

^{129}I



Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	1.61×10^7 Years
Origin [1]	Fission
Principal decay mode [1]	Beta
Specific activity [2]	6.67×10^6 Bq/g
Freshwater Kd [3]	4.4×10^3 L kg ⁻¹
Marine Kd [4]	2.0×10^2 L kg ⁻¹

Parameters useful for human assessments	Value
CR Pasture Grass [3]	3.7×10^{-3}
CR Freshwater Fish [3]	6.5×10^2 L kg ⁻¹
CR Marine Fish [4]	9.0×10^0 L kg ⁻¹
F _f Cow Meat [3]	6.7×10^{-3} d kg ⁻¹
F _m Cow Milk [3]	5.4×10^{-3} L kg ⁻¹
Human fractional absorption (f ₁) [5]	1.0
Inhalation dose coefficient [6]	9.8×10^{-9} Sv Bq ⁻¹
Ingestion dose coefficient (adult) [6]	1.1×10^{-7} Sv Bq ⁻¹
Biological half life for Human (adult) [7]	12 days (80 days in thyroid)
Biological half life for Cow milk [8]	a: 1.0 day (100%)
EU Food intervention limit- Dairy [9]	500 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Baby food [9]	150 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Liquid [9]	500 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Other food [9]	2000 Bq L ⁻¹ or Bq kg ⁻¹
EU Food intervention limit- Minor food [9]	20000 Bq L ⁻¹ or Bq kg ⁻¹

^{129}I Nuclear data

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Parameters useful for wildlife assessments	Value
Terrestrial EMCL — Soil [10]	$1.59 \times 10^5 \text{ Bq kg}^{-1}$
Freshwater EMCL — Water [10]	$1.91 \times 10^0 \text{ Bq L}^{-1}$
Freshwater EMCL— Sediment [10]	$3.94 \times 10^4 \text{ Bq kg}^{-1}$
Marine EMCL — Water [10]	$5.35 \times 10^0 \text{ Bq L}^{-1}$
Marine EMCL — Sediment [10]	$1.29 \times 10^2 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [10]	4.0×10^{-1}
CR Freshwater fish [10]	3.2×10^2
CR Freshwater mollusc [10]	8.3×10^1
CR Marine fish [10]	9.0×10^0
CR Marine mollusc [10]	8.8×10^3
Internal DCC Terrestrial mammal (rat) on soil [10]	$5.21 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [10]	$3.0 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [10]	$1.1 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [10]	$5.21 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [10]	$9.2 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface [10]	$4.6 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ sediment
Internal DCC Freshwater fish (pelagic) [10]	$5.25 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Freshwater fish in water [10]	$7.7 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ 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 : April 2015

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