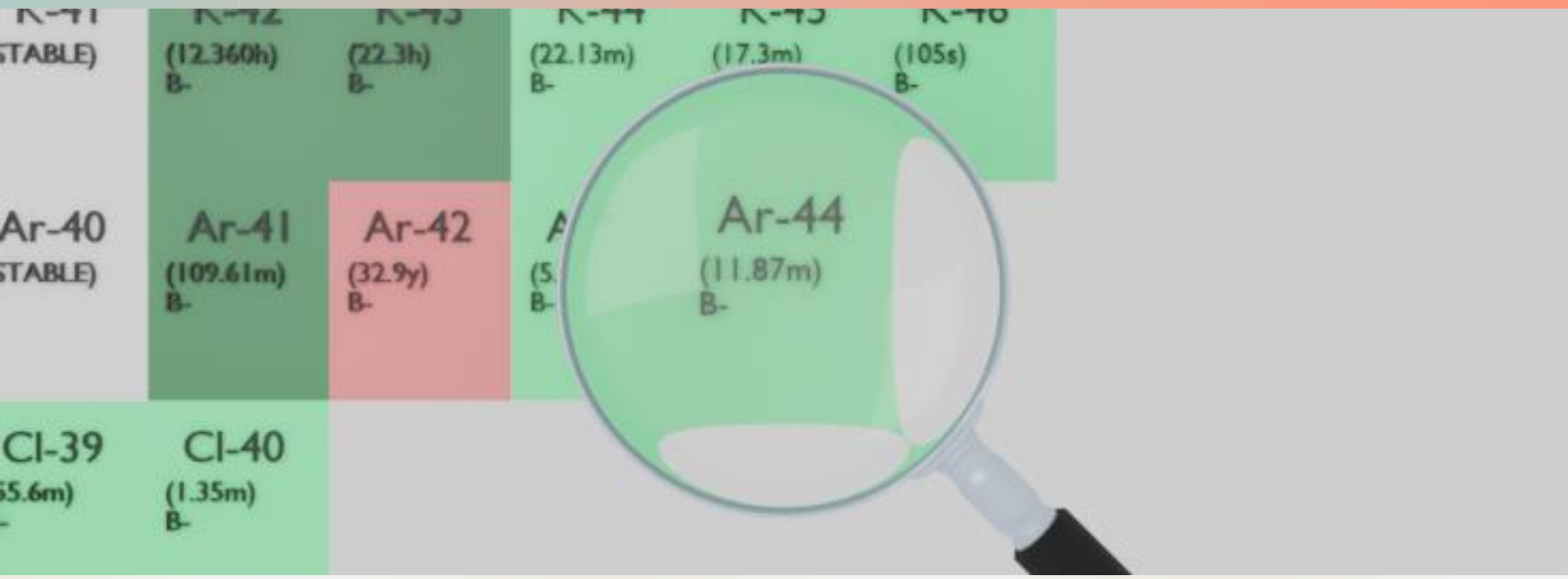


ARGON-44

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Ar-44
Atomic number (Z): 18
Mass number (A): 44
Neutron number (N): 26

RADIOACTIVE DECAY

Decay modes: β-
Half-life: 11.87 [m]
Decay constant: 9.7325e-04 [1/s]
Daughters: K-44 (100.0%)
Radioactive daughters: K-44

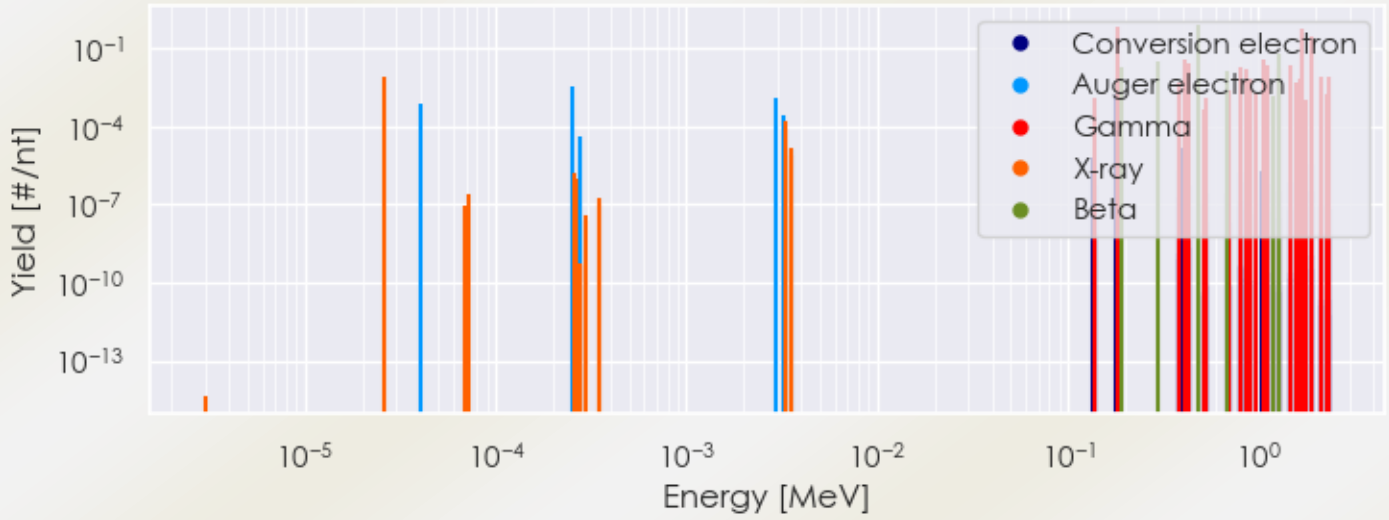
DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.52445 [MeV]
Mean photon energy: 1.93763 [MeV]
Air kerma rate constant, Γ_{10}: 6.141e-17 [Gy·m^2/Bq·s]
Air kerma coefficient, K_{air}: 6.141e-17 [Gy·m^2/Bq·s]
Equilibrium dose constant for weakly-penetrating radiations (a and/or electrons), Δ_{wp}: 8.403e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for alphas, Δ_{a}: 0.000e+00 [Gy·kg/Bq·s]

Equilibrium dose constant for betas/electrons, $\Delta_{\beta-,\beta+,e-}$: 8.403e-14 [Gy·kg/Bq·s]
Equilibrium dose constant for photons, Δ_{p}: 3.104e-13 [Gy·kg/Bq·s]

SUMMARY SPECTRA (PLOT)

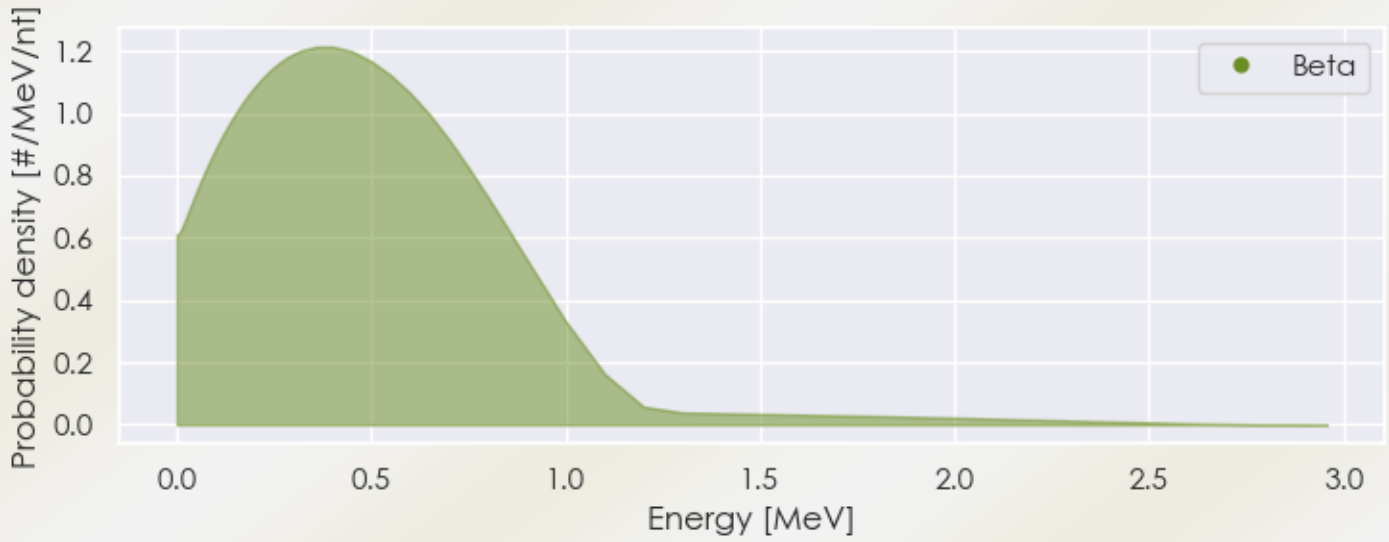
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/Ar-44 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/Ar-44 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/Ar-44 Summary Spectrum.csv

Energy [MeV]	Yield [#/nt] if > 0.01	Radiation type
1.82600e-01	6.600e-01	Gamma
4.08100e-01	4.092e-02	Gamma
4.26700e-01	2.640e-02	Gamma
8.09100e-01	1.980e-02	Gamma
8.66100e-01	1.630e-02	Gamma
1.05130e+00	3.960e-02	Gamma
1.11470e+00	2.178e-02	Gamma
1.27660e+00	1.538e-02	Gamma
1.46000e+00	2.178e-02	Gamma
1.70340e+00	5.650e-01	Gamma
1.88610e+00	3.148e-01	Gamma
1.92601e-01	2.067e-02	Beta
2.93614e-01	3.007e-02	Beta
4.83718e-01	8.740e-01	Beta
6.76841e-01	1.278e-02	Beta
1.27929e+00	6.108e-02	Beta

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