

¹⁰¹Rh

Lindner and Perlman discovered ¹⁰¹Rh in 1948 in “Neutron-deficient isotopes of rhodium and palladium” (1948Li03). A 200 MeV deuteron beam from the Berkeley 184-inch cyclotron bombarded an antimony target. Beta-decay curves as well as X- and γ -ray spectra were measured following chemical separation. “4.3-day Rh¹⁰¹.—Rhodium removed from palladium contained only the 4.3-day Rh¹⁰¹ after the 19.4-hr. Rh¹⁰⁰ had decayed.” This half-life corresponds to an isomeric state and the internal transition γ -ray of 157.32(3) keV populating the ground state was measured by Evans et al. seventeen years later (1965Ev04). Also seventeen years later, Hisatake et al. reported a half-life of 3.0(4) y for the ground state (1965Hi07). Evidence for the existence of ¹⁰¹Rh in nature (1936Sa02) was incorrect.

Adapted from reference (2012Pa21)

- 1936Sa02 M. B. Sampson and W. Bleakney, Phys. Rev. **50**, 732 (1936).
1948Li03 M. Lindner and I. Perlman, Phys. Rev. **73**, 1202 (1948).
1965Ev04 J. S. Evans, E. Kashy, R. A. Naumann, and R. F. Petry, Phys. Rev. **138**, B9 (1965).
1965Hi07 K. Hisatake, S. Matsuo, and H. Kawakami, J. Phys. Soc. Jap. **20**, 1107 (1965).
2012Pa21 A. M. Parker and M. Thoennessen, At. Data Nucl. Data Tables **98**, 812 (2012).

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