

## <sup>79</sup>As

<sup>79</sup>As was first observed by Butement in 1950 at the Atomic Energy Research Establishment in Harwell, England, as reported in “New Radioactive Isotopes Produced by Nuclear Photo-Disintegration” (1950Bu07). <sup>79</sup>As was produced through irradiation of potassium selenate by 23 MeV x-rays from the synchrotron in the photonuclear reaction <sup>80</sup>Se( $\gamma$ ,p) and chemically separated from other resultant isotopes (1951Bu25). In the original paper (1950Bu07) the probably assignment was only given in a table. More details were reported in the subsequent publication (1951Bu25): “The activity showed a half-life of 9 minutes and a weak residual activity with an apparent half-life of about 31 hours. The latter may be attributed to a mixture of 26.8-hour <sup>76</sup>As and 40-hour <sup>77</sup>As. The yields of the 9-minute and 31-hour activities were approximately equal. The 9-minute arsenic is therefore probably <sup>79</sup>As, decaying by beta-particle emission into <sup>79</sup>Se whose half-life is either very short or very long.” In the original compilation the Butement’s second paper was credited with the discovery.

Adapted from reference (2010Sh34)

- 1950Bu07 F. D. S. Butement, *Nature* **165**, 149 (1950).  
1951Bu25 F. D. S. Butement, *Proc. Phys. Soc. (London) A* **64**, 395 (1951).  
2010Sh34 A. Shore, A. Fritsch, M. Heim, A. Schuh, and M. Thoennessen, *At. Data Nucl. Data Tables* **96**, 299 (2010).

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