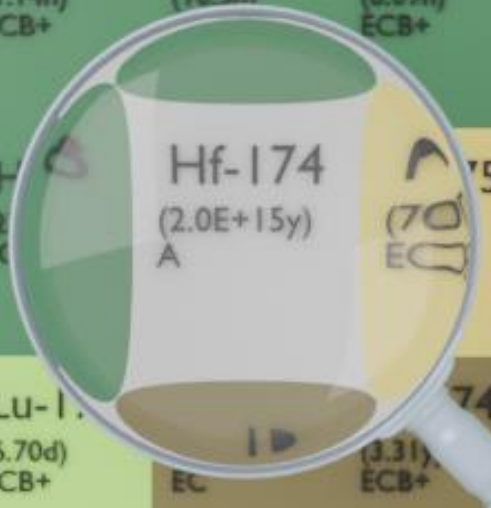




Ta-172 (36.8m) ECB+	Ta-173 (3.14h) ECB+	Ta-174 (1.14h) ECB+	Ta-175 (10.5h) ECB+	Ta-176 (8.09h) ECB+	Ta-177 (56.56h) EC	Ta-178 (9.31m) ECB+	Ta-179 (1.82y) EC
Hf-170 (16.01h) EC		Hf-172 (1.87y) EC	Hf-173 (2.0E+15y) A	Hf-175 (70d) EC	Hf-176 (STABLE)	Hf-177 (STABLE)	Hf-178 (STABLE)
Lu-169 (4.06h) CB+	Lu-170 (2.012d) ECB+	Lu-171 (8.24d) ECB+	Lu-172 (6.70d) ECB+	Lu-174 (3.31y) ECB+	Lu-175 (STABLE)	Lu-176 (3.85E+10y) B-	Lu-177 (6.647d) B-

HAFNIUM-174

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Hf-174
Atomic number (Z): 72
Mass number (A): 174
Neutron number (N): 102

RADIOACTIVE DECAY

Decay modes: α
Half-life: 2000000000000000.0 [y]
Decay constant: 1.0982e-23 [1/s]
Daughters: Yb-170 (100.0%)
Radioactive daughters: None

DOSIMETRIC CONSTANTS

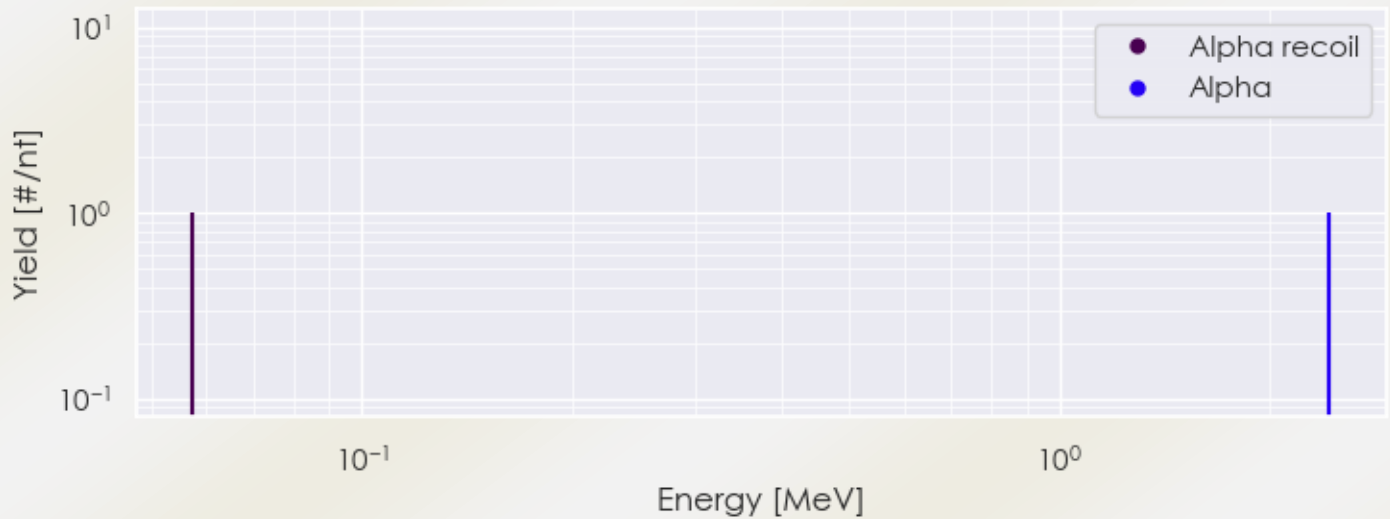
Mean alpha energy: 2.4947 [MeV]
Mean electron energy: 0.0 [MeV]
Mean photon energy: 0.0 [MeV]
Air kerma rate constant, Γ_{10} : 0.000e+00 [Gy·m²/Bq·s]
Air kerma coefficient, K_{air} : 0.000e+00 [Gy·m²/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 3.997e-13 [Gy·kg/Bq·s]
Equilibrium dose constant for alphas, Δ_{α} : 3.997e-13 [Gy·kg/Bq·s]

Equilibrium dose constant for betas/electrons, $\Delta_{\beta-\beta+,e-}$: 0.000e+00 [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 0.000e+00 [Gy·kg/Bq·s]

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/Hf-174 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Hf-174%20Summary%20Spectrum.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/Hf-174 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Hf-174%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# / nt] if > 0.01	Radiation type
2.43741e+00	1.000e+00	Alpha
5.73881e-02	1.000e+00	Alpha recoil

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