

²⁴⁶Pu

In the 1955 paper “The new isotopes Pu²⁴⁶ and Am²⁴⁶” Engelkemeir et al. from Argonne National Laboratory reported the discovery of ²⁴⁶Pu ([1955En16](#)). ²⁴⁶Pu was detected in the debris of the November 1952 thermonuclear test. The mass assignment was made based on mass spectrometric measurements. Beta- and gamma-ray spectra were measured with a scintillation spectrometer following chemical separation. “The beta-emitting plutonium isotope decayed with a half-life of 11.2±0.2 days, while the half-life of the americium isotopes was 25±0.2 minutes... Re-examination of the Pu²⁴⁶ content of this plutonium after 10 days disclosed a decrease in 246 mass consistent with a half-life of 11.2±0.2 days. On this basis the mass number was conclusively shown to be 246.”

Adapted from reference ([2013Fr02](#))

[1955En16](#) D. Engelkemeir, P. R. Fields, S. Fried, G. L. Pyle *et al.*, *J. Inorg. Nucl. Chem.* **1**, 345 (1955).

[2013Fr02](#) C. Fry and M. Thoennessen, *At. Data Nucl. Data Tables* **99**, 96 (2013).

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