

Radiological Properties of Isotopes

Isotope	Half Life ($t_{\frac{1}{2}}$)	Decay Time 10($t_{\frac{1}{2}}$)	Primary Particle Emitted	Energy (meV)	Shielding
H-3	12.8 years	128 years	Beta	0.019	3/8" Lucite
C-14	5730 years	57300 years	Beta	0.156	3/8" Lucite
Na-22	2.6 years	26 years	Gamma	0.246	HVL 0.16" Lead
P-32	14.3 days	4.7 months	Beta	0.734	3/8" Lucite
S-35	87.4 days	2.39 years	Beta	0.167	3/8" Lucite
Ca-45	163 days	4.46 years	Beta	0.257	3/8" Lucite
Cr-51	27.7 days	9.1 months	Beta / Gamma	0.320 / 0.004	HVL 0.07" Lead
Co-60	5.26 years	52.6 years	Beta / Gamma	1.170 / 0.310	HVL 0.44" Lead
Tc-99	6.02 hours	2.5 days	Gamma	0.141	HVL 0.008" Lead
I-125	60.0 days	1.64 years	Gamma	0.035	HVL 0.0008" Lead
I-131	8.04 days	2.64 months	Beta / Gamma	0.606 / 0.723	HVL 0.10" Lead
Cs-137	28.8 years	288 years	Beta / Gamma	1.170 / 0.662	HVL 0.25" Lead
Ga-67	78.3 hours	32.62 days	Beta / Gamma	0.084 / 0.394	HVL 0.028" Lead
Mo-99	66.0 hours	27.5 days	Beta / Gamma	1.210 / 0.778	HVL 0.32" Lead

Ba-133	10.7 years	107 years	Gamma	0.080	HVL 0.10" Lead
Xe-133	5.3 days	1.74 months	Beta / Gamma	0.436 / 0.081	HVL 0.0016" Lead
Ir-192	74 days	2.02 years	Beta / Gamma	0.670 / 0.320	HVL 0.20" Lead
Tl-201	73 hours	30.41 days	Beta / Gamma	0.153 / 1.35	HVL 0.008" Lead
Tl-204	3.77 years	37.7 years	Beta	0.763	3/8" Lucite
Ra-226	1628 years	16280 years	Gamma	2.44	HVL 0.50" Lead
P-33	25.4 days	8.35 months	Beta	0.249	0.035" Lucite

Blue = Beta Emitter
Yellow = Beta / Gamma Emitter
Red = Gamma Emitter