



## IRE moves to 100% LEU (Low-Enriched Uranium) conversion

**Fleurus, Belgium – March 28<sup>th</sup>, 2023** The Institute for Radioelements (IRE), world leader in the production of molybdenum-99 (Mo-99), the most widely used radioisotope in nuclear medicine for diagnosis, and iodine-131 (I-131) essential and irreplaceable radionuclide for thyroid cancer treatments, announced today the complete conversion of its production process to low-enriched uranium (LEU).

IRE thus definitively marks its contribution to the international commitment to put an end to the civil use of highly-enriched uranium (HEU) for the production of medical isotopes and makes it possible to fulfill a joint statement issued by the governments of Belgium, France, the Netherlands, and the United States at the 2012 Nuclear Security Summit. The U.S. Department of Energy's National Nuclear Security Administration (DOE/NNSA) provided financial and technical support for the conversion.

*"For decades, access to life-saving medical isotopes depended on the shipment of proliferation-sensitive nuclear material across continents,"* said NNSA Administrator Jill Hruby. *"With IRE's production facility converted to LEU, all major producers across the Mo-99 industry can perform their vital work without HEU targets."*

The Director-General of the Euratom Supply Agency and Co-chair of the European Observatory on the Supply of Medical Radioisotopes Agnieszka Kaźmierczak, also commented on this major step: *«The completion of IRE's conversion of its production process from HEU to LEU is an important milestone in the global efforts of HEU minimization declared through the Nuclear Security Summits. The close cooperation between various actors involved in this endeavour allowed to advance the goal of both: nuclear security and security of supply of the most vital medical radioisotopes.»*

This complete conversion to a LEU process represents the culmination of years of work and collaboration between the R&D, production, safety, quality assurance and regulatory teams of IRE around an entirely new industrial process for supplying Mo-99 and I-131 to healthcare professionals, without impacting the site's production capacity. This outcome would not have been possible either, without the upstream collaboration of the research reactors which irradiate the uranium targets, but also downstream thanks to IRE customers who had to modify the application files of their Mo-99 and I-131-based drugs and have them approved.

IRE would also like to particularly thank the FANC, the Belgian Federal Agency for Nuclear Control, which has followed and accompanied it at all the milestones of this long development in terms of nuclear security and safety. The switch to LEU will have a positive impact in this respect since this new production process has been developed with increased attention to intrinsic safety, particularly with regard to reducing the risk of incidental emissions of volatile radioisotopes.

For IRE, this project is the culmination of more than 10 years of development and validation, and is part of a perspective of continuous improvement of our processes. *"IRE will continue to innovate in order to contribute even better to saving lives thanks to nuclear medicine applications, while increasing the safety of our processes and our facilities"* concluded Erich Kollegger, CEO of IRE.



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## About IRE – IRE ELiT

IRE or National Institute of Radioelements is a public utility foundation, whose main activity is the production of radioisotopes for diagnostic and therapeutic applications in the field of nuclear medicine. IRE is the world leader in the production of Molybdenum-99, the "parent" isotope of metastable Technetium-99m, and the most widely used in nuclear medicine for many examinations (heart, bones, lungs, thyroid, the brain, the kidneys etc...). IRE, beyond its production activities, contributes through its IRE Lab division to the protection and monitoring of the environment through its services for measuring radioactivity in various samples, radiological characterization of waste and contaminated elements and consultancy and technical assistance in the radiological and nuclear fields. For its part, IRE ELiT is the Innovation subsidiary of IRE, founded in 2010 to fully develop radiopharmaceuticals used for the imaging and treatment of certain cancers. IRE and IRE ELiT currently employ more than 250 people. More information: [www.ire.eu](http://www.ire.eu)

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