

RADIONUCLIDE DATA SHEET

[IRON]

Fe-55

26 protons

29 neutrons

Half Life: 2.73 years

Radiation: Decay Mode: Electron Capture

Gamma Constant: 8.6 mR/hr per 1 mCi at 30 cm

Auger Electrons:

Major Gammas:

Max E(MeV)	Avg E (MeV)	# per 100 dis
	0.0052	

E(MeV)	# per 100 Dis
0.006	25

Max. Beta Range in Air : N/A cm

Max. Beta Range in Water : N/A cm

Average gamma E = 0.006 MeV

Intake Data (annual):

Minimum Ingestion: 9000 μ Ci equals 5 rem TEDE (WHOLE BODY)

Minimum Inhalation: 2000 μ Ci equals 5 rem TEDE (WHOLE BODY)

Doses:

Skin Dose: Reported for 1 μ Ci over 10 cm² of skin
25.1 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	0 cm
	Aluminum	0 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	0%	Liq. Scint. Counter	25%
Ludlum 3 w/ NaI probe near surface	0%	Gamma Counter	0%

Action Quantities:

Bench Top Quantity Must Be Less Than	20000 μ Ci
Containers Require Labeling When Greater Than	100 μ Ci
Rooms Require Posting When There Is Greater Than	1000 μ Ci
Contamination Lasting More than 24 hrs Require NRC Notification At	10000 μ Ci