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
- Water Activity
- pH
- Time
- Temperature
- Atmosphere
- Nutrients
- Inhibitors
- Previous Stress
- Microbial Interaction
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
- **Ambient**
  - 75°F
- **Bacillus cereus**
- **Clostridium perfringens**

Holding Cold TCS Foods

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

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?

- Part 5: Menus and Recipes
- Part 1: Safe Food Handling

Template Provided in HACCP
Part 1: Menus and Recipes

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

Sample Template: Safe Food Handling

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1. |...
| 2. |...
| 3. |...
| 4. |...

Note: The table is an example of how a sample template might be structured in a presentation or document.
<table>
<thead>
<tr>
<th>Food or Menu Item</th>
<th>Deli Turkey and Cheese.subs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of Batch/Quantity to prepare</td>
<td>Up to 25 sandwiches/paper</td>
</tr>
<tr>
<td>Ingredients:</td>
<td>Whole grain sub buns, deli deli turkey, deli American cheese</td>
</tr>
</tbody>
</table>

### Procedures for preparation, service, and discard:

1. Hot items must be held in a refigerator or a product temperature below 4°F. All temperature must be maintained for 24 hour period in a HACCP
2. Turkey and cheese is removed from refrigeration at the proper temperature.
3. Sandwiches are assembled and immediately reassembled and stored in a portion of up to 22 sandwiches/paper at the proper temperature. This ensures maximum time assembly begins.
4. During serving time, sandwiches are served from the container within 2 hours from the time they were assembled.
5. Sandwiches not used within 2 hours are physically discarded.

### Time Control

- **Cooking Completion** - Time begins at the completion of the cooking process i.e. cooked pizza removed from the oven.
- **Removed from heat or cold holding** - Time begins when the food is removed from temperature control i.e. microwave vegetables are removed from hot holding unit, sub sandwiches or rolls are removed from refrigeration.
- **Assembly** - Time begins when preparing the menu item i.e. sandwiches, salads, cut melons. Note: the ingredients must be at 4°F before assembly begins.
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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