

# RADIONUCLIDE DATA SHEET

[**IODINE**]

I-125

53 protons

72 neutrons

**Half Life:** 60.1 days

**Radiation:** Decay Mode: Electron Capture

**Gamma Constant:** 3.06 mR/hr per 1 mCi at 30 cm

### **Major Gammas:**

E(MeV)	# per 100 Dis
0.0355	7

Max. Beta Range in Air : N/A cm

Max. Beta Range in Water : N/A cm

Average gamma E = 0.028 MeV

### **Intake Data (annual):**

Minimum Ingestion: 100  $\mu$ Ci equals 5 rem TEDE (WHOLE BODY)

40  $\mu$ Ci equals 50 rem CEDE (Thyroid)

Minimum Inhalation: 200  $\mu$ Ci equals 5 rem TEDE (WHOLE BODY)

40  $\mu$ Ci equals 50 rem CEDE (Thyroid)

### **Doses:**

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

32.1 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	0.83 cm
	Lead	0.01 cm

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

Ludlum 3 w/ pancake probe at 1 cm	<1%	Liq. Scint. Counter	65%
Ludlum 3 w/ NaI probe near surface	5%	Gamma Counter	70%

### **Action Quantities:**

Bench Top Quantity Must Be Less Than	400 $\mu$ Ci
Containers Require Labeling When Greater Than	1 $\mu$ Ci
Rooms Require Posting When There Is Greater Than	10 $\mu$ Ci
Contamination Lasting More than 24 hrs Require NRC Notification At	200 $\mu$ Ci