^{237}Np

^{237}Np was identified in 1948 by Wahl and Seaborg in "Nuclear properties of 93^{237}" (1948Wa04). A uranyl nitrate hexahydrate target was irradiated with fast neutrons produced by bombarding a beryllium target with deuterons from the Berkeley 60-inch cyclotron forming ^{237}U in the reaction ^{238}U(n,2n). ^{237}Np was then populated with β decay. Resulting activities were measured with a Lauritsen electroscope following chemical separation. "The alpha-counting rate of this sample, as mentioned above, was about 300 counts per minute, and from this value, together with the calibrated efficiency (45 percent) of the ionization chamber, it is calculated that the half-life of alpha-emitting 93^{237} is about 3×10^6 years." The actual experiment was performed about seven years earlier: "This article was mailed, as a secret report, from Berkeley, California to the Uranium Committee in Washington, D. C. on April 14, 1942. The experimental work was done during 1941 and the early part of 1942."

Adapted from reference (2013Fr02)

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