

⁵⁴Mn

In 1938, Livingood and Seaborg outlined their discovery of ⁵⁴Mn in the article “Radioactive Manganese Isotopes” ([1938Li10](#)). The reaction for this isotope made use of deuterons at energies of 5.5 and 7.6 MeV, and helium ions at energies of 16 MeV from the Berkeley cyclotron. ⁵⁴Mn was produced through the activation of iron with deuterons, chromium with deuterons, and vanadium with helium ions. “Only two choices are available for this isotope when produced from iron by deuteron bombardment; Mn⁵² and Mn⁵⁴. We have given evidence above for the assignment of Mn⁵² of the isomeric activities with 21 minutes and 6 days half-lives, so that the 310-day period is to be associated with Mn⁵⁴.”

Adapted from reference ([2012Ga06](#))

[1938Li10](#) J. J. Livingood and G. T. Seaborg, Phys. Rev. **54**, 391 (1938).
[2012Ga06](#) K. Garofali, R. Robinson, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 356 (2012).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”