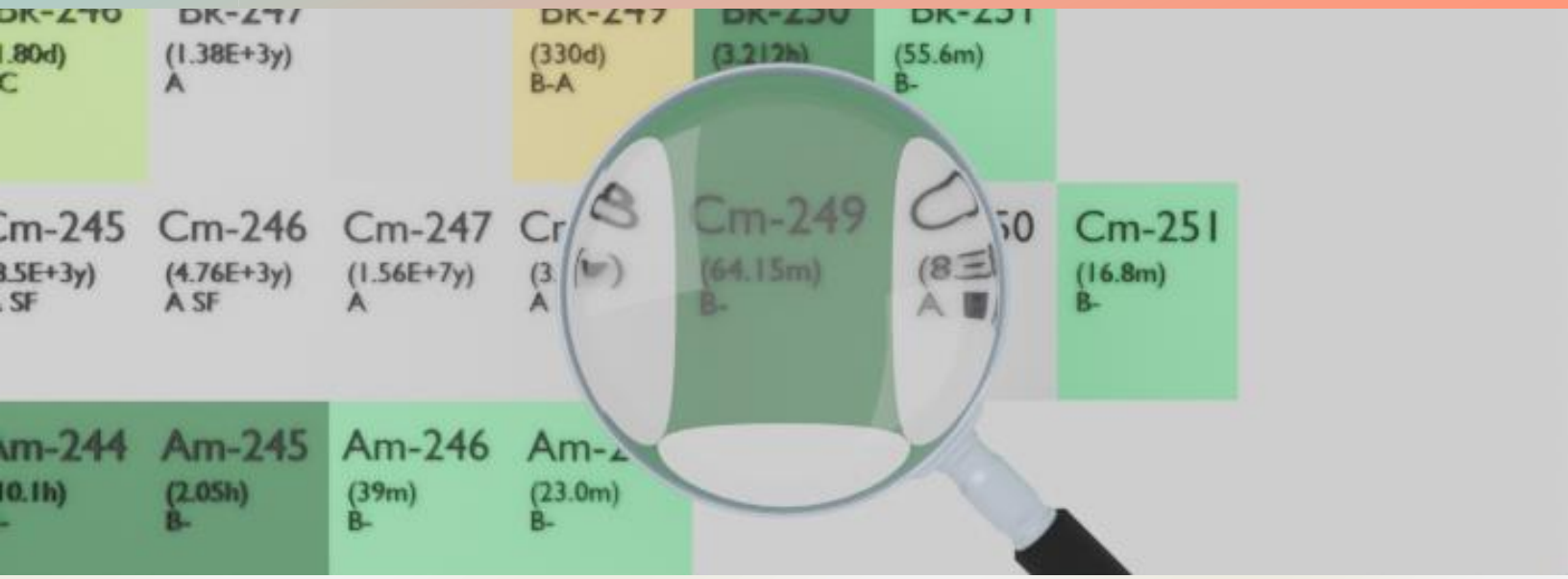


CURIUM-249

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Cm-249
Atomic number (Z): 96
Mass number (A): 249
Neutron number (N): 153

RADIOACTIVE DECAY

Decay modes: β-
Half-life: 64.15 [m]
Decay constant: 1.8009e-04 [1/s]
Daughters: Bk-249 (100.0%)
Radioactive daughters: Bk-249

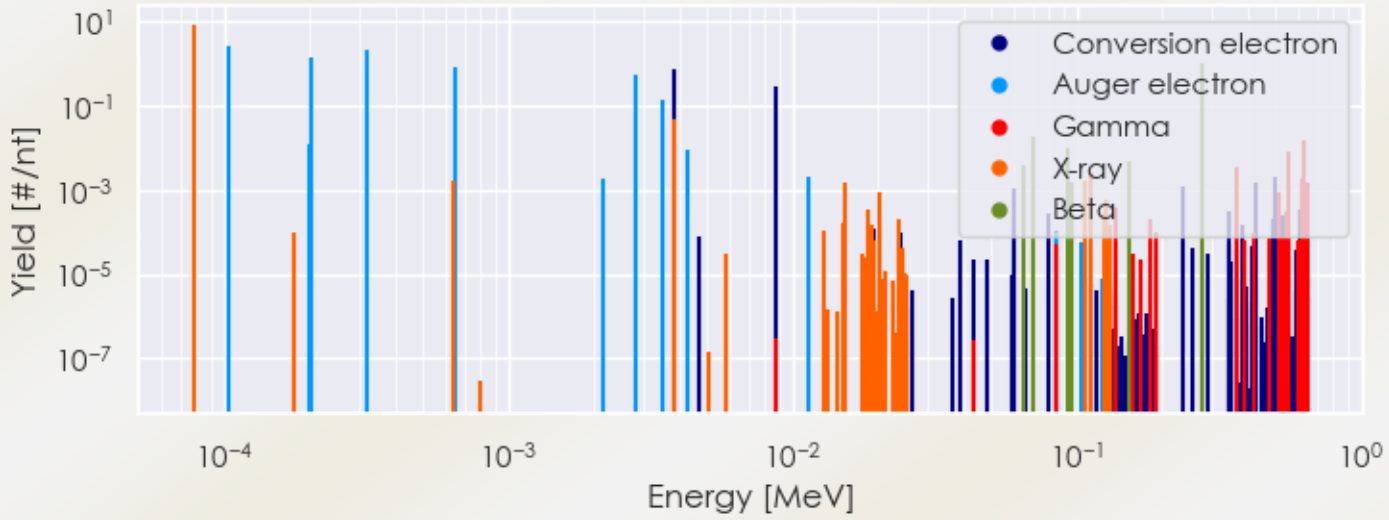
DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.28352 [MeV]
Mean photon energy: 0.02 [MeV]
Air kerma rate constant, Γ_{10}*:* 7.854e-19 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air}*:* 7.854e-19 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (a and/or electrons), Δ_{wp}*:* 4.543e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for alphas, Δ_{a}*:* 0.000e+00 [Gy·kg/Bq·s]

Equilibrium dose constant for betas/electrons, $\Delta_{\beta^-,\beta^+,e^-}$: 4.543e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for photons, Δ_p: 3.204e-15 [Gy·kg/Bq·s]

SUMMARY SPECTRA (PLOT)

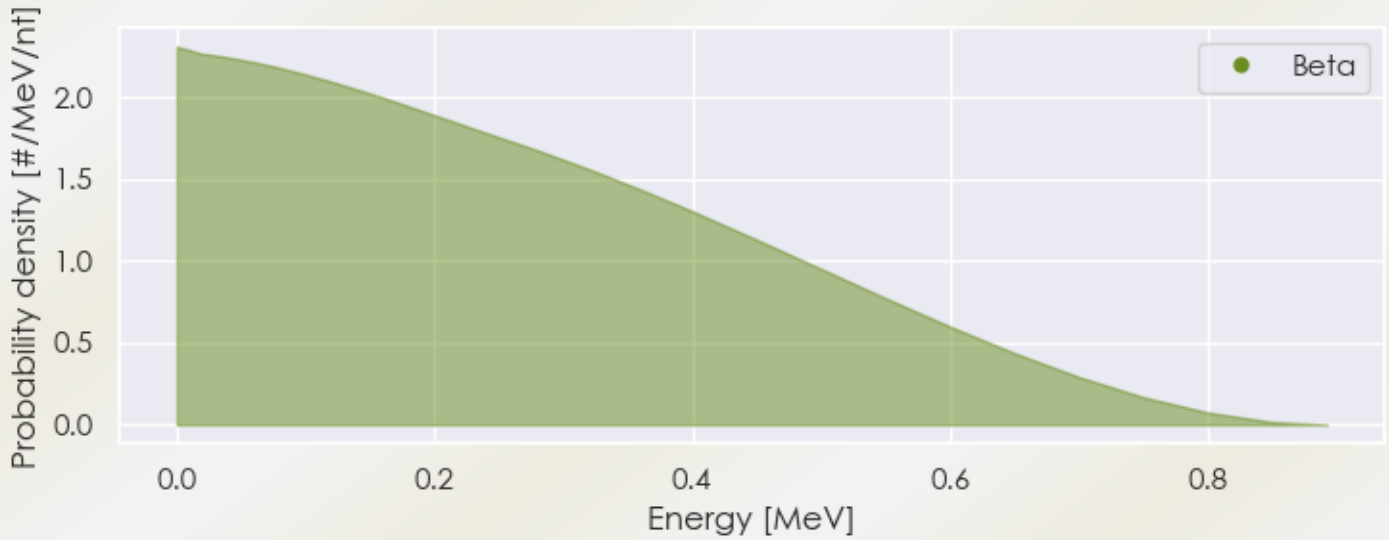
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/Cm-249 Summary Spectrum.csv

BETA SPECTRA (PLOT)

Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated beta spectra file here: www.mirdsoft.org/products/MIRDspecs/Cm-249 Beta Spectrum.csv

TABULATED DATA

SUMMARY SPECTRA (TABLE)

Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**

Note: Radiations with yield < 0.01 are excluded from the table, but are available in the linked *.csv data.

Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/Cm-249 Summary Spectrum.csv

Energy [MeV]	Yield [#/nt] if > 0.01	Radiation type
7.82242e-05	8.512e+00	X-ray
3.80519e-03	4.659e-02	X-ray
6.34310e-01	1.500e-02	Gamma
7.03892e-02	1.892e-02	Beta
9.24798e-02	1.036e-02	Beta
2.78865e-01	9.610e-01	Beta
1.03498e-04	2.458e+00	Auger electron
2.00169e-04	1.245e-02	Auger electron
2.01101e-04	1.343e+00	Auger electron
3.18660e-04	2.185e+00	Auger electron
6.52622e-04	8.206e-01	Auger electron
2.80011e-03	5.462e-01	Auger electron
3.48123e-03	1.316e-01	Auger electron
3.83140e-03	7.213e-01	Conversion electron
8.80000e-03	2.787e-01	Conversion electron

USEFUL LINKS

Isotope decay characteristics are periodically updated as better measurements can be made - changes that may not be reflected on this page. Please see useful links:

National Nuclear Data Center (NNDC): https://www.nndc.bnl.gov/nudat3/mird/

International Atomic Energy Agency (IAEA) Livechart: https://www-nds.iaea.org/relnsd/vcharthtml/VChartHTML.html

REFERENCE LINKS

ICRP Report 107: https://www.icrp.org/publication.asp?id=ICRP%20Publication%20107

Graves et al. Dose Point Kernels: https://doi.org/10.1002/mp.13789

MIRD Decay Schemes 2nd Edition: https://sites.snmmi.org/SNMMI-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6