



# SELENIUM-79

## SUMMARY DATA

### GENERAL

#### CLASSIFICATION

Isotope: Se-79  
 Atomic number (Z): 34  
 Mass number (A): 79  
 Neutron number (N): 45

#### RADIOACTIVE DECAY

Decay modes:  $\beta^-$   
 Half-life: 295000.0 [y]  
 Decay constant:  $7.4457e-14$  [1/s]  
 Daughters: Br-79 (100.0%)  
 Radioactive daughters: None

#### DOSIMETRIC CONSTANTS

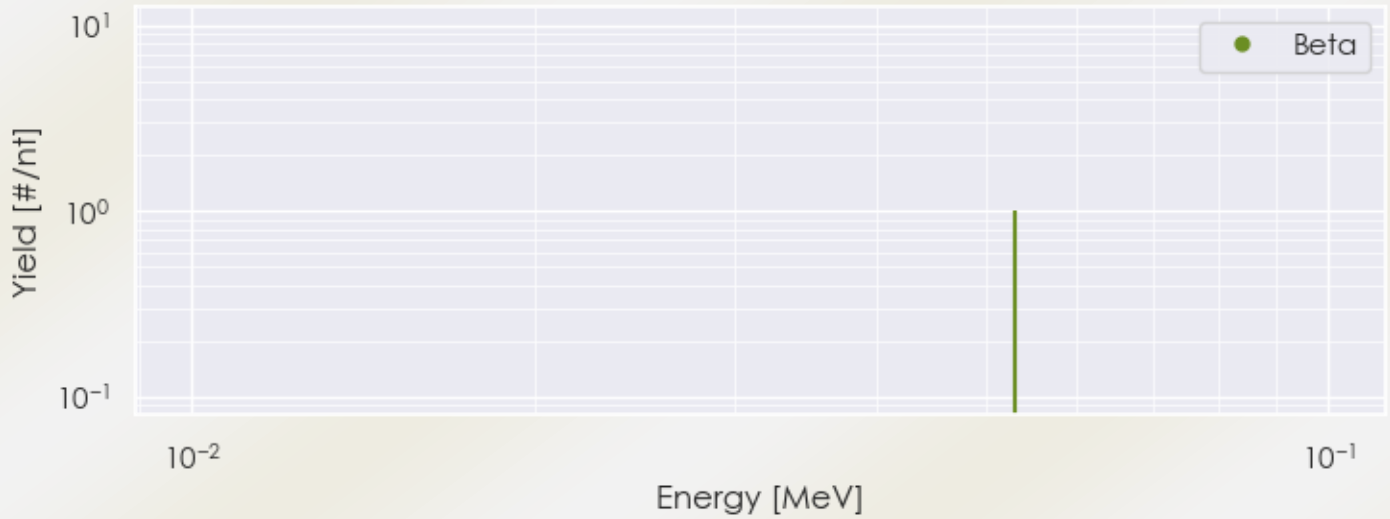
Mean alpha energy: 0.0 [MeV]  
 Mean electron energy: 0.05292 [MeV]  
 Mean photon energy: 0.0 [MeV]  
 Air kerma rate constant,  $\Gamma_{10}$ : 0.000e+00 [Gy·m<sup>2</sup>/Bq·s]  
 Air kerma coefficient,  $K_{air}$ : 0.000e+00 [Gy·m<sup>2</sup>/Bq·s]  
 Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons),  $\Delta_{wp}$ : 8.479e-15 [Gy·kg/Bq·s]  
 Equilibrium dose constant for alphas,  $\Delta_{\alpha}$ : 0.000e+00 [Gy·kg/Bq·s]

Equilibrium dose constant for betas/electrons,  $\Delta_{\beta,\beta^+,e^-}$ : 8.479e-15 [Gy·kg/Bq·s]

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

SUMMARY SPECTRA (PLOT)

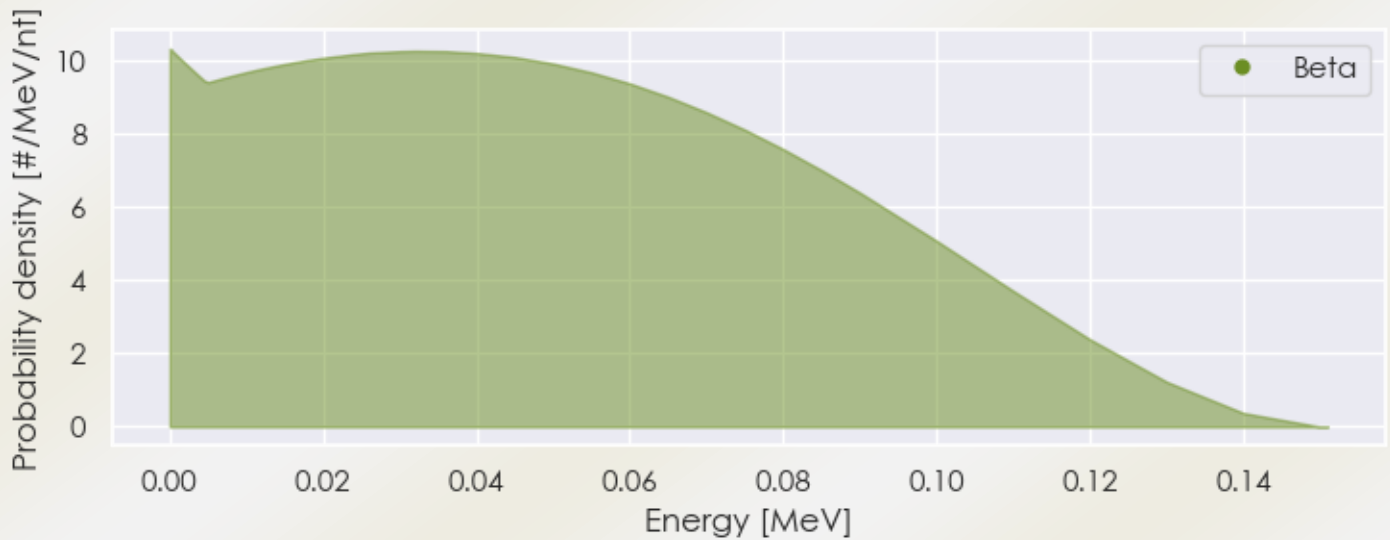
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: [www.mirdsoft.org/products/MIRDspecs/Se-79 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Se-79%20Summary%20Spectrum.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/Se-79 Beta Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Se-79%20Beta%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/Se-79 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Se-79%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# /nt] if > 0.01	Radiation type
5.29212e-02	1.000e+00	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](https://sites.snmmi.org/SNMMI-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6)