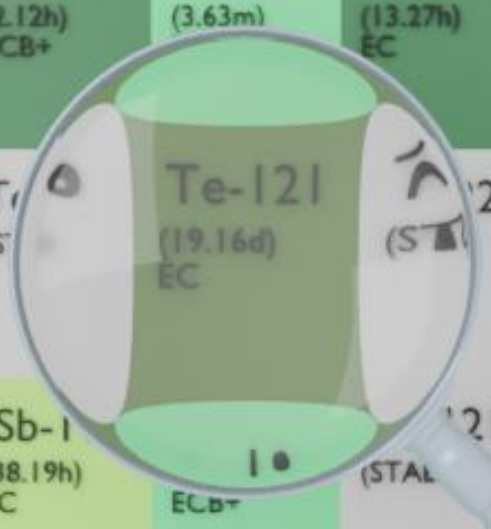




I-118 (13.7m) CB+	I-119 (19.1m) ECB+	I-120 (81.6m) ECB+	I-121 (2.12h) ECB+	I-122 (3.63m) EC	I-123 (13.27h) EC	I-124 (4.1760d) ECB+	I-125 (59.400d) EC	I-126 (12.93d) ECB+B-
Te-117 (52m) CB+	Te-118 (6.00d) EC	Te-119 (16.05h) ECB+	Te-120 (5.0h) ECB+	Te-121 (19.16d) EC	Te-122 (5.0h) ECB+	Te-123 (6.00E+14y) EC	Te-124 (STABLE)	Te-125 (STABLE)
Sb-116 (5.8m) CB+	Sb-117 (2.80h) ECB+	Sb-118 (3.6m) ECB+	Sb-119 (38.19h) EC	Sb-120 (5.0h) ECB+	Sb-121 (STABLE)	Sb-122 (2.7238d) B-ECB+	Sb-123 (STABLE)	Sb-124 (60.20d) B-

TELLURIUM-121

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Te-121
Atomic number (Z): 52
Mass number (A): 121
Neutron number (N): 69

RADIOACTIVE DECAY

Decay modes: Electron capture
Half-life: 19.16 [d]
Decay constant: 4.1871×10^{-7} [1/s]
Daughters: Sb-121 (100.0%)
Radioactive daughters: None

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.00978 [MeV]
Mean photon energy: 0.57746 [MeV]
Air kerma rate constant, Γ_{10} : 2.663×10^{-17} [Gy $\cdot$ m²/Bq $\cdot$ s]
Air kerma coefficient, K_{air} : 2.663×10^{-17} [Gy $\cdot$ m²/Bq $\cdot$ s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 1.567×10^{-15} [Gy $\cdot$ kg/Bq $\cdot$ s]
Equilibrium dose constant for alphas, Δ_{α} : 0.000×10^0 [Gy $\cdot$ kg/Bq $\cdot$ s]

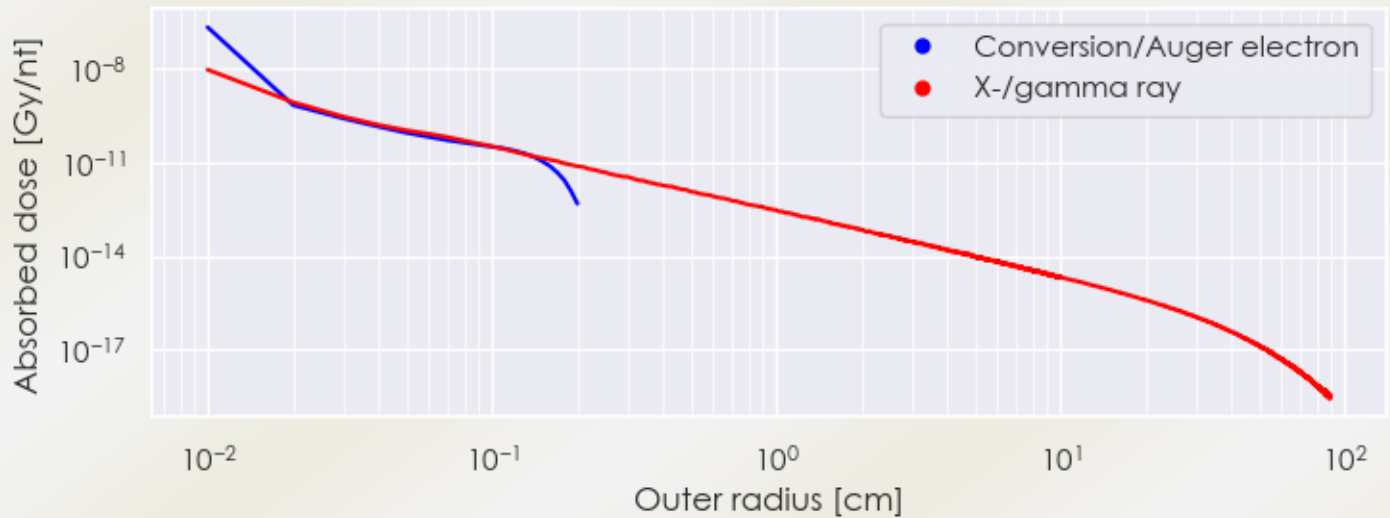
Equilibrium dose constant for betas/electrons, $\Delta_{\beta, \beta+, e^-}$: 1.567×10^{-15} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 9.252×10^{-14} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

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

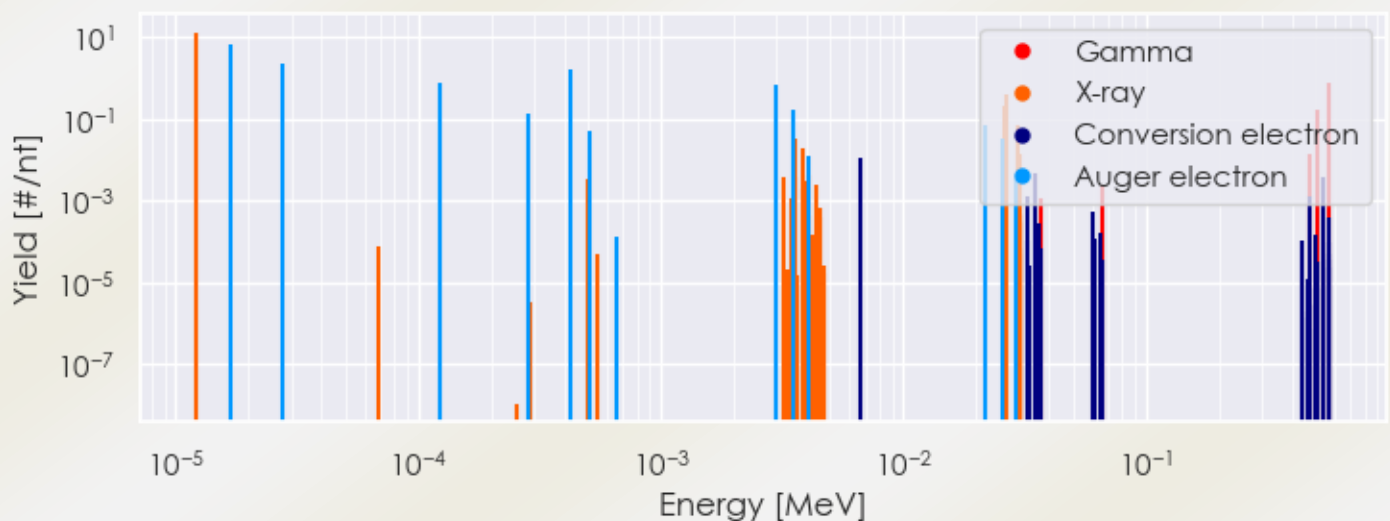
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/Te-121 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-121 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-121 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Te-121%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# /n ^t] if > 0.01	Radiation type
1.22327e-05	1.359e+01	X-ray
3.59266e-03	3.261e-02	X-ray
3.83820e-03	1.867e-02	X-ray
2.60930e-02	2.170e-01	X-ray
2.63486e-02	4.050e-01	X-ray
2.96698e-02	3.692e-02	X-ray
2.97173e-02	7.164e-02	X-ray
3.03709e-02	1.490e-02	X-ray
4.70472e-01	1.405e-02	Gamma
5.07591e-01	1.767e-01	Gamma
5.73139e-01	8.030e-01	Gamma
1.68974e-05	6.692e+00	Auger electron
2.73520e-05	2.262e+00	Auger electron
1.21901e-04	7.585e-01	Auger electron
2.85742e-04	1.411e-01	Auger electron
4.22645e-04	1.690e+00	Auger electron
5.05268e-04	5.121e-02	Auger electron
2.96676e-03	6.650e-01	Auger electron
3.52182e-03	1.800e-01	Auger electron
4.09767e-03	1.238e-02	Auger electron
6.65900e-03	1.122e-02	Conversion electron
2.17904e-02	7.568e-02	Auger electron
2.54497e-02	3.278e-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/SNMML-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6