



# RADIONUCLIDE DATA SHEET

## Phosphorous – 32



**P – 32**      15 protons      17 neutrons

**Radiation:**      **Decay mode:** Beta

**Major Betas:**

Max E (MeV)	Avg E (MeV)	# per 100 dis
1.710	0.695	100

Max. Beta Range in air      730 cm      or      23.95 ft  
 Max. Beta Range in water      0.8 cm

**Major Gammas:**

E (MeV)	# per 100 dis
None	

**Avg. gamma E = 0 MeV**

**Half – life:**      14.29 days

**Gamma constant:**      0 mR/hr per 1 mCi at 30 cm

**Radiological data:**

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

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

**Doses:**

**Skin Dose:**      Reported for 1 μCi over 10 cm<sup>2</sup> of skin  
                          0 mrad/hr (gamma dose)

**Point Source:** 663 mrad/hr (beta dose)

**Disk Source:** 667 mrad/hr (beta dose)

**Shielding data:**

**Max. range for beta:**      Plastic      =      0.8 cm

   Aluminum      =      0.38 cm

**Tenth Value Thickness for**      Concrete      =      0 cm

**average gamma:**      Lead      =      0 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:**      0 %      **Gamma Counter:**      0 %

**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