RADIONUCLIDE DATA SHEET [IODINE]

University of California San Diego

I-123 — 53 protons — 70 neutrons

Half Life: 13.27 hours
Radiation: Decay Mode: Electron Capture
Gamma Constant: 0.792 mR/hr per 1 mCi at 30 cm

Major Gammas:

E(MeV)	# per 100 Dis
0.159	83.3
0.440	0.43
0.529	1.39

Max. Beta Range in Air : N/A cm
Max. Beta Range in Water : N/A cm

Average gamma E = 0.166 MeV

Intake Data (annual):

Minimum Ingestion: 10000 µCi equals 5 rem TEDE (WHOLE BODY)
3000 µCi equals 50 rem CEDE (Thyroid)
Minimum Inhalation: 20000 µCi equals 5 rem TEDE (WHOLE BODY)
6000 µCi equals 50 rem CEDE (Thyroid)

Doses:

Skin Dose: Reported for 1 µCi over 10 cm² of skin
21.2 mrad/hr (gamma dose)
Point Source: 0 mrad/hr (beta dose)
Disk Source: 0 mrad/hr (beta dose)

Shielding Information:

Maximum Range For Beta	Plastic	N/A cm
	Aluminum	N/A 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	60000 µCi
Containers Require Labeling When Greater Than	100 µCi
Rooms Require Posting When There Is Greater Than	1000 µCi
Contamination Lasting More than 24 hrs Require NRC Notification At	30000 µCi