

⁴³Sc

⁴³Sc was discovered in 1935 by Frisch at the Institute for Theoretical Physics in Copenhagen as reported in the paper “Induced Radioactivity of Fluorine and Calcium” (1935Fr04). Alpha particles from a 600 mCi radon source were used to irradiate calcium and ⁴³Sc was formed in the reaction ⁴⁰Ca(α ,p). “From the great intensity, one may say that the effect is due to the main isotope of calcium, Ca⁴⁰. Capture of the alpha particle, with subsequent emission of a proton or neutron, would lead to the formation of Sc⁴³ or Ti⁴³, respectively. A chemical separation, kindly carried out by Prof. G. von Hevesy, showed that the active body follows the reactions of scandium. Therefore the 4.4 hours activity certainly corresponds to Sc⁴³.”

Adapted from reference (2011Me01)

1935Fr04 O. R. Frisch, Nature **136**, 220 (1935).

2011Me01 D. Meierfrankenfeld, A. Bury, and M. Thoennessen, At. Data Nucl. Data Tables **97**, 134 (2011).

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