

^{137}Cs



Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	30.05 Years
Origin [1]	Fission
Principal decay mode [1]	Beta
Specific activity [2]	3.3×10^{12} Bq/g
Freshwater Kd [3]	2.9×10^4 L kg ⁻¹
Marine Kd [4]	2.0×10^3 L kg ⁻¹

Parameters useful for human assessments	Value
CR Pasture grass [3]	6.3×10^{-2}
CR Freshwater fish [3]	3.0×10^3 L kg ⁻¹
CR Marine fish [4]	1.0×10^2 L kg ⁻¹
F _f Cow meat [3]	2.2×10^{-2} d kg ⁻¹
F _m Cow milk [3]	4.6×10^{-3} d kg ⁻¹
Human fractional absorption (f ₁) [5]	1
Inhalation dose coefficient [6]	3.9×10^{-8} Sv Bq ⁻¹
Ingestion dose coefficient [6]	1.3×10^{-8} Sv Bq ⁻¹
Biological half life for Human (adult) [7]	a: 2 days (0.1) , b: 110 days (0.9)
Biological half life for Cow milk [8]	a: 1.5 days , b: 15 days
EU Food intervention limit- Dairy [9]	1000 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Baby food [9]	400 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Liquid [9]	1000 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Other food [9]	1250 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Minor food [9]	12500 Bq L ⁻¹ or Bq kg ⁻¹

^{137}Cs Nuclear data

www.star-radioecology.org

^{137}Cs

Commonly used or illustrative parameters

Parameters useful for wildlife assessments	Value
Terrestrial EMCL— Soil [10]	$2.28 \times 10^3 \text{ Bq kg}^{-1}$
Freshwater EMCL—Water [10]	$5.56 \times 10^{-1} \text{ Bq L}^{-1}$
Freshwater EMCL— Sediment [10]	$1.13 \times 10^5 \text{ Bq kg}^{-1}$
Marine EMCL — Water [10]	$7.63 \times 10^{-1} \text{ Bq L}^{-1}$
Marine EMCL — Sediment [10]	$2.48 \times 10^4 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [10]	3.4×10^0
CR Freshwater fish [10]	3.4×10^3
CR Freshwater mollusc [10]	1.3×10^3
CR Marine fish [10]	8.4×10^1
CR Marine mollusc [10]	5.1×10^1
Internal DCC Terrestrial mammal (rat) on soil [10]	$1.7 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [10]	$2.8 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [10]	$1.1 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [10]	$1.7 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [10]	$3.0 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface [10]	$1.5 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ sediment
Internal DCC Freshwater fish (pelagic) [10]	$1.8 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Freshwater fish in water [10]	$2.9 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ 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 : January 2015

www.star-radioecology.org