

## <sup>123</sup>Ba

Preiss and Strudler reported the discovery of <sup>123</sup>Ba in 1962 in their article “New Neutron Deficient Barium Isotopes” (1962Pr09). <sup>123</sup>Ba was produced via the fusion-evaporation reactions <sup>113</sup>In(<sup>16</sup>O,p5n), <sup>115</sup>In(<sup>16</sup>O,p7n), <sup>113</sup>In(<sup>14</sup>N,4n), <sup>115</sup>In(<sup>14</sup>N,6n), natural Sn(<sup>16</sup>O,αxn)<sup>123</sup>Ba and natural Sn(<sup>12</sup>C,xn)<sup>123</sup>Ba; the beams were produced by the Yale University Heavy Ion Accelerator and had a maximum energy of 10.5 MeV/nucleon. <sup>123</sup>Ba was identified measuring characteristic X-ray spectra following chemical separation. “Mass assignments for the new Ba activities were based on the parent daughter genetics using Cs half-lives and γ-ray energies previously reported and/or found in the present study. The proposed half-lives and mass assignments are: <sup>123</sup>Ba, 2±0.5 min; <sup>125</sup>Ba, 6.5±0.5 min; and <sup>127</sup>Ba, 10.0±0.5 min.”

Adapted from reference (2010Sh20)

- 1962Pr09 I. L. Preiss and P. M. Strudler, *J. Inorg. Nucl. Chem.* **24**, 589 (1962).  
2010Sh20 A. Shore, A. Fritsch, J. Q. Ginepro, M. Heim *et al.*, *At. Data Nucl. Data Tables* **96**, 749 (2010).

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