# $^{112}$In

"The Radioactive Indium Isotopes of Mass Numbers 111 and 112" by Tendam and Bradt was published in 1947 identifying $^{112}$In (1947Te04). At Purdue University silver targets were bombarded with 15-20 MeV $\alpha$-particles. Indium was identified by chemical analysis, and the isotopes were identified via excitation energy measurements and decay curves. "The 23-min. period must be assigned to mass number 112 as the product of the Ag$^{109}$($\alpha$,n)In$^{112}$ reaction." The half-life for $^{112}$In corresponds to an isomeric state. The ground state was also observed with a half-life of 9 min. Lawson and Cork had previously assigned a $\sim$20 m half-life to $^{111}$In in several papers (1937La05, 1939Co04, 1940La07). Barnes also attributed a 2.7 d half-life to an $^{112}$In isomer in 1939 (1939Ba03). Cork and Lawson assigned a 65.0(45) h half-life first to $^{113}$In (1939Co04) and later to $^{112}$In (1940La07).

Adapted from reference (2011Am01)


1937La05 J. L. Lawson and J. M. Cork, Phys. Rev. **52**, 531 (1937).
1939Ba03 S. W. Barnes, Phys. Rev. **56**, 414 (1939).
1939Co04 J. M. Cork and J. L. Lawson, Phys. Rev. **56**, 291 (1939).
1940La07 J. L. Lawson and J. M. Cork, Phys. Rev. **57**, 982 (1940).
1947Te04 D. J. Tendam and H. L. Bradt, Phys. Rev. **72**, 1118 (1947).
2011Am01 S. Amos, J. L. Gross, and M. Thoennessen, At. Data Nucl. Data Tables **97**, 383 (2011).



Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"