



	Cd-101 (1.36m) ECB+	Cd-102 (5.5m)	Cd-103 (7.3m) ECB+	Cd-104 (57.7m) EC	Cd-105 (55.5m) ECB+	Cd-106 (STABLE)
	Ag-99 (124s) ECB+	Ag-101 (11.1m) ECB+	Ag-102 (1.1m) EC	Ag-103 (65.7m) ECB+	Ag-104 (69.2m) ECB+	Ag-105 (41.29d) EC
Pd-96 (22s) CB+	Pd-97 (3.10m) ECB+	Pd-98 (17.7m) ECB+	Pd-99 (21.4m) ECB+	Pd-100 (8.47m) ECB+	Pd-101 (STABLE)	Pd-102 (STABLE)
					Pd-103 (16.991d) EC	Pd-104 (STABLE)

SILVER-101

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Ag-101
Atomic number (Z): 47
Mass number (A): 101
Neutron number (N): 54

RADIOACTIVE DECAY

Decay modes: β^+ , Electron capture
Half-life: 11.1 [m]
Decay constant: 1.0408e-03 [1/s]
Daughters: Pd-101 (100.0%)
Radioactive daughters: Pd-101

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.83955 [MeV]
Mean photon energy: 1.57031 [MeV]
Air kerma rate constant, Γ_{10} : 3.183e-17 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air} : 5.979e-17 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 1.345e-13 [Gy·kg/Bq·s]
Equilibrium dose constant for alphas, Δ_{α} : 0.000e+00 [Gy·kg/Bq·s]

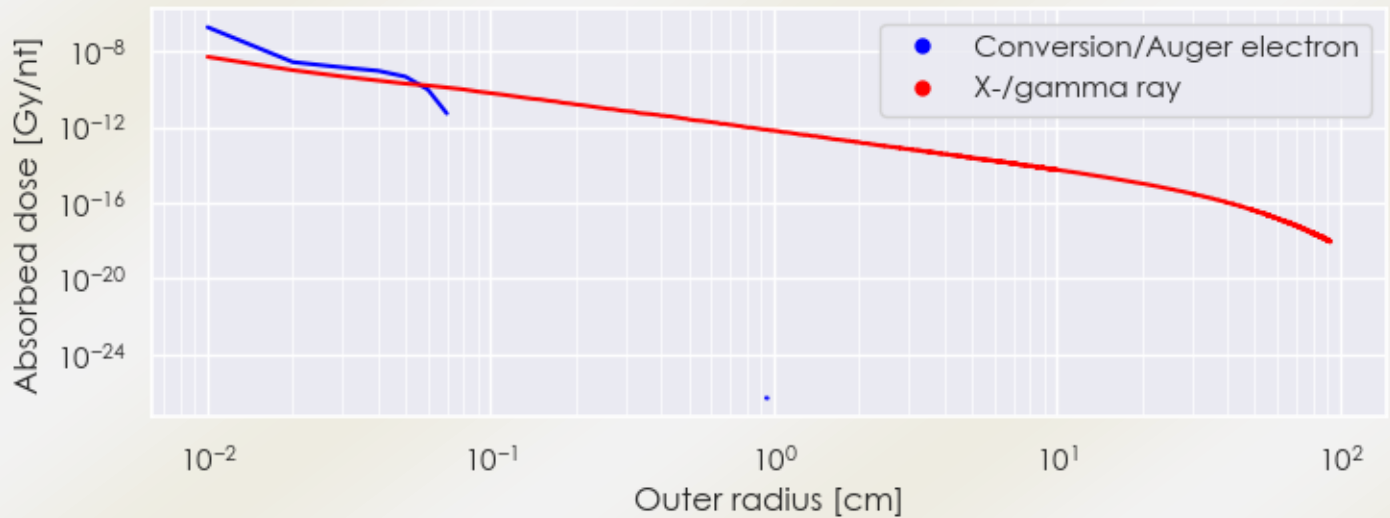
Equilibrium dose constant for betas/electrons, $\Delta_{\beta, \beta+, e-}$: 1.345×10^{-13} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 2.516×10^{-13} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

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

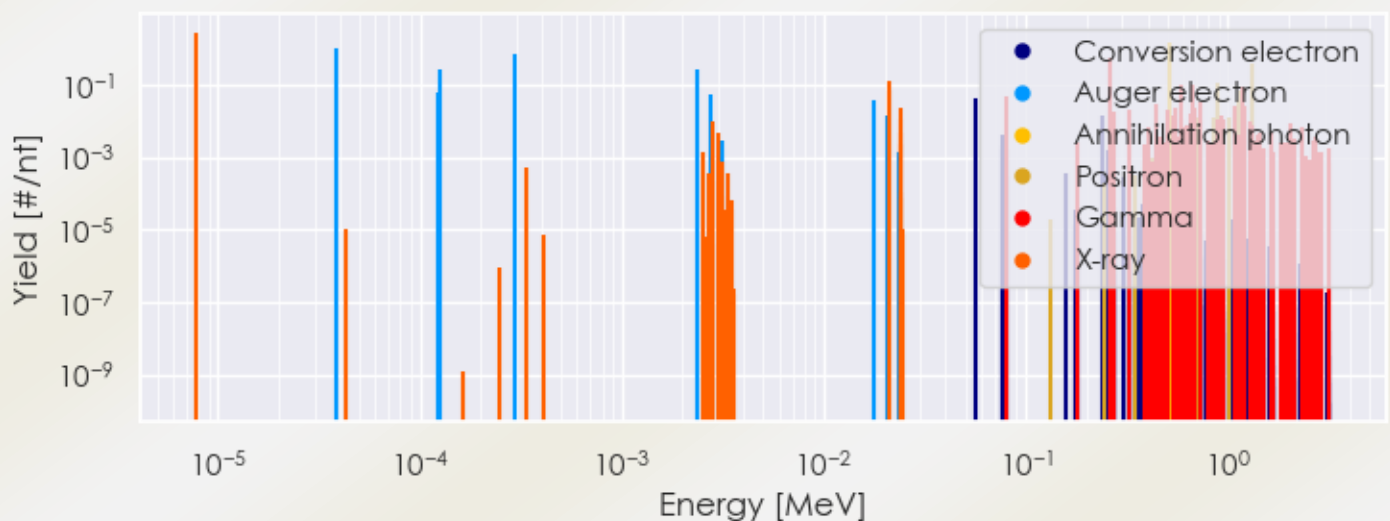
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/Ag-101 DPK.csv

SUMMARY SPECTRA (PLOT)

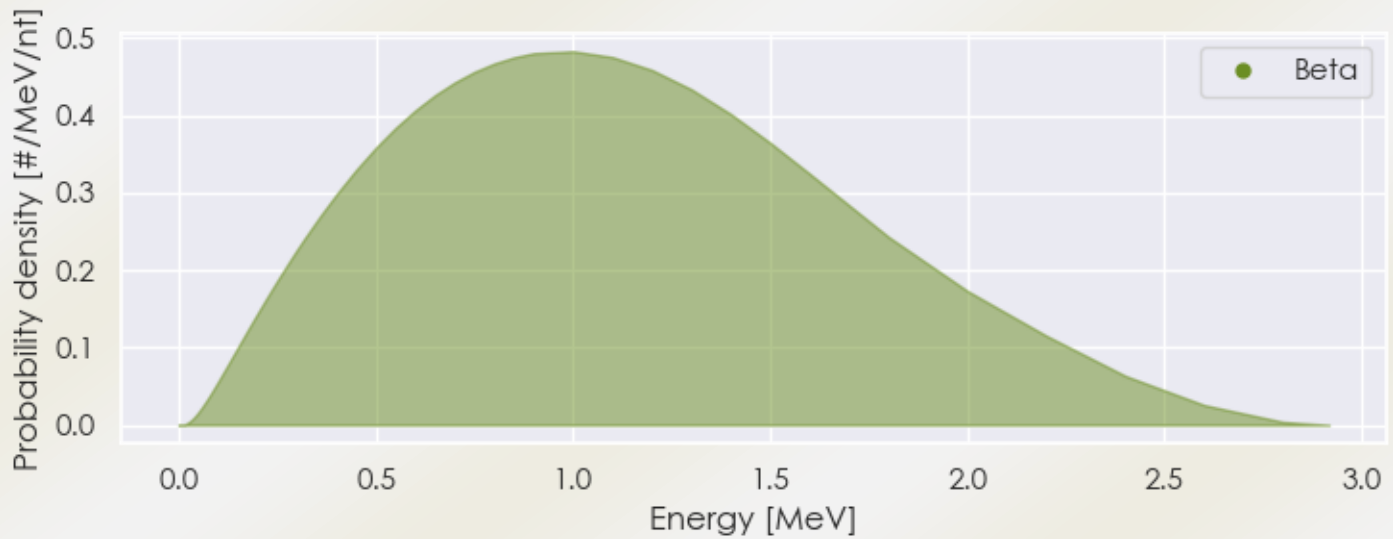
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/Ag-101 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/Ag-101 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/Ag-101 Summary Spectrum.csv

Energy [MeV]	Yield [# / nt] if > 0.01	Radiation type
7.85947e-06	2.771e+00	X-ray
2.09884e-02	7.024e-02	X-ray
2.11504e-02	1.327e-01	X-ray
2.37657e-02	1.143e-02	X-ray
2.37942e-02	2.221e-02	X-ray
8.02600e-02	4.734e-02	Gamma
2.61010e-01	5.260e-01	Gamma
2.74680e-01	1.683e-02	Gamma
3.26910e-01	1.894e-02	Gamma
4.39200e-01	2.851e-02	Gamma

5.07600e-01	2.051e-02	Gamma
5.11000e-01	1.444e+00	Annihilation photon
5.37920e-01	1.383e-02	Gamma
5.43320e-01	2.314e-02	Gamma
5.85900e-01	1.052e-02	Gamma
5.88000e-01	9.994e-02	Gamma
6.54400e-01	1.578e-02	Gamma
6.67320e-01	9.836e-02	Gamma
6.77700e-01	1.315e-02	Gamma
6.77900e-01	2.367e-02	Gamma
7.34710e-01	3.261e-02	Gamma
8.93200e-01	1.126e-02	Gamma
9.38320e-01	1.368e-02	Gamma
9.44330e-01	1.157e-02	Gamma
1.09359e+00	2.630e-02	Gamma
1.17394e+00	8.942e-02	Gamma
1.20526e+00	2.630e-02	Gamma
7.20016e-01	1.203e-02	Positron
8.53948e-01	1.203e-02	Positron
8.81499e-01	4.212e-02	Positron
8.84243e-01	1.805e-02	Positron
8.95866e-01	1.123e-01	Positron
1.00382e+00	1.203e-02	Positron
1.12945e+00	3.811e-02	Positron
1.14974e+00	1.203e-02	Positron
1.16629e+00	6.920e-02	Positron
1.31889e+00	3.711e-01	Positron
3.82005e-05	1.044e+00	Auger electron
1.21690e-04	6.233e-02	Auger electron
1.26063e-04	2.744e-01	Auger electron
2.92884e-04	6.774e-01	Auger electron
2.38227e-03	2.583e-01	Auger electron
2.75690e-03	5.239e-02	Auger electron
1.76856e-02	3.705e-02	Auger electron
2.05196e-02	1.470e-02	Auger electron
5.59390e-02	4.062e-02	Conversion electron
2.36689e-01	1.318e-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