

RADIONUCLIDE DATA SHEET

[STRONTIUM]

Sr-89

38 protons

51 neutrons

Half Life: 50.52 days

Radiation: Decay Mode: Beta

Gamma Constant: 0 mR/hr per 1 mCi at 30 cm

Major Betas:

Max E(MeV)	Avg E (MeV)	# per 100 dis
1.491	0.583	100

Max. Beta Range in Air : 650 cm

Max. Beta Range in Water : 0.7 cm

Average gamma E = 0 MeV

Intake Data (annual):

Minimum Ingestion: 500 μ Ci equals 5 rem TEDE (WHOLE BODY)

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

Doses:

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

Point Source: 634 mrad/hr (beta dose)

Disk Source: 634 mrad/hr (beta dose)

Shielding Information:

Maximum Range For Beta	Plastic	0.7 cm
	Aluminum	0.33 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	13%	Liq. Scint. Counter	85%
Ludlum 3 w/ NaI probe near surface	1%	Gamma Counter	4%

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