

## Module 4 Overview:



# Utensil Washing - Manual and Mechanical



*TRAINER: Read this page ahead of time to prepare for teaching the module.*

### **PARTICIPANTS WILL:**

1. Explain the importance of utensil washing and sanitizing.
2. Demonstrate manual or mechanical utensil washing.
3. Measure the **SANITIZER** concentration with **TEST STRIPS** or read the temperature gauge on a hot water sanitizing dish machine.

**TIME:** 15 minutes

**TEACHING LOCATION:** Kitchen - utensil washing area

### **MATERIALS NEEDED:**

- Activity: Manual Utensil Washing (p. M4-5)
  - 3 or 4 compartment sink
  - Approved **SANITIZER**
  - **TEST STRIPS**
- Activity: Mechanical Utensil Washing (p. M4-6)
  - Chlorine or hot water sanitizing dish machine
  - **TEST STRIPS**

### **COPIES REQUIRED:**

- Pre and Post Quiz
- Talking Points (p. M4-4)
- Activity: Manual Utensil Washing (p. M4-5)
- Activity: Mechanical Utensil Washing (p. M4-6)
- Fact Sheet: Manual Utensil Washing (p. M4-7)
- Fact Sheet: Mechanical Utensil Washing (p. M4-8)

### **GLOSSARY TERMS:**

- CLEAN
- FOOD-CONTACT SURFACE
- SANITIZE
- SANITIZER
- TEST STRIP



## Pre Quiz

# MODULE 4: UTENSIL WASHING

Fill in the blanks

### Manual Utensil Washing Steps

1. Scrape
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. Air Dry

### Sanitizer

Chlorine

Quaternary Ammonia

Iodine

### Concentration

\_\_\_\_\_ ppm

\_\_\_\_\_ ppm

12.5 - 25 ppm



## Module 4 Presentation:

# Utensil Washing - Manual and Mechanical



*TRAINER: Read aloud to prepare participants for training.*

## Today We Are Learning About Utensil Washing.

Before our training begins today there will be a short quiz. The quiz helps the Health Department assess training effectiveness and success. You do not need to write your name on the quiz and you will not be graded. Try your best to answer all the questions and don't share your answers with coworkers. We will be taking the same quiz at the end of training so if you don't know the answers, you'll be learning them today. After the training presentation we will do an activity together followed by some review questions. The training will take about 15 minutes and all of you will be participating.



*TRAINER: Read aloud.*

## What's the Risk?

Disease-causing germs can be found on inadequately CLEANED and SANITIZED utensils, which increase the potential for food contamination and the chances of foodborne illness. The Centers for Disease Control and Prevention (CDC) estimates that contaminated equipment or utensils cause about 10% of the known foodborne illness outbreaks in the United States. CLEANING and SANITIZING equipment and utensils is essential for removing dirt and food particles and reducing germs to safe levels.



*TRAINER: Read aloud.*

## What's the Law?

### Manual Utensil Washing - Method

- Pre-Wash/Scrape
- Wash with Detergent and Warm Water (110°F)
- Rinse
- Sanitize with Approved Sanitizer
- Air Dry

### Mechanical Utensil Washing

- Chemical Sanitizing Dish Machine
  - Wash Temperature (120°F)
  - Chlorine Sanitizer Concentration (at least 50 ppm)
- Hot Water Sanitizing Dish Machine
  - Wash Temperature (150°F - 165°F)
  - Final Sanitizing Rinse (180°F)



*TRAINER: Give participants a copy and have them take turns reading aloud.*



## Talking Points

- **CLEAN:** A process that removes soil and prevents accumulation of food.
- **FOOD-CONTACT SURFACE:** A surface of equipment or a utensil with which food normally comes into contact.
- **SANITIZE:** The final step needed to remove bacteria from food contact surfaces that have just been **CLEANED**. A common sanitizing solution is made up of one teaspoon of bleach to one gallon of water and is used to **SANITIZE** equipment and utensils.
- **SANITIZER:** Chemicals that reduce disease-causing germs to safe levels.
- **TEST STRIP:** Test paper that measures the concentration in parts per million (ppm) of the **SANITIZER** in solution.
- The most common **SANITIZERS** used are chlorine (bleach), quaternary ammonia compounds (quat), or iodine.
- Use warm water to make **SANITIZER** solutions. The following concentrations are required for utensil washing **SANITIZERS**:
  - Chlorine 50 ppm for mechanical utensil washing
  - Chlorine 50-100 ppm for manual utensil washing
  - Quaternary Ammonia 200 ppm or as specified by the manufacturer
  - Iodine 12.5-25 ppm
- Test the **SANITIZER** strength a few times per day to make sure the **SANITIZER** is strong enough to kill germs.
- Store the **TEST STRIPS** near the utensil washing area. Be sure to keep them dry.



## Module 4 Activity:

# Manual Utensil Washing

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*TRAINER: Give participants copies of activity sheet and corresponding fact sheet(s). Have participants complete individually or as a group.*

Using the Manual Utensil Washing fact sheet (p. M4-7) as a guide, set-up the 3 or 4 compartment utensil washing sinks.

1. Show or mark the water fill line in each sink compartment.
2. Fill each compartment with the appropriate amount of warm water.
3. Dispense or add detergent to the wash compartment.
4. According to the manufacturer's instructions, measure the appropriate amount of SANITIZER into the SANITIZER compartment (1 tablespoon chlorine SANITIZER in 3 gallons water = 100 ppm).
5. Thoroughly mix the SANITIZER in the water.
6. Measure the SANITIZER concentration in parts per million (ppm) with the appropriate TEST STRIPS. Follow the directions provided with the TEST STRIPS.

**NOTE:** Chlorine TEST STRIPS turn shades of purple and quat TEST STRIPS turn shades of greenish blue, depending on the concentration.



## Module 4 Activity:

# Mechanical Utensil Washing

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*TRAINER: Give participants copies of activity sheet and corresponding fact sheet(s). Have participants complete individually or as a group.*

## Chlorine Sanitizing Dish Machine

1. Explain how the machine operates.
2. Utensils must be thoroughly pre-washed or scraped before placing in the machine.
3. Place the utensils in a rack and start the machine.
4. When cycle is complete, use a chlorine TEST STRIP to measure the SANITIZER concentration in parts per million (ppm). Dip the TEST STRIP on a utensil that has pooled water. Note: Chlorine TEST STRIPS turn shades of purple, depending on the concentration. (Minimum chlorine concentration 50 ppm).
5. Show the employees how to prime the chemical SANITIZER injection tube, if applicable.
6. Explain what to do if the chemical SANITIZER concentration is measuring 0 ppm.

## Hot Water Sanitizing Dish Machine

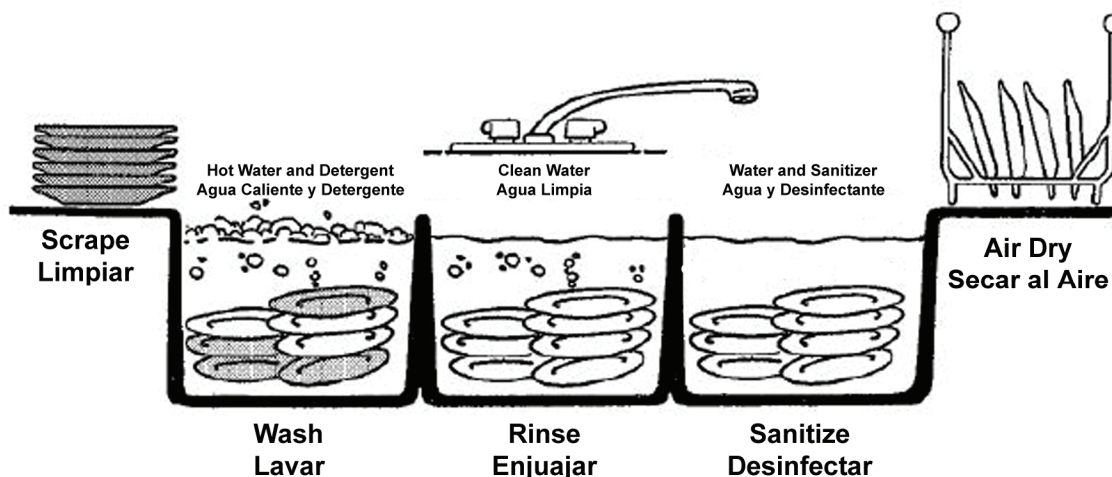
1. Explain how the machine operates.
2. Utensils must be thoroughly pre-washed or scraped before placing in the machine.
3. Place the utensils in a rack and start the machine.
4. Watch the final rinse gauge to verify machine is reaching a minimum water temperature of 180°F or as specified by the manufacturer.
5. Explain what to do if the dish machine is not reaching the proper temperature.

To get more information invite your dish machine or chemical service technician to the training, as he or she may be able to provide assistance in this area.



Fact Sheet:

# MANUAL UTENSIL WASHING



*Change your water frequently. Cambie el agua con frecuencia.*

Sanitizer

Chlorine

Quaternary Ammonia

Iodine

Concentration

50 - 100 ppm

200 ppm or as specified by the manufacturer

12.5 - 25 ppm

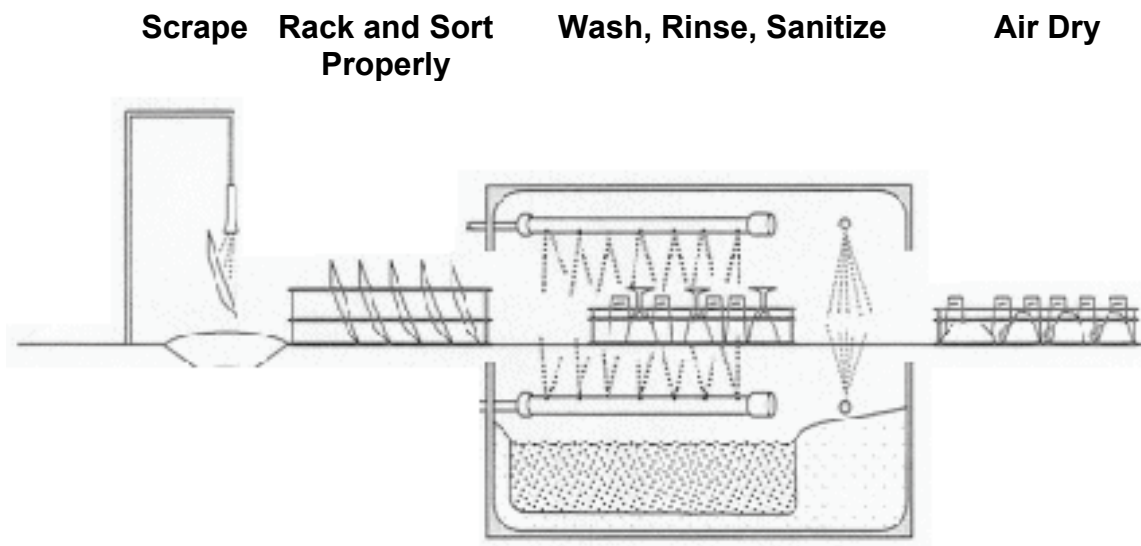
Note: Concentrations below the approved chemical levels are not effective and concentrations above these levels can be toxic. To ensure the correct concentration, always read the directions on the label and use the proper test strips to check the concentration.

*Public Health – Madison and Dane County (06/04)*



Fact Sheet:

# **MECHANICAL UTENSIL WASHING**



Graphic Courtesy of DuPage County Health Department

## **CHEMICAL SANITIZING**

- Water temperature according to the manufacturer
- Detergent and sanitizer must be automatically dispensed
- Chlorine at 50 ppm

## **HOT WATER SANITIZING**

- Wash temperature according to the manufacturer
- Final rinse temperature at least 180°F

*Public Health – Madison and Dane County (06/04)*



*TRAINER: Share this story with participants.*

## Tales from the Kitchen

Recently a manager shared an interesting story. She had been off a few days and had decided to stop by the restaurant to see how things were going. She entered through the mechanical utensil washing area and noticed a very strange odor. She wasn't quite sure what she smelled. She decided to check the chlorine level of the dish machine, just to make sure it was working. When she dipped the TEST STRIP into the pooling water after a cycle, there was no color change. She thought that maybe the chlorine bucket was empty. She noticed the bucket attached to the SANITIZER injector was not SANITIZER. When she opened the bucket, she found shriveled-up pickles! Apparently the employee had mistakenly attached a bucket of pickles instead of the chlorine SANITIZER. All the utensils in the kitchen had a faint odor of pickle juice - the same odor the manager noticed when she entered the utensil washing area. The employee had not been trained to use TEST STRIPS to check the SANITIZER level. If he had, this mistake may have been noticed and corrected immediately.

**Solution:** The person in charge has the responsibility to ensure dish machines are operating properly every day. An employee must be assigned to check the SANITIZER level with a TEST STRIP to verify the concentration is at the appropriate level and to notify the person in charge if there is a problem.



## Module 4 Questions:

# Utensil Washing-Manual and Mechanical Review

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*TRAINER: Ask participants to answer the following.*

1. How do you set up a 3 or 4 compartment sink?

**Answer:** 1 - Pre-Wash/Scrape  
2 - Wash with Detergent and 110°F Water  
3 - Rinse  
4 - SANITIZE with Approved SANITIZER

2. What is the proper SANITIZER concentration for manual utensil washing?

**Answer:** Chlorine at 50 - 100 ppm in warm water  
Quaternary Ammonia Compound (Quat) at 200 ppm or as specified by the manufacturer.

3. How do TEST STRIPS work?

**Answer:** TEST STRIPS measure the concentration in parts per million (ppm) of the SANITIZER in solution. Chlorine TEST STRIPS turn shades of purple and quat TEST STRIPS turn shades of greenish blue, depending on the concentration.

4. What is the final rinse temperature for a hot water SANITIZING dish machine?

**Answer:** 180°F or as specified by the manufacturer.



## Post Quiz

# MODULE 4: UTENSIL WASHING

Fill in the blanks

### Manual Utensil Washing Steps

1. Scrape
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. Air Dry

### Sanitizer

Chlorine

Quaternary Ammonia

Iodine

### Concentration

\_\_\_\_\_ ppm

\_\_\_\_\_ ppm

12.5 - 25 ppm



## Post Quiz Answers

# **MODULE 4: UTENSIL WASHING**

Fill in the blanks

Manual Utensil Washing Steps

1. Scrape
2. **Wash**
3. **Rinse**
4. **Sanitize**
5. Air Dry

Sanitizer

Concentration

Chlorine

**50-100 ppm**

Quaternary Ammonia

**200 ppm**

Iodine

**12.5 - 25 ppm**



## Module 4 Moving Ahead:

# For Managers/Trainers

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*TRAINER: Do not read aloud. These are your next steps, additional activities and resources.*

## After the Training

- Have participants sign Training Verification Log (p. 9), a requirement for **SAFE FOOD CREW** Recognition Program.
- Complete the Trainer's Evaluation Form (p. 10), a requirement for **SAFE FOOD CREW** Recognition Program.
- Present participants with Certificate of Completion (p. 12).
- Track all trainings an employee receives on the Employee Attendance Record (p. 13).
- Check manual utensil washing sanitizing solutions and chemical sanitizing dish machines once per day with a TEST STRIP.
- Check the temperature gauge on a hot water sanitizing dish machine once per day.
- Use the Sanitizer Check Log (p. M4-14) or provide your own log/calendar to document testing.
- Review your dish machine manufacturer manual for proper operation and maintenance.
- Invite your dish machine or chemical service technician to provide training on proper operation of your machine or use of chemicals.
- Post the Manual Utensil Washing fact sheet (p. M4-7) or Mechanical Utensil Washing fact sheet (p. M4-8) in the utensil washing area for a quick reference.

## Resources

- FDA 2001 Food Code and Wisconsin Food Code: 4-301, Equipment Numbers and Capacities; 4-302.14, Sanitizing Solutions, Testing Devices; 4-501, Equipment Maintenance and Operation; 4-603, Cleaning of Equipment and Utensils - Methods; 4-7, Sanitization of Equipment and Utensils.
- Video: [The Food Protection Video Series: Your Safe Food Training Guide - Vol. 5: Cleaning And Sanitizing.](#) University of Florida/Florida Restaurant Association, 1997. *The University of Florida Food Protection Video Series is ideal for training your food service personnel about the most important aspects of food safety. This volume covers proper cleaning and sanitizing of food equipment and utensils (9:00 min).*

