^{111}Pd

In "Radioactive isotopes of palladium and silver from palladium", Kraus and Cork reported the discovery of ^{111}Pd in 1937 (1937Kr01). ^{111}Pd was produced by bombarding palladium with 6.3 MeV deuterons from the University of Michigan cyclotron and irradiating palladium with fast and slow neutrons. Decay curves were measured with Lauritsen quartz fiber electroscopes and a Wulf string electrometer equipped with an ionization chamber following chemical separation. "If one of the observed periods is due to the isotope of mass 111 then by beta-decay it should produce a radioactive silver since there is no stable silver of mass 111. Subsequent precipitation of silver from the palladium precipitates proved this to be the case. Moreover, by making these subsequent separations at different times after the original bombardment, it appears to be quite certain that this silver activity (180-hr. half-life) must be built up from the 17-min. palladium and not the 13-hr. palladium." Kraus and Cork identified the decay of the ^{111}Ag correctly. Previously, a 15 min half-life of palladium was reported without a mass assignment (1935Am01).

Adapted from reference (2013Ka01)

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