^{84}Se

In the 1960 paper "Short-lived Bromine and Selenium Nuclides From Fission" Sattizahn et al. reported the discovery of ^{84}Se (1960Sa05). The isotope was produced by irradiation of 93% ^{235}U in the Los Alamos Water Boiler. Decay curves were measured with methane-flow proportional counters following chemical separation. "The half-lives of ^{84}Se and ^{85}Se were determined by periodic extraction and measurement of the daughter 31.7 min. and 3.0 min. bromine activities which grow from fission-product selenium." The 1948 Table of Isotopes (1948Se40) quotes half-lives of 2.5 min and $<$10 min. for ^{84}Se attributed to results from the Manhattan project. Both reported half-lives were based on unpublished reports which were classified at the time. Although the 2.5 min. half-life was referenced as to be published in the National Nuclear Energy Series (NNES-PPR, Vol. 9B, Paper No. 7.3.1) it was ultimately not included in the NNES series publication. The classified report quoting the 10 min. upper limit for the half-life (CC-3390) was the basis for a paper included in the NNES series of the Plutonium Project Records (1950Ed01).

Adapted from reference (2012Gr02)

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