# $^{50}$Fe

In the paper "Mass measurements of the proton-rich nuclei $^{50}$Fe and $^{54}$Ni", Tribble et al. reported the discovery of $^{50}$Fe in 1977 (1977Tr05). Alpha particles accelerated to 110 MeV with the Texas A&M University 88-inch Cyclotron were used to produce the reaction $^{54}$Fe($^{4}$He,$^{8}$He) and the ejectiles were observed at the focal plane of an Enge split-pole magnetic spectrograph. "The experiments provide the first observation and subsequent mass measurement of the proton-rich nuclei $^{50}$Fe and $^{54}$Ni." The measured $\beta$-decay energy was 7.12(6) MeV which was used to estimate a half-life of 200 ms.

Adapted from reference (2010Sc18)


1977Tr05 R. E. Tribble, J. D. Cossairt, D. P. May, and R. A. Kenefick, Phys. Rev. C **16**, 917 (1977).

2010Sc18 A. Schuh, A. Fritsch, M. Heim, A. Shore, and M. Thoennessen, At. Data Nucl. Data Tables **96**, 817 (2010).



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