

⁶⁰Co

⁶⁰Co was uniquely identified for the first time in 1941 by Livingood and Seaborg in the paper “Radioactive Isotopes of Cobalt” (1941Li01). Deuterons bombarded a cobalt target at the Berkeley cyclotron and decay and absorption curves were measured. The measurements had been published previously (1938Li06), however, no mass assignment was made until 1941: “The recent mass spectrographic investigation of the cobalt isotopes by Mitchell, Brown, and Fowler (1941Mi09), showing that Co⁵⁹ is the only stable isotope of cobalt, taken together with our recently acquired transmutation data, now makes it possible for us to make isotopic assignments for all the cobalt radioactivities with almost complete certainty.” The measured half-lives for ⁶⁰Co of 5.3 y and 10.7 m correspond to the ground state and an isomeric state, respectively. Earlier measurements of the short half-life (1935Ro02,1937He05,1937Ki01,1937Li02) and the long half-life (1936Sa03,1937Ri02,1938Li06,1938Vi01,1939Ba12) could not have made a correct mass assignment because of an (incorrect) report of the existence of a stable ⁵⁷Co isotope (1936Sa02).

Adapted from reference (2010Sz02)

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