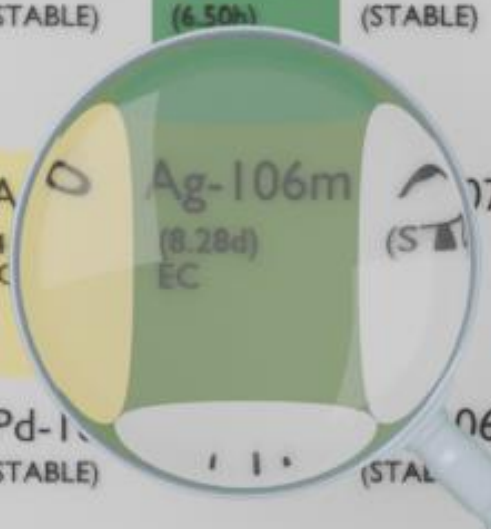




Cd-103 (7.3m) CB+	Cd-104 (57.7m) EC	Cd-105 (55.5m) ECB+	Cd-106 (STABLE)	Cd-107 (6.50h)	Cd-108 (STABLE)	Cd-109 (461.4d) EC	Cd-110 (STABLE)	Cd-111 (STABLE)
Ag-102 (12.9m) CB+	Ag-103 (65.7m) ECB+	Ag-104 (69.2m) ECB+	Ag-105 (4.83m) EC	Ag-106m (8.28d) EC	Ag-107 (STABLE)	Ag-108 (2.37m) B-ECB+	Ag-109 (STABLE)	Ag-110 (24.6s) B-EC
Pd-101 (1.47h) CB+	Pd-102 (STABLE)	Pd-103 (16.991d) EC	Pd-104 (STABLE)	Pd-105 (STABLE)	Pd-106 (STABLE)	Pd-107 (6.5E+6y) B-	Pd-108 (STABLE)	Pd-109 (13.7012h) B-

SILVER-106M

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Ag-106m
Atomic number (Z): 47
Mass number (A): 106
Neutron number (N): 59

RADIOACTIVE DECAY

Decay modes: Electron capture
Half-life: 8.28 [d]
Decay constant: 9.6891×10^{-7} [1/s]
Daughters: Pd-106 (100.0%)
Radioactive daughters: None

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.01311 [MeV]
Mean photon energy: 2.80912 [MeV]
Air kerma rate constant, Γ_{10} : 1.087×10^{-16} [Gy $\cdot$ m²/Bq $\cdot$ s]
Air kerma coefficient, K_{air} : 1.087×10^{-16} [Gy $\cdot$ m²/Bq $\cdot$ s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 2.100×10^{-15} [Gy $\cdot$ kg/Bq $\cdot$ s]
Equilibrium dose constant for alphas, Δ_{α} : $0.000 \times 10^{+00}$ [Gy $\cdot$ kg/Bq $\cdot$ s]

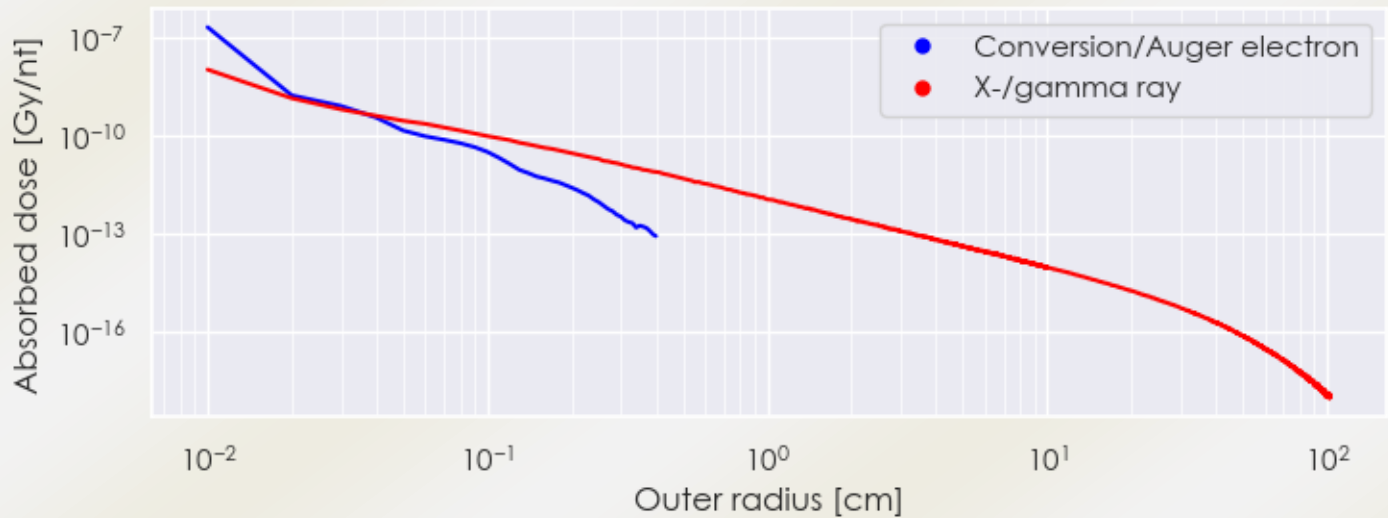
Equilibrium dose constant for betas/electrons, $\Delta_{\beta,\beta^+,e^-}$: 2.100×10^{-15} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 4.501×10^{-13} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

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

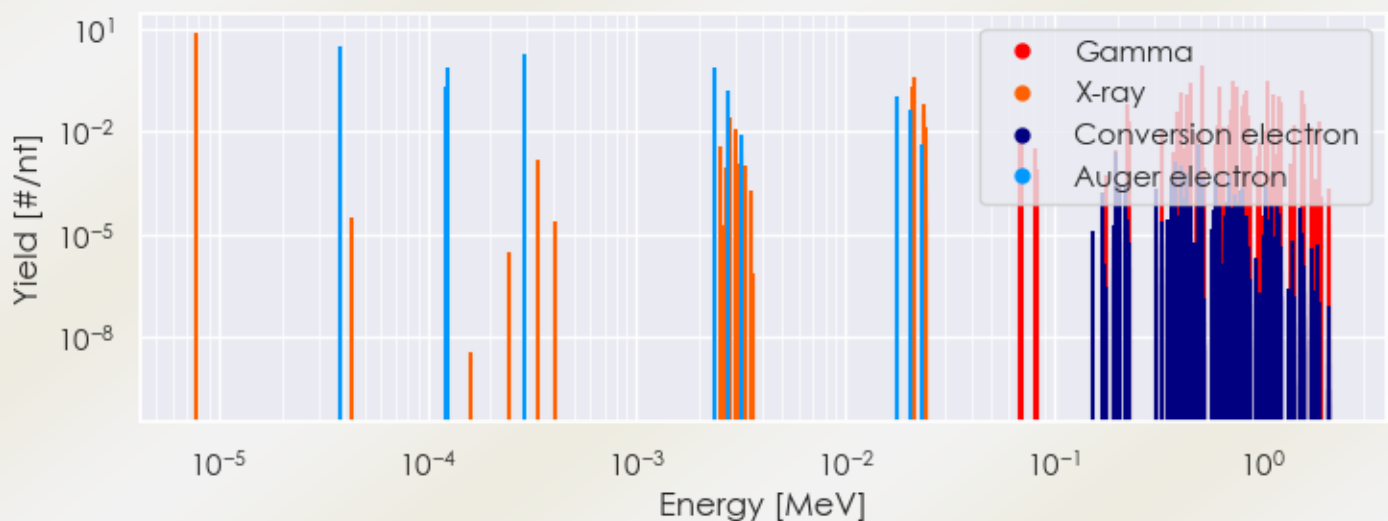
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/Ag-106m 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/Ag-106m 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/Ag-106m Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Ag-106m%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [#/(nt)] if > 0.01	Radiation type
7.85937e-06	8.158e+00	X-ray
2.82809e-03	2.681e-02	X-ray
2.98437e-03	1.254e-02	X-ray
2.09884e-02	2.028e-01	X-ray
2.11504e-02	3.832e-01	X-ray
2.37657e-02	3.300e-02	X-ray
2.37942e-02	6.415e-02	X-ray
2.42659e-02	1.292e-02	X-ray
2.21701e-01	6.578e-02	Gamma
2.28633e-01	2.105e-02	Gamma
3.28463e-01	1.140e-02	Gamma
3.91035e-01	3.683e-02	Gamma
4.06182e-01	1.342e-01	Gamma
4.29646e-01	1.316e-01	Gamma
4.50976e-01	2.824e-01	Gamma
5.11850e-01	8.770e-01	Gamma
6.01170e-01	1.614e-02	Gamma
6.16170e-01	2.157e-01	Gamma
6.46030e-01	1.456e-02	Gamma
6.80420e-01	1.544e-02	Gamma
7.03110e-01	4.473e-02	Gamma
7.17340e-01	2.894e-01	Gamma
7.48360e-01	2.061e-01	Gamma
7.93170e-01	5.876e-02	Gamma
8.04280e-01	1.237e-01	Gamma
8.08360e-01	4.034e-02	Gamma
8.24690e-01	1.535e-01	Gamma

8.47030e-01	2.806e-02	Gamma
8.47270e-01	1.579e-02	Gamma
1.01972e+00	1.044e-02	Gamma
1.04583e+00	2.955e-01	Gamma
1.12802e+00	1.175e-01	Gamma
1.19939e+00	1.123e-01	Gamma
1.22288e+00	7.016e-02	Gamma
1.39435e+00	1.491e-02	Gamma
1.52765e+00	1.631e-01	Gamma
1.57235e+00	6.578e-02	Gamma
1.72276e+00	1.403e-02	Gamma
1.83905e+00	2.017e-02	Gamma
3.81910e-05	3.076e+00	Auger electron
1.21650e-04	1.965e-01	Auger electron
1.25817e-04	8.078e-01	Auger electron
2.92953e-04	1.992e+00	Auger electron
2.38270e-03	7.548e-01	Auger electron
2.75751e-03	1.531e-01	Auger electron
1.76856e-02	1.070e-01	Auger electron
2.05196e-02	4.247e-02	Auger 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