

Siemens Inveon microPET

Longwood Small Animal Imaging Facility at the Beth Israel Deaconess Medical Center

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Table 1. PET Isotopes (arranged by increasing half-lives)

Nuclide	Z	Half-Life	Annihilation Distance (mean/90%)	Decay Product	Chelator	Notes
⁸² Rb	37	75 sec	2.6/13.2 mm	⁸² Kr		Produced by ⁸² Sr generator <i>in situ</i> , Contaminating γ
¹⁵ O	8	124 sec	1.4 mm	¹⁵ N		
¹³ N	7	10 min	1 mm	¹³ C		
¹¹ C	6	20 min	0.28/1.86 mm	¹¹ B		
^{94m} Tc	43	52 min	3.3 mm	⁹⁴ Mo	MAS ₃	Contaminating γ
⁶⁸ Ga	31	68 min	1.35/5.92 mm	⁶⁸ Zn	DOTA	Contaminating γ
^{110m} In	49	75 min	3.0 mm	¹¹⁰ Cd	DOTA	Contaminating γ
¹⁸ F	9	109 min	0.22/1.09 mm	¹⁸ O		
⁵² Fe	26	8.3 h	0.9 mm	⁵² Mn		High liver Mn ⁺⁺ uptake, Contaminating γ
⁶⁶ Ga	31	9.5 hr	10 mm	⁶⁶ Zn	DOTA	
⁶⁴ Cu	29	13 h	0.7 mm	⁶⁴ Zn, ⁶⁴ Ni		<i>In vivo</i> transmetallation a problem
¹²⁴ I	53	4.2 d	2.3 mm	¹²⁴ Te		Contaminating γ
⁶⁸ Ge	32	280 d		⁶⁸ Ga		