

Element report - einsteinium

[Science](#), [Physics](#)



The element (einsteinium) has the atomic symbol of Es. Its atomic number is 99 while its atomic mass is 252. Einsteinium is located in period 7 of the periodic table as a part of the actinide series. It has 99 protons, 99 electrons, and 153 neutrons in its atoms. The physical appearance of einsteinium is not known, but it is predicted to be metallic and silvery white or grey.

Einsteinium is classified as a metal and is a solid at room temperature. It has a melting point of 860°C and an atomic radius of approximately 186 pm. It was named after the famous physicist Albert Einstein. Einsteinium is the seventh transuranic element of the actinide series was discovered in the December of 1952 at Berkeley California by Albert Ghiorso and his co-workers. It was discovered while they were studying the radioactive debris from the first large thermonuclear explosion (the first hydrogen bomb). The substance that Albert Ghiorso and his co-workers studied was collected on filter paper by drone airplanes which flew through the radioactive explosion clouds. When they studied the substance on the filter paper, they had actually discovered einsteinium²⁵³: an isotope of einsteinium. There are approximately 20 known isotopes of einsteinium, and none of those isotopes are stable. The most stable isotope is einsteinium²⁵⁴. Einsteinium is a synthetic element which is produced through a long series of nuclear reactions. In these reactions, each isotope in the series is bombarded with neutrons and then the resulting isotope is allowed to undergo beta decay. The yearly production of einsteinium is less than 1 gm worldwide, so it isn't surprising that einsteinium does not have many uses. Einsteinium does not have a biological role but if it were produced in large amounts, it could pose a radiation threat. Einsteinium is mostly used in the area of scientific

research. Einsteinium²⁵² was used to produce Mendelevium (element 101). It can also be used to produce a variety of other transuranic elements. Einsteinium²⁵² can decay into berkelium²⁴⁸ through alpha decay. It can turn into californium²⁵² through electron capture. Finally, it can decay into fermium²⁵² through beta decay.