

**<sup>131</sup>I**

### Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	8.02 Days
Origin [1]	Fission
Principal decay mode [1]	Beta [gamma]
Specific activity [2]	$4.81 \times 10^{15}$ Bq/g
Freshwater Kd [3]	$4.4 \times 10^3$ L kg <sup>-1</sup>
Marine Kd [4]	$2.0 \times 10^2$ L kg <sup>-1</sup>

Parameters useful for human assessments	Value
CR Pasture Grass [3]	$3.7 \times 10^{-3}$
CR Freshwater Fish [3]	$6.5 \times 10^2$ L kg <sup>-1</sup>
CR Marine Fish [4]	$9.0 \times 10^0$ L kg <sup>-1</sup>
F <sub>f</sub> Cow Meat [3]	$6.7 \times 10^{-3}$ d kg <sup>-1</sup>
F <sub>m</sub> Cow Milk [3]	$5.4 \times 10^{-3}$ L kg <sup>-1</sup>
Human fractional absorption (f <sub>1</sub> ) [5]	1.0
Inhalation dose coefficient [6]	$1.6 \times 10^{-9}$ Sv Bq <sup>-1</sup>
Ingestion Dose Coefficient [6]	$2.8 \times 10^{-8}$ Sv Bq <sup>-1</sup>
Biological half life for Human (adult) [7]	a: 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 <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit- Baby food [9]	150 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit- Liquid [9]	500 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit- Other food [9]	2000 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit- Minor food [9]	20000 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>

### <sup>131</sup>I Nuclear data

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### Commonly used or illustrative parameters

Parameters useful for wildlife assessments	Value
Terrestrial EMCL — Soil [10]	$3.1 \times 10^4 \text{ Bq kg}^{-1}$
Freshwater EMCL — Water [10]	$1.19 \times 10^{-1} \text{ Bq L}^{-1}$
Freshwater EMCL — Sediment [10]	$1.31 \times 10^4 \text{ Bq kg}^{-1}$
Marine EMCL — Water [10]	$1.31 \times 10^0 \text{ Bq L}^{-1}$
Marine EMCL — Sediment [10]	$3.16 \times 10^1 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [10]	$4.0 \times 10^{-1}$
CR Freshwater fish [10]	$3.2 \times 10^2$
CR Freshwater mollusc [10]	$8.3 \times 10^1$
CR Marine fish [10]	$9.0 \times 10^0$
CR Marine mollusc [10]	$8.8 \times 10^3$
Internal DCC Terrestrial mammal (rat) on soil [10]	$1.3 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [10]	$1.8 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [10]	$7.5 \times 10^{-5} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [10]	$1.3 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [10]	$2.0 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface [10]	$1.0 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ sediment
Internal DCC Freshwater fish (pelagic) [10]	$1.4 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Freshwater fish in water [10]	$1.9 \times 10^{-4} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ 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 : April 2015

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