

⁸⁵Y

The discovery of ⁸⁵Y is described by Carotto and Wiig in their paper “Three New Neutron Deficient Isotopes of Yttrium” published in 1952 ([1952Ca29](#)). A target of yttrium oxide covered in an aluminum envelope was bombarded with 130 and 240 MeV protons at the Rochester 130-inch cyclotron. Decay curves were recorded with a Geiger-Müller tube following chemical separation. “These experiments give the following values for the half lives of the yttrium isotopes: Y⁸² 70±10 minutes, Y⁸³ 3.5±0.5 hours, Y⁸⁵ 5±1 hours.” The half-life of ⁸⁵Y corresponds to an isomeric state. It should be noted that the half-lives for ⁸²Y and ⁸³Y were incorrect, however, the known half-lives of ⁸⁶Y, ⁸⁷Y, and ⁸⁸Y, were reproduced. Subsequent measurements ([1962Ma44](#)) did not question the results of Carotto and Wiig. The ground state was first reported eleven years later by Dostrovsky et al. ([1963Do07](#)).

Adapted from reference ([2012Ny02](#))

- [1952Ca29](#) A. A. Caretto Jr. and E. O. Wiig, J. Am. Chem. Soc. **74**, 5235 (1952).
[1962Ma44](#) V. Maxia, W. H. Kelly, and D. J. Horen, J. Inorg. Nucl. Chem. **24**, 1175 (1962).
[1963Do07](#) I. Dostrovsky, S. Katcoff, and R. W. Stoenner, Phys. Rev. **132**, 2600 (1963).
[2012Ny02](#) A. Nystrom and M. Thoennessen, At. Data Nucl. Data Tables **98**, 95 (2012).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”