

**SAMPLE DOCUMENTATION
PRODUCTION OF DAIRY PRODUCTS IN FOOD SERVICE
ESTABLISHMENTS**



Ricotta



Ministry of
Health

Production of Ricotta in Food Service Establishment

Ricotta is traditionally made by cooking the leftover whey from cheese making. The word ricotta means recooked in Italian. During this second heat process the proteins in the whey coagulate like an egg white. The resulting curd is drained, and cream is added to improve richness and texture. The amount of protein in whey is very low (<1%) thus a large volume of whey would be required. Ricotta can also be made by heat and acid coagulation of milk and cream ingredients. This recipe is made with milk, cream and citric acid. Acidulants such as vinegar and lemon juice can be used but overuse may affect flavour of finished product.



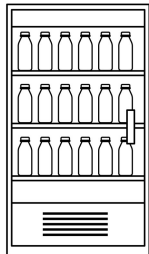
STANDARD RECIPE

- 10 Litres of pasteurized whole milk (3.25% BF)
- 750 mL whipping cream (34% BF)
- 1 Tablespoon citric acid powder (15 g)
- 2 Tablespoon salt (30 g)

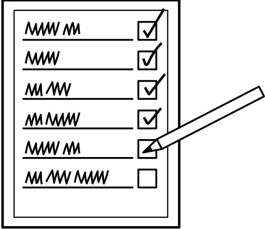

Equipment List

Thermometer	pH meter	Measuring cups	Measuring spoons
Kettle/Pot	Spatula	Cheese cloth	Colander
Catch bowl for whey	Skimmer or perforated ladle		

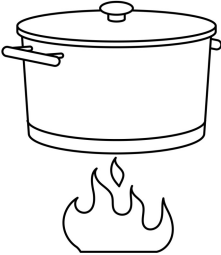

PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
1	Purchase and refrigerate milk 	<u>Biological</u> Pathogen contamination due to using product that is past best before date. Pathogen contamination due to condensation falling onto/into uncovered product. Pathogen growth due to time/temperature abuse.	<ul style="list-style-type: none"> Purchase and use only pasteurized dairy ingredients from approved sources. Keep pasteurized dairy ingredients in original commercial packaging, as purchased, until use. Store at 4°C or colder. <p style="text-align: center;">Do not use products where the best before date has expired.</p>

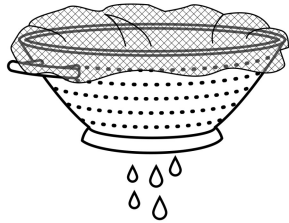
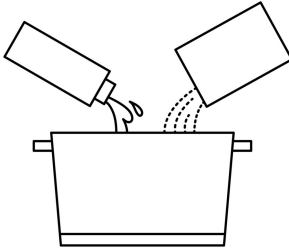
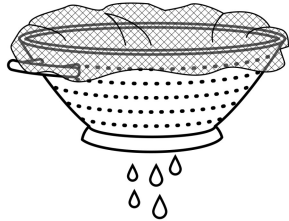
PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
2	Preoperational Checks 	<p><u>Biological</u> Pathogen contamination due to incomplete sanitation procedures.</p> <p><u>Chemical</u> Contamination with non-food chemicals due to residual cleaners or sanitizers. Contamination with non-food chemicals due to mishandling of sanitizer spray bottles during use or filling.</p> <p><u>Allergens</u> Allergen cross contamination due to improper separation of activities.</p>	<ul style="list-style-type: none"> • Inspect, clean and sanitize designated work area. • Inspect equipment, utensils, and processing areas (clean and sanitized). • Use written recipe each time you make the product to ensure consistency of measurements and that all steps in the production process are followed. • Label the sanitizer spray bottles to indicate the content (non-food chemical).
3	Stage Ingredients 	<p><u>Biological</u> Pathogen growth due to time/temperature abuse. Pathogen contamination due to unsanitary equipment. Pathogen cross-contamination due to improper employee handling practices.</p> <p><u>Chemical</u> Contamination with non-food chemicals due to residual cleaners or sanitizers.</p> <p><u>Allergens</u> Allergen cross contamination due to improper separation of activities.</p>	<ul style="list-style-type: none"> • A combination of milk and cream is used to make ricotta. • Ricotta is a fresh cheese made by curdling milk (and cream) using an acidulant such as citric acid, lemon juice, or vinegar. The acidulant used can affect flavour.

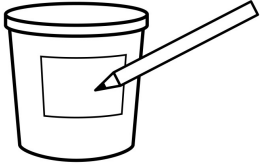
PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
4	Add acidulant and salt and heat slowly 	<p><u>Biological</u> Pathogen growth due to time/temperature abuse (too slow heating rate, incorrectly calibrated thermometer). Pathogen contamination due to improper employee handling practices. Pathogen contamination due to unsanitary equipment.</p> <p><u>Chemical</u> Contamination with non-food chemicals due to residual cleaners or sanitizers.</p> <p><u>Allergens</u> Contamination by allergens due to improper separation of activities.</p>	<p>CRITICAL CONTROL POINT (CCP1B)</p> <ul style="list-style-type: none"> • Combine the milk, cream, acidulant and half of the salt. • Blend well using a whisk. • Begin to heat the milk slowly over medium heat. • Continue heating until the temperature reaches 85 to 90 ° C. This should take 15 to 20. minutes to reach. • Stir product frequently to prevent burn on. • As the milk reaches the desired temperature, it will begin to coagulate and the solids will separate from whey. The whey should look clear, not milky. It will have a yellowish or green colour. • Measure pH with a calibrated pH meter. Record on batch report. The pH will drop to 5.4.
5	Rest 	<p><u>Biological</u> Pathogen growth due to time/temperature abuse.</p> <p><u>Allergens</u> Contamination by allergens due to improper separation of activities.</p>	<ul style="list-style-type: none"> • Use a rubber spatula and gently stir the curd mass around the edge of the pot to rotate the curd. • Remove from heat • Cover and allow to rest for 10 minutes.

PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
6	Drain (curd separation) 	<p>Biological</p> <p>Pathogen growth due to time/temperature abuse.</p> <p>Pathogen growth due to poor hygiene and improper handling by employees.</p> <p>Pathogen contamination due to unsanitary equipment.</p> <p>Pathogen contamination due to reusing worn out cheese cloth.</p>	<ul style="list-style-type: none"> • Wash hands and wear gloves before handling curd at this step. • Prepare a cheese cloth lined colander. Place a catch bowl underneath to collect the whey as it drains off • Use a ladle or spoon to scoop curd into the strainer for draining. • Do not scrape curd that has stuck to bottom of pot. It is likely burned on and will affect the flavour of the finished product. • When the whey dripping has slowed continue with next step.
7	Add salt 	<p>Biological</p> <p>Pathogen contamination due to improper employee hygiene practices.</p> <p>Pathogen contamination due to improper employee handling practices.</p> <p>Pathogen growth due to time/temperature abuse.</p>	<ul style="list-style-type: none"> • Wash hands and wear gloves before handling curd at this step. • Distribute the remaining salt over the curds. • Gently incorporate the salt into the curd. Mix gently with hands and try not to break up curd pieces.
8	Drain in cheese cloth 	<p>Biological</p> <p>Pathogen growth due to time/temperature abuse.</p> <p>Pathogen growth due to poor hygiene and improper handling by employees.</p> <p>Pathogen contamination due to unsanitary equipment.</p>	<ul style="list-style-type: none"> • Prepare a draining bag by tying opposite corners of the cheese cloth in a knot and repeat on the other two corners. • Suspend the bag using a clean and sanitized dowel or wooden spoon so that whey can drop freely into the whey catching bowl. • Drain until desired consistency is reached; this will take 15-20 minutes. • Discard whey.

PROCESS BASED FOOD SAFETY PLAN

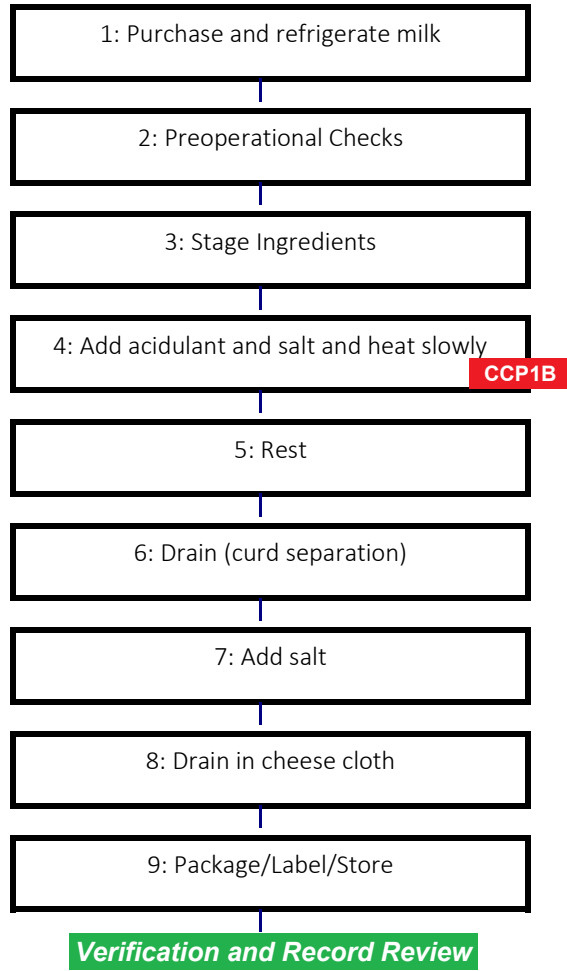
Step #	Process Step	Potential Hazards	Instructions and Outcomes
9	Package/Label/Store 	<p><u>Biological</u> Pathogen contamination due to poor hygiene and improper handling by employees. Pathogen growth due to time/temperature abuse. Pathogen contamination due to unsanitary equipment.</p> <p><u>Physical</u> Contamination with non-food materials due to condensation falling onto/into uncovered product.</p>	<ul style="list-style-type: none">• Date product with 3-day use by date.• Store at 4°C or colder.• Discard product after 3 days.

Product Description Form (Foodservice)

Product Category	Fresh Cheese
1. What is your product name and weight/volume?	Ricotta
2. What type of product is it (e.g. raw, ready-to-eat, ready-to-cook, or ready for further processing)	Ready to Eat (RTE), ingredient in meal preparation.
3. What are your product's important food safety characteristics (e.g. acidity, water activity, salinity, etc.)?	Pasteurized, acidified, stored refrigerated, added salt (flavour).
4. What allergens does your product contain?	Milk
5. What restricted ingredients (preservatives, additives, etc.) does your product contain, and in what amounts e.g. grams)	None
6. How do you store your product e.g. keep refrigerated, keep frozen, keep dry) in your establishment and when you ship your product?	Store in lidded container in refrigerator.
7. What is the shelflife of your product under proper storage conditions?	3 days refrigerated (4°C).
8. Who will consume your product (e.g. the general public, the elderly, the immunocompromised, infants?)	Food Service customers.
9. How might the consumer mishandle your product and what safety measures will prevent this?	Mishandled in kitchen.
10. Where will the product be sold?	At own facility.
11. What information is on your product label?	Keep refrigerated, production date (lot code).

Ricotta

Process Flow Table



Critical Control Points Table: Ricotta

1. Identifying Hazards	2. Identifying Critical Control Points (CCP)	3. Establishing Critical Limits:	4. Establishing Monitoring Procedures (who, what, how and when)	5. Establishing Corrective Actions:	6. Establishing Verification Procedures (who, what, how and when)	7. Keeping Records
Pathogen growth due to time and temperature abuse during production.	<p>CCP1B</p> <p>Add acidulant and salt and heat slowly</p>	The product temperature must remain above 60°C.	<p>1. Production worker monitors temperature during coagulation step. Use a clean and sanitized thermometer.</p> <p>2. Check pH with clean and sanitized calibrated pH meter. The pH will drop to 5.4.</p> <p>3. Record on batch report.</p>	<p>2. Discard the batch if temperature drop can not be corrected within two hours.</p> <p>The batch may be contaminated and should not be used.</p>	<p>1. Operator reviews and signs batch reports at end of production day to ensure that it has been properly completed.</p> <p>2. Once per week, the Operator ensures that the temperature monitoring and pH checks follow the procedure (observes production worker in their task).</p> <p>3. If a non-conformance is found during the verification procedure, immediately investigate the cause of the non-conformance and take necessary corrective actions to prevent reoccurrence.</p> <p>4. Record all observations on the batch report, including the date, the time and initials.</p>	Ricotta Batch Report Thermometer Calibration Log

Note: CCPs are points in your process where controls are essential to preventing hazards or reducing them to acceptable levels. You may not be able to prevent or reduce the risk of the hazard at any later step. A CCP is measureable. Some examples of measureable CCPS in dairy processing are the time and temperature of pasteurization, the pH of a fermented dairy product and the water activity of a dried product such as skim milk powder. Foodservice establishments may include additional preparation steps as CCPs particularly when there is no cook step in the operation. These additional CCPs control the hazards associated with crosscontamination due to sanitation and personnel.

Cheese Batch Report

Cheese Type	<i>Ricotta</i>	Lot Code:	<i>22118</i>
Date Made:	<i>4/28/2022</i>	Cheesemaker:	<i>Joe</i>
Best Before Date:	<i>22 MA 01</i>		

Preoperational checks done *Yes, JG*

Staging Ingredients

Dairy Ingredient	Amount	Code/Lot	Supplier
Homo Milk (3.25%BF)	<i>10 Litre</i>	<i>MA 23</i>	<i>Saputo</i>
Whipping Cream (34%)	<i>750 mL</i>	<i>MA 23</i>	<i>Saputo</i>
Citric Acid	<i>30 g</i>	<i>21322</i>	<i>Bartek</i>
Salt	<i>60 g</i>	<i>21028</i>	<i>Sifto</i>

Process Step	Time	Temp (°C)	pH	Comments
Combine milk and cream, acidulant and half of the salt.				
Start Heating	<i>9:00</i>			
	<i>9:20</i>	<i>88</i>	<i>5.4</i>	
Rest	<i>9:30</i>	<i>85</i>		<i>good curd</i>
Drain Curd	<i>9:35</i>			
Add Salt	<i>9:50</i>	<i>63</i>		
Hang draining bag	<i>10:00</i>	<i>63</i>		
Package	<i>10:30</i>			
Temperature after 6 hours in storage	<i>16:30</i>	<i>4</i>		

Yield Number of 250 g tubs *4.5*

1.15 Kg

Observed Deviations and Corrective Actions

Date of Record Review: *2-May-22* Verification by: *M. Smith*