



I-122 (3.63m) CB+	I-123 (13.27h) EC	I-124 (4.1760d) ECB+	I-125 (59.400d) EC	I-126 (12.93d) B-	I-127 (STABLE)	I-128 (24.99m) B-ECB+	I-129 (1.57E+7y) B-	I-130 (12.36h) B-
Te-121 (19.16d) C	Te-122 (STABLE)	Te-123 (6.00E+14y) EC	Te-124 (STABLE)	Te-125m (57.40d) IT	Te-126 (STABLE)	Te-127 (9.35h) B-	Te-128 (STABLE)	Te-129 (69.6m) B-
Sb-120 (5.89m) CB+	Sb-121 (STABLE)	Sb-122 (2.7238d) B-ECB+	Sb-123 (STABLE)	Sb-124 (STABLE)	Sb-125 (2.75d) B-	Sb-126 (12.35d) B-	Sb-127 (3.85d) B-	Sb-128 (9.01h) B-

TELLURIUM-125M

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Te-125m
Atomic number (Z): 52
Mass number (A): 125
Neutron number (N): 73

RADIOACTIVE DECAY

Decay modes: Internal transition
Half-life: 57.4 [d]
Decay constant: $1.3977\text{e-}07$ [1/s]
Daughters: Te-125 (100.0%)
Radioactive daughters: None

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.10907 [MeV]
Mean photon energy: 0.03598 [MeV]
Air kerma rate constant, Γ_{10} : $8.140\text{e-}18$ [Gy·m²/Bq·s]
Air kerma coefficient, K_{air} : $8.140\text{e-}18$ [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : $1.747\text{e-}14$ [Gy·kg/Bq·s]
Equilibrium dose constant for alphas, Δ_{α} : $0.000\text{e+}00$ [Gy·kg/Bq·s]

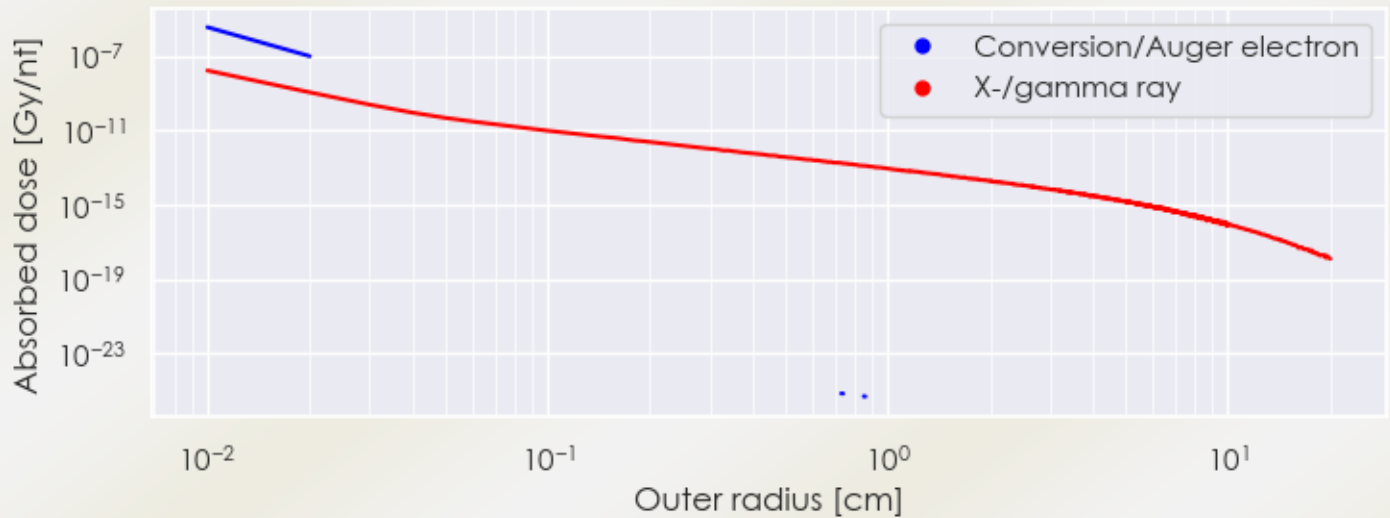
Equilibrium dose constant for betas/electrons, $\Delta_{\beta-, \beta+, e-}$: 1.747×10^{-14} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 5.765×10^{-15} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

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

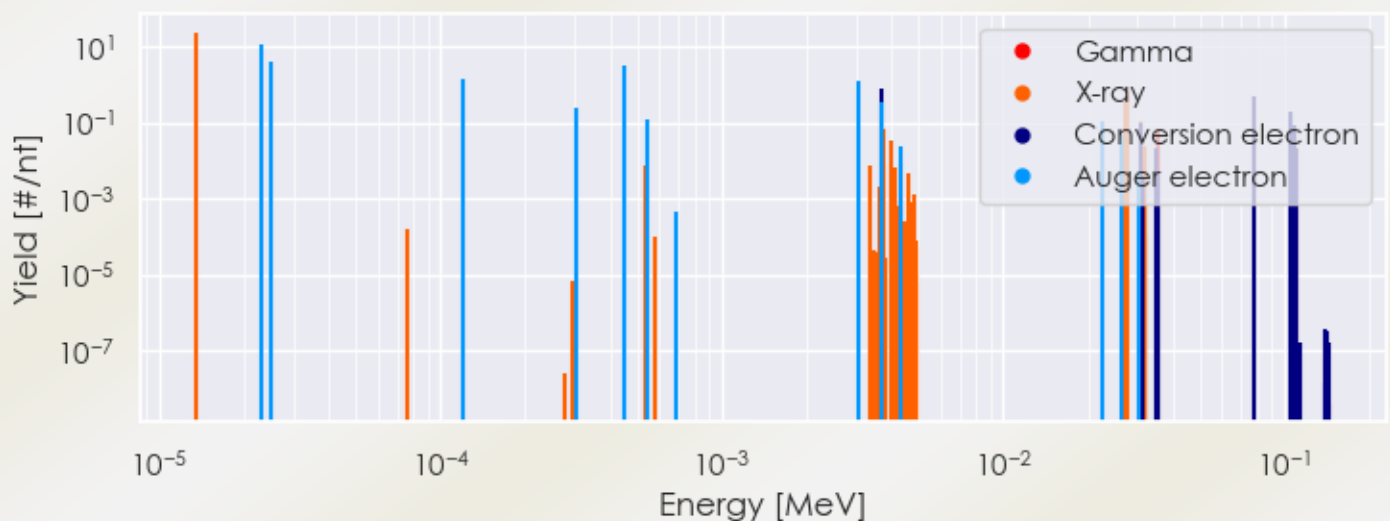
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/Te-125m 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/Te-125m 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/Te-125m Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Te-125m%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# / n _t] if > 0.01	Radiation type
1.36112e-05	2.434e+01	X-ray
3.75695e-03	6.562e-02	X-ray
4.02446e-03	3.346e-02	X-ray
2.71868e-02	3.322e-01	X-ray
2.74652e-02	6.185e-01	X-ray
3.09378e-02	5.695e-02	X-ray
3.09901e-02	1.105e-01	X-ray
3.16740e-02	1.180e-02	X-ray
3.16841e-02	2.319e-02	X-ray
3.55040e-02	6.670e-02	Gamma
2.29215e-05	1.190e+01	Auger electron
2.49015e-05	3.981e+00	Auger electron
1.20601e-04	1.376e+00	Auger electron
3.01766e-04	2.538e-01	Auger electron
4.49577e-04	3.054e+00	Auger electron
5.41487e-04	1.178e-01	Auger electron
3.08113e-03	1.194e+00	Auger electron
3.67527e-03	3.380e-01	Auger electron
3.69900e-03	8.060e-01	Conversion electron
4.29176e-03	2.391e-02	Auger electron
2.26653e-02	1.074e-01	Auger electron
2.65056e-02	4.730e-02	Auger electron
3.05898e-02	9.662e-02	Conversion electron
3.46892e-02	2.199e-02	Conversion electron
7.74710e-02	5.101e-01	Conversion electron
1.04362e-01	1.488e-01	Conversion electron
1.04658e-01	3.443e-02	Conversion electron

1.04936e-01	1.950e-01	Conversion electron
1.08461e-01	8.822e-02	Conversion electron
1.09276e-01	2.022e-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