

ATPC Program Step 2 Training

IMPORTANT

This section is designed to teach you the BASIC foodservice worker knowledge and skills required to perform your duties in a safe and professional manner.

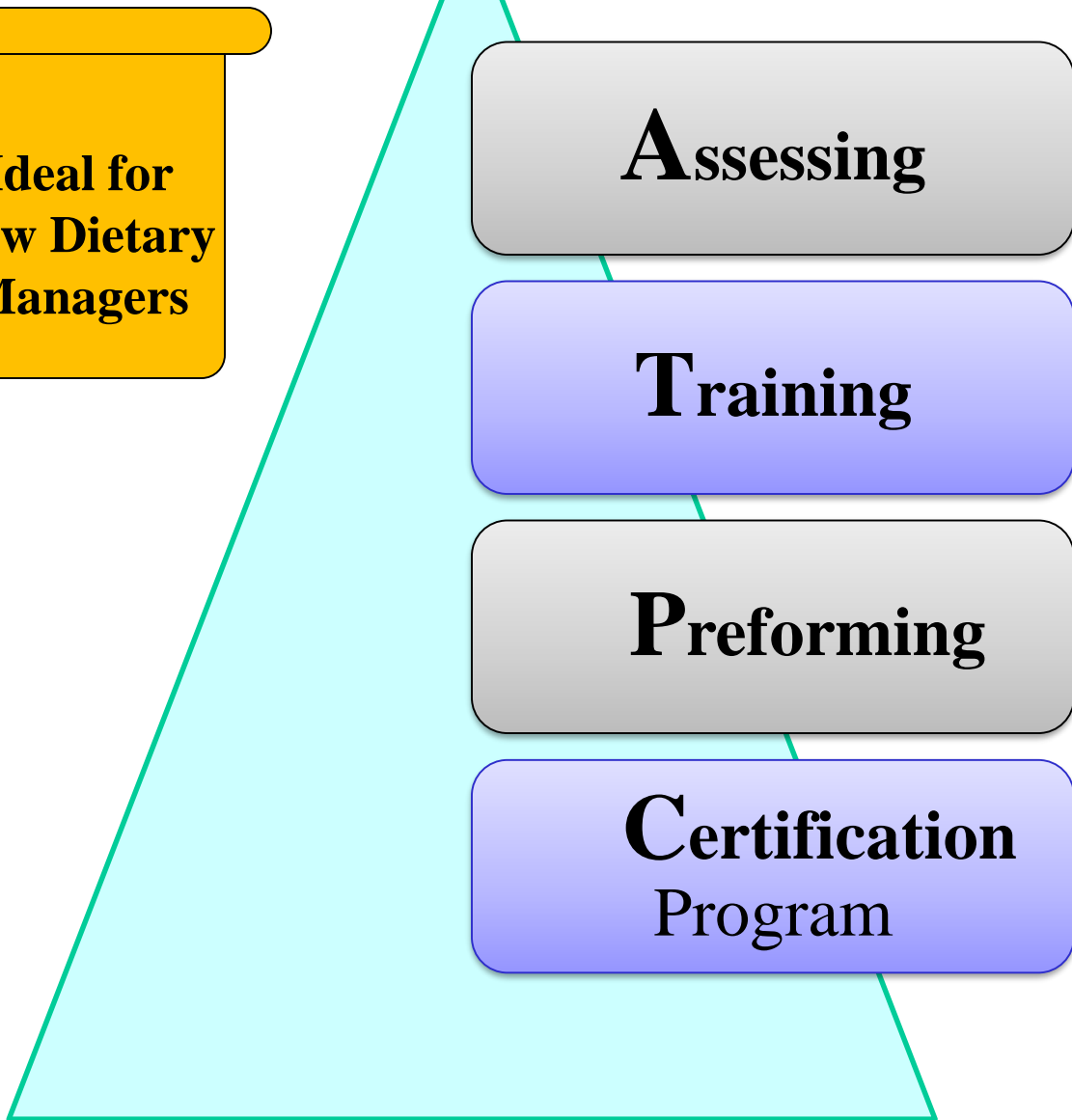
Take your time. Review as needed.

For the best learning experience use Microsoft Power Point. You can get a free power point viewer program at

<http://www.microsoft.com/enus/download/details.aspx?id=13>

Food Service Worker/Aid/Dishwasher/Cook ATPC Program

**Ideal for
New Dietary
Managers**



ATPC Program

Providing BASIC Training for Food Service Employees

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Food Service Workers Certification Procedures

Step 1: Assessing Current Skills:
Take Food Handlers Exam Pre-Test

Step 2: Training: Basic Food Safety, Equipment, & Diets Training by ATPC Book or ATPC slide show presentation.

Step 3: Performing: Hands on Training and Evaluation with Trainer or Dietary Manager.

Step 4: Certification: Complete New employee training check list and Food handlers Exam

Step 5: Retrain: Repeat Steps 2, 3 and 4 if employee fails certification

Step 6: 90 Day Performance Evaluation:
Dietary Manager complete 90 day certification check list (See employees completed New Employee Check List)



Step 2: Training:

Basic Food Safety,
Equipment, & Diets Training
by ATPC Book and/or ATPC
Slide Show Presentation

SECTION 2

Training: Employee must complete this sections

- 1) Hair Net
- 2) Uniform, Aprons Jewelry
- 3) Hand washing
- 4) Gloves
- 5) Dumpster, Flies
- 6) Kitchen Safety, Proper Lifting Technique and Fire Extinguisher
- 7) Bacteria
- 8) Two types of Food
- 9) Preventing Food borne Illness
- 10) Portion control
- 11) Kitchen Rags
- 12) Sanitizer Bucket and Setup
- 13) Kitchen Equipment Sanitizers
- 14) Sweeping and Mopping Kitchen Floor
- 15) 3 compartment sink set up
- 16) How to wash pot/pans in 3 compartment sink
- 17) How to wash pots/pans with 2 compartment sink
- 18) Cold Temperature Dish Machine Set Up

Section 2 (continued)

- 19) Hot Temperature Dish machine set up
- 20) Wash Dishes with Cold / Hot temperature dish machine
- 21) Food Pantry / Dry storage Area
- 22) Self stable food storage, labeling / dating and rotation
- 23) Chemical storage, MSDS sheets
- 24) Refrigerator food storage / temperatures
- 25) Freezer food storage / temperatures
- 26) Order in which food deliveries is put away.
- 27) Danger Zone.

1.) Hair Nets

You **MUST** have a Hair Net on **Prior** to Entering the Kitchen

Food employees shall wear hair restraints such as hats, hair coverings or nets, beard restraints, and clothing that covers body hair, that are designed and worn to effectively keep their hair from contacting exposed food; clean equipment, utensils, and linens; and unwrapped single-service and single-use articles.

BEARD GUARDS (MALES ONLY)

Facial hair is like any other hair as far as foodservice is concerned. It still carries the risk of falling into food, not to mention, facial hair collects tiny bits of food(which grows bacteria), saliva, and germs from nasal membranes



INCORRECT



CORRECT

1.) Hair Nets (Continued.....)

How to put on hairnets

Females.

- Flip your head upside down. Make sure all of your hair is down and not in its normal position.
- Take the hairnet and spread it apart. Start at the tips of you hair and work your way to your head.
- When you get to your head make sure all your hair is in the hairnet and also tuck in any fly always.

Males

Put the hairnet over your hair and make sure all of your hair is tucked inside of it.



INCORRECT

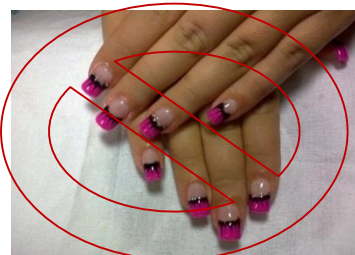


CORRECT

2.) Uniform, Aprons Jewelry

CLOTHING/UNIFORMS

Food employees shall wear clean outer clothing to prevent contamination of food, equipment, utensils, linens, and single-service and single-use articles.



Fingernails

Fingernails (real or artificial) and nail polish can become a physical hazard. Therefore, workers must keep their nails trimmed and filed. Long nails can easily break and end up in food.

Also if nails are long, dirt and microorganisms can collect beneath them. If workers want to wear fingernail polish or artificial fingernails, they must wear single-use gloves.

<http://www.foodsafetysite.com/resources>



Never use apron as hand rag

APRONS

Aprons must be clean and removed when soiled. Also Kitchen employees must take off apron when leaving kitchen area i.e.: restroom breaks, smoking breaks etc.....



Restroom

No Apron ZONE

JEWELRY

While preparing food, food employees **may not** wear jewelry including medical information jewelry on their arms and hands. *This does not apply to a plain ring such as a wedding band.*

3.) Hand Washing

Hepatitis A

Hepatitis A is a serious liver disease caused by the hepatitis A virus that is found in the stool of people with hepatitis A.

<http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-hep-a.pdf>

Can Be Caused By **Not** Washing Your Hands

Before and After Preparing Food

Before Serving Food

Before and After Eating

After Smoking

After Using the Toilet

After Taking Out the Trash

After touching Bare Human Parts

After Coughing, Sneezing and or Scratching

After Caring for or Handling Animals or Fish

After Handling Soiled Equipment or Utensils

Before Putting On or Removing Gloves

After any activity that Contaminates Your Hands

3.) Hand Washing (continued.....)

Hand Washing Station

Enclosed single sheet towel dispenser filler with paper towels

Open Roll of paper towels **IS NOT** a substitute



Hand washing soap dispenser with approved liquid soap



Step Trash Can with lid for used paper towels

Designated Hand washing sink used for Hand washing

ONLY

Sink must be cleaned and sanitized daily and as needed



3.) Hand Washing (continued.....)



3.) Hand Washing (continued.....)

Use Same Paper towel to Turn off water supply



Open step on trash can with foot and place used paper towel inside.



IMPORTANT

The hand washing sink is used for hand washing only !!!
Clean and sanitize sink daily or as needed



4.) Gloves

Proper Use of Gloves

If gloves are worn , **YOU MUST** wear them **CORRECTLY**

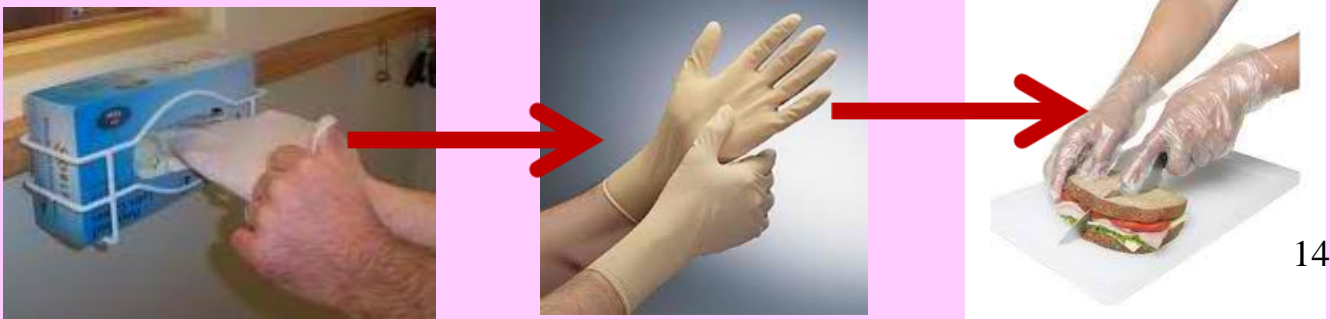
1). You **MUST** wash your hands for 20 seconds before putting on protective Gloves



2). You **MUST** wash your hands for 20 seconds after removing your protective Gloves



3). When changing task/work stations, wash hands and put on **NEW** pair of gloves



4.) Gloves (continued.....)

Proper Use of Gloves (continued)

3 a). A **NEW** pair of gloves must be worn:

1. When changing task.
2. After handling raw meats.
3. Before handling ready to eat food such as sandwiches and after cleaning duties.
4. After covering mouth during sneezing, coughing, blowing nose, or touching hair.

4. **Disposable** gloves should only be used **once**.

5. Durable re-usable gloves must be washed and sanitized between task and stored carefully after removal to prevent contamination

6. Gloves should **ALWAYS** be worn by employees:

- Who have cuts, sores or rashes on hands
- Who wear orthopedic support devices on the hands that cannot be adequately cleaned such as casts and braces.
- Who wears artificial nails or fingernail polish

5.) Dumpster and kitchen trash cans:

Dumpster and Kitchen Trash Can Lid MUST be closed at ALL Times



Wash your hands after take out the trash or touching trash and/or trash can

5.) Dumpster and kitchen trash cans:



YOU EVER WONDER HOW A FLY EATS ?

Believe it or not, flies can not eat solid food. In order to eat the fly must do the following.



- I. First the fly vomits digestive juices on the food.
- II. Second the fly does a little dance, stomps the vomit into the food, and adds a pinch of germs for good measure.
- III. Third; when the vomit liquefies the food, the fly sucks it in. If you are lucky you may get a few droppings and excrements for extra flavor.
- IV. Then its your turn to eat!



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6.) Kitchen Safety

FOOD SERVICE WORKER SAFETY RULES

Safety Rules are in place to keep **YOURSELF** and your fellow employees **SAFE**. Failure to follow these rules can change your quality of life or someone else's "in a moment."



To Prevent Falls

Use a stepladder of safe construction.

Keep floors dry and free from litter.

<http://www.cartoonmotivators.com/images/P/StandingOnChair.jpg>

Clean up spilled food, water or grease at once.

Request for immediate repair of any hazard such as broken floor, fallen wires, etc...

Keep traffic aisles and passages clear, including electrical cords.



www.ogusbaba.com

To Protect Against Cuts:

❖ Keep knives sharp and store separately in a drawer.

❖ Use tools for purposes for which they were made. For example do not use cleaver or knives to open cans or knife blades as a screwdriver.

❖ Cut away from, never towards body.

❖ Be sure the can opener leaves no jagged edges on cans.

❖ Sweep up broken glass. To pick up very small pieces use wet toweling then wrap all broken glass in paper. Dispose promptly.

❖ Use approved cutting board for cutting or chopping food.

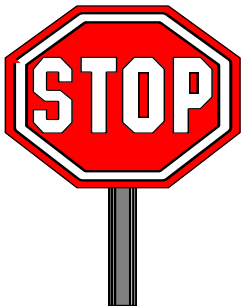
❖ When cutting keep tips of fingers back to prevent injury.

❖ Collect all sharp tools on a tray and wash each item separately from other utensils.

❖ Use plastic or paper for drinking containers in the kitchen, never glass.

6.) Kitchen Safety (continued....)

Proper Lifting, Pushing and Carrying Technique



THINK BEFORE YOU LIFT



Don'ts of lifting

- ✓ Avoid heavy lifting if you have a history of joint injuries, are poorly nourished or overweight, or have any medical problems such as hernias, heart disease or high blood pressure.
- ✓ Never lift more than you can easily handle.
- ✓ Never reach over your shoulders to lift. Use a step stool or ladder not at chair, box or other objects not intended to handle your weight.
- ✓ Never lift with your back rounded and legs straight.
- ✓ Avoid twisting your body when lifting or when carrying. Move your feet to change direction.
- ✓ Never look down when lifting.
- ✓ Never lift from an unbalanced position. This means no lifting from one knee on the floor.
- ✓ Never carry an object through an obstructed path.
- ✓ Never try to recover a falling load.

6.) Kitchen Safety (continued....)

To Prevent Burns:



brotherjournal.blogspot.com

- Turn handles of pans on range so that pans cannot be knocked off or caught in clothing and pulled off. Always use dry pot holders/gloves to remove hot pots and pans.
- To avoid scalds, tilt lids away and get help to remove.
- Prepare a place to put hot pots and pans before removing them from range or oven. Move hot food on a cart.
- Keep papers, plastic aprons and other flammable materials away from hot areas.
- Pull rack out part way or use puller to remove items from oven.
- Use ONLY pots and pans that are serviceable with sturdy handles.
- Pour hot fat into a metal container and allow it to cool before moving to store.
- Keep moisture at a minimum when putting food in fryer.
- Operate steam equipment according to instructions.

NEVER use/operate any equipment in the kitchen that you have not been trained to operate.



6.) Kitchen Safety (continued....)

Equipment Operation:

- Never use/operate/turnoff kitchen electrical equipment with WET HANDS and/or standing on a WET Floor. (exception using dish machine)
- Make sure all your electrical appliances have plugs and electric cords in good working order. NEVER unplug electrical equipment by grasping cord.
- Never operate any kitchen electrical appliance/equipment until you received HANDS ON TRAINING on that appliance/equipment BY manufacturer's instruction for safe operation.
- Be careful in handling slicing, chopping, grinding and mixing equipment.
- Never operate without or REMOVE safe guards on any equipment that mixes, slices, chops or grinds.
- Keep hands and spoons away from moving parts, as in using mixer, grinder attachments and slicers.
- Turn off mixer and wait until all moving parts have stopped before adding ingredients, scraping down sides of bowls or removing foods.
- Turn off electrical switches and gas controls when equipment is not in use.
- Make sure that the pressure gauge is at zero before opening steamer.
- Make sure all employees know the location of master cut off switch for kitchen electrical/gas equipment.



**NEVER use/operate any equipment
in the kitchen that you have not received
HANDS ON TRAINING on how to operate.**



6.) Kitchen Safety (continued....)

Fire Extinguisher

Fire Classification Know How To Handle It

Classes Of Fires	Types Of Fires	Picture Symbol	Extinguisher
	Wood, paper, cloth, trash and other ordinary materials.		<ul style="list-style-type: none">WaterFoam SprayABC PowderWet Chemical
	Gasoline, oil, paint and other flammable liquids		<ul style="list-style-type: none">Foam SprayABC PowderCarbon Dioxide
	May be used on fires involving live electrical equipment without danger to the operator		<ul style="list-style-type: none">ABC Powder
	Combustible metals and combustible metal alloys		<ul style="list-style-type: none">ABC PowderCarbon Dioxide
	Cooking media (Vegetable or Animal Oils and Fats)		<ul style="list-style-type: none">Wet Chemical

6.) Kitchen Safety (continued....)

Fire Extinguisher

How To Use Fire Extinguisher

Remember the **PASS** word (**P**ull - **A**im - **S**queeze - **S**weep)

P

Pull

Pull The Pin



Break seal
and test
extinguisher



A

Aim

Aim At
The Base
Of Fire



Ensure you have
a means of
escape



S

Squeeze

Squeeze The
Operating
Handle



To operate
extinguisher
and discharge
the agent



S

Sweep

Sweep From
Side To Side

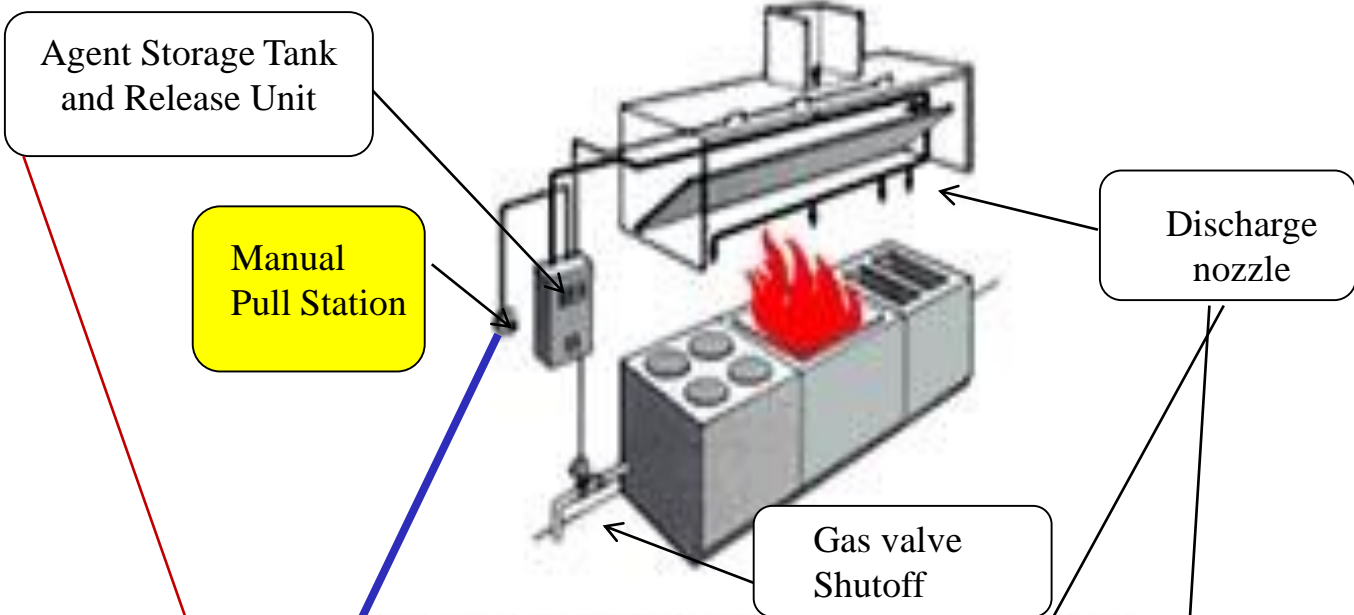


Completely
extinguish
the fire



6.) Kitchen Safety (continued....)

Kitchen Fire Extinguisher

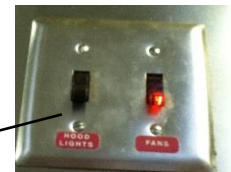


Kitchen Hood Suppression Systems

<http://www.apxinc.com/images/restauranthood.jpg>



PULL to Operate



Exhaust fan and light switch

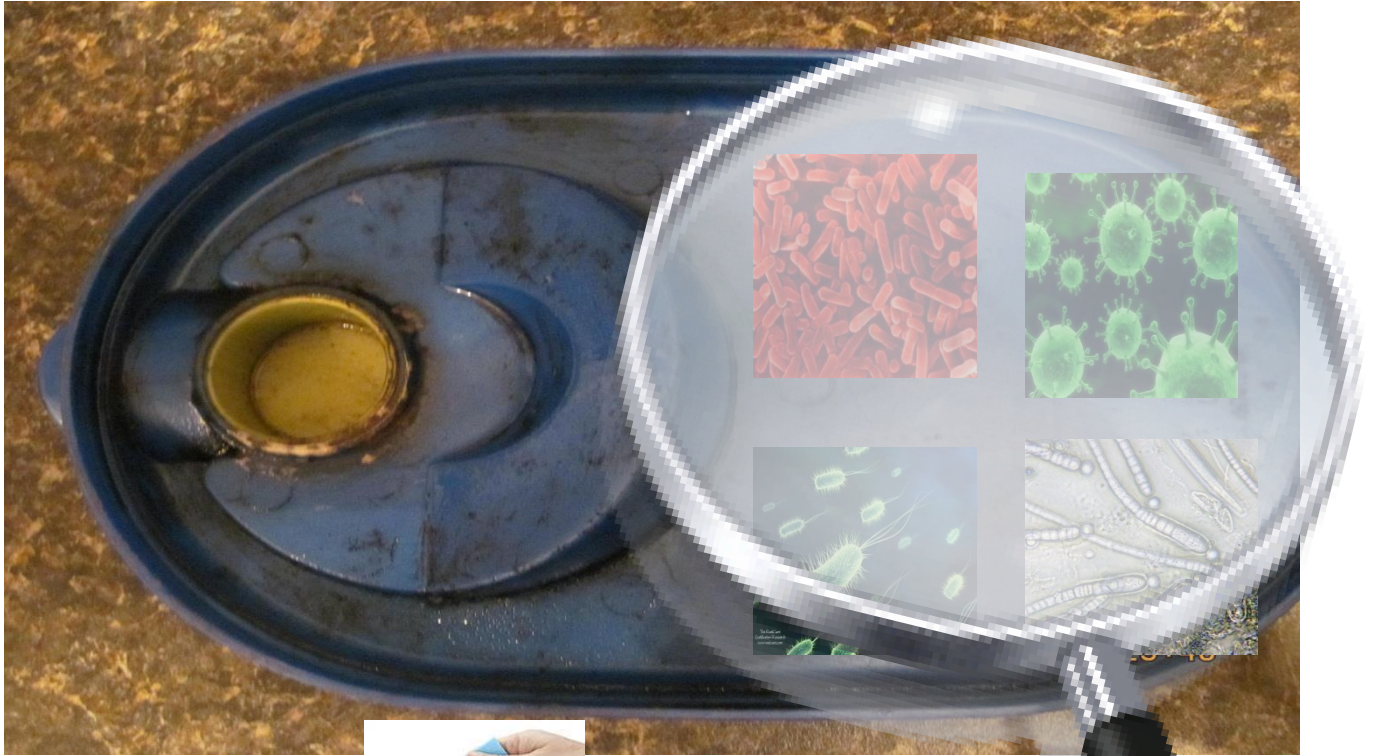


6.) Kitchen Safety (continued....)

Place your kitchen fire drill
procedures and individual
responsibility procedures here

7.) Bacteria

Bacteria requires 4 thing to grow



1. FOOD



2. MOISTER



3. TEMPERATURE



4. TIME



Each bacteria will take 20 minutes to double so in a few hours, there could be thousands.

8). TWO TYPES OF FOODS

I. Potentially Hazardous Foods

Bacteria does grow well in these foods Strict temperature control is needed to keep foods safe

1. Any food that requires refrigeration or kept frozen
2. Any **cut** raw vegetable or Fruit
3. Any food which is mechanically altered, stirred, mixed, assembled, etc.....
4. Any food being cook, or being held on steam table/warmer
5. Any food once its been open

8). TWO TYPES OF FOODS (continued...)

II. Non-Potentially Hazardous Foods

Bacteria does not grow well in these foods.
Temperature control is not necessary to keep food safe.

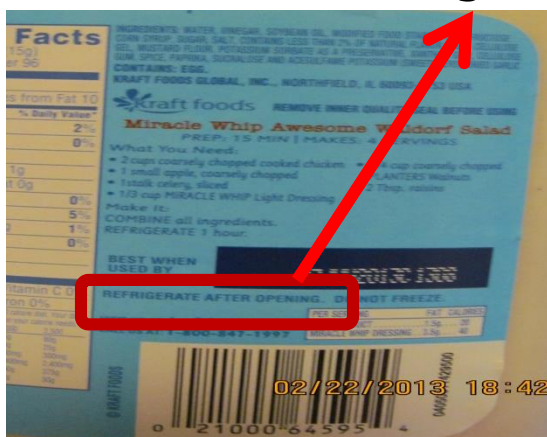
1. Unopened Self stable foods which do not require refrigeration and can be stored at room temperature.
2. Fresh **UNCUT** fruit and vegetables.
3. Uncooked dry foods, i.e..... rice, pasta, beans, flour, sugar, spices. freeze dried foods, dried etc.....
4. Any food being stored in your pantry.

IMPORTANT Thing to REMEMBER

some shelf stable foods become
Potentially Hazardous Foods after opening.

So you **MUST**

Read your food label and look for
Refrigerate after opening



9.) Preventing Food borne Illness

Tips on Preventing Food borne Illness and Contamination

. Food Handling Techniques

- . Use proper hand washing techniques, before touching food
- Touch food as little as possible. Use spoons or tongs when handling food**
- Always keep food covered and at correct temperature
- Prevent cross contamination
- Always use sanitized work surfaces and utensils
- .Don't taste raw meat, poultry, fish or poultry



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Portion Controlled Serving Utensils



Non Portion Controlled
Serving Utensils

9.) Preventing Food borne Illness (continued)

Tips on Preventing Food borne Illness and Contamination

Utensil Care and Storage

- . All utensils and cookware should be kept clean and in good repair
- . Cracked or chipped dishes should not be used
- . Handle dishes so as not to contaminate food contact surface
- . Store dry dishes on clean surface
- . Glasses stored with rim down
- . Silverware should be stored with handles in same directions

Personal Hygiene

- Begin the work day with clean body and uniform
- Wash hands before preparing or serving food
- Keep fingernails short, clean and free from polish
- Do not smoke, eat, chew gum or drink while preparing or serving food
- Report all illness to management to determine if it is safe to be handling food

Vomiting

Diarrhea

Fever (with or without a sore throat)

Jaundice

Diagnosed with one of the following:

Hepatitis A

Shiga toxin-producing Escherichia coli

Shigella spp

Salmonella Typhi

Norovirus

- . Cover all sores, cuts and burns appropriately
- . Wear appropriate hair restraints



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10.) Portion Control

Portion Controlled Serving Utensils

How to determine Ladle & SPOODLE serving size



Spoodle Serving Sizes

- 1 oz.
- 2 oz.
- 3 oz.
- 4 oz.
- 6 oz.
- 8 oz.
- 12 oz.



Warning you can no longer go by handle
color to determine serving size

Portion Controlled Serving Utensils

How to determine DISHER (ice cream Scoop) serving size



Number	Level Measure	Number	Level Measure
6	2/3 cup	30	2 Tbsp..
8	1/2 cup	40	1 2/3 Tbsp..
10	3/8 cup	50	3 3/4 tsp.
12	1/3 cup	60	3 1/4 tsp.
16	1/4 cup	70	2 3/4 tsp.
20	3 1/3 Tbsp..	100	2 tsp.
24	2 2/3 Tbsp..		

Warning you can no longer go by handle **color** to determine serving size



Location of Disher/Scoop Size

To determine serving amount use the following formula

$$\frac{32 \text{ oz.}}{\text{Scoop/Disher No.}} = \text{servng amount}$$

$$\frac{32 \text{ oz.}}{\# 16 \text{ scoop}} = 2 \text{ oz.}$$

Important Portion Control Recipe Abbreviations

<u>Abbreviation</u>	<u>Meaning</u>
approx.	approximate
tsp. or t	teaspoon
Tbsp.. or T	tablespoon
c	cup
pt.	pint
qt.	quart
gal.	gallon
wt.	weight
oz.	ounce
lb. or #	Pound (3#)
g	gram
kg	kilogram
vol	volume
mL	milliliter
L	Liter
fl oz.	Fluid ounce
No. or #	number (# 3)
in or “	inches (12”)
‘F	Degree Fahrenheit
‘C	Degree Celsius

Equivalent in Weight

ounces	Pounds in fractions	Pounds in decimals
16 oz.	= 1 lb.	= 1.000 lb.
12 oz.	= ¾ lb.	= 0.750 lb.
8 oz.	= ½ lb.	= 0.500 lb.
4 oz.	= ¼ lb.	= 0.250 lb.
1 oz.	= 1/16 lb.	= 0.063 lb.

Volume Equivalence for Liquids

60 drops	= 1 tsp.	
1 Tbsp..	= 3 tsp.	= 0.5 fl oz.
1/8 cup	= 2 Tbsp..	= 1 fl. oz.
¼ cup	= 4 Tbsp..	= 2 fl. oz.
1/3 cup	= 5 Tbsp.. + 1 tsp.	= 2.65 fl. oz.
3/8 cup	= 6 Tbsp..	= 3 fl. oz.
½ cup	= 8 Tbsp..	= 4 fl. oz.
5/8 cup	= 10 Tbsp..	= 5 fl. oz.
2/3 cup	= 10 Tbsp.. + 2 tsp.	= 5.3 fl. oz.
¾ cup	= 12 Tbsp..	= 6 fl. oz.
7/8 cup	= 14 Tbsp..	= 7 fl. oz.
1 cup	= 16 Tbsp..	= 8 fl. oz.
½ pint	= 1 cup	= 8 fl. oz.
1 pint	= 2 cups	= 16 fl. oz.
1 quart	= 2 pints	= 32 fl. oz.
1 gallon	= 4 qts	= 128 fl. oz.

10.) Portion Control (continued.....)

How to weigh food with a food scale.

Electric scale follow the same procedure but follow manufactures instructions on how to zero scale.



Step 1 : Clean and sanitize weighing scale



Step 2 : Zero your scale.
Turn the dial to zero.



Step 3: Put a clean and sanitized pan, plate, bowl weighing paper etc.....



Step 4: Zero your scale
Turn the dial to Zero

10.) Portion Control (continued.....)



Step 5: Place item being weighed in pan. If pan moves, center the pan again.



Step 6: read scale for items weight

Ex; this chicken is 3 oz.



IMPORTANT

When serving ground beef, scrambled eggs, or any ground/chopped foods. You cannot go by scoop size. You **MUST** weigh the food to determine what size scoop to use, due to air pockets in ground/chop food..

Portion Controlled Serving Utensils (Continued)

Fraction to Decimal Equivalents

Information from <http://www.nfsmi.org/documentlibraryfiles/PDF/20081006054447.pdf>

Fraction	Decimal Equivalents		Fraction	Decimal Equivalents
1/8	= 0.125		5/8	= 0.625
1/4	= 0.250		2/3	= 0.666
1/3	= 0.333		3/4	= 0.750
3/8	= 0.375		7/8	= 0.875
1/2	= 0.500			

Metric Conversion to Grams and Liters.




U.S.A. Units	Metric Units
Ounces (oz.)	Grams (g)
1 oz.	= 28.35 g
4 oz.	= 113.4 g
8 oz.	= 226.8 g
16 oz.	= 543.6 g
Pounds (lb.)	Grams (g)
1 lb.	= 453.6 g
2 lb.	= 907.2 g
Pounds (lb.)	Kilograms (kg)
2.2 lb.	= 1 kg (1000 g)

U.S.A. Unit	Metric Unit
Ounces	Milliliter Liter
8 oz.	= 236.59 ml
32 oz.	= 946.36 ml
48 oz.	= 1.42 L
33.818 oz.	= 1.0 L

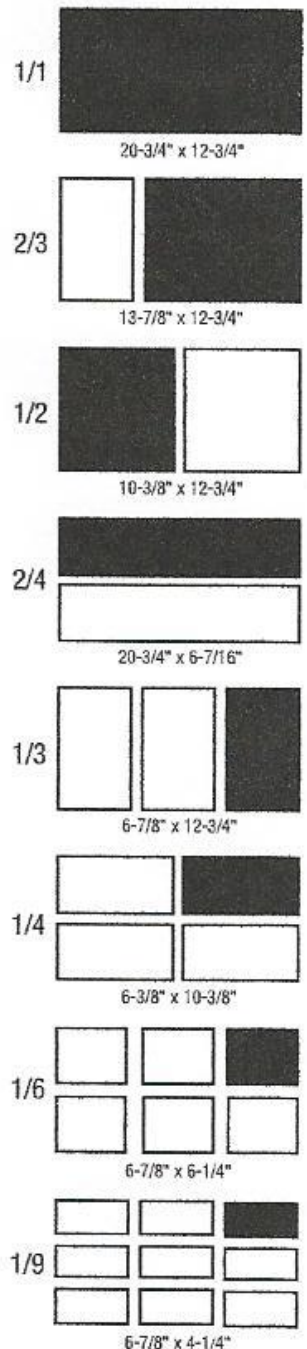


Portion Controlled Serving Utensils (Continued)

Steamtable Pan Capacity

Pan Size	Approx. Capacity	Serving Size	Ladle (fl oz)	Scoop #	Approx. # Servings
12" x 20" x 2-1/2" 	2 gal	1/2 cup	4 oz	8	64
		3/8 cup	3 oz	10	80
		1/3 cup	2.65 oz	12	96
		1/4 cup	2 oz	16	128
12" x 20" x 4" 	3-1/2 gal	1/2 cup	4 oz	8	112
		3/8 cup	3 oz	10	135
		1/3 cup	2.65 oz	12	168
		1/4 cup	2 oz	16	224
12" x 20" x 6" 	5 gal	1/2 cup	4 oz	8	160
		3/8 cup	3 oz	10	200
		1/3 cup	2.65 oz	12	240
		1/4 cup	2 oz	16	320

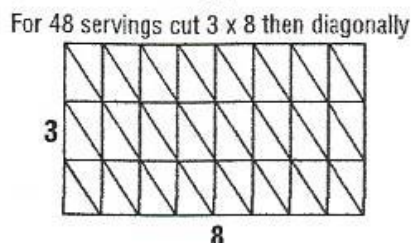
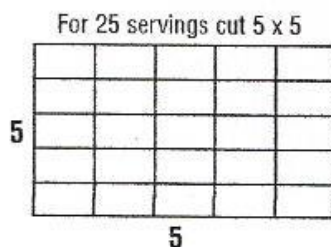
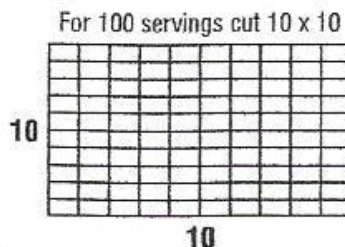
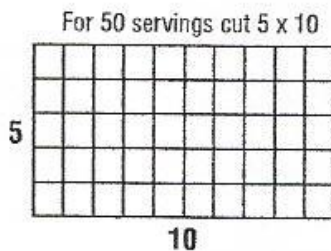
Other Pan Sizes



Approximate Dimensions of Serving Sizes from Different Pan Sizes

Pan	Approx. Size	No. and Approx. Size Servings per Pan		
		25	50	100
Baking or steamtable	12" x 20" x 2-1/2"	2" x 3-3/4"	2" x 2"	-----
Sheet or bun	18" x 26" x 1"	3-1/4" x 5"	3-1/4" x 2-1/2"	1-3/4" x 2-1/2"

Cutting Diagrams for Portioning



Steamtable or counter pans are available in various sizes. Smaller size pans may require the use of an adapter bar.

11.) Kitchen Rags

Where do you put rags after you use them?

Incorrect



Incorrect



Correct



Sanitizer Bucket

12.) Sanitizer Bucket and Setup

How to prepare sanitizer water for sanitizer bucket



Step 1: Take a bucket and draw a water fill line with a Permanente marker

Step 2: Fill to fill line with warm water

Step 3: Starting with $\frac{1}{2}$ teaspoon of beach mix it in water and test chlorine concentration with a test strip

Step 4: Test strip should read 50 to 100 ppms Chlorine

Step 5: If too weak add another $\frac{1}{2}$ teaspoon of bleach and retest solution until mixture is 50 to 100 ppms

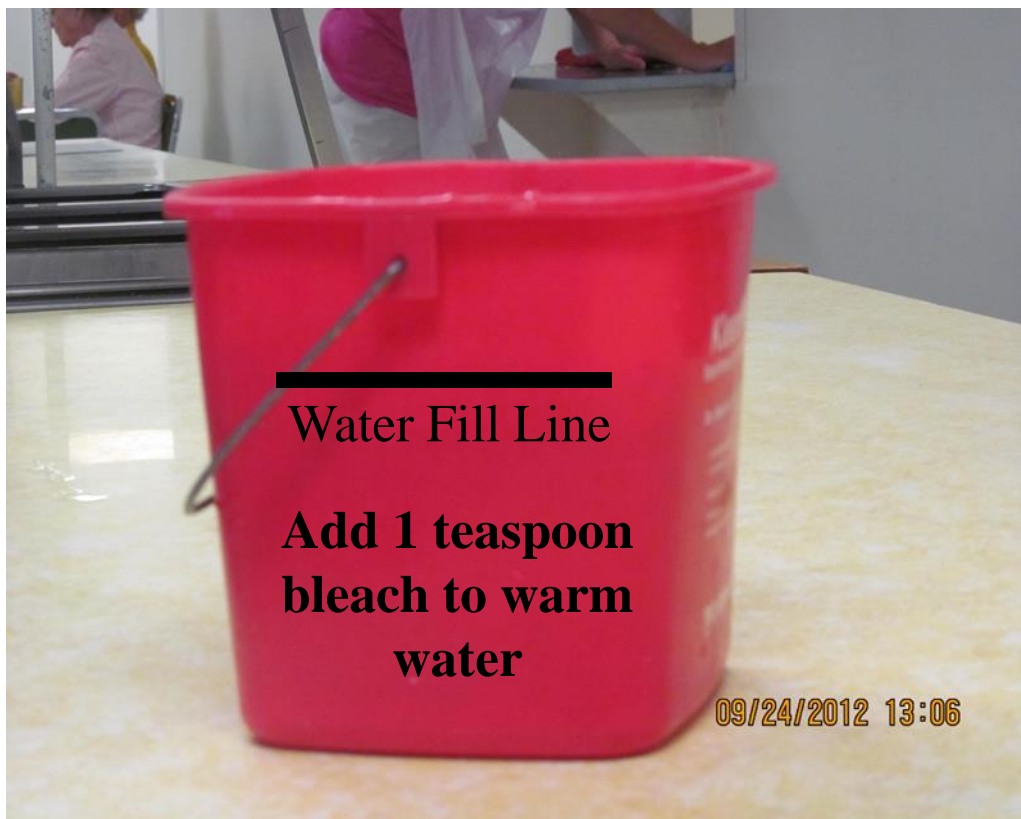
Note if solution is too strong. Empty the bucket rinse several times. Refill to fill line and reduce test amount till 50 to 100 ppms is reached

12.) Sanitizer Bucket and Setup (Continue....)

Step 6: Write amount of bleach needed to make exact solution without using another test strip

WARNING

Chlorine solution 200 ppm or stronger is TOXIC



Change solution every 2 hours or as needed.

13.) Kitchen Sanitizer, and Testing Devices

Quaternary
Ammonia



Test Stripes



Strength needed
To sanitize

200 ppm

You Must
hold the test strip in
solution for
1 seconds

Iodine



12.5 to 25 ppm

*You Must
hold the test strip
in
solution for
60 seconds*

Chlorine



50 to 100 ppm

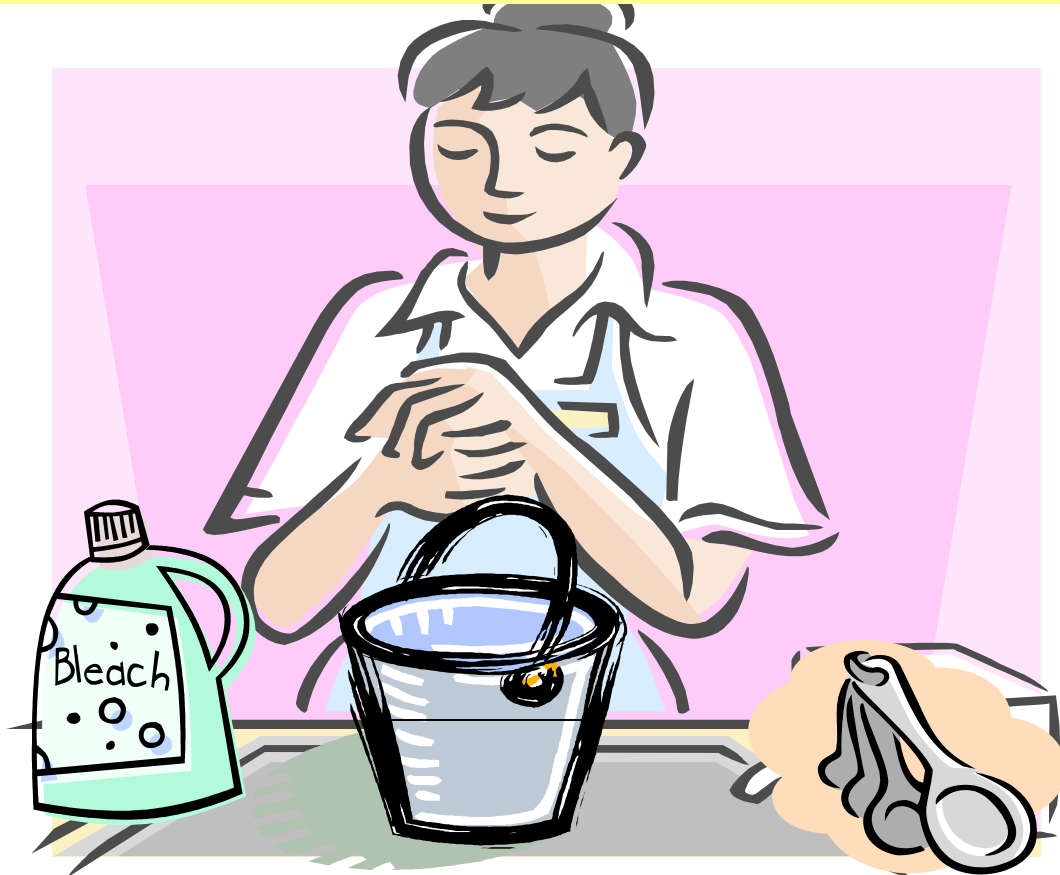
You Must
hold the test
strip in
solution for
1 seconds

**Check test strip manufactures instructions
to verify test strip time.**

13.) Kitchen Sanitizer, and Testing Devices (continue...)

My Supervisor wants me to sanitize the dining room tables. She said to fill the bucket to the fill line with water and mix in ONLY one teaspoon of bleach.

I will add 3 teaspoons to be on the safe side!



WARNING

Adding too much of any sanitizer solution can make the solution

TOXIC



13.) Kitchen Sanitizer, and Testing Devices (continue...)



How to Sanitize a Food Contact Surface (i.e.....table top)

STEP 1. Clean the surface with a cloth/rag containing detergent solution.

STEP 2. Rinse the surface

STEP 3. Sanitize the surface with a cloth/rag containing **CORRECT AMOUNT** of sanitizer solution.

STEP 4. allow the surface to **AIR** dry.

How to Clean and Sanitize Kitchen Equipment

Step 1. Unplug the equipment.

Step 2. Disassemble the equipment by manufactures instruction.. Remember kitchen equipment is potential dangerous and expensive to replace. **IF YOU DO NOT KNOW what YOU ARE DOING ASK for HELP.**

Step 3. Wash, rinse, and sanitize the removable parts in a three compartment sink.

Step 4. Wash and rinse the stationary parts.

Step 5 Sanitize any areas that touches food.

Step 6. Air dry.

Step 7. Wash your hands and reassemble air dried parts

14.) Sweeping and Mopping Kitchen Floor

How to Properly Sweep and Mop the Kitchen Floor.



WARNING: If further foot traffic is unavoidable, be sure to post a wet floor sign.

STEP 1: Wipe down all of the counters, clearing all crumbs and debris.

STEP 2: Pick up all floor mats in the kitchen, if your facility uses them. **First clean them and roll them up in a designated storage space that's out of the way.**

STEP 3: Sweep the floor and under the refrigeration and storage stations. It's vital to be thorough; if there's exposed flooring, it should be swept. Any residual debris can compromise the mopping and scrubbing steps ahead.

STEP 4: Set up your mop bucket with water and the cleaning solution that your facility uses. Read the instructions carefully to obtain the most safe and effective mixture.

- a). Too much water and the floors don't get clean.
- b). Too much solution, and it could pose a health risk.

Soak the floor, refraining from squeezing the solution out of the head since saturation is the goal at this point. 44

"Clip art Used with permission from Microsoft."

14.) Sweeping and Mopping

Kitchen Floor (Continued...)

STEP 5: Scrub the floors, preferably with a deck brush. This is good for stubborn stains and also picking up what a mop may have missed. If there are ridges or grooves in the floor, consider using a grout brush for those hard to reach areas.

STEP 6: Dip the mop in the solution, squeeze it out thoroughly and begin mopping up the water. Dip it frequently in order to keep the mop head as sanitized as possible. Start from the end of the room furthest from your exit so as to not mop yourself into a corner



"Clip art Used with permission from Microsoft."

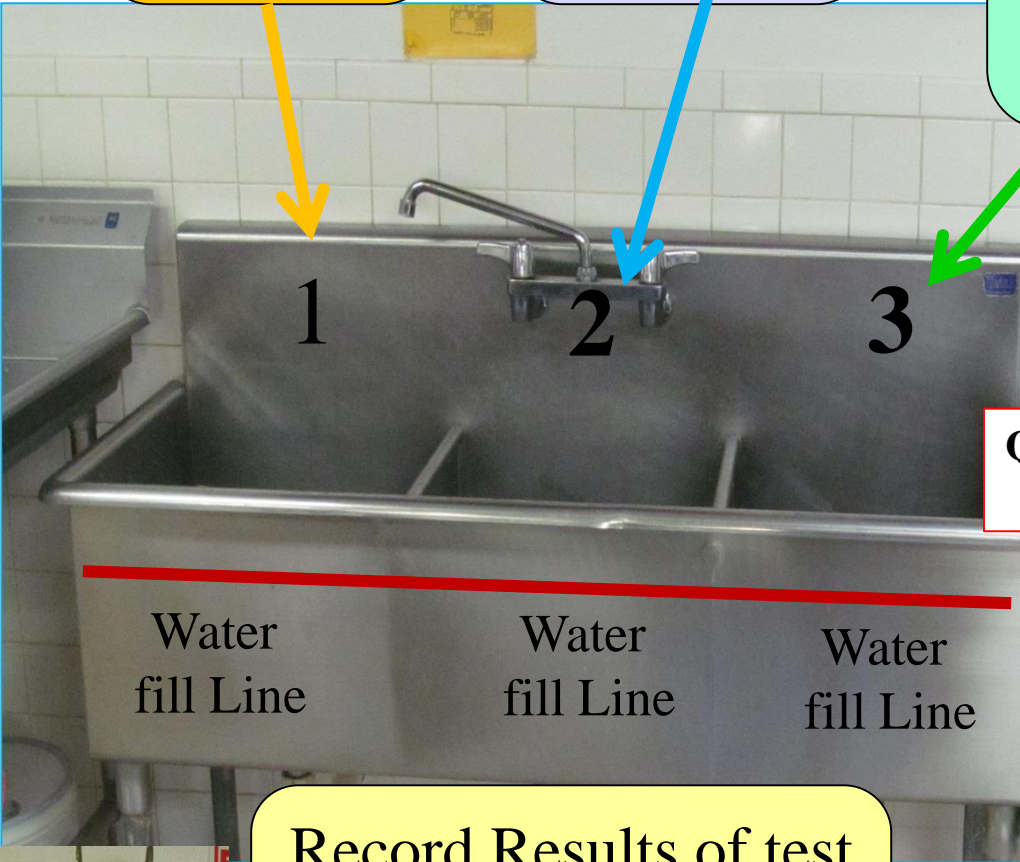
15.) 3 Compartment Sink setup Procedures

Using Quaternary Ammonia

Tank 1
Hot Soapy
Water
120°F or >

Tank 2
Clean warm
water

Tank 3
COLD
Water < 75°F
Quaternary
Ammonia
200 ppm

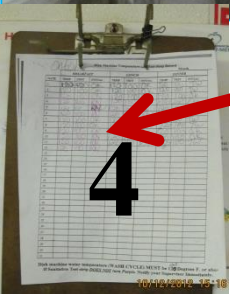


Quaternary Ammonia
Test Strips



Micro Quat.
Mix according to
manufacturer's instructions

Record Results of test
BEFORE washing
pots and pans



WARNING

Tank 3 water temperature is **COLD Water Only**
Not less than 75°F

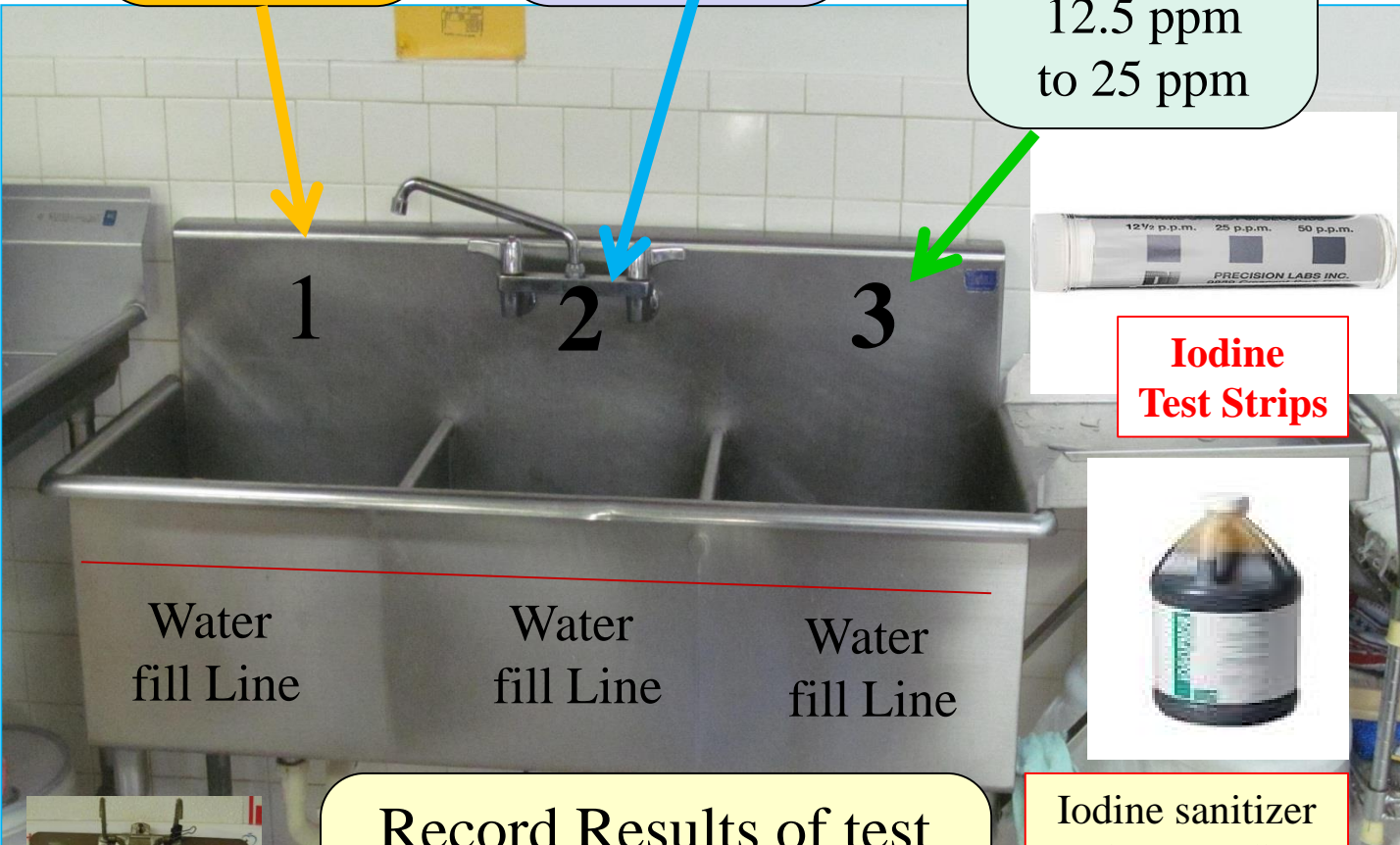
15.) 3 Compartment Sink Setup Procedures

Using Iodine

Tank 1
Hot Soapy
Water
120°F or >

Tank 2
Clean warm
water

Tank 3
COLD
Water < 75°F
Iodine
12.5 ppm
to 25 ppm



**Iodine
Test Strips**



Iodine sanitizer
Mix according
to
manufacturer's
instructions

Record Results of test
BEFORE washing pots
and pans

4

WARNING

Tank 3 water temperature is
COLD Water Only Not less than 75°F

15.) 3 Compartment Sink Setup Procedures

Using Chlorine

Tank 1
Hot Soapy
Water
120°F or >

Tank 2
Clean warm
water

Tank 3
COLD
Water at
least 75°F
50m to 100
ppm

1

2

3

Water
fill Line

Water
fill Line

Water
fill Line



Chlorine
Test Strips



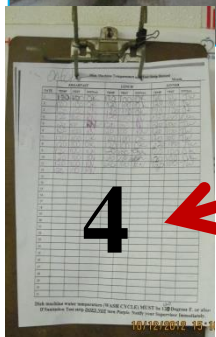
Chlorine
sanitizer

Record Results of test

BEFORE

washing pots and pans

4



WARNING

Tank 3 water temperature is
COLD Water Only Not less then 75°F

16.) How to wash dishes/pots/pans in 3 compartment sink



Step 1: Wash in hot soapy water

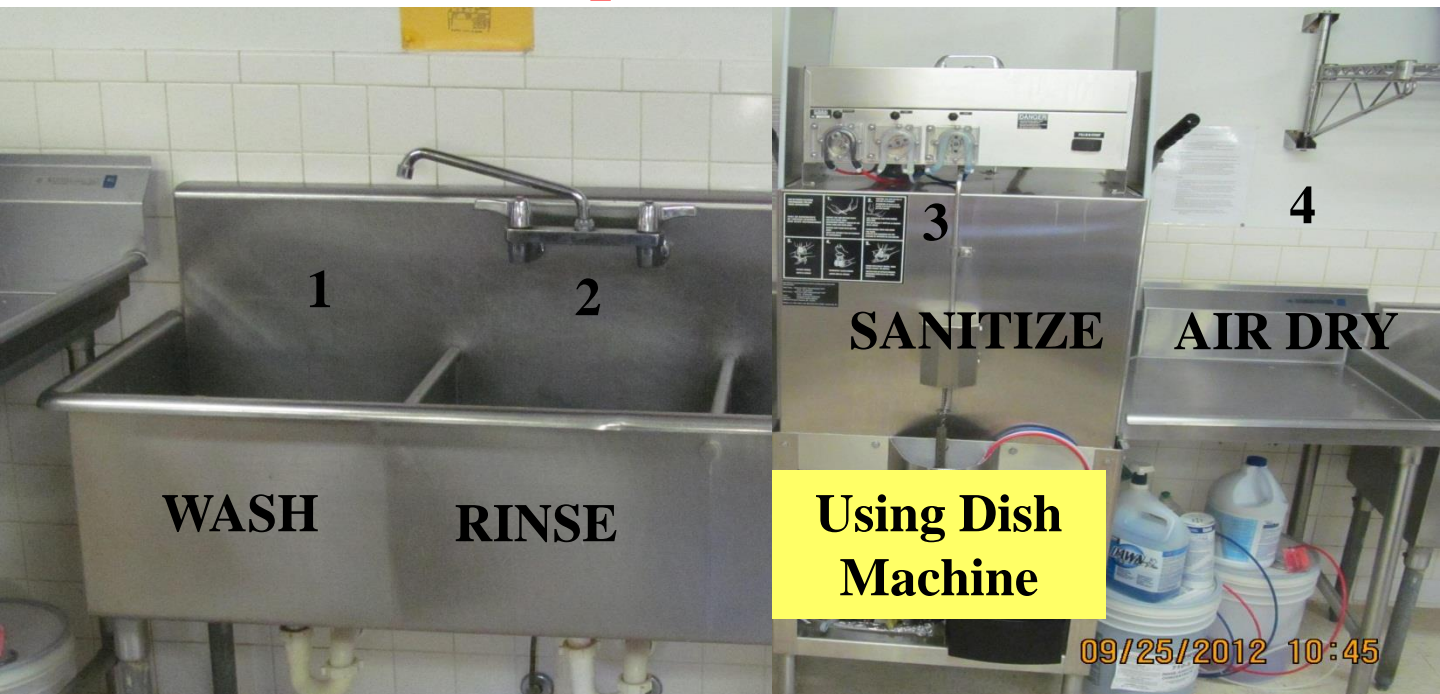
Step 2: Rinse in warm water.

Step 3: Sanitize in COLD water. Item must be **completely submerged in solution for 1 minute.**

Step 4: Air dry

Step 5: Visually inspect pots and pans for food particles and/or wetness before returning item to ready to use area.

17.) How to wash pots/pans in 2 compartment sink



Step 1: Wash in hot soapy water

Step 2: Rinse in warm water.

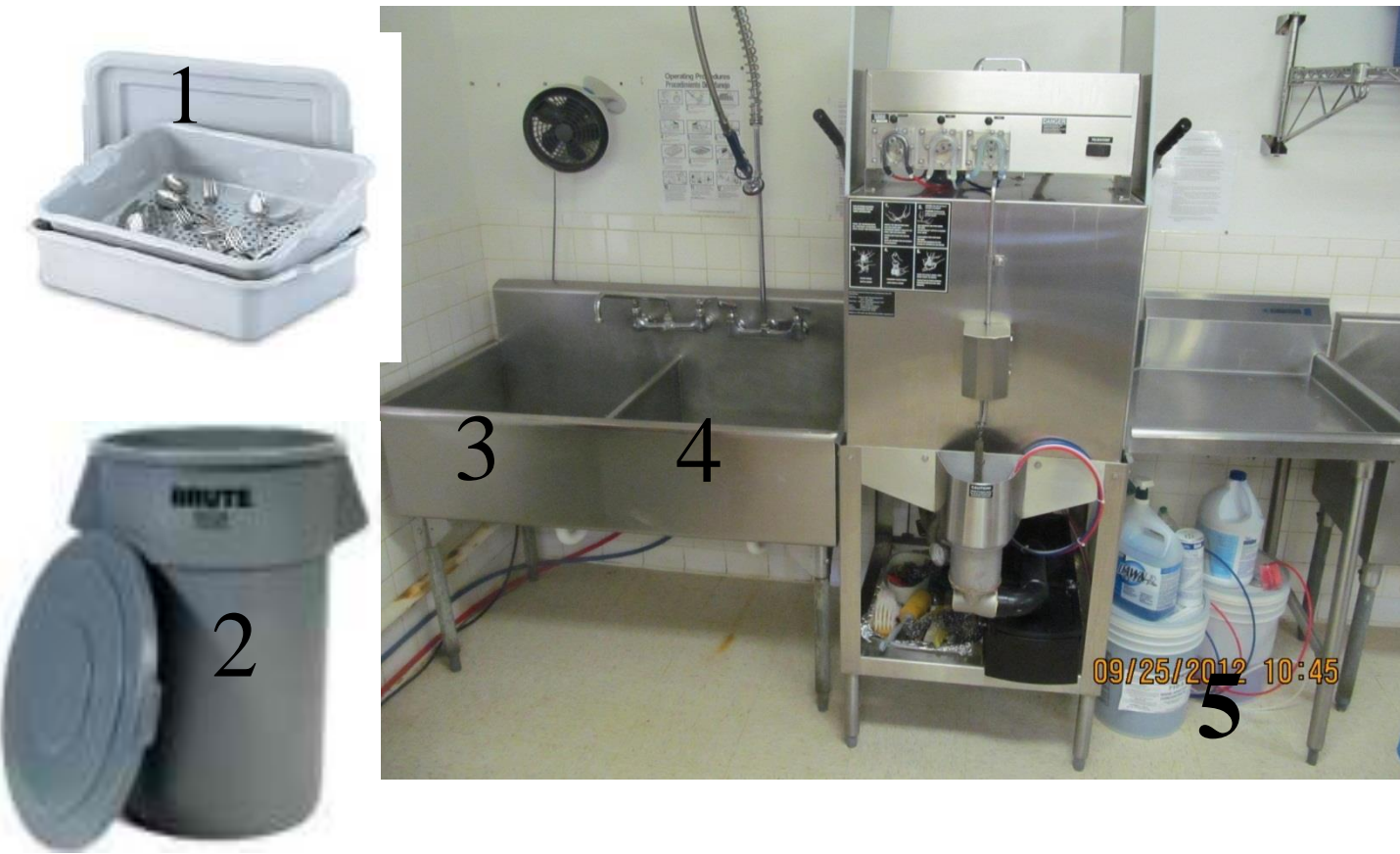
Step 3: Sanitize in dish machine by running a complete cycle.

Step 4: Air dry

Step 5: Visually inspect pots and pans for food particles and/or wetness before returning item to ready to use area.

.

18.) Cold Temperature Dish Machine Setup



Step 1: Fill up silverware pre soak tub

Step 2: Empty Trash can with lid

Step 3: Set up Pre dish wash solution with warm to hot water and soap.

Step 4: Set Up warm water rinse

Step 5: Check status of dish machine chemicals dish washing soap, rinse agent and sanitizer solution.

18.) Cold Temperature Dish Machine Setup

Continued



Step 6: Test dish machine test (water temperature and sanitizer solution strength).

Step 7: Check dish machine temperature gauge (water temp must be 120°F to 140°F)

Step 8: After dish machine has completed all cycles test water with TEST STRIP . Reading should be 50 to 100 ppm (light purple)



Step 9: Log temperature and test strip results on dish machine log form.



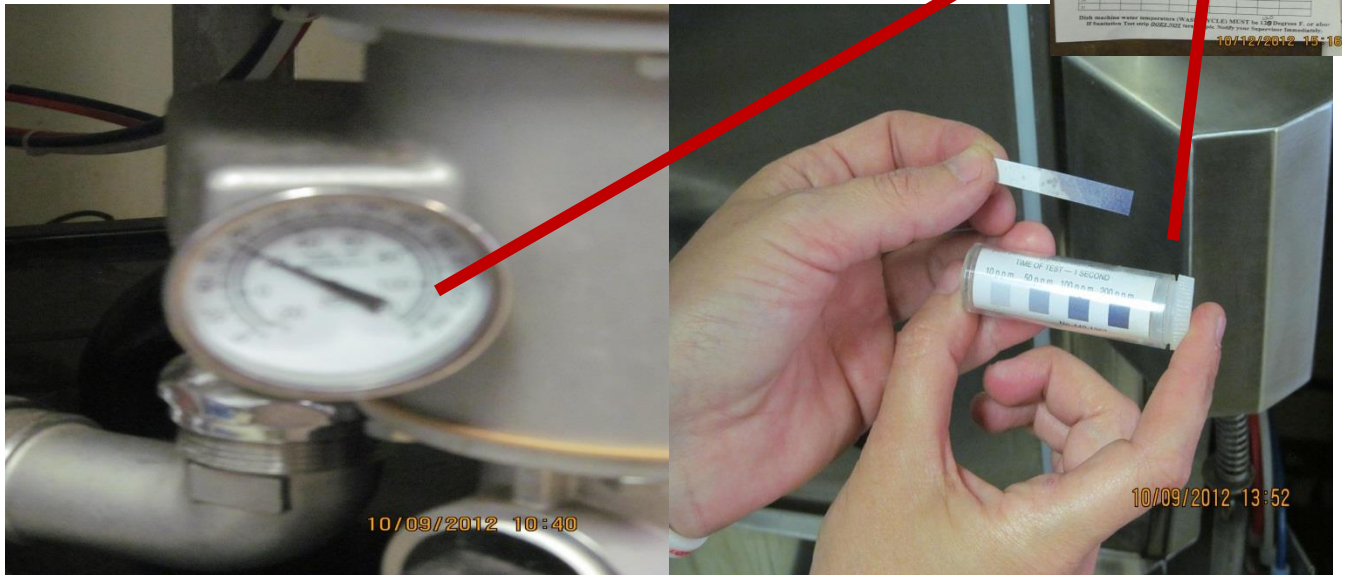
18.) Cold Temperature Dish Machine Setup

Continued

IMPORTANT

You must check your dish machine chemicals, check temperature, sanitizer, and record results

BEFORE every meal.



Temperature

120°F to 140°F

Sanitizer Check

50 ppm to 100 ppm

If dish machine temperature and/ or sanitizer check FAIL Notify your supervisor Immediately

19.) Hot Temperature Dish Machine Set Up

<http://www.jacksonmsc.com/products/warewashing/door/tempstar-door-type>



Step 1: Fill up silverware pre soak tub

Step 2: Empty Trash can with lid

Step 3: Check status of dish machine chemicals dish washing soap, and rinse agent (see dish machine manual)

Step 4: Turn on dish machine run a complete cycle and check wash temp 140°F or greater and rinse cycle temp 180°F or greater.

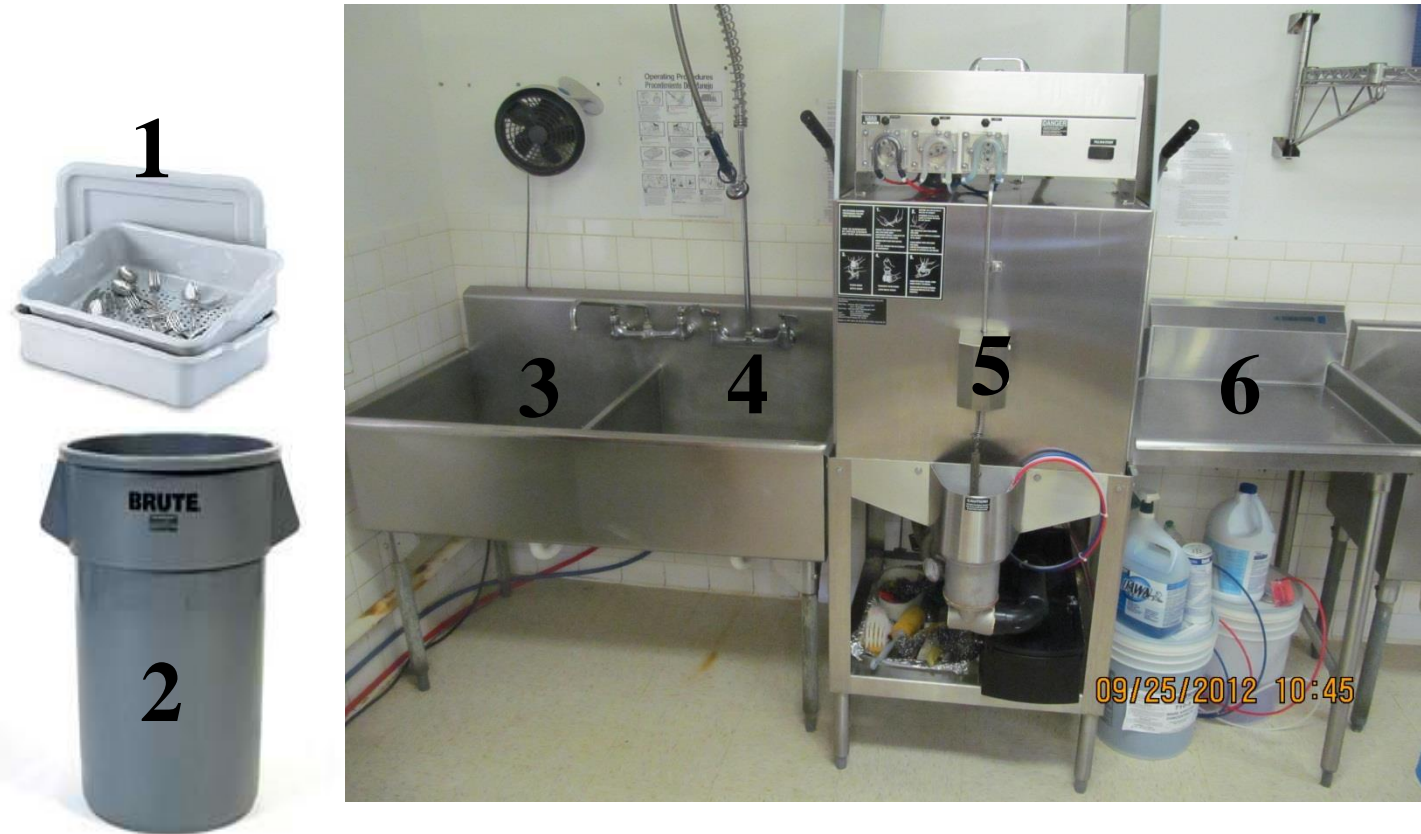
(Note some States require Test strip to verify internal water temperature 160°F or above)

Step 5; Log down test results .

Under the counter hot water dish machine.
Use same dish machine procedures



20.) How to wash dishes/pans with Cold Temp dish machine



Step 1: Silverware is placed in tub in a silverware pre-soak solution.

Step 2: Excess food/trash is scraped of plate, tray pan, etc.....

Step 3 Pre-wash item in first tube (#3)

Step 4: Place pre-wash item in next tub Rinse (# 4)

Step 5: Place rinsed item neatly in dish machine rack. When rack is full, wash, rinse and sanitize item in dish machine. (#5) run a complete cycle.

Step 6: Remove dish rack from dish machine without touching item then air dry.

Step 7; Wash silverware last, (Must run through complete cycles of the dish machine 3 times).

20.) How to wash dishes/pans with Cold Temp dish machine (continued....)

All wash items **MUST Be** Air Dried



CORRECT



INCORRECT



INCORRECT

**WET DISHES/POTS
STACKED TOGETHER WILL
NEVER DRY**

REMEMBER

**BACTERIA NEEDS
FOOD, MOISTER,
TEMPERATUE AND
TIME**



If a fan is used to help dry dishes/pots it must be **CLEAN**

How to air dry dishes with limited drying space



Do not touch dishes

Place is dish rack on a clean sanitize cart



Clean and sanitized cart

When cart is full push it out of the way.
Put away when dry

21.) Food pantry / Dry Storage Area

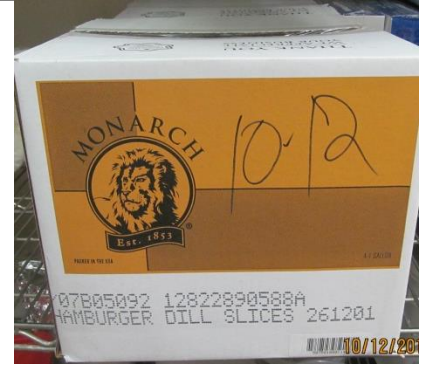
Food Storage PANTRY



**Never Store any
chemicals with
any food item**

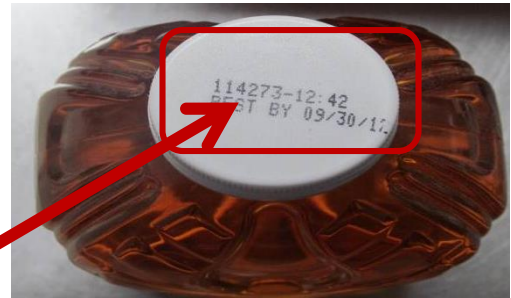
22.) Self Stable Foods, Storage, Labeling / Dating and Rotation.

Food Storage PANTRY (Dating Food items)



Only Shelf Stable foods are stored in your pantry. When received you must put at least **Month and Year** on the item. Note: **Day, Month and Year** is OK. **Year** must be on the item for proper rotation.

Food shelf life: Generally 1 year but there is some exceptions.



USE BY OR BEST BUY STAMP

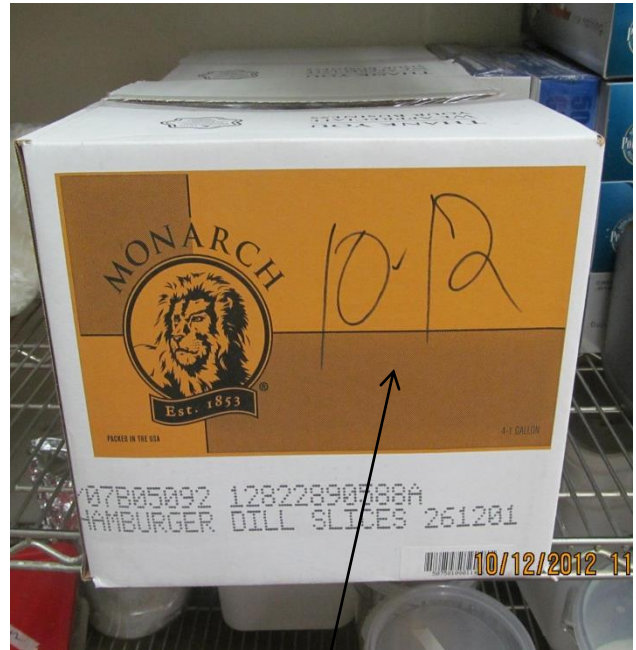
It is IMPORTANT to check all stamps on food items to verify its freshness during food delivery/stocking. Use by or best buy can shorten or extent the products shelf life. If **USE Buy Date is 12/21/12** and you received the item on **6/10/12** the product must be used before **12/22/12**. You mark the can **USE BY 12/21/12**

It is IMPORTANT to check all your food items during delivery. If you do not you may receive someone's REJECTED food item

22.) Self Stable Foods, Storage, Labeling / Dating and Rotation (continued.....)



You can date the shipping container of cases of small cans without having to date every can.



You can date a large box containing multiple cans

Keep individual food items in there cases does save you time.

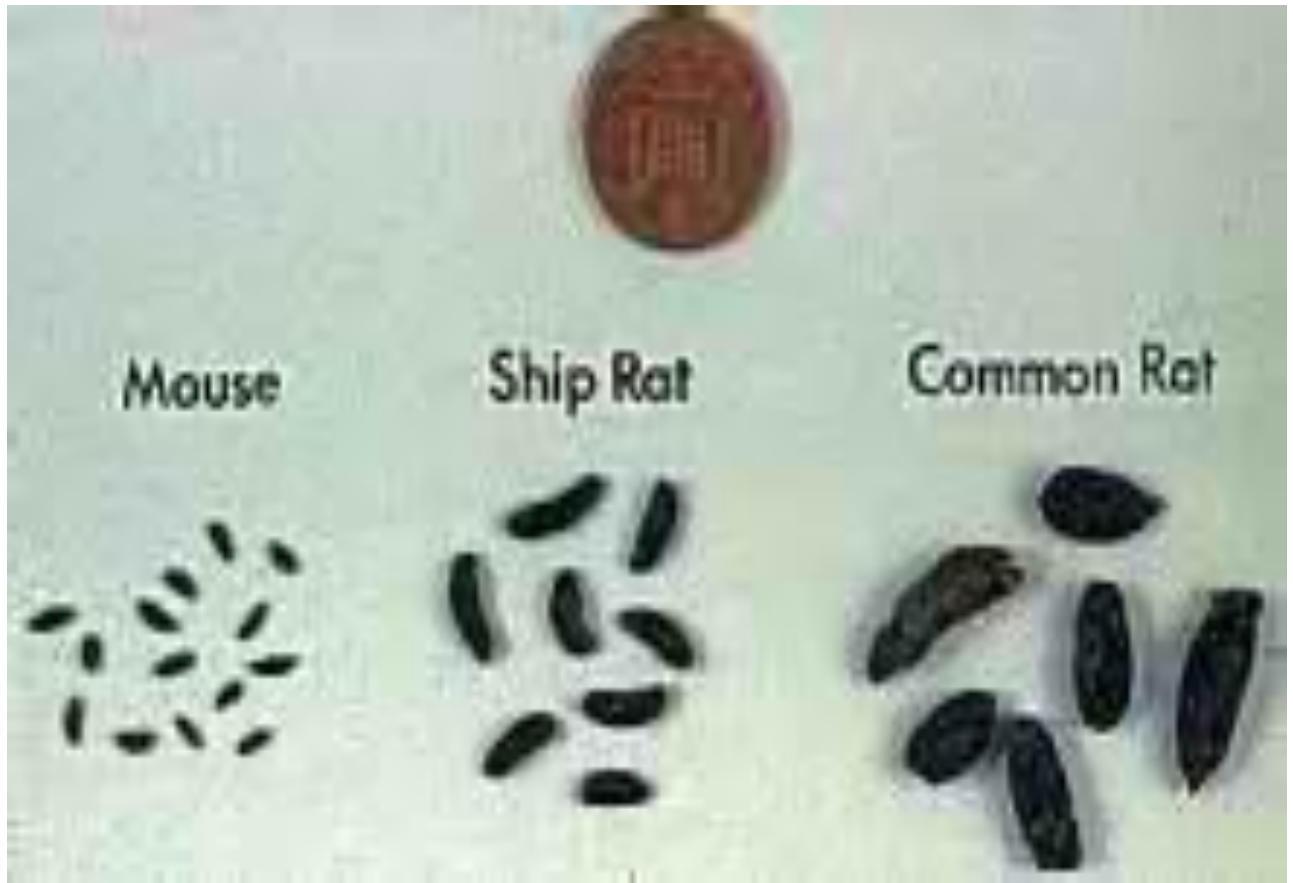
BUT

You are creating a *perfect home* for these uninvited pantry guest



"Clip art Used with permission from Microsoft."

Difference between Mouse and Rat Droppings



http://media.freeola.com/images/user-images/7964/rat_droppings.jpg

22.) Self Stable Foods, Storage, Labeling / Dating and Rotation (continued.....)



When using a can storage rack. You can make food rotation easier double mark.

Remember unrefrigerated food items stored in the your pantry have a 1 year shelf life. Except if the product expiration date comes first. If you have a lot of food 1 year old or older you are doing a poor job rotating your stock

Use either
FIFO (First In First Out) or
LIFO (Last In Last Out)
to rotate all food stock.

22.) Self Stable Foods, Storage, Labeling / Dating and Rotation. (Continued.....)

Shelf Stable Open Dry Goods must be repackaged in a air tight container. Container MUST be designed for Food Storage.

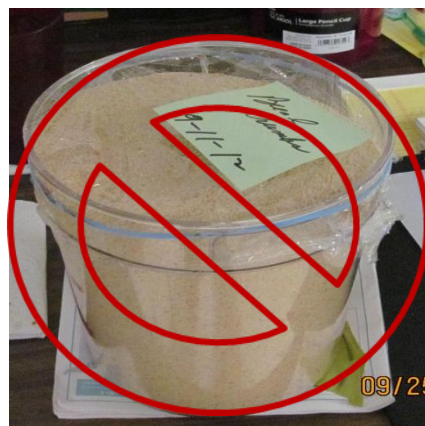
One time use containers such as Single-use articles" designed and constructed to be used once and discarded. Single-use articles includes items such as wax paper, butcher paper, plastic wrap, formed aluminum food containers, jars, plastic tubs or buckets, bread wrappers, pickle barrels, ketchup bottles, and number 10 cans which do not meet the materials, durability, strength, and clean ability specifications under OAC 310:257-7-1, OAC 310:257-7-13 and OAC 310:257-7-15 for multiuse utensils.



Not Air Tight



Not Air Tight
No Aluminum Foil



Not Air Tight
No Plastic wrap



Improper Food
storage container

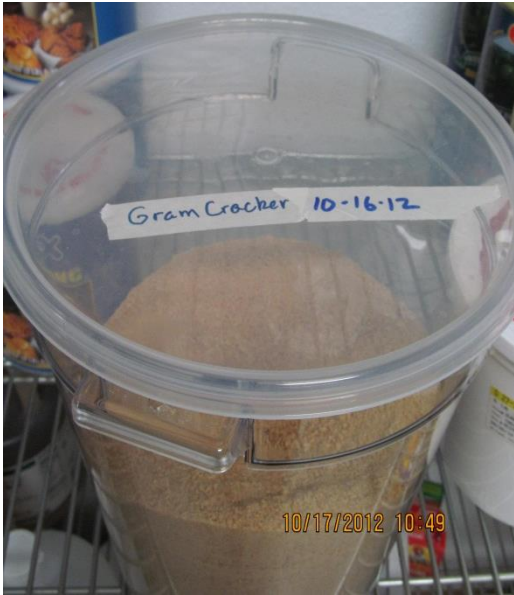


Not
relabeled

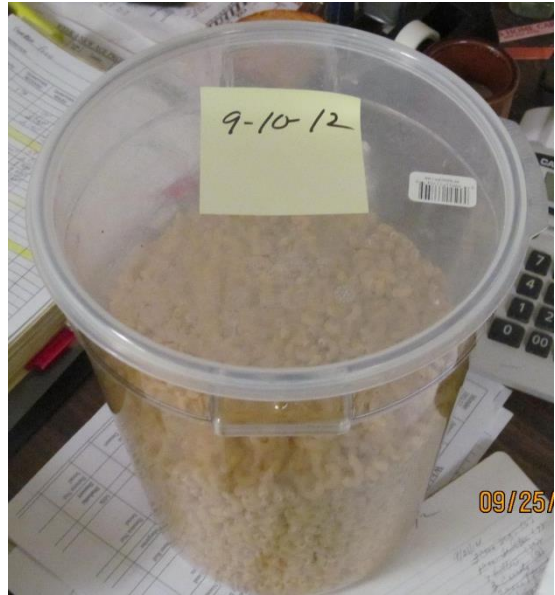


No Scoops in Bins
flour, sugar etc.....

22.) Self Stable Foods, Storage, Labeling / Dating and Rotation. (Continued.....)

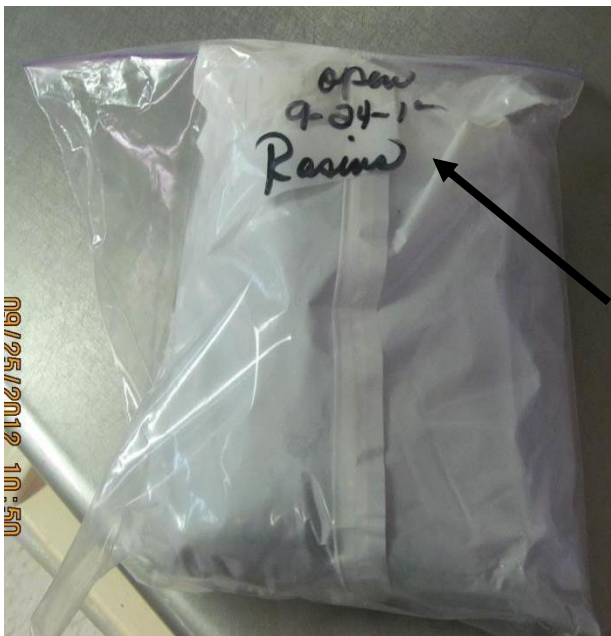


CORRECT



CORRECT

Dry Goods stored in a clear container DOES Not have to have the food name if Easily identified



CORRECT

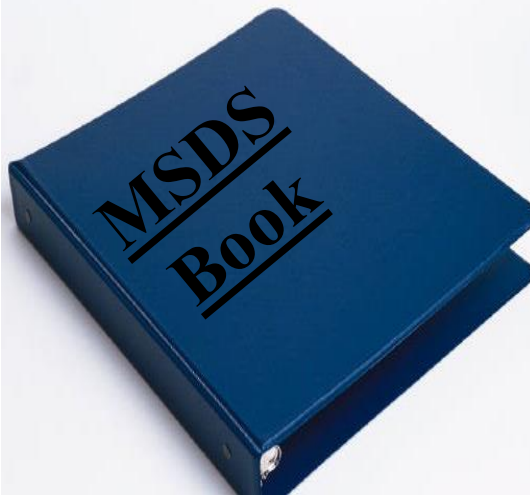
Open shelf stable food should be re-dated due to shorter shelf life

DO NOT FORGET YOUR USED FIRST LABELS

23.) Chemical Storage and MSDS (Material Safety Data Sheet)



MSDS Sheet is required on every chemical used in your kitchen



It is IMPORTANT that you know the location of the MSDS book. You must know how to read it and especially find the First Aid Procedures and/or Poison Control phone numbers.

You or your co-worker's Eye Sight, Skin and/or Life may depend on it!!!!

MSDSs vary in style, but are required to identify

1. Chemical identification,
2. Chemical composition ,
3. Health Concerns (known carcinogens (Cancer causing) etc.....)
4. physical, and environmental hazards
5. **Emergency and first aid procedures.**
6. Safe handling and storage procedures.

23.) Chemical Storage and MSDS (Material Safety Data Sheet)



The Clorox Company
 1221 Broadway
 Oakland, CA 94612
 Tel. (510) 271-7000

Material Safety Data Sheet

I Product: CLOROX REGULAR-BLEACH	
Description: CLEAR, LIGHT YELLOW LIQUID WITH A CHARACTERISTIC CHLORINE ODOR	
Other Designations Clorox Bleach EPA Reg. No. 5813-50	Distributor Clorox Sales Company 1221 Broadway Oakland, CA 94612
Emergency Telephone Nos. For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtrec (800) 424-9300	

II Health Hazard Data	III Hazardous Ingredients									
<p>DANGER: CORROSIVE. May cause severe irritation or damage to eyes and skin. Vapor or mist may irritate. Harmful if swallowed. Keep out of reach of children.</p> <p>Some clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite if skin damage (e.g., irritation) occurs during exposure. Under normal consumer use conditions the likelihood of any adverse health effects are low.</p> <p>Medical conditions that may be aggravated by exposure to high concentrations of vapor or mist: heart conditions or chronic respiratory problems such as asthma, emphysema, chronic bronchitis or obstructive lung disease.</p> <p>FIRST AID: <u>Eye Contact:</u> Hold eye open and rinse with water for 15-20 minutes. Remove contact lenses, after first 5 minutes. Continue rinsing eye. Call a physician. <u>Skin Contact:</u> Wash skin with water for 15-20 minutes. If irritation develops, call a physician. <u>Ingestion:</u> Do not induce vomiting. Drink a glassful of water. If irritation develops, call a physician. Do not give anything by mouth to an unconscious person. <u>Inhalation:</u> Remove to fresh air. If breathing is affected, call a physician.</p>	<table border="1"> <thead> <tr> <th>Ingredient</th> <th>Concentration</th> <th>Exposure Limit</th> </tr> </thead> <tbody> <tr> <td>Sodium hypochlorite CAS# 7681-52-9</td> <td>5 - 10%</td> <td>Not established</td> </tr> <tr> <td>Sodium hydroxide CAS# 1310-73-2</td> <td><1%</td> <td>2 mg/m³ 2 mg/m²</td> </tr> </tbody> </table> <p>²OSHA Permissible Exposure Limit (PEL) – Time Weighted Average (TWA)</p> <p>None of the ingredients in this product are on the IARC, NTP or OSHA carcinogen lists.</p>	Ingredient	Concentration	Exposure Limit	Sodium hypochlorite CAS# 7681-52-9	5 - 10%	Not established	Sodium hydroxide CAS# 1310-73-2	<1%	2 mg/m ³ 2 mg/m ²
Ingredient	Concentration	Exposure Limit								
Sodium hypochlorite CAS# 7681-52-9	5 - 10%	Not established								
Sodium hydroxide CAS# 1310-73-2	<1%	2 mg/m ³ 2 mg/m ²								

Locating the First Aid Procedures & Emergency phone #'s is most important section for a food service work

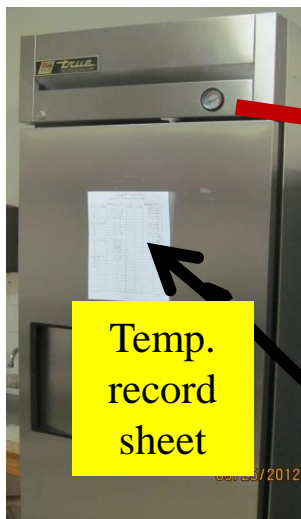
Always highlight these areas before the MSDS is placed in the MSDS book

IV Special Protection and Precautions	V Transportation and Regulatory Data
<p>No special protection or precautions have been identified for using this product under directed consumer use conditions. The following recommendations are given for production facilities and for other uses where the potential for exposure is increased potential for accidental, large scale releases.</p> <p><u>Hygienic Practices:</u> Avoid contact with product after direct contact. Do not wear product on hands.</p> <p><u>Engineering Controls:</u> Use general ventilation to reduce exposure to mist.</p> <p><u>Personal Protective Equipment:</u> Wear safety goggles. Use rubber or nitrile gloves if in contact liquid, especially for prolonged periods.</p> <p>KEEP OUT OF REACH OF CHILDREN</p>	<p>DOT/IMDG/IATA - Not restricted.</p> <p>This product is not reportable under chemicals reportable under Section 313. (sodium hydroxide <0.2% and sodium hypochlorite) reportable under Section 304/CERCLA. Other ingredients of this product are on the U.S. TSCA list.</p>
VI Spill Procedures/Waste Disposal	VII Reactivity Data
<p><u>Spill Procedures:</u> Control spill. Containerize liquid and use absorbents on residual liquid; dispose appropriately. Wash area and let dry. For spills of multiple products, responders should evaluate the MSDS's of the products for incompatibility with sodium hypochlorite. Breathing protection should be worn in enclosed, and/or poorly ventilated areas until hazard assessment is complete.</p> <p><u>Waste Disposal:</u> Dispose of in accordance with all applicable federal, state, and local regulations.</p>	<p>Stable under normal use and storage conditions. Strong oxidizing agent. Reacts with other household chemicals such as toilet bowl cleaners, rust removers, vinegar, acids or ammonia containing products to produce hazardous gases, such as chlorine and other chlorinated species. Prolonged contact with metal may cause pitting or discoloration.</p>
VIII Fire and Explosion Data	IX Physical Data
<p><u>Flash Point:</u> None</p> <p><u>Special Firefighting Procedures:</u> None</p> <p><u>Unusual Fire/Explosion Hazards:</u> None. Not flammable or explosive. Product does not ignite when exposed to open flame.</p>	<p>Boiling point..... approx. 212°F/100°C</p> <p>Specific Gravity (H₂O=1) ~ 1.1 at 70°F</p> <p>Solubility in Water complete</p> <p>pH ~11.9</p>

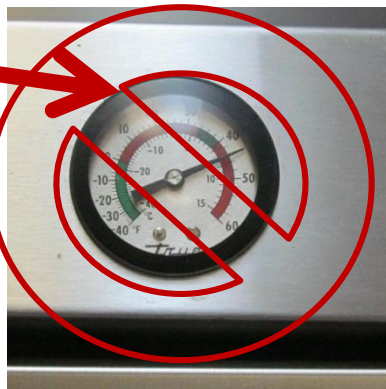
24.) Refrigerator Food Storage / Temperatures

Refrigerator Temperature Range **41°F or Below**

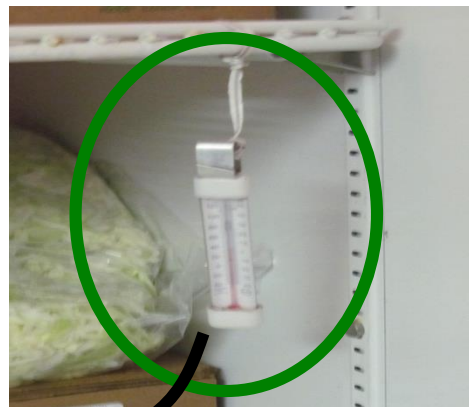
Refrigerator Temperature should be taken **FIRST** thing in the morning



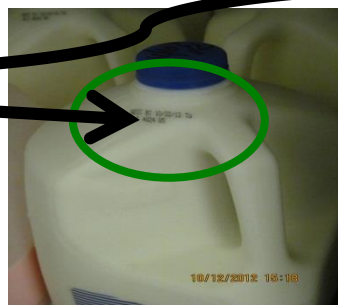
Incorrect



Correct



Refrigerator temperature is recorded using a Working Internal Thermometer **ONLY**



Rotate Milk by USE BUY date

All foods item in the refrigerator are dated with Month , Day, & Year
Ex: 10/14/12



Eggs are always stored bottom shelf of your refrigerator.

25.) Freezer Food Storage / Temperatures

Freezer Temperature Range **0°F or Below**. Freezer Temperature should be taken **FIRST** thing in the morning

Incorrect



Correct



Freezer temperature is recorded using a Working Internal Thermometer

ONLY

**All foods item in the Freezer are dated with Month , Day, & Year
Ex: 10/14/12**



Stand up freezer



Tub Freezer

Freezers and refrigerators should not be overloaded. Air circulation is vital to insure proper operation of this equipment. All food spills need to be clean/sanitize immediately when discovered.

26.) Order in which food deliveries is put away.

First: Cold Refrigerator Temperature foods: Must prevent food temperature from rising above **41°F _____ (DANGER ZONE)**
Date all foods with **Month Day & Year** with a permanent marker and store FIFO or LILO.

Second: Put away all Frozen Food (Freezer). Prevent Foods from being Defrosted. (CANNOT be Re-Frozen)
Date all foods with **Month Day & Year** with a permanent marker and store FIFO or LILO.

Third: Put away shelf stable (Can/ Dry goods) in pantry:
Date all foods with **Month and Year or Month Day & Year** with a permanent marker and store FIFO or LILO

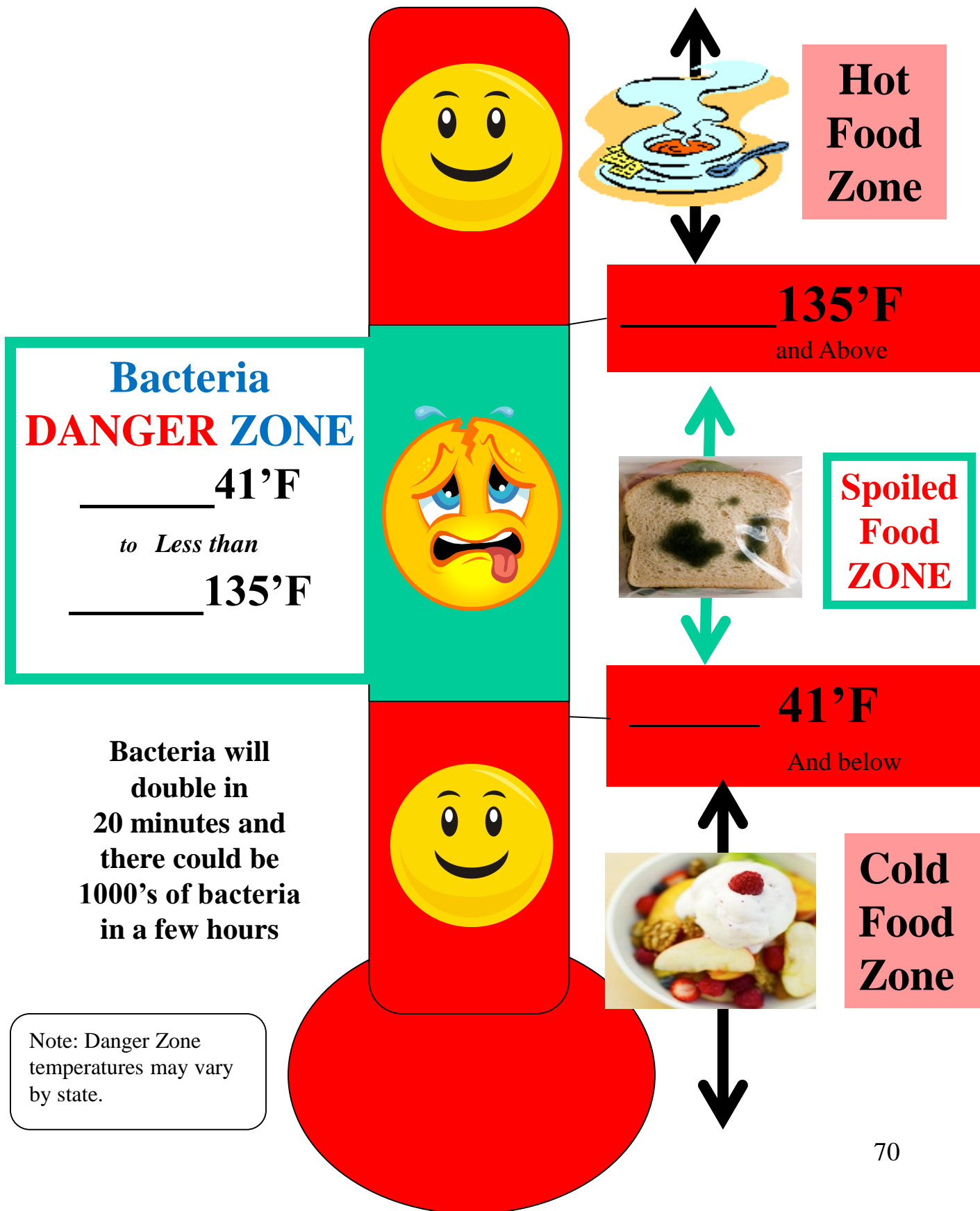
Forth: Put away paper goods, utensils chemical etc.:

Notify your supervisor if:

1. cold food is not cold, open or damaged or expired
2. Frozen food is not Frozen, open or damaged or expired
3. Cans are dented, sunken in or bloated, or expired
4. Dry good containers are open or damaged or expired

Remember When in Doubt Throw it Out

27.) Danger Zone Food Temperature Thermometer





Conventional Oven VS Convection Oven

- Powered by Gas or Electric
- Heat is stationary and usually radiating from bottom
- Has cold and hot air pockets
- Uneven cooking when using top and bottom rack.

- Powered by gas or electric
- Fan circulates air inside oven chamber
- Constant oven temperature
- Even and fast cooking

It is very **IMPORTANT** to read your cook book/recipe **food production information section** correctly. You must know if your recipe is written for a **Conventional Oven** or **Convection Oven**

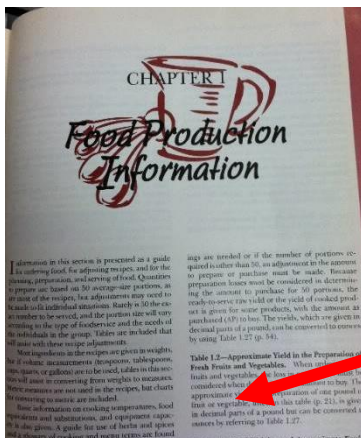


Table 1.7—Convection Oven Baking Times and Temperatures. Information in this table (p. 37) is useful when using convection ovens. Times and temperatures in recipes included in *Food for Fifty* have been tested using conventional ovens.

How to convert a recipe **CONVENTIONAL** oven temperature/time 350°F. for 1 hr. 30 min. to **CONVECTION** oven temperature/time.

How to convert cooking temperature?

Step 1: Subtract 25 degrees from conventional oven temperature.

Example $350^{\circ}\text{F} - 25^{\circ}\text{F} = 325^{\circ}\text{F}$ Convection oven temperature

How to convert cooking time

Step 1: Subtract 30% from total Cooking time

Example: Conventional oven cooking time: 1 hour 30 minutes

Step 1: convert to minutes :

$$1 \text{ hour} = 60 \text{ min} + 30 \text{ Min.} = 90 \text{ min.}$$

Step 2: convert 30% to decimal $30\% = 0.3$

Step 3 Multiple $90 \text{ min.} \times 0.3 = 27 \text{ minutes}$

Step 4: Subtract : $90 \text{ min} - 27 \text{ min} = 63 \text{ minutes}$

or 1 hour and 3 minutes

Step 5: **IMPORTANT SAFEGUARD**: Use a **Cooking timer** and **Subtract 10 min.** from adjusted cooking time (53 min.) to check your product.



Cooking timer is one of the most important piece of equipment in your kitchen.

USE It !!!!!

Your Turn

Convert a recipe **CONVENTIONAL** oven temperature/time 425°F. for 1 hr. 15 min. to **CONVECTION** oven temperature/time.

Step 1 Temperature conversion : $425^{\circ}\text{F} - 25^{\circ}\text{F} = 400^{\circ}\text{F}$

Step 2 Time Conversion: 1 hr 15 min convert to minutes
 $1 \text{ hr} = 60 \text{ min.} + 15 \text{ min.} = 75 \text{ min.}$

Step 3 Cooking time reduction calculation

Remember Reduce by 30 %, change to a decimal to .3

$75 \times .3 = 22.5 \text{ minutes}$

$75 - 22.5 = \text{cooking time of } 52.5 = 53 \text{ minutes}$

Answer: 400°F for 53 minutes.

If your cooking time is 53 min. At what time do you check your food in oven?

Answer 43 minutes

How to check food thermometer temperature calibration.



Step 1: fill glass with ice and add cold water



Step 2: Stir ice water with thermometer stem few times and let stand for 3 to 5 minutes.



Step 3: Thermometer temperature should read 32°F +/- 2°F
You should check thermometer calibration monthly

How to check digital food thermometer temperature calibration



Step 1: fill glass with ice and add cold water

Step 2: Stir ice water with thermometer stem few times and let stand for 3 to 5 minutes.

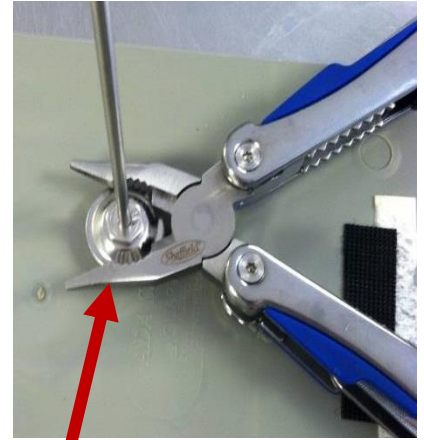


Step 3: Thermometer temperature should read 32°F +/- 2°F
if not change batteries and retest.

How to calibrate a thermometer



Calibration
Nut



Step 1: Take a pair of pliers and grasp calibration nut.



Step 2: While observing to temperature dial turn nut until needle reads 32 °F
Important: Keep the thermometer Inside the glass and in Ice water



Step 3: Stir ice water with thermometer stem few times and let stand for 3 to 5 minutes.



Step 4: Thermometer temperature should read 32°F +/- 2°F
Remove thermometer and recheck in 3 to 5 minutes

How to clean and sanitize a food thermometer when checking multiple food temperatures.



Step 1: Wash your hands for 20 seconds!!!



Step 2: Using a clean spoon stir the food you wish to test.



Step 3: Take clean thermometer and sanitize with an alcohol wipe.



Step 4: Place a thermometer in center of pan mid depth wait about 30 seconds and record temperature.

How to take hot food temperatures from stove to steam table.



Step 1: Stir food item with a clean/sanitize spoon.



Step 2: Place thermometer in center of pan. The temperature probe should be mid depth.

Not touching pan bottom.



Ideal food temperature should be **165°F or above**. Please note: if food temperature is above **200°F** you risk reducing nutritional content , by denature protein/cell wall structure of the food item. (mushy food consistency)



Step 3: Place hot food on pre heated steam table and **cover** food item.

Steam table is design to hold food at above 135°F for up to 4 hours. **NOT design to COOK your food.** Do not forget to preheat your steam table and change water daily or as needed.

15 minutes before serving time recheck and log all food temperatures. (Per facility SOP)



Step 4: Remove lid and Stir food stir hot food item



Step 5: Check food temperature by placing a clean and sanitize thermometer in center of pan. The temperature probe should be mid depth. Not touching pan bottom.



Serving food temperature is 135°F or above. If food item is below 135°F remove food item from steam table to stove and rapidly reheat to 165°F or above within 2 hours

Cooling Methods

The Food Code requires that all cooked foods not prepared for immediate service shall be cooled as quickly as possible to eliminate the possibility of bacteria development. There are two methods to cool.

NOTE: potentially hazardous foods: the two-stage method (preferred) over the one-stage method.

• • **The one-stage method** is designed to reduce the cooked food's internal temperature from **less than 135°F to 41°F or colder within four hours of preparation.**

This method should only be used if the food is prepared from ingredients **at ROOM temperature also called ambient temperature**, such as **FREEZE DRIED / DEHYDRATED** also called reconstituted foods like (instant puddings freeze dried fruit etc), and canned foods, like fruit, pudding, tuna etc.....



Helpful Hint: Place #10 cans fruit in the refrigerator the night before to have correct serving temperature of 41°F or below. 79

The **two-stage method** reduces the cooked food's internal temperature in two steps.

Step 1: Reduce the temperature from 135°F to 70°F within two hour period.

Step 2: Reduce the temperature from 70°F to 41°F or colder within an additional four-hour period.

Total cooling time should never exceed six hours.

Rapid food cooling method for cooked foods,
(see Local Food Codes)

- Placing the food in shallow pans;
- Separating/Spread out the food (in smaller or thinner portions;)
- Using rapid cooling equipment, such as 'blast chillers';
- Stirring the food to be cooled in a container placed in an ice bath;
- Using containers that transfers the heat;
- Adding ice as an ingredient to the cooked food; or
- A combination of the above methods.

Once food reaches 41 'F or below it's ready to be covered, labeled, dated, and stored in the refrigerator.



Cooling Wand



Ice Bath

Cooling foods tips to remember.

- 1. Cooling time starts at 135°F. Food may be left at room temperature until it drops to 135°F.**
2. Reduced food temperature to 41°F or colder as quickly as possible.
3. Do not exceed the maximum cooling time allowed for the selected method
(4 hour for the one-stage method)
(6 hours for the two-stage method).
3. Remember placing a hot food item in a refrigerator to cool may not be sufficient to:
reduce the threat of bacterial growth. Hot food item placed into a refrigerator may raise the temperature inside the refrigerator and may and jeopardize the safety of other stored foods.
4. Once the food item has been properly cooled, it should be stored properly – covered and labeled with the date the product was prepared.

When preparing foods using cooked ingredients, always use the older products first.

**For more information about operating a food establishment,
contact your local health department.**

Recipe Conversion

Need to know terminology

Recipe Conversion: a series of mathematical equations that will allow you to change recipe +/- the **total amount** produced **by serving size**. If done correctly, it will reduce your food cost and waste (leftovers).

Work Factor: A number that is multiply by each ingredient in the original recipe. This will increase or decrease the amount of the individual ingredient.

How to convert a given Recipe

Chicken salad

50 (3 oz.) portion to 139 (3 oz.) portions

STEP 1: Find the Work Factor

STEP 2: Multiple each ingredients x the **WORK FACTOR**

8 lb cooked chicken x WF = ???

12 Eggs, Hard Cooked x WF = ???

3 lb celery, diced x WF = ???

2 tbsp onion, minced x WF = ???

2 tbsp salt x WF = ???

1 tsp white pepper x WF = ???

1 qt mayonnaise x WF = ???

4 tsp Fresh Lemon Juice x WF = ???

How calculate the Work Factor

To find the Work Factor you need the # of portions and the serving size.

Original Recipe

50 portions 3 oz. Serving

New Recipe

139 portions 3 oz. Servings

Step 1: Multiply the number of portions with serving size for each recipe

Original Recipe

$50 \times 3 \text{ oz.} = 150 \text{ oz.}$

New Recipe

$139 \times 3 \text{ oz.} = 417 \text{ oz.}$

Step 2: Divide

$$\text{Formula: } \frac{\text{New Recipe Yield}}{\text{Old Recipe Yield}} = \text{Work Factor}$$

$$\frac{417 \text{ oz.}}{150 \text{ oz.}} = \mathbf{2.78} \text{ Work Factor}$$

The new Recipe is 2.78 times larger the original Recipe.

Step 3: Multiple the work factor x original recipe ingredients.

Original recipe	Wrk factor	NewRecipe Amounts
8 lbs. cooked chicken	x 2.78	= 22.24 lbs.
12 Eggs, Hard Cooked	x 2.78	= 33.36 eggs
3 lbs. celery, diced	x 2.78	= 8.34 lbs.
2 tbsp. onion, minced	x 2.78	= 5.56 tbsp.
2 tbsp. salt	x 2.78	= 5.56 tbsp.
1 tsp. white pepper	x 2.78	= 2.78 tsp.
1 qt. mayonnaise	x 2.78	= 2.78 qt.
4 tsp. Fresh Lemon Juice	x 2.78	= 11.12 tsp.

All ingredients are larger the original recipe.
Always round number up.

How to convert and multiply mixed units before multiplying with the work factor.

6 lbs. 8 oz. cooked chicken

1 qt. 3oz Milk

Step 1: Convert amount to smallest unit.

:6 lbs. 8 oz. cooked chicken

$$6 \text{ lbs.} \times 16 \text{ oz./lb.} = 96 \text{ oz.} + 8 \text{ oz.} = \mathbf{104 \text{ oz.}}$$

1 qt. 3oz Milk

$$1 \text{ qt.} = 32 \text{ oz.} + 3 \text{ oz.} = \mathbf{35 \text{ oz.}}$$

Find the Work Factor:

Formula:

$$\frac{\text{New Yield Weight}}{\text{Original Yield Weight}} = \text{Work Factor}$$

$$\frac{104 \text{ oz.}}{35 \text{ oz.}} = 2.97142857 = 3.0 \text{ Work Factor}$$

The End

Important

The ATPC Program Step 2 slides and or ATPC Booklet can be reviewed at any time.

Highly recommended that you review this presentation prior to taking the ATPC Post Exam.

References

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