

RADIONUCLIDE DATA SHEET

[CESIUM]

Cs-134

55 protons

79 neutrons

Half Life: 2.0648 years

Radiation: Decay Mode: Beta

Gamma Constant: 9.67 mR/hr per 1 mCi at 30 cm

Major Betas:

Max E(MeV)	Avg E (MeV)	# per 100 dis
0.658	0.210	70.23
0.415	0.123	2.506
0.089	0.023	27.28

Max. Beta Range in Air : 184.17 cm

Max. Beta Range in Water : 0.24 cm

Major Gammas:

E(MeV)	# per 100 Dis
0.569	15.38
0.796	85.53
0.802	8.69
0.604	97.0

Average gamma E = 0.764 MeV

Intake Data (annual):

Minimum Ingestion: 70 μ Ci equals 5 rem TEDE (WHOLE BODY)

Minimum Inhalation: 100 μ Ci equals 5 rem TED (WHOLE BODY)

Doses:

Skin Dose: Reported for 1 μ Ci over 10 cm² of skin
28.2 mrad/hr (gamma dose)

Point Source: 396 mrad/hr (beta dose)

Disk Source: 396 mrad/hr (beta dose)

Shielding Information:

Maximum Range For Beta	Plastic	0.2 cm
	Aluminum	0.09 cm
Tenth Value Thickness For Average Gamma:	Concrete	0 cm
	Lead	0 cm

Detection information: Usable Detectors listed with estimate efficiencies

Ludlum 3 w/ pancake probe at 1 cm	%	Liq. Scint. Counter	%
Ludlum 3 w/ NaI probe near surface	%	Gamma Counter	%

Action Quantities:

Bench Top Quantity Must Be Less Than	1000 μ Ci
Containers Require Labeling When Greater Than	10 μ Ci
Rooms Require Posting When There Is Greater Than	100 μ Ci
Contamination Lasting More than 24 hrs Require NRC Notification At	500 μ Ci