

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



Ministry of
Health

Production of Clotted Cream in Food Service Establishment

Clotted Cream is a traditional recipe from England. It is a very thick rich spreadable form of heavy cream. The texture and flavour is developed by the gentle clotting or cooking of the cream. Clotted cream tastes like lightly "cooked" cream. This thick, rich golden cream is served with scones.



STANDARD RECIPE

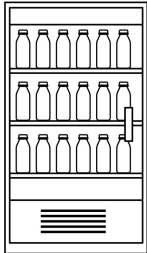
10 Litres of pasteurized high fat cream (whipping cream)

Note: UHT pasteurized cream or cream with stabilizer additives will not work in this process.

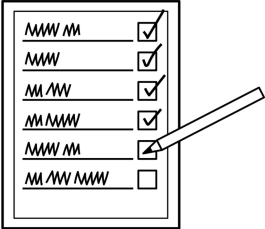

Equipment List

Shallow pan	Bain Marie	Spatula	Thermometer
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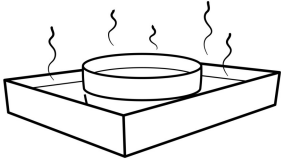
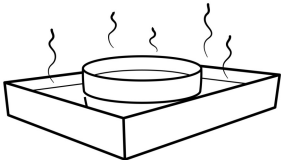
PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
1	Purchase and refrigerate cream 	<p><u>Biological</u></p> <p>Pathogen contamination due to using product that is past best before date.</p> <p>Pathogen growth due to time/temperature abuse.</p> <p>Pathogen contamination due to condensation falling onto/into uncovered product.</p>	<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>

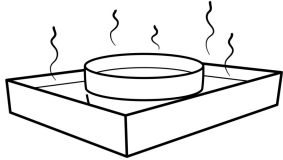
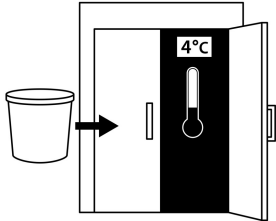
PROCESS BASED FOOD SAFETY PLAN

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> Cross contamination due to improper separation of activities. 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>	<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"> • Clotted cream is made by indirectly heating high fat cream using steam or a water bath and then leaving it in a shallow pan to cool slowly. The fat separates to the top and fat globules cling together giving the cream its clotted appearance. • Monitoring time and temperature is key success factor for safe clotted cream.

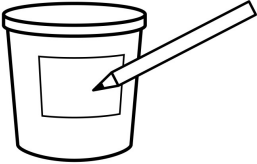
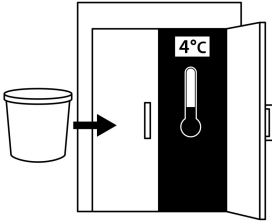
PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
4	Preheat oven (prepare Bain Marie) 	<u>Biological</u> None identified due to none identified	<ul style="list-style-type: none"> • Preheat oven to 200°F. • A Bain Marie is used for gentle even heating. Use a pan with high sides such as a roasting pan (but not ceramic). Line the bottom of the pan with a towel. Add hot water.
5	Transfer cream to shallow oven proof dish 	<u>Biological</u> Pathogen contamination due to poor hygiene and improper handling by employees. Pathogen contamination due to unsanitary equipment. <u>Chemical</u> Contamination with non-food chemicals due to residual cleaners or sanitizers. <u>Allergens</u> Allergen cross contamination due to improper separation of activities.	<ul style="list-style-type: none"> • Pour the cream into a shallow casserole dish or glass baking dish. Use a dish with a large surface area to maximize yield. • Place pan in Bain Marie in oven.

PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
6	Bake	<p><u>Biological</u></p> <p>Pathogen survival due to improper heat treatment.</p> <p>Pathogen survival due to improper calibration of thermometer.</p>	<p>CONTROL POINT (CCP1B)</p> <ul style="list-style-type: none"> • The temperature of the Bain Marie must stay above 60°C. The cream should reach between 77 and 79 °C. • Bake for 12 hours. Remove from oven. The surface will be a bubbly yellow (clotted cream). <p style="text-align: center;">Check temperature with clean and sanitized probe thermometer</p>
			
7	Cool finished product	<p><u>Biological</u></p> <p>Pathogen growth due to time/temperature abuse (too slow cooling rate, incorrectly calibrated thermometer).</p> <p>Pathogen contamination due to poor hygiene and improper handling by employees.</p> <p>Pathogen contamination due to uncovered baking dish in cooler.</p> <p><u>Chemical</u></p> <p>Contamination with non-food chemicals due to residual cleaners or sanitizers.</p> <p><u>Physical</u></p> <p>Hazardous extraneous material contamination due to uncovered baking dish in cooler.</p>	<p>CRITICAL CONTROL POINT (CCP2B)</p> <ul style="list-style-type: none"> • Transfer dish to refrigerator. • Cover <p>Ensure proper cooling rate: Cool down to 60°C within 2 hours, and from 20°C to 4°C within 4 hours. Total cooling time not to exceed 6 hours.</p>
			

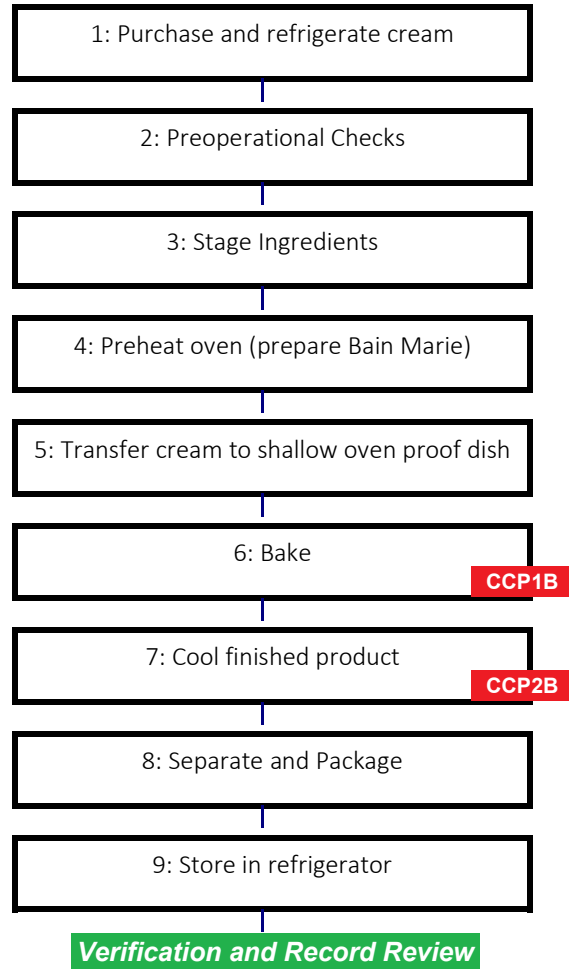
PROCESS BASED FOOD SAFETY PLAN

Step #	Process Step	Potential Hazards	Instructions and Outcomes
8	Separate and Package 	<p><u>Biological</u> Pathogen contamination due to poor hygiene and improper handling by employees. Pathogen contamination due to unsanitary equipment. Pathogen growth due to time/temperature abuse due to taking too long to complete step</p> <p><u>Chemical</u> Contamination with non-food chemicals due to incomplete sanitation procedures.</p>	<ul style="list-style-type: none"> • Use a clean spoon and transfer the clotted cream to a jar leaving the liquid that has separated behind. • Store in sealed containers. This will reduce the risk of bacterial contamination of the whole batch.
9	Store in refrigerator 	<p><u>Biological</u> Pathogen growth due to improper storage conditions (cooler malfunction). Pathogen growth due to poor inventory control (use of FIFO for frozen paneer on hand). Pathogen growth due to time/temperature abuse.</p> <p>Pathogen growth due to poor inventory control (use of FIFO)</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	Evaporation
1. What is your product name and weight/volume?	Clotted Cream
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.)?	High fat, baked for long period of time.
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).

Clotted Cream
Process Flow Table



Critical Control Points Table: Clotted Cream

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 improper time and temperature of thermal process	CCP1B Bake	Temperature of water in Bain Marie must be greater than 60°C	1. Production worker checks temperature of Bain Marie with clean and sanitized probe thermometer. 2. Record start and end of cook step on batch report.	When critical limits have not been met for the batch of clotted cream. 1. Continue heating batch of product. Monitor time and temperature. Record on clotted cream batch report. 2. If problem is due to malfunctioning equipment (oven) report to Operator. Place product on hold (in cooler) until equipment can be fixed. 3. Record on batch report. 4. If heat treatment can not be completed and time limit has not been met, discard the batch of clotted cream. 5. Immediately investigate the cause of the non-conformance and take necessary corrective actions to prevent reoccurrence. 6. Record corrective action on batch report.	1. Operator reviews and signs batch reports at end of production day to ensure that it has been properly completed. 2. Once per week, the Operator ensures that the temperature checks follow the procedure (observes production worker in their task). 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. 4. Record all observations on the batch report, including the date, the time and initials.	Clotted Cream Batch Report. Equipment maintenance record.
Pathogen growth due to improper cooling procedures	CCP2B Cool finished product	Cool down to 20 °C within 2 hours and from 20 to 4 °C within 4 hours. Total cooling time not to exceed 6 hours.	1. Production worker checks temperature with clean and sanitized probe thermometer. 2. Check temperature every hour until 4 °C is reached. 3. Record on batch report	When critical limits are not being met for one or more product samples. 1. Report slow cooling to Operator. Check cooler and determine if maintenance is required. 2. Place product on hold. Discard clotted cream if time limit has not been met. 3. Immediately investigate the cause of the non-conformance and take necessary corrective actions to prevent reoccurrence. 4. Record all non-conformances and corrective actions on batch report.	1. Operator reviews and signs batch reports at end of production day to ensure that it has been properly completed. 2. Once per week, the Operator ensures that the temperature checks follow the procedure (observes production worker in their task). 3. Operator reviews and signs cooler temperature once per week. 4. 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. 5. Record all observations on the batch report, including the date, the time and initials.	Clotted Cream Batch Report Cooler Temperature Log 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.

Clotted Cream Batch Report

Date Made: 4/28/2022
 Best Before Date: 22 MA 01 Lot Code: 22118
 Operator: Joe

Preoperational checks done Yes, JG

Ingredients Used

Ingredient	Amount	Code/Lot	Supplier
Whipping cream (34 % BF)	10 Litre	MA 12	Saputo

Process Step	Time Start	Time End	Temp of Bain Marie (°C)
Prepare Bain Marie	8:00		61
CCP1B Bake	8:10		61
	9:15		61
	12:00		61
	16:00		61
	18:00		61
		19:15	61
CCP2B Final temperature in cooler (at 24 hours)	8:00		4

Number of portions (sealed and dated) 3

Observed Deviations and Corrective Actions

Date of Record Review: 1-May-22 Verification by: M. Smith