

New results on samples from Japan by ACRO

ACRO continue to analyse the radioactivity at the request of Japanese citizens affected by the disaster of Fukushima. The results posted today are for vacuum cleaner dust and urine of children.

All the dust from vacuum cleaners are contaminated

ACRO has analysed dust of vacuum cleaners from 13 dwellings. Excepted Osaka, chosen as a reference because it is located 600 km from the plant, all dust samples are contaminated with cesium 137 and 134 following the catastrophe of Fukushima.

It is in the district of Watari of Fukushima-city that the contamination is highest with almost 20,000 becquerels per kilogram for both cesium. This district, located about fifty kilometres from the plant, is known to be particularly contaminated and the sale of rice is prohibited.

Homes are also significantly contaminated in Ichinoseki in Iwate province to the north and in Kashiwa in Chiba to the south, situated in the northern suburbs of Tokyo. In both cities, located about 200 km of the plant, contaminated dust is nearly 6,000 becquerels per kilogram.

The evacuation criteria set by the Japanese government are solely based on soil contamination on the outside and implicitly assume that once at home, residents of contaminated areas no longer run any risk. Our study shows that it is not the case. It seems important to make systematic measurements in homes and to consider these risks in managing the disaster.

Urines of the children are still contaminated

ACRO has also continued to analyse the urine of children at the request of Japanese citizens. Even if there is not 100% of the urine contaminated in Fukushima prefecture, which is good news, many children continue to be contaminated at levels that do not decrease from the levels we measured in May.

Some of these children live in homes where we controlled the dust from the vacuum cleaner. But it does not seem to be any clear correlation between the contamination of dust and urine. This leads us to point the finger to the food as the main contributor to the internal contamination.

Urine is the most contaminated in Ichinoseki in Iwate prefecture located 200 km from the crippled nuclear plant.

For the first time, we found a contamination of the urine of a child in Tokyo. This probably comes from the diet.

Again, this continuing internal contamination is not included in the criteria for evacuation.

Results

House dust

ACRO has analysed dust of vacuum cleaners from 13 dwellings. Excepted Osaka, chosen as a reference because it is located 600 km from the plant, all dust samples are contaminated with cesium 137 and 134 following the catastrophe of Fukushima.

It is in the district of Watari of Fukushima-city that the contamination is highest with almost 20,000 becquerels per kilogram for both cesium. This district, located about fifty kilometres from the plant, is known to be particularly contaminated and the sale of rice is prohibited.

Homes are also significantly contaminated in Ichinoseki in Iwate province to the north and in Kashiwa in Chiba to the south, situated in the northern suburbs of Tokyo. In both cities, located about 200 km of the plant, contaminated dust is nearly 6,000 becquerels per kilogram.

We don't know from when the dust was collected by the vacuum cleaners. In Japan, one removes shoes before entering home.

Sample N°	Type	Date	Place	Dwelling	Bq/kg	
					Cs-134	Cs-137
1012D-7	Dust	October 10 th , 2011	Koriyama-City, Fukushima Pref.	A	155	226
1012D-9	Dust	October 10 th , 2011	Koriyama-City, Fukushima Pref.	B	2,110	2,800
1012D-5	Dust	October 10 th , 2011	Date-City, Fukushima Pref.	C	1,430	1,820
1012D-11	Dust	October 12 th , 2011	Date-City, Fukushima Pref.	D	1,690	2,210
1111D-9	Dust	November 5 th , 2011	Date-City, Fukushima Pref.	E	2,230	2,950
1012D-8	Dust	October 10 th , 2011	Nihonmatsu-City, Fukushima Pref.	F	7,100	9,100
1012D-10	Dust	October 11 th , 2011	Fukushima-City, Fukushima Pref.	G	4,900	6,400
1118D-3	Dust	October 20 th , 2011	Watari-Fukushima, Fukushima Pref.	H	8,500	11,000
1012D-3	Dust	October 10 th , 2011	Kashiwa-City, Chiba Pref.	I	2,580	3,390
1012D-6	Dust	October 11 th , 2011	Oosyuu-City, Iwate Pref.	J	109	111
1012D-1	Dust	October 10 th , 2011	Ichinoseki-City, Iwate Pref.	K	185	267
1012D-2	Dust	October 10 th , 2011	Ichinoseki-City, Iwate Pref.	L	2,530	3,330
1012D-4	Dust	October 10 th , 2011	Suita-City, Osaka Pref.	M	Not Detected	Not Detected

Urines of children from Tohoku

ACRO has also continued to analyse the urine of children at the request of Japanese citizens. Even if there is not 100% of the urine contaminated in Fukushima prefecture, which is good news, many children continue to be contaminated at levels that do not decrease from the levels we measured in May.

Some of these children live in homes where we controlled the dust from the vacuum cleaner. But it does not seem to be any clear correlation between the contamination of dust and urine. This leads us to point the finger to the food as the main contributor to the internal contamination.

Urine is the most contaminated in Ichinoseki in Iwate prefecture located 200 km from the crippled nuclear plant.

Sample N°	Type	Sex / Age	Date	Place	Dwelling	Bq/L	
						Cs-134	Cs-137
1004U-1	Urine	Male / 14	September 27 th , 2011	Koriyama-City, Fukushima Pref.	*	< 0.3	< 0,4
1004U-2	Urine	Female / 9	September 26 th , 2011	Fukushima-City, Fukushima Pref.	*	< 0.3	< 0,4
1004U-3	Urine	Female / 12	September 27 th , 2011	Koriyama-City, Fukushima Pref.	*	0.40 ± 0.18	0,44 ± 0,18
1017U-1	Urine	Female / 4	September 29 th , 2011	Date-City, Fukushima Pref.	C	0.51 ± 0.21	0,59 ± 0,20
1017U-2	Urine	Female / 5	September 29 th , 2011	Shirakawa-City, Fukushima Pref.	*	< 0.2	< 0,2
1017U-3	Urine	Male / 3	September 29 th , 2011	Koriyama-City, Fukushima Pref.	A	< 0.3	< 0,4
1017U-4	Urine	Male / 13	September 29 th , 2011	Nihonmatsu-City, Fukushima Pref.	F	< 0.2	< 0,3
1017U-5	Urine	Female / 10	September 29 th , 2011	Koriyama-City, Fukushima Pref.	B	< 0.2	< 0,2
1017U-6	Urine	Female / 14	September 29 th , 2011	Date-City, Fukushima Pref.	E	1.33 ± 0.26	1,59 ± 0,29
1102U-1	Urine	Female / 8	September 29 th , 2011	Koriyama-City, Fukushima Pref.	*	0.61 ± 0.22	0,64 ± 0,20
1102U-2	Urine	Male / 9	September 29 th , 2011	Date-City, Fukushima Pref.	*	0.69 ± 0.22	0,85 ± 0,24
1102U-3	Urine	Male / 17	October 21 th , 2011	Fukushima-City, Fukushima Pref.	G	0.92 ± 0.25	1,54 ± 0,29
1102U-4	Urine	Male / 22	October 21 th , 2011	Fukushima-City, Fukushima Pref.	G	0.68 ± 0.21	1,06 ± 0,25
1111U-1	Urine	Female / 4	September 29 th , 2011	Ichinoseki-City, Iwate Pref.	*	2.22 ± 0.39	2.42 ± 0.41
1111U-2	Urine	Male / 3	September 29 th , 2011	Date-City, Fukushima Pref.	*	< 0.3	< 0.4
1111U-3	Urine	Female / 10	September 29 th , 2011	Date-City, Fukushima Pref.	*	< 0.3	< 0.4
1111U-4	Urine	Male / 4	September 30 th , 2011	Date-City, Fukushima Pref.	*	1.47 ± 0.31	1.72 ± 0.33
1111U-5	Urine	Male / 6	September 29 th , 2011	Koori-Chyo, Fukushima Pref.	*	0.62 ± 0.25	0.76 ± 0.27
1111U-6	Urine	Female / 8	November 8 th , 2011	Date-City, Fukushima Pref.	*	0.43 ± 0.17	0.66 ± 0.18
1111U-8	Urine	Female / 6	November 8 th , 2011	Date-City, Fukushima Pref.	*	0.54 ± 0.24	0.62 ± 0.24
*	Urine	Female / 9	September 27 th , 2011	Aizu-Wakamatsu, Fukushima Pref.	*	< 0.4	< 0.5
*	Urine	Female / 10	September 26 th , 2011	Aizu-Wakamatsu, Fukushima Pref.	*	< 0.4	< 0.4
*	Urine	Female / 12	September 27 th , 2011	Aizu-Wakamatsu, Fukushima Pref.	*	< 0.4	< 0.5

Urines of children from Kantô

For the first time, we found a contamination of the urine of a child in Tokyo. This probably comes from the diet.

Sample N°	Type	Sex / Age	Date	Place	Bq/L	
					Cs-134	Cs-137
*	Urine	Female / 6	September 23th to 27th, 2011	TOKYO	< 0.3	< 0.3
*	Urine	Male / 3	September 23th to 27th, 2011	TOKYO	< 0.3	< 0.3
*	Urine	Female / 7	October 12th, 2011	TOKYO	< 0.2	< 0.2
*	Urine	Female / 3	November 8 to 11th, 2011	TOKYO	< 0.2	< 0.2
*	Urine	Male / 5	November, 6th to 10th, 2011	CHIBA	< 0.2	< 0.2
*	Urine	Female / 5	October 25th to 26th, 2011	TOKYO	< 0.2	< 0.2
*	Urine	Female / 5	October 24th to 27th, 2011	TOKYO	< 0.2	< 0.2
*	Urine	Male / 8	October 25th to 27th, 2011	TOKYO	0.40 ± 0.17	0.43 ± 0.17