

FOOD SAFETY FIRST MANUAL



*FOOD SERVICES
OF AMERICA®*

At Food Services of America, the quality and security of our products are our highest priority. Food safety policies and procedures are in place to reduce the risk of an actual or perceived tampering or contaminant incident and ensure that we provide safe and wholesome products to all of our customers.

Through the use of HACCP (Hazard Analysis Critical Control Point), a system specifically designed to focus on food safety, and GDP (Good Distribution Practices), we carefully manage the flow of products through our distribution centers. We maintain a steady flow of food safety information through our quality assurance teams to keep our customers up to date on issues that may affect the food supply chain.

Our customers know they can rely on us to provide them with products they can trust.



FOOD SAFETY FIRST MANUAL

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COOKING, COOLING & REHEATING FOODS

A CALIBRATED THERMOMETER IS CRITICAL TO MEASURING COOKING AND COOLING TEMPERATURES

Types of thermometers:

<i>Thermometer</i>	<i>Description</i>	<i>Uses</i>
Bi-metallic stem	Round, dial thermometer probe with a pointer. Used in most operations	A. Usually has a range of 0°F to 220°F B. Can take most food temperatures; thermometer must stabilize for approximately 15 seconds before accurate reading
Digital	Round or square thermometer	C. Has a greater temperature recording range with a numeric face D. Can take most food temperatures; thermometer will stabilize quickly
Refrigerator/oven	Several shapes and sizes, may have dials or other indicators	E. Useful in monitoring refrigerator and oven temperatures
Thermocouple	A digital thermometer that can use a variety of probes	F. Very accurate G. Can take most food temperatures very quickly

Thermometer use rules:

- Keep thermometers and their cases clean.
 - During temperature monitoring, thermometers should be sanitized between each food; you may use an alcohol swab.
 - Between monitoring times, thermometers should be washed, rinsed, sanitized and allowed to air dry.
- Measure internal temperatures of foods by inserting the thermometer probe into the center (thickest part) of the food.
 - Take two readings in different locations of the food.
 - Wait at least 15 seconds for the pointer to stop moving.

THERMOMETERS MUST BE CALIBRATED REGULARLY TO BE ACCURATE

- Always calibrate after dropping the thermometer.
- Always calibrate after extreme temperature changes.
- At a minimum, calibrate thermometer at least once per week.
- Calibrate using the ice method or boiling point method.



COOK FOOD TO THE CORRECT TEMPERATURE:

NOTE: Your local health department can provide information on accepted cooking temperatures within their jurisdiction. The health department’s guidelines are the ones you need to follow. However, as an organization, you can establish higher cooking temperatures, if you so desire.

Food	2001 Food Code Temperature	Your local health department or organization’s required temperature
Roast beef	145°F	
Roast pork	145°F	
Fish	145°F	
Ground meat (beef, pork)	155°F	
Poultry	165°F	
Stuffed meats, casseroles	165°F	

INCORPORATE GOOD COOKING PRACTICES TO MINIMIZE THE POSSIBILITY OF FOODBORNE ILLNESS:

- Use properly calibrated thermometers to measure food temperature.
- Always test the temperature of a product in the thickest part.
- Do not overload cooking equipment. It may extend the time food is in the temperature danger zone (41°F - 140°F).

COOL FOODS PROPERLY TO MINIMIZE THE POSSIBILITY OF FOODBORNE ILLNESS:

Cooling Method	Why We Do This	We Can Use This Cooling Method In Our Operation (Where, What Foods)
Reduce the size and thickness of foods.	Food (roasts, meats) that are <4” thick will cool quickly to 41°F.	
Use an ice bath or an ice wand.	Liquids (soups, stews) will cool quickly to 41°F.	
Stir foods as they cool.	Eliminates “hot pockets.”	
Use shallow, 2” pans.	Helps food cool quickly.	
Place pans on the top shelves of the refrigerator.	The top of the refrigerator is usually colder.	
Make sure air can circulate around pans.	Helps cool food quickly.	
Do not cover food until it is completely cool.	Prevents air from acting as an insulator and slowing food cooling.	



COOLING METHODS:

- One-step method: Food must be cooled to below 41°F within 4 hours.
- Two-step method: Food must be cooled to 70°F within 2 hours and then 41°F within 4 hours.

BEFORE REHEATING FOODS:

- Foods that will be reheated must have been first cooked to the correct temperature.
- Foods that will be reheated must have been first cooled using correct procedures.
- Check your temperature monitoring logs to confirm that foods have been cooked and cooled correctly.
- Minimize the need to reheat foods by preparing just enough food for the meal.

FOOD MUST BE REHEATED PROPERLY FOR HOT HOLDING:

- Foods must be reheated to 165°F within 1-2 hours (check your Health Department guidelines for time recommendations).
- Foods reheated in a microwave must be covered, stirred 1/2 way through reheating, and must stand for 2 minutes before serving.
- Use a thermometer to confirm the food temperature.

FOODBORNE ILLNESS

FOOD SERVICE MUST BE CONCERNED ABOUT FOODBORNE ILLNESS:

- There are increasing numbers of people at risk, including young children, the elderly, pregnant women, people with weakened immune systems and people taking certain medications.
- Food composition has changed. There are fewer natural barriers to prevent the growth of bacteria.
- There are new disease-causing organisms.
- People are buying more take-home food and may be handling it improperly.

FOOD SERVICE PAYS A HIGH PRICE FOR FOODBORNE ILLNESS:

- Our operation may lose customers and sales - and our reputation.
- We may have higher insurance premiums.
- We may have to test our food and supplies and retrain our employees.

FACTS ABOUT FOODBORNE ILLNESS:

- You can become ill in a few hours or in weeks.
- Your symptoms may range from a fever, vomiting, diarrhea, dizziness, fatigue, dehydration and abdominal pain.
- You may be sick for a few hours, a few days or indefinitely.
- Foods that are most likely to cause food-borne illness include shell eggs, meats, poultry, fish, baked or boiled potatoes, milk or milk products, tofu or other soy-protein foods, raw seeds and sprouts, garlic and oil mixtures, sliced melons and shellfish.

FOOD CAN BECOME UNSAFE IN SEVERAL WAYS:

Poor personal hygiene

- Employees do not wash their hands frequently.
- Employees cough or sneeze on food.

Cross-contamination

- Using the same cutting boards and utensils for raw and cooked foods.
- Storing food improperly.

Lack of time and temperature control

- Failure to check food temperatures at receiving.
- Failure to cook foods to the proper temperature.
- Failure to hold both hot and cold foods at the proper temperatures.
- Failure to cool foods properly.

HOW FOODBORNE ILLNESS MICROORGANISMS GROW:

- Bacteria, viruses, parasites and fungi can cause foodborne illness.
- Bacteria are of greatest concern.
- You can control the growth of bacteria by controlling the conditions that favor growth.

FOOD

- Bacteria need food to grow, particularly protein and carbohydrates.
- Examples of these foods include meat, eggs, poultry and dairy products.

ACIDITY

- Bacteria grow best at a neutral pH.
- Foods that are either acidic (with a low pH) or alkaline (with a high pH) will not support bacteria growth as well as a neutral pH.

TEMPERATURE

- Bacteria grow best between 41°F and 140°F (the Temperature Danger Zone)

TIME

- Bacteria grow to their highest levels when left in the Temperature Danger Zone for 4 hours or more.

OXYGEN

- Most bacteria need oxygen to grow.

MOISTURE

- Bacteria like moist foods with a water activity (a_w) of 0.85 or higher.

KEY PRACTICES FOR FOOD SAFETY:

Practice good personal hygiene

- Wash your hands frequently.
- Do not work if you are sick.
- Do not eat and drink while preparing food.

Control the time and temperature of food

- Make sure food is received and stored at the correct temperature.
- Minimize the amount of time food is in the Temperature Danger Zone (41° to 140°F) - it should never exceed 4 hours.
- Cook food to the correct internal temperature.
- Hold hot food above 140°F and cold food at or below 41°F.
- Cool foods correctly.
- Reheat food to 165°F within the correct time period.
- Monitor temperatures and record the information on temperature logs.

Minimize the possibility of cross-contamination

- Practice good personal hygiene.
- Store foods correctly.
- Clean and sanitize work surfaces between preparation of cooked and raw foods.

Make the food more acidic

- Add lemon juice or vinegar to the food.



FOOD PREPARATION & SERVICE

HANDLING FOOD SAFELY DURING PREPARATION:

- Good personal hygiene is essential during food preparation and service.
- Food must be stored correctly to minimize the possibility of cross-contamination.
- Cross-contamination must be eliminated during food preparation and service.
- Time and temperature must be controlled during food preparation.
 - Food should be held below 41°F or above 140°F.
 - Food can be between 41°F and 140°F (in the Temperature Danger Zone) for no longer than a total of four hours.
- Cook food to the correct temperature.
- Cool food using the correct method.

SHOULD I WEAR GLOVES WHEN PREPARING OR SERVING FOOD?

The 1999 FDA Food Code recommends minimizing bare hand contact when working with or serving ready-to-eat foods.

Ready-to-eat foods include:

- Meat and cheese for sandwiches
- Sandwiches
- Salads
- Desserts and pastries

When preparing a ready-to-eat food:

- Wear gloves (wash your hands before you put on gloves).
- Use a serving or mixing utensil.
- Use a disposable paper.

WHEN BEGINNING PREPARATION, FOOD SHOULD BE THAWED CORRECTLY:

There are 4 acceptable methods for thawing food:

- Thaw in the refrigerator at 41°F or less.
- Use running, drinkable water that is 70°F or less.
- Use a microwave (but you must cook the food immediately afterward).
- Thaw food as part of the cooking procedure.

GENERAL GUIDELINES FOR FOOD PREPARATION:

- Wash your hands before beginning any food preparation and between food items.
- Use clean and sanitized work areas and equipment.
- Keep raw meat, fish or poultry separate from foods that will be served without cooking (fresh produce, cheese, sandwich meats).
- When preparing food, leave most of it in the refrigerator.
- Take out only the amount of food you can prepare quickly.



General guidelines for preparing protein-based salads, including egg, tuna, chicken, potato and macaroni salads:

- Consider chilling all ingredients before making the salads.
- Wash all produce very well.
- Make sure all salad ingredients have been well cooked and cooled.
- Prepare small batches of salad.

HOLDING HOT FOOD SAFELY:

- Food must be held at or above 140°F.
- Do not use hot holding equipment to reheat foods.
 - Foods must first be heated to 165°F and can then be held at 140°F.
- To help keep food hot, stir regularly and keep covered.
- Measure the food temperature every two hours.
- Do not mix freshly prepared food with foods being held for service.

HOLDING COLD FOOD SAFELY:

- Food must be held at or below 41°F.
- Check with your local Health Department for the approved temperature in your area.
- Measure the food temperatures every two hours.

SERVING FOOD SAFELY BEGINS IN THE KITCHEN:

- Use gloves or utensils when handling cooked or ready-to-eat foods.
- Practice good personal hygiene.
- Use clean and sanitized utensils for serving.
- Serving utensils should have long handles to minimize contamination.
- Store serving utensils correctly.

TASTING FOOD - MINIMIZING THE POSSIBILITY OF CROSS-CONTAMINATION:

- Ladle a small amount of food into a small dish.
- Taste the food with a clean spoon.
- Remove the dish and spoon from the food preparation area.

THE SERVER'S ROLE IN SERVING FOOD SAFELY:

- Practice good personal hygiene.
- Handle glasses, dishes and flatware by the edge or by the handle, never on the food contact surface.
- Use gloves or utensils when handling food or ice.



COMMON FOOD SAFETY SERVICE QUESTIONS

- Can I re-serve any food that the customer did not eat?
 - The only foods that can be re-served are unopened, prepackaged foods. These include condiment packages, wrapped crackers and other sealed foods.
- If my customer wants to return to the salad bar is there anything I need to do?
 - Yes, the customer needs a clean plate to help minimize cross-contamination.



FOOD STORAGE & TIME GUIDELINES

FOOD IS STORED IN A VARIETY OF LOCATIONS

Cleaning and chemical storage

- Cleaning supplies and chemicals should be stored away from food.
- Keep supplies and chemicals in their original containers.
- If supplies and chemicals are not in their original containers, clearly label.

Dry storage

- Storerooms should be cool, dry, clean, well lighted and well ventilated.
- Food items must be kept off the floor.
- Food items should be kept in containers that cannot be damaged by water or a possible pest infestation.

Frozen storage

- Freezers keep food at 0°F or below.
- Freezers are never intended to cool food.
- Freezers should not be overloaded.

Refrigerated storage

- Refrigerators are used for short-term holding at 41°F or below.
- Food must be stored correctly to minimize the possibility of foodborne illness and cross-contamination.
- Refrigerated storage temperatures vary from product to product.

Blast chill refrigeration

- Blast chillers are used to quickly cool foods to below 41°F.

Deep chill refrigeration

- Deep chill refrigeration keeps food at a colder temperature. This may extend the shelf life of the food items.



**TO MAINTAIN FOOD QUALITY AND PREVENT FOODBORNE ILLNESS,
FOOD SHOULD BE STORED FOR A LIMITED AMOUNT OF TIME**

<i>Food</i>	<i>Recommended Temperature</i>	<i>Recommended Maximum Storage Time</i>	<i>Our Operation's Maximum Storage Time</i>
MEAT			
Roast	35-41°F	2 - 5 days	
Ground meat	35-41°F	1-2 days	
Sliced ham	35-41°F	3-5 days	
Lunch meats	35-41°F	3-5 days	
Frozen roasts	0-10°F	6-9 months	
Frozen ground meat	0-10°F	3-4 months	
Frozen bacon, ham	0-10°F	2 weeks	
POULTRY			
Chicken, turkey	32-36°F	1-2 days	
Cooked poultry	32-36°F	1-2 days	
Frozen chicken	0-10°F	12 months	
FISH			
Fresh fish	32-36°F	1-2 days	
Frozen fish	0-10°F	2-3 months	
EGGS			
Shell eggs	45°F	4-5 weeks	
DAIRY PRODUCTS			
Milk	35-41°F	5-7 days after container date	
Hard cheese (cheddar)	35-41°F	1 month	
DRY GOODS			
Flour		6-8 months	
Canned fruit		1 year	
Tea bags		18 months	
Canned fruit juice		9 months	
Oatmeal		6 months	
Rice		2 years	
Dried beans		1-2 years	
Potato chips		1 month	



ALWAYS FOLLOW THESE GENERAL STORAGE GUIDELINES:

- Store food and supplies in their specific designated areas.
- Keep storage areas clean and dry.
- Keep potentially hazardous foods (PHF) out of the Temperature Danger Zone (41°F to 140°F).
- Use first in, first out (FIFO) when storing food.
- Food should be dated when it is received and prepared.
- Label food with its expiration date.
- If there is any question about a product's storage or expiration, discard it.

REFRIGERATION STORAGE GUIDELINES:

- Use open shelving - this improves air circulation.
- Monitor food temperatures and the temperature of the refrigerator.
- To hold food at 41°F or less, the refrigerator temperature must be 38°F.
- Do not overload the refrigerator.
- Store raw products (meat, poultry and fish) separately from (or below) cooked or ready-to-eat foods.
- Monitor the temperature of the refrigerator. Create a temperature chart and post by each refrigerator. Temperatures should be recorded each morning and evening.

FREEZER STORAGE GUIDELINES:

- Place frozen food in the freezer as soon as received and inspected.
- Use FIFO.
- Store food in the original container or tightly wrap to prevent freezer damage.
- Keep the freezer at 0°F or below.
- Monitor the temperature of the freezer.

DRY STORAGE GUIDELINES:

- Store food at least 6 inches off the floor and away from walls.
- Store food in the original packages or in containers that prevent product damage.
- Keep the storeroom clean.

SUMMARY:

- Food and supplies must be stored correctly.
- Food must be rotated, using FIFO.
- Monitoring of refrigerator and freezer temperatures (and products) is an important part of correct storage.
- Foods should be labeled with their preparation and expiration dates.
- Cleaning supplies must be clearly labeled.
- Keep cleaning supplies and food separated.



KNIFE USE

HOW TO USE KNIVES SAFELY:

Use the correct grip

- Hold the knife in your right or left hand.
- Place your index finger on the knife blade and your 3 remaining fingers on the knife handle.
- Tighten your grip on the handle and place your thumb on the opposite side of the blade from your index finger.

Hold the knife and food correctly

- Finger tips should grip the food item and are tucked slightly under the knuckles.
- The side of the knife blade remains in contact with the knuckle so that the left hand (for right-handed cooks) acts as a guide for the blade.
- The right hand does not steer the blade at all - the left is moved to position the blade for the next cut and the blade will naturally follow the knuckle sideways.

Use efficient and safe methods when cutting

- The right hand generates a rolling-sliding motion for the blade. (This is more efficient than chopping straight down, particularly for tougher vegetables).
- The left hand moves to the left at the end of each cutting stroke - the distance it moves will determine the width of the next cut.

TYPES OF KNIVES AND THEIR USES:

<i>Knife</i>	<i>Description & Uses</i>	<i>Picture</i>
French (Chef's) Knife	Most frequently used General chopping slicing & dicing Most common blade length is 10"	
Utility (Salad) Knife	Narrow, pointed, 6-8" long Used for pantry work (cutting & preparing lettuce & fruit)	
Paring Knife	Small pointed blade 2-4" Used for trimming & paring vegetables & fruit	
Slicer	Long, slender, flexible blade up to 14" Used for carving & slicing cooked meats	
Serrated Slicer	Like a slicer, but with a serrated edge Used for cutting breads and cakes	

PREVENTING CUTS & ACCIDENTS:

- Keep knives sharp. A sharp knife is safer than a dull one - it requires less pressure and is less likely to slip.
- Use a cutting board - do not cut against a metal surface. To keep the cutting board from slipping, place a damp towel under the board.
- When using a knife or cutting equipment, pay attention to your work.
- Cut away from your body when cutting, trimming or boning.
- Use protective clothing (e.g., meat aprons and mesh gloves) when trimming meat.
- Use knives only for cutting - do not use for opening containers or for other tasks.
- Don't try to catch a falling knife. Step back and let it fall.
- Don't put knives in a sink, under water or any place where they cannot be seen.
- Clean knives carefully, with sharp edge away from you.
- Store knives in a safe place, such as in a rack or knife block, when not in use.
- Carry knives properly.
- Use the correct knife for the job you are doing.

MEATS: COOKING & SERVING

INTRODUCTION TO COOKING METHODS:

There are many ways to cook meat, fish and poultry.

It is very important to use the correct cooking method for different cuts of meat.

Cooking methods use either dry or moist heat.

<i>Type</i>	<i>Cooking Method</i>	<i>Description</i>	<i>Used for</i>
Dry Heat	Roasting	Use an oven Cook uncovered	Top round Bottom round Rib roasts Whole chicken
	Grill	Cook over direct heat	Hamburgers Chicken breasts
	Broil	Cook by radiant heat (food is placed either below or between the heat source) Tender cuts of meat	Fish Poultry Meat
Moist Heat	Braising	Brown meat and then cook slowly in a liquid in a covered pan	Top round Bottom round Chuck roast Chicken
	Poaching	Immerse food in a hot liquid maintained at a simmering temperature	Fish Eggs out of the shell Fruit
	Stewing	Cook in a small amount of liquid that may be either boiling or simmering	Meat Poultry

PURCHASING BEEF

- Fresh beef (not vacuum-packed) is bright cherry red and will be firm and elastic to the touch.
- Vacuum-packaged beef will be dark red, even slightly purplish.
- Make sure the beef arrives sealed, if the seal is broken, reject the meat
- Vacuum-packaged beef may have an unusual odor because of no oxygen. The odor will disappear in 15-30 minutes after opening.

STORING BEEF

- Beef should be stored between 28-32°F.
- Beef will absorb odors.
- Unopened vacuum-packaged meat has a 21-day storage life in the refrigerator, once open the storage life is 2-3 days.
- Frozen beef may be stored for 6 months at 0°F.
- Thaw beef in the refrigerator for 15-24 hours before using.



TIPS FOR HANDLING GROUND BEEF:

- Use ground beef within 2 days of receipt or freeze for up to 4 months.
- Do not over mix ground beef - the texture will become firm and compact.

FACTORS TO CONSIDER WHEN CHOOSING A COOKING METHOD:

- Fat/moisture
- Connective tissue
- Texture
- Cut of meat
- What type of meat
- The relationship between time and temperature

INCREASING MEAT FLAVOR

	<i>What it does</i>	<i>Use with</i>
<u>Marinades</u> <ul style="list-style-type: none">• Combine oil with an acid-based liquid (wine, vinegar, citrus juice).• Add herbs and garlic for extra flavor	<ul style="list-style-type: none">• Increases flavor and tenderness• Breaks down connective tissue	Leaner cuts
<u>Seasonings/Rubs</u> <ul style="list-style-type: none">• Combine dry spices and seasonings with crushed garlic & herbs• Add mustard or liquid seasoning to create a seasoned paste	<ul style="list-style-type: none">• Increases flavor	Tender cuts
<u>Chutneys, Salsas and Relishes</u>	<ul style="list-style-type: none">• Used as an accompaniment after cooking	All cuts

AFTER COOKING

- Allow the meat to rest for 20-30 minutes.
- If serving immediately, slice the meat, hold at or above 140°F.

FOOD SAFETY TIPS FOR PROPERLY HANDLING MEAT, FISH & POULTRY:

- Eliminate the possibility of cross-contamination.
- Store raw meat, fish and poultry below ready-to-eat and cooked foods.
- Store poultry on the lowest shelf.
- Use separate cutting boards for meat, fish, poultry and cooked products.
- Wash, rinse and sanitize cutting boards, knives and other utensils between use.
- Practice good personal hygiene, especially hand washing at all times.



Other food safety guidelines:

	<i>Meat</i>	<i>Fish</i>	<i>Poultry</i>
Receiving	At or below 41°F	At or below 41°F	At or below 41°F
Storing	At or below 41°F	At or below 41°F	At or below 41°F
Cooking	Roasts and steaks should be cooked to a minimum of 145°F Ground meats should be cooked to a minimum of 155°F	Cook to a minimum of 145°F	Cook to a minimum of 165°F
Serving	Hold at or above 140°F	Hold at or above 140°F	Hold at or above 140°F
Cooling	Store uncovered until at or below 41°F Store no more than 2" thick Divide large roasts into pieces no more than 4" thick	Store uncovered until at or below 41°F Store no more than 2" thick	Store uncovered until at or below 41°F Store no more than 2" thick Divide poultry into pieces no more than 4" thick
Reheating	Heat to 165°F within 2 hours	Heat to 165°F within 2 hours	Heat to 165°F within 2 hours

PERSONAL HYGIENE

FOOD HANDLERS HAVE AN IMPORTANT ROLE IN PREVENTING FOODBORNE ILLNESS.

People are sources of microorganisms that cause foodborne illness

- Hepatitis A is most infectious before symptoms appear.
- 30 – 50% of healthy adults have staphylococci (a bacteria that causes foodborne illness) in their noses.
- 20 – 35% of healthy adults have staphylococci (a bacteria that causes foodborne illness) on their skin.
- In some states, there is documented information that over 50% of foodborne illnesses are related to food service workers and poor personal hygiene.

Food handlers are often responsible for several tasks that can increase the risk of foodborne illness

- Food handlers may handle both raw and cooked foods.
- Food handlers may be responsible for food preparation, cleaning or garbage removal.
- Food handlers may not take the time to wash their hands after taking a break.

Food handlers can cause foodborne illness by:

- Touching anything that will contaminate their hands and not washing afterwards.
- Having an infected sore or wound that is not covered or bandaged.
- Handling food while having nausea, vomiting or diarrhea.
- Handling food when diagnosed with a foodborne illness.
- Handling ready-to-eat food with bare hands.

PROPER HAND WASHING IS KEY TO A GOOD PERSONAL HYGIENE PROGRAM.

Hand washing should occur often and always after:

- Using the restroom.
- Taking out garbage or picking garbage up off the floor.
- Before and after handling raw foods.
- Between handling dirty and clean dishes.
- After using any cleaning chemical.
- After smoking, eating or drinking.
- After sneezing, coughing or blowing your nose.
- After any other situation that may result in contaminated hands.

NOTE: Some facilities are implementing a “double wash” system. Anytime a worker leaves the kitchen for any reason, they must wash their hands when they return to the kitchen.



Proper hand washing requires 6 steps:

1. Wet hands with hot running water (at or above 110°F).
2. Apply soap – enough to work up a good lather. (Any type of liquid hand soap is effective).
3. Wash hands (front and back) and wrists for a minimum of 20 seconds.
4. Clean under fingernails, using a nailbrush or by scrubbing your nails in the palm of your hand.
5. Rinse hands thoroughly under hot running water.
6. Dry hands on a single-use paper towel – and then turn off the water.

THE USE OF DISPOSABLE GLOVES CAN BE HELPFUL IN PREVENTING FOODBORNE ILLNESS.

Gloves are not a substitute for hand washing.

If you use gloves, you must still follow the same hand washing guidelines.

Change gloves and wash your hands between possible contaminations.

- In some states, gloves or some other type of barrier (tongs, deli tissue) must be used when handling ready-to-eat foods.

You should wear gloves in certain situations.

- If you have a wound or cut on your hand (after applying a bandage).
- If you wear fingernail polish.
- If you have artificial or acrylic nails.

PERSONAL APPEARANCE, CLEANLINESS AND HABITS ARE IMPORTANT IN PREVENTING FOODBORNE ILLNESS

You should shower or bathe and wash your hair before coming to work.

Hair should be restrained.

Clean clothing should be worn.

Aprons should be changed as they get dirty.

- Aprons should be removed before leaving the work area.

Jewelry should not be worn when handling food.

- Jewelry can be both a safety hazard and a carrier of bacteria.
- The only acceptable jewelry is a plain wedding band.

Eating, drinking, chewing gum, smoking or chewing tobacco are not allowed
while preparing or serving food.

- Saliva contains microorganisms that can cause foodborne illness.
- Some local regulatory agencies allow unbreakable beverage containers with a lid and straw.
- If you must taste food, follow the correct procedure.
 - Ladle food into a separate dish.
 - Taste the food with a clean spoon.



PERSONAL ILLNESS MAY MEAN THAT YOU CANNOT WORK.

If you have a diagnosed food-borne illness, you cannot work.

- If your doctor has diagnosed you with a food-borne illness, let your manager know immediately.

If you have certain symptoms, you cannot work

- Diarrhea
- Vomiting
- Fever
- Jaundice (yellow skin and eyes)



PREVENTING KITCHEN ACCIDENTS INCLUDING FIRE & ELECTRICAL SAFETY

FOOD PREPARATION AND SERVICE HAS MANY POTENTIAL DANGERS:

Kitchen accidents can be caused by:

- Creating unsafe conditions
- Ignoring hazards (picking up broken glass, not using safety devices)
- Not paying attention
- Unsafe practices

Types of accidents include:

<i>Injury</i>	<i>Source</i>
Cuts	Knives, cutters, slicers, choppers
Burns and scalds	Open flames, hot oils, steam, ovens
Electric shock	Appliances
Slips and falls	Slippery and cluttered floors
Itching, skin redness	Exposure to detergents, cleaning solutions
Coughing, shortness of breath	Flour, spices, additives

PREVENTING INJURIES FROM MACHINES AND EQUIPMENT:

- Make sure you understand how equipment works before you use it.
- Use all guards and safety devices on equipment. Keep slicer set on zero (blade closed) when not in use.
- Do not touch or remove food from any kind of equipment while it is running, not even with a spoon or spatula.
- Unplug electric equipment before disassembling or cleaning.
- Make sure the switch is off before plugging in equipment.
- Do not touch or handle electric equipment, including switches, if your hands are wet or if you are standing in water.
- Wear properly fitting clothing and tuck in apron strings to avoid getting them caught in machinery.
- Use equipment only for the purpose intended.
- Stack pots and other equipment properly on pot racks so that they are stable and not likely to fall.
- Use extreme caution when opening cooking equipment - steam needs to escape.



EVALUATE YOUR OPERATION:

<i>Practice</i>	Yes	No	<i>Corrective Action</i>
Employees are trained to avoid hazards.			
All electrical equipment has Underwriter's Lab (UL) seal.			
We regularly inspect electrical cords for fraying or loose wiring.			
On/off switches are accessible in emergencies.			
We do not use extension cords.			
Electrical switches and outlets are covered.			
Our electrical connections are all grounded. They have a 3-prong or pigtail connection.			
Hot pads and spatulas are available for equipment.			
We use available protective gear (goggles, gloves).			
We have racks or magnetic bars for knives.			
Dishes and glasses are inspected for chips and cracks. Defective pieces are discarded.			
We have the correct tools for opening boxes and cartons.			
Knives and blades are kept sharp.			



POSSIBLE FIRE HAZARDS & HOW PROBLEMS CAN BE PREVENTED:

SMOKING

- Know where you can smoke.
- Use large, deep, non-tip ashtrays.
- Empty the ashtray into a metal container.
- Do not flick ashes into wastebaskets, beauty bark or the floor.

FAULTY or IMPROPERLY USED EQUIPMENT

- Check electrical cords to make sure they are not cracked or split.
- Check electrical outlets to make sure they are intact.
- Turn off equipment when not in use - double check at the end of the day.
- Minimize or eliminate the use of extension cords.
- Never run extension cords under carpets or where they may be stepped on.
- Never plug extension cords together.
- Before cleaning electrical equipment, make sure it is unplugged.
- If in doubt, ask someone in your operation responsible for electrical safety to check the equipment.
- Check the dryer lint screen between each load. Remove lint as needed.

CLUTTER or IMPROPERLY STORED FLAMMABLE MATERIALS

- Do not clutter exits or stairways with empty boxes or paper.
- Know where to store any flammable materials.

WHAT TO DO IF THERE IS A FIRE:

Sound the alarm

- Notify all co-workers.
- Leave the area.
- Make sure 911 has been called.

Evacuate

- Go to the assigned meeting place.
- Do not go back in the building until those in charge say it is safe.

Think "RACE"

- RESCUE anyone threatened by fire.
- ACTIVATE the ALARM.
- CONFINE the fire by closing doors to slow the spread of smoke and flame.
- EXTINGUISH the fire, but only if it is small and you know how to operate the fire extinguisher.

EVERYONE SHOULD KNOW:

- Two exits from the building.
- The location of fire alarms.
- How to use the fire alarm.
- Exact address of your location.
- The assigned meeting place (if you evacuate).



TYPES OF FIRE EXTINGUISHERS:

Type of Extinguisher	Use for
A	Paper, wood, fabric, trash
B	Gasoline, oil, grease
C	Computers, electrical equipment, circuit breakers
K	Vegetable oil
BC & ABC	Can be used on 2 or more different types of fire

The “K” type extinguisher is a new extinguisher. Vegetable-based frying oils cook at a higher temperature than animal fats. Once a fire starts in a deep fat fryer using a vegetable fat, it cannot be extinguished by traditional range hoods or by using a Class B extinguisher.

When using a fire extinguisher, remember to keep your back to the exit and the fire in front of you.

There are 4 basic steps to using a fire extinguisher:

- PULL – Pull the safety pin by grabbing the ring and twisting.
- AIM – Aim the hose at the base of the fire.
- SQUEEZE – Squeeze the handle.
- SWEEP – Sweep the hose from side to side while discharging the extinguisher.

GET OUT – If the fire gets bigger, close the door to slow the spread of heat and smoke and evacuate.

LIST KEY INFORMATION FOR YOUR OPERATION:

Facility Name: _____

Facility Address: _____

Main Phone Number: _____

Facility Manager’s Phone Number: _____

Emergency Phone Numbers:

Fire, Police 911

Medical Emergency 911

Assigned meeting place for evacuation: _____



SAMPLE OPERATION INSPECTION:

<i>Issue</i>	<i>Yes</i>	<i>No</i>	<i>Action Plan</i>
We know where we can smoke			
We use large, deep, non-tip ashtrays			
We empty the ashtray into a metal container			
We do not flick ashes into wastebaskets, beauty bark or the floor			
Electrical cords are not cracked or split			
Electrical outlets are intact			
Equipment is turned off when not in use and we double check at the end of the day			
We do not use extension cords			
Before cleaning electrical equipment, we make sure it is unplugged			
If we are in doubt, we ask someone in our operation responsible for electrical safety to check the equipment			
We check the dryer lint screen between each load			
Exits or stairways are not cluttered with empty boxes or paper			
We know where to store any flammable materials			



PRODUCE HANDLING & STORAGE

KEY RECEIVING TIPS:

- Check the quality of the produce when it is delivered.
- Move the produce to the correct storage area as quickly as possible.
- Use FIFO (first in, first out) and rotate produce.

KEY STORAGE TIPS - ETHYLENE SENSITIVITY:

Some fruits and vegetables produce ethylene gas. Ethylene gas can cause premature ripening of some items and will ruin others. It is best to store ethylene-producing produce away from ethylene sensitive produce.

Produce that produces ethylene includes:

- Apples
- Bananas (ripening)
- Cantaloupe and honeydew melons
- Pears
- Tomatoes

Produce that is sensitive to ethylene includes:

- Bananas (unripe)
- Broccoli
- Cabbage
- Carrots
- Cucumbers
- Lettuce
- Peppers
- Squash
- Watermelon

KEY STORAGE TIPS - ODOR SENSITIVITY:

Some fruits and vegetables produce odor while some will absorb odor. You should always store these separately.

<i>Odor produced by:</i>	<i>Will be absorbed by:</i>
Apples	Cabbage, carrots, celery, meat, eggs, dairy products
Carrots	Celery
Onions (dry)	Apples, celery, pears
Onions (green)	Grapes, mushrooms
Pears	Cabbage, carrots, celery, onions, potatoes
Potatoes	Apples, pears
Green peppers	Pineapples
Citrus	Meat, eggs, dairy products

PROPER STORAGE:

<i>Produce</i>	<i>Storage Temperature</i>	<i>Storage Recommendation</i>
Apples	32°F	Store away from greens.
Bananas	56-62°F	Never refrigerate.
Broccoli	32°F	Will last 10 - 14 days. Sprinkle with water or with crushed ice to avoid dehydration.
Cabbage	32-35°F	Wash and store in plastic bags.
Carrots	32-35°F	Wash and store in plastic bags.
Cauliflower	32-35°F	Store only briefly, 5 days maximum.
Cantaloupe	32-40°F	Allow 2-3 days at room temperature before serving.
Celery	32-35°F	Wash, trim and store in plastic bags.
Cucumbers	45-50°F	Store only briefly.
Grapes	32-35°F	Highly perishable. Store only briefly.
Lemons	50°F	
Lettuce		Avoid storing by or under the blower or by ethylene-producing fruits.
Mushrooms	32°F	Keep dry, have a very short shelf life.
Onions	45-55°F	Store out of the refrigerator.
Oranges	32-35°F	
Potatoes	50-60°	Store out of the refrigerator, away from light.
Tomatoes	60-65°F	Never refrigerate.

HOW TO CORRECTLY CRISPEN PRODUCE:

There are 3 steps for keeping vegetables fresh, moist and high quality.

Step #1

- Remove all yellow, heavily wilted and discolored parts.
- Do NOT trim the roots on radishes, carrots, green onions or spinach.
- Do NOT remove leaves or stalks from the base of the celery or lettuce or cabbage.

Step #2

- Soak the vegetable in tepid water (70-90°F) for 2-4 minutes.
- Iceberg lettuce should be placed core down in a tray or sink with about 2" of warm water. Do not soak the lettuce!

Step #3

- Shake off or drain all water and place in clean plastic bags or containers with small holes for drainage.
- Pack vegetables loosely.
- Place in the cooler for a minimum of 6 hours.

USING PRE-CUT PROCESSED PRODUCE:

Pre-cut produce can save time and storage space, and provide a consistent product at all times.

To improve shelf life, use the following guidelines:

- Move products directly to the cooler.
- Maintain FIFO ("first in, first out") rotation.
- Maintain a temperature of 34-36°F.
- After opening, remove air and reseal remaining product in the original bag. Refrigerate immediately.
- Avoid damaging the bags. Any pinhole or cut will result in too much oxygen and discoloration will occur.

To crispen processed product:

- Open bag.
- Run tepid (70-90°F) water into bag to cover product. Close bag.
- Let set approximately 2-4 minutes.
- Cut bottom of bag and drain water.
- Return product to cooler to chill.

SANITATION & SAFETY: CLEANING PROGRAM IMPLEMENTATION

Although the basics of cleaning stay the same in any operation, your operation has specific and unique equipment. A cleaning schedule, procedures for cleaning each piece of equipment and a checklist will help you set up a sanitation program for your operation.

An example of a cleaning schedule:

Area	What to do	When to do it	What to use	Who should do it
Worktables	Clean and sanitize	Between uses	Soap, water and clean bar towel Sanitize with sanitizing solution, clean bar towel - let air dry	Prep cooks, bakers or cold food prep
Worktables	Empty, clean and sanitize drawers	1st Saturday of the month	Soap, water and clean bar towel Sanitize with sanitizing solution, clean bar towel - let air dry	Prep cooks, bakers or cold food prep
Floors	Wipe up spills	As they happen	Disposable towel Broom and dustpan Mop & bucket	Anyone in the area
Floors	Clean	At closing	Sweep first with broom Mop, bucket and floor detergent **Use "wet floor" signs	Janitor

An example of a checklist:

Area	Standard of Cleanliness	Opening	Middle of Day	Closing
Dish room floors	Free of water & dirt No built-up grime Clean mats			
Dish machine	Free of dirt & build-up Outside free of dirt & streaks Clean screens & curtains			
Carts	Free of dirt, grease & grime			

NOTE: Check your cleaning products against Material Safety Data Sheet (MSDS) information. All cleaning products require this information. MSDS information is available on the Food Services of America website at www.fsafood.com.



A GOOD CLEANING PROGRAM CAN HELP PREVENT OR MINIMIZE THE POSSIBILITY OF FOODBORNE ILLNESS:

It is very important to have a clean and sanitary work area.

- There is a difference between “clean” and “sanitary.”
- Cleaning involves removing food and dirt.
- Sanitizing reduces the number of microorganisms.
- You cannot sanitize until you clean.

Each of us has a responsibility for cleaning and sanitizing our work areas and equipment.

THERE ARE SPECIFIC TOOLS FOR CLEANING:

- Cleaning tools should be stored in the correct location, away from food.
- It is important to use the right cleaning tool for each cleaning job.

THERE ARE SPECIFIC CHEMICALS FOR CLEANING:

- It is very important that you use the correct protective equipment when using certain chemicals.
- Information on the use of chemicals needing protective equipment and first aid is located in the Material Safety Data Sheet (MSDS) book.

SUMMARY:

- Cleaning – using chemicals and following a cleaning schedule is an essential part of a food safety program.
- It is important to use chemicals correctly and use protective gear.
- Equipment must be clean before it can be sanitized.



HACCP

HACCP is the acronym for the Hazard Analysis and Critical Control Point Systems. HACCP is a preventative system that is used in the food industry to help insure food safety. The purpose of HACCP is to identify potential hazards associated with food production and preparation, and to develop mechanisms to eliminate or control these hazards.

There are seven principles which are used to develop and implement a HACCP plan:

1. Analyze hazards
2. Determine CCPs (Critical Control Points)
3. Establish critical limits for CCPs
4. Monitor CCPs
5. Take corrective action
6. Do record keeping
7. Verify that the system is working

There are several ways that establishments may develop a HACCP plan. A practical approach is included in Figure 1 (Hazard Analysis) and Figure 2 (Sample HACCP Plan format). For assistance in HACCP plan development, contact your local health department or review information on the web sites listed on the References & Resources page of this document.

Restaurant Hazard Analysis - Figure 1

Product Description: _____

Method of Storage: _____

Intended Use: _____

Ingredient/ processing step	Identify potential hazards introduced, controlled or enhanced at this step (1)	Are any potential food safety hazards significant? (Yes/No)	Justify your decisions for column (3)	What preventative measures can be applied to prevent the significant hazards?	Is this step a critical control point? (Yes/No)
	Biological				
	Chemical				
	Physical				
	Biological				
	Chemical				
	Physical				
	Biological				
	Chemical				
	Physical				
	Biological				
	Chemical				
	Physical				



Restaurant HACCP Plan - Figure 2

Product Description: _____

Method of Storage: _____

Intended Use: _____

Process Step/Critical Control Point	Hazard	Critical Limits	What	Monitoring-How	Frequency	Who	Corrective Action	Records	Verification



REFERENCES & RESOURCES

Center for Food Safety & Applied Nutrition	www.cfsan.fda.gov
FDA's Bad Bug Book (Micro)	www.cfsan.fda.gov/~mow/intro.html
FightBac!-Partnership for Food Safety Education	www.fightbac.org
Foodsafety.gov	www.foodsafety.gov
Food & Drug Administration	www.fda.gov
Food Marketing Institute	www.fmi.org
Food Services of America	www.fsafood.com
Material Safety Data Sheets (MSDS) online-Food Services of America	www.fsafood.com
National Fisheries Institute	www.nfi.org
National Food Safety Database · current site	http://foodsafety.ifas.ufl.edu/index.NFSDB.htm
· site under construction	www.foodsafety.gov
National Marine Fisheries SVC	www.seafood.nmfs.noaa.gov
National Restaurant Association	www.restaurant.org
Occupational Safety & Health Administration	www.osha.gov
Pest Control	http://everest.ento.vt.edu/~sharov/entovt/bugprob.html
Produce Marketing Association	www.pma.com
Produce Oasis - (produce facts, recipes & nutrition information)	www.produceoasis.com
Seafood Business	www.seafoodbusiness.com
ServSafe®	www.restaurant.org
US Department of Agriculture	www.usda.gov
USDA Food & Nutrition SVC	www.fns.usda.gov/fns
USDA Agri Marketing SVC	www.ams.usda.gov
USDA Food Safety INSP SVC	www.fsis.usda.gov/index.htm





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