

submissions

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Attachments: What's wrong with food irradiation .htm



FSANZ: Applications and Submissions - Submission

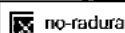
Friday, 29 August, 2014

1. **Assessment Report Number:** A1092
2. **Assessment Report Title:** Irradiation of specific fruits
3. **Organisation Name:** Kim Druve
4. **Organisation Type:** Individual
5. **Representing:** Myself
6. **Street Address:** [REDACTED]
7. **Postal Address:** [REDACTED]
8. **Contact Person:** Kim Druve
9. **Phone:** [REDACTED]
10. **Fax:**
11. **Email Address:** [REDACTED]
12. **Submission Text:** I am concerned by the application to irradiate specific fruit and vegetables. It is clear that irradiating fruit will reduce the nutritional value. Farming processes are already causing a decline in nutrients in foods and irradiating food will only exacerbate this problem. <http://www.scientificamerican.com/article/soil-depletion-and-nutrition-loss/> The lack of long-term studies on the effects of eating irradiated fruit/vegies is also of concern, particularly in children/infants that are developing and may be eating these foods for 50+ years. A lack of research does not mean it is safe. Our bodies are already inundated with chemicals in cleaning, medicines, bathroom products, even water, it would be nice if our food was just that - food.
http://www.naturallifemagazine.com/1106/is_food_irradiation_dangerous.htm

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WHAT'S WRONG WITH FOOD IRRADIATION



revised February 2001

Irradiation damages the quality of food.

- Irradiation damages food by breaking up molecules and creating free radicals. The free radicals kill some bacteria, but they also bounce around in the food, damage vitamins and enzymes, and combine with existing chemicals (like pesticides) in the food to form new chemicals, called unique radiolytic products (URPs).
- Some of these URPs are known toxins (benzene, formaldehyde, lipid peroxides) and some are unique to irradiated foods. Scientists have not studied the long-term effect of these new chemicals in our diet. Therefore, we cannot assume they are safe.
- Irradiated foods can lose 5%-80% of many vitamins (A, C, E, K and B complex). The amount of loss depends on the dose of irradiation and the length of storage time.
- Most of the food in the American diet is already approved by the U.S. Food and Drug Administration (FDA) for irradiation: beef, pork, lamb, poultry, wheat, wheat flour, vegetables, fruits, shell eggs, seeds for sprouting, spices, herb teas. (Dairy is already pasteurized). A food industry petition currently before the FDA asks for approval for luncheon meats, salad bar items, sprouts, fresh juices and frozen foods. Another petition before the USDA asks for approval for imported fruits and vegetables.
- Irradiation damages the natural digestive enzymes found in raw foods. This means the body has to work harder to digest them.
- If unlabeled, raw foods that have been irradiated look like fresh foods, but nutritionally they are like cooked foods, with decreased vitamins and enzymes. The FDA allows these foods to be labeled "fresh."
- Irradiated fats tend to become rancid.
- When high-energy electron beams are used, trace amounts of radioactivity may be created in the food.

Science has not proved that a long-term diet of irradiated foods is safe for human health.

- The longest human feeding study was 15 weeks. No one knows the long-term effects of a life-long diet that includes foods which will be frequently irradiated, such as meat, chicken, vegetables, fruits, salads, sprouts and juices.
- There are no studies on the effects of feeding babies or children diets containing irradiated foods, except a very small and controversial study from India that showed health effects.
- Studies on animals fed irradiated foods have shown increased tumors, reproductive failures and kidney damage. Some possible causes are: irradiation-induced vitamin deficiencies, the inactivity of enzymes in the food, DNA damage, and toxic radiolytic products in the food.
- The FDA based its approval of irradiation for poultry on only 5 of 441 animal-feeding studies. Marcia van Gemert, Ph.D., the toxicologist who chaired the FDA committee that approved irradiation, later said, "These studies reviewed in the 1982 literature from the FDA were not adequate by 1982 standards, and are even less accurate by 1993 standards to evaluate the safety of any product, especially a food product such as irradiated food." The 5 studies are not a good basis for approval of irradiation for humans, because they showed health effects on the animals or were conducted using irradiation at lower energies than those the FDA eventually approved.
- The FDA based its approval of irradiation for fruits and vegetables on a theoretical calculation of the amount of URPs in the diet from one 7.5 oz. serving/day of irradiated food. Considering the different kinds of foods approved for irradiation, this quantity is too small and the calculation is irrelevant.
- Even with current labeling requirements, people cannot avoid eating irradiated food. That means there is no control group, and epidemiologists will never be able to determine if irradiated food has any health effects.
- Science is always changing. The science of today is not the science of tomorrow. The science we have today is not adequate to prove the long-term safety of food irradiation.

Irradiation covers up problems that the meat and poultry industry should solve

- Irradiation covers up the increased fecal contamination that results from speeded up slaughter and decreased federal inspection, both of which allow meat and poultry to be produced more cheaply. Prodded by the industry, the USDA has allowed a transfer of inspection to company inspectors. Where government inspectors remain, they are not allowed to condemn meat and poultry now that they condemned 20 years ago.
- Because of this deregulation (continued under President Clinton, a protégé of Tyson Foods), the meat and poultry industry has recently lost money and suffered bad publicity from food-poisoning lawsuits and expensive

product recalls. Irradiation is a "magic bullet" that will enable them to say that the product was "clean" when it left the packing plant. (Irradiation, however, does not sterilize food, and any bacteria that remain can grow to toxic proportions if the food is not properly stored and handled.)

- In 2000, seven meat industry associations submitted a petition to USDA to redefine key regulations relating to contamination. If accepted by USDA, this petition would permit unlimited fecal contamination during production, as long as irradiation was used afterwards.

Labeling is necessary to inform people so they can choose to avoid irradiated foods.

- Because irradiated foods have not been proven safe for human health in the long term, prominent, conspicuous and truthful labels are necessary for all irradiated foods. Consumers should be able to easily determine if their food has been irradiated. Labels should also be required for irradiated ingredients of compound foods, and for restaurant and institutional foods.

- Because irradiation can deplete vitamins, labels should state the amount of vitamin loss after irradiation, especially for fresh foods that are usually eaten fresh. Consumers have the right to know if they are buying nutritionally impaired foods.

- Current US labels are not sufficient to enable consumers to avoid irradiated food. Foods are labeled only to the first purchaser. Irradiated spices, herb teas and supplement ingredients, foods that are served in restaurants, schools, etc., or receive further processing, do not bear consumer labels. Consumer labels are required only for foods sold whole (like a piece of fruit) or irradiated in the package (like chicken breasts). The text with the declaration of irradiation can be as small as the type face on the ingredient label. The US Department of Agriculture requirements have one difference: irradiated meat or poultry that is part of another food (like a tv dinner) must be disclosed on the label.

- The US Food and Drug Administration is currently rewriting the regulation for minimum labeling, and will release it for public comment by early 2002. They may eliminate all required text labels. If they do retain the labels, Congress has told them to use a "friendly" euphemism instead of "irradiation."

Electron-beam irradiation today means nuclear irradiation tomorrow.

- The source of the irradiation is not listed on the label.

- The original sponsor of food irradiation in the US was the Department of Energy, which wanted to create a favorable image of nuclear power as well as dispose of radioactive waste. These goals have not changed. Cobalt-60, which is used for irradiation, must be manufactured in a nuclear reactor.

- Many foods cannot be irradiated using electron beams. E-beams only penetrate 1-1.5 inches on each side, and are suitable only for flat, evenly sized foods like patties. Large fruits, foods in boxes, and irregularly shaped foods must be irradiated using x-rays or gamma rays from nuclear materials.

- Countries that lack a cheap and reliable source of electricity for e-beams use nuclear materials. Opening U.S. markets to irradiated food encourages the spread of nuclear irradiation worldwide.

Irradiation using radioactive materials is an environmental hazard.

- The more nuclear irradiators, the more likelihood of a serious accident in transport, operation or disposal of the nuclear materials.

- Food irradiation facilities have already contaminated the environment. For example, in the state of Georgia in 1988, radioactive water escaped from an irradiation facility. The taxpayers were stuck with \$47 million in cleanup costs. Radioactivity was tracked into cars and homes. In Hawaii in 1967 and New Jersey in 1982, radioactive water was flushed into the public sewer system.

- Numerous worker exposures have occurred in food irradiation facilities worldwide.

Irradiation doesn't provide clean food.

- Because irradiation doesn't kill all the bacteria in a food, the ones that survive are by definition radiation-resistant. These bacteria will multiply and eventually work their way back to the 'animal factories'. Soon thereafter, the bacteria that contaminate the meat will no longer be killed by currently approved doses of irradiation. The technology will no longer be usable, while stronger bacteria contaminate our food supply.

- People may become more careless about sanitation if irradiation is widely used. Irradiation doesn't kill all the bacteria in a food. In a few hours at room temperature, the bacteria remaining in meat or poultry after irradiation can multiply to the level existing before irradiation.

- Some bacteria, like the one that causes botulism, as well as viruses and prions (which are believed to cause Mad Cow Disease) are not killed by current doses of irradiation.

- Irradiation encourages food producers to cut corners on sanitation, because they can 'clean up' the food just before it is shipped.

Irradiation does nothing to change the way food is grown and produced.

- Irradiated foods can have longer shelf lives than nonirradiated foods, which means they can be shipped further while appearing 'fresh.' Food grown by giant farms far away may last longer than nonirradiated, locally grown

food, even if it is inferior in nutrition and taste. Thus, irradiation encourages centralization and hurts small farmers.

- The use of pesticides, antibiotics, hormones and other agrichemicals, as well as pollution and energy use, are not affected. Irradiation is applied by the packer after harvest or slaughter.

- Free-market economists say irradiation is 'efficient': it provides the cheapest possible food for the least possible risk. But these economists are not concerned about the impaired nutritional quality of the food. They are not considering the environmental effects of large-scale corporate farming, the social costs of centralization of agriculture and loss of family farms, the replacement of unionized, impartial government inspectors with company inspectors, the potential long-term damage to human health, and the possibility of irradiation-resistant super-bacteria. All of these developments should be (but are not) considered when regulators and public health officials evaluate the benefits of food irradiation.

Organic Consumers Association, <<http://www.organicconsumers.org/irradlink.html>> Contact Irradiation

Coordinator: danila@purefood.org

Office: 6101 Cliff Estate Rd, Little Marais, MN 55614 218/226-4164, fax 218/ 226-4157

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Organic Consumers Association - 6771 South Silver Hill Drive, Finland MN 55603

E-mail: Staff · Activist or Media Inquiries: 218-226-4164 · Fax: 218-353-7652

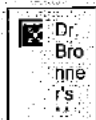
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