

Cs137 in Daily Rations of Foods Grown at Rongelap Atoll

12/10/58

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2. Cs137 in daily rations of foods grown at Rongelap atoll (8/58)

Sample No.	μc/Sample	Total Weight of Daily Ration as Received	G R A M S							Misc.
			Coconut Meat (mature, green (sprouting))	Coconut Milk	Fresh Pandanus	Pandanus "Paste" (Partially Dried)	Tacca (Arrow-root)	Bread	Fruit	
12	0.0075	584	159	129	61	53	(dry) 31	74		Squash 22 Papaya 55
8	0.0073	427	132	102	85	see misc. (29)*		222		Rice-Pandanus mixture 88
1	0.0071	544	93	98		40				
5	0.0055	91				91				
7	0.0049	546	283	108	79	50	(dry) 19			Fish 7
6	0.0044	584	88		101			395		
14	0.0037	519	238	238	43					
10	0.0025	210			159					Fish 7
13	0.0023	159	16		41	14	(cooked) 17	41		
9	0.0019	342	124	158	60					
2	0.0015	314	202	68		44				
11	0.0015	208	124	26					58	
4	0.0009	165	95		30	33				
Average	0.0039	361	119	71	51	27	5	65		11

Each sample number represents one daily ration for one adult male in August 1958. No imported foods are included with the exception of the rice in sample number 8.

* estimate that about 1/3 of rice-pandanus mixture with total weight of 88 gms consisted of Pandanus.

Cs¹³⁷ in Food Samples Collected at Rongelap
Atoll, August 1958

Comparison with Maximum Permissible Intake

Maximum daily intake found for one person:

$$7 \times 10^{-3} \mu\text{c}$$

MPC in water = $1.5 \times 10^{-3} \mu\text{c/ml}$ (Handbook 52)
Daily intake of water as fluids by standard man = $1.5 \times 10^3 \text{ ml/day}$
(Radiological Health Handbook).

Maximum permissible daily intake taken as

$$(1.5 \times 10^{-3} \mu\text{c/ml}) (1.5 \times 10^3 \text{ ml/day}) = 2.25 \mu\text{c/day}.$$

Maximum daily intake of Cs¹³⁷ for one person is about ~~one~~^{three}
~~three~~^{one} thousandth of the maximum permissible.

$$\frac{0.007 \mu\text{c/day}}{2.25 \mu\text{c/day}} = 0.0031$$

Average daily intake of Cs¹³⁷ for one person (average of 13
daily rations) was found to be:

$$3.9 \times 10^{-3} \mu\text{c}$$

Average daily intake is less than ~~one two~~^{the one} thousandth of the
maximum permissible.

$$\frac{0.0039 \mu\text{c/day}}{2.25 \mu\text{c/day}} = 0.0017$$

Average Values of Survey-meter Readings on Land at Rongelap and Kabelle Islands on Different Dates (Values in m/hr)

Date	Rongelap Island				Kabelle Island			
	3' closed	3' open	1" closed	1" open	3' closed	3' open	1" closed	1" open
Apr. 25 1954					360	480	420	180
July 18 1954					32		110	
Apr. 28 1955	0.0				3.0		5.0	
Nov. 30 1955	1.2	1.4	0.38	2.7			2.5	3.2
June 20 1956	0.4	1.0	0.37	2.7	1.3	1.7	2.3	
July 1 1957	0.071	0.27	0.14	0.31	0.20	0.34	0.31	
April 19 1958	0.029	0.01	0.064	0.48	0.14	0.70	0.29	
Aug. 1953	0.053	0.10	0.087	0.14	0.15	0.35	0.18	0.18

Date	Eniaetok Island			
	3' closed	3' open	1" closed	1" open
March 1958	0.067	0.47	0.17	0.33
Aug. 1958	0.078	0.12	0.10	0.22

Table 3. Distribution of Streptococcus in coconuts and coconut
 liver collected at Bougainville in March 1955

Sample Number	Location of Collection	Non-fat solids g/m/g		Total Solids g/m/g	
		Wet	Dry	Wet	Dry
34	Kabelle Island	266±10	363±17	55±2	87±2
35		263±12	344±20	60±3	120±3
36		276±12	434±20	130±3	250±3
37		605±38	660±44	164±3	247±3
38		420±20	574±33	124±3	210±3

Mean 383 648 121 218
 Standard deviation 140 258 52 103

39	Bougainville Island	216±10	307±15	55±2	87±2
40		245±12	371±20	60±3	120±3
41		160±12	217±20	40±3	80±3
42		400±38	580±44	164±3	247±3
43		224±20	307±33	55±2	87±2

Mean 269 363 73 118
 Standard deviation 89 134 13 25

44	Eniactok Island	240±10	320±15	55±2	87±2
45		225±12	300±20	60±3	120±3

Mean 233 310 58 94
 Standard deviation 62 107 13 25