



Fact Sheet

FOOD IRRADIATION

What is food irradiation?

Food irradiation is the process of exposing food to a controlled amount of energy called “ionizing radiation.” There are three different types of radiation allowed: Gamma rays, X-rays and electron beam radiation.

Why irradiate food?

Ionizing radiation can penetrate food, killing microorganisms without raising the temperature of the food significantly. Food irradiation is used to:

- prevent food poisoning by reducing the level of harmful bacteria, such as *E.coli O157:H7* in ground beef and *Salmonella* and *Campylobacter* in poultry; and parasites which cause food-borne diseases;
- prevent spoilage by destroying bacteria, molds and yeast which cause food to spoil, and control insect and parasite infestation, and;
- increase shelf life by slowing the ripening or sprouting in fresh fruits and vegetables, thereby allowing for longer shelf life.

It is possible for irradiated food to become contaminated after it has been treated. For this reason, proper storage, handling and cooking are very important.

Is eating irradiated foods safe?

Extensive research and testing have demonstrated that irradiated food is safe. Before foods are listed in the *Food and Drug Regulations* as permitted to be irradiated or sold in Canada, Health Canada reviews petitions for new applications of the irradiation process to ensure its safety. The regulations also specify the source, the energy level and the total absorbed dose for the identified food.

Is food irradiation mandatory?

No. Food processors may use irradiation for permitted applications. Irradiation is one of the tools available to the food industry to help produce safe food products.

What foods are currently permitted to be irradiated and sold in Canada?

Currently, onions, potatoes, wheat, flour, whole wheat flour, and whole or ground spices and dehydrated seasonings are approved for irradiation and sale in Canada.

Health Canada is proposing regulatory changes which would expand the list of irradiated food permitted to be sold in Canada. The proposed additions are: fresh and frozen ground beef, fresh and frozen poultry, prepackaged fresh, frozen, prepared and dried shrimp and prawns, and mangoes. Permitting irradiation on these foods will assist the food industry in enhancing the safety and quality of these products, while providing consumers with a product with a longer durable life.



Does food irradiation guarantee food safety?

No, nothing can guarantee food safety, but food irradiation reduces the bacteria and other microorganisms that may be present on food. Irradiated food must be handled properly like other foods to prevent re-contamination.

What is the Canadian Food Inspection Agency's (CFIA) role related to irradiated food?

The CFIA is responsible for the enforcement of the regulations relating to the labelling of irradiated food products under the Food and Drug Act.

The CFIA establishes inspection and testing programs to verify compliance by both domestic producers and importers. Irradiated foods that have not been approved for sale in Canada are not permitted entry, and the CFIA takes appropriate action if such products are illegally imported.

How can I tell if food has been irradiated?

Pre-packaged foods that have been wholly irradiated display the international radiation symbol, along with a statement that the product has been irradiated. Food that is not pre-packaged must have a sign with this information displayed beside the food.

Pre-packaged foods that contain an irradiated ingredient which is more than 10 per cent of the finished product must indicate in the list of ingredients that the component is irradiated. If the ingredient makes up less than 10 per cent of the finished product, it is exempt from the labelling requirements.

For more information on food labelling requirements, visit the CFIA's web site at:

<http://www.inspection.gc.ca/english/bureau/labeti/guide/2-tablee.shtml>

For further information on food irradiation, visit Health Canada's web site at:

http://www.hc-sc.gc.ca/food-aliment/fpi-ipa/e_faq_food_irradiation01.html

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