^{171}Ta

In 1969, the discovery of ^{171}Ta was announced in "New neutron-deficient isotopes of tantalum with mass numbers from 167 to 171, and the systematics of the half lives of deformed neutron-deficient nuclei with $150 < A < 190$" by Arlt et al. (1969Ar22). HgO and $HReO_4$ targets were bombarded with 660 MeV protons from the Dubna synchrocyclotron. Gamma-ray spectra were measured with a Ge(Li) detector following chemical separation. "The ^{171}Ta was identified from its genetic relations to the daughter hafnium and lutetium isotopes... [The figure] shows decay curves for ^{171}Ta constructed from the intensities of the 662 keV (^{171}Hf) and 741 (^{171}Lu) γ ray from Hf preparations separated from the Ta fraction at 20 min intervals. The half life of ^{171}Ta is 25 ± 2 min."

Adapted from reference (2012Ro36)

1969Ar22 R. Arlt, Z. Malek, G. Muziol, and H. Strusny, Bull. Acad. Sci. USSR, Phys. Ser. **33**, 1144 (1970).

2012Ro36 R. Robinson and M. Thoennessen, At. Data Nucl. Data Tables **98**, 911 (2012).

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