RADIONUCLIDE DATA SHEET [CHROMIUM]

University of California San Diego

Cr-51 — 24 protons — 27 neutrons

Half Life: 27.7 days
Radiation: Decay Mode: Electron Capture
Gamma Constant: 0.26 mR/hr per 1 mCi at 30 cm

Major Gammas:

E(MeV)	# per 100 Dis
0.32	10

Max. Beta Range in Air : N/A cm
Max. Beta Range in Water : N/A cm

Average gamma E = 0.32 MeV

Intake Data (annual):

Minimum Ingestion: 40000 µCi equals 5 rem TEDE (WHOLE BODY)
Minimum Inhalation: 2000 µCi equals 5 rem TEDE (WHOLE BODY)

Doses:

Skin Dose: Reported for 1 µCi over 10 cm^2 of skin
28.9 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	9.5 cm
	Lead	0.55 cm

Detection information: Usable Detectors listed with estimate efficiencies

Ludlum 3 w/ pancake probe at 1 cm	<1%	Liq. Scint. Counter	20%
Ludlum 3 w/ NaI probe near surface	<1%	Gamma Counter	3%

Action Quantities:

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