

Isotopes of Curium

Isotope	Atomic Mass	Half-life	Mode of Decay	Nuclear Spin	Nuclear Magnetic Moment
Cm-240	240.05552	27 hours	α to Pu-236; EC to Am-240; SF	0	No data available
Cm-241	241.05765	32.80 days	α to Pu-237; EC to Am-241	1/2	No data available
Cm-242	242.05883	162.80 days	α to Pu-238; SF	0	No data available
Cm-243	243.06138	28.50 years	α to Pu-239; EC to Am-243	5/2	0.41
Cm-244	244.06275	18.11 years	α to Pu-240; SF	0	No data available
Cm-245	245.06548	8500 years	α to Pu-241; SF	7/2	No data available
Cm-246	246.06722	4780 years	α to Pu-242; SF	0	No data available
Cm-247	247.070347	1.56×10^7 years	α to Pu-243	9/2	0.37
Cm-248	248.07234	3.40×10^5 years	α to Pu-244; SF	0	No data available
Cm-249	249.07595	64.15 minutes	β^- to Bk-249	1/2	No data available
Cm-250	250.07835	9700 years	α to Pu-246; β^- to Bk-250; SF	0	No data available



Curium is a radioactive rare earth metal. It was first produced in 1944 in a cyclotron at the University of California, Berkeley, USA, by Glenn T. Seaborg, Ralph A. James and Albert Ghiorso, who bombarded Plutonium-239 with α -particles. It takes its name from that of Pierre and Marie Curie, who were known for their research on radioactivity.

Curium is a hard, brittle, radioactive silvery metal. It is paramagnetic in ambient conditions and becomes antiferromagnetic when it cools. It oxidizes readily. It forms strongly fluorescent complexes with various organic compounds. It does not occur in nature and must be made in a nuclear reactor by neutron capture reactions from plutonium and americium isotopes. It tarnishes slowly in dry air at room temperature. The most stable isotope is Curium-247, which has a half-life of almost 16 million years.

All known isotopes of curium are radioactive. When introduced into the human body, curium accumulates in the bones, lungs and liver, promoting cancer.

Properties of Curium

Name	Curium
Symbol	Cm
Atomic number	96
Atomic weight	[247]
Standard state	Solid at 298 °K
CAS Registry ID	7440-51-9
Group in periodic table	N/A
Group name	Actinoid
Period in periodic table	7 (Actinoid)
Block in periodic table	f-block
Color	Silver
Classification	Metallic
Melting point	1613 °K [or 1340 °C or 2444 °F]
Boiling point	3383 °K [or 3110 °C or 5630 °F]
Density of solid	13.51 g/cm ³
Electron configuration	[Rn]5f ⁷ 6d ¹ 7s ²