RADIONUCLIDE DATA SHEET [NICKEL]

Ni-63 — 28 protons — 35 neutrons

Half Life: 100 years
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
0.066	0.017	100

Max. Beta Range in Air : 6.8 cm
Max. Beta Range in Water : 0.01 cm

Average gamma E = 0 MeV

Intake Data (annual):

Minimum Ingestion: 9000 µCi equals 5 rem TEDE (WHOLE BODY)
Minimum Inhalation: 800 µCi equals 5 rem TEDE (WHOLE BODY)

Doses:

Skin Dose: Reported for 1 µCi over 10 cm^2 of skin
0 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	0.01 cm
	Aluminum	0.01 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	<1%	Liq. Scint. Counter	75%
Ludlum 3 w/ NaI probe near surface	0%	Gamma Counter	0%

Action Quantities:

Bench Top Quantity Must Be Less Than	8000 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	4000 µCi