# $^{97}$Tc

Motta et al. discovered $^{97}$Tc as described in their 1947 paper "Production and Isotopic Assignment of a 90-day activity in Element 43" (1947Mo05). Purified samples of $Ru(OH)_3$ were irradiated with neutrons in the Clinton self-sustaining chain reacting pile. Beta-decays were measured following chemical separation. "Extensive chemical tests in which the known six-hour $43^{99}$ activity was employed as a monitor have shown this daughter activity to be an isotope of element 43, thus permitting its assignment to $43^{97}$. The activity has been observed to decay with a half-life of $93\pm5$ days." This value corresponds to an isomer and the ground state with a half-life of $10^4$ to $10^5$ y was reported seven years later by Boyd (1954Bo24). Previously half-lives of 90 d (1939Ca02) and 91(2) d (1941He01) were reported without mass assignments.

Adapted from reference (2012Ny02)


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