

Development of actinium-225 production method using liquid target

To prepare the radioisotope Ac-225 using the liquid target of the Ra-226 chloride, and to evaluate the durability of the liquid target for this purpose. We will use Barium, a family like Radium.

The Ba target was prepared by dissolving BaCl₂ in DI water. An amount of 20 g/100 mL was prepared considering the solubility of BaCl₂ (35.8 g/100 mL, 20 °C) and the amount of 2 mL was loaded on the liquid target.

The beam test was carried out using CYCLON 30 Cyclotron (Korea Institute of Radiological & Medical Sciences, IBA, 2001). The target was a large-volume liquid target of IBA and irradiated with energy of 15 - 30 MeV. To optimize irradiation energy and current conditions.

To confirm the nuclear transformation, the irradiated target was analyzed using the HPGe detector for γ -spectrum.

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