

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 21 AND 22)**

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 21 and 22.

Table 1 – Data on the number of measurements and the quantity of the preparation VITAPECT given in framework of the stages 21 and 22 to the Contract No. 36.

Settlement	Date	Number of measurements			Quantity of VITAPECT		Notes
		expected	all	children	expected	actual	
Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region	13.10.2009	83	55	43	166	-	
	22.02.2010	-	-	-	-	166	
	17.04.2010	83	90	75	-	-	
Korma kindergarten No. 2 of Gomel region	14-16.10.2009	102	91	71	204	-	
	22.02.2010	-	-	-	-	204	
	25.03.2010	102	97	85	-	-	
Korma kindergarten No. 5 of Gomel region	08.04.2010	-	76	64	-	-	Control measurement
Korma secondary school No. 1 of Gomel region	13-16.10.2009	681	567	541	1362	-	
	22.02.2010	-	-	-	-	1362	
	06-08.04.2010	681	534	499	-	-	
	20.05.2010	-	312	311	-	-	Control measurement
Korovatichi secondary school of Rechitsa district of Gomel region	15.10.2009	122	126	112	244	-	
	22.02.2010	-	-	-	-	244	
	16.04.2010	122	123	119	-	-	
Korotki secondary school and kindergarten of Korma district of Gomel region	09.04.2010	-	96	86	-	-	Control measurement
Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region	14.10.2009	92	104	84	184	-	
	22.02.2010	-	-	-	-	184	
	16.04.2010	92	81	68	-	-	
TOTAL:		2160	2352	2158	2160	2160	

Hereafter there is a statistical data processing.

VYSHEMIR

Characteristics	Value	Source
^{137}Cs contamination density of the territory	3.15 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	413 persons	Vyshemir village council, dated to October 2008
External dose	0.38 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	0.40 mSv/a	-----«-----
Cumulative dose	0.78 mSv/a	-----«-----

According to the data dated to April 2010 in the Vyshemir secondary school there are 72 children, 15 teachers, 15 persons of another staff; in the kindergarten there are 9 children and 2 persons of another staff.

Children from following settlements go to the Vyshemir secondary school and kindergarten: Vyshemir, Dukhanovka, Goncharovka and Semyonovka.

October 13, 2009

The first measurement of children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 55 persons (43 children and 12 adults).

Average ^{137}Cs specific activity in the whole group (n = 43): (22.2 ± 1.1) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (29.2 ± 1.7) Bq/kg.

Median value in the whole group: 21.9 Bq/kg.

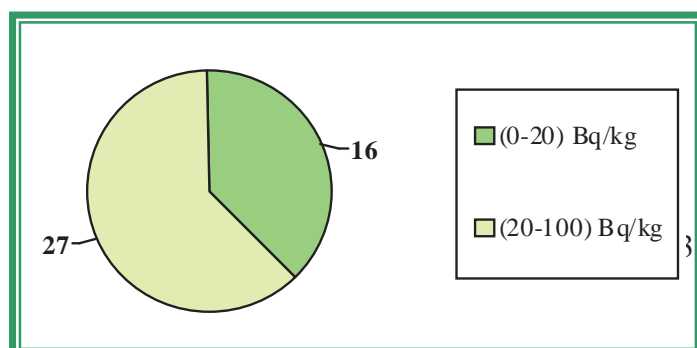
Median value in the critical group: 27.6 Bq/kg.

The table 2 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to October 13, 2009.

Table 2

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	P.E.M.	SCHOOLGIRL	F	64	1993	51.6
2.	S.V.A.	SCHOOLGIRL	F	34	1999	31.7
3.	P.D.A.	SCHOOLBOY	M	30	2000	31.6
4.	L.E.S.	SCHOOLGIRL	F	60	1993	30.1
5.	Sh.M.S.	CHILD PRESCHOOL AGE	F	14	2005	29.3
6.	V.N.A.	SCHOOLGIRL	F	52	1996	28.1
7.	S.M.V.	SCHOOLGIRL	F	47	1996	27.7
8.	L.A.N.	SCHOOLBOY	M	48	1994	27.6
9.	S.K.A.	SCHOOLGIRL	F	40	1998	27.5
10.	K.E.A.	CHILD PRESCHOOL AGE	F	18	2004	26.3
11.	P.T.M.	SCHOOLGIRL	F	38	1999	26.2
12.	S.A.A.	SCHOOLGIRL	F	52	1997	25.8
13.	Z.A.I.	SCHOOLBOY	M	25	2002	25.0
14.	P.A.D.	CHILD PRESCHOOL AGE	F	21	2004	24.8
15.	B.A.M.	CHILD PRESCHOOL AGE	F	19	2004	24.2

The figure 1 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 13, 2009.



← Figure 1 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 13, 2009

On February 22, 2010 166 packings of the pectin preparation VITAPECT were given for children.

April 17, 2010

The second measurement of children in the Vyshmir secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 90 persons (75 children and 15 adults).

Average ^{137}Cs specific activity in the whole group (n = 75): (20.1 ± 4.1) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (49.2 ± 18.9) Bq/kg.

Median value in the whole group: 14.0 Bq/kg.

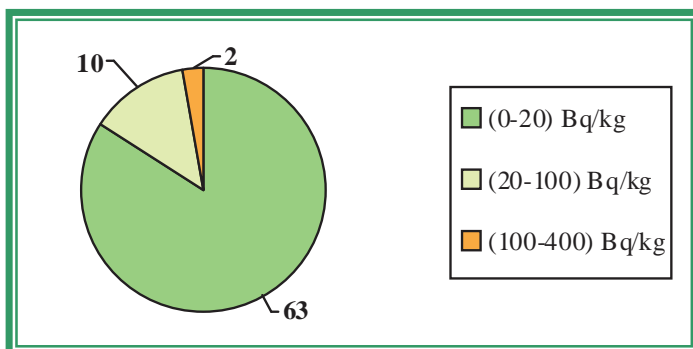
Median value in the critical group: 21.7 Bq/kg.

The table 3 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to April 17, 2010.

Table 3

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	R.I.A.	SCHOOLBOY	M	50	1999	256.6
2.	R.Yu.A.	SCHOOLGIRL	F	29	2003	197.4
3.	N.S.I.	SCHOOLBOY	M	62	1994	27.0
4.	S.D.P.	SCHOOLBOY	M	24	2003	25.3
5.	P.A.D.	CHILD PRESCHOOL AGE	F	24	2004	23.4
6.	L.V.N.	SCHOOLGIRL	F	19	2002	23.2
7.	J.A.V.	SCHOOLBOY	M	24	2003	22.7
8.	S.N.E.	SCHOOLGIRL	F	22	2003	21.7
9.	P.A.P.	SCHOOLGIRL	F	21	2003	21.5
10.	S.K.V.	SCHOOLGIRL	F	21	2002	21.1
11.	Sh.M.S.	CHILD PRESCHOOL AGE	F	15	2005	20.2
12.	P.V.A.	SCHOOLBOY	M	31	2001	20.2
13.	K.E.A.	CHILD PRESCHOOL AGE	F	19	2004	19.3
14.	S.M.E.	SCHOOLBOY	M	29	2000	19.3
15.	S.A.N.	CHILD PRESCHOOL AGE	M	17	2007	19.2

The figure 2 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Vyshmir secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to April 17, 2010.



← Figure 2 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Vyshmir secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to April 17, 2010

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of ^{137}Cs in children having taken VITAPECT and having passed two WBC measurements (on October 13, 2009 and April 17, 2010). This group consists of 39 children.

October 13, 2009

April 17, 2010

The first measurement of children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 55 persons (43 children and 12 adults).

The second measurement of children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 90 persons (75 children and 15 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 (39 children).

Average specific activity of ^{137}Cs :

after the first measurement: (22.5 ± 1.2) Bq/kg,

after the second measurement: (13.2 ± 0.6) Bq/kg.

Decrease of average specific activity of ^{137}Cs was 41%.

Increase of specific activity: in 0% children.

The same level of specific activity: in 13% children.

Reduction of specific activity: in 87% children.

The evaluation of the scientific significance according to T-Student criterion ($n = 39$): $t=9.81$. The received criterion $t > 1.96$; $p < 0.01$.

Median value after the first measurement: 23.2 Bq/kg.

Median value after the second measurement: 13.3 Bq/kg.

Decrease of median value of specific activity of ^{137}Cs was 43%.

The figure 3 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 13, 2009 and April 17, 2010.

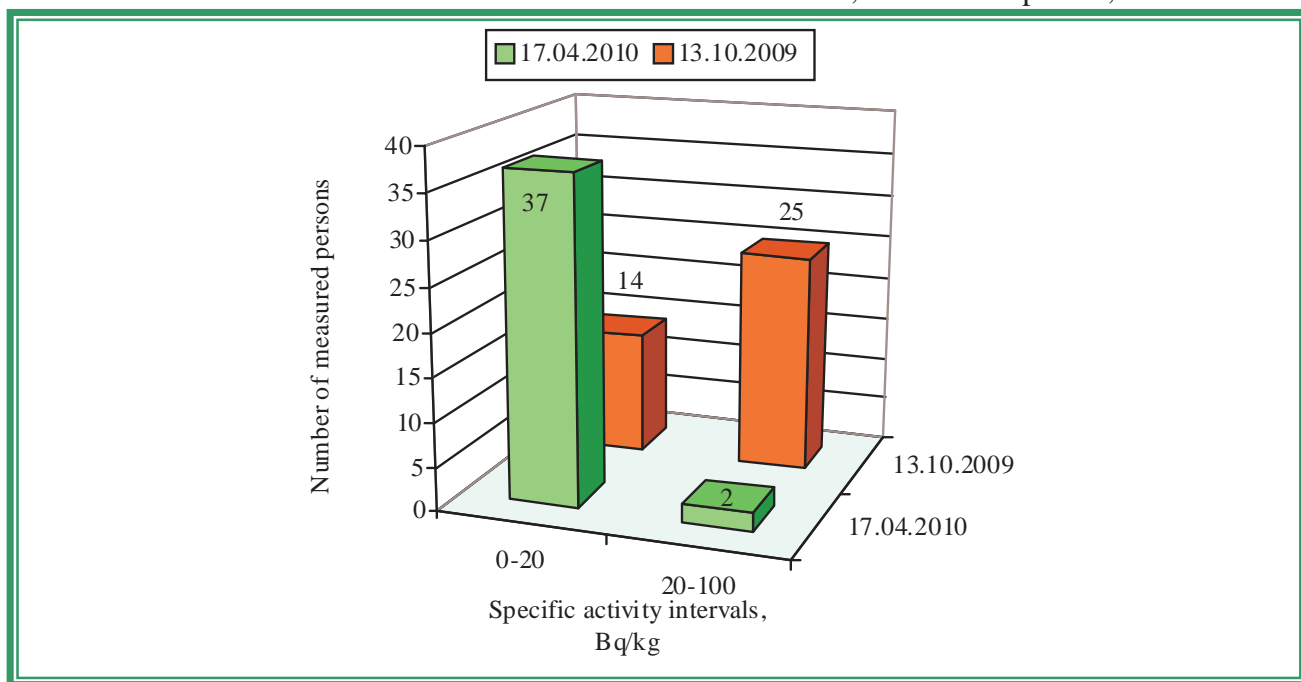


Figure 3 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Vyshemir secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 13, 2009 and April 17, 2010

KORMA, KINDERGARTEN No. 2

Characteristics	Value	Source
^{137}Cs contamination density of the territory	11.52 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	7500 persons	Korma executive committee, dated to

		January 01, 2008
External dose	1.38 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	0.30 mSv/a	-----«-----
Cumulative dose	1.68 mSv/a	-----«-----

According to the data dated to March 2010 in the Korma kindergarten No.2 there are 104 children and 35 persons of another staff.

October 14-16, 2009

The first measurement of children in the Korma kindergarten No. 2 of Gomel region was performed in the kindergarten building. A total of measured persons was 91 persons (71 children and 20 adults).

Average ^{137}Cs specific activity in the whole group (n = 71): (17.5 ± 1.6) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (32.9 ± 1.0) Bq/kg.

Median value in the whole group: 21.7 Bq/kg.

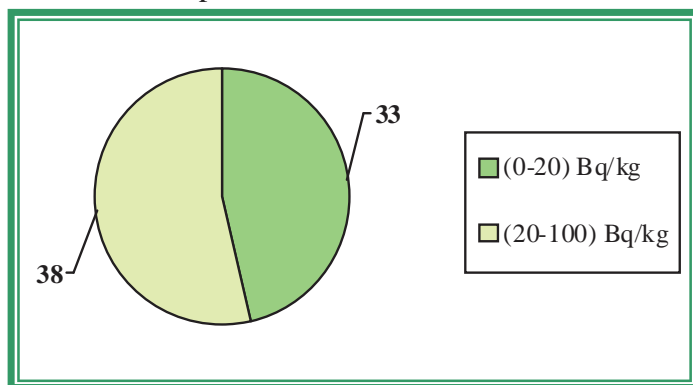
Median value in the critical group: 32.1 Bq/kg.

The table 4 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements performed from October 14, 2009 to October 16, 2010.

Table 4

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	B.D.A.	CHILD PRESCHOOL AGE	M	16	2004	40.0
2.	G.K.A.	CHILD PRESCHOOL AGE	F	11	2006	39.4
3.	K.V.A.	CHILD PRESCHOOL AGE	M	16	2005	36.3
4.	L.A.A.	CHILD PRESCHOOL AGE	F	24	2002	35.2
5.	G.A.G.	CHILD PRESCHOOL AGE	F	14	2005	34.6
6.	K.A.N.	CHILD PRESCHOOL AGE	M	17	2003	34.2
7.	S.E.S.	CHILD PRESCHOOL AGE	M	16	2005	33.5
8.	D.Ya.I.	CHILD PRESCHOOL AGE	M	16	2006	32.1
9.	J.D.S.	CHILD PRESCHOOL AGE	M	14	2004	30.7
10.	H.V.V.	CHILD PRESCHOOL AGE	M	18	2003	30.6
11.	S.I.V.	CHILD PRESCHOOL AGE	M	19	2004	30.0
12.	L.D.V.	CHILD PRESCHOOL AGE	F	14	2006	29.6
13.	S.T.S.	CHILD PRESCHOOL AGE	F	16	2004	29.4
14.	F.E.A.	CHILD PRESCHOOL AGE	F	14	2006	29.1
15.	D.A.S.	CHILD PRESCHOOL AGE	F	23	2004	28.5

The figure 4 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 2 of Gomel region in accordance with the results of measurements performed from October 14, 2009 to October 16, 2009.



← Figure 4 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 2 of Gomel region in accordance with the results of measurements performed from October 14, 2009 to October 16, 2009

On February 22, 2010 204 packings of the pectin preparation VITAEPECT were given for children.

March 25, 2010

The second measurement of children in the Korma kindergarten No. 2 of Gomel region was performed in the kindergarten building. A total of measured persons was 97 persons (85 children and 12 adults).

Average ^{137}Cs specific activity in the whole group (n = 85): (15.2 ± 1.7) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (38.6 ± 3.0) Bq/kg.

Median value in the whole group: 15.5 Bq/kg.

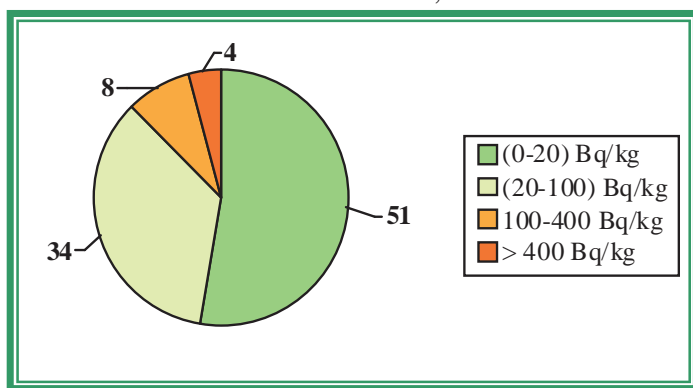
Median value in the critical group: 32.8 Bq/kg.

The table 5 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to March 25, 2010.

Table 5

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	S.E.S.	CHILD PRESCHOOL AGE	M	35	2004	71.7
2.	O.D.A.	CHILD PRESCHOOL AGE	M	24	2003	55.5
3.	D.V.V.	CHILD PRESCHOOL AGE	F	10	2008	48.1
4.	S.E.S.	CHILD PRESCHOOL AGE	M	18	2005	42.1
5.	S.A.I.	CHILD PRESCHOOL AGE	M	20	2003	38.3
6.	L.A.M.	CHILD PRESCHOOL AGE	F	13	2007	38.1
7.	L.A.I.	CHILD PRESCHOOL AGE	M	28	2003	33.2
8.	Ch.A.N.	CHILD PRESCHOOL AGE	M	14	2007	32.8
9.	D.Ya.I.	CHILD PRESCHOOL AGE	M	20	2006	32.6
10.	R.E.A.	CHILD PRESCHOOL AGE	M	16	2006	32.1
11.	S.R.E.	CHILD PRESCHOOL AGE	F	20	2005	31.3
12.	G.K.A.	CHILD PRESCHOOL AGE	F	13	2006	31.0
13.	G.S.A.	CHILD PRESCHOOL AGE	M	15	2006	30.6
14.	S.E.V.	CHILD PRESCHOOL AGE	F	16	2007	30.5
15.	P.A.A.	CHILD PRESCHOOL AGE	F	18	2007	30.4

The figure 5 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 2 of Gomel region in accordance with the results of measurements dated to March 25, 2010.



← Figure 5 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 2 of Gomel region in accordance with the results of measurements dated to March 25, 2010

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of ^{137}Cs in children having taken VITAPECT and having passed two WBC measurements (from October 14, 2009 to October 16, 2009 and on March 25, 2010). This group consists of 51 children.

October 14-16, 2009

March 25, 2010

The first measurement of children in the Korma kindergarten No. 2 of Gomel region was performed in the kindergarten building. A total of measured persons was 91 persons (71 children and 20 adults).

The second measurement of children in the Korma kindergarten No. 2 of Gomel region was performed in the kindergarten building. A total of measured persons was 97 persons (85 children and 12 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 (51 children).

Average specific activity of ^{137}Cs :

after the first measurement: (17.1 ± 1.8) Bq/kg,

after the second measurement: (12.3 ± 1.9) Bq/kg.

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

Increase of specific activity: in 10% children.

The same level of specific activity: in 43% children.

Reduction of specific activity: in 47% children.

The evaluation of the scientific significance according to T-Student criterion ($n = 51$): $t=2.59$. The received criterion $t > 1.96$; $p < 0.01$.

Median value after the first measurement: 21.7 Bq/kg.

Median value after the second measurement: 15.1 Bq/kg.

Decrease of median value of specific activity of ^{137}Cs was 31%.

The figure 6 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 2 of Gomel region in accordance with the results of measurements performed from October 14, 2009 to October 16, 2009 and on March 25, 2010.

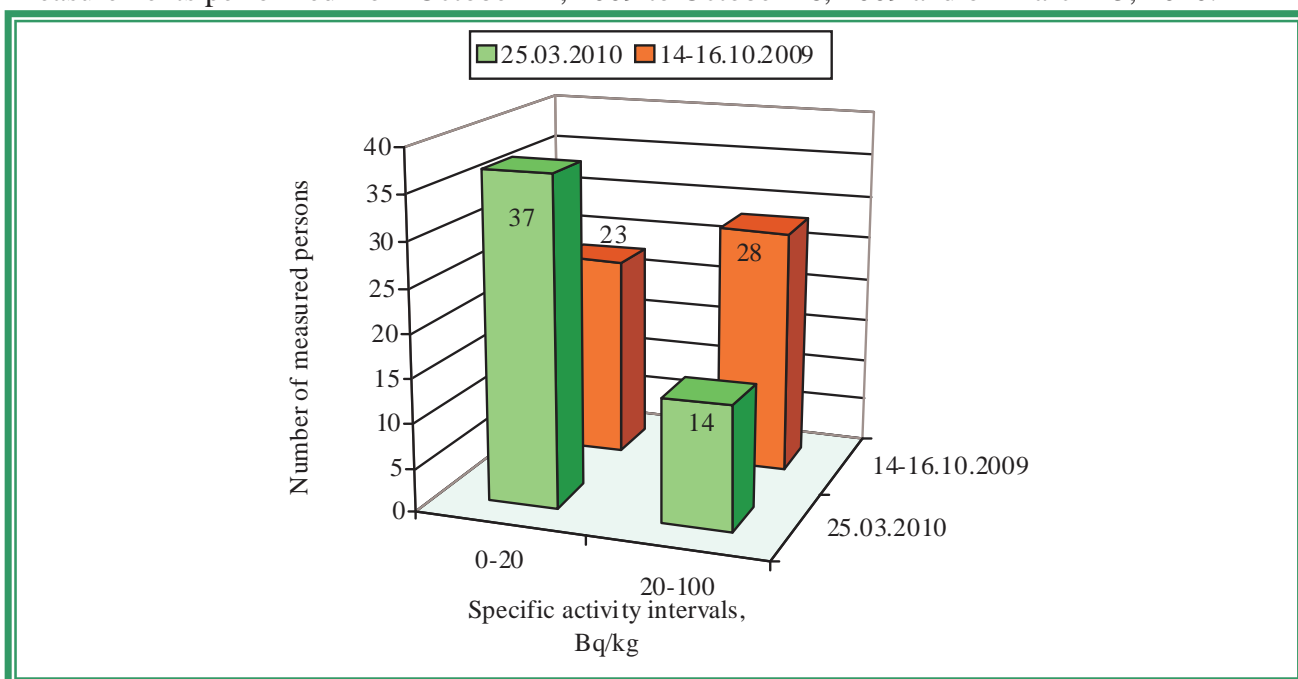


Figure 6 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 2 of Gomel region in accordance with the results of measurements performed from October 14, 2009 to October 16, 2009 and on March 25, 2010

KORMA, KINDERGARTEN No. 5

Characteristics	Value	Source
^{137}Cs contamination density of the territory	11.52 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	7500 persons	Korma executive committee, dated to January 01, 2008
External dose	1.38 mSv/a	Dose catalogue of the Ministry for Public Health Services of the

		Republic of Belarus, 2004
Internal dose	0.30 mSv/a	-----<-----
Cumulative dose	1.68 mSv/a	-----<-----

According to the data dated to April 2010 in the Korma kindergarten No.5 there are 113 children and 37 persons of another staff.

April 08, 2010

The control measurement of children in the Korma kindergarten No. 5 of Gomel region was performed in the kindergarten building. A total of measured persons was 76 persons (64 children and 12 adults).

Average ^{137}Cs specific activity in the whole group (n = 64): (33.0 ± 1.3) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (46.7 ± 3.0) Bq/kg.

Median value in the whole group: 31.5 Bq/kg.

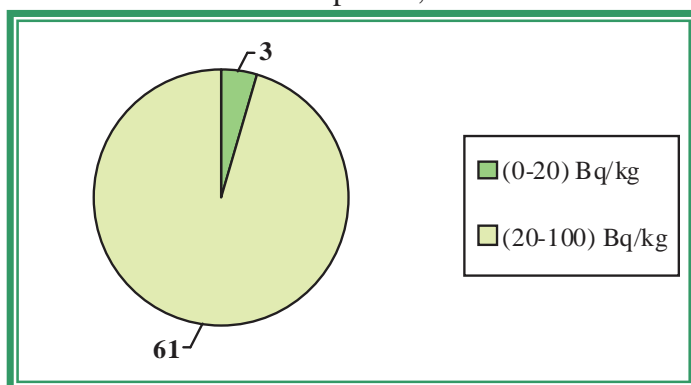
Median value in the critical group: 41.9 Bq/kg.

The table 6 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to April 08, 2010.

Table 6

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	G.V.S.	CHILD PRESCHOOL AGE	F	14	2005	82.5
2.	R.D.N.	CHILD PRESCHOOL AGE	F	10	2006	60.3
3.	M.A.V.	CHILD PRESCHOOL AGE	F	11	2006	52.5
4.	S.A.A.	CHILD PRESCHOOL AGE	F	12	2007	49.6
5.	Sh.I.B.	CHILD PRESCHOOL AGE	M	12	2004	48.7
6.	Sh.S.S.	CHILD PRESCHOOL AGE	F	14	2006	42.6
7.	I.A.S.	CHILD PRESCHOOL AGE	M	11	2007	42.1
8.	B.A.V.	CHILD PRESCHOOL AGE	F	15	2005	41.9
9.	C.D.E.	CHILD PRESCHOOL AGE	M	18	2005	41.5
10.	S.D.S.	CHILD PRESCHOOL AGE	F	17	2004	41.4
11.	M.V.A.	CHILD PRESCHOOL AGE	F	17	2004	40.3
12.	N.O.E.	CHILD PRESCHOOL AGE	F	20	2004	39.4
13.	L.E.V.	CHILD PRESCHOOL AGE	M	14	2006	39.4
14.	A.A.S.	CHILD PRESCHOOL AGE	F	15	2004	39.2
15.	F.D.N.	CHILD PRESCHOOL AGE	M	14	2004	38.6

The figure 7 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 5 of Gomel region in accordance with the results of measurements dated to April 08, 2010.



←Figure 7 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma kindergarten No. 5 of Gomel region in accordance with the results of measurements dated to April 08, 2010

KORMA, SECONDARY SCHOOL No. 1

Characteristics	Value	Source
^{137}Cs contamination density of the territory	11.52 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004

Number of inhabitants	7500 persons	Korma executive committee, dated to January 01, 2008
External dose	1.38 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	0.30 mSv/a	-----«-----
Cumulative dose	1.68 mSv/a	-----«-----

According to the data dated to September 2010 in the Korma secondary school No.1 there are 618 children, 59 teachers and 20 persons of another staff.

Children from following settlements go to the Korma secondary school No.1: Korma, Vynoshevka, Semyonovka and Lebedevka.

October 13-16, 2009

The first measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 567 persons (541 children and 26 adults).

Average ^{137}Cs specific activity in the whole group (n = 541): (29.6 ± 1.8) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 30): (143.6 ± 22.0) Bq/kg.

Median value in the whole group: 22.6 Bq/kg.

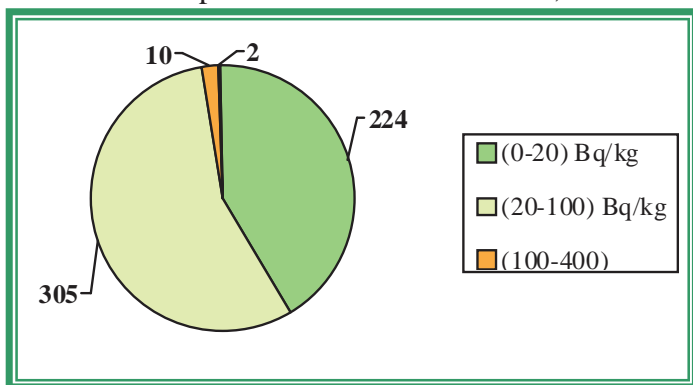
Median value in the critical group: 91.7 Bq/kg.

The table 7 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements performed from October 13, 2009 to October 16, 2009.

Table 7

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	M.V.I.	SCHOOLBOY	M	63	1992	580.7
2.	M.P.I.	SCHOOLBOY	M	74	1997	419.5
3.	P.V.V.	SCHOOLBOY	M	60	1994	330.5
4.	K.S.A.	SCHOOLBOY	M	36	1998	283.9
5.	B.Yu.Yu.	SCHOOLGIRL	F	60	1994	260.6
6.	S.T.S.	SCHOOLGIRL	F	41	2002	221.2
7.	K.K.A.	SCHOOLGIRL	F	35	2000	160.2
8.	M.A.V.	SCHOOLBOY	M	34	1998	145.3
9.	K.K.D.	SCHOOLGIRL	F	37	1997	141.3
10.	B.V.S.	SCHOOLBOY	M	28	2001	124.9
11.	M.D.V.	SCHOOLGIRL	F	24	2000	111.0
12.	P.A.A.	SCHOOLBOY	M	25	2001	107.9
13.	B.V.V.	SCHOOLGIRL	F	29	1997	99.3
14.	M.N.S.	SCHOOLGIRL	F	37	1999	93.6
15.	G.A.P.	SCHOOLBOY	M	51	1995	92.5
16.	K.S.M.	SCHOOLGIRL	F	56	1996	90.9
17.	L.V.V.	SCHOOLBOY	M	29	2002	88.3
18.	G.I.N.	SCHOOLBOY	M	29	2000	87.0
19.	V.T.V.	SCHOOLGIRL	F	44	1996	78.9
20.	S.K.S.	SCHOOLGIRL	F	45	1993	78.4
21.	P.S.A.	SCHOOLBOY	M	41	1996	76.0
22.	B.V.E.	SCHOOLGIRL	F	47	1995	73.9
23.	M.K.V.	SCHOOLBOY	M	26	2001	73.0
24.	G.E.V.	SCHOOLBOY	M	56	1995	72.3
25.	K.E.V.	SCHOOLBOY	M	24	2003	72.2
26.	M.P.V.	SCHOOLBOY	M	21	2002	69.4
27.	L.V.S.	SCHOOLGIRL	F	26	2001	69.3
28.	L.V.V.	SCHOOLBOY	M	40	1999	69.1
29.	M.Ya.V.	SCHOOLGIRL	F	24	2000	68.6
30.	P.V.O.	SCHOOLBOY	M	36	1997	68.6

The figure 8 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from October 13, 2009 to October 16, 2009.



← Figure 8 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from October 13, 2009 to October 16, 2009

On February 22, 2010 1362 packings of the pectin preparation VITAPECT were given for children.

April 06-08, 2010

The second measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 534 persons (499 children and 35 adults).

Average ^{137}Cs specific activity in the whole group (n = 499): (21.2 ± 0.9) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 30): (76.6 ± 10.0) Bq/kg.

Median value in the whole group: 17.5 Bq/kg.

Median value in the critical group: 56.4 Bq/kg.

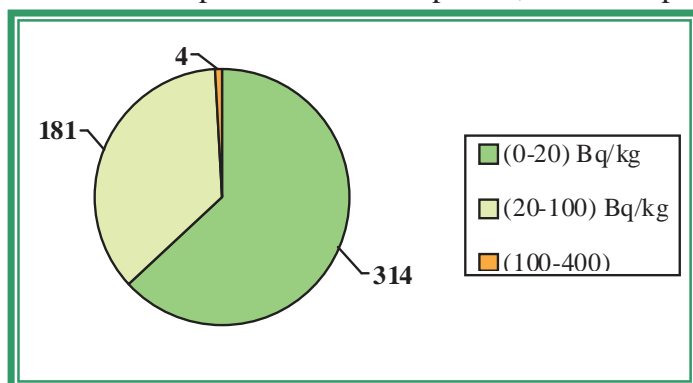
The table 8 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements performed from April 06, 2010 to April 08, 2010.

Table 8

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	B.Yu.Yu.	SCHOOLGIRL	F	63	1994	281.4
2.	M.V.I.	SCHOOLBOY	M	64	1992	242.9
3.	L.O.P.	SCHOOLGIRL	F	50	1994	140.5
4.	M.P.I.	SCHOOLBOY	M	76	1997	106.7
5.	K.S.M.	SCHOOLGIRL	F	57	1996	84.7
6.	N.M.V.	SCHOOLBOY	M	62	1994	84.4
7.	B.A.V.	SCHOOLGIRL	F	58	1995	78.9
8.	G.I.N.	SCHOOLBOY	M	30	2000	78.8
9.	J.N.N.	ШКОЛЬНИК	F	23	2003	67.1
10.	G.E.V.	SCHOOLBOY	M	59	1995	66.2
11.	N.M.A.	SCHOOLGIRL	F	31	2000	65.9
12.	S.T.S.	SCHOOLGIRL	F	47	2002	65.0
13.	B.A.V.	SCHOOLGIRL	F	58	1994	60.3
14.	B.D.A.	SCHOOLBOY	M	51	1995	58.6
15.	M.O.S.	SCHOOLGIRL	F	49	1995	58.1
16.	D.I.V.	SCHOOLGIRL	F	46	1996	54.7
17.	K.A.A.	SCHOOLGIRL	F	26	2000	54.2
18.	B.V.V.	SCHOOLGIRL	F	31	1997	53.4
19.	B.A.V.	SCHOOLBOY	M	23	2002	52.9
20.	K.L.A.	SCHOOLGIRL	F	62	1992	52.6
21.	P.M.V.	SCHOOLGIRL	F	31	2000	51.1
22.	D.D.A.	SCHOOLBOY	M	67	1992	50.9
23.	K.A.A.	SCHOOLBOY	M	37	1997	50.7
24.	R.D.E.	SCHOOLBOY	M	52	1995	49.7
25.	M.A.S.	SCHOOLBOY	M	37	2000	48.8
26.	P.D.A.	SCHOOLBOY	M	47	1995	48.7

27.	M.Ya.V.	SCHOOLGIRL	F	25	2000	48.1
28.	M.A.V.	SCHOOLBOY	M	36	1998	47.7
29.	Ya.I.N.	SCHOOLBOY	M	35	2000	47.3
30.	R.Yu.E.	SCHOOLGIRL	F	52	1994	46.5

The figure 9 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from April 06, 2010 to April 08, 2010.



←Figure 9 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from April 06, 2010 to April 08, 2010

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of ^{137}Cs in children having taken VITAPECT and having passed two WBC measurements (from October 13, 2009 to October 16, 2009 and from April 06, 2010 to April 08, 2010). This group consists of 427 children.

October 13-16, 2009 April 06-08, 2010

The first measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 567 persons (541 children and 26 adults).

The second measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 534 persons (499 children and 35 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 (427 children).

Average specific activity of ^{137}Cs :

after the first measurement: (29.8 ± 2.0) Bq/kg,

after the second measurement: (21.0 ± 1.1) Bq/kg.

Decrease of average specific activity of ^{137}Cs was 29%.

Increase of specific activity: in 3% children.

The same level of specific activity: in 31% children.

Reduction of specific activity: in 66% children.

The evaluation of the scientific significance according to T-Student criterion ($n = 427$): $t=5.37$. The received criterion $t > 1.96$; $p < 0.01$.

Median value after the first measurement: 22.3 Bq/kg.

Median value after the second measurement: 16.8 Bq/kg.

Decrease of median value of specific activity of ^{137}Cs was 25%.

The figure 10 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from October 13, 2009 to October 16, 2010 and from April 06, 2010 to April 08, 2010.

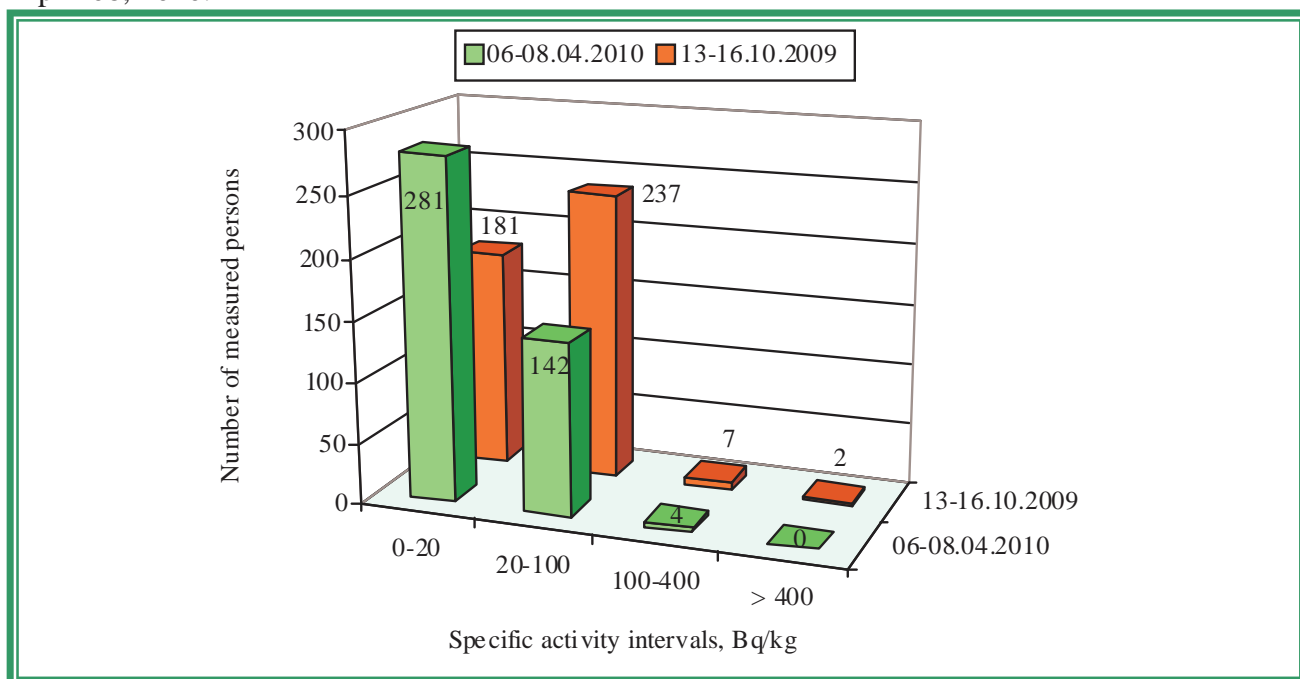


Figure 10 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from October 13, 2009 to October 16, 2010 and from April 06, 2010 to April 08, 2010

May 20, 2010

The control measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 312 persons (311 children and 1 adult).

Average ^{137}Cs specific activity in the whole group (n = 311): (19.8 ± 0.5) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 30): (37.2 ± 2.3) Bq/kg.

Median value in the whole group: 18.5 Bq/kg.

Median value in the critical group: 32.8 Bq/kg.

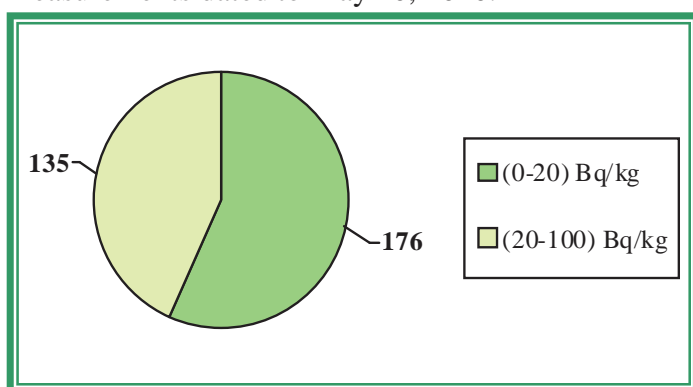
The table 9 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to May 20, 2010.

Table 9

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	M.P.I.	SCHOOLBOY	M	75	1997	76.7
2.	M.O.S.	SCHOOLGIRL	F	43	1995	71.9
3.	S.M.B.	SCHOOLGIRL	F	43	2000	65.2
4.	B.V.N.	SCHOOLBOY	M	60	1993	44.5
5.	G.E.A.	SCHOOLBOY	M	60	1992	43.7
6.	D.D.A.	SCHOOLBOY	M	67	1992	39.2
7.	Ya.P.V.	SCHOOLGIRL	F	20	2002	38.9
8.	D.D.S.	SCHOOLBOY	M	39	2000	38.6
9.	K.A.N.	SCHOOLBOY	M	50	1994	38.4
10.	Sh.A.A.	SCHOOLBOY	M	45	1995	35.7
11.	D.I.V.	SCHOOLGIRL	F	44	1996	35.1
12.	K.A.D.	SCHOOLBOY	M	39	2000	34.1
13.	S.L.V.	SCHOOLGIRL	F	47	1993	34.0
14.	N.M.A.	SCHOOLGIRL	F	33	2000	33.2

15.	P.A.V.	SCHOOLGIRL	F	40	1997	32.8
16.	P.D.A.	SCHOOLBOY	M	44	1995	32.8
17.	C.D.E.	SCHOOLGIRL	F	30	2000	32.3
18.	L.M.V.	SCHOOLGIRL	F	41	1997	31.7
19.	P.M.V.	SCHOOLGIRL	F	34	2000	31.7
20.	Sh.A.P.	SCHOOLGIRL	F	26	2000	31.6
21.	M.K.A.	SCHOOLGIRL	F	48	1993	30.3
22.	K.E.V.	SCHOOLGIRL	F	44	1996	30.3
23.	Sh.A.V.	SCHOOLBOY	M	24	2000	30.1
24.	M.A.S.	SCHOOLBOY	M	36	2001	30.0
25.	K.K.D.	SCHOOLGIRL	F	39	1997	29.4
26.	L.V.A.	SCHOOLBOY	M	50	1997	29.4
27.	M.A.V.	SCHOOLGIRL	F	30	2001	29.1
28.	G.Yu.M.	SCHOOLGIRL	F	53	1995	29.0
29.	L.E.S.	SCHOOLBOY	M	21	2002	28.9
30.	K.A.D.	SCHOOLBOY	M	30	2000	28.7

The figure 11 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements dated to May 20, 2010.



←Figure 11 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements dated to May 20, 2010.

Hereafter there are comparative data on interval distribution of the specific activity of ^{137}Cs in children having passed two WBC measurements (from April 06, 2010 to April 08, 2010 and on May 20, 2010). This group consists of 267 children.

April 06-08, 2010 May 20, 2010

The second measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 534 persons (499 children and 35 adults).

The control measurement of children in the Korma secondary school No. 1 of Gomel region was performed in the school building. A total of measured persons was 312 persons (311 children and 1 adult).

The data of statistical processing of the results of measurements of the group of children having passed two WBC measurements (267 children).

Average specific activity of ^{137}Cs :

after the first measurement: (21.5 ± 0.9) Bq/kg,

after the second measurement: (19.5 ± 0.5) Bq/kg.

Decrease of average specific activity of ^{137}Cs was 9%.

Increase of specific activity: in 43% children.

The same level of specific activity: in 16% children.

Reduction of specific activity: in 41% children.

The evaluation of the scientific significance according to T-Student criterion ($n = 267$): $t=2.82$. The received criterion $t > 1.96$; $p < 0.01$.

Median value after the first measurement: 18.6 Bq/kg.
 Median value after the second measurement: 18.5 Bq/kg.
 Decrease of median value of specific activity of ^{137}Cs was 1%.

The figure 12 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from April 06, 2010 to April 08, 2010 and on May 20, 2010.

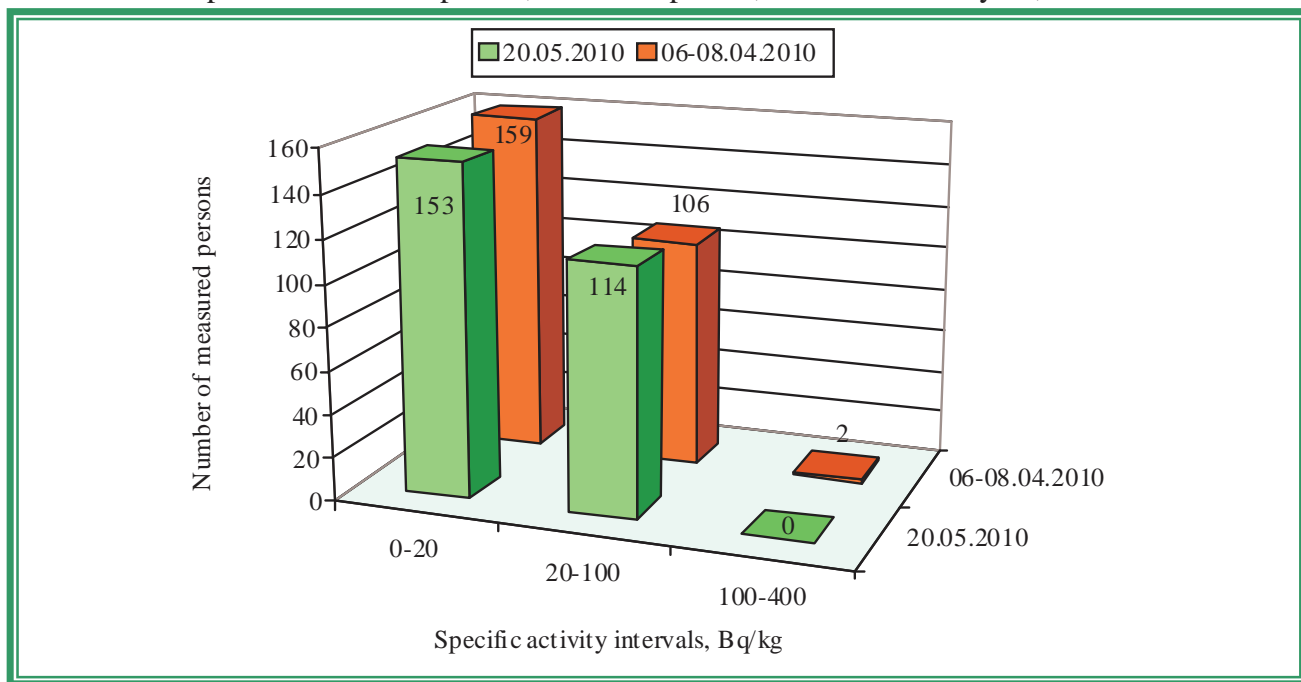


Figure 12 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Korma secondary school No. 1 of Gomel region in accordance with the results of measurements performed from April 06, 2010 to April 08, 2010 and on May 20, 2010

KOROVATICHI

Characteristics	Value	Source
^{137}Cs contamination density of the territory	1.58 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	747 persons	Korovatichi village council, dated to October 15, 2009
External dose	0.19 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	0.30 mSv/a	-----<-----
Cumulative dose	0.49 mSv/a	-----<-----

According to the data dated to April 2010 in the Korovatichi secondary school there are 123 children, 18 teachers and 11 persons of another staff.

Children from following settlements go to the Korovatichi secondary school: Korovatichi, Krasnaya Dubrova, Pervomaisk and Tishkovka.

October 15, 2009

The first measurement of children in the Korovatichi secondary school of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 126 persons (112 children and 14 adults).

Average ^{137}Cs specific activity in the whole group (n = 112): (21.6 ± 0.9) Bq/kg.
 Average ^{137}Cs specific activity in the critical group (n = 15): (40.3 ± 3.3) Bq/kg.

Median value in the whole group: 19.4 Bq/kg.

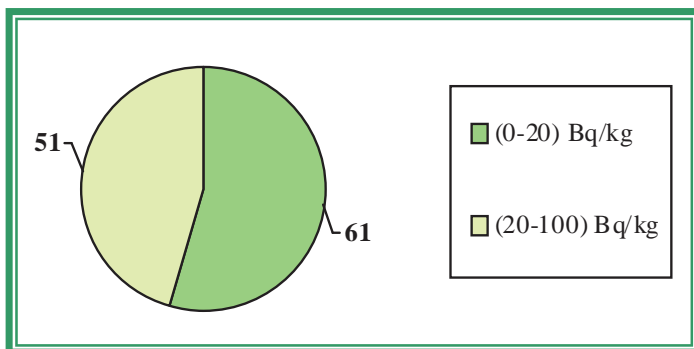
Median value in the critical group: 37.2 Bq/kg.

The table 10 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to October 15, 2009.

Table 10

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	K.O.N.	SCHOOLGIRL	F	38	1997	80.1
2.	M.A.M.	SCHOOLGIRL	F	33	1999	53.7
3.	P.D.N.	SCHOOLGIRL	F	22	2002	44.4
4.	T.D.S.	SCHOOLBOY	M	58	1997	42.0
5.	Sh.A.E.	SCHOOLGIRL	F	31	1998	40.6
6.	B.E.N.	SCHOOLGIRL	F	26	2001	38.6
7.	K.V.N.	SCHOOLGIRL	F	48	1996	38.1
8.	T.V.V.	SCHOOLBOY	M	33	1997	37.2
9.	K.E.V.	SCHOOLGIRL	F	50	1993	36.7
10.	D.A.V.	SCHOOLBOY	M	66	1993	35.8
11.	T.N.V.	SCHOOLBOY	M	89	1995	32.6
12.	D.E.V.	SCHOOLGIRL	F	51	1996	32.3
13.	S.I.S.	SCHOOLBOY	M	31	2000	32.1
14.	K.T.V.	SCHOOLGIRL	F	44	1996	31.0
15.	J.G.V.	SCHOOLGIRL	F	21	2000	29.6

The figure 13 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korovatichi secondary school of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 15, 2009.



←Figure 13 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korovatichi secondary school of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 15, 2009

On February 22, 2010 244 packings of the pectin preparation VITAPECT were given for children.

April 16, 2010

The second measurement of children in the Korovatichi secondary school of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 123 persons (119 children and 4 adults).

Average ^{137}Cs specific activity in the whole group (n = 119): (16.0 ± 2.1) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (44.6 ± 15.1) Bq/kg.

Median value in the whole group: 12.3 Bq/kg.

Median value in the critical group: 19.8 Bq/kg.

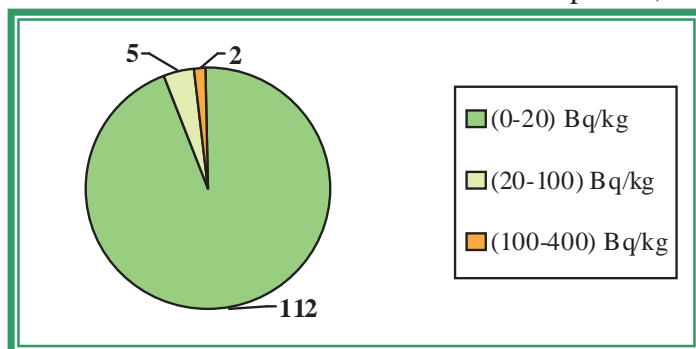
The table 11 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to October 16, 2010.

Table 11

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	S.I.M.	SCHOOLBOY	M	39	2002	234.8
2.	M.Yu.S.	SCHOOLGIRL	F	59	1999	108.4
3.	F.A.V.	SCHOOLGIRL	F	58	1997	71.7
4.	G.A.V.	SCHOOLGIRL	F	44	2001	38.1

5.	Sh.A.E.	SCHOOLGIRL	F	33	1998	27.0
6.	K.E.V.	SCHOOLGIRL	F	50	1993	22.0
7.	T.D.S.	SCHOOLBOY	M	63	1997	21.7
8.	T.V.V.	SCHOOLBOY	M	35	1997	19.8
9.	A.E.R.	SCHOOLBOY	M	21	2003	19.7
10.	O.T.V.	SCHOOLGIRL	F	61	1993	18.7
11.	S.D.A.	SCHOOLBOY	M	58	1995	18.6
12.	T.L.V.	SCHOOLBOY	M	53	1995	18.0
13.	P.A.A.	SCHOOLGIRL	F	44	1998	17.2
14.	T.N.V.	SCHOOLBOY	M	91	1995	16.6
15.	Sh.I.Ya.	SCHOOLBOY	M	25	2003	16.6

The figure 14 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korovatichi secondary school of Rechitsa district of Gomel region in accordance with the results of measurements dated to April 16, 2010.



←Figure 14 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korovatichi secondary school of Rechitsa district of Gomel region in accordance with the results of measurements dated to April 16, 2010.

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of ^{137}Cs in children having taken VITAPECT and having passed two WBC measurements (on October 15, 2009 and April 16, 2010). This group consists of 109 children.

October 15, 2009

April 16, 2010

The first measurement of children in the Korovatichi secondary school of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 126 persons (112 children and 14 adults).

The second measurement of children in the Korovatichi secondary school of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 123 persons (119 children and 4 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 (109 children).

Average specific activity of ^{137}Cs :

after the first measurement: (21.4 ± 0.9) Bq/kg,

after the second measurement: (16.4 ± 2.3) Bq/kg.

Decrease of average specific activity of ^{137}Cs was 24%.

Increase of specific activity: in 3% children.

The same level of specific activity: in 18% children.

Reduction of specific activity: in 79% children.

The evaluation of the scientific significance according to T-Student criterion ($n = 109$): $t=2.88$. The received criterion $t > 1.96$; $p < 0.01$.

Median value after the first measurement: 19.4 Bq/kg.

Median value after the second measurement: 12.3 Bq/kg.

Decrease of median value of specific activity of ^{137}Cs was 37%.

The figure 15 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korovatchi secondary school of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 15, 2009 and April 16, 2010.

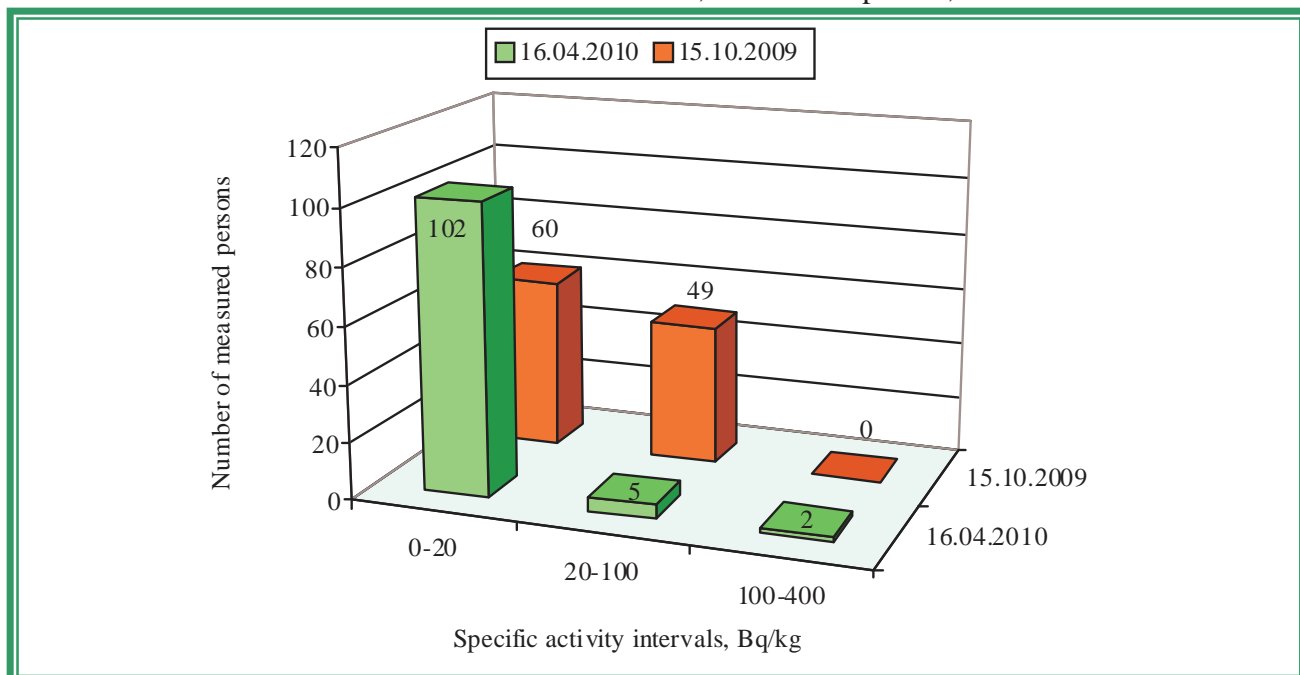


Figure 15 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korovatchi secondary school of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 15, 2009 and April 16, 2010.

KOROTKI

Characteristics	Value	Source
^{137}Cs contamination density of the territory	7.30 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	630 persons	Korotki village council, dated to October 15, 2009
External dose	0.87 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	0.40 mSv/a	-----<-----
Cumulative dose	1.27 mSv/a	-----<-----

According to the data dated to September 2009 in the Korotki secondary school there are 72 children, 20 teachers and 10 persons of another staff; in the kindergarten there are 22 children and 12 persons of another staff.

April 09, 2010

The control measurement of children in the Korotki secondary school and kindergarten of Korma district of Gomel region was performed in the school building. A total of measured persons was 96 persons (86 children and 10 adults).

Average ^{137}Cs specific activity in the whole group (n = 86): (20.6 ± 1.4) Bq/kg.

Average ^{137}Cs specific activity in the critical group (n = 15): (40.2 ± 5.7) Bq/kg.

Median value in the whole group: 15.8 Bq/kg.

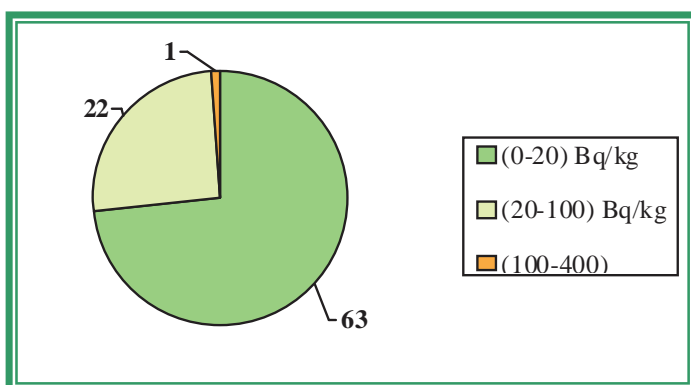
Median value in the critical group: 29.7 Bq/kg.

The table 12 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to April 09, 2010.

Table 12

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	G.A.E.	SCHOOLBOY	M	28	1999	101.1
2.	L.A.M.	CHILD PRESCHOOL AGE	M	21	2004	68.4
3.	M.O.A.	SCHOOLBOY	M	50	1998	61.9
4.	M.T.A.	SCHOOLGIRL	F	49	1995	58.1
5.	B.S.U.	CHILD PRESCHOOL AGE	F	17	2005	33.7
6.	K.D.D.	SCHOOLGIRL	F	32	2001	30.6
7.	S.D.A.	SCHOOLGIRL	F	33	1999	30.6
8.	T.M.A.	CHILD PRESCHOOL AGE	M	28	2004	29.7
9.	L.A.M.	SCHOOLGIRL	F	34	2000	29.7
10.	L.D.A.	SCHOOLBOY	M	37	1998	29.3
11.	B.K.P.	SCHOOLBOY	M	32	2001	26.3
12.	A.L.A.	SCHOOLGIRL	F	23	2002	26.2
13.	M.R.A.	CHILD PRESCHOOL AGE	M	19	2005	26.1
14.	D.A.S.	SCHOOLBOY	M	46	1996	25.4
15.	D.V.V.	SCHOOLBOY	M	43	1997	25.2

The figure 16 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Korotki secondary school and kindergarten of Korma district of Gomel region in accordance with the results of measurements dated to April 09, 2010.



←Figure 16 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Korotki secondary school and kindergarten of Korma district of Gomel region in accordance with the results of measurements dated to April 09, 2010.

NOVY BARSUK

Characteristics	Value	Source
^{137}Cs contamination density of the territory	2.25 Ci/km ²	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Number of inhabitants	371 persons	Novy Barsuk village council, dated to October 14, 2009
External dose	0.27 mSv/a	Dose catalogue of the Ministry for Public Health Services of the Republic of Belarus, 2004
Internal dose	0.50 mSv/a	-----«-----
Cumulative dose	0.77 mSv/a	-----«-----

According to the data dated to October 2009 in the Novy Barsuk secondary school there are 72 children, 15 teachers and 12 persons of another staff; in the kindergarten “Zolotoy Klyuchik” there are 23 children and 13 persons of another staff.

Children from following settlements go to the Novy Barsuk secondary school and kindergarten: Novy Barsuk, Stary Barsuk, Malodusha, Zarya Svobody and Vyshemir.

October 14, 2009

The first measurement of children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 104 persons (84 children and 20 adults).

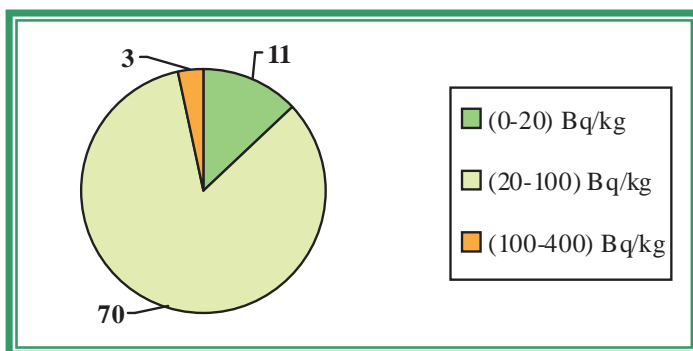
Average ^{137}Cs specific activity in the whole group (n = 84): (37.1 ± 3.3) Bq/kg.
 Average ^{137}Cs specific activity in the critical group (n = 15): (85.5 ± 12.2) Bq/kg.
 Median value in the whole group: 26.0 Bq/kg.
 Median value in the critical group: 67.1 Bq/kg.

The table 13 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to October 14, 2009.

Table 13

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	H.K.V.	SCHOOLGIRL	F	42	1997	227.9
2.	Ch.E.F.	SCHOOLGIRL	F	56	1992	158.0
3.	Sh.S.N.	SCHOOLBOY	M	41	1997	107.5
4.	Z.A.A.	CHILD PRESCHOOL AGE	F	21	2003	79.8
5.	L.Yu.A.	SCHOOLBOY	M	35	1999	72.6
6.	F.M.S.	CHILD PRESCHOOL AGE	M	14	2006	71.1
7.	R.D.V.	SCHOOLBOY	M	27	2001	71.0
8.	A.I.A.	SCHOOLBOY	M	45	1995	67.1
9.	Ch.D.F.	SCHOOLBOY	M	25	2001	65.4
10.	K.M.N.	SCHOOLBOY	M	50	1994	64.5
11.	H.D.V.	SCHOOLGIRL	F	44	1995	63.2
12.	Ch.M.F.	SCHOOLBOY	M	41	1996	62.0
13.	S.A.V.	SCHOOLGIRL	F	28	2002	60.5
14.	G.V.N.	SCHOOLGIRL	F	29	2001	55.6
15.	G.A.N.	SCHOOLBOY	M	31	1997	55.6

The figure 17 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 14, 2009.



←Figure 17 - Diagram of the interval ^{137}Cs specific activity distribution in children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 14, 2009

On February 22, 2010 184 packings of the pectin preparation VITAPECT were given for children.

April 16, 2010

The second measurement of children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 81 persons (68 children and 13 adults).

Average ^{137}Cs specific activity in the whole group (n = 68): (19.8 ± 3.1) Bq/kg.
 Average ^{137}Cs specific activity in the critical group (n = 15): (39.7 ± 13.0) Bq/kg.
 Median value in the whole group: 16.6 Bq/kg.
 Median value in the critical group: 25.3 Bq/kg.

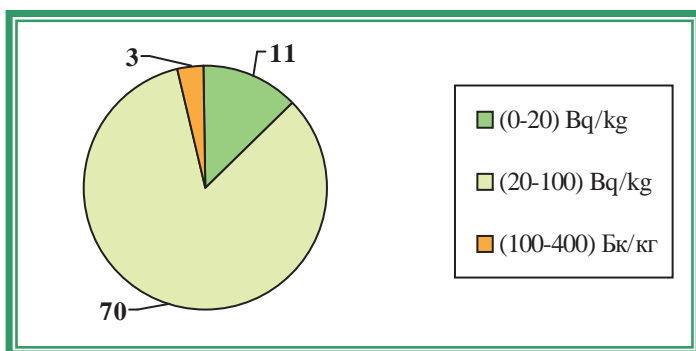
The table 14 demonstrates the maximal levels of ^{137}Cs specific activity (the critical group) according to the results of measurements dated to April 14, 2010.

Table 14

No.	Surname Name Patronymic	Occupation	Sex	Weight, kg	Year of birth	Sp. activity, Bq/kg
1.	F.D.E.	SCHOOLGIRL	F	46	1996	221.4

2.	Z.A.A.	SCHOOLGIRL	F	22	2003	42.6
3.	S.Z.S.	CHILD PRESCHOOL AGE	F	14	2007	30.9
4.	K.I.V.	CHILD PRESCHOOL AGE	F	19	2005	30.0
5.	P.N.N.	CHILD PRESCHOOL AGE	M	14	2007	28.3
6.	S.A.O.	CHILD PRESCHOOL AGE	M	15	2007	27.9
7.	G.A.N.	CHILD PRESCHOOL AGE	M	16	2007	26.4
8.	P.K.A.	CHILD PRESCHOOL AGE	F	17	2005	25.3
9.	K.A.A.	SCHOOLBOY	M	25	2002	24.9
10.	T.A.V.	SCHOOLBOY	M	22	2002	24.7
11.	L.M.N.	CHILD PRESCHOOL AGE	F	15	2006	23.9
12.	T.S.N.	SCHOOLBOY	M	37	1997	23.3
13.	L.Yu.A.	SCHOOLBOY	M	38	1999	22.3
14.	H.D.V.	SCHOOLGIRL	F	46	1995	22.3
15.	B.A.Yu.	SCHOOLGIRL	F	30	2003	22.0

The figure 18 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to April 16, 2010.



←Figure 18 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to April 16, 2010

To demonstrate the efficiency of the effects of pectin preparations there are comparative data on interval distribution of the specific activity of ^{137}Cs in children having taken VITAPECT and having passed two WBC measurements (on October 14, 2009 and April 16, 2010). This group consists of 62 children.

October 14, 2009 April 16, 2010

The first measurement of children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 104 persons (84 children and 20 adults).

The second measurement of children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region was performed in the school building. A total of measured persons was 81 persons (68 children and 13 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 (62 children).

Average specific activity of ^{137}Cs :

after the first measurement: (36.7 ± 3.1) Bq/kg,

after the second measurement: (20.0 ± 3.4) Bq/kg.

Decrease of average specific activity of ^{137}Cs was 46%.

Increase of specific activity: in 8% children.

The same level of specific activity: in 6% children.

Reduction of specific activity: in 86% children.

The evaluation of the scientific significance according to T-Student criterion ($n = 62$): $t=5.13$. The received criterion $t > 1.96$; $p < 0.01$.

Median value after the first measurement: 26.1 Bq/kg.

Median value after the second measurement: 15.5 Bq/kg.

Decrease of median value of specific activity of ^{137}Cs was 41%.

The figure 19 contains the diagram of the interval ^{137}Cs specific activity distribution in children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 14, 2009 and April 16, 2010.

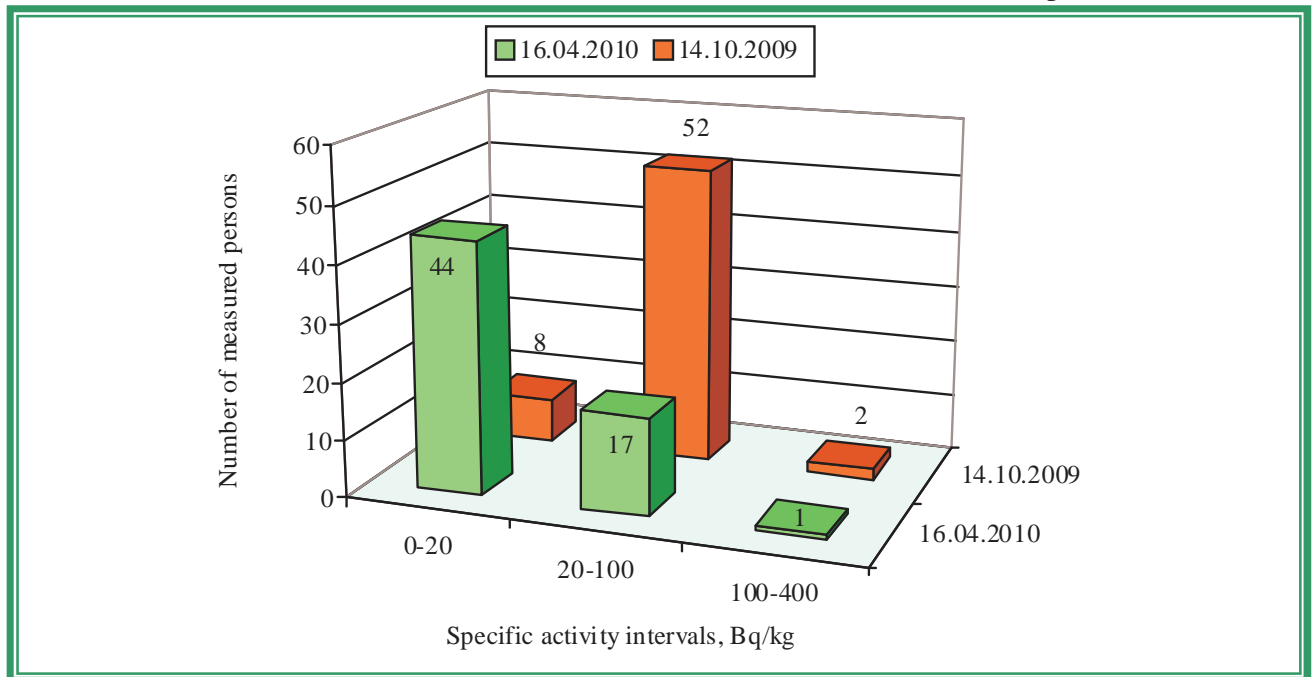


Figure 19 – Diagram of the interval ^{137}Cs specific activity distribution in children in the Novy Barsuk secondary school and kindergarten of Rechitsa district of Gomel region in accordance with the results of measurements dated to October 14, 2009 and April 16, 2010

Senior engineer

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