Recommended Nuclear Decay Data

Am-241

Decay Mode: α	Half-Life: (157850 ± 240) d			[2]
Radiation Type	Energy (keV)	Intensity (%)		Ref.
Auger-L	10	30	5	[4]
ce-L-2	3.92	14	5	[4]
ce-L-5	10.78	17	3	[4]
ce-L-7	20.3	0.324	23	[4]
ce-M-2	20.61	3.9	5	[4]
ce-L-8	21.0	9.1	12	[4]
ce-M-5	27.47	4.4	7	[4]
ce-L-11	33.13	0.89	12	[4]
ce-L-14	37.11	30.2	22	[4]
ce-M-8	37.68	2.4	3	[4]
ce-M-11	49.82	0.24	3	[4]
ce-M-14	53.8	8.1	3	[4]
ce-NOP-14	58.04	34	4	[4]
ce-L-22	76.54	0.229	8	[4]
α	5388.0	1.40	20	[4]
α	5443.0	12.80	20	[4]
α	5485.7	85.2	8	[4]
α	5512.0	0.20	5	[4]
α	5544.3	0.34	5	[4]
X-ray L Σ	16.6	37.7	6	[2]
γ	26.34	2.40	2	[2]
γ	33.20	0.126	3	[2]
γ	43.42	0.073	8	[2]
γ	59.54	35.9	4	[2]

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

Recommended Nuclear Decay Data

Co-57

Decay Mode: EC	Half-Life: (271.83 ± 0.08) d			[2]
Radiation Type	**Energy (keV)**		**Intensity (%)**	**Ref.**
Auger-L	0.6 - 0.7	255	16	[3]
Auger-K	5.37 - 7.10	106	3	[3]
ce-K-1	7.31	70.2	4	[3]
ce-LMN-1	13.56	7.57	24	[3]
ce-K-2	114.95	1.63	10	[3]
ce-LMN-2	129.36	0.18	1	[3]
ce-K-3	129.36	1.43	4	[3]
ce-LMN-3	135.62	0.172	15	[3]
X-ray L	0.71	1.27	21	[2]
X-ray K Σ	6.48	57.9	8	[2]
γ	14.41	9.16	15	[2]
γ	122.06	85.60	17	[2]
γ	136.47	10.68	8	[2]
γ	230.40	0.00040	12	[2]
γ	339.69	0.0037	11	[2]
γ	352.33	0.0030	9	[2]
γ	366.80	0.0012	4	[2]
γ	570.09	0.016	5	[2]
γ	692.41	0.149	10	[2]
γ	706.54	0.0050	15	[2]

Recommended Nuclear Decay Data

Pb-210

Decay Mode: β^-, α	Half-Life: (8145 ± 80) d			[2]
Radiation Type	**Energy (keV)**	**Intensity (%)**		**Ref.**
Auger-L	8.15	35	4	[4]
ce-L-1	30.13	60	4	[4]
ce-M-1	42.52	14.0	9	[4]
ce-NOP-1	45.58	4.6	3	[4]
β^-max	16.5	80	2	[3]
β^-max	63.0	20	2	[3]
α	3720	« 0.001	--	[3]
X-ray L Σ	12.4	23.4	5	[2]
γ	46.54	4.24	5	[2]
γ	671.45	1.79	6	[2]

Pb-210 with Bi-210 (half-life: 5.013 d) in equilibrium

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

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