

ภาคผนวก ก.

ลักษณะสมบัติในแง่ฟิสิกส์ของนิวไคลด์รังสีซึ่งสนใจใช้ในเวชศาสตร์นิวเคลียร์

TABLE A-1. Radiations Emitted in the Decay of ^{123}I ($\Gamma = 1.53 \text{ R cm}^2/\text{mCi}\cdot\text{hr}$);
 $T_{1/2} = 13 \text{ hr}$

Number	Radiation (i)	Frequency of Emission (n_i)	mean Energy-(MeV) (E_i)
1	$\gamma 1$	0.84	0.159
2	K Conversion Electron	0.13	0.127
3	L Conversion Electron	0.02	0.154
4	$\gamma 2$	0.01	0.529
5	X-Ray-K (a)	0.71	0.027
6	X-Ray-K (β)	0.15	0.031
7	X-Ray-L	0.13	0.003
8	LMM Auger Electron	0.92	0.003
9	MXY Auger Electron	2.19	0.001

TABLE A-2. Radiations Emitted in the Decay of ^{131}I ($\Gamma = 2.2 \text{ R}\cdot\text{cm}^2/\text{mCi}\cdot\text{hr}$);
 $T_{1/2} = 8.1 \text{ days}$

Number	Radiation (i)	Frequency of Emission (n_i)	Mean Energy (MeV) (E_i)
1	$\beta 1$	0.02	0.069
2	$\beta 2$	0.07	0.096
3	$\beta 3$	0.90	0.192
4	$\gamma 1$	0.03	0.080
5	K Conversion Electron	0.03	0.046
6	$\gamma 2$	0.06	0.284
7	Y 3	0.82	0.364
8	K Conversion Electron	0.02	0.330
9	$\gamma 4$	0.07	0.637
10	$\gamma 5$	0.02	0.723

Data derived from Journal of Nuclear Medicine (Suppl. 10, 1975)

TABLE A-3. Radiations Emitted in the Decay of ^{201}Tl ($\Gamma = 0.47 \text{ R} \cdot \text{cm}^2/\text{mCi} \cdot \text{hr}$);
 $T_{1/2} = 73 \text{ hr}$

Number	Radiation (i)	Frequency of Emission (n_i)	Mean Energy (MeV) (E_i)
1	$\gamma 1$	0.01	0.032
2	L Conversion Electron	0.21	0.018
3	M Conversion Electron	0.07	0.029
4	$\gamma 2$	0.04	0.135
5	K Conversion Electron	0.10	0.052
6	L Conversion Electron	0.02	0.121
7	$\gamma 3$	0.12	0.167
8	K Conversion Electron	0.18	0.084
9	L Conversion Electron	0.03	0.154
10	X-Ray-K (α)	0.78	0.070
11	X-Ray-K (β)	0.22	0.081
12	X-Ray-L	0.46	0.010
13	KLL Auger Electron	0.03	0.055
14	KLX Auger Electron	0.02	0.066
15	LMM Auger Electron	0.81	0.008
16	MX Y Auger Electron	2.44	0.003

TABLE A-4. Radiations Emitted in the Decay of ^{133}Xe ($\Gamma = 0.15 \text{ R} \cdot \text{cm}^2/\text{mCi} \cdot \text{hr}$);
 $T_{1/2} = 5.3 \text{ days}$

Number	Radiation (i)	Frequency of Emission (n_i)	Mean Energy (MeV) (E_i)
1	$\beta 1$	0.02	0.075
2	$\beta 2$	0.98	0.101
3	$\gamma 1$	0.01	0.080
4	K Conversion Electron	0.01	0.044
5	$\gamma 2$	0.36	0.081
6	K Conversion Electron	0.53	0.045
7	L Conversion Electron	0.08	0.076
8	M Conversion Electron	0.03	0.080
9	X-Ray-K (a)	0.39	0.030
10	X-Ray-K (β)	0.09	0.035
11	X-Ray-L	0.08	0.004
12	Auger Electrons	1.67	0.003

TABLE A-5. Radiations Emitted in the Decay of ^{111}In ($\Gamma = 1.9 \text{ R}\cdot\text{cm}^2/\text{mCi}\cdot\text{hr}$);
 $T_{1/2} = 67.4 \text{ hr}$

Number	Radiation (i)	Frequency of Emission (n_i)	Mean Energy (MeV) (E_i)
1	Gamma 1	0.90	0.172
2	K Conversion Electron	0.09	0.145
3	L Conversion Electron	0.01	0.168
4	Gamma 2	0.94	0.247
5	K Conversion Electron	0.05	0.220
6	L Conversion Electron	0.007	0.243
7	K (α) X-Ray	0.70	0.023
8	K (β) X-Ray	0.14	0.026
9	L-X-Ray	0.11	0.003
10	KLL Auger Electron	0.11	0.019
11	KLX Auger Electron	0.04	0.022
12	LMM Auger Electron	0.99	0.002

TABLE A-6. Radiations Emitted in the Decay of ^{67}Ga ($\Gamma = 0.80 \text{ R}\cdot\text{cm}^2/\text{mCi}\cdot\text{hr}$);
 $T_{1/2} = 78.1 \text{ hr}$

Number	Radiation (i)	Frequency of Emission (n_i)	Mean Energy (MeV) (E_i)
1	Gamma 1	0.033	0.091
2	Gamma 2	0.38	0.093
3	K Conversion Electron	0.28	0.084
4	L Conversion Electron	0.038	0.092
5	M Conversion Electron	0.013	0.093
6	Gamma 3	0.24	0.185
7	Gamma 4	0.025	0.209
8	Gamma 5	0.16	0.300
9	Gamma 6	0.04	0.394
10	K-X-Ray	0.46	0.009
11	Auger Electron	0.66	0.008