

## <sup>86</sup>Se

Tamai et al. observed <sup>86</sup>Se in 1973 as reported in “Gamma-Ray Energies of Se-85 and Se-86” (1973Ta19). A 90% enriched uranyl nitrate solution was irradiated with thermal neutrons in the Kyoto University Reactor. Gamma-ray spectra were measured with a Ge(Li) detector following chemical separation. In the text of the article the assignment is not convincing: “The photopeaks with half-life of 15 s are not necessarily due to the  $\gamma$ -ray from <sup>86</sup>Se because the half-life of <sup>88</sup>Br (17.5 s) is nearly the same as that of <sup>86</sup>Se (16 s). Accordingly, from the half-lives alone <sup>86</sup>Se cannot be distinguished from <sup>86</sup>Br.” However, the figures and the last table clearly assign  $\gamma$ -rays to <sup>86</sup>Se and the current data evaluations concur with this assignment for the lowest three energies. The 16 s half-life mentioned in the quote had initially been assigned to <sup>87</sup>Se (1960Sa05). It is not clear when this assignment was changed. While the 1967 Table of Isotopes (1967Le24) still listed it for <sup>87</sup>Se, the 1969 review article by Herrmann and Denschlag (1969He25) assigned the 16 s half-life to <sup>86</sup>Se.

Adapted from reference (2012Gr02)

- 1960Sa05 J. E. Sattizahn and J. D. Knight, *J. Inorg. Nucl. Chem.* **12**, 206 (1960).  
1967Le24 C. M. Lederer, J. M. Hollander, and I. Perlman, *Table of Isotopes*, Sixth Edition, John Wiley and Sons, Inc. , New York (1967).  
1969He25 G. Herrmann and H. O. Denschlag, *Ann. Rev. Nucl. Part. Sci.* **19**, 1 (1969).  
1973Ta19 T. Tamai, R. Matsushita, J. Takada, and Y. Kiso, *Inorg. Nucl. Chem. Lett.* **9**, 1145 (1973).  
2012Gr02 J. L. Gross, J. Claes, J. Kathawa, and M. Thoennessen, *At. Data Nucl. Data Tables* **98**, 75 (2012).

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