^{93}Tc

In "Tc^{92} and Tc^{93} by Relative Cross-Section Measurements," Kundu and Pool from Ohio State University identified ^{93}Tc in 1948 (1948Ku26). Natural molybdenum and enriched ^{92}Mo, ^{94}Mo, ^{98}Mo targets were bombarded with 5 MeV protons and 10 MeV deuterons. ^{93}Tc was identified by measuring charged particles, X- and γ-rays. "On this basis, the 47-minute activity is produced by (p,n) and the 2.7-hour activity by (p,γ) reactions, respectively. The 47-minute activity is thus assigned to Tc^{92} and the 2.7-hour activity to Tc^{93}." It should be noted that the assignment of the 47 min activity to ^{92}Tc was incorrect and corresponds to an isomeric state of ^{93}Tc. The 2.7 h half-life had been measured before with no mass assignment (1939De01) or with an uncertain assignment to either ^{92}Tc or ^{93}Tc (1948Mo18). Also a 2 h (1939Se04) and a $\sim$40 min (1939De01,1948Mo18) half-life had been reported without a mass assignment.

Adapted from reference (2012Ny02)

1939De01 L. A. Delsasso, L. N. Ridenour, R. Sherr, and M. G. White, Phys. Rev. **55**, 113 (1939).

1939Se04 G. T. Seaborg and E. Segre, Phys. Rev. **55**, 808 (1939).

1948Ku26 D. N. Kundu and M. L. Pool, Phys. Rev. **74**, 1775 (1948).

1948Mo18 E. E. Motta and G. E. Boyd, Phys. Rev. **73**, 1470 (1948).

2012Ny02 A. Nystrom and M. Thoennessen, At. Data Nucl. Data Tables **98**, 95 (2012).

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