RADIONUCLIDE DATA SHEET
Copper – 67

Cu – 67 29 protons 38 neutrons

Radiation: **Decay mode:** Beta

Major Betas:

Max E (MeV)	Avg E (MeV)	# per 100 dis
0.390	0.121	57
0.482	0.154	22
0.575	0.189	20

Max. Beta Range in air 200 cm or 6.56 ft
Max. Beta Range in water 0.21 cm

Major Gammas:

E (MeV)	# per 100 dis
0.091	7
0.093	16
0.185	49

Avg. gamma E = 0.157 MeV

Half – life: 5.58 days

Gamma constant: 0.97 mR/hr per 1 mCi at 30 cm

Radiological data:

Min. Ingestion ALI: 5000 μCi equals 5 rem TEDE (Whole Body)
Min. Inhalation ALI: 5000 μCi equals 5 rem TEDE (Whole Body)

Doses:

Skin Dose: Reported for 1 μCi over 10 cm^2 of skin
4.57 mrad/hr (gamma dose)
Point Source: 507 mrad/hr (beta dose)
Disk Source: 511 mrad/hr (beta dose)

Shielding data:

Max. range for beta:	Plastic	=	0.21 cm
	Aluminum	=	0.1 cm
Tenth Value Thickness for average gamma:	Concrete	=	7.1 cm
	Lead	=	0.11 cm

Detection Information: Usable Detectors listed with estimated efficiencies
(Use efficiencies listed on instrument when available)

Ludlum 3 with pancake probe at 1 cm:	9 %	**Liq. Scint. Counter:**	85 %
Ludlum 3 with NaI probe near surface:	3 %	**Gamma Counter:**	70 %

Action Quantities:

Bench top quantity must be less than	50000 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 when greater than	25000 μCi

Updated – 08/02/2005