



## MARYLAND Department of Health

# Developing Sanitation Standard Operating Procedures

### What is a Sanitation Standard Operating Procedure (SSOP)?

A Sanitation Standard Operating Procedure (SSOP) is a written document of procedures or programs used to maintain equipment and the environment in a sanitary condition for food processing. It is a step-by-step description of cleaning and sanitizing procedures and specifies:

- what is to be cleaned
- how it is to be cleaned
- how often it is to be cleaned
- what records are used to monitor the procedures

An SSOP is a fundamental part of a Food Safety Plan. It may be a stand-alone procedure or may be a Prerequisite Program (PP). It shall be updated whenever there is a change in processes or chemicals used. It should be reviewed annually with the Food Safety Plan. An SSOP may be written for:

- a piece of equipment
- employee hygiene
- hand washing, hair restraint, utensil or glove usage in the plant environment
- several pieces of equipment in a process
- an environmental area
- as a Master Sanitation Plan for the whole facility

### What should an SSOP contain?

At a minimum, your SSOP should cover:

#### **Pest Control**

Pests must be excluded from the processing plant. Your company's written plan must include all measures completed to ensure a pest-free environment. Include such information as the type of traps used, where they are located, a schedule for monitoring and replacement and who is responsible for the task. If you've sealed holes, repaired walls or put in a new drainage system to deal with the problem, document it. Also include any plans for pest control in the future.

#### **Proper Storage and Labeling of Chemicals**

This includes anything and everything utilized for cleaning, pest control, machine maintenance and employee health. Store according to the directions on the packaging and separate as necessary per hazardous material specifications. If you are mixing cleaning compounds into smaller containers for use, be sure that every container is clearly labeled and stored in its proper place. No exceptions.

### **Food, Packaging and Food Contact Surfaces**

All of these things must be protected from adulteration with all biological, chemical and physical contaminants. This includes machine lubricants, cleaning compounds, pesticides and sanitizing agents. Additionally, cross-contamination of gloves, utensils, protection garments and any other possible avenues of cross-contamination must be considered and addressed. Be sure to include processes that prevent cross-contamination from raw product to final product.

### **Facility Condition and Cleanliness**

The condition and the cleanliness of the facility and its processing equipment must be maintained so as to prevent adulteration of food products. To put it in perspective — if you would hesitate to eat the food coming out of your company's facility, your company should upgrade and/or clean up. Document machine and facility maintenance as well as cleaning schedules and procedures. Always include the responsible parties' names and contact information.

### **Water Use and Safety**

All water that comes into contact with food or food contact surfaces must be clean and pathogen free. Include in your SSOP the procedures by which your company tests and monitors the water used within the facility. Don't forget to consider the water in employee restrooms, break rooms and hand washing stations. Standing water of any kind is an issue and will be dealt with by regulating authorities if not addressed by the facility.

### **Sanitization Maintenance**

This involves hand washing stations, toilet facilities and hand sanitizing stations. Outer garments, hair nets, gloves, booties and goggles must be laundered, replaced, sanitized or changed as often as necessary to prevent insanitary conditions, cross-contamination or adulteration. Also include a plan for safe storage and disposal of these items.

### **Employee Health Monitoring**

Sick or otherwise unhealthy employees can directly cause the microbiological contamination of food, food contact surfaces and packaging material. Encourage employees to report illness and to take the necessary steps to prevent it from spreading. It may be prudent to train management or shift supervisors to watch for signs of infection in order to preclude the spread of a communicable disease.

### **Can I just use a Sanitation Standard Operating Procedure from another food plant that I found online?**

Only if the document addresses the same equipment and procedures that you will be using in your own plant. Batch mixers, filling machines, etc., all have unique cleaning considerations specific to their own break down and clean up. It would best serve your firm to develop your own document that represent what is done at your firm, uses your cleaning and sanitizing procedures and that is specific to your own plant's equipment.

## **How would I develop a Sanitation Standard Operating Procedure (SSOP)?**

### **Use Clear Language**

SSOPs should be written in a concise, easy-to-read format. Simple, direct terms are the most effective. Ambiguous directions or long instructions can be difficult to follow correctly.

If employees are not native English speakers, consider having an alternative version available in their first language. When training non-native English speaking employees, it is critical that they understand the details of the procedures and the proper use of chemicals before beginning their job. This will ensure the utmost sanitary condition for processing, reduce food safety risk and minimize employee accidents.

### **Completely Describe the Steps**

An SSOP is a step-by-step document.

- use a numbered sequence for the steps

Describe the steps completely.

- identify specific cleaning chemicals (type, brand, name, concentration)
- include the temperature and time conditions needed to achieve proper cleaning

Add notes for clarification as needed.

- notes are particularly useful when identifying specific hazards, such as making sure the correct personal protection equipment (PPE) is put on prior to handling caustic chemicals

An SSOP should be considered a training document.

- when a new or relief employee is asked to do this task, can they follow this SSOP and get the job done correctly and timely

### **Identify the Monitoring Records**

Monitoring records are an integral part of a Food Safety Plan. Monitoring records are logs, charts and other documents that prove that cleaning and sanitizing occurred. Monitoring records should be filled in the date and signature or initials of the person completing the task.

**If it wasn't documented, it wasn't done!**

Examples of monitoring records include

- chemical concentration logs
- cleaning schedule logs
- pasteurization chart with the CIP cycle
- periodic checklists on the Master Sanitation Plan

### **Elements of an SSOP**

Here is a checklist of elements that should be included in an SSOP:

- company name
- date (most recent update or effective date)
- version ID
- SSOP number (optional see below)
  - some companies assign numbers to their SSOPs while some may combine the SSOP number and version (Example: SSOP #3)
- title
  - the name of the procedure or program: SSOP #3 Cleaning the Batch Tank

- scope or introduction
    - what is covered
  - frequency
    - how often this should be done
  - procedures
    - step-by-step instructions
    - use a logical, sequential order
    - add notes as needed for clarification
    - specify:
      - chemicals (type, brand name)
      - chemical concentration
      - time
      - temperature
- Break into sections for multiple tasks*
- recordkeeping
    - identify which forms or logs are used (Example: chemical concentration logs)
  - person responsible
    - for the SSOP content and updates
    - include signature & date lines
  - page numbers

## **Cleaning and Sanitizing Food Contact Surfaces** (A Very Simple Sample SOP)

**PURPOSE:** To prevent foodborne illness by ensuring that all food contact surfaces are properly cleaned and sanitized.

**SCOPE:** This procedure applies to foodservice employees involved in cleaning and sanitizing food contact surfaces.

**KEY WORDS:** Food contact surface, cleaning, sanitizing

### **INSTRUCTIONS:**

1. train foodservice employees on using the procedures in this SOP
2. follow state or federal requirements
3. follow manufacturer's instructions regarding the use and maintenance of equipment and use of chemicals for cleaning and sanitizing food contact surfaces per the manufacturer's recommendations on the label
4. wash, rinse and sanitize food contact surfaces of sinks, tables, equipment, utensils, thermometers, carts and equipment using the above-mentioned correct concentration of the sanitizer:
  - before each use
  - between uses when preparing different types of raw animal foods, such as eggs, fish, meat and poultry
  - between uses when preparing ready-to-eat foods and raw animal foods, such as eggs, fish, meat and poultry
  - after four hours of continuous production
  - any time contamination occurs or is suspected
5. wash, rinse and sanitize food contact surfaces of sinks, tables, equipment, utensils, thermometers, carts and equipment using the following procedure:
  - wash surface with detergent solution
  - rinse surface with clean water
  - sanitize surface using a sanitizing solution mixed at a concentration specified on the manufacturer's label
  - place wet items in a manner to allow air drying
6. if a three-compartment sink is used, setup and use the sink in the following manner:
  - in the first compartment, wash with a clean detergent solution at or above 110°F or at the temperature specified by the detergent manufacturer
  - in the second compartment, rinse with clean water
  - in the third compartment, sanitize with a sanitizing solution mixed at a concentration specified on the manufacturer's label or by immersing in hot water at or above 171°F for 30 seconds; test the chemical sanitizer concentration by using an appropriate test kit
7. if a dish machine is used:
  - check with the dish machine manufacturer to verify that the information on the data plate is correct
  - refer to the information on the data plate for determining wash, rinse and sanitization (final) rinse temperatures; sanitizing solution concentrations; and water pressures, if applicable
  - follow manufacturer's instructions for use

- ensure that food contact surfaces reach a surface temperature of 160°F or above if using hot water to sanitize

### **MONITORING:**

Employee will:

1. during all hours of operation, visually and physically inspect food contact surfaces of equipment and utensils to ensure that the surfaces are clean
2. in a three-compartment sink, on a daily basis:
  - visually monitor that the water in each compartment is clean
  - take the water temperature in the first compartment of the sink by using a calibrated thermometer
  - if using chemicals to sanitize, test the sanitizer concentration by using the appropriate test kit for the chemical
  - if using hot water to sanitize, use a calibrated thermometer to measure the water temperature; refer to Using and Calibrating Thermometers SOPs

### **MONITORING, continued:**

3. in a dish machine, on a daily basis:
  - visually monitor that the water and the interior parts of the machine are clean and free of debris
  - continually monitor the temperature and pressure gauges, if applicable, to ensure that the machine is operating according to the data plate
  - for hot water sanitizing dish machine, ensure that food contact surfaces are reaching the appropriate temperature by placing a piece of heat sensitive tape on a small ware item or a maximum registering thermometer on a rack and running the item or rack through the dish machine
  - for chemical sanitizing dish machine, check the sanitizer concentration on a recently washed food-contact surface using an appropriate test kit

### **CORRECTIVE ACTION:**

1. retrain any foodservice employee found not following the procedures in this SOP
2. wash, rinse and sanitize dirty food contact surfaces; sanitize food contact surfaces if it is discovered that the surfaces were not properly sanitized; and discard food that comes in contact with food contact surfaces that have not been sanitized properly
3. in a three-compartment sink:
  - drain and refill compartments periodically and as needed to keep the water clean
  - adjust the water temperature by adding hot water until the desired temperature is reached
  - add more sanitizer or water, as appropriate, until the proper concentration is achieved
4. in a dish machine:
  - drain and refill the machine periodically and as needed to keep the water clean
  - contact the appropriate individual(s) to have the machine repaired if the machine is not reaching the proper wash temperature indicated on the data plate
  - for a hot water sanitizing dish machine, retest by running the machine again.
    - a. if the appropriate surface temperature is still not achieved on the second run, contact the appropriate individual(s) to have the machine repaired.
    - b. wash, rinse and sanitize in the three-compartment sink until the machine is repaired or use disposable single service/single-use items if a three-compartment sink is not available

- for a chemical sanitizing dish machine, check the level of sanitizer remaining in bulk container; fill, if needed; “prime” the machine according to the manufacturer’s instructions to ensure that the sanitizer is being pumped through the machine; retest; if the proper sanitizer concentration level is not achieved, stop using the machine and contact the appropriate individual(s) to have it repaired; and use a three-compartment sink to wash, rinse and sanitize until the machine is repaired

**VERIFICATION AND RECORD KEEPING:**

Food service employees will record monitoring activities and any corrective action taken on the Food Contact Surfaces Cleaning and Sanitizing Log. The person in charge will verify that food service employees have taken the required temperatures and tested the sanitizer concentration by visually monitoring food service employees during the shift and reviewing, initialing and dating the Food Contact Surfaces Cleaning and Sanitizing Log. The log will be kept on file for at least one year. The food service manager will complete the Food Safety Checklist daily. The Food Safety Checklist is to be kept on file for a minimum of one year.

**DATE IMPLEMENTED:** \_\_\_\_\_ **BY:** \_\_\_\_\_

**DATE REVIEWED:** \_\_\_\_\_ **BY:** \_\_\_\_\_

**DATE REVISED:** \_\_\_\_\_ **BY:** \_\_\_\_\_

## Cheese Process Equipment Cleaning and Sanitizing

### SCOPE

Cheese process equipment includes the pasteurizer, cheese vat, cheese press, tables, and utensils used during the manufacture of cheese.

### CLEANING & SANITIZING SCHEDULE

Processing equipment is sanitized immediately prior to use and cleaned at the end of each processing day.

### MANUAL SANITIZING

1. Fill 5 gallon bucket with room temperature water.
2. Add 1 packet of ABC powdered sanitizer (HIJ Company) to the bucket. Stir to dissolve.
3. Sanitize equipment using a clean brush, making sure to sanitize all surfaces and parts.

### MANUAL CLEANING (in a sink)

1. Dismantle equipment to be cleaned and rinse parts with warm water.
2. Make cleaning and sanitizing solutions according to manufacturer's instructions.

NOTE: wear appropriate personal protection equipment (gloves, eye protection)

3. Wash parts using a clean brush, making sure to wash all surfaces and parts.
4. Rinse thoroughly with warm water to remove cleaner residues.
5. Rinse parts with sanitizer solution.
6. Visually inspect parts for damage and residual cleaner.

### CIP CLEANING OF THE HTST PASTEURIZER

1. Continue the flush rinse after product processing until the clean water comes out of the product lines (at least 20 min). Maintain water level in balance tank.
2. Prepare the HTST and Homogenizer for CIP.
  - a. Turn the Temperature Set Point down to allow the flow to divert. Shut off the booster pump, homogenizer, and hot water system. Turn off the chilled water.
  - b. Turn the switch on the Back Panel (CIP box) from Product to CIP.
  - c. Reconnect the product recirculation line. Remove end caps and reconnect the bypass line on the homogenizer.
  - d. Turn the Product Flow to CIP on the Control Panel.
3. Turn HTST system back on & stabilize conditions.
  - a. Check water level in balance tank, and add water if needed.
  - b. Release the backpressure using the Back Pressure Regulating Valve.
  - c. Adjust the Temperature Set Point to 180°F.
  - d. Turn on the Homogenizer and Booster Pump to High Speed. Turn on the Hot Water System at the control panel.
4. Add Caustic and circulate for 20 min.
  - a. Add city water to the balance tank to a level just below the side port.
  - b. Add 4.5 lbs. of caustic (EFG caustic cleaner by HIJ Company) to balance tank

- c. Take a sample of the caustic solution from the balance tank and check concentration using the test kit for Caustic Wash. Record concentration of caustic wash on the Sanitation Test Log.
  - d. Caustic solution should be 1 – 1.5%; adjust concentration and retest as needed.
  - e. Switch between Forward and Diverted Flow a few times to clean the entire system.
5. Drain caustic solution.
    - a. Turn Flow Valve to Drain.
    - b. When balance tank is almost empty add clean water to balance tank for rinse.
  6. Rinse with clean water 20 – 30 min.
  7. Add acid and circulate for 20 min.
    - a. Turn flow valve back to Forward Flow F/F.
    - b. Add city water to the balance tank to a level just below the side port.
    - c. Add 1.5 lbs. of acid (KLM acid cleaner by HIJ Company) to balance tank.
    - d. Take a sample of the acid solution from the balance tank and check concentration using the test kit for Acid Wash. Record concentration of acid wash on the Sanitation Test Log.
    - e. Acid solution should be 8,000 – 10,000 ppm; adjust concentration and as needed.
    - f. Switch between forward and diverted flow a few times to clean the entire system.
  8. Rinse with clean water 30 – 45 min.
    - a. Turn flow valve to Drain.
    - b. When balance tank is almost empty, add clean water to balance tank for rinse. Add water as needed to complete rinse cycle.
    - c. After rinse is complete, drain tank until only a small amount remains in the bottom.
  9. Cool System.
    - a. Turn off Steam Valve at control panel and allow the temp to drop below 140°F.
    - b. Adjust the Temperature Set Point to 120°F.
    - c. Wait until the temperature of the system is < 120°F before turning off the system.

#### RECORDKEEPING

- The results from testing the concentrations of cleaning solutions are recorded on the Sanitation Test Log immediately following the test.
- CIP cleaning of the pasteurizer is recorded on the Pasteurization Chart at the end of the production run each day.
- Manual cleaning of the cheese vat, tables and equipment is recorded on the Daily Cleaning Log.

The following individual is responsible for implementation of this SSOP:

Name: Jane Doe

Title: Plant Manager

Date: 4/15/15