

High production rates of medical radioisotopes

Cyclotron targets for scalable and efficient production of medical radioisotopes essential for medical diagnostics and treatments.

Business Opportunity

We offer an innovative solution for the production of medical radioisotopes using advanced cyclotron target technologies, addressing the growing demand for isotopes critical in diagnostics and treatment. These production targets overcome key challenges in efficiency and scalability, providing improved yield, reduced hazardous waste, and streamlined workflows compared to conventional methods. Medical radioisotopes are vital for cancer diagnosis, cardiovascular imaging, and other essential healthcare applications, with over 50 million procedures performed annually and a global market exceeding USD 10 billion. Our technology addresses isotope shortages, enabling the utilization of new clinical radioisotopes, long-range distribution of previously inaccessible isotopes, and optimized cyclotron infrastructure usage. Seamlessly integrating with existing systems, this solution tackles supply chain challenges while enhancing operational efficiency and sustainability, making it an attractive option for manufacturers looking to meet market gaps and improve patient outcomes.

Inven2 is seeking development partners or licensees to further advance and commercialize this opportunity.

Technology Description

This technology can transform medical radioisotope production by utilizing phosphate-based glass and ceramics as cyclotron target materials. The targets are designed for high energy deposition and rapid chemical processing. Incorporating isotopically enriched elements, the targets enable large scale cyclotron production of critical isotopes like ^{99}Mo , $^{99\text{m}}\text{Tc}$, ^{68}Ga , and ^{177}Lu , offering versatile applications in radiopharmaceutical development. This platform technology supports high-beam currents and ensures consistent and efficient isotope output.

Intellectual Property

- Granted [patent](#) in EPO and Japan, pending in the US, Canada, China, and Korea
- Pending [patent application](#) in EPO, the US, Canada, China, and South Africa

Category

Medical Devices

Materials Tech

Further information

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