^{77}Ga

In 1968, Wish reported the observation of ^{77}Ga in "Thermal neutron fission of ^{235}U: Identification and fractional chain yield of 17-sec ^{77}Ga." (1968Wi11). Thermal neutrons from the Vallecitos Nuclear Test Reactor irradiated a solution of enriched ^{235}U and Ga(III) carrier in hydrochloric acid. The resulting β-ray activity was measured with a gas-flow proportional counter following chemical separation. "The results indicate the presence of ^{77}Ga and ^{78}Ga in the fission-product mixture. A plot of the 11.3-h ^{77}Ge β-ray activity versus the time of the Ga separation after irradiation is shown in [the figure]. A least-squares fit of the data gave a half-life of 17.1$\pm$1.5 sec for ^{77}Ga."

Adapted from reference (2012Gr19)

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