



Food Safety

NEWS

Food Safety CURRENT NEWS

On the Web

Consumer Food

Safety Case Study

www.ers.usda.gov/publications/aer804/

Home Food Preservation

www.oznet.ksu.edu/extrapidresponse/Food%20Preservation.htm

National Center for Home Food Preservation

www.uga.edu/nchfp/

Acrylamide

www.epa.gov/safewater/dwh/c-voc/acrylami.html

www.fao.org/english/newsroom/news/2002/4344-en.html

www.nfpa-food.org/News_Release/062502Acrylamide.htm

Neotame

www.neotame.com/

National Food Safety Education Month

www.foodsafety.gov/~fsg/september.html

www.restaurant.org/nfsem/

KSU Food Safety

www.oznet.ksu.edu/foodsafety/

Acrylamides in Food Prompt Concerns

Acrylamide is an odorless solid that exists as flake-like crystals. It is produced as a precursor to the production of polyacrylamide polymers, and used to make adhesives, print ink stabilizers, thickening agents for agricultural sprays, and water retention aids.

Acrylamide enters the body when breathed in with contaminated air or when consumed with contaminated food or water. It can also be absorbed through skin contact. It is excreted in urine.

Recent Swedish research findings indicate that acrylamide can be formed during the preparation of foods and that it may occur in a variety of cooked foods. Previously, food was not recognized as a source. However, it may be an occupational hazard for workers in the paper and pulp, construction, foundry, oil drilling, textiles, cosmetics, food processing, plastics, mining and agricultural industries. The Swedish study reported high levels of acrylamide in fried potato crisps and chips, and in a variety of baked cereal-based products. The high temperature of frying and length of cooking time appear to be factors in the formation of the substance. Clearly, additional investiga-

tion is needed on food sources of acrylamide. Non-food acrylamide exposure of the general nonsmoking public is thought to be low.

On July 3, the European Commission's Scientific Committee on Food issued an opinion on acrylamide in food. The committee recommends that levels of acrylamide in food should be as low as reasonably achievable. However, given the current lack of detailed knowledge about acrylamide and food safety, the committee only offered general advice on how to manage risks. In the opinion report, the committee recommends the following:

- Foods should not be cooked excessively, i.e. for too long or at too high a temperature. However, all foods, particularly meat and meat products, should be cooked thoroughly to destroy foodborne pathogens.
- The information available on acrylamide reinforces general advice on healthy eating. People should eat a balanced and varied diet, which includes plenty of fruit and vegetables, and should moderate their consumption of fried and fatty foods.

See Acrylamide, p. 2

Health effects of acrylamide

How does acrylamide affect human health?

Effects on human health depend on how much is present and the length and frequency of exposure, according to a fact sheet by the Environmental Protection Agency (EPA). Effects also depend on the health of the individual exposed. Short term exposure can affect the nervous system. Exposure may cause drowsiness, incoordination, hallucinations and confusion. Acrylamide dust may affect the respiratory system, and direct contact on the skin with acrylamide in water can cause irritation. These effects are not likely to happen at levels of acrylamide found in the environment. Repeat exposure to acrylamide may cause general toxicity, adverse blood effects and adverse reproductive effects in animals. Repeat exposure to acrylamide may cause cancer in humans.

The EPA fact sheet can be found at:

www.epa.gov/opptintr/chemfact/f_acryla.txt www.epa.gov/opptintr/chemfact/f_acryla.txt

FAQs

Question: My meat has an iridescent green color, is it safe?

Answer: Meat contains iron, fat, and other compounds. When light hits a slice of meat, it splits into colors like a rainbow. There are various pigments in meat compounds that can give it an iridescent or greenish cast when exposed to heat and processing. Iridescence does not represent decreased quality or safety of the meat.

Question: Where can I find food safety publications in Spanish?

Answer: Here are several Web sites with Spanish food safety publications...

www.fsis.usda.gov/OA/pubs/consumerpubs.htm

www.foodsafety.gov/~acrobat/fsthermy.pdf

www.foodsafety.gov/~acrobat/fstherp.pdf

www.foodsafety.gov/~fsg/fsgpath.html

foodsafety.wsu.edu/

www.oznet.ksu.edu/library/fntr2/mf2502.pdf

www.ces.ncsu.edu/depts/foodsci/agentinfo/org/list.html

foodsafety.unl.edu/files/handwashingspanish.pdf

foodsafety.unl.edu/files/handwashingenglish.pdf

www.texasfoodsafety.org/brochures/pdf/english/sfsleng.pdf

www.texasfoodsafety.org/brochures/pdf/spanish/sfslspan.pdf

agpublications.tamu.edu/pubs/snutri/

www.nal.usda.gov/fnic/foodborne/fbidb/forlang.shtml

www.cdc.gov/spanish/

www.fw-ac-deptofhealth.com/food/spanish_translation.htm

www.fsis.usda.gov/OA/pubs/languages.htm

Acrylamide, from p. 1

- The possibilities for reducing the levels of acrylamide in food by changes in formulation, processing and other practices should be investigated.
- An international network “Acrylamide in Food” should be established inviting all interested parties to share relevant data, as well as ongoing investigations.

The U.S. Food and Drug Administration (FDA) issued a news statement indicating that

three FDA scientists, experts in food safety and cancer risk assessment, participated in a World Health Organization expert consultation regarding the health implications of acrylamide in foods. FDA is also analyzing a variety of foods. Because of limited data at present, the FDA continues to advise consumers to eat a variety of foods and to follow established dietary guidelines.

More data will be needed to determine what effects acrylamide in food may have on health of consumers.

The American Association of Cereal Chemists has responded by forming a team to analyze the Swedish study that

brought about the European Commission’s response. They also have provided additional information on their Web site.

Is acrylamide on the verge of becoming a huge food safety issue? Only time and more research will provide the answer.

Sources:

europa.eu.int/comm/food/fs/sc/scf/out131_en.pdf, europa.eu.int/comm/food/fs/sc/scf/out131_en.pdf.

www.fda.gov/bbs/topics/NEWS/2002/NEW00817.html

www.aaccnet.org/default

ehp.niehs.nih.gov/roc/ninth/rahc/acrylamide.pdf” ehp.niehs.nih.gov/roc/ninth/rahc/acrylamide.pdf

New Look in Your Grocer’s Meat Case

Have you noticed a change in your grocer’s meat case? In the past, the meat products sold were cut or ground at the store. The poultry industry has been selling regional or national branded products for many years. Now, the red meat industry is building a trend called case-ready meat products.

Case-ready meats are prepackaged in meat plants, then shipped to grocery stores. The stores do not cut or process the meat any further. Packages of meat arrive boxed. The store removes them from the box and places them in the meat case. This is similar to hot dogs, bacon and lunch meats. Case-ready meats are also referred to as consumer-ready or kitchen-ready. They are sold



in one of two ways. The first is vacuum packaged. The plastic packaging fits snugly around the meat by removing the oxygen. This helps eliminate freezer burn, and the shelf life increases three to five times longer than with traditional packaging. Vacuum packaging leaves the red meat a purple color. The second method of sale is modified atmosphere or “gas flushed” packaging. The inside of the package is flushed with various combinations of oxygen, nitrogen and carbon dioxide. This is commonly used and gives the red meat a bright red color.

In 2000, stores sold 1.2 billion packages of case-ready meat. This is double the amount sold in 1997. Case-ready meats can result in fewer

out-of-stocks and reduced labor costs. Stores can order specific cuts in amounts to meet consumer demands. Sales are expected to expand rapidly in the next few years.

Examples of case-ready meats include ground turkey, marinated pork loins, and full or partially cooked heat-and-eat products such as barbecued beef or pot roast. Limited product handling reduces food safety risks at the store level. Case-ready products are also more consistent from one purchase to the next.

Source: AMI Fact Sheet: Case Ready Meats

Neotame: A New Nonnutritive Sweetener

The Food and Drug Administration (FDA) has approved a new sweetener called neotame. It is a general purpose sweetener for a wide variety of products. It is a nonnutritive, high intensity sweetener developed by the NutraSweet Company.

Neotame is about 7,000 to 13,000 times sweeter than sugar. It is a free-flowing,

water-soluble white powder. It is heat stable and can be used from the tabletop or in cooking. Current approved uses include baked goods, nonalcoholic beverages (including soft drinks), chewing gum, confections and frostings, frozen desserts, gelatins and puddings, jams and jellies, processed fruits and fruit juices, toppings and syrups.

To determine the safety of neotame, FDA reviewed data from 113 animal and human studies. These studies identify possible toxic effects, such as cancer-causing, reproductive, and neurological effects. From these studies, the FDA concluded that neotame is safe for human consumption.

Source: www.fda.gov/bbs/topics/ANSWERS/2002/ANS01156.html

Tools for Food Safety Education Month

This year, training materials for Food Safety Education Month will be provided on CD-ROM or from the internet. The theme this year is Four Steps To Food Safety. This includes food safety messages from the last four years, Clean, Separate, Cook and Chill. You can choose one topic or combine topics to develop training programs.

The CD-ROM contains various educational activities and ideas to put them into practice. Many fact sheets are in English and Spanish. Educational activities designed for children are included, as are many downloadable images of Fight BAC!® and Thermy™. The activities include puzzles, experiments, and group activities. There are also brief videos for each of the four

topics. Media materials are available for marketing and promoting training opportunities.

The same information on the CD-ROM can be accessed on the Internet at www.foodsafety.gov/~fsg/september.html. There are two planning guides, one for consumer training, the other for food service training.

Dairy Queen Offers Irradiated Hamburgers

More Dairy Queen restaurants in the Twin Cities area of Minnesota are offering irradiated ground beef. Last month, Dairy Queen added the product to 23 more stores, increasing the total store count to 43. This is roughly one-third of Minnesota's Dairy Queen stores. The franchise began serving irradiated ground beef about two years ago and has been the leader in selling irradiated ground beef at the quick-service restaurant level.

At each store, customers receive information about irradiated ground beef and are encouraged to call a survey line to express their opinions. There have only been a handful of concerned customers. Overall, the customers are pleased with the product.

Irradiation by electricity was developed by the SureBeam® Corporation. The process is approved by the USDA and FDA to eliminate the threat of dangerous

foodborne bacteria. Dairy Queen has not passed the cost of irradiation on to the consumer. This current test market will be conducted for 60 days, before a decision is made to expand the test to more locations.

Source: *University of Minnesota and the Minnesota Beef Council*

FAQs (cont.)

Question: How can I get rid of flour beetles?

Answer: The best remedy is to keep the storage area and containers clean. Foods such as flour, grains, cake mixes and pasta are susceptible to flour beetles. Pet food and bird seed can also attract these pests. Storing these items in clean, airtight plastic or glass containers is recommended. For large quantity storage, it is best to freeze these products. Freezing will also kill the larvae that can be present. Frequent checking of products, buying smaller quantities and rotating inventory can reduce the problem of flour beetles. Discard infested products.

Question: Will placing moth balls around garden plants to deter pests affect the produce?

Answer: Mothballs won't work in a garden to deter insects. People who have tried to use moth balls to deter deer are also disappointed. The produce may not absorb the fumes, but there is no research to prove this. Bottom line, we do not have research showing that moth balls are either safe or effective, so we cannot recommend their use.

Department of Animal Sciences & Industry
244 Weber Hall
Kansas State University
Manhattan, Kansas 66506-3403



August 2002

Volume 5, Number 4

Published Bimonthly by
K-State Research and Extension
Food Science Institute
Animal Sciences and Industry

Karen P. Penner
Extension Specialist
Food Science Institute
Animal Sciences and Industry
kpenner@oznet.ksu.edu
(785) 532-1672

Contributors

Karen P. Penner, Editor
Professor, Food Science
Animal Sciences and Industry

Karen Blakeslee
Rapid Response Coordinator
Animal Sciences and Industry

Cooperative Extension Service
K-State Research and Extension
Animal Sciences and Industry
216 Call Hall
Manhattan, Kansas 66506

K-State, County Extension Councils, Extension Districts,
and U.S. Department of Agriculture Cooperating

All educational programs and materials are available
without discrimination on the basis of race, color,
religion, national origin, sex, age, or disability.

August 12 & 19

Chanute

Serving Safe Food
Memorial Regional Medical Center
Contact: Lois Carlson
620-244-3826

August 13 & 14

Dodge City

Serving Safe Food
Rose Room – Ford County
Government Building
Contact: Ethel Schneweis
620-227-4542

August 20 & 21

Olathe

Serving Safe Food
Johnson County Extension Office
Contact: Nada Thoden
913-764-6300

Upcoming Events

September 19 & 20

Hays

Serving Safe Food
Ellis County Extension Office
Contact: Carla Morriscal-Frederking
785-628-9430

September 24 & 25

Wichita

Serving Safe Food
Sedgwick County Extension
Education Center
Contact: Teresa Lang
316-722-7721

November 13 & 14

Olathe

Serving Safe Food
Johnson County Extension Office
Contact: Nada Thoden
913-764-6300

Other Events...

September 13

Kansas State University

Call Hall
Excellence in Food Science
Seminar: "A Snack is Born! The Food
Product Development Story,"
Dr. Fadi Aramouni, KSU
Contact: Dr. Karen Penner
785-532-1672

October 15

Manhattan

Food Safety Consortium Symposium
Topic: Risk Assessment
Contact: University of Arkansas
479-575-5647