

MYTH & FACTS ABOUT FOOD IRRADIATION

Myth

“Irradiated food tastes bad.”



Reality:

Some foods irradiated at certain doses can have flavor changes. However, if they have a bad taste they will not be marketable. Therefore, irradiated food that is sold in stores does not taste bad.

The irradiation of food is a gentle process when compared to other processes such as heating. Normally, there is very little effect on the food. For some foods, there are effects on taste that are detectable at certain dose levels.

When a company is interested in irradiating their food product they test samples of the food by irradiating them to the highest dose that they would expect commercial lots of the food to receive. They need to handle these samples as close as practical to the way that they would handle commercial product. Product handling and shipping might have an effect on the food product that is independent from the irradiation process. When performing these tests, it is also important to send a control sample along with the samples to be irradiated. This control should be treated as close as practical to the samples that are irradiated...effectively irradiated to a zero dose. A second control sample should be kept at the place of origin to be able to compare this sample with both the irradiated samples and the “zero dose” control sample. By using this approach, the food company can determine if the handling, shipping and/or the irradiation has had any effect on their product. Often these effects can be minimized or eliminated by changing the way the product is handled.

Once a company has tested their product, under their handling conditions, they need to evaluate the product to determine if there are any effects. More importantly, if there are any effects, they need to determine if those effects would have a negative impact on marketing the product. Obviously, if they do, then they would not market the product. Sometimes there are negative effects that are minimal (would not affect the marketing of the product) or positive effects that might actually enhance the marketing of the product. The important point is that if a food company determines that there is a significant negative effect on their product, it would not be marketed and therefore, not available to consumers. A company is not going to sell a food product that has a bad taste.

Many years ago when it was realized that there may be advantages to irradiating food, extensive “basic” research was performed. Food was irradiated at very high doses to determine what effects the irradiation had on food. One of the questions was how high a dose could a specific food be irradiated to before developing a bad taste? Obviously, to determine this dose, it was required to irradiate the test samples until a bad taste was detected. This leads to a statement that I hear quite often: “I’ve read that irradiated [fill in your favorite food] taste horrible!” That leads to my question: “What was the dose that it was irradiated at, and under what conditions, such as temperature?” Similarly, any food will also taste bad if overcooked. If a hamburger was cooked at 600 degrees for an hour, I’m sure you would not find it on the menu at your local burger joint. Does this mean that we shouldn’t be able to buy properly cooked hamburgers?

Irradiation may have a negative impact at a certain dose on specific foods. If they do, then they will not be marketed. However, this should never be used as an excuse not to allow the use of irradiation on food. If this argument were used on the cooking of hamburgers, our holiday menu would be severely impacted.

On a side note, sometimes the irradiation of certain foods has a positive effect on taste. Personally I prefer the taste of irradiated crab meat. But, then again, I love creamed succotash!

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