

Table 15
Concentrations of uranium and thorium series radionuclides in foods and drinking water

Region / country	Concentration (mBq kg ⁻¹)									Ref.
	²³⁸ U	²³⁰ Th	²²⁶ Ra	²¹⁰ Pb	²¹⁰ Po	²³² Th	²²⁸ Ra	²²⁸ Th	²³⁵ U	
Milk products										
North America United States	0.7	0.4	5.7	11		0.27			0.05	[F3, M16]
Asia China India Japan	13 17 0.55		6 12	16	13 15	1.2 0.29	21		0.6	[Z1] [D6, K6] [S22]
Europe Italy Germany Poland Romania U.K.			3-19 2-130 10 0.9-44 <0.4-200	5-280 18 11-15 35-88	2-80 16 13-140 20-220	1.2		56		[M17] [B3, J4, M18] [P3, P7] [B20,R20] [B2]
Reference value	1	0.5	5	15 (40) ^a	15 (60)	0.3	5	0.3	0.05	
Meat products										
North America United States	0.8-2.3	0.5-3	20	18		0.3-2			0.02	[F3,M16]
Asia China India Japan	10 13		41 36	140	120 440	4.3 2.3	120		0.5	[Z1] [K6] [S22]
Europe Germany Poland Romania U.K.	1-20 1.6-5.6 4.9	0.7-3.0	30-220 11-19 2-30 2.6-74	100-1 000 98-105 15-19 40-3 700	37-4 000 99-102 38-110 62-67 000	0.5-3.6		22-93		[B3, G5,M18] [P3, P7] [B20,R20] [B2]
Reference value	2	2	15	80	60	1	10	1	0.05	
Grain products										
North America United States	3-23	0.9-10	7-100	33-81		0.1-2.8			0.1-1.3	[F3,M16]
Asia China India Japan	9.8 7.4-67 1.2		17 14	34	42 15-120	13 1.2	38		0.5	[Z1] [D6, K6] [S22]
Europe Germany Poland Romania U.K.	20-400 4.7-11 6.1-85 6.2-35	1.4-17	20-2 900 80-110 30-90 0.7-5 200	40-4 000 110-160 49-59 56-120	37-1 900 90-140 20-360 27-260	2.0-21 1.6-33 12		180-2300		[B3, G5] [P3, P7] [B20,R20] [B2]
Reference value	20	10	80	50 (100)	60 (100)	3	60	3	1	
Leafy vegetables										
North America United States	24	20	56	41		18			1.2	[F3,M16]
Asia China India	16 61-72		75	360	430 320	23	220		0.7	[Z1] [D6, K6]

Table 15 (continued)

Region / country	Concentration (mBq kg ⁻¹)									Ref.
	²³⁸ U	²³⁰ Th	²²⁶ Ra	²¹⁰ Pb	²¹⁰ Po	²³² Th	²²⁸ Ra	²²⁸ Th	²³⁵ U	
Europe										
Germany	6-2 200		6-1 150	4-4 100	4-7 400					[B3, G5,M18]
Italy			27-44							[D9]
Poland	14-15	6-9	37-43	43-51	40-67	4-7				[P3, P7]
U.K.	9.8-400	80-380	2.2-170	16-3 300	37-3 300					[B2]
Reference value	20	20	50	80 (30)	100 (30)	15	40	15	1	
Root vegetables and fruits										
North America										
United States	0.9-7.7	0.2-1.1	7-47	8-150		0.08-1.4			0.1	[F3,M16]
Asia										
China	13		63	27	29	4.7	110		0.6	[Z1]
India	0.4-77				16-140					[D6, K6]
Japan	26		11			2.3				[S22]
Europe										
Germany	10-2 900		5-9 400	20-4 900	22-5 200					[B3, G5,M18]
Italy			14-25							[D9]
Poland	0.9-10	0.7-7.5	11-215	24-93	28-210	0.7-7.1				[P3, P7]
Romania	6-120		9-190	19-44	12-140	0.4-2.1		22		[B20,R20]
U.K.	6		9.0-41	18-76						[B2]
Reference value	3	0.5	30	30 (25)	40 (30)	0.5	20	0.5	0.1	
Fish products										
North America										
United States	13-1 900	1.2-29	30-59	14-1 800	150-55 000	1.2-30			0.4-90	[F3, M16, S23]
Asia										
China	12		39	3 500	4 900	1.3	320		0.5	[Z1]
Europe										
France			37							[P6]
Germany			100-7 400	20-4 400	50-5 200					[G5,M18]
Poland			28-43	81-93	3 100-3 800					[P7]
Portugal					80-120 000					[C14]
U.K.	2.5		8.5-2 100	180-4 800	60-53 000			56-700		[B2]
Reference value	30	10	100	200	2 000	10		100		
Drinking water										
North America										
United States	0.3-77	0.1	0.4-1.8	0.1-1.5		0.05	0-0.5		0.04	[C15, F3, H11, M20]
Asia										
China	0.1-700		0.2-120			0.04-12				[N3]
India	0.09-1.5									[D6]
Europe										
Finland	0.5-150 000		10-49 000	0.2-21 000	0.2-7 600		18-570			[A16,S11]
France	4.4-930		7-700			0-4.2				[D8, P6]
Germany	0.4-600		1-1 800	0.2-200	0.1-200					[B3, G5, G6]
Italy	0.5-130		0.2-1200							[S55]
Poland	7.3	1.4	1.7-4.5	1.6	0.5	0.06				[P3, P7]
Romania	0.4-37		0.7-21	7-44	7-44	0.04-9.3				[B20,R20]
Switzerland	0-1 000		0-1500				0-200		0-50	[S51]
Spain	3.7-4.4		<20-4 000							[S24]
U.K.			0-180	40-200						[B2]
Reference value	1	0.1	0.5	10	5	0.05	0.5	0.05	0.04	

a Revised value with previous value [U3] (if different) in parentheses.