

⁹⁷Rh

“Formation and properties of neutron-deficient isotopes of rhodium and palladium” by Aten Jr and De Vries-Hamerling describes the identification of ⁹⁷Rh in 1955 ([1955At34](#)). Ruthenium targets were bombarded with 17 MeV and 25 MeV deuterons from the Amsterdam Instituut voor Kernfysisch Onderzoek Phillips cyclotron. Beta- and γ -ray spectra were measured following chemical separation. For the discovery of ⁹⁷Rh they stated: “In an earlier paper from this institute, it was suggested that the 32-minutes rhodium isotope, which was first observed by Eggen and Pool, might be ⁹⁷Rh. In this case ⁹⁷Ru should grow from it. We have since been able to isolate ⁹⁷Ru from the rhodium fraction obtained by irradiating ruthenium with deuterons... The half-life of the rhodium mother we calculated to be 35 ± 10 minutes.” In the earlier paper mentioned in the quote a half-life of 31 min was measured but a firm mass assignment was not possible ([1952At32](#)). Previously a 32 min half-life was reported in a conference abstract without a mass assignment ([1949Eg04](#)).

Adapted from reference ([2012Pa21](#))

- [1949Eg04](#) D. T. Eggen and M. L. Pool, Phys. Rev. **75**, 1464, F3 (1949).
[1952At32](#) A. H. W. Aten Jr., H. Cerfontain, W. Dzcubas, and T. Hamerling, Physica **18**, 972 (1952).
[1955At34](#) A. H. W. Aten Jr. and T. de Vries-Hamerling, Physica **21**, 597 (1955).
[2012Pa21](#) A. M. Parker and M. Thoennessen, At. Data Nucl. Data Tables **98**, 812 (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)”