Recommended Nuclear Decay Data

Pu-238

Decay Mode: α	Half-Life: (32030 ± 110) d			[2]
Radiation Type	**Energy (keV)**	**Intensity (%)**		**Ref.**
Auger-L	9.89	9.1	13	[4]
ce-L-2	21.72	20.7	8	[4]
ce-M-2	37.93	5.69	22	[4]
ce-NOP-2	42.04	1.88	8	[4]
α	5357.7	0.10	3	[4]
α	5456.3	28.3	6	[4]
α	5499.1	71.6	6	[4]
X-ray LI	11.62	0.25	3	[2]
X-ray Lα	13,60	4.2	3	[2]
X-ray Lη	15.40	0.102	11	[2]
X-ray Lβ	17.06	5.2	5	[2]
X-ray Lγ	20.30	1.15	13	[2]
γ	43.50	0.0395	8	[2]
γ	99.85	0.00735	8	[2]

weak γ's (I < 0.001 %)

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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