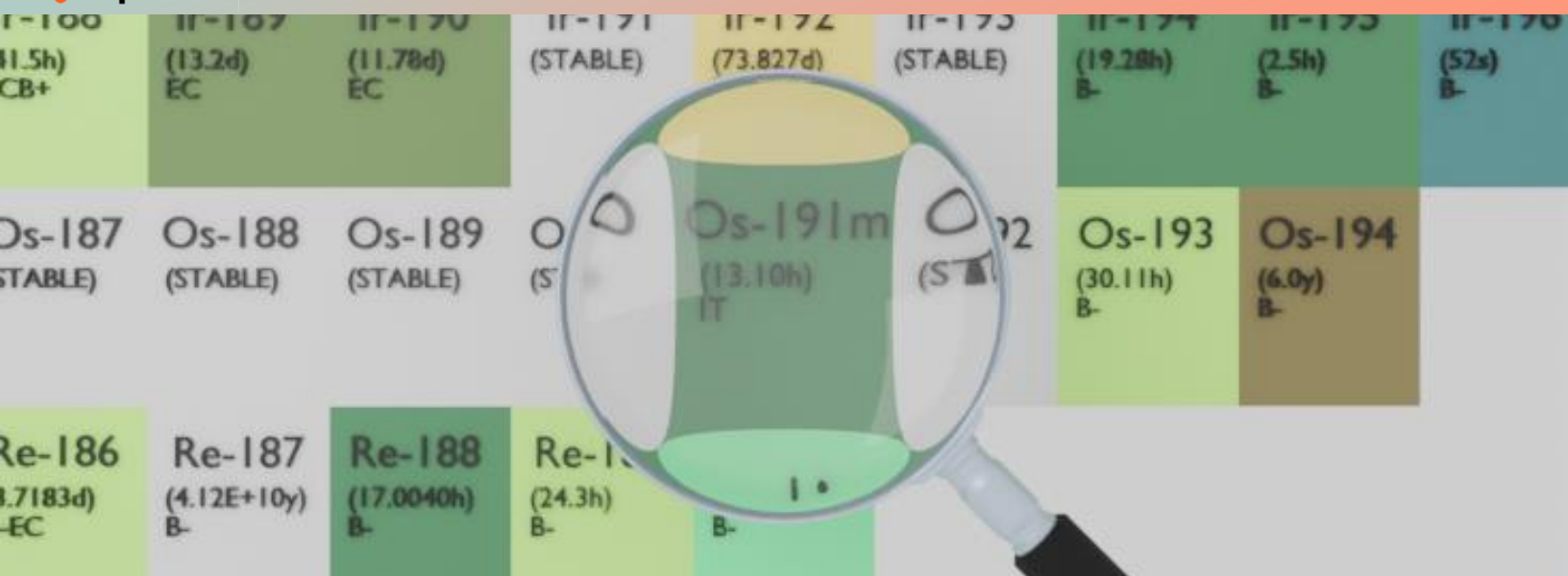




OSMIUM-191M

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Os-191m
Atomic number (Z): 76
Mass number (A): 191
Neutron number (N): 115

RADIOACTIVE DECAY

Decay modes: Internal transition
Half-life: 13.1 [h]
Decay constant: 1.4698×10^{-5} [1/s]
Daughters: Os-191 (100.0%)
Radioactive daughters: Os-191

DOSIMETRIC CONSTANTS

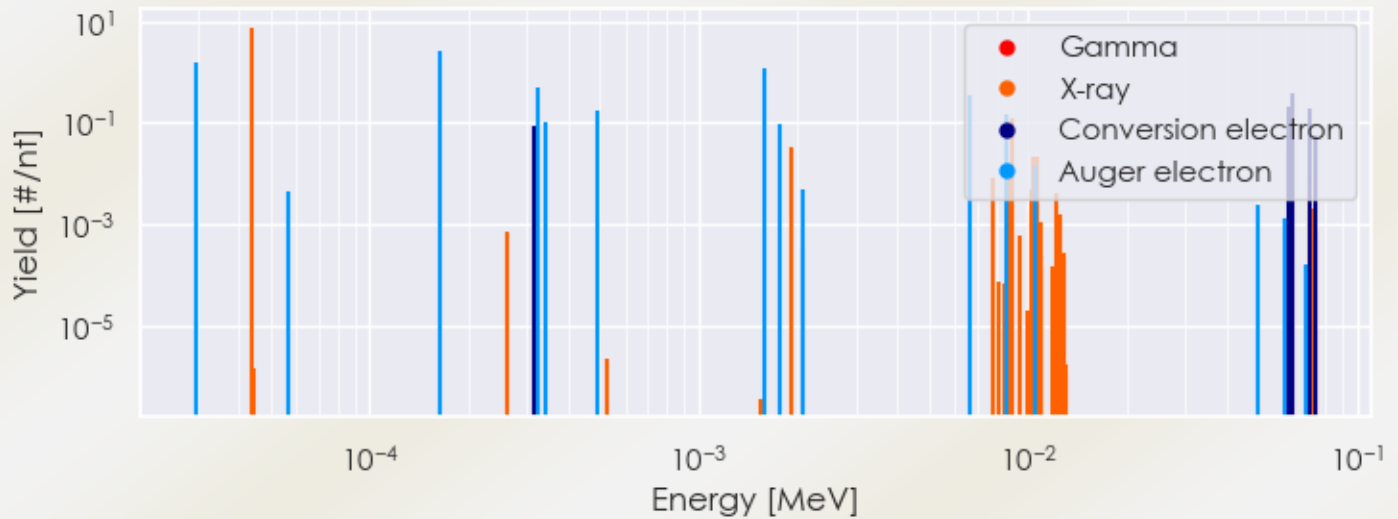
Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.06635 [MeV]
Mean photon energy: 0.00803 [MeV]
Air kerma rate constant, Γ_{10} : 3.869×10^{-18} [Gy $\cdot$ m²/Bq $\cdot$ s]
Air kerma coefficient, K_{air} : 3.869×10^{-18} [Gy $\cdot$ m²/Bq $\cdot$ s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 1.063×10^{-14} [Gy $\cdot$ kg/Bq $\cdot$ s]
Equilibrium dose constant for alphas, Δ_{α} : 0.000e+00 [Gy $\cdot$ kg/Bq $\cdot$ s]

Equilibrium dose constant for betas/electrons, $\Delta_{\beta,\beta^+,e^-}$: 1.063e-14 [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 1.287e-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/Os-191m Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Os-191m%20Summary%20Spectrum.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-191m Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Os-191m%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# /nt] if > 0.01	Radiation type
4.39534e-05	7.739e+00	X-ray
1.91737e-03	3.358e-02	X-ray
8.83249e-03	1.406e-02	X-ray
8.90609e-03	1.240e-01	X-ray
1.03795e-02	2.139e-02	X-ray
1.05947e-02	2.245e-02	X-ray

6.16420e-02	2.495e-02	X-ray
6.31890e-02	4.299e-02	X-ray
2.96807e-05	1.514e+00	Auger electron
1.62922e-04	2.564e+00	Auger electron
3.14005e-04	8.977e-02	Conversion electron
3.26138e-04	5.214e-01	Auger electron
3.41711e-04	1.017e-01	Auger electron
4.93411e-04	1.783e-01	Auger electron
1.57717e-03	1.233e+00	Auger electron
1.77244e-03	9.650e-02	Auger electron
6.67793e-03	3.595e-01	Auger electron
8.56370e-03	1.420e-01	Auger electron
1.04760e-02	1.386e-02	Auger electron
6.14300e-02	2.156e-01	Conversion electron
6.19560e-02	3.731e-02	Conversion electron
6.35030e-02	4.043e-01	Conversion electron
7.19283e-02	1.936e-01	Conversion electron
7.43800e-02	5.807e-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