

^{228}Ra



Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	5.76 Years
Origin [1]	Naturally occurring
Principal decay mode [1]	Beta minus (β^-)
Specific activity [2]	1.01×10^4 GBq/g
Freshwater Kd [3]	7.4×10^3 L kg ⁻¹
Marine Kd [4]	4×10^3 L kg ⁻¹

Parameters useful for human assessments	Value
CR Pasture grass [3]	7.1×10^{-2}
CR Freshwater fish [3]	2.1×10^2 L kg ⁻¹
CR Marine fish [4]	1×10^2 L kg ⁻¹
F _f Cow meat [4]	1.7×10^{-3} d kg ⁻¹
F _m Cow milk [4]	3.8×10^{-4} d kg ⁻¹
Human fractional absorption (f ₁) [5]	0.3
Inhalation dose coefficient [6]	9.5×10^{-3} Sv Bq ⁻¹
Ingestion dose coefficient [6]	6.9×10^{-7} Sv Bq ⁻¹
Biological half life for Human (adult)	No data available
Biological half life for Cow milk	No data available
EU Food intervention limit- Dairy [7]	1000 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Baby food [7]	400 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Liquid [7]	1000 Bq L ⁻¹
EU Food intervention limit- Other food [7]	1250 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Minor food [7]	12500 Bq L ⁻¹ or Bq kg ⁻¹

^{228}Ra Nuclear Data

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Parameters useful for wildlife assessments	Value
Terrestrial EMCL— Soil [8]	$1.33 \times 10^4 \text{ Bq kg}^{-1}$
Freshwater EMCL—Water [8]	$3.53 \times 10^0 \text{ Bq L}^{-1}$
Freshwater EMCL— Sediment [8]	$1.84 \times 10^4 \text{ Bq kg}^{-1}$
Marine EMCL — Water [8]	$8.93 \times 10^{-1} \text{ Bq L}^{-1}$
Marine EMCL — Sediment [8]	$1.31 \times 10^4 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [8]	4.4×10^{-2}
CR Freshwater fish [8]	1.8×10^2
CR Freshwater mollusc [8]	2.4×10^4
CR Marine fish [8]	1.4×10^2
CR Marine mollusc [8]	6.5×10^1
Internal DCC Terrestrial mammal (rat) on soil [8]	$3.5 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [8]	$4.7 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [8]	$1.9 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [8]	$3.5 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [8]	$5.2 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface[8]	$6.2 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ sediment
Internal DCC Freshwater fish (pelagic)[8]	$3.71 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Freshwater fish in water [8]	$5.00 \times 10^{-4} \text{ Gy h}^{-1}/\text{Bq L}^{-1}$ water

All terms used in these tables are described and discussed in underlying documents accessed via the hyperlinks provided

Sources of data [reference list](#)

Data compiled: September 2012

Data updated : May 2015

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