 USING TIME AS A PUBLIC HEALTH CONTROL

Keep it cold, keep it hot, or don’t keep it too long!

Objectives

• Recognize TCS foods
• Learn the Food Code Requirements for TPHC procedures
• Recognize acceptable TPHC marking procedures
• Determine how TPHC and HACCP complement

Factors Affecting Pathogen Growth

<table>
<thead>
<tr>
<th>Water Activity</th>
<th>Time</th>
<th>Temperature</th>
<th>Atmosphere</th>
<th>Nutrients</th>
<th>Inhibitors</th>
<th>Previous Stress</th>
<th>Microbial Interaction</th>
</tr>
</thead>
</table>
Time/temperature Controlled for Safety (TCS) Food

A food that requires time or temperature control for safety to limit pathogenic microorganism growth or toxin formation

TCS foods

• Animal foods
• Heat-treated plant food
• Raw seed sprouts
• Cut melons
• Garlic-in-oil mixtures that have not been modified to prevent growth

TCS foods

• Cut tomatoes or cut tomato mixtures
• Cut leafy greens
• A food that because of its pH and Aw values is designated as Product Assessment Required (PA) in Interaction Tables A or B of the Food Code
Non-TCS foods

- Air-cooled, hard-boiled egg with intact shell
- Pasteurized egg with intact shell
- A food that does not support the growth and toxin formation of pathogens but may otherwise be contaminated and capable of causing illness

Non-TCS foods

- A food that because of its pH and Aw values is designated as non-PHF/non-TCS food in Interaction Tables A and B
- A food designated as Product Assessment Required (PA) with subsequent PA proving that the food does not support the growth and toxin production of pathogens

Holding TCS Foods

Use temperature

OR

Use time
**Holding Hot TCS Foods**

- Hot
  - 135°F
- Bacillus cereus
- Clostridium perfringens
- Ambient
  - 75°F

**Holding Cold TCS Foods**

- Cold
  - 41°F
- Listeria monocytogenes
- Salmonella
- Bacillus cereus
- Ambient
  - 75°F

**Holding TCS Foods using Time**

Food Code section 3-501.19 describes requirements

- Up to 4 hours, irreversible and uninterrupted
- Cold foods up to 6 hours under specific circumstances
Holding TCS Foods using Time

No prior approval required
Foods must be marked to indicate time
Must have written procedures available upon request
Procedures must be followed exactly
All foods discarded at end of time period
How does TPHC fit into HACCP?

- Menus and Recipes
- Safe Food Handling
Template Provided in HACCP Section: Menus and Recipes

- Name of food product/recipe
- How the food will be prepared, served, and discarded
- Time Control Procedure
- Holding information

Sample Template

HACCP Section: Safe Food Handling

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>- Procedure for preparation, service, and discard</td>
<td>0.00</td>
</tr>
<tr>
<td>- Time Control</td>
<td>0.00</td>
</tr>
<tr>
<td>- Holding</td>
<td>0.00</td>
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</tbody>
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<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>- Sample Template: How to Prepare Milk</td>
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<td>- Name of food product/recipe</td>
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</table>

Food or Menu Item: 8 oz containers of milk
Size of Batch/Quantity to prepare: Up to 50 containers in each crate
Ingredients: Pasteurized 3% and demi milk
Procedures for preparation, service, and discard:

1. Containers of milk are held in a walk-in cooler at a product temperature below 40 degrees per HACCP procedures.
2. Milk is removed from refrigeration and placed on a cart for breakfast meal service in the classrooms.
3. Each container of milk is marked with the discard time.
4. During mealtime, milk is served from the cart within 2 hours from the time it is removed from cold holding.
5. Milk not used within two hour time period are discarded.

Time Control

- Cooking Completion – time begins at the completion of the cooking process. i.e. cooked pizza removed from the oven.
- Removal from hot or cold holding – time begins when the food is removed from temperature control. i.e. meats or vegetables are removed from hot holding unit, sub sandwiches or rolls are removed from refrigeration.
- Assembly from Room Temperature Ingredient(s) – time begins when preparing from room temperature ingredients. i.e. tuna salad, cut melons.

Holding Time

Maximum holding time for food is 4 hours.

Specify food location during holding:
On an refrigerated serving/transporting cart in school hallways and classrooms.

Describe labeling method:
Marking tape will be attached to each crate and denoting the discard time within 2 hours of removal from cold holding.

Labeling Method includes:
☐ when time control begins ☐ discard time

Disposal Method:
Unused milk will be discarded in the trash can.
Similar TCS foods

- Can use same form or attach listing for like products
- Group by identical preparation, serving, and discarding procedures

A few more comments about food safety:

No food can be recovered and re-served once it passes the point of service (i.e. cashier) in a traditional cafeteria setting.

No food provided for service in an alternate or innovative service location can be recovered and re-served in the SN program once it leaves supervision of nutrition staff.

QUESTIONS?

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Department of Public Instruction
Safe and Healthy Schools Support Division
School Nutrition Services Section
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