

⁹⁰Sr



Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	2.88 x 10 ¹ Years
Origin [1]	Fission
Principal decay mode [1]	Beta
Specific activity [2]	5.2 x 10 ¹² Bq/g
Freshwater Kd [3]	1.2 x 10 ³ L kg ⁻¹
Marine Kd [4]	2 x 10 ² L kg ⁻¹

Parameters useful for human assessments	Value
CR Pasture grass [4]	1.3 x 10 ⁰
CR Freshwater fish [4]	1.4 x 10 ⁻² L kg ⁻¹
CR Marine fish [3]	1.0 x 10 ⁰ L kg ⁻¹
F _f Cow meat [4]	1.3 x 10 ⁻³ d kg ⁻¹
F _m Cow milk [4]	1.3 x 10 ⁻³ d kg ⁻¹
Human fractional absorption (f ₁) [5]	0.3
Inhalation dose coefficient [6]	1.6 x 10 ⁻⁷ Sv Bq ⁻¹
Ingestion dose coefficient [6]	2.8 x 10 ⁻⁸ Sv Bq ⁻¹
Biological half life for Human (adult) [7]	a: 11 yrs (1.0)
Biological half life for Cow milk [8]	0.5 days (0.93), 3 days (0.06), 16 days (0.004), 315 days (0.0006)
EU Food intervention limit- Dairy [9]	125 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Baby food [9]	75 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Liquid [9]	125 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Other food [9]	750 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Minor food [9]	7 500 Bq L ⁻¹ or Bq kg ⁻¹

⁹⁰Sr Nuclear data

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Commonly used or illustrative parameters

Parameters useful for wildlife assessments	Value
Terrestrial EMCL— Soil [10]	$2.3 \times 10^3 \text{ Bq kg}^{-1}$
Freshwater EMCL—Water [10]	$3.39 \times 10^{-1} \text{ Bq L}^{-1}$
Freshwater EMCL— Sediment [10]	$2.65 \times 10^2 \text{ Bq kg}^{-1}$
Marine EMCL — Water [10]	$2.53 \times 10^1 \text{ Bq L}^{-1}$
Marine EMCL — Sediment [10]	$7.46 \times 10^1 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [10]	1.7×10^0
CR Freshwater fish [10]	8.6×10^2
CR Freshwater mollusc [10]	4.6×10^2
CR Marine fish [10]	2.5×10^1
CR Marine mollusc [10]	1.5×10^2
Internal DCC Terrestrial mammal (rat) on soil [11]	$6.2 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [11]	$1.2 \times 10^{-10} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [11]	$1.6 \times 10^{-11} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [11]	$6.0 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [11]	$5 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface [11]	$2.5 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ sediment
Internal DCC Freshwater fish (pelagic) [11]	$1.6 \times 10^{-11} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Freshwater fish in water [11]	$6.3 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ 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 : May 2015