

# RADIONUCLIDE DATA SHEET

[SELENIUM]

Se-75

34 protons

41 neutrons

**Half Life:** 119.78 days

**Radiation:** Decay Mode: Electron Capture

**Gamma Constant:** 9.55 mR/hr per 1 mCi at 30 cm

**Major Gammas:**

E(MeV)	# per 100 Dis
0.136	59
0.265	60
0.280	25

Max. Beta Range in Air : 0 cm

Max. Beta Range in Water : 0 cm

Average gamma E = 0.165 MeV

**Intake Data (annual):**

Minimum Ingestion: 500  $\mu$ Ci equals 5 rem TEDE (WHOLE BODY)

Minimum Inhalation: 600  $\mu$ Ci equals 5 rem TEDE (WHOLE BODY)

**Doses:**

**Skin Dose:** Reported for 1  $\mu$ Ci over 10 cm<sup>2</sup> of skin  
38.6 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	7 cm
	Lead	0.1 cm

**Detection information:** Usable Detectors listed with estimate efficiencies

Ludlum 3 w/ pancake probe at 1 cm	1%	Liq. Scint. Counter	98%
Ludlum 3 w/ NaI probe near surface	17%	Gamma Counter	6%

**Action Quantities:**

Bench Top Quantity Must Be Less Than	5000 $\mu$ Ci
Containers Require Labeling When Greater Than	100 $\mu$ Ci
Rooms Require Posting When There Is Greater Than	1000 $\mu$ Ci
Contamination Lasting More than 24 hrs Require NRC Notification At	2500 $\mu$ Ci