

Recommended Nuclear Decay Data

Sr-90

Decay Mode: β^-		Half-Life: (10523 \pm 35) d		[2]
Radiation Type	Energy (keV)	Intensity (%)		Ref.
β^- max	546	100	--	[3]
β^- av	196			[3]

Y-90

Decay Mode: β^-		Half-Life: (2.671 \pm 0.004) d		[2]
Radiation Type	Energy (keV)	Intensity (%)		Ref.
ec-KLMN	1742.7	0.013	7	[3]
β^- max	523.2	0.016	7	[3]
β^- av	188			[3]
β^- max	2283.9	99.984	7	[3]
β^- av	939			[3]

Recommended Nuclear Decay Data

■ 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:

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

■ 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

Eckert & Ziegler Nuclitec GmbH

Gieselweg 1
38110 Braunschweig
Deutschland

Tel. +49 5307 932-555
Fax +49 5307 932-194
www.nuclitec.de