Recommended Nuclear Decay Data

Cd-109

Decay Mode: EC		Half-Life: (462.1 ± 1.4) d					[2]
Radiation Type		**Energy (keV)**			**Intensity (%)**		**Ref.**
Auger-L		1.8	-	3.8	1.670	10	[1]
Auger-K		17.8	-	25.5	20.6	5	[1]
ce-K-1			65.52		40.8	5	[1]
ce-L-1			84.2		44.8	5	[1]
ce-MNOP-1			87.32		9.8	2	[1]
X-ray L	Σ		3.1		10.34	26	[2]
X-ray Kα	Σ		22.1		83.6	6	[2]
X-ray Kβ	Σ		25.0		17.77	19	[2]
γ	Ag-109m		88.03		3.626	20	[2]

Cd-109 with Ag-109m (half-life: 39.6 s) in equilibrium

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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 ≥ 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 Kα, Kβ	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	56	=	1.2	±	5.6
1.23	56	=	1.23	±	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 Radionuclidés, 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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