

Relative atomic masses and half-lives of selected radionuclides[†]

Atomic number	Element name	Symbol	Mass no.	Atomic mass	Half-life	Unit
43	Technetium	Tc	97	96.9064	$4.0(3)\times 10^6$	y
			98	97.9072	$6.6(10)\times 10^6$	y
			99	98.9063	$2.1(3)\times 10^5$	y
61	Promethium	Pm	145	144.9127	17.7(4)	y
			147	146.9151	2.623(3)	y
84	Polonium	Po	209	208.9824	102(5)	y
			210	209.9829	138.4(1)	d
85	Astatine	At	210	209.9871	8.1(4)	h
			211	210.9875	7.21(1)	h
86	Radon	Rn	211	210.9906	14.6(2)	h
			220	220.0114	55.6(1)	s
			222	222.0176	3.823(4)	d
87	Francium	Fr	223	223.0197	22.0(1)	min
88	Radium	Ra	223	223.0185	11.43(1)	d
			224	224.0202	3.66(2)	d
			226	226.0254	1599(4)	y
			228	228.0311	5.75(3)	y
89	Actinium	Ac	227	227.0277	21.77(2)	y
90	Thorium	Th	230	230.0331	$7.54(3)\times 10^4$	y
			232	232.0381	$1.40(1)\times 10^{10}$	y
91	Protactinium	Pa	231	231.0359	$3.25(1)\times 10^4$	y
92	Uranium	U	233	233.0396	$1.592(2)\times 10^5$	y
			234	234.0409	$2.455(6)\times 10^5$	y
			235	235.0439	$7.04(1)\times 10^8$	y
			236	236.0456	$2.342(4)\times 10^7$	y
			238	238.0508	$4.468(3)\times 10^9$	y
93	Neptunium	Np	237	237.0482	$2.14(1)\times 10^6$	y
			239	239.0529	2.355(6)	d
94	Plutonium	Pu	238	238.0496	87.7(1)	y
			239	239.0522	$2.410(3)\times 10^4$	y
			240	240.0538	$6.56(1)\times 10^3$	y
			241	241.0568	14.4(1)	y
			242	242.0587	$3.75(2)\times 10^5$	y
95	Americium	Am	241	241.0568	432.7(6)	y
			243	243.0614	$7.37(2)\times 10^3$	y
96	Curium	Cm	243	243.0614	29.1(1)	y
			244	244.0627	18.1(1)	y
			245	245.0655	$8.48(6)\times 10^3$	y
			246	246.0672	$4.76(4)\times 10^3$	y
			247	247.0704	$1.56(5)\times 10^7$	y
97	Berkelium	Bk	248	248.0723	$3.48(6)\times 10^5$	y
			247	247.0703	$1.4(3)\times 10^3$	y
98	Californium	Cf	249	249.0750	$3.26(3)\times 10^2$	d
			249	249.0749	351(2)	y
99	Einsteinium	Es	250	250.0764	13.1(1)	y
			251	251.0796	$9.0(5)\times 10^2$	y
			252	252.0816	2.64(1)	y
			252	252.0830	472(2)	d
100	Fermium	Fm	257	257.0951	100.5(2)	d
101	Mendelevium	Md	258	258.0984	51.5(3)	d
			260	260.1037	27.8(3)	d
102	Nobelium	No	259	259.1010	58(5)	min
103	Lawrencium	Lr	262	262.1097	3.6(3)	h
104	Rutherfordium	Rf	261	261.1088	1.3^a	min
105	Dubnium	Db	262	262.1141	34(5)	s
106	Seaborgium	Sg	266	266.1219	$\sim 21^a$	s
107	Bohrium	Bh	264	264.12	0.44^a	s
108	Hassium	Hs	277		$16.5^{a,b}$	min
109	Meitnerium	Mt	268	268.1388	$0.070^{a,b}$	s
110	Darmstadtium	Ds	281		$1.6^{a,b}$	min
111	Roentgenium	Rg	272	272.1535	$1.5^{a,b}\times 10^{-3}$	s
112	Ununbium	Uub	285		$15.4^{a,b}$	min
114	Ununquadium	Uuq	289		$30.4^{a,b}$	s
116	Ununhexium	Uuh	289		$0.60^{a,b}\times 10^{-3}$	s

^a The uncertainties of these elements are asymmetric.

^b The value given is determined from only a few decays.

[†] *Pure Appl. Chem.* **75**, 1107 (2003)