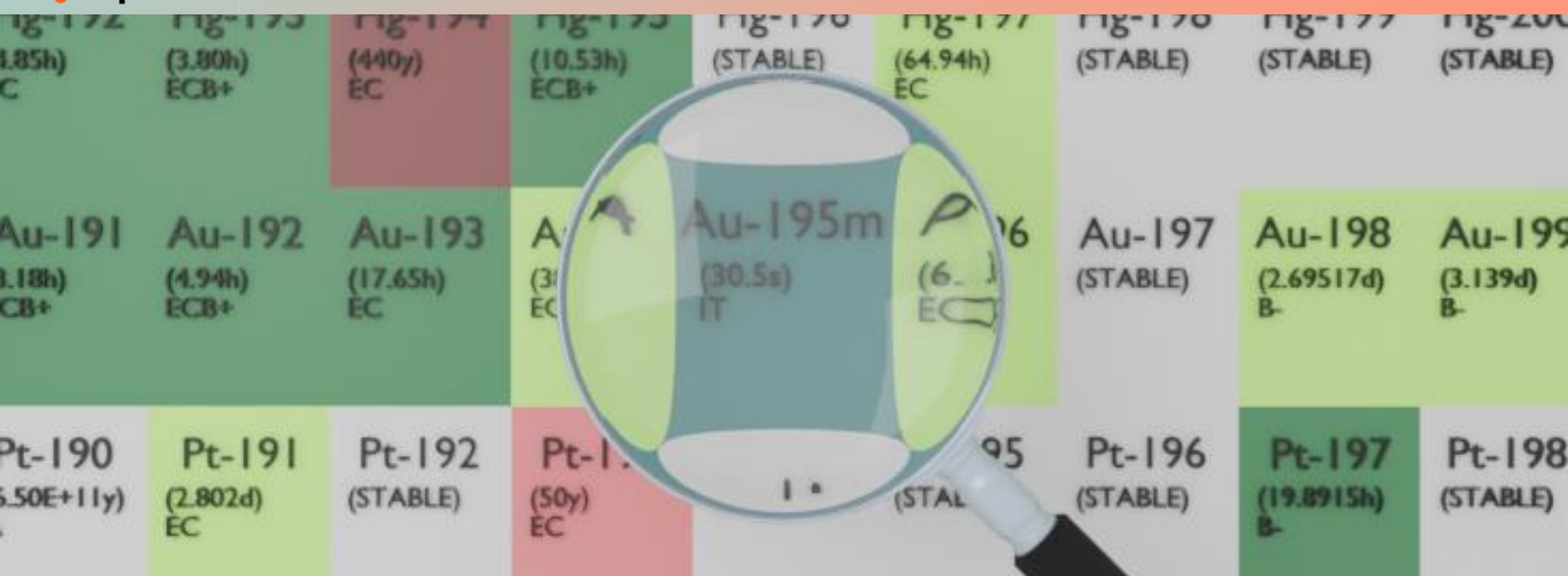




Hg-192 (1.85h) EC	Hg-193 (3.80h) ECB+	Hg-194 (440y) EC	Hg-195 (10.53h) ECB+	Hg-196 (STABLE)	Hg-197 (64.94h) EC	Hg-198 (STABLE)	Hg-199 (STABLE)	Hg-200 (STABLE)
Au-191 (3.18h) CB+	Au-192 (4.94h) ECB+	Au-193 (17.65h) EC	Au-194 (3.1h) EC	Au-195m (30.5s) IT	Au-196 (6.1h) EC	Au-197 (STABLE)	Au-198 (2.69517d) B-	Au-199 (3.139d) B-
Pt-190 (5.50E+11y) EC	Pt-191 (2.802d) EC	Pt-192 (STABLE)	Pt-193 (50y) EC	Pt-194 (STABLE)	Pt-195 (STABLE)	Pt-196 (STABLE)	Pt-197 (19.8915h) B-	Pt-198 (STABLE)

GOLD-195M

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Au-195m
Atomic number (Z): 79
Mass number (A): 195
Neutron number (N): 116

RADIOACTIVE DECAY

Decay modes: Internal transition
Half-life: 30.5 [s]
Decay constant: 2.2726e-02 [1/s]
Daughters: Au-195 (100.0%)
Radioactive daughters: Au-195

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.11719 [MeV]
Mean photon energy: 0.20136 [MeV]
Air kerma rate constant, Γ_{10} : 1.579e-17 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air} : 1.579e-17 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 1.878e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for alphas, Δ_{α} : 0.000e+00 [Gy·kg/Bq·s]

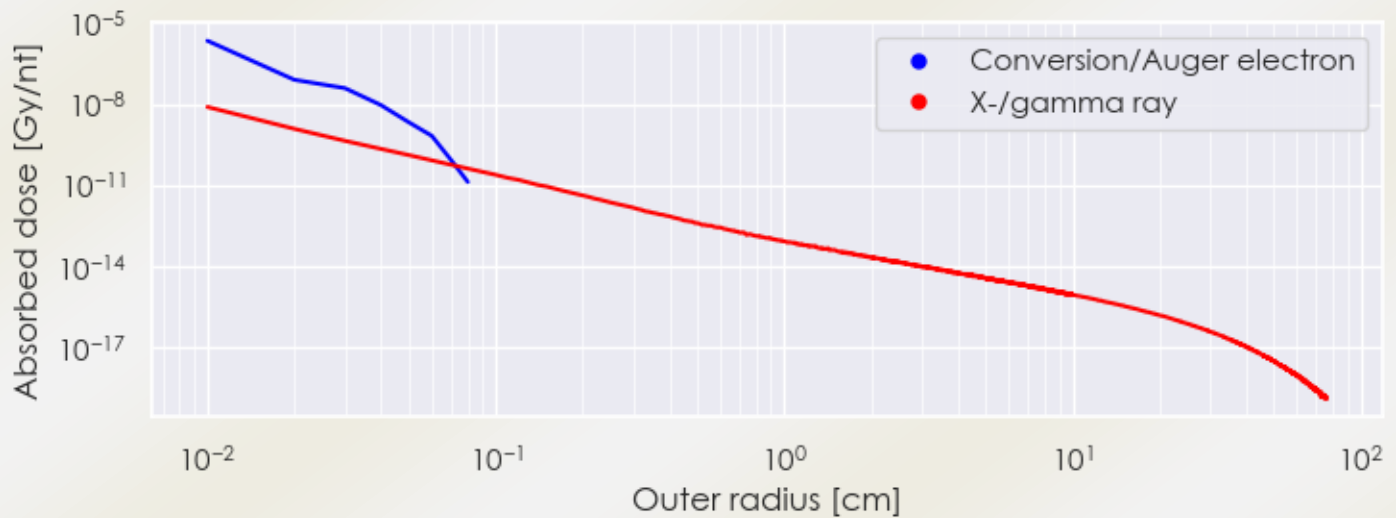
Equilibrium dose constant for betas/electrons, $\Delta_{\beta,\beta^+,e^-}$: 1.878×10^{-14} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 3.226×10^{-14} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

Dose point kernel source: **Graves, et al. Medical Physics. 2019 Nov.; 46(11):5284-5293.**

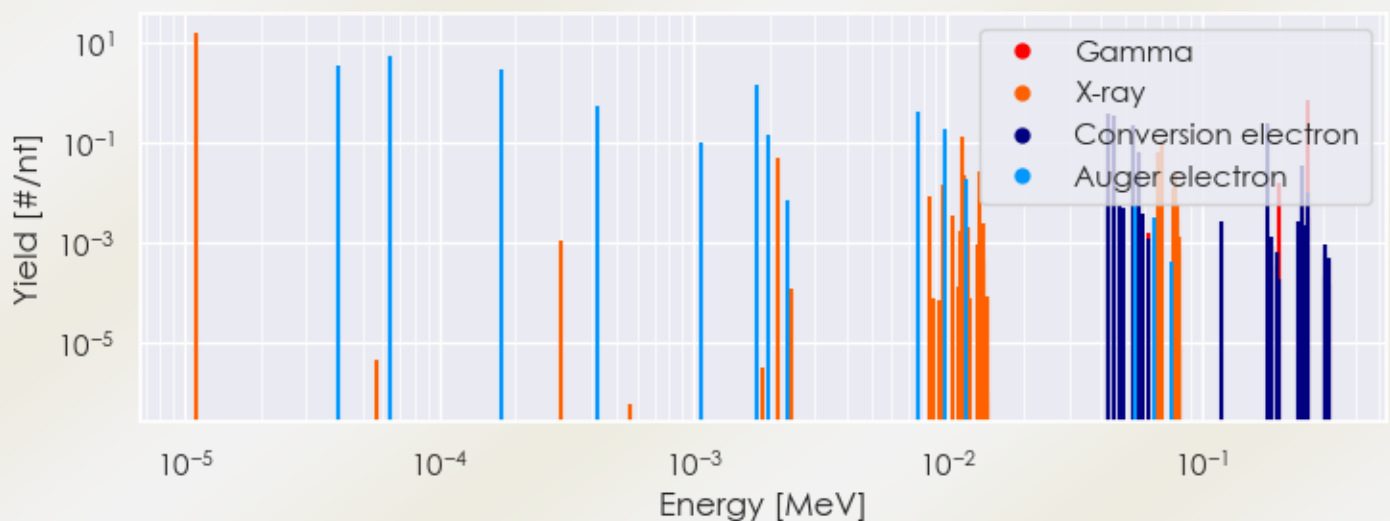
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/Au-195m DPK.csv

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/Au-195m Summary 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/Au-195m Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Au-195m%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# / n _t] if > 0.01	Radiation type
1.11065e-05	1.611e+01	X-ray
2.14952e-03	4.848e-02	X-ray
9.62131e-03	1.430e-02	X-ray
9.70979e-03	1.259e-01	X-ray
1.14753e-02	1.333e-01	X-ray
1.15870e-02	2.353e-02	X-ray
1.34225e-02	2.631e-02	X-ray
6.71839e-02	6.762e-02	X-ray
6.90380e-02	1.150e-01	X-ray
7.78158e-02	1.265e-02	X-ray
7.82261e-02	2.449e-02	X-ray
2.00380e-01	1.640e-02	Gamma
2.61750e-01	6.778e-01	Gamma
4.01448e-05	3.542e+00	Auger electron
6.41789e-05	5.430e+00	Auger electron
1.74940e-04	2.889e+00	Auger electron
4.20641e-04	5.623e-01	Auger electron
1.06570e-03	1.030e-01	Auger electron
1.76116e-03	1.424e+00	Auger electron
1.98531e-03	1.481e-01	Auger electron
7.58138e-03	4.278e-01	Auger electron
9.71504e-03	1.802e-01	Auger electron
1.18779e-02	1.840e-02	Auger electron
4.30240e-02	3.706e-01	Conversion electron
4.48780e-02	3.352e-01	Conversion electron
5.40660e-02	2.148e-01	Conversion electron
5.68000e-02	6.444e-02	Conversion electron

1.80790e-01	2.360e-01	Conversion electron
2.47414e-01	3.523e-02	Conversion electron
2.59016e-01	1.047e-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/SNMML-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6