

Selected Properties of Radionuclides Commonly Used at CUMC & NYSPI

Radio-nuclide	Half-life	Significant Radiation Emission	Maximum Energy of Emission	Daily Monitoring Needed	TLD Badge	Shield
H-3	12 years	Beta	0.018 meV	Smears*	No	No
C-14	5730 years	Beta	0.156 meV	Smears	No	No
S-35	87.9 days	Beta	0.167 meV	Smears	No	No
P-32	14 days	Beta	1.710 meV	GM	Yes	Lucite
I-125	60.2 days	Gamma	0.035 meV	Nal	Yes	Lead
P-33	25.2 days	Beta	0.248 meV	GM	Yes	Lucite

* Wipe Test

P-32 Radiation Dose[†]

Distance of Hand from Source	Average mRem/hr/mCi	Time to Reach Requirement Limit [‡] (12,500 mRem/13 weeks)
10 cm from contact with glass vial	5	2500 hrs.
1 cm from contact with glass vial	300	41.6 hrs.
Contact on side of glass vial	439	28.47 hrs.
Drop of P-32 in contact with 1 cm ² of bare skin	2,000,000	3.7 hrs.

† Source: NEN Dupont

‡ NYC Health Code, Article 175.103