^{131}Sb

In 1956, Pappas and Wiles from the Chemical Institute of the University of Oslo, identified ^{131}Sb in "New short-lived isotopes of tin found in fission" (1956Pa20). ^{131}Sb was produced via fission of uranium with thermal neutrons. Beta-decay curves were measured with an inverted externally quenched end-window Geiger-Müller tube following chemical separation. "The method of curve analysis used was to fit to the experimental points a constructed curve for the decay of the 23.1-min $Sb^{131}-25$-min Te^{131} pair, subtracting whatever long-lived background (as 4.6-h $Sb^{129}-70$-min Te^{129}) was necessary to obtain a reasonable fit. Construction of the curve was based on the genetic relationships shown in [the table], and on equal counting efficiency for antimony-131 and tellurium-131, as demonstrated earlier by Pappas. This constructed curve was then subtracted from the experimental points to give successively the 10-min (Sb^{130}) and 2-min (Sb^{132}) components." Pappas and Wiles did not consider their measurements discoveries referring to internal reports (1951Co27, 1953Pa25) and a conference proceeding (1954Pa41). A 5 min half-life had been reported by Abelson first without a mass assignment (1939Ab05) and then later it was assigned to either ^{132}Sn, ^{134}Sb, or ^{136}Sb (1939Ab02).

Adapted from reference (2013Ka01)

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