

1 Half-life, Q-value and Decay mode

$T_{1/2}$:	23.43	(6)	$\times 10^6$	y
Q_α	:	4573.1	(9)		keV
α	:	100			%
SF	:	~ 9		$\times 10^{-8}$	%

2 α Emissions

	Energy keV	Probability $\times 100$
$\alpha_{0,3}$	4168	0.00014 (5)
$\alpha_{0,2}$	4332 (8)	0.149 (22)
$\alpha_{0,1}$	4445 (5)	26.1 (40)
$\alpha_{0,0}$	4494 (3)	73.8 (40)

3 Electron Emissions

		Energy keV	Electrons per 100 disint.
e_{AL}	(Th)	5.8 - 20.3	10.1 (12)
e_{AK}	(Th)		0.000139 (30)
	KLL	68.406 - 76.745	}
	KLX	83.857 - 93.345	}
	KXY	99.29 - 109.64	}
$ec_{1,0 L}$	(Th)	28.99 - 33.20	19.2 (29)
$ec_{1,0 M}$	(Th)	44.28 - 46.13	5.3 (8)
$ec_{1,0 N}$	(Th)	48.13 - 49.12	1.41 (21)
$ec_{2,1 L}$	(Th)	92.32 - 96.50	0.092 (15)
$ec_{2,1 M}$	(Th)	107.61 - 109.46	0.0253 (41)

4 Photon Emissions

4.1 X-Ray Emissions

		Energy keV	Photons per 100 disint.	
XL	(Th)	11.118 — 19.599	9.4 (10)	
$XK\alpha_2$	(Th)	89.954	0.00128 (22)	} $K\alpha$
$XK\alpha_1$	(Th)	93.351	0.0021 (4)	}
$XK\beta_3$	(Th)	104.819	}	
$XK\beta_1$	(Th)	105.604	}	$K\beta'_1$
$XK\beta'_5$	(Th)	106.239	}	

		Energy keV		Photons per 100 disint.	
XK β_2	(Th)	108.509	}		
XK β_4	(Th)	108.955	}	0.00025 (5)	K β'_2
XKO $_{2,3}$	(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)	49.46 (10)	26.3 (40)	E2	324 (10)	0.081 (12)
$\gamma_{2,1}$ (Th)	112.79 (10)	0.150 (24)	E2	6.67 (20)	0.0195 (31)
$\gamma_{3,2}$ (Th)	171.15 (20)	0.000142 (48)	E2	1.186 (36)	0.000065 (22)

5 References

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