

## <sup>48</sup>Sc

In 1937, the observation of <sup>48</sup>Sc was reported in the paper “The Induced Radioactivity of Titanium and Vanadium” by H. Walke ([1937Wa03](#)). 14-20 MeV neutrons from the bombardment of 5.5 MeV deuterons on lithium at the Berkeley cyclotron were used to activate titanium and vanadium targets. <sup>48</sup>Sc was produced in the reactions <sup>48</sup>Ti(n,p) and <sup>51</sup>V(n,α). Decay and absorption measurements were performed with a Lauritsen type quartz fiber electroscope. “When bombarded with fast neutrons it seems likely that Ca<sup>45</sup>, Sc<sup>48</sup> and Sc<sup>46</sup> are formed from titanium. Sc<sup>48</sup> is also produced by the transmutation V<sup>51</sup> + n<sup>1</sup> → Sc<sup>48</sup> + He<sup>4</sup>, its half-life being 41±3 hours.”

Adapted from reference ([2011Me01](#))

[1937Wa03](#) H. Walke, Phys. Rev. **52**, 777 (1937).

[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](https://doi.org/10.11578/frib/2279152)”