

**<sup>3</sup>H**

### Commonly used or illustrative parameters

Generic parameters	Value
Radioactive half life [1]	12.3 Years
Origin [1]	Natural, fission & activation
Principal decay mode [1]	Beta
Specific activity [1]	$3.56 \times 10^{14}$ Bq/g
Freshwater Kd [2]	0 L kg <sup>-1</sup>
Marine Kd (open ocean) [3]	$1.0 \times 10^0$ L kg <sup>-1</sup>

Parameters useful for human assessments	Value
Soil water-air moisture ratio (HTO) [4]	$0.3 \times 10^0$
HTO vapour pressure to that of H <sub>2</sub> O [4]	$9.09 \times 10^{-1}$
Water Content (pasture/fish) [4]	0.76 /0.78 L kg <sup>-1</sup> wet
Water Equivalent Factor (plants/fish) [4]	0.56/0.65 L kg <sup>-1</sup> dry
CR Cow HTO (meat/milk) [4]	0.66/0.87 Bq kg <sup>-1</sup> fresh per Bq L <sup>-1</sup> intake
CR Cow OBT (meat/milk) [4]	0.40/0.24 Bq kg <sup>-1</sup> fresh per Bq L <sup>-1</sup> intake
Human fractional absorption (f <sub>1</sub> ) [5]	1.0
Inhalation dose coefficient [6]	$2.6 \times 10^{-10}$ Sv Bq <sup>-1</sup>
Ingestion dose coefficient [6]	$1.8 \times 10^{-11}$ (HTO) / $4.2 \times 10^{-11}$ (OBT) Sv Bq <sup>-1</sup>
Biological half life - Human (adult) [7]	10 days (HTO)
Biological half life - Cow [8]	a: 3-4 days , b: 30-40 days
EU Food intervention limit - Dairy, liquid [9]	10 000 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit - Baby food [9]	4 000 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit - Other food [9]	12 500 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>
EU Food intervention limit - Minor food [9]	125 000 Bq L <sup>-1</sup> or Bq kg <sup>-1</sup>

**<sup>3</sup>H Nuclear data**

<sup>3</sup>H

### Commonly used or illustrative parameters

Parameters useful for wildlife assessments	Value
Terrestrial EMCL— Soil [10]	$2.64 \times 10^3 \text{ Bq kg}^{-1}$
Freshwater EMCL—Water [10]	$3.94 \times 10^5 \text{ Bq L}^{-1}$
Freshwater EMCL— Sediment [10]	$6.02 \times 10^4 \text{ Bq kg}^{-1}$
Marine EMCL — Water [10]	$3.94 \times 10^5 \text{ Bq L}^{-1}$
Marine EMCL — Sediment [10]	$1.11 \times 10^5 \text{ Bq kg}^{-1}$
CR Terrestrial mammal (rat) [10]	$1.5 \times 10^2$
CR Freshwater fish [10]	$1.0 \times 10^0$
CR Freshwater mollusc [10]	$1.0 \times 10^0$
CR Marine fish [10]	$1.0 \times 10^0$
CR Marine mollusc [10]	$1.0 \times 10^0$
Internal DCC Terrestrial mammal on soil (Rat) [ 10]	$8.25 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Terrestrial mammal (rat) in soil [10]	$0 \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
External DCC Terrestrial mammal (rat) on soil [10]	$0 \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ soil
Internal DCC Marine fish (benthic) [10]	$8.25 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Marine fish (benthic) in water [10]	$7.96 \times 10^{-13} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ water
External DCC Marine fish (benthic) at sediment interface [10]	$3.98 \times 10^{-13} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ sediment
Internal DCC Freshwater fish (pelagic) [10]	$8.25 \times 10^{-6} \mu\text{Gy h}^{-1}/\text{Bq kg}^{-1}$ whole organism
External DCC Freshwater fish in water [10]	$3.60 \times 10^{-13} \mu\text{Gy h}^{-1}/\text{Bq L}^{-1}$ 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

[www.radioecology-exchange.org](http://www.radioecology-exchange.org)