

Uranium 241

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About Uranium 241:

- It has an atomic number of 92 and a mass number of 241.
- The researchers also calculated that uranium-241 likely has a **half-life of just 40 minutes**.

How was uranium-241 found?

- The researchers **accelerated uranium-238 nuclei into plutonium-198** nuclei at the KEK Isotope Separation System (KISS).
- In a process called multinucleon transfer, the two isotopes exchange protons and neutrons. The resulting nuclear fragments contained different isotopes.

Key facts about the Uranium

- It was discovered in 1789 by Martin Klaproth, a German chemist.
- It is a **silvery-white metallic chemical element** in the periodic table, with atomic number 92.
- It has the **highest atomic weight** of all naturally occurring elements.

- It occurs naturally in low concentrations in soil, rock and water, and is commercially extracted from uranium-bearing minerals such as uraninite.
 - Uranium ore can be mined from open pits or underground excavations.
 - The ore can then be crushed and treated at a mill to separate the valuable uranium from the ore.
 - Uranium may also be dissolved directly from the ore deposits in the ground (in-situ leaching) and pumped to the surface.
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Q1) What is an isotope?

An isotope is a variant of an element that has the same number of protons in its atomic nucleus but a different number of neutrons.

Source: [In pursuit of a 'magic number', physicists discover new uranium isotope](#)

Source: <https://vajiramandravi.com/current-affairs/uranium-241/>

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