RADIONUCLIDE DATA SHEET
Sodium – 24

Na – 24 11 protons 13 neutrons

Radiation:

Decay mode: Beta

Major Betas:

Max E (MeV)	Avg E (MeV)	# per 100 dis
1.390	0.554	100

Max. Beta Range in air 600 cm or 19.69 ft
Max. Beta Range in water 0.65 cm

Major Gammas:

E (MeV)	# per 100 dis
1.369	100
2.754	100

Avg. gamma E = 2.060 MeV

Half – life:

14.96 hours or 0.623 days

Gamma constant:

21.5 mR/hr per 1 mCi at 30 cm

Radiological data:

Min. Ingestion ALI: 4000 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
58.9 mrad/hr (gamma dose)
Point Source: 651 mrad/hr (beta dose)
Disk Source: 651 mrad/hr (beta dose)

Shielding data:

Max. range for beta:	Plastic	=	0.62 cm
	Aluminum	=	0.3 cm
Tenth Value Thickness for average gamma:	Concrete	=	23 cm
	Lead	=	4.4 cm

Detection Information:

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

Ludlum 3 with pancake probe at 1 cm: 13 % **Liq. Scint. Counter:** 85 %
Ludlum 3 with NaI probe near surface: <1 % **Gamma Counter:** 5 %

Action Quantities:

Bench top quantity must be less than	40000 µCi
Containers require labeling when greater than	100 µCi
Rooms require posting when there is greater than	1000 µCi
Contamination lasting more than 24 hrs require NRC notification when greater than	20000 µCi

Updated – 08/02/2005