




SafeBites Food Safety Institute presents

FOOD STORAGE FOR FOOD SAFETY


presented by **Dr. Catherine Strohbehn**
& **Mr. Tim Stark**



To gain a better understanding of the important role of storage practices and materials in ensuring quality and safety of food, and in improving operational costs.

PURPOSE

- Identify two action steps related to storage practices in your operation to improve quality of food.
- Identify best practices of inventory management for food items to ensure safety.
- Implement one approach that will reduce food costs or food waste.



OBJECTIVES

- Best Practices, Food Storage/Inventory Management
 - Quality
 - Safety
 - Waste/Cost
- Products
 - Materials
 - Bags
 - Trends




OUTLINE



Best Practices, Food Storage & Inventory Management



QUALITY

- Menu drives purchasing
- Written specifications guide purchasing and receiving
- No evidence of tampering
 - Package & Label
- Proper storage conditions
 - Type (dry, refrigerated, and frozen)
 - Time
 - Temperature
 - Containers (for food as purchased, and for leftovers)



MAINTAIN PURCHASE QUALITY

- **Labeling**
 - Original labels or description
 - Date Marking – consistent use of opened, stored, packed on, or use by dates
 - General rule is 7 day life shelf
- **Tracking**
 - Computerized
 - Manual
- **Rotation**
 - FIFO
 - Quality considerations



CONSIDERATIONS TO INVENTORY MANAGEMENT



Best Practices, Food Storage & Inventory Management

FOOD SAFETY

- Size of container or bag
- Materials
 - Protect from contaminants
 - Food grade
 - Approved for re-use
 - No single-use containers may be reused for food storage
 - Break down of materials – harmful chemicals aka crazing containers

SAFETY CONCERNS

- Regulated by FDA for food manufacturers and processors
- Codes of Federal Regulations provide guidance
- **Food Safe** materials can safely contact with food
- **Food Grade** materials are designed to ensure the long term safety of the food in the container.
 - Food grade plastic does not contain any dyes or recycled plastic harmful to humans
 - No other harmful chemicals were used in either the resin or in production of the plastic container.

FOOD PACKAGE MATERIALS

3-202.15 Package Integrity.

FOOD packages shall be in good condition and protect the integrity of the contents so that the FOOD is not exposed to ADULTERATION or potential contaminants.

What this means for foodservices:

- Check for evidence of tampering or damage before accepting
- Check that package contents match the label
- Don't reuse food package containers for direct contact with food

FOOD CODE 2017 - GUIDANCE FOR FOODSERVICES

- Many foodservices conduct in house processing
 - Preservation (such as freezing of summer harvest)
 - Sous vide
 - Cook chill
- Quality and Safety issues to address
- Proper package materials will affect safety
- Size of container will affect quality

FOODSERVICES AS FOOD PROCESSORS

- Vacuum PACKAGING, in which air is removed from a PACKAGE of FOOD and the PACKAGE is HERMETICALLY SEALED so that a vacuum remains inside the PACKAGE;
- Modified atmosphere PACKAGING, in which the atmosphere of a PACKAGE of FOOD is modified so that its composition is different from air but the atmosphere may change over time due to the permeability of the PACKAGING material or the respiration of the FOOD;
- Controlled atmosphere PACKAGING, in which the atmosphere of a PACKAGE of FOOD is modified so that until the PACKAGE is opened, its composition is different from air, and continuous control of that atmosphere is maintained, such as by using oxygen scavengers or a combination of total replacement of oxygen, nonrespiring FOOD, and impermeable PACKAGING material;
- Cook chill PACKAGING, in which cooked FOOD is hot filled into impermeable bags which have the air expelled and are then sealed or crimped closed. The bagged FOOD is rapidly chilled and refrigerated at temperatures that inhibit the growth of psychotropic pathogens; or
- Sous vide PACKAGING, in which raw or partially cooked FOOD is vacuum packaged in an impermeable bag, cooked in the bag, rapidly chilled, and refrigerated

**IN HOUSE PROCESSING & PACKAGING -
FOOD CODE 2017 REQUIRES VARIANCE**

- (1) Provide to the REGULATORY AUTHORITY prior to implementation, a HACCP PLAN that contains the information as specified
- (2) Ensure the FOOD is:
 - (a) Prepared and consumed on the PREMISES, or prepared and consumed off the PREMISES but within the same business entity with no distribution or sale of the PACKAGED product to another business entity or the CONSUMER, ¹⁸
 - (b) Cooked to heat all parts of the FOOD to a temperature and for a time as specified under §§ 3-401.11 (A), (B), and (C), ¹⁹
 - (c) Protected from contamination before and after cooking as specified under Parts 3-3 and 3-4, ²⁰
 - (d) Placed in a PACKAGE with an oxygen barrier and sealed before cooking, or placed in a PACKAGE and sealed immediately after cooking and before reaching a temperature below 57°C (135°F), ²¹
 - (e) Cooled to 5°C (41°F) in the sealed PACKAGE or bag as specified under § 3-501.14 and: ²²
 - (i) Cooled to 1°C (34°F) within 48 hours of reaching 5°C (41°F) and held at that temperature until consumed or discarded within 30 days after the date of PACKAGING; ²³
 - (ii) Held at 5°C (41°F) or less for no more than 7 days, at which time the FOOD must be consumed or discarded; ²⁴ or
 - (iii) Held frozen with no shelf life restriction while frozen until consumed or used. ²⁵
 - (f) Held in a refrigeration unit that is equipped with an electronic system that continuously monitors time and temperature and is visually examined for proper operation twice daily. ²⁶
 - (g) If transported off-site to a satellite location of the same business entity, equipped with verifiable electronic monitoring devices to ensure that times and temperatures are monitored during transportation, ²⁷ and
 - (h) Labeled with the product name and the date PACKAGED; ²⁸ and
- (3) Maintain the records required to confirm that cooling and cold holding refrigeration time/temperature parameters are required as part of the HACCP PLAN and:

**FOOD CODE REQUIREMENTS FOR
COOK-CHILL OR SOUS VIDE**

- Use by that foodservice only
- Waiver filed with local regulatory authority that includes HACCP plan
- Specific packaging material requirements
- Packaging methods
- Labeling system
- Temperature controls

IN HOUSE PROCESSING REQUIREMENTS

- Invest in food grade storage products
- Specify with vendors the type of packing materials for products
- Train staff on dangers of re-using single use products
- Work with local health authority if processing in house



BEST PRACTICES



Best Practices, Food Storage & Inventory Management

FOOD WASTE & COST CONTROL

- Know items in inventory, intended purpose, and organizational needs.
- Manage inventory with good storage and rotation practices paying attention to quality and safety.
- Communicate consistent messages to staff and vendors.




DECREASE FOOD WASTE - IMPROVE FOOD COST

ADD POLL HERE

Are storage products and practices currently used in your foodservice compliant with these best practices?

1 = Not at all
3 = Somewhat
5 = Completely

- Clear containers
- Dissolvable labels
- Color coded bags/ day of week bags



TRENDS

- **Containers**
 - Permanent
 - Semi Permanent
- **Bags**
 - Disposable



TYPES OF FOOD STORAGE

- Food grade materials
- Types of materials
 - Glass
 - Foil
 - Plastics



STORAGE CONTAINERS



BAGS USED IN FOODSERVICE OPERATION



Protect

- Quality
- Safety

Functions


- Packaging
- Storage
- Preservation

FOOD BAGS

- Materials
- Closures
- Dispensers
- Size



FOOD BAG SELECTION FACTORS



Low Density Polyethylene (LDPE)

Bags made of LDPE are flexible, transparent and adaptable to many uses coming in a variety of thicknesses depending on the strength and security needed. LDPE is safe to refrigerate or freeze, and is a softer material than HDPE. Recloseable (Zip) bags are examples of LDPE bags.


High Density Polyethylene (HDPE)

High Density Polyethylene material is thinner, stronger and less transparent than LDPE. HDPE is puncture resistant, and has a distinctive sound similar to the crinkle of a grocery bag. HDPE is appropriate for both microwaving and freezing. Higher temperature tolerance than LDPE.

Nylon

Nylon is an outstanding choice for heavy duty performance bags. In foodservice they are the preferred material for high heat tolerance bags and cooking pan liners.


MATERIALS



Open End, Twist Tie Closure

The common open end poly bag can be closed with twist ties when filled. Can remove air from enclosure

Commonly used for bakery items




Resealable, Top Reclosable

This is a common zip-type closure where tracks in the opening of the bag are finger-pressed together for a secure closure. These closures allow for opening and closing for repeated access to the contents. Allow to remove air from enclosure.


Commonly used in general storage of food items.

COMMON BAG CLOSURES




Roll Packs

Roll packed bags are packaged on a roll for easy box dispensing. Bags are separated with perforations for easy operation. Most commonly found with Food Storage Bags.



Flat Packs


Flat packed bags are stacked in a case one-by-one, loosely. Most commonly found in bags that do not perforate or work on a roll, such as Low Density (LDPE) Recloseable Bags.



Saddle Packs

Saddle bags are packed in a fashion so they can hang on a pronged metal saddle via holes above the perforation separating the bag from the saddle. Saddles are useful for fast prep and fast delivery sandwich, deli, and snack bags.


PACK / DISPENSING TYPES



Gusset or Gusseted Bags

Gusset is an industry term for food storage bags with an expandable side seam and three measurement dimensions.

Ex: Low Density 6" x 3" x 12" Utility Food Storage Bag.



Flat Bags

Flat is a term for food storage bags that have a distinct single side and bottom seams, with no expansion. These bags have two dimensions.

Ex: Low Density 10" x 14" Food Storage Bag


FOOD STORAGE BAG SIZES AND SEAMS

- Store a variety of foods to keep fresh in dry, refrigerated or frozen storage and through food preparation process.
- Proper protection of food in prolongs shelf life.
- High Density Bags (HDPE) are widely used for freezer storage and for greasy types of foods.
- Low Density Bags (LDPE) have flexible uses and multiple sizes and features.




FOOD STORAGE BAG USES

- Used to store food in a sealed, leak-resistant package in the refrigerator or dry storage.
- Low Density (LDPE) = Excellent clarity for food contents.
- Versatile bag line
- Single Track and Double Track styles available.
- "Deli" print.
- Double Track: Strong closure and convenient write-on blocks.



RECLOSABLE (ZIP) BAGS

- Used in kitchens to keep dough fresh, and to protect food in storage and during transport from dust, debris, and odors.
- Commonly used in Commercial and Industrial kitchens.
- Bun Pan Bags offered in both High Density (HDPE) and Low Density (LDPE).
- Bun Pan Rack Cover is High Density (HDPE), providing strong grease and moisture resistance.




BUN PAN BAGS & RACK COVERS

- Identification
 - Contents & Ingredients
 - Time
- Approaches
 - Color Coding
 - Date Marking
- Examples



LABELING

- Identify two action steps related to storage practices in your operation to improve quality of food.
- Identify best practices of inventory management for food items to ensure safety.
- Implement one approach that will reduce food costs or food waste.



OBJECTIVES

Questions?





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THANK YOU!

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WEDNESDAYS @ 1 PM (CT)**

<p>SEPT. 11 Communication</p> <p>OCT. 16 Controlling Costs</p> <p>NOV. 13 Preparing For An Emergency/Disaster</p>	<p>Each are preapproved for 1 hour of Continuing Education Credit by the School Nutrition Association (SNA) and the Certifying Board for Dietary Managers (CBDM)</p>
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INFORMATION & REGISTRATION**

Videos

- Handwashing
- Why To Glove
- When To Glove
- How To Glove

Documents

- Daily Temperature Logs
- Temperature Chart For Safe Food
- Refrigerator Storage Chart
- Food Safety Doesn't Happen By Accident



FOODHANDLER RESOURCES

Past Blogs

- Holiday Health & Food Safety
- Norovirus
- Employee Health & Reportable Illnesses (What & How)
- Active Managerial Control including Research Focus (*tie with webinar 1*)
- Coaching & Training of Staff (*tie with webinar 2*)

Upcoming Blogs

- Productivity
- Food Storage & Food Contact (*tie with webinar 3*)
- Glove Use
- Risk Based Inspections



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FEEDBACK & COMMENTS**

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1 = Complete waste of time/Nothing new here

5 = Time well spent/Goals were met