^{136}Cs

In the 1951 Plutonium Project paper "Further study of the 13d Cs activity" Glendenin reported the observation of ^{136}Cs (1951GlZZ). The Clinton Pile in Oak Ridge was used to irradiate UO_3 in order to produce ^{136}Cs. Decay curves and γ-spectra were recorded following chemical separation. "Finkle, Engelkemeir, and Sugarman (1950Fi06) have shown that the 13d Cs is not produced in fission by a secondary neutron reaction, i.e., neutron capture by a cesium fission product with a mass number lower by 1, and also that it is not produced by neutron irradiation of xenon. They suggest that this activity is isomeric with Cs^{135}, Cs^{137}, or Cs^{138} and is formed uniquely in fission as a primary product in low yield. Another possibility, which seems much more likely to the writer, is that the 13d Cs is the "shielded" nucleus Cs^{136}, which must be formed directly in fission (in low yield), since the indirect formation through a β-decay chain is prevented by the existence of stable Xe^{136}."

Adapted from reference (2012Ma48)

1950Fi06 B. Finkle, D. W. Engelkemeir, and N. Sugarman, NNES **9**, 1083 (1950).
1951GlZZ L. E. Glendenin, Radiochemical Studies: The Fission Products, Book 2, Part V, McGraw-Hill, p. 1092 (1951).
2012Ma48 E. May and M. Thoennessen, At. Data Nucl. Data Tables **98**, 960 (2012).

Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"