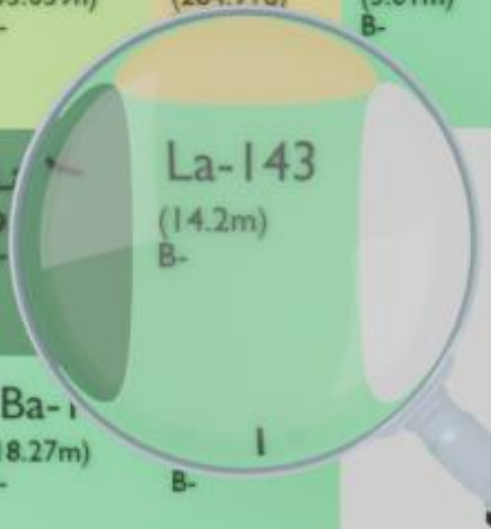




Ce-140 (STABLE)	Ce-141 (32.508d) B-	Ce-142 (STABLE)	Ce-143 (33.039h) B-	Ce-144 (284.91d) B-	Ce-145 (3.01m) B-
La-139 (STABLE)	La-140 (1.6781d) B-	La-141 (3.92h) B-	La-142 (9.1h) B-	La-143 (14.2m) B-	
Ba-138 (STABLE)	Ba-139 (83.06m) B-	Ba-140 (12.752d) B-	Ba-141 (18.27m) B-		

LANTHANUM-143

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: La-143
Atomic number (Z): 57
Mass number (A): 143
Neutron number (N): 86

RADIOACTIVE DECAY

Decay modes: β^-
Half-life: 14.2 [m]
Decay constant: $8.1355\text{e-}04$ [1/s]
Daughters: Ce-143 (100.0%)
Radioactive daughters: Ce-143

DOSIMETRIC CONSTANTS

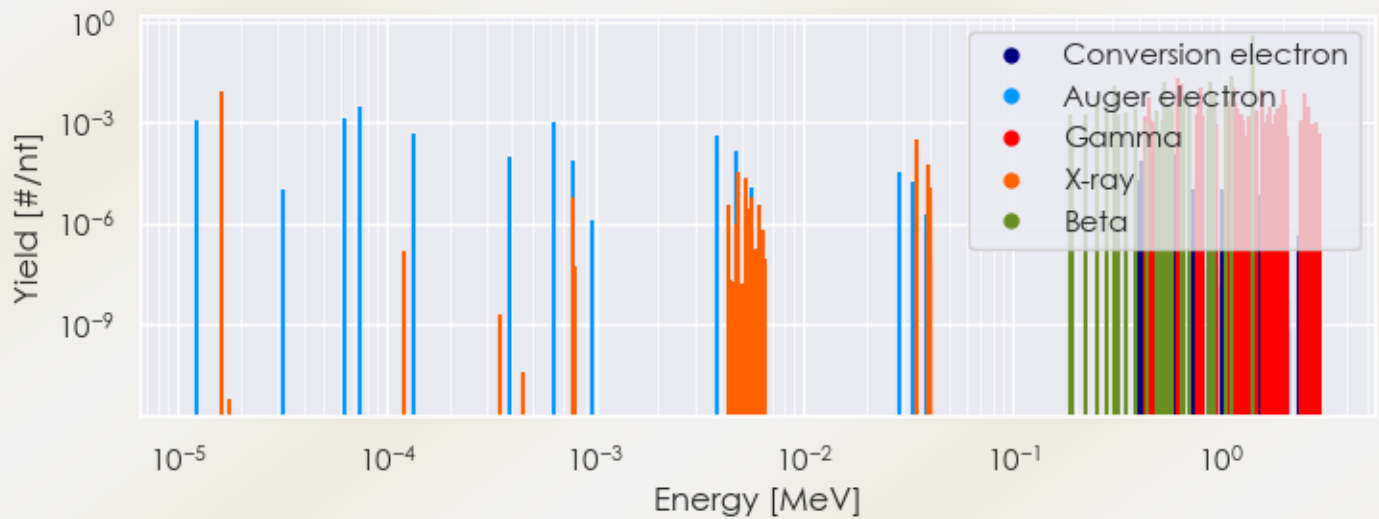
Mean alpha energy: 0.0 [MeV]
Mean electron energy: 1.29946 [MeV]
Mean photon energy: 0.26306 [MeV]
Air kerma rate constant, Γ_{10} : $8.645\text{e-}18$ [$\text{Gy} \cdot \text{m}^2/\text{Bq} \cdot \text{s}$]
Air kerma coefficient, K_{air} : $8.645\text{e-}18$ [$\text{Gy} \cdot \text{m}^2/\text{Bq} \cdot \text{s}$]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : $2.082\text{e-}13$ [$\text{Gy} \cdot \text{kg}/\text{Bq} \cdot \text{s}$]
Equilibrium dose constant for alphas, Δ_{α} : $0.000\text{e+}00$ [$\text{Gy} \cdot \text{kg}/\text{Bq} \cdot \text{s}$]

Equilibrium dose constant for betas/electrons, $\Delta_{\beta, \beta^+, e^-}$: 2.082e-13 [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 4.215e-14 [Gy·kg/Bq·s]

SUMMARY SPECTRA (PLOT)

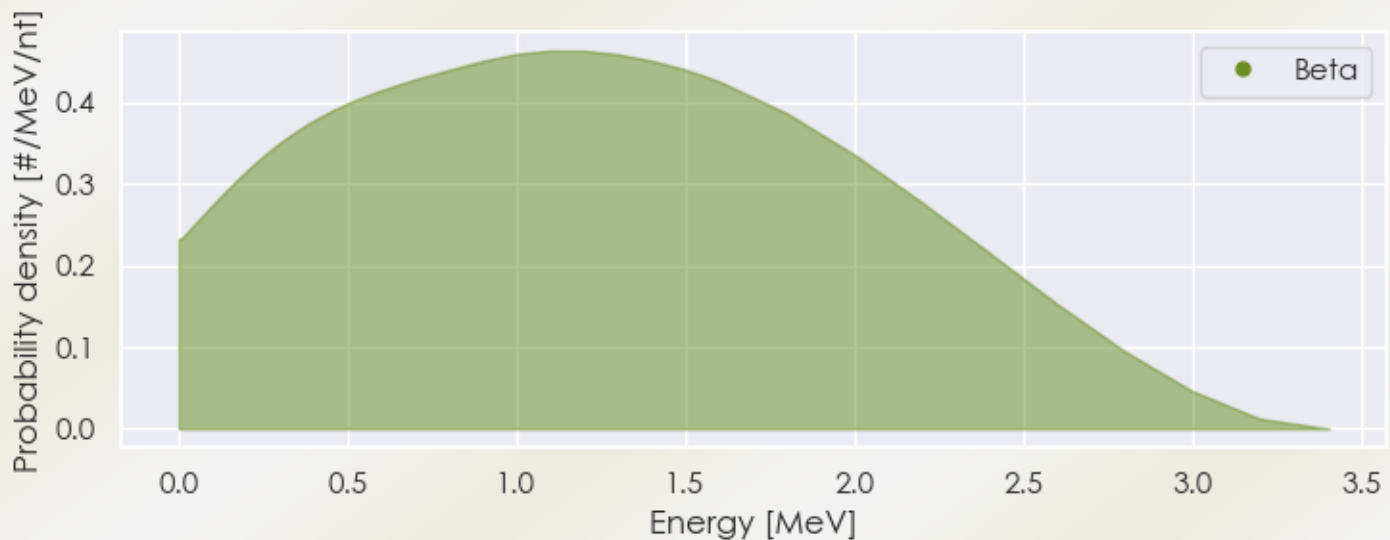
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/La-143 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/La-143 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/La-143 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/La-143%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# / n _t] if > 0.01	Radiation type
6.20300e-01	2.340e-02	Gamma
6.21400e-01	1.520e-02	Gamma
6.43750e-01	1.550e-02	Gamma
7.98140e-01	1.180e-02	Gamma
1.14850e+00	1.160e-02	Gamma
1.55643e+00	1.000e-02	Gamma
1.96144e+00	1.010e-02	Gamma
3.04871e-01	1.301e-02	Beta
5.28564e-01	1.661e-02	Beta
8.88183e-01	1.170e-02	Beta
8.89359e-01	1.601e-02	Beta
1.04764e+00	1.010e-02	Beta
1.11831e+00	2.601e-02	Beta
1.40461e+00	4.202e-01	Beta
1.41545e+00	4.202e-01	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/SNMML-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6