

FoodBytes



Indiana State
Department of Health

Winter, 2003 Volume 3, Issue 4

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Irradiation: Next public health pillar?

Several national companies now offer irradiated ground beef as an option for consumers. The process of irradiation involves subjecting the finished packaged product to radioactivity high enough to kill pathogens, but low enough to not change the texture or flavor of the product. Some consumer groups are trying to stop irradiation from becoming a mainstream public health tool, like chlorination and pasteurization, because they fear there may be unknown chemical changes to the foods.

The irradiation process is finally becoming a reality after 50 years of study and research. When pasteurized milk was first introduced, there were many consumers who decried it was harmful and would make you sick if



The "radura" must appear on all product labels for foods treated with irradiation. It is often green but might be another color.

you drank it. How many people would normally consider drinking unpasteurized milk today? Some believe that irradiation will become another public health tool, and in a few years, consumers will only want foods that have been irradiated.

Irradiation does not cause the food to become radioactive any more than a person becomes radioactive from having an X-ray or from too much exposure to the sun. Although the irradiating doses when treating meat are higher than an X-ray, it is not nearly enough to make meat

radioactive. Several national grocery store chains like Publix and Wegman's beginning to offer irradiated food choices. In Indiana, Kroger

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Read the label

Useful information can be learned by reading the product labeling.

Besides the expected information like the manufacturer's or distributor's name and address and the name of the product, you can also find answers to other questions.

Is the product "ready to eat?" What is the required storage or holding temperature? What is the "shelf life?"

Some information may be printed on product cases.

Labels may be written in any language, but if in a foreign language, the required information must also be in English.

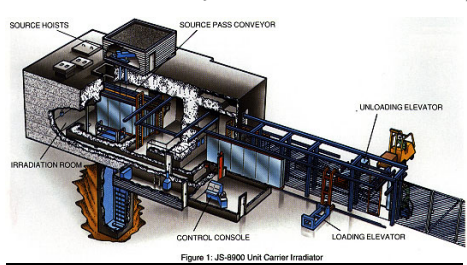


Figure 1. JS-800 Unit Center Irradiator
A typical irradiation unit

Model ordinance for local departments nears completion

Several meetings and many hours of work have produced an ordinance model that may be adopted by local jurisdictions to regulate their food establishments. The model ordinance is the product of a joint committee comprised of

The model will be designed for local health departments to “plug in” their agency names, make minor modifications as needed.

members of the Indiana Environmental Health Association’s Food Protection Committee. It has also undergone a legal review for accuracy and compatibility with existing Indiana laws.

The committee was formed to fill a need expressed by local health departments seeking guidance in writing and implementing ordinances to support their food protection programs. Many do not have access to legal expertise to write ordinances, or the ability to do it themselves.

It was also known that many local ordinances were out of date and were either unenforceable or were referencing laws that no longer existed.

The model will be designed for local health departments to “plug in” their agency’s name, make minor modifications as needed, and then have a finished document ready for their boards of health, commissioners, and attorneys to review. This should save dozens of hours for local environmentalists.

The format of the model will cover the regulatory process from beginning to end. Areas addressed in the model include the application and permitting process, plan review, assessment of fees, conducting inspections, and due process to achieve compliance and enforcement.

The model ordinance is undergoing final revisions and should be available soon in both written and electronic form for use by local health departments.

FoodBytes is published quarterly by the Food Protection program, Indiana State Department of Health. Comments may be directed to:

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Mark your calendar

Acidified Foods

March 19 - 21, 2003

FDA’s training on recognizing and determining safety of acidified products.

More information is coming soon.

Wholesale food rule approved

The head of the ISDH Wholesale Foods Division is breathing a sigh of relief.

After months of work by her and her staff writing, editing, and gaining the approvals needed, Shirley Vargas has finally witnessed 410 IAC 7-21 become law.

This is a huge step for the wholesale inspection program as inspectors will now have a specific code that will provide support in citing violations. Previ-

ously, inspectors relied upon the Code of Federal Regulation’s “good manufacturing practices” or GMPs to provide the basis for seeking corrections.

This rule may be utilized by local health departments, if needed, to regulate any wholesale operations not exclusively under state jurisdiction.

There are currently about 770 wholesale food establishments in Indiana inspected by the ISDH.

Irradiation

(Continued from page 1)

is expected to begin offering some products soon. Among fast food chains, Dairy Queen is expanding the use of only irradiated ground beef for its *Brazier Burgers*. Several hundred Dairy Queen stores will offer irradiated burgers by next year.

Spices, and some produce, have been irradiated for years and consumers most likely have unknowingly eaten food treated this way.

Inspectors are encouraged to react positively to food establishments in each jurisdiction and support the use of irradiated products. Inspectors as consumers can lead by example by purchasing irradiated food products and support this industry.

Scott Gilliam

ISDH retail food program fully staffed

With the filling of the vacancy in Southern Indiana, the ISDH Retail Food staff is now complete. Paula Proctor of Newburgh has been hired to cover health departments and conduct inspections in 14 Southwest Indiana counties.

Because of Paula's location, the areas covered by all but one member of the field staff have been adjusted as shown on the map below. Several county health departments will have a new retail foods

contact person, who will be contacting the staffs of these departments to advise them of the change.

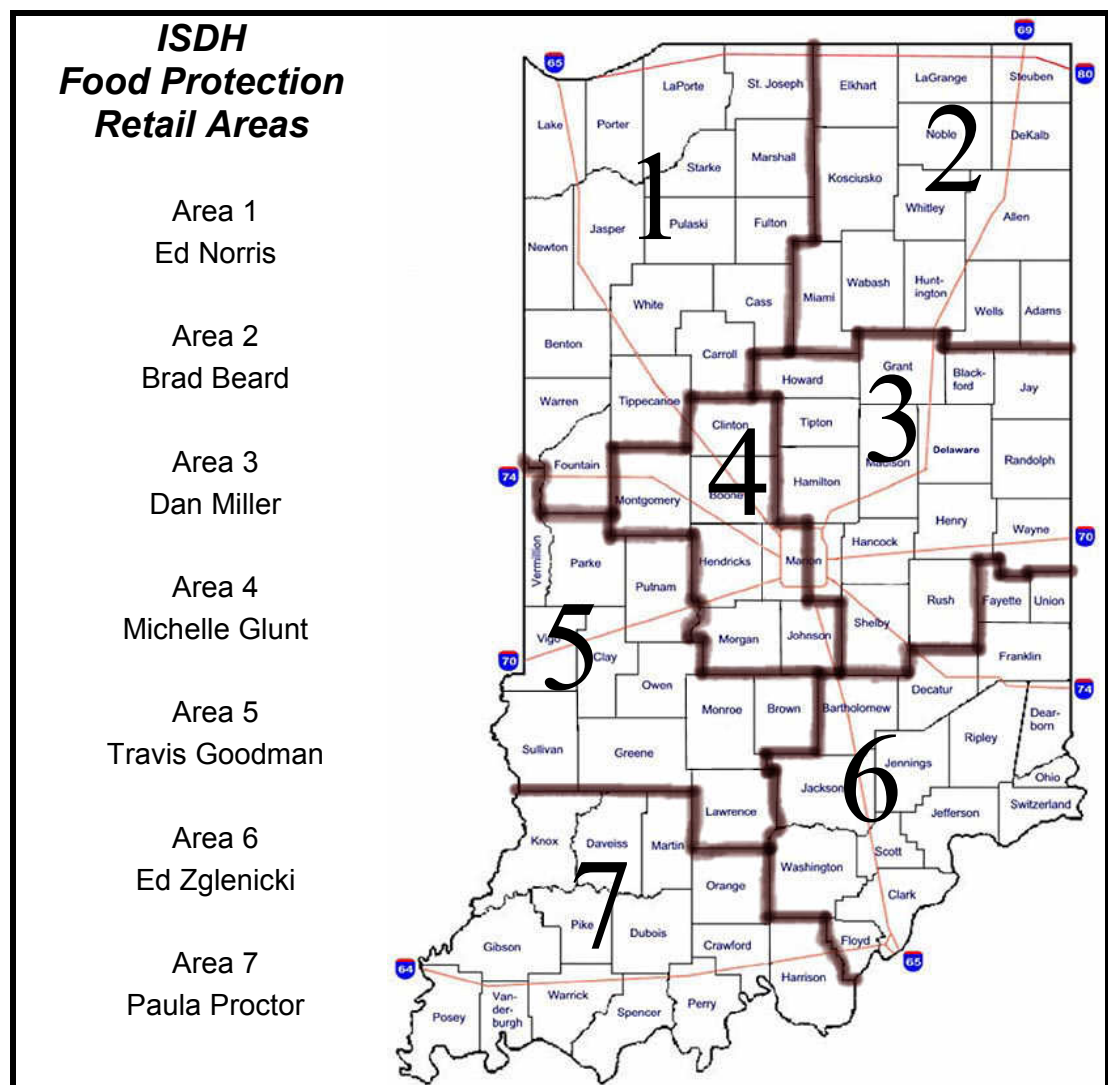
The ISDH retail field staff is also responsible for conducting inspections of foodservice facilities that are either located on state property, or otherwise come under state jurisdiction.

Also, with the hiring of Piki Saha, the Wholesale Foods division now has all staff positions filled.

Foods Web page source of valuable information

The rules mentioned throughout this issue may be found on the ISDH Food Division web site.

Point your browser to www.state.in.us/isdh/regsvcs/foodprot and follow the links.



Several new rules going into effect

Certification of food handlers

Effective January 1, 2005, most Hoosier food establishments will be required to have at least one "certified food handler."

The new law, 410 IAC 7-22, was written in its final form by a task force of ISDH, local health department, and industry personnel, after passage of Senate Bill 404 by the legislature.

It will take precedence over any "certifications" that may be offered at the local level.

This new law means that one person employed

by each covered establishment will need to have passed an examination recognized by the Conference for Food Protection. Such persons would not necessarily have to take a course, just an examination.

The certified person would not need to be present at the establishment at all times, but the certification document must be available for inspection.

410 IAC 7-22 spells out specific penalties for non-compliance. It also lists those types of establishments exempt from compliance.

Schedule of civil penalties

410 IAC 7-23, also known as the civil penalties rule, will be effective in early 2004.

This rule sets specific monetary amounts that may be levied by ISDH or its agents (local health departments) for cited violations of the Indiana Food Establishment Act, and the retail and wholesale food rules.

Penalties don't have to be assessed, but if they are, they must follow this rule.

These resulted from action by the Indiana Legislature last year.

Vendors need safe water, too

Is there a temporary vendor operating in your county who supplies his own water? Then make sure the water is from a potable source.

Several mobile food vendors operate in Indiana with water they obtain from their own wells. If this is the case in your county, the vendor needs to show proof that the water is safe by providing a current water sample report.

Remember that even though water might not be on the menu, it is used for hand-washing and washing utensils and equipment.

One bacterial sample submitted to a certified laboratory per calendar year is sufficient for compliance.

Orientation for local departments held



What services and assistance can the Indiana State Department of Health provide to local health department employees? Twenty-three attendees learned the answer to that question in the two-day orientation held recently in Rice Auditorium.

Attending both days of the orientation were:

Steve Schumm, Allen

Co.; Joshua Williams, Boone Co.; Doug Bentfield and Todd Webb, Clark Co.; Christine Dely, and Lynnetta Abram, Delaware Co.; and Amy Smith, Indiana University.

Also attending were Elois Green and Larry Miller, Jackson Co.; Anita Clott, Jay Co.; Kevin Stark and Melissa Hatton, Jennings Co.; George

O'Donnell, Lake Co.; Amanda Fitzsimmons and Mike Eimen, Montgomery Co.; plus Bobby Knieriem and Shane Modglin, Morgan Co.

Rounding out the list were Rita Becht, Orange Co.; Tammy Hill, Parke Co.; Mark Linderman, Wayne Co.; Jason Habegger, Wells Co.; and Heather Vaughan and Piki Saha, ISDH.

Match the thermometer to each task

Lisp

In the employee restroom at work, the boss placed a sign directly above the handsink. It had a single word on it - "THINK!"

The next day, when he went to the restroom, he looked at the sign and right below it, immediately above the soap dispenser, someone had carefully lettered another sign that simply read -

"THOAP!"

Source unknown

By now, inspectors should know that thermometers are key pieces of inspection equipment. For the operator, the right thermometer is a key weapon in the food safety arsenal. But an inspector must have the right thermometer for each situation, if he intends to cite violative conditions.

Several factors go into selecting thermometers to measure food temperatures: sensitivity, accuracy, and price. More expensive tools do not always assure greater accuracy, but will often provide greater speed. Let's look at some thermometer types.

Thermometers Types

◆ Bimetallic

This is the most common type. Inside the thin metal stem is a sensor that consists of two metals with two different rates of expansion coiled together. As the metal changes, the

dial changes. Bimetallics are not practical for thin foods (hamburgers, for instance) since the sensor is located from the tip to around two inches above the tip. For an accurate reading, the stem must be inserted the full two inches.

◆ Thermister digital

These contain a ceramic heat-sensitive resistor in the tip that changes as the heat changes. This is shown as a temperature on the read-out. These will work on thin foods.

◆ Thermocouple

Two different metals are joined in the thermocouple, which produce varying thermoelectric charges as the temperature changes. The result shows on the digital display. Although more expensive,

thermocouples are highly accurate and fast in all food types.

◆ Maximum registering

This type may be the digital thermister type or a thermocouple. It is distinguished by the fact that its design allows it to hold the maximum (and minimum) temperature reached from the time it was last reset. This type is most often used to measure the final rinse temperature of dish machines.

Inspectors must carry a variety of thermometers to allow accurate temperature measurements under a variety of conditions. One cannot determine violative conditions without accurate and appropriate test equipment. Violations concerning temperatures are all *critical*.

Note: the older mercury filled glass tube thermometers must not be used because of the health risk posed from the mercury.



Food Irradiation: What's the science at work?

Food irradiation involves the use of either high-speed electron beams or high-energy radiation with wavelengths smaller than 200 nanometres, or 2000 angstroms (e.g., X rays and gamma rays). These rays contain sufficient energy to break chemical bonds and ionize molecules that lie in their path. The two most common sources of high-energy

radiation used in the food industry are cobalt-60 (Co^{60}) and cesium-137 (Cs^{137}). For the same level of energy, gamma rays have a greater penetrating power into foods than high-speed electrons.

The unit of absorbed dose of radiation by a material is denoted as the gray (Gy), one gray being equal to the absorption of one joule of energy by one kilo-

gram of food. The energy possessed by an electron is called an electron volt (eV). One eV is the amount of kinetic energy gained by an electron as it accelerates through an electric potential difference of one volt. It is usually more convenient to use a larger unit such as megaelectron volt (MeV), which is equal to one million electron volts.

(From Encyclopedia Britannica 2003)

"Ask Scott"

Q. I have heard that there are certain sample containers we should have in our health department. What are they?

A. Two of the containers every local health department must have are specific water sample bottles, and "7A" containers for enteric bacteriological specimens. The sample bottles all come with complete instructions for use and will contain a liquid or powder media. Leave the media there as it serves a purpose in preserving the sample.

Important to note: The 7A containers all have expi-

ration dates and can not be used past those dates! If you have no 7A containers on hand, or if the ones you have are expired, contact ISDH and return the expired containers for replacement. Call 317 233 8105.

If you're called upon to handle a foodborne investigation, there may not be time to obtain sample containers.

Q. What is the ambient air temperature requirement of a walk-in cooler? I can't

find it in the code.

A. The reason you can't find it is because it isn't there. Remember, it's the food that may be in violation if in the danger zone, not the air. If you find the ambient air in a walk-in above 41° F., check temperatures of potentially hazardous foods. If too warm, cite Section 173.

You can access timely health information from just about anywhere through the expanded ISDH food web site! See p. 2.

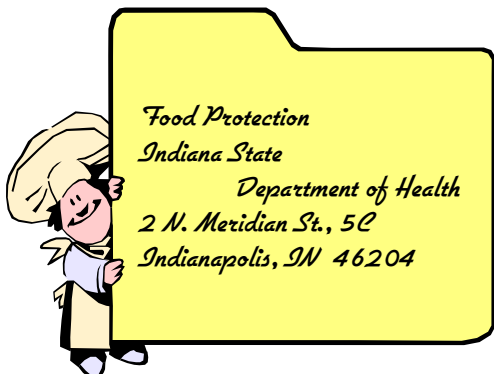


Tip of the month

When calibrating thermometers using the ice bath method, the ice must be as finely crushed as possible before adding water. Cubes will not work well.

The idea is to make a "slush" so that the temperature will be extremely close to 32° F. Using cubes or chunks of ice will give an inconsistent temperature.

Send your questions to Scott Gilliam at <food@isdh.state.in.us>, or use the address on page 2.



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