

Berkelium (Bk)

Element 97 | Actinide | Period 7 | f-block

Atomic number	97
Atomic mass	[247]
Electron configuration	[Rn] 5f9 7s2
Reference isotope	249Bk
Density	14.78 g/cm3
Melting point	1259 K
Boiling point	Unknown
Structure	Double-hexagonal close-packed (DHCP) teaching reference

Big idea

Berkelium is an artificial actinide made in tiny quantities. Its research value comes from nuclear and actinide chemistry, not from commercial bulk use.

Five things to remember

- Atomic number 97 means every berkelium nucleus has 97 protons.
- The ground-state/reference electron configuration is [Rn] 5f9 7s2.
- The representative teaching isotope is 249Bk.
- Berkelium is an artificial actinide made in tiny quantities. Its research value comes from nuclear and actinide chemistry, not from commercial bulk use.
- Material structure status: Double-hexagonal close-packed (DHCP) teaching reference.

Structure, evidence and real-world context

The viewer represents the reviewed Double-hexagonal close-packed (DHCP) teaching reference material reference for elemental Berkelium. It is a teaching model, not a refined crystallographic coordinate set or a model of every compound.

Evidence boundary

Atomic identity and source-reviewed reference values are separated from predictions. Search demand shapes headings and FAQs but never overrides scientific evidence; unknown bulk structure/density/phase values remain visibly unknown.

Where is it used?

Scientific research - Research-only context; no operational production or handling guidance.

Starting material in selected heavy-element research - Research-only context; no operational production or handling guidance.

Actinide chemistry studies - Research-only context; no operational production or handling guidance.

Discovery and history

1949 - Stanley Thompson, Albert Ghiorso and Glenn Seaborg's team produced berkelium at the University of California, Berkeley.

Naming / context - The element name and discovery story are part of the historical record; search-led questions are answered without turning history into scientific evidence for bulk properties.

Today - Current use is described at the level supported by the element's availability and evidence, with research-only elements kept research-only.

Safety / interpretation

This page is educational and non-operational. It provides no radioactive-material production, separation, source-preparation, handling or access instructions.

Search-led questions and review

The questions below reflect genuine learner/search intent. Answers remain source- and evidence-led.

What is berkelium?

Berkelium is chemical element 97, symbol Bk, classified here as actinide.

What is the atomic number of berkelium?

The atomic number is 97, meaning every berkelium nucleus has 97 protons.

What is the symbol for berkelium?

The chemical symbol is Bk.

What is berkelium used for?

Berkelium has no ordinary commercial use; it is used in scientific research and selected heavy-element experiments.

Is berkelium radioactive?

Yes. All berkelium isotopes are radioactive.

Who discovered berkelium?

Berkelium was first produced in 1949 by a team at the University of California, Berkeley.

Quick review

What is Berkelium's atomic number?

Answer: 97

Atomic number 97 defines Berkelium by its proton count.

Which statement best describes the material evidence for Berkelium?

Answer: Double-hexagonal close-packed (DHCP) teaching reference

The Structure view follows measured/reviewed evidence; unknown bulk structures remain unknown.

What is the safest rule for Berkelium uses?

Answer: Distinguish the element from its isotopes, compounds and engineered materials

Elemental, isotope-specific and compound properties must not be conflated.

Sources

Royal Society of Chemistry - Berkelium: <https://periodic-table.rsc.org/element/97/>

NIST - Atomic Weights and Isotopic Compositions: https://physics.nist.gov/cgi-bin/Compositions/stand_alone.pl

IUPAC - Periodic Table of Elements: <https://iupac.org/what-we-do/periodic-table-of-elements/>