the data dated to December 2009 in the Chechersk gymnasium there are 255 children, 31 teachers and 22 persons of other staff.

Children from following settlements go to the Chechersk gymnasium: Chechersk and Kovalyov Rog.

### December 3-4, 2009

The first measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 263 persons (259 children and 4 adults).

Average <sup>137</sup>Cs specific activity in the whole group (n = 259): (22.8 ± 1.1) Bq/kg.

Average <sup>137</sup>Cs specific activity in the critical group (n = 30): (54.7 ± 7.0) Bq/kg.

Median value in the whole group: 19.6 Bq/kg.

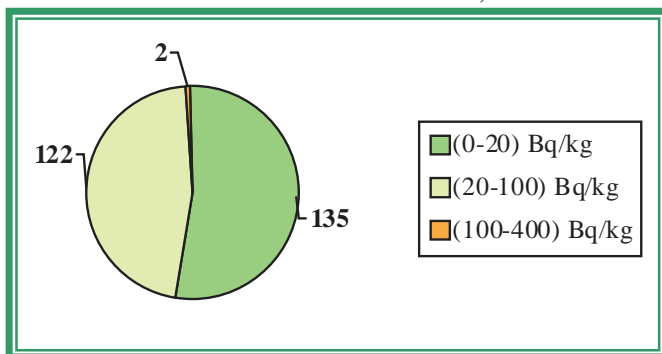
Median value in the critical group: 42.0 Bq/kg.

The table 2 demonstrates the maximal levels of <sup>137</sup>Cs specific activity (the critical group) according to the results of measurements dated to December 03, 2009 to December 04, 2009.

Table 2

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	K.S.S.	SCHOOLGIRL	F	37	1998	211.5
2.	H.N.V.	SCHOOLGIRL	F	70	1994	129.1
3.	Ch.A.S.	SCHOOLBOY	M	36	1998	98.5
4.	L.V.A.	SCHOOLGIRL	F	47	1995	97.5
5.	P.T.A.	SCHOOLGIRL	F	58	1995	71.7
6.	H.A.Yu.	SCHOOLGIRL	F	30	1999	66.2
7.	T.V.N.	SCHOOLGIRL	F	57	1993	64.1
8.	U.E.A.	SCHOOLBOY	M	87	1993	60.4
9.	R.S.A.	SCHOOLGIRL	F	52	1992	59.6
10.	B.D.S.	SCHOOLBOY	M	46	1997	57.9
11.	F.E.A.	SCHOOLBOY	M	51	1996	51.7
12.	J.A.M.	SCHOOLGIRL	F	52	1995	50.0
13.	R.S.A.	SCHOOLGIRL	F	47	1992	49.5
14.	F.E.V.	SCHOOLBOY	M	48	1996	48.1
15.	P.D.E.	SCHOOLGIRL	F	67	1997	43.7
16.	G.I.P.	SCHOOLGIRL	F	63	1997	40.2
17.	G.V.N.	SCHOOLBOY	M	18	2003	37.8
18.	T.A.A.	SCHOOLBOY	M	74	1995	35.9
19.	K.E.Yu.	SCHOOLBOY	M	49	1996	32.5
20.	K.K.O.	SCHOOLBOY	M	23	2002	31.7
21.	S.T.N.	SCHOOLGIRL	F	73	1993	31.4
22.	P.V.V.	SCHOOLGIRL	F	45	1994	31.3
23.	R.Yu.S.	SCHOOLGIRL	F	44	1999	31.0
24.	G.D.D.	SCHOOLGIRL	F	27	2003	30.7
25.	K.V.S.	SCHOOLGIRL	F	20	2003	30.5
26.	F.A.G.	SCHOOLGIRL	F	21	2003	30.3
27.	S.E.A.	SCHOOLGIRL	F	20	2003	30.2
28.	P.S.V.	SCHOOLBOY	M	59	1995	30.0
29.	Ch.A.M.	SCHOOLBOY	M	35	1999	29.0
30.	L.Yu.N.	SCHOOLBOY	M	35	1998	29.0

The figure 1 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements dated to December 03, 2009 to December 04, 2009.



←Figure 1 - Diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements dated to December 03, 2009 to December 04, 2009

On February 17, 2010 560 packings of the pectin preparation VITAPECT were given for children.

### March 3-5, 2010

The second measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 271 persons (268 children and 3 adults).

Average  $^{137}\text{Cs}$  specific activity in the whole group (n = 268):  $(18.9 \pm 0.9)$  Bq/kg.

Average  $^{137}\text{Cs}$  specific activity in the critical group (n = 30):  $(45.3 \pm 5.3)$  Bq/kg.

Median value in the whole group: 16.2 Bq/kg.

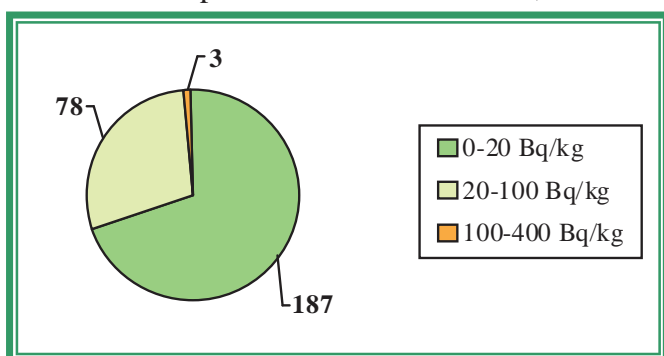
Median value in the critical group: 29.6 Bq/kg.

The table 3 demonstrates the maximal levels of  $^{137}\text{Cs}$  specific activity (the critical group) according to the results of measurements performed from March 03, 2010 to March 05, 2010.

Table 3

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	K.I.A.	SCHOOLGIRL	F	43	1996	132.0
2.	K.S.S.	SCHOOLGIRL	F	38	1998	109.3
3.	U.E.A.	SCHOOLBOY	M	84	1993	102.8
4.	T.V.V.	SCHOOLBOY	M	74	1995	87.6
5.	S.M.M.	SCHOOLGIRL	F	45	1995	84.0
6.	T.I.V.	SCHOOLBOY	M	52	1998	62.6
7.	L.V.A.	SCHOOLGIRL	F	47	1995	56.6
8.	T.V.N.	SCHOOLGIRL	F	59	1993	51.4
9.	Ch.A.S.	SCHOOLBOY	M	39	1998	51.0
10.	P.D.O.	SCHOOLBOY	M	29	1997	45.7
11.	F.E.V.	SCHOOLBOY	M	52	1996	37.6
12.	F.E.A.	SCHOOLBOY	M	52	1996	33.3
13.	G.V.N.	SCHOOLBOY	M	18	2003	32.5
14.	B.A.A.	SCHOOLGIRL	F	25	2002	30.0
15.	M.A.M.	SCHOOLBOY	M	22	2002	29.9
16.	L.A.V.	SCHOOLBOY	M	19	2002	29.2
17.	J.A.M.	SCHOOLGIRL	F	54	1995	29.2
18.	Ch.A.N.	SCHOOLBOY	M	45	1995	28.5
19.	P.V.A.	SCHOOLBOY	M	23	2003	28.2
20.	B.T.V.	SCHOOLGIRL	F	19	2003	28.0
21.	M.A.S.	SCHOOLGIRL	F	25	2003	28.0
22.	K.A.I.	SCHOOLGIRL	F	27	2002	28.0
23.	H.A.Yu.	SCHOOLGIRL	F	31	1999	27.9
24.	B.D.S.	SCHOOLBOY	M	48	1997	27.2
25.	B.A.A.	SCHOOLGIRL	F	24	2003	27.1
26.	E.D.P.	SCHOOLBOY	M	26	2002	26.8
27.	E.K.A.	SCHOOLGIRL	F	22	2003	26.6
28.	L.Yu.N.	SCHOOLBOY	M	36	1998	26.5
29.	S.S.S.	SCHOOLBOY	M	40	1997	25.9
30.	M.P.P.	SCHOOLBOY	M	18	2003	25.8

The figure 2 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements performed from March 03, 2010 to March 05, 2010.



←Figure 2 – Diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements performed from March 03, 2010 to March 05, 2010

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of  $^{137}\text{Cs}$  in children having taken VITAPECT and having passed two WBC measurements (on December 03, 2009 and December 04, 2009 and from March 03, 2010 to March 05, 2010). This group consists of 244 children.

### December 3-4, 2009 March 3-5, 2010

The first measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 263 persons (259 children and 4 adults).

The second measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 271 persons (268 children and 3 adults).

The data of statistical processing of the results of measurements of the group of children having passed two WBC measurements and having taken VITAPECT-T (244 children).

Average specific activity of  $^{137}\text{Cs}$ :

after the first measurement:  $(23.0 \pm 1.1)$  Bq/kg,

after the second measurement:  $(18.4 \pm 0.8)$  Bq/kg.

Decrease of average specific activity of  $^{137}\text{Cs}$  was 20%.

Increase of specific activity: in 2% children.

The same level of specific activity: in 20% children.

Reduction of specific activity: in 78% children.

The evaluation of the scientific significance according to T-Student criterion ( $n = 244$ ):  $t=4.90$ . The received criterion  $t > 1.96$ ;  $p < 0.01$ .

Median value after the first measurement: 20.5 Bq/kg.

Median value after the second measurement: 16.0 Bq/kg.

Decrease of median value of specific activity of  $^{137}\text{Cs}$  was 22%.

The figure 3 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements performed from December 03, 2009 to December 04, 2009 and from March 03, 2010 to March 05, 2010.

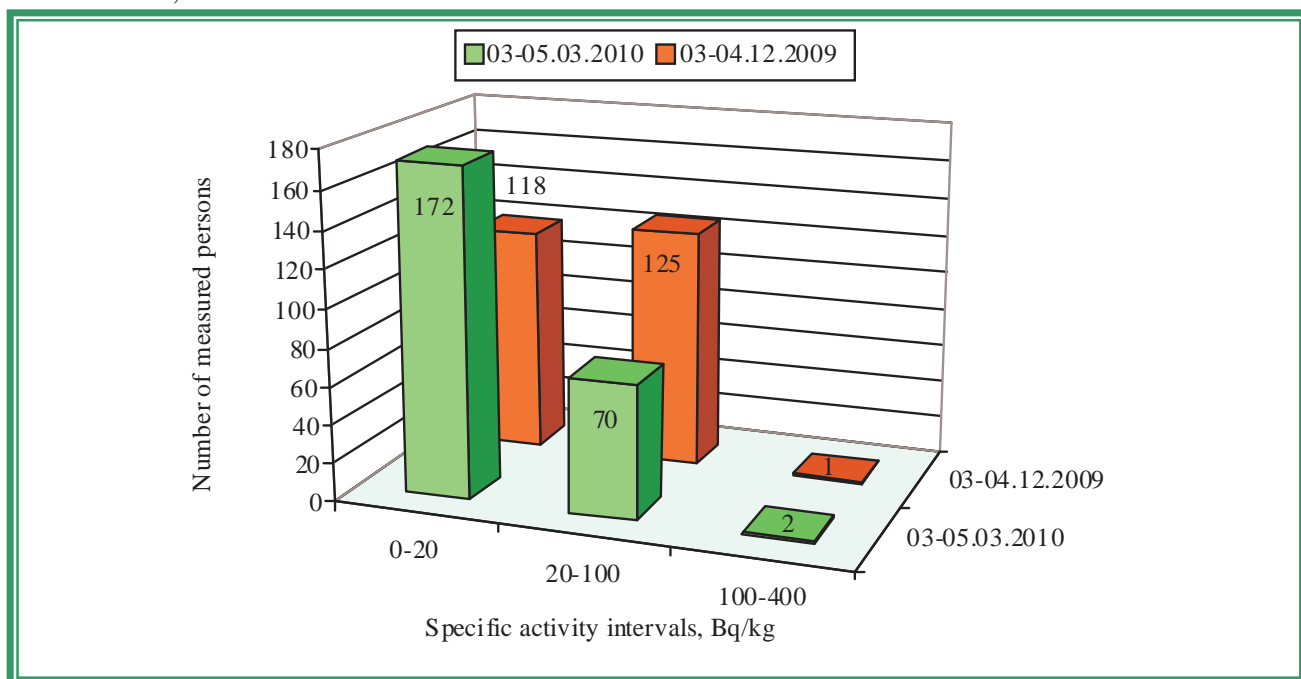


Figure 3 - Diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements performed from December 03, 2009 to December 04, 2009 and from March 03, 2010 to March 05, 2010

**May 25, 2010**

The control measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 103 persons (102 children and 1 adult).

Average  $^{137}\text{Cs}$  specific activity in the whole group ( $n = 102$ ):  $(23.5 \pm 1.0)$  Bq/kg.

Average  $^{137}\text{Cs}$  specific activity in the critical group ( $n = 30$ ):  $(32.3 \pm 2.1)$  Bq/kg.

Median value in the whole group: 23.2 Bq/kg.

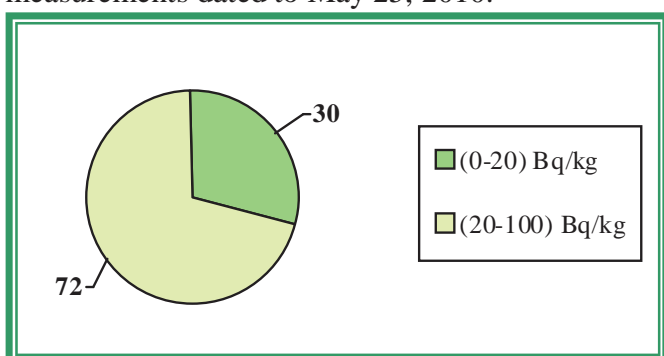
Median value in the critical group: 29.1 Bq/kg.

The table 4 demonstrates the maximal levels of  $^{137}\text{Cs}$  specific activity (the critical group) according to the results of measurements dated to May 25, 2010.

Table 4

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	H.N.V.	SCHOOLGIRL	F	70	1994	85.1
2.	U.E.A.	SCHOOLBOY	M	83	1993	61.2
3.	A.T.N.	SCHOOLGIRL	F	53	1992	34.2
4.	R.S.A.	SCHOOLGIRL	F	50	1992	33.4
5.	G.Yu.S.	SCHOOLGIRL	F	59	1993	33.0
6.	R.M.A.	SCHOOLGIRL	F	45	1992	32.7
7.	Z.L.V.	SCHOOLGIRL	F	54	1993	32.5
8.	B.M.N.	SCHOOLGIRL	F	54	1993	31.5
9.	G.V.S.	SCHOOLBOY	M	65	1994	31.4
10.	G.T.V.	SCHOOLGIRL	F	54	1993	30.8
11.	T.V.V.	SCHOOLBOY	M	75	1995	30.0
12.	R.A.S.	SCHOOLGIRL	F	45	1995	30.0
13.	F.I.E.	SCHOOLGIRL	F	45	1994	29.7
14.	Sh.E.A.	SCHOOLGIRL	F	44	1994	29.4
15.	M.V.M.	SCHOOLGIRL	F	47	1994	29.4
16.	F.E.V.	SCHOOLBOY	M	52	1996	28.9
17.	M.A.M.	SCHOOLGIRL	F	57	1995	28.9
18.	J.A.M.	SCHOOLGIRL	F	52	1995	28.8
19.	K.A.V.	SCHOOLBOY	M	65	1994	28.6
20.	L.V.A.	SCHOOLGIRL	F	49	1995	28.4
21.	M.M.S.	SCHOOLGIRL	F	55	1994	28.2
22.	H.E.A.	SCHOOLGIRL	F	50	1995	27.8
23.	L.Ya.N.	SCHOOLGIRL	F	51	1995	27.6
24.	Sh.E.V.	SCHOOLGIRL	F	45	1996	27.5
25.	S.Yu.V.	SCHOOLGIRL	F	55	1995	26.8
26.	K.A.A.	SCHOOLBOY	M	60	1993	26.6
27.	K.M.N.	SCHOOLGIRL	F	47	1995	26.6
28.	S.M.M.	SCHOOLGIRL	F	45	1995	26.4
29.	Yu.Yu.A.	SCHOOLGIRL	F	61	1992	26.3
30.	T.I.V.	SCHOOLBOY	M	65	1992	26.1

The figure 4 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements dated to May 25, 2010.



←Figure 4 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements dated to May 25, 2010

Hereafter there are comparative data on interval distribution of the specific activity of  $^{137}\text{Cs}$  in children having passed two WBC measurements (from March 03, 2010 to March 05, 2010 and on May 25, 2010). This group consists of 244 children.

**March 3-5, 2010**  
**May 25, 2010**

The second measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 271 persons (268 children and 3 adults).

The control measurement of children in the Chechersk gymnasium of Gomel region was performed in the gymnasium building. A total of measured persons was 103 persons (102 children and 1 adult).

The data of statistical processing of the results of measurements of the group of children having passed two WBC measurements and having taken VITAPECT-T (84 children).

Average specific activity of  $^{137}\text{Cs}$ :

after the first measurement:  $(22.9 \pm 2.0)$  Bq/kg,

after the second measurement:  $(24.1 \pm 1.1)$  Bq/kg.

Increase of average specific activity of  $^{137}\text{Cs}$  was 5%.

Increase of specific activity: in 58% children.

The same level of specific activity: in 14% children.

Reduction of specific activity: in 28% children.

The evaluation of the scientific significance according to T-Student criterion ( $n = 84$ ):  $t=0.77$ . The received criterion  $t < 1.96$ ;  $p > 0.01$ .

Median value after the first measurement: 18.5 Bq/kg.

Median value after the second measurement: 23.5 Bq/kg.

Increase of median value of specific activity of  $^{137}\text{Cs}$  was 27%.

The figure 5 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements performed from March 03, 2010 to March 05, 2010 and on May 25, 2010.

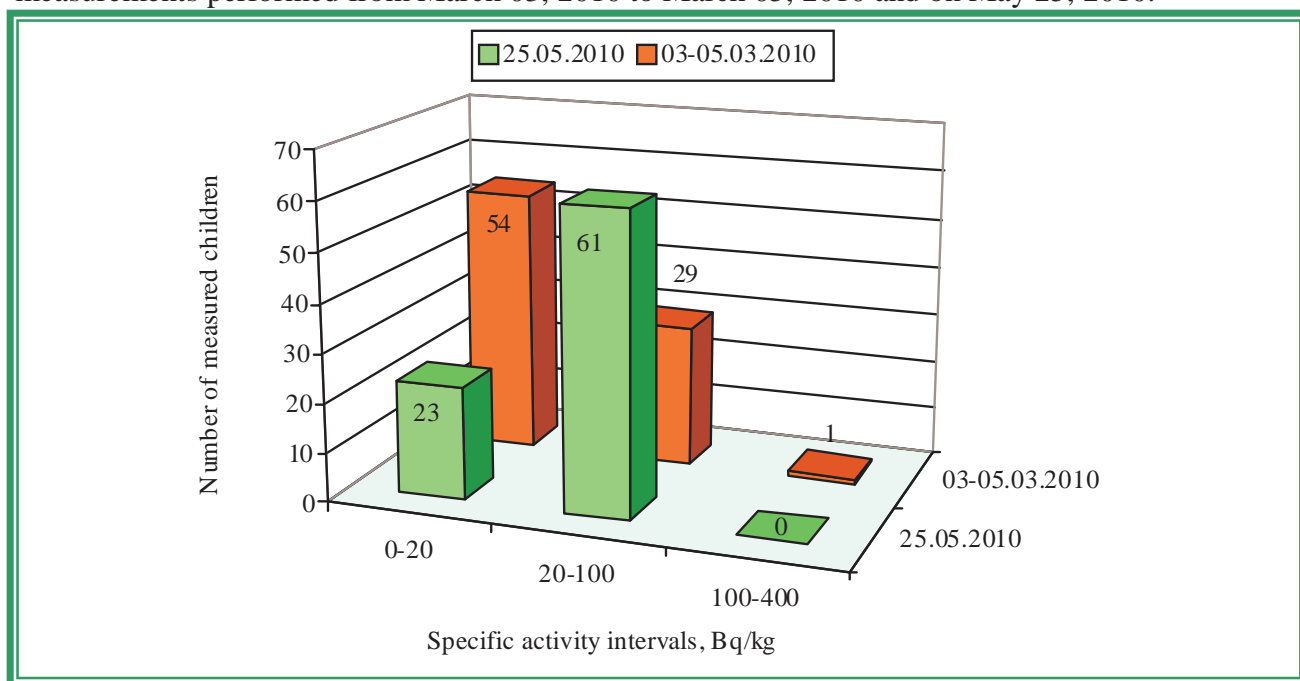


Figure 5 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk gymnasium of Gomel region in accordance with the results of measurements performed from March 03, 2010 to March 05, 2010 and on May 25, 2010

## CHECHERSK, SECONDARY SCHOOL No. 1

Characteristics	Value	Source
$^{137}\text{Cs}$ contamination density of the territory	7.75 Ci/km <sup>2</sup>	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004

Number of inhabitants	7700 persons	Chechersk executive committee, dated to 01.01.2009
External dose	0.93 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	1.50 mSv/a	-----«-----
Cumulative dose	2.43 mSv/a	-----«-----

According to the data dated to December 2009 in the Chechersk secondary school No.1 there are 557 children, 71 teachers and 23 persons of other staff.

Children from following settlements go to the Chechersk secondary school No.1: Chechersk, Starye Mlynichi, Zalesye, Voznesensky, Ippolitovka and Belyayevka.

## December 8-11, 2009

The first measurement of children in the Chechersk secondary school No.1 of Gomel region was performed in the school building. A total of measured persons was 504 persons (492 children and 12 adult).

Average  $^{137}\text{Cs}$  specific activity in the whole group (n = 492):  $(25.0 \pm 0.6)$  Bq/kg.

Average  $^{137}\text{Cs}$  specific activity in the critical group (n = 30):  $(54.1 \pm 6.2)$  Bq/kg.

Median value in the whole group: 23.9 Bq/kg.

Median value in the critical group: 42.7 Bq/kg.

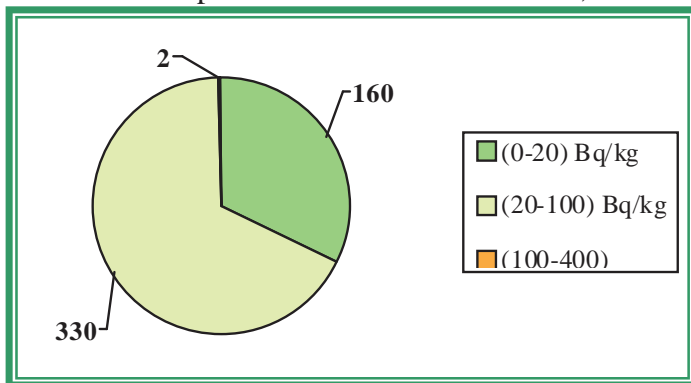
The table 5 demonstrates the maximal levels of  $^{137}\text{Cs}$  specific activity (the critical group) according to the results of measurements performed from December 08, 2009 to December 11, 2009.

Table 5

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	A.A.A.	SCHOOLBOY	M	60	1995	210.5
2.	L.V.S.	SCHOOLBOY	M	50	1995	114.9
3.	M.V.V.	SCHOOLBOY	M	49	2001	89.0
4.	K.N.G.	SCHOOLBOY	M	30	2001	59.0
5.	G.P.Yu.	SCHOOLBOY	M	28	2001	58.0
6.	A.E.V.	SCHOOLBOY	M	38	1997	55.4
7.	K.I.P.	SCHOOLBOY	M	25	2002	55.1
8.	J.V.M.	SCHOOLGIRL	F	30	1999	55.0
9.	B.A.D.	SCHOOLBOY	M	39	2001	53.1
10.	D.A.S.	SCHOOLGIRL	F	30	1999	51.9
11.	G.D.V.	SCHOOLBOY	M	27	2001	49.5
12.	G.A.P.	SCHOOLGIRL	F	57	2001	46.9
13.	M.A.G.	SCHOOLBOY	M	39	1995	44.9
14.	Z.D.A.	SCHOOLBOY	M	65	1995	44.1
15.	K.Ya.K.	SCHOOLBOY	M	26	2001	42.8
16.	N.A.V.	SCHOOLBOY	M	60	1992	42.6
17.	A.V.G.	SCHOOLBOY	M	70	1993	41.9
18.	S.D.V.	SCHOOLBOY	M	75	1995	41.3
19.	G.Yu.A.	SCHOOLGIRL	F	56	1995	41.0
20.	H.E.V.	SCHOOLGIRL	F	33	2001	39.8
21.	F.D.P.	SCHOOLBOY	M	28	2000	39.5
22.	A.I.A.	SCHOOLBOY	M	45	2001	39.5
23.	B.A.A.	SCHOOLGIRL	F	26	2002	39.1
24.	M.V.A.	SCHOOLBOY	M	36	1995	39.1
25.	M.M.P.	SCHOOLGIRL	F	23	2003	38.8
26.	T.R.V.	SCHOOLBOY	M	27	1997	38.6
27.	F.Yu.A.	SCHOOLGIRL	F	21	2002	38.6
28.	B.S.A.	SCHOOLBOY	M	52	1996	38.6
29.	F.M.V.	SCHOOLBOY	M	74	1993	38.5
30.	L.E.V.	SCHOOLGIRL	F	30	2001	37.4



The figure 6 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk secondary school No.1 of Gomel region in accordance with the results of measurements performed from December 08, 2009 to December 11, 2009.



←Figure 6 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk secondary school No.1 of Gomel region in accordance with the results of measurements performed from December 08, 2009 to December 11, 2009

On February 17, 2010 1040 packings of the pectin preparation VITAPECT were given for children.

### March 2-5, 2010

The second measurement of children in the Chechersk secondary school No.1 of Gomel region was performed in the school building. A total of measured persons was 412 persons (402 children and 12 adult).

Average  $^{137}\text{Cs}$  specific activity in the whole group (n = 402):  $(18.0 \pm 0.7) \text{ Bq/kg}$ .

Average  $^{137}\text{Cs}$  specific activity in the critical group (n = 30):  $(47.0 \pm 6.2) \text{ Bq/kg}$ .

Median value in the whole group: 16.4 Bq/kg.

Median value in the critical group: 33.1 Bq/kg.

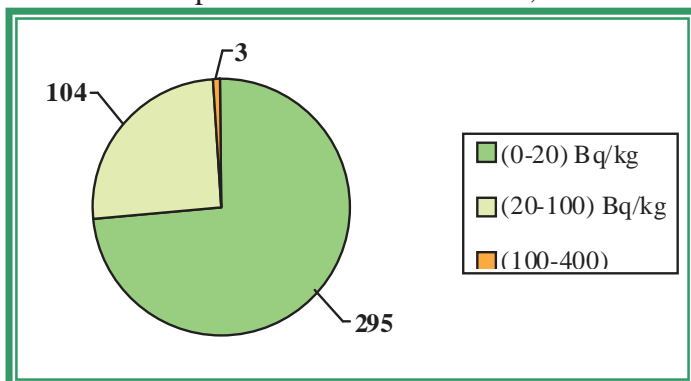
The table 6 demonstrates the maximal levels of  $^{137}\text{Cs}$  specific activity (the critical group) according to the results of measurements performed from March 02, 2010 to March 05, 2010.

Table 6

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	M.F.G.	SCHOOLBOY	M	36	1996	239.7
2.	A.D.V.	SCHOOLBOY	M	65	1995	111.5
3.	A.A.A.	SCHOOLBOY	M	59	1995	108.8
4.	M.V.V.	SCHOOLBOY	M	49	2001	61.8
5.	Sh.K.V.	SCHOOLBOY	M	45	1997	57.1
6.	F.A.L.	SCHOOLBOY	M	30	2000	46.1
7.	G.P.Yu.	SCHOOLBOY	M	30	2001	45.1
8.	K.I.P.	SCHOOLBOY	M	26	2002	43.7
9.	A.V.G.	SCHOOLBOY	M	70	1993	40.3
10.	H.E.V.	SCHOOLGIRL	F	33	2001	38.0
11.	L.V.S.	SCHOOLBOY	M	52	1995	37.6
12.	F.M.V.	SCHOOLBOY	M	71	1993	36.0
13.	O.A.V.	SCHOOLGIRL	F	33	2000	35.4
14.	A.I.A.	SCHOOLBOY	M	45	2001	35.0
15.	D.A.S.	SCHOOLGIRL	F	32	1999	34.9
16.	K.Yu.V.	SCHOOLBOY	M	26	2001	31.3
17.	R.I.I.	SCHOOLBOY	M	59	1995	31.0
18.	V.A.I.	SCHOOLBOY	M	29	1999	30.4
19.	S.E.A.	SCHOOLBOY	M	25	2000	30.3
20.	E.T.V.	SCHOOLGIRL	F	30	2000	29.9
21.	L.A.V.	SCHOOLBOY	M	52	1996	29.3
22.	S.N.A.	SCHOOLBOY	M	34	2001	29.3
23.	B.A.A.	SCHOOLGIRL	F	32	1998	29.1
24.	S.S.A.	SCHOOLGIRL	F	32	1996	28.7
25.	P.M.V.	SCHOOLBOY	M	43	2000	28.6
26.	K.O.A.	SCHOOLBOY	M	26	2002	28.3
27.	Ch.I.V.	SCHOOLBOY	M	25	2002	28.1

28.	A.Yu.G.	SCHOOLGIRL	F	52	1993	28.1
29.	Ya.N.P.	SCHOOLBOY	M	37	2000	28.1
30.	K.D.I.	SCHOOLGIRL	F	35	1999	27.9

The figure 7 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk secondary school No.1 of Gomel region in accordance with the results of measurements performed from March 02, 2010 to March 05, 2010.



←Figure 7 – Diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk secondary school No.1 of Gomel region in accordance with the results of measurements performed from March 02, 2010 to March 05, 2010

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of  $^{137}\text{Cs}$  in children having taken VITAPECT and having passed two WBC measurements (on December 08, 2009 and December 11, 2009 and from March 02, 2010 to March 05, 2010). This group consists of 396 children.

### December 8-11, 2009 March 2-5, 2010

The first measurement of children in the Chechersk secondary school No.1 of Gomel region was performed in the school building. A total of measured persons was 504 persons (492 children and 12 adult).

The second measurement of children in the Chechersk secondary school No.1 of Gomel region was performed in the school building. A total of measured persons was 412 persons (402 children and 12 adult).

The data of statistical processing of the results of measurements of the group of children having passed two WBC measurements and having taken VITAPECT-T (369 children).

Average specific activity of  $^{137}\text{Cs}$ :

after the first measurement:  $(25.0 \pm 0.7)$  Bq/kg,

after the second measurement:  $(18.1 \pm 0.7)$  Bq/kg.

Decrease of average specific activity of  $^{137}\text{Cs}$  was 28%.

Increase of specific activity: in 1% children.

The same level of specific activity: in 21% children.

Reduction of specific activity: in 78% children.

The evaluation of the scientific significance according to T-Student criterion ( $n = 369$ ):  $t=9.10$ . The received criterion  $t > 1,96$ ;  $p < 0,01$ .

Median value after the first measurement: 23.5 Bq/kg.

Median value after the second measurement: 16.4 Bq/kg.

Decrease of median value of specific activity of  $^{137}\text{Cs}$  was 30%.

The figure 8 contains the diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk secondary school No.1 of Gomel region in accordance with the results of measurements performed from December 08, 2009 to December 11, 2009 and from March 02, 2010 to March 05, 2010.

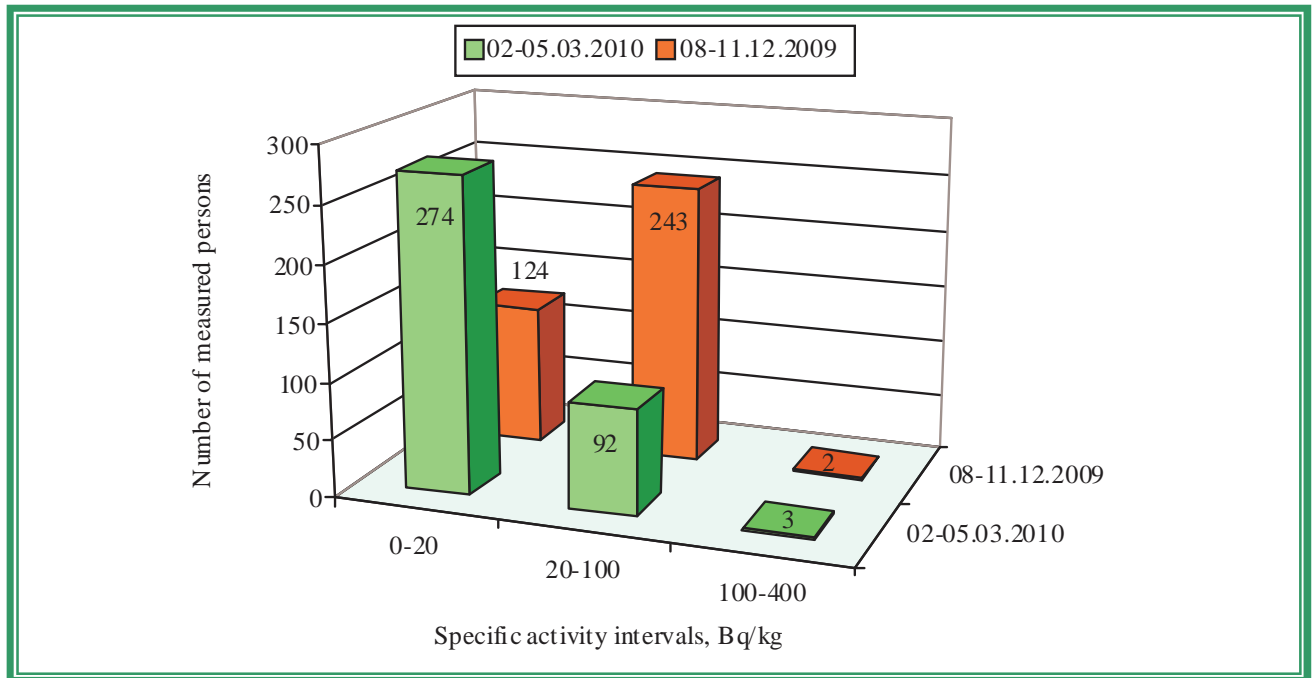


Figure 8 – Diagram of the interval  $^{137}\text{Cs}$  specific activity distribution in children in the Chechersk secondary school No.1 of Gomel region in accordance with the results of measurements performed from December 08, 2009 to December 11, 2009 and from March 02, 2010 to March 05, 2010

Senior engineer

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