

Sn-112 (STABLE)	Sn-113 (115.09d) EC	Sn-114 (STABLE)	Sn-115 (STABLE)	Sn-116 (STABLE)	Sn-117 (STABLE)	Sn-118 (STABLE)	Sn-119 (STABLE)	Sn-120 (STABLE)
In-111 (2.8047d) EC	In-112 (14.97m) ECB+B-	In-113 (STABLE)	In-114 (7h) B-	In-115m (4.486h) ITB-	In-117 (43.2m) B-	In-118 (5.0s) B-	In-119 (2.4m) B-	
Cd-110 (STABLE)	Cd-111 (STABLE)	Cd-112 (STABLE)	Cd-113 (7.7E+15y) B-	Cd-115 (53.4d) B-	Cd-116 (STABLE)	Cd-117 (2.49h) B-	Cd-118 (50.3m) B-	

INDIUM-115M

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: In-115m
Atomic number (Z): 49
Mass number (A): 115
Neutron number (N): 66

RADIOACTIVE DECAY

Decay modes: β^- , Internal transition
Half-life: 4.486 [h]
Decay constant: 4.2920e-05 [1/s]
Daughters: In-115 (95.0%), Sn-115 (5.0%)
Radioactive daughters: In-115

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.17484 [MeV]
Mean photon energy: 0.16272 [MeV]
Air kerma rate constant, Γ_{10} : 8.729e-18 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air} : 8.729e-18 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 2.801e-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, $\Delta_{\beta, \beta^+, e^-}$: 2.801×10^{-14} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 2.607×10^{-14} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

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

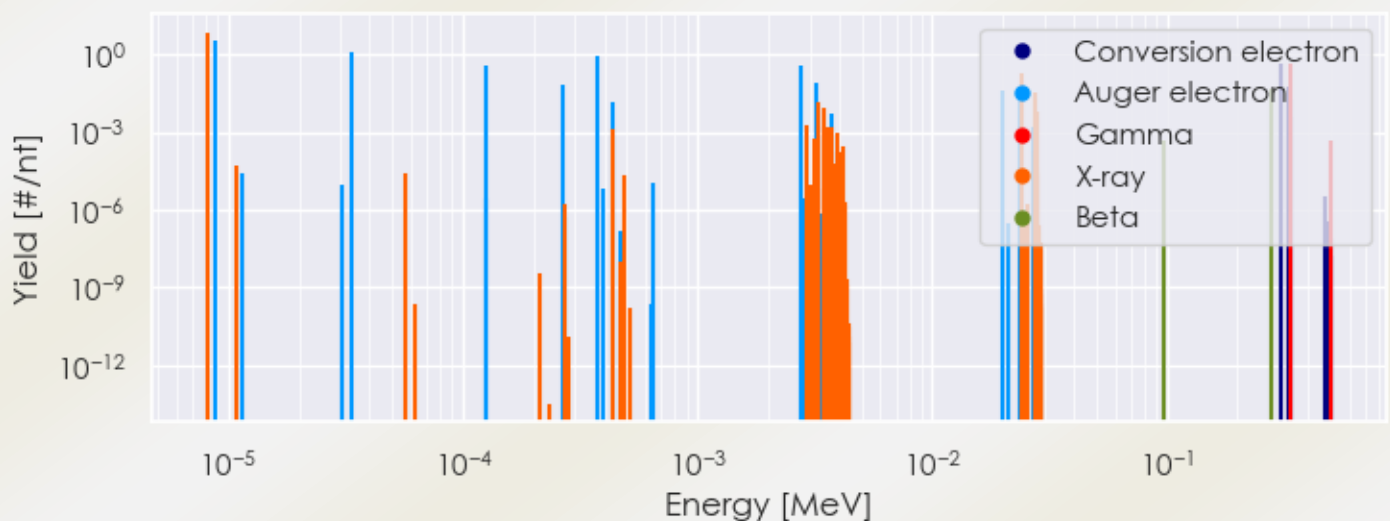
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/In-115m DPK.csv

SUMMARY SPECTRA (PLOT)

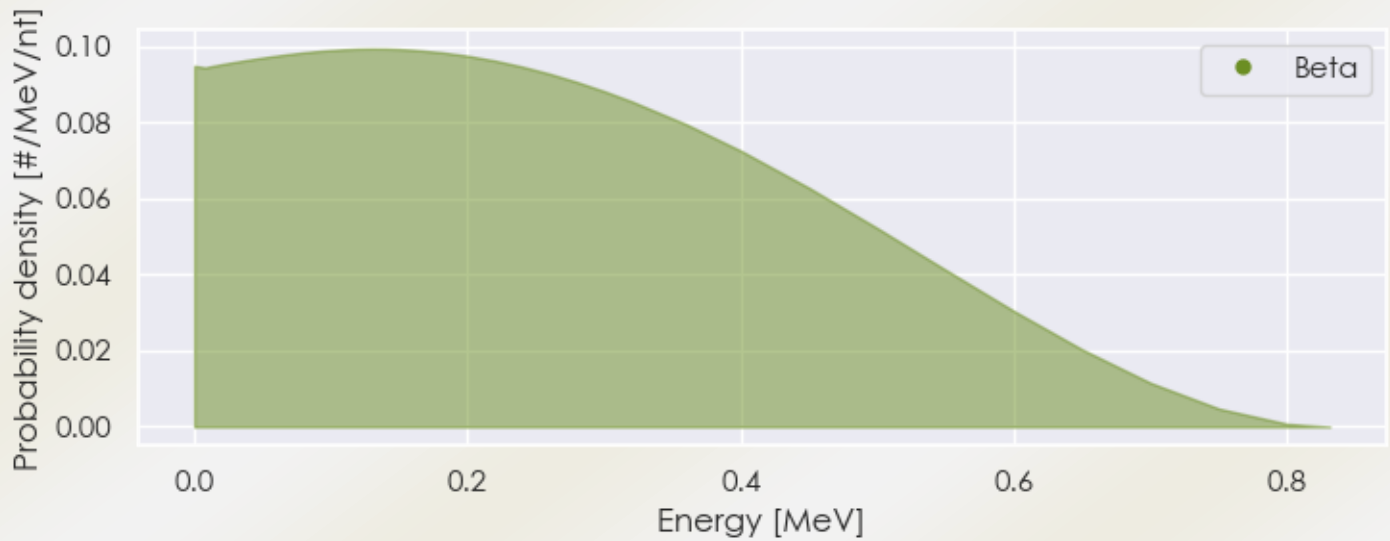
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/In-115m 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/In-115m 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/In-115m Summary Spectrum.csv

Energy [MeV]	Yield [# / nt] if > 0.01	Radiation type
8.12539e-06	7.046e+00	X-ray
3.27540e-03	1.418e-02	X-ray
2.39785e-02	9.774e-02	X-ray
2.41926e-02	1.834e-01	X-ray
2.72214e-02	1.636e-02	X-ray
2.72603e-02	3.177e-02	X-ray
3.36241e-01	4.579e-01	Gamma
2.79276e-01	4.953e-02	Beta
8.85906e-06	3.494e+00	Auger electron

3.35253e-05	1.229e+00	Auger electron
1.25689e-04	3.832e-01	Auger electron
2.63951e-04	6.831e-02	Auger electron
3.70891e-04	8.638e-01	Auger electron
4.37093e-04	1.421e-02	Auger electron
2.73514e-03	3.420e-01	Auger electron
3.21558e-03	8.363e-02	Auger electron
2.00957e-02	3.994e-02	Auger electron
2.34091e-02	1.672e-02	Auger electron
3.08320e-01	3.978e-01	Conversion electron
3.32027e-01	5.928e-02	Conversion electron
3.32299e-01	1.020e-02	Conversion electron
3.32513e-01	1.565e-02	Conversion electron
3.35580e-01	1.750e-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