

Recommended Nuclear Decay Data

Pd-103

| Decay Mode: EC | | Half-Life: (16.97 ± 0.02) d | | [4] | |
|------------------|---------|-----------------------------|---------------|------|-----|
| Radiation Type | | Energy (keV) | Intensity (%) | Ref. | |
| Auger-L | | 2.39 | 244 | 9 | [4] |
| Auger-K | | 17 | 19.8 | 33 | [4] |
| ce-K-1 | | 16.54 | 19.0 | 7 | [4] |
| ce-L-1 | | 36.34 | 142.3 | 40 | [4] |
| ce-M-1 | | 39.13 | 28.8 | 10 | [4] |
| ce-NOP-1 | | 39.67 | 9.42 | 40 | [4] |
| X-ray L | Σ | 2.7 | 13 | 5 | [4] |
| X-ray K α | Σ | 20.17 | 70.36 | 40 | [4] |
| X-ray K β | Σ | 22.7 | 14.4 | 7 | [4] |
| γ | Rh-103m | 39.75 | 0.0684 | 7 | [4] |
| γ | | 62.41 | 0.00104 | 4 | [4] |
| γ | | 294.98 | 0.00280 | 8 | [4] |
| γ | | 357.45 | 0.0221 | 8 | [4] |
| γ | | 497.08 | 0.00397 | 15 | [4] |

Pd-103 with Rh-103m (half-life: 56.114 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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