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 AND 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 manufacturers’ 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 minutes). 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 and stabilize conditions.
   a. Check water level in balance tank; 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 solution and circulate for 20 minutes.
   a. Add city water to the balance tank to a level just below the side port.
   b. Add 4.5 pounds of caustic solution (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 percent; 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 for 20–30 minutes.
7. Add acid solution and circulate for 20 minutes.
   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 pounds of acid solution (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 as needed.
   f. Switch between forward and diverted flow a few times to clean the entire system.
8. Rinse with clean water for 30–45 minutes.
   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 temperature to drop below 140°F.
   b. Adjust the temperature set point to 120°F.
   c. Wait until the temperature of the system is below 120°F before turning off the system.

RECORDKEEPING
• Record the results from testing the concentrations of cleaning solutions on the Sanitation Test Log immediately following the test.
• Record CIP cleaning of the pasteurizer on the Pasteurization Chart at the end of the production run each day.
• Record manual cleaning of the cheese vat, tables, and equipment on the Daily Cleaning Log.

The following individual is responsible for implementation of this SSOP:

Name: Jane Doe 
Title: Plant Manager 
Date: 4/28/15