^{78}Ga

In the 1972 paper "Identification of new germanium isotopes in fission: Decay properties and nuclear charge distribution in the A = 78 to 84 mass region" del Marmol and Fettweis identified ^{78}Ga (1972De43). A uranyl nitrate solution of ^{235}U was irradiated with neutrons from the Mol BR1 graphite reactor. Gamma-ray spectra were recorded with a Ge(Li) detector following chemical separation. "By using this method a half-life of 4.8 ± 1.3 s is found for ^{78}Ga; it specifies the estimated value of $\approx$4 s by Wish who counted a ^{78}Ge-^{78}As mixture formed from fission produced gallium, separated different times after the end of irradiation and it confirms the element assignment of a 4.9$\pm$0.2 s half-life obtained through mass separation by the Osiris collaboration." As stated in the quote, previously Wish only estimated a value for the half-life (1968Wi11), while the measurement by the Osiris collaboration was only published in a conference proceeding (1970GrYM).

Adapted from reference (2012Gr19)

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