^{127}Ba

In 1952, Linder and Osborne reported the discovery of ^{127}Ba in "The Nuclides Ba^{127}, Ba^{128}, and Cs^{128}" (1952Li23). A cesium nitrate target was bombarded with 190 MeV deuterons at Livermore. ^{127}Ba was chemically separated and its activity measured with an end-window argon-alcohol-filled counter. "A barium isotope of 12-minute half-life was found whose radiations were not directly characterized. However, positron emission is probable since electromagnetic radiation seemed to comprise no more than five percent of the total activity detectable on an end-window counter. By four rapid chemical separations made at ten-minute intervals a cesium activity was obtained from the barium whose half-life and radiation characteristics agree with those reported for Cs^{127}. Furthermore, the yield of this nuclide diminished roughly by a factor of two in each of the four successive separations. The 12-minute barium activity is thus Ba^{127}."

Adapted from reference (2010Sh20)

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