

STANDARD OPERATING PROCEDURE – Ricotta Cheese Production**INTRODUCTION:**

Ricotta cheese is prepared from a pasteurized blend of milk and cream, salt, vinegar and potassium sorbate. It is packaged for wholesale distribution.

MATERIALS

1. Supplies
 - a. Sanitizer
 - b. Detergent
 - c. White distilled vinegar
 - d. Salt
 - e. Potassium sorbate
 - f. Ricotta cheese vat
 - g. Sanitized containers
 - h. Gloves
2. Hazards
 - a. Burns from hot steam and pipes
 - b. Loud noises from steam pressure in vat
 - c. Vinegar may splash up and harm eyes. Wear goggles.
 - d. Corrosive damage to eyes and skin from sanitizers. Wear goggles and gloves when using the concentrate. Avoid breathing the vapors.

PRE-PRODUCTION SANITATION

1. On the work day immediately preceding cheese manufacture the ricotta vat should be hand scrubbed with detergent.
2. Additional hand scrubbing will be performed on the day of processing if necessary.
3. Pasteurized water should be run through the pipes and valves that feed the vat from the milk room.
4. Sanitizer is then sprayed into the vat and allowed to drain out 5-15 minutes prior to running the product into the vat.

MILK ROOM PROCEDURE

1. Blend and pasteurize the required volume of milk and cream. Pump it to the ricotta cheese vat.
2. Fill out the appropriate portion of the record of manufacture and pass it on to the cultured products room.

CULTURED PRODUCTS ROOM PROCEDURE

1. Pre-production duties
 - a. Collect all necessary ingredients and supplies.
 - a. Calculate the weight of salt and volume of vinegar and potassium sorbate needed.
 - b. Prepare a volume of sanitizer (200 ppm available chlorine) adequate for dipping equipment and containers.
 - c. Code-date containers and lids and apply product labels.
 - d. Dip containers in sanitizing solution 5 to 15 minutes prior to packaging product.
 - e. Calibrate the pH meter if necessary.
2. Production
 - a. After all of the milk has been delivered to the ricotta vat, add 6 quarts of white distilled vinegar for every 1,000 pounds of milk.
 - b. Turn the agitator on low speed.
 - c. Measure the pH or titratable acidity (should be pH of 6.0, or TA of 0.31).
 - d. Before adding steam, if possible, turn steam injection on and check for proper steam flow and leaks.

- e. Insert direct steam injection and turn on steam, also turn on vat steam to inside jacket (40 pounds of live steam pressure).
 - f. Add 2.25 pounds of salt per 1,000 pounds of milk. Turn agitator to low speed.
 - g. Add 1.75 oz. of potassium sorbate per 1,000 pounds of milk.
 - h. After 15-20 minutes, pass a large sanitized spatula through the milk, and look for fine flakes of curd.
 - i. When the temperature of the ricotta cheese reaches 178 °F, turn off the steam and turn off the jacketed steam.
 - j. Let curd remain quiescent for 30 minutes.
 - k. Repeatedly dip a sanitized spatula into the vat, moving all of the curd toward the center of the vat.
 - l. Turn agitator on at low speed. Quickly pour in the remaining vinegar from one single large sanitized container, adding it at many locations in the vat.
 - m. Test the final pH. It should be between 5.0 and 5.2.
 - n. With the agitator on, hold at that temperature for 5 minutes.
 - o. Turn on cold water in vat jacket. Drain the whey from the vat.
 - p. Pull ricotta cheese to the sides of the vat with a sanitized rake, creating a channel to remove as much whey as possible.
 - q. Using a sanitized hand scoop and wearing gloves, package cooled ricotta cheese into sanitized 10-pound containers.
 - r. Immediately place the packaged ricotta on a cart and when the entire product is packaged move it into a 38 to 40°F cooler.
 - s. Take a sample of the finished product to lab for testing.
3. Post-production sanitation
 - a. Rinse the vat.
 - b. Fill the vat with 200 gallons of water and a detergent. Hand scrub the vat using abrasive pads and then thoroughly rinse it.
 - c. Steam pipes are cleaned in the COP tub and then rinsed off. When not in use the pipes are returned to the storage shelf and the agitators are hung on the wall.

RECORD KEEPING

1. Completely fill out the record of manufacture form.
 - a. Record lot numbers of each ingredient used as well as the packaging materials used.
 - b. Record the volume of finished product that was packaged and its code date.

REFERENCES

1. Ricotta vat operators manual – Kusel Dairy Equipment
2. SOP 027 Operation of the ricotta vat
3. SSOP 009 Operation of the COP tubs

The following individual is responsible for implementation of this SOP and has the overall authority on-site:

Name: _____ Title: _____ Date: _____