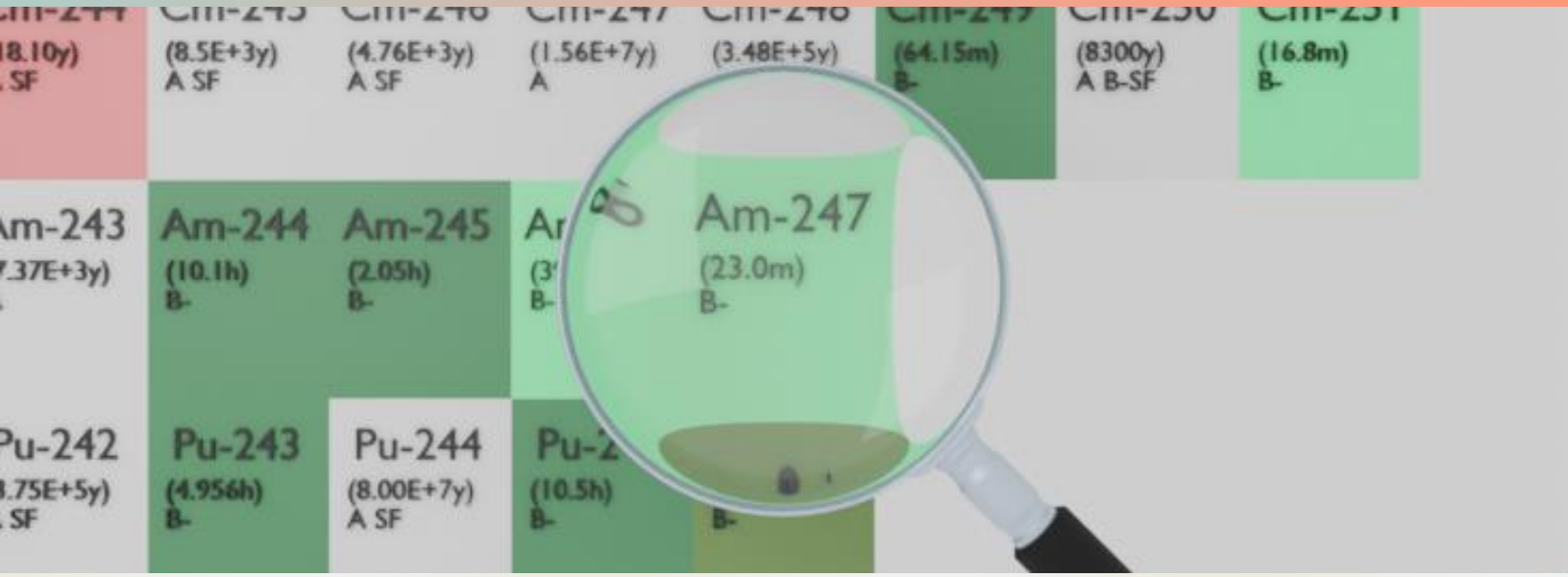


AMERICIUM-247

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Am-247
Atomic number (Z): 95
Mass number (A): 247
Neutron number (N): 152

RADIOACTIVE DECAY

Decay modes: β-
Half-life: 23.0 [m]
Decay constant: 5.0228e-04 [1/s]
Daughters: Cm-247 (100.0%)
Radioactive daughters: Cm-247

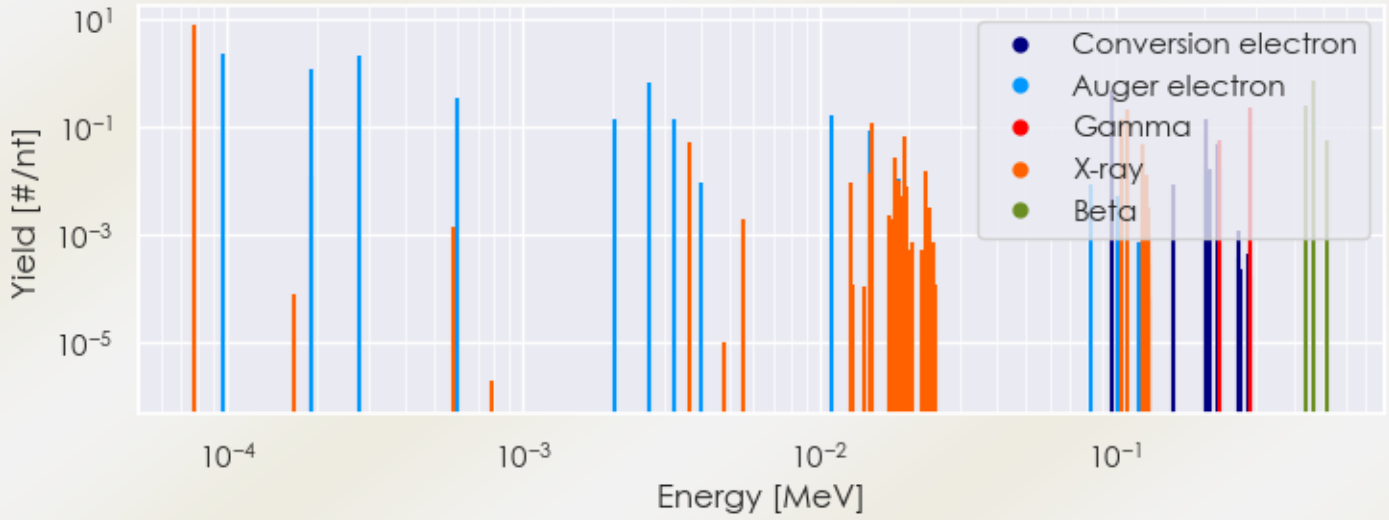
DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.56834 [MeV]
Mean photon energy: 0.1348 [MeV]
Air kerma rate constant, Γ_{10}: 1.034e-17 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air}: 1.034e-17 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (a and/or electrons), Δ_{wp}: 9.106e-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, $\Delta_{\beta^-,\beta^+,e^-}$: 9.106e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for photons, Δ_p: 2.160e-14 [Gy·kg/Bq·s]

SUMMARY SPECTRA (PLOT)

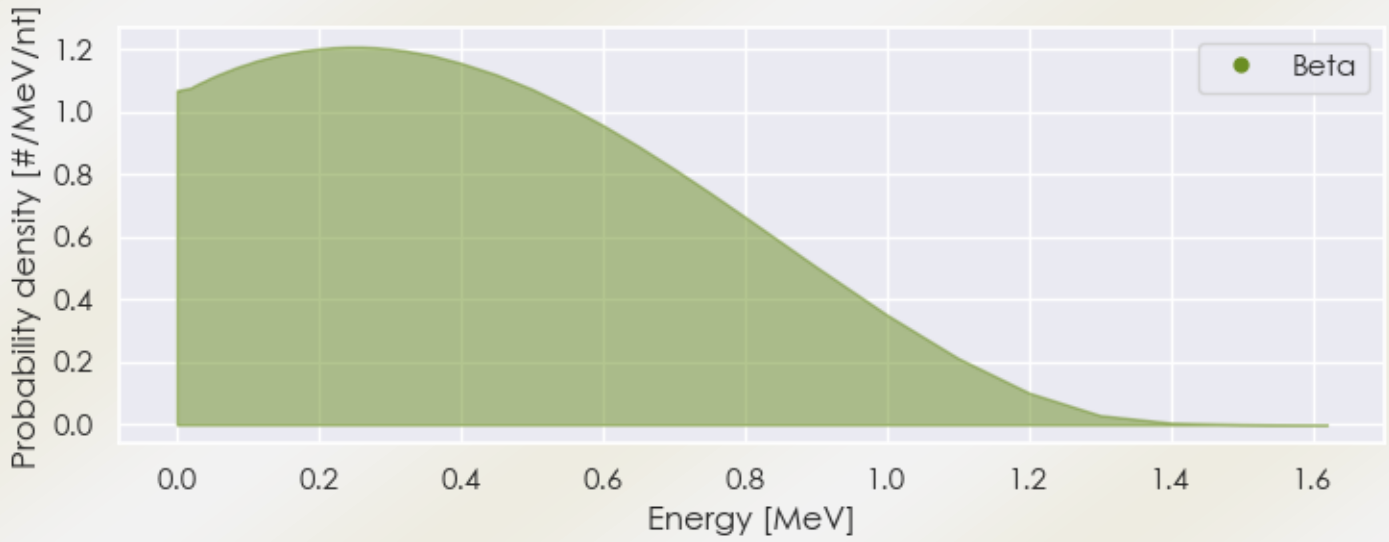
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/Am-247 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/Am-247 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/Am-247 Summary Spectrum.csv

Energy [MeV]	Yield [#/nt] if > 0.01	Radiation type
7.75750e-05	7.703e+00	X-ray
3.64688e-03	5.391e-02	X-ray
1.47568e-02	1.379e-02	X-ray
1.49784e-02	1.211e-01	X-ray
1.81285e-02	2.612e-02	X-ray
1.86084e-02	1.009e-02	X-ray
1.95388e-02	6.674e-02	X-ray
2.28564e-02	1.568e-02	X-ray
1.05084e-01	1.375e-01	X-ray
1.09866e-01	2.151e-01	X-ray
1.22914e-01	2.508e-02	X-ray
1.24031e-01	4.937e-02	X-ray
1.27666e-01	1.307e-02	X-ray
2.26000e-01	5.669e-02	Gamma
2.85000e-01	2.287e-01	Gamma
4.42860e-01	2.427e-01	Beta
4.64907e-01	6.990e-01	Beta
5.22400e-01	5.825e-02	Beta
9.70202e-05	2.186e+00	Auger electron
1.91945e-04	1.144e+00	Auger electron
1.92776e-04	1.200e-02	Auger electron
2.78160e-04	2.024e+00	Auger electron
5.95287e-04	3.385e-01	Auger electron
2.04068e-03	1.366e-01	Auger electron
2.66244e-03	6.543e-01	Auger electron
3.25445e-03	1.446e-01	Auger electron
1.10339e-02	1.614e-01	Auger electron

1.47921e-02	8.524e-02	Auger electron
1.85899e-02	1.055e-02	Auger electron
9.71400e-02	4.605e-01	Conversion electron
2.01446e-01	1.406e-01	Conversion electron
2.02224e-01	2.012e-02	Conversion electron
2.07006e-01	1.680e-02	Conversion electron
2.21171e-01	4.707e-02	Conversion electron
2.26000e-01	1.822e-02	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