

Monitor Reactions and Medical Isotope Production Reactions (A33)

(N. Otsuka, 2013-06-07, Memo CP-D/793)

The 1st IAEA Research Coordination Meeting on Nuclear Data for Charged-particle Monitor Reactions and Medical Isotope Production Reactions prepared a list of reactions to be studied within the project (IAEA(NDS)-0630 Tables 1 to 5). Articles reporting cross sections of these reactions were extracted from the Landolt-Börnstein compilation by A. Oechs and L. Vrapcjenjak (NDS), and I checked EXFOR against the list of the articles. NNDC, NEA DB, ATOMKI, CNPD and JCPRG are expected to compile articles with a very high priority.

Proj.	Application	Reaction	Symbol	First author	Reference	Centre	Memo	
p	Monitor	Al→ ²² Na	Hud54	Hudis, J.	Phys. Rev. 94 (1954) 775	NNDC	CP-D/725	
			Kau79	Kaufman, S.B.	Phys. Rev. C 19 (1979) 962	NNDC	CP-D/725	
			Mos70	Moskalev L.P.	Yad. Fiz. 12 (1970) 871	CNPD	CP-D/725	
			Ngu61	Nguyen, L.D.	Compt. Rend. 253 (1961) 2919	NEADB	CP-D/725	
			Pos71	Poskanzer, A.M.	Phys. Rev. C 3 (1971) 882	NNDC	Add to C0376	
		Al→ ²⁴ Na	Cum81	Cumming, J.B.	Nucl. Instr. Meth. 180 (1981) 37	NNDC	CP-D/725	
			Hud54	Hudis, J.	Phys. Rev. 94 (1954) 775	NNDC	CP-D/725	
			Kau79	Kaufman, S.B.	Phys. Rev. C 19 (1979) 962	NNDC	CP-D/725	
			Tam61	Tamers, M.A.	Compt. Rend. B 253 (1961) 1202	NEADB	CP-D/725	
		Cu→ ⁵⁸ Co	Koz88	Kozma, P.	Czech. J. Phys. B 38 (1988) 1317	CNPD	CP-D/725	
		Diagonostic gamma emitter	⁵¹ V→ ⁵¹ Cr	Hon63	Hontzeas, S.	Can. J. Chem. 41 (1963) 2194	NNDC	CP-D/725
		Positron emitters	Mn→ ⁵² Fe	Suz85	Suzuki, K.	Radioisotopes 34 (1985) 537	JCPRG	CP-D/725
				Koz90	Kozma, P.	J. Phys. G 16 (1990) 45	CNPD	CP-D/725
				Bro76	Brodovitch, J.C.	J. Inorg. Nucl. Chem. 38 (1976) 1581	NNDC	CP-D/725
		Positron emitters (generators)	Mn→ ⁵² Fe	Suz85	Suzuki, K.	Radioisotopes 34 (1985) 537	JCPRG	CP-D/725
Koz90	Kozma, P.			J. Phys. G 16 (1990) 45	CNPD	CP-D/725		
Therapeutic alpha emitters	Th→ ²²⁵ Ra	Lin56	Lindner, M.	Phys. Rev. 103 (1956) 378	NNDC	Add to C0367		
		Lin56	Lindner, M.	Phys. Rev. 103 (1956) 378	NNDC	Add to C0367		
		Lin56	Lindner, M.	Phys. Rev. 103 (1956) 378	NNDC	Add to C0367		
		Lin56	Lindner, M.	Phys. Rev. 103 (1956) 378	NNDC	Add to C0367		
		Lin56	Lindner, M.	Phys. Rev. 103 (1956) 378	NNDC	Add to C0367		
Electron and X emitters	Cs→ ¹³¹ Ba	Fin54	Fink, R.W.	Phys. Rev. 94 (1954) 1357	NNDC	CP-D/725		
		Fin54a	Fink, R.W.	Phys. Rev. 96 (1954) 185	NNDC	CP-D/725		
		Zai91	Zaitseva, N.G.	Radiochim. Acta 54 (1991) 57	CNPD	Add to A0918		
d	Monitor	^{nat} Ti→ ⁴⁶ Sc	Jun-87	Jung, P.	J. Nucl. Mater. 144 (1987) 43	ATOMKI	Add to D4058	
		^{nat} Ni→ ⁵⁶ Co	Koz86	Kozma, P.	Preprint JINR E1-86-607 (1986)	CNPD	CP-D/725	
h	Positron emitters	⁵² Cr→ ⁵² Fe	Gre70	Greene, M.W.,	J. Appl. Radiat. Isot. 21 (1970) 719	NNDC	CP-D/757	
			Gre70	Greene, M.W.,	J. Appl. Radiat. Isot. 21 (1970) 719	NNDC	CP-D/757	
a	Monitor	^{nat} Cu→ ⁶⁵ Zn	Kar74	Karol, P.	Phys. Rev. C 10 (1974) 150	NNDC	CP-D/757	