

Recommended Nuclear Decay Data

Re-186

Decay Mode: β^- , EC		Half-Life: (3.7183 ± 0.0011) d			[6]
Radiation Type		Energy (keV)	Intensity (%)		Ref.
Auger-L	EC	6.530	4.8	3	[6]
Auger-K	EC	45.70	0.269	8	[6]
	β^-	48.30	0.161	6	[6]
ce-K-1	EC	53.12	0.359	13	[6]
	β^-	63.29	4.14	13	[6]
ce-L-1	EC	110.54	0.555	19	[6]
ce-M-1	EC	119.82	0.139	5	[6]
ce-L-1	β^-	124.19	6.02	19	[6]
ce-M-1	β^-	134.11	1.53	5	[6]
ce-NOP-1	β^-	136.50	0.461	15	[6]
β^- max		302.0	0.0625	9	[6]
β^- max		932.3	21.54	14	[6]
β^- max		1069.5	70.99	12	[6]
X-ray L	Σ EC	9.3	0.0191	21	[2]
	$\Sigma\beta^-$	9.9	0.031	7	[2]
X-ray K α	Σ EC	58.8	4.77	5	[2]
	$\Sigma\beta^-$	62.4	3.07	5	[2]
X-ray K β	Σ EC	67.6	1.25	20	[2]
	$\Sigma\beta^-$	71.7	0.82	15	[2]
γ	EC	122.61	0.603	6	[2]
γ	β^-	137.16	9.39	6	[2]
γ	β^-	630.33	0.0293	6	[2]
γ	β^-	767.47	0.0327	6	[2]

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■ Decay Mode

α	Alpha
β^- , β^+	Beta
EC	Electron capture
IT	Isomeric transition

■ Half-Life

s	Seconds
m	Minutes
h	Hours
d	Days
y	Years

■ Energy

All energies are given in keV.
Normally there are energies listed with an intensity $\geq 1\%$.

■ Radiation Type

Auger-L/K	L or K-shell auger electron
ce-K-1	K-shell conversion electron transition 1
ce-L-2	L-shell conversion electron transition 2
α	Alpha particle
β^- max, β^+ max	Beta particle (maximal energy)
β^- av, β^+ av	Beta particle (average energy)
X-ray L	L X-ray
X-ray $K\alpha$, $K\beta$	K X-rays
γ	Gamma ray
γ Annih.	Annihilation radiation
Σ	Signifies weighted mean energies and intensities

■ Intensity

Values are given in percent. The format used for the uncertainties in the listed values can be illustrated by the following examples:

$$1.2 \quad 56 = 1.2 \pm 5.6$$
$$1.23 \quad 56 = 1.23 \pm 0.56$$

■ References

- [1] PTB-6.11-97-1, Braunschweig, Oktober 1997
- [2] PTB-Ra-16/5, Braunschweig, Mai 2000
- [3] LMRI. Table de radionuclides. 1982 ff
- [4] NCRP Report No.58, 2nd Edition, February 1985
- [5] Table de Radionuclides, BNM-CEA/DTA/LPRI Commissariat à l'Énergie Atomique – France 1999
- [6] National Nuclear Data Center USA, Brookhaven National Laboratory Upton N.Y.
- [7] Table of Isotopes, 8th Edition, 1996
- [8] BNM-CEA/DTA/DAMRI Nuclear and Atomic Decay Data ; 19/12/98

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