What is Potentially Hazardous Food?

Potentially Hazardous Food is a term used by food safety organizations to classify foods that require time-temperature control to keep them safe for human consumption.

Definition

A potentially hazardous food is one that:

- Contains moisture - usually regarded as a water activity greater than 0.85; and
- Contains protein; and
- Is neutral to slightly acidic - typically having a pH between 4.6 and 7.5

Examples of Potentially Hazardous Foods

The US Food and Drug Administration Food Code identifies the following examples of potentially hazardous foods:

- Meat (beef, pork, lamb)
- Poultry (chicken, turkey, duck)
- Fish, shellfish, and crustaceans
- Eggs (except those treated to eliminate Salmonella)
- Milk and dairy products
- Heat-treated plant food (cooked rice, beans, or vegetables)
- Baked potatoes
- Mushrooms, raw sprouts,
- Cut melons and tomatoes
- Tofu and soy-protein foods
- Untreated garlic and oil mixtures

Remember: All foods must be prepared in your booth at the event or at a commercial or semi-commercial kitchen, EXCEPT, charitable non-profit organizations may prepare non-potentially hazardous foods in homes.

Factors that contribute to foodborne illness:

- Improper cooling of potentially hazardous foods
- 12 or more hours between preparation and sale of potentially hazardous food
- Improper holding temperature (hot or cold) of potentially hazardous food
- People who are ill or infected handling foods
- Contaminated raw food or ingredients
- Cross-contamination from raw to cooked or ready-to-eat foods
- Improper cleaning of equipment and utensils
- Inadequate cooking
Temperature Control

Temperature control of potentially hazardous food is absolutely essential for preventing foodborne illness. Here are the key elements of temperature control for potentially hazardous food that need to be followed:

➢ In order to kill any harmful bacteria present on raw meats, fish eggs, and poultry, thoroughly cook these foods to bring the internal temperature to that which is shown in this chart

➢ Always hold at or below 45°F - or at or above 135°F

➢ If held at or below 41°F during the operating day, the food can be used the following day

➢ If held at 45°F during the event, discard the food at the end of the operating day

➢ If held at or above 135°F during the event, discard the food at the end of the day

Adequate Control Equipment

The equipment you use for cold holding and hot holding potentially hazardous foods needs to be adequate for the type and amount of food and for the ambient temperature at the event.

➢ Super insulated ice chests with ice packs may be used for one day events if foods are in waterproof containers, separate ice chests are used for different types of foods, and 45°F is maintained

➢ If refrigerators are used, they need to be pre-cooled to 45°F prior to holding food in them

Note: Domestic refrigerators can take hours to cool down and may not maintain food at 45°F in hot weather!

➢ Food held hot needs to be held using an oven, steam table, or other equipment able to maintain food at 135°F

Importance of Proper Thermometers

Temperature control to protect food safety requires accurate thermometers and vigilance by all those who are staffing the temporary food facility

Thermometers need to be located in each refrigerator and a metal stem thermometer (0-220°F or digital) needs to be available for checking hot and cold food temperatures
Protecting Food from Contamination

Cross-Contamination

Cooked foods and produce need to be stored and handled separately from raw beef, pork, fish, and poultry so they do not become exposed to harmful organisms that could cause foodborne illness.

Here are some helpful suggestions:

➢ Wash hands frequently as described in the following section of this Resource Guide.
➢ Wash utensils between uses or choose another safety option as described in the section on utensil washing in this Resource Guide.
➢ Use clean wiping cloths stored between uses in disinfectant solution to wipe food contact surfaces. Avoid reusing wiping cloths that have been used to clean up blood or juices from raw meat!

Cloths reused to clean and sanitize food contact surfaces need to be kept in a bucket of sanitizing solution. A common sanitizing solution is about 1 tablespoon of household bleach per gallon of water.

➢ Store raw meats, fish, eggs and poultry separate from produce and ready-to-eat foods. Use separate ice chests and containers for storing raw meats, fish, eggs and poultry. Store raw meats, fish, eggs and poultry below produce and ready-to-eat foods in refrigerators.

Sneeze Guards

Foods need to be displayed in a manner that minimizes potential contamination from people who are walking by or purchasing food. In some cases, the food can be packaged or displayed in a manner that will minimize potential contamination and make use of sneeze guards unnecessary. Discuss alternatives available with our staff.

Employee Health

Food handlers that are ill should be encouraged to stay at home and not serve food at the event, so that they do not pass their illness on to their customers.

The following are the common organisms that cause foodborne illness:

➢ Norovirus: leading cause of foodborne illness in the United States. Found in food handled by food workers prepared with bare hands. Source is human feces.
➢ Campylobacter jejuni: found in dairy or poultry products.
➢ E. coli 0157:H7: commonly found in undercooked beef, water, and unpasteurized juices and ciders.
➢ Salmonella: found in poultry or raw eggs.
➢ Shigella: found in ready-to-eat foods handled by ill food workers.
➢ Listeria: found in raw meat, processed meats, deli meats, seafood or dairy products.
➢ Yersinia enterocolitica: found in undercooked pork, milk, or water.
➢ Vibrio parahemolyticus: found in seafood and shellfish.
➢ Hepatitis A virus: found in foods handled by ill food workers prepared with bare hands.
➢ Bacillus cereus: found in beans, rice, and potatoes.
➢ Cyclospora: found in imported fruit.
Hand Washing: Why and How?

Importance of Hand Washing
Viruses and bacteria are invisible to the naked eye, but may be present on your hands if you do not wash them thoroughly. Hand washing with soap and water is the single most effective way to prevent the spread of bacteria and viruses, which are the major causes of foodborne illness.

When a Hand Washing Sink Isn’t Available
Temporary food facilities often operate in settings where they do not have their own hand washing facility with hot and cold running water.

A low tech alternative is to utilize a five-gallon water container with warm water and a dispensing valve, which will leave hands free for washing. Also provide a wastewater container, soap dispenser, and paper towels for hand washing within the food booth. Thorough hand washing (scrubbing with soap and warm water for 20 seconds) is needed:

- Upon entering food booth prior to food preparation
- After using the restroom
- After breaks
- After sneezing or coughing
- After handling raw meats
- After handling garbage or chemicals

Note: Hand washing facilities must be separate from utensil washing facilities.

Alternatives that May be Considered in Some Cases
In certain situations, there may be an operational need for more than one vendor to share a common hand washing facility. Our office will work with Event Coordinators and individual vendors to help them meet their operational needs whenever possible, with the objective of assuring hand washing facilities for all food handlers are conveniently located so as to encourage frequent use.

Examples of Possible Operational Needs
The following are examples of circumstances that may present an operational need for sharing a common hand washing facility:

- Several vendors are sharing a common table at an event rather than each being in an enclosed booth
- Adjoining booths have very limited space and adjacent ven-
dors request a common hand washing facility

➢ Several vendors are sharing an indoor space with conveniently located and accessible public rest rooms

Environmental Health Review of Alternatives

In reviewing requests by Event Coordinators or vendors to allow shared hand washing facilities, our office would consider the following factors:

➢ Practical circumstances and realities faced by the vendors
➢ Operational details, such as whether the vendors are working in pairs so that one worker can leave the work site to wash hands without disrupting the food service operation
➢ Segregation of duties, such as whether one food working is handling food exclusively while the other worker is handling money
➢ Proximity of nearest hand washing facility
➢ Use of hand sanitizer IN ADDITION TO use of disposable gloves to keep food workers’ hands clean prior to use of the sanitizer (see Information About Hand Sanitizers, below)

Information About Hand Sanitizers

The use of hand sanitizers is sometimes requested as a substitute for individual vendor hand washing stations.

Hand sanitizers with at least 60% alcohol have been shown to be effective in killing bacteria and some viruses on clean hands. However, use of hand sanitizers does not replace the need for frequent hand washing by food service employees.

The hands of foodworkers are often wet or may be contaminated with fatty material or with food high in proteins. The presence of water, food, fatty materials, animal feces, and blood on the hands can significantly reduce the effectiveness of an alcohol-based hand sanitizer. Norovirus, the leading cause of foodborne illness, is not killed by hand sanitizers.

Bottom Line: Our office will work with Event Coordinators and vendors to find solutions whenever possible that meet the operational needs of the vendors while protecting food safety and public health
Utensil Washing Information

Utensil Washing Facilities
Temporary food facilities with food preparation and reusable utensils need to have the ability to wash, rinse, and sanitize utensils that are used to prepare and serve the food. Ideally, utensil washing facilities should consist of a two or three compartment metal sink with hot and cold running water from an adequate approved source and shall drain to sewer or a holding tank.

Alternatives that May be Considered
Temporary food facilities often do not have their own utensil washing facility as described above. Therefore, a number of alternatives are available for vendors.

Shared Utensil Washing Facility
If a utensil washing facility as described above is located within a reasonable distance of the temporary food facility, the vendor may bring extra utensils to the temporary event and periodically wash used utensils at the shared facility.

Disposable Utensils
Disposable utensils that are not reused are an acceptable alternative.

Three 5-Gallon Containers
Temporary food facilities serving food at events no longer than three days may use three five-gallon containers for the cleaning of equipment, utensils and for general cleaning purposes. The first container is full of soapy water for washing the utensils. The second container has clear water for rinsing the utensils. The third container has a solution of bleach and water to sanitize the utensils before they are allowed to air dry. Use 1 tablespoon of 5.25% household bleach per gallon of water in the third container.

Healthy Suggestions:
1. If using 5-gallon containers to wash utensils, plan ahead and pre-portion raw meat prior to the event whenever possible to minimize any chance of cross-contamination.
2. Disposable cutting boards can be used in part of the food preparation process and then discarded to reduce the need for disinfection and protect against cross contamination.

Bottom Line: Our office will work with Event Coordinators and vendors to find solutions whenever possible that meet the operational needs of the vendors while protecting food safety and public health.
Use of Enclosures

When Enclosures Are Required

Enclosures are required for all temporary food facilities \textbf{EXCEPT}: 

(1) Non-profit charitable organizations holding four or fewer annual fundraisers (each no more than 3 days in duration long), or 

(2) Facilities selling only prepackaged food items or preparing and serving food in a manner that minimizes exposure to flying insects.

Public Health Importance of Enclosures

Enclosure of food booths is intended to prevent the spread of disease by flying insects, primarily flies and meat bees. Flies are a concern because of their feeding habits. A brief description of this is presented in the shaded box. Beware, the description is graphic!

When flies land on your food, remember that they have an even greater attraction for feces and rotting flesh. They cannot eat solids, so before feeding they vomit a bit of their previous meal on their current meal. The acidic saliva in their vomit dissolves their current meal so they can eat it. Besides feeding on filthy material, they also collect and spread germs by rubbing their bodies, legs, and wings on the material they are eating. As a result of their feeding preferences and practices, flies are known to be an important agent for the spread of many foodborne diseases, such as salmonella infections, dysentery, etc.

Enclosure Specifications

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<thead>
<tr>
<th>Component of Booth</th>
<th>Requirement</th>
<th>Application</th>
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<tbody>
<tr>
<td>Floor</td>
<td>Smooth and easily cleanable</td>
<td>Pavement, plywood, and canvas are acceptable as flooring, but lawn, dirt, and sawdust are not acceptable</td>
</tr>
<tr>
<td>Walls &amp; Ceilings</td>
<td>Completely enclose the booth to minimize the entrance of flies - or - Use food compartments</td>
<td>Walls and ceilings constructed of wood, canvas, plastic, or fly screening; Food service openings need to be equipped with tight-fitting closures Provide overhead protect and easily cleanable food compartments to protect unpackaged food and food preparation surfaces</td>
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Helpful Hints and Tips

- Shade Pop-Ups are commonly used for ceilings and are available at garden supply stores
- Insect or sun screening materials are acceptable for enclosure walls or ceilings available at hardware stores in pre-cut rolls.
- Screening can be kept closed using Velcro or ties

\textbf{Bottom Line}: Our office will work with Event Coordinators and vendors to find solutions whenever possible that meet the operational needs of vendors while protecting food safety and public health.