

Recommended Nuclear Decay Data

Ge-68

Decay Mode: EC		Half-Life: (270.95 ± 0.16) d			[2]		
Radiation Type		Energy (keV)			Intensity (%)		Ref.
Auger-L	Ga-68	0.73	-	1.00	13.66	6	[1]
		0.78	-	1.07	121.9	4	[1]
Auger-K	Ga-68	7.21	-	9.65	4.94	7	[1]
		7.71	-	10.4	41.7	4	[1]
β^- max	Ga-68	821.7			1.20	6	[4]
β^- max	Ga-68	1899.1			87.80	20	[4]
X-ray L	Σ (Ga-68)	0.88	-	1.11	0.149	6	[1]
	Σ (Ge-68)	0.95	-	1.20	1.52	5	[1]
X-ray K α	Σ (Ga-68)	8.61	-	8.64	4.09	6	[1]
	Σ (Ge-68)	9.22	-	9.25	38.98	25	[1]
X-ray K β	Σ (Ga-68)	9.57	-	9.65	0.579	10	[1]
	Σ (Ge-68)	10.2	-	10.4	5.68	5	[1]
γ	Annih (Ga-68)	511.0			178.28	22	[2]
γ	Ga-68	578.52			0.0335	17	[1]
γ	Ga-68	682.57			0.00031	2	[1]
γ	Ga-68	805.83			0.094	3	[2]
γ	Ga-68	938.61			0.00017	2	[1]
γ	Ga-68	1077.3			3.22	3	[2]
γ	Ga-68	1165.9			« 0.001	--	[1]
γ	Ga-68	1261.1			0.094	3	[2]
γ	Ga-68	1744.4			0.0095	5	[1]
γ	Ga-68	1883.2			0.137	4	[2]
γ	Ga-68	2338.4			0.00113	15	[1]
γ	Ga-68	2821.7			0.001	4	[1]

Ge-68 with Ga-68 (half-life: 67.71 m) in equilibrium

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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:

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

■ 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

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