

¹²⁵Ba

Preiss and Strudler reported discovery of ¹²⁵Ba in 1962 in their article “New Neutron Deficient Barium Isotopes” (1962Pr09). ¹²⁵Ba was produced via the fusion-evaporation reactions ¹¹³In(¹⁶O,p3n), ¹¹⁵In(¹⁶O,p5n), ¹¹³In(¹⁴N,2n), ¹¹⁵In(¹⁴N,4n), natural Sn(¹⁶O,αxn)¹²³Ba and natural Sn(¹²C,xn)¹²³Ba; the beams were produced by the Yale University Heavy Ion Accelerator and had a maximum energy of 10.5 MeV/nucleon. ¹²⁵Ba was identified measuring characteristic X-ray spectra following chemical separation. “Mass assignments for the new Ba activities were based on the parent daughter genetics using Cs half-lives and γ-ray energies previously reported and/or found in the present study. The proposed half-lives and mass assignments are: ¹²³Ba, 2±0.5 min; ¹²⁵Ba, 6.5±0.5 min; and ¹²⁷Ba, 10.0±0.5 min.” Although the half-life for ¹²⁵Ba differs almost by a factor of two from the correct value of 3.3(3) min (2011Ka02), we credit Preiss and Strudler with the discovery because the half-lives of all other reported isotopes were correct.

This assignment was changed from the original compilation (2010Sh20) which credited a later paper by D’Auria et al. (1968Da09) with the discovery of ¹²⁵Ba.

- 1962Pr09 I. L. Preiss and P. M. Strudler, *J. Inorg. Nucl. Chem.* **24**, 589 (1962).
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