RADIONUCLIDE DATA SHEET
Sodium – 22

Na – 22 11 protons 11 neutrons

Radiation: **Decay mode:** Beta

Major Betas:

Max E (MeV)	Avg E (MeV)	# per 100 dis
0.546	0.216	90

Max. Beta Range in air 176 cm or 5.77 ft
Max. Beta Range in water 0.2 cm

Major Gammas:

E (MeV)	# per 100 dis
1.275	100

Avg. gamma E = 0.784 MeV

Half – life: 2.605 years or 9.51E+02 days

Gamma constant: 14.9 mR/hr per 1 mCi at 30 cm

Radiological data:

Min. Ingestion ALI: 400 μCi equals 5 rem TEDE (Whole Body)
Min. Inhalation ALI: 600 μCi equals 5 rem TEDE (Whole Body)

Doses:

Skin Dose: Reported for 1 μCi over 10 cm^2 of skin
38.2 mrad/hr (gamma dose)
Point Source: 566 mrad/hr (beta dose)
Disk Source: 568 mrad/hr (beta dose)

Shielding data:

Max. range for beta:	Plastic	=	0.2 cm
	Aluminum	=	0.09 cm
Tenth Value Thickness for average gamma:	Concrete	=	14.1 cm
	Lead	=	2.3 cm

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

Ludlum 3 with pancake probe at 1 cm:	11 %	**Liq. Scint. Counter:**	85 %
Ludlum 3 with NaI probe near surface:	14 %	**Gamma Counter:**	40 %

Action Quantities:

Bench top quantity must be less than	4000 μCi
Containers require labeling when greater than	10 μCi
Rooms require posting when there is greater than	100 μCi
Contamination lasting more than 24 hrs require NRC notification when greater than	2000 μCi

Updated – 08/02/2005