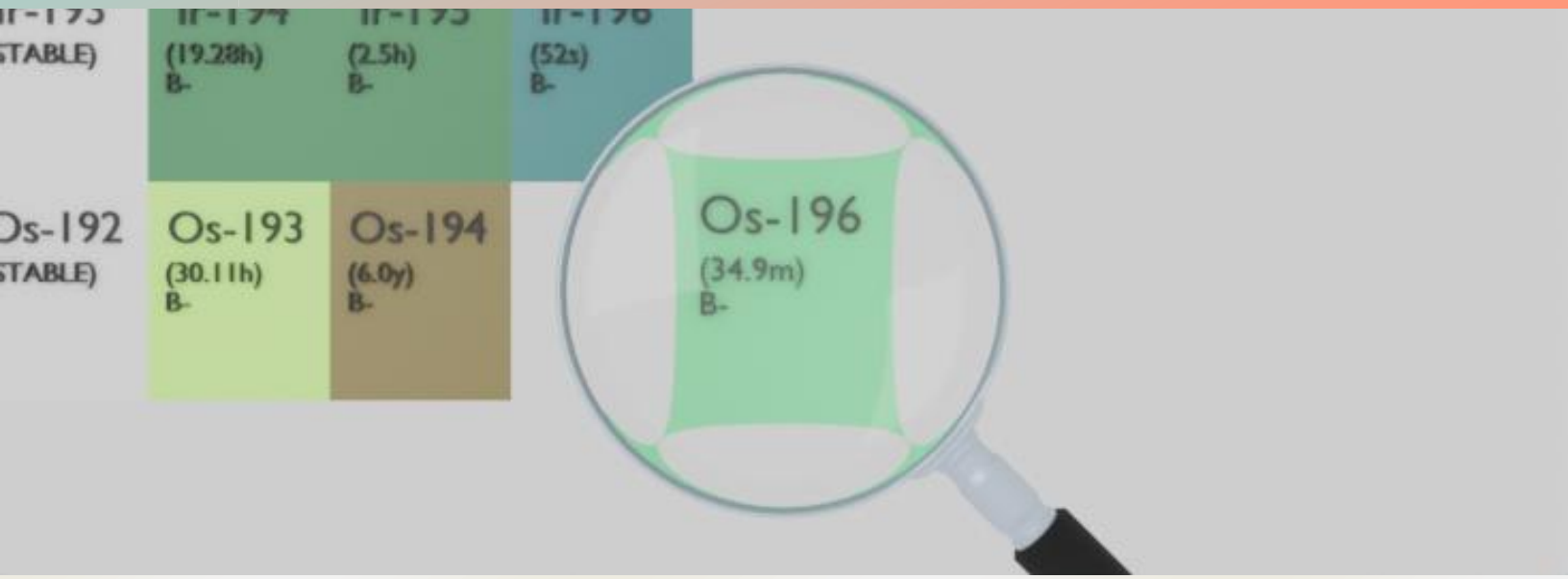


OSMIUM-196

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Os-196
Atomic number (Z): 76
Mass number (A): 196
Neutron number (N): 120

RADIOACTIVE DECAY

Decay modes: β-
Half-life: 34.9 [m]
Decay constant: 3.3102e-04 [1/s]
Daughters: Ir-196 (100.0%)
Radioactive daughters: Ir-196

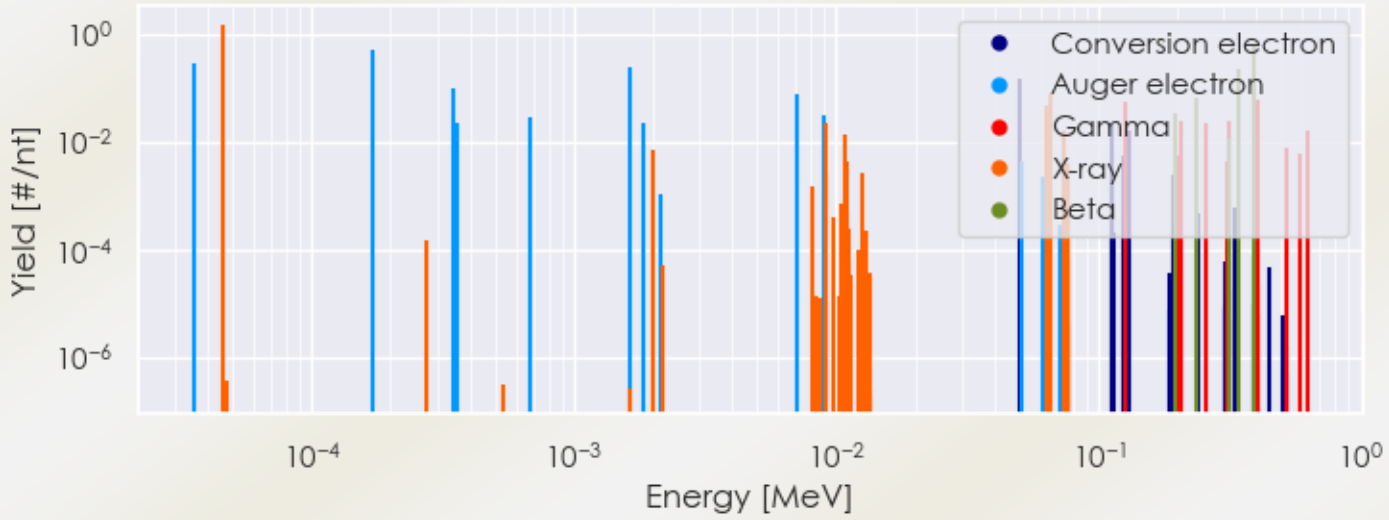
DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.3807 [MeV]
Mean photon energy: 0.08049 [MeV]
Air kerma rate constant, Γ_{10}*:* 4.116e-18 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air}*:* 4.116e-18 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (a and/or electrons), Δ_{wp}*:* 6.099e-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, $\Delta_{\beta^-,\beta^+,e^-}$: 6.099e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for photons, Δ_p: 1.290e-14 [Gy·kg/Bq·s]

SUMMARY SPECTRA (PLOT)

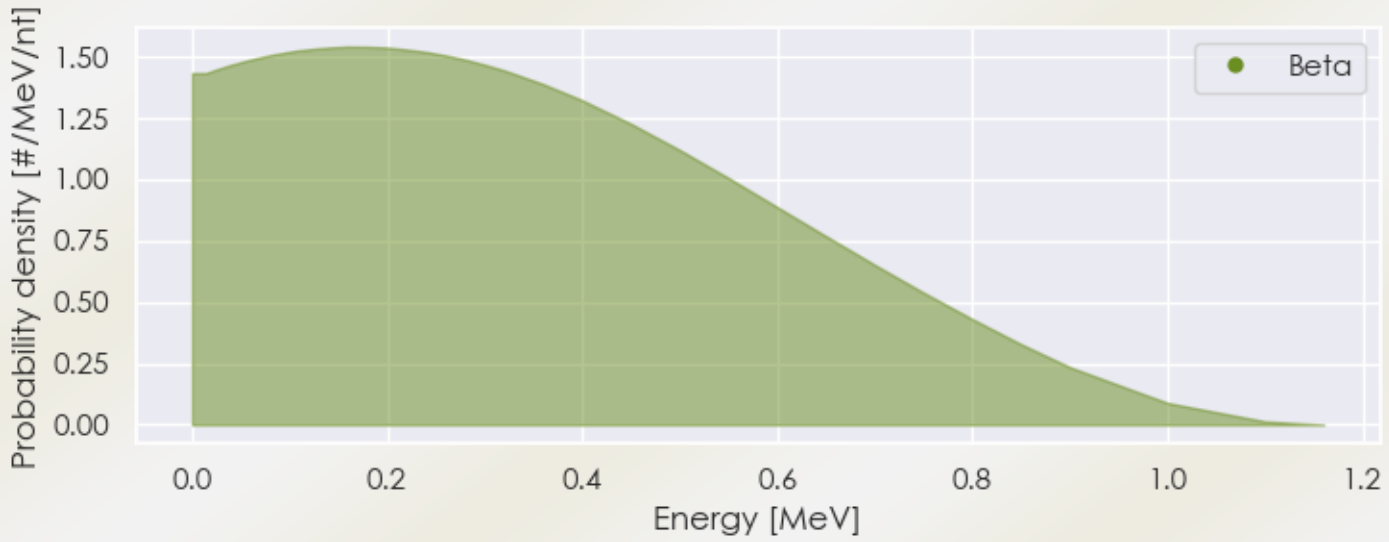
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/Os-196 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/Os-196 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/Os-196 Summary Spectrum.csv

Energy [MeV]	Yield [#/nt] if > 0.01	Radiation type
4.54888e-05	1.512e+00	X-ray
9.16923e-03	2.267e-02	X-ray
1.07358e-02	1.414e-02	X-ray
6.34550e-02	4.511e-02	X-ray
6.50999e-02	7.738e-02	X-ray
7.37750e-02	1.632e-02	X-ray
1.26200e-01	5.300e-02	Gamma
2.07100e-01	2.400e-02	Gamma
2.57800e-01	2.300e-02	Gamma
3.15400e-01	2.500e-02	Gamma
4.07900e-01	5.900e-02	Gamma
6.29100e-01	1.600e-02	Gamma
1.96739e-01	3.297e-02	Beta
2.38010e-01	6.593e-02	Beta
3.13300e-01	1.199e-02	Beta
3.44485e-01	2.298e-01	Beta
3.94020e-01	6.593e-01	Beta
3.53998e-05	2.873e-01	Auger electron
1.70986e-04	4.982e-01	Auger electron
3.48365e-04	9.921e-02	Auger electron
3.58738e-04	2.192e-02	Auger electron
6.79991e-04	2.874e-02	Auger electron
1.64235e-03	2.424e-01	Auger electron
1.84233e-03	2.138e-02	Auger electron
7.05894e-03	7.490e-02	Auger electron
9.03120e-03	3.035e-02	Auger electron
4.98860e-02	1.443e-01	Conversion electron
1.12804e-01	2.143e-02	Conversion electron

1.30786e-01	1.615e-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