

Increases
Safety

Equally
Wholesome¹

Extends
Shelf Life

FACTS ABOUT FOOD IRRADIATION

Over the years Nordion has answered many questions about gamma.

Why is food irradiated?

The purpose of food irradiation is to reduce or eliminate harmful pathogens like *e. coli* or *salmonella* that can be present on food products such as spices and ground beef. Irradiation can also reduce the microorganisms that cause food to spoil and inhibit processes like sprouting in potatoes and onions, thereby extending shelf life. Another use for irradiation is to kill insect pests found in food that has been imported from other countries.

What is food irradiation?

Irradiation is a process whereby products are exposed to a source of radiation in order to achieve a specific effect. For food irradiation in Canada, the source of irradiation could be gamma from a Cobalt-60 irradiator, electron beams or x-rays. The products are exposed to radiation for a prescribed amount of time that will reduce the number of microorganisms on the food to a safe level.

FACT

55 countries have approved the use of irradiation²

FACT

500,000 metric tons of food products are commercially irradiated each year³



Does irradiation change the taste or the quality of the food?

Food treated by irradiation generally is as nutritious as or better than the same food treated by conventional methods such as cooking, drying and freezing.⁴ The effects of irradiation at doses required for microbial control in food are often compared to a milder form of the changes that occur during cooking. For spices where a microbial control step may be a requirement, irradiation provides less of a negative impact than some alternatives such as fumigation or elevated temperature processes. Irradiation; therefore, can result in a higher quality product.⁵ At doses used for phytosanitary irradiation, and even lower doses for sprout inhibition in potatoes and onions, irradiation has been shown to improve the shelf life with little to no negative impact to taste or quality.

Is irradiated food radioactive?

No. As the food passes through the irradiation field, energy passes through the food. The energy will destroy bacteria that cause disease; however, will not affect the quality of the food. The energy of the irradiation cannot make the food radioactive. The food never comes into contact with any radioactive materials.

What foods can be irradiated in Canada?

In Canada, Health Canada has approved the irradiation of spices, dried seasoning, potatoes, wheat, flour, onions, and as of 2017, fresh or frozen ground beef. The most commonly irradiated foods in Canada are spices.

Is food irradiation mandatory?

No, food irradiation is an option available to producers to improve the safety of their food products, or otherwise improve quality or shelf life.

Is special packaging required for irradiated foods?

If the purpose of irradiation is to eliminate pathogens in food, then packaging must be in place that ensures that food can't get re-contaminated. Also, the packaging material should be approved based on studies that show that when it is irradiated, it does not form any harmful byproducts that can get into or on the food.

How will I know if the food I buy has been irradiated?

Food that has been irradiated in Canada, the United States and most other jurisdictions, must display a symbol called the Radura accompanied by explanatory wording such as "Treated by Irradiation." Since many bulk spices used in the restaurant and food packaging industry are irradiated and are only added in small quantities to prepared foods, it is not required to label the prepared foods or foods served in restaurants with the symbol.

Where can I buy irradiated foods?

The irradiation of ground beef products in Canada is in its infancy. Consumer demand and/or food safety decisions will drive what products become available and when. In the United States, irradiated meat products and fruits can be bought at many food markets. You can look for irradiated spices when buying bulk supplies. Produce that is irradiated for phytosanitary import control is available at many stores in the United States and other jurisdictions. Remember to look for the Radura!



Where can I find more information about food irradiation?

- Health Canada
- Canadian Food Inspection Agency
- USDA Food Safety Inspection
- Nordion