

Convert mR readings to uCi values:

The "Specific Exposure Rate Constant", sometimes known as the "Gamma Factor", is the exposure rate at a specific distance from a given amount of a photon-emitting radionuclide. These constants are used frequently for radiation protection purposes. The following is a listing of Specific Exposure Rate Constants for a variety of radionuclides, in units of Roentgens per hour (R/hr) at a distance of one (1) meter from a one (1) curie point source of that radionuclide.

Americium

- Am-241 - 0.313723

Barium

- Ba-133 - 0.45547

Beryllium

- Be-7 - 0.0343804

Bismuth

- Bi-206 - 2.5234
- Bi-207 - 1.33311
- Bi-208 - 1.5207
- Bi-211 - 0.047138
- Bi-212 - 0.194768
- Bi-213 - 0.11618
- Bi-214 - 0.83916

Cesium

- Cs-137 - 0.38184

.

## Cobalt

- Co-56 - 1.92585
- Co-57 - 0.151219
- Co-58 - 0.61383
- Co-58m - 9.7569E-05
- Co-60 - 1.37011
- Co-60m - 0.00335109

.

## Iodine

- I-122 - 0.70337
- I-123 - 0.276686
- I-124 - 0.7585
- I-125 - 0.274984
- I-126 - 0.39035
- I-128 - 0.059792
- I-129 - 0.125837
- I-130 - 1.40267
- I-131 - 0.282939
- I-132 - 1.42746
- I-133 - 0.40885
- I-134 - 1.57287
- I-135 - 0.86099
- I-136 - 1.26429

## Krypton

- Kr-85 - 0.00156584

## Lead

- Pb-203 - 0.67636
- Pb-204m - 1.3505

- Pb-205 - 0.251193
- Pb-210 - 0.251637
- Pb-211 - 0.0363932
- Pb-212 - 0.273393
- Pb-214 - 0.323454
- Pd-103 - 0.230103
- Pd-109 - 0.0004847
- Mo-101 - 0.88467
- .07707

- Ni-65 - 0.297406

#### Niobium

- Nb-90 - 2.44089
- Nb-91 - 0.326784
- Nb-91m - 0.26492
- Nb-92 - 1.26318
- Nb-92m - 0.89281
- Nb-93m - 0.052577
- Nb-94 - 0.97976
- Nb-94m - 0.202797
- Nb-95 - 0.48026
- Nb-95m - 0.23643
- Nb-96 - 1.5244
- Nb-97 - 0.43475
- Nb-97m - 0.46694

#### Nitrogen

- N-13 - 0.71706

#### Plutonium

- Pu-236 - 0.088985

- Pu-237 - 0.38443
- Pu-238 - 0.078995
- Pu-239 - 0.0301365
- Pu-240 - 0.07511
- Pu-242 - 0.062308
- Pu-243 - 0.092833
- Pu-244 - 0.054094
- Pu-245 - 0.38702

#### Polonium

- Po-209 - 0.00363007
- Po-210 - 5.2688E-06
- Po-211 - 0.0049136
- Po-213 - 1.90402E-05
- Po-214 - 5.1726E-05
- Po-215 - 0.000105857
- Po-216 - 8.9688E-06

#### Potassium

- K-40 - 0.081696
- K-42 - 0.143153
- K-43 - 0.67007

·

#### Radium

- Ra-222 - 0.0078255
- Ra-223 - 0.325193
- Ra-224 - 0.0109779
- Ra-225 - 0.154068
- Ra-226 - 0.0121138

#### Radon

- Rn-218 - 0.00050579
- Rn-219 - 0.052503
- Rn-220 - 0.000359751
- Rn-222 - 0.00027343
- 

#### Rhodium

- Rh-103m - 0.0255744
- Rh-105 - 0.058756
- Rh-105m - 0.157287
- Rh-106 - 0.138158

#### Silver

- Ag-106m - 1.93769
- Ag-108 - 0.0162763
- Ag-108m - 1.27132
- Ag-109m - 0.100714
- Ag-110 - 0.0205646
- Ag-110m - 1.65242
- Ag-111 - 0.0197173

#### Sodium

- Na-22 - 1.3394
- Na-24 - 1.93769

#### Strontium

- Sr-82 - 0.39405
- Sr-85 - 0.75924
- Sr-85m - 0.222148
- Sr-87m - 0.29637
- Sr-89 - 8.1585E-05
- Sr-91 - 0.41366

· Sr-92 - 0.72002

· Sr-93 - 1.35605

#### Technetium

· Tc-99 - 4.5954E-07

#### Thorium

· Th-226 - 0.067266

· Th-227 - 0.42365

· Th-228 - 0.079254

· Th-229 - 0.73593

· Th-230 - 0.068857

· Th-231 - 0.54501

· Th-232 - 0.068376

· Th-233 - 0.095719

· Th-234 - 0.075406

#### Uranium

· U-230 - 0.091131

· U-231 - 0.7844

· U-232 - 0.088911

· U-233 - 0.0291042

· U-234 - 0.077589

· U-235 - 0.338883

· U-236 - 0.073704

· U-237 - 0.58793

· U-238 - 0.065231

· U-239 - 0.13431

· U-240 - 0.284382

#### Xenon

· Xe-122 - 0.180079

- Xe-123 - 0.52392
- Xe-125 - 0.356014
- Xe-127 - 0.345247
- Xe-129m - 0.228105
- Xe-131m - 0.093721
- Xe-133 - 0.102971
- Xe-133m - 0.112258
- Xe-135 - 0.189477
- Xe-135m - 0.320087
- Xe-137 - 0.123802
- Xe-138 - 0.62123

#### Yttrium

- Y-86 - 2.32804
- Y-87 - 0.68857
- Y-88 - 1.78303
- Y-90m - 0.48692
- Y-91 - 0.00199911
- Y-91m - 0.38036
- Y-92 - 0.146927
- Y-93 - 0.051652

\*\*Listing partially extracted from ORNL/RSIC-45, "Specific Gamma-Ray Dose

Constants for

Nuclides Important to Dosimetry and Radiological Assessment", 1981.

Geo