

## Sanitation for Organic Food Processing

### WHAT'S SPECIAL ABOUT SANITATION FOR ORGANIC PROCESSING?

#### SANITATION IS A COMPONENT OF THE ORGANIC SYSTEM PLAN

#### What are the sanitation goals of the Organic System Plan (OSP)?

- To manage sanitation material residues and cross-contamination of conventional food residues so that food contact surfaces, storage containers, processing equipment, and washed organic produce will not be contaminated with sanitizer residues or conventional food residues prior to processing.
- To provide a detailed plan that is part of your OSP and is approved by your organic certifier.
- To document your compliance with organic requirements.

Refer to NOP regs 205.105, 205.201(5), and 205.272

#### What basic information will I need to get started?

1. List and describe all equipment used in your organic food processing, including all lines, conveyors, containers, surfaces, and utensils.
2. List all sanitation materials and concentrations used with information on the product manufacturer and composition (best done using a Material Safety Data Sheet or specifications sheet).
3. List Standard Operating Procedures for cleaning each piece of equipment.
4. Identify Critical Control Points for your organic sanitation system. That is, identify every point in your process where there is potential to contaminate organic product with conventional food residues or sanitizers used in direct food contact or sanitizers used on any food contact surface.

### Helpful Hints

- Are you processing both conventional and organic product? Prevent cross-contamination by scheduling the organic run as the first run of the day—otherwise an extra sanitation step will be required.
- Using a shared kitchen? Your plan should list all sanitizers used in the kitchen; you may need to create an appropriate "intervening event" and verification test (see page 2).
- Enclosed food contact surfaces like pipes, tanks, and closed equipment (a.k.a. *clean-in-place*) often require a purge with potable water or some of the first organic product through the system.
- Your organic certifier can answer questions about their forms and the organic standards; they may *not* be allowed to help you develop your plan. Consultants who can give suggestions or write an Organic System Plan are available.
- "Dry cleaned" equipment (e.g., a coffee roaster) requires a purge of organic product to prevent cross-contamination from conventional residues.
- Remember: State or federal food safety regulations supersede organic regulations when requirements conflict.

## SANITIZERS

Sanitizers are applied to surfaces after they are cleaned, to *kill microorganisms*. They may be applied to the surface of fresh produce or added to wash water for produce, eggs, poultry, or meat products. If using sanitizers that leave a residue, you need a plan for verifying that no residues remain.

### SANITIZERS ALLOWED FOR ORGANIC OPERATIONS

- Acidified sodium chlorite
- Hydrogen peroxide
- Ozone
- Peracetic acid/Peroxyacetic acid
- Chlorine materials (including bleach)

(More about this on page 2)

## Do the allowed sanitizers require rinsing afterward?

- **Most allowed sanitizers do not need a potable water rinse after use** (i.e. acidified sodium chlorite, hydrogen peroxide, ozone, peracetic acid/peroxyacetic acid).
- **Chlorine-based sanitizers, found on the National List of allowed materials, have some restrictions.** Residuals levels in the rinse water cannot exceed 4 ppm. Air drying of open surfaces may be sufficient to meet this requirement. If you wash harvested crops or use a chill tank, the final rinse must bring chlorine levels in the water down to 4 ppm.
- **Brand name sanitizers may require a residue plan** if they contain more than the specific allowed agent. The National Organic Program lists sanitizers as "allowed synthetics" on the National List of Handling Materials, NOS 205.605. Brand names can be looked up on the OMRI Materials List (see Resources).

## What sanitation components will an organic certifier expect to see?

- ✓ **Sanitizers used are not in excess** of the maximum strength allowed by the FDA for food contact surfaces or direct food contact.
- ✓ **Water meets federal safety requirements:** No more than 4 ppm chlorine, and bacteriologically safe.
- ✓ **Organic sanitation system critical control points are all addressed** in your plan.
- ✓ **For sanitizers not listed in the organic regulations**, an "intervening event" occurs between the last sanitizer used and the processing of organic food. This is usually done with a potable water rinse or a purge of some organic product through the system prior to production.
- ✓ **The intervening event is effective** in removing conventional food residues and sanitizer residues from food contact surfaces. Verification of clean food contact surfaces is usually done with chlorine strip tests, a pH meter for acid-based sanitizers, or a titration test. For conventional food residues, a special cleaning or purging protocol is needed.
- ✓ **A record-keeping system is in place** to document your organic sanitation system and for employee training of protocols and record-keeping.

## What about Quat?

Quaternary Ammonia sanitizers, often called 'Quat,' should be considered as a 'last resort,' or appropriate when specifically suited to the surface in question. Organic certifiers will look carefully at your system for dealing with Quat residues, since they remain on the surface after a rinse. Quat residue tests are expensive, and most may not be sensitive enough to verify compliance with organic standards.

### ON PURGING:

#### *How long should I air dry after using chlorine?*

Try air drying your food contact surface for varying amounts of time (1/2 hour, 1 hour, etc.). At each interval, rinse the surface with water; capture the rinsate and test with a chlorine test strip. You have found the correct drying time when the test indicates chlorine in the rinse water at 4 ppm or less.

#### *I have a closed tank and pipeline I clean with an acid-based sanitizer. How much of a potable water purge do I need?*

Use a pH test strip and test the pH of your water source. Purge your system with varying amounts of water. At the conclusion of each purge, test the rinse water for pH. When the pH of the rinse water equals the pH of your water source, you will have an adequate purge.

**NOTE:** Specialized equipment may require specific purging or cleaning protocols to clear conventional food residues.

## RESOURCES

### OMRI: Organic Materials Review Institute ([omri.org](http://omri.org))

OMRI reviews products for use in organic production. The *OMRI Products List*® is a directory of over 2800 OMRI Listed® products that may be used in organic production or processing. The *OMRI Generic Materials List*® is a directory of substances that are allowed, allowed with restrictions, or prohibited for organic use.

OMRI staff provided input for this Fact Sheet.

### National Organic Program Handbook

([ams.usda.gov/NOPprogramhandbook](http://ams.usda.gov/NOPprogramhandbook))

NOP 5026: *The Use of Chlorine Materials in Organic Production and Handling*, 7/22/2011

*Guide for Organic Processors*, 12/10/2012