

Medical
Devices

Food
Irradiation

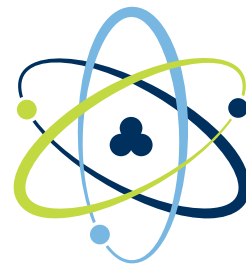
Innovative
Applications

NORDION MILESTONE:

A Billion Curies and Counting

For over 70 years, Nordion has been a leading provider of gamma technologies that benefit the lives of people around the world. As the years added up, so too did the number of curies shipped.

Many presentations that Richard Wiens, Director of Strategic Supply, gave over the past 12 months have been under the theme, "A Billion Curies and Counting." For industry and academia who did not have the opportunity to hear Richard's presentation, here is a synopsis.



1 billion
curies
and counting



Lesser-known Applications

When one thinks about the applications for Cobalt-60, the usual suspects come to mind: sterilization of single-use medical devices, treatment of food and cancer therapy. There are also many lesser-known innovative and interesting applications. Here are just three.

- Sterile Insect Technique (SIT) is used to control populations of insects that spread disease or impact agricultural crops. Gamma irradiation is used to render male flies sterile. Large numbers of sterile males are then released into the wild, dramatically reducing the number of insects in the next generation. SIT is currently being used to combat the Zika virus.
- Gamma is used in the cosmetic industry for containers, applicators and the cosmetics themselves both proactively as part of a quality program to control sources of micro-organisms and reactively to mitigate contamination of cosmetic products.
- Gemstone traders use gamma irradiation to enhance the colors of gemstones by creating changes in their crystalline structure. Examples of precious gemstones to which gamma processing has been applied include but are not limited to topaz (to create a rich cobalt-blue), tourmaline and quartz.

The number of applications for Cobalt-60 continues to grow each year as industry and academia research and bring new products to market that require material modification, sterilization, disinfection—and phytosanitary treatment.



Emerging Markets for Gamma Processing

With an ever-increasing global marketplace, phytosanitary treatment of food products has emerged as a key enabler for food export. Asia is a good example of a growing market using phytosanitary treatment to export their food products. We see this in Mexico as well.

Counting on Curies

In summary, Nordion has provided a safe and reliable supply of Cobalt to the industry for many, many decades. In the past 15 years we have diversified and enhanced our supply chain. Internally, we have expanded our regulatory, logistics and engineering capabilities to better serve our customers. In addition, we have a dedicated Isotope Supply team focused on our “Extend, Expand and Develop” strategy, and our strong inventory position will provide stability through reactor refurbishment and the transition to new sources of supply. For example, in 2016 Nordion and Bruce Power entered into an agreement to secure the long-term supply of Cobalt-60 up to 2064. Nordion understands the importance of Cobalt supply to the gamma processing industry and we remain committed to providing a sustainable, reliable and safe supply of Cobalt.