

1 Half-life, Q-value and Decay mode

$T_{1/2}$:	70.6	(11)	y
Q_α	:	5413.63	(9)	keV
α	:	100		%
SF	:	2.8	(6)	$\times 10^{-12}$ %

2 α Emissions

	Energy keV	Probability $\times 100$
$\alpha_{0,8}$	4460.86 (9)	0.0000033 (9)
$\alpha_{0,7}$	4502.77 (9)	0.0000214 (16)
$\alpha_{0,6}$	4810.01 (9)	0.000054 (4)
$\alpha_{0,5}$	4931.00 (9)	0.000048 (4)
$\alpha_{0,4}$	4948.59 (9)	0.000051 (6)
$\alpha_{0,3}$	4997.90 (9)	0.00622 (9)
$\alpha_{0,2}$	5136.64 (9)	0.325 (6)
$\alpha_{0,1}$	5263.48 (9)	30.6 (6)
$\alpha_{0,0}$	5320.24 (9)	69.1 (6)

3 Electron Emissions

	Energy keV	Electrons per 100 disint.
e _{AL}	(Th) 5.8 - 20.3	11.62 (22)
e _{AK}	(Th)	0.00057 (8)
	KLL 68.406 - 76.745	}
	KLX 83.857 - 93.345	}
	KXY 99.29 - 109.64	}
ec _{2,1} K	(Th) 19.414 (6)	0.01811 (33)
ec _{2,1} L	(Th) 108.592 - 112.800	0.1742 (33)
ec _{2,1} M	(Th) 123.882 - 125.732	0.0478 (8)
ec _{2,1} N	(Th) 127.730 - 128.729	0.01283 (24)
ec _{1,0} L	(Th) 37.28 - 41.50	22.4 (6)
ec _{1,0} M	(Th) 52.57 - 54.42	6.14 (16)
ec _{1,0} N	(Th) 56.420 - 57.417	1.646 (41)

4 Photon Emissions

4.1 X-Ray Emissions

		Energy keV	Photons per 100 disint.	
XL	(Th)	11.1177 — 19.5043	11.00 (24)	
XK α_2	(Th)	89.954	0.00524 (11)	} K α
XK α_1	(Th)	93.351	0.00847 (16)	
XK β_3	(Th)	104.819	} 0.00301 (7)	K β'_1
XK β_1	(Th)	105.604		
XK β''_5	(Th)	106.239		
XK β_2	(Th)	108.509	} 0.001016 (29)	K β'_2
XK β_4	(Th)	108.955		
XK $O_{2,3}$	(Th)	109.442		

4.2 Gamma Transitions and Emissions

	Energy keV	P $_{\gamma+ce}$ $\times 100$	Multipolarity	α_T	P $_{\gamma}$ $\times 100$
$\gamma_{1,0}$ (Th)	57.752 (13)	30.8 (8)	E2	153.2 (22)	0.200 (4)
$\gamma_{2,1}$ (Th)	129.065 (3)	0.325 (5)	E2	3.74 (6)	0.0686 (7)
$\gamma_{6,4}$ (Th)	140.999 (20)	0.0000038 (16)	E1	0.217 (3)	0.0000031 (13)
$\gamma_{4,2}$ (Th)	191.351 (11)	0.000055 (5)	E2	0.776 (11)	0.000031 (3)
$\gamma_{5,2}$ (Th)	209.252 (6)	0.0000119 (33)	E1	0.0848 (12)	0.000011 (3)
$\gamma_{3,1}$ (Th)	270.245 (7)	0.00332 (7)	E1	0.0470 (7)	0.00317 (7)
$\gamma_{3,0}$ (Th)	328.004 (7)	0.00292 (7)	E1	0.0305 (5)	0.00283 (7)
$\gamma_{6,2}$ (Th)	332.371 (6)	0.0000505 (31)	E1	0.0297 (5)	0.000049 (3)
$\gamma_{5,1}$ (Th)	338.320 (5)	0.0000381 (19)	E1	0.0285 (4)	0.0000370 (18)
$\gamma_{8,5}$ (Th)	478.41 (5)	0.0000014 (6)	E1	0.01379 (20)	0.0000014 (6)
$\gamma_{7,3}$ (Th)	503.819 (23)	0.0000147 (9)	E1	0.01243 (18)	0.0000145 (9)
$\gamma_{8,3}$ (Th)	546.454 (21)	0.0000010 (6)	E1	0.01058 (15)	0.0000010 (6)
$\gamma_{7,1}$ (Th)	774.05 (9)	0.0000048 (8)	E2	0.01649 (23)	0.0000047 (8)
$\gamma_{8,1}$ (Th)	816.62 (700)	0.00000083 (31)	M1+E2	0.0359 (5)	0.0000008 (3)

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