

⁵⁷Co



Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	272 Days
Origin [2]	Charged particle reaction
Principal decay mode [1]	Electron capture
Specific activity [1]	3.118×10^{14} Bq/g
Freshwater Kd [3]	4.4×10^4 L kg ⁻¹
Marine Kd [4]	5×10^7 L kg ⁻¹

Parameters useful for human assessments	Value
CR Pasture grass [3]	4.5×10^{-2}
CR Freshwater fish [3]	4.0×10^2 L kg ⁻¹
CR Marine fish [4]	7×10^2 L kg ⁻¹
F _f Cow meat [3]	4.3×10^{-4} d kg ⁻¹
F _m Cow milk [3]	1.1×10^{-4} d kg ⁻¹
Human fractional absorption (f ₁) [5]	0.1
Inhalation dose coefficient [6]	1.9×10^{-9} Sv Bq ⁻¹
Ingestion dose coefficient [6]	2.1×10^{-10} Sv Bq ⁻¹
Biological half life for Human (adult) [7]	a: 60 days (0.05) , b: 800 days (0.45)
Biological half life for Cow milk	No data available
EU Food intervention limit- Dairy [8]	1000 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Baby food [8]	400 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Liquid [8]	1000 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Other food [8]	1250 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Minor food [8]	12500 Bq L ⁻¹ or Bq kg ⁻¹

⁵⁷Co Nuclear data

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Commonly used or illustrative parameters

Parameters useful for wildlife assessments	Value
Terrestrial EMCL— Soil [9]	$1.59 \times 10^5 \text{ Bq kg}^{-1}$
Freshwater EMCL—Water [9]	$3.3 \times 10^{-1} \text{ Bq L}^{-1}$
Freshwater EMCL— Sediment [9]	$1.22 \times 10^5 \text{ Bq kg}^{-1}$
Marine EMCL — Water [9]	$4.74 \times 10^{-2} \text{ Bq L}^{-1}$
Marine EMCL — Sediment [9]	$1.3 \times 10^5 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [9]	1.22×10^{-5}
CR Freshwater fish [9]	2.3×10^2
CR Freshwater mollusc [9]	1.1×10^3
CR Marine fish [9]	5.3×10^3
CR Marine mollusc [9]	5.3×10^3
Internal DCC Terrestrial mammal (rat) on soil [9]	$3.56 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [9]	$3.80 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [9]	$1.9 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [9]	$3.52 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [9]	$6.30 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface [9]	$3.15 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
Internal DCC Freshwater fish (pelagic) [9]	$3.82 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Freshwater fish in water [9]	$6.00 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ 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

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