

⁸⁴Rb

Barber reported first evidence for ⁸⁴Rb in the 1947 article “Search for positron-electron branching in certain beta emitting isotopes” ([1947Ba08](#)). Rubidium and strontium was bombarded with neutrons and 18 MeV deuterons, respectively produced by the 60-inch Berkeley cyclotron. The activated rubidium samples were measured with a trochoid with a Geiger Müller counter and the activities from the strontium samples were measured following chemical separation. “The rubidium was chemically separated from the other reaction products, and the half-life of the positron activity was measured roughly as 40 days. These two methods of production suggest that the activity is due to Rb⁸⁴, which could decay to Kr⁸⁴ by positron emission, from the reactions Rb⁸⁵(n,2n)→Rb⁸⁴, Sr⁸⁶(d,α)→Rb⁸⁴.”

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

[1947Ba08](#) W. C. Barber, Phys. Rev. **72**, 1156 (1947).

[2012Pa21](#) A. M. Parker and M. Thoennessen, At. Data Nucl. Data Tables **98**, 812 (2012).

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