



FOOD SAFETY AND —HANDLING—

Policies and Procedures

STORAGE AND DISTRIBUTION

- Store perishables promptly and properly
- Maintain food within optimal storage conditions, including logging temperatures for each cooler and freezer unit
- Avoid leaving frozen or refrigerated product in a warm place like a vehicle
- Store products marked “Keep Refrigerated” or “Keep Frozen” in their corresponding areas
- Refrigerate eggs in their original carton
- Leave product in original packaging. Discard products with compromised packaging (torn, broken, leaking etc.)
- **DO NOT REPACKAGE ANY PRODUCT**
- Use First In, First Out (FIFO) or First Expired, First Out (FEFO) when rotating products
- Always store foods in a clean, dry area. Do not store food near cleaning products, chemicals, paint, under sinks, pipes, or on the floor
- Maintain regular cleaning schedule and trash removal
- Perform pest control maintenance and regular trash removal-we recommend pest proof receptacles
- Food must be stored at least 6 inches off the floor, 4 inches from the wall and 2 feet from the ceiling
- Insulate any heat generating pipes or ducts
- Ensure food storage area is secure to prevent unauthorized access

TIPS FOR STORING PRODUCE

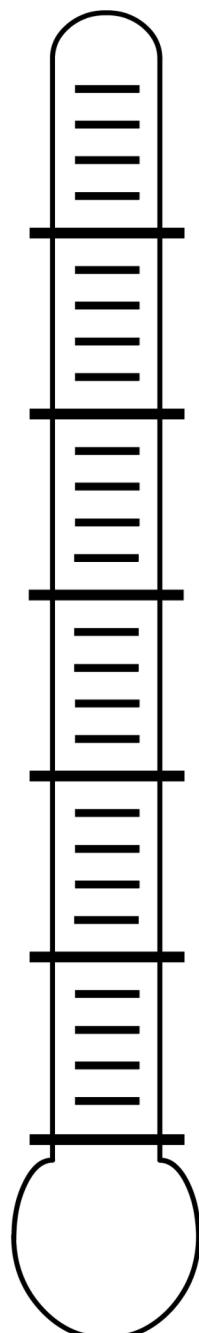
- Dry onions, potatoes, rutabagas and winter squash usually keep best in cool dark spaces around 50-60F. Onions and potatoes will sprout in the spring, during this time buy only what you can distribute within a week.
- Do not refrigerate sweet potatoes or store below 50F, this will change the starch and alter flavor.
- Ripen tomatoes at room temperature. Do not put in direct sunlight. Refrigerate when they have ripened.
- Store apples in a cool space below 60F during the fall following harvest. After this time, they deteriorate rapidly and should be kept in the refrigerator
- Ripen firm avocados and cantaloupe at room temperature. Allow 3 to 5 days for avocados and 2 to 4 days for cantaloupe.

TEMPERATURE GUIDELINES

- Check and record temperatures at the beginning of each day and before distribution begins
- Frozen food must be stored at or below 0F.
- Refrigerated food must be between 35F and 41F
- If transporting refrigerated or frozen product you should temp at pickup and when it arrives to your facility
- Freezer blankets should be used when traveling less than 30 minutes and refrigerated vehicles should be used if traveling further than 30 minutes.

Maintaining food at proper temperatures prevents spoilage, bacteria growth and helps food retain its optimal flavor, quality, color and texture.

FOOD TEMPERATURES AND BACTERIA



212F

Cooking temperatures destroy most bacteria. Time required to kill bacteria decreases as temperature increases.

165F

Warming temperatures prevent growth but allow for survival of some bacteria.

145F

DANGER ZONE:

Temperatures above 40F allow for rapid growth of bacteria and production of toxins by some bacteria that causes food poisoning. Don't leave food at room temperature for more than 2 hours.

40F

Cold temperatures permit slow growth of some bacteria that causes spoilage.

32F

Freezing temperatures stop growth of some bacteria but may allow bacteria to survive and grow again when defrosting.

0F

- Temperatures between 32F-40F are best for refrigeration
- Use food quickly, don't depend on maximum storage time
- Clean refrigerators and freezers regularly
- Remove spoiled foods promptly to avoid passing decay to other foods

WORKING WITH ALLERGENS

- Top 9 allergens: milk, soy, eggs, fish, tree nuts, shellfish, peanuts, wheat and sesame
- Prevent cross-contact
 - Do not store allergens on top of other product, store allergens on a separate pallet if possible
 - Clean and sanitize surfaces between products
 - Inspect products for leaks and spills
- If a spill occurs:
 - Isolate the allergen food from other products
 - Check the other products did not come in contact with the spilled allergen
 - Dispose of open products that come in contact
 - Unopened products with packaging that can be safely clean and sanitized can be saved, discard products that cannot be cleaned and sanitized
 - Clean and sanitize area

AVOIDING CROSS CONTAMINATION

- No bare hand contact with ready to eat food or ice
- Use proper utensils and single use gloves
- Practice good handwashing and hygienic habits
- Store raw meat and raw shelled eggs below cooked or ready to eat foods in the cooler
- Clean and sanitize all utensils and surfaces that touch food:
 - After each use
 - When changing product
 - Between meat species
 - Frequently when preparing large amounts
 - Between raw meats and cooked or ready to eat meats

REFRIGERATION STORAGE TIPS

Lowest Internal Cooking Temperature

Top Shelf: Ready to Eat Foods

No further preparation needed

145 F

Whole seafood and cuts of meat,
roasts, raw eggs

155 F

Ground, tenderized, or injected
meats

165 F

Poultry, stuffed seafood, meats,
or stuffing containing these
items

Highest Internal Cooking Temperature

Store foods in order of their
minimum internal cooking
temperature, with those that
require the highest on the
bottom.



PRACTICING PROPER HYGIENE

- Wash hands only in the designated handwashing sink
- Send home ill volunteers and staff who can cause food borne illness
- Do not eat, drink, chew gum or use tobacco/vape products near food prep and storage areas
- Do not wipe or dry hands on clothing or communal towels
- Wear gloves and hairnets when touching ready to eat foods or preparing meals
- Nails should be short, clean and unpolished, rings should be limited to plain bands
- Cover open cuts and burns with bandages and single use gloves
- Single use gloves, aprons and hairnets should be replaced:
 - After using the restroom
 - If they become damaged or soiled
 - When switching to a new product or activity
 - After touching hair or face

GUIDE TO SAFELY COOLING FOODS

2 Stage cooling is required. Cooked foods need to move quickly through the temperature danger zone to limit microbial growth.

- Stage 1: 140F-70F in 2 Hours or 4 hours if food was prepared using ingredients normally stored at room temperature
- Stage 2: 70F-41F in the next 4 hours

Cooling Methods

Shallow Metal Pans 2"-4" deep

- leave partially uncovered
- refrigerate immediately
- DO NOT stack hot pans this allows for air flow

Ice Bath must use ice and water

- Fill clean sink or large pant with ice and water
- Divide product into 1 gallon containers
- Immerse pan until level with ice
- Stir every 10 minutes
- Drain water and replenish ice as it melts
- Use a thermometer to monitor temperature
- Store immediately once food has reached 41F

Small Portions

- Divide food into small pans
- Separate food into small or thinner portions (2" for thick foods, 4" for thin liquids)
- Cut or slice portions of meat no larger than 4" or 4 pounds

Tips

- Never try to cool food in plastic containers
- Never allow to cool at room temperature

CLEANING AND SANITIZING

Manual Washing Steps

- Wash
 - Clean and sanitize sinks and drain boards
 - Pre-soak and pre-rinse all eating utensils and equipment
 - Use hot soapy water
- Rinse
 - Use clean hot water
- Sanitize
 - Use 50-200 PPM chlorine, mix with cool water
 - Immerse for 60 seconds
 - Air dry utensils and equipment
 - Use appropriate test strips to check concentration
- Air dry

For 100 PPM chlorine solution mix 1 ounce bleach with 3 gallons of water

Mechanical Dishwashing

High Temperature

- Pre-rinse before loading
- Wash temperature
 - Single tank, stationary rack, dual temperature machine 150F
 - Single tank, conveyor machine 160F
- Hot water sanitization
 - 180F at manifold
 - 160F at plate level

Low Temperature

- Chemical sanitization required
- Water temperatures according to manufacturer
- Chemicals must be auto dispensed into final rinse water, check daily
- Must have visual or audible low sanitizer indicator

INSECT AND RODENT CONTROL

Insects and rodents carry diseases and can contaminate food and surface. Take precautions to minimize their presence.

- Protect openings by keeping outer doors closed, repair broken screens, maintain tight fitting doors and openings, use air curtains
- Eliminate harborage conditions
- Exterminate regular

Toxic Materials

These items can be poisonous or toxic if ingested

- Detergents
- Sanitizers
- Polishes and cleaners
- Insecticides
- Rodenticides
- First aid supplies and personal medications

Storage, Labeling and Use

- Store separately from foods and food contact surfaces
- Never store above foods or food surfaces
- Label all toxins
- Use only approved chemicals in food areas

Organizing Produce Storage

Certain crops should not be kept in close proximity to other products. Some crops (like apples) emit ethylene gas, which causes ethylene-sensitive crops (like bananas) to ripen too quickly if exposed. Refer to the “Produce Storage Groupings” section of this handout for a list of crops by ethylene sensitivity. Produce should never be kept near chemicals, raw poultry, meat, or seafood. While in storage, produce should be checked daily (if not more often) to ensure that there are no new signs of damage, decay, or pest infestation and that it is being held in the proper temperature range. One way to integrate this with other warehouse activities is to check for produce quality while doing inventory level checks. Documenting and coordinating checks will help make operations more efficient.

Ethylene* Sensitive

- Bananas
- Beans, Snap/Green
- Bell Peppers
- Broccoli
- Cabbage
- Carrots
- Cauliflower
- Cucumber
- Honeydew Melons
- Lettuce
- Okra
- Onion
- Squash
- Sweet Potatoes
- Watermelon

Ethylene* Producers

- Apples
- Cantaloupe
- Peaches
- Pears
- Plums
-

***Ethylene is a gas that causes many fruits and vegetables to ripen. Certain crops are particularly sensitive to it, while others produce large quantities of it. Ethylene sensitive crops should never be stored with ethylene producers.**

Produce Storage Guide

PRODUCE	Storage Temp in F	Ethylene Sensitive	Ethylene Producer	Odor Sensitive	Odor Producer	Susceptible to Freezing
Apples	32-34	N	Y	Y	N	Y
Bananas	56-58	Y	N	N	N	Y
Beans, Green/Snap	40-45	N	N	N	N	Y
Beans, Lima	37-41	Y	N	N	N	Y
Berries, Blackberries	32-34	N	N	N	N	Y
Berries, Blueberries	32-34	N	N	N	N	Y
Berries, Strawberries	32-34	N	N	N	N	Y
Broccoli	32	Y	N	N	N	Y
Cabbage	32	Y	N	Y	N	N
Cantaloupe	36-41	N	Y	N	N	Y
Carrots	33-35	Y	N	Y	N	N
Cauliflower	32	Y	N	N	N	N
Celery	32-36	N	N	Y	N	N
Corn	34-38	N	N	Y	N	N
Cucumbers	45-50	Y	N	N	N	Y
Grapefruit	45-50	Y	N	N	N	N
Grapes	30-32	N	N	Y	Y	Y
Honeydew	45-50	N	N	N	Y	Y
Lemons	45-48	Y	N	N	N	Y
Lettuce Leaf	34-36	N	N	N	N	N
Lettuce Whole	34-36	Y	N	N	N	Y
Mixed Fresh Cut Fruit	33-41	N	N	N	N	Y
Nectarines	31-32	N	N	N	N	N
Okra	43-45	Y	N	N	N	Y
Onions, Bulb	40-60	Y	N	Y	Y	Y
Onions, Green	32	N	N	N	Y	N
Onions, Sweet	45-55	N	N	Y	Y	Y
Oranges	38-48	N	N	N	Y	Y
Peaches	29-34	N	Y	N	N	Y
Pears	32	N	Y	Y	Y	Y
Peppers, Bell	45-50	Y	N	N	Y	Y
Pineapple	Ripe:45 Unripe:50-55	N	N	Y	N	Y
Plums	unripe at room temp, ripe at 32	N	Y	N	N	Y
Potatoes	45-50	N	N	Y	Y	Y
Salad Mixes, Fresh Cut	33	N	N	N	N	N
Squash	Soft:41-50 Hard:50-55	Y	N	N	N	Y
Sweet Potatoes	55-60	Y	N	N	N	Y
Tomatoes	Ripe:55-60 Unripe:62-68	N	N	N	N	Y
Watermelons	50-60	Y	N	N	N	Y

Produce information and images courtesy of St. Mary's Food Bank Alliance Produce Storage Guidelines

Produce Temperature Groupings

Very Cold 32-38F

- Apples
- Beans, Lima
- Berries, Blackberries
- Berries, Blueberries
- Berries, Strawberries
- Broccoli
- Cabbage
- Cantaloupe
- Carrots
- Cauliflower
- Celery
- Corn
- Grapes
- Lettuce, Leaf
- Lettuce, Whole
- Mixed Fruit, Fresh Cut
- Nectarines
- Onions, Green
- Peaches
- Pears
- Plums
- Salad Mixes, Fresh Cut

Cold 45-50F

- Beans, Snap/Green
- Cucumbers
- Grapefruit
- Honeydew Melons
- Lemons
- Onions, Sweet
- Oranges
- Okra
- Peppers, Bell
- Pineapples
- Potatoes
- Squash
- Watermelons

Cool 55-65F

- Bananas
- Onions, Bulb
- Sweet Potatoes
- Tomatoes

These cooler space groupings are meant to help organize storage for coolers at food banks, not to be taken as an exact indication of recommended storage temperature for each product. For precise temperatures by product, check the Produce Storage Guide

Tips for Sorting Produce

Sanitary Practices

- Make sure anyone sorting is in good health
- Wash hands before touching produce and before returning from a break
- Hairnets and gloves should be worn
- Use masks when handling dusty or dirty produce
- Wash and sanitize surfaces after sorting
 - Sweep floors and sanitize as needed
 - Wash and sanitize sinks
 - Wash, rinse and sanitize any equipment used

Physical Safety Tips

- Use proper lifting techniques for heavy objects
- Adjust workload for volunteers with health problems
- Make sure volunteers take breaks and stay hydrated
- Keep volunteers away from potentially dangerous equipment such as forklifts

General Recommendations

- Do not smell moldy items, this can cause respiratory issues
- Minimize time produce spends outside of ideal storage conditions
- Show volunteers acceptable vs. unacceptable produce items (examples are in the following pages)

Apples

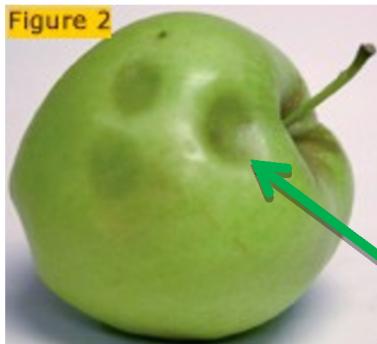
Receiving and Inspecting:

Apples should be firm and have smooth skin.

Storing and Handling:

Apples should be stored at 32-34°F. Susceptible to freezing; do not store below 29°F.

Acceptable

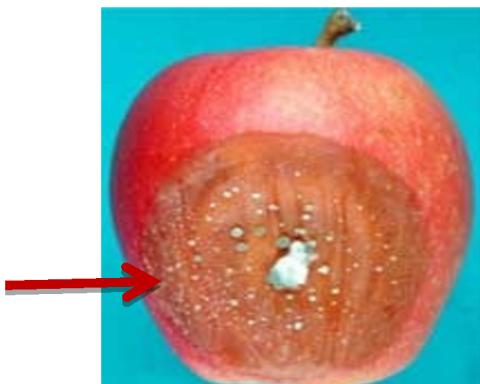


Bruises

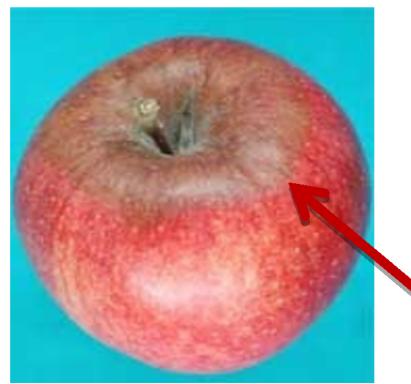


Superficial spot

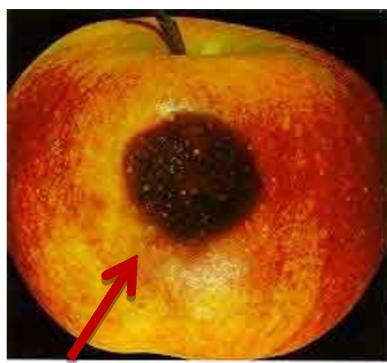
Not acceptable



Blue mold



Gray mold



Alternaria rot



Bull's eye rot

Bananas

Receiving and Inspecting:
Avoid fruit with damaged skins.

Storing and Handling:
Bananas should be stored at 56-58°F. To ripen green bananas, store at 60-65°F. Bananas bruise easily; handle with care.

Acceptable

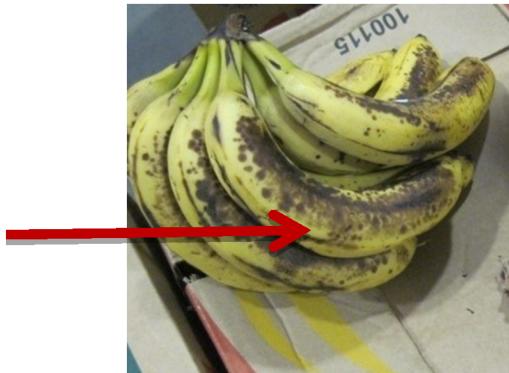


A few bruises



Slight speckling

Not acceptable



Chill damage



Overripe

Cabbage

Receiving and Inspecting:

Cabbage should be fairly even colored and heavy for its size.

Storing and Handling:

Cabbage should be stored at 32-36°F.

Acceptable



Small spots on outer leaves

Not acceptable



Black rot



White rot



Downy mildew

Cantaloupe

Receiving and Inspecting:

Cantaloupe should be round with good netting or webbing over creamy-colored rind. They have a distinctive aroma and the blossom end will yield to gentle pressure when ripe.

Storing and Handling:

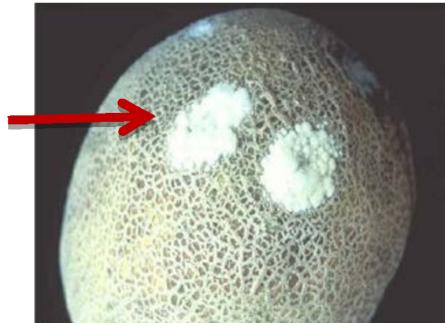
Cantaloupe should be stored at 36-41°F. Susceptible to freezing; to prevent chill injury, do not store below 30°F.

Acceptable



Slight discoloration

Not acceptable



Mold



Decay



Anthracnose

Carrots

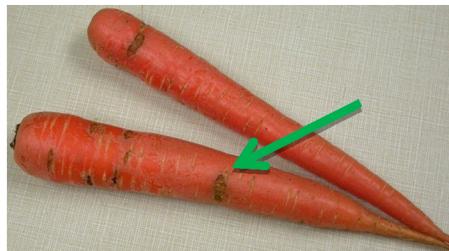
Receiving and Inspecting:

Carrots should have firm, smooth exteriors (should snap when bent far enough). Color should be vibrant orange to orange-red.

Storing and Handling:

Carrots should be stored at 33-35°F. Do not store below 30°F.

Acceptable



Spots on outer surface



Odd shapes

Not acceptable



Rot



Mold



More rot

Lettuce

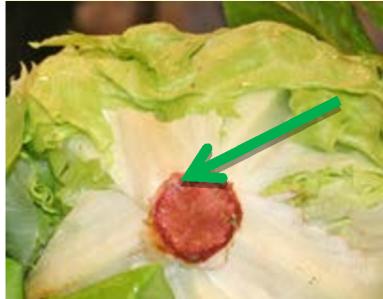
Receiving and Inspecting:

In general, avoid wilted and discolored leaves. For iceberg lettuce, some browning of the core end is natural and occurs from oxidation after lettuce has been harvested and trimmed.

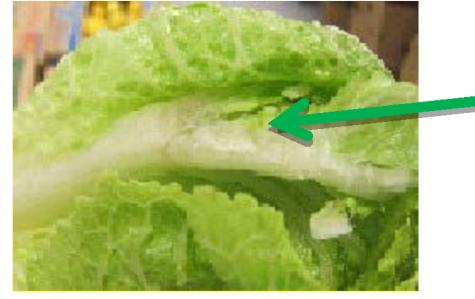
Storing and Handling:

Lettuce should be stored at 34-36°F. Keep lettuce away from drafts to avoid dehydration.

Acceptable



Brown core

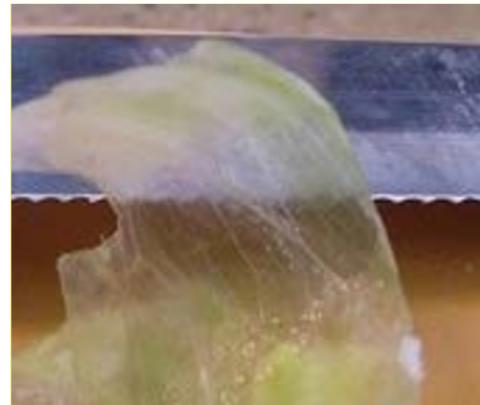


Tear/slight bruising

Not acceptable



Wilting leaves



Translucent leaves (freeze damage)

Onions (bulb)

Receiving and Inspecting:

Good quality onions should be firm and hard with short, tight necks and dry papery skin. Slightly loose outer skin is common and should not affect quality.

Storing and Handling:

Onions should be stored at 40-60°F. For extended storage (longer than 7 days), hold at 32-36°F. Keep out of direct sunlight.

Acceptable



Small sprouts



Unusual shape

Not acceptable



Bulb rot



Bacterial soft rot



Neck rot



Sour skin

Oranges

Receiving and Inspecting:

Oranges should be firm, heavy for size, and have fine-textured skin. Skin color of a ripe orange ranges from orange to greenish-orange. Many oranges go through a regreening process on the tree in which the skin color begins to turn from orange back to green again. Regreening is a natural occurrence and does not affect the flavor quality of the orange.

Storing and Handling:

Optimal storage temperature varies by type. FL: 32-34°F; CA: 45-48°F; AZ & TX: 32-48°F.

Acceptable



Slightly green oranges



Small spots

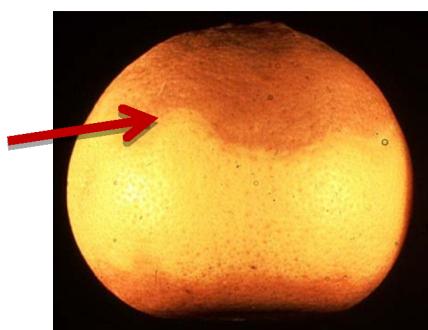
Not acceptable



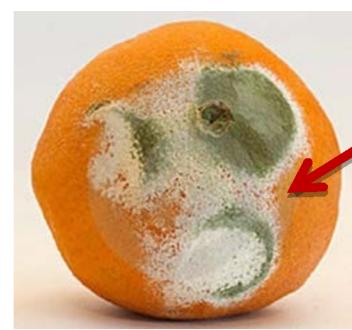
Mold



Mold in navel



Stem end decay



More mold (green)

Potatoes

Receiving and Inspecting:

All potato varieties should be fairly clean, firm, and smooth. Avoid potatoes with wrinkled skins, soft dark spots, or green appearance.

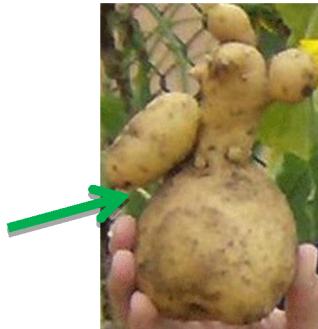
Storing and Handling:

Potatoes should be stored at 45-50°F. Susceptible to freezing; to prevent chill injury, do not store below 42°F.

Acceptable



Small peepers (sprouts)

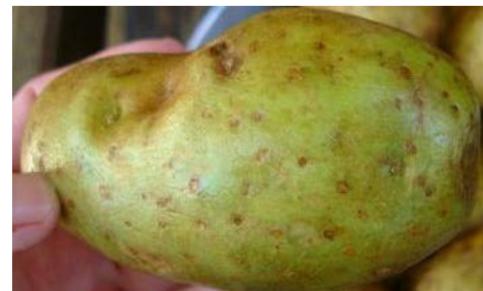


Odd lumps

Not acceptable



Moldy cut



Green potato (solanine)



Common scab



Late blight

Tomatoes

Receiving and Inspecting:

Good quality tomatoes should have bright, shiny skin and firm flesh.

Storing and handling:

Ripe (nearly full red) tomatoes should be stored at 55-60°F; less ripe tomatoes should be stored at 62-68°F.

Acceptable



Slight dent



Greenish tint

Not acceptable



Moldy bruise



Black rot



Late blight



Mold and bruising

Watermelon

Receiving and Inspecting:

Watermelons should be firm. Watermelons do not ripen after harvesting; a ripe watermelon will produce a distinct hollow sound when thumped.

Storing and Handling:

Watermelons should be stored at 50-60°F. Susceptible to freezing; to prevent chill injury, do not store below 41°F.

Acceptable



White/yellow patch



Small spots

Not acceptable



Decay



Anthracnose



Fruit blotch

Storing Food Safely



Store refrigerated food at 41°F (5°C) or lower



Keep frozen food frozen solid



Store food away from walls and at least six inches (15cm) off the floor



Store ready-to-eat food above raw meat, seafood, and poultry



Store food only in containers made for food



Store food only in designated storage areas



Discard Cans With These Defects



Severe dent in seam



Deep dents in can body



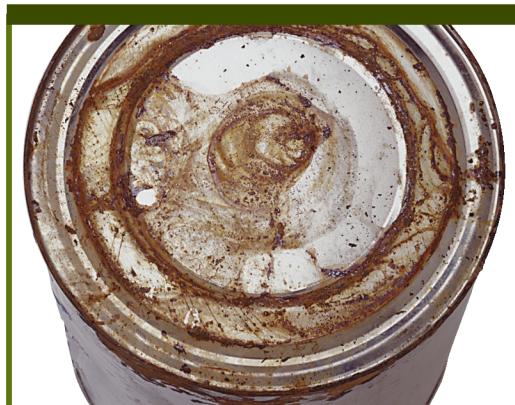
Missing or unreadable labels



Swollen or bulging ends



Holes or signs of leaking



Rust that cannot be wiped off



How To Wash Your Hands

1



Wet your hands and arms

Use running water as hot as you can comfortably stand

2



Apply soap

Apply enough to build up a good lather

3



Scrub your hands and arms vigorously for 10 to 15 seconds

Clean under fingernails and between fingers

4



Rinse your hands and arms thoroughly

Use running warm water

5



Dry your hands and arms

Use a single-use paper towel or hand dryer



Loading and Transporting Food Safely

Keep food at safe temperatures in unrefrigerated vehicles.



Cover cold food with thermal blankets or use coolers with ice packs

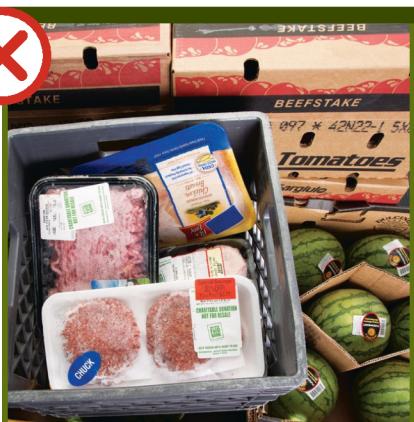


Keep drive times to 30 minutes or less



Check food temperatures after arriving at the destination

Prevent contamination:



DON'T store raw food over ready-to-eat food



DON'T store allergens over other products



DON'T store chemicals with food products



Steps to Clean and Sanitize in a 3-Compartment Sink

Before you clean and sanitize utensils/equipment in a 3-compartment sink, it is recommended that you clean and sanitize each sink and the drain boards.

Then follow these five steps:

1 SOAK, SCRAPE OR RINSE ITEMS

(If necessary.)

2 CLEAN Items in the first sink. Wash them in warm water and detergent. Replace the water when suds are gone or the water is dirty.

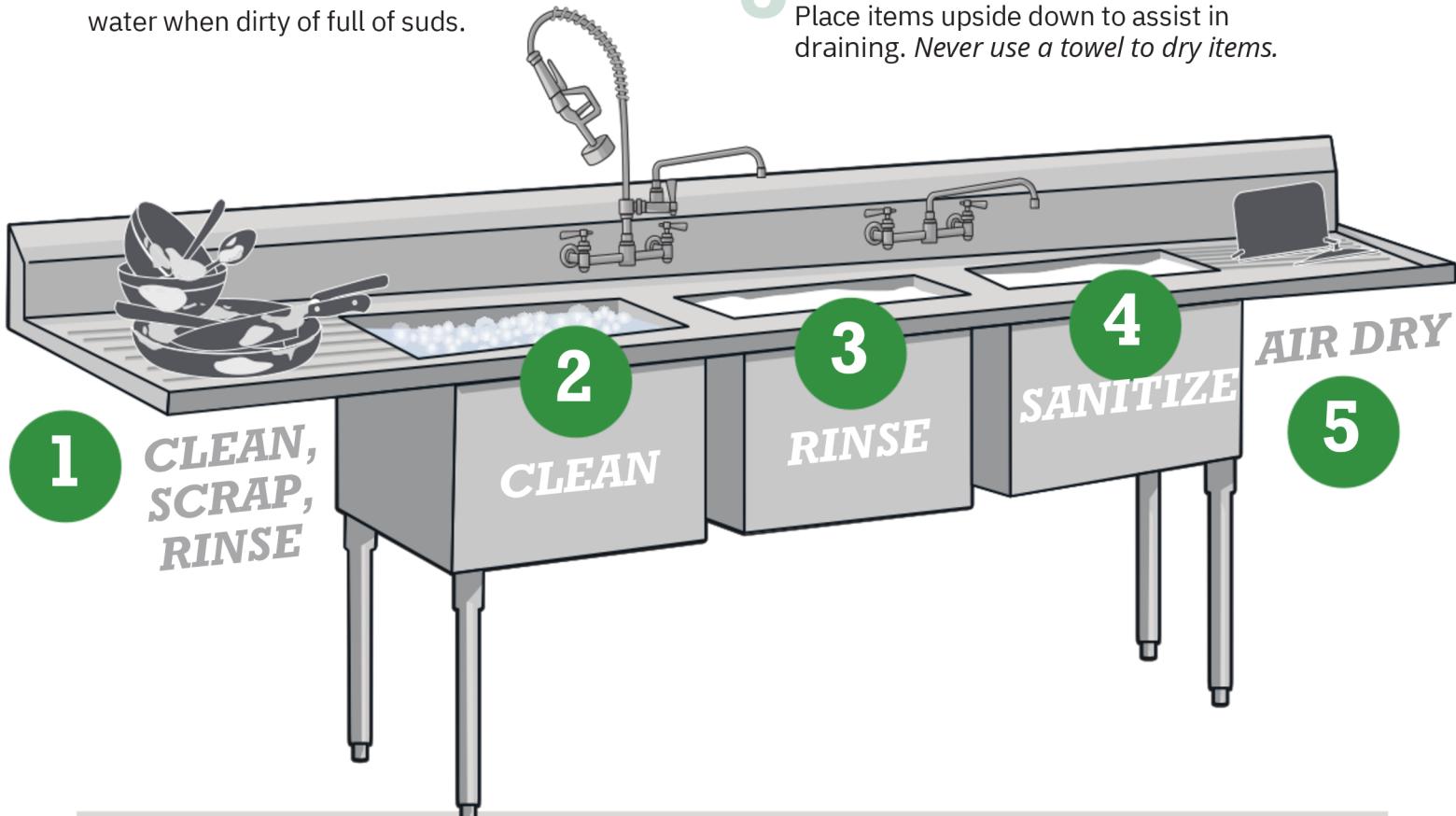
3 RINSE Items in the second sink. Spray with water or dip them into water. Remove all traces of food and detergent. If dipping items, change rinse water when dirty or full of suds.

4 SANITIZE Items in the third sink. Read the label for time and temperature requirements for the sanitizer you are using. Use a test kit to check concentration.

- Chlorine 50-100 ppm at 55°F to 75°F
- Quaternary ammonia 150-400 ppm at 75°F
- Iodine 12.5 to 25 mg/L
- Acid sanitizer must be used according to label directions.

5 AIR DRY ALL ITEMS

Place items upside down to assist in draining. *Never use a towel to dry items.*



For more information and resources on food safety, see our list of [Food Code Fact Sheets](#) or the [Wisconsin Food Code](#)



Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Food and Recreational Safety
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datcp.wi.gov

Sanitizing: Food Contact Surfaces

The sanitizing of cleaned food contact surfaces is an important step in keeping food safe. Routine cleaning and sanitizing of these surfaces will prevent bacterial growth and prevent cross contamination with other kitchen items.

Sanitizer Buckets

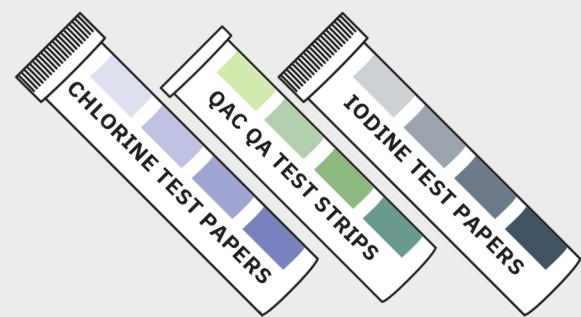
- Bucket should be easily identifiable and labeled as “sanitizer.”
- Store in-use buckets off the floor and in a way that will prevent them from contaminating food and other kitchen items.
- Keep wiping cloths stored in a bucket with sanitizer solution when not being used.
- Replace sanitizer solution when the concentration gets too weak or the solution is visibly soiled.



Sanitizer Spray Bottles

- Spray bottle should be easily identifiable and labeled as “sanitizer.”
- Never spray around open foods.
- Replace solutions when the concentration gets weak.
- Allow contact time if you are wiping off sanitizer.

Test strips are required to check sanitizer concentration to make sure it is within the correct range for that sanitizer type.



*Type	Concentration	Temperature	Contact Time	Note
Chlorine (Bleach) *	50 to 100 ppm	55°F to 75°F	10 seconds	Do not use gel, scented or non-chlorine/color safe bleach
Quaternary Ammonia (QUAT)	150 to 400 ppm <i>Follow label Instructions</i>	Minimum 75°F	30 seconds	Longer contact time is needed with this sanitizer
Iodine	12.5 to 25 mg/L	Minimum 68°F	30 seconds	



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No Bare Hand Contact with Ready-to-Eat Foods

Cross contamination between ready-to-eat food and unclean hands causes foodborne illnesses. You can avoid contaminating food by providing a barrier between your hands and the food.

Ready-to-eat foods are foods consumed without further washing or thorough cooking.

EXAMPLES INCLUDE:



Prepared fresh fruits and vegetables served raw



Cold meats, cheeses and sandwiches



Bread, toast, rolls, and baked goods



Ice



Sushi rolls



Garnishes such as lettuce, parsley, lemon wedges, celery sticks, pickles

Remember to follow proper handwashing steps.

- Food handlers must be trained on proper handwashing.
- The person-in-charge must monitor employee handwashing.
- Monitor to ensure employees are not touching ready-to-eat foods with their bare hands.



What can I use to prevent bare hand contact?

- Single-use gloves
- Deli paper
- Toothpicks or clean and sanitized tongs
- Spatulas and other utensils



When is bare hand contact allowed?

- Bare hand contact when washing raw fruits and vegetables, and when handling ingredients used in food products that will be fully cooked, such as pizza.
- Bare hand contact with exposed food that is not ready to eat should be minimized.
- Bare hand contact with specific ready-to-eat foods may be approved by your inspectional authority. A written plan and prior approval is required. Specific procedures, policies and documentation must be submitted, per Wis. Admin. Code ATCP 75 Appendix 3-301.11(E).

Additional information:

- [DATCP Home Wisconsin Food Code](#)
- [Retail Food Protection: Employee Health and Personal Hygiene Handbook | FDA](#)



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