

## <sup>204</sup>Tl

Harbottle reported the observation of <sup>204</sup>Tl in the 1953 paper “The half-life of thallium-204” (1953Ha89). Neutrons irradiated thallos nitrate in the Oak Ridge Reactor and the products were cooled for 2.2 y. The source was then counted for 2.9 y in a methane-flow proportional counter. “A least-squares fit of the results, plotted as log (Tl<sup>204</sup> counting rate corrected for background) versus time, yields a half-life of 4.02±0.12 years. This half-life is not far from the earlier value of 3.5 years but is entirely inconsistent with the later values of 2.7 years.” The 3.5 y half-life mentioned in the quote had been assigned to <sup>206</sup>Tl instead of <sup>204</sup>Tl (1941Fa04) and the 2.7 y half-life referred to a private communication listed in the 1953 Table of Isotopes (1953Ho53). Previously measured half-lives of 4.1 min (1937He04) 4.4(1) min (1940Kr08) were incorrect.

Adapted from reference (2013Fr04)

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